



Department of Biodiversity,
Conservation and Attractions



SWAN CANNING
RIVERPARK



Swan Canning River Protection Strategy Progress Report 2017



Acknowledgements

This report was prepared by the Department of Biodiversity, Conservation and Attractions (formerly the Department of Parks and Wildlife) on behalf of the Swan River Trust.

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Department of **Biodiversity,**
Conservation and Attractions



SWAN CANNING
RIVERPARK



Swan Canning

River Protection Strategy

Progress Report 2017

Executive Summary

The *Swan Canning River Protection Strategy* (SCRPS) was released in November 2015 and heralded a new approach to bringing together a range of government organisations to clearly identify how agencies are working, both individually and collaboratively, to produce positive outcomes for the rivers. This is the first Progress Report by the Swan River Trust based on the implementation of the SCRPS Strategic Management Program. The development of this report has been supported by the Department of Parks and Wildlife.

From November 2015 to May 2016, the Department of Parks and Wildlife worked with partner agencies to establish the operations of the SCRPS Advisory Group, and begin the development of agreed reporting frameworks to ensure that each partner clearly understood their agreed responsibilities and proposed reporting timeframes. With the first SCRPS Advisory Group meeting in May 2016, the implementation of the SCRPS was considered to formally commence, even though the various projects and tasks listed by agencies represents ongoing core business being undertaken prior to those dates. As a result, this report covers the period from May 2016 to May 2017.

Agencies have provided short status reports on each project or task undertaken in support of SCRPS actions and contributed to additional highlight stories on examples of collaboration with other public-sector organisations, the community, industry or research organisations.

The actions within the SCRPS Strategic Management Program are structured around eight objectives. Based on the information provided by partner agencies, the status of these objectives within the reporting period is as follows:

Objective 1: Increase management coordination and collaboration between organisations with Riverpark responsibilities

Overall implementation is pleasing with the formal structures and agreements to support the implementation of the SCRPS now in place. Additional engagement and interaction between agencies to support activity beyond the actions listed in the SCRPS would be welcomed.

Objective 2: Improve water quality and manage environmental flow

This is a substantial objective, containing four separate strategies and 14 actions. Water quality improvement in rivers is only achieved through consistent and long-term activity in the catchment to reduce point and non-point source contributions and improving the condition of drains and tributaries to 'strip' contaminants out before they reach the rivers. The Department of Parks and Wildlife, Department of Water, Department of Environment Regulation and local governments are all working in diverse areas to reach these outcomes.

Objective 3: Ensure management decisions are based on appropriate knowledge

Objective three has four actions, focussing on various monitoring programs across water quality and ecological health. These programs allow the tracking of progress against targets and the effectiveness of management strategies for the river systems. Some minor delays have occurred in this objective due to a shift in resourcing while responding to critical incidents such as the Swan Avon flood event in February 2017.

Objective 4: Protect, manage and enhance biodiversity

This is the largest objective with five strategies and 14 actions. Implementation is progressing well, with only minor delays in one project investigating riparian condition and links to hydro-climatological change.

Objective 5: Maintain and improve sense of place with the Riverpark

This objective focuses on improving community understanding and engagement and shows solid progress in providing opportunities for people to engage with information, interpretation and educational opportunities focussing on culture and natural heritage. The Riverpark Trails project has been a successful collaboration in supporting this objective.

Objective 6: Provide access and a safe environment for Riverpark users

This objective has four strategies and 13 actions that focus on safe access and use of facilities both on water and land, as well as continuing to improve the communities' ability to access public lands adjoining the rivers. There have been minor delays in strategic projects supporting improved public access and foreshore development, however these are progressing in 2017-18. A project to finalise dinghy management around the foreshores is almost complete, with only two local governments remaining to finalise the implementation of dinghy management systems. Ongoing works continue with local governments and other agencies. This includes Department of Transport and Main Roads as they work to improve Riverpark facilities including cycle paths, marine facilities, toilets and lookouts.

Objective 7: Improve public knowledge and understanding of the Riverpark

There are five actions under this objective with good progress being made in all areas. One collaboration of note is the substantial and long-term commitment of the Trust and Parks and Wildlife to an important community partnership with Alcoa and Perth NRM in providing funding for conservation activities by local groups.

Objective 8: Improve the way we do business

There are four strategies and 11 actions supporting this objective covering external investment, statutory approvals processes, legislation and support businesses. Minor delays were experienced with several strategic land use planning initiatives during the reporting period, including precinct planning, but these will be programmed in 2017-18 as work continues on three actions to support appropriate and responsible development in the Riverpark. A review of the *Swan and Canning Rivers Management Act 2006* and Swan and Canning Rivers Management Regulations 2007 will be undertaken in 2017-18 to assess their effectiveness.

Introduction

The Swan Canning river system is an iconic part of the Perth environmental, economic, and social landscape. The Swan River Trust (the Trust) is the community steward for the river system. The rivers provide a backdrop to the lives of the residents of Perth. Like any significant place, it is subject to laws and requirements administered by various agencies and local governments. The only way to ensure the continuing health and amenity of the rivers is to have all elements of government working together in alignment.

The *Swan Canning River Protection Strategy (SCRPS)* was developed by the Swan River Trust, as required by the *Swan and Canning Rivers Management Act 2006*, to coordinate the efforts of individual agencies in order to achieve this goal. The SCRPS was released in November 2015.

The SCRPS was developed in consultation with other government agencies, the community and various recreational, sporting, and community organisations with an interest in the future of the rivers. It includes a Strategic Management Program that lists those actions that the lead agencies have identified as part of their core business that contribute to the ecological health and community benefit of the Swan and Canning rivers. The SCRPS Strategic Management Program contains 33 priority actions, indicated with a “P”. These priority actions are required to be undertaken within five years and are a key performance indicator of the SCRPS. Achievement reporting agreements have been developed with the lead agencies to define individual activities to implement actions.


This River Protection Strategy Progress Report provides an update on the status of these agreed actions and highlights the work of the SCRPS partner agencies in implementing this important cross-government initiative.

Understanding this Report

This report should be read in conjunction with the SCRPS. A ‘traffic light’ approach has been developed to provide an easy visual reference to the status of each action listed in the SCRPS. The status of each action is displayed in a pie chart. Each pie chart is divided into segments depending on how many activities (projects or tasks) have been identified for each action. This provides a visual display of how the concurrent activities are tracking within the associated action. Most actions only have one or two activities attached, whilst others may have up to ten. Some activities may be relatively minor. The classification is provided below:




- 1 Green (on track):** Activity is on track to address action.
- 2 Amber (at risk):** Activity undertaken is experiencing minor delays or is at risk of not addressing action. Attention required.
- 3 Red (significant delay):** Activity is experiencing significant delays and is unlikely to address action in the near future. Immediate review required.

Each lead agency has reviewed and reported on the status of the projects or tasks they are delivering in support of their SCRPS actions. As a result, each segment of the pie chart receives a colour depending upon the status of the relevant activity. For example, in the below action, the Department of Parks and Wildlife (Parks and Wildlife) has four identified activities that are delivering against the action. One activity is slightly delayed and therefore amber, while the other three are on track and are green.

6.3 Monitor and report on the extent and severity of algal blooms and other events affecting water quality	
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Objective 1: Increase management coordination and collaboration between organisations with Riverpark responsibilities

1 Implement and review the strategy

Action	Status	Parks & Wildlife	Swan River Trust
1.1 Establish a RPS Advisory Group (P)		●	
1.2 Establish collaborative agreements between management organisations (P)		●	●
1.3 Biennial and five-yearly reports to be delivered to the Minister, partners and the community (P)		●	

Implementation and Review







The SCRPS Advisory Group was established in May 2016 with representatives from each lead organisation, as well as the Water Corporation and Tourism WA. Parks and Wildlife coordinates the SCRPS Advisory Group to support implementation of the SCRPS and reporting on achievement to the Swan River Trust.

Collaborative agreements have been established between the Trust, Parks and Wildlife and each of the key agencies involved in the management of the Swan Canning river system, detailing the activity undertaken by agencies in support of SCRPS actions.

A monitoring, evaluation and reporting framework for the biennial and 5-yearly reporting on the SCRPS, as required by the *Swan and Canning Rivers Management Act 2006*, is being progressed.

Objective 2: Improve water quality and manage environmental flow

2 Reduce nutrients, organic material and sediment entering the Swan and Canning rivers

Action	Status	Parks & Wildlife	DoW	Local Govt
2.1 Identify the levels and sources of nutrients, organic material and sediment entering the Swan and Canning rivers (P)		●	●	
2.2 Develop and implement Swan Canning and local Water Quality Improvement Plans to achieve nutrient load reduction targets (P)		●		
2.3 Prescribe and apply intervention techniques to either trap nutrients, organic material and sediments in drains and tributaries, or to achieve source control of these contaminants				●
2.4 Improve management of fertiliser use to reduce nutrient loss from urban and rural land in the Swan Canning catchment (P)		●		
2.5 Implement actions arising from the urban water drainage partnerships addressing strategic issues in the Swan Canning catchment		●		
2.6 Improve planning schemes and policies to achieve a net decrease in nutrient inputs from future land development				●

Water Quality Monitoring

Parks and Wildlife and the Department of Water (DoW) work together to monitor water quality within the sub-catchments of the Swan and Canning rivers, as well within as the estuary itself. Data is collected fortnightly by DoW from sub-catchment sites, where accessible. This monitoring is conducted under an agreement between DoW and Parks and Wildlife and provides guidance on levels and sources of nutrients, organic material and sediments within the Swan Canning river system. Data is also collected weekly from sites within the six ecological management zones of the estuary. In response to the recent flood event in February 2017, additional sampling was also carried out this year.

This information is used to determine sources of nutrients, organic material and sediment entering the Swan and Canning rivers, and influence funding priorities for intervention programs such as the Water Quality Improvement Plans (WQIPs). Monitoring has allowed the identification of priority sub-catchments contributing large amounts of nutrients to the Swan and Canning rivers and the targeting of plans to those areas.

