Referral of proposed action

Project title: Oceanic Victor Viewing Platform

1 Summary of proposed action

NOTE: You must also attach a map/plan(s) and associated geographic information system (GIS) vector (shapefile) dataset showing the location and approximate boundaries of the area in which the project is to occur. Maps in A4 size are preferred. You must also attach a map(s)/plan(s) showing the location and boundaries of the project area in respect to any features identified in 3.1 & 3.2, as well as the extent of any freehold, leasehold or other tenure identified in 3.3(i).

1.1 Short description

The proposal is for a tourism operation based in the waters of Encounter Bay near Granite Island, Victor Harbor, which will allow customers the opportunity to swim with a range of native fish species, including Southern Bluefin Tuna, within the safe confines of a pontoon/ viewing platform, surrounded by a sea cage. Customers will also have the option of viewing and hand-feeding aquatic animals on the surface from a viewing platform, or view them from an underwater observatory. An interactive set of touch tanks is also proposed to educate customers about South Australia's marine life. The structures will sit within a marine lease area (with a corresponding licence to undertake an aquaculture activity) issued by the Minister for Agriculture, Food and Fisheries with the concurrence of the Minister for Transport, pursuant to the *Aquaculture Act 2001*. The proponents also intend to lease land based tourism facilities already located on Granite Island from the Department of Environment, Water and Natural Resources (DEWNR), and will launch a vessel from Granite Island to tend the marine site and transport customers to the pontoon. A aerial photograph of the pontoon and seacage is included on page 2 of Attachment 1 'Summary of Marine Aquaculture Pilot Lease and Corresponding Licence Application'.

1.2	Latitude and longitude	Latitude			Longitude			
	Latitude and longitude details are used to accurately map the boundary of the proposed action. If these coordinates are inaccurate or insufficient it may delay the processing of your referral.	location point 1 2 3 4 5	degrees 35 35 35 35 35	minutes 33 33 33 33 33	seconds 32.12 24.40 32.72 40.45 32.12	degrees 138 138 138 138 138	minutes 38 38 37 38 38	seconds 16.98 06.80 57.34 07.52 16.98

Please refer to Attachment 2 – a map of the proposed site. Please note, on contacting M Whitting at DOTE the proponent was advised that these coordinates would be entered by DOTE staff to create a file, therefore it was not necessary to attach a GIS compliant file.

1.3 Locality and property description

The proposed marine site is located within the waters of Encounter Bay, 600m south east from the township of Victor Harbor in South Australia. It is approximately 240m north of Granite Island (including the breakwater) and 570m east of the Granite Island causeway. The site has an average depth of 10.4m and is dominated by a low profile reef with relatively opportunistic algal flora. The proponents will launch a vessel from Granite Island to transport customers to and from the site, and to undertake routine inspections and maintenance.

1.4	Size of the development footprint or work area (hectares)	The site is 12.25ha, however at any given time only 3.4ha (185m x 185m) of the site will be 'marked off' with St Andrew's crosses and navigational marks in accordance with a lease issued pursuant to the <i>Aquaculture Act 2001</i> . At any given time, the extent of development will include a single sea-caged pontoon (45m in diameter) and associated moorings. The larger lease area is required for a fallowing regime to minimise the impact of the development and maintain the health of the environment.
1.5	Street address of the site	Not applicable

1.6 **Lot description**Not applicable

1.7 Local Government Area and Council contact (if known)

The marine site containing the sea-caged pontoon falls within the Land Not Within a Council Area (Coastal Waters) Development Plan (consolidated 4 July 2013), while the 'launch' operations on Granite Island fall within the Victor Harbor (City) Development Plan (consolidated January 2013). The proposal is subject to assessment by South Australia's Development Assessment Commission (DAC). The DAC's Principal Planner is Mark Adcock (mark.adcock@sa.gov.au, telephone (08) 8204 8204).

1.8 Time frame

Subject to relevant approvals under the *Aquaculture Act 2001 (SA) and the Development Act 1993 (SA),* it is proposed to locate the sea-caged pontoon on the site by 1 December 2015 and commence stocking and feeding operations shortly thereafter.

1.9 Alternatives to proposed action Were any feasible alternatives to taking the proposed action		Х	No
	(including not taking the action) considered but are not proposed?		Yes, you must also complete section 2.2
1.10	Alternative time frames etc Does the proposed action	Х	No
	include alternative time frames, locations or activities?		Yes, you must also complete Section 2.3. For each alternative, location, time frame, or activity identified, you must also complete details in Sections 1.2-1.9, 2.4-2.7 and 3.3 (where relevant).
1.11	State assessment Is the action subject to a state or territory environmental impact assessment?		No
		Х	Yes, you must also complete Section 2.5
1.12 Component of larger action Is the proposed action a		Х	No
	component of a larger action?		Yes, you must also complete Section 2.7
1.13	Related actions/proposals Is the proposed action related to other actions or proposals in the region (if known)?	Х	No
			Yes, provide details:
1.14	Australian Government	Х	No
	funding Has the person proposing to take the action received any Australian Government grant funding to undertake this project?		Yes, provide details:
1.15	Great Barrier Reef Marine Park	Χ	No
	Is the proposed action inside the Great Barrier Reef Marine Park?		Yes, you must also complete Section 3.1 (h), 3.2 (e)

2 Detailed description of proposed action

2.1 Description of proposed action

This referral relates to a proposed marine based tourism operation based in the waters of Encounter Bay near Granite Island, situated off Victor Harbor in South Australia. The marine facility is comprised of a sea-caged pontoon to be located on a marine site, to be operated in conjunction with existing land based tourism facilities on Granite Island.

The sea-caged pontoon will allow customers the opportunity to swim with a range of native fish species including Southern Bluefin Tuna within the safe confines of the pontoon/ viewing platform, surrounded by a sea cage. Customers will also have the option of viewing and hand-feeding aquatic animals on the surface from a viewing platform, or view them from an underwater observatory. An interactive set of touch tanks is also proposed to educate customers about South Australia's marine life. The structures will sit within a marine lease area (with a corresponding licence to undertake an aquaculture activity) issued by the Minister for Agriculture, Food and Fisheries with the concurrence of the Minister for Transport, pursuant to the *Aquaculture Act 2001*. The proponents will launch a vessel from existing facilities on Granite Island to tend the marine site and transport customers to the pontoon.

