

Wheatstone Project

Biodiversity Offsets Strategy

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ACRONYMS, ABBREVIATIONS AND TERMINOLOGY

ANSIA	Ashburton North Strategic Industrial Area
CAR	Compliance Assessment Report
Chevron Australia	Chevron Australia Pty Ltd
Commonwealth Offset Policy	Commonwealth Government Environmental Offset Policy
CPDEP	Chevron Project Development and Execution Process
Cth	Commonwealth
DBNGP	Dampier-to-Bunbury Natural Gas Pipeline
DDG	DBP Development Group Pty Ltd
Domgas	Domestic Gas
DOTE	Department of the Environment - formerly Department of Sustainability, Environment, Water, Population and Communities (Cth)
DPaW	Department of Parks and Wildlife (WA) - formerly Department of Environment and Conservation (WA)
Draft EIS/ERMP	Draft Environmental Impact Statement / Environmental Review and Management Program
EPBC Act (Cth)	Environment Protection and Biodiversity Conservation Act 1999
EPBC 2008/4469	The Commonwealth Primary Environmental Approval and conditional requirements for the Wheatstone Project. Commonwealth Government of Australia, Minister for Sustainability, Environment, Water, Populations and Communities, Hon. Tony Burke, 22 September 2011 as amended from time to time
Fully Fund	Means funding of full-time Indigenous Sea Ranger positions and a full-time Indigenous Sea Ranger Coordinator, appropriate training, and reasonable equipment and resources for the implementation of the Program (including work vehicles and a vessel, as reasonably required), or in-kind support for any of these items, but does not include housing, food or recreational vehicles
km	Kilometre(s)
LNG	Liquefied Natural Gas
MTPA	Million tonnes per annum
NES	National Environmental Significance
Offsets Program	Commonwealth Offsets Program
Project	Nearshore and offshore marine facilities, trunkline, and Onshore Facility
Project Area	The geographic locations in, at, through or in close proximity to which the Wheatstone Development or part thereof is to be performed
SEWPaC	Department of Sustainability, Environment, Water, Population and Communities (Cth) - formerly DEWHA, now DOTE
Science Plan	WAMSI Node 1 – Dredging Science Plan
Strategy	Biodiversity Offsets Strategy
Threatened Species Program	5-year Threatened Species Information and Protection Program

Revision Date: 01/04/2016

WA	Western Australia
WAMSI	Western Australian Marine Science Institution
WEPCC	Wheatstone Environmental Protection Code of Conduct

1.0 EXECUTIVE SUMMARY

The Wheatstone Project (the Project) was approved by the Minister for Sustainability, Environment, Water, Population and Communities (currently the Minister for the Environment) in September 2011 in the form of Environmental Protection and Biodiversity Conservation (EPBC) 2008/4469. Conditions of approval include that the person taking the action must submit to the Minister a Biodiversity Offsets Strategy (Strategy) for approval. This Strategy has been prepared to meet Conditions 66 and 67 of EPBC 2008/4469.

EPBC 2008/4469 Condition 66 requires the Strategy address the residual impacts to *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed dugongs, dolphins, migratory birds, marine turtles, cetaceans and sawfish from construction and production, including dredging and noise impacts and increased recreational use of the area and its associated impacts to these species.

This Strategy outlines all Commonwealth Offset Programs (Offset Programs) that Chevron Australia Pty Ltd (Chevron Australia) has funded. The Offset Programs are closely aligned with descriptions provided in EPBC 2008/4469 Condition 66 and include:

- The establishment and operation of a regional Indigenous Sea Ranger Program (Condition 66a)
- Provision of funding for research and implementation of ecological studies on seagrass in the Project area or other areas in the Pilbara (Condition 66b)
- Provision of funding to a recognised research institution to research measures, including fishways, to remove barriers to sawfish migration in riverine habitats and pending the outcomes of research implement measures to protect sawfish populations (Condition 66c and d)
- Provision of funding to a conservation and natural resource management organisation to develop and implement a 5-year Threatened Species Information and Protection Program (Condition 66e).

In accordance with Condition 67, this Strategy includes information on key milestones, performance indicators, actions and timeframes for each of the programs required by EPBC 2008/4469 Conditions 66a–66e. EPBC 2008/4469 Condition 66f requires a suitable offset area, for the portion of Dwarf Desert Spike-rush habitat, or likely habitat as identified in Condition 60, is cleared from the Project area in excess of 30% of suitable habitat, within a 10 km radius of the outer edge of the disturbance footprint. EPBC 2008/4469 Condition 66f only applies in the event that greater than 30% of Dwarf Desert Spike-rush habitat, or likely habitat, is proposed to be cleared within a 10 km radius of the outer edge of the disturbance footprint. Chevron Australia has undertaken an assessment of likely habitat presence in the Project area and provided the relevant data and report to Department of the Environment (DOTE). The DOTE have reviewed the assessments and concluded that less than 30% of suitable Dwarf Desert Spike-rush habitat will be impacted by the Project, and therefore Condition 66f will not apply.

2.0 INTRODUCTION

2.1 **Project Overview**

Chevron Australia will construct and operate a multi-train Liquefied Natural Gas (LNG) and domestic gas (Domgas) plant near Onslow on the Pilbara Coast, Western Australia (WA). The Project will process gas from various offshore fields in the West Carnarvon Basin. Ashburton North Strategic Industrial Area (ANSIA) is the approved site for the LNG and Domgas plants.

The Project requires installation of gas gathering, export and processing facilities in Commonwealth and State waters and on land. The initial Project will produce gas from Production Licences WA-46-L, WA-47-L and WA-48-L, 145 km offshore from the mainland, approximately 100 km north of Barrow Island and 225 km north of Onslow. It will also process gas from Production Licence WA-49-L operated by Woodside Energy Julimar Pty Ltd. Figure 2.1 shows the location of the Wheatstone Project.

The ANSIA site is located approximately 12 km south-west of Onslow along the Pilbara coast within the Shire of Ashburton. The initial Project will consist of two LNG processing trains, each with a capacity of approximately five million tonnes per annum (MTPA). Environmental approval was granted for a 25 MTPA plant to allow for further plant expansion. The Domgas plant will be a separate but co-located facility and will form part of the Project. The Domgas plant will tie-in to the existing Dampier-to-Bunbury Natural Gas Pipeline (DBNGP) infrastructure via third party DBP Development Group Pty Ltd (DDG) Domgas pipeline. Figure 2.2 shows the onshore and nearshore project footprint.

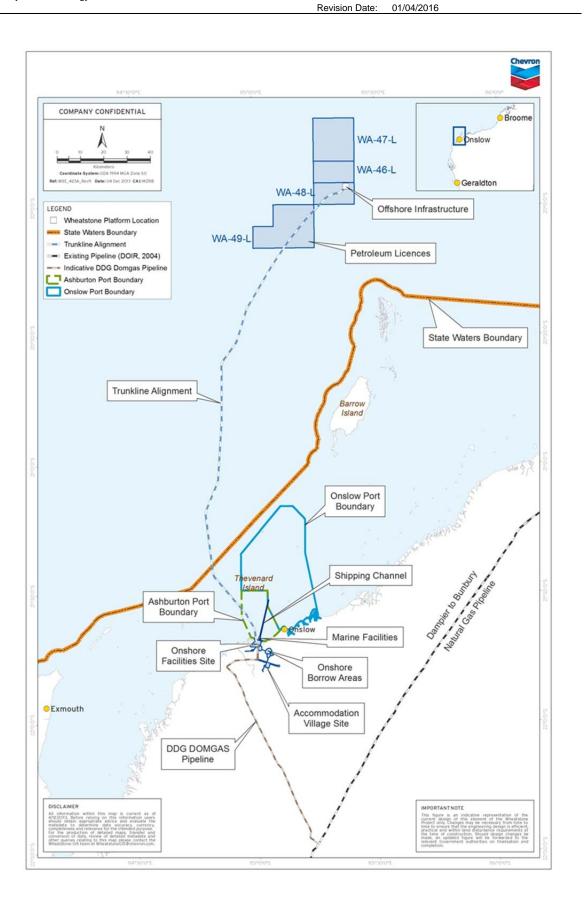
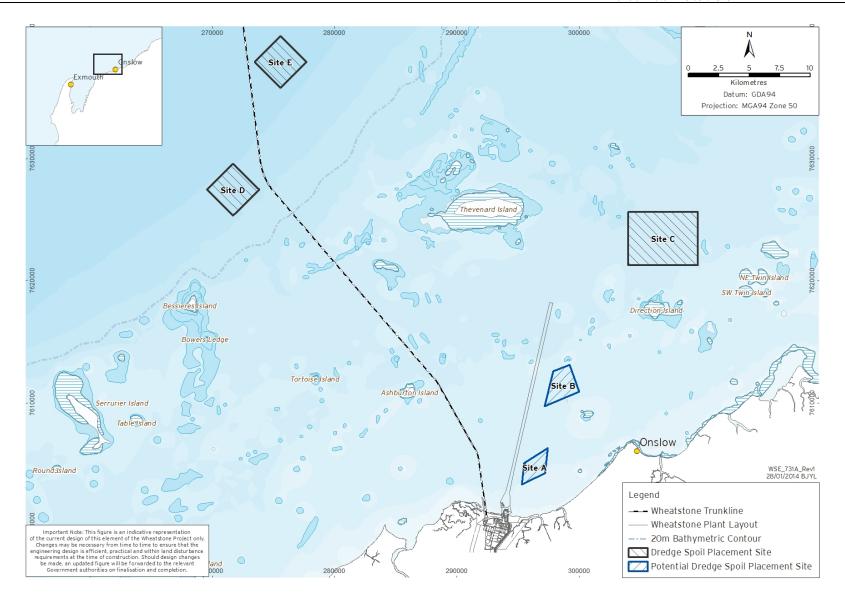


Figure 2.1: Location of Wheatstone Project Infrastructure





2.2 Proponent

Chevron Australia is the proponent and the company taking the action for the Project on behalf of its joint venture participants Woodside Energy Julimar Pty Ltd, PE Wheatstone Pty Ltd a company part-owned by Tokyo Electric Power Company, Kuwait Foreign Petroleum Exploration Company and Kyushu Electric Power Company.