Water Quality Improvement Plans

Local WQIPs have been developed for catchments contributing the greatest amount of nutrients and contaminants. These WQIPs were developed by Parks and Wildlife in consultation with regional and sub-regional NRM groups, community groups, industry organisations, local government, state government agencies and the Water Corporation. Sub-catchments with local WQIPs include Bennett Brook, Bayswater Brook, Ellen Brook, Southern River, Mounts Bay, Bickley Brook, Canning Plain, Bannister Creek, Saint Leonards and Bull Creek. Parks and Wildlife is currently reviewing the local WQIPs to assess progress against their prescribed actions. These reviews will also determine which WQIPs will be updated, based on the level of support from key stakeholders and ongoing requirement for water quality improvement.

Intervention Techniques

Parks and Wildlife is working closely with local governments to improve water quality and manage environmental flows throughout the Swan Canning river system. Recently, Parks and Wildlife and project partners, the City of Melville, SERCUL, Water Corporation and Main Roads completed the construction and vegetation of the Brentwood Living Stream 'Dragonfly Dreaming' in the Bull Creek catchment. Along with partner contributions, a Federal Government National Landcare Programme grant made up a significant portion of the project funding. The commissioning of the nutrient stripping wetland within the Eric Singleton Bird Sanctuary was also completed by the City of Bayswater, a funding and delivery partner in the creation of this wetland, which was also funded and supported by Parks and Wildlife. These projects have supported implementation of the Bull Creek and Bayswater Brook WQIPs.

Fertiliser Use

Parks and Wildlife funds the Phosphorus Awareness Project, delivered by the South East Regional Centre for Urban Landcare (SERCUL). The program targets fertiliser use and nutrient loss from urban and rural land within the Swan Canning Catchment. It provides educational resources, presentations, and opportunities for getting involved in Landcare for schools and at community events. The program increases awareness of catchment issues in the community, local governments, and industry particularly in reducing nutrient inputs from fertilisers. Additional funding for 2016 and 2017 provided for the delivery of a targeted educational program in the Bennett Brook catchment as part of the Bennett Brook WQIP implementation. Parks and Wildlife also funded the Fertiliser Wise Training in 2016-17 which promotes efficiency in fertiliser usage in turfed areas and public open space.





Urban Water Drainage Partnerships

The Urban Drainage Partnership was one-year program between the Trust, DoW, Water Corporation and the Western Australian Local Government Association to undertake activities to deliver on cooperative strategic drainage management. This program has now finished. DoW and Water Corporation have created a new cooperative drainage partnership under the heading of Drainage for Liveability that has adopted elements of the previous approach. Parks and Wildlife supports this partnership and is continuing its long-standing activities of identifying and delivering on drainage projects in conjunction with local governments that support this. Drainage for Liveability Projects that Parks and Wildlife have contributed funding to include Stage 2 of the Brentwood living stream: Dragonfly Dreaming 2 and the Russell Street Park and Jakobsons Way Living Streams. These projects are designed to improve water quality, as well as community benefit, amenity and ecological health around local drains and wetlands.

Planning Schemes and Policies

Twenty local government authorities manage lands within the Swan Canning Riverpark. These agencies continue to work with Parks and Wildlife to improve planning schemes and policies that lead to a net decrease in nutrient inputs. This is achieved by ensuring that local government schemes and policies are consistent with *Better Urban Water Management*, *Stormwater Management Manual for Western Australia*, *Decision Process for Stormwater Management in WA* and *Parks and Wildlife Policy 49 - Planning for Stormwater Management affecting the Swan Canning Development Control Area*. Parks and Wildlife provides advice to local government authorities to support consistent approaches in line with the WA Planning Commission (WAPC) and Parks and Wildlife policies.

3 Reduce non-nutrient contaminants entering the Swan and Canning rivers

Action	Status	DER	Parks & Wildlife
3.1 Regulate and manage pollution from contaminated sites, prescribed premises and other commercial activities with the potential to cause pollution (P)		●	
3.2 Maintain inventory database of confirmed contaminated sites in the catchment, monitor appropriate remediation for sites and use the clean-up notice provisions of the Contaminates Sites Act as required.		●	
3.3 Maintain an inventory of sources of pollution incidents		●	
3.4 Undertake action to address identified sources of pollution			●

Pollution Regulation and Management

The Department of Environment Regulation (DER) works with local government and other State government agencies in responding to serious pollution incidents and hazardous materials emergencies state-wide, with a 24/7 availability. DER has the capacity to respond to incidents such as fuel tanker roll overs, chemical spills, chemical fires, illegal chemical dumping and hazardous materials truck crashes. In 2015-16, DER responded to 246 pollution incidents.

Contaminated Sites

The Department of Environment Regulation (DER) continues to regulate new and existing sites along the Swan and Canning rivers that may represent a potential risk to human health or the environment. This is done in accordance with the requirements of the *Contaminated Sites Act 2003*. DER also maintains the Contaminated Sites Database for Western Australia.

Light Industry Audits

The Light Industry Program is a joint program between Parks and Wildlife and DER in partnership with seven local governments. It is funded with a two year, \$250,000 Federal Government National Landcare Programme grant provided to Parks and Wildlife. This program aims to reduce the contaminant input to the rivers from light industry in priority catchments. Audits are conducted on light industrial and commercial premises to ensure compliance with environmental obligations. The majority of business owners and operators were proactive in resolving issues identified at their premises once made aware of the risks to waterways. The Light Industry Program has improved the rate of non-compliance of businesses audited from 48.3% to 18.4% through inspections and re-inspections. The remaining non-compliant businesses will be subject to follow up inspections.

Light Industry Program

DER, Parks and Wildlife, local governments

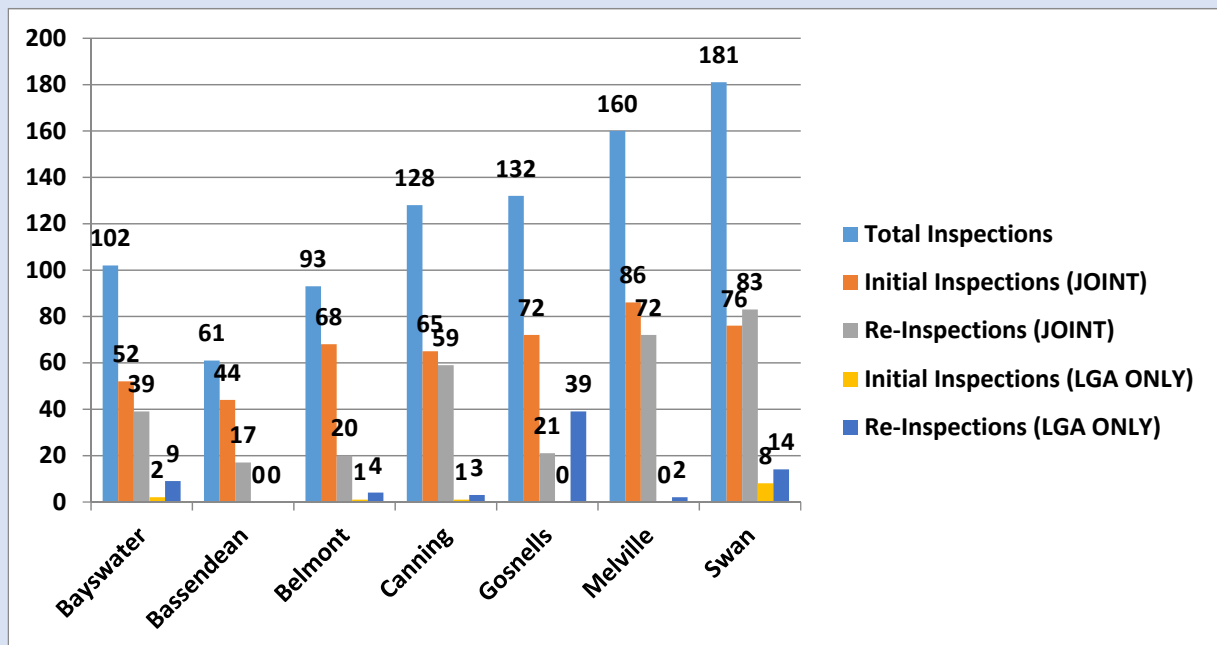
The 2015-17 Light Industry Program is a joint initiative by DER and Parks and Wildlife. It aims to reduce contamination of groundwater and drains within the Swan and Canning river catchments from light industrial and commercial activities.

The Light Industry Program works with seven local governments to conduct joint inspections of light industrial premises. It has increased local government capability to regulate light industry under the *Environmental Protection Act 1986* and established a consistent approach to light industry regulation across Local Governments.

Australian Government National Landcare Programme funding is being used to employ a Program Officer to carry out local government liaison and light industry inspections with local government officers. If serious pollution incidents are identified during the audits, DER's Pollution Response team has the capacity to intervene.










To date, a total of 857 inspections have been conducted of light industrial and commercial premises under the program. Significant successes have been achieved in working collaboratively between partners and this process has allowed DER to gain a clearer appreciation of local government issues.

Parks and Wildlife and DER are working on the possible continuation of the program past its current funding arrangement.



Inspections conducted by DER and local government officers under the Light Industry Program (DER)

4 Undertake intervention works and/or programs to improve or maintain water quality

Action	Status	Parks & Wildlife	DoW
4.1 Increase dissolved oxygen levels in the Swan and Canning rivers where required (P)			
4.2 Investigate approaches to moderate and reduce the prevalence of algal blooms (P)			
4.3 Adapt the use of oxygenation and other innovative technologies to manage future water quality issues as climate change science is updated			

Oxygenation and Innovation


Parks and Wildlife has responsibility for the funding and delivery of the oxygenation program for the Swan and Canning rivers. The operation of the plants on a daily basis is undertaken by DoW under a service agreement. There are four operational oxygenation plants located along the Swan and Canning rivers. Plants located at Caversham and Guildford increase dissolved oxygen levels in the upper reaches of the Swan River. A 4.5km stretch of the Canning River is oxygenated by plants at Bacon St and Nicholson Rd. These plants operate predominantly in the Summer and Autumn periods when seasonal conditions are more likely to create low dissolved oxygen levels within the river system.

