



Government of **Western Australia**
Department of the **Premier and Cabinet**

Perth and Peel Green Growth Plan for 3.5 million

Strategic Assessment of the Perth and Peel Regions

Draft Action Plan F: MNES conservation commitments

December 2015

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1 Introduction

1.1 OVERVIEW OF THE ACTION PLAN

This Action Plan has been prepared in support of the Strategic Assessment of the Perth and Peel Regions (the Strategic Assessment) that has been undertaken by the Western Australian Government (see Figure 1-1 for a map of the area).

It provides the conservation commitments that will protect matters of national environmental significance (MNES) under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

1.2 RELATIONSHIP TO THE STRATEGIC CONSERVATION PLAN

A key output of the EPBC Act strategic assessment process is the endorsement of a "Plan, Program or Policy" by the Commonwealth Minister for the Environment. The "Plan, Program or Policy" is the document that sets out the commitments that the State will deliver to protect MNES in the Strategic Assessment Area and enable development to be approved.

As part of progressing the strategic assessment, a single plan has been developed that addresses both MNES and State environmental values – the Strategic Conservation Plan. The Plan includes:

- the conservation outcomes, objectives and commitments that will be endorsed, and the classes of action that will be approved, by the Commonwealth Minister for Environment under the EPBC Act strategic assessment process; and
- the commitments for State environmental values as relevant to the EPA's advice under section 16(e) of the *Environmental Protection Act 1986* (EP Act).

As part of the Strategic Conservation Plan, a series of Action Plans have been developed to assist with implementation of the Strategic Conservation Plan. The Structure of the Strategic Conservation Plan and the supporting Action Plans are shown in Figure 1-2.

The commitments in this Action Plan are:

- Implemented through the development Action Plans (A-E) where the commitments relate to avoidance and mitigation in a development area (e.g. avoidance of a flora population within an urban expansion area);
- Implemented through the Conservation Program Action Plan (H) where the commitments relate to the protection and management of land (and form part of the conservation actions); and
- Monitored through the assurance Action Plan (I) to determine if:
 - they have been implemented; and
 - the conservation objectives are being achieved.

1.3 RELATIONSHIP TO STRATEGIC PLANNING FOR THE PERTH AND PEEL REGIONS

The Strategic Assessment has been progressed in consideration of major planning frameworks for the Perth and Peel regions.

Western Australia (WA) has a population of over 2.57 million people (Australian Bureau of Statistics 2014). Of this number, more than 2 million live in the Perth and Peel regions, which are located within one of the world's 35 biodiversity hotspots. As a strategic approach to long-term urban planning, the Department of Planning (DoP) and the Western Australian Planning Commission (WAPC) in 2010 released *Directions 2031 and Beyond – Metropolitan Planning Beyond the Horizon* (Directions 2031) which is a high level strategic plan and associated spatial framework to guide development policy and planning to accommodate an additional half a million people by 2031. It outlines a vision for future land uses and a more liveable, prosperous, connected and sustainable community.

To realise the vision encompassed in Directions 2031, the WAPC has developed a series of detailed draft sub-regional planning frameworks with a unified, long-term growth strategy for land use and infrastructure required to support a population of 3.5 million in the Perth and Peel regions. This series of draft planning frameworks, titled *Perth and Peel @3.5million*, was released for public consultation in May 2015 and includes:

- *Draft North-West Sub-regional Planning Framework.*
- *Draft North-East Sub-regional Planning Framework.*
- *Draft Central Sub-regional Planning Framework.*
- *Draft South Metropolitan Peel Sub-regional Planning Framework.*

It is intended that once finalised, these sub-regional planning frameworks will support the projected growth of the Perth and Peel regions in a sustainable manner.

The Strategic Conservation Plan is complementary to the draft sub-regional planning frameworks and provides alignment across government on a land use plan to support the growth of the Perth and Peel regions to 3.5 million people.

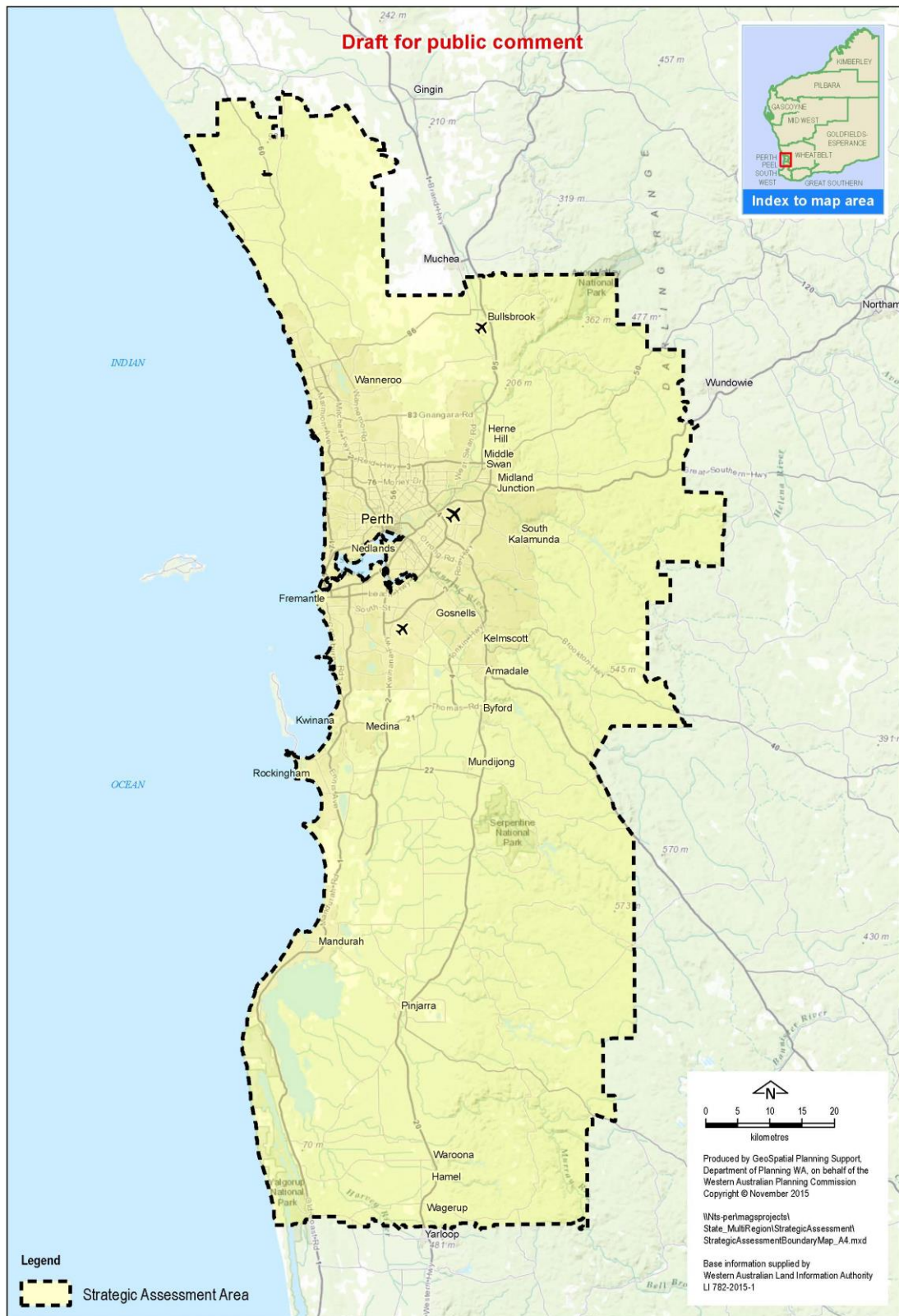


Figure 1-1: Perth and Peel Strategic Assessment Area

1.4 STRUCTURE OF THIS DOCUMENT

The structure of this document is as follows:

Section 2: provides an outline of the conservation framework.

