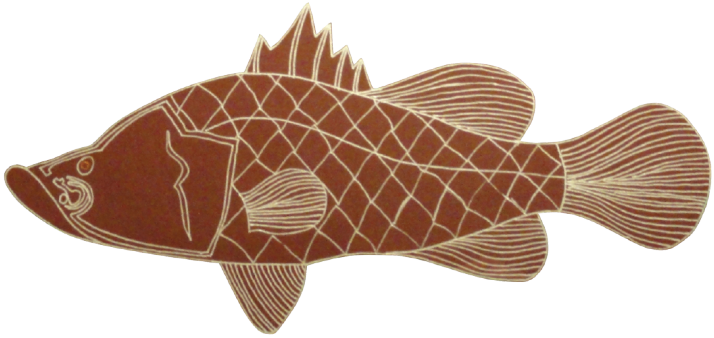
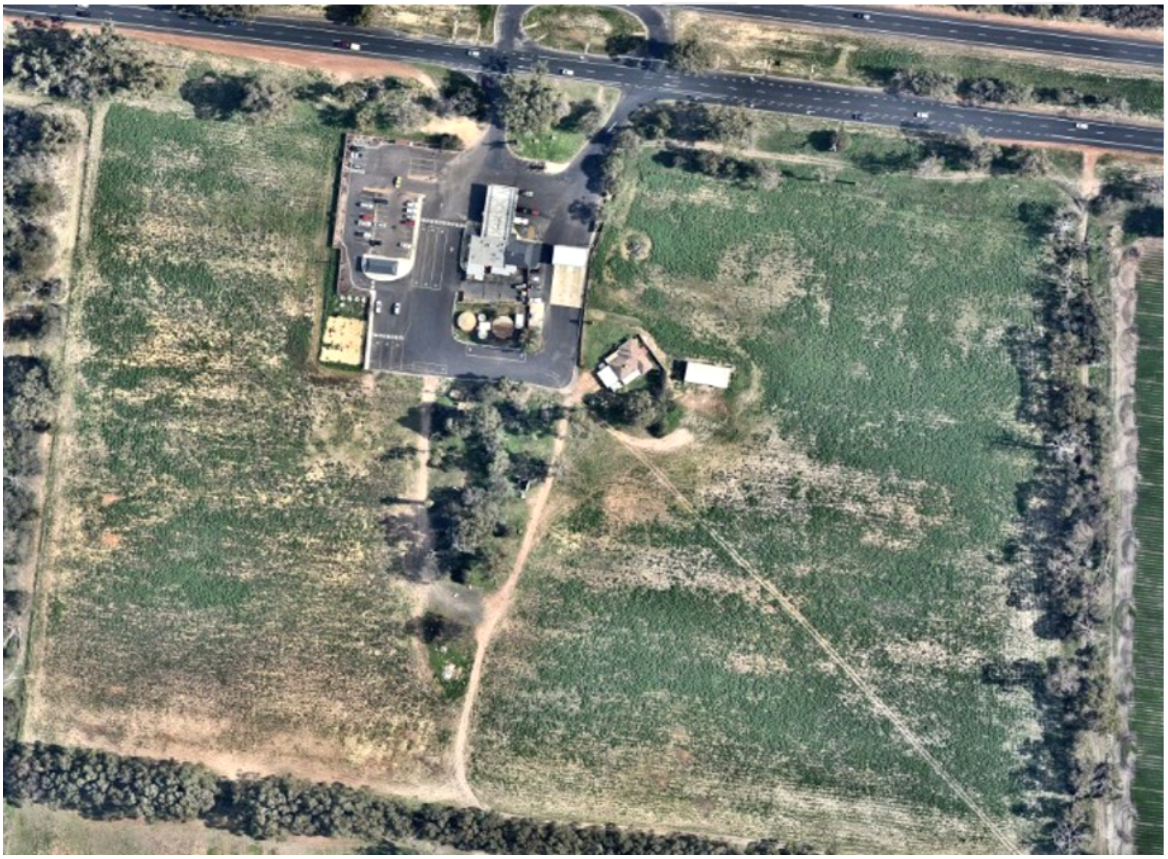
Foundation for Indigenous Sustainable Health



"Healthy spirit, heart, mind and body,
healthy families, community and land"



Environmental Assessment

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Acknowledgement

FISH acknowledges Aboriginal people as the first peoples of our nation and as the traditional owners of the land. FISH acknowledges that there were hundreds of different Aboriginal groups within Australia prior to European settlement, each with their own distinctive language, customs and lore. Under Aboriginal lore and custom, Aboriginal people have cultural responsibilities and rights in relation to the land of which they are the traditional owners. Aboriginal people have a living spiritual, cultural, familial and social connection with the land. Aboriginal people have made, are making, and will continue to make, a significant and unique contribution to the heritage, cultural identity, community and economy of Australia.

