PROJECT SEA DRAGON
STAGE 1 LEGUNE GROW-OUT FACILITY
DRAFT ENVIRONMENTAL IMPACT STATEMENT

VOLUME 3 - SOCIAL, ECONOMIC AND CULTURAL ASSESSMENT

CHAPTER 3 - HUMAN HEALTH AND SAFETY

CONTENTS

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1 INTRODUCTION

This chapter identifies and assesses the potential risks to human health and safety from the Stage 1 Legune Grow-out Facility (the Project or the Project Area).

The potential risks to human health and safety identified in this chapter have been broadly categorised as:

- Meteorological conditions and natural disasters including cyclones and severe storm events, storm surge and flooding, heat and sun exposure and bushfires.
- Biological hazards including crocodiles, other potentially dangerous wildlife, and biting insects.
- Operational hazards including working on or near water, and working with boats and helicopters.
- The exposure of personnel to hazardous materials.
- Access issues including increased traffic movements, and unauthorised access.

1.1 ENVIRONMENTAL OBJECTIVES

The Terms of Reference for the Preparation of an Environmental Assessment (ToR) for the Project provide the following environmental objective in relation to human health and safety:

- Ensure that the risks to human health and safety are identified, understood and adequately mitigated.

1.2 TERMS OF REFERENCE ADRESSED IN THIS CHAPTER

Table 1 summarises the requirements from the Terms of Reference for the Preparation of an Environmental Impact Statement (ToR) for the Project and where they have been addressed in this chapter.

TABLE 1 TERMS OF REFERENCE

Section	Terms of Reference	Chapter Section
4.7	**Human Health and Safety**	
4.7.2	**Assessment of Risk**	
	The Environmental Impact Statement (EIS) should include an assessment of the risks to people, the environment and nearby facilities associated with construction, operation, maintenance, and decommissioning of the various components of the Project and the site post-closure, and the storage and transport of materials to and from the work sites. The aim of the risk assessment is to demonstrate that:	This Chapter and the Risk Assessment (Volume 1, Chapter 8)
	▪ the Proponent is fully aware of the risks to human health and safety associated with all aspects of the proposed action	
	▪ the prevention and mitigation of risks to human health and safety are properly addressed in the design specifications	
	▪ the risks can and will be managed effectively during the construction, operation, and decommissioning of the Project, including safety risks associated with:	

Section	Terms of Reference	Chapter Section
	wildfire	Section 2.4
	meteorological conditions and events	Section 2
	saltwater crocodiles and other biological hazards	Section 3
	unauthorised access and third party interference with the Project	Section 6.2
	road users associated with increased traffic and use of the existing road networks.	Section 6.1
4.7.3	**Mitigation**	
	Detailed emergency plans and response procedures will need to be developed as a contingency in the event of an emergency or accident, incorporating management of all emergencies that may impact on the facility, its surrounds, personnel or the public. Responsibilities and liabilities in such an event should be included.	Section 7 and the Environmental Management Plan (Volume 4, Chapter 3)

1.3 REGULATORY APPROVALS, CONDITIONS AND AGREEMENTS

The regulatory requirements relevant to human health and safety are discussed in Sections 1.3.1 to 1.3.4.

1.3.1 Bushfires Act

The NT *Bushfires Act* and associated regulations relate to the prevention and suppression of bushfires. Bushfires NT, a branch of the Department of Land Resource Management is responsible for rural fire management in the NT. Bushfires NT's primary role is to administer the provisions set out in the Bushfires Act and support landholders in fire mitigation and management.

1.3.2 Dangerous Goods Act

The NT *Dangerous Goods Act* regulates how dangerous goods are stored, handled and transported. The use, storage and transport of any dangerous goods required for the Project will be undertaken in accordance with the Dangerous Goods Act.

1.3.3 Public and Environmental Health Act and Regulations

The NT *Public and Environmental Health Act* and associated regulations creates a framework for the regulation of particular activities to protect public health in the NT. The Act and regulations is administered by the NT Department of Health.

