

PHCC RAMSAR REVIEW

November 2018-Present

Ramsar TAG Meeting to be held on 22nd March 2021

Significant activities since November 2018

1. **Wetlands and People – A community restoring the Ecological Character of the Peel-Yalgorup Ramsar 482 Wetland (2018-2023)**
 - PHCC continued delivery of this 5-year Project funded through the National Landcare Program / Regional Land Partnerships (NLP2 RLP) tender process. This project addresses the outcomes specified by the Australian Government which are relevant to this Technical Advisory Group
 - **Primary Outcome (1) - By 2023, there is restoration of, and reduction in threats to, the ecological character of Ramsar sites, through the implementation of priority actions (i.e. the Peel-Yalgorup System); and**
 - **Secondary Outcome (4) - By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities (i.e. the Thrombolites at Lake Clifton)**
 - Progress against the project services (outputs) for the project **November 2018 to December 2020** were as follows:
 - **13 / 25** baseline data sets collected and/or synthesized
 - **186 / 321** communications material published
 - **0 / 3** conferences / seminars
 - **5 / 12** field days held
 - **9 / 30** on-ground works on private land (weed control to complement works within Ramsar Site)
 - **62 / 125** community engagement training /workshop events
 - **56 / 160** ha controlling access
 - **215 / 390** ha treated for pest animals, initial
 - **95 / 360** ha treated for pest animals, follow up (monitoring, baiting & trapping foxes, feral cats)
 - **28 / 30** ha from which debris was removed
 - **18 / 19** agreements established (Contractor and Landholder Works Agreements)
 - **7/7** monitoring regimes established
 - **29 / 68** days maintaining monitoring regimes
 - **8 / 17** annual fauna surveys conducted
 - **0 / 1** flora surveys conducted
 - **32 / 32 potential** sites identified for on-ground works
 - **18 / 37** negotiations with community, landholders, farmers, traditional owners, industry groups
 - **575 / 1210** days of project planning and delivery
 - **49 / 77** planning and delivery documents for delivery of the project services
 - **367 / 477** ha of initial weed removal
 - **137 / 350** ha of follow-up weed removal
 - **30 / 30** ha revegetated
 - **0 / 20** ha of revegetated habitat maintained
 - **16/16** days of site preparation
 - **26 / 50** Water quality Surveys conducted
 - **1 / 2** weed distribution surveys conducted

- This Project Design consisted of four components, briefly described as follows:
 - i. **Integrated collaborative management facilitated for ongoing integrated delivery and sustained action:** PHCC will continue to lead Peel-Yalgorup System's "Ramsar 482" initiative, including facilitating the Technical Advisory Group (TAG); reporting the condition of the Ecological Character of the Site against the Limits of Acceptable Change; supporting subsidiary TAGs and Working Groups, and reviewing and updating the Site's Ecological Character Description, Monitoring and Evaluation Guide and the Management Plan.
 - ii. **Community Engagement (Wetlands and People):** this sub-project component supports the Ramsar Convention's Program on communication, capacity building, education, participation and awareness (CEPA) including implementing the Wetlands & People Plan – CEPA-Action Plan priority activities.
 - iii. **Assess Ecological Character and address key knowledge gaps:** core elements of the 12 recommended Monitoring Programs within the Monitoring and Evaluation Guide for the Peel-Yalgorup Ramsar Site (2008) will be implemented, as well as investigations into the hydrology of Lake Clifton and biological investigations to establish the condition of the Lake Clifton Thrombolite Threatened Ecological Community, and investigations into ASS at Lake McLarty.
 - iv. **On-ground priority actions:** will be implemented to remediate riparian and aquatic areas and associated upland habitats and reduce threats to further degradation. Priority actions include weed control, illegal access control, debris (litter and pollution) control, feral animal control and restoration.
- Highlights are summarized as follows:
 - i. **Integrated Collaborative Management (coordinated by Rick James and Steve Fisher)**
 - Organised the 18th Ramsar Technical Advisory Group (TAG) meeting for March 2020, which was cancelled due to the COVID-19 pandemic and the 19th Ramsar TAG Meeting March 2021 (this meeting).
 - Completed a Draft version of the Addendum to the Ecological Character Description and for the Peel-Yalgorup System, produced by Jenny Hale with stakeholder input.
 - Participated in the Ecological Risk Assessment for the Peel-Harvey Fishery as part of the audit of the Marine Stewardship Council Certification.
 - Participated in and/or hosted the subsidiary Lake McLarty and Lake Mealup TAGs
 - ii. **Wetlands & People (Community Engagement, (coordinated by Sharon Meredith and Charlie Jones)**
 - Coordinated and delivered more than 60 community engagement and education events designed to promote the ecological values of Ramsar 482 and encourage the wise use of the wetlands according to the Wetlands and People Plan. These events involved a total of 13,533 participants and 98 unique groups including community groups, education providers, government agencies and businesses.
 - Major events were:
 - **Two Wetland Weekenders** (October 2019 and 2020), the latter celebrating the 30th Anniversary of the Peel-Yalgorup Wetland System's recognition as Ramsar Site 482 and World Migratory Bird Day. Events included tours of the estuary by boat and the Creery Wetlands by foot, the 'Pave the Way' clean up event and a mini-festival at the Coodanup Foreshore, movie nights and children's activities. These were attended by more than 1200 people.
 - Two art exhibitions: The Overwintering Exhibition and the Flyway Print Exchange Exhibition, a portfolio of 150 prints that respond to the sites that migratory shorebirds visit and depend on to survive,

