

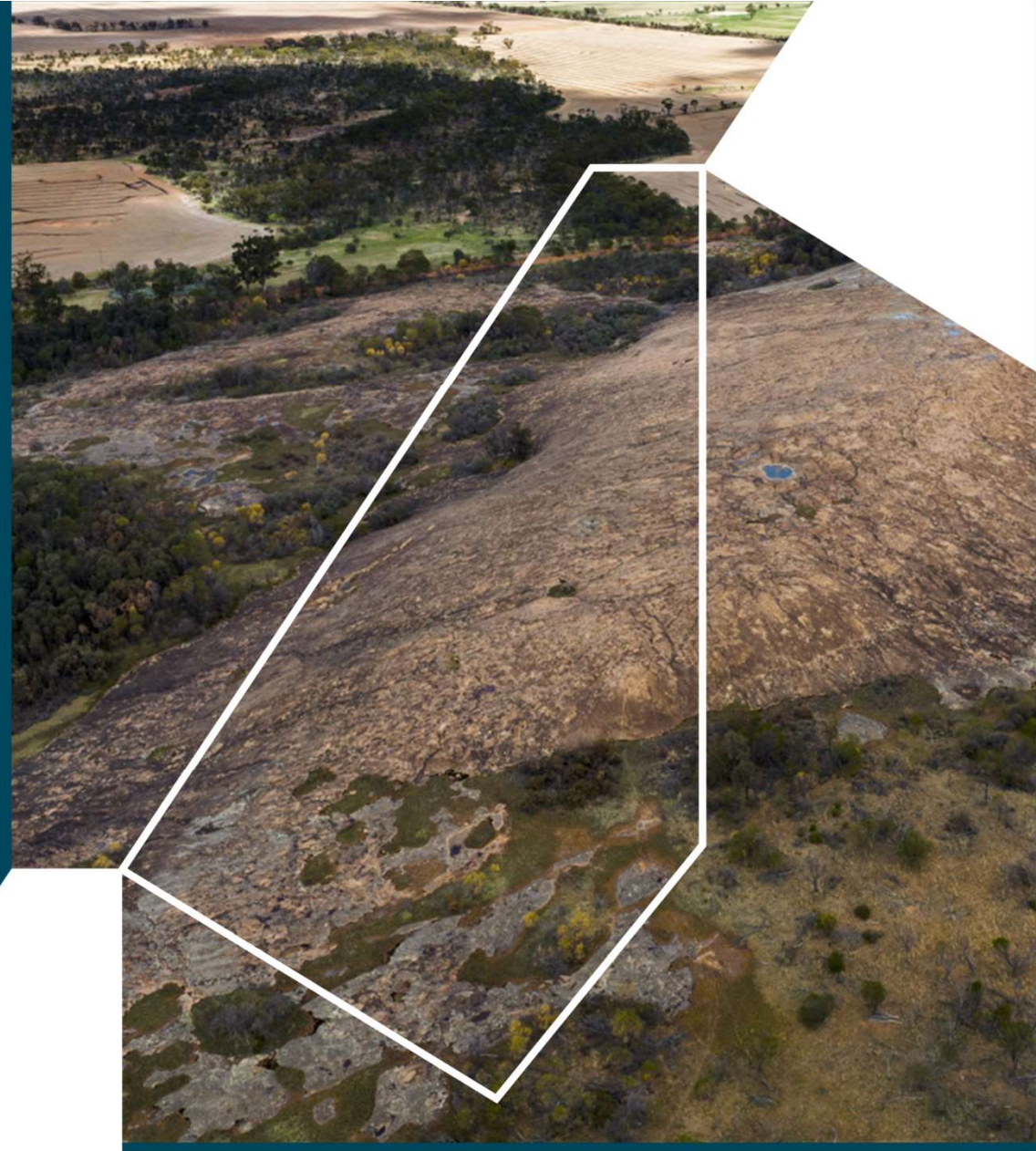


An Introduction to

Local Biodiversity Planning for Local Government

In the South-West of Western Australia

February 2024

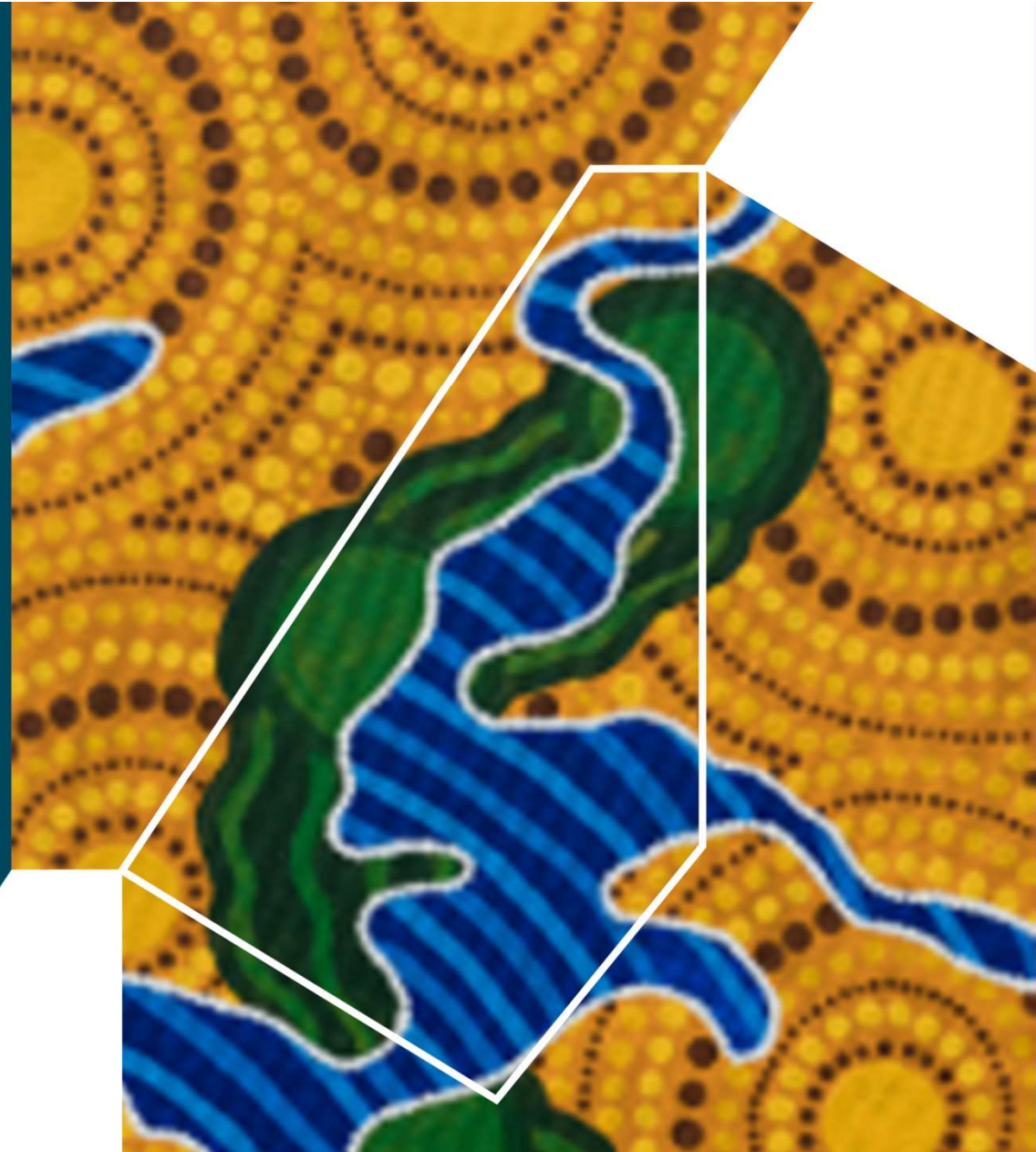




Acknowledgement of Traditional Owners

WALGA acknowledges the continuing connection of Aboriginal people to Country, culture and community. We embrace the vast Aboriginal cultural diversity throughout Western Australia, including Boorloo (Perth), on the land of the Whadjuk Noongar People, where WALGA is located and we acknowledge and pay respect to Elders past and present.