Section 3: describes the conservation outcomes for MNES.

Section 4: provides the conservation objectives and commitments for MNES.

Section 5: includes a process for review and modification of the Action Plan.

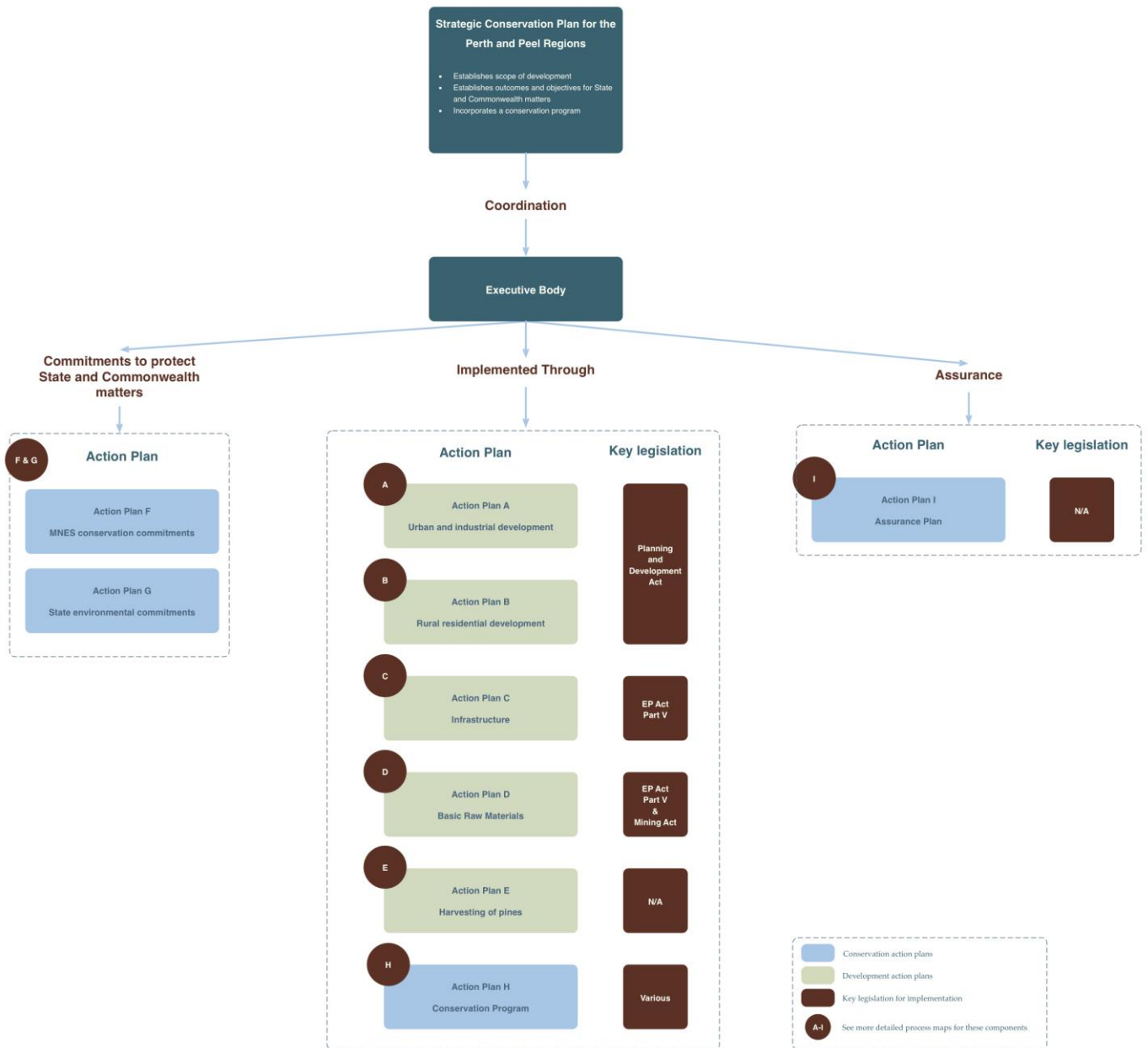


Figure 1-2: Structure of the Strategic Conservation Plan and the supporting action plans

2 The conservation framework

A key component of the Strategic Conservation Plan is the use of a conservation framework. This framework aims to clearly outline what needs to be delivered over the life of the Strategic Conservation Plan to ensure that positive outcomes for MNES are achieved.

The outcomes framework is based around a hierarchy of three levels (see Figure 2-1):

1. Outcomes: Describe the overall outcomes that need to be achieved in implementing the Strategic Conservation Plan. They provide a broad framework for the assessment and address the key statutory requirements under Commonwealth and State legislation.

They include 'conservation outcomes' for MNES and 'environmental outcomes' for State values.

2. Objectives: In addition to the outcome statements, objectives were developed for each specific Commonwealth MNES determined to be assessed (e.g. individual threatened species, wetlands of international importance) and State environmental values grouped in accordance with the EPA's environmental factors (e.g. flora and vegetation, terrestrial fauna, air quality). The objectives are more specific and detailed and identify what is required in order for the broader outcomes to be achieved. They were developed to reflect the status of each individual matter/factor and how it is represented at a site specific and regional level.

They include 'conservation objectives' for MNES and 'environmental objectives' for EPA environmental factors.

3. Commitments: Commitments are defined for each MNES or State environmental value being assessed as a product of the impact assessment. They comprise the management measures and strategies (e.g. further avoidance measures, mitigation, protection of habitat) that will be delivered under the Strategic Conservation Plan. They are the key actions that will deliver the outcomes and are required to achieve the objectives.

They include 'conservation commitments' for MNES and 'environmental commitments' for State environmental values. The commitments are specific, detailed and measureable. These include commitments to protect specific sites supporting MNES or State environmental values (as detailed in Action Plans F and G), as well as commitments which comprise the Conservation Program (such as creating new conservation reserves and undertaking vegetation) that are detailed in Action Plan H and address the impacts of the classes of action.