- Three National Shorebird Counts in partnership with BirdLife - Peel which involved facilitating shorebird identification workshops for 21 volunteers with Ornithological Technical Services providing the key trainer, and coordination count program involving more than 60 volunteers split into 20 teams across the Ramsar Site.
 - Four excursions per year (2018-2020) with Year 1 to 6 students (280 students per year) from Greenfields Primary School and Mandurah Primary School discovering Ramsar 482 and engraining the “Wise use of our Wetlands”. The Year 6 cohort have attended at least one of these excursions each year of their primary school education.
 - The Clean Up Peel Waterways event throughout March each year involved 17 teams cleaning up various sites across the Ramsar Wetland.
 - Supported Dolphin Watch Training in Mandurah and the production of 500 new FinBooks. The FinBook Mandurah was provided to 130 volunteers who attended the Dolphin Watch Training event 27 March 2019 and will continue to be distributed throughout the Peel community. Training will resume in March 2021.
 - Sponsored the 2021 WA Wetlands Management Conference in March 2021, celebrating the 50th Anniversary of the Ramsar Convention. Also supported the conference through delivering one keynote and three plenary presentations; pre conference tours to Lake Clifton and Peel-Harvey Estuary and the Danjoo Gabi Wonga Sundowner on 15 March.
- iii. **Assess Ecological Character & Address Key Knowledge Gaps (coordinated by Rick James and Steve Fisher)**
- Developed and launched a Ramsar 482 Report Card (Baseline 2018) based on measurements of current condition against Limits of Acceptable Change to identify gaps in monitoring data at the commencement of the project.
 - Implemented a surface water quality (and quantity) monitoring program for the Yalgourup Lakes – monthly in-situ measurements of Electrical Conductivity, pH, Dissolved Oxygen & temperature; quarterly ionic balance; biannual nutrients
 - Commenced a groundwater monitoring program for Lake Clifton (existing bores and “spear probing”)
 - Designed and implemented a survey of benthic organisms at Lake McLarty (with Adrian Pinder, DBCA)
 - Performed an aerial survey of Lake Clifton to establish the extent of the thrombolite TEC.
 - Implemented a sampling and analysis program to determine the abundance and diversity of fish assemblages in the Peel-Harvey Estuary System (Fish Community Index) including the estuarine reaches of the Serpentine and Murray rivers – see also ‘Restoring the Serpentine River’ below).
 - Supported the ARC Linkage project LP 150100451 ‘Balancing estuarine and societal health in a changing environment’ to its completion in 2020 filling knowledge gaps in estuarine sediment quality; submerged aquatic vegetation; fish communities; benthic organisms; estuary hydrodynamics.
 - Implemented a monitoring program for cormorants (Waterbirds B)
- iv. **On-ground priority actions (coordinated by Jo Garvey, Rick James and Mike Griffiths)**
- Outputs over the life of the project are summarized in Figure 1 below. Highlights include:
 - Carried out 365 hectares of initial weed control at priority sites on the Ramsar Site including cotton Bush at the southern end of Kooljerrenup Nature Reserve (NR) and the eastern side of Lake Preston, Brazilian Pepper and Fig control on the east side of Lake Clifton.
 - Follow up weed control in 2020 over an area of 137 ha

