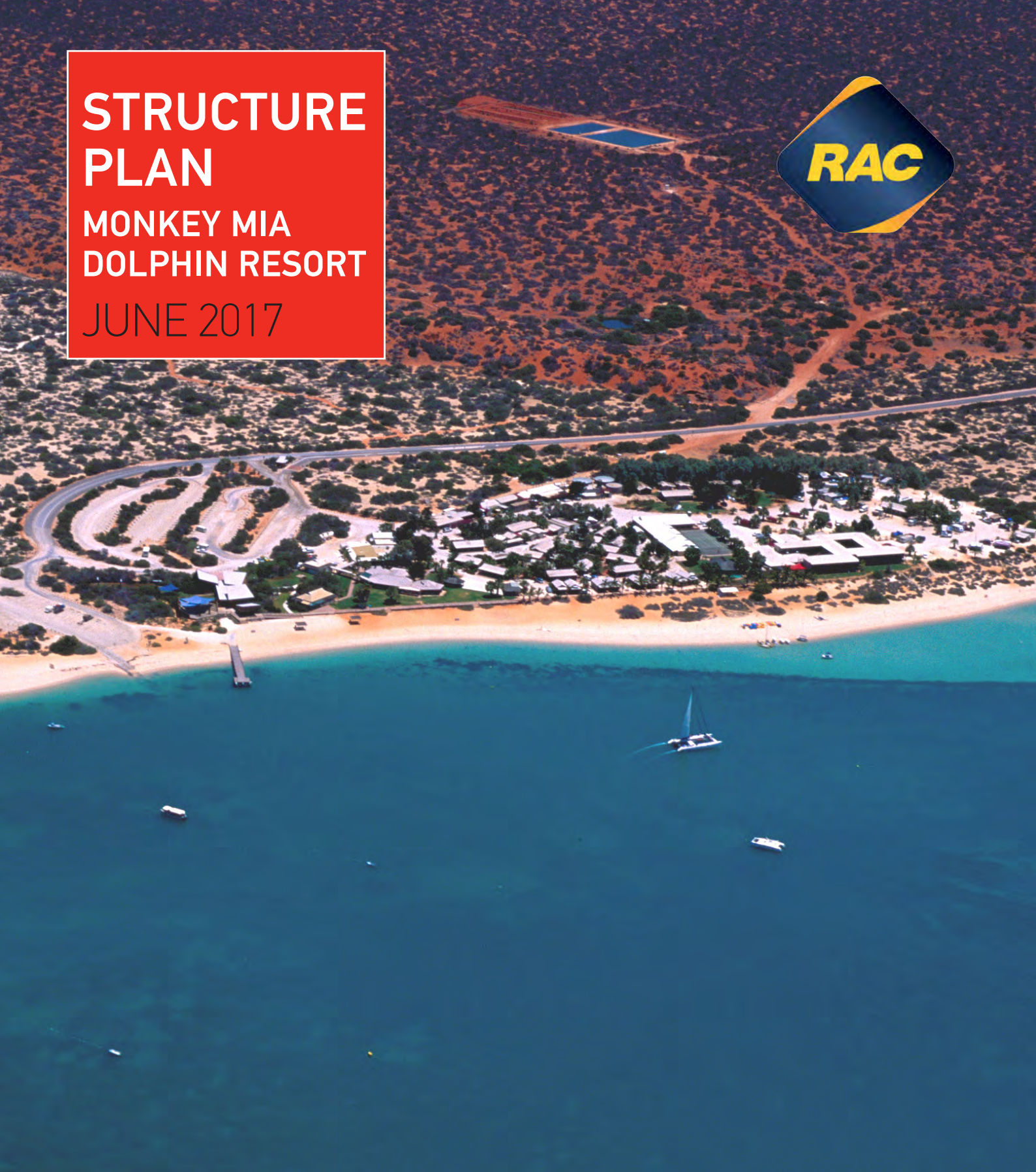


STRUCTURE PLAN

MONKEY MIA
DOLPHIN RESORT

JUNE 2017



Shire of Shark Bay
Structure Plan Ref No: TBC
FINAL Version 2
20 JUNE 2017

PREPARED BY



Document Control

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4	20.06.17	WAPC modifications.	Matt Raymond		Tony Paduano	
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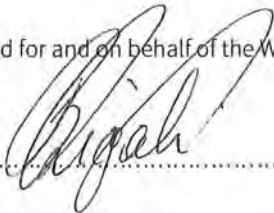
Endorsement Page

This Structure Plan Amendment is prepared under the provisions of the Shire of Shark Bay Local Planning Scheme No. 3.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

7 July 2017 Date

Signed for and on behalf of the Western Australian Planning Commission


.....

An officer of the Commission duly authorised by the Commission pursuant to section 16 of the *Planning and Development Act 2005* for that purpose, in the presence of:


.....Witness

7 July 2017 Date

7 July 2027 Date of Expiry

Table of Amendments

Amendment No.	Summary of the Amendment	Amendment Type	Date approved by WAPC

Executive Summary

This Structure Plan has been prepared under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* and the Shire of Shark Bay Local Planning Scheme No. 3 (LPS 3), to guide the redevelopment and expansion of the Monkey Mia Dolphin Resort (MMDR) on Lot 130 and Lot 501 Monkey Mia Road, Monkey Mia.

Covering approximately 9.18 hectares of land, the existing MMDR and proposed expansion area is located approximately 26 km northeast of the town of Denham, adjacent to the southern boundary of the Francois Peron National Park, within the Shire of Shark Bay. The subject site borders the Shark Bay Marine Park, and lies within the Shark Bay World Heritage Area.

The subject site is primarily zoned 'Special Use Area – SU9' under the provisions of the Shire of Shark Bay's LPS 3. The eastern portion of the subject site is reserved 'Major Highways' and 'Parks and Recreation'. These reserves are understood to be historic mapping anomalies which will need to be rectified through a separate scheme amendment process to correctly represent the existing resort land uses which are located within these reserves.

The MMDR is adjacent to the Department of Parks and Wildlife (DPaW) Monkey Mia Visitor Centre. Monkey Mia has now become an important tourist destination with over 100,000 visitors each year. The main attraction is the dolphins but other activities such as ocean sail cruising and day trips to nearby features including the stromatolites, Shell Beach, Steep Point, Big Lagoon and Francois Peron National Park have also been introduced in an effort to broaden appeal and market the wider attractions of the region.

The MMDR has a range of accommodation options to suit most budgets from camping, backpacker dormitories through to family villas. It also has a shop, café, restaurant and recreation facilities. The existing resort operations are located entirely on Reserve 40727, which is vested in the Shire for 'Tourism' purposes and leased to RAC Tourism Assets Pty Ltd (RAC).

Some of the accommodation within the MMDR is approaching economic obsolescence and the resort is generally run down. Development across the subject site has evolved in a piecemeal approach over a long period. Consequently, the existing layout of the resort is not as optimal as it could be.

RAC purchased the MMDR lease and improvements in 2015 in support of its Tourism Assets Strategy, its intent to invest in and redevelop the MMDR into a family beach resort to target a *4-star rating (Star Ratings Australia).

This Structure Plan provides a guiding planning framework to facilitate the redevelopment and expansion of the MMDR for tourism purposes. It will guide development in an integrated and orderly manner through subsequent planning approvals. The objectives of the Structure Plan are to:

- provide an overarching blueprint which shall guide the redevelopment and expansion of the MMDR into a quality tourist development, which shall fulfill its role as a strategic tourism site for the region;
- achieve beneficial economic, environmental and community outcomes that enhances the management and welfare of the Shark Bay World Heritage Property, and particularly, the welfare of the dolphins;
- design for and manage coastal and bushfire hazard processes; and
- respect sites of heritage significance.

The redevelopment and expansion of the MMDR will provide a variety of accommodation types ranging from:

- Beachfront family cabins;
- Garden villas;
- Dolphin Lodge accommodation with beachside rooms, shared ensuite and dormitories;
- Sites for all types of accommodation vehicles; and
- Camping facilities.

The redevelopment is estimated to increase the number of accommodation units from 204 to approximately 318. The detailed accommodation yields shall be determined at the development application stage.

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PART ONE – IMPLEMENTATION

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Implementation

Structure Plan Area

The Monkey Mia Dolphin Resort Structure Plan (Structure Plan) shall apply to the area defined by the black dashed line on Plan 1 – Structure Plan.

Purpose

The Structure Plan provides a broad framework to guide the Shire of Shark Bay when it considers subsequent development proposals within the site. This Structure Plan constitutes a Structure Plan prepared pursuant to the Shire of Shark Bay Local Planning Scheme No. 3 (LPS 3).

Operation

This Structure Plan comes into operation when it is approved by the Western Australian Planning Commission (WAPC) pursuant to section 16 of the *Planning and Development Act 2005*.

Objectives

The objectives of the Structure Plan are to:

- provide an overarching blueprint which shall guide the redevelopment and expansion of the MMDR into a quality tourist development, which shall fulfill its role as a strategic tourism site for the region;
- achieve beneficial economic, environmental and community outcomes that enhances the management and welfare of the Shark Bay World Heritage Property, and maintain a positive relationship with the adjoining dolphin experience area (whilst maintaining the welfare of the dolphins);
- design for and manage coastal and bushfire hazard processes; and
- respect sites of heritage significance.

Staging

Staging does not apply to this Structure Plan.

Development Requirements

Bushfire Management

Portions of the site are located within a designated bushfire prone area, as per the Western Australia State Map of Bush Fire Prone Areas (DFES 2016). Prior to the lodgement of a development application in these areas, bushfire mitigation and management measures are to be addressed in accordance with a Bushfire Management Plan endorsed by the Shire of Shark Bay.

Coastal Hazard

The subject site is located on low-lying land and is therefore vulnerable to inundation from storm tide. Development is to be in accordance with the Coastal Hazard Risk Management and Adaptation Plan (Appendix H) which provides guidance on required adaptation and management actions associated with existing and proposed assets within the MMDR.

Heritage

A Site Identification Survey will be conducted for the Structure Plan area should it be deemed required. The results of the survey will determine whether section 18 consent is required prior to development approval.

Land Use Zones and Reserves

The Zones and Reserves of the Structure Plan area are shown on Plan 1. Land use permissibility within the Structure Plan area shall be in accordance with the corresponding Special Use Area – SU9 zone under LPS 3.

Landscape Strategy

A Landscape Strategy will be prepared as part of the detailed design during the development application stage and shall be cognisant of the Bushfire Regulations.

Colour Scheme

The Shark Bay World Heritage Committee's preferred colour schedule shall be considered as part of new structures at the development application stage.

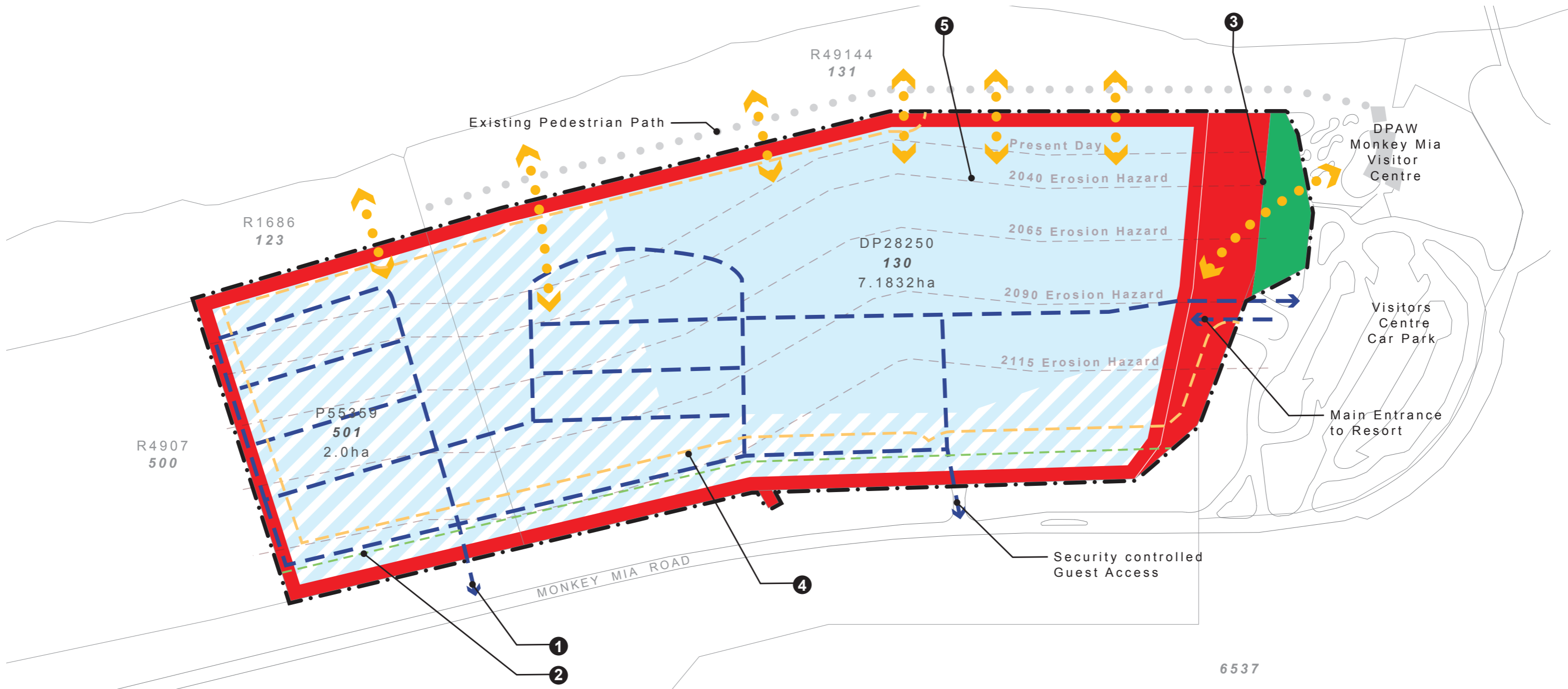
Environmental Considerations

A suite of environmental management documents are applied and managed through the Environmental

Management System (EMS):

- Construction Management Plan (refer to Appendix C);
- Drainage Management Plan (refer to Appendix D);
- Nutrient & Irrigation Management Plan (refer to Appendix E);
- Foreshore Management Plan (refer to Appendix F); and
- Compliance Assessment Plan.

The EMS provides a structured environmental management approach for the expansion of the Monkey Mia Dolphin Resort. One of the key elements of the EMS is to fulfill the requirements of commitment 1 of Ministerial Statement 709.



LEGEND

LOCAL SCHEME RESERVES

- Major Highways (LPS 3)
- Parks & Recreation (LPS 3)

ZONES

- Special Use (LPS 3)

OTHER

- Structure Plan Boundary
- SU9 Special Use Area (LPS 3)

- Existing Cadastre
- Existing Resort Development
- Tourism Development Expansion
- Asset Protection Zone (see Note 4)
- Erosion Hazard Contour (By Year)
- Internal Access Road (Indicative Location)
- Key Pedestrian Links to Beach

- 15m wide Vegetation Buffer (Acacia sp) as per Ministerial Statement 709
- Existing Pedestrian Path
- Asset Protection Zone (Strategen Environmental)

NOTES

- 1** Emergency access to Monkey Mia Road dependant on the final layout. No additional access onto Monkey Mia Road is permitted without the approval of Main Roads.
- 2** 15m wide Vegetation Buffer (Acacia sp) as per Ministerial Statement 709. This buffer is subject to review and requires Ministerial approval for removal.
- 3** Land within the subject site reserved 'Major Highways' and 'Parks & Recreation' under LPS 3 subject to future amendment.
- 4** Following removal of the 15m wide vegetation buffer (under Ministerial Statement 709) the 'Asset Protection Zone' is to be modified and a revised Bushfire Management Plan will be required to be submitted to the Shire of Shark Bay.
- 5** Monitoring and review of coastal hazard risk management and adaptation planning is required by the Shire of Shark Bay to ensure that management and adaptation strategies identified remain relevant to future development proposals.

Plan 1 - Structure Plan

Monkey Mia Dolphin Resort, Monkey Mia

Date: 8 June 2017
 Scale: 1:2,000 @ A3
 Drawing No. 715-184 ST-1 A
 Staff: MR_GW

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PART TWO – EXPLANATORY SECTION AND TECHNICAL APPENDICES

Figure 1 – Aerial View of Monkey Mia Dolphin Resort



1. Planning Background

1.1 Introduction and Purpose

The Monkey Mia Dolphin Resort Structure Plan (Structure Plan) has been prepared on behalf of RAC Tourism Assets Pty Ltd (RAC). The purpose of the Structure Plan is to provide an agreed overarching design framework which shall guide future development over the site at the next level of detailed planning (development approval).

The Structure Plan has been prepared in response to the provisions of the 'Special Use' zone 'Area 9' (SU 9) of the Shire's Local Planning Scheme No.3 which stipulates:

- I. To provide for the needs of tourists in manner that enhances the management and welfare of the Shark Bay World Heritage Property, and particularly, the welfare of the dolphins.*
- II. Development shall be generally in accordance with the Monkey Mia Outline Development Plan (O'Brien 1995), and development shall only occur following, and generally in accordance with, the preparation of an Outline Development Plan (formerly Concept Development Plan) and its approval by the local government and the Commission. The Outline Development Plan should incorporate, and have regard for, the relevant management provisions required in the current lease agreement in respect of the land.*

Part Two of this Structure Plan comprises an explanatory report which outlines the site details, the applicable planning framework, the site conditions and constraints and the design rationale for the Structure Plan. Part Two should be read in conjunction with the Structure Plan Map and any appendices that relate to applicable site investigations.

1.2 Consultant Team

The Structure Plan has been prepared on behalf of RAC with input from the following consultants:

Table 1- Consultant Team Inputs

TPG + Place Match	MMDR Local Structure Plan Report
Donaldson Development Management	Project Coordinator
PGA Architects	Concept Masterplan
Strategen Environmental	Bushfire Management Plan Construction Management Plan Drainage Management Plan Environmental Management System Foreshore Management Plan Nutrient & Irrigation Management Plan
Flyte	Traffic Impact Statement
BPA Engineering	Civil Engineers Servicing Report
M.P. Rogers & Associates	Coastal Hazard Risk Management and Adaptation Plan
Heritage Link	Aboriginal Heritage Compliance

1.3 Vision For MMDR

To provide a range of consistent, reliable quality accommodation options for tourists, preserving the traditional WA holiday for current and future generations of West Australians.

The design will promote a sense of place and community providing opportunities to interact with other guests and wildlife, whilst providing a sense of spaciousness and refuge in a remote and arid landscape. The design shall be sympathetic to the World Heritage Area and interface with the DPaW Dolphin management. Facilities will provide for the needs of tourists in a manner that enhances the management and welfare of the Shark Bay World Heritage Property, and particularly, the welfare of the dolphins.

1.4 Land Description

1.4.1 Location

The Structure Plan (described as Lots 130 and 501 Monkey Mia Road, Monkey Mia) is located approximately 26 km northeast of the town of Denham, south east of the Francois Peron National Park within the Shire of Shark Bay. Monkey Mia borders the Shark Bay Marine Park, and lies within the Shark Bay World Heritage Area.

Refer to Figure 2 – Location Plan

The subject site sits north of Monkey Mia road, which is reserved as ‘Major Highways’ under the Shire of Shark Bay’s Local Planning Scheme No.3, which falls under the control of Main Roads WA. The northern boundary of the subject site fronts onto the ocean conservation strip, whilst the eastern boundary is bookended by the Shark Bay Marine Park, located on the peninsula adjacent to the Department of Parks and Wildlife’s (DPaW) car park (Reserve 49444/131) and the Monkey Mia Visitor Centre.

1.4.2 Area and Land Use

Monkey Mia has now become an important tourist destination with over 100,000 visitors each year. The main attraction is the dolphins but other activities such as ocean sail cruising and day trips to nearby features including the stromatolites, Shell Beach, Steep Point, Big Lagoon and Francois Peron National Park have also been

introduced in an effort to broaden appeal and market the wider attractions of the region.

The MMDR which has a range of accommodation options to suit most budgets from camping through to villas. It also has shops, café, restaurant and recreation facilities. The existing resort operations are located entirely on Reserve 40727, which is vested in the Shire for ‘Tourism’ purposes and leased to RAC Tourism Assets Pty Ltd. Other facilities available to day visitors and tourists staying at the resort include a Visitor Information Centre, Caravan Park, shop, restaurant, barbecue, toilets, boat ramp and jetty.

Refer to Figure 3 – Local Attractions and Facilities (Source: Department of Parks and Wildlife)

Public attendance to observe the dolphins is now managed by the DPaW which has established a car park and a visitor’s centre adjacent the east end of the resort. The dolphins frequent the beach in front of the resort each day and are fed by DPaW staff in close proximity to the public. The centre performs an important scientific research function with researchers (up to 12 researchers/scientists at a time) from overseas coming to study the dolphins and sea life at Monkey Mia. RAC has engaged with DPaW in regard to the interface between the resort and the public facilities and has been encouraged to consider this in any redevelopment.

The MMDR currently consists of the following land uses:

- Park cabins;
- Villas;
- Camping area;
- Lodge;
- Supermarket/Souvenir shop;
- Boughshed Restaurant;
- Bar and pool;
- Reception;
- Amenities;
- Public toilets; and
- Associated infrastructure.

Refer to Figure 4 - Existing Resort Land Uses (Source: PGA)

Figure 2 – Location Plan

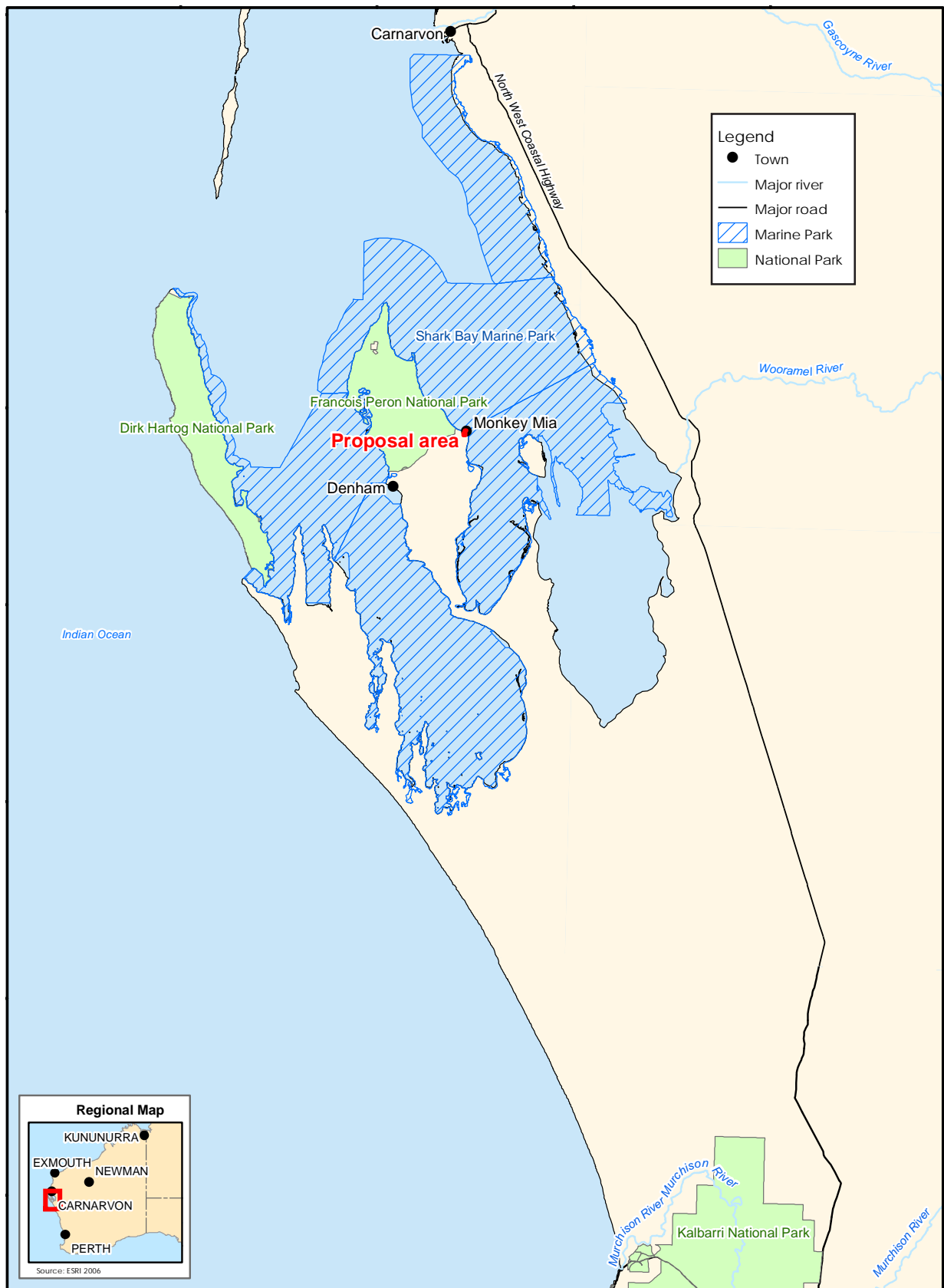


Figure 3 – Local Attractions and Facilities (Source: Department of Parks and Wildlife)



Please help look after the dolphins

With so many people visiting the bay to see the dolphins there is a risk to their health and natural habits. At Monkey Mia we appreciate your help looking after the dolphins.

- Please follow the instructions given by DEC officers and volunteers.
- Quietly leave the water when there is a new calf close to shore.
- Only feed dolphins when invited to do so by DEC officers and their volunteer assistants.
- Help maintain the wild dolphins' health and friendly nature by not touching them.
- Children should be supervised by adults at all times.

- If a dolphin approaches you in the water, watch it and remain still; do not pursue the dolphin.
- Do not try to attract dolphin attention by splashing the water – your fingers may look like a fish.
- If you are in the water, try to keep at least 30 metres away from any dolphins – swimming with dolphins can result in mothers and calves being separated.
- Do not wear sunscreen in the water at the dolphin experience area, as lotions and creams can irritate dolphin skin and eyes.
- Pets are not allowed in the dolphin experience area and must be on leads when in the reserve.
- If a dolphin approaches you while fishing, please remove your fishing line from the water.

Things to do at Monkey Mia

Swim and snorkel

Monkey Mia provides a wonderful opportunity to snorkel over the seagrass beds that support much of Shark Bay's marine life.

Boating and kayaking

Boating and kayaking are great ways to enjoy the waters around Monkey Mia. When out on the water you may see dolphins, dugongs, stingrays, turtles and other marine animals. During whale migration times in spring and autumn there are many humpback whales in the bay and they are sometimes seen from the shore.

Camping and accommodation

The adjacent Monkey Mia Resort offers a variety of accommodation, including camp sites. Camping is not permitted within the Monkey Mia Conservation Park, reserve and car park. Entry fees still apply.

Tours

A number of tours operate from Monkey Mia. More information is available from the DEC tour booking office.

Display Centre

Discover what makes Monkey Mia and Shark Bay a World Heritage area, and find out more about dolphins and other marine life.

Theatrette

Watch nature documentaries about Shark Bay in air-conditioned comfort.

Picnicking

Enjoy a picnic on the beach, lawn or one of the picnic tables.

Bird watching

Look for thick-billed grass-wrens, babblers, emus and many other birds around Monkey Mia.