1.3.4 Work Health and Safety (National Uniform Legislation) Act

The NT *Work Health and Safety (National Uniform Legislation) Act* and associated regulations aim to promote health and safety in the workplace.

2 METEOROLOGICAL CONDITIONS AND NATURAL DISASTERS

This section addresses the potential risks to the Project's workforce as a result of extreme meteorological conditions and events including tropical cyclones, severe storms, storm surges, flooding and heat.

2.1 CYCLONES AND INTENSE STORM EVENTS

2.1.1 Assessment of Potential Impacts

The Project is located on the northern Australian coastline and is therefore at risk of tropical cyclones and severe storm events. High winds resulting from a cyclone or a severe storm event can cause structural damage to buildings and other infrastructure, and turn airborne debris into potentially lethal projectiles. Cyclones and severe storms can also produce heavy rain and storm surges, which can result in extensive flooding. This can cause further damage to buildings and infrastructure and isolate the Project Area, or parts of the Project Area for extended periods of time. Death by drowning may also occur if floodwaters are entered into. The risks associated with and the management and mitigation measures that will be implemented in the event of a flood or storm surge are discussed further in Section 2.2.

2.1.2 Mitigation and Monitoring

The following measures will implemented to manage the risks associated with tropical cyclones and severe storms:

- Legune Station is located in the cyclone wind region C, a 50 km wide strip along the coastline of the Northern Territory. Buildings in this area are required to be designed to withstand a Category C cyclone wind loading (i.e. wind speeds of up to 252 km/hour). Therefore, all buildings constructed for the Project will comply with the cyclone rating requirements for region C.
- The central mess area (located in the central facilities area) will be designated as the emergency response centre where all personnel will assemble in the event of a cyclone warning being issued for the site.
- The central mess area will be appropriately provisioned with emergency equipment and supplies (e.g. potable water, torches and batteries, first aid kit, radio and communication devices, tarps, ropes and non-perishable foodstuffs).
- Generators and emergency response plant and equipment (e.g. chainsaw, tractor, front-end loader etc.) will be kept onsite and in serviceable condition.
- Fuel stores sufficient for one week's operation of generators and emergency response plant and equipment will be kept on site.
- All personnel will be adequately briefed and practiced in what to do in the event of a cyclone or severe storm.
- A register of all personnel and next of kin contact details will be established and maintained.

In the event that cyclone forms within Australian coastal zone, the Australian Bureau of Meteorology will issue a cyclone warning. Should a cyclone warning be issued for the Project site, the following measures shall be implemented:

- All loose and potential wind propelled projectiles around the site will safely secured or removed.
- Non-essential electrical equipment will be correctly shut down and isolated from the electrical supply, and emergency generators will be deployed around the facility.
- All staff will assemble and stay at the central mess area until the all clear has been issued by the relevant emergency services agency.

Once the cyclone threat has passed and the all clear has been issued by the relevant emergency services, the relevant managers will conduct a site assessment to identify any potential hazards and take note of the recovery actions required to be undertaken. Access to various parts of the Project site will be restricted to personnel until safety is assured.

An adverse weather preparedness plan will be developed for the Project and will provide personnel with the necessary guidance and directions in the event of tropical cyclones and severe storm events.

2.2 STORM SURGE AND FLOODING

2.2.1 Assessment of Potential Impacts

Storm surges occur when strong winds associated with a tropical cyclone cause a rise in the normal water level along the shore. Storm surges can cause flooding and inundation of low-lying coastal areas. As the grow-out centre will be located on the low lying estuarine-deltaic plain, it is at particular risk from storm surge and resultant flooding.

Floodwaters can cut access roads resulting in the site, or areas of the site, being cut off for extended periods of time. Death by drowning may also occur if floodwaters are entered into.

Flooding can also increase the mobility and distribution of potentially dangerous wildlife, in particular crocodiles and snakes, causing them to be present in areas they do not normally inhabit. The risks associated with, and the management and mitigation measures that will be implemented for, crocodiles and other dangerous wildlife are discussed further in Sections 3.1 and 3.2.

