

GORGON GAS DEVELOPMENT

PROSPECTIVE VOLUNTEER INFORMATION BOOKLET

**BARROW ISLAND & MUNDABULLANGANA STATION
FLATBACK TURTLE TAGGING PROGRAM 2020/21**



**PENDOLEY
ENVIRONMENTAL**

MARINE CONSERVATION
ENVIRONMENTAL SERVICES

DOCUMENT CONTROL INFORMATION

TITLE: PROSPECTIVE VOLUNTEER INFORMATION BOOKLET

Disclaimer and Limitation

This report has been prepared on behalf of and for the use of Chevron Australia Pty Ltd – Gorgon Gas Development. Copying or distribution of this Document without the permission of Chevron Australia Pty Ltd – Gorgon Gas Development is not permitted.

Document History

Revision	Description	Date received	Date issued	Personnel
Rev 1	Finalised		25/06/2020	P. Whittock

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Flatback Turtle Biology.....	1
1.2	The Gorgon Gas Development & Barrow Island.....	2
2	PROGRAM COSTS	3
2.1	Costs covered by the program	3
2.2	*Costs not covered by the Program.....	3
3	PRE-SELECTION	4
3.1	Online Application.....	4
3.1.1	Information Night Preferences	4
3.1.2	Tagging Site Preferences.....	4
3.1.3	Tagging Group Preferences.....	5
3.1.4	Confirmation	5
4	INFORMATION NIGHTS & SELECTION	6
4.1	Presentation.....	6
4.2	Group Activities.....	6
4.3	Selection.....	6
4.3.1	If you are selected	7
4.3.2	If you are not selected	7
5	WHAT TO EXPECT ON THE PROGRAM	8
5.1	Covid-19 Controls.....	8
5.2	Day One.....	8
5.3	Day Two.....	8
5.4	Day Three Onwards.....	8
5.5	Beach Patrols	9
6	BARROW ISLAND.....	10
6.1	Travel.....	10
6.2	Accommodation & Facilities	11
6.3	Meals.....	11
6.4	Recreation	11
6.5	Communications	11
7	MUNDABULLANGANA STATION	12
7.1	Travel.....	12
7.2	Accommodation & Facilities	12
7.3	Meals.....	13
7.4	Recreation	13
7.5	Communications	13
8	PERSONAL PROTECTIVE EQUIPMENT	14
8.1	Camp Dress	14
9	REFERENCES	15

LIST OF TABLES

Table 1: Information Night schedule.	4
Table 2: Tagging group dates and duration.	5
Table 3: Field dress.	14

LIST OF FIGURES

Figure 1: Adult flatback turtle; flatback turtle track; and flatback turtle hatchling.....	1
Figure 2: Location of Barrow Island and Mundabullangana and nearby town of Port Hedland.	2
Figure 3: Taggers on an excursion at Barrow Island; Lufkin at Barrow Island; Taggers preparing for night survey on Barrow Island; nesting turtle at Yacht Club South beach.....	10
Figure 4: Volunteers at the entrance to MDA; station homestead; livestock; flatback turtle (Munda Main Beach).	12

IMPORTANT: This document provides **information you need to know before completing the online application form**. Please read the document in its entirety as it explains what you are applying for.

1 INTRODUCTION

1.1 Flatback Turtle Biology

The flatback turtle (*Natator depressus*) is the least well known of the marine turtle species. This is primarily due to its restricted distribution; nesting only in Australia, the flatback occurs in shallow coastal waters in the north of the continent and can be found as far north as Indonesia and Papua New Guinea (Limpus 2009). The current status of this species on the IUCN Red List is Data Deficient (IUCN 2013), while it is listed as Vulnerable under the Environmental Protection and Biodiversity Conservation (EPBC) Act (1999). The common name flatback is derived from the shape of the turtle's carapace, which appears flatter when compared with other marine turtle species. The carapace lacks keratin and distinctively curves up at the margins. The flatback is a medium-sized marine turtle (average curved carapace length 900 mm) and are grey, grey-green, or olive in colour (Spotila 2004).