School holiday activities

The Wonderfully Wild school holiday program runs during most school holidays. Ask for a timetable at the Monkey Mia Booking Office.



A beach wheelchair is available. Ask a DEC officer if you would like to use it.

Wulyibidi Yaninyina Trail 4km loop, allow 1.5 hours

Explore some of Shark Bay's World Heritage values, local history and Malgana Aboriginal culture along the Wulyibidi Yaninyina walk trail.

Wulyibidi Yaninyina is Malgana for 'walking Peron' and is an easy walk around this part of the Peron Peninsula. It starts at the large shelter along the entry road. Early morning and late afternoon are the best times to see birds.

Figure 4 - Existing Resort Land Uses (Source: PGA)



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1.4.3 Legal Description and Ownership

The Certificate of Title details and land use for the subject lots are summarised in the following table.

Refer to Appendix A – Certificate of Title

Lot	Survey	Volume/Folio	Area	Registered Proprietor & Lease Details	Current Land Use
130	DP 54332 Reserve 40727	3144-942	7.18 ha	Crown Land. Vested in the Shire of Shark Bay, under a management order. 99 year lease agreement with RAC Tourism Assets Pty Ltd, expiring in April 2114.	Existing MMDR with portions of vacant land along western and southern lot boundary.
501	DP 55359	3144-940	2 ha	Crown Land. State of WA. No vesting. Leased to RAC Tourism Assets Pty Ltd.	Vacant land.

Note:

- Lot 500 Monkey Mia Road is located to the west of the subject site and forms part of the SU9 zone. The lot does not form part of the MMDR Structure Plan, and shall be subject to separate and future planning (by others).
- Lot 556 Monkey Mia Road, located to the south of the subject site, on the opposite side of Monkey Mia Road, has also been leased from the Shire of Shark Bay to accommodate a waste water treatment plant and associated infrastructure to facilitate the servicing needs of the MMDR and other tourist facilities. This lot does not form part of the MMDR Structure Plan area.

Refer to Figure 5 - Lot and Lease Boundaries (Source:PGA)

1.5 Planning Framework

The following existing LPS 3 conditions of development apply under SU9:

1.5.1 Zoning and Reservations

The subject site is primarily zoned 'Special Use Area – SU9' under the provisions of the Shire of Shark Bay's Local Planning Scheme No.3 (LPS 3). The eastern portion of the subject site is reserved 'Major Highways' and 'Parks and Recreation'. These reserves are understood to be historic mapping anomalies which will need to be rectified through a scheme amendment. The mapping anomalies can be addressed as part of the Shire of Shark Bay's upcoming Scheme review, which is anticipated to occur over the next 6 - 12 months.

Special Use zones are set out in Schedule 4 and are in addition to the zones in the Zoning Table. LPS 3 states that a person must not use any land, or any structure or buildings on land, in a Special Use zone except for the purpose set out against that land in Schedule 4 and subject to compliance with any conditions set out in Schedule 4 with respect to that land.

Refer to Figure 6 - Extract of Shire of Shark Bay Local Planning Scheme No.3

- i. The intent of this Special Use Zone is to provide for the needs of tourists in a manner that enhances the management and welfare of the Shark Bay World Heritage Property, and particularly, the welfare of the dolphins.
- ii. Development shall be generally in accordance with the Monkey Mia Outline Development Plan (O'Brien 1995), and development shall only occur following, and generally in accordance with, the preparation of an Outline Development Plan (formerly Concept Development Plan) and its approval by the local government and the Commission. The Outline Development Plan should incorporate, and have regard for, the relevant management provisions required in the current lease agreement in respect of the land.

Note: The purpose of the 1995 O'Brien Outline Development Plan report was to establish the principles for the preparation of an Outline Development Plan, and is not itself an Outline Development Plan.

Figure 5 - Lot and Lease Boundaries (Source:PGA)

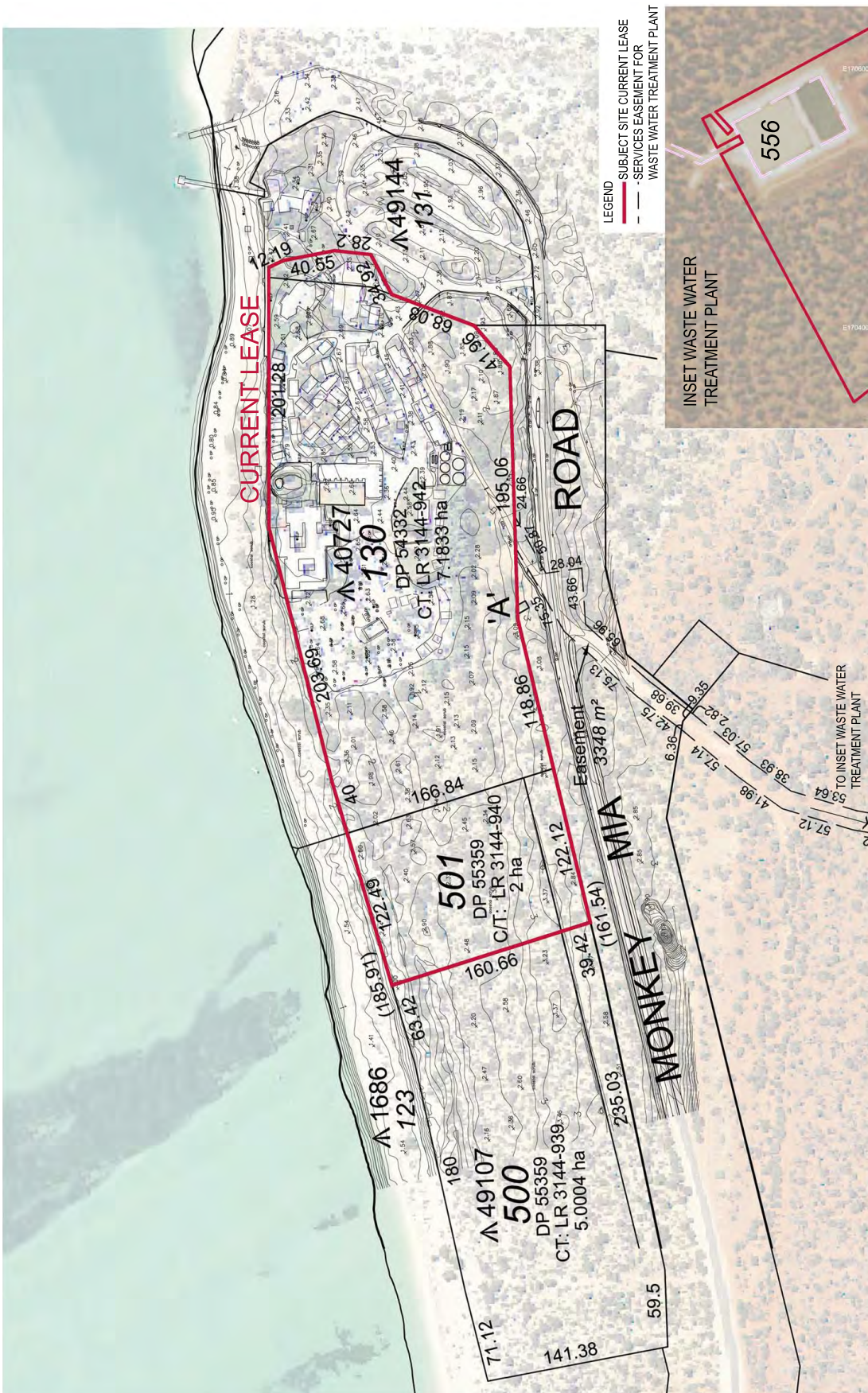
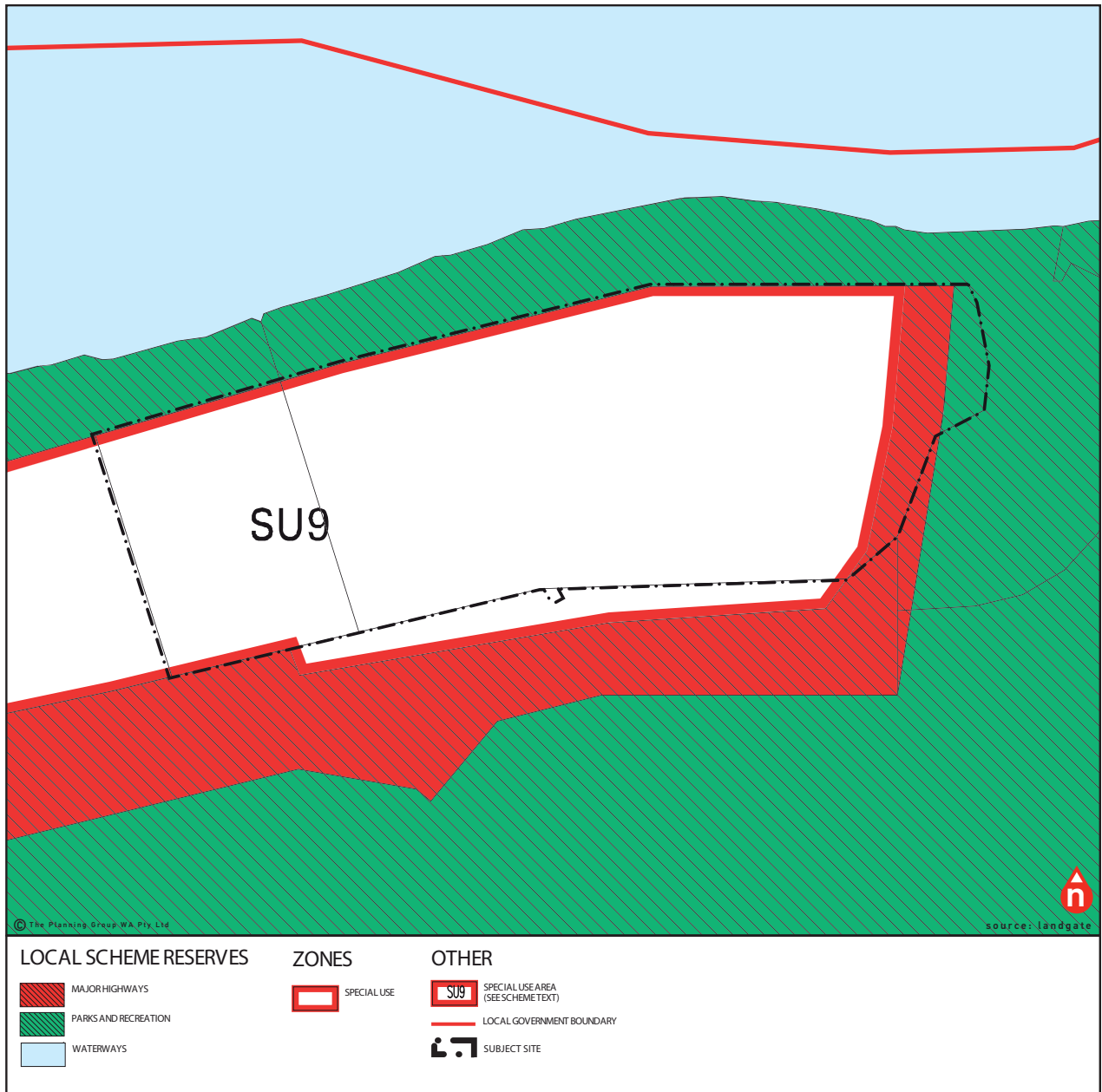


Figure 6 - Extract of Shire of Shark Bay Local Planning Scheme No.3



- III. *If the local government or the Commission:*
 - (a) *fail to make a determination in respect of the Outline Development Plan within 5 months of lodgement of such a plan with the local government, or within such other time frame agreed by the proponent; or*
 - (b) *makes a determination or imposes a requirement in respect of the Outline Development Plan and the proponent is dissatisfied with such a determination; the proponent may appeal in accordance with Part V of the Act.*
- IV. *Any minor variation to the Outline Development Plan, including uses considered incidental to the primary activity of the development, may approved by the government.*
- V. *No structure shall exceed 7.75 m in height above finished ground level unless it forms part of the essential services (water or fuel tanks, powerlines or communication aerals). The location, intensity and design of two-storey development shall comply with an endorsed Outline Development Plan.*

With the introduction of the *Planning and Development (Local Planning Schemes) Regulations in 2015*, the existing Outline Development Plan provisions of LPS 3 are now superseded by the deemed provisions (Schedule 2) introduced under the Regulations, which include provisions relating to Structure Plans. The Structure Plan has been prepared in this context.

1.5.2 Land Use

SU9 allows for a wide range of land uses, mainly relating to tourist accommodation and associated tourist uses:

Special Use	
Camping Area	Reception Centre
Caravan Park	Residential Building
Carpark	Restaurant
Desalination Plant	Shop
Motel	Short Term Accommodation
Office	Special Facility
Park Home Park	Staff Accommodation
Power Generation Plant	

The redevelopment and expansion of the MMDR will be in accordance with these land use provisions.

1.5.3 Shire of Shark Bay Local Planning Strategy

The Local Planning Strategy is a non statutory document which provides strategic planning direction for the next 15 years. As a significant portion of the Shire area forms part of a World Heritage Listed area, the Strategy focuses on the strategic direction for the Denham townsite.

The Local Planning Strategy's Vision:

Through effective governance, leadership, management and the support of the community, the Shire of Shark Bay is a safe, attractive, healthy, diverse and unique place to live, work, retire or visit. The Shire is proud of its history, location on the coast, its natural environment (containing many scenic places of rare beauty), World Heritage Listing, popularity as a tourist destination, and its friendly relaxed atmosphere.

The Strategy recognises the potential for the expansion of the MMDR:

To the immediate west of the Monkey Mia resort is undeveloped land also within the same 'Special Use' zone consisting of Lot 501 which is unallocated crown land and Reserve 49107. There is potential for more tourist uses subject to meeting environmental requirements. The land could also cater for any future expansion of Monkey Mia.

The proposed Structure Plan is consistent with the aspirations of the Local Planning Strategy as it will facilitate the future redevelopment and expansion of tourist facilities on the site.

Figure 7 - Shoreline fronting the existing resort (Source: M.P. Rogers & Associates)



1.5.4 Shire of Shark Bay Local Tourism Strategy

The Shire of Shark Bay’s Local Tourism Strategy reviews existing tourism trends and assesses the possible opportunities that can further develop and enhance Shark Bay’s tourism growth.

The objectives of the Strategy are to:

- Ensure that future tourism fulfils sustainable principles;
- Plan for tourism’s increased contribution to the local community and economy;
- Ensure land resources available for tourism are suitable for any realistic future growth scenarios; and
- Seek from stakeholders a clear understanding of the future tourism land use needs.

The MMDR is identified as ‘Site 15’ in the Strategy, where it states:

The combination of all the attributes at Monkey Mia result in it being considered a “Strategic Tourism Site” and that its priority should always be to cater to tourist visitation, accommodation and activity. There is no justification to allow permanent residential use other than when associated with tourist activity for operators and staff.

There is still room for expansion of the facilities to the west, which is considered acceptable. Lot 501 is a relatively small lot west of the resort, which is unallocated Crown land and Reserve 49107, are areas where expansion of development could occur if environmentally acceptable.

The proposed MMDR Structure Plan is in keeping with the recommendations of the Strategy to develop and enhance the MMDR as a ‘Strategic Tourism Site’.

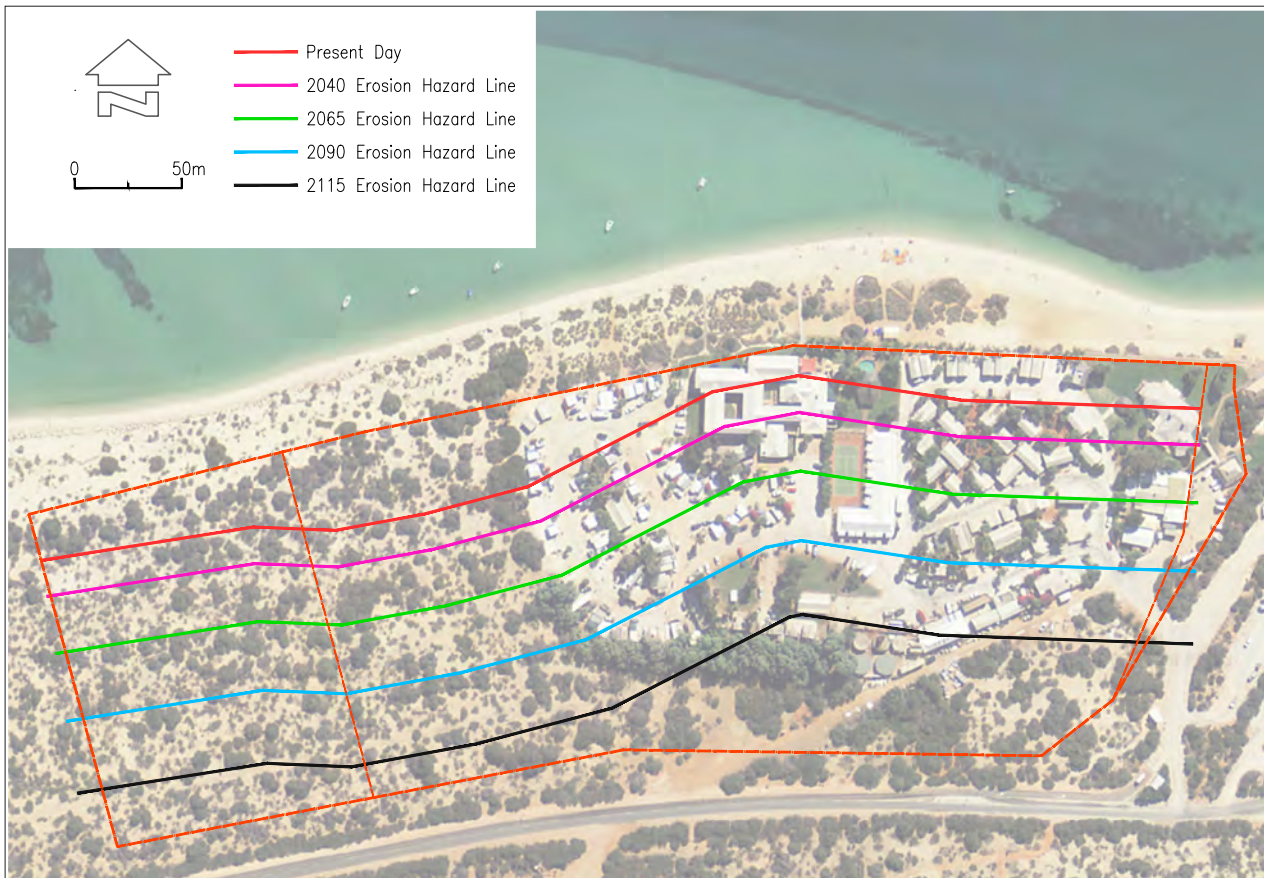
1.5.5 State Planning Policy No. 2.6 – State Coastal Planning Policy

The potential vulnerability of the coastline and the subsequent risk to the community, economy and environment needs to be considered for any coastal development. The subject site is located on low-lying land and is therefore could be vulnerable to inundation from storm tide.

Refer to Figure 7 - Shoreline fronting the existing resort (Source: M.P. Rogers & Associates)

Refer to Figure 8 - Maximum extent of erosion (Source: M.P. Rogers & Associates)

Figure 8 - Maximum extent of erosion (Source: M.P. Rogers & Associates)



The risks posed to the site from coastal hazards need to be considered both now and into the future. This is particularly relevant given the planned upgrade of the MMDR which shall provide for a range of affordable accommodation options for tourists.

The State Government's coastal planning policy *State Coastal Planning Policy No. 2.6 State Coastal Planning Policy (SPP2.6)* supports a risk management approach and provides the framework for undertaking risk management and adaptation planning for coastal hazards in Western Australia.

SPP 2.6 provides guidance in the form of a methodology to assess the potential extent of coastal hazard impacts, as well as for the development of a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP). The key requirement of a CHRMAP is to develop a risk based adaptation framework for assets or infrastructure that could be at risk of impact by coastal hazards over the relevant planning timeframe. Importantly, the balance of these risks needs to be considered with reference to the expected lifetime of the asset/infrastructure. In

this regard, the requirements for tourism development within the MMDR will be different to that which would be required for freehold residential development, for example. This is reflective of both the less critical nature, and shorter planning horizon (or time to asset replacement) of the proposed tourist infrastructure.

RAC commissioned coastal engineers M. P. Rogers to produce a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) for the resort. Further details are provided under Section 2.7 of this report.

The potential future movement of the shoreline and the risk posed by extreme events necessitates the requirement for coastal adaptation and risk mitigation planning. The proposed coastal management strategies in the CHRMAP are derived from SPP 2.6 (the coastal hazard risk management and adaptation hierarchy) and are summarised below:

- Assets constructed as part of the redevelopment of the resort will either accommodate or avoid the risks posed by coastal hazards over their expected design life.

- Accommodation will be achieved through the use of appropriately designed infrastructure and systems that can withstand the impacts of coastal hazards over their initial service life. An example of this is the design of the beachfront cabins, which are being designed to accommodate potential loads associated with severe events and inundation.
- Avoidance of coastal hazard risks will be achieved over the given design lives for other, less transportable, infrastructure such as camp kitchens, ablutions, workshops, etc by locating these facilities landward of the hazard line corresponding to the design life of the infrastructure (i.e. assets with a 25 year design life are located landward of the 25 year erosion hazard line).
- Managed Retreat will be completed for the replacement of all assets upon fulfilment of their design lives, or at such time as shoreline monitoring indicates that it is required based on predefined triggers and specialist coastal engineering advice at the time. It is envisaged that managed retreat of assets could occur more than once over the coming 100 years. Each cycle of managed retreat would relocate the assets to locations determined by a coastal hazard risk assessment completed at that time.
- Abandonment (with removal) of certain infrastructure may be considered as part of any managed retreat sequence if the erosion of the shoreline reduces the available space to the extent that certain infrastructure can no longer be accommodated.
- Management of public safety would be achieved through existing and proposed management strategies that presently require evacuation of guests during cyclone or other coastal risk warnings.

1.5.6 State Planning Policy No. 3.7 – Planning In Bushfire Prone Areas

State Planning Policy 3.7 (SPP 3.7) intends to assist in reducing the risk of bushfire to people, property and infrastructure by taking a risk-minimisation approach to development proposed in bushfire prone areas. A designated Bushfire prone area is an area that has been identified and designated by the *Fire and Emergency Services Act 1998* (as amended). Such areas are identified on the *Map of Bush Fire Prone Areas*.

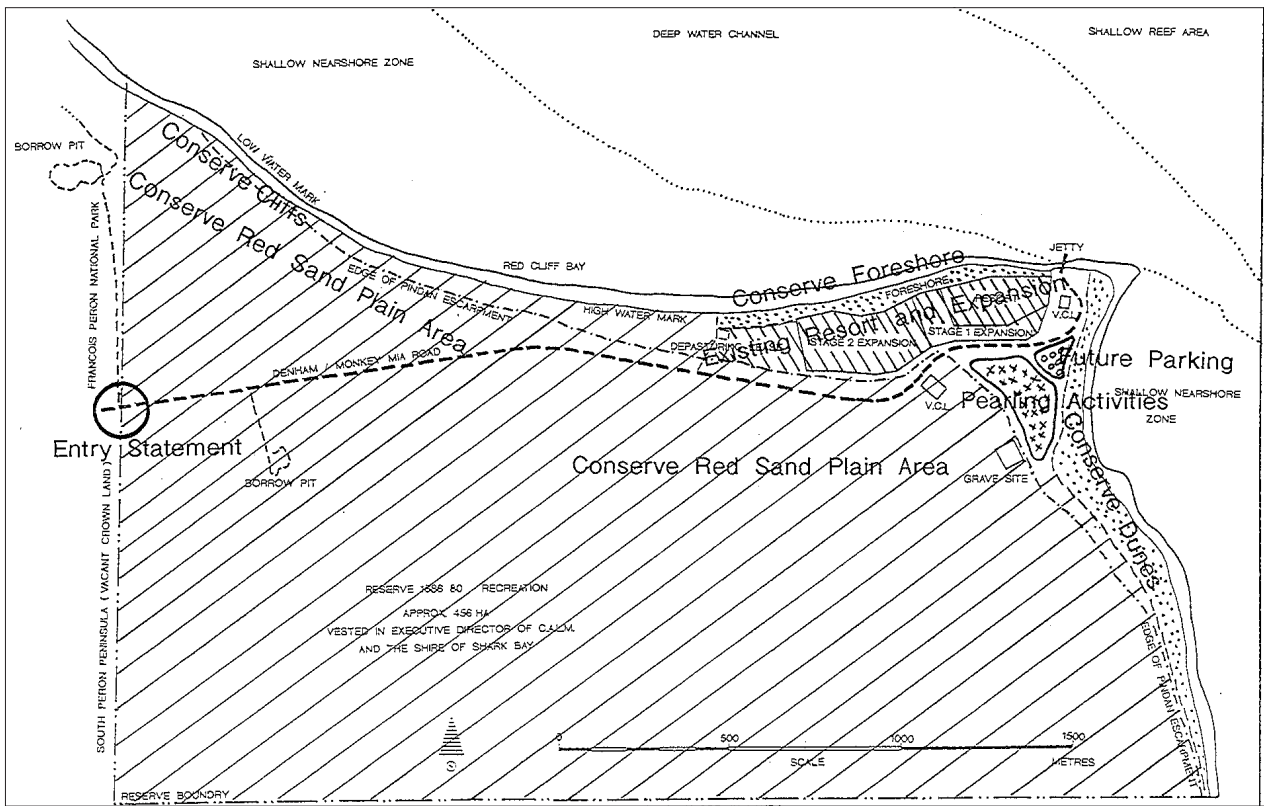
Portions of the site are located within a designated bushfire prone area, as per the Western Australia State Map of Bush Fire Prone Areas (DFES 2016). In accordance with SPP 3.7 and the associated Guidelines, the Structure Plan's internal road and tourist accommodation layout has been influenced by the outcomes of a Bushfire Hazard Level Assessment and BAL Contour Map prepared by Strategen (refer to Appendix B).

1.5.7 O'Brien Outline Development Plan (Draft)

The draft Monkey Mia Outline Development Plan (draft ODP) was prepared in 1995 by O'Brien Planning Consultants. The purpose of the draft ODP was to define the extent and type of development appropriate for the Monkey Mia locality, taking into account resource management objectives, particularly those associated with the World Heritage Listing of Shark Bay, and the need to protect the viability of the dolphin population in the area.

Refer to Figure 9 - O'Brien Draft Outline Development Plan

Figure 9 - O'Brien Draft Outline Development Plan



SU 9 of LPS 3 requires that development be generally in accordance with the draft ODP and that development shall only occur following, and generally in accordance with, the preparation of an ODP (formerly Concept Development Plan). SU 9 states that the purpose of the O'Brien ODP was to establish the principles for the preparation of an ODP, and is not itself an ODP.

The following table lists the issues identified by the O'Brien draft ODP, and how these will be addressed.