In addition to the marine facility, the proponents intend to lease existing land based tourism facilities already located on Granite Island from DEWNR. These existing facilities include a kiosk/ café and 'Penguin Centre' (interpretive and educational centre). The land based operations will support the operation of the marine facilities through promotion, booking, visitor transfers (by boat to the marine site) and interpretive and educational opportunities. The land based tourist precinct will be the subject of a separate lease currently being negotiated between the proponent and DEWNR.

The land based operations do not form part of this referral given that the operation of the land based visitor facilities are effectively 'a lawful continuation of an existing use' which, according to the Department of the Environment's website, is not an action for the purposes of the EPBC Act.

2.2 Alternatives to taking the proposed action

No alternatives to the proposed action have been considered. The proposed action has been the subject of a comprehensive assessment by the Government of South Australia in accordance with the *Aquaculture Act 2001* (SA). This assessment concluded that the proposed action meets the 'ecological sustainable development' objectives of the *Aquaculture Act 2001*.

2.3 Alternative locations, time frames or activities that form part of the referred action

No alternative locations, time frames or activities are proposed.

2.4 Context, planning framework and state/local government requirements Aquaculture Act 2001

The proposed action is subject to a pilot lease and marine aquaculture licence and associated regulations under the *Aquaculture Act 2001*. This Act includes provision for aquaculture policies to identify a zone within State waters (an aquaculture zone) in which aquaculture or specified classes of aquaculture will be permitted, or to identify a zone within State waters in which aquaculture will not be permitted. If an area is outside of an aquaculture zone, a pilot lease (and corresponding licence) may be granted by the relevant Minister, which is proposed for this action.

The Aquaculture Act requires certain matters to be referred to the Environment Protection Authority (EPA), including whether a corresponding licence containing specified conditions should be granted in connection with an aquaculture lease. In determining its response, the EPA must have regard to, and seek to further, the objects of the *Environment Protection Act 1993* and have regard to the general environmental duty and any relevant environment protection policies under that Act.

Furthermore, the Minister's power to grant an aquaculture lease in State waters is subject to concurrence of the Minister responsible for the administration of the *Harbors and Navigation Act 1993*.

Marine Parks Act 2007

The Marine Parks Act provides for a system of marine parks for South Australia. It includes provision for particular types of zones within marine parks, depending on the degree of protection required within the area.

The area subject of this referral is contained within the Encounter Bay Marine Park (http://www.environment.sa.gov.au/marineparks/find-a-park/fleurieu-peninsula/encounter), specifically within a 'habitat protection zone' (HPZ), being a zone primarily established so that an area may be managed to provide protection for habitats and biodiversity within a marine park, while allowing activities and uses that do not harm habitats of the functioning of ecosystems. Under the *Marine Parks (Zoning) Regulations* 2012, the activity of aquaculture is permitted within the boundaries of a HPZ provided it is authorised by, and carried on in accordance with, the *Aquaculture Act 2001*. No further permits are required under the Marine Parks Act for the activities proposed.

The Encounter Bay Marine Park Management Plan seeks to provide opportunities for public appreciation, understanding and enjoyment of the marine park; creating and promoting opportunities for sustainable nature-based tourism in the marine park and working co-operatively with Aboriginal communities to conserve country, plans, animals and culture. These objectives will effectively be supported by the proposed activity, as visitors have the opportunity to gain a deeper understanding of local marine life through a closer viewing than might otherwise be experienced, all within a safe, controlled and sustainable environment. The proponents have also contacted Aboriginal groups and liaised with the relevant State department with respect to working cooperatively with Aboriginal communities to support their objectives. This is further expanded upon in the 'consultation' section of this referral.

Development Act 1993

The tourism operation will operate from two locations – one on Granite Island where operations will be launched (which is considered by the proponent to be a lawful continuation of an existing use for the purposes of this EPBC referral) and the other in the waters of Encounter Bay where the sea-caged pontoon will be located. It is subject to assessment by South Australia's Development Assessment Commission (DAC) and will be assessed against the Victor Harbor (City) Development Plan (consolidated 10 January 2013) and the Land Not Within a Council Area (Coastal Waters) Development Plan (consolidated 4 July 2013). The DAC's Principal Planner is Mark Adcock (mark.adcock@sa.gov.au, telephone (08) 8204 8204). An application has been lodged with the DAC, which required a further 2 week public notification period in addition to consultation already undertaken by PIRSA in relation to the aquaculture lease and licence. This notification period closed on 21 October 2015, after which time the proponent has two weeks to respond to any issues raised prior to the DAC making their determination.

2.5 Environmental impact assessments under Commonwealth, state or territory legislation

As the area subject to this proposal has not been considered for an aquaculture zone, a pilot lease has been sought and the assessment process undertaken. An 'ecologically sustainable development' (ESD) assessment has been undertaken by the Department of Primary Industries and Regions SA (PIRSA), which is attached to this referral (Attachment 3 – PIRSA Licence Assessment). A draft aquaculture pilot lease and a draft aquaculture marine licence are also attached (Attachment 4 and Attachment 5, respectively). The EPA have considered PIRSA's ESD assessment and are satisfied that the activity can be appropriately managed through the draft lease and licence conditions. PIRSA's assessment process has been coordinated by Matt Hoare, Case Manager, Aquaculture Environment Program, PIRSA Fisheries and Aquaculture Division (matthew.hoare@sa.gov.au, telephone (08) 8226 1045).

A lease under the *Aquaculture Act 2001* effectively creates 'tenure' over the seabed, while a corresponding licence places conditions on the activity to be undertaken on the site. The *Aquaculture Act 2001* requires that, prior to granting a corresponding licence the Minister must cause public notice of the application to be published in a newspaper circulating generally in the State and invite interested persons to make written submissions on the application within the period allowed in the notice, and has taken any such submissions into account. During the public notification period for the application 116 submissions were received and considered during PIRSA's ESD assessment. PIRSA's have developed a Submission Response Document (Attachment 6).