It is estimated that approximately 10,000 flatback females nest each year in Australia. Mundabullangana and Barrow Island flatback populations are considered globally significant due to the size of their rookeries, with around 2,000 turtles nesting per year at each site (Pendoley et al. 2014). Flatback turtles generally breed every one to three years (average two years) and lay up to four clutches of around 50 eggs between October and February (in the Pilbara region of WA) in a nesting year (Pendoley et al. 2014). Peak nesting season at Barrow Island is between late November and January, with the peak nesting season at Mundabullangana occurring slightly earlier between early November and December. After an incubation period of approximately six weeks, the eggs hatch and the hatchlings immediately make their way to the ocean. Flatback turtles do not have an oceanic phase to their lifecycle, and instead remain on the continental shelf (Hamann et al. 2009). It is thought that females reach maturity at about 20 - 30 years of age, where they show nest site fidelity, generally returning to their natal (birth) beach or island to lay their eggs



Figure 1: Adult flatback turtle; flatback turtle track; and flatback turtle hatchling.

1.2 The Gorgon Gas Development & Barrow Island

Chevron Australia has operated an oilfield on Barrow Island since 1964. The Gorgon Gas Development, operated by Chevron Australia and in joint venture with ExxonMobil and Shell, was given approval to develop the Greater Gorgon gas fields, which contain 40 trillion cubic feet of gas. The gas is being piped to an LNG processing and shipping facility that have been constructed on the east coast of Barrow Island. Chevron Australia is committed to protecting the conservation and biodiversity values upon Barrow Island and provides full support of the marine turtle research program. One part of this research program involves the Flatback Turtle Tagging Program that has been conducted by Pendoley Environmental since 2005/06. The Program is designed to assess and monitor the status of the nesting flatback turtle population on the east coast of Barrow Island so that any impact from the Gorgon Gas Development can be identified. Equivalent studies are also undertaken at a reference beach located on the mainland at Mundabullangana Station, west of Port Hedland. **Figure 2** shows the location of the two sites in WA, and the closest major town.



Figure 2: Location of Barrow Island and Mundabullangana and nearby town of Port Hedland.

2 PROGRAM COSTS

The Barrow Island and Mundabullangana Station Flatback Turtle Tagging Program is **FREE***.

2.1 Costs covered by the program

Costs covered by the Program include:

- flights to and from Barrow Island or Port Hedland;
- pre-mobilisation medical;
- field equipment and PPE such as safety or hiking boots;
- accommodation and meals while at Barrow Island or Mundabullangana Station; and
- insurance – volunteers are covered during the course of their volunteer duties under the Pendoley Environmental Public Liability and Volunteer insurance policies.

2.2 *Costs not covered by the Program

The following costs are not covered by the Program:

- travel to and from Perth from regional WA, interstate or overseas;
- accommodation in Perth (including accommodation required following demobilisation for a Tropical Cyclone);
- travel to and from:
 - the airport;
 - the volunteer medical; and
 - information nights (all of which take place in Perth).
- your time.

3 PRE-SELECTION

To be eligible for selection on the Volunteer Tagging Program you must:

- be **18 years** or older at the time of participation in the program;
- be fit and healthy (capable of walking up to 15 km per day for up to 16 nights straight on a sandy beach in hot/humid/uncomfortable conditions while carrying a backpack and tagging turtles);
- complete the online application form available on the Pendoley Environmental website; and
- attend an Information Night held in Perth (with the exception of remigrants¹ and interstate applicants).

¹ Remigrant – returning volunteer. The term ‘remigrant’ also refers to a nesting female turtle that has been recorded nesting at a particular nesting beach before and has returned, or remigrated, to the nesting beach in a different subsequent year to nest again (seaturtle.org).

3.1 Online Application

Online applications are open between **Tuesday 14th July** and **Sunday 6th September 2020**. Applications submitted after the closing date will not be considered. When completing your online application form you will be asked to indicate your availability for Information Nights and Tagging Groups.

3.1.1 Information Night Preferences

There are limited seats at each Information Night, so please indicate *all* sessions for which you are available (see **Table 1**). Official invitations to each of the Information Nights will be distributed on Monday 7th September 2020.

Note: If you are unable to attend any of the scheduled Information Nights, you **may** be granted a phone interview with a Pendoley Environmental Staff member.