2.3 Objectives

This Strategy has been developed to fulfil the requirements of Conditions 66 and 67 of EPBC 2008/4469. Specifically the objectives of this Strategy are to:

- List the residual impacts/risks to the taxa described in Condition 66
- Describe the offset commitments to address residual impacts as required under EPBC 2008/4469
- Detail the key milestones, performance indicators, actions and timeframes for the completion of all offset programs outlined in the strategy.

This Strategy focusses on the residual impacts or risks, ongoing research and the offset commitments for dugongs, dolphins, migratory birds, marine turtles, cetaceans and sawfish. The residual impacts from construction and production of the Project are based on the residual risk rankings presented in the Draft Environmental Impact Statement / Environmental Review and Management Program (Draft EIS/ERMP) which are considered to be the most up to date residual impact predictions. Commonwealth recovery plans for listed threatened species are referenced (where relevant) to demonstrate how the Wheatstone Commonwealth offsets commitments are aligned with objectives and actions set out in these Commonwealth recovery plans.

2.4 Environmental Approvals

The Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (currently Commonwealth Minister for the Environment) approved the Wheatstone Project on 22 September 2011 (EPBC 2008/4469) with variations to EPBC 2008/4469 Conditions 44, 45, 55, 56 and 66 made pursuant to section 143 of the EPBC Act. Other amendments may be made from time to time and if so will be reflected in the next revision of this Plan. This Strategy was originally submitted on 27 August 2012 for the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (SEWPaC) approval to meet the submission timing requirements of EPBC 2008/4469 Condition 66 and approved on 26 October 2012. This Strategy has been prepared to meet the requirements of EPBC 2008/4469 Conditions 66 and 67 (Table 2.1).

Table 2.1: Requirements of Commonwealth Ministerial Conditions: EPBC 2008/4469 relevant to this Strategy

No.	Condition	Section
66	The person taking the action must submit for the Minister's approval a Biodiversity Offsets Strategy within 12 months of the date of this approval, or as otherwise approved in writing by the Minister. The strategy must address the	2.4 3.0
	residual Impacts to EPBC Act listed dugong, dolphins, migratory birds, marine	4.0
	turtles, cetaceans and sawfish from construction and production, including	5.0 6.0
	dredging and noise impacts and the increased recreation use of the area and its associated impacts to species.	7.0
		8.0
66a	The establishment and operation of a regional Indigenous Sea Ranger	3.2.1
	Program to be operated out of the Onslow area. The Program should fully fund	4.2.1
	all costs associated with supporting annually, a minimum of 5 full-time equivalent field ranger positions and a full-time lead coordinator position for the	5.2.1
	life of the project. The Program should seek to address the threats to EPBC Act	6.2.1
	listed threatened and migratory species, protect the coastline and tidal creeks,	7.2.1
	remove marine debris, and play a key role in assisting Chevron to ensure compliance with the Wheatstone Environment Protection Code of Conduct.	8.2.2 9.1
66b	Provide funding for research and implementation of ecological studies on	3.2.2
000	seagrass in the Project area or other areas in the Pilbara region.	5.2.2 6.2.2
		9.2
66c	Provide funding to a recognised research institution for research and	8.2.1
	development of sawfish-appropriate fishways to remove barriers to the movement of sawfish in riverine habitats.	9.3
66d	The design, fit or retrofitting of 5 sawfish-appropriate fishways or alternative measures to remove barriers to sawfish passage in riverine habitat in the Pilbara and/or Kimberley regions, as identified through the research referred to in 66 (c).	8.2.1 9.3
66e	Provide funding to a recognised conservation or natural resource management	3.2.3
	organisation to develop and implement a 5-year Threatened Species	4.2.2
	Information and Protection Program comprising of educational materials, interpretive signage and actions that seek to discourage human access to	5.2.2
	sensitive or important habitat - including marine turtle nesting beaches or	6.2.3
	migratory bird nesting, roosting or feeding sites on offshore islands. [Amended	7.2.2
	by variation to EPBC 2008/4469 Condition 66 made pursuant to section 143 of the EPBC Act]	8.2.3 9.4
66f	A suitable offset area for the portion of Dwarf Desert Spike-rush habitat, or likely habitat, as identified in Condition 60 that is cleared from the project area in excess of 30% of suitable habitat, within a 10 km radius of the outer edge of the disturbance footprint.	9.5
67	The Biodiversity Offset Strategy must include key milestones, performance	9.1.6
	indicators, actions and timeframes for the completion of all offsets outlined in	9.1.7
	the strategy'.	9.1.8
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		9.2.5 9.2.6
		9.2.6 9.3.3
		9.3.4

No.

9.4.3 9.4.4 9.4.5 9.4.6

Condition Section 9.3.5 9.3.6

2.5 Commonwealth Government Environmental Offset Policy

In October 2012, the Commonwealth Government released the EPBC Act Environmental Offset Policy (Commonwealth Offset Policy) (Commonwealth of Australia 2012). Offsets are defined in the Policy as "measures that compensate for the residual adverse impacts of an action on the environment".

The Commonwealth recognises two types of offsets in the Commonwealth Offset Policy: direct offsets and other compensatory measures. Direct offsets are "those actions that provide a measurable conservation gain for an impacted protected matter". Conservation gain is the benefit that a direct offset delivers to the protected matter, which maintains or increases its viability or reduces any threats of damage, destruction or extinction. Other compensatory measures are "those actions that do not directly offset the impacts on the protected matter, but are anticipated to lead to benefits for the impacted protected matter, for example funding for research or educational programs".

Although this Commonwealth Offset Policy does not apply to EPBC 2008/4469, the offset programs detailed in this Strategy have been aligned with this Commonwealth Offset Policy and include a combination of both direct offsets (Condition 66a) and other compensatory measures (Conditions 66b, 66c, 66d and 66e).

2.6 Review, Approval and Revision of this Strategy

Chevron Australia is committed to conducting activities in an environmentally responsible manner and aims to implement reviews of its environmental management actions as part of a program of continuous improvement. This commitment to continuous improvement means that Chevron Australia will review the Strategy to address matters such as the overall effectiveness, environmental performance, changes in environmental risks and changes in business conditions on an as needed basis (e.g. in response to new information).

EPBC 2008/4469 Conditions 5 and 6 requires that Chevron Australia may only implement the Project otherwise than in accordance with the provisions of this Strategy which regulate the matters of National Environmental Significance (NES) relevant to this Strategy from the date of approval of any variation to this Strategy by the Commonwealth Minister. Amendments to activities and management may be made without an amendment to the Strategy where those amendments do not increase the risk level, and where the regulator is notified of those amendments before being implemented.

2.7 Actions

Where this Strategy sets out that a third party will take an action, Chevron Australia will advise that third party of those actions, and Chevron Australia will implement the related reasonable steps noted in this Strategy to facilitate that party taking the action. Where Chevron Australia implements those steps, but the third party does not take the action, or

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the third party actions do not achieve the performance indicators or environmental objectives, Chevron Australia will not be in non-compliance with this Strategy.

Where the Strategy sets out that Chevron Australia will agree a matter with a third party, Chevron Australia will take all reasonable practical commercial steps to do so. Provided Chevron Australia takes these steps, it will not be in non-compliance with this Strategy where an agreement with a third party cannot be reached.

3.0 DUGONGS

3.1 Residual Impacts

The Draft EIS/ERMP predicted residual risks for dugongs associated with Project activities as follows:

Dredging (loss of habitat):	Very Low
Vessel movement (construction and operation):	Low
Vessel movement (recreation):	Medium
Noise and vibration:	Low
Leaks and spills:	Low
Discharges:	Very low

In summary, only recreational vessel activity was predicted to pose a residual risk higher than low for dugongs.