Issues Raised By Draft ODP	Structure Plan Response
Foreshore Management	A Foreshore Management Plan (refer to Appendix F) has been prepared by Strategen Environmental consultants in response to the MS 709 requirements.
Tourist Demands	The redevelopment and expansion of the MMDR will result in a family beach resort which shall target a *4-star rating (Star Ratings Australia). The MMDR will provide a diverse range of accommodation types to meet tourist demands (refer below to Future Accommodation Requirements).
Community Opinion	<p>The Structure Plan shall be assessed by the Shire of Shark Bay and referred to the relevant agencies during the advertising process. The community will have the opportunity to comment on the proposed Structure Plan and associated Concept Plan, which shall inform the future development application(s) for the sites redevelopment.</p> <p>The resort will be designed as an open planned resort, addressing the public beach and DPaW dolphin interaction area and will welcome day visitors and local residents to use its food and beverage facilities.</p> <p>RAC recognises that the Monkey Mia area has a special cultural significance for the Malgana People. RAC is committed to working with the Malgana People to ensure that any Aboriginal heritage issues are managed appropriately and by agreement with the Traditional Owners. RAC has taken assignment of the Native Title Agreement negotiated between the former resort operators (Aspen) and intends to uphold the undertakings of that Agreement. Consultation is already being undertaken with the Malgana Working Group as part of the Structure Plan and Development Application processes.</p>
Appropriate Architectural Design and Landscaping of the Area	<p>The detailed landscaping and architectural design applied to the subject site shall be addressed at the development application stage.</p> <p>The development application will be accompanied by a landscape strategy which shall coordinate landscape design in accordance with 2.9.4 and 2.9.5 of the draft ODP, including:</p> <ul style="list-style-type: none"> • the provision of shelter belt planting to camping and recreation areas; • shade planting; • screen planting around chalets and new units (subject to compliance with Bushfire Regulations); and • boundary planting. <p>The detail for built form and architectural style shall also be included as part of the development application. Refer to section 3.6 of this report for further information.</p>
Plot Ratio of Buildings	There are no specified plot ratio requirements under SU 9 of the Shire of Shark Bay's LPS 3, nor the draft ODP. However, Division 5 (Recreational Areas) of the <i>Caravan Parks and Camping Grounds Regulations</i> require at least 10% of the site area to be set aside as open space. The specifications of the Regulations shall be followed as part of the development application proposal.
Future Accommodation Requirements (Having Regard to Regulations)	<p>The MMDR will provide a diverse range of accommodation types ranging from:</p> <ul style="list-style-type: none"> • beachfront family cabins; • garden villas; • Dolphin Lodge accommodation with beachside rooms, shared ensuite and dormitories; • sites for all types of accommodation vehicles; and • associated camping facilities. <p>The design and development of the MMDR will be guided by Schedule 7 -Caravan parks and camping grounds, of the <i>Caravan Parks and Camping Grounds Regulations</i>.</p>

1.5.8 WAPC Planning Bulletin 49 - Caravan Parks

The WAPC's Planning Bulletin 49 supports the provision of caravan parks within Western Australia by facilitating greater flexibility in the design and composition of new or redeveloped caravan parks and is to be applied on a case-by-case basis. The Bulletin details matters to be taken into consideration in planning for the development of caravan parks. The key objectives of the Bulletin are to encourage the development and redevelopment of caravan parks as a form of short-stay (affordable) accommodation primarily for leisure tourists and long-stay uses where appropriate. The expansion of the MMDR will include a supply of approximately 194 caravan and tent sites and associated amenities. Subsequent development applications for the MMDR will be required to meet these provisions, in conjunction with the *Caravan Parks and Camping Grounds Regulations (1997)*.

1.6 Environmental Considerations

The MMDR expansion has approval under the Environmental Protection Act 1986 (EP Act) and the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

1.6.1 Environmental Protection Act 1986 - Ministerial Statements No.709 and 919

Approval under the EP Act to expand the MMDR resort was granted to the former proponent Monkey Mia Dolphin Resort Pty Ltd through issue of Ministerial Statement No.709 (MS 709) on 28 December 2005. Subsequent approval extending the period for substantial commencement was granted under MS 919 on 18 December 2012. MS709 provides for approval to implement the proposal subject to a number of conditions and commitments associated with the following:

- project implementation;
- compliance audit;
- Thick-billed Grasswren;
- drainage management;

- nutrient and irrigation management;
- foreshore management; and
- environmental and construction management planning.

The Office of the Environmental Protection Authority (OEPA) on 8 April 2015 confirmed that the project had substantially commenced in through the completion of the waste water treatment plant.

Strategen Environmental have prepared a suite of an environmental management planning documentation comprising of the following documents:

- Construction Management Plan (refer to Appendix C);
- Drainage Management Plan (refer to Appendix D);
- Nutrient & Irrigation Management Plan (refer to Appendix E);
- Foreshore Management Plan (refer to Appendix F);
- Compliance Assessment Plan; and
- Environmental Management System.

This suite of environmental management documents are applied and managed through the Environmental Management System (Strategen 2016) (EMS) providing a structured environmental management approach for the expansion of the MMDR. One of the key elements of the EMS is to fulfill the requirements of commitment 1 of MS 709. Management Plans are included in this Structure Plan as supporting information only, and require separate approval under the conditions of Ministerial Statement 709.

A Section 38(6) (Notice of Nomination as Proponent) was issued by the Minister for Environment on 24 June 2016 to nominate RAC as the entity responsible for the expansion of the MMDR.

1.6.2 Amendment to approved proposal (MS 709) under section 45C

An amendment to the existing MS 709 through section 45C of the EP Act is being undertaken to enable minor amendments to the Resort Expansion facilities, staff accommodation. MS 709 will also be amended to reflect the Department of Parks and Wildlife correspondence with respect to clearing undertaken in associated with the implementation of the waste water treatment plant. The amendment will not result in additional clearing to that under existing endorsements.

Consultation has been undertaken with the OEPA in May 2016.

The proposed amendments will not have a significant detrimental effect on the environment that is additional or different from the effect which the original proposal has had or will have on the environment.

1.6.3 Environment Protection and Biodiversity Conservation Act 1999 - Not a Controlled Action

In 2003 the proposal was referred to the then Department of the Environment and Heritage for a decision on assessment of the potential significance of impact on the following matters of national environmental significance (MNES):

- Thick-billed Grasswren;
- Western Spiny-tailed Skink; and
- World Heritage Values

The proposal was assessed as 'Not a Controlled Action' on the basis that the proposal was not deemed to have a significant impact on the MNES.

1.7 Pre Lodgement Consultation

The project team have liaised with the following stakeholders in formulating the Structure Plan proposal:

Agency	Individuals Consulted	Matter Investigated
Shire of Shark Bay	Liz Bushby – Consultant Planner to the Shire.	Requirements for Structure Plan.
Department of Planning	Justin Breez – Planning Manager Central Regions Johan Gildenhuis – Urban and Regional Planner	Briefing regarding Structure Plan and future development.
Department of Parks and Wildlife	Rod Quartemain – Policy and Tourism Branch Manager Steve Nicholson – District Manager Shawn DeBono – Manager Regional Parks Unit Nigel Sercombe – Regional Manager Shark Bay Sue Hancock – Regional Leader Parks and Visitor Services, Midwest Region	Briefing regarding Structure Plan and future development.
Main Roads WA	Mark Wilson	Requirements for Traffic Impact Assessment
Yamatji Marlpa Aboriginal Corporation regarding Malgana Native Title Claim	Malgana People	Adhering to the Native Title Agreement and complying with the Aboriginal Heritage Act 1972
UNESCO World Heritage	Shire President Cr Cheryl Cowell	Briefing regarding Structure Plan and future development.



2. Site Conditions and Constraints

2.1 Biodiversity and Natural Area Assets

2.1.1 Flora and Vegetation

There are two landform-vegetation units found within the proposed resort expansion area being the Coastal Sandplain and Coastal Dunes. The Coastal Sandplain unit is the white sandy flat area located between the coastal dunes and the Red Sandplain. The vegetation is dominated by *Acacia sclerosperma*, *Scholtzia* spp. and *Rhagodia preissii* with smaller depressions containing *Halosarcia* spp., *Frankenia pauciflora* and *Sporobolus virginicus*.

The Coastal Dune unit forms a narrow strip adjacent to the beach and consists of sparse shrubland and spinifex. It is dominated by *Acacia sclerosperma*, *Spinifex longifolius*, *Halosarcia* spp. and *Sporobolus virginicus*.

The Monkey Mia Reserve Management Plan notes that there is only one saltpan (birrida) in the Monkey Mia reserve, near its western boundary, and that it contains saltbush, samphires.

Impacts to clearing are managed through MS 709 conditions and through the implementation of the Environmental Management System (Strategen 2016)

2.1.2 Fauna

The Shark Bay region is described as an area of major zoological importance, primarily due to habitats on peninsulas and islands being isolated from the disturbance that has occurred elsewhere. The region contains a rich avifauna with over 230 species, or 35% of Australia's bird species having been recorded. The area is also noted for its diverse herpetofauna supporting nearly 100 species, many of which are at their northern or southern limit.

Fauna survey's were undertaken in accordance with the Environmental Protection Authority Guidance Statement 56. The report and recommendations of the Environmental Protection Authority (Bulletin 1165) identified potential impacts to fauna was limited to the Thick-billed Grass wren. Thick-billed Grass Wren has recently been delisted from the EPBC Act and is classified as Priority 4 species under the Wildlife Conservation Act 1959. Priority 4 species are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.

Potential impacts to the Thick-billed Grass Wren (western sub-species) are managed through MS 709 Conditions and the implementation of the Environmental Management System (Strategen 2016).

2.2 Landform and Soils

The topography of the land proposed for the extension of the MMDR is generally flat and sits at an elevation of 2-3m AHD. The land slopes down from the Monkey Mia Road at approximately 3m AHD into a small depression zone along the side of the road at approximately 2.2m AHD before rising slightly through low sand dune terrain at around AHD 2.6m. This fall from the road creates the opportunity to introduce view corridors to the beach and water at strategic points on the approach.

The subject site mainly comprises white quartz sandplain (White Coastal Sandplain) that forms a strip between the beach and unconsolidated red quartz sand plain (Red Sandplain) which overlay the Peron Sandstone. A narrow strip of low coastal dunes is present between the quartz sand unit and the beach face.

2.3 Groundwater and Surface Water

2.3.1 Surface Water

There are no identified surface water bodies within close proximity to the proposed expansion areas.

2.3.2 Groundwater

Groundwater for Monkey Mia and other Shark Bay settlements is sourced from the Carnarvon Artesian Basin aquifer. The then Department of Conservation and Land Management considered extraction levels as at 1998 unlikely to impact on World Heritage values of the area.

2.4 Bushfire Hazard

WAPC's SPP 3.7 requires development applications for vulnerable land uses (such as tourism resorts) in areas between BAL-12.5 and BAL-29 to be accompanied by a Bushfire Management Plan (BMP), an emergency evacuation plan for proposed occupants and/or a risk management plan for any flammable on-site hazards.

Strategen has prepared a Bushfire Hazard Level Assessment and BAL Contour Map to accompany this Structure Plan (refer to Appendix B). The purpose of the document is to provide guidance on how to plan for and manage the bushfire risk to the proposed resort expansion through the implementation of a range of bushfire management measures.

The proposed design of the Structure Plan road network has been altered to ensure assets are located entirely within BAL-12.5 areas, thus being located outside of BAL FZ and BAL 40 areas. This is shown on the Bushfire Hazard Level Assessment and BAL Contour Map included in Appendix B.

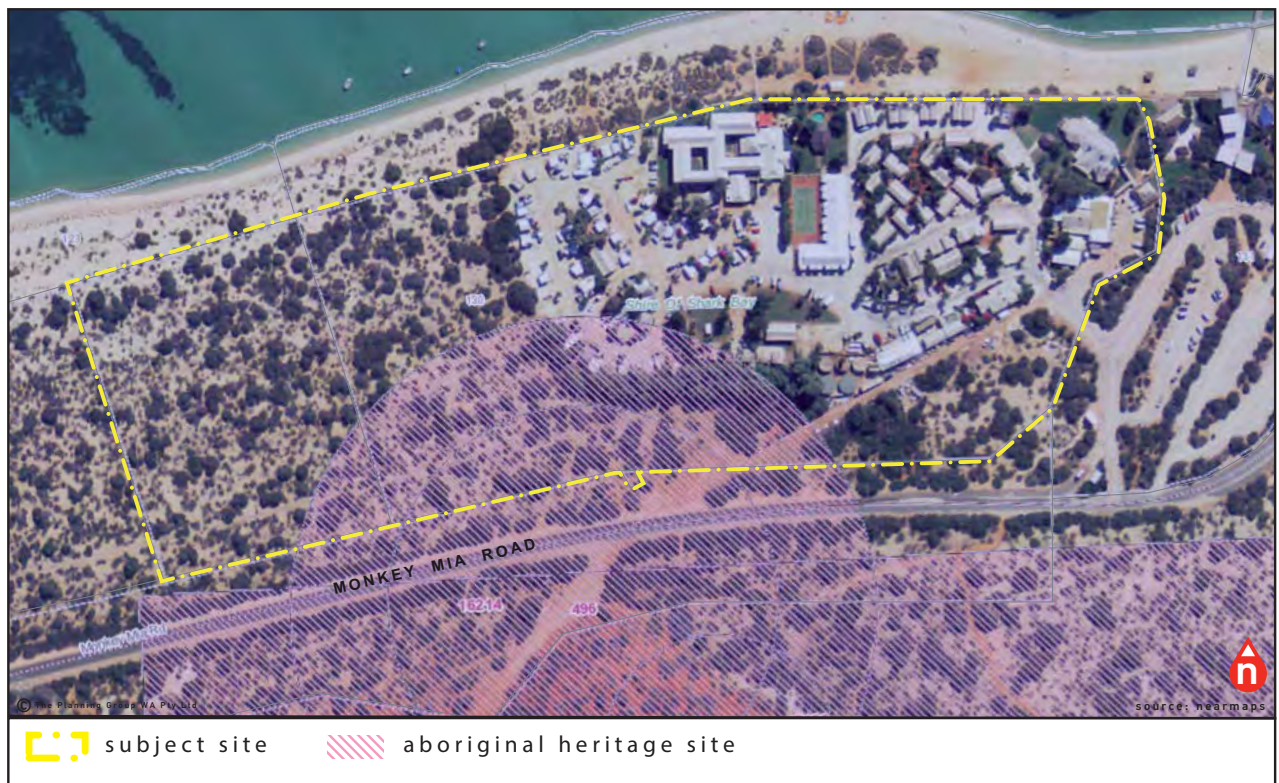
A fire service access road will be provided along the southern and western lot boundaries of the subject site to enhance fire brigade access for bushfire fighting activities. Water for firefighting purposes will be extended from the existing resort, with over 480 kL onsite tank capacity reticulated to onsite fire hydrants and hose reels.

Regarding the 15 m vegetation buffer required as per Ministerial Statement 709, an application has been made to the Minister for Environment under s 46 of the Environmental Protection Act 1986 to have the condition requiring the retention of the vegetated buffer removed. This removal of this condition is anticipated to occur prior to subsequent development approvals being issued by the Shire of Shark Bay.

Any future development proposals will ensure that vulnerable land uses, particularly campsites, are located away from bushfire prone areas. A BMP is required to be endorsed by the Shire of Shark Bay prior to a development approval being granted.

Refer to Appendix B - Bushfire Hazard Level Assessment and BAL Contour Map

Figure 10 - Registered Aboriginal Heritage Sites



2.5 Heritage

2.5.1 World Heritage List

Shark Bay was inscribed on the World Heritage List in 1991 on the basis of its “natural heritage” values. The World Heritage Boundary is recognised by a Special Control Area (SCA) under the Shire’s Scheme. The purpose of the SCA is to ensure that all proposals for development are in accordance with the protection of World Heritage Values. In considering any rezoning or development application, the local government will have regard to the ‘Guidance Statement for Assessment of Development Proposals in Shark Bay World Heritage Property No. 49’ of the Environmental Protection Authority which guides development in the World Heritage Property. It is anticipated that the proposed Structure Plan and subsequent development application(s) shall be referred by the Shire of Shark Bay for comment as part of the advertising process.

2.5.2 Aboriginal Heritage

RAC recognises that the Monkey Mia area has a special cultural significance for Malgana People. RAC is committed to working with the Malgana People to ensure that any Aboriginal heritage issues are managed appropriately and by agreement with the Traditional Owners. A Deed of Covenant has now been executed by RAC that now puts it in a contractual relationship with the Malgana People, the Traditional Owners of the land and waters in and around Shark Bay. RAC looks forward to working in close partnership with the Malgana People in developing and running the Monkey Mia Resort into the future.

A desktop search of the Department of Aboriginal Affairs (DAA) Heritage Inquiry System (October 2016) indicates that there are two recorded sites, two lodged sites and one stored data site located within the vicinity of the Structure Plan area.

The recorded and lodged sites are:

- DAA 16,214 (Monkey Mia Hill) – Artefacts/Scatter.
- DAA 496 (Monkey Mia 5) – Artefacts / Scatter.

Refer to Figure 10 - Registered Aboriginal Heritage Sites

Historical records show that an Ethnographic and Archaeological Survey has been undertaken for the proposed extensions to the MMDR. RAC is in discussions with the Department of Aboriginal Affairs and the Malgana People to ensure it complies with the Aboriginal Heritage Act 1972 and meets the requirements of the Traditional Owners. A Site Identification Survey will now be conducted for the Structure Plan area. The results of the survey will determine whether section 18 consent is required.

European Heritage

The State Heritage Office Inherit database confirms no European Heritage sites are located within the Structure Plan area.

To the south of the Structure Plan area there is one site on the Shire's Municipal Inventory Heritage List. The brass plaque records the history of the site as follows, "Believed to be the grave of Hilda Johnson aged 3 years. Died in 1890 en route to Carnarvon on the Barque Niola. Hilda was the daughter of H. F. Johnson, Survey General of Western Australia, 1896 - 1915."

The grave site is located in the sand dunes, 15 minutes walk south of Monkey Mia Road, as part of a formalised walk trail. The grave site has a replacement concrete plinth with brass plaque attached. The plinth is surrounded by four low concrete posts and the site has a treated pine rail fence. The proposed redevelopment within the Structure Plan will not adversely affect this site.

2.6 Foreshore Area

The expansion of the MMDR is not expected to directly impact upon the surrounding foreshore area. Development will be set back from the beach, and formalised access points will be created at several accommodation nodes. The provision of formalised access points will reduce the potential for erosion and loss of coastal landform stability. The implementation of the following management plans will be undertaken to mitigate these potential impacts:

- Foreshore Management Plan (refer to Appendix F);
- Construction Environmental Management Plan (refer to Appendix C); and
- Drainage Management Plan (refer to Appendix D).

Opportunities to minimise the potential impacts to the foreshore reserve as a result of development are addressed through the Foreshore Management Plan prepared to satisfy MS 709 (refer to section 1.6 Environmental Considerations).

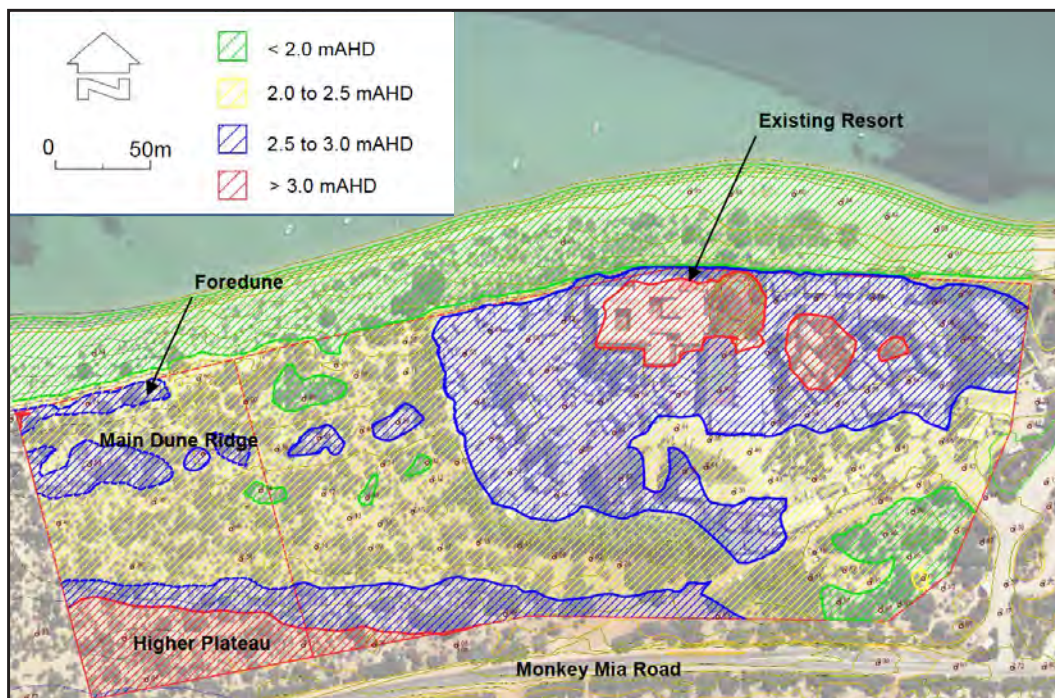


Figure 11 – Site Elevations (Source: M.P. Rogers & Associates)

2.7 Coastal Risk Hazards

The Structure Plan has a coastal frontage, which is significant, as the risks posed to the subject site from coastal hazards need to be considered both now and into the future. M.P Rogers and Associates were engaged by RAC to prepare a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) for the Structure Plan area. The CHRMAP is required to be adopted by the Shire of Shark Bay as the Management Authority recognised under SPP 2.6. The CHRMAP will assist the Shire of Shark Bay in consultation with DFES to prepare for and reduce or manage the impact of coastal hazard risk in the Monkey Mia locality.

Refer to Figure 11 – Site Elevations (Source: M.P. Rogers & Associates)

Refer to Appendix H: Coastal Hazard Risk Management and Adaptation Plan

The key requirement of the CHRMAP is to develop a risk based adaptation framework for assets or infrastructure that could be at risk of impact by coastal hazards over the relevant planning timeframe. Importantly, the balance of these risks needs to be considered with reference to the expected lifetime of the asset/ infrastructure. In this regard, the requirements for tourism development within the MMDR will be different to that which would be required for freehold residential development, for example.

The plan was developed on the basis that the risk to public safety as a result of cyclone inundation is already managed by the Department of Fire Emergency Services (DFES). The report recommends a specific evacuation and cyclone event management plan be developed for the Resort. This plan should be developed in consultation with DFES and the Shire of Shark Bay.

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3. Structure Plan

The existing MMDR has evolved in a piecemeal approach over a long period. Consequently, the existing layout of the resort is not as optimal as it could be. The proposed Structure Plan shall provide the required design framework to guide future development proposals over the subject site. The following section provides the rationale for the proposed Structure Plan.

Consideration has been given to the O'Brien draft ODP which sets out a number of suggestions in relation to the landscaping and built form materials.

3.1 Design and Development Principles

The design and development principles of the MMDR are informed by the following considerations:

- respond to tourist needs (providing for a variety of accommodation types, amenities and recreation facilities) which shall provide a better experience for visitors and encourage a longer duration of stay;
- integrate appropriate architectural design and landscaping within the site;
- achieve a positive foreshore interface, including an integrated approach to common user areas and the DPaW car park;
- achieve fluid pedestrian and vehicle accessibility; and
- address coastal hazard and bushfire risks through site responsive building design and proactive management measures.

3.2 Resort Concept

The redevelopment and expansion of the MMDR will result in a family beach resort which shall target a *4-star rating (Star Ratings Australia). The resort will create a guest experience that stimulates visitors to stay, relax and explore the resort and the wilderness surrounds. Accommodation and facilities will be generous, but practical and efficient, encouraging extended stays and repeat visitation.

The completed development will create and link the distinct zones and precincts within the Resort, with activity centres and points of seclusion, connected by pathways and boardwalks that are appropriately landscaped and lit. Landscaping will be abundant, low maintenance and designed to support local wildlife.

The design will promote a sense of place and community providing opportunities to interact with other guests and wildlife, whilst providing a sense of spaciousness and refuge as an oasis in a remote and arid landscape, within the world heritage area.