The proponents of the activity commissioned a biogeographical report (Cheshire 2015) that includes analysis and assessment of benthic video data collected from 4 transects of around 150-210 metres in length. The report concluded that the area would be suitable for the establishment of an in-sea marine aquarium (ie a low intensity aquaculture lease), and that any impacts to biota in the immediate vicinity of the cage structure are expected to recover rapidly when the cage system is moved (to allow for fallowing) or should it be removed at a future date. Further, the report noted that there is not expected to be any impact that extends beyond the lease area to surrounding habitats. This conclusion was supported by PIRSA's assessment.

PIRSA's ESD assessment considered the potential for wildlife interactions, given that Encounter Bay is an area where many species of marine mammals are known to be present, including globally protected Southern Right Whales (Eubalaena australis) calving along Encounter Bay during the autumn to mid spring (DENR) 2010. Short-Beaked Common Dolphins (*Delphinus delphis*) and Indo-Pacific Bottlenose Dolphins (*Tursiops aduncus*) also reside in the waters of Encounter Bay. Further, Encounter Bay is an area where many species of sharks, including White Sharks, are known to be present and igrate under their normal patterns of movement. A similar aquaculture tourism operation has been in operation near Port Lincoln since January 2011, during which time no interactions with protected marine vertebrates, sharks and seabirds have been reported to PIRSA, although they are known to frequent the waters of Port Lincoln. A number of mitigating strategies to reduce the risk of interaction with marine mammals, sharks and seabirds will be implemented as part of the interaction strategy contained in PIRSA's assessment, these include:

- limiting the stocking densities to very low rates compared to commercial finfish aquaculture ventures previously
 assessed and approved in State waters (to around 7.5% of that in commercial farms);
- hand feeding the stock such that there is no excess feed, and maintain low feeding rates (maximum daily feeding rate of approximately 210kg at maximum stocking rates of all species);
- removal of dead and moribund fish daily (weather permitting) to further minimise the risk of interactions;
- regular surveillance and repair of damaged nets as soon as practicable;
- · subsurface nets will be kept taut;

- no netting will be placed across the top of the cage;
- a 2.5m jump fence will be in place; and
- no aquaculture stock will be harvested.

Further, the proponent is aware of their obligations, particularly in relation to whales, under the National Parks and Wildlife (Protected Animals – Marine Mammals) Regulations 2010. The proponent must also abide by all licence conditions and *Aquaculture Regulations 2015* relating to interactions with seabirds and protected marine vertebrates, through an approved strategy and reporting in the event of an interaction.

PIRSA's assessment also considered the effect of noise on wildlife, however considered it unlikely that the noise generated by vessels servicing the operation will exceed that of other vessels in the area. Power for the pontoon is delivered through a battery system charged primarily by solar panels, and an 8KVA diesel generator as a redundancy system. Sound emissions from the generator will be mitigated by housing the generator in a sound proof casing, which in turn is mounted in a sound proof fibreglass box on the pontoon platform.

PIRSA's assessment has concluded that that environmental impacts associated with the proposed development can be appropriately managed under the conditions of an aquaculture licence to be issued pursuant to the *Aquaculture Act 2001* and associated regulations. The assessment also notes that, in accordance with section 52 of the *Aquaculture Act 2001*, the Minister may vary licence conditions at any time to prevent or mitigate significant environmental harm or the risk of significant environmental harm.

2.6 Public consultation (including with Indigenous stakeholders)

The *Aquaculture Act 2001* requires that, prior to granting a corresponding licence the Minister must cause public notice of the application to be published in a newspaper circulating generally in the State and invite interested persons to make written submissions on the application within the period allowed in the notice, and has taken any such submissions into account. During the public notification period for the application 116 submissions were received and considered during PIRSA's ESD assessment. PIRSA's Submission Response Document is included as Attachment 6.

Granite Island has historical and cultural significance for the Ngarrindjeri people and is included in the Dreaming legend of Ngurunderi. The proponents have sought to engage with the Ngarrindjeri Regional Authority (NRA) and it has been confirmed that the NRA's preferred approach to managing any risk of breach of the *Aboriginal Heritage Act 1988* (AHA) is for the proponent to engage in risk management discussions and processes with the NRA. In doing so, it would be unlikely that an authorisation under section 23 of the *Aboriginal Heritage Act 1988* would be required. The proponents are committed to building a strong cooperative working relationship with the Ngarrindjeri people to support their objectives to conserve country, plans, animals and culture. Correspondence to this effect from the relevant government department is included as Attachment 7.

The development is also subject to approval under the *Development Act 1993*, which requires South Australia's Development Assessment Commission (DAC) to assess the development against the provisions of the appropriate Development Plan. In this case, the proposal will be assessed against the Victor Harbor (City) Development Plan (consolidated 10 January 2013) and the Land Not Within a Council Area (Coastal Waters) Development Plan (consolidated 4 July 2013). The DAC's Principal Planner is Mark Adcock (<u>mark.adcock@sa.gov.au</u>, telephone (08) 8204 8204). An application has been lodged with the DAC, which required a further 2 week public notification period in addition to consultation already undertaken by PIRSA in relation to the aquaculture lease and licence. This notification period closed on 21 October 2015, after which time the proponent has two weeks to respond to any issues raised prior to the DAC making their determination.

2.7 A staged development or component of a larger project Not applicable

3 Description of environment & likely impacts

3.1 Matters of national environmental significance

3.1 (a) World Heritage Properties

Description

A report from the Australian Government Department of the Environment (DOTE 2015) indicated that the region surrounding the proposed marine site contains no world heritage properties.

Nature and extent of likely impact

Not applicable

3.1 (b) National Heritage Places

Description

A report from the Australian Government Department of the Environment (DOTE 2015) indicated that the region surrounding the proposed marine site contains no national heritage places.

Nature and extent of likely impact

Not applicable

3.1 (c) Wetlands of International Importance (declared Ramsar wetlands)

Description

A report from the Australian Government Department of the Environment (DOTE) indicated that a 10km radius around the proposed marine site contains no wetland of international importance (Ramsar).

Nature and extent of likely impact

Not applicable

3.1 (d) Listed threatened species and ecological communities

Description

A report from the Australian Government Department of the Environment (DOTE) indicated that a 10km radius around the proposed marine site does not contain any threatened ecological communities. Refer to 3.1(e) for further discussion regarding migratory and threatened species.