3.2 Offsets Programs

3.2.1 Indigenous Sea Ranger Program

Chevron Australia has a condition to fund the establishment and operation of a regional Indigenous Sea Ranger Program which includes five full-time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator. The Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed threatened and migratory species, protect the coastline and tidal creeks, remove marine debris, and play a role in assisting Chevron Australia to monitor compliance with the approved Wheatstone Environmental Protection Code of Conduct (WEPCC), thereby mitigating residual impacts associated with recreational vessel movement. In relation to dugongs, the work scope for the Indigenous Sea Ranger Program may include assisting dugong monitoring programs. The Indigenous Sea Rangers may also assist with field work associated with the Dugong Research Plan. Refer to Section 9.1 for a full description of the Indigenous Sea Ranger Program.

3.2.2 Seagrass Ecological Study

Seagrass is the primary food source for dugongs. Chevron Australia has provided funding to Western Australian Marine Science Institution (WAMSI) for research and implementation of ecological studies on seagrass in the Project area or other areas in the Pilbara region. This research and implementation will be conducted in accordance with the WAMSI Node 1 – Dredging Science Plan (Science Plan) under the categories of 'Ecological Response Prediction' and 'Critical Ecological Processes and Windows'. Refer to Section 9.2 for more information.

3.2.3 5-year Threatened Species Information and Protection Program

Chevron Australia has provided funding to West Australian Department of Parks and Wildlife (DPaW) (formerly Department of Environment and Conservation) to develop and implement a 5-year Threatened Species Information and Protection Program (Threatened Species Program). The Threatened Species Program will focus on the EPBC Act listed species most likely to be affected by residual impacts from construction and production of the Project such as dugongs. This Threatened Species Program includes the development of educational material, interpretive signage on offshore islands focused on EPBC listed species, including dugongs. Refer to Section 9.4 for further information.

4.0 DOLPHINS

4.1 Residual Impacts

The Draft EIS/ERMP predicted residual risks for the EPBC Act listed dolphins, including the Indo-Pacific Humpback Dolphin and the Spotted Nose Dolphin associated with the Project activities as follows:

Noise and vibration:	Low
Leaks and spills:	Low
Physical presence of marine infrastructure:	Low
Vessel movement (construction and operation):	Low
Marine construction activities:	Low
Discharges:	Very low

In summary, no activity was predicted to pose a residual risk higher than low to the Indo-Pacific Humpback Dolphin and Spotted Nose Dolphin.

4.2 Offsets Programs

4.2.1 Indigenous Sea Ranger Program

Chevron Australia has a condition to fund the establishment and operation of a regional Indigenous Sea Ranger Program which includes five full-time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator. The Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed threatened and migratory species, protect the coastline and tidal creeks, remove marine debris, and play a role in assisting Chevron Australia to monitor compliance with the approved WEPCC. In relation to dolphins, the work scope for the Indigenous Sea Ranger Program may assist with dolphin monitoring programs, if required and developed. Refer to Section 9.1 for a full description of the Indigenous Sea Ranger Program.

4.2.2 5-year Threatened Species Information and Protection Program

Chevron Australia has provided funding to DPaW to develop and implement the Threatened Species Program. The Threatened Species Program focuses on the EPBC Act listed species most likely to be affected by residual impacts from construction and production of the Project such as dolphins. This Threatened Species Program includes the development of educational material, interpretive signage on offshore islands focused on EPBC listed species, including dolphins such as the Indo-Pacific Humpback Dolphin and Spotted Nose Dolphin. Refer to Section 9.4 for further information.

5.0 MIGRATORY BIRDS

5.1 Residual Impacts

The Draft EIS/ERMP predicted key residual risks for EPBC Act listed migratory birds, including the Fork-tailed Swift, Great Egret, White Egret, Cattle Egret, Bridled Tern, Caspian Tern and Southern Giant Petrel associated with Project activities as follows:

Workforce recreational access to offshore islands (Fork-tailed Swift and Cattle Egret only):	Medium
Leaks and spills (Great Egret, White Egret and Bridled Tern only):	Low
Vessel movement (construction, operation and recreational) (Caspian Tern):	Low
Dredging (Southern Giant Petrel):	Very low

In summary, only workforce recreational access to offshore islands was predicted to pose a residual risk higher than low.

5.2 Offset Programs

5.2.1 Indigenous Sea Ranger Program

Chevron Australia has a condition to fund the establishment and operation of a regional Indigenous Sea Ranger Program which will include five full-time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator. The Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed migratory birds, protect the coastline and tidal creeks, remove marine debris, and play a role in assisting Chevron Australia to monitor compliance with the approved WEPCC. In relation to migratory birds, the work scope for the Indigenous Sea Ranger Program may include assisting with migratory bird monitoring programs, if required and developed. Refer to Section 9.1 for a full description of the Indigenous Sea Ranger Program.

5.2.2 5-year Threatened Species Information and Protection Program

Chevron Australia has provided funding to DPaW to develop and implement the Threatened Species Program. The Threatened Species Program focuses on the EPBC Act listed species most likely to be affected by residual impacts from construction and production of the Project such as migratory birds. This Threatened Species Program includes the development of educational material, interpretive signage and implements actions that seek to discourage human access to sensitive or important habitats including migratory bird nesting, roosting or feeding sites on offshore islands. Refer to Section 9.4 for further information.

6.0 MARINE TURTLES

6.1 Residual Impacts

The Draft EIS/ERMP predicted residual risks for Flatback Turtles, Green Turtles, Hawksbills Turtles and Loggerhead turtles associated with Project activities as follows:

Workforce recreational access to offshore islands:	Medium
Noise and vibration:	Low
Dredging (entrainment):	Low
Dredging (loss of habitat):	Very low
Light emissions:	Low
Vessel movement (construction and operation):	Low
Leaks and spills:	Low
Marine construction activities:	Low
Presence of marine infrastructure:	Low
Discharges:	Very low

In summary, only workforce recreational access to offshore islands was predicted to pose a residual risk higher than low to Flatback, Green, and Hawksbill Turtles.

The Draft EIS/ERMP predicted residual risks for the Leatherback Turtle which are unlikely to be present in coastal waters or nest in the Project area, associated with the Project activities as follows:

|--|

In summary, no activity was predicted to pose a residual risk higher than low to Leatherback Turtles.

6.2 Offsets Programs

6.2.1 Indigenous Sea Ranger Program

Chevron Australia has a condition to fund the establishment and operation of a regional Indigenous Sea Ranger Program which will include five full-time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator. The Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed migratory birds, protect the coastline and tidal creeks, remove marine debris, and play a role in assisting Chevron Australia to monitor compliance with the approved WEPCC. In relation to EPBC Act listed turtles, the work scope for the Indigenous Sea Ranger Program may include assisting with marine turtle monitoring programs. Refer to Section 9.1 for a full description of the Indigenous Sea Ranger Program.

6.2.2 Seagrass Ecological Study

Seagrass provides habitat for turtles. Chevron Australia has provided funding to WAMSI for research and implementation of ecological studies on seagrass in the Project area or other areas in the Pilbara region. This research and implementation will be conducted in accordance with the WAMSI Science Plan under the categories of 'Ecological Response Prediction' and 'Critical Ecological Processes and Windows'. Refer to Section 9.2 for more information.

6.2.3 5-year Threatened Species Information and Protection Program

Chevron Australia has provided funding to DPaW to develop and implement the Threatened Species Program. The Threatened Species Program focuses on the EPBC Act listed species most likely to be affected by residual impacts from construction and production of the Project such as turtles. This Threatened Species Program includes the development of educational material, interpretive signage and implements actions that seek to discourage human access to sensitive or important habitats including marine turtle nesting beaches. Refer to Section 9.4 for further information.

The offset commitments made under this Strategy are generally consistent with the objectives and recovery actions within the Commonwealth Recovery Plan for Marine Turtles in Australia.

7.0 WHALES

7.1 Residual Impacts

The Draft EIS/ERMP predicted residual risks for Humpback Whales, Blue Whales, Antarctic Mink Whales, Bryde's Whale, Southern Right Whales, Sperm Whales and Killer Whales associated with Project activities as follows:

Discharges:	Very Low (Humpback Whales)
Physical presence of marine infrastructure:	Low
Marine construction activities:	Low
Vessel movements (construction, operations, and recreational):	Low
Leaks and spills:	Low
Noise and vibration:	Low

In summary, no activities were predicted to pose a residual risk higher than low.

7.2 Offsets Programs

7.2.1 Indigenous Sea Ranger Program

Chevron Australia has a condition to fund the establishment and operation of a regional Indigenous Sea Ranger Program which will include five full-time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator. The Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed migratory birds, protect the coastline and tidal creeks, remove marine debris, and play a role in assisting Chevron Australia to monitor compliance with the approved WEPCC. In relation to whales, the work scope for the Indigenous Sea Ranger Program may include monitoring whales observed within the Project area. Refer to Section 9.1 for a full description of the Indigenous Sea Ranger Program.