The subsequent development application shall seek to achieve the following design solutions:

- The layout will be based on zones addressing the needs of the target tourist market.
- User groups will be co-located where facilities can be on a shared basis rather than duplicated.
- Integrated controlled vehicle access with an efficient, pedestrian friendly, road network. Vehicles entering the resort should be diverted away from the resort central area.
- Beach access is to be conserved and improved.
- View corridors from the arrival area to the ocean to be enhanced.
- Public access to the resort retail (shop) and F&B will be encouraged and located accordingly.
- The visitor arrival is to be integrated with the

Figure 12 - Site Views and Vistas (Source: PGA)

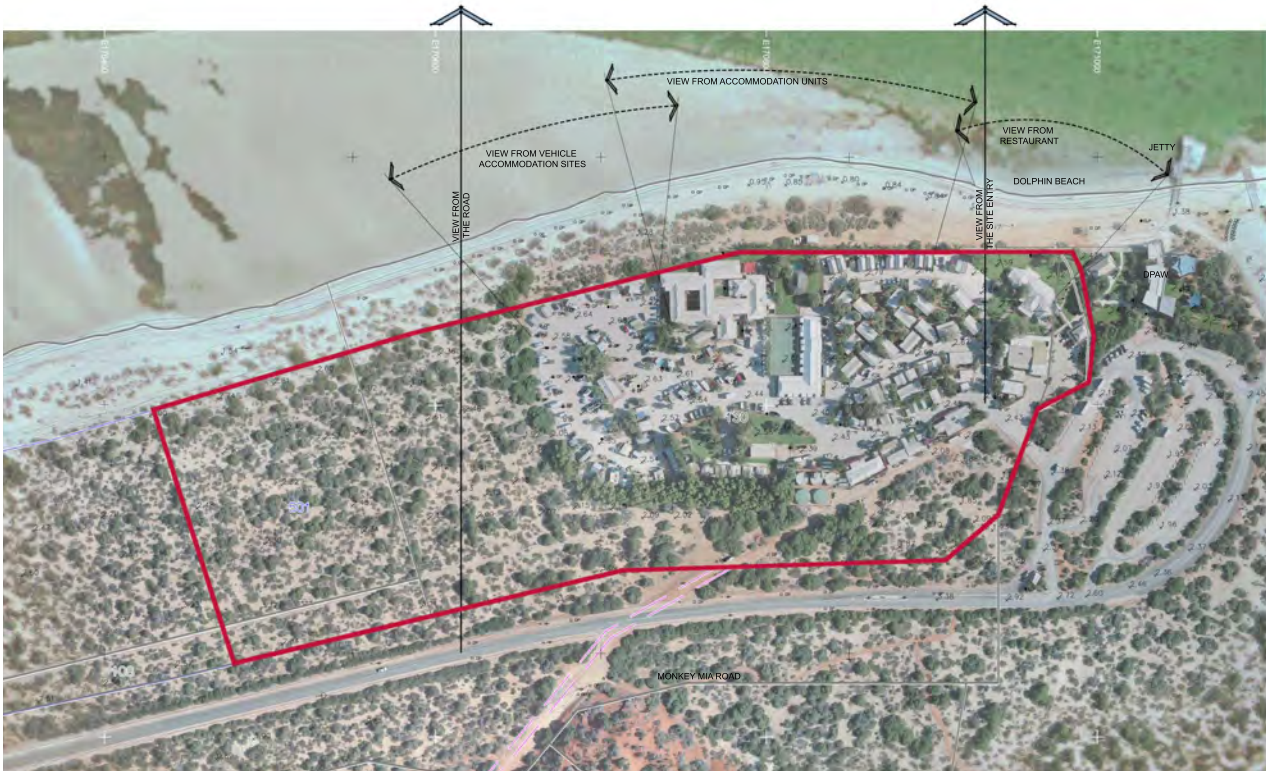
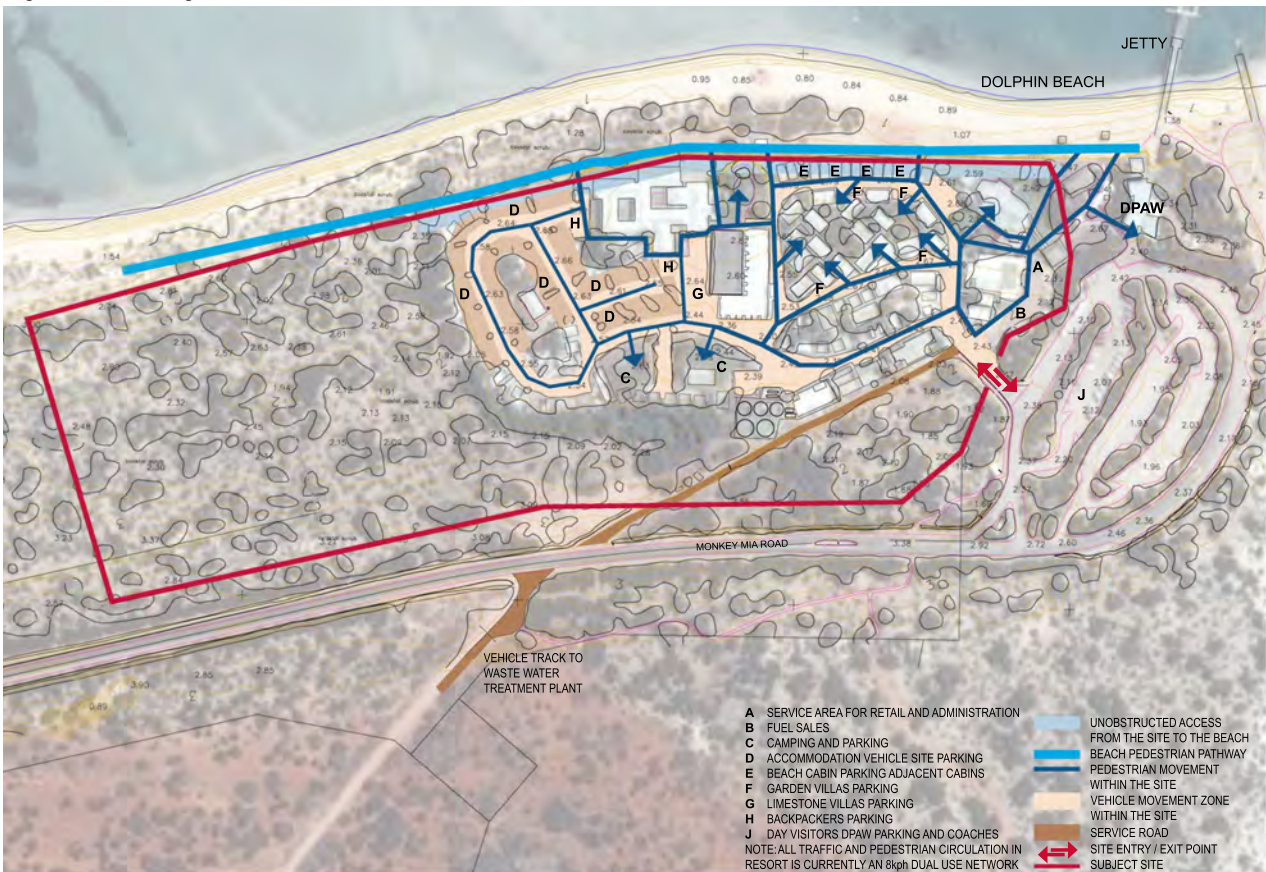


Figure 13 - Existing Access (Source: PGA)



DPaW visitor centre and be capable of operating jointly or independently of the DPaW facilities. Controlled access should be capable of being moved to the resort arrival area.

- The resort's front of house, including shop, Malgana cultural centre and arrival facilities should be welcoming to resort guests and day visitors alike.
- Guests staying in the accommodation will be diverted to designated parking areas.
- A separate self-contained staff accommodation "village" precinct, will be developed in stages.
- Grouping of facilities and activities are to be considered in a pedestrian context.
- Accommodation should be well related to the main resort attractions, such as the beach, without impinging upon them.

3.3 Accommodation Types

The MMDR will provide a range of accommodation types ranging from:

- Beachfront family cabins;
- Garden villas;
- Dolphin Lodge accommodation with beachside rooms, shared ensuite and dormitories;
- Sites for all types of accommodation vehicles; and
- Camping facilities.

The detailed accommodation yields shall be provided at the development application stage.

3.4 Views and Vistas

The resort has excellent oceanfront views along its entire 882 metre coastal frontage. View corridors can readily be established through the site. This is particularly relevant on arrival. The intention is to create view corridors from the point of arrival to the main beach area and also the resort pool and recreation area, with the aim of creating a quality first impression.

Refer to Figure 12 - Site Views and Vistas (Source: PGA)

The main street provides a vista through the resort from the main entry to the holiday park recreation hub, and provides the opportunity for terminating the vista with sculptures at each end. The main plaza and recreation areas have all been positioned with beachfront and

coastal aspects. All new cabins have beachfront views and ten van sites have been located on the beachfront boundary to provide beach front sites to caravan users.

3.5 Landscape

The resort shall be well landscaped to create an attractive open environment. Open green spaces are to be provided for guest amenity and the landscaping should present as abundant, be attractive to wildlife and present as seamless with the surrounding landscape. A Landscape Strategy will be prepared as part of the detailed design during the development application stage and shall be cognisant of the Bushfire Regulations and the suggested landscape provisions of the O'Brien draft ODP. Water recycling and reuse for landscaping will be considered within the broader infrastructure strategy at this stage.

Whilst the Structure Plan accommodates the 15 metre vegetation buffer along the northern side of Monkey Mia Road, the requirements for this buffer shall be potentially reviewed in the future.

3.6 Built Form

The existing resort has a relaxed, coastal holiday beach shack design vernacular and this shall be continued and enhanced. An emphasis on traditional materials that are appropriate to environment, readily transportable, buildable and maintainable will be considered at the development application stage. Local materials such as shell grit and driftwood may be considered in the architectural and landscape themes. The existing materials selection and roofline design strategy are to be retained where practical. The Shark Bay World Heritage Committee's preferred colour schedule will be considered as part of the new structures at the development application stage of the project.

The proposed cabins shall be designed in accordance with the minimum prescriptive requirements of codes and standards typically considered mandatory for cyclonic regional and coastal built forms. This shall form the baseline design criteria for all modular units. Refer to Appendix H - Coastal Hazard Risk Management and Adaptation Plan for further information.

3.7 Resort Entrance

The main entry and exit to the MMDR is currently via the DPaW carpark. It is proposed to maintain this location but enhance the arrival experience by creating view corridors to the beach and potentially realigning the entry to create the start of a main street through the site. This also creates a main vista along the main street that could be bookended by sculptural elements. The entry will be well landscaped and signposted with easy access to reception which is located immediately adjacent the DPaW carpark turnoff into the resort.

3.8 Interface with Public Area and DPaW Carpark

The eastern boundary of the MMDR is located just to the east of the Boughshed restaurant, running between the restaurant and the DPaW Visitor's Centre further east. The distance is approximately 50m. The beach is to the north and the DPaW carpark to the east, with the potential for the resort reception and retail building to form an integral part of the new plaza. The interface land between is therefore partly within the Lot 130 lease and partly crown land. Initial discussions with DPaW to create an integrating landscape and a business and management plan for the retail, administrative and research functions have proved positive. The Concept Plan has therefore taken this into consideration.

3.9 Movement Network

A Traffic Impact Assessment has been prepared by Flyte to support the Structure Plan and associated Concept Plan. The key findings are outlined below.

Refer to Appendix I - Traffic Impact Assessment

3.9.1 Access

Existing vehicle access to the Monkey Mia Dolphin Resort is via the DPaW visitor centre car park access road. The car park access road is accessed from Monkey Mia Road, with entering vehicles having to pass through a DPaW toll booth to purchase a pass for entry into the Monkey Mia Reserve. Vehicles with a valid Monkey Mia Reserve pass can bypass the DPaW toll booth and enter the DPaW visitor centre car park access road a further 30m to the east along Monkey Mia Road.

Refer to Figure 13 - Existing Access (Source: PGA)

The existing access point from the visitor car park access road will be maintained, although the internal configuration will be modified. The legal vehicle access and egress between Lot 130 and Lot 131 (reserve 49144) is required to be formalised under the *Land Administration Act 1997*. There will be no change to the intersection between Monkey Mia Road and the visitor centre car park access road. A secondary access is proposed, directly connecting to Monkey Mia Road at a location approximately 140m to the west of the existing intersection between Monkey Mia Road and the visitor centre car park access road. The secondary access will be restricted to service vehicles and returning resort guests only (i.e. those who have already gone through the DPaW toll booth) and will be controlled via a boom gate. The boom gate will be located within the resort's land and not within the road reserve. This secondary access will allow resort guests and service vehicles to bypass queues which can form back from the DPaW checkpoint. This proposed access intersection will be located within the existing 60 kph section of Monkey Mia Road. A 500m long 80 kph speed zone commences 140m west of the proposed second access intersection. The standard of construction and design for access points onto Monkey Mia Road will be to the satisfaction of Main Roads WA.

3.9.2 Parking

The existing guest and staff parking is contained within the MMDR, with parking bays adjacent to the various accommodation types. There will be an expansion in the number of parking bays in accordance with the increased number of accommodation units and staff. All parking will be accommodated on-site, with parking bays adjacent to the various accommodation types.

3.9.3 Service Vehicles

Rubbish collection vehicles will access the redeveloped site via the secondary access. Emergency vehicles will access the redeveloped site via both the main and secondary access. Appropriate loading facilities will be located on site, accessed via either the main or secondary access points. Fuel tankers will access the service station resort through main access. The proposed design permits the tankers to turn around and exit via the main access or continue and exit via the secondary exit. The intersections of Monkey Mia Road with the visitor centre car park access road and the secondary access road will need to accommodate the turning movements of the fuel tankers.

3.9.4 Internal Road System

The predominant movement of people within the redeveloped resort will be on foot. The redevelopment proposes to include an expansion of the internal road network with an 8kph speed limit.

Dedicated pedestrian paths will remain to certain resort amenities, the beachfront and the DPaW visitor centre.

3.9.5 Projected Vehicle Movement and Safety

The redevelopment proposes to increase the existing accommodation units from 204 to an estimated 318 (subject to detailed design at the development application stage). This will be accompanied by additional guest facilities, however the facilities will largely contain trips on site and therefore the trips associated with the accommodation were factored to represent current usage.

The forecast two-way volume of traffic on this section of Monkey Mia Road is not anticipated to result in any design or congestion issues, with the most likely implication being platooning of vehicles behind slower moving vehicles (such as trucks, campervans or cars with caravans) or temporary waiting at the entry gate into the existing car park.

The volume of traffic associated with the development is unlikely to result in specific safety issues at the development site. Given the nature of the attraction and the access controls in place, some temporary queuing at the entry gate may result from platooning of vehicles along Monkey Mia Road at the busier times associated with dolphin feeding. In respect of outgoing vehicles, the secondary egress point allows for the splitting of vehicles exiting the site.

For the internal design of the development, it has been set out to accommodate the proposed development in a slow-speed and limited access design. The secondary access will be restricted to service vehicles and returning resort guests only (i.e. those who have already gone through the DPaW toll booth) and will be controlled via a boom gate. The internal road network shared space accommodates pedestrians and bicycles with a speed up to 8 kph as is typically the case with developments of this nature.

3.10 Infrastructure Coordination, Servicing and Staging

Head end infrastructure was completely replaced and upgraded in 2013. External Infrastructure (sewer, water power, gas) is owned and operated by the MMDR.

In order to provide reliable power, water and waste water services to the MMDR, the following upgrades to the infrastructure were undertaken in 2013:

- new potable water treatment plant;
- new waste water treatment plant;
- new power house and associated fuel storage;
- redevelopment of the existing water treatment plant, powerhouse and associated fuel storage.

The sewerage treatment plant and potable water plant require capacity upgrades. Water treatment for reuse in landscaping requires additional upgrades.

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Technical Studies Appendices Index

No.	Document Title	Nature of Document	Approval Status	Approval Agency
A	Certificated of Title	Information Only	N/A	N/A
B	BAL Assessment - Subject to future BMP at DA	Supporting Document	N/A	DFES, SSB, DPaW,
C	Construction Management Plan	Supporting Document	Yet to be Approved	SSB, DPaW
D	Drainage Management Plan	Supporting Document	Yet to be Approved	SSB, DoW
E	Nutrient & Irrigation Management Plan	Supporting Document	Yet to be Approved	SSB, DoW
F	Foreshore Management Plan	Supporting Document	Yet to be Approved	SSB, DPaW
G	Environmental Management System	Supporting Document	Yet to be Approved	SSB, DPaW
H	Coastal Hazard Risk Management and Adaptation Plan	Supporting Document	Yet to be Approved	SSB, WAPC
I	Traffic Impact Statement	Supporting Document	Yet to be Approved	Main Roads WA, SSB

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TECHNICAL APPENDIX

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Appendix A

Certificate of Title

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WESTERN



AUSTRALIA

REGISTER NUMBER 130/DP54332	
DUPLICATE EDITION N/A	DATE DUPLICATE ISSUED N/A

RECORD OF QUALIFIED CERTIFICATE

VOLUME
LR3144

FOLIO
942

OF

CROWN LAND TITLE

UNDER THE TRANSFER OF LAND ACT 1893
AND THE LAND ADMINISTRATION ACT 1997

NO DUPLICATE CREATED

The undermentioned land is Crown land in the name of the STATE of WESTERN AUSTRALIA, subject to the interests and Status Orders shown in the first schedule which are in turn subject to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 130 ON DEPOSITED PLAN 54332

**STATUS ORDER AND PRIMARY INTEREST HOLDER:
(FIRST SCHEDULE)**

STATUS ORDER/INTEREST: RESERVE UNDER MANAGEMENT ORDER

PRIMARY INTEREST HOLDER: SHIRE OF SHARK BAY OF POST OFFICE BOX 126, DENHAM
(XE H967578) REGISTERED 2 APRIL 2002

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)**

- K205178 RESERVE 40727 FOR THE PURPOSE OF TOURISM DEVELOPMENT REGISTERED 25.5.2007.
H967578 MANAGEMENT ORDER. CONTAINS CONDITIONS TO BE OBSERVED. WITH POWER TO LEASE FOR ANY TERM NOT EXCEEDING 99 YEARS, SUBJECT TO THE CONSENT OF THE MINISTER FOR LANDS. REGISTERED 2.4.2002.
- H967577 TAKING ORDER. THE DESIGNATED PURPOSE OF TOURIST DEVELOPMENT. AS TO PORTION ONLY. REGISTERED 21.12.2001.
- N051538 LEASE TO ASPEN MONKEY MIA PTY LTD OF LEVEL 3, 129 ST GEORGES TERRACE, PERTH EXPIRES: SEE LEASE. REGISTERED 12.8.2015.
N122539 TRANSFER OF LEASE N051538 , LESSEE NOW RAC TOURISM ASSETS PTY LTD OF 832 WELLINGTON STREET WEST PERTH REGISTERED 15.9.2015.

- Warning: (1) A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
Lot as described in the land description may be a lot or location.
- (2) The land and interests etc. shown hereon may be affected by interests etc. that can be, but are not, shown on the register.
- (3) The interests etc. shown hereon may have a different priority than shown.

-----END OF CERTIFICATE OF CROWN LAND TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land

END OF PAGE 1 - CONTINUED OVER

ORIGINAL CERTIFICATE OF CROWN LAND TITLE
QUALIFIED

REGISTER NUMBER: 130/DP54332

VOLUME/FOLIO: LR3144-942

PAGE 2

and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: DP54332.
PREVIOUS TITLE: LR3110-209, LR3144-936.
PROPERTY STREET ADDRESS: LOT 130 MONKEY MIA RD, MONKEY MIA.
LOCAL GOVERNMENT AREA: SHIRE OF SHARK BAY.
RESPONSIBLE AGENCY: DEPARTMENT OF LANDS (SLSD).

NOTE 1: A000001A CORRESPONDENCE FILE 02219-1998-02RO.



REGISTER NUMBER 501/DP55359	
DUPLICATE EDITION N/A	DATE DUPLICATE ISSUED N/A

VOLUME **LR3144** FOLIO **940**

**RECORD OF CERTIFICATE
OF
CROWN LAND TITLE
UNDER THE TRANSFER OF LAND ACT 1893
AND THE LAND ADMINISTRATION ACT 1997
NO DUPLICATE CREATED**

The undermentioned land is Crown land in the name of the STATE OF WESTERN AUSTRALIA, subject to the interests and Status Orders shown in the first schedule which are in turn subject to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 501 ON DEPOSITED PLAN 55359

**STATUS ORDER AND PRIMARY INTEREST HOLDER:
(FIRST SCHEDULE)**

STATUS ORDER/INTEREST: LEASEHOLD

PRIMARY INTEREST HOLDER: RAC TOURISM ASSETS PTY LTD OF 832 WELLINGTON STREET WEST PERTH
(TL N122541) REGISTERED 15/9/2015

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)**

- 1. N083157 LEASE. SUBJECT TO THE TERMS AND CONDITIONS AS SET OUT IN THE LEASE. REGISTERED 5/8/2015.
- N122541 TRANSFER OF LEASE N083157. REGISTERED 15/9/2015.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF CROWN LAND TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: DP55359
 PREVIOUS TITLE: LR3144-937
 PROPERTY STREET ADDRESS: NO STREET ADDRESS INFORMATION AVAILABLE.
 LOCAL GOVERNMENT AUTHORITY: SHIRE OF SHARK BAY
 RESPONSIBLE AGENCY: DEPARTMENT OF LANDS (SLSD)

NOTE 1: N083157 CORRESPONDENCE FILE 00932-1993-03RO

Appendix B

Bushfire Hazard Level Assessment and BAL Contour Map

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2.2 Existing fire environment

2.2.1 Vegetation

The development area and the surrounding land within 100 m of the proposed resort expansion currently consist of the following vegetation classes as depicted in Figure 2a:

- Class B woodland (Plate 1)
- Class D scrub (Plate 2; Plate 3; Plate 4)
- Class C shrubland (Plate 5; Plate 6; Plate 7)
- excluded vegetation as per clauses 2.2.3.2 (e) and (f) of AS 3959-2009 (Plate 8; Plate 9).

Vegetation within the proposed expansion area will be cleared/modified as part of the development. In addition, fuel reduction buffers will be incorporated around the boundaries of the development area to reduce bushfire risk. These low fuel buffers have been agreed to by adjacent landowners (Appendix 3) as identified below:

- North: Shire of Shark Bay and Department of Parks and Wildlife (DPaW)
- South: Main Roads Western Australia
- East: DPaW
- West: Shire of Shark Bay.

The fuel reduction buffers have been adopted based on DPaW advice and strategies adopted by DPaW for their own assets. The buffers will be 25m wide and consist of mulched vegetation to a height of 5cm and annual maintenance of same.

It is further noted that the resort is afforded significant practical bushfire protection by the surrounding land forms as follows;

- North: Beach & Shark Bay (water body)
- South: Dual lane highway and road verges (and 25m fuel reduction buffer)
- East: DPaW Visitor Centre Car Park (subject to DPaW agreed fuel reduction)
- West: 25 fuel reduction buffer (as described above).

A post-development vegetation class map is presented in Figure 2b. Vegetation within the expansion area and low fuel buffers will be maintained as non vegetated areas or Low Threat Vegetation as per clauses 2.2.3.2 (e) or (f) of AS 3959-2009.

2.2.2 Site topography and slope under vegetation

The following information (depicted in Figure 2a and Figure 2b) summarises the slope characteristics under the classified vegetation to inform the BAL assessment outlined in Section 2.4:

- Class C vegetation located northeast of the development area is situated 0-5 degrees downslope of the proposed resort extension
- all other vegetation is located on flat land or effectively upslope of the proposed resort extension.

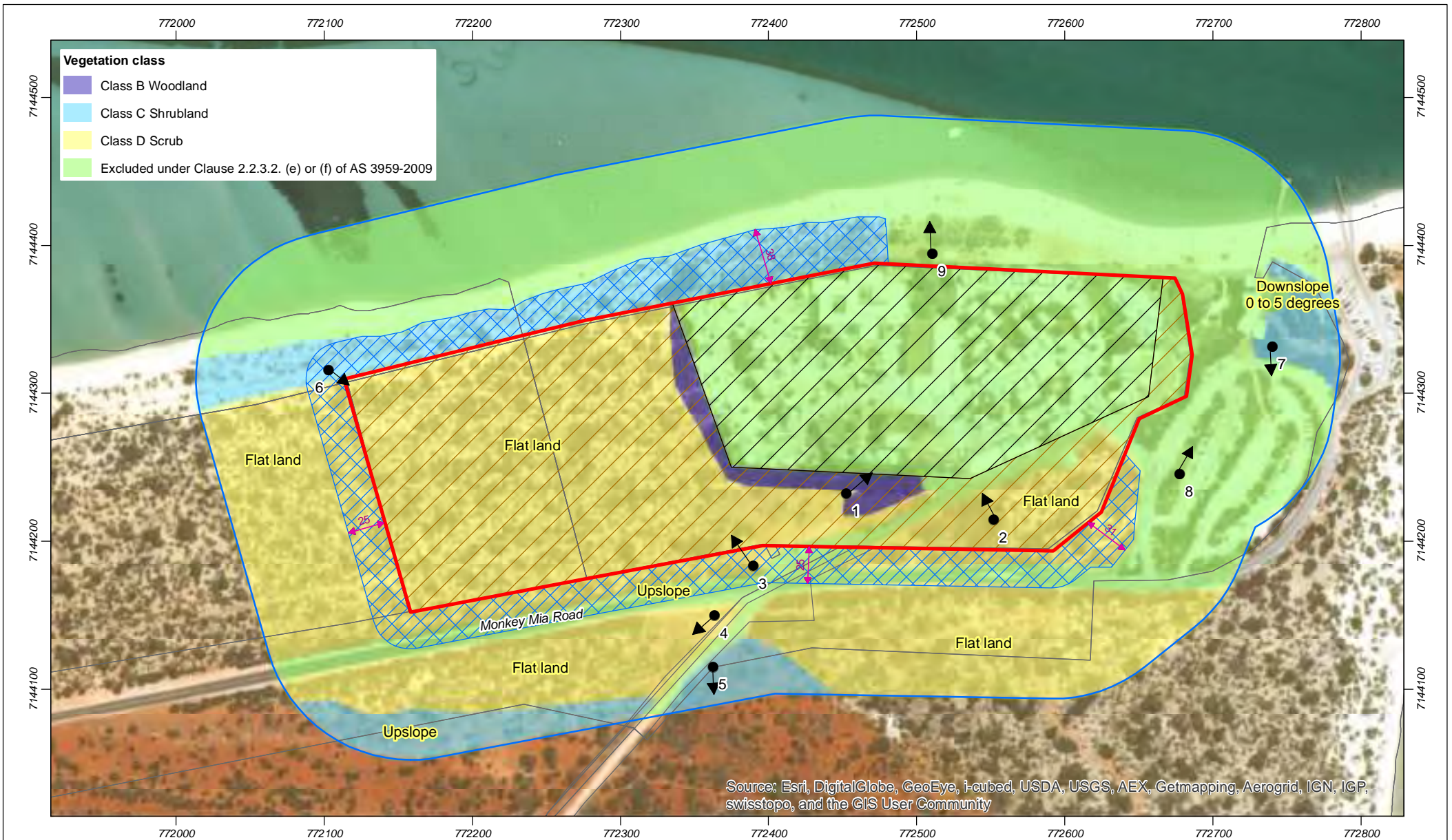


Figure 2a: Vegetation class (pre-development)

Scale 1:3,519 at A4

0 20 40 60 80 100 m

Coordinate System: GDA 1994 MGA Zone 49
 Note that positional errors may occur in some areas
 Date: 21/02/2017
 Author: DWhite
 Source: Aerial image: ESRI, approx. 2010; Existing cadastre: Client 02/2017

Legend

- Photo points and direction
- ↔ Fuel load buffer distance (m)
- Development area
- ▨ Low fuel buffer
- 100m wide assessment area
- ▨ Existing development area
- ▨ Existing cadastre
- ▨ Proposed expansion area



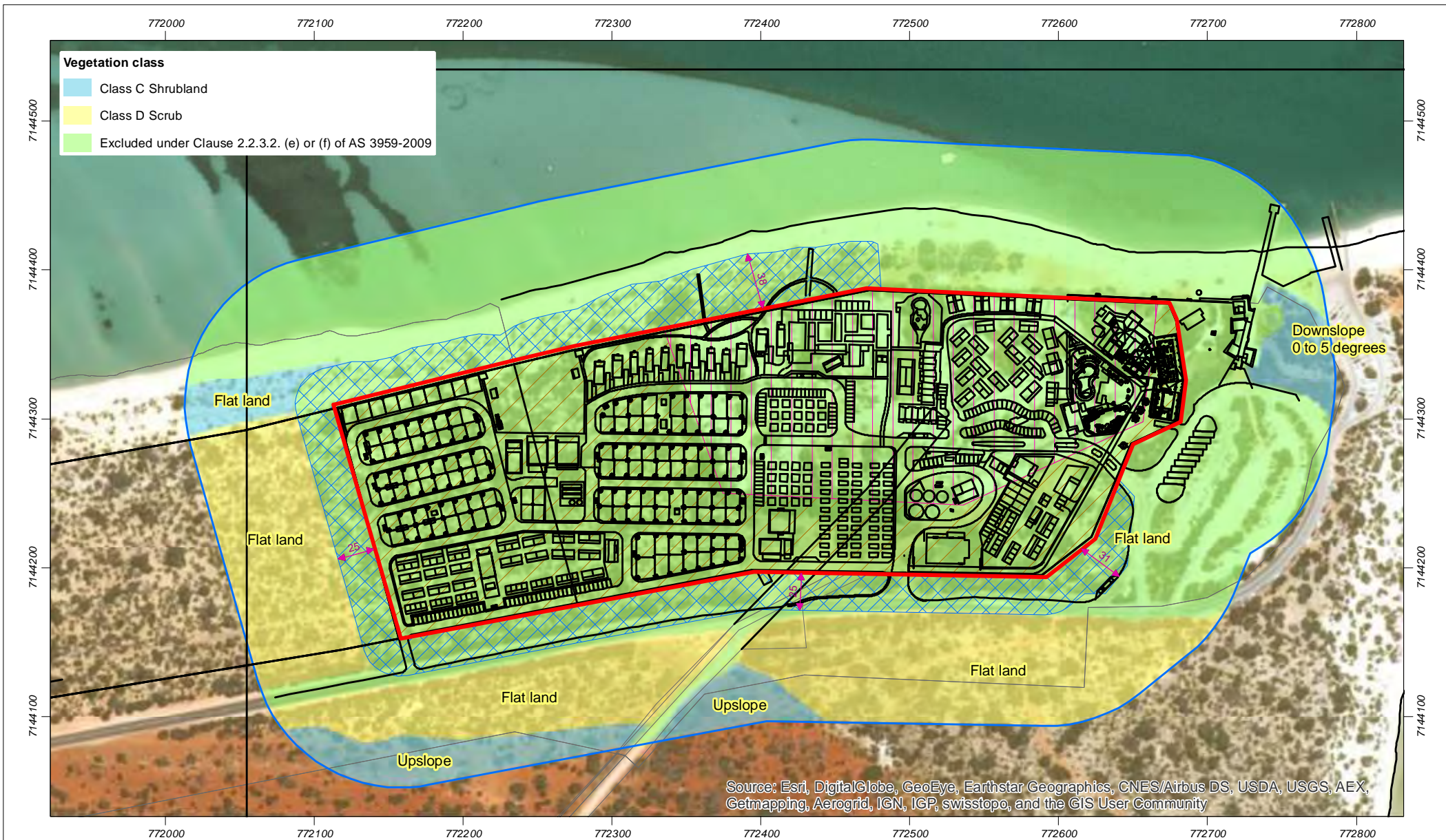
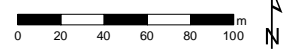


Figure 2b: Vegetation class (post-development)

Scale 1:3,500 at A4



Coordinate System: GDA 1994 MGA Zone 49
Note that positional errors may occur in some areas

Date: 21/06/2017

Author: DWhite

Source: Aerial image: ESRI, approx. 2010; Regional inset: SLIP database, Landgate 2017; Proposed layout & existing cadastre: Client 02/2017.