Table 1: Information Night schedule.

Information Night	Date	Venue
1	Wednesday 9 th September 2020	Swan River Rowing Club 2 The Esplanade Canning Bridge, 6153
2	Thursday 10 th September 2020	
3	Monday 14 th September 2020	
4	Tuesday 15 th September 2020	

3.1.2 Tagging Site Preferences

During your application, you will be asked to indicate your preference between BARROW ISLAND (BWI) and MUNDABULLANGANA STATION (MDA). Please be aware that when submitting your site preference that we **DO NOT** accept any taggers at **Mundabullangana** with dietary restrictions i.e. vegan, vegetarians, gluten

intolerance etc. Mundabullangana is a remote cattle station, so dietary restrictions are not catered for. Barrow Island is un-restricted so please select Barrow Island only if you have any dietary requirements.

We will do our best to place successful volunteers at their preferred location, but as places on the program are very competitive you may not be offered your preferred location.

You will significantly improve your chances of selection by:

- not having a specific preference for when and where you go, i.e. having a greater availability; and
- not having any special dietary preferences or requirements.

Note: We are unable to commit to provision for special dietary preferences or requirements at Mundabullangana Station as catering at the Station is outside of our control.

3.1.3 Tagging Group Preferences

You will also be asked to indicate which Tagging Groups you are available for (see **Table 2: Tagging group dates**). Please select **only** the groups for which you are genuinely available. If you only want to go to BWI, then select **only** the BWI groups. If you want to go to BWI but are willing to accept a position at MDA if you miss out, then please select both BWI and MDA groups.

Table 2: Tagging group dates and duration.

Location	Group	Start Date	End Date	Duration
Mundabullangana Station (MDA)	1	Thu 05/11/2020	Sat 21/11/2020	17 days
	2	Sat 21/11/2020	Mon 07/12/2020	17 days
	3	Mon 07/12/2020	Wed 23/12/2020	17 days
	4	Mon 28/12/2020	Wed 13/01/2021	17 days
Barrow Island (BWI)	1	Fri 20/11/2020	Mon 07/12/2020	18 days
	2	Mon 07/12/2020	Wed 23/12/2020	17 days
	3	Mon 28/12/2020	Wed 13/01/2020	17 days
	4	Wed 13/01/2020	Fri 29/01/2020	17 days

3.1.4 Confirmation

If your online application form is successfully submitted, the system will generate an automated response to the email address you provided. Please allow a few minutes for the response to come through (if it doesn't come through then please contact volunteer@penv.com.au).

Note: Check your email (including spam folder) to confirm your application has been received.

4 INFORMATION NIGHTS & SELECTION

Information nights will be managed to ensure compliance with Covid-19 restrictions in place at the time. This will likely include maintaining social distancing, use of hand sanitiser, ensuring group sizes are kept to a minimum and in compliance with the total space of the venue.

4.1 Presentation

The Information Night presentation will provide information about the Gorgon Gas Development, flatback turtles, Barrow Island and Mundabullangana, an overview of the flatback turtle tagging program, administrative and training requirements, accommodation, and recreational activities available on site.

After the presentation you will have the opportunity to ask questions and chat with Pendoley Environmental staff about the tagging experience.

4.2 Group Activities

The main purpose of the Information Night is to facilitate the selection of Volunteers. After the presentation you will be split into small groups, assigned a Pendoley staff member, and then participate in group activities. Your participation and interaction within your group will allow your Pendoley Environmental assessor to determine your suitability.

Note: Group activities may involve sitting or kneeling on the floor, so please wear sensible/comfortable clothes on the night.

4.3 Selection

Selection for the Volunteer Program is **very competitive**. Last season, there were 300 applicants applying for the 88 volunteer positions. There are also a large number of Reserve positions available – in case a position re-opens (historical figures show that a very high percentage of selected Reserves make it onto the Program).

Selection for the Program depends on a number of factors including (in no particular order):

- your Information Night group activity assessment;
- your experience (we will allocate at least one 'remigrant' to each Tagging Group to assist with training);
- your availability (greater availability means you are more likely to be offered a position);
- your previous application history;
- your online application information; and
- your location (particularly relevant if there are Covid-19 related inter- or intrastate travel restrictions in place at the time of volunteer selection).