7.2.2 5-year Threatened Species Information and Protection Program

Chevron Australia has provided funding to DPaW to develop and implement the Threatened Species Program. The Threatened Species Program focuses on the EPBC Act listed species most likely to be affected by residual impacts from construction and production of the Project such as whales. This Threatened Species Program includes the development of educational material, interpretive signage on offshore islands focused on EPBC listed species, including whales. Refer to Section 9.4 for further information.

The offset commitments made under this Strategy are generally consistent with the objectives and recovery actions within the objectives and recovery actions within the Commonwealth Humpback Whales Recovery Plan 2005–2010, the Blue, Fin and Sei Whale Recovery Plan 2005–2010, and the Southern Right Whale Recovery Plan 2005–2010.

8.0 SAWFISH

8.1 Residual Impacts

The Draft EIS/ERMP predicted residual risks for sawfish associated with Project activities as follows:

Noise and Vibration:	Low
Vessel movements (construction, operation and recreational):	Low
Leaks and spills:	Low
Discharges:	Very Low

In summary, no activities were predicted to pose a residual risk higher than low.

8.2 Offsets Programs

8.2.1 Sawfish Research and Barriers to Migration

Chevron Australia has provided funding to WAMSI to research measures that remove barriers to sawfish migration in riverine habitats and to recommend measures to protect sawfish populations. Globally, no fishways have been constructed specially for sawfish, and there are no fishways currently operating in sawfish habitats in WA. Thus, part of the study will determine the swimming performance of sawfish to generate hydrological thresholds to ensure that construction of any fishway will enable passage. The results of this study will determine if the design and installation of fishways is a preferred option for achieving the objectives to EPBC 2008/4469 Condition 66d.

Pending the results and recommendations of this study, Chevron Australia will also fund the design, fit or retrofitting of five sawfish-appropriate fishways or alternative measures to remove barriers to sawfish passage in riverine habitat in the Pilbara and/or Kimberley regions. Refer to Section 9.3 for full description.

8.2.2 Indigenous Sea Ranger Program

Chevron Australia has a condition to fund the establishment and operation of a regional Indigenous Sea Ranger Program which will include five full-time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator. The Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed migratory birds, protect the coastline and tidal creeks, remove marine debris, and play a role in assisting Chevron Australia to monitor compliance with the approved WEPCC. In relation to sawfish, the work scope for the Indigenous Sea Ranger Program may include observing for any fishing activities in breach of the WEPCC and potentially assisting with monitoring and education programs associated with sawfish. Refer to Section 9.1 for a full description of the Indigenous Sea Ranger Program.

8.2.3 5-year Threatened Species Information and Protection Program

Chevron Australia has provided funding to DPaW to develop and implement the Threatened Species Program. The Threatened Species Program will focus on the EPBC Act listed species most likely to be affected by residual impacts from construction and production of the Project such as sawfish. This Threatened Species Program includes the development of educational material, interpretive signage for sawfish. Refer to Section 9.4 for further information.

9.0 PROGRAMS

9.1 Indigenous Sea Ranger Program

9.1.1 Introduction

EPBC 2008/4469 Condition 66a requires the establishment and operation of a regional Indigenous Sea Ranger Program to be operated out of the Onslow area. This condition requires Chevron Australia to fully fund all costs associated with establishing and operating the Indigenous Sea Ranger Program including a minimum of five full-time equivalent Indigenous Sea Ranger positions and a full-time Indigenous Sea Ranger Coordinator position for the life of the Project. This Indigenous Sea Ranger Program seeks to address the threats to EPBC Act listed threatened and migratory species, protect the coastline and tidal creeks, remove marine debris, and play a key role in assisting Chevron Australia to monitor compliance with the WEPCC.

9.1.2 Indigenous Sea Ranger Program Scope

It is envisaged that the Indigenous Sea Ranger Program will be comprised of Indigenous Sea Rangers from the Indigenous community in proximity to Onslow. As per EPBC 2008/4469 Condition 66a the Indigenous Sea Ranger Program will focus on EPBC Act listed threatened and migratory species and will aim to protect the coastline and tidal creeks, remove marine debris and play a key role in assisting Chevron Australia to monitor compliance with the WEPCC. The Wheatstone Project is currently in the construction phase, whereby baseline environmental surveys have ceased and the monitoring of construction activities and their potential environmental impacts have begun. The Indigenous Sea Ranger Program may provide the capability to gather data for ongoing studies relating to threatened and migratory species, to inspect and maintain equipment (such as buoys), as well as conduct other operational tasks. The Indigenous Sea Rangers may make observations of EPBC Act listed dugongs, dolphins, migratory birds, marine turtles, cetaceans and sawfish including notifying Chevron Australia of any observations of any injured or dead fauna.

There are opportunities for synergies between the Indigenous Sea Ranger Program and implementation of the Threatened Species Program. It is anticipated that DPaW and the Indigenous Sea Ranger Coordinator may further define the Indigenous Sea Rangers involvement in the Threatened Species Program, including implementation tasks such as education, interpretive signage and actions that seek to discourage human access to sensitive or important habitats for EPBC Act listed species.

Additional resources, provided by the Indigenous Sea Ranger Program may be of assistance to the Project in assisting Chevron Australia to monitor compliance with the WEPCC, particularly in areas away from the Project Area. The WEPCC also restricts recreational activities such as boating, fishing and recreational visitation of the offshore islands by Project personnel. The Indigenous Sea Rangers may assist in monitoring and reporting that these restrictions are being adhered to by Project personnel.

In summary, it is intended that the Indigenous Sea Ranger Program may support the following activities:

- Environmental Monitoring:
 - Turtle track surveys
 - Marine mammal observations
 - Associated marine activities such as water quality monitoring, equipment maintenance

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- Compliance related tasks in support of Commonwealth and State legislation:
 - Weed control
 - Maintenance and operation of monitoring equipment
 - Remediate small oil spills (e.g. spills from small vessels such as a dinghy refuelling)
- Field implementation of the WEPCC:
 - Monitoring of boating and recreational/illegal fishing
 - Patrols of offshore islands and associated quarantine measures
 - Patrols of turtle nesting beaches
 - Removal of litter
 - Erection of education signage
 - Environmental and cultural education of Project personnel
- Field support of Commonwealth offsets such as:
 - Community liaison, education, input into and erection of interpretive signage, and actions that seek to discourage human access to sensitive or important habitats
 - Sawfish observations and inspections of acoustic receivers.

9.1.3 Resourcing

In accordance with EPBC 2008/4469 Condition 66a, Chevron Australia is required to fully fund the establishment and operation of the Indigenous Sea Ranger Program. Funding includes costs associated with employment of five full time equivalent Indigenous Sea Rangers and a full-time Indigenous Sea Ranger Coordinator, appropriate training, and reasonable equipment and resources for the implementation of the Indigenous Sea Ranger Program (including work vehicles and a vessel, as reasonably required), or in-kind support for any of these items, but does not include housing, food or recreational vehicles. Due to the site entry requirements and nature of the work, the ideal candidates will have good written and oral communication skills and work experience.

The Indigenous Sea Ranger Coordinator position is a critical appointment, with the ideal candidate being responsible for the Indigenous Sea Ranger Program development and the ensuing oversight of staff and resources in challenging site conditions. Supervisory experience is necessary, with experience in natural resource management or environmental science preferential.

The ongoing duration of the Indigenous Sea Ranger program, combined with the nature of the work, will result in a requirement for resources. Illustrative resources to support implementation are displayed in Table 9.1.

Table 9.1: Illustrative resources for successful implementation of the Indigenous SeaRanger Program

Equipment & Storage
Office or desk space at Onslow work yard or other suitable location
Work vehicle x 2, located at Onslow (Mine Equipped 4x4 with recovery equipment), ATV x 2
Computers (including field computer), printers
Other general office equipment
Communications equipment such as mobile/satellite phone, email, internet
General tools and equipment for on ground works
Binoculars, camera
Oil spill kits
Equipment for weed control
Monitoring equipment
Boat x 1, storage at Onslow work yard or other suitable location
Dinghy x1 (for access to creeks)
PPE
Uniforms and fit for purpose PPE (clothing, boots, gloves, hats, bags etc.)
Life jackets
First aid kit
Marine radio
GPS in line with safety requirements
Emergency Position Indicating Radio Beacon / Flares

A number of significant training opportunities also exist for members of the Indigenous Sea Ranger Program. Participation in these training opportunities may enhance Indigenous Sea Ranger capabilities and provide important career development for individuals. Training will be provided in Onslow where practicable. Where training cannot be provided in Onslow the Indigenous Sea Rangers may be required to travel to other locations to receive training. Opportunities for online and electronic training will also be explored. Illustrative training requirements to support implementation are displayed in Table 9.2.