2.2.2 Mitigation and Monitoring

The following measures will be implemented to mitigate and manage the risks associated with flooding caused by storm surges and/or heavy rainfall:

- The central service road linking the grow-out centre to the central facilities will designed to achieve a flood immunity equivalent to a 1 in 100 year Average Recurrence Interval (ARI) flood event.
- The Legune Access Road will be designed will designed to achieve a flood immunity equivalent to a 1 in 50 year ARI flood event.
- All personnel will be adequately briefed and practiced in what to do in the event of a storm surge or flood event.
- In the event of cyclone and/or storm surge warning being issued for site, all personnel working at the grow-out centre will evacuate to the central mess area in the accommodation village which is located on higher ground to the south of the Project Area.
- All staff will assemble and stay at the central mess area until the all clear has been issued by the relevant emergency services agency.

2.3 HEAT AND SUN EXPOSURE

2.3.1 Assessment of Potential Impacts

The Project Area is located in the tropics and is often subject to high temperatures and humidity. Personnel working in an outdoor tropical environment are at increased risk of ultra-violet radiation exposure, and risk of heat induced medical conditions such as dehydration and heat stroke.

2.3.2 Mitigation and Monitoring

All personnel working outdoors will be required to wear long sleeved shirts and hats to help reduce sun exposure. Sunscreen will also be made available to all personnel.

To mitigate the risk of heat induced medical conditions, all personnel will be made aware during induction training of the signs and symptoms of overexposure to heat and its effects, including dehydration. Drinking water will also be made readily available onsite.

2.4 BUSHFIRES

2.4.1 Assessment of Potential Impacts

Bushfires pose a potential risk to infrastructure and personnel in the Project Area. The central facilities, accommodation village and power station are at particular risk as they are surrounded by natural bushland. Uncontrolled bushfires may result in the loss of life, injury and/or damage to property and infrastructure.

2.4.2 Mitigation and Monitoring

Bushfire risk will be managed in accordance with the Northern Territory *Bushfires Act 2009* which establishes the legal framework and responsibilities for bushfire management. This includes management that mitigates risks to property and personnel operating the proposed facility, as well as risks associated with bushfires initiated from the actions of personnel or operation of the facility.

A bushfire management plan will be developed for the Project in consultation with the relevant authorities and Traditional Owners. The bushfire management plan will include measures to ensure the risks associated to human safety and infrastructure are managed and mitigated. These measures include:

- All buildings will be constructed in accordance with Australian Standard (AS) 3959-2009 - Construction of Buildings in Bushfire-prone Areas.
- Firebreaks up to 30 m wide will be established and maintained around the central facilities and accommodation village.
- A fire truck equipped with the appropriate firefighting equipment will be stationed at the central facilities.
- All personnel will be adequately briefed and practiced in what to do in the event of a bushfire.

A fire management regime will also be developed as part of the bushfire management plan. The fire management regime will take into consideration fire regimes to optimise biodiversity while also ensuring the risks to human health and safety are managed.

3 BIOLOGICAL HAZARDS

This section deals with the potential risks to the Project's workforce as a result of biological hazards including crocodiles, other potentially dangerous wildlife, and biting insects.

3.1 CROCODILES

3.1.1 Assessment of Potential Impacts

Crocodiles are common in and around waterbodies of the Project Area including in waterways, freshwater wetland areas and farm dams. Once constructed, the grow-out ponds, water supply and discharge channels may also become inhabited by crocodiles. Crocodiles pose a serious risk to personnel working in or near these areas and an attack may result in serious injury or death.