Path: Q:\Consult\2016\IRAC\IRAC 16323\ArcMap_documents\IR001\Rev 2\IRAC16323_01_R001_Rev2_F002b.mxd

Legend

- Fuel load buffer distance (m)
- Development area
- Proposed layout
- Low fuel buffer
- 100m wide assessment area
- Existing cadastre
- Existing development area
- Proposed expansion area





Plate 1: Class B woodland



Plate 2: Class D scrub (>2 m average height)



Plate 3: Class D scrub (>2 m average height)



Plate 4: Class D scrub (>2 m average height)



Plate 5: Class C shrubland (<2 m average height)



Plate 6: Class C shrubland (<2 m average height)



Plate 7: Class C shrubland (<2 m average height)



Plate 8: Excluded - Clause 2.2.3.2 (f) of AS 3959-2009



Plate 9: Excluded - Clause 2.2.3.2 (e) of AS 3959-2009

2.2.3 Bushfire weather conditions

Worst case bushfire weather condition

The Shark Bay region has a semi-arid climate with hot, dry summers and mild winters. December to January are generally subject to summer drought conditions, which is when the potential for bushfire occurrence is at its peak.

Worst case (adverse) bushfire weather conditions can occur during this dry period when a low pressure trough forms off the west coast and strong winds develop from the north or northeast. These conditions are sometimes associated with 'Extreme' or 'Catastrophic' fire dangers, which are consistent with very high temperatures, low relative humidity and very strong winds. Based on the predominant summer climatic conditions of the local area, 'Extreme' and 'Catastrophic' fire dangers normally occur less than 5% of the time during the designated bushfire season, which equates to around six days between December and March (McCaw & Hanstrum 2003).

Predominant bushfire weather conditions

Predominant fire weather conditions are considered to occur 95% of the time during the designated bush fire season and these conditions generally align with average summer climatic conditions of the locality.

Average 9:00 am and 3:00 pm January wind profiles for Shark Bay Airport are contained in Appendix 1. These illustrate that the predominant winds during the designated bush fire season are from the south in the morning averaging around 23.9 km/h; and from the southwest in the afternoon averaging around 30.5 km/h (BoM 2016).

The mean 9:00 am and 3:00 pm relative humidity for Shark Bay Airport during the designated bush fire season is around 57% and 43% respectively, with average monthly maximum temperatures peaking at around 35.1°C in February.

The predominant bushfire weather conditions discussed above correlate with an average fire danger index of 'High', as determined using the Commonwealth Science and Industrial Research Organisation (CSIRO) Fire Danger and Fire Spread Calculator (CSIRO 1999).

2.2.4 Bushfire history, fuel age, risk of ignition and potential ignition sources

Vegetation within and directly adjacent to the development area does not contain any evidence of recent bushfire occurrence. Consistent with this observation, advice from DPaW regional staff (Sercombe N [DPaW Midwest Regional Manager] 2017, pers. comm. 8 February) confirms that past prescribed burning attempts in the locality of Peron Peninsular (including Monkey Mia) have been unsuccessful due to the low combustibility of vegetation beyond areas dominated by Spinifex vegetation. Successful burns in the locality appear to be limited to those undertaken within pastoral lands in 1960s to 1970s when the area was subject to active grazing.

The majority of the vegetation in the development area and surrounds is comprised of shrubs, with minimal grass or herb species present in the understorey. Consequently, available fuel loads have been rated as moderate.

The risk of ignition pre-development was assessed as moderate-high throughout the development area due to the high levels of public access and visitation. The risk of ignition is not considered likely to increase post-development due to fuel reduction strategies surrounding the resort and within the resort including extensive landscaping of shell grit and maintained lawn once the resort is complete.

The potential sources of ignition in the area are expected to be from:

- deliberately lit fire (i.e. arson)
- lightning strike
- accidental causes, such as vehicle accidents and sparks from vehicle exhausts
- escapes from unauthorised camp fires, particularly throughout the broader fire environment and bushland reserves
- escapes from prescribed burns
- incorrect disposal of cigarettes.

2.2.5 Potential bushfire scenarios

Bushfire runs in land surrounding the development area have the potential to be extensive given the expanse of unbroken vegetation.

Based on the above, a bushfire has the potential to facilitate significantly elevated levels of radiant heat and ember attack if left unchecked.

Bushfire impacts are most likely to be received from the south in the morning and the southwest in the afternoon in association with the prevailing winds during the bushfire season. Monkey Mia Road and the proposed fuel reduced buffer to the south will assist with providing a low fuel defensible space in the event of a bushfire under these conditions.

2.2.6 Bushfire suppression response capability

The local volunteer bushfire brigade in Denham is expected to be able to respond to a bushfire within the development area within 60 minutes. The resort has its own bushfire fighting equipment including a 1,000-litre tank and pump on trailer which will be duplicated by project completion.

2.3 Bushfire hazard assessment

Strategen has mapped the bushfire hazard levels within 100 m of the proposed extension (refer to Figure 3a [pre-development] and Figure 3b [post-development]) on the basis of the vegetation classes identified in Section 2.2.1 and the slope under classified vegetation assessed in Section 2.2.2. The following bushfire hazard levels were assigned:

- Class B woodland vegetation: 'Extreme'
- Class D scrub vegetation: 'Extreme'
- Class C shrubland vegetation: 'Moderate'
- all land within 100 m of classified vegetation: 'Moderate'
- all other land: 'Low'.

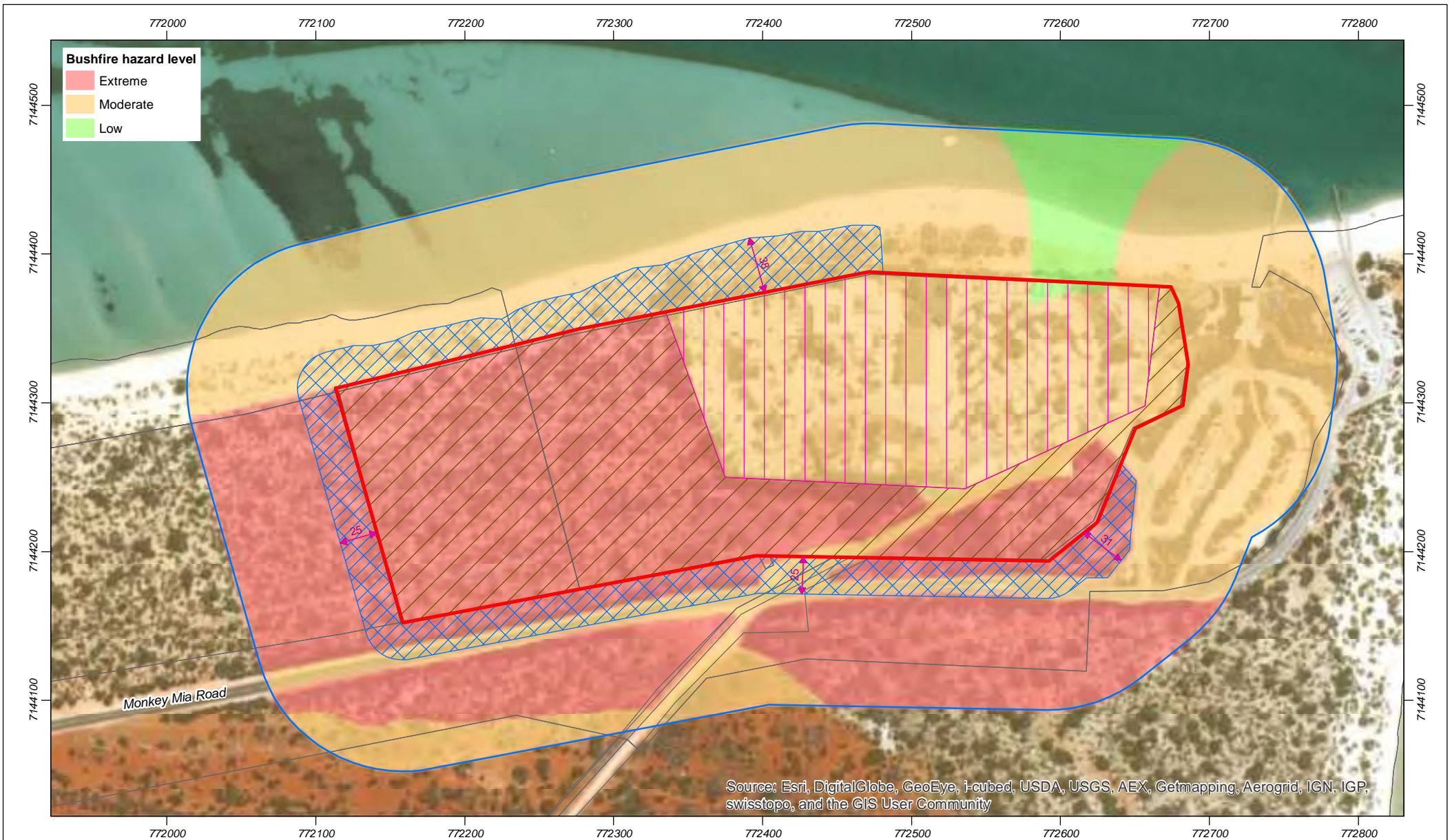
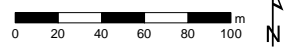


Figure 3a: Bushfire Hazard Level Assessment (pre-development)

Scale 1:3,500 at A4



Coordinate System: GDA 1994 MGA Zone 49
 Note that positional errors may occur in some areas
 Date: 21/02/2017
 Author: DWhite
 Source: Aerial image: ESRI, approx. 2010; Existing cadastre: Client 02/2017.

Legend

- Fuel load buffer distance (m)
- Development area
- Low fuel buffer
- 100m wide assessment area
- Existing development area
- Proposed expansion area
- Existing cadastre



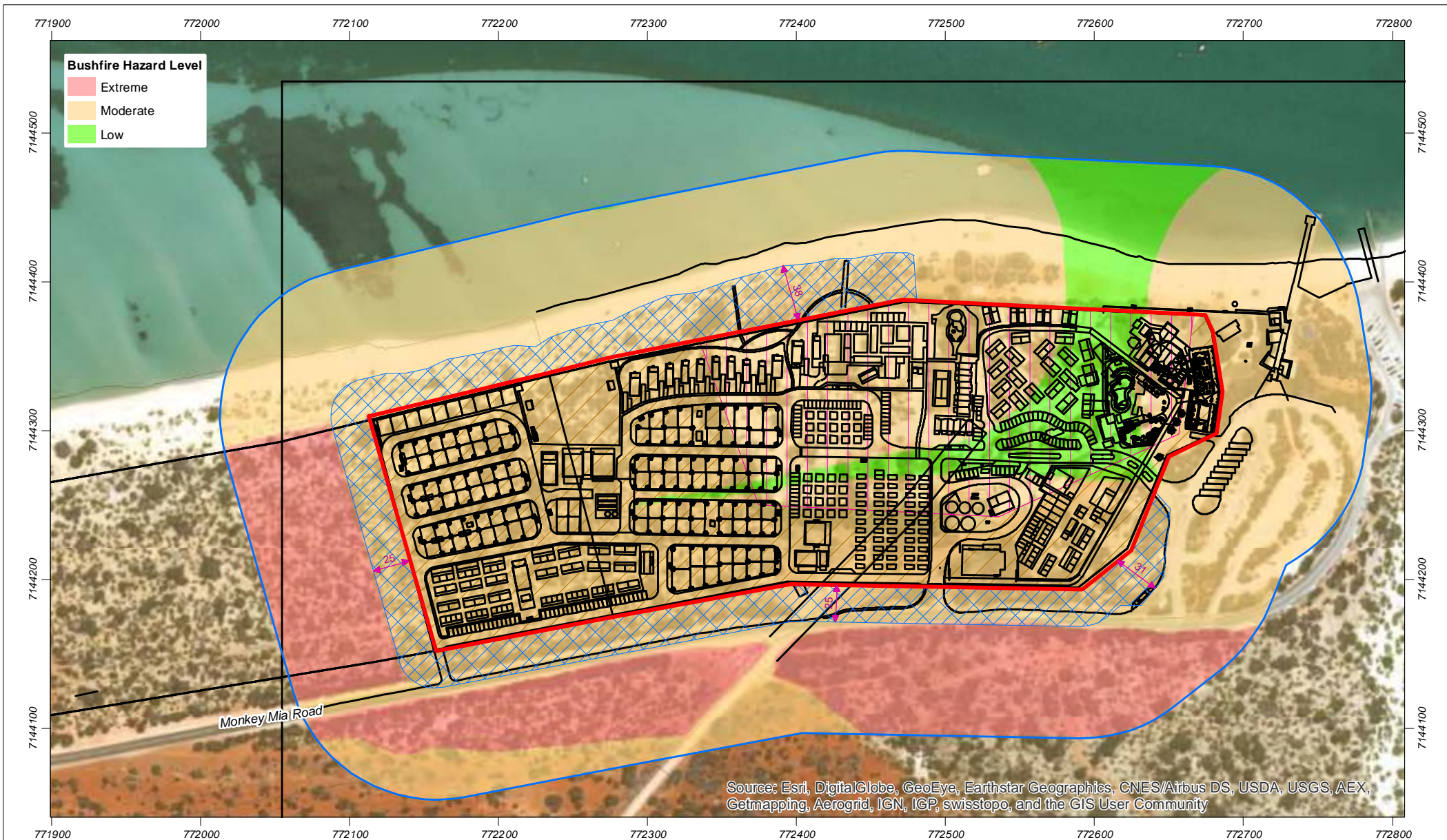
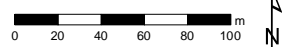


Figure 3b: Bushfire Hazard Level Assessment (post-development)

Scale 1:3,500 at A4



Coordinate System: GDA 1994 MGA Zone 49
Note that positional errors may occur in some areas

Date: 21/06/2017

Author: DWhite

Source: Aerial image: ESRI, approx. 2010; Existing cadastre and Proposed layout: Client 02/2017

Path: Q:\Consult\2016\IRAC\IRAC 16323\ArcMap_documents\IR001\Rev 2\IRAC16323_01_R001_Rev2_F003b.mxd

Legend

- Fuel load buffer distance (m)
- Development area
- Low fuel buffer
- 100m wide assessment area
- Proposed layout
- Existing development area
- Proposed expansion area
- Existing cadastre

2.4 BAL assessment

Classified vegetation assigned with a 'Moderate' or 'Extreme' bushfire hazard level is considered bushfire prone in accordance with methodology specified by Office of Bushfire Risk Management (OBRM). The bushfire prone extent assessed for this site is depicted by classified vegetation in Figure 2a (pre-development) and Figure 2b (post-development).

Any proposed development located within 100 m of the classified vegetation depicted in Figure 2b is subject to Bushfire Attack Level (BAL) assessment in accordance with Australian Standard *AS 3959–2009 Construction of Buildings in Bushfire-prone Areas* (SA 2009).

The Method 1 procedure for calculating the BAL (as outlined in AS 3959–2009) incorporates the following factors:

- state-adopted Fire Danger Index (FDI) rating
- vegetation class
- slope under classified vegetation
- distance maintained between proposed development areas and the classified vegetation.

Based on the specified BAL, construction/setback requirements for proposed buildings can then be assigned.

2.4.1 Fire Danger Index

A blanket rating of FDI 80 is adopted for Western Australian environments, as outlined in AS 3959–2009 and endorsed by Australasian Fire and Emergency Service Authorities Council.

2.4.2 Vegetation class

Vegetation class (post-development) is depicted in Figure 2b and consists of Class D scrub and Class C shrubland.

2.4.3 Slope under classified vegetation

Slope under classified vegetation is assessed in Section 2.2.2, with a summary provided as depicted in Figure 2b:

- Class C vegetation located northeast of the development area is situated 0-5 degrees downslope of the proposed resort extension
- all other vegetation is located on flat land or effectively upslope of the proposed resort extension.

2.4.4 Method 1 BAL calculation

A Method 1 BAL calculation has been completed for the proposed development in accordance with AS 3959–2009 following assessment of the abovementioned parameters (Table 1). The BAL rating gives an indication of the level of bushfire attack (i.e. the radiant heat flux) that may be received by the proposed building and subsequently informs the standard of building construction required for the building to withstand such impacts. BAL contours derived from the assessment are depicted in Figure 4 and show that all proposed buildings will be located in areas subject to a BAL rating of BAL 12.5 or lower.

Table 1: Method 1 BAL calculation (BAL contours)

BAL	Vegetation class	Slope under classified vegetation	Distance from classified vegetation
BAL FZ	Class C shrubland	Downslope 0-5 degrees	0-<7 m
		Upslope or flat land	0-<7 m
	Class D scrub		0-<10 m
BAL 40	Class C shrubland	Downslope 0-5 degrees	7-<10 m
		Upslope or flat land	7-<9 m
	Class D scrub		10-<13 m
BAL 29	Class C shrubland	Downslope 0-5 degrees	10-<15 m
		Upslope or flat land	9-<13 m
	Class D scrub		13-<19 m
BAL 19	Class C shrubland	Downslope 0-5 degrees	15-<22 m
		Upslope or flat land	13-<19 m
	Class D scrub		19-<27 m
BAL 12.5	Class C shrubland	Downslope 0-5 degrees	22-<100 m
		Upslope or flat land	19-<100 m
	Class D scrub		27-<100 m

The BAL contours are based on the vegetation class and effective slope assessed at the time of inspection and take into consideration the proposed clearing extent, resultant vegetation exclusions and separation distances achieved in line with the development plan. Should there be any changes in development design or vegetation/hazard extent that requires a modified bushfire management response, then the above BAL contours will need to be reassessed for the affected areas and documented in a brief addendum to this BMP prepared to accompany a future planning/development application.

3. Bushfire management measures

Strategen has identified a range of bushfire management measures that on implementation will enable the proposed tourist facility to be constructed whilst maintaining a manageable level of bushfire risk and compliance with the Guidelines. The bushfire management measures are depicted in Figure 4 (where applicable) and discussed in the following subsections.

3.1 Asset Protection Zone

The proposed resort extension will maintain an Asset Protection Zone (APZ) between classified vegetation and proposed buildings which will allow all proposed buildings and campsites to be located in areas subject to a BAL rating of BAL 12.5 or BAL-Low (Figure 4). These APZs will comprise of perimeter roads and setbacks within the development area itself, as well as low fuel buffers on adjacent lands which will be maintained by the resort owners in perpetuity (refer to Appendix 3 for landowner agreements).

All APZs will be maintained on a regular and ongoing basis as low threat vegetation as per clause 2.2.3.2 (f) of AS 3959-2009. Requirements under the Guidelines for APZs include:

- Fine Fuel Load: combustible dead vegetation matter less than 6 mm in thickness reduced to and maintained at an average of 2 t/ha
- Trees (> 5 m in height): lower branches should be removed to a height of 2 m above the ground, canopy cover should be less than 15% with tree canopies at maturity well spread to at least 5 m apart as to not form a continuous canopy
- Shrubs (0.5 m to 5 m in height): should not be located under trees, should not be planted in clumps greater than 5 m² in area, clumps of shrubs should be separated from each other by at least 10 m
- Groundcovers (<0.5 m in height): can be planted under trees but must be properly maintained to remove dead plant material and any parts within 2 m of a structure
- Grass: should be managed to maintain a height of 10 cm or less.

This meets the intent of the APZ specified in the Guidelines.

3.1.1 Low fuel buffers

The BAL contours depicted in Figure 4 are based on all proposed vegetation clearing being completed within and adjacent to the development area.

Low fuel buffers surrounding the development area will be maintained in perpetuity by RAC and will serve as an APZ to the development area itself. These buffers have been agreed to by all relevant landowners and will ensure that no buildings or campsites will be located in areas subject to BAL FZ and/or BAL 40 contours.

3.2 Increased building construction standards

Strategen has designated BAL requirements for the development area in accordance with AS 3959–2009. This has resulted in BAL 12.5 contours being applied to a number of buildings (and campsites) as depicted in Figure 4.

These BAL contours may be revised at future stages of planning to incorporate any changes in the surrounding fire environment or proposed development.

Campsites do not require construction to a BAL rating, and therefore are exempt from this management measure.

3.3 Vehicle access

The proposed vehicle access network will provide two access points to Monkey Mia Road to the south and east of the development area (Figure 4). One entry will be via the existing access point from the DPaW visitor car park to the east of the development area. The second access point will be a resort service vehicle access road that is connected to Monkey Mia Road approximately 140 m west of the existing intersection between Monkey Mia Road and the visitor centre car park access road. This access point will be controlled via a boom gate, which will consist of an unrestricted automated egress (exit) to be fixed open in the case of emergency.

Strategen acknowledges that Monkey Mia Road is the only road servicing the resort; however this is a legacy issue which cannot be controlled by the proponent and is similar to many Western Australian coastal settlements and gazetted towns. Notwithstanding this, Monkey Mia Road is constructed to a very high (highway) standard and will provide for safe ingress and egress for residents, visitors and emergency services. In addition, in the event of Monkey Mia Road being closed there is an alternative safe refuge available at the beach car park at the resort. Emergency evacuation is also available along the beach front which runs the full length of the property (north) boundary.

Up to three proposed additional access routes to Monkey Mia road are also currently being identified. At least one of these additional exits will be included and incorporated into the proposed layout of the development and included in the revised BMP and Bushfire Emergency Evacuation Plan that will be prepared to support the future Development Application for the project.

A perimeter road (fire service access route), complying with requirements detailed in Table 2, has also been included adjacent to the southern and western boundaries of the proposed extension to the resort which will allow fire service vehicles access to the interface between assets and bush, which currently does not exist.

Internal roads servicing the development area constitute a private driveway as per the Guidelines and will comply with requirements detailed in Table 2.

Table 2: Vehicular access requirements for private driveways

Technical requirements	Private driveway	Fire service access routes
Minimum trafficable surface	4 m	6 m*
Horizontal clearance	6 m	6 m
Vertical clearance	4.5 m	4.5 m
Maximum grade <50 m	1 in 10	1 in 10
Minimum weight capacity	15 tonnes	15 tonnes
Maximum crossfall	1 in 33	1 in 33
Curves minimum inner radius	8.5	8.5

Refer to E3.2 Public roads: Trafficable surface

3.4 Non-reticulated water supply

Water supply services will be extended to the proposed expansion from the existing resort and surrounding development. Water will initially be supplied to the proposed development expansion via a deep bore. Once the development is operational, water will provided to the resort in the form of Level 3 treated waste water as an output from the resort.

The 3 x 90 kl concrete and 2 x 150 kl colorbond tanks with an existing capacity of 480 kl exceeds the 50 kL water tank requirements of the Guidelines. These measures will result in provision of a reliable water supply including emergency use fire hydrants, hose reels and power supply in a non-reticulated area.

3.5 Additional measures

Strategen makes the following additional recommendations to inform ongoing planning stages of the development:

1. Compliance with the Shire of Shark Bay annual firebreak notice: Monkey Mia Dolphin Resort is to comply with the current Shire of Shark Bay annual firebreak notice (Appendix 2).
2. BMP addendum or revised BMP: this BMP and the BAL assessment contained within are considered sufficient to inform future planning and development stages such as subdivision application, development application and building construction. However, a BMP addendum or individual building BAL assessment may need to be prepared at a later date to demonstrate reassessment of the management measures documented in this BMP (such as the APZ and/or BALs) in response to further details or modifications to development design or changes to the vegetation extent currently affecting the site. Any addendum to this BMP or individual lot BAL assessment should be prepared to accompany the relevant planning or building permit application to the Shire.
3. Preparation of a bushfire emergency evacuation: A bushfire emergency evacuation plan will be prepared for the proposed development at the development application stage of planning as per Policy Measure 6.6 of SPP 3.7.

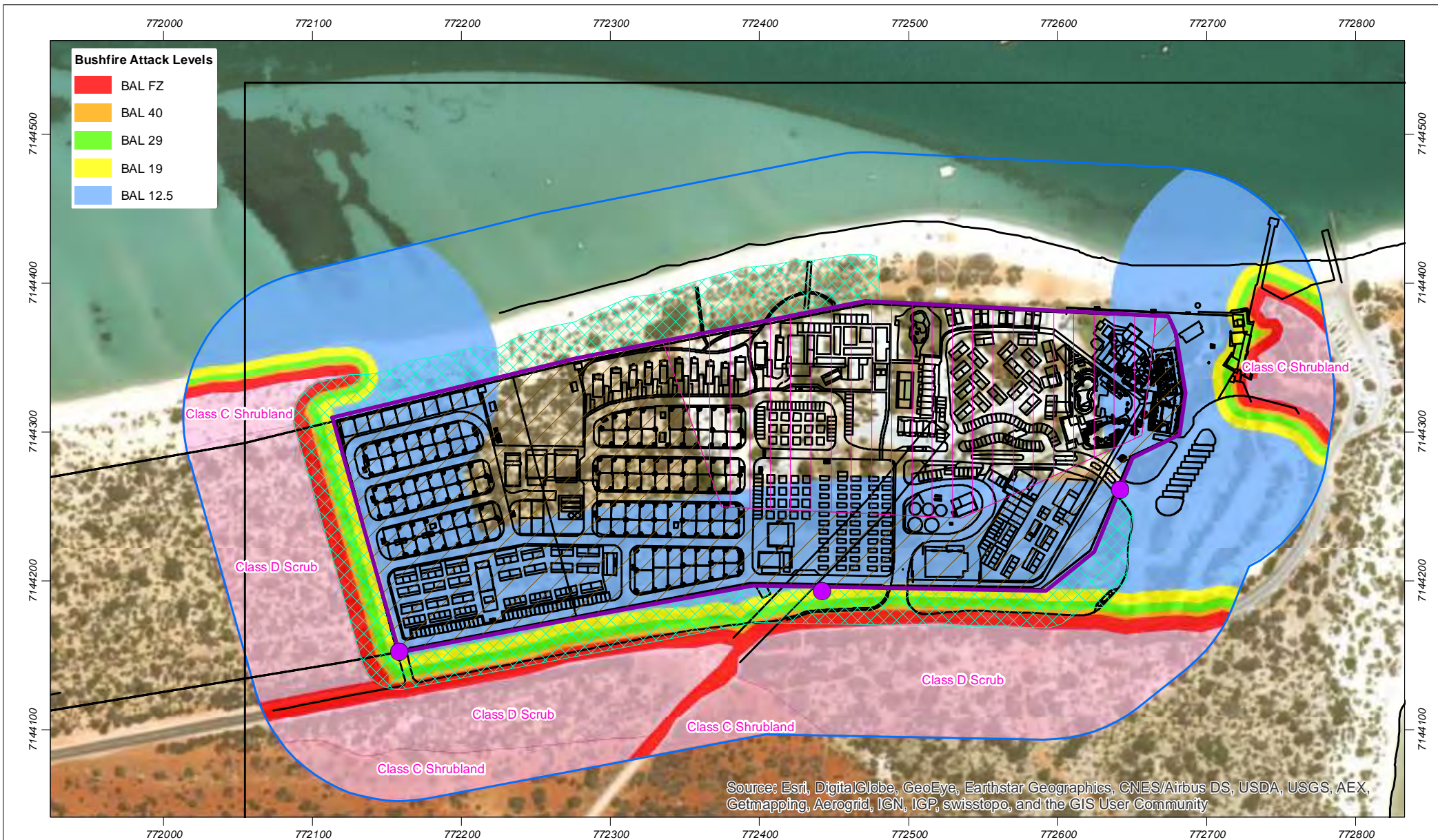
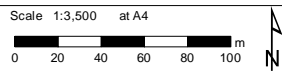


Figure 4: Bushfire Management Plan



Coordinate System: GDA 1994 MGA Zone 49
 Note that positional errors may occur in some areas
 Date: 21/06/2017
 Author: DWhite
 Source: Aerial image: ESRI, approx. 2010. Proposed layout & Existing cadastre: Client 02/2017.