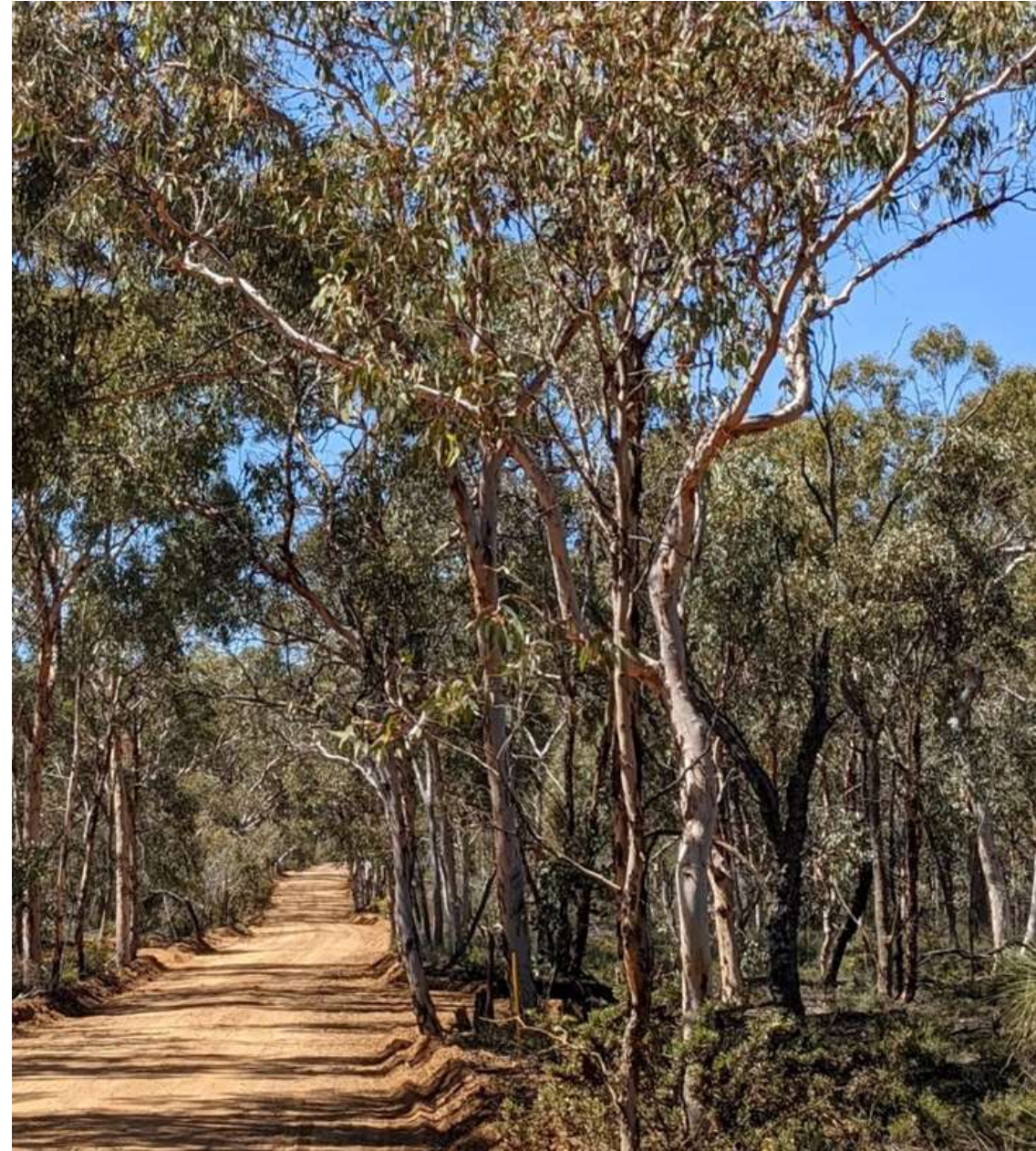
Pictured left: Artwork by Jade Dolman, a young Whadjuk/Ballardong Nyoongar, Eastern Arrernte, Irish woman from Perth.





Overview

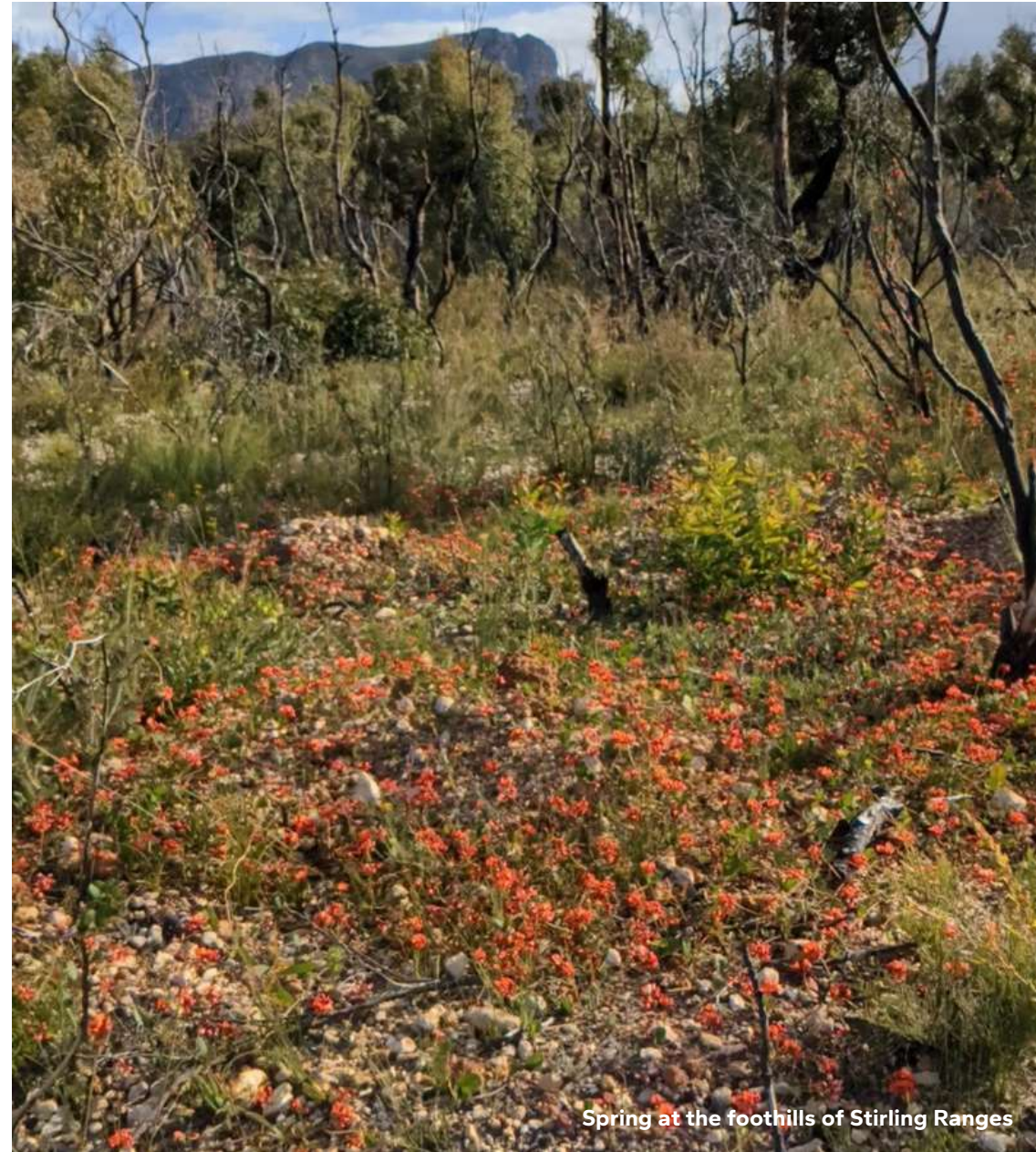
- 1 Local Governments & biodiversity
- 2 Support for local biodiversity planning
- 3 Components of an effective Local Biodiversity Strategy
- 4 What can Local Government influence?
- 5 Benefits of local biodiversity planning





Biodiversity means the variability among living organisms and the ecosystems of which those organisms are a part and includes the following:

- (a) diversity within native species and between native species;
- (b) diversity of ecosystems;
- (c) diversity of other biodiversity components.



Spring at the foothills of Stirling Ranges



Legislation

Australian Government

- *Environmental Protection and Biodiversity Conservation Act 1999*
- *Nature Repair Act 2023*

State Government

- *Biodiversity Conservation Act 2016*
- *Environmental Protection Act 1986:*
 - *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*
 - *Environmental Protection (Environmentally Sensitive Areas) Notice 2005*



Eucalyptus woodlands of the Wheatbelt Region of WA, nationally listed threatened ecological community. Photo: Courtesy of Wheatbelt NRM.



Local Governments and Biodiversity

Commonwealth and State Environmental Legislation



Regulator

Land use planning provisions
Development approvals
Enforcement of local laws



Proponent

Planner and manager
of infrastructure
projects



Assets manager

Natural areas in reserves
and freehold land
Native vegetation and
habitat in parks and
roadsides



Facilitator

Community education
and engagement
Volunteer support
Landholder incentives



Local Governments and Biodiversity

- In the Southwest of WA, Local Governments can affect nearly one third of mapped native vegetation through land use planning decisions and land management
- Some vegetation types are unique to a single Local Government area and many are not protected via the State's conservation reserve network
- Some of the State's unique plants have been recorded only from Local Government managed lands; like below examples of threatened plants with all or all but one known location being in local roadsides (Images sourced from Florabase).



Endangered
Found only in the Shires of Toodyay and Victoria Plains



Endangered
Found only in the Shire of Corrigin



Endangered
Found only in the Shire of Esperance



Support for 'local' biodiversity conservation

Urban Bushland Strategy (1995)

Bush Forever (2000)

RESOURCES

GOVERNMENT
POLICY



2001-2012

2008: EPA Guidance Statement No 33



2006-2009

2010: State Planning Policy 2.8

2010: WAPC position

2010: State Administrative Tribunal decision

(Bernardini and WAPC [2010] WASAT 105)



2012-2014

2014: A guide to the assessment of applications clear native vegetation

Planning instruments and other relevant matters

❖ Environmental Events 2014- now

2015: Model text - local scheme provisions:
- Local reserve: Environmental Conservation

❖ On-line mapping portal 2014-2021

❖ Local Biodiversity and Native Vegetation Management Project 2023-2024

2020: Guidance for planning & development:
Protection of naturally vegetated areas in urban and peri-urban areas