Both oxygenation plants currently operating on the Canning River utilise vastly improved technology from the two plants originally installed on the river. The original configuration of plants provided oxygenation over a total distance of 2.3km of the Canning River, while the recently upgraded configuration allows efficient delivery of oxygenated water over an extended distance of 4.5 km. This ensures that oxygen relief is provided to all feasible areas upstream of the Kent Street Weir. A transformer upgrade is scheduled for the Guildford plant on the Swan River, ensuring consistent power supply to meet demands.

Algal Blooms

Research into new and innovative approaches aimed at moderating and reducing algal blooms continues to occur. Most recently, Murdoch University and Parks and Wildlife collaborated to investigate the effectiveness of using clay to control the harmful alga, *Karlodinium*, however laboratory trials showed that this would not be a cost-effective option. Additional approaches to moderating and reducing the prevalence of algal blooms will be investigated as opportunities arise.

5 Maintain or improve environmental flows to rivers

Action	Status	Parks & Wildlife	DoW
5.1 Investigate, plan and manage environmental flows to the Swan and Canning rivers		●	●

Supporting Environmental Flows

Parks and Wildlife and DoW are working together to investigate and support environmental water flow requirements for major tributaries of the river system particularly the Helena River. River levels are checked regularly and the Water Corporation contacted if additional environmental releases are required to the system from the Helena River dam. This ensures adequate water is available within the Helena River to support native fish populations and other environmental requirements.





On the Canning River, investigations have been undertaken in conjunction with Murdoch University on the potential impacts of in-river barriers. A draft report has been written and submitted for review. A Canning River Science and Management Workshop was held in March 2017 with river management stakeholders to discuss findings and implications for management. A summary of the workshop is being developed to inform ongoing management and required actions.

Kent Street Weir Upgrade

An upgrade of the Kent Street Weir by DoW has been given planning approval by Parks and Wildlife. The upgraded weir will allow safer and more effective control of environmental flows to the Canning Estuary and prevent saltwater intrusion upstream. Parks and Wildlife has also provided additional funding to incorporate a fishway to allow migration of native fish through the weir. There have been delays in finalising design of the weir, however construction commenced in May 2017 and completion is scheduled for September 2017.

Objective 3: Ensure management decisions are based on appropriate knowledge

6 Coordinate a water quality and ecological health monitoring and evaluation program

Action	Status	Parks & Wildlife	DoW
6.1 Undertake river and catchment-based water quality monitoring program to measure compliance against management targets (P)		●	●
6.2 Establish a program to monitor non-nutrient contaminants entering, and in, the river system (P)		●	
6.3 Monitor and report on the extent and severity of algal blooms and other events affecting water quality		●	●
6.4 Develop suite of ecological health indicators to support reporting		●	●

Water Quality Monitoring

A Memorandum of Understanding (MoU) is in place between DoW and Parks and Wildlife for the provision of water quality monitoring and reporting within the Swan and Canning rivers and their sub-catchments. Routine estuary monitoring is undertaken on a weekly basis and sub-catchment monitoring on a fortnightly basis, where water levels allow. A range of key water quality parameters including microalgae, nutrients, salinity, temperature and dissolved oxygen are monitored. During critical events, such as the flood event in February 2017, additional sampling is also conducted. Reports are available from Parks and Wildlife, detailing compliance against relevant water quality targets. These reports can be viewed at: <https://www.dpaw.wa.gov.au/management/swan-canning-riverpark/management/swan-canning-riverpark/ecosystem-health-and-management/374-monitoring-evaluation-and-reporting>

Non-Nutrient Contaminants

Development of an overarching monitoring program for contaminants other than nutrients entering the river system has begun and it is expected that this will be completed in 2017-18. There have been some delays due to the requirement for additional non-nutrient investigations around emerging contaminants of potential concern.

Algal Blooms and Other Events Affecting Water Quality

Microalgae provide an essential foundation for energy supply to the food-web and respond rapidly to environmental change. High concentrations of microalgae, otherwise known as blooms, can occur when environmental conditions become favourable for their growth and may impact recreational activities or wildlife.

Monitoring and analysis of microalgae is conducted by DoW on a weekly basis for Parks and Wildlife under a Memorandum of Understanding (MoU) arrangement. Parks and Wildlife reviews results provided by DoW and provides weekly Microalgae Activity Reports to the public via the Parks and Wildlife website and The West newspaper's Monday edition. These reports were collaboratively developed by DoW in partnership with Parks and Wildlife. Larger quarterly monitoring reports are produced by DoW on behalf

of Parks and Wildlife and these include further detail on microalgal activity. These reports can be found at:

<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark/ecosystem-health-and-management/374-monitoring-evaluation-and-reporting?showall=&start=1>

Parks and Wildlife has an Algal Bloom Response Protocol that provides guidance to various government stakeholders involved in monitoring and managing algal blooms. Where algal blooms reach pre-defined trigger levels in the rivers, notifications are issued to community stakeholders and the public and can include warnings on potential public health, amenity or environmental impacts arising from different types of algal blooms. Between 1 July 2016 and 31 March 2017, notifications were issued to stakeholders on five occasions.

Microalgae response guidelines are reviewed by a multi-agency panel (Parks and Wildlife, DoW and DoH) on an annual basis. The Department's Algal Bloom Response Protocol underwent significant review in 2016 and further review is triggered by changes to microalgae response trigger levels. In collaboration with Murdoch University and CSIRO, Parks and Wildlife is also evaluating a Flow-Cam (an image particle analysis system) for its capacity to provide efficient and reliable phytoplankton and zooplankton data. The project commenced recently and methods for analyses and validation are being fully scoped.

In addition to management of algal blooms, Parks and Wildlife also provides advice and response to incidents and river management issues including dolphin deaths, fish kills, contaminants, pathogens, pollution and flood effects.

Parks and Wildlife has commenced a review of environmental monitoring approaches and reporting and preliminary recommendations influence the development of the monitoring MoU with DoW. There have been minor delays in completion, due to competing demands for staff resourcing associated with recent algal blooms and flood incidents. The review is progressing and will be completed in 2017-18.

Ecological Health Indicators

Measures of ecological health complement water quality monitoring and reporting and provide more information about the overall health of the waterway. Parks and Wildlife works with Murdoch University and DoW to monitor and evaluate the condition of fish and seagrass communities as indicators of waterway condition. In addition, some iconic species including the bottlenose dolphins and the western school prawn are being investigated in more detail to understand their populations and factors affecting them.

The 2016 Fish Community Index report was released in November. Overall ecological condition of the nearshore and offshore waters was determined to be good and fair, respectively, based on fish communities. Summer and autumn sampling for 2017 are complete and a new report is in preparation.

Seagrass sampling is being undertaken by DoW to develop and validate measures of seagrass performance within the estuary. The 2016-17 season seagrass sampling was affected by the 2017 flood event. Seagrass and fish community reports are available at:

<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark/ecosystem-health-and-management/374-monitoring-evaluation-and-reporting?showall=&start=3>

Parks and Wildlife also funds and runs the Dolphin Watch program in conjunction with Murdoch and Curtin University as way of engaging citizen scientists to help monitor dolphin activity, behaviours and population within the Swan Canning Riverpark. The community reporting is closely linked with university based research to understand movement patterns, population dynamics of these iconic inhabitants of the waterways. For more information, please visit <http://www.riverguardians.com/projects/dolphin-watch>.

Flood Response and Monitoring

Parks and Wildlife, Water, Health, Transport, Bureau of Meteorology

In February 2017, heavy and widespread rainfall in the Avon catchment delivered unseasonal and unusually high flows into the Swan Canning Riverpark. This resulted in a minor flood warning being issued for the Swan River. In addition to high water levels, the resultant water quality also became a concern as a result of pollutants from streets, gardens and farms that were flushed into the waterways from the catchment area.

An incident management team was established by Parks and Wildlife in response to the flood event. This team was developed to manage associated risks and provide necessary communication to ensure the health and safety of the community and the environment. The team collaborated with representatives from DoW, Transport, Department of Health, Bureau of Meteorology and local governments. To aid the decision-making process, DoW provided valuable information on changing water levels, measured by their telemetered monitoring stations. This data was used in conjunction with previous modelling conducted in 2000, allowing for effective prediction of timing and volumes of water throughout the flood event.






Water quality monitoring was also undertaken and, as a result, multiple alerts were issued to stakeholders over issues such as:

- waterborne bacteria;
- increased water levels;
- microalgae activity;
- recreational fishing;
- in-water hazards;
- foreshore safety; and
- mosquitoes.

This collaboration between agency partners provided information effectively and promptly to the community. Targeted communication ensured that Riverpark users were able to make informed decisions over their own health and safety, whilst foreshore land managers were able to focus on the effective protection and conservation of the built and natural environment within the Riverpark.

Objective 4: Protect, manage and enhance biodiversity

7 Manage fish communities to maintain diversity and abundance

Action	Status	Fisheries
7.1 Manage aquatic resources in the Swan Canning River system using a risk based management framework (P)		●
7.2 Protect and monitor the stock status of priority species in the Swan Canning river system according to risk (P)		●
7.3 Investigate fish re-stocking where appropriate		●
7.4 Involve recreational fishers and commercial tour operators with monitoring fish stocks		●
7.5 Promote responsible fishing behaviour (e.g. abiding by catch limits, protecting shoreline vegetation, using fishing platforms provided and using rubbish bins for unwanted tackle, bait packaging and other refuse)		●

Managing Fish Stocks

Department of Fisheries uses a risk and evidence based approach to managing and monitoring aquatic resources. The risk imposed by fishing is currently considered by Fisheries research division to be low to the fish stocks. Crabs are monitored via statutory catch and effort returns by the commercial fishers and reported annually in the *Status reports of the Fisheries and Aquatic Resources 2015/16* (SRFAR). These reports are released annually by Fisheries. Within the Swan Canning Riverpark there is currently one commercial operator targeting crabs, as well as ongoing recreational fishers.

Status of fish stocks in the Swan and Canning rivers are also reported annually as part of the West Coast bioregion within the SRFAR. Results for species including cobbler, crabs and herring are aggregated within data collected across the entire West Coast Bioregion and statuses for the specific populations within the rivers are not available. The Swan Canning population of black bream is reported individually and is currently assessed as Adequate. The SRFAR is available here:

<http://www.fish.wa.gov.au/About-Us/Publications/Pages/State-of-the-Fisheries-report.aspx>

The *Resource Assessment Framework* (RAF) (2011) describes how Fisheries has selected indicators and what indicators are used in which location. Cobbler, black bream and herring are all identified for the Swan and Canning rivers as part of the West Coast estuarine suite. The RAF is currently being updated and refined. Fishing restrictions can be implemented if protection of fish stocks is required.