Table 9.2: Illustrative Training Requirements for successful implementation of theIndigenous Sea Ranger Program

Training Requirements
Tropical Basic Offshore Safety Induction and Emergency Training
Skippers Ticket and/or relevant marine training
Driver's License, 2 Wheel Drive and 4 Wheel Drive Training
Document control
Information resource management

Training Requirements

Computer training and literacy

Certificate II and III in Conservation and Land Management (TAFE)

Tourism knowledge sharing

Fisheries management

Cultural awareness training

Construction White Card

Relevant Chevron Australia and site inductions, where required.

Oil spill and other waste stream response training

9.1.4 Implementation Alternatives

A preliminary analysis has been conducted on alternative approaches of implementing the Indigenous Sea Ranger Program. The alternatives considered include but are not limited to:

 Chevron Australia executing the Program internally. Under an internal implementation approach alternatives may include:

The Indigenous Sea Ranger Coordinator and Indigenous Sea Ranger positions may be appointed as Chevron Australia employees or

- The Indigenous Sea Ranger Program Coordinator may be appointed as a Chevron Australia employee and the Indigenous Sea Ranger positions may be externally contracted.
- External funding provided by Chevron Australia to a third party organisation to establish and oversee the Indigenous Sea Ranger Program
- Partnering with an external organisation, such as an Aboriginal Corporation, existing ranger program or not-for-profit group, to implement the Program.

The decision on which alternative will be implemented is still under consideration and forms one of the initial actions to be undertaken by Chevron Australia.

9.1.5 Lessons Learned from Existing Sea Ranger Programs and Opportunities for Collaboration

Several successful Indigenous ranger programs have been implemented in the Kimberley, including the Bardi Jawi and the Karajarri Ranger Programs. The Karajarri Ranger Program has been operating since 2009 and is credited with "improving self-esteem, health, and wellbeing, whilst reducing unemployment in the indigenous communities where the program has been operating" (Kimberley Land Council 2011).

The Bardi Jawi and Karajarri ranger programs are considered to be potential models for the Indigenous Sea Ranger Program, as both programs manage coastal lands with similar potential threats as for the Onslow locality. If these models are adopted, they may need to be adapted to reflect Chevron Australia's requirements and amended as required to address the relevant requirements of EPBC 2008/4469. The marine focus of the Indigenous Sea Ranger Program may create alignment opportunities with these other sea ranger programs. The Bardi Jawi also has a history of working with industry, particularly oil and gas, participating in heritage surveys, environmental monitoring and community liaison. Kimberley Indigenous ranger programs have identified potential synergies between rangers and

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scientific research programs, particularly involving Australian universities. Indigenous rangers possess strong local knowledge, fauna handling skills and other 'bush craft', making them an important asset to field based programs.

The Uunguu rangers have participated in contract work on behalf of Australian Quarantine Inspection Service, patrolling for illegal fishing in Admiralty Gulf and searching the shoreline for associated debris which represents a quarantine threat. This work is conducted in conjunction with a variety of non-government organisations and a number of positive environmental outcomes have resulted (Kimberley Land Council 2011).

Although the Kimberley Indigenous ranger programs function as self-sufficient organisations, there is a significant culture of collaboration between ranger groups, particularly around education and training. Although ranger programs in the Pilbara are in their comparative infancy, significant opportunities for Indigenous Sea Ranger collaboration exists, particularly around the sawfish reconnaissance and monitoring with Kimberley rangers in northern waters, where the federally protected Freshwater and Green Sawfishes have their core habitat (SEWPaC 2011).

Chevron Australia will benchmark existing Indigenous ranger programs during the selection of the preferred implementation model and from time to time thereafter.

9.1.6 Milestones

To enhance outcomes, Chevron Australia is applying the Chevron Project Development and Execution Process (CPDEP) to guide the development and definition of the Indigenous Sea Ranger Program. CPDEP is a framework for decision making across the life cycle of a project. It aligns all activities to support making the next decisions. As a consequence the phasing of the development of the Rangers Program has been revised to align with the phasing of the standardised CPDEP process. The revised Phase and associated milestones are as follows:

Phase 1 – Identify and Assess Opportunities

Key Milestones include:

- Identify and confirm Project Team and key decision makers including engaging the Ranger Coordinator.
- Identify and frame the opportunity.

During Phase 1 the Coordinator of the Indigenous Sea Ranger Program will be engaged and the opportunity will be appropriately framed.

Stakeholders will be identified during Phase 1. Stakeholders identified at this preliminary stage are DOTE, DPaW, Department of Fisheries, Bechtel (the Engineering Procurement, Construction Management Contractor engaged by Chevron Australia), Department of Aboriginal Affairs, the Thalanyji People and local community.

Phase 2 – Generate and select alternatives

Key Milestones include:

- Generate and analyse alternatives. Recommend preferred alternative.
- Benchmark existing Indigenous rangers programs.

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A detailed scope of works will be established to provide a strong foundation for management of the program. Compliance with the WEPCC, community liaison and education, environmental monitoring and support of fisheries management are the key items in the scope of works. Other items for inclusion in the scope of works include erection of environmental signage, weed control and maintenance and operation of monitoring equipment.

In parallel with scope development, a Strengths Weaknesses Opportunities Threats (SWOT) analysis will be performed on the alternatives. Lessons learned from benchmarking existing ranger programs may be considered in this process or more broadly. Benchmarking is a process whereby a comparison of the Wheatstone Indigenous Sea Ranger Program with other Australian Indigenous Sea Ranger Programs is undertaken, with the aim of identifying learning opportunities. The scope of benchmarking will include Indigenous ranger programs within Australia.

Phase 3 – Develop preferred alternative

Key Milestones include:

- Fully define and freeze scope.
- Develop final Implementation and Execution Plans.

Phase 4 - Execute

Key Milestones include:

- Finalise Operations Plan.
- Implement Procurement Plan; procure resources and key equipment.
- Identify additional Ranger candidates.

Phase 5 – Operate and Evaluate

Key Milestones include:

- Recruit Rangers.
- Operate Ranger Program, deploy Rangers.
- Monitor and evaluate performance.
- Review the Ranger Program.

The process to engage personnel and procure resources is dependent on the preferred alternative selected. The pool of available workers in the Thalanyji and broader Indigenous community will be identified and resources deployed to identify the best candidates. An important aspect of this will be the training programs to be conducted following initial recruitment. Onslow based training will need to be conducted in most cases, which requires a significant increase in expenditure on existing site-based programs.

9.1.7 Performance Indicators

Performance indicators are as follows:

- Project team confirmed. Ranger Coordinator engaged.
- Framing workshop held.

- Recommendation of preferred alternative documented.
- Benchmarking summary documented.
- Scope documented.
- Implementation and Execution Plan(s) approved by Chevron Australia.
- Operations Plan approved by Chevron Australia.
- Resources and key equipment procured.
- List of candidates prepared.
- Five or more Rangers recruited.
- Annual reviews and audits documented.

9.1.8 Actions

The following initial actions have been identified for Chevron Australia to either undertake or facilitate:

- Use of a decision quality tool to assist in determining the preferred alternative for the Program.
- Document, in detail, the marine and terrestrial components of the Program including activities to be undertaken in each phase, identification of resources, and finalisation of budget.
- Establish budget to recruit, train and employ Rangers. Commence discussions to identify
 potential candidates with an initial focus on the recruitment of the Ranger Coordinator
 position. Develop a comprehensive training matrix and arrange logistical requirements
 for Indigenous Sea Rangers to attend training sessions (in Onslow, Karratha, Perth etc.)
 including familiarisation with the WEPCC and environmental monitoring programs.
- Establish a comprehensive list of equipment. Fund procurement of equipment. Establish location to store equipment. Test equipment and establish a maintenance program for equipment. Training on the use of equipment to be undertaken by Rangers where necessary.
- Implement initial field activities in accordance with the scopes of work. Site familiarisation to be undertaken where necessary. Establishment of field office or desk space. Continue to develop relationships with key stakeholders and the community
- Indigenous Sea Rangers provide input into annual review. Complete annual audit on the program.
- Develop Closure Plan. Implement measures within the plan.

9.1.9 Indicative Timeframes

The following timeframes are indicative only and will be finalised in the scope of works:

- ◆ Phase 1: 12/13 31/3/14
- ◆ Phase 2: 1/4/14 31/8/14
- Phase 3: 2014 2015 reporting period (end August 2015)
- Phase 4: 2015 2016 reporting period (end August 2016)
- Phase 5: from end of Phase 4 to the final year of the Project's operational life.