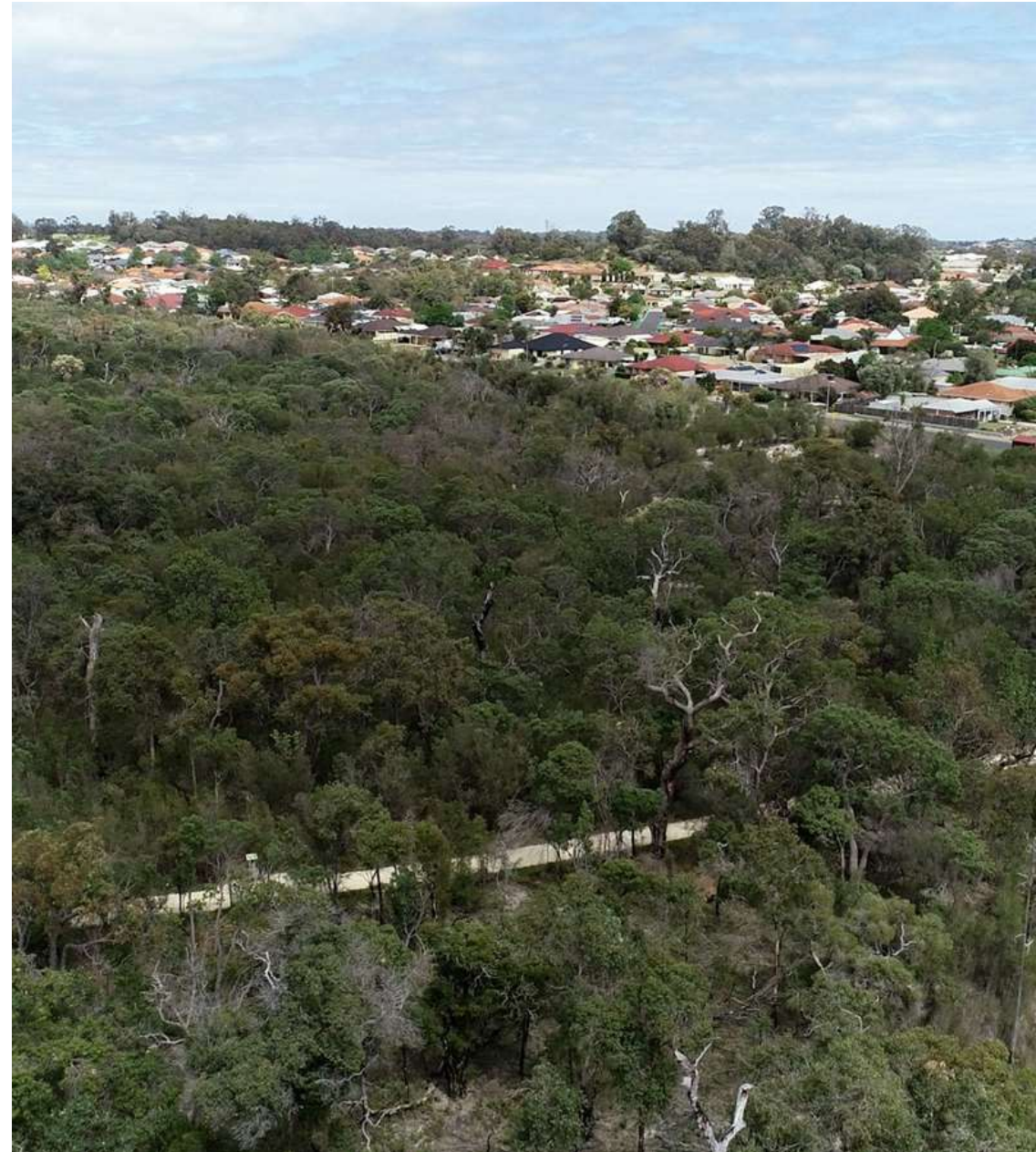
WALGA
initiatives



What is a Local Biodiversity Strategy?

A local biodiversity strategy provides for:

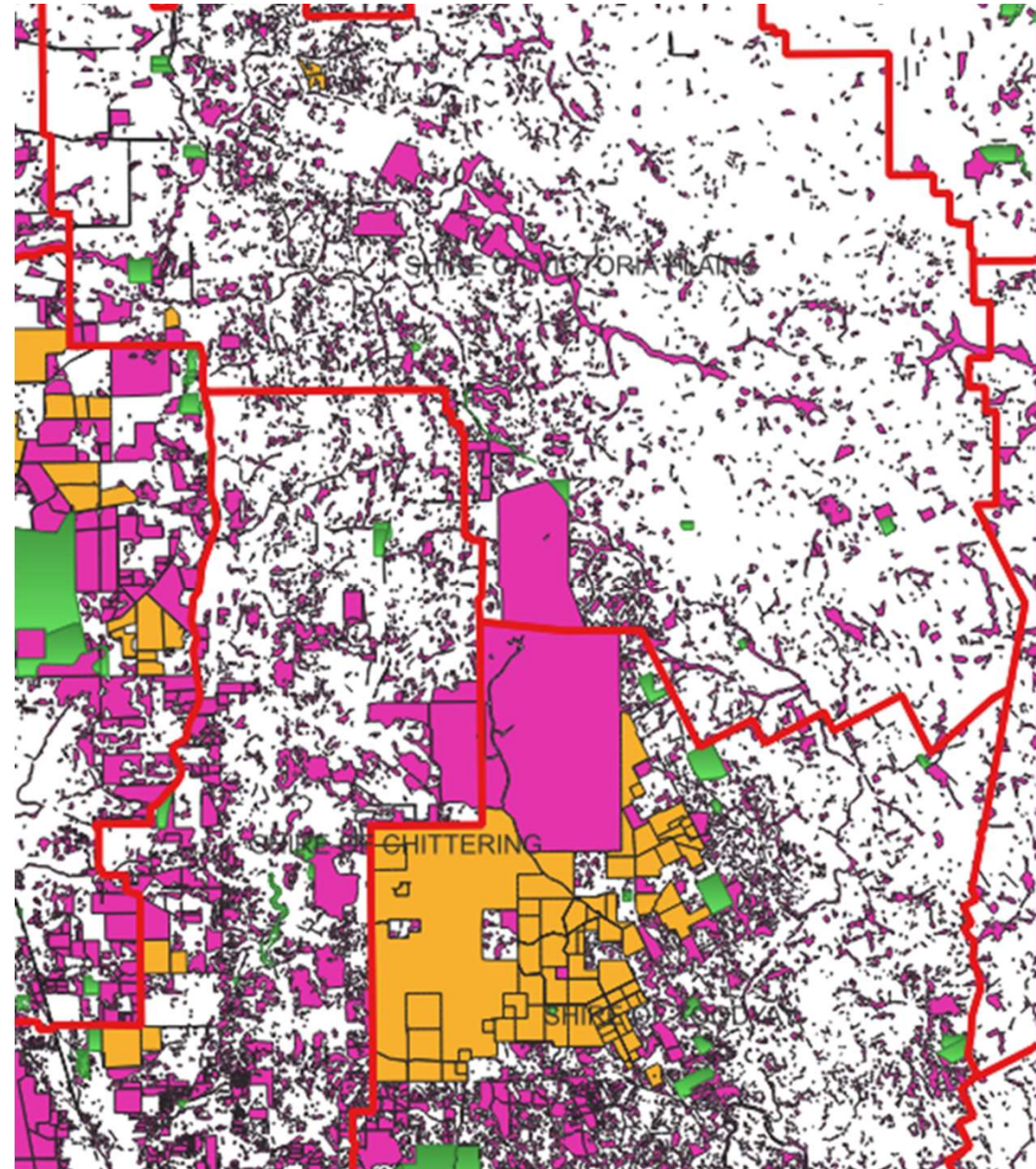
- the identification local natural areas, the biodiversity they support and their conservation significance/priorities,
- the assessment of local opportunities and constraints to protection of natural areas, and for
- the identification of ways to achieve local biodiversity conservation objectives and targets.





Key features of an effective Local Biodiversity Strategy

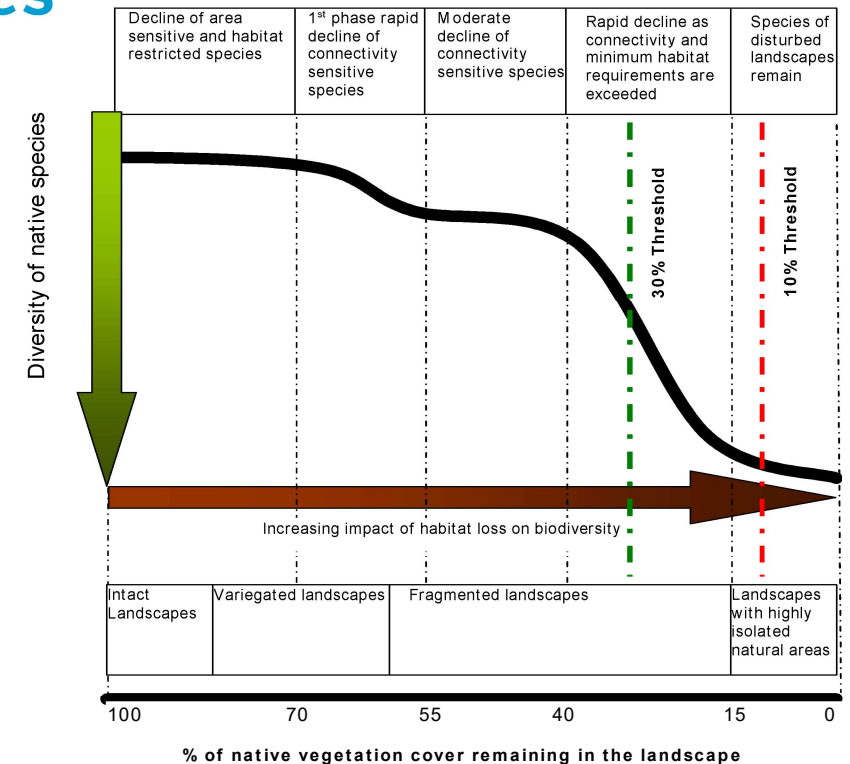
- 1 Focus on 'Local Natural Areas' including biodiversity on public and private lands
- 2 Objectives and targets are based on spatial analysis, consistent endorsed criteria and considered in the regional context
- 3 Include a bushland protection map and/or local conservation priorities maps
- 4 An action plan that integrates biodiversity consideration into all areas of Local Government functions
- 5 Prepared in consultation with relevant stakeholders and endorsed by the Council.