The overall sustainability of black bream, cobbler and Perth herring are all listed as being at moderate risk across the West Coast bioregion within the estuarine zones. Cobbler are restricted and may not be taken by fishers at all in the Swan Canning river system. Bag limits are also in place to restrict the number of black bream and crabs that can be taken within the Swan Canning river system.

The RAF is available here:

http://www.fish.wa.gov.au/Documents/occasional_publications/fop085.pdf

Fish Restocking



Fisheries WA has a policy on Restocking and Stock Enhancement in Western Australia (http://www.fish.wa.gov.au/Documents/management_papers/fmp261.pdf) that it currently uses to assess all proposals. Most recently, Fisheries has supported restocking of the Western School Prawn in the Swan Canning Riverpark. Stock enhancement proposals are assessed on a case by case basis.

Community Involvement

Fisheries manages and promotes the Research Angler Program (RAP). Data from this program is reported as part of the SRFAR. Typically, more than 800 logbooks at any one time are being reported by RAP participants. Data from catch cards at recreational fishing events such as Swan Fish is also collected and can aid with monitoring of fish stocks.

Fisheries has community education officers who promote responsible fishing practices at events, schools and through communication material such as brochures, posters, websites, social media. In addition, Fisheries officers with powers under the *Fisheries Resource Management Act 1994* engage in participant's education and prosecute against fishing regulations. Priorities for education and compliance are established on a risk based process. Recent highlights include Fisheries WA starting a number of social media platforms to further engage with fishers.

8 Protect and rehabilitate foreshore

Action	Status	Parks & Wildlife
8.1 Provide protection for riparian and/or aquatic vegetation (P)		●
8.2 Provide guidance on best management practices for shore stabilisation (P)		●




Protecting Foreshores

Parks and Wildlife provides funding towards riverbank rehabilitation and protection in conjunction with foreshore land managers through two schemes – the Riverbank Grants program and the Proactive Funding Scheme. In 2016-17, \$2.3 million was provided under these programs to fund projects to protect, improve, and manage Riverbank areas of the Swan and Canning rivers.

These Riverbank programs assists with the development, coordination and management of foreshore management projects as well as the provision of advice and support to facilitate best management practices among foreshore land managers. There are currently 44 active riverbank projects that have received advice on best management techniques for shoreline stabilisation. These include:

- Bioengineering concept design advice to City of Vincent for Banks Reserve Restoration Stage 2;
- Providing advice to Town of Victoria Park for McCallum Park Foreshore Management Plan;
- On-ground implementation advice to contractors and City of Perth installing revetment nodes at the Perth Exhibition and Convention Centre foreshore;
- Project management advice to City of Swan for Loder Way site; and
- On-ground implementation advice to City of Belmont Staff during construction of gabion baskets at Ascot Racecourse foreshore.

9 Reduce the adverse impacts of introduced plants and animals in the Riverpark

Action	Status	FLM	DAFWA	Fisheries
9.1 Manage riparian and/or aquatic weeds		●		
9.2 Coordinate the management of declared plant species			●	
9.3 Where resources allow, investigate and map the extent of occurrence of feral fish and invasive species, and mitigate impacts by directing efforts into the early control of invasive species				●

Weed Management

Foreshore land managers (FLM) are responsible for onsite management of land adjoining the rivers, including weed control. Foreshore land managers include the 20 local governments and various state agencies including Department of Lands, WAPC and Parks and Wildlife. The Department of Planning (DoP), on behalf of WAPC, continues to implement weed removal programs either on its own or in partnership with local government. The department also has a program to remove exotic trees and revegetate the foreshores owned by WAPC with native species endemic to the area.

Parks and Wildlife has conducted aquatic weed control of taro on the Canning River between Nicholson Road and Roe Highway. Hydrocotyle control is continuing with a project coordinated by SERCUL supported by Commonwealth funding. Weed control and rehabilitation projects are also in progress at Whiteman Park (Guildford) and at Lot 216, Caversham, adjacent to Mandoon Estate. A weed management strategy has commenced for Parks and Wildlife managed lands within the Riverpark.

Declared Plant Species

The Department of Agriculture and Food WA (DAFWA) supports the coordinated community control of widespread and established plant and animal species declared under the *Biosecurity and Agriculture Management Act 2007* (BAM Act). DAFWA maintains and, where appropriate, replies to reports of declared plant and animal species. The community is now able to provide these reports through the MyWeedWatcher and MyPestGuideReporter apps.

Invasive Species

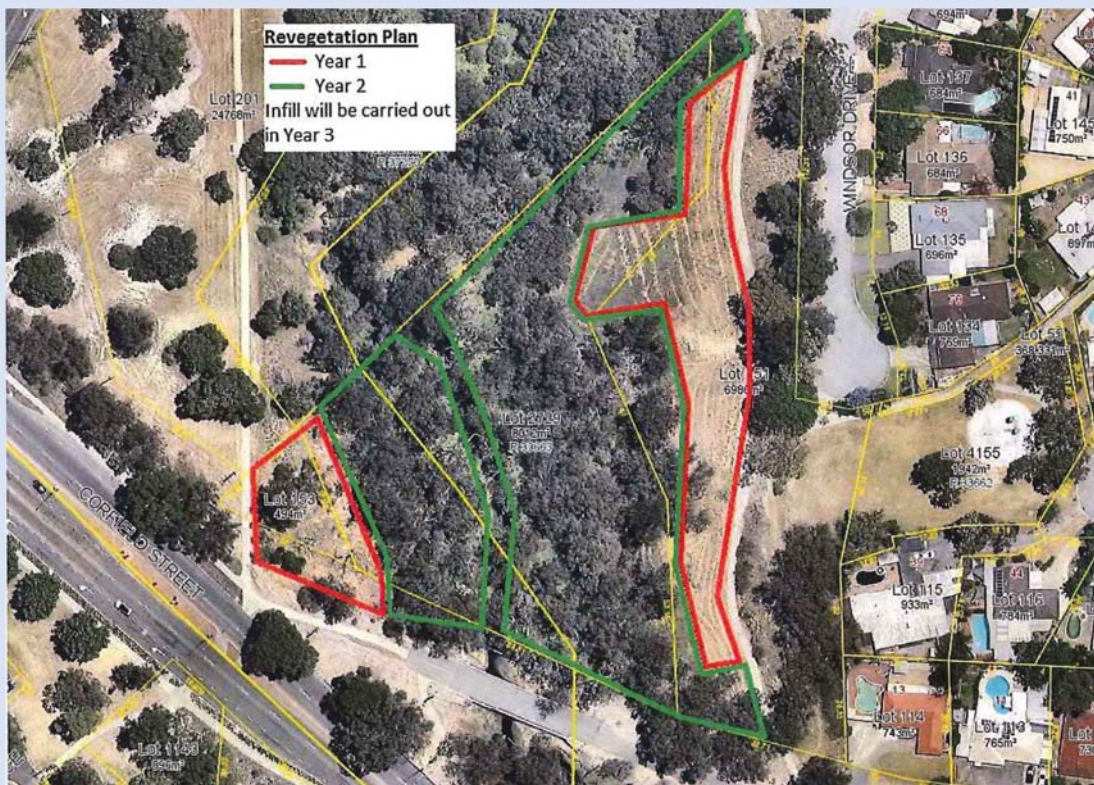
Fisheries WA manages a freshwater fish database. This system records all research reports and pest fish reports for freshwater systems. This is a publicly accessible database with the most current occurrence of feral fish data available. Fisheries WA prioritises prevention activities in biosecurity management. This includes promotion of the don't dump that fish message and early detection methods such as Fisheries WA Pestwatch app. Fisheries WA also provides technical advice and best practice advice to local government authorities and community groups on pest fish management in wetlands and lakes throughout the metro area.

Southern River Foreshore Rehabilitation

WAPC, Parks and Wildlife, City of Gosnells, Armadale Gosnells Landcare Group (AGLG)





One of WAPC's roles is to acquire land for public purposes such as reserves during land use development processes and transfer it to the relevant land managers such as local governments. WAPC works collaboratively with the land managers, community stakeholders, and other relevant agencies to address possible management issues during this process.

In early 2017, WAPC entered into a collaborative project with the Department of Parks and Wildlife and the City of Gosnells for foreshore restoration works on the Southern River foreshore downstream from Corfield Street Bridge. This project includes extensive revegetation, fencing and weed control to restore the natural environment, improve local biodiversity and create linkages of foreshore vegetation. Project management and works are being undertaken by the Armadale Gosnells Landcare Group. Once completed, the site will be transferred to the City of Gosnells to form part of its system of reserves and parks managed for the community.



Proposed revegetation plan for Southern River (DBCA)

10 Maintain environmental values of the Riverpark with the community

Action	Status	Parks & Wildlife
10.1 Administer legislation to manage the Riverpark including the use of vessels and facilitate safe community use (P)		
10.2 Maintain an incident response capability to ensure public safety and environment protection		

Facilitating Safe Community Use of the Riverpark

The Department of Transport is responsible for marine safety through legislation that controls licensing of boat skippers as well as provision of navigation aids throughout the river and regulating aquatic use and activities on the river. Transport is responsible for establishing speed limits and gazetted specific areas for higher risk aquatic activities such as jet skiing within the rivers. Parks and Wildlife staff meet with Transport on a quarterly basis to coordinate joint agency patrols and undertake compliance particularly during peak periods. Parks and Wildlife has several boats operating on the river and staff to ensure the safe and responsible use of the river for the community.

The Boating Management Strategy and Aquatic Use Management Framework are also implemented by Parks and Wildlife in collaboration with the Department of Transport (Marine Safety branch). The Departments work together to ensure that different user groups and activities can equitably access the river in a safe and appropriate manner and to minimise conflicts between incompatible activities.

Incident Response Capabilities

Parks and Wildlife has incident response protocols established with various organisations to respond to critical events as they arise within the Riverpark. These are reviewed on a regular basis. Response plans have been developed for dolphin deaths or injuries, oil spills, algal blooms, wastewater spills and oiled wildlife.