9.1.10 Summary

Table 9.3: Ind	ligenous Sea	Ranger P	rogram S	Summary
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Key Milestone	Performance Indicator	Actions	Indicative Timeframes (on or before)	
Identify and confirm Project Team and key decision makers including engaging the Indigenous Sea Rangers Coordinator	Project team confirmed. Ranger Coordinator engaged.	Identify Project team and to undertake recruitment process to engage the Indigenous Sea Rangers Coordinator	March 2014	
Identify and frame the opportunity	Framing work shop held	Hold framing workshop	March 2014	
Generate and analyse alternatives. Recommend preferred alternative.	Recommendation of preferred alternative documented	Decision quality tool used to assist in determining the preferred alternative for the Program	August 2014	
Benchmark existing Indigenous Ranger programs	Benchmarking summary documented	Research other Indigenous Ranger programs and prepare benchmarking summary document	August 2014	
Fully define and freeze scope	Scope documented	Document scope	August 2015	
Develop final Implementation and Execution Plans*	Plan(s) approved by Chevron Australia	Document in detail the steps required to implement and execute the preferred alternative, including identification of resources	August 2015	
Finalise Operations Plan*	Plan approved by Chevron Australia	Document in detail the components of the Program including activities to be undertaken in each phase and finalisation of budget	August 2016	
Implement Procurement Plan. Procure resources and key equipment.	Resources and key equipment procured	Establish a comprehensive list of equipment. Fund procurement of equipment. Establish location to store equipment. Test equipment and establish a maintenance program for equipment. Training on the use of equipment to be undertaken by Rangers where necessary	August 2016	

Key Milestone	Performance Indicator	Actions	Indicative Timeframes (on or before)
Identify Ranger candidates	List of candidates prepared	Establish budget to recruit, train and employ Rangers.	August 2016
Recruit Rangers	5 or more Rangers recruited	Commence discussions to identify potential candidates with an initial focus on the recruitment of the Ranger Coordinator position. Develop a comprehensive training matrix and arrange logistical requirements for Indigenous Sea Rangers to attend training sessions (in Onslow, Karratha, Perth etc.) including familiarisation with the WEPCC and environmental monitoring programs	From end of Phase 4 to the final year of the Project's operational life
Deploy Rangers	Rangers deployed	Implement initial field activities in accordance with the scopes of work. Site familiarisation to be undertaken where necessary. Establishment of field office or desk space.	From end of Phase 4 to the final year of the Project's operational life
Monitor and evaluate performance until closure	Annual reviews and audits documented	Indigenous Sea Rangers provide input into annual review. Complete an annual audit on the program*. Develop Closure Plan. Implement measures within the plan.	From end of Phase 4 to the final year of the Project's operational life

• * In accordance with Condition 2 of EPBC 2008/4469 the Executions Plan, Operations Plan and Annual Review Report will be provided to DOTE upon request

9.2 Seagrass Research

9.2.1 Introduction

EPBC 2008/4469 Condition 66b requires that Chevron Australia provide funding for research and implementation of ecological studies on seagrass in the Project area or other areas in the Pilbara region.

9.2.2 Program Description

To fulfil EPBC 2008/4469 Condition 66b, Chevron Australia has provided funding to WAMSI for research and implementation of ecological studies on seagrass in the Project area or other areas in the Pilbara region. WAMSI is a collaboration of State, Commonwealth, industry and academic organisations that undertake marine research. The University of Western Australia is the agent for WAMSI; other partner organisations include Office of the Environmental Protection Authority, Australian Institute of Marine Science, DPaW, Edith Cowan University, and Murdoch University. A number of these organisations have international reputations for seagrass research.

Under WAMSI's existing Science Plan, WAMSI is to conduct marine research to enhance capacity within Government and the private sector to predict and manage the environmental impacts of dredging in WA and in turn deliver outcomes to increase the confidence, timeliness and efficiency of the assessment, approval and regulatory processes associated with dredging projects. This Science Plan has nine broad themes of inter-disciplinary research set out under the four broad categories which are to be delivered through a combination of reviews, field studies, laboratory experimentation, relationship testing and development of standardised protocols and guidance for impact prediction, monitoring and management.

The seagrass research and implementation will be conducted in accordance with the WAMSI Science Plan under category 3 Ecological Response Prediction (theme 5 defining thresholds and indicators of Primary Producer response to dredging-related pressures) and category 4 Critical Ecological Processes and Windows (theme 9 – effects of dredging-related pressures on critical ecological processes for Other Organisms). The objective of the Ecological Response Prediction category is to establish quantitative relationships between dredging-related pressure and seagrass response. These relationships, derived thresholds and approaches for the prediction and measurement will be translated into tools and protocols to be used in the real-world application. The objective of the Critical Ecological Processes and Windows category is to identify the critical ecological processes in marine communities in WA that could be affected by dredging programs, the likely cause: effect pathways, and the significance of those processes at local regional scales.

9.2.3 Milestones

Key milestones include:

- Establishment governance arrangements with WAMSI [Complete: 21/12/2012].
- Study objectives relating to seagrasses in the Project area or other areas in the Pilbara region finalised [Complete: 21/12/2012].
- Transfer of funding to WAMSI (in the form of a single contribution) [Complete: 23/01/2013].
- Annual reports received from WAMSI detailing the results relating to studies undertaken to achieve the agreed research objectives including executive summaries from detailed science papers and details on publications, seminars and other public fora at which findings of the WAMSI Science Plan have been presented.

9.2.4 Performance Indicators

Performance indicators are as follows:

- Governance arrangements executed by both parties [Complete: 21/12/2012].
- Study objectives documented in the WAMSI Science Plan [Complete: 21/12/2012].
- Funding released by Chevron Australia to WAMSI [Complete: 23/01/2013].
- Annual reports received from WAMSI detailing the results relating to studies undertaken to achieve the agreed research objectives including executive summaries from detailed science papers and details on publications, seminars and other public fora at which findings of the WAMSI Science Plan have been presented [ongoing].

9.2.5 Actions

Key actions for Chevron Australia to either undertake or facilitate include:

- Chevron Australia and WAMSI to agree on WAMSI's responsibilities in implementing the WAMSI Science Plan. Prepare governance arrangements and agree on terms and conditions of funding [Complete: 21/12/2012].
- Finalisation of a Science Plan by WAMSI which outlines the study objectives for the funding and the timeframe that the research will be conducted [Complete: 21/12/2012].
- Chevron Australia to transfer funds [Complete: 23/01/2013].
- WAMSI to provide Chevron Australia with an annual report for the WAMSI Science Plan which includes a summary of the governance of the program, total amount spent for the reporting period and in total to date, WAMSI Science Plan status updates, including executive summaries from detailed science review, and advise on publications, seminars and other public fora at which findings of the Program have been presented [ongoing].

9.2.6 Actual and Indicative Time Frames

Actual and indicative timeframes for the key actions are provided below:

- Governance arrangements executed by both parties [Complete: 21/12/2012].
- Study objectives finalised [Complete: 21/12/2012].
- Funding amount agreed [Complete: 21/12/2012].
- Status report submitted to Chevron Australia annually for the duration of the research [ongoing].

9.2.7 Summary

Key Milestones	Performance Indicator	Actions	Actual and Indicative Timeframes
Establishment governance arrangements with WAMSI	Governance Arrangement executed by both parties	 Chevron Australia and WAMSI to agree on WAMSI's responsibilities in implementing the Science Plan. Prepare governance arrangements and agree on terms and conditions of funding. 	Complete: 21/12/2012
Transfer of funding to WAMSI (in the form of a single contribution)	Funds released by Chevron to WAMSI	 Chevron Australia to transfer funding to WAMSI to implement research 	Complete: 23/01/2013
Reporting	Report received of results relating to studies undertaken to achieve the agreed research objectives	 WAMSI to submit report providing status updates on the Science Plan, including executive summaries from detailed science review, and advise on publications, seminars and other public fora at which findings of the Science Plan have been presented. 	Ongoing: Annually for the duration of the research

Table 9.4: Seagrass Research Summary

9.3 Barriers to Sawfish Migration Research, Fishways and Alternatives Measures

9.3.1 Introduction

EPBC 2008/4469 Conditions 66c and d requires that Chevron Australia "Provide funding to a recognised research institution for research and development of sawfish-appropriate fishways to remove barriers to the movement of sawfish in riverine habitats" and "The design, fit or retrofitting of 5 sawfish-appropriate fishways or alternative measures to remove barriers to sawfish passage in riverine habitat in the Pilbara and/or Kimberley regions, as identified through the research referred to in 66 (c)", respectively.

9.3.2 **Program Description**

The Sawfish Project is envisaged to provide a sound scientific basis for the development of effective fishways for sawfish in WA. Globally, no fishways have been constructed specifically for sawfish, and there are no fishways currently operating in sawfish habitats. Thus, part of the study will determine the swimming performance of sawfish in order to generate hydrological thresholds to assess whether the construction of any fishway will enable passage of the target species.

This Sawfish Project will be conducted in two stages and are designed to meet the requirements of EPBC 2008/4469 Conditions 66c and 66d respectively.

9.3.2.1 Stage One

Chevron Australia has provided funding to WAMSI for stage one of the Sawfish Project. Chevron Australia specified to WAMSI (Marine Wildlife Research Node) that the funding is to be used for the purpose of developing a comprehensive program of work including desk top and field based studies to meet the requirements of EPBC 2008/4469 Conditions 66c. Stage One of the Sawfish Project includes the following four phases.