4.3.1 If you are selected

If you are selected for the Program (Volunteer and Reserve positions) you will be informed by **Friday 25th September 2020** and sent the *Information for Selected Volunteers* Booklet.

Prior to participating in the program, you will need to complete the following training requirements which will be booked directly by your Volunteer Co-ordinator:

- pass your Volunteer Medical (half day);
- complete online training modules (about 2 hours); and
- complete your Defensive Driver Training if you are selected as a driver at Mundabullangana (1 day).; and
- provide copies of your training certificates to Pendoley Environmental.

4.3.2 If you are not selected

If you are not selected for the Program you will be informed by **Friday 2nd October 2020**.

If you are not selected, you will be one of many excellent candidates to miss out. We encourage you to put your name down as a Reserve or apply for subsequent groups and will look with favour on applicants who have applied more than once.

5 WHAT TO EXPECT ON THE PROGRAM

Note: Consumption of alcohol at any time during the Program is prohibited. Persons caught drinking alcohol will be removed from the Program immediately. Volunteers and staff will be subject to random Drug & Alcohol testing in accordance with Site Policy.

5.1 Covid-19 Controls

There may be additional requirements prior to mobilising to site and when on-site that relate to managing the risk of Covid-19 infection. These likely include avoiding physical greetings such as handshakes, social distancing, temperature checks, repeated use of hand sanitiser, cleaning tagging equipment, and following good personal hygiene.

5.2 Day One

When you arrive at your work site you will be assigned a room, and allowed to get yourself settled in. Under the direction of the Field Team Leader you will then be required to attend:

- a camp induction;
- on-site kick-off meeting;
- tagging training (may be conducted on day two); and
- other onsite training as required.

You will then be given the first night to rest and adjust yourself to nightshift. *Your nightshift will be conducted around the night-time high tide or as determined by the Field Team Leader. Nightshifts can be tiring as they affect the daily circadian rhythm of the body and you may feel more fatigued than normal throughout the trip. However, you will have plenty of downtime during the day to rest and recover.

5.3 Day Two

After sleeping as much as you can during the day, you will attend an evening toolbox meeting to discuss the plan for the night and sign on to the Job Hazard Analysis (JHA).

You will head into the field as a group and the Field Team Leader will conduct some practical tagging demonstrations with any encountered nesting flatback turtles. Then, once fully trained and under supervision of the Field Team Leader, it will be your turn to read the tags of a turtle or, if necessary, tag a turtle.

5.4 Day Three Onwards

Once the Field Team Leader is confident in your tagging ability (and your ability to work safely in the field), you will be divided into tagging pairs and assigned a beach section to patrol for the night. A typical night will include:

- Onsite safety ('toolbox') meeting to plan the shift and discuss hazards and controls;
- equipment checks;

- drawing a 'line' along the beach in order to identify the tracks of new or missed turtles;
- patrolling the high tide line during the night-time beach survey (8 – 9 hours in duration);
- walking on sand in safety/hiking boots and other PPE for up to 15 km to monitor nesting flatback turtles;
- spotting turtles and waiting for a suitable time to approach;
- bending down to tag and restrain turtles;
- scanning turtles for a PIT tag, collecting and recording relevant data;
- removing barnacles from existing flipper tags; and
- applying new flipper and PIT tags when required.

5.5 Beach Patrols

Beach patrols are hard work. You will walk up to 15 km a night on soft sand, almost always in hot, humid conditions. You will be tagging, reading the tags, and collecting data (measurements/GPS) of up to 30 turtles in one patrol. You will be required to wear safety glasses, safety or hiking boots, Pendoley Environmental tagging work shirt (supplied), full length cotton/natural fibre workpants, and gloves.

You will be required to patrol the beach each night of the survey period, with a partner, for up to eight hours at a time. What this means is that you will require a good level of fitness to avoid muscle fatigue or joint stress.

Due to shifting high tide times, beach patrols will take place at a slightly later time each night and will sometimes be required over two consecutive high tides. What this means in practice is that on one occasion during your tagging group you will have to work two shifts in one 24-hour period.