11 Improve understanding of Riverpark ecosystem through research

Action	Status	Parks & Wildlife
11.1 Investigate threats to ecosystem integrity and their processes		●
11.2 Improve understanding of the biophysical environment of the Riverpark		●

Investigating Threats to Ecosystem Integrity

Parks and Wildlife actively investigates threats to the catchment ecosystem. This includes investigations into:

- Dolphin deaths and dolphin health;
- Land and groundwater nutrient sources to Lucky Bay;
- Understanding and predicting riparian condition with hydro-climatological change; and
- Identifying pools in the Canning River that provide habitat for freshwater fauna.

The project investigating riparian condition experienced some delays in establishing a University of Western Australia masters project to undertake this work, and will now focus on riparian decline in the relative to hydro-climatological change in the Guildford area and link closely with associated research by Murdoch University exploring the role of phytophthora on tree health in the same area.

Tributary assessments have been carried out on Bennett Brook and the Helena River in 2016-17. These surveys have been done as a comparison to assessments conducted in 2008 and will help in identifying and managing threats to the Swan Canning river system.

Understanding the Biophysical Environment

Parks and Wildlife collaborates with various groups and agencies, providing funding and technical support, to research various aspects of the biological and physical environment of the Swan and Canning rivers. Ongoing monitoring and research is undertaken for various aspects of the river system, including seagrass, macroalgae, water quality and fish populations.

Example of projects currently being carried out include:

- Investigating habitat value of seagrass and macroalgae;
- Understanding factors affecting natural recruitment of Western School Prawns;
- Prawn Watch evaluation;
- Estuarine Response Model and frameworks for reporting; and
- Tracking of priority estuarine fish species, with a particular focus on the oxygenation zone in the upper Swan River.

The Swan Canning Acoustic Array (SCAA), which allows the monitoring and tracking of tagged aquatic species in the river system, continues to be operated and maintained by Parks and Wildlife. Under this project, 79 Black Bream have been tagged and their movements tracked throughout the estuary. Two honours theses have been completed in 2017 using data from the SCAA by students at Murdoch University.

Shorebird Monitoring Pilot Program

Parks and Wildlife, BirdLife WA, Swan Estuaries Reserve Action Group, Scotch College

A collaborative partnership has been initiated between Parks and Wildlife, Birdlife WA and the Swan Estuaries Reserve Action Group in an effort to try and improve the success of shorebirds nesting at key locations around the Riverpark. A pilot trial was established over the summer of 2016-17, using chick shelters that were built by Scotch College students as part of their community service program. These were placed on the Point Walter spit in advance of Red Capped Plover and Fairy Tern nesting season and monitored by Birdlife WA.





The project will continue through the coming year with events planned to raise awareness of the plight of shore nesting species and the risk to them caused by trampling. The project will also focus on monitoring disturbance of nesting birds.



The construction and monitoring of chick shelters (Photos: Scotch College, BirdLife Australia)

Objective 5: Maintain and improve sense of place with the Riverpark

12 Increase community understanding and engagement with natural and cultural heritage

Action	Status	Aboriginal Affairs	Parks & Wildlife	Heritage Council
12.1 Assess, recognise and protect sites with a high level of cultural heritage significance (P)		●	●	●
12.2 Develop interpretive and educational opportunities incorporating the cultural resources of the area			●	
12.3 Provide publicly accessible information and maps detailing important cultural and natural sites and structures in the Riverpark			●	
12.4 Work with relevant Noongar groups to manage the Riverpark (P)			●	

Assessment, Recognition and Protection of Sites

No projects undertaken by Parks and Wildlife have required formal Department of Aboriginal Affairs heritage approval in 2016-17. Partner agencies remain committed to the recognition and protection of sites of cultural heritage significance.

Interpretive and Educational Opportunities Incorporating Culture

Parks and wildlife is continuing to recognise and promote Aboriginal and other cultural heritage through the Riverpark Trails Project. Up to four specific interpretive nodes have been created with more being planned. Nodes include seating, artwork and information incorporated into structures as well as audio trail guides available via the GeoTourist App. Further implementation of both the *marli riverpark Interpretation Plan* and the *Riverpark Trails Masterplan* are being planned. Trail guides are also being developed.

Parks and Wildlife is developing content for new interpretive facilities at John Tonkin Park in East Fremantle, at Adenia Park in Canning River Regional Park, as part of an Australian Sikh Heritage project. Parks and Wildlife is also working closely with the City of Bayswater to plan a future interpretation node at Eric Singleton Bird Sanctuary.

Publicly Accessible Information

Parks and Wildlife has a range of information available to the community on exploring the Swan Canning Riverpark through the Explore Parks WA website. The link is provided below. The site provides maps as well as links to a range of information sources. People can also access information on indigenous history, the social, political and environmental history of Perth Water, stories by the community and links to trail guides.

<https://parks.dpaw.wa.gov.au/park/swan-canning-riverpark>

Trail guides for the Melville Water Riverpark Trail (a 16km urban trail along the river) from Fremantle to Canning Bridge and the Jenna Bidli Yorga trail (a 2km walk) from Pt Walter to Blackwall Reach are provided via the GeoTourist app and the Trails WA website. The links are provided below.

<http://trailswa.com.au/trails/jenna-biddi-yorga>

<http://trailswa.com.au/trails/melville-water-riverpark-trail#>

Working with Whadjuk Noongar Traditional Owners

Parks and Wildlife actively works with Whadjuk Noongar Traditional Owners to manage the Riverpark. As many projects are operationally delivered by partner organisations, Parks and Wildlife actively encourages its project partners to maximise opportunities for Aboriginal involvement in projects and activities. An example of this is through the South East Regional Centre for Urban Landcare (SERCUL), which Parks and Wildlife financially supports. In October 2016 SERCUL launched the new Booyi Cultural Awareness Education Project - Yelakitj Moort Nyungar Association.

Parks and Wildlife work closely with Whadjuk elders for a number of key trail and interpretive projects, where oral recordings of the cultural values of the Swan Canning Riverpark are captured. The recordings are available on the Explore Parks WA website, as well as on the Geotourist app so Riverpark visitors can listen to the stories. Most recently, Aboriginal observers were present during the commencement of works on the Kent Street Weir.



A cyclist utilising one of the Riverpark's many scenic paths. (Photo: Stewart Allen)

Swan Canning Riverpark Trails Project

Parks and Wildlife, local governments, Noongar Advisory Panel

The Riverpark Unit is currently implementing the Riverpark Trails Project across the Swan Canning Riverpark. To date, Parks and Wildlife has completed four interpretation nodes; at Brentwood, Heathcote, Point Walter and Bicton Baths (all within the City of Melville), as part of the Riverpark trail project. Parks and Wildlife is now developing an additional two nodes which are due to be completed in 2017-18. These include Adenia Park (City of Canning) and John Tonkin Park (Town of East Fremantle).

The interpretation facilities, known as River Journeys, are designed to share the cultural and natural values of the river foreshore. Made up of wooden structures, seating, interpretive signage and pathway linkages, and enhanced by digital experiences available via smartphone and online, the facilities are the result of years of hard work by Riverpark Unit staff, working with the Recreation and Landscape Unit and the City of Melville.

A series of virtual trails have been developed, linking the sites together. These can be accessed on the Geotourist or Trails WA apps, as well as on the Explore Parks website. Visitors are able to walk or ride these trails and use their smartphone to access detailed maps, read trail descriptions and learn about points of interest.

The interpretation makes use of visual, audio and artistic elements to allow visitors to engage with the content in a variety of ways. The trails also include recordings of Whadjuk Noongar elders telling stories about the importance of the sites, which will help visitors to connect emotionally with the storyteller. The project also incorporates artwork by Noongar artist Charmaine Cole, signage written in Noongar and English languages, engravings, seating and wheelchair-accessible pathways.











The Bicton Baths interpretation facility (Photo: Ben Ansell - DBCA)

This project forms part of a greater plan to connect sites across the whole Riverpark, an area of 72 square kilometres, with more interpretation facilities and trails. The *marli riverpark Interpretation Plan* has identified 19 nodes across the Swan Canning Riverpark, with an additional six (6) nodes identified by the Noongar Advisory Panel, which gives a total of 25 nodes. However, the Riverpark Unit does not exclude developing additional nodes at other key recreational sites along the Swan Canning Riverpark where land managers are re-developing sites. This does though depend on interest from land managers, funding and resource availability and whether it fits with the outcome to be achieved.

Objective 6: Provide access and a safe environment for Riverpark visitors

13 Maintain and improve safe access for Riverpark visitors

Action	Status	Parks & Wildlife	DoP	Local Govt	Transport	DoH
13.1 Promote public use and enjoyment of the Riverpark (P)		●				
13.2 Maintain and improve the level of safe public access to and along foreshore areas in the Riverpark (P)		●	●			
13.3 Improve access to public/courtesy moorings and short-stay pens		●				
13.4 Implement a rational management system for dinghy storage on foreshore areas				●		
13.5 Facilitate safe use of vessels on waterways – maintain navigation aids in the Swan and Canning rivers to facilitate safe passage through the navigation channels (P)					●	
13.6 Coordinate primary contact water quality monitoring at popular swimming locations and report conditions to the community (P)						●
13.7 Develop a Shared Asset Management System to link funding/assets/damage to enable forecasting and prioritising of foreshore improvement works		●				
13.8 Implement works to stabilise the riverbank where valuable infrastructure or recreational amenity is threatened by erosion (P)		●			●	

Promotion

Parks and Wildlife promotes events, activities, projects and other ways to enjoy the Riverpark through the River Guardians social media and projects. Internal and external events, activities and projects run by NGOs and community groups have been promoted through the River Guardians website, Facebook page and Instagram account. Recently, the River Guardians Facebook page was used to communicate river alerts for the recent flooding event. Additional information on activities undertaken to support community enjoyment of the Riverpark and the River Guardians program can be found under Strategy 17 of this report.