3.1.2 Mitigation and Monitoring

The following procedures and protocols will be implemented to manage and mitigate the risks posed by crocodiles:

- All personnel will be made aware of the dangers of crocodiles in the Project Area.
- Appropriate signage will be installed around the Project Area to remind personnel of the potential presence of crocodiles.
- All sightings of crocodiles in and around the Project Area will be immediately reported to the farm manager.
- Access will be restricted to any area that is known to be inhabited by a crocodile until the crocodile has been moved on or relocated from the area.
- Personnel will be required to observe waterbodies and surrounding areas for crocodiles prior to working near the water's edge.
- Vegetation surrounding waterbodies will be maintained in as low in height as practical to enable easy observation of the area.
- Any work required to be undertaken on water (e.g. boat activities) will always be conducted by multi-person work crews with one person acting as an observer at all times.
- When a crocodile has taken up residence within the Project Area, the NT Parks and Wildlife Commission or other such authority will be notified, and a request to trap and relocate the crocodile will be submitted.
- Only trained, competent and authorised persons will attempt to move, relocate, capture or otherwise handle a crocodile.

3.2 OTHER ANIMALS

3.2.1 Assessment of Potential Impacts

Some wildlife likely to be encountered on the Project Area are considered to be dangerous as they may attack and cause injury to humans. Dangerous animals (other than crocodiles which are discussed in Section 3.1) likely to encountered in and around the Project Area include:

- wild pigs

- wild dogs (including dingoes)
- venomous snakes (including king brown and northern death adder)
- sharks
- sting-rays.

3.2.2 Mitigation and Monitoring

All personnel will be made aware of potential wildlife hazards and methods to avoid negative encounters. Any sightings of dangerous animals in the Project Area and surrounds will be reported to the farm manager. No personnel, unless trained, competent and authorised, shall attempt to move, capture, relocate or otherwise handle a dangerous animal at any time.

Appropriate training for the treatment of bites, in particular snake bites, will be provided to all personnel. First aid facilities will also be made available and will be equipped to respond to such incidents and provide appropriate treatment.

3.3 BITING INSECTS

3.3.1 Assessment of Potential Impacts

Mosquitos are the most common and widespread biting insect in the Northern Territory. As well as being a nuisance, mosquitos have the ability to transmit a range of diseases. The development and operation of aquaculture facilities can lead to the creation of new mosquito sites or exacerbate existing breeding sites.

A 12 month baseline biting insect assessment, including monthly trapping of mosquitos at five locations across Legune Station, was undertaken for the Project by the Medical Entomology Group of the NT Department of Health. The purpose of the assessment was to provide an indication of the seasonal distribution of mosquito species present, the actual and potential breeding sites within the Project Area and surrounds, and the potential risk for mosquito borne diseases. The results of the assessment are included Volume 5, Appendix 22.

The results of the biting insect assessment indicate that Legune Station already contains extensive areas of mosquito breeding habitat. The tidal and freshwater floodplains are likely to produce seasonally significant numbers of pest and disease carrying mosquito species. A total of 12 species of mosquitos were recorded during the baseline trapping program with the greatest numbers recorded in early December following rainfall events.

The most important mosquito recorded during the biting insect assessment from a pest and disease perspective was the common banded mosquito (*Culex annulirostris*). The common banded mosquito was recorded in low numbers across most trapping sites from August to December. It generally breeds in temporary and permanent freshwater wetlands and is common across the Northern Territory. The common banded mosquito can be a significant pest mosquito and is a known vector of Ross River virus, Barmah Forest virus, Murray Valley encephalitis virus and Kunjin virus.

Other mosquitos recorded during baseline assessment that are of note from a pest and disease perspective include the northern saltmarsh mosquito (*Aedes vigilax*) and *Anopheles* species. The northern saltmarsh mosquito was recorded in high numbers at some trapping sites during December. It is a known vector of Ross River virus and Barmah Forest virus and due to its aggressive biting habits can be a serious pest mosquito. *Anopheles* species mosquitos were recorded in lower numbers, however, are of importance due to their potential to transmit malaria.

The development of the Project, most notably the construction of additional areas of ponded water for the grow-out ponds, settlement ponds, water channels and environmental protection zone, has the potential to create new mosquito breeding sites. Should the appropriate management and mitigation measures not be implemented, this could lead to an increase mosquito pest problems, extend the pest season, and increase the potential disease risk for personnel onsite.