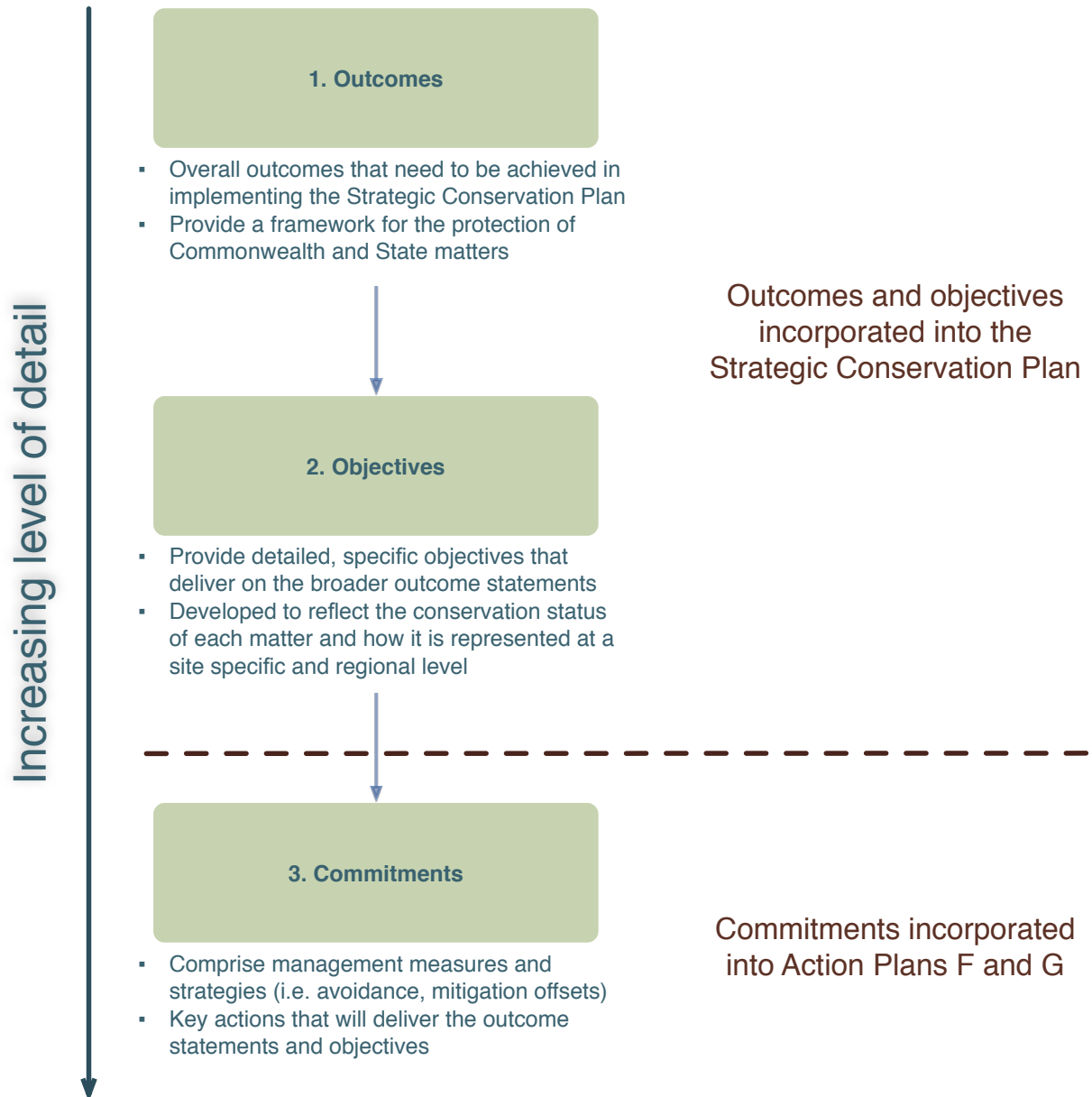


Figure 2-1: Conservation framework

3 Conservation outcomes for MNES

The following conservation outcomes for MNES will be achieved through implementation of the Strategic Conservation Plan.

Matter of National Environmental Significance	Conservation outcome
Listed threatened species and ecological communities	The viability and conservation status of listed threatened species and ecological communities in the Perth and Peel regions is maintained, and where possible improved, with measures and actions consistent with any approved Commonwealth recovery plans, threat abatement plans or conservation advice.
Listed migratory species	The values of the Perth and Peel regions to listed migratory species are maintained, and where possible improved, with measures and actions consistent with Australia's international obligations.
Wetlands of international importance	The ecological character of wetlands of international importance within the Perth and Peel regions is maintained, with measures and actions consistent with Australia's international obligations.
World and National Heritage	The values of World and National Heritage places within the Perth and Peel regions are maintained, with measures and actions consistent with Australia's international obligations or relevant National Heritage commitments.

4 **Conservation objectives and commitments for MNES**

The following conservation objectives and commitments for specific MNES will be achieved through implementation of the Strategic Conservation Plan.

These MNES represent the key MNES within the Strategic Assessment Area that were identified through the impact assessment phase (see the *Commonwealth Strategic Impact Assessment Report* for further details).

Conservation objectives and commitments (where relevant) are presented for:

- Over-arching commitments that are relevant to multiple MNES.
- Listed threatened species and ecological communities.
- Listed migratory species.
- Wetlands of international importance.
- World and National Heritage.

4.1 OVER-ARCHING CONSERVATION COMMITMENTS

The following overarching conservation commitments (Table 1) will contribute positively to the conservation objectives for a large range of MNES in the Perth-Peel region. These commitments should be read in conjunction with the MNES specific commitments (Sections 4.2 – 4.4).

Table 1: Over-arching Conservation commitments for MNES

Type	Conservation commitments	Implementation mechanism
Avoidance	1. For urban, industrial and rural residential development, undertake and implement land use planning to achieve the specific commitments for MNES and State factors as set out below in Tables 2, 3, 4, 5 and 6. As described in Action Plans A and B this process of ‘further avoidance’ will: <ul style="list-style-type: none"> require decision makers to have due regard for the environmental values mapping undertaken during preparation of the Strategic Conservation Plan for urban and industrial expansion sites and new rural residential zones; consider additional opportunities for retention of native vegetation, fauna habitat and wetlands; and be informed by previous EPA advice and Ministerial Statement conditions, or in the absence of this, detailed investigations, within existing zoned urban and industrial areas. 	Statutory planning processes as detailed in Action Plans A and B
Avoidance	2. Ensure direct and indirect impacts to conservation category wetland (CCWs) are avoided (including through the application of appropriate buffers) within urban, industrial, and rural residential areas.	Statutory planning and approval processes as detailed in Action Plans A and B Conservation processes as detailed in Action Plan H
Avoidance Mitigation Offset	3. Implement the infrastructure impact assessment process detailed in Section 4.2.2 of Action Plan C (Internal impact assessment and planning processes to review infrastructure siting and alignments).	As detailed in Action Plan C
Avoidance and conservation	4. Avoid and protect environmental values within selected BRM Exclusion Areas through Action Plans D and H.	Action Plan D
Offsets	5. Implement the Conservation Program detailed in Action Plan H. This includes: <ul style="list-style-type: none"> establishment and management of 170,000 ha of new conservation reserves, including resolving ownership, tenure and management arrangements for Bush Forever, the Peel Regional Park and selected Peel Regionally Significant Natural Areas; and improving the management and protection of significant environmental values which have been identified for retention through Action Plans F and G. 	Conservation processes as detailed in Action Plan H
Avoidance Mitigation	6. Implement environmental assessment and management measures, controls and standards for all development to reduce direct and indirect environmental impacts. This will include, but is not limited to, controls on vegetation clearing, water quality and use, stormwater, dust, noise, emissions, public access. This process will involve: <ul style="list-style-type: none"> ensuring controls / conditions placed on existing approvals continue to be implemented; and ensuring that new proposals that are approved incorporate at a minimum the existing standard and expectations for control / mitigation / management of direct and indirect impacts. 	Statutory planning and approval processes as detailed in Action Plans A, B, C and D

4.2 LISTED THREATENED SPECIES AND ECOLOGICAL COMMUNITIES

In addition to the over-arching conservation commitments (Section 4.1), conservation objectives and commitments for specific threatened species and ecological communities are presented in the following tables:

- Table 2: Conservation commitments for threatened ecological communities.
- Table 3: Conservation commitments for threatened fauna.
- Table 4: Conservation commitments for threatened flora.

Table 2: Conservation commitments for threatened ecological communities

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Aquatic Root Mat Community in Caves of the Swan Coastal Plain	<ul style="list-style-type: none"> • Maintain the long-term viability of the ecological community within the Strategic Assessment Area through continued protection and management within the Yanchep National Park and maintenance of groundwater levels. • Manage offsite threats to the ecological community within the Strategic Assessment Area. 	<p>7. Prior to region scheme rezoning, to address potential impacts to caves and wetlands (including Loch McNess) in and adjacent to the Yanchep National Park and occurrence 1921 of the Aquatic Root Mat Community in Caves of the Swan Coastal Plain TEC, a hydrogeological assessment of the Carabooda industrial investigation area will be required to determine:</p> <ul style="list-style-type: none"> • the potential pathways of groundwater flow from this area to occurrence 1921 and other cave, karst and wetland features • the risk of detrimental changes in cave water levels arising from development of this area • the risk of cave water contamination at occurrence 1921 and other cave, karst and wetland features arising from various possible industrial uses in this area <p>If the assessment identifies a moderate or higher risk of detrimental changes in groundwater flow to or contamination of water in caves or wetlands arising from industrial uses in the Carabooda industrial investigation area, mitigation measures will be implemented to reduce this risk, which may include:</p> <ul style="list-style-type: none"> • application of appropriate setback of industrial activities • restrictions on types of industrial activities • incorporation of drainage and water quality management controls, including engineering/interception measures. 	Statutory planning processes as detailed in Action Plan A
		8. Minimise impacts to occurrence 1921 where it may be impacted by infrastructure.	Environmental assessment process as detailed in Action Plan C
Assemblages of plants and invertebrate animals of tumulus (organic mound) springs of the Swan Coastal Plain	<ul style="list-style-type: none"> • Maintain the long-term viability of the ecological community within the Strategic Assessment Area. • Increase the extent of the ecological community within secure conservation tenure within the Strategic Assessment Area. • Manage offsite threats to the ecological community within the Strategic Assessment Area. 	9. Protect and manage for conservation occurrence 31 where it occurs in a Bush Forever site 97.	As detailed in Action Plan H
		10. Minimise impacts to the following occurrences where they may be impacted by the infrastructure class of action: 31; 3620.	Environmental assessment process as detailed in Action Plan C