- Revegetation of 30 ha spread across 6 locations: Lake McLarty; North west lake Clifton; Hexham Reserve; Serpentine River
- Feral animal control (pigs, foxes) over 215 ha in Kooljerrenup Nature Reserve.
- Access control (fence and gates) at McLarty Nature Reserve and Northern Lake Clifton protecting an area of more than 160 ha.
- Carried out works on 9 privately owned landholdings adjacent to the Ramsar 482 Site, coordinated with works on the Ramsar 482 site, including.
 - Feral animal control over 90 ha surrounding Lake Mealup on the land owned by Lake Mealup Preservation Society
 - Typha control (~10 ha) at Lake McLarty
 - Weed control on more than 300 ha at selected properties to complement weed control on Ramsar 482.

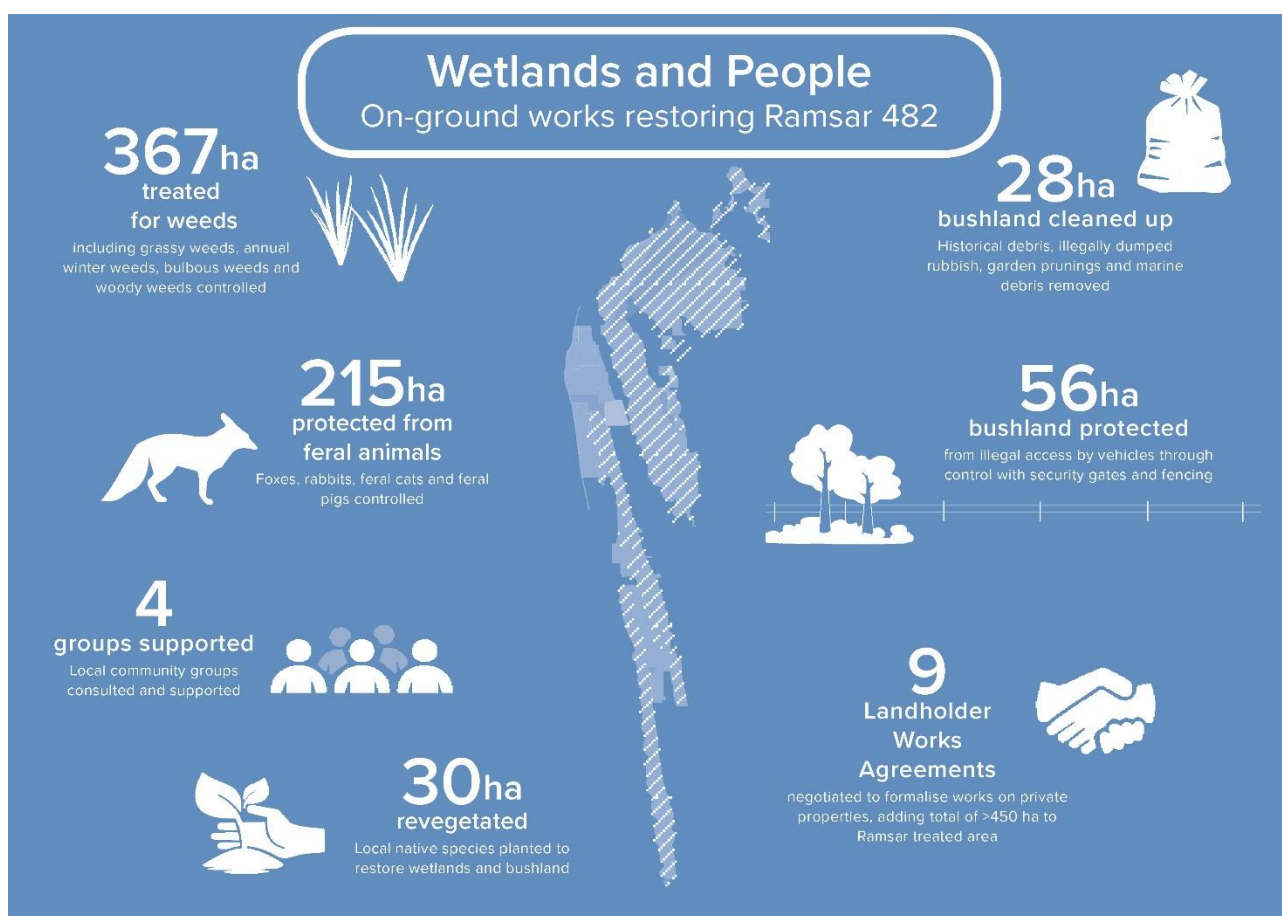


Figure 1: Outputs achieved to December 2020 by the On ground priority actions component of the 'Wetlands and People' project