Local Biodiversity Planning Principles

1. Retention of at least 30% of the pre-European extent of each ecological community is required to prevent an exponential loss of species and failure of ecosystem processes.
2. Protect regionally and locally significant natural areas
3. Biodiversity is best conserved in-situ – protect what remains before revegetating
4. Regeneration is a higher priority than revegetation



Biodiversity loss in relation to native vegetation loss (Smith & Siversten 2001)



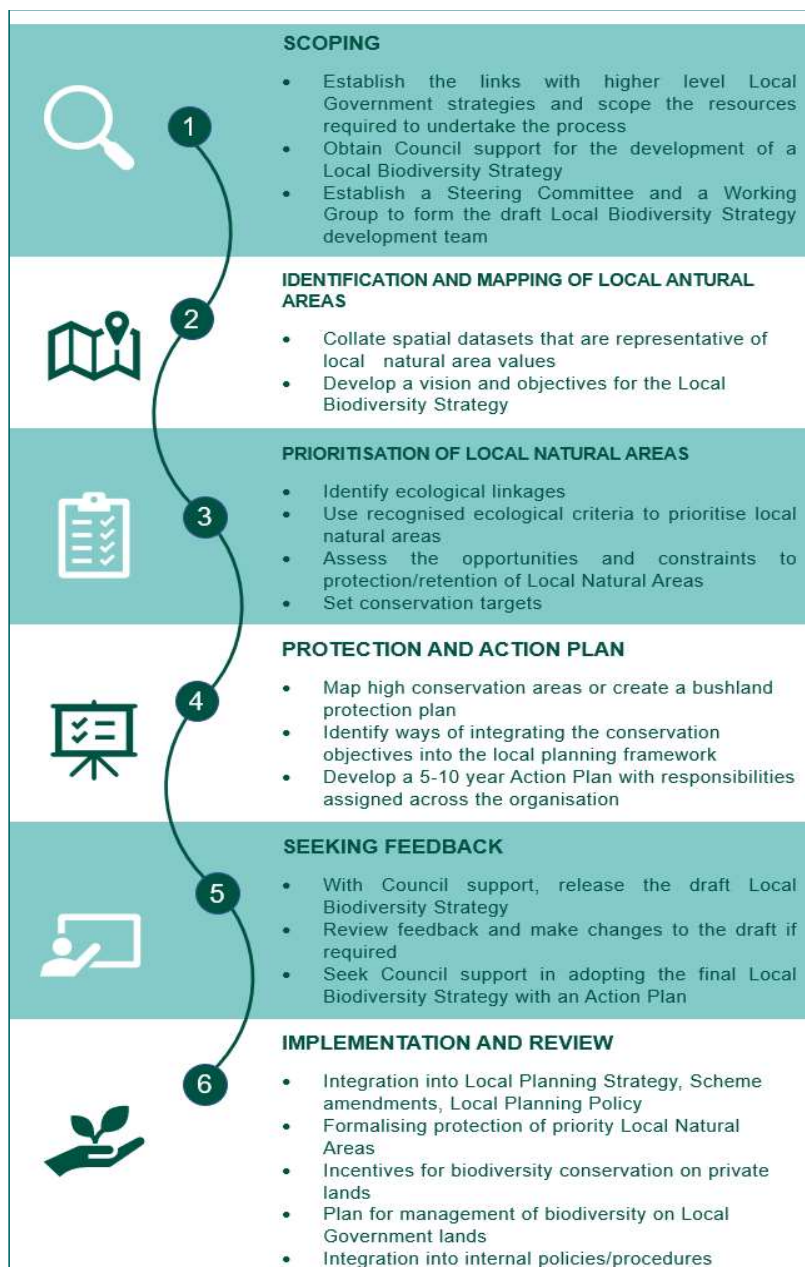
Local Biodiversity Planning Principles

5. Prioritise protection and management of the highest biodiversity value natural areas
6. Support community involvement in biodiversity conservation
7. Biodiversity values must be made transparent in decision-making
8. Site specific field survey is essential to understand biodiversity value
9. Natural area conservation is a legitimate land use





Local Biodiversity Planning Phases



2 months
after
securing
resources

1 month

2 months

3 months

2-3
months

5-10
years

Scoping

- Establish links with the Strategic Community Plan
 - Scope the resources required
 - Obtain Council support
-
- Establish a Steering Committee (Terms of Reference):
 - Two Elected Members, Executive Managers (planning and asset management), Community representatives
-
- Set up a Working Group:
 - Staff from planning, infrastructure and natural area management
-
- Develop a project plan allowing for public consultation





Identification and mapping of Local Natural Areas



- Collate spatial datasets that are representative of local natural area values (see list in the Local Biodiversity Planning Guidelines), including metadata
- Develop a vision and objectives for the Local Biodiversity Strategy (via Stakeholder Reference Group)

Local natural areas (LNAs) are defined as natural areas that exist outside lands managed by the Department of Parks and Wildlife, Regional Parks, and Bush Forever Areas (Del Marco et al, 2004).



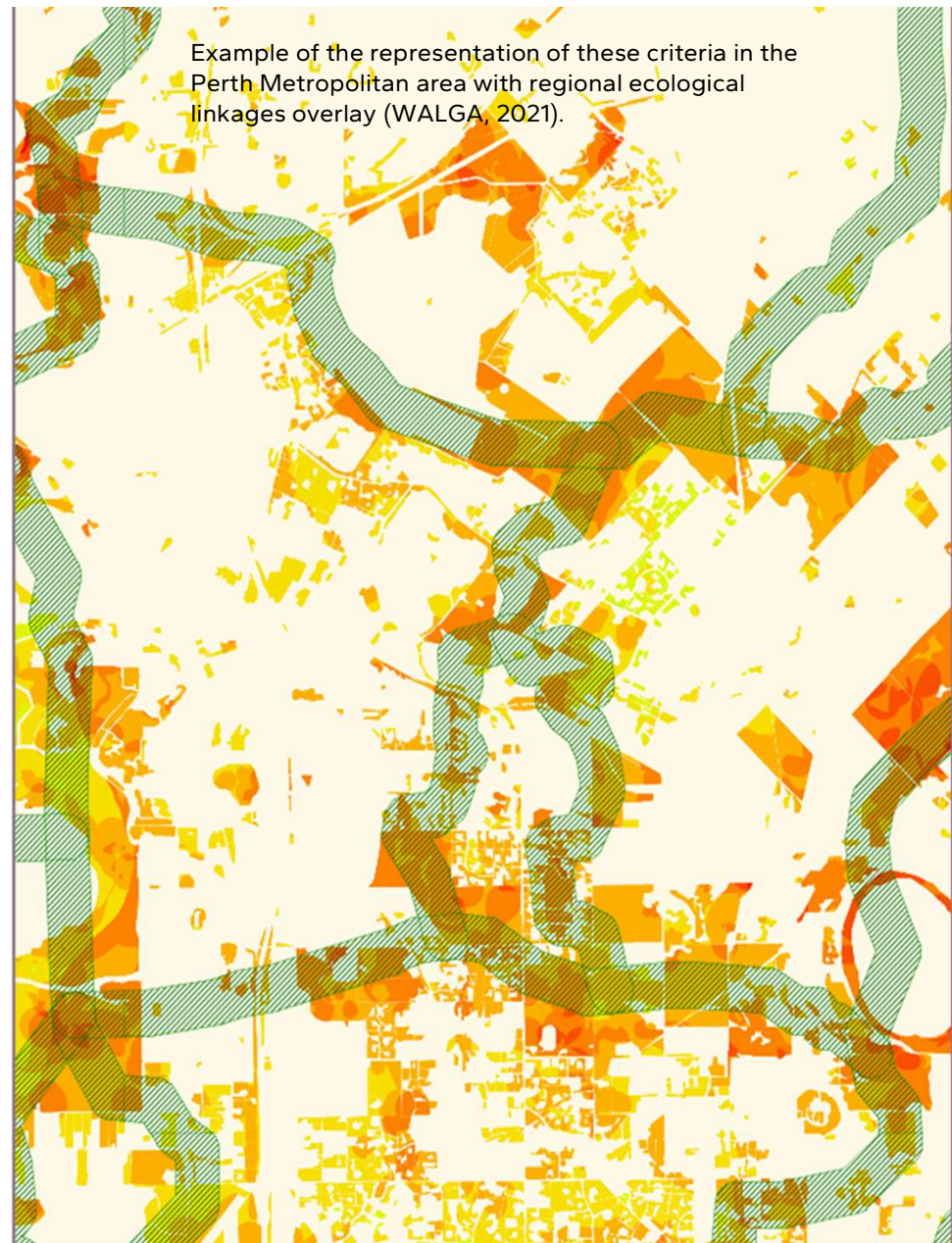
Prioritisation of Local Natural Areas

The ecological criteria categories (State endorsed):

- Areas of recognised international, national or regional values which could include areas of scientific or evolutionary importance.
- Representation of ecological communities including vegetation unique to Local Government area
- Diversity – priority species and communities
- Rarity – threatened species and ecological communities
- Maintenance of ecological processes or natural systems (connectivity)
- Protection of wetland, streamline, estuarine and coastal vegetation.

- Identify ecological linkages
- Use recognised ecological criteria to prioritise local natural areas
- Assess the opportunities and constraints to protection/retention of Local Natural Areas
- Where appropriate, determine conservation targets

Example of the representation of these criteria in the Perth Metropolitan area with regional ecological linkages overlay (WALGA, 2021).





An example of prioritisation criteria that combines two levels of vegetation type mapping

Table 3 Conservation Significance Criteria for the Geraldton. This shows reasoning for assigning significance categories, combining the criteria used for PCs, BVAs and additional information.