Riverpark Access

Parks and Wildlife develops and implements visitor risk management plans for areas of shared responsibility within the Riverpark to ensure safe public access and enjoyment. This includes inspections and the mitigation of hazards where necessary. Parks and Wildlife also conducts bi-annual inspections of courtesy moorings to ensure that the Riverpark remains safe and accessible for the boating community.

Parks and Wildlife also supports planning for future foreshore lands and redevelopment of existing public parks and reserves through strategic planning processes including precinct planning and the land and

waterways use plan. These support ongoing community access to the rivers. Both these projects have experienced minor delays due to staff resourcing issues but are being progressed in 2017-18.

The Department of Planning is continuing its program of land acquisitions to consolidate the Swan and Canning river foreshores and the provision of public access and facilities. Land is acquired either by purchase or through the subdivision process by relevant development conditions. Land acquired is usually transferred to a land manager such as a local government to become part of the local parks and reserves system available for community use and access.

Mooring access and dinghy storage

Parks and Wildlife provides a number of courtesy short-stay moorings in the Riverpark throughout different mooring zones to allow recreational users to safely moor in different locations. Ten additional courtesy moorings were provided in Perth Water as a part of the Elizabeth Quay development project.

Dinghy storage has been an issue affecting Riverpark access with dinghies on foreshores restricting the ability to move through the park as well as access beaches and the waterline. Abandoned dinghies created a hazard and visual amenity problem as well as contributing to erosion issues and destruction of foreshore vegetation. Following an extensive collaborative program there are now only two local government authorities that have not implemented a management storage system for dinghies on the foreshore. These are the Town of Claremont and the Town of Mosman Park. The Town of Mosman Park has worked with Parks and Wildlife to develop a strategy. Storage system designs are complete and the system is now to be formally approved and implemented under a permit in accordance with the Swan and Canning rivers Management Regulations 2007. The Town of Claremont to date has not proposed a system of any kind however this matter will continue to be pursued.

Vessel Use

The Department of Transport (Transport) undertakes education and compliance of *Western Australian Marine Act 1982* and Navigable Water Regulations 1957 through regular education programs and compliance patrols throughout the Riverpark. Over the past year, Transport undertook 308 education and compliance patrols in the Swan Canning Riverpark, including four joint patrols. In addition, Transport undertook six education campaigns specifically related to the Swan Canning Riverpark.

Transport undertakes ongoing maintenance of navigational aids in the Riverpark. Over the past year, Transport undertook maintenance on 242 of the 266 navigational aids in the Riverpark.

Transport also facilitates the cross authorisation of Department of Parks and Wildlife officers under the *West Australian Marine Act 1982* and provide appropriate training. There are currently five Riverpark Unit officers cross authorised under the *Western Australian Marine Act 1982* all of which have received authorised officer training.

Health Monitoring

The Department of Health (DoH) coordinates and supports microbiological water sampling activities conducted by local government authorities within the Riverpark. In addition to regular monitoring, additional sampling activities were undertaken in response to the flood event that occurred in February 2017.

Asset Management

Parks and Wildlife is working to implement an Asset Management System (AMS) for the riverbank foreshore including both built and natural foreshore areas. This will support management in meeting the required level of service in the most cost-effective manner for present and future community needs. The AMS also includes the collection of habitat data through Riparian Ecology Assessments. This data will

support the ability to track improvements of riverbank foreshores over time and provide up to date information on the condition of each reach of the rivers.

Infrastructure and Amenity Protection

Riverbank stabilisation works are supported by Parks and Wildlife through funding provided to local governments and other foreshore land managers. During 2016–17, Parks and Wildlife’s Riverbank Grants program and Proactive Funding Scheme invested more than \$2.3 million in 22 priority projects across 16 foreshore land managers. These projects included erosion control, revegetation, weed control, river wall repair, enhancing river access, widening vegetation corridors and preparing foreshore management plans. These projects ensure that shorelines are protected from erosion to protect on-shore infrastructure such as paths, parklands and roads. Natural and built foreshore works also improve local amenity, support community access to the waterways and improve local habitat for biodiversity.

14 Manage public use requirements to minimise conflicts

Action	Status	Parks & Wildlife	Transport
14.1 Implement Aquatic Use Review and Management Framework for the Riverpark (P)		●	●

Managing Public Use

A major Aquatic Use Review was jointly undertaken by the Swan River Trust and the Department of Transport in 2011. Several critical changes were made to use on the river including changes to speed limits and some special use areas to ensure more equitable and safer sharing of the river between user groups. The Aquatic Use Management Framework Operational Working Group continues to consider additional minor amendments to speed limits, gazetals, and activities as needed to ensure the safety of users, the stability of the foreshores and infrastructure.

Transport has recently completed a minor Aquatic Use Review within Matilda Bay. The major outcome of this review has resulted in the implementation of an 8 knot speed restriction in all waters of Matilda Bay for vessels over 10m in length.

Matilda Bay Aquatic Use Review

Transport, Parks and Wildlife, Rowing WA, Yachting WA, various river users and stakeholder groups

The Department of Transport is responsible for marine safety including the establishment of boating speed limits and gazettal of areas in the river for specific uses. Aquatic use reviews are undertaken to ensure the safe, equitable and sustainable use of waterways. In 2016, Transport undertook a minor AUR for the Matilda Bay area of the Swan Canning Riverpark. Matilda Bay is a popular spot with several aquatic clubs and a yacht club being located within it. There is a mix of natural shorelines and river walls around this area designed to protect critical infrastructure.

Key stakeholders consulted included Parks and Wildlife, Rowing WA, Yachting WA, various clubs using Matilda Bay, commercial ferry operators, Recfishwest, the Boating Industry Association of WA and Boating Western Australia. The general public were also provided an opportunity to comment, with 360 responses being submitted through an online survey.




The major outcome of the review was the implementation of an 8 knot speed limit in all the waters of Matilda Bay for vessels over 10m in length. The wash and wake created by these larger vessels travelling at greater than 8 knots had a significant detrimental impact on the stability and safety of other vessels and were causing damage to nearby marine facilities. Reducing the speed of these larger boats creates a safer environment for all boat users in the area and helps protect local facilities.

The changes were included in the latest Boating Guide to the Swan Canning Riverpark in 2017.



Matilda Bay is popular with a variety of Riverpark users (*Photo: DBCA*)

15 Enhance the standard of Riverpark facilities

Action	Status	Transport	Parks & Wildlife	Local Govt	MIRA
15.1 Improve quality of existing public facilities and infrastructure		●	●	●	
15.2 Establish a Swan Canning Riverpark Trails project including walking, cycling and kayaking trails			●		
15.3 Improve walking and cycle ways including the implementation of the Recreational Shared Path Network along the rivers as set out in the Western Australian Bicycle Network Plan		●			●

Improve quality of existing facilities and infrastructure

Department of Transport administers the Recreational Boating Facilities scheme with funding obtained primarily from boat registration fees. Funding can be used for enhancing safety of recreational facilities, maintaining a clean and healthy environment, improving access, and upgrading of boating facilities including jetties, navigational aids, and courtesy moorings. Parks and Wildlife is a member of the assessment panel supporting Transport in assessing applications. In April 2017, Riverpark facilities funding was announced including \$700,000 for the City of Melville Deepwater Point Boat Launching facility upgrade and \$67,500 for the Shire of Bassendean Pickering Park Boat Ramp and Jetty planning study.

Transport also undertook maintenance and modifications to facilities at Mend Street Jetty, Como Jetty and Nedlands.

Local governments are important contributors to Riverpark facilities. In the last 18 months, the following work was undertaken by local governments:

- the City of South Perth completed several overhauls and redevelopment of local facilities including new pathways, overwater boardwalks and shaded seating at Mill Point Pond and a refit of toilet facilities west of the Narrows Bridge adjoining the Personal Watercraft area;
- City of Bayswater - Claughton Reserve Public Art Project with toilet upgrade in progress;
- City of Belmont - Construction of Bilya Kard Boodja Lookout and park area - located along Tanunda Drive overlooking the Swan River; and the Garvey Park viewing platform;
- City of Perth - Realignment of Principal Shared Path (walking/cycling) near Exhibition Centre foreshore; and
- City of Swan - Upgrade to boat ramp Fish Market Reserve.

This list is representative and does not include all works undertaken by the 20 local governments in their ongoing work in providing community facilities and services.

Riverpark Trails project

Implementation of the Riverpark Trails project is continuing, with four interpretive trails constructed to date. Planning is underway with the Town of East Fremantle and City of Canning for the development of new interpretation nodes at Adenia Park and Canning River Regional Park. The Trails project supports the development of new or upgraded walking/cycling trails around the length of the Riverpark with interpretation nodes being placed at critical points highlighting Aboriginal, social and natural heritage features of the area. Contemporary technology is providing a unique trails experience with users able to

access audio recordings via the GeoTourist app to hear stories and explanations from Aboriginal elders about the local landscape and its significance.



Improve walking and cycle ways including Recreational Shared Path Network.

Transport has four activities aimed at delivering improvements to shared paths including maintenance of existing networks and planning, scoping and constructing new networks. Main Roads oversees maintenance of existing Recreational Shared Path (RSP) Network and Principal Shared Path (PSP) network with line-marking reinstatement works undertake on the PSP along the Kwinana Freeway between Canning Highway and Cranford Ave and the Windan Bridge river crossing. Planning for upgrades to the RSP and PSP has been undertaken as part of the *Transport @ 3.5 million Perth and Peel Transport Plan*.

Work is currently underway reviewing potential new river crossings to identify development footprints and environmental approvals to be obtained. There are no timelines to deliver a revised network in the short to medium term by the Department of Transport and all proposals in the Transport Plan are indicative.

The Metropolitan Redevelopment Authority (MRA) has been working to integrate pedestrian and cycle paths in redevelopment areas into the existing networks in six major project areas including the Waterbank precinct, Elizabeth Quay, Champion Lakes, Wungong, and two in Midland. Planning is continuing for Wungong and Midland redevelopment areas to connect foreshores and living streams with public open spaces and support movement around the foreshores. Implementation of paths for Midland has been delayed as shown by the orange segment.