Nature and extent of likely impact

Not applicable

3.1 (e) Listed migratory species

Description

A report from the Australian Department of the Environment (DOTE 2015) indicated that a 10km radius around the proposed marine site contains 29 listed migratory species that may occur in the region or whose habitat is known or is likely to occur within the area. A number of these are listed as endangered or vulnerable (23 in total). PIRSA's assessment therefore considered the likelihood of disturbance to migratory and threatened species, however given the low level of activities, and small proportion of the marine site which will be developed at any given point in time (3.4ha) the site is unlikely to impact on habitat requirements and migration paths. Furthermore, the mitigation strategies proposed for the site will minimise the risk of entanglement or physical impact on migratory species.

Nature and extent of likely impact

The risks considered by PIRSA in relation to migratory and threatened species included potential for interactions, noise effects and behavioural effects, but all of these matters were considered to be low risk, given the scale of the activity and the management controls required by the aquaculture lease, licence and Aquaculture Regulations 2005.

A number of strategies to minimise interactions and other effects include:

- limiting the stocking densities to very low rates compared to commercial finfish aquaculture ventures previously assessed and approved in State waters (to around 7.5% of that in commercial farms);
- hand feeding the stock such that there is no excess feed, and maintain low feeding rates (maximum daily feeding rate of approximately 210kg at maximum stocking rates of all species);
- removal of dead and moribund fish daily (weather permitting) to further minimise the risk of interactions;
- regular surveillance and repair of damaged nets as soon as practicable;
- subsurface nets will be kept taut;
- no netting will be placed across the top of the cage;
- a 2.5m jump fence will be in place; and
- no aquaculture stock will be harvested.

The proponent is aware of their obligations under the National Parks and Wildlife (Protected Animals – Marine Mammals) Regulations 2010. The marine site is located within the Encounter Bay Restricted Area described in Schedule 1, Clause 2 of these regulations, which requires that a non-prescribed vessel must not move closer than 300 metres to a whale. Should a whale move within 300 metres of a vessel, the person in control of the vessel must not use, or continue using, the vessel to enable persons on the vessel to observe the whale or swim near it unless he or she either maintains the vessel's position or moves it away from the whale.

Additionally, the applicant must adhere to all licence conditions and Aquaculture Regulations 2005 relating to interactions with seabirds and marine vertebrates in accordance with an approved strategy to minimise the consequence and overall risk of interaction with these species.

3.1 (f) Commonwealth marine area

(If the action is in the Commonwealth marine area, complete 3.2(c) instead. This section is for actions taken outside the Commonwealth marine area that may have impacts on that area.)

A report from the Australian Government Department of the Environment (DOTE) indicated that a 10km radius around the proposed marine site does not contain any Commonwealth marine areas.

Nature and extent of likely impact

Not applicable

3.1 (g) Commonwealth land

(If the action is on Commonwealth land, complete 3.2(d) instead. This section is for actions taken outside Commonwealth land that may have impacts on that land.)

Description

Not applicable

Nature and extent of likely impact

Not applicable

Descripti Not applica			
Nature a	nd extent of likely impact		
Not applica			
3.1 (i) A	water resource, in relation to coal seam ga	s develo	pment and large coal mining development
Descripti Not applica			
Nature a	nd extent of likely impact		
Not applica	able		
agency	Nuclear actions, actions taken by y), actions taken in a Commonwea onwealth land, or actions taken in	alth m	<u>-</u>
3.2 (a)	Is the proposed action a nuclear action?	Х	No
			Yes (provide details below)
	If yes, nature & extent of likely impact on		
3.2 (b)	Is the proposed action to be taken by the Commonwealth or a Commonwealth	X	No
	agency?		Yes (provide details below)
	If yes, nature & extent of likely impact on		
3.2 (c)	Is the proposed action to be taken in a Commonwealth marine area?	X	No
	If yes, nature & extent of likely impact on	the who	Yes (provide details below) le environment (in addition to 3.1(f))
3.2 (d)	Is the proposed action to be taken on	Χ	No
J (u)	Commonwealth land?		Yes (provide details below)
	If yes, nature & extent of likely impact on	the who	, ,
		Lv	T
3.2 (e)	Is the proposed action to be taken in the	X	No

3.1 (h) The Great Barrier Reef Marine Park

Great Barrier Reef Marine Park? Yes (provide details below)	v)
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If yes, nature & extent of likely impact on the whole environment (in addition to 3.1(h))

3.3 Other important features of the environment

3.3 (a) Flora and fauna

The proposed marine site is characterised by predominantly low profile opportunistic macroalgal dominated platform reef, with patches of sand and shell grit. It does not contain seagrass, and the algae present on the site are not remarkable for the region (Cheshire 2015). The presence of marine animals and potential for interactions (and mitigation strategies) are addressed in sections 2.5 and 3.1(e) of this referral.

According to PIRSA's assessment, the closest Australian sea lion breeding colony, The Pages, is located 37km south west of the proposed site and is recognised as the second largest breeding colony in South Australia. This is well outside the 15 km range that is recommended as the required separation distance between sea lion breeding sites and finfish/tuna aquaculture operations, established by a Marine Mammal Working Party in South Australia in 2004. There are also several Long-nosed fur seal haul-out sites in the immediate vicinity of the site (Granite Island breakwater 240 m south, Seal Rocks 1.8 km south, and West Island 6.3 km south west of the site). The proposed site is within the foraging range of both of these pinniped species.

There is a Little Penguin (Eudyptula minor) colony in close proximity to the site on Granite Island, which contributes to a valuable tourism industry in South Australia. Approximately 700,000 people visit Granite Island each year making it the most visited park in South Australia, and an estimated 25,000 people participate in tours to view penguins each year. Recent surveys indicate that little penguin populations have been declining at Granite Island. While the cause of decline has not be definitively identified, the populations of Long-nosed (New Zealand) fur seals in South Australia have been steadily increasing in the last 30 years since commercial sealing stopped and Long-nosed fur seals are known to attack and kill Little Penguins. Granite Island also has important feeding and breeding sites for colonies of Black-faced cormorants and Crested

Biogeographically, the proposed site is within the Encounter Biounit, in the Gulf St Vincent Bioregion. The Biounit extends from Rapid Head to the Murray Mouth, and covers an area of 39,389 ha. Exposed rocky shores and reefs in the Encounter Biounit are dominated by mixed sponges, hydroids, ascidians, bryozoans and large brown algae. Seagrass meadows are sparse in this region and are restricted to the more sheltered sections. The area is recognised for its high diversity of large algae.