EXECUTIVE SUMMARY

This Environmental Assessment addresses the key environmental issues which have been considered in the development of the Myalup Karla Waanginy initiative.

The document considers the following:

- Broad principles of sustainability in site design, including energy and water efficiency, responsible resource usage and care for land;
- Biophysical considerations, including native vegetation and pest control;
- Pollution management; and
- Social factors, including visual amenity and noise.

The proposed usage is not anticipated to cause any significant detriments to the environmental values of the site or its surroundings.

SUSTAINABILITY – CENTRAL TO SITE AND PROGRAM DESIGN

Myalup Karla Waanginy will have a strong focus on sustainability and ecological integration. The design and appearance of the buildings will be integrated with the surrounding environment. Overall, the site will have a natural feel in its integration of architecture and landscaping.

We recognise that the construction industry is central in determining whether our society meets its sustainability goals. The building industry is responsible for around 20% of Australia's carbon footprint. These emissions include embodied energy and water consumption that goes into the building during construction as well as operational energy and water usage of the completed building, maintenance during the life span and the demolition at the end of the building's life.

FISH's Aboriginal consortium partners have collectively formulated and signed up to a set of Sustainability Principles which will guide the construction and operation of the site. These principles are:

"To recognise the environment as the third teacher and to use innovation and newest technologies to sustainably develop the Myalup site to reduce consumption of non-renewable resources, minimise waste, and to create a healthy, productive environment. Sustainable design principles include the ability to:

- optimise site potential;
- minimise non-renewable energy consumption;
- use environmentally preferable products;
- protect and conserve water;
- enhance indoor and outdoor environmental quality;
- optimise operational and maintenance practices;
- reduce, reuse and recycle;
- minimise impact on / enhance surrounding environment; and
- optimise safety and wellbeing."

Solar passive design principles have been used in all of the buildings at Myalup Karla Waanginy. Passive design uses natural energy flows (sun and wind) to maintain the most comfortable indoor environment possible for a building for the climate in which it is located.

The site will be primarily powered by photovoltaic solar generation and battery storage, with an ultimate target of 100% self-generation.

Biophysical Factors

Native vegetation

FISH has consulted with the Department of Biodiversity, Conservation and Attractions (DBCA) and has received preliminary advice from Peter Hanly. DBCA has confirmed that it does not have any specific concerns regarding the Myalup Karla Waanginy development. The site is already predominantly clear of native vegetation, and there is no proposed removal or disruption to the remnant established trees on the site (located in the central part of the site, and along the perimeter.

As outlined in the Landscaping Plan, the landscaping of the site will be carried out using appropriate native species. The use of endemic species, small maintained water features and green roofs at the site will indeed increase the biodiversity value of the land. The site will be managed by Indigenous horticultural and landscaping specialists, combining traditional understanding with current best practice land management knowledge.

Weed and pest management

FISH has consulted with Peel Harvey Biosecurity Group (PHBG) regarding the proposal. The PHBG has expressed strong support for the initiative and has indicated a desire to work collaboratively with FISH to use the site for training around local landcare and pest management. Due to the agricultural nature of the surrounding region, local businesses and landcare groups place great emphasis on pest control and weed management. Common weed concerns in the area include cotton bush infestations, which are more likely to arise on vacant unused properties and with seeds easily dispersed by wind, water and animals. The Myalup Karla Waanginy proposal will offer a net benefit with respect to weed and pest management, because the entire site will be maintained by the trained, on-site landscaping and horticulture team to ensure that only preferred species are present. The PHBG have also raised the potential for collaboration with FISH in delivering courses for Aboriginal participants to undertake the Certificate 111 in vertebrate pest management.

FISH has also consulted with the Department of Fisheries (within DPIRD) regarding the proposal to stock the on-site dams with marron and silver perch. The Department has confirmed that both species are common aquaculture species within the region and has advised of the process to obtain a Translocation Permit with respect to the silver perch.

According to Department information, the scale, size and location of the dams will be such that complex management plans (such as MEMP) would not be required. The dams will be situated on private land, not in proximity to natural waterways, and will be producing at below the minimum thresholds.

Pollution Management

Environmental Site Assessment

In Dec 2019-Jan 2020, WSP Environmental Consultants conducted an Environmental Site Assessment (ESA) on behalf of Puma (now Chevron) to investigate any residual soil and water contamination issues arising from the operation of Settlers Roadhouse petrol station. The report concluded that there are relatively minor plumes of soil contamination beneath the petrol bowsers, which are stable and subject to natural attrition over time. This small-scale localised contamination does not pose a risk to the proposed activities. Please see separately attached ESA.