- Legend**
- Access points
 - Existing development area
 - ▨ APZ (includes low fuel buffers on adjacent land)
 - 100m wide assessment area
 - Development area
 - ▨ Proposed expansion area
 - Proposed layout
 - Classified vegetation



Appendix C

Construction Management Plan

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Monkey Mia Dolphin Resort

Construction Management Plan

Prepared for
RAC Tourism Assets Pty Ltd
by Strategen

June 2016

Monkey Mia Dolphin Resort

Construction Management Plan

Strategen is a trading name of
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June 2016

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: RAC Tourism Assets Pty Ltd

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Draft Report	A	For client review	D White / A Welker, B Downe, D Goundrey	Electronic	15 April 2016
Final Draft Report	0	Draft for OEPA review	B Downe, A Welker/D Goundrey	Electronic	13 May 2016
Final Report	1	Stakeholder comment	B Downe, A Welker/D Goundrey	Electronic	23 June 2016

Filename: RAC16009_01 R004 Rev 1 - 23 June 2016

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Appendix 1 Risk-matrix
Appendix 2 Monkey Mia Dolphin Resort Vegetation and Traffic Plan, Shire of Shark Bay

1. Summary

This Construction Management Plan (CMP) is submitted in accordance with Ministerial Statement (MS) 709 condition 2-1 and commitment 2 & 3 of Schedule 2 for the Monkey Mia Dolphin Resort expansion (the Project) by RAC Tourism Assets Pty Ltd (RAC).

Table 1 below presents the environmental management targets to measure achievement of the conditioned environmental objective that must be met through implementation of this CMP.

Table 1: Environmental management targets

Required information	Response	
Title of proposal	Expansion of the Monkey Mia Dolphin Resort, Monkey Mia, Shark Bay.	
Proponent	RAC Tourism Assets Pty Ltd.	
Ministerial Statement number	709.	
Purpose of this Condition EMP	The Construction Management Plan is submitted to fulfil the requirements of condition 2-1 and commitment 2 and 3 of Schedule 2 of the above Statement.	
EPA's environmental objective for the key environmental factor	Environmental factor	EPA Environmental objective
	Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.
	Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.
	Factor 3 Terrestrial Fauna	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
	Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
Management targets	Environmental Factor	Management Target
	Factor 1 Terrestrial Environmental Quality	<ul style="list-style-type: none"> No unauthorised loss or degradation of vegetation outside the project areas. (T1.2). No uncontained refuse within the project area or in the surrounding environment. (T1.3).
		<ul style="list-style-type: none"> Maintain the amenity of the area and the health of the surrounding environment by minimising indirect impacts such as dust and noise from Project construction activities. (T2.1). Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2).
	Factor 3 Terrestrial Fauna	<ul style="list-style-type: none"> Protect fauna and its habitat by ensuring no unauthorised clearing or earthworks. (T3.1). No fauna mortality resulting from the Project construction activities. (T3.2).
		<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment (T4.1).

Corporate endorsement

I hereby certify that to the best of my knowledge, the Condition EMP provisions in within this Construction Management Plan are true and correct and address the legal requirements of condition 2-1 and commitment 2 & 3 Schedule 2 of Ministerial Statement No. 709.

[Signature of duly authorised proponent representative]

Name:

Signed:

Designation:

Date:

2. Context, scope and rationale

RAC owns and manages the current Monkey Mia Dolphin Resort located within a World Heritage area on a Shire of Shark Bay reserve. Approval under the *Environmental Protection Act 1986* (EP Act) to expand the resort was granted through issue of MS 709 on 28 December 2005.

As per MS 709, the expansion of the resort comprises the expansion of the existing resort area, the provision of staff accommodation facilities and an upgrade to the wastewater treatment plant (the Project, Figure 1). The Project commenced in 2013 with the upgrade to the wastewater treatment plant, which was subsequently completed in 2014.

This CMP forms a component of the Project Environmental Management System (EMS).

2.1 Scope

Condition 2-1 and commitment 2 & 3 in Schedule 2 of MS 709, requires the proponent to prepare a CMP to ensure construction activities are managed to minimise the potential impacts upon the surrounding environment and visual amenity.

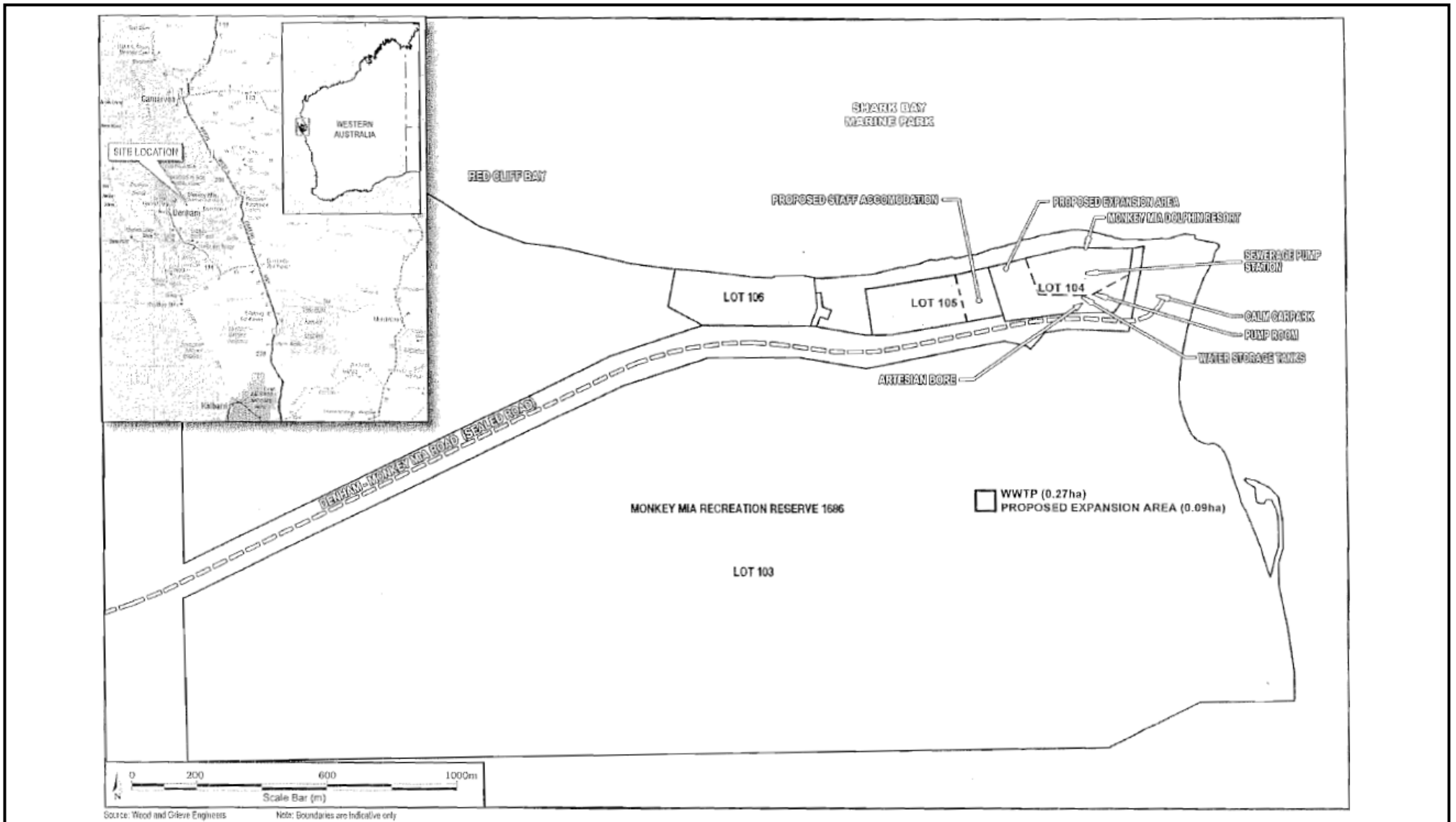
Given that the upgrade to the waste water treatment plant was completed in 2014, this CMP specifically refers to the management of construction activities associated with the resort expansion area and staff facilities (Figure 2). This CMP also addresses the requirements of the existing approved Monkey Mia Dolphin Resort Vegetation and Traffic Plan, Shire of Shark Bay (Appendix 2).

2.1.1 Key environmental factors

The environmental factors, EPA objectives and environmental aspects of the Project are provided in Table 2.

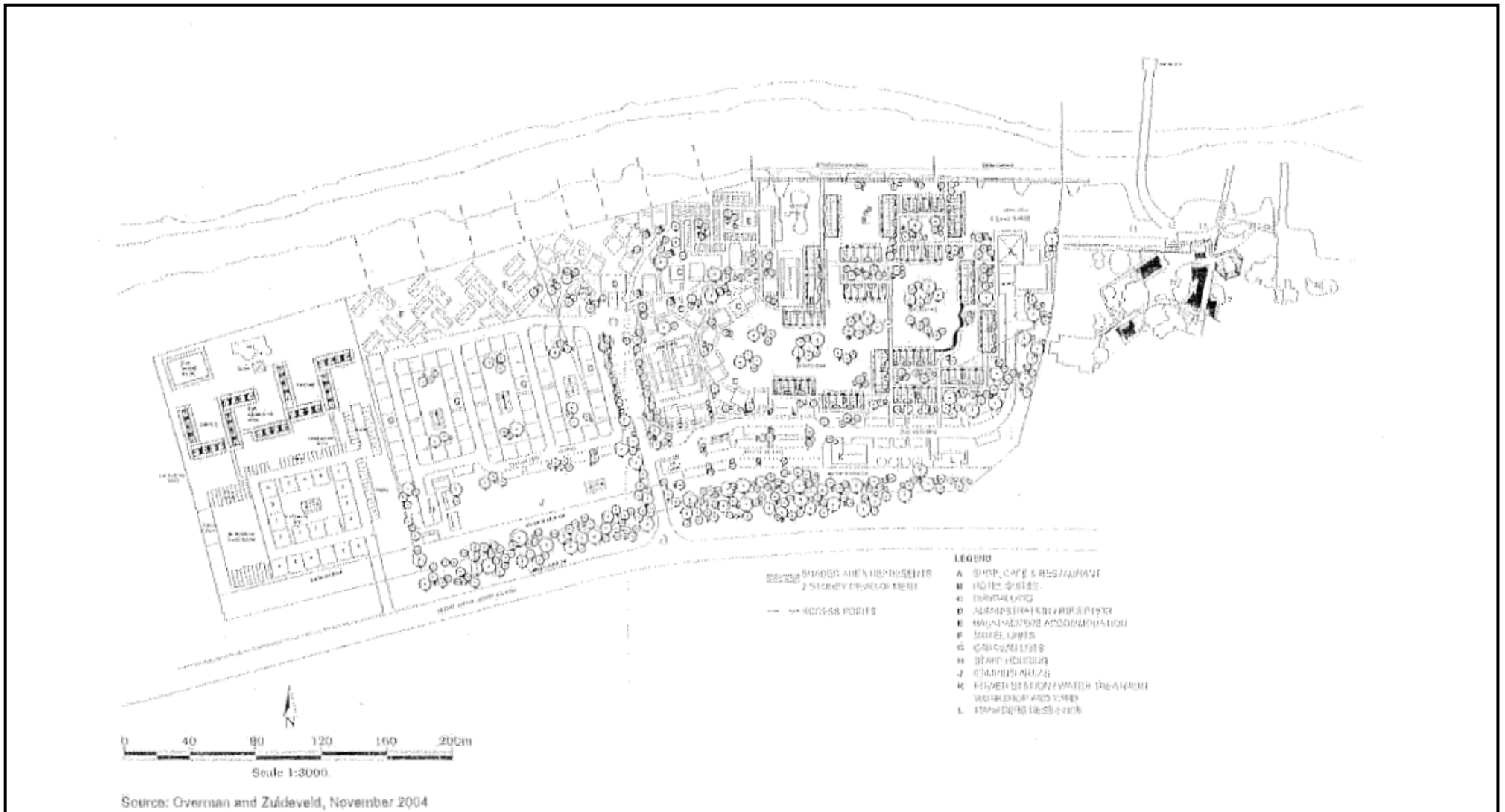
Table 2: Key environmental factors, objectives and Project environmental aspects

Factor	EPA objective	Environmental aspects of the Project
Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.	<ul style="list-style-type: none"> Clearing and earthwork activities have the potential to generate dust and noise which may adversely impact visual amenity and the surrounding environment Placement of storage facilities may adversely impact visual amenity and the surrounding environment
Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Earthwork activities may adversely impact the beach through waste generation and erosion.
Factor 3 Terrestrial Fauna	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.	<ul style="list-style-type: none"> Clearing and earthwork activities have the potential to fragment fauna habitat and cause fauna mortality.
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Uncontrolled stormwater drainage has the potential to impact flora through smothering from sediment transport Uncontrolled stormwater drainage has the potential to release potential contaminants from construction activities into the terrestrial environment.



Source: MS 709

Figure 1: Monkey Mia Dolphin Resort, noting expansion areas for the resort



Source: MS 709

Figure 2: Monkey Mia Dolphin Resort expansion area and staff facilities

2.2 Requirements of MS 709

This CMP is submitted in accordance with MS 709, in particular condition 2-1 and commitment 2 & 3 in Schedule 2. Table 3 details the requirements of these conditions and commitments, and also indicates which sections of this CMP they are addressed.

Table 3: Requirements of condition 2-1 and commitment 2 & 3 of Schedule 2 of MS 709

Condition	Requirement	Section in CMP
Condition 2-1	The proponent shall implement the environmental management commitments documented in schedule 2 of this statement.	CMP
Commitment 2 of Schedule 2	Prepare a Construction Management Plan, which will include:	
	(a) management of noise and dust impacts;	Section 3 and 3.3
	(b) minimising visual impacts;	Section 3 and 3.3
	(c) provision of fencing, appropriate storage facilities and locations; and	Section 3.1 and 3.3
	(d) containment of all earthworks to avoid affecting the beach.	Section 3 and 3.3
Commitment 3 of Schedule 2	Implement the Construction Management Plan.	Section 2 and 4

2.3 Rationale and approach

The general approach for managing any potential construction impacts is to develop a comprehensive management based program that identifies:

- management risks
- key management based targets
- management actions
- monitoring measures
- review and revision requirements.

An adaptive risk based management approach has been developed in order to create a robust management system, that prioritises and manages significant risks using the mitigation hierarchy (i.e. avoid, minimise, manage, rehabilitate and offset).

This management approach allows for flexibility, to enable the management program to adapt to any changes in the Project conditions, as well as to respond to the dynamic nature of the surrounding environment. The methodology for the risk-based approach is provided in Appendix 1.

2.3.1 Rationale for choice of management targets

The management targets in Table 5 were selected in order to prioritise the risks identified for the Project, and are based on a review of:

- available data for the region
- the relationship between the project aspects and the environmental factors
- industry standards and legislative requirements
- the requirements of MS 709.

3. Construction management

The objective of the CMP is to identify the management provisions that RAC proposes to implement to manage and minimise potential construction impacts to:

- meet the EPA's objectives for amenity and terrestrial environmental quality as described in Table 2
- meet the objective of the MS 709, which is to minimise the potential impacts of construction activities upon the surrounding environment and visual amenity.

3.1 Management actions

Risk-based management actions have been identified and prioritised in Table 4 based on the methodology provided in Appendix 1.

These management actions focus on Project construction activities that have the highest likelihood of causing environmental impact, and were specifically developed to reduce potential impacts of construction activities on the surrounding environment and visual amenity.

Table 4: Risk-based management actions

Risk and key impacts	CEMP Management action reference	Management actions	Relevant Management Target	Risk-based priority	Timing
Earthwork, operations and vehicle movements may generate dust that can affect visual amenity and the surrounding environment	CEMP 1.	Undertake dust training as part of the Project site induction, which should include: <ul style="list-style-type: none"> • information on the potential for construction activities to cause dust • information on the effects of dust on the environment and visual amenity • details of designated roads and access tracks • procedures for dust suppression. 	T2.1	Medium	Prior to personnel commencing work on site
	CEMP 2.	Avoid dust generating activities during unfavourable weather conditions (e.g. high wind speed) and unfavourable wind directions relative to sensitive areas, where practicable.	T2.1	Medium	During construction
	CEMP 3.	Implement dust suppression (e.g. water spray/wet down of unsealed tracks/stockpiles) if high levels of dust is observed or considered likely.	T2.1	Medium	During construction
	CEMP 4.	Minimise cleared surfaces to only that which is required for construction activities.	T2.2	Medium	During construction
	CEMP 5.	Schedule vegetation clearing to occur immediately before planned earthworks to minimise potential for dust, where practicable.	T2.1	Medium	During construction
	CEMP 6.	Stabilise cleared areas and any dry, dust-prone areas or stockpiles to prevent dust lift off.	T2.1	Medium	During construction
	CEMP 7.	Ensure disturbed areas not required for operation are revegetated as soon as possible.	T2.2	Medium	During construction
	CEMP 8.	Restrict site access to designated roads, access tracks and construction areas.	T2.1	Medium	During construction
	CEMP 9.	Establish and enforce vehicle speed limits for unsealed areas with an objective to minimise dust generation.	T2.1	Medium	During construction
	CEMP 10.	Inform the public of the construction activities including timing and hours of work.	T2.2	Medium	During construction
	CEMP 11.	Maintain a public complaint register and develop appropriate responses to any dust complaints received.	T2.1	Medium	During construction
Earthwork, operations and vehicle movements generate noise that affects visual amenity and the surrounding environment	CEMP 12.	Undertake noise training as part of the Project site induction, which should include: <ul style="list-style-type: none"> • information on the potential for construction activities to cause noise • information on the effects of noise on the environment and visual amenity • details of designated roads and access tracks • procedures for noise management. 	T2.1	Medium	Prior to personnel commencing work on site
	CEMP 13.	Undertake all construction activities between the hours of 7 am and 7 pm Monday to Saturday, excluding public holidays.	T2.1	Medium	During construction
	CEMP 14.	Avoid construction activities adjacent to occupied residences, where possible.	T2.1	Medium	During construction

Risk and key impacts	CEMP Management action reference	Management actions	Relevant Management Target	Risk-based priority	Timing
	CEMP 15.	If construction activities are proposed to occur adjacent to occupied residences install noise barriers during construction activities, if high noise levels are considered likely.	T2.1	Medium	During construction
	CEMP 16.	Maintain a public complaint register and develop appropriate responses to any complaints received.	T2.1	Medium	During construction
Unauthorised earthworks and incorrect placement of infrastructure leading to disturbance of the foreshore	CEMP 17.	Demarcate the Project boundary prior to the commencement of construction.	T1.2	High	Prior to construction
	CEMP 18.	Ensure the total area cleared associated with the resort expansion area, does not exceed 3.1 ha of white coastal sandplain vegetation.	T1.2	High	Prior to clearing
	CEMP 19.	Ensure the total area cleared associated with the staff accommodation facilities, does not exceed 2.3 ha of white coastal sandplain vegetation.	T1.2	High	Prior to clearing
	CEMP 20.	Install signage and fences to restrict access into the Project area and to formalise the approved construction area.	T1.2	High	During construction
	CEMP 21.	Ensure all earthworks are contained within a fenced boundary.	T1.2	High	During construction
	CEMP 22.	Ensure storage facilities are appropriately banded.	T4.1	Medium	During construction
Site operations and activities are likely to generate waste which may affect the beach and foreshore if not appropriately disposed of	CEMP 23.	Undertake waste training as part of site inductions, including information on: <ul style="list-style-type: none"> waste management procedures and practices appropriate disposal of waste location and types of waste disposal facilities. 	T1.3	Low	Prior to commencing work on site
	CEMP 24.	Ensure clearly labelled waste disposal facilities are located around the Project area for waste disposal.	T1.3	Low	Prior to commencing work on site
	CEMP 25.	Ensure waste collected within the Project area is disposed of appropriately.	T1.3	Low	Prior to commencing work on site
Clearing and earthwork activities has the potential to fragment fauna habitat and cause fauna mortality	CEMP 26.	Clearly demarcate areas of habitat proposed to be cleared.	T3.1	High	Prior to clearing
	CEMP 27.	Establish a buffer area (approximately 600 m in length and minimum 15 m wide) containing <i>Acacia</i> sp. along the southern side of the Denham-Monkey Mia Road.	T3.1	High	Prior to clearing
	CEMP 28.	Retain additional areas of white coastal sandplain vegetation, where practicable.	T3.1	High	Prior to clearing
	CEMP 29.	Seek endorsement of the areas of retained vegetation, including the buffer area, from the Minister for the Environment on advice of the Environmental Protection Authority.	T3.1	High	Prior to clearing
	CEMP 30.	Undertake a Thick-billed Grasswren survey during their nesting season (July to September) for any development stage proposed to be cleared within the next 12 months.	T3.2	High	12 months prior to clearing development stage

Risk and key impacts	CEMP Management action reference	Management actions	Relevant Management Target	Risk-based priority	Timing
	CEMP 31.	If Thick-billed Grasswrens breeding activity is identified during the survey implement contingency actions as listed in Table 7.	T3.2	High	Prior to clearing
	CEMP 32.	Enforce a maximum speed limit within the Project area of 40 km/hr to minimise collisions with native fauna.	T3.2	Medium	During construction
	CEMP 33.	Install fauna warning signage on roads close to significant fauna habitats in line with the Shire of Shark Bay signage policy.	T3.1	Medium	During construction
Uncontrolled stormwater drainage has the potential to impact marine flora through smothering from sediment transport.	CEMP 34.	Direct water flows away from cleared areas and stockpiles.	T4.1	High	During construction
	CEMP 35.	Incorporate sediment traps designed to remove silt and withstand at least a 2 year ARI event.	T4.1	High	During construction
Uncontrolled stormwater drainage has the potential to release potential contaminants from construction activities into the marine environment	CEMP 36.	Allow for the treatment of hardstand runoff water in interceptors to remove oil and contaminants, where necessary.	T4.1	High	During construction
	CEMP 37.	Reduce stormwater discharge by containing runoff from bulk earthworks in storage ponds and dams, where possible.	T4.1	High	During construction
	CEMP 38.	Re-use stormwater runoff, where applicable, as dust suppression and road watering.	T4.1	Low	During construction
	CEMP 39.	Revise the 'Cyclone Management Plan' to include protocols to reduce the stormwater impacts from cyclonic rainfall. Protocols will include inspections of the stormwater containment system and the Project area to prevent discharge to the foreshore/marine environment.	T4.1	Medium	During construction

3.2 Management target

Management targets have been developed to measure and report against the relevant EPA environmental objective (Table 5).

Table 5: Management targets

Environmental factor	EPA Environmental objective	Management targets (Unique identifier)
Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.	<ul style="list-style-type: none"> No unauthorised loss or degradation of vegetation outside the project areas. (T1.2) No uncontained refuse within the project area or in the surrounding environment. (T1.3)
Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Maintain the amenity of the area and the health of the surrounding environment by minimising indirect impacts such as dust and noise from Project construction activities. (T2.1) Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2)
Factor 3 Terrestrial Fauna	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.	<ul style="list-style-type: none"> Protect fauna and its habitat by ensuring no unauthorised clearing or earthworks. (T3.1) No fauna mortality resulting from the Project construction activities. (T3.2)
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment. (T4.1)

3.3 Monitoring program

The purpose of monitoring program is to inform, through the management targets, if the environmental objective is being achieved, as well as to determine if management actions need to be reviewed and revised.

Table 6 outlines the monitoring program proposed to be undertaken by RAC.

Table 6: Monitoring program to achieve management targets

CEMP Monitoring action	Monitoring Indicator	Parameter	Monitoring method	Frequency	Location	CEMP action cross reference	Relevant Management Target
CEMP M1.	No public complaints relating to dust or noise	Complaints register	Review of the complaints register	Daily	Project area	CEMP2 CEMP10 CEMP11 CEMP13 CEMP14 CEMP15 CEMP16	T2.1
CEMP M2.	No observations of excessive dust observed during site inspections	Dust	Site inspection	Weekly during clearing and earthwork activities	Within the Project area and surrounding environment	CEMP3	T2.1
CEMP M3.	Completed induction register and induction material which includes dust and noise management procedures	Induction register and induction material	Review of the induction register and material	Monthly	Project area	CEMP1 CEMP12	T2.1
CEMP M4.	Rehabilitation of disturbed areas occurs as soon as is practicable	Cleared areas	Site inspection	Weekly	Project area	CEMP7	T2.2
CEMP M5.	Clearing and earthwork boundaries are adequately demarcated	Clearing and earthwork boundaries	Site inspection	Weekly	Project area	CEMP17	T1.2
CEMP M6.	Fencing is in adequate condition	Integrity of fencing	Site inspection	Weekly	Project area	CEMP20	T1.2
CEMP M7.	No earthworks or clearing activities are undertaken outside of the Project area	Earthworks and operations	Site inspection	Weekly	Project area	CEMP17 CEMP21	T1.2 T2.1
CEMP M8.	No incorrect disposal of waste	Waste	Site inspection	Weekly	Project area	CEMP23 CEMP25	T1.3
CEMP M9.	No reports of fauna encounters/ collisions	Fauna	Review of native fauna death records	As required	Project area	CEMP32	T3.2

CEMP Monitoring action	Monitoring Indicator	Parameter	Monitoring method	Frequency	Location	CEMP action cross reference	Relevant Management Target
CEMP M10.	Successful delineation of buffer area and retained local native vegetation	Demarcation of buffer area and local native vegetation	Site inspection of fencing and signage	Weekly	Project area	CEMP27	T3.1
CEMP M11.	No clearing of Thick-billed Grasswrens breeding activity	Thick-billed Grasswrens breeding	Review of survey report and clearing records.	Annually during construction	Project area	CEMP31	T3.1
CEMP M12.	Inspections of the stormwater system demonstrates that sediment and debris is not present	Sediment	Visual assessment	Monthly during construction	Stormwater system manholes/pits	CEMP34 CEMP35	T4.1
CEMP M13.	Inspections of chemical and fuel storage areas demonstrate that no spills/leaks have occurred	Contaminants	Visual assessment	Weekly during construction	Chemical and fuel storage areas	CEMP36	T4.1

4. Review and revision of management actions

In the event that management targets are not met, RAC will investigate the potential cause and any potential impacts that may have resulted. If the management targets are not met, and it is deemed to be the result of the project, the corrective actions detailed in Table 7 will be implemented.