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Claypans of the Swan Coastal Plain	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. Increase the extent of the ecological community within secure conservation tenure within the Strategic Assessment Area. Manage offsite threats to the ecological community within the Strategic Assessment Area. 	11. Protect and manage for conservation the following occurrences where they occur in Bush Forever sites: <ul style="list-style-type: none"> 213, 227, 242, 2481, 3877, 3878, & 3879 (in Bush Forever site 387) 217 (in Bush Forever site 292) 223 & 232 (in Bush Forever site 360) 234 (in Bush Forever site 321) 447 & 448 (in Bush Forever site 422) 754, 756 & 5069 (in Bush Forever site 365) 5088 (in Bush Forever site 255) 	As detailed in Action Plan H
		12. Retain the following occurrences (with consideration of appropriate vegetation buffers) where they may be impacted by the urban or industrial land class of action: 213; 234; 242; 447; 448; 754; 756; 927; 1902; 1903; 1904; 1932; 2862; 2863 4069; 4070; 4073; 4075; 4376; 5069; 5078; 5079; 5080; 5081; 5082; 5084 and 5088.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		13. Minimise impacts to the following occurrences where they may be impacted by the infrastructure class of action: 217; 222; 223; 227; 228; 232; 235; 754; 1902; 1932; 2481; 3877; 3878; 3879; and 4100.	Environmental assessment process as detailed in Action Plan C
<i>Corymbia calophylla</i> - <i>Kingia australis</i> woodlands on heavy soils of the Swan Coastal Plain	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. Increase the extent of the ecological community within secure conservation tenure within the Strategic Assessment Area. Manage offsite threats to the ecological community within the Strategic Assessment Area. 	14. Protect and manage for conservation the following occurrences where they occur in Bush Forever sites: <ul style="list-style-type: none"> 105, 1783 & 1784 (in Bush Forever site 264) 107 & 110 (in Bush Forever site 321) 108, 4345 and 5076 (in Bush Forever site 360) 111 (in Bush Forever site 319) 113 (in Bush Forever site 74) 512 (in Bush Forever site 350) 1989 (in Bush Forever site 387) 	As detailed in Action Plan H
		15. Retain the following occurrences (with consideration of appropriate vegetation buffers) where they may be impacted by the urban or industrial land class of action: 105; 107; 110; 111; 112; 512; 1783; 1784; 4074; 4078; 4083; 4345; 4897; 5076; 5083; 5085; 5086; 5176 and 5665.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		16. Minimise impacts to the following occurrences where they may be impacted by the infrastructure class of action: 105; 108; 110; 111; 112; 512; 1784; 1989; 4345; 5057 and 5076.	Environmental assessment process as detailed in Action Plan C
<i>Corymbia calophylla</i> - <i>Xanthorrhoea preissii</i> woodlands and shrublands of the Swan Coastal Plain	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. Manage offsite threats to the ecological community within the Strategic Assessment Area. 	17. Protect and manage for conservation the following occurrences where they occur in Bush Forever sites: <ul style="list-style-type: none"> 114 (in Bush Forever site 89) 117 and 118 (in Bush Forever site 306) 119 and 4347 (in Bush Forever site 360) 120 (in Bush Forever site 301) 461 (in Bush Forever site 362) 502 and 503 (in Bush Forever site 466) 510 (in Bush Forever site 365) 5061 and 5066 (in Bush Forever site 350) 	As detailed in Action Plan H

Name	Conservation objectives	Conservation commitments	Implementation mechanism
		18. Retain the following occurrences (with consideration of appropriate vegetation buffers) where they may be impacted by the urban land class of action: 114, 117; 4347 and 5061.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		19. Minimise impacts to the following occurrences where they may be impacted by the infrastructure class of action: 114, 119, 120, 510, 4347, 5061 and 5066.	Environmental assessment process as detailed in Action Plan C
Sedgeland in Holocene dune swales of the southern Swan Coastal Plain	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. Increase the extent of the ecological community within secure conservation tenure within the Strategic Assessment Area. Manage offsite threats to the ecological community within the Strategic Assessment Area. 	20. Protect and manage for conservation the following occurrences where they occur in Bush Forever sites: <ul style="list-style-type: none"> 606, 619, 620, 628, 640, 643, 837, 838, 845, 919, 922, 1949, and 2032 (in Bush Forever site 356) 589, 590, 1945 and 1946 (in Bush Forever site 358) 	As detailed in Action Plan H
		21. Retain the following occurrences (with consideration of appropriate vegetation buffers) where they may be impacted by the urban or industrial land class of action: 614, 615, 616, 617, 618, 629, 630, 631, 636, 637, 638, 639, 641, 817, 819, 820, 821, 823, 824, 833, 904, 950, 1793, 1795, 1914, 1922, 1925, 1926, 1945, 3971, 3972 and 4398.	Statutory planning processes as detailed in Action Plan A As detailed in Action Plan H
		22. Minimise impacts to the following occurrences where they may be impacted by the infrastructure class of action: 589, 590, 593, 596, 606, 619, 620, 630, 640, 643, 837, 838, 845, 919, 922, 1946, 1949 and 2032.	Environmental assessment process as detailed in Action Plan C
Shrublands and Woodlands of the eastern Swan Coastal Plain	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. Increase the extent of the ecological community within secure conservation tenure within the Strategic Assessment Area. Manage offsite threats to the ecological community within the Strategic Assessment Area. 	23. Protect and manage for conservation the following occurrences where they occur in Bush Forever sites: <ul style="list-style-type: none"> 32 (in Bush Forever site 306) 659 (in Bush Forever site 53) 747 (in Bush Forever site 481) 	As detailed in Action Plan H
		24. Retain the following occurrences (with consideration of appropriate vegetation buffers) where they may be impacted by the urban or industrial land class of action: 32 and 747.	Statutory planning processes as detailed in Action Plan A As detailed in Action Plan H
		25. Minimise impacts to the following occurrence where it may be impacted by the infrastructure class of action: 659.	Environmental assessment process as detailed in Action Plan C
Shrublands and Woodlands on Muchea Limestone of the Swan Coastal Plain	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. Increase the extent of the ecological community within secure conservation tenure within the Strategic Assessment Area. Manage offsite threats to the ecological community within the Strategic Assessment Area. 	26. Retain the following occurrence (with consideration of appropriate vegetation buffers) where it may be impacted by the urban or industrial land class of action: 1878.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		27. Minimise impacts to the following occurrence where it may be impacted by the infrastructure class of action: 1878.	Environmental assessment process as detailed in Action Plan C
Thrombolite (microbialite)	<ul style="list-style-type: none"> Maintain the long-term viability of the ecological community within the Strategic Assessment Area. 	28. Determine the cause of rising salinity in Lake Clifton by undertaking water quality monitoring and developing a groundwater flow model.	As detailed in Action Plan H