Heat stress and fatigue are very real hazards for work in the Pilbara. To minimise the associated risks, you will need to:

- drink lots of water;
- get plenty of rest;
- look out for each other; and
- report immediately to the Field Team Leader if you (or your buddy) feel unwell. If these working conditions don't put you off volunteering, please read on.

6 BARROW ISLAND



Figure 3: Taggers on an excursion at Barrow Island; Lufkin at Barrow Island; Taggers preparing for night survey on Barrow Island; nesting turtle at Yacht Club South beach.

Barrow Island is a 23,400-hectare island located 88 km from the north-west of Onslow. Western Australia's second largest island, it is a Class A Nature Reserve, providing habitat for 14 mammal species, more than 110 types of birds, 54 reptile species and over 350 native plant species. Four species of marine turtles either nest on Barrow Island and/or forage in the waters surrounding the island.

The Tagging Program focuses on the eight most populous flatback turtle nesting beaches, all located along the east coast of the island.

The construction phase of the Gorgon Gas Development on Barrow Island commenced in December 2009 and is now operational.

6.1 Travel

Flights to Barrow Island are arranged by Pendoley Environmental and depart Monday to Friday from Cobham Airport, Perth.

Note: Barrow Island is subject to strict quarantine requirements, so if you plan on taking snacks or other dietary supplements to Barrow Island, you do so at your own risk. Quarantine information can be requested from the office at any time. Otherwise, detailed quarantine information will be provided to selected volunteers.

6.2 Accommodation & Facilities

You will be assigned your own private room, complete with ensuite. Your linen/towels will be provided, and your room regularly cleaned (regularity dependent on circumstances at Barrow Island). You will have access to laundry facilities and free laundry powder.

You will have access to a pool, a gym, and a shop which stocks toiletries, confectionery, snacks, soft drinks etc. purchased at your own expense.

6.3 Meals

You will dine at the camp 'mess', buffet style. Vegetarians/vegans are well catered for, and meals are labelled for those with common special dietary requirements (i.e. dairy-free, or gluten-free). Plastic containers are provided for 'crib', or takeaway meals, so you won't miss out because of your awkward working hours (we encourage you to bring your own reusable containers for food storage).

Note: Minimum dress requirements at the mess are enforced. Clothing such as singlets, cap-sleeved shirts, short shorts/skirts and ripped jeans are not allowed.

6.4 Recreation

Barrow Island is an A-class nature reserve, and an active operating site. For the sake of Barrow Island's ecology, and your own safety, you will have very limited opportunities to partake in recreational activities outside the Camp.

Island tours *may* be arranged but cannot be guaranteed. There are restricted areas outside camp for walking/cycling. There is strictly no swimming (or wading) in the ocean due to the presence of dangerous 'stingers'.

Recreational activities available within the confines of the camp include:

- yoga;
- tennis;
- darts;
- table tennis;
- badminton;
- pool/snooker;
- gym/fitness classes; and
- swimming.

6.5 Communications

If you are on a Telstra plan you will have mobile phone reception within the camp. Otherwise, calls to Perth landlines are free of charge from phones in your room. For calls to other numbers, phone cards can be purchased from the shop. Wi-Fi is available throughout the accommodation rooms.

Note: Volunteers must adhere to the Gorgon Project Mobile Phone Policy. Mobile phones are not permitted in work areas, or otherwise outside the camp (including when participating in recreational activities).

7 MUNDABULLANGANA STATION



Figure 4: Volunteers at the entrance to MDA; station homestead; livestock; flatback turtle (Munda Main Beach).

Mundabullangana Station (MDA) is located on the Western Australian mainland approximately 60 km southwest of Port Hedland. It is a working station spanning approximately 500,000 acres and home to approximately 10,000 head of cattle. It is host to a significant flatback turtle rookery, located on the beaches to the north of the station. This population of flatback turtles appears to be discrete from the turtles found on Barrow Island, located approximately 280 km to the west.

7.1 Travel

To get to MDA you will fly from Perth domestic airport to Port Hedland. Note that Volunteers cannot make their own way to MDA. There will be an opportunity to purchase last minute supplies at South Hedland Shopping Mall prior to departure for the station. The drive to the station will take approximately 1.5 hours.