Table 7: Corrective actions for management targets

CEMP corrective action	Performance indicator	Action	Responsibility	CEMP monitoring action reference	Relevant Management Target
CEMP CA1.	Public complaints received regarding the level of dust and/or noise from the project area	<ol style="list-style-type: none"> 1. Investigate cause. 2. Ensure dust and noise control measures are being implemented and are appropriate. 3. Implement appropriate control to reduce or rectify impact. 4. Where required, re-educate personnel on the importance of dust and noise management. 5. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM1	T2.1
CEMP CA2.	Excessive dust observed during site inspections	<ol style="list-style-type: none"> 1. Investigate cause. 2. Ensure dust control measures are being implemented and are appropriate. 3. Implement appropriate control to reduce or rectify impact. 4. Where required, re-educate personnel on the importance of dust management. 5. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM2	T2.1
CEMP CA3.	Inductions are not being undertaken and/or do not include appropriate induction material.	<ol style="list-style-type: none"> 1. Investigate cause. 2. Undertake induction of relevant personnel. 3. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM3	T2.1 T1.3
CEMP CA4.	Cleared areas have not been rehabilitated as soon as is practicable	<ol style="list-style-type: none"> 1. Investigate cause. 2. Undertake rehabilitation as soon as possible. 3. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM4	T2.2

CEMP corrective action	Performance indicator	Action	Responsibility	CEMP monitoring action reference	Relevant Management Target
CEMP CA5.	Clearing and earthwork boundaries are not demarcated and/or fenced	<ol style="list-style-type: none"> 1. Investigate cause. 2. Immediately stop ground disturbance activities. 3. Demarcate and /or fence appropriate boundaries as soon as possible. 4. Re-educate personnel on the importance of demarcation and/or fencing. 5. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM5 CEMPM6	T1.2
CEMP CA6.	Unauthorised clearing or earthworks have been undertaken	<ol style="list-style-type: none"> 1. Immediately stop ground disturbance activities. 2. Investigate cause. 3. Implement appropriate control to reduce or rectify impact including conducting rehabilitation as soon as possible. 4. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM7	T1.2
CEMP CA7.	Excessive vehicle collisions with native fauna (more than one collision per month)	<ol style="list-style-type: none"> 1. Investigate cause. 2. Undertake intervention or remediation works (e.g. further reduce speed limit, educate workforce). 3. Monitor success. 4. Revise and update risk assessment and management actions where applicable. 	Construction contractor	CEMPM9	T3.2
CEMP CA8.	Active Thick-billed Grasswren nesting is observed in stages proposed to be cleared	<ol style="list-style-type: none"> 1. Mark the area with temporary bunting and signage. 2. Report nesting locations to RAC. 3. Install temporary bunting and signage to provide a buffer around the nesting locations. 4. Retain the nesting location during the nesting season. 5. Re-inspect the nesting locations at the end of nesting season to confirm all birds have vacated the nest. 5. Report the status of nesting burrows to the RAC and suitability for clearing. 	Fauna specialist and Construction contractor	CEMPM11	T3.1
CEMP CA9.	Sediment and/or debris present in the stormwater system	<ol style="list-style-type: none"> 1. Investigate cause and determine source. 2. Remove sediment/debris. 3. Continue monitoring. 	Construction contractor	CEMPM12	T4.1

CEMP corrective action	Performance indicator	Action	Responsibility	CEMP monitoring action reference	Relevant Management Target
CEMP CA10.	Spills and/or loss of containment has occurred at the chemical/fuel storage area	<ol style="list-style-type: none"> 1. Investigate cause. 2. Report spill to DPaW, DER and Shire of Shark Bay. 3. Immediately cleanup and undertake remediation. 4. Review procedures and undertake further training of staff. 5. Continue monitoring. 	Construction contractor	CEMPM13	T4.1

4.1 Reporting provisions

The performance of the CMP will be assessed annually against the management targets in Table 5, and will be reported on as part of the Compliance Assessment Report (CAR). The CMP reporting template is presented in Table 8.

4.1.1 Reporting on exceedance of the management target

In the event that management targets are not met during the reporting period, a written report will be included in the CAR detailing the corrective actions that were undertaken, and the effectiveness of the corrective actions to rectify any potential impacts.

Table 8: Environmental management plan reporting table

Condition environmental objective and management target set in the Condition EMP		Reporting on the management objective and management target	Status ¹
Key EPA environmental factors: Terrestrial environmental quality, Amenity, Terrestrial fauna, Inland waters environmental quality and Marine environmental quality			
EPA objective	Management target		
Factor 1 Terrestrial Environmental Quality To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.	<ul style="list-style-type: none"> No unauthorised loss or degradation of vegetation outside the project areas. (T1.2). 	<ul style="list-style-type: none"> No unauthorised loss or degradation of vegetation is outside the project area. 	<ul style="list-style-type: none"> ■ YES or ● No
	<ul style="list-style-type: none"> No uncontained refuse within the project area or in the surrounding environment. (T1.3). 	<ul style="list-style-type: none"> No uncontained refuse was within the project area or in the surrounding environment. 	<ul style="list-style-type: none"> ■ YES or ● NO
Factor 2 Amenity To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Maintain the amenity of the area and the health of the surrounding environment by minimising indirect impacts such as dust and noise from Project construction activities. (T2.1). 	<ul style="list-style-type: none"> The amenity of the area and health of the surrounding environment was minimised and maintained. 	<ul style="list-style-type: none"> ■ YES or ● NO
	<ul style="list-style-type: none"> Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2). 	<ul style="list-style-type: none"> The amenity and surrounding environment was protected. 	<ul style="list-style-type: none"> ■ YES or ● No
Factor 3 Terrestrial Fauna To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.	<ul style="list-style-type: none"> Protect fauna and its habitat by ensuring no unauthorised clearing or earthworks. (T3.1). 	<ul style="list-style-type: none"> Fauna and its habitat was protected. 	<ul style="list-style-type: none"> ■ YES or ● NO
	<ul style="list-style-type: none"> No fauna mortality resulting from the Project construction activities. (T3.2). 	<ul style="list-style-type: none"> No fauna mortality resulted from the Project construction activities. 	<ul style="list-style-type: none"> ■ YES or ● NO
Factor 4 Inland Waters Environmental Quality To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment (T4.1). 	<ul style="list-style-type: none"> Sediment from the Project area was prevented from entering the ground and surface water environment. 	<ul style="list-style-type: none"> ■ YES or ● No

¹Notes: The status of achievement of the condition environmental objectives is indicated by the following symbols:

- Condition environmental objective achieved
- Condition environmental objective not achieved

5. Adaptive management

RAC will implement an adaptive management system to provide a robust management plan, which effectively meets the environmental objectives. To achieve this, the CMP will be reviewed on an annual basis to ensure that the plan takes into consideration amendments to operations, monitoring results, audits, continuous improvement and changes in regulatory and corporate requirements. If revised, a copy of the revised CMP will be provided to the OEPA as part of the CAR.

6. Stakeholder consultation

Consistent with the EPA's expectations for this CMP, RAC consulted with a number of stakeholders during the development of the plan.

This section provides a summary of consultation that occurred and key comments received from each stakeholder (Table 9).

Table 9: Stakeholders consulted, comments and responses

Organisation(s)	Comments	RAC response to comments/concerns
Xx To be updated once consultation finalized xx		

7. References

RPS Bowman Bishaw Gorham (RPS) 2004, *Expansion of Monkey Mia Dolphin Resort Public Environmental Review (EPA Assessment Number 1455)*, report prepared for Monkey Mia Dolphin Resort Pty Ltd, Perth, June 2004.

Appendix 1
Risk-matrix

Risk-based priority

A risk assessment determines whether a hazard could harm the environment. The following stages are undertaken once an environmental hazard has been identified

- Stage 1: Risk identification to identify and document environmental risks and impacts associated with the organisation activities, goods and services
- Stage 2: Qualitatively ranking potential environmental impacts to establish relative significance
- Stage 3: Establishing and documenting control measures to mitigate potentially significant environmental impacts.

RAC shall control all environmental risks identified within the organisation to an extent that is practically possible (Table A 1), once they have been identified through the risk management and identification process.

Risk ranking is generally undertaken by assigning likelihood and consequence levels to each identified activity or issue and determining risk levels through the use of a risk matrix. After completing this process management measures are implemented and a residual risk is determined.

Table A 1: Qualitative risk rating matrix

Likelihood	Consequences			
	Critical (4)	Major (3)	Moderate (2)	Minor (1)
Almost Certain (A)	VH	VH	H	M
Likely (B)	VH	VH	H	M
Unlikely (C)	VH	H	M	L
Rare (D)	H	M	L	L

VH	Very High	Immediate action required. Task stopped.
H	High	Senior Management attention needed.
M	Medium	Management responsibility must be specified.
L	Low	Manage by routine procedures.

Table A 2: Likelihood Classification

Likelihood	Description
Almost Certain (A)	Event is a common or frequent occurrence and is expected to occur daily (e.g. noise and dust).
Likely (B)	Event is expected to occur annually.
Unlikely (C)	Event may occur. If the event has occurrence in the project area it is very infrequent. It is likely to have occurred within the industry.
Rare (D)	The event is unlikely to not occur in the project area but has been known to occur infrequently within the industry. The event may occur at a frequency of more than 10 years.

Table A 3: Consequence Classification

Consequence	Definition
Critical (4)	Environment: Long term large scale damage to habitat or environment. Legal: Non-compliance having a critical financial or community profile impact. Community: Widespread community disruption with significant adverse economic impact.
Major (3)	Environment: Severe impact requiring remedial damage to environment. Legal: Non-compliance and having high financial or community profile impact. Community: Extensive community complaints extending beyond the region or adverse state level media coverage. Wider community disruption up to 7 days with adverse economic impact.
Moderate (2)	Safety: Moderate impact on environment. No long term or irreversible damage. Legal: Non-compliance having moderate financial or community profile impact. Community: Widespread local complaints or adverse regional media coverage. Isolated community disruption up to 3 days with limited adverse economic impact.
Minor (1)	Environment: Minor breach of environmental policy. Negligible impact on environment. Legal: Technical breach with no sanction. Community: Few complaints or minor adverse media coverage. Negligible impact on reputation. Isolated community disruption up to 1 day with minimal economic.

When determining risk controls, the hierarchy of risk controls, summarised in Table A 4 must be considered.

Table A 4: Hierarchy of risk controls

Option	Examples
Elimination	Stop using equipment or substance, or stop undertaking the procedure causing the risk.
Substitution	Use an alternative substance, equipment or process which poses less risk.
Isolation	Separate receivers from the source of the risk.
Engineering Controls	Reduce exposure to the risk by making physical changes to equipment, procedures or the work environment (e.g. using dust control measures on equipment).
Change work practices	Adopt work procedures which minimise exposure to the risk (e.g. wet sweeping a dusty environment rather than dry sweeping, to minimise the amount of airborne dust).

Appendix 2
Monkey Mia Dolphin Resort Vegetation
and Traffic Plan, Shire of Shark Bay



Monkey Mia Dolphin Resort Vegetation and Traffic Management Plan





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Monkey Mia Vegetation and Traffic Management Plan

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Appendix 1

Framework for Conservation Significance Flora Species in WA

Appendix 2

Paterson's Curse

(**Echium plantagineum*) Factsheet Department of Agriculture and Food**Tables**

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1.0 Introduction

1.1 Background

Aspen Parks Property Management Pty Ltd (Aspen) manages the Monkey Mia Dolphin Resort, which is located on Monkey Mia Road in Denham, in the Shire of Shark Bay (Figure 1.1)

Aspen intends to upgrade the water treatment and power facilities at the resort. The existing facility includes two ponds, on the northern half of Reserve 49108, located 800 m to the south-southwest of the resort and serviced by an unsealed track that encroaches on Reserve 1686 (Figure 1.2). The Shire of Shark Bay (the Shire) manages Reserve 49108, while the Shire and the Department of Environment and Conservation (DEC) jointly manage Reserve 1686.

The main components of the facility upgrade will be positioned on the southern half of Reserve 49108, and include:

- one 100 kilolitre water tank and two 250 kilolitre water tanks;
- an open shed, approximately 148 m² in size, to accommodate four generators, a switch room and a workshop; and
- a sea container for fuel storage.

Upgrades to the existing access track will also occur to accommodate construction traffic. These include:

- widening of sections of the access track;
- a vehicle bypass track for construction traffic; and
- a turnaround area at the southern end of the existing track.

The general project layout is shown on Figure 1.2, and this area will hereafter be referred to as the project area.

Aspen submitted plans for the expansion and upgrading of the facilities to the Shire of Shark Bay in December 2012. The proposal was given condition approval by the Shire on February 27th 2013 (Shire of Shark Bay 2013).

Native vegetation will be cleared as part of the facilities upgrade. Specifically, clearing will be associated with the upgrade of the access track. The total area to be cleared is 0.86 ha (Figure 1.2). The *Environmental Protection Act 1986 (EP Act 1986)* requires that clearing of native vegetation is conducted under a permit (Native Vegetation Clearing Permit) unless it is for a defined exempt purpose. Clearing involved with the facilities upgrade is considered to be exempt under Schedule 6 of the EP Act 1986; clause 9- Clearing under the *Town Planning and Development Act 1928*. This exemption allows for clearing in accordance with an approved subdivision including construction of access tracks to or within the subdivision. In addition clearing of up to one hectare with one financial year for the construction of vehicle tracks is also exempt under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

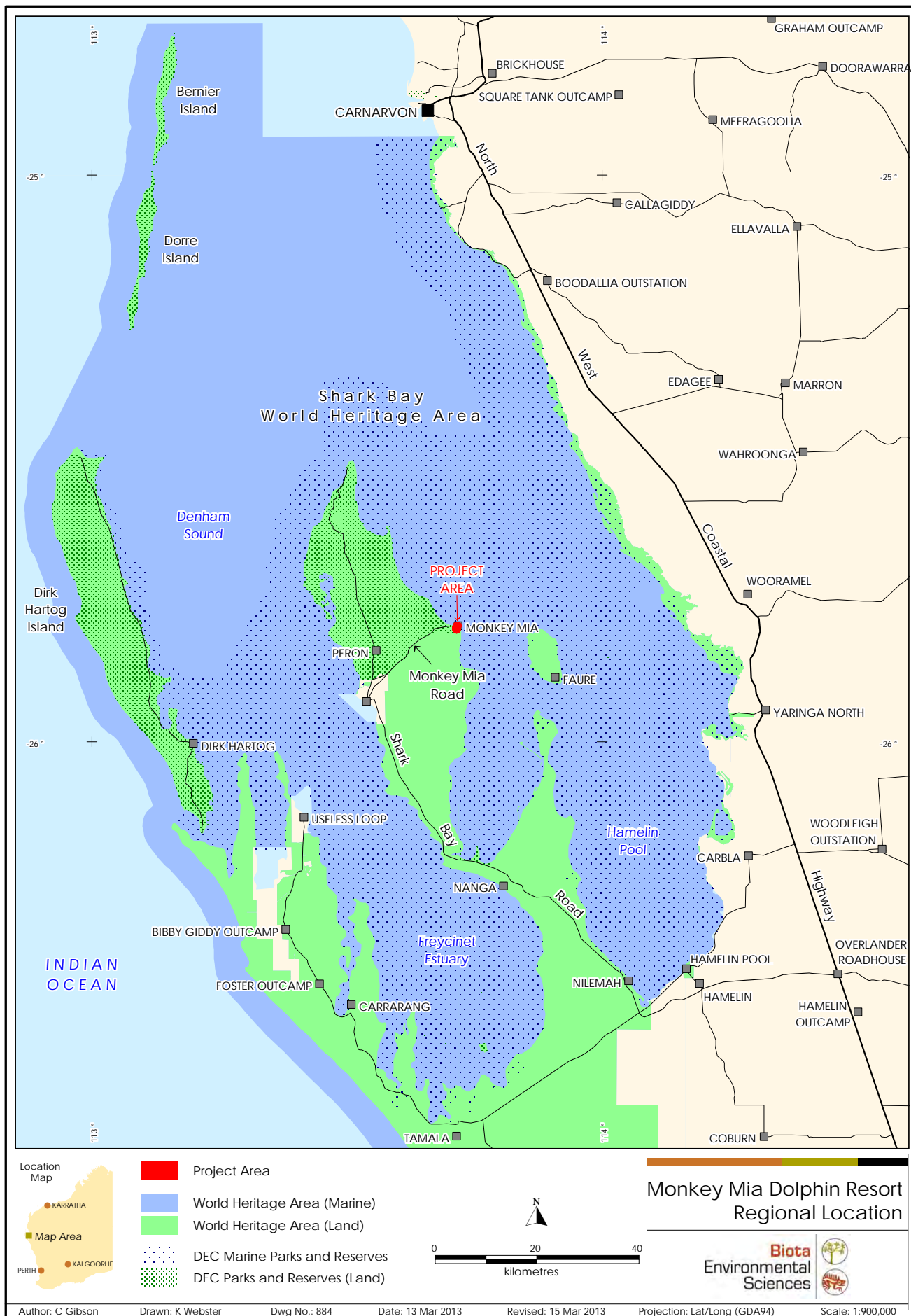


Figure 1.1: Location of the Monkey Mia Dolphin Resort, Denham.

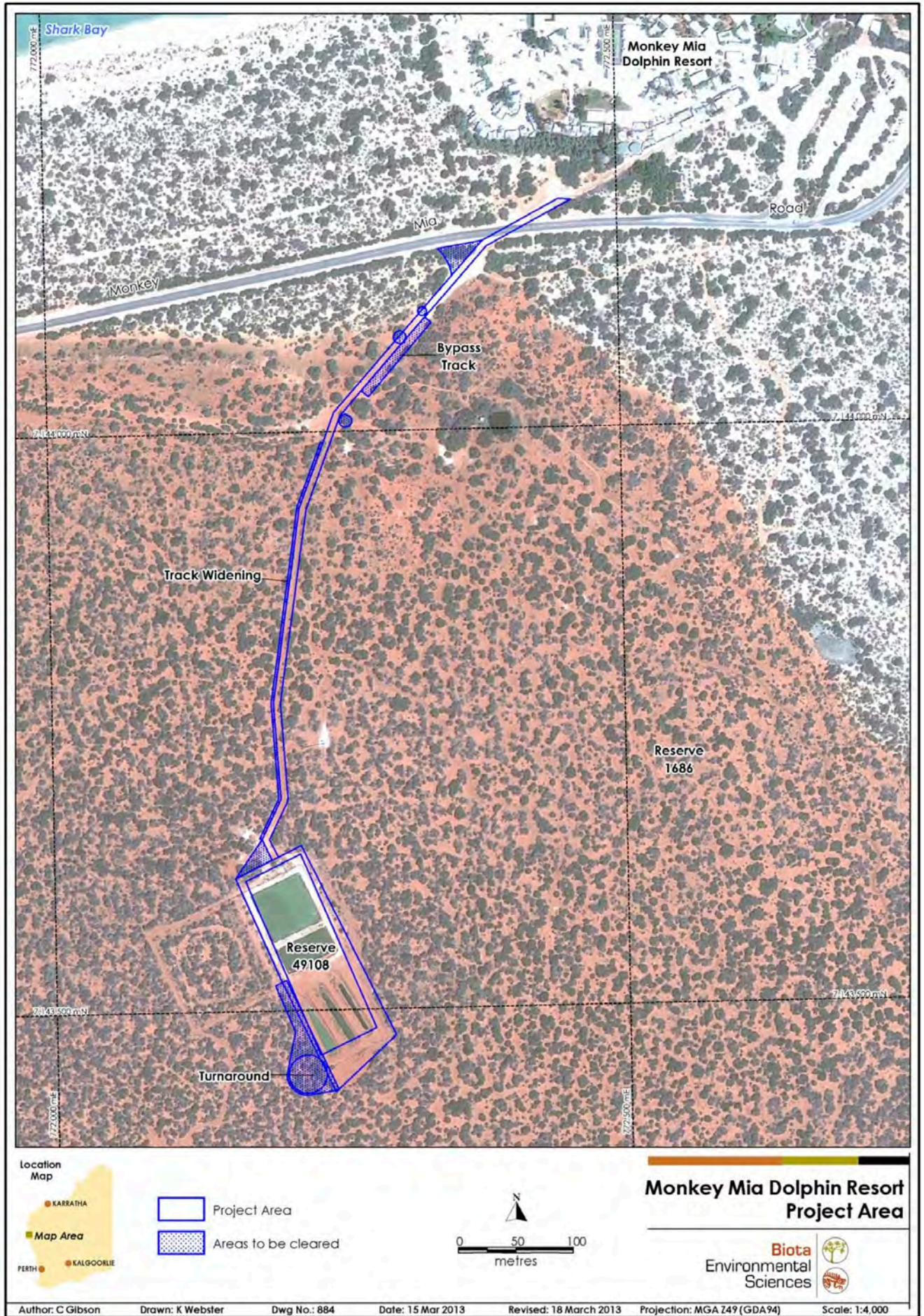


Figure 1.2: Project area.

1.2 Scope and Structure of this Document

This document has been prepared in accordance with, and with the intention of meeting, the requirement of the following condition set by the Shire of Shark Bay:

- Condition 1(iv): “Lodgement of a Traffic and Vegetation Management Plan for the separate written approval by the Shire Chief Executive Officer prior to the commencement of any construction” (Ordinary Council Meeting Minutes, 27 February 2013).

The project area shown on Figure 1.2 sets the spatial scope for this management plan. This management plan is intended for use during construction associated with the upgrade of the facilities for the Monkey Mia Dolphin Resort.

Management of vegetation is addressed in Sections 3.0 and 4.0 while traffic management is discussed in Section 6.0. In addition, Aspen has requested that rehabilitation measures, for historically disturbed areas within Reserve 1686, be considered in this document. This is provided in Section 5.0.

1.3 Other Related Documents

Several other management plans are relevant to this document and include:

- Shark Bay Terrestrial Reserves and Proposal Reserve Additions Management Plan No. 75 2012 (DEC and Conservation Council 2012); and
- Shark Bay World Heritage Property Strategic Plan 2008-2020 (DEC and DEWSPAC 2008).

This management plan draws on flora and vegetation data collected during two previous flora and vegetation surveys in the project area:

- Monkey Mia Resort Expansion (Strategen 2012); and
- Vegetation and Rare Flora Surveys - Concept Development Plan Areas Monkey Mia Dolphin Resort (Weston 2002).

2.0 Environmental Setting

2.1 Overview

The project area is located on the Peron Peninsula and is situated within the Shark Bay World Heritage Area, in the Midwest Region of Western Australia (WA).

Botanically, it occurs close to the boundary of two provinces, the Southwest Botanical Province and the Eremaean Botanical Province. Vegetation on the Peron Peninsula comprises arid zone flora species and is considered to be representative of the Eremaean Botanical Province (DEC and Conservation Council 2012).

2.2 Vegetation

Vegetation mapping completed by Weston (2002) covers most of the project area, including the areas surrounding the existing water treatment facility. This mapping does not include the majority of the vegetation adjacent to the existing access track.

Weston (2002) describes two vegetation communities within the project area:

- *Acacia ramulosa* thicket. This community is characterised by dense (>50% canopy cover) *Acacia ramulosa* shrubs to 3 m in height over scattered lower shrubs including *Persoonia bowgada*, *A. tetragonophylla*, *Eremophila maitlandii*, *Rhagodia latifolia* and *Stylobasium spathulatum*. The thicket surrounds the southern boundary of Reserve 49108, within which the existing facilities are located.
- *Acacia ramulosa*, *A. tetragonophylla* scrub. This community is characterised by *Acacia ramulosa*, *A. tetragonophylla* shrubs greater than 2 m in height over *Rhagodia latifolia* shrubs over *Ptilotus divaricatus*, *P. obovatus* low shrubs. This community covers the area surrounding the north Reserve 49108 and is dominant in the boarder area surveyed by Weston (2002).

These *Acacia* shrubland communities are well represented on the Perron Peninsula (DEC and Conservation Council 2012).

The vegetation condition¹ within the majority of the project area is considered to be Excellent to Very Good (Weston 2002, Strategen 2012). Previous surveys observed that herbs and grasses were either absent or unidentifiable. This was considered to be a result of grazing by feral animals (predominantly goats and rabbits) and unfavourable conditions for flora sampling at the time of survey (insufficient rainfall preceding the survey) (Weston 2002, Strategen 2012).

The condition of vegetation 10 m either side of the access track was described by Strategen (2012) as ranging from Very Good to Completely Degraded¹. Observed disturbances along the track included construction of fencing, walking trails, minor excavations and rubbish dumping.

2.3 Conservation Significant Vegetation and Flora

2.3.1 Threatened Flora

To date, no Threatened Flora species listed under the Federal Environment Protection and Biodiversity Conservation 1999 or under the WA Wildlife Conservation Act 1950 have been recorded during flora surveys associated with the Monkey Mia Dolphin Resort (Weston 2002, Strategen 2012).

The nearest Threatened Flora record is *Eucalyptus beardiana*, located approximately 75 km south-southwest of Monkey Mia (DEC and WAM 2013). To date, no *Eucalyptus* species have been

¹ Vegetation Condition scale based on Bush Forever (Government of Western Australia 2000).

recorded during flora surveys associated with the Monkey Mia Dolphin Resort, (Weston 2002, Strategen 2012). Thus, it is considered highly unlikely that this species occurs in the project area.

The framework for ranking flora species of conservation significance is presented in Appendix 1.

2.3.2 Priority Flora

A total of five Priority Flora species are known to occur within a 5 km radius of the Monkey Mia Dolphin Resort (DEC and WAM 2013). These species are listed in Table 2.1, along with a brief description and the likelihood of their occurrence in the project area.

The framework for ranking flora species of conservation significance is presented in Appendix 1.

Table 2.1: Priority Flora species known from within a 5 km radius of the Monkey Mia Dolphin Resort.

Species	Conservation Status	Description (DEC 2013)	Likelihood of Occurrence in Project Area
<i>Chthonocephalus tomentellus</i>	Priority 2	Daisy. Annual herb with yellow flowers between August and November. Known to occur on red sand plains and dunes near saline depressions.	Unlikely; absence of preferred habitat (Weston 2002).
<i>Lepidium biplicatum</i>	Priority 2	Low shrub with white flowers in September. Known to occur in coastal regions between Geraldton and Carnarvon.	Unlikely; absence of preferred habitat (Weston 2002).
<i>Olearia occidentissima</i>	Priority 2	Daisy. Shrub to 20 cm in height with white/pink flowers between July and September. Known to occur in shallow soils and on coastal limestone cliffs.	Possible; recorded ~3 km west of Monkey Mia jetty (DEC and WAM 2013). Conditions during surveys in project area have been unfavourable for the identification of this species (Weston 2002, Strategen 2012).
<i>Sondottia glabrata</i>	Priority 2	Daisy. Annual herb to 10 cm in height with white/yellow flowers between September and October. Known to occur on saline flats.	Unlikely; due to absence of preferred habitat (Weston 2002).
<i>Acacia drepanophylla</i>	Priority 3	Wattle. Tree to 5 m in height with yellow flowers between May and July. Known to occur on red clay or loam over limestone on flat to undulating plains.	Possible; recorded <10 m to the southeast of the existing facilities (Weston 2002), ~3 km west of Monkey Mia jetty and within 250 m of the project area (DEC and WAM 2013).