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Community of a Coastal Brackish Lake (Lake Clifton)	<ul style="list-style-type: none">Continue to protect and manage the occurrence of the ecological community within Lake Clifton.Manage offsite threats to the ecological community within the Strategic Assessment Area.	29. Investigate potential remedial action to counteract the impact of rising salinity.	Monitoring processes as detailed in Action Plan I
Thrombolite (microbial) community of coastal freshwater lakes of the Swan Coastal Plain (Lake Richmond)	<ul style="list-style-type: none">Maintain the long-term viability of the ecological community within the Strategic Assessment Area.Continue to protect and manage the occurrence of the ecological community within Rockingham Lakes Regional Park.Manage offsite threats to the ecological community within the Strategic Assessment Area.	<i>The conservation objectives for this community will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A

Table 3: Conservation commitments for threatened fauna

Name	Conservation objectives	Conservation commitments	Implementation mechanism
BIRDS			
<i>Botaurus poiciloptilus</i> Australasian Bittern	<ul style="list-style-type: none"> Maintain the long-term viability of the Australasian Bittern within the Strategic Assessment Area through the protection of known habitat and maintenance of a mosaic and diversity of potential wetland habitats for use by the species. 	30. Manage indirect impacts to this species on a site specific basis, paying particular attention to sites directly adjacent, or in close proximity to the classes of action footprint. This will be done via: <ul style="list-style-type: none"> continuing to implement existing groundwater management arrangements and potential future site supplementation; maintaining vegetated buffers at all sites where they currently exist and seeking to develop buffer zones where they currently do not; controlling access to sites to minimise disturbance to shorebirds in a way most appropriate to the individual site; and/or educating the neighbouring community about the Australasian Bittern and what they can do to assist with their conservation. 	Statutory planning and approval processes as detailed in Action Plans A, B, C and D As detailed in Action Plan H
		31. Protect important occurrences and manage for conservation by continuing to implement the Bush Forever Program as detailed in Action Plan H.	As detailed in Action Plan H
<i>Calidris ferruginea</i> Curlew Sandpiper	<ul style="list-style-type: none"> Ongoing use* of the Strategic Assessment Area by the species. Maintain and where possible enhance Curlew Sandpiper habitat. Reduce disturbance at key feeding and roosting sites**. <p>*Ongoing use' means that areas remain as habitat in which Curlew Sandpiper has been recorded and where the habitat is not lost permanently due to development actions.</p> <p>**Key feeding and roosting sites' are those site at which the species has been recorded in numbers exceeding 0.1% of the flyway population.</p>	<i>Commitments to prevent indirect impacts to migratory shorebirds (see Section 4.3) will directly apply to the Curlew Sandpiper. Accordingly no specific conservation commitments for this species have been included in the Strategic Conservation Plan.</i>	N/A
<i>Calyptorhynchus banksii naso</i> Forest Red-tailed Black-cockatoo	<ul style="list-style-type: none"> Ensure the continued use of the Strategic Assessment Area by the subspecies. Avoid and protect habitat in the Strategic Assessment Area that is required to maintain the north-western extent of the subspecies' distribution and population. Maintain habitat connectivity across the Strategic Assessment Area between the north-eastern and southern extent of the subspecies' range. Undertake research to improve knowledge about the subspecies and inform conservation effort and management in the Strategic Assessment Area. 	<i>Commitments for Carnaby's cockatoo to maintain habitat and mitigate impacts will provide a range of concurrent benefits for the Forest Red-tailed Black-cockatoo.</i> <i>Consideration of habitat values for the Forest Red-tailed Black-cockatoo will form part of the ongoing processes for protecting land for black cockatoos.</i>	N/A

Name	Conservation objectives	Conservation commitments	Implementation mechanism
<i>Calyptorhynchus baudinii</i> Baudin's cockatoo	<ul style="list-style-type: none"> Ensure the continued use of the Strategic Assessment Area by the species. Avoid and protect habitat in the Strategic Assessment Area that is required to maintain the northern extent of the species distribution. Maintain habitat connectivity across the Strategic Assessment Area and with the southern extent of the species' range. Undertake research to improve knowledge about the species and inform conservation effort and management in the Strategic Assessment Area. 	<p><i>Commitments for Carnaby's cockatoo to maintain habitat and mitigate impacts will provide a range of concurrent benefits for the Baudin's cockatoo.</i></p> <p><i>Consideration of habitat values for the Baudin's cockatoo will form part of the ongoing processes for protecting land for black cockatoos.</i></p>	N/A
<i>Calyptorhynchus latirostris</i> Carnaby's cockatoo	<ul style="list-style-type: none"> Maintain habitat for the species to ensure ongoing use of the Strategic Assessment Area including: <ul style="list-style-type: none"> habitat within the Swan Coastal Plain IBRA region; habitat within the Jarrah Forest IBRA region; and key resources that provide for feeding, breeding and roosting. Undertake actions that address the loss of feeding habitat within areas of pine plantations. Undertake actions that contribute to the conservation of habitat outside of the Strategic Assessment Area. Maintain habitat connectivity to facilitate species movement within and outside the Strategic Assessment Area. Undertake research to improve knowledge about the species and inform the conservation effort. 	<p>32. Maintain cockatoo habitat and habitat connectivity within the Strategic Assessment Area by:</p> <ul style="list-style-type: none"> Limiting clearing of feeding habitat within the classes of action to no more than: <ul style="list-style-type: none"> 24,400 ha of pines; 9,700 ha of Swan Coastal Plain feeding habitat; and 4,400 ha of Jarrah Forest feeding habitat. Avoiding clearing of known roosting and confirmed and possible breeding sites demonstrated to be viable within urban, industrial and rural residential areas. Replacing 5,000 ha of pines habitat through replanting or other mechanisms. <p>33. Mitigate impacts of clearing of cockatoo habitat through:</p> <ul style="list-style-type: none"> Revegetation to restore habitat values as far as practicable in areas disturbed by BRM extraction when the area is not required for future classes of action. Existing habitat within such areas includes: <ul style="list-style-type: none"> 1,300 ha of pines; 400 ha of Swan Coastal Plain habitat; and 900 ha of Jarrah Forest habitat. Rehabilitating habitat disturbed by infrastructure construction but not required for permanent structures or maintenance. 	<p>Statutory planning and approval processes as detailed in Action Plans A, B, C and D</p> <p>Processes detailed in Action Plan E</p> <p>Processes as detailed in Action Plans C and D</p>

Name	Conservation objectives	Conservation commitments	Implementation mechanism
		<p>34. Offset residual impacts to habitat through:</p> <ul style="list-style-type: none"> Protecting and managing no less than 116,000 ha of Carnaby's cockatoo feeding habitat through the creation of new conservation reserves within and outside the Strategic Assessment Area. Restoring Swan Coastal Plain feeding habitat through the re-creation and rehabilitation of degraded habitat in conservation areas and planting of species of trees suitable for cockatoo feeding in open space across urban, industrial and rural residential areas in partnership with community groups and local government. Improving and supplementing of breeding habitat across the species range through provision of the no less than 700 artificial hollows from Eneabba to Ravensthorpe to address limitations in breeding hollows. Improve breeding and associated feeding habitat at known breeding sites in the Wheatbelt of WA which may include fencing and protecting remnants, hollow repair and supplementation, revegetation of food plants and rehabilitation of feeding habitat, and control of nest competitors. 	As detailed in Action Plan H
		<p>35. Improve knowledge about the species and inform conservation efforts through the following measures:</p> <ul style="list-style-type: none"> Ongoing monitoring program across the distribution of the species to improve the reliability of population estimates and observe changes in the local and total population size and movement arising from both clearing of habitat and conservation projects. Research to fill critical information gaps. Artificial hollow monitoring program. Education and signage program to raise awareness of the threat to cockatoos from car strikes. Measures and guidance to improve management of fire in cockatoo feeding habitat areas to optimise food resources. Investigation aimed at understanding the value and benefit of introducing artificial water sources into feeding habitat to increase visitation, feeding and roosting. 	As detailed in Action Plan H
<i>Numenius madagascariensis</i> Eastern Curlew	<ul style="list-style-type: none"> Ongoing use of the Strategic Assessment Area by the species. Maintain and where possible enhance important habitat. Reduce disturbance at feeding and roosting sites. 'Ongoing use' means that areas remain as habitat in which migratory shorebirds have been recorded and where the habitat is not lost permanently due to development actions. 	<i>Commitments to prevent indirect impacts to migratory shorebirds (see Section 4.3) will directly apply to the Eastern Curlew. Accordingly no specific conservation commitments for this species have been included in the Strategic Conservation Plan.</i>	N/A