2. Connecting Corridors and Communities: Restoring the Serpentine River (2018-March 2021)

- PHCC completed delivery of the project *Connecting Corridors and Communities: Restoring the Serpentine River*, funded by the Alcoa Foundation. This project, managed by Jo Garvey, aimed to improve the health, biodiversity and ecosystem services of the Serpentine River through on-ground works including fencing, feral animal control, revegetation and bank stabilization. Outputs over the life of the project are shown in Figure 2 below. Highlights include:
 - Development of a River Action Plan for the Serpentine River which identifies priority areas for restoration works to be implemented

- Continued engagement with landholders and Traditional Owners through forums, meetings and field days
- River Health Assessments performed at 7 sites on the Serpentine River between Rapids Road (upstream of Lowlands Nature Reserve) and Karnup Road to establish a baseline of river condition.
- Supporting Landcare SJ to contain and remove water hyacinth
- implemented a sampling and analysis program to determine the abundance and diversity of fish assemblages (Fish Community Index) in the estuarine reaches of the Serpentine and Murray rivers – see also ‘Wetlands and People, Assess Ecological Character & Address Key Knowledge Gaps’ above).
- Developed concept plans for restoration works at three priority sites identified in the River Action Plan
- Revegetated an area of foreshore south of the confluence with the Peel Main Drain (The Karu-Bilya Project) in collaboration with BirdLife WA and PHCC’s World for Woodlands project