Over 80 species of fish have been recorded off the coast of the Fleurieu Peninsula. The Encounter Bay region also contains many ray, shark and skate species, and molluscs such as Greenlip and Blacklip abalone and the Goolwa cockle. There are many species of Sygnathids (i.e. Leafy and Weedy seadragons, pipefishes and seahorses). A rare phototrophic sponge species, Cymbastela sp., has been found in the sheltered subtidal habitats in the area. Fish species of conservation concern such as the Harlequin fish, Western blue devil and the Western blue groper can be found at a variety of reefs throughout the area.

Granite Island is reportedly surrounded by medium to high profile granite/limestone reef, with sand adjacent to the reef and a mosaic of seagrass patches, sand and low profile reef inshore. Reefs are typically dominated by the kelp *Ecklonia* radiata along with a variety of other large brown (typically fucalean) algae. The Granite Island area is regionally significant due to the complex mosaic of habitat types, including the largest seagrass meadows between Cape Jervis to the west and Lacepede Bay in the South East. The surrounding jetty structures also form a significant habitat for marine life.

3.3 (b) Hydrology, including water flows

According to PIRSA's assessment, the average flow rate in the area of the proposed licence is 5 cm/s. Infrastructure required for this operation is likely to result in obstruction of water flow in the immediate vicinity. The extent of this obstruction has been estimated by PIRSA by calculating the volume of space occupied by site structures (sea-caged pontoon) at maximum development and comparing this to the volume of undeveloped water in the proposed site. The current application considers a 12.25 ha site with an average water depth of 10.4 m (based on ground truthing vessel depth surveys by PIRSA and the applicant) and an estimated site volume of 1,274,000 m3. At full development the applicant proposes a maximum of one sea-cage pontoon (45 m diameter x 6 m depth) which is calculated to occupy a total volume of 9,542 m3 and a total of 0.74 % of the proposed site. The relative volume of the structures compared to the site volume is small and the effects of site development on water flow are expected to be negligible. Environmental monitoring program requirements set out in the Aquaculture Regulations 2005 and the proposed conditions as part of the granting of the licence are considered sufficient to adaptively manage any potential impacts to water flow.

3.3 (c) Soil and Vegetation characteristics

Benthic video was undertaken to understand the composition of the site and is characterised by predominately of low profile opportunistic macroalgal dominated platform reef, with patches of sand and shell grit. It is noteworthy that the site does not contain seagrass, and that algae present on the site are not remarkable for the region (Cheshire 2015)

3.3 (d) Outstanding natural features

Not applicable

3.3 (e) Remnant native vegetation

Not applicable

3.3 (f) Gradient (or depth range if action is to be taken in a marine area)

The site has an average water depth of 10.4m (based on ground truthing vessel depth surveys by PIRSA and the proponent). The site has a surveyed depth ranging between 8.8m - 12m. The seacage is 6m deep, and the aquaculture licence requires that a 3m clearance be maintained from the seafloor at all times.

3.3 (g) Current state of the environment

According to PIRSA's ESD assessment, Physical influences on the biota in this region include fresh water inputs and associated sediments and nutrients from the Inman, Hindmarsh and Murray Rivers (discharging into the marine environment approximately 1.8 km, 1.5 km and 25 km respectively from the proposed site). Poor water quality in the Inman and Hindmarsh Rivers is noted as an issue in the Victor Harbor Environmental Management Plan (2010-14). Coastal environments adjacent to the Encounter Biounit have been heavily modified for agriculture, and expanding coastal development throughout the area is putting considerable strain on infrastructure as well as the quality and quantity of stormwater discharges. A large proportion of the sewage treatment is currently undertaken at the Waste Water Treatment Plant at Victor Harbor but there are still high numbers of septic tanks throughout the area which have the potential to add nutrients into the groundwater. During peak holiday periods the population in the area can be as high as 30,000 people. Many dwellings rely on septic tanks to treat and dispose of sewage, which can transport considerable loads of nutrients (up to 10 kg/dwelling/year) into shallow groundwater that is likely to be flowing towards the nearshore marine environment.

In addition to the waste water discharge into the Inman River, the catchment area upstream is predominantly agricultural land and dairy farms, which may input significant amounts of nutrient into the river and subsequently the marine environment. A survey of seagrass condition around the Inman River mouth indicated that seagrasses were generally in good condition but there were areas of high epiphyte cover and seagrass may have been lost since 2000 directly off the river mouth. Discharges from the Inman River may be responsible for this loss of seagrass. The Hindmarsh River also enters the marine environment at Encounter Bay, with a similar agricultural catchment.

In the 2005 Reef Health surveys, most reefs in the Fleurieu Peninsula were found to be in good condition; however Granite Island and Port Elliot were scored as "Caution Recommended". This may be simply a factor of differing exposure to wave energy, or differences in the abundance of site-attached fish rather than any issues with the reef itself. Nutrient and sediment loads from the Inman and Hindmarsh Rivers in Victor Harbor are likely to influence the reef ecosystems in the broader region.

There is also a lot of sediment in the general area laid down by historical flows of the Murray River, making reduced underwater visibility a common issue (although this is a natural phenomenon and not therefore an issue of environmental management per se).

Due to its proximity to Adelaide, the coastal and marine environments of the region are very popular. Key activities include recreational and charter fishing, sailing and other boating, diving and snorkelling, marine mammal watching, sightseeing cruises, swimming, surfing, four wheel driving and cruise ship visits, and the management plan recognizes tourism as an important economic contributor to the region. The coastline has high amenity value and includes high quality landscapes or viewscapes. In regards to the specific location, a considerable amount of recreational, commercial and ecotourism vessels traverse the site, and vessels moor in close proximity to the proposed site within the shelter of Granite Island. In addition a number of popular swimming and surfing locations are located in relative proximity to the proposed site, the closest being 600 m north west of the proposed site.

3.3 (h) Commonwealth Heritage Places or other places recognised as having heritage values

A report obtained from the Australian Government Department of the Environment (DOTE 2015) indicates that the region surrounding the proposed site location of AQ00315 contains no world heritage properties or national heritage places.