Name	Conservation objectives	Conservation commitments	Implementation mechanism
<i>Rostratula australis</i> Australian Painted Snipe	<ul style="list-style-type: none">Maintain the long-term viability of the species within the Strategic Assessment Area through the protection and maintenance of a mosaic and diversity of suitable wetland habitats for use by the species.	36. Manage indirect impacts to this species on a site specific basis, paying particular attention to sites directly adjacent, or in close proximity to the classes of action footprint. This will be done via: <ul style="list-style-type: none">continuing to implement existing groundwater management arrangements and potential future site supplementation;maintaining vegetated buffers at all sites where they currently exist and seeking to develop buffer zones where they currently do not;controlling access to sites to minimise disturbance to shorebirds in a way most appropriate to the individual site; and/oreducating the neighbouring community about the Australian Painted Snipe and what they can do to assist with their conservation.	Statutory planning and approval processes as detailed in Action Plans A, B, C and D As detailed in Action Plan H
		37. Protect important occurrences and manage for conservation by continuing to implement the Bush Forever Program as detailed in Action Plan H.	As detailed in Action Plan H
MAMMALS			
<i>Bettongia penicillata ogilbyi</i> Woylie	<ul style="list-style-type: none">Prevent impacts to known habitat in the Strategic Assessment Area.Maintain the potential for the species to occur within the Strategic Assessment Area.	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Dasyurus geoffroii</i> Chuditch, Western Quoll	<ul style="list-style-type: none">Minimise potential threats from future development to maintain the long-term viability of the Chuditch within the Strategic Assessment Area.Protect and maintain a connected network of known and potential habitat within the Strategic Assessment Area.	38. Plan and design infrastructure to minimise impacts to the species' habitat with a particular focus on minimising habitat fragmentation.	Environmental assessment process as detailed in Action Plan C
		39. Maintain effective and functional habitat linkages in the Chidlow and Mundaring areas to maintain connectivity.	Statutory planning processes as detailed in Action Plan A As detailed in Action Plan H
		40. Actively manage indirect impacts to the species within conservation reserves. Including through: <ul style="list-style-type: none">programs to reduce feral predators.management of access to important areas.	As detailed in Action Plan H
<i>Pseudocheirus occidentalis</i> Western Ringtail Possum	<ul style="list-style-type: none">Maintain the long-term viability of the Western Ringtail Possum within the Strategic Assessment Area by protecting and maintaining a connected network of known and potential habitat within the Strategic Assessment Area.	41. Retain viable corridor/s of vegetation in the Dawesville / Panarama urban development area to act as an effective and functional east-west habitat linkage to maintain habitat connectivity.	Statutory planning processes as detailed in Action Plan A As detailed in Action Plan H
		42. Actively manage threats to the species within the Yalgorup National Park and along the urban/woodland interface. Including: <ul style="list-style-type: none">Continued feral baiting programs.Reduce habitat degradation by limiting access from increased development adjacent to known habitat.<i>Phytophthora</i> dieback, monitoring and control.	Conservation processes as detailed in Action Plan H
<i>Setonix brachyurus</i> Quokka	<ul style="list-style-type: none">Maintain the long-term viability of the species within the Strategic Assessment Area through the protection and maintenance of a connected network of known and potential habitat.	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A

Name	Conservation objectives	Conservation commitments	Implementation mechanism
REPTILES			
<i>Pseudemydura umbrina</i> Western Swamp Tortoise	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage populations at Ellenbrook Nature Reserve and Twin Swamps Nature Reserve. 	43. Protect known and possible future habitat, including: <ul style="list-style-type: none"> the Ellenbrook Nature Reserve and Twin Swamps Nature Reserve the potential translocation site at Perth airport through collaboration with Commonwealth Government agencies. 	Conservation processes as detailed in Action Plan H
INSECTS			
<i>Leioproctus douglasiellus</i> A short-tongued bee & <i>Neopasiphae simplicior</i> A native bee	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area through protecting and maintaining known habitat. Ensure adequate representation of potential habitat outside of classes of Action. Gain a better understanding of the potential importance of the Perth-Peel area to the species in order to inform management and conservation planning. 	44. Protect and manage the known population of <i>L. douglasiellus</i> at Carousel Swamp in Cannington.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		45. Offset residual impacts by increasing the extent of protected areas that support known habitat, including: <ul style="list-style-type: none"> extending the Kenwick Wetlands management boundary extending the Forrestdale Lake Nature Reserve and Gibbs Road Nature Reserve boundary 	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		46. Continue to manage protected areas supporting the two species to reduce threats. Including management of off road vehicle access, weed control, fire control and control of feral bees.	Conservation processes as detailed in Action Plan H

Table 4: Conservation commitments for threatened flora

Name	Conservation objectives	Conservation commitments	Implementation mechanism
<i>Acacia anomala</i> Grass Wattle, Chittering Grass Wattle	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Continue to manage populations in existing protected areas. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Acacia aphylla</i> Leafless Rock Wattle	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Continue to protect and manage populations within Beelu National Park. Focus conservation efforts on larger populations with greater potential for long-term survival. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Andersonia gracilis</i> Slender Andersonia	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population located within Greater Brixton Street Wetlands. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Anthocercis gracilis</i> Slender Tailflower	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Continue to protect and manage the populations within John Forrest National Park and Marrinup State Forest. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Banksia mimica</i> Summer Honeypot	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Improve the security of tenure and management of populations within the Strategic Assessment Area. 	47. Retain Population 3 where it intersects with urban or industrial land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
<i>Caladenia huegelii</i> King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Focus conservation efforts on larger populations with greater potential for long-term survival. Improve the security of tenure and management of populations within the Strategic Assessment Area. 	48. Protect and manage the following populations where they occur in Bush Forever sites: <ul style="list-style-type: none"> 6 (in Bush Forever site 245). 37 (in Bush Forever site 125). 42 (in Bush Forever site 390). 	Bush Forever Program as detailed in Action Plan H
		49. Retain the following populations where they intersect with urban or industrial land: 18, 42. For Population 42, conduct surveys to locate all plants in order to define the retention area.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		50. Minimise impacts to the following populations where they intersect with infrastructure: 6, 22, 37 and 55.	Environmental assessment process as detailed in Action Plan C
<i>Calytrix breviseta</i> subsp. <i>breviseta</i>	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by protecting and managing the existing populations within the Greater Brixton Street 	51. Protect and manage the following populations where they occur in Bush Forever sites: <ul style="list-style-type: none"> 1 (in Bush Forever site 387). 2 (in Bush Forever site 387). 	Bush Forever Program as detailed in Action Plan H