Note: Your arrival at Port Hedland is your last opportunity to stock up on your favourite snacks/drinks. MDA is very remote, and supply runs will be made only when absolutely necessary.

7.2 Accommodation & Facilities

At MDA you will be accommodated adjacent to the homestead. You will likely have to share a room with another volunteer of the same gender. Your linen/towels will be provided and will be changed once a week (depending on circumstances at the station). All rooms are air conditioned and fitted with blackout curtains for sleeping during the day.

Bathroom facilities are communal (and gender specific). You will have access to laundry facilities and free laundry powder.

At times you may be required to 'chip-in' and help out by cleaning your own room, cleaning the bathrooms, or washing linen.

7.3 Meals

We do not accept any taggers with dietary requirements/restrictions at MDA i.e. vegan, vegetarians, gluten intolerance etc. MDA is a remote cattle station so dietary restrictions are not catered for.

7.4 Recreation

The volunteer recreation room is equipped with a TV, Foxtel, and a fridge for the sole use of the Taggers. You are also encouraged to bring your own games, books, board games, playing cards etc. There is an open grass area where football, soccer, Frisbee or other outdoor games can be played.

Recreational field trips (i.e. fishing trips) around the station will be organised by the Field Team Leader (fatigue dependent).


7.5 Communications

If you are on a Telstra plan you will have mobile phone reception in particular areas at the MDA station. The kitchen landline phone is also available for volunteer use, but there are no free calls out (i.e. you will need to purchase a phone card prior to arrival). There is limited WiFi internet access and will be made available to volunteers at the discretion of the Field Team Leader (dependent on data allowance and use).

8 PERSONAL PROTECTIVE EQUIPMENT

As a Volunteer Tagger you will be required to dress in accordance with the Health, Environment, Safety and Quality (HESQ) Plan, and in accordance with any additional site rules. You will also need to supply some of your own gear (see **Table 3**).

Table 3: Field dress.

Item	Specifications	Provided by	
Safety/hiking boots		Program	
Sun hats	Wide-brimmed or legionnaire-style	Volunteers	
Safety glasses		Program	
Hi-vis shirts		Program	
Trousers	Full length, natural fibre, loose fitting (Note: Use of tight or ripped trousers/jeans for fieldwork is not recommended)	Volunteers	
Gloves	Full and Fingerless	Program	

Note: It is very important that the trousers you take to site are made of natural fibre i.e. 100 % cotton. This is to ensure compliance with onsite requirements.

8.1 Camp Dress

The general dress requirement for both camps is to **dress practically and modestly**. As an operational site, BWI has more rigid dress standards (particularly in the mess), but if you follow the basic guidance below you will be ok:

- Leave your tight and ripped jeans at home;
- leave your short skirts and short shorts at home;
- leave your strappy singlets and cap-sleeve shirts at home; and
- take comfortable, enclosed shoes.

9 REFERENCES

HAMANN, M., LIMPUS, C., PENDOLEY, K., SCHAUBLE, C., SPERLING, J. AND WYNEKEN, J. (2009) The Flatback – Australia’s Own Sea Turtle *SWOT Report*, Vol IV, 18-25.

IUCN (2013) IUCN Red List of Threatened Species. Version 2013.2. Available at: www.iucnredlist.org.

LIMPUS, C.J. (2009) *A Biological Review of Australian Marine Turtles*. Environmental Protection Agency, Queensland.

PENDOLEY ENVIRONMENTAL (2010) *Marine Turtle Tagging Standard Operating Procedure*. Unpublished report for Chevron Australia Pty Ltd.

PENDOLEY, K.L., BELL, C.D., MCCracken, R., BALL, K.R., SHERBORNE, J., OATES, J.E., BECKER, P., VITENBERGS, A. & WHITTOCK, P.A. (2014) Reproductive biology of the flatback turtle *Natator depressus* in Western Australia. *Endangered Species Research*, 23:115 – 123.

SPOTILA, J.R. (2004) *Sea Turtles – A Complete Guide to Their Biology, Behavior, and Conservation*. The Johns Hopkins University Press and Oakwood Arts, Maryland, USA.

