

**APPLICATIONS FOR THE VARIATION OF AN AQUACULTURE  
LICENCE**

**by**

**Pan Holdings Pty Ltd**

**Shark Bay WA**

**April 2017**

**DEPARTMENT OF FISHERIES**  
**APPLICATIONS FOR THE VARIATION OF AN AQUACULTURE LICENCE**  
**PAN HOLDINGS PTY LTD**  
**SHARK BAY WA**

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<b>File Ref</b>	L23/16
<b>Date of Application</b>	14 March 2017
<b>General Location</b>	Shark Bay, WA
<b>Area of Site</b>	400.6 ha
<b>Proposed New Species</b>	Roe's abalone Tropical abalone Staircase abalone
<b>Culture Method</b>	Ranching - grow-out on purpose-made structures
<b>Further Information</b>	Contact Clara Alvarez at the Department of Fisheries on (08) 9482 7336 or <a href="mailto:clara.alvarez@fish.wa.gov.au">clara.alvarez@fish.wa.gov.au</a> .

# Information provided by the applicant relevant to applications for the variation of an aquaculture licence

*Pan Holdings Pty Ltd*

April 2017

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## Introduction

This document outlines the information for consideration by agencies, stakeholders and community and industry groups regarding applications submitted by Pan Holdings Pty Ltd (Pan Holdings) for an aquaculture licence.

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## Background

Pan Holdings holds Aquaculture Licence No. 1649 (AL 1649), which authorises the culture of various species at a 400.6 hectare site in waters of Nanga, Shark Bay. The species cultured are as follows:

- Rock oyster (*Saccostrea glomerata*, *Saccostrea cucullata*, *Saccostrea scyphophilla*);
- Black-lipped pearl oyster (*Pinctada margaritifera*);
- Akoya pearl oyster (*Pinctada fucata*);
- Shark Bay pearl oyster (*Pinctada albina*);
- Penguin shell (*Pteria penguin*);
- Clams/cockles (Family *Veneridae* – species of Venus clams endemic to Shark Bay, including *Callista inpar*, *Gomphina undulosa*, *Callista planatella*, *Antigona lamellaris*, *Circe rivularis*, *Circe sulcate*, *Paphia crassisulca*, *Paphia semirugata*, *Pitar nancyae*); and
- Sponges (*Spongidae* (Order *Dictyoceratida*), *Irinidae* (Order *Dictyoceratida*), *Thorectidae* (Order *Dictyoceratida*), *Hymedesmiliidae* (Order *Poecilosclerida*), *Latrunculiidae* (Order *Poecilosclerida*), *Mycalidae* (Order *Poecilosclerida*), *Raspailiidae* (Order *Poecilosclerida*)).

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## Proposal

On 14 March 2016, Pan applied to the Department of Fisheries for the variation of its licence and proposes to culture abalone at the operation in Shark Bay. Proposed species are:

- Roe's abalone (*Haliotis roei*);
- Tropical abalone (*Haliotis asinina*); and
- Staircase abalone (*Haliotis scalaris*).

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## Source of Stock and Methods

Pan Holdings seeks to obtain abalone seedstock from existing hatcheries using Shark Bay abalone broodstock to produce spat for initial trials at Nanga. Juvenile abalone will be positioned on purpose-built structures that will be placed on sand, avoiding sensitive benthic areas such as seagrass densities. The structures used will be manufactured locally.

Pan Holdings intends to partner with a university to conduct research and development, feasibility studies and subsequent pilot-scale production trials using various structure designs and types in order to determine the optimal grow-out systems for abalone ranching in Shark Bay.

Abalone habitat structures are generally made from concrete and types include: “Star” units, “Tube” units, “V” units, “Block” units, “Pyramid” units, other commercially available ranching units, as well as novel habitat designs. Curtin University partnered with Ocean Grown Abalone for an FRDC project to investigate ranching techniques for greenlip abalone in South Western Australia, near Augusta (Sea ranching trials for commercial production of greenlip (*Haliotis laevigata*) abalone in Western Australia – FRDC Project No. 2012/220). A similar project is envisaged for Shark Bay, in which Pan Holdings trials various designs of abalone habitat structure, together with environmental monitoring, including temperature and salinity data, in order to determine effect of site and habitat structure on the survival and growth of abalone stocked.

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## Management and Environmental Monitoring

Risk of disease outbreak in abalone stocks is minimised through licence conditions that include regular monitoring and conducting of health checks, use of locally-sourced broodstock and optimising stock density through husbandry and stock management protocols.

There will be no requirement to feed stocked abalone at the site, therefore aquaculture of the proposed species is considered to pose no significant environmental or ecological issues. Identified biosecurity and environmental risks will be managed under Pan Holdings Management and Environmental Monitoring Plan (MEMP).

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## Diagram

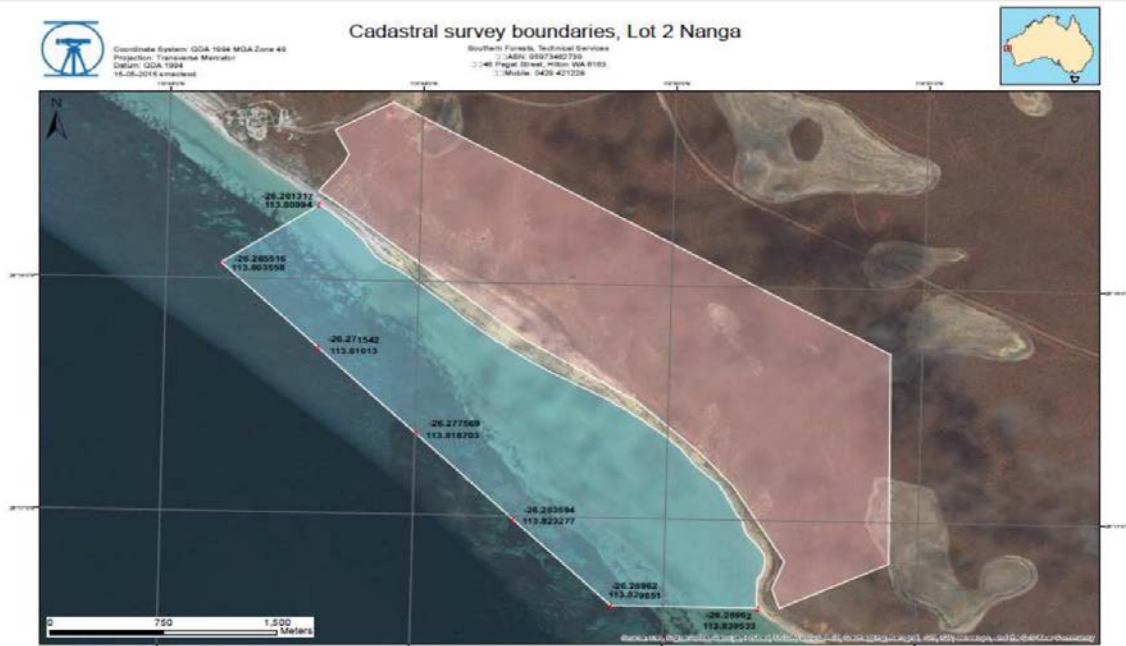


Figure 1: Site Plan of AL 1649

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## Oversight and Experience

Pan Holdings has been in business since 1981 and the board is highly experienced in running private Australian companies.

Personnel with the required experience and expertise will be contracted and employed to design, build, commission and run the proposed operations.

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