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Swamp Starflower	Wetlands.	52. Retain the following populations where they intersect with urban or industrial land: 1; 2.	Environmental assessment process as detailed in Action Plan C
<i>Conospermum undulatum</i> Wavy-leaved Smokebush	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Focus conservation efforts on larger populations with greater potential for long-term survival. Improve the security of tenure and management of populations within the Strategic Assessment Area 	53. Protect and manage the following populations where they occur in Bush Forever sites: <ul style="list-style-type: none"> 3 (in Bush Forever site 122). 4 (in Bush Forever site 123). 8 (in Bush Forever site 320). 13 (in Bush Forever site 53). 16 (in Bush Forever sites 319 and 440). 18 (in Bush Forever site 50). 	Bush Forever Program as detailed in Action Plan H
		54. Retain the following populations where they intersect with urban or industrial land: 4; 5; 10; 11; 12; 13; 16; 19; 23; 28.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		55. Retain the following populations where they intersect with rural residential land: 12; 15.	Statutory planning processes as detailed in Action Plan B Conservation processes as detailed in Action Plan H
		56. Minimise impacts to the following populations where they intersect with infrastructure: 3; 4; 8; 13; 16; 17; 18; 28.	Environmental assessment process as detailed in Action Plan C
<i>Darwinia apiculata</i> Scarp Darwinia	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Darwinia foetida</i> Muchea Bell	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Diuris drummondii</i> Tall Donkey Orchid	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Continue to protect large populations of the species within the Strategic Assessment Area such as that which occurs within Korung National Park and manage those populations for conservation. 	57. Retain Population 6 where it intersects with urban or industrial land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
<i>Diuris micrantha</i> Dwarf Bee-orchid	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A

Name	Conservation objectives	Conservation commitments	Implementation mechanism
<i>Diuris purdiei</i> Purdie's Donkey-orchid	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	58. Protect and manage the following population where it occurs in Bush Forever sites: <ul style="list-style-type: none"> 3 (in Bush Forever site 125). 	Bush Forever Program as detailed in Action Plan H
		59. Retain the following populations where they intersect with urban or industrial land: 8, 19.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
<i>Drakaea elastica</i> Glossy-leafed Hammer-orchid, Praying Virgin	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	60. Retain Population 37 where it intersects with urban or industrial land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		61. Minimise impacts to Population 38 where it intersects with infrastructure.	Environmental assessment process as detailed in Action Plan C
<i>Drakaea micrantha</i> Dwarf Hammer-orchid	<ul style="list-style-type: none"> Monitor the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Eleocharis keigheryi</i> Keighery's Eleocharis	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Eucalyptus argutifolia</i> Yanchep Mallee, Wabbling Hill Mallee	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Improve the security of tenure and management of important populations within the Strategic Assessment Area 	62. Retain the following populations where they intersect with urban or industrial land: 13, 14, 15.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		63. Offset residual impacts to the species by protecting and managing the following populations: 3 (outside the Strategic Assessment Area), 18 (Outside the Strategic Assessment Area), 19, 20, 21.	As per the Conservation Program as detailed in Action Plan H
<i>Eucalyptus balanites</i> Cadda Road Mallee, Cadda Mallee	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population at Wungong. 	64. Retain Population 2 where it intersects with urban or industrial land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
<i>Grevillea althoferorum</i>	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population in the Bullsbrook Nature Reserve. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Grevillea christineae</i>	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to manage the 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in</i>	N/A

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Christine's Grevillea	existing population at Bells Rapid Park.	<i>the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	
Grevillea curviloba subsp. curviloba Curved-leaf Grevillea	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	65. Protect and manage the following population where it occurs in Bush Forever sites: <ul style="list-style-type: none"> 10 (in Bush Forever site 300). 	Bush Forever Program as detailed in Action Plan H
		66. Retain Population 10 where it intersects with urban or industrial land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		67. Minimise impacts to the following populations where they intersect with infrastructure: 1, 5.	Environmental assessment process as detailed in Action Plan C
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
Grevillea flexuosa Zig Zag Grevillea	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
Lasiopetalum pterocarpum Wing-fruited Lasiopetalum	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage populations within the Serpentine National Park. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
Lepidosperma rostratum Beaked Lepidosperma	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Focus conservation efforts on larger populations of the species with a greater chance of long-term survival. 	68. Protect and manage the following populations where they occur in Bush Forever sites: <ul style="list-style-type: none"> 1 (in Bush Forever site 387). 3 (in Bush Forever site 422 and 387). 7 (in Bush Forever site 387). 	Bush Forever Program as detailed in Action Plan H
		69. Retain the following populations where they intersect with urban or industrial land: 1, 3 and 6.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
Macarthuria keigheryi Keighery's Macarthuria	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	70. Protect and manage the following population where it occurs in Bush Forever sites: <ul style="list-style-type: none"> 3 (in Bush Forever site 319). 	Bush Forever Program as detailed in Action Plan H
		71. Retain Population 3 where it intersects with urban or industrial land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
Ptilotus	<ul style="list-style-type: none"> Protect the population of the species within the Greater Brixton 	72. Protect and manage the following population where it occurs in Bush Forever sites:	Bush Forever Program as detailed in Action

Name	Conservation objectives	Conservation commitments	Implementation mechanism
<i>pyramidatus</i> Pyramid Mulla Mulla	Street Wetlands.	<ul style="list-style-type: none"> 1 (in Bush Forever site 387). 	Plan H
<i>Synaphea</i> sp. Fairbridge Farm (D.Papenfus 696). Selena's Synaphea	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	73. Protect and manage the following population where it occurs in Bush Forever sites: <ul style="list-style-type: none"> 3 (in Bush Forever site 375) 7 (in Bush Forever site 387). 	Bush Forever Program as detailed in Action Plan H
		74. Minimise impacts to Population 1 and 3 where they intersect with infrastructure.	Environmental assessment process as detailed in Action Plan C
<i>Synaphea</i> sp. Pinjarra (R.Davis 6578). Club-leafed Synaphea	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Synaphea stenoloba</i> Dwellingup Synaphea	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. Improve the security of tenure and management of populations within the Strategic Assessment Area. 	75. Retain the following populations where they intersect with urban or industrial land: 2, 6, 8.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		76. Minimise impacts to the following population where it intersects with infrastructure: 1, 15.	Environmental assessment process as detailed in Action Plan C
<i>Tetraria australiensis</i> Southern Tetraria	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage populations within conservation reserves. 	77. Protect and manage the following populations where they occur in Bush Forever sites: <ul style="list-style-type: none"> 1 (in Bush Forever site 360). 5 (in Bush Forever site 354). 8 (in Bush Forever site 360). 16 (in Bush Forever site 371). 	Bush Forever Program as detailed in Action Plan H
		78. Retain population 7 where it intersects with urban land.	Statutory planning processes as detailed in Action Plan A Conservation processes as detailed in Action Plan H
		79. Minimise impacts to Population 10 where it intersects with infrastructure.	Environmental assessment process as detailed in Action Plan C
<i>Thelymitra dedmaniarum</i> Cinnamon Sun Orchid	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Thelymitra stellata</i> Star Sun-orchid	<ul style="list-style-type: none"> Maintain the long-term viability of the species within the Strategic Assessment Area. 	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be</i>	N/A

Name	Conservation objectives	Conservation commitments	Implementation mechanism
		<i>implemented.</i>	
<i>Trithuria occidentalis</i> One-sexed Hydatella	<ul style="list-style-type: none">Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population within nature reserves.	<i>The conservation objectives for this species will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A
<i>Verticordia fimbrilepis</i> subsp. <i>fimbrilepis</i> Shy Featherflower	<ul style="list-style-type: none">Maintain the long-term viability of the species within the Strategic Assessment Area by continuing to protect and manage the existing population within Jarrahdale State Forest.	<i>The conservation objectives for this TEC will be achieved through higher level commitments and existing ongoing conservation and planning mechanisms, accordingly no specific conservation commitments have been included in the Strategic Conservation Plan. Established and ongoing conservation measures should continue to be implemented.</i>	N/A

4.3 LISTED MIGRATORY SPECIES

In addition to the over-arching conservation commitments (Section 4.1), conservation objectives and commitments for migratory shorebirds are presented in Table 5.