Cons. Sig.	Description of reason for significance	Vegetation descriptors	Additional information
Regionally significant natural areas			
1A	Vegetation within BVAs with <10% of Pre European extent remaining in WA	BVA 35 & BVA 371 and PCs floristically associated with BVA 35 (PC16 & PC17)	Highly restricted vegetation associations, priority for inclusion into the NAR system by both the Federal and State Government. BVA 371 is the highest priority for conservation in the study area as it used to be a common and now its extent only represents 5.7% of the total area (from 29%)
1A	GRFVS PCs potentially restricted to study area	PC4, PC5, PC9, PC11, PC14	Descriptions of these PCs include characteristics not identified in similar studies outside the study area. Additional detailed surveys are required to confirm this status.
1A	Contains (records) of DRF	DEC database	In patches > 20 ha, a 50 m buffer is applied to a spot location, otherwise the whole patch is selected.
1A	Contains Threatened and Protected Ecological Communities (TEC, PEC)	PC15	Priority 1 EC recorded
1A	Natural areas with high diversity of flora species	PC15, PC16	Include records of several listed flora and recorded the highest species diversity in the study area
1A	Coastal vegetation on foredunes and secondary dunes	PC 3, PC4, PC5, PC6, PC 8, PC9	
1A	Estuarine fringing vegetation	PC1	
1A	Floodplain area	Mapped for Chapman River, otherwise Soil Landscape Units are used to identify	Floodplains are generally no-development zones due to risk of damage to infrastructure. Any native vegetation occurring on or buffering floodplains is important for soil stability and the health of the river system. Regularly inundated floodplains can also support a wide range of fauna.
1A	Riparian vegetation	PC2	
1A	Significant wetland	No significant wetlands have been mapped in study area	
1B	Vegetation within BVAs with <30% Pre European Extent remaining in WA	BVA 675 and BVA 359 and PCs associated with BVAs (PC13 & PC15)	The portion of BVA 359 within the GRFVS area declined from its original extent
1B	Contains (records) of Priority or other significant flora	DEC database	In patches >20 ha, a 50 m buffer is applied to a spot location, otherwise the whole patch is selected.
1C	Vegetation within Beard Vegetation Association with >30% Pre-European extent remaining in WA but with local proportion of the original extent declining below the 30% threshold	BVA 413 and PCs floristically associated with BVA 413 (PC15)	To conserve BVA 413 regionally, > 509 ha should be retained and protected within GRFVS area. 509ha would represent 30% of the original extent. However, only 316 ha remain locally, which means that the GRFVS portion declined from 41.86% to 19%. No other occurrences of BVA 413 are in adjoining IBRA sub-regions so it's assumed that they would be different in floristic composition on finer scale.
Locally significant natural areas			
2A	Vegetation within BVAs with >30% Pre European Extent remaining in WA but <30% remaining in GRFVS Area and inadequately reserved in WA	BVA 387 and PCs floristically associated with BVA 387 (PC11 and PC12)	
2A	PCs with <400ha remaining or PCs within 10% of the 400ha threshold	PC7, PC14, PC16, PC17	
2A	Natural areas with high diversity of flora species	PC12, PC13, PC14	Recorded high species diversity in the study area
2B	BVAs with >30% Pre European Extent remaining in WA and >30% remaining in GRFVS Area but threatened by future development and inadequately reserved in WA	BVA 440	Over 70% of extent within zoning with limited opportunities for vegetation retention and protection
3	BVAs with >30% Pre European Extent in WA and >30% in GRFVS Area but inadequately reserved in WA or locally	BVA 431 BVA 129	

Source: https://www.cgg.wa.gov.au/documents/1196/geraldton_local_biodiversity_strategy-2013



Protection and Action Plan

- Map areas of high conservation priority and/or create a bushland protection plan
- Identify ways of integrating biodiversity conservation objectives into the local planning framework
- Prioritise local government managed lands for further investigations ([NAIA Templates](#)) and management
- Develop a 5-10 years Action Plan with responsibilities assigned across the organisation

Examples:

Greater Bunbury Region Scheme

Shire of Mundaring Local Planning Strategy (2009) and Local Planning Scheme No. 4

Shire of Chittering Local Planning Strategy (2019) and Local Planning Scheme No. 6

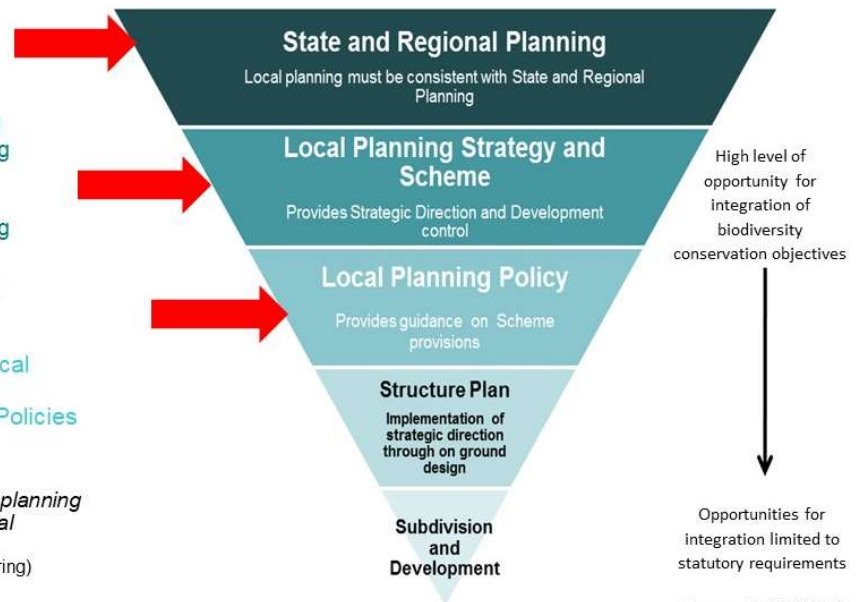
City of Wanneroo District Planning Scheme Amendment No. 109

Shire of Serpentine-Jarrahdale Local Planning Policy 26

City of Wanneroo Local Planning Policies 4.1, 4.3, 4.13

Examples of structure and subdivision planning supported by recommendations in Local Biodiversity Strategies:

- Shire of Chittering (Bindoon, Lower Chittering)
- Shire of Serpentine-Jarrahdale (Byford)
- City of Wanneroo (Banksia Grove)



Source: WAPC (2011)



Local Biodiversity Strategies and State Government processes

Land use planning

State recognition of local biodiversity conservation objectives is achieved through the endorsement of a local planning strategy by the WAPC when they become a component of a local planning strategy and are based on a local biodiversity strategies prepared:

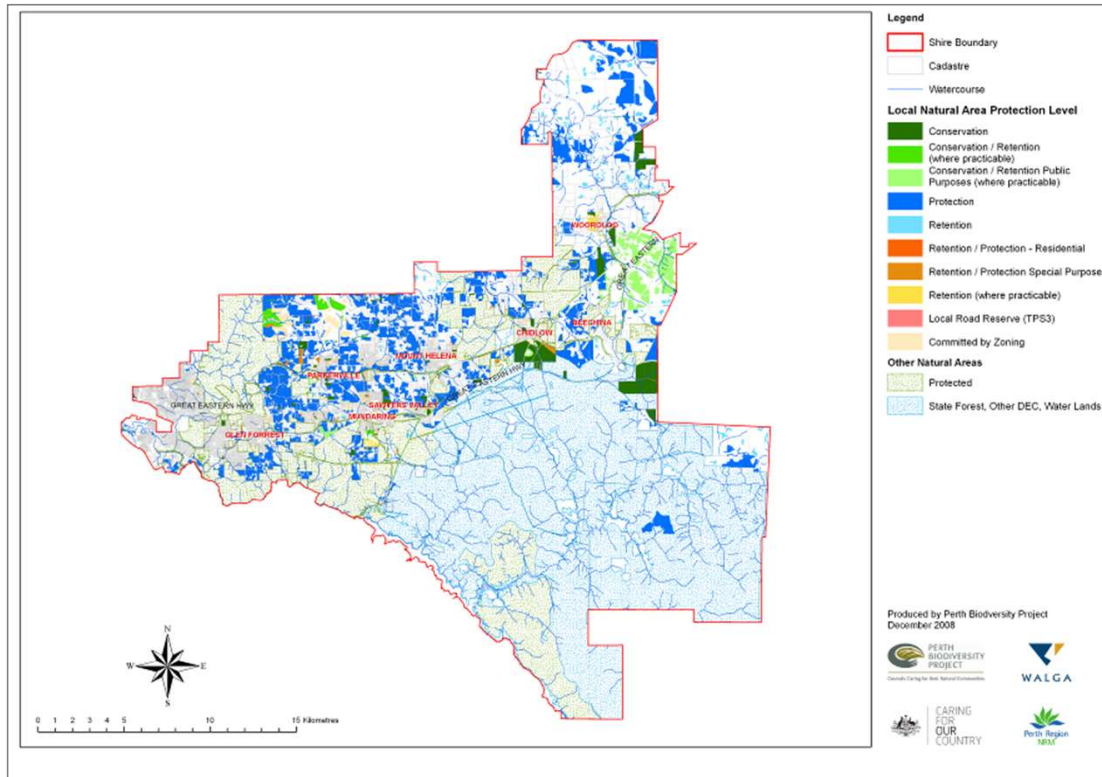
- in accordance with the endorsed methodology,
- in consultation with relevant stakeholders,
- endorsed by the Council.