Phase 1: Undertake a desktop assessment of all instream barriers in northern WA and also the distribution of sawfish and other threatened fishes, and from this produce a short-list of potential fishway sites.

Phase 2: Undertake ground truthing of the short-listed sites in order to determine the spatial and temporal movement patterns (via acoustic tracking) of resident sawfishes in relation to the barriers, and to qualify the potential benefit of fishway construction at each site.

Phase 3: Assess the swimming performance of freshwater sawfish including burst, prolonged and sustained swimming performance in a purpose-built swim tunnel and using accelerometers in the field in order to generate hydrological thresholds to cater for sawfish passage.

Phase 4: Determine whether fishways are a preferred option for achieving the objectives of EPBC 2008/4469 Condition 66d. Recommend priority fishway location(s) and their design criteria.

9.3.2.2 Stage Two

Chevron Australia will consider and asses the results and recommendations of Stage One of the Sawfish Project to determine whether the installation of fishways or alternate measures are preferred to remove barriers to sawfish passage and to meet the requirements of EPBC 2008/4469 Condition 66d. Chevron Australia will provide funding to develop and implement Stage Two of the Sawfish Project based on the results of Stage One.

9.3.3 Milestones

9.3.3.1 Stage One

Key milestones include:

- Establish governance arrangements with WAMSI to develop, in consultation with Chevron Australia, a research program to achieve the study objectives [Complete: 19/04/2013].
- Finalise study objectives (for each phase) [Complete: 19/04/2013].
- Transfer funds to WAMSI [Complete: 19/04/2013].
- Annual report of results relating to studies undertaken to achieve the agreed research objectives [Ongoing].

9.3.3.2 Stage Two

Key milestones for Stage Two will be developed once the results and recommendations of Stage One have been considered.

9.3.4 Performance Indicators

9.3.4.1 Stage One

Performance indicators include:

- Governance arrangement executed by WAMSI and Chevron Australia [Complete: 19/04/2013].
- Study objectives documented in a Science Plan [Complete: 19/04/2013].
- Funds released by Chevron Australia to WAMSI [Complete: 29/05/213].
- Annual report received from WAMSI detailing the results relating to studies undertaken to achieve the agreed research objectives [Ongoing].

9.3.4.2 Stage Two

Performance indicators for Stage Two will be developed once the results and recommendations of Stage One have been considered.

9.3.5 Actions

9.3.5.1 Stage One

The key actions for Chevron Australia to either undertake or facilitate include:

- Chevron Australia and WAMSI to agree on WAMSI's responsibilities in implementing the Sawfish Project (Stage One). Chevron Australia to prepare governance arrangements [Complete: 19/04/2013].
- Chevron Australia and WAMSI to agree on terms and conditions of funding. [Complete: 19/04/2013].
- Preparation of the Science Plan by WAMSI with input from Chevron Australia which outlines the study objectives [Complete: 19/04/2013].
- Chevron Australia to transfer funding to WAMSI [Complete: 29/05/2013].
- WAMSI to submit annual reports providing status updates on the Sawfish Project (Stage One), including executive summaries from detailed science review, and advise on publications, seminars and other public fora at which findings have been presented.

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9.3.5.2 Stage Two

Actions for Stage Two will be developed once the results and recommendations of Stage One have been considered.

9.3.6 Indicative Time Frames

Indicative timeframes are provided below:

- Stage One
 - Phase 1: 2014
 - Phase 2: 2014
 - Phase 3: 2015
 - Phase 4: 2016
- Stage Two
 - Commencement upon completion of Stage One.

9.3.7 Summary

Table 9.5: Barrier to Sawfish Migration Research, Fishways and Alternatives Summary

Key Milestones	Performance Indicator	Actions	Actual and Indicative Timeframes
Establishment governance arrangements with WAMSI to develop, in consultation with Chevron Australia, a research program to achieve the study objectives for stage one of the Sawfish Project	Sawfish Project (Stage One) Governance Arrangement executed by WAMSI and Chevron Australia	 Chevron Australia and WAMSI to agree on WAMSI's responsibilities in implementing the Sawfish Project (Stage One). Chevron Australia to prepare governance arrangements Chevron Australia to prepare governance arrangements including terms and conditions of funding 	Complete: 19/04/2013
Transfer of funding to the WAMSI (in the form of a single contribution)	Funds released by Chevron to WAMSI	 Chevron Australia to transfer funding to WAMSI for the Sawfish Project (Stage One) 	Complete: 29/05/2013
Finalise study objectives for each phase of stage one of the Sawfish Project Phase 1	Study objectives documented in a Sawfish Project (Stage One) Science Plan. Analysis undertaken to determine if the design and installation of fishways is the preferred option for achieving the	 Preparation of the Sawfish Project (Stage One) Science Plan which outlines the study objectives that the funding will contribute to. Literature review 	2013 - 2014

Revision Date: 01/04/2016

Key Milestones	Performance Indicator	Actions	Actual and Indicative Timeframes
	objectives of Condition 66c		
Phase 2	Field work commenced. Education program commenced in Onslow.	 Preparation of detailed scope for undertaking field work. Educational program to be defined, including options for the dissemination of information. WAMSI to undertake habitat assessment 	2014 - 2015
Phase 3	Study objectives documented in the Sawfish Project (Stage One) Science Plan.	 WAMSI undertake monitoring of sawfish below specific barriers (trap and haul and telemetry studies) 	2015 - 2016
Phase 4	Report received from WAMSI detailing the results relating to studies undertaken to achieve the agreed research objectives	 WAMSI to submit report providing results from studies Documented analysis determining whether fishways installation is the preferred option for achieving the objectives of Condition 66c. 	2016
Reporting	Annual report received from WAMSI detailing the results relating to studies undertaken to achieve the agreed research objectives	 WAMSI to submit annual reports providing status updates on the Sawfish Project (Stage One), including executive summaries from detailed science review, and advise on publications, seminars and other public fora at which findings have been presented. 	Annually

9.4 5 Year Threatened Species Information and Protection Program

9.4.1 Introduction

EPBC 2008/4469 Condition 66e requires Chevron Australia to provide funding to a recognised conservation or natural resource management organisation to develop and implement a 5-year Threatened Species Information and Protection Program comprising of educational materials, interpretive signage and actions that seek to discourage human access to sensitive or important habitat - including marine turtle nesting beaches or migratory bird nesting, roosting or feeding sites on offshore islands.

9.4.2 **Program Description**

DPaW is considered to be a recognised conservation or natural resource management organisation for the purpose of EPBC 2008/4469 Condition 66e. DPaW has the lead responsibility for protecting and conserving the State's environment on behalf of the people of WA. Its key responsibilities include broad roles in conserving biodiversity, protecting, managing, regulating and assessing many aspects of the use of the State's natural resources. DPaW will develop and implement a 5-year Threatened Species Information and Protection Program (Threatened Species Program), which Chevron Australia has been funded in accordance with EPBC 2008/4469 Condition 66e.

DPaW proposes to manage the Threatened Species Program from its' Exmouth District Office. This Threatened Species Program has a Primary Focus (islands off Onslow) area and two Secondary Focus areas – South (islands in Exmouth Gulf) and North (islands north of Onslow, including Barrow/Montebello's) (Figure 9.1). The Threatened Species Program will include the development of educational materials, interpretive signage and actions that seek to discourage human access to sensitive habitats on offshore islands. Products developed through the Threatened Species Program (such as interpretive materials and signage) will focus on EPBC Act listed species such as dugongs, dolphins, migratory birds, marine turtles, cetaceans and sawfish.

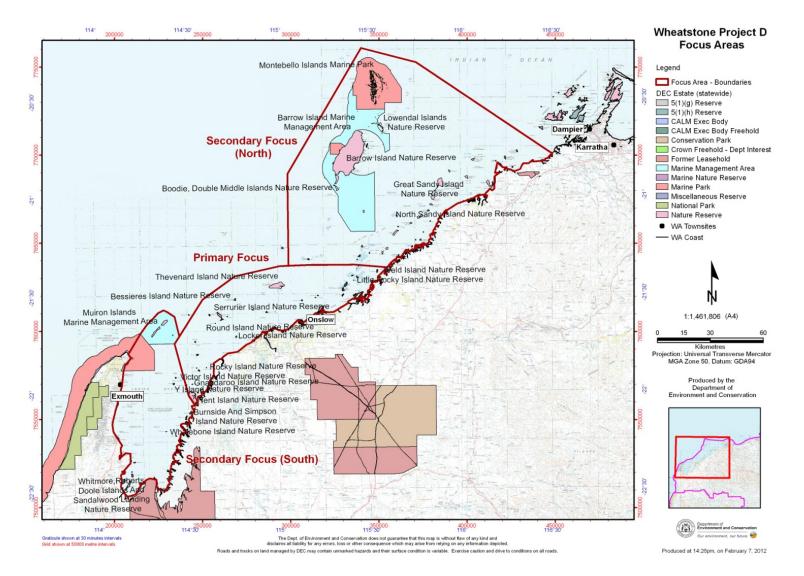


Figure 9.1: Focus Areas for the 5 Year Threatened Species Information and Protection Program

9.4.3 Milestones

Key milestones for Chevron Australia to meet include:

- Establishment of governance arrangements with DPaW (formerly Department of Environment and Conservation) to develop and implement the Threatened Species Program [Complete: 27/05/2013].
- Transfer funds to DPaW [Complete: 02/09/2013].