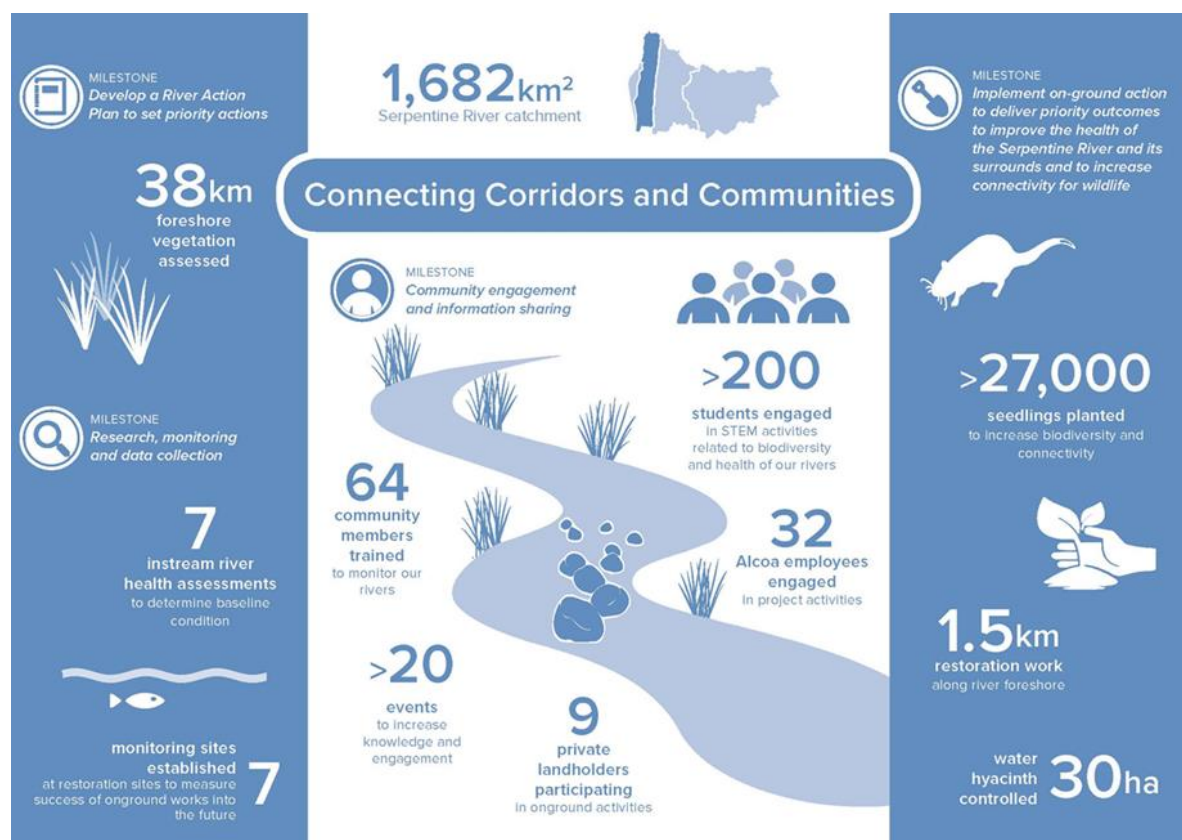


Figure 2: Outputs achieved during the ‘Connecting Corridors and Communities: Restoring the Serpentine River’ project

3. Healing Bilya - Restoring the Serpentine and Murray Rivers (2021-2023)

- PHCC secured funding from the Alcoa Foundation to extend the Restoring the Serpentine River project for a further three years (to December 2023) to implement actions from the River Action Plan including the restoration concept plans and to expand activities into the Murray River, including updating the River Action Plans for the Murray River.

4. Peel-Harvey Estuary Grants (2018-2021)

- This project, funded by the Western Australian Government (DPIRD) aims to improve the health of the Peel-Harvey Estuary by improving fish habitat or abundance in our rivers. Highlights include:

- Set up of an aquaculture program at John Tonkin College and Murdoch University to grow black bream from larvae to juveniles, including the aquaculture of algae, rotifers and artemia as diet.
- Release of approx. 2,600 black bream juveniles into the Murray River
- Engaging with community through the Mussel up for the Murray Project, where 27 local residents are growing black pygmy mussels in cages under their jetties in the Murray River to test their survival and range (salinity tolerance). These mussels provide habitat for black bream.
- River Health Assessments at 5 sites on the Harvey River completed (Harvey River Restoration Taskforce and Murdoch University)
- Planned installation of in-stream structures in the Lower Harvey River as habitat for native fish, including the smooth marron.
- Working with OzFish Unlimited to develop a project to better engage with recreational fishers in creating habitat for fish in the Murray River.

5. Shorebird ID Training and National Shorebird Monitoring Program

- PHCC facilitated the annual Shorebird identification training and count for the Peel Region (– see Wetlands and People component above funded by the Australian Government’s NLP/RLP). Run on an annual basis BirdLife’s National Shorebird Monitoring Program is the largest Citizen Science Program in Australia. In 2021:
 - 72 volunteers counted shorebirds over the duration of the weekend (30 & 31 January).
 - A total of 33750 waterbirds were counted comprising:
 - 12326 Shorebirds
 - 21424 other waterbirds.

6. Saving Lake McLarty (Phase 1): Addressing acidification, hydrology and habitats (2019-2022)

- This project is funded through the State NRM Program Community Stewardship Grants and includes on-ground works and investigations to better understand the decline in water levels and mitigate risks of formation and oxidation of acid sulfate materials and increasing terrestrialisation of the lake. The proposed works are in accordance with the Lake McLarty Action Plan, developed by PHCC in collaboration with the Friends of Lake McLarty, DBCA and the Lake McLarty TAG.
 - Completion of a Draft report for the “Flow Augmentation Feasibility Study”, investigating alternative water sources to extend the hydro-period of the lake.
 - Consultant engaged and work commenced (March 2021) to perform acid sulfate soils investigations, describe stratigraphy and install groundwater monitoring bores
 - Lease of water quality meter and probes for use by Friends of Lake McLarty to monitor water quality
 - In-kind contributions from PHCC, DBCA and others including:
 - revegetation with 3900 plants at Lot 68 Mills Rd Lake McLarty Living Stream project site by PHCC (see Wetlands and People above) and DBCA
 - assessments made of benthic fauna (sampling rounds in November 2019 and January 2020)
 - preliminary Acid Sulphate Soils investigations (PHCC ‘Wetlands and People’ and DBCA)

7. Point Grey Marina Proposal

- On 15 March 2019, the Australian Government granted the proponent a 10-year extension to the Time Limit of Authorisation for substantial commencement of the development extending the Time Limit from 28 June 2019 to 28 June 2029. The Australian Government also varied the conditions of the approval so that the proponent now must provide a Capital Dredging and Spoil Disposal Management

Plan three months prior to the commencement of dredging operations rather than the commencement of any action. In effect, this allows the proponent to commence development of the marina without having an approved plan for management and disposal of spoil from dredging operations.