3.3.2 Mitigation and Monitoring

The Medical Entomology Group of the NT Department of Health has developed the Guidelines for Preventing Mosquito Breeding Associated with Construction Practice near Tidal Areas in the NT (2011) and Guidelines for Preventing Mosquito Breeding Sites Associated with Aquaculture Developments in the NT (2006) to ensure that the construction and operation of aquaculture facilities are carried out in a manner that minimises the creation of new mosquito breeding sites. The Project has been developed in consideration of these guidelines and there are a number of features in the Project design which will reduce the risk of mosquitos breeding on the site. These include:

- The slope of the embankments for the farm ponds, settlement ponds, main feeder canal and main discharge channel will be no flatter than 1V:3H.
- Ponds will be aerated when in use.
- The farm pond floors will be contoured to allow the ponds to completely drain and dry out when not in use.
- The environmental protection zone (EPZ) has been designed to handle low flow periods (i.e. daily turnover) and peak discharge periods.
- Culverts and spoon drains will be installed to drain the areas in between the farms and prevent the inadvertent ponding of water in these areas.
- Culverts will be installed where required along the central service road and Legune Access Road to allow the natural flow of water and prevent the shallow impoundment of water.
- The accommodation camp and central facilities where the majority of Project personnel will work and live has been sited away (approximately 20 km to the south) from the grow-out centre.
- Where possible, borrow pits will be rehabilitated to be free draining when no longer required.
- Any equipment such as tanks, drums, buckets, machinery items and other receptacles sourced from North Queensland will be inspected for water ponding or evidence of previous water ponding (water stains) to prevent the potential introduction of the dengue mosquito, *Aedes aegypti*, from North Queensland as larvae or desiccation resistant eggs.

Given the existing extensive areas of mosquito breeding habitat already present on Legune Station, mosquito problems are likely to occur periodically. As such, the potential for nuisance levels and disease transmission by mosquitos will be managed and mitigated by:

- Ensuring personnel wear light coloured, long sleeved shirts and mosquito repellent.
- Installation of low intensity yellow lighting in outside areas, where possible, to minimise attracting insects.
- The Project Area will be kept as clean as possible with artificial receptacles stored undercover away from rain where possible, or stored in a manner that prevents the ponding of water and creation of mosquito breeding habitat.

4 OPERATIONAL HAZARDS

4.1 WORKING ON OR NEAR WATER

4.1.1 Assessment of Potential Impacts

A large portion of the work that will be conducted at the Project site involves personnel having to work near or on waterbodies. These waterbodies include the grow-out ponds, water supply and discharge channels and natural waterways. Working around these areas has many inherent risks for personnel including:

- drowning
- contact with dangerous animals (e.g. crocodiles, sharks and sting-rays)
- electrocution from installed electrical equipment (e.g. pumps)

4.1.2 Mitigation and Monitoring

Potential risks associated with working in and/or around water will be managed by:

- All personnel working near water will be required to be competent swimmers and/or capable of removing themselves from the water.
- Personnel will be required to ensure any electrical installation in or near the waterbody is electrically safe prior to coming in contact with the water.
- Personnel will be encouraged to observe waterbodies and surrounding areas for dangerous animals (e.g. crocodiles) prior to working in or near the water.
- Any work required to be undertaken on water will always be conducted by multi-person work crews with one person acting as an observer at all times.

Management and mitigation measures that will be implemented for crocodiles and other dangerous wildlife associated with waterbodies are discussed further in Sections 3.1 and 3.2.

4.2 BOATS

4.2.1 Assessment of Potential Impacts

Boats will be essential in the day to day operation of the Project. Boats will be required for use in the grow-out ponds to undertake maintenance of equipment within the ponds (e.g. the pond aerators), as well as in the waterways surrounding the Project to undertake maintenance on the intake and outfall structures, and for environmental monitoring activities. Risks associated with the operation of boats include:

- capsize
- crush injuries particularly during the launch/retrieval of boats
- contact with dangerous animals (e.g. crocodiles, sharks and string-rays)
- seasickness
- drowning.

The operation of boats in the waterways surrounding the Project site carries additional risks as the waterways are uncharted and subject to large tidal movements. The channels in the waterways are extremely dynamic

and conditions change regularly. As such, there is risk of boats and personnel becoming lost, grounded and stranded for extended periods of time.