Additionally, the underground water flow direction at the site was found to be towards the west (ie: away from FISH's portion of the site) and therefore any residual contamination would not a risk.

The Department of Water and Environmental Regulation has reviewed this ESA and has not identified any specific concerns arising.

Protection of Catchment

As referred to in the separate Planning Report, Statement of Planning Policy 2.1 aims to project the Peel-Harvey Coastal Plain Catchment, in particular its ecological values, and to prevent excessive nutrient export into the drainage system.

There are no proposed activities at Myalup Karla Waanginy which would pose a risk to the catchment system.

- *Horticulture (production of native plants, vegetables, fruits, etc):* These activities will not entail any significant use of agri-chemical products and are not expected to generate any degree of nutrient run-off or effluent from the land.
- *Aquaponics:* The proposed aquaponics facility will operate as a closed-loop system and will therefore not generate any nutrient run-off or effluent from the land.
- *Aquaculture*: The aquaculture dams will operate as a small-scale ancillary component of the broader Myalup Karla Waanginy program. Production scale will be analogous to hobby farm arrangements, with the primary focus on education and training, landscape integration (within overall site aesthetic and tourism context), and therapy. An aquaculture licence will be obtained in order to permit the commercial use of on-site production (silver perch and marron) at the restaurant. The dams are not primarily intended for commercial production and therefore, will not be utilised in a way as to generate excessive organic build-up requiring purging or draining. Therefore, the dams will not generate nutrient run-off or effluent from the land.

Potentially high impact activities, such as intensive animal husbandry or high chemical use farming are not proposed for the site. Clearing of established vegetation is also not proposed. The site has an existing Groundwater Licence and the proposed water use demands of the site are comfortably within the allotted volumes. In summary, no adverse impacts on the Catchment are anticipated.

Wastewater treatment and water management

The land does not have any connection to mains sewerage. The site will be serviced by two septic systems in compliance with Government Sewerage Policy, September 2019. Please refer to separate Water Management Plan for details of proposed system.

FISH has an MOU with Aboriginal-owned Regional Services Group – a plumbing and civil works company. FISH is in discussions with the international company Veolia who are looking at partnering with the FISH Myalup Karla Waanginy Justice Initiative and working with Regional Services Group and FISH in the development of the site, with respect to water, sewerage and waste management. This includes technical advice with:

- Reverse osmosis (RO) and Treatment – including tanks and treatment plant for the supply of potable water;
- Process treatment – this treatment would service the ponds and aquaponics;
- Grey water treatment (Drip irrigation) – to potentially service the plant nursey;
- Rain water treatment – the system could be incorporated into RO or service other areas of Myalup operation.

Regional Services Group, in consultation with Veolia and other technical experts, has worked with FISH in providing input to the site design with reference to the above points and will be the preferred Aboriginal contractor to carry out the final technical design and implementation with third parties.

FISH has obtained groundwater analysis data to ensure that water quality is suitable for intended purposes.

SOCIAL SURROUNDINGS

Visual amenity

Preserving and improving the visual amenity of the land, particularly with respect to the vistas from the Forrest Highway, have been a key priority in the architectural and landscaping design of the Myalup Karla Waanginy site.

The tourist component and public access portion of the site will be located at the south portion of the land, facing the Forrest Highway. This building is designed to have a striking visual appeal, and its location toward the front of the lot will enhance its prominence as a tourist attraction.

Visual beauty of water features is further integrated with the tourist areas. The dams form an important part of the site landscaping and will feature native wetland vegetation and timber decking to allow residents and visitors to appreciate the area.

The largest buildings on the site will be the aquaponics and panel manufacturing facilities. These structures will be located along the northern border of the land in order to reduce their visual impact and take advantage of the large trees along the northern boundary as a visual filter. These buildings will be approximately 7m tall at the highest point. This strategy is consistent with the other existing large industrial sheds along the Forrest Hwy. All other buildings will be single storey.

The sides of the panel facility will comprise of panels which will serve as canvases for Aboriginal art. Program participants will use the space for art therapy, and the shed will be an open-air gallery of Aboriginal art when completed.

For more detailed descriptions of the visual and aesthetic elements of the site, please refer to the separate Planning Report and Landscaping Reports.

Noise

No notable noise pollution is anticipated. Myalup Karla Waanginy is intended to be a place of healing and learning. The proposed activities at the site are not expected to generate any substantial noise. Noise produced within the panel manufacturing facility will be comparable to typical urban workshops with a carpentry-type focus.

Likewise, neighbouring agricultural land uses are not expected to cause any noise-related disturbances for visitors or residents at the site.