Key milestones for DPaW to meet include:

- Regional Communication Strategy finalised.
- Interpretation and Information Plan finalised.
- Interpretive material developed, published and installed.
- General community and target user groups in the Project area receive conservation messages which promote the conservation of threatened species.
- Develop and Implement the Threatened Species Program Operational Works Program (Operational Works Program).
- Annual report showing the opening balance, income, expenditure and closing balance of the Account, and including that description of the Threatened Species Program activities undertaken during the past year, the results of those activities and a summary of the Threatened Species Program activities anticipated to be undertaken in the following year.

9.4.4 Performance Indicators

Performance indicators for Chevron Australia include:

• Governance arrangements executed by both Chevron Australia and the DPaW.

Performance indicators for DPaW include:

- Regional Communication Strategy to outline key methods and strategies for effective communication with stakeholders.
- The Interpretation and Information Plan is to prioritise and provide clear messages about the protection of EPBC Act listed species such as dugongs, dolphins, migratory birds, marine turtles, cetaceans and sawfish.
- Implementation of interpretive strategies and use of materials and media to enhance the messages to be delivered.
- Heightened environmental awareness within schools, targeted user groups and the broader community, of EPBC Act listed species such as dugongs, dolphins, migratory birds, marine turtles, cetaceans and sawfish.
- Operational Works Program commenced, plans of work implemented.

9.4.5 Actions

The key actions for Chevron Australia include:

• Chevron Australia to prepare governance arrangements and agree on terms and conditions of funding.

The key actions for DPaW include:

- Engage a Project Officer/Interpretation Officer to:
 - Liaise with DPaW Species and Communities Branch, DOTE and Chevron Australia to agree on what threatened species will be the focus of the program.
 - Conduct a literature review and consult with key stakeholders.
 - Prepare and implement the Regional Communication Strategy; and Interpretation and Information Plan in consultation with DPaW (Recreation, Interpretation and Community Involvement Branch).
 - Confirm interpretive themes, material to be presented and media to be used (signs, brochures, webpage, school package etc.). For signs, ensure themes are appropriate to locations. Information presented will link to the Operational Works Program.
- Engage an Operations Officer to:
 - Review and benchmark existing management programs relating to relevant threatened species.
 - Identify and prioritise threatened species habitat sites for actions that seek to discourage human access to sensitive or important habitat based on conservation values and current and future human use.
 - Develop and implement an Operational Works Program for each threatened species habitat sites informed by the Regional Communication Strategy; and Interpretation and Information Plan.
 - Consult with stakeholders to gain necessary approvals required to implement the Operational Works Program as required, e.g. aboriginal heritage.
 - Notify stakeholders of the proposed works and implement them.
 - Assess the implementation of the Operational Works Program and adapt as required.
- Annual report submitted to Chevron Australia annually for the duration of the Threatened Species Program.

9.4.6 Actual and Indicative Time Frames

Actual and Indicative timeframes are set out below:

- Establish governance arrangements with DPaW.
- Communication Strategy and Interpretation and Information Plan Prepared: June 2015 January 2016.
- Interpretive material developed, published and installed: January 2016– On going.
- Educational program implemented: May 2016– December 2019.
- Operational Works Program: January 2017 June 2020.
- Annual reporting [ongoing for the duration of the Threatened Species Program].

9.4.7 Summary

Table 9.6: 5 Year Threatened Si	becies Information and Protection Program Summary

Key Milestones	Performance Indicator	Actions	Actual and Indicative Timeframes
Establish governance arrangements with DPaW	Governance Arrangement executed by both parties.	 Prepare governance arrangements and agree on terms and conditions of funding. 	Complete: 27/05/2013 Complete: 02/09/2013
Transfer of funding to the DPaW (in the form of a single contribution)	Funds released by Chevron Australia to DPaW	 Chevron Australia to transfer funding to DPaW 	Complete: 02/09/2013
Communication Strategy and Interpretation and Information Plan Prepared	Strategy documented by DPaW	 DPaW to employ a Project Officer/Interpretation Officer to prepare the strategy and plan Agree on threatened species to be protected —liaison with Chevron Australia, DPaW (Species and Communities Branch) 	June 2015– January 2016
Interpretive material developed, published and installed.	Implementation of interpretive strategies and use of materials and media to enhance the messages to be delivered.	 Confirm interpretive themes, material to be presented and media to be used (signs, brochures, webpage, school package etc.). For signs, ensure themes are appropriate to locations. Information presented will link to the operational works program. 	January 2016 – On going
General community and target user groups in the project area receive conservation messages which promote the conservation of threatened species.	Heightened environmental awareness within schools, targeted user groups and the broader community, of threatened species and their habitats.	 All components of the interpretation and information plan are implemented and updated. Key messages about conserving threatened species are delivered to schools and targeted user groups. 	May 2016– December 2019
Operational Works Program - Protection of EPBC Act listed species such as dugongs, dolphins, migratory birds, marine	Plans of work developed for each of the threatened species habitat sites and implementation commenced.	 Employ an operations officer to undertake the operational works program. Review management programs completed to 	January 2017 - June 2020

Key Milestones	Performance Indicator	Actions	Actual and Indicative Timeframes
turtles, cetaceans and sawfish.		date on relevant threatened species.	
		 Identify and prioritise threatened species habitat sites for works, based on conservation values and current and future human use. 	
		 Consult with stakeholders and gain necessary approvals as required, e.g. aboriginal heritage. 	
		 Develop a brief 'plan of works' for each of the threatened species habitat sites. 	
		 Notify stakeholders of the works, and implement them. 	
		 Assess the implementation of program and adapt program as required. 	

9.5 Dwarf Desert Spike-rush Habitat

9.5.1 Introduction

EPBC 2008/4469 Condition 61 requires Chevron Australia to include the offset commitment set out in Condition 66f if greater than 30% of Dwarf Desert Spike-rush habitat or likely habitat is proposed to be cleared within a 10 km radius of the outer edge of the disturbance footprint. In accordance with EPBC 2008/4469 Conditions 59 and 60, Chevron Australia conducted pre-clearance surveys and an assessment of habitat presence of the Dwarf Desert Spike-rush in the Project area and the assessments indicate that approximately 22% of suitable Dwarf Desert Spike-rush habitat will be cleared. As evidenced by letter dated 3 July 2012, the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities (Currently the Minister for the Environment), by his delegate, considers that EPBC 2008/4469 Conditions 59 to 61 have been satisfied and does not require Chevron Australia to provide the offset commitment stipulated in EPBC 2008/4469 Condition 66.

10.0 REPORTING

The Commonwealth Offset Policy states that offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced. Although this Commonwealth Offsets Policy does not apply to EPBC 2008/4469, as the Wheatstone Project was approved prior to the implementation of this policy, each Offset Funding Agreement has incorporated transparent governance arrangements.

To verify that the performance indicators for each offsets program are being met, each vendor will be required to conduct an annual review on the implementation of the offset program against key milestones, and performance indicators and provide an annual report to Chevron Australia. Dependent on the terms and conditions of each contract between Chevron Australia and WAMSI the report may include information such as governance arrangements, financial details, description of activities undertaken during the past year, the results of those activities and a summary of the activities anticipated to be undertaken in the following year (where applicable).

In accordance with EPBC 2008/4469 Condition 68, the findings of the studies and activities conducted as part of the programs set out under this Strategy including related data, or any or all of the studies and activities will be made publicly available upon request by any interested parties.

In accordance with EPBC 2008/4469 Condition 2, Chevron Australia will maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the Biodiversity Offsets Strategy. These records will be made available to DOTE upon their request.

10.1 Annual Compliance Reporting

A Commonwealth annual Compliance Assessment Report (CAR) is required by EPBC 2008/4469 Condition three. The report assesses compliance against ministerial conditions within the compliance reporting period being 31 August to 30 August of each compliance year, with each CAR due by the 30 November of each year. A copy of the most recent annual CAR will be placed on the Chevron Australia website until the subsequent annual CAR is placed on the website. Annual CAR's from previous years will be made publicly available on request for the life of the project.

10.2 Non-compliance reporting

EPBC 2008/4469 Condition 3 requires non-compliance with this Strategy to be reported to DOTE at the time the CAR is published on Chevron Australia's website.

11.0 REFERENCES

Department of Environment and Heritage. 2005. *Blue, Fin and Sei Whale Recovery Plan* 2005 – 2010 [online]. Available from:

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Kimberly Land Council. 2011. *Rangers* [online]. Available from: <<u>http://klc.org.au/rangers/</u>> [accessed 6 May 2014]