16 Promote appropriate tourism activities

Action	Status	Local Govt
16.1 Support community events (e.g. Skyworks, Autumn River Festival and Blessing of the Rivers) and tourism opportunities on the river foreshore (P)		

Community Events and Tourism

Community events are held throughout the year within the Swan Canning Riverpark. These include the Skyworks, Autumn River Festival and Blessing of the Rivers. These events are promoted and supported by the River Guardians program of the Department of Parks and Wildlife. Local government participation in the planning and coordination of these events is instrumental to their success.

Parks and Wildlife recently hosted the Culture in the Parks event where traditional owners and Aboriginal tourism operators from across WA have joined with the Department to explore new opportunities for cultural tourism and activities in national and marine parks as well as the Swan Canning Riverpark. A presentation by the Riverpark unit on the trails project with its emphasis on supporting Aboriginal cultural heritage was well received.

Parks and Wildlife also authorises commercial operations within the Riverpark.

Garvey Park Foreshore Upgrades

Parks and Wildlife, City of Belmont

Parks and Wildlife has been working with the City of Belmont since 2010 to upgrade the foreshore of Garvey Park in Ascot. This project has been made possible through the Riverbank funding program, which aims to protect foreshores and improve the public amenity of the Swan and Canning rivers.

Stage three of the four-stage project received \$380,000 in Riverbank funding during 2014–16, and cumulative State Government investment into the greater Garvey Park site since 2010 is more than \$600,000. City of Belmont has contributed the remainder of the \$1.5 million investment.

The Garvey Park foreshore is located in a flood risk area, and is prone to river flow and boat wake on an ongoing basis. The work included significant, complex engineering and construction to stabilise the crumbling riverbank, as well as the improvement of recreational access to the river and protection of fringing vegetation. This was accomplished through bank re-grading, construction of a new beach, rock headlands and gabions, improvements to the existing beach, construction of a viewing deck, improved path and access arrangements, installation of a limestone rock toe and brush mattressing, and revegetation.

The most recent works were technically challenging and involved numerous stakeholders. Working closely with the City of Belmont, Parks and Wildlife staff tackled and rectified issues such as acid sulphate soils, dewatering and geotechnical issues, which complicated the stabilisation of viewing platform and access ramp footings.






The restoration has ensured that this section of foreshore is now protected to 100-year flood levels.



A significant foreshore upgrade has been completed at Garvey Park in Ascot, thanks to a partnership between Parks and Wildlife and the City of Belmont (Photo: Markus Nordstom – DBCA)

Objective 7: Improve public knowledge and understanding of the Riverpark

17 Facilitate opportunities for engagement with the Riverpark

Action	Status	Parks & Wildlife	Sport & Recreation
17.1 Promote opportunities for community groups and individuals to be involved in on-ground conservation activities (P)		●	
17.2 Facilitate opportunities for local community groups, agencies, educational institutions and volunteers to be involved in research, behavioural change and sustainable living programs/projects		●	
17.3 Support local environmental groups to source additional funding (P)		●	
17.4 Promote active and healthy lifestyles that encourage the use of the Riverpark			●
17.5 Promote Riverpark identity through the media and major public and corporate events occurring in the Riverpark		●	

Opportunities in On-Ground Conservation

Parks and Wildlife assists landholders in implementing on ground activities that will improve soil health and contribute to improved water quality in the Swan-Avon river system. Between 2014-17, \$75,000 was provided in landholder grants. A series of workshops have been delivered and 115 properties have undertaken soil testing and as a result have applied improved nutrient management practices. Funding of \$60,000 has been approved for the program from 2017-19.

Parks and Wildlife and the Swan River Trust have been supporting regional and local natural resource management (NRM) groups within the catchment for nearly 19 years, providing financial aid, technical support and advice as well as support to access various external funding sources. Parks and Wildlife supports three subregional groups – SERCUL, Ellen Brockman Integrated Catchment Group (EBICG) and the Eastern Hills Catchment Management Program (EHCMP). Parks and Wildlife also provides funding for officers based in sub-regional NRM groups. Local community groups are integral in undertaking work to improve the ecological and community benefit of their areas and often work in conjunction and with the support of local governments and Parks and Wildlife.

Facilitate opportunities for community involvement in research, education and behaviour change

The River Guardians program funded by Parks and Wildlife continues to promote the Riverpark and provide opportunities to engage with various initiatives, activities and events. Volunteering opportunities are offered through the Fishing Line Bin project, River clean ups and planting opportunities.

Parks and Wildlife and the Trust have also created and delivered two innovative citizen science programs:

- Dolphin Watch – supporting improved understanding of the dolphin population; and
- Prawn Watch – where community and fishers helped gather broodstock prawns for the restocking trial and assisted with monitoring prawn abundance and distribution.

Parks and Wildlife also funds the delivery of Riverwise Gardening workshops by the award-winning Josh Byrne. These informative and interactive workshops help community members learn sustainable gardening practices to save time, money, water and nutrients whilst attracting birds and wildlife to the garden.

Support groups to source funding

Parks and Wildlife financially supports NRM sub-regional groups to maintain community capacity across the catchment. Parks and Wildlife (and previously the Swan River Trust) has also been providing grants in conjunction with Alcoa and administered by Perth Region NRM under the Swan Alcoa Landcare Program (SALP) since 1999. In the 2017 round of funding, \$334,000 has been provided to 19 community groups. This will support 47 on-ground projects within the Swan Canning catchment.

Promoting Active, Healthy Lifestyles

The Department of Sport and Recreation (Sport and Recreation) provides support via the Organisational Sustainability Program to state sporting associations and recreation organisations such as Canoeing WA, Yachting WA, WA Water Ski, WA Power Boat, Rowing WA, Triathlon WA, and Outdoors WA. In 2016-17, support was provided to more than 12 state sporting associations and recreation organisations who use the Swan Canning Riverpark for sport and recreation. More than 100,000 people were recorded as association members or as participants in organised events.

Sport and Recreation is involved in the development and maintenance of sport and recreation facilities through the Community Sporting and Recreation Facility Fund. Past funding has assisted with facility development in various Riverpark locations including Ascot Kayak Club, Swan Canoe Club at Mosman Beach and the WA Watersports Facility at Burswood. In January 2017, the Sport and Recreation allocated funding of \$700,000 to the City of Melville towards sporting facilities at Tompkins Park. This project will commence in 2017-18.

Sport and Recreation also finances the State Sporting Infrastructure Fund. Past funding has assisted with major facility development in Riverpark locations including the Rowing WA headquarters at Canning Beach. The department also continues to improve the amenity of the Burswood Peninsula through its role as Client Agency for the Perth Stadium project via investments in planning and upgrading the State Tennis Centre.

The Point Walter Campsite has been developed to include river-based activities. From April 2016 – April 2017, Sport and Recreation has recorded a total of 3390 participations, equalling 5085 participation hours.

Promoting the Riverpark Identity

Parks and Wildlife provides articles and various contributions for Landscape magazine (community engagement and citizen science projects), West Australian Newspaper (the Riverpark), Boating WA's magazine Flagship (fishing line bins), and Community Newspapers (seaweed accumulation on foreshores).

Regular promotional events and activities include Swanfish, The Autumn River Festival, Blessing of the Rivers, Avon Descent and Prawn Watch. Recently, it has been confirmed that Riverbank content within the National Museum in Canberra will feature as a regular exhibit.

Parks and Wildlife also hosts the River Guardians community program website and Facebook page to keep the friends of the river involved and up to date on local happenings.

River Guardians

Parks and Wildlife

The *River Guardians* program has been connecting the community with the rivers and the people and projects that protect them for nine years. Working with local partners and 'friends', the program provides member benefits, including free RiverWise events and activities. *River Guardians* provides opportunities for volunteering, training and education, as well as providing the latest river information and updates from experts. Volunteering opportunities such as planting, weeding, rubbish removal and fauna monitoring give the community opportunity to be involved in on-ground conservation activities to enhance and protect the rivers.

Members also enjoy discounts with riverside businesses through the *Friends of River Guardians* program, from bike hire and cruises, to meals at some of Perth's favourite restaurants. With a membership of close to 3000 and active volunteers monitoring fauna, clearing fishing line bin waste and cleaning up the rivers, River Guardians are paving the way for a better future for the rivers and people who enjoy them.



George England and John Garrett from Booragoon Lions Club volunteering at the 2016 World Environment Day cleanup (Photo: Maureen Maher, Keep Australian Beautiful Council)

Outdoors October – Park a day promotion

Sport and Recreation, Parks and Wildlife

Outdoors October is an annual event that encourages people to go outside and explore. Sport and Recreation and Parks and Wildlife collaborated in a “Park a Day” challenge to promote 31 parks along the Swan and Canning rivers. A wide diversity of parks and places were presented spanning the entire breadth of the river systems from the Darling Ranges to Fremantle and offering a range of spaces for the community to enjoy: from natural bushwalks to hidden local gems.







The event started with a feature on Walyunga National Park in the Darling Range. This park is rich with mythological Aboriginal significance while the river provides opportunities to kayak through thundering rapids and along tranquil pools and bushwalks through the woodlands and granite outcrops. Further along the system, alongside the CBD, you can find John Oldham Park, a hidden urban park tucked away within the Narrows Interchange Parklands in Mounts Bay. At the end of the river system in North Fremantle you could venture to Harvey Beach, a small local gem of a park with heritage significance adjacent to the Water Police headquarters.



The Swan River has sections of rapids in Walyunga National Park and is popular for kayaking
(Photo: DBCA)

Objective 8: Improve the way we do business

18 Support appropriate development and businesses through planning and policy framework

Action	Status	Parks & Wildlife
18.1 Identify nodes for developing appropriate commercial opportunities in the Riverpark (P)		
18.2 Ensure all commercial operators in the Riverpark meet high standards through licensing (P)		
18.3 Ensure River Reserve leases are managed in line with policy to best practice standards (P)		

Commercial Opportunities

Parks and Wildlife is responsible for approving the operation of commercial operations within the Riverpark. The Department balances the need to preserve, protect and manage the River as a public space on behalf of the community whilst supporting suitable commercial operations that contribute to the community benefit and local economic development.

A strategic land and waterways use plan is under development to identify preferred locations for appropriate commercial and development around the rivers to better assist proponents and local governments in holistic management of development across the river park. It will also identify critical environmental and community characteristics for protection for example sea grasses or important landscape features to ensure the essential ecological and community amenity of the Riverpark is maintained for all into the future. This project was slightly delayed in 2016-17 with Parks and Wildlife adjusting staff resources to start development.