Table 5: Conservation commitments for migratory shorebirds

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Migratory shorebirds	<ul style="list-style-type: none">Ongoing use of the Strategic Assessment Area by the 29 migratory shorebird species that have previously been recorded.Ongoing use of all important habitat areas across the Strategic Assessment Area by migratory shorebird species.Protection and maintenance of a mosaic and diversity of wetland and coastal habitats for use by these bird species. <p>‘Ongoing use’ means that areas remain as habitat in which migratory shorebirds have been recorded and where the habitat is not lost permanently due to development actions</p>	<p>80. Manage indirect impacts to migratory shorebirds on a site specific basis, paying particular attention to sites directly adjacent, or in close proximity to the classes of action footprint. This will be done via:</p> <ul style="list-style-type: none">continuing to implement existing groundwater management arrangements and potential future site supplementation;maintaining vegetated buffers at all sites where they currently exist and seeking to develop buffer zones where they currently do not;controlling access to sites to minimise disturbance to shorebirds in a way most appropriate to the individual site; and/oreducating the neighbouring community about shorebirds and what they can do to assist with their conservation.	<p>Statutory planning and approval processes as detailed in Action Plans A, B, C and D</p> <p>Conservation processes as detailed in Action Plan H</p>

4.4 WETLANDS OF INTERNATIONAL IMPORTANCE

In addition to the over-arching conservation commitments (Section 4.1), conservation objectives and commitments for the three wetlands of international importance that occur in the Strategic Assessment Area are presented in Table 6.

Table 6: Conservation commitments for wetlands of international importance

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Becher Point Wetlands	<p>Maintain the ecological character of the Becher Point Ramsar site via the ongoing presence of the following characteristics:</p> <ul style="list-style-type: none"> A suite of approximately 60 discrete, small wetlands in inter-dunal swales. Geological sequence of wetland ages with corresponding evolution of wetland characteristics. Seasonal wetting of inter-dunal swales Water quality that is not saline, acidic or eutrophic. Vegetation dominated by native plants and very low abundance of Typha. No loss of Sedgeland in Holocene dune swales of the southern Swan Coastal Plain TEC. 	<p>81. Implement key actions necessary to improve and maintain the health of the wetlands using a whole of catchment management approach, including improvements to the monitoring and reporting on the health of the system.</p> <p>82. Implement a monitoring program that includes the limits of acceptable change, and installing additional monitoring bores to determine impacts from nearby water users to ensure ongoing viability of the vegetation communities of Becher Point wetlands.</p> <p>83. Conserve the ecological characteristics of the Becher Point Ramsar site by managing adjacent land uses and indirect impacts through implementing measures to prevent and discourage unlawful access to the site and illegal activities; facilitate managed recreation opportunities and protect and conserve threatened ecological communities.</p> <p>84. Continue to manage groundwater resources in accordance with the requirements of existing legislation and policy including taking an adaptive management approach to groundwater allocations based on annual evaluations.</p>	Action Plans A, B, I
Forrestdale and Thomsons Lakes	<p>Maintain the ecological character of the Forrestdale and Thomsons Lakes Ramsar site via the ongoing presence of the following characteristics:</p> <ul style="list-style-type: none"> A regular cycle of wetting and drying. Shallow water depths. Water quality that is not saline, acidic or eutrophic. Vegetation dominated by native plants. Suitable foraging, roosting and breeding habitat for water birds (incl. migratory species). Presence of Threatened Ecological Communities, rare and priority flora species, migratory shorebirds. 	<p>85. Implement key actions necessary to improve and maintain the health of the wetlands using a whole of catchment management approach, including improvements to the monitoring and reporting on the health of the system.</p> <p>86. Implement a monitoring program that includes the limits of acceptable change.</p> <p>87. Continue to manage groundwater resources in accordance with the requirements of existing legislation and policy including taking an adaptive management approach to groundwater allocations based on annual evaluations.</p> <p>88. Conduct an investigation into a potential storm water supplementation program for Forrestdale Lake to identify limits of acceptable change, incorporate findings into adaptive management arrangements and future planning.</p> <p>89. Implement management arrangements to further conserve the ecological characteristics of the wetland, including fencing extension and upgrades, construction of passive recreation facilities, vegetation rehabilitation, fauna management and rubbish removal.</p>	Action Plan I
Peel-Yalgorup System	<p>Maintain the ecological character of the Peel-Yalgorup Ramsar site via the ongoing presence of the following characteristics:</p> <ul style="list-style-type: none"> Large and diverse complex of ecosystem types including shallow estuaries, coastal saline lakes and freshwater marshes. Populations of plants and animals important to maintaining the biodiversity of the Swan Coastal Plan bioregion, include threatened species and communities. An actively growing Thrombolite community. Water quality that is equivalent to or better than current and/or recent historical conditions. Suitable habitat to support a range of species during critical life cycle 	<p>90. Establish the proposed Peel Regional Park and marine management area (as detailed in Action Plan H) including the following priority conservation projects:</p> <ul style="list-style-type: none"> Peel Yalgorup Ramsar site boundary extension; acquisition of regional open space land for inclusion in the conservation reserve system; Peel-Harvey Riparian Zone Restoration Project; Access to the estuary strategy; and Migratory Bird Habitat Protection works (including expansion of existing nature reserves and conservation park into intertidal areas). <p>91. Implement a monitoring program that includes the limits of acceptable change.</p> <p>92. Extend the Yalgorup National Park (as detailed in Action Plan H).</p>	Action Plans A, B, H and I

Name	Conservation objectives	Conservation commitments	Implementation mechanism
	<p>stages, including breeding and moulting waterbirds; over-wintering migratory shorebirds; and breeding fish and crustaceans.</p> <ul style="list-style-type: none">• Very high abundance of waterbirds and migratory shorebirds, sufficient to meet Ramsar listing criteria.• Breeding, nursery and feeding habitat for numerous fish and crustacean species.	<p>93. Continue to manage groundwater resources in accordance with the requirements of existing legislation and policy including taking an adaptive management approach to groundwater allocations based on annual evaluations.</p> <p>94. Any future development within the Ravenswood North or Pinjarra West precincts will require specific consideration of arising water quality issues. These precincts are located in environmentally sensitive hydrological catchments and may require additional design measures to address water quality and quantity. Such measures should be identified as early in the land use planning process as possible, in accordance with the Better Urban Water Management Framework.</p> <p><i>Additional commitments related to the Thrombolite (microbialite) Community of a Coastal Brackish Lake (Lake Clifton) are incorporated into Action Plan F.</i></p> <p><i>Additional commitments related to Water Quality are incorporated into Action Plans G and H.</i></p>	

4.5 WORLD AND NATIONAL HERITAGE

Conservation objectives for the two World and/or National Heritage sites that occur in the Strategic Assessment Area are presented below. There are no conservation commitments for these sites.

Table 7: Conservation objectives for World and/or National Heritage sites

Name	Conservation objectives	Conservation commitments	Implementation mechanism
Fremantle Prison (former)	<ul style="list-style-type: none">• Continue to manage the Fremantle Prison (former) to maintain its World and National Heritage values.	N/A	N/A
The Goldfields Water Supply Scheme	<ul style="list-style-type: none">• Continue to manage the Goldfields Water Supply Scheme to maintain its National Heritage values.	N/A	N/A

5 Process for review and modification

In certain circumstances this Action Plan may need to be reviewed and modified to amend the commitments. These circumstances include:

- Where it is determined through monitoring that commitments are not achieving the conservation outcomes and objectives.
- Where information has become available that a commitment is no longer necessary to achieve the conservation outcomes and objectives.
- Where minor technical amendments are required to the wording or operational elements of a commitment or commitments.

Annual monitoring and reporting, and the five-yearly review of the Strategic Conservation Plan (see Action Plan I) will be the key tools used to inform possible modifications to this Action Plan.

Finally, this Action Plan is subject to approval by the Commonwealth Minister for the Environment, as part of the overall strategic assessment (under Part 10 of the EPBC Act) of the Strategic Conservation Plan. In the case of proposed amendments of a substantial manner, the Action Plan will be re-submitted to the Minister for approval.