Native vegetation clearing regulations

Can be a consideration in the assessment of clearing permit applications



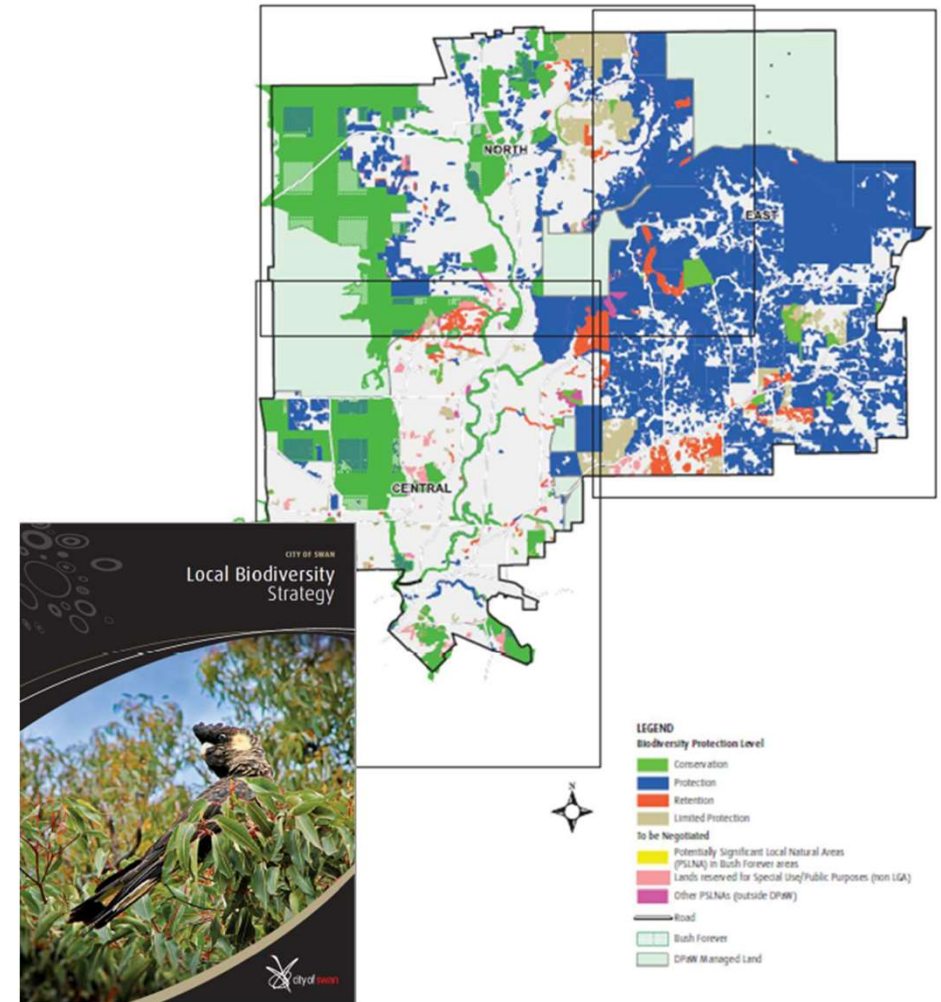
Examples of bushland protection maps



Shire of Mundaring (2009 & 2023)

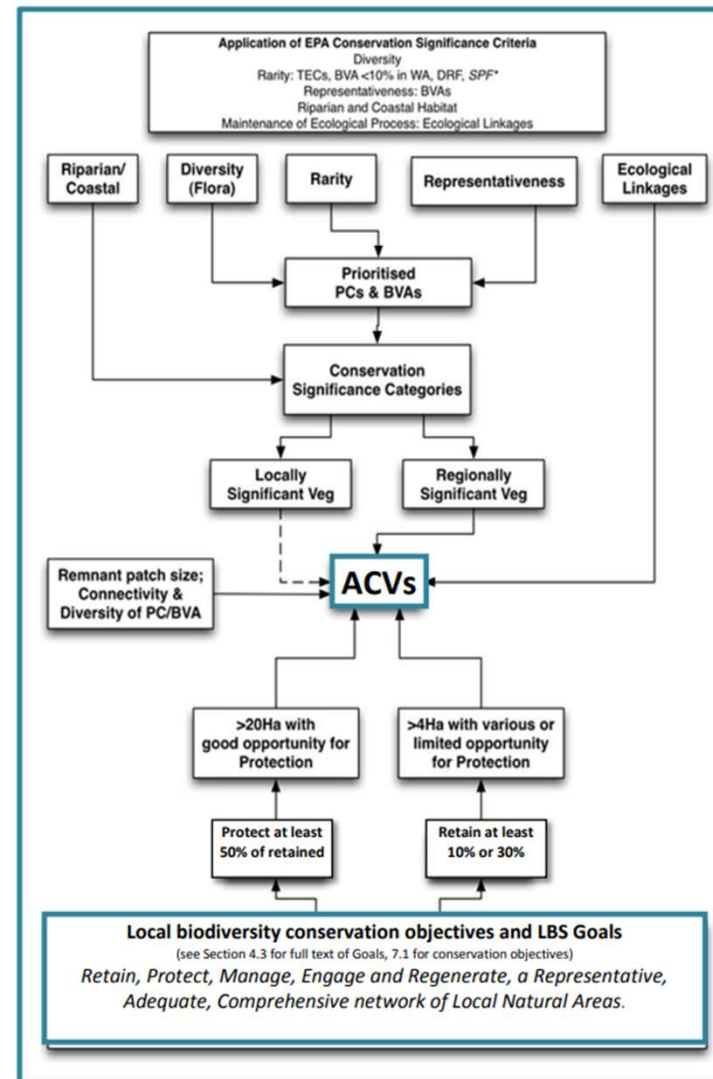
– to help with implementation of conservation targets on private lands, the Shire introduced a very effective 'Environmental Asset Inspections Service'

City of Swan (2004 & 2014)





Examples of bushland protection maps

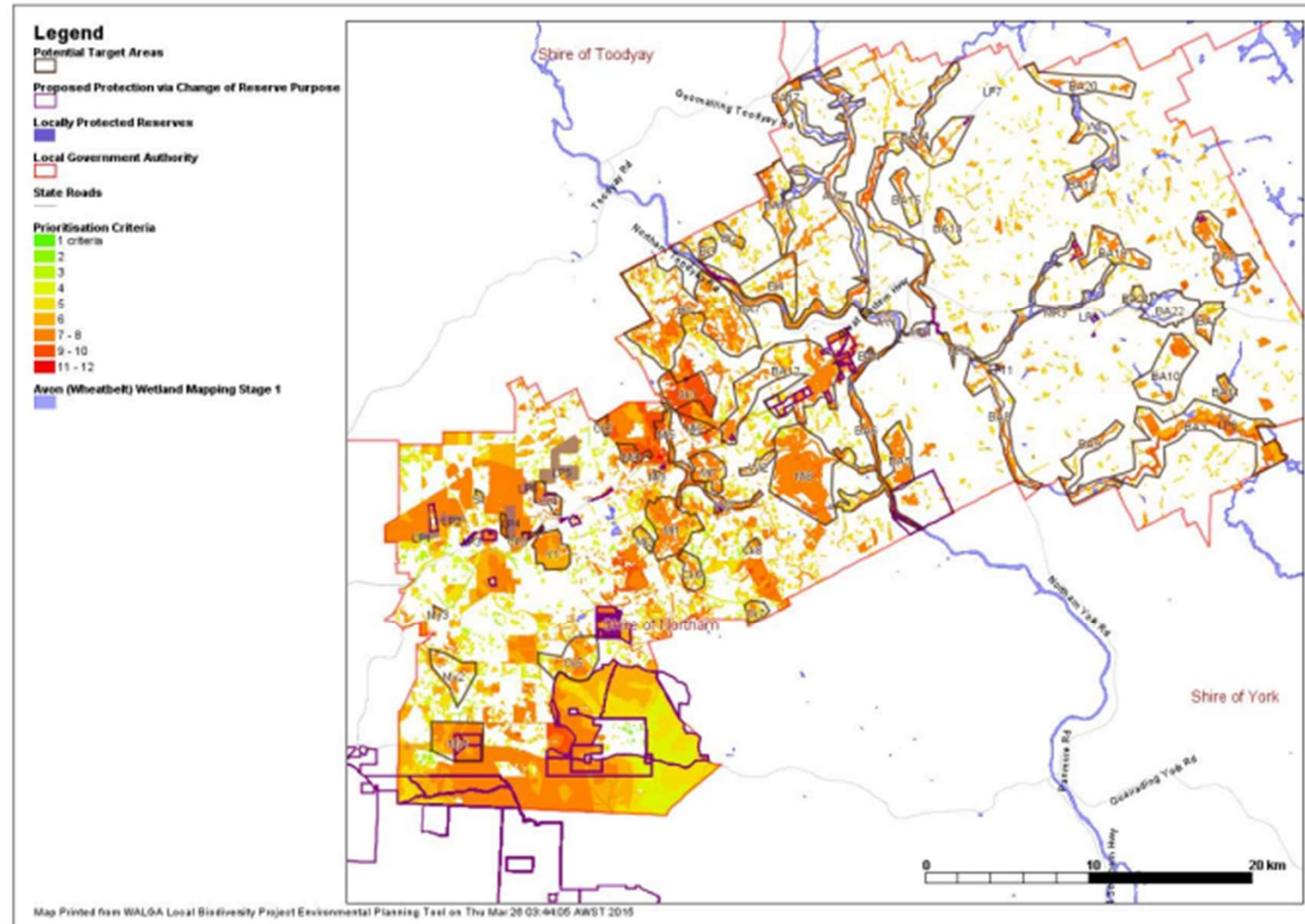
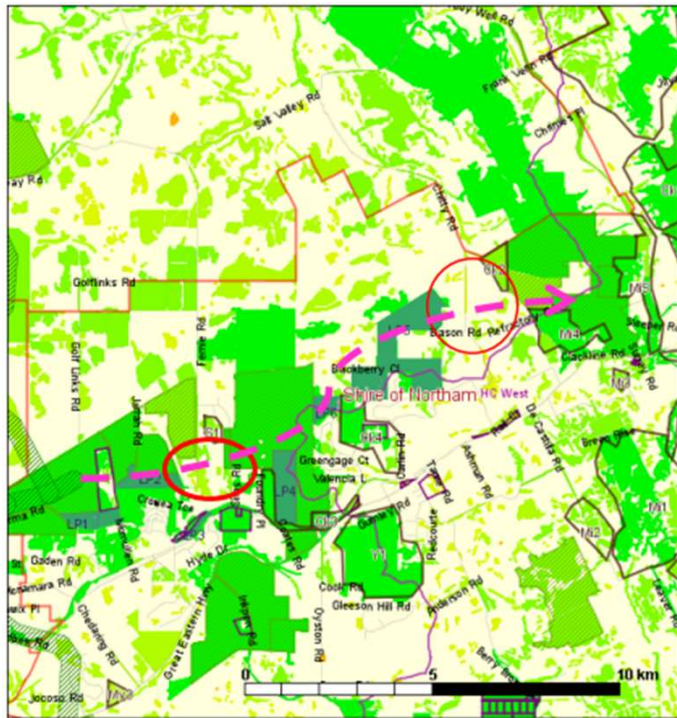