Licensing

The variety and number of proposed commercial operations continues to increase with 41 applications submitted in 2016-17 alone. Parks and Wildlife assesses and issues approvals in a timely manner. There is a balance to ensure that new and existing businesses enhance the Riverpark surroundings as well as providing economic opportunities. It is equally important to ensure that private businesses seeking to operate on the river do not exclude or inhibit existing public access and use or substantively negatively affect other existing commercial operations.

Best Practice Policy

Parks and Wildlife issues leases for development activities where permanent or semi-permanent structures are placed on or in the River Reserve. Examples of developments requiring River reserve leases include jetties, marinas, over-water restaurants, and boat sheds. Other commercial operations such as ferries or surf kite hire only require a commercial operators' approval through a licence or permit.

Parks and Wildlife actively works with lease holders on environmental management of their facilities including the use of Environmental Management Systems to ensure that nutrients, sediments, contaminants and rubbish are prevented from entering the river system.

Supporting Unique Commercial Operations

Parks and Wildlife

Parks and Wildlife regulates commercial operators on the Swan Canning Riverpark to ensure that they contribute to community benefit and the long-term community use and enjoyment of the river systems without adversely affecting ecological health and amenity. Appropriately designed and managed commercial facilities and operations can add to the enjoyment of the Riverpark by the community and enrich visitor experiences. Conversely, poorly operated operations can create congestion, add to safety issues, increase rubbish and possible impacts on aquatic wildlife.

Parks and Wildlife carefully reviews applications and considers a range of safety, ecological and community benefit issues before issuing approvals. The Department is open to new and innovative forms of commercial businesses and has worked with commercial operators to ensure these businesses meet the needs of the Riverpark. Recent examples include:




- **Seaplanes:** The return of commercial seaplane operations on the Swan River, with two operators approved during a two-year trial. This will allow Parks and Wildlife to monitor and review issues such as noise and compatibility with other river users including ferries.
- **Mr Shippy:** This operator has marked the innovative approach of taking the traditional ice cream van, a much-loved feature of suburban summers, and taken it to the river. *Mr Shippy* has been operating since January 2016, supplying a range of delicious icecream treats, coffee and soft drinks to foreshore visitors and boats on the river.
- **Westcoast Hydrobikes:** Approval has recently been given to conduct guided tours and hiring of exciting 'hydrobikes' on the Swan River, based on the South Perth foreshore. It is anticipated this activity will commence in time for the 2017-18 summer period.

These innovative commercial activities are in addition to the more traditional social river cruises and water sport hire and lesson operations that have been operating around the Riverpark for many years.



Mr Shippy has taken the traditional ice cream van concept and moved it to the river (Photo: *The West* <https://thewest.com.au/news/wa/mr-shippy-the-ice-cream-on-top-for-river-punters-nq-b88333760z>)

19 Engage effectively in the statutory decision-making process

Action	Status	WAPC	Parks & Wildlife	Local Govt	MRA
19.1 Provide clear guidance consistent with SPP 2.10 to developers of land adjacent to the foreshore (P)		●	●		
19.2 Apply water sensitive urban design principles and other existing policies and guidelines		●		●	●
19.3 Continue to collaborate on the development of precinct plans to support riverside development			●		

Providing guidance

Parks and Wildlife and WAPC/DoP continue to apply policies, such as State Planning Policy 2.10, and relevant planning instruments, such as structure plans, to their assessment of development applications and subdivisions in and adjoining the Swan Canning Development Control Area. These policies ensure consistent, critical advice and assessment is provided to proponents.

The volume of proposals submitted to Parks and Wildlife continues to be high with increasing requests for expedited assessments. In 2016-17, 194 applications under the *Swan and Canning Rivers Management Act 2006* and *Regulations* were received for assessment by Parks and Wildlife.

Apply WSUD and other policies

Water sensitive urban design (WSUD) is an approach for minimising the impact of urbanisation on the natural water cycle and supports integrated water cycle management. For the rivers, WSUD is a critical element in urban planning to maintain and enhance water quality, manage groundwater and surface water interactions and achieve enhanced environmental and community amenity outcomes in urban developments. Parks and Wildlife provided assessment support and advice on WSUD application on 107 development applications referred from 20 local governments in 2016-17. WAPC and Parks and Wildlife also support the application of WSUD through the framework and principles contained in *Better Urban Water Management* (WAPC, 2008).

The Metropolitan Redevelopment Authority is a supporter of WSUD approaches and has worked to incorporate environmental integrity as part of its redevelopment objectives, as well as incorporating WSUD and other sustainability aspects into redevelopment scheme principles, development policies and design guidelines. Proposals are assessed for their compliance with these requirements to achieve improved environmental, sustainability and community outcomes.

Collaborate on precinct plans

Several precinct plans are being developed throughout the Riverpark. Precinct plans are progressing for Belmont foreshore and Bassendean foreshores.

Perth Water is the next scheduled precinct plan to be developed and involves three local governments and five government organisations. Agreement on undertaking the collaborative strategic land use planning of this important area was reached in 2016-17. The process was slightly delayed due to the complex nature of the project but is now underway with plans for completion in 2017-18.

Precinct Planning

Parks and Wildlife, MRA, City of Perth, City of South Perth, Town of Victoria Park, DoP, Transport, Tourism WA


Historically, land use planning along the rivers was fragmented and uncoordinated with responsibility resting with WAPC and 21 adjoining local governments.

Consolidating all riverside development under the control of a single planning assessment organisation with approvals by the Minister for Environment has delivered multiple benefits and efficiencies including:

- improved environmental and amenity outcomes for the rivers;
- integrated advice;
- dedicated specialist staff allowing for closer relationships and consultation with proponents, consultants and other decision makers; and
- a clear and well understood framework for proponents, providing certainty and support.

Strategic land use planning around the rivers has also improved with the introduction of precinct plans. Perth Water is the latest and most ambitious precinct planning project yet for Parks and Wildlife. Together, the authorities with an interest in the precinct will come up with a strategic vision and guide for the future use and management of Perth Water, the adjacent Parks and Recreation foreshore reserve and the development interface. Perth Water includes some of the most iconic river-viewscapes in the city as well as premium residential and commercial land along one of the busiest sections of the River with many recreational, tourism, and transport activities all occurring in this space. The aim of the Precinct Plan is to purposefully guide future improvement of the area in a more strategic and proactive manner for the wider benefit of all visitors to the area.

20 Continually improve the statutory approval process

Action	Status	Parks & Wildlife	Aboriginal Affairs	Local Govt	MRA
20.1 Review regulations and legislation to improve efficiency of the statutory assessment process (P)		●			
20.2 Support implementation of Aboriginal Heritage Protocol to obtain Aboriginal Heritage Act 1972 approvals for conservation works in the Riverpark		●	●		
20.3 Monitor and enforce compliance with development approvals		●		●	●

Review regulations and legislation

A review of the *Swan and Canning Rivers Management Act 2006* and *Regulations* was undertaken in 2016-17. It was placed temporarily on hold pending the machinery of government announcements in early 2017 and the need to consider potential changes to the Act arising from this. Amendments to improve efficiency, particularly targeting regulation changes, will be considered in 2017-18.

Implementation of Aboriginal Heritage approvals





Parks and Wildlife has not initiated any projects requiring heritage approval and continues to advise partner organisations when projects should seek approval. Recently, a proposed boardwalk in the Canning River Regional Park in the City of Canning has commenced a section 18 application. The Swan River Trust was one of the first agencies to trial the Aboriginal Heritage Protocol when first developed to improve collaboration and streamline heritage approvals in the Riverpark. Parks and Wildlife is committed to recognising and preserving Aboriginal heritage in all areas of the state.

Compliance with development

Parks and Wildlife continues to check compliance with approval conditions, particularly focussing on high risk and contentious proposals. The Department also tries to assist other approvals authorities with advice on compliance of their conditions. An increase in major works approvals has meant less time spent supporting other authorities in 2016-17.

The MRA has continued to work with developers on major projects including Elizabeth Quay, Waterbank, Helena Precinct and Wungong Urban Water Project to achieve agreed WSUD and environmentally sustainable outcomes. Approved developments at Elizabeth Quay must demonstrate Australian Best Practice 5 Star Green Star design and dewatering management plans.

21 Identify and attract new sources of investment to achieve greater management outcomes

Action	Status	Parks & Wildlife
21.1 Develop mechanisms for attracting private sector financial support for conservation and community projects through corporate partnering and establishing a Swan Canning Rivers Foundation		
21.2 Investigate opportunities to diversify and increase investment in the Riverpark		

Attracting private sector support and new investment

Parks and Wildlife coordinates grant applications and promotes key project to federal government, private enterprise, philanthropists and foundations to help secure external income streams to support Riverpark objectives.

Parks and Wildlife is actively supporting the newly established WA Parks Foundation and is not pursuing a separate Swan Canning Rivers Foundation. The Swan Canning Riverpark trails network is part of a series of proposed projects that the WA Parks Foundation is working to secure private and corporate support and funding to implement.

The Swan River Trust, Parks and Wildlife and the Burswood Park Board have had a long-term partnership with Perth NRM and Alcoa for the Swan Alcoa Landcare Program. The program is approaching its 20-year anniversary. Since the partnership began in 1999, with funding support from the Burswood Park Board, Burswood Crown and the Australian Government, the Trust, and then the Department of Parks and Wildlife has invested more than \$4.25 million into the landcare program. Parks and Wildlife has worked closely with Perth NRM and Alcoa to secure ongoing commitment and funding for this iconic and critical community program.

In 2016-17, \$10,000 was secured from the WA Fish Foundation to extend the Prawn Watch program. This was in addition to the \$1.7 million of cash and in-kind contributions by project partners (over the preceding 3 years) into an initiative to breed and re-stock prawns into the rivers and understand factors affecting their population recovery through monitoring and research.

Parks and Wildlife continues to attract partnerships and support to address the research agenda set by the Swan River Trust 2013-18 and to date the value of cash and in-kind contributions of research partners total more than \$2.6 million. New federal funding sources are being investigated in collaboration with the State NRM office and WALGA.