- Immediately following this approval, Roberts Day on behalf of Point Grey Development Company Pty Ltd (The Proponent) submitted a Development Application to the Shire of Murray for Proposed Stage 1 Earthworks, Point Grey Marina involving clearing and excavating the land identified for the marina and the entrance channel, but not intersecting the groundwater table or surface water.
- After considering deputations by PHCC, BirdLife WA, commercial fishers and others at two council meetings, the Shire of Murray refused the original development application (in April 2019) and an amended application (in June 2019).
- The proponent appealed the decision at the State Administrative Tribunal (SAT) in October 2019 at which Dr Steve Fisher (PHCC) and Dr Vicki Stokes (BirdLife WA) appeared as expert environmental witnesses to support the Shire of Murray. In November 2019, the SAT upheld the decision of the Shire of Murray primarily on the grounds that the proposed development was not consistent with orderly and proper planning
- In October the proponent submitted a Channel and Marina Management Monitoring Plan to DWER as a requirement of the State Government Approvals process (Ministerial Statement no 906 i.e. the proponent shall prepare a Channel and Marina Management Monitoring Plan for estuary water and sediment quality to the satisfaction of the CEO (of DWER) prior to the commencement of construction. PHCC reviewed this plan and provided comments supporting the Shire of Murray in its advice to DWER that the CMMP does not meet the requirements of the Ministerial Statement and requesting an opportunity to comment on an amended CMMMP if and when it is submitted.
- PHCC, Shire of Murray, PDC and others contracted the lead investigators of the ARC Linkage Project Balancing estuarine and societal health in a changing environment to explore how the findings of this research might help assess the environmental risks of the proposed development, in particular modeling the trapping of sediment and macroalgal wrack in the navigation channel, entrance channel and marina.
- Incorporated this information into deputations to Council Meetings of the Shire of Murray (25 June 2020 and 21 Jan 2021) and a written submission to the Shire (30 October 2020) supporting the recommendation to remove discretion for planning approval of a marina from the Shire of Murray Town Planning Scheme (i.e. District Scheme Amendment No 314 to Remove Discretion for a Marina at Lot 1132 (745) Carrabungup Road, Point Grey). The main planks of our argument were:
 - Threats to ecological character of the Peel-Harvey Estuary (Environmental)
 - Financial risks of ongoing costs, future maintenance, environmental repair (Economic)
 - Social and economic– loss of jobs, threat to recreational values including fishing and crabbing (Social)
- The Shire of Murray voted in favour of this amendment and so it has now been referred to the WA Planning Commission to make this recommendation to the Minister
- It is our hope that the Minister approves this amendment, effectively ending this proposal to build a marina at Point Grey.

8. Ramsar 101 Master Classes

- PHCC continued this initiative by delivering a series of presentations giving an overview of the ecological character of the Peel-Yalgrope System Ramsar Site (Ramsar 101), the threats and threatening processes to these values and the research, science and on- ground works currently

underway to address these threats. Presentations were made to more than 1200 people from the following audiences:

- Dolphin Watch information and training session (March 2019).
- Rotary Club of Pinjarra (April 2019)
- John Tonkin College Surf Science students (March 2019)
- Science Department staff and students at Santa Maria College, Attadale (July 2019).
- LABNETWEST, the Association of Science Technicians in Independent Schools (July 2019).
- Mandurah Local Area Emergency Management Committee (August 2019).
- Provided commentary during various boat tours of the Peel-Harvey Estuary
- National Science Week event hosted by Peel Bright Minds (August 2020).
- Movie Night at the Wetlands Weekender (October 2020).
- Commentary during various visits to the lake Clifton Thrombolites
- Association of Independent Retirees (October 2020).
- Rotary Club Mandurah Districts and Rotary Club Como (October 2020).
- Various presentations to Greenfields and Mandurah Primary Schools.
- PHCC's 'SHARE in the Shed' events

Steve Fisher

Operations Manager, Science & Waterways

We acknowledge the Noongar people as Traditional Custodians of this land and pay our respects to all Elders past and present