A spatial assessment using ArcGIS mapping software identified that there are three historic shipwrecks located within 500 m of the proposed site, namely the Triton (~64 m), Mary (~96 m), and Lady of the Lake (~480 m). The proponent is aware of their obligations in relation to the Historic Shipwrecks Act 1981, to mitigate any potential impacts from their aquaculture activity to these shipwrecks.

There are State heritage places located within the vicinity of the aquaculture site, which are protected under the Heritage

Places Act 1993 and the heritage provisions of the Development Act 1993. It is considered unlikely that the aquaculture activity will impact these places, and the proponent is aware of their obligations in relation to this legislation.

3.3 (i) Indigenous heritage values

As discussed at 2.6 of this referral, Granite Island has historical and cultural significance for the Ngarrindjeri people and is included in the Dreaming legend of Ngurunderi. The proponents have been advised that the NRA's preferred approach is for the proponent to engage in risk management discussions and processes with the NRA. In doing so, it would be unlikely that an authorisation under section 23 of the Aboriginal Heritage Act 1988 would be required. The proponents are committed to building a strong cooperative working relationship with the Ngarrindjeri people to support their objectives to conserve country, plans, animals and culture. Correspondence to this effect from the relevant State Government department is included as Attachment 7.

3.3 (j) Other important or unique values of the environment

The proposed site is located 1.8km north of the Seal Rock Conservation Park, 6.3km north east of West Island conservation Park, and 5.2km south west of the Pullen Island Conservation Park. It is also located 240m north from the boundary of the Granite Island Recreation Park. Additionally the proposed site is located within Habitat Protection Zone (HPZ) 7 of the Encounter Marine Park. The Marine Parks Act 2007 makes provision for HPZ which are primarily established so that an area may be managed to provide protection for habitats and biodiversity within a marine park, while allowing activities and uses that do not harm habitats or the functioning of ecosystems. The proposed use is permitted within a HPZ subject to an aguaculture lease and licence granted pursuant to the Aguaculture Act 2001.

3.3 (k) Tenure of the action area (eg freehold, leasehold)

The marine site will subject to a leasing arrangement under the Aquaculture Act 2001. According to the Act, a pilot lease may be granted in respect of State waters outside of an aquaculture zone. The term of a pilot lease is 12 months or a lesser period specified in the lease. A pilot lease is renewable for successive terms but not so the aggregate of the terms exceeds 5 years.

The holder of a pilot lease may apply to the Minister to convert a pilot lease to a production lease after 3 years operation – in doing so, the leaseholder must demonstrate that conversion of a pilot lease to a production lease would be consistent with the objects of the Aquaculture Act and that aquaculture has been carried on in the area during each term of the pilot lease that meets performance criteria specified by the lease. Further, the Minister must refer applications for conversions to the EPA for their approval. The term of a production lease is 20 years, or a lesser period specified in the lease, and is renewable for successive terms.

In this case, the initial term of the pilot lease will be 12 months with successive renewals, subject to performance of the lease and licence.

3.3 (I) Existing land/marine uses of area

Throughout PIRSA's public notification process, it was identified that recreational (fishing and sailing), commercial and ecotourism vessels frequently traverse the site, and vessels moor in close proximity to the site within the shelter of Granite Island.

The granting of an aguaculture lease provides the leaseholder with the opportunity to exercise their legal right to exclude other persons from the lease area. The total lease area is 12.25 hectares (350m x 350m). To minimise the impact of alienation, the proponent has agreed to an aquaculture lease condition which will mean that vessels will be able to traverse the non-active areas of the site, with a maximum of 3.4ha (185m x 185m) marked off for the proposed activity at any given time. Navigation markers required by the aquaculture lease will ensure the safety of other vessels navigating the area.

3.3 (m) Any proposed land/marine uses of area

Part of the proposed site overlaps a proposed Department of Planning, Transport and Infrastrucuture (DPTI) cruise ship anchorage, however DPTI have not raised any issues with the proposal in relation to the cruise ship anchorage, and grant of an aquaculture lease is subject to concurrence by the Minister for Transport.

4 Environmental outcomes

The objects of the Aquaculture Act 2001 are:

- to promote ecologically sustainable development of marine and inland aguaculture; and
- to maximise benefits to the community from the State's aquaculture resources; and (b)
- (c) otherwise to ensure the efficient and effective regulation of the aquaculture industry.

For the purposes of the Act, 'ecologically sustainable development' is further defined:

- Development is *ecologically sustainable* if it is managed to ensure that communities provide for their (1)economic, solical and physical well-being while
 - natural and physical resources are maintained to meet the reasonably foreseeable needs of future generations; and
 - biological diversity and ecological processes and systems are protected; and
 - adverse effects on the environment area avoided, remedied or mitigated.
- (2) In making decisions as to whether development is ecologically sustainable or to ensure that development is ecologically sustainable
 - long-term and short-term economic, environmental, social and equity considerations should be effectively integrated; and
 - if there are threats of serious or irreversible environmental harm, lack of full scientific certainty should not be taken to justify the postponement of decisions or measure to prevent the environmental harm.

An aquaculture lease and corresponding licence issued pursuant to the Act must therefore be consistent with the Objects of the Act and include such conditions that will support the Objects. A draft aquaculture lease and licence are attached to this referral. The proponent is also required to meet the requirements of Aquaculture Regulations 2005 which set out further requirements to prevent and mitigate any adverse environmental effects.

5 Measures to avoid or reduce impacts

Of particular interest to this referral is the potential for interactions with threatened migratory species, however the following mitigation measures will be implemented by the proponent:

- limiting the stocking densities to very low rates compared to commercial finfish aquaculture ventures previously assessed and approved in State waters (to around 7.5% of that in commercial farms);
- hand feeding the stock such that there is no excess feed, and maintain low feeding rates (maximum daily feeding rate of approximately 210kg at maximum stocking rates of all species);
- removal of dead and moribund fish daily (weather permitting) to further minimise the risk of interactions;
- regular surveillance and repair of damaged nets as soon as practicable;
- subsurface nets will be kept taut;
- no netting will be placed across the top of the cage;
- a 2.5m jump fence will be in place; and
- no aquaculture stock will be harvested.

The impacts on threatened migratory species – and other environmental effects – have been comprehensively assessed by PIRSA and a draft aquaculture lease and licence has been prepared which include a number of management controls and are attached to this referral. The proponent is also required to meet the requirements of Aquaculture Regulations 2005 which set out further requirements to prevent and mitigate any adverse environmental effects and interactions, and environmental monitoring and reporting.