[City of Greater Geraldton \(2013\)](#)



Examples of bushland protection maps

Shire of Northam (2014)





Action Plan



Integration into land use planning
Internal mapping systems



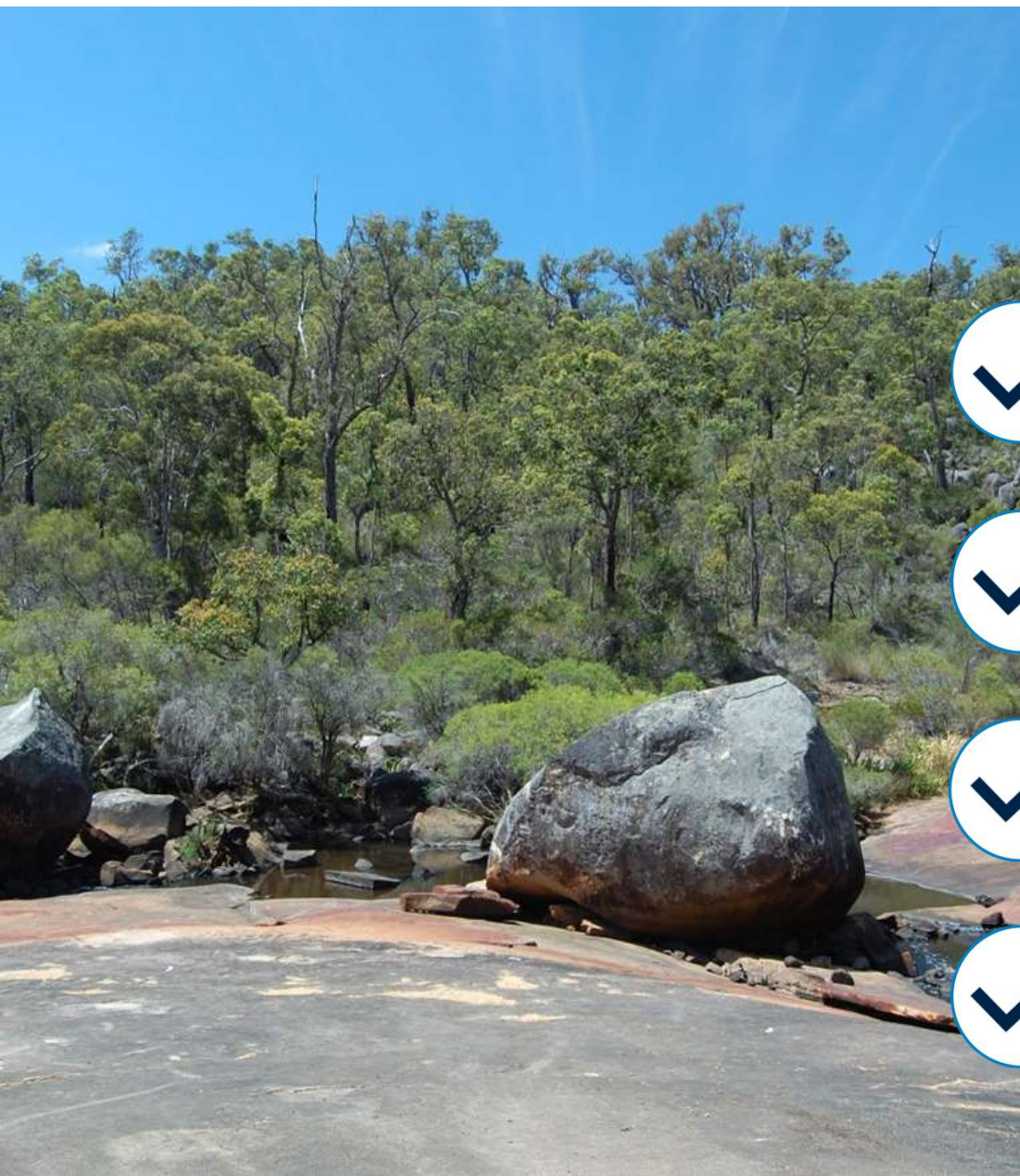
Management of lands vested in Local
Government



Private landholder incentives

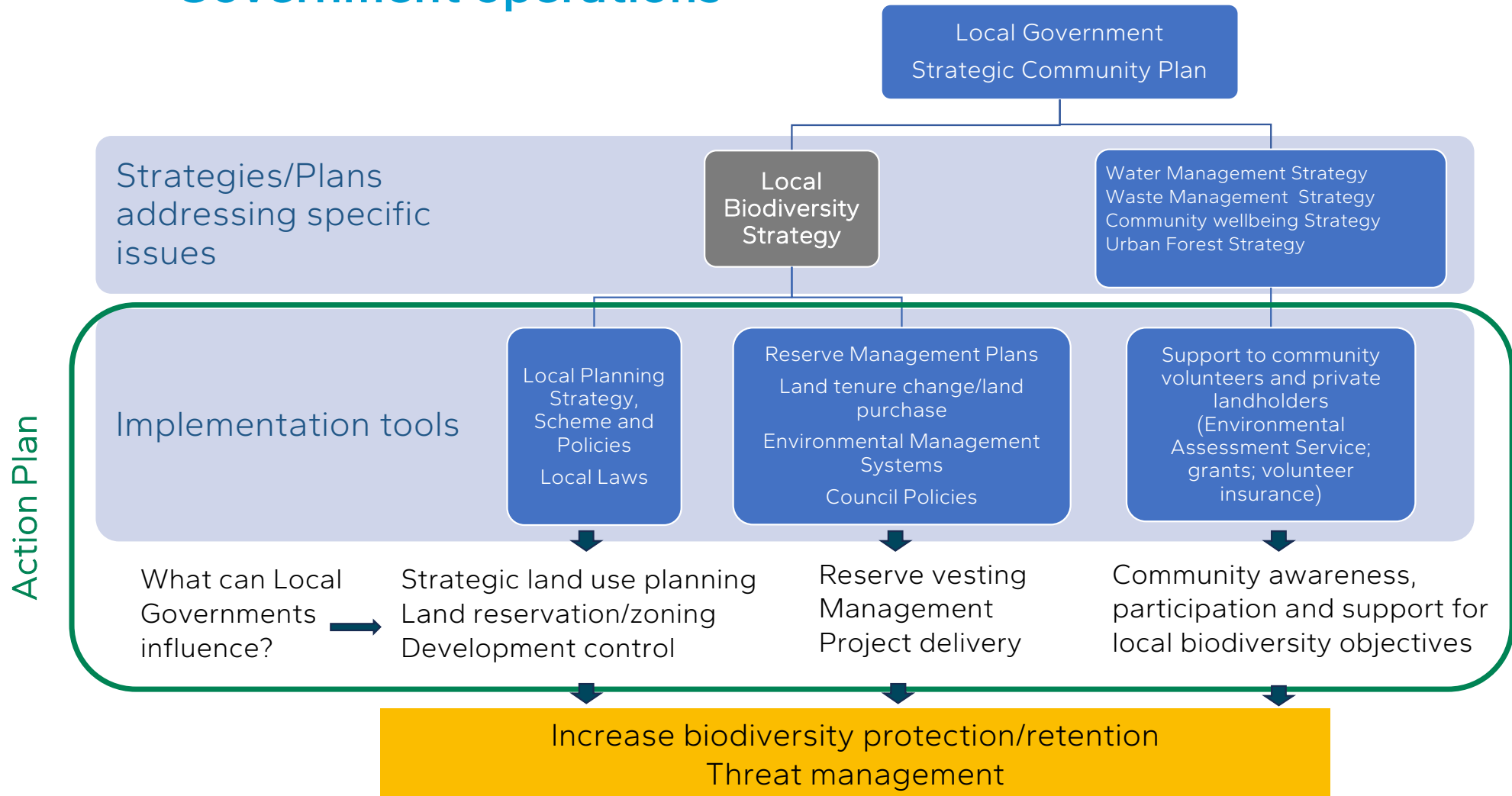


Community engagement and volunteer support





Integrations of biodiversity considerations in Local Government operations





Consultation, Implementation and Review



- With Council support, invite public comments on draft Local Biodiversity Strategy
- Review feedback and make changes to the draft if required
- Seek Council support in adopting the final Local Biodiversity Strategy with an Action Plan



- Review every 5-10 years to adapt prioritisation and implementation actions

WALGA Support

Identification of Local Natural Area and mapping data for local natural area prioritisation

(Download data via DataWA @ [Western Australian Local Government Association - Organisations - data.wa.gov.au](https://data.wa.gov.au))