4.2.2 Mitigation and Monitoring

Potential risks associated with the use of boats will be managed by:

- Personnel responsible for the operation of the boats will hold appropriate licences.
- All personnel on the boat must be fit for work and not under the influence of alcohol or other drug.
- Any boat activities will always be conducted by multi-person work crews with one person acting as an observer at all times.
- Boat ramps will be constructed where required to assist in the launching or retrieval of boats from the water.
- All boats will be adequately sized and equipped with life vests, first aid kit, emergency position indicating radio beacon (EPIRB), fire extinguisher and emergency provisions (e.g. water, food and insect repellent).
- All personnel on the boat are to wear life vests at all times.
- All boats are to be fitted with a working means of communication (e.g. a two way radio and/or satellite phone).
- Tides and weather conditions will be consulted, and a journey management plan, prepared prior to operating a boat in the waterways surrounding the Project site.

4.3 HELICOPTERS

4.3.1 Assessment of Potential Impacts

Helicopters will also be used in the day to day operation of the Project. Robinson 22 (R22) helicopters may be used at the grow-out farms to deter birds predating on prawn stock. There are a number of risks associated with the operation of helicopters and an accident involving a helicopter may result in serious injury or death. The use of drones are also being investigated as an alternative bird predation management strategy. It likely that the use of drones would present considerably fewer risks to human health and safety than helicopters

4.3.2 Mitigation and Monitoring

The Civil Aviation Authority of Australia (CASA) is the government statutory authority responsible for the safety of civil air operations in Australia. CASA enforces safety requirements under the Commonwealth *Civil Aviation Act 1988* and the *Air Navigation Act 1920* and regulates pilot licencing, aircraft operations and maintenance, record keeping and fatigue management. The operation of helicopters and/or drones for the Project will comply with the relevant CASA regulations.

5 HAZARDOUS MATERIALS

5.1 PERSONNEL EXPOSURE

5.1.1 Assessment of Potential Impacts

Hazardous materials that will be transported, stored and handled for the Project include:

- Diesel to fuel the vehicle fleet and generators and pumps.
- Oil and lubricants will be used in the vehicle fleet and to service equipment such as generators and pumps.
- Hydrogen peroxide for disinfection purposes.

Potential risks to human health and safety could occur from the following:

- Release of hazardous materials due to vehicle accident or rollover or a spill.
- Fire and/or explosions resulting from flammable and combustible materials.

5.1.2 Mitigation and Monitoring

To minimise the potential for impact to human health and safety, hazardous materials will be transported, stored, handled and disposed of in compliance with industry standards. A hazardous materials register will be maintained for the Project detailing the types and amounts of hazardous materials stored on site.

All personnel required to work with hazardous materials will be appropriately trained in the handling, use, storage and disposal. The correct personal protective equipment (PPE) will be required to be worn when handling hazardous materials.

Fuel tanks, fuel unloading and dispensing equipment will be contained within a bunded area with a drain to the oil/water separator. Appropriate emergency response equipment, including firefighting equipment, shall be readily available at all locations where hazardous chemicals are used, stored, transported and/or disposed.

The management of Project wastes including hazardous materials is described in further detail in the Waste Management chapter (Volume 2, Chapter 9).

6 ACCESS

6.1 INCREASED TRAFFIC MOVEMENTS

6.1.1 Assessment of Potential Impacts

The construction and operation of the Project will result in an increase in traffic movements to, from, and around Legune Station.

The only road access to the Project Area is via the Cave Springs Road, which runs from WA/NT border to the southern boundary of Legune Station. The Cave Springs Road will be upgraded by the NT Government to an all-weather, two-laned sealed road. The two main internal roads on Legune Station, the Legune Access Road and central service road, will also be constructed to be all-weather two-laned sealed roads. Internal farm access roads to and from the ponds and channels will be constructed to be all-weather, unsealed gravel sheeted roads.