These measures have been assessed by PIRSA as adequate to manage identified risks.

6 Conclusion on the likelihood of significant impacts

6.1 Do you THINK your proposed action is a controlled action?

Χ	No, complete section 5.2
	Yes, complete section 5.3

6.2 Proposed action IS NOT a controlled action.

The proponents do not consider that the proposed action is a controlled action, given that a comprehensive assessment has been undertaken by PIRSA, and PIRSA have concluded that the proposed action supports the ecologically sustainable development objectives of the Aquaculture Act 2001.

This proposal is for a single sea cage in an area regularly used by recreational, commercial and tourism vessels and, while potential does exist for interactions with threatened migratory species, the risk has been assessed by PIRSA as low. The proponents believe that the very small scale and low density of this operation when compared to commercial aquaculture activities located elsewhere in South Australia, further minimises the likelihood of such an interaction. However, should an interaction occur, a number of management measures will be in place, including:

- limiting the stocking densities to very low rates compared to commercial finfish aquaculture ventures previously assessed and approved in State waters (to around 7.5% of that in commercial farms);
- hand feeding the stock such that there is no excess feed, and maintain low feeding rates (maximum daily feeding rate of approximately 210kg at maximum stocking rates of all species);
- removal of dead and moribund fish daily (weather permitting) to further minimise the risk of interactions;
- regular surveillance and repair of damaged nets as soon as practicable;
- subsurface nets will be kept taut;
- no netting will be placed across the top of the cage;
- a 2.5m jump fence will be in place; and
- no aquaculture stock will be harvested.

As part of their due diligence process the proponent has decided to refer the matter to ensure that approporiate consideration has been given to the proposal by all relevant authorities.

6.3 Proposed action IS a controlled action

Not applicable

Matters likely to be impacted World Heritage values (sections 12 and 15A) National Heritage places (sections 15B and 15C) Wetlands of international importance (sections 16 and 17B) Listed threatened species and communities (sections 18 and 18A) Listed migratory species (sections 20 and 20A) Protection of the environment from nuclear actions (sections 21 and 22A) Commonwealth marine environment (sections 23 and 24A) Great Barrier Reef Marine Park (sections 24B and 24C) A water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E) Protection of the environment from actions involving Commonwealth land (sections 26 and 27A) Protection of the environment from Commonwealth actions (section 28)

Commonwealth Heritage place	es overseas (sections 27B and 27C)	

7 Environmental record of the responsible party NOTE: If a decision is made that a proposal needs approval under the EPBC Act, the Environment Minister will also decide the assessment approach. The EPBC Regulations provide for the environmental history of the party proposing to take the action to be taken into account when deciding the assessment approach.

		Yes	No
7.1	Does the party taking the action have a satisfactory record of responsible environmental management?	Х	
	Provide details The applicant, Oceanic Victor Pty Ltd, has not previously been licensed for aquaculture in South Australia. However, the directors of the company have extensive experience and knowledge of sea-cage aquaculture. Tony Santic currently owns and operates two SBT production leases (LA00326 and LA00327) and licences (AQ00169 and AQ00053), located in the Lincoln (inner) sector of the <i>Lincoln aquaculture zone</i> . Michael Dyer has been involved in SBT sea-cage aquaculture since the early 1990's and is the Operations Manager of a large SBT aquaculture company.		
7.2	Has either (a) the party proposing to take the action, or (b) if a permit has been applied for in relation to the action, the person making the application - ever been subject to any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources?		Х
	If yes, provide details		
7.3	If the party taking the action is a corporation, will the action be taken in accordance with the corporation's environmental policy and planning framework?		Х
	If yes, provide details of environmental policy and planning framework		
7.4	Has the party taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?		X
	Provide name of proposal and EPBC reference number (if known)		

8 Information sources and attachments

(For the information provided above)

8.1 References

- Cheshire, A.C. (2015). Biogeographical Report: Oceanic Victor Aquaculture Lease Site. Granite Island, Victor Harbor, South Australia. Report prepared for Oceanic Victor Pty Ltd by Science to Manage Uncertainty. Not for public distribution.
- DEWNR (2012) Encounter Marine Park Management Plan. Department of Environment, Water and Natural Resources, South Australia. Publicly available: http://www.environment.sa.gov.au/marineparks/find-a-park/fleurieupeninsula/encounter
- PIRSA (2015) Fisheries and Aquaculture Division Summary of Marine Aquaculture Pilot Lease and Corresponding Licence Application. Department of Primary Industries and Regions, South Australia.
- PIRSA (2015) Fisheries and Aquaculture Division Marine Licence Assessment: AO00315. Department of Primary Industries and Regions, South Australia. Not for public distribution.
- PIRSA (2015) Fisheries and Aquaculture Division Oceanic Victor Pty Ltd Marine Pilot Lease and Licence Application Submission Response Document. Department of Primary Industries and Regions, South Australia.

Legislation

Aquaculture Act 2001 (SA) Development Act 1993 (SA) Marine Parks Act 2007 (SA)

8.2 Reliability and date of information

Information relied upon for the preparation of this referral has been produced in 2015 by Anthony Cheshire B.Sc. Ph.D. (Biogeographical Report) and the Department of Primary Industries and Regions SA (PIRSA) (ESD Assessment). In both cases, the information has been prepared by individuals who are known to the proponent and appropriately qualified to prepare such information. Further published (and peer reviewed) reference material and sources were drawn upon by Cheshire and PIRSA and these are detailed further in their reports. In addition, PIRSA's ESD assessment is subject to review by South Australia's Environment Protection Authority (EPA).