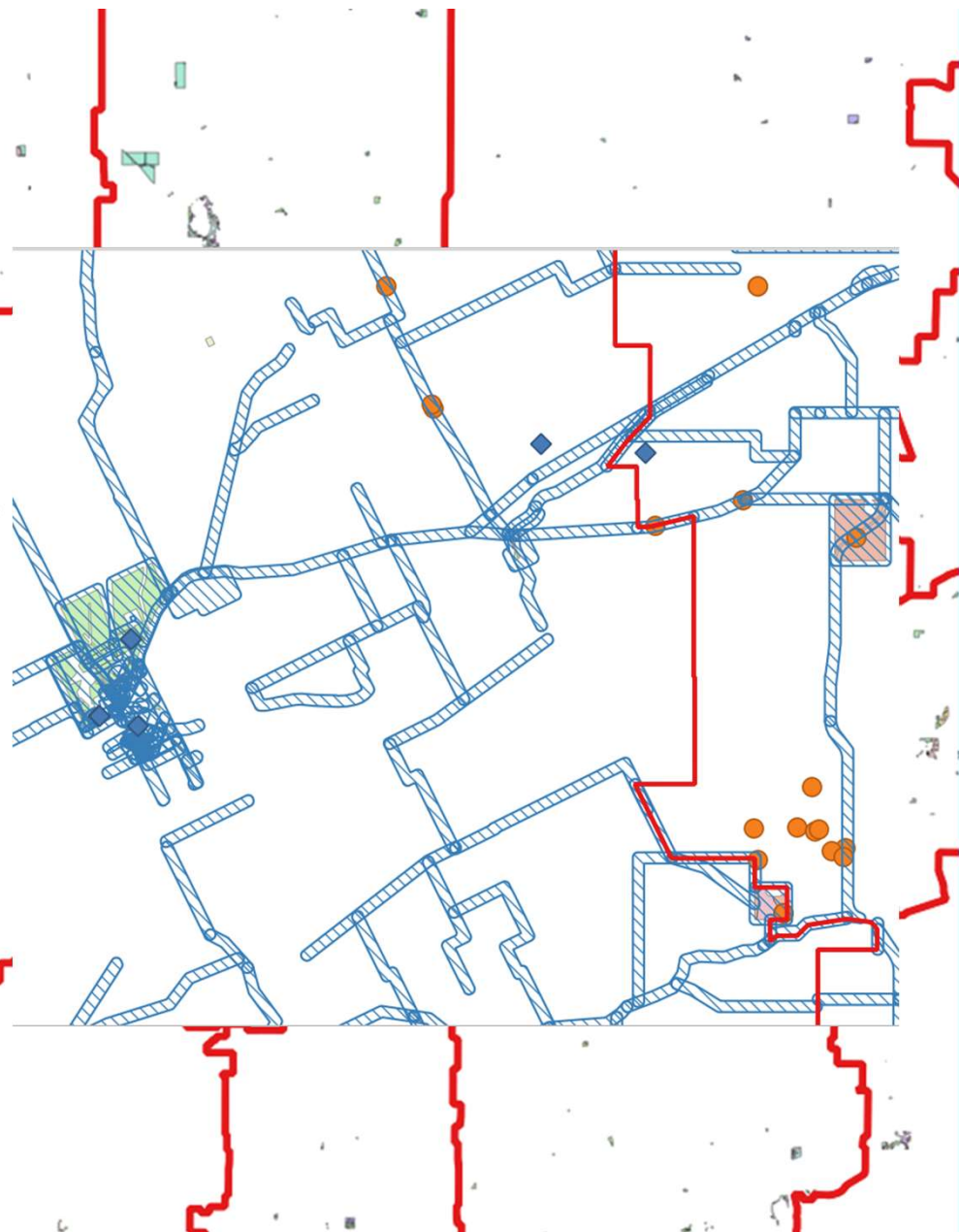
Assistance with the development of prioritisation criteria, establishment of the Steering Committee

Advice on the local biodiversity conservation planning process and on integrating biodiversity into land use planning

1

2

3





Benefits of Local Biodiversity Strategies

- Catalyst for early consideration of biodiversity in land use planning;
- Support for land use/development application decisions as recognised a valid consideration in land use planning as noted by the WA Planning Commission, EPA and the State Administrative Tribunal
- Increased transparency on what 'significant' vegetation or natural area means locally and where these 'significant' areas are located;
- Local protection targets contribute to improved conservation status of biodiversity at regional levels;
- Catalyst for identification of opportunities for restoration (local reserves, ecological linkages);
- Catalyst for mainstreaming biodiversity across Local Government operations and meeting regulatory requirements for Local Government infrastructure projects and operations.

Contribution to conservation

In Perth and Peel, 60% of remaining vegetation in 8 Local Government areas with quantitative targets for protection adopted via Local Biodiversity Strategies; Implementation of targets for the Darling Scarp vegetation complex could prevent its decline below the 30% threshold

Shire of Chittering – protection target is over 6,328 ha

Shire of Mundaring – increased regional protection status for two vegetation complexes by 1%

Shire of Augusta-Margaret River - Natural areas representative of eight vegetation complexes are protected only through the Shire's Local Planning Scheme provisions of three zones

In the portion of the City of Greater Geraldton and the Shire of Chapman Valley – more than 1,000 hectares to be protected and at least 1,500 hectares restored to achieve 10% native vegetation coverage

1

2

3

4





Examples of Local Governments which adopted Local Biodiversity Strategies and Local Planning Schemes with zones or local reserves protecting biodiversity:

Shire of Mundaring

City of Wanneroo

Shire of Serpentine-Jarrahdale

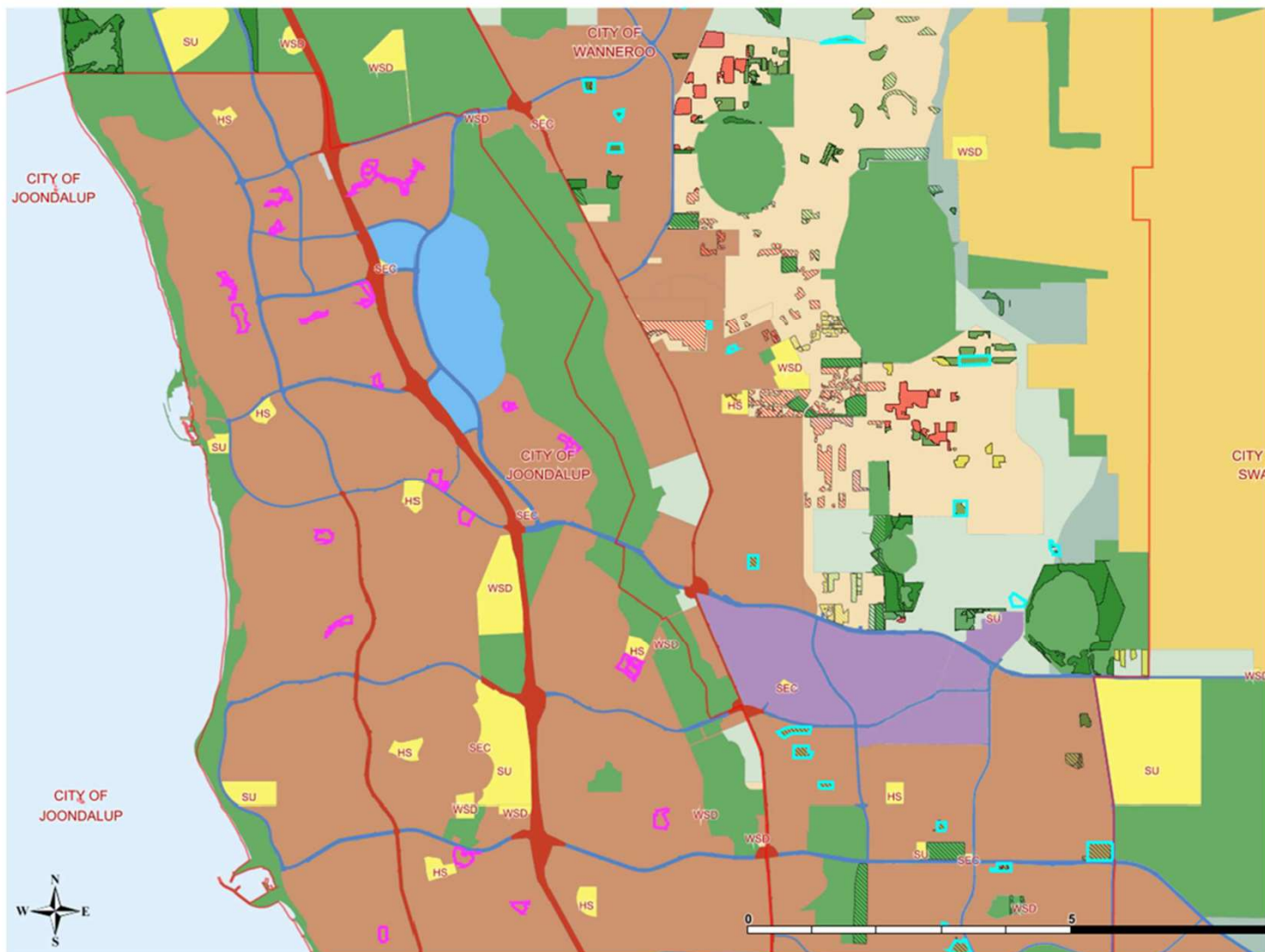
Shire of Chittering

City of Greater Geraldton

Shire of Northam

City of Joondalup

City of Swan



Local conservation type reserves over Metropolitan Region Scheme land use categories. Source: LGmap WALGA, 2021



Local Biodiversity Planning Summary



Strategic benefits

- Effective compliance with environmental regulations
- Transparency in decision making
- Early consideration of environmental matters in project planning
- An instrument for delivering on Local Government Strategic Community Plan objectives



Resources

- Updated Local Government Guidelines for Biodiversity Planning
- NAIA Templates
- Mapping data
- Technical support/advice



Local Biodiversity Strategy

- Focus on Local Natural Areas
- Consistent criteria in the regional context
- Bushland protection map
- Action plan for each business area



Biodiversity Outcomes

- Improved biodiversity outcomes at local and regional levels
- Opportunities for increasing community awareness



Contact

For further information email
to environment@walga.asn.au

Resources

To download resources supporting local
biodiversity planning visit [WALGA's website](#)

To download mapping data, go to

[Western Australian Local Government
Association - Organisations - data.wa.gov.au](#)

Acknowledgements

Photo credits: Where not listed, WALGA

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natural resource
management program