During the construction of the Project, there is expected to be some 10,880 vehicle movements (5,440 inbound and 5,440 outbound) over the 32 month construction period. Approximately 65% of these will be light vehicle and bus movements associated with transport of contractors and staff to and from the site. The other vehicle movements during the construction phase are associated with heavy vehicle movements involved in the transport of equipment and material.

Traffic movements associated with the operation of the Project are provided in Table 2.

TABLE 2 OPERATIONAL TRAFFIC MOVEMENTS

Delivery	Number of Deliveries	Vehicle Type and Route
Diesel	3 per week	Quad road train, Wyndham to Legune
Feed	243 per year	Triple tautliner, Wyndham to Legune
Post-larvae prawns	1 every second day	Triple tautliner, Darwin to Legune
Processed prawns	222 per year	Triple road train, Kununurra to Wyndham
Workforce	14 per week	10-seater bus, Kununurra to Legune
Harvested prawns	3,177 per year	Refrigerated Pantech, Legune to Kununurra

A traffic and transport assessment was undertaken by GHD (as detailed in Volume 3, Chapter 4) to assess the impact of the Project on the road network. GHD (2016) concluded that traffic movements associated with the Project were likely to have a low impact on the road network. Therefore, the traffic movements associated with the Project are not expected to increase the risk to personnel and other road users.

6.1.2 Mitigation and Monitoring

While the traffic movements associated with the Project will have a low impact on the existing road network, a Driver Safety and Fatigue Management Policy will be developed and implemented for all employees and contractors to manage and mitigate the risk of vehicle incidents.

Additionally all personnel will be required to observe speed limits and road rules. All personnel operating a vehicle must not be under the influence of alcohol or other drugs.

6.2 UNAUTHORISED ACCESS AND THIRD PARTY INTERFERENCE

6.2.1 Assessment of Potential Impacts

The only road access to the Project Area is from Kununurra via the Moonamang Road. The Moonamang Road runs from Kununurra to the WA/NT border where it connects to the Cave Springs Road. The Cave Springs Road then runs from the WA/NT border to the southern boundary of Legune Station where it connects with the Legune Access Road.

The Cave Springs Road and Legune Access Road are unsealed and, as such, often become impassable in the wet season. The Cave Springs Road will be upgraded by the NT Government to an all-weather access road and will allow access to Legune Station all year round. The Legune Access Road will also be upgraded as part of the Project to match the upgrade of the Cave Springs Road.

Legune Station is frequently visited by recreational visitors who come to camp, fish and hunt when the roads are trafficable. The upgrade of the Cave Springs Road and Legune Access Road to allow all weather access to the Project Area may increase the numbers of recreational visitors who visit the Legune Station. There is also potential for these unauthorised visitors to interact and interfere with the Project.

6.2.2 Mitigation and Monitoring

To mitigate the potential impact of unauthorised visitors to Legune Station, access to the Project Area will only be permitted to authorised personnel. As the only road into the Project Area, a gate will be installed at the entrance to Legune Access Road to prevent unauthorised access and potential third party interference with the Project. All access to Legune Station will be subject to private property and biosecurity management requirements due to the importance of quarantine requirements.

7 COMMITMENTS

The proponent commits to the preparation and implementation of a Health and Safety Plan to mitigate the risk of the Project on human health and safety. The Health and Safety Plan will include the mitigation and monitoring measures referred to in this chapter. It will also include detailed emergency plans and response procedures in the event of an emergency or accident. Responsibilities and liabilities in the event of an emergency or accident will be identified in the Health and Safety Plan.

8 CONCLUSION

The potential risks to human health and safety can be broadly categorised as:

- Meteorological conditions and natural disasters including cyclones and severe storm events, storm surge and flooding, heat and sun exposure and bushfires.
- Biological hazards including, crocodiles, other potentially dangerous wildlife and biting insects.
- Operational hazards including working on or near water and working with boats and helicopters.
- Hazardous materials including the exposure of personnel to hazardous materials.
- Access issues including increased traffic movements and unauthorised access.

Measures to manage and mitigate these risks will be detailed in the Health and Safety Plan which will be developed for the Project.