8.3 Attachments

		√	T11 6 11 1 16)
You must attach	figures, maps or aerial photographs showing the project locality (section 1)	attached X	Title of attachment(s) Attachment 2 – Map of Proposed Activity
	GIS file delineating the boundary of the referral area (section 1)		
	figures, maps or aerial photographs showing the location of the project in respect to any matters of national environmental significance or important features of the environments (section 3)		
If relevant, attach	copies of any state or local government approvals and consent conditions (section 2.5)	X	Attachment 4 Draft Aquaculture Pilot Lease; Attachment 5 Draft Aquaculture Marine Licence
	copies of any completed assessments to meet state or local government approvals and outcomes of public consultations, if available (section 2.6)	X	Attachment 3 – PIRSA Licence Assessment Attachment 6 – Submission Response Document
	copies of any flora and fauna investigations		

and surveys (section 3)		
technical reports relevant to the assessment of impacts on protected matters that support the arguments and conclusions in the referral (section 3 and 4)		
report(s) on any public consultations undertaken, including with Indigenous stakeholders (section 3)	X	Attachment 6 – Submission Response Document; Attachment 7 – Aboriginal Heritage Act Letter

REFERRAL CHECKLIST

NOTE: This checklist is to help ensure that all the relevant referral information has been provided. It is not a part of the referral form and does not need to be sent to the Department.

HAVE YOU:	
	Completed all required sections of the referral form?
	Included accurate coordinates (to allow the location of the proposed action to be mapped)?
	Provided a map showing the location and approximate boundaries of the project area?
	Provided a map/plan showing the location of the action in relation to any matters of NES?
	Provided a digital file (preferably ArcGIS shapefile, refer to guidelines at Attachment A) delineating the boundaries of the referral area?
	Provided complete contact details and signed the form?
	Provided copies of any documents referenced in the referral form?
	Ensured that all attachments are less than three megabytes (3mb)?
	Sent the referral to the Department (electronic and hard copy preferred)?

Geographic Information System (GIS) data supply guidelines

If the area is less than 5 hectares, provide the location as a point layer. If the area greater than 5 hectares, please provide as a polygon layer. If the proposed action is linear (eg. a road or pipline) please provide a polyline layer.

GIS data needs to be provided to the Department in the following manner:

- Point, Line or Polygon data types: ESRI file geodatabase feature class (preferred) or as an ESRI shapefile (.shp) zipped and attached with appropriate title
- Raster data types: Raw satellite imagery should be supplied in the vendor specific format.
- Projection as GDA94 coordinate system.

Processed products should be provided as follows:

- For data, uncompressed or lossless compressed formats is required GeoTIFF or Imagine IMG is the first preference, then JPEG2000 lossless and other simple binary+header formats (ERS, ENVI or BIL).
- For natural/false/pseudo colour RGB imagery:
 - If the imagery is already mosaiced and is ready for display then lossy compression is suitable (JPEG2000 lossy/ECW/MrSID). Prefer 10% compression, up to 20% is acceptable.
 - If the imagery requires any sort of processing prior to display (i.e. mosaicing/colour balancing/etc) then an uncompressed or lossless compressed format is required.

Metadata or 'information about data' will be produced for all spatial data and will be compliant with ANZLIC Metadata Profile. (http://www.anzlic.org.au/policies_guidelines#guidelines).

The Department's preferred method is using ANZMet Lite, however the Department's Service Provider may use any compliant system to generate metadata.

All data will be provide under a Creative Commons license (http://creativecommons.org/licenses/by/3.0/au/)

9 Contacts, signatures and declarations

NOTE: Providing false or misleading information is an offence punishable on conviction by imprisonment and fine (s 489, EPBC Act).

Under the EPBC Act a referral can only be made by:

- the person proposing to take the action (which can include a person acting on their behalf); or
- a Commonwealth, state or territory government, or agency that is aware of a proposal by a person to take an action, and that has administrative responsibilities relating to the action¹.

Project title:

Oceanic Victor Viewing Platform

Person proposing to take action

1. Name and Title:

Mr Michael Wayne Dyer

2. Organisation (if

Oceanic Victor Pty Ltd

3. EPBC Referral Number

TBC

(if known):

applicable):

ACN 604 170 881

4: ACN / ABN (if applicable):

PO Box 3527, PORT LINCOLN SA 5606

5. Postal address 6. Telephone:

0439 180 030

7. Email:

dycraft@bigpond.com

8. Name of designated proponent (if not the

Oceanic Victor Pty Ltd

same person at item 1

above and if applicable):

9. ACN/ABN of

designated proponent (if

not the same person named at item 1 above): ACN 604 170 881

COMPLETE THIS SECTION ONLY IF YOU QUALIFY FOR EXEMPTION FROM THE FEE(S) THAT WOULD OTHERWISE BE PAYABLE

I qualify for exemption from fees under section 520(4C)(e)(v) of the

an individual; OR

EPBC Act because I am: a small business entity (within the meaning given by section 328-110 (other than subsection 328-119(4)) of the Income Tax Assessment Act 1997); OR

not applicable.

If you are small business entity you must provide the Date/Income Year that you became a small business entity:

Oceanic Victor Pty Ltd was registered under the Corporations Act on 11th February 2015

¹ If the proposed action is to be taken by a Commonwealth, state or territory government or agency, section 8.1 of this form should be completed. However, if the government or agency is aware of, and has administrative responsibilities relating to, a proposed action that is to be taken by another person which has not otherwise been referred, please contact the Referrals Gateway (1800 803 772) to obtain an alternative contacts, signatures and declarations page.

Note: You must advise the Department within 10 business days if you cease to be a small business entity. Failure to notify the Secretary of this is an offence punishable on conviction by a fine (regulation 5.23B(3) *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth)).

COMPLETE THIS SECTION ONLY IF YOU WOULD LIKE TO APPLY FOR A WAIVER

I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations. Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons

why it should be made:

N/A

An exemption from fees has been sought (as above) as the proponent is a small business entity with an annual turnover of less than \$2million.

Declaration

I declare that to the best of my knowledge the information I have given on, or attached to this form is complete, current and correct.

I understand that giving false or misleading information is a serious offence.

I agree to be the proponent for this action.

I declare that I am not taking the action on behalf of or for the benefit of any other

person or entity.

Signature

Date 26/10/15

9.2 Person preparing the referral information (if different from 8.1)

Individual or organisation who has prepared the information contained in this referral form.

Name Heather Montgomerie

Principal

Title Partner Strategy Trust

Organisation Farther Strategy 110.

ACN / ABN (if applicable) ABN 30 671 148 313

Postal address PO Box 3, Klemzig SA 5087

Telephone 0422 185 895

Email Heatherm16672@gmail.com

Declaration I declare that to the best of my knowledge the information I have given on, or attached

to this form is complete, current and correct.

I understand that giving false or misleading information is a serious offence.

Signature

Date