No Priority Flora species, listed by the DEC, have been recorded during flora surveys associated with the Monkey Mia Dolphin Resort (Weston 2002, Strategen 2012).

2.4 Weeds (Introduced Species)

A total of five weed species have been recorded within a 5 km radius of the Monkey Mia Dolphin Resort. Of these, two have previously been recorded in the project area (Weston 2002, Strategen 2012). These species are listed in the Table 2.2, along with a brief description and their weed rating (CALM 1999).

One of these species, *Echium plantagineum*, is listed as a Declared Plant in the Shire of Shark Bay under the *Agriculture and Related Resources Protection Act 1976 (ARRP Act)*. This species is commonly referred to as Paterson's Curse and is listed as a category P1 for the whole State, which prohibits the introduction or movement of the plant or its seeds. The WA Department of Agriculture and Food have produced a factsheet on this species, which is provided in Appendix

2. Doublegee (*Emex australis*) is also listed as a Declared Plant in the southwest of WA. However, it is not listed in the Shire of Shark Bay.

Table 2.2: Weed species recorded within a 5 km radius of the Monkey Mia Dolphin Resort (*denotes introduced/weed species).

Species	Source	Description (DEC 2013)	Weed Rating (CALM 1999)
Buffel Grass (* <i>Cenchrus ciliaris</i>)	Weston (2002) and Naturemap (DEC and WAM 2013)	Tufted grass to 1.5 m in height with purple flowers between February and October. Aggressive weed.	High
Doublegee (* <i>Emex australis</i>)	Recorded in the project area by Strategen (2012)	Annual herb with green flowers between January and December. Weed of disturbed areas.	Low
Mediterranean Turnip (* <i>Brassica tournefortii</i>)	Recorded in the project area by Weston (2002)	Annual herb to 60 cm in height with yellow/cream flowers between June and November. Aggressive weed of disturbed areas.	High
Paterson's Curse (* <i>Echium plantagineum</i>)	Naturemap (DEC and WAM 2013)	Annual herb to 1 m in height, with purple/pink flowers in between September and January. Aggressive weed of disturbed areas.	To Be Advised
Ruby Dock (* <i>Acetosa vesicaria</i>)	Naturemap (DEC and WAM 2013)	Fleshy annual herb to 1 m in height with pink-red flowers between July and September. Aggressive weed of disturbed areas.	Not Listed

A brief discussion for each of five weed species recorded within a 5 km radius of the Monkey Mia Resort follows:

- Buffel Grass (*Cenchrus ciliaris*) was introduced by pastoralists as a fodder species. Buffel Grass has demonstrated allelopathic capacities whereby it releases chemicals that inhibit the growth of other plants, and aggressively competes with native flora (Cheam 1984a, 1984b). This perennial grass can form dense tussock grasslands, particularly along creeklines, floodplains and in sandy coastal areas. Buffel Grass is known to be widespread on the Peron Peninsula (DEC and Conservation Council 2012). Buffel Grass has not been recorded in the project area, however both of the surveys noted that some grasses were in poor health and were difficult to identify at the time of survey (Weston 2002, Strategen 2012). It is therefore unknown whether some of these were Buffel Grass, or other weed grasses. This species may occur in the project area.

A key management strategy set by the DEC is to prevent new infestations of this species and control small infestations where appropriate (DEC and Conservation Council 2012). Given its prevalence in the locality, this species is a threat to the native vegetation.

- Doublegee (*Emex australis*) was originally introduced as a salad vegetable (Hussey et al. 1997). It is now a widespread weed of agricultural and disturbed land throughout the southwest of WA (Hussey et al. 1997). The woody fruits of this species were commonly observed in the project area by Strategen (2012).
- Mediterranean Turnip (*Brassica tournefortii*) is a common weed of disturbed roadsides and grazed woodlands (Hussey et al. 1997). Mediterranean Turnip was recorded several times in the project area by Weston (2002). The subsequent survey by Strategen (2012) did not locate this species, however they did note that the timing of the survey was not favourable for flora sampling, and weed species may have been present but not identifiable at the time of the survey.

The DEC and Conservation Council (2012) consider that the Acacia shrublands on the Peron Peninsula have become infested with Mediterranean Turnip and that this species has been replacing native herbs.

- Paterson's Curse (*Echium plantagineum*) is a Declared Plant listed under the ARRPP Act. This species is known to compete aggressively with native daisies and form dense herblands

throughout the southwest of WA. One record of Paterson's Curse is known from the Monkey Mia locality (DEC and WAM 2013). It was recorded in 1992 approximately 1.5 km west of the Monkey Mia Dolphin Resort, along Monkey Mia Road (DEC 2013). This species was not recorded by Weston (2002) or Strategen (2012). However, it is known from the broader Shark Bay area (DEC and Conservation Council 2012). Given it has not been recently recorded in the locality, it is considered unlikely that Paterson's Curse occurs in the project area.

- Ruby Dock (**Acetosa vesicaria*) is a common weed of roadsides and is often mistaken for a native species (Hussey et al. 1997). One historical record of Ruby Dock is known from the Monkey Mia locality (DEC and WAM 2013). It was recorded in 1993 approximately 1.5 km west of the Monkey Mia Dolphin Resort along Monkey Mia Road (DEC 2013). This species has not been recorded by subsequent surveys at Monkey Mia (Weston 2002, Strategen 2012). However, it is known from the broader Shark Bay area (DEC and Conservation Council 2012). Given it has not been recently recorded in the locality, it is considered unlikely that Ruby Dock occurs in the project area.

3.0 Potential Impacts on Vegetation

The construction involved with upgrading the water treatment and power facilities at the Monkey Mia Dolphin Resort has the potential to impact on the flora and vegetation in the area. These impact mechanisms are described below.

3.1 Introduction or Spread of Weeds

Construction in the project area has the potential to introduce new weed species and/or spread existing populations, through earthworks, clearing and the movement of vehicles. Low density populations of two weed species have been observed in the project area (Weston 2002, Strategen 2012). An additional three weed species are known to occur with a 5 km radius of the Monkey Mia Dolphin Resort (Section 0), and other weed species may also occur in the project area or in the vicinity. Section 4.1 provides management measures to address the risk associated with the introduction or spread of weeds in the project area during construction.

3.2 Unplanned Clearing or Disturbance

There is a risk of ground disturbance or inadvertent clearing outside of the defined works area while construction is occurring in the project area. The movement of vehicles is considered to be the most likely way in which unplanned vegetation clearing or disturbance could occur. Section 4.2 provides management measures to address the risk of unplanned clearing or disturbance during construction.

3.3 Fire

While fire is an essential and natural process in the vegetation communities of the locality, altered fire regimes have the potential to impact vegetation condition. The construction associated with the facility upgrade may result in inadvertent fires and burning of native vegetation. Section 4.3 provides management measures to address the risk of bushfires during construction.

3.4 Dust

Although the Midwest region is a naturally dusty environment, additional dust is likely to be generated in the project area via clearing, construction and earth moving and traffic movement along unsealed tracks. This may affect the physiological processes of the vegetation and subsequently its overall condition. Section 4.4 provides management measures to address the risk of dust generation to vegetation.

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4.0 Vegetation Management Procedures

4.1 Introduction or Spread of Weeds

Management actions to prevent/reduce the introduction and/or spread of weed species in the project area and surrounding vegetation that will be implemented for the project comprise:

1. Introduce and maintain vehicle, plant and equipment weed hygiene, including the establishment of a vehicle wash/brush down station. All contractors will be required to ensure that vehicles and equipment are free of dirt, mud or plant material prior to entry into the project area.
2. Restrict access into the project area to approved staff and contractors only. Signage should be erected at the entrance to the access track to advise the public accordingly.
3. Educate staff and contractors to raise awareness of the weed species in the vicinity of Monkey Mia and how they can impact environmental values, particularly the Declared Plant, Paterson's Curse (*Echium plantagineum*).
4. Implement eradication procedures in the event of a weed outbreak or infestation, appropriate to the species in question. This should be developed in consultation with the DEC or Department of Agriculture and Food.

Table 4.1 below provides a summary of weed management measures to be implemented for the project, including identification of management responsibilities.

Table 4.1: Summary of weed management actions, responsibilities and timing.

Management Action	Responsibility	Timing
1.1 - Establish a wash-down facility for vehicles, plant and equipment in a suitable location outside of the project area. This should comprise a concrete hard stand with high-pressure hose, brooms and drainage controls to ensure wash-down water is captured.	Site Supervisor	Pre-construction
1.2 - Ensure all vehicles, plant and equipment entering the project area are free of dirt and plant material.	All staff and contractors	Construction
1.3 - Carry out periodic inspections of contractor vehicles, plant and equipment to ensure compliance with weed hygiene measures.	Site Supervisor	Construction
2.1 - Erect signage advising no public access to the project area.	Site Supervisor	Pre-construction
3.1 - Provide copies of relevant weed factsheets to staff and contractors working on-site.	Site Supervisor	Construction
4.1 - Consult with DEC or Department of Agriculture and Food to develop and implement control procedures if any new weed outbreaks occur in the project areas.	Site Supervisor	Construction

4.2 Unplanned Clearing or Disturbance

Management actions that will be implemented to prevent inadvertent clearing or disturbance in the project area and surrounding vegetation will include:

1. Clearly demarcate all areas that have been approved for clearing. Clearing limit boundaries must be shown on all drawings and specifications issued to contractors. These limits will also be surveyed in on-site and clearly marked with posts and flagging or other suitable method. Commencement of vegetation clearing will be made a hold-point for all contractors, requiring checking and sign off by the site supervisor prior to proceeding.

2. Ensure that all staff and contractors understand the boundaries of the project area and only work within this area.
3. Restrict vehicle movement and parking to designated tracks and areas.
4. Rehabilitate areas that have been historically disturbed in the vicinity of the project area with native vegetation (as described in Section 5.0). Where appropriate, disturbed areas in the project area should also be rehabilitated when they are longer required.

No clearing or disturbance should occur outside the defined project area. Contractors should be required to rehabilitate any area that they clear outside of the defined clearing areas associated with the facilities upgrade.

Table 4.2 below provides a summary of vegetation clearing management measures to be implemented for the project, including identification of management responsibilities.

Table 4.2: Summary of vegetation clearing management actions, responsibilities and timing.

Management Action	Responsibility	Timing
1.1 – Show all areas of vegetation approved for clearing on all design and specification drawings issued to contractors.	Aspen Project Manager	Pre-construction
1.2 – Survey in and mark vegetation clearing limits on-site.	Site Supervisor	Construction
1.3 – Ensure no clearing works are commenced without written sign off by the Aspen Site Supervisor.	All staff and contractors	Construction
2.1 – Ensure all staff and contractors are made aware of the boundaries of the project area and that clearing is prohibited.	Site Supervisor	Pre-construction
3.1 – Provide copies of relevant weed factsheets to staff and contractors working on-site.	Site Supervisor	Construction
4.1 – Consult with DEC or Department of Agriculture and Food to develop and implement control procedures if any new weed outbreaks occur in the project areas.	Site Supervisor	Construction

4.3 Fire

Management actions that will be implemented to minimise the potential for fires in the project area include:

1. Ensure that no fires are deliberately started within the project area and that all on-site personnel understand that fires are strictly prohibited.
2. Ensure that vehicles and machinery are parked on clear ground to avoid hot engines igniting .
3. Ensure that all vehicles operating in the project area are equipped with fire extinguishers.
4. Develop an emergency response plan for bushfires.
5. Designate the project area as a no smoking zone.

Table 4.1 below provides a summary of bushfire management measures to be implemented for the project, including identification of management responsibilities.

Table 4.3: Summary of bushfire management actions, responsibilities and timing.

Management Action	Responsibility	Timing
1.1 – Ensure no fires are deliberately lit in the project areas.	All staff and contractors	Construction
1.2 – Ensure all on-site personnel understand that fires are prohibited.	Site Supervisor	Construction
2.1 – All vehicles, plant and equipment are to be parked on existing cleared areas only.	All staff and contractors	Construction
3.1 – Ensure all vehicles are equipped with fire extinguishers.	Contractor	Construction
4.1 – Develop a bushfire emergency response plan.	Site Supervisor	Pre-construction
4.1 – Designate the project area as a no smoking zone.	Site Supervisor	Construction

4.4 Dust

Management actions that may be implemented to minimise dust levels in the project area include:

1. Consider weather conditions (such as wind direction and speed) when planning construction or disturbance activities.
2. Implement dust suppression if high levels of dust are being generated, such as waterspray/wetdown of unsealed tracks.

The Site Supervisor will monitor conditions on-site and liaise with the staff and contractors to implement control measures if significant dust is being generated during construction.

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5.0 Rehabilitation of Degraded Vegetation

5.1 Objective and Scope

Aspen has identified areas outside of the project area, within Reserve 1686, which have been degraded by vehicle tracks, walking tracks and other historical disturbance. Aspen intends to rehabilitate these areas to a condition resembling the surrounding natural environment. This will be approached primarily through the recovery and management of topsoil from areas to be cleared for the project.

The steps involved in the rehabilitation process are described in the following sections and include:

- selection of sites for rehabilitation;
- preparation of sites for rehabilitation;
- placement of topsoil;
- placement of vegetation debris;
- control measures for weeds and feral animals; and
- monitoring and maintenance.

Reserve 1686 is jointly managed by the Shire and the DEC, and therefore approval from these bodies should be sought prior to the commencement of rehabilitation works within this Reserve.

5.2 Selection of Sites

Degraded sites chosen for rehabilitation should be:

- Representative of the vegetation type from which the topsoil will be taken. This will maximise the likelihood that an equivalent suite of flora species will be represented in the topsoil seed bank compared to those in the adjacent intact vegetation.
- Accessible to vehicles and equipment. No additional clearing of native vegetation should occur as a result of accessing rehabilitation sites.

5.3 Site Preparation

The following site preparation should be conducted on all sites for rehabilitation:

- Chemical control and/or hand removal of any weeds present.
- Construct a perimeter fence to restrict the movement of the public and feral animals (particularly grazers) into the site.
- Provide clear signage to notify the public of the rehabilitation works.

Established native trees or shrubs should not be removed from any rehabilitation areas.

5.4 Topsoil Management

It is intended that topsoil from cleared areas will be moved to disturbed sites to allow for germination of locally-occurring native species from the soil seed bank.

Topsoil should be stripped at a depth of 50 mm. It is preferable that the topsoil is relocated to the rehabilitation sites when it is removed and not stockpiled (termed 'direct return' topsoil management). Where this is not possible, topsoil should be stockpiled as close as possible to the

rehabilitation sites, for the shortest possible time. Topsoil stockpiles should be placed in previously disturbed areas and should not exceed 2 m in height. No native vegetation should be cleared to accommodate stockpiles.

If possible, the placement of topsoil on the rehabilitation sites should occur before rain. This will promote seed growth and aid in the establishment of native species. This will, however, also aid the establishment of weed species. Weed monitoring and manual removal should be conducted regularly. The Shark Bay area experiences its highest rainfall between the months of May and July (Bureau of Meteorology 2013).

5.5 Vegetation Debris

Native vegetation removed as a result of approved clearing should be spread onto rehabilitation sites after the placement of topsoil. The vegetation debris should be spread to a depth of between 10-50 mm, which will aid in suppressing weed germination and establishment. It is preferable that the debris is spread by hand to reduce soil compaction, which will inhibit plant growth.

5.6 Weed Control

Weed control should be undertaken prior to rehabilitation works (see Section 5.3). Regular inspections should occur after topsoil placement and in particular after winter rain (see Section 5.4). Eradication procedures should be implemented in the event of a weed outbreak or infestation, such as chemical control or manual removal. This should be developed in consultation with the DEC or Department of Agriculture and Food as appropriate to the species in question.

5.7 Control of Feral Animals

A perimeter fence should be constructed around rehabilitation sites to restrict the movement of feral animals. Feral animals can significantly impact the revegetation of sites, through grazing pressure and introducing weed species.

5.8 Monitoring and Maintenance

Monitoring should occur to ensure the success of the rehabilitation. Rehabilitation success can be measured by the establishment of native species, in a similar composition to surrounding vegetation, and the absence of weeds.

The monitoring and maintenance of rehabilitated sites should focus on:

- Identifying weed outbreaks and implementing control measures (Section 5.6).
- Checking the perimeter fence for failures or breakage and effecting repairs if required.
- Observing if native flora species are recruiting to the rehabilitation areas. This can be determined through a comparison of the rehabilitation area with nearby areas of intact vegetation with a similar structure and species composition. If native species are not growing within the rehabilitation site, additional measures may be necessary such as seeding or planting with locally occurring native species.

6.0 Traffic Management

Construction and works associated with upgrading and expanding the facilities at the Monkey Mia Dolphin Resort will require an increased traffic volume within the project area. Specifically, construction traffic will be utilising the track that runs south from the resort to the facilities, including a turning circle at the southern end (see Figure 1.2). The access track also crosses Monkey Mia Road, which is the only public access the resort.

Issues associated construction traffic on Monkey Mia Road have been addresses in a separate "Temporary Road Closure Plan" which Aspen has developed in consultation with Main Roads.

Risks associated with the construction traffic along the access track include:

- Interaction of construction traffic along on a single lane unsealed access track.
- Interaction of construction vehicles with private vehicles and pedestrians.
- Noise disturbance.

The following management actions are intended to reduce and control the risks associated with the construction traffic.

6.1 Interaction of Construction Traffic on a Single Lane Unsealed Access Track

Management actions that will be implemented to reduce to risks associated with interacting construction traffic on a single lane unsealed access track include:

1. Setting safe speed limits for all construction traffic. A speed limit of 40 km is usually adequate for construction works.
2. Implementing dust suppression, such as spray/wetdown of unsealed tracks, should dust levels being to impact visibility or if there are complaints from the public.
3. Construction of vehicle bypass tracks as described in the works approved by the Shire of Shark Bay.
4. Widening of the access track as outlined on the project layout
5. Establishment of vehicle and plant and equipment priority rankings such that light vehicle traffic must give way to plant and equipment, and inclusion in site inductions.

Table 6.1 below provides a summary of management measures to be implemented for the project to address the risks associated with the interaction of construction on the access track.

Table 6.1: Summary of management actions, responsibilities and timing for the interaction of construction traffic on the access track.

Management Action	Responsibility	Timing
1.1 – Set a safe speed limit for construction traffic using the access track.	Site Supervisor	Pre-construction
2.1 – Implementing dust suppression.	Site Supervisor	Construction
3.1 – Construction of vehicle bypass tracks.	Site Supervisor	Construction
4.1 – Widening of the access track.	Site Supervisor	Construction
5.1 – Establishment of vehicle and plant and equipment priority rankings	Site Supervisor	Pre-construction

6.2 Interaction of Construction Vehicles with Private Vehicles and Pedestrians

Management actions that will be implemented to reduce the risks associated with construction traffic interacting with private vehicles and pedestrians include:

1. Restricting access into the project area to approved staff, contractors and vehicles only, with the use of signage, fences and barriers.
2. Informing the public utilising the facilities in the area, including the Monkey Mia Resort and the DEC Monkey Mia visitors centre, of the construction activities including timing and hours of work.
3. Diverting, with the use of signage, barriers and fencing, any existing walking tracks that cross the project area or other areas where construction vehicles will be present.

Table 6.2 below provides a summary of management measures to be implemented for the project to address the risks associated with the interaction of construction vehicles with private vehicles and pedestrians.

Table 6.2: Summary of management actions, responsibilities and timing for the interaction of construction traffic with private vehicles and pedestrians.

Management Action	Responsibility	Timing
1.1 – Erect signage advising no public access to the project area.	Site Supervisor	Pre-construction
2.1 – Inform the public of the construction works.	Site Supervisor	Pre-construction
3.1 – Erect signage, barriers and fencing, to divert any existing walking tracks.	Site Supervisor	Pre-construction

6.3 Noise Disturbance Caused by Construction Traffic

Management actions to reduce to impact of noise disturbance caused by the movement of construction vehicles include:

1. Adherence to all applicable noise regulations and legislation.
2. Adherence to the relevant work hour regulations for the Shire of Shark Bay.
3. Maintain a public complaints register and develop appropriate responses to any complaints received.

The Site Supervisor will monitor conditions on-site and liaise with the contractors and staff to implement control measures if significant noise is being generated during construction. The Site Supervisor will also maintain the public complaints register.

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Appendix 1

Framework for Conservation Significance Flora Species in WA



Threatened Flora Statutory Framework

In Western Australia, all native flora species are protected under the *Wildlife Conservation Act 1950-1979*, making it an offence to remove or harm native flora species without approval. In addition to this basic level of statutory protection, a number of plant species are assigned an additional level of conservation significance based on the fact that there are a limited number of known populations, some of which may be under threat.

Species of the highest conservation significance are designated Threatened, either extant or presumed extinct: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee;

- T: Threatened Flora (Threatened Flora - Extant): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee (Atkins 2008). (= Threatened Flora = Endangered + Vulnerable)

Species that appear to be rare or threatened, but for which there is insufficient information to properly evaluate their conservation significance, are assigned to one of four Priority flora categories:

- P1: Priority One - Poorly Known: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2: Priority Two - Poorly Known: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3: Priority Three - Poorly Known: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4: Priority Four - Rare: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- P5: Priority Five – Conservation Dependent: taxa that are subject to a specific conservation program, the cessation of which would result in the taxon becoming Threatened within five years.

Note that of the above classifications, only 'Threatened' has statutory standing. The Priority Flora classifications are employed by the Department of Environment and Conservation to manage and classify their database of species considered potentially rare or at risk, but these categories have no legislative status. Note also that proposals that appear likely to affect Threatened flora require formal written approval from the Minister for the Environment under Section 23(f) of the *Wildlife Conservation Act 1950-1979* in addition to the requirements of the *Environmental Protection (Native Vegetation Clearing) Regulations 2004*.

Appendix 2

Paterson's Curse
(**Echium plantagineum*) Factsheet
Department of Agriculture and Food





Paterson's curse (*Echium plantagineum*)

Family : Boraginaceae
Form : Herbaceous – Annual or biennial
Status : Present in WA

An erect annual (occasionally biennial) herb to 1.5 m high, commonly 30-60 cm, reproducing by seed. Native to southern Europe. Widespread throughout the south-west of Western Australia, and the eastern Goldfields.

- Stems** : One to several stems arise from base, much branched and covered with stiff white hairs.
- Leaves** : Alternate, bristly. Rosette leaves to 25 cm long, oval to oblong, stalked and with distinct lateral veins. Stem leaves are smaller and narrower, not stalked and almost clasping the stem.
- Flowers** : Purple, rarely pink or white, crowded along one side of a curved spike. Five petals joined in a curved trumpet shape, 2-3 cm long. Five stamens, two of which are longer than the others and extend beyond the petals.
- Fruit** : A group of four nutlets surrounded by a stiffly bristled calyx.
- Seeds** : Brown to grey, 2-3 mm long, three sided strongly wrinkled and pitted.



Declaration

Category : P1
Location : For the whole of the State

Category : P3
Location : For the municipal districts of Augusta-Margaret River, Broomehill, the City of Bunbury, Busselton, Capel, Chittering, Collie, Cranbrook, Dandaragan, Dalwallinu, Dardanup, Denmark, Donnybrook-Balingup, Harvey, Esperance, Gingin, Kent, Kojonup, Mandurah, Moora, Murray, Ravensthorpe, Serpentine-Jarrahdale, Tambellup, Victoria Plains, Waroona, Wongan – Ballidu, Wagin, West Arthur and Woodanilling.

Category : P4
Location : For the municipal districts of the City of Albany, Boddington, Boyup Brook, Bridgetown-Greenbushes, Gnowangerup, Brookton, Bruce Rock, Corrigin, Cuballing, Dumbleyung, Jerramungup, Katanning, Kondinin, Kulin, Lake Grace, Manjimup, Merredin, Mukinbudin, Nannup, Narembreen, Narrogin, Nungarin, Pingelly, Plantagenet, Wandering, Westonia, Wickipin, Williams, Yilgarn and those portions of the municipal districts of Carnamah and Coorow west of the Midland Road.

Standard Control Codes (these may vary for individual plants)	
P1 REQUIREMENTS Prohibits movement	Introduction of the plant or their seeds into, or movement within the declared area is prohibited.
P3 REQUIREMENTS Aims to control infestation by reducing area and/or density of infestation	<p>The infested area must be managed in such a way that reduces the extent/distribution and/or density of the declared plant within the infested property.</p> <p>The infested area must be managed to prevent the spread of seeds or plant parts within and from the property on or in livestock, fodder, grain, vehicles and/or machinery</p> <p>Treatment must be done prior to seed set each year.</p>
P4 REQUIREMENTS Aims to prevent infestation spreading beyond existing boundaries of infestation.	<p>The infested area must be managed in such a way that contains the declared plant by preventing the spread of seeds or plant parts within and from the property on or in livestock, fodder, grain, vehicles and/or machinery to prevent spread beyond existing boundaries on the infested property.</p> <p>Treatment must be done prior to seed set each year.</p>

Control Method

Recommended herbicides	:	<p>In cereals</p> <ul style="list-style-type: none"> • Chlorsulfuron • Metsulfuron methyl • Triasulfuron • Tigrex • Broadstrike • Jaguar • Bromoxynil + MCPA <p>In Pasture</p> <ul style="list-style-type: none"> • Up to 4 leaf stage Jaguar® Tigrex® Broadstrike® Bromoxynil + MCPA • At early flowering - seed set control Chlorsulfuron Metsulfuron methyl Triasulfuron Glyphosate + 2,4-D LV ester
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Herbicide	:	2,4-D amine (various trade names - APVMA site)
Active ingredient	:	a) 500 g/litre 2,4-D amine (Group I) b) 625 g/L
Rates of dilution for spot spraying	:	Not Recommended
Amount of product per 10 litres water	:	Not Recommended
Rate of product per hectare	:	<ul style="list-style-type: none"> • a) 0.75 L for 'Spray Grazing • b) 0.6 L. • a) 1.6 L for rosettes less than 10 leaves. • b) 1.3 L
Time of application	:	'Spray Grazing' - Winter - from three weeks after germination.
Remarks	:	'Spray-graze' technique for selective control in pastures.
More information and other control methods	:	'Spray Grazing' apply low rate (0.75 L) of 2,4-D amine (500 g/L) or MCPA (1L/ha) and heavy graze at 4 - 6 times normal stocking rate from 7 - 10 days after treatment. Best results in small paddocks 10 - 20 ha. Other formulations of 2,4-D amine are available and if using these adjust rates accordingly

Herbicide	:	Chlorsulfuron (various trade names - APVMA site)
Active ingredient	:	750 g/kg chlorsulfuron (Group B)
Rates of dilution for spot spraying	:	1 g in 50 litres
Amount of product per 10 litres water	:	0.2 g
Rate of product per hectare	:	15 – 20 g
Wetting agent dilution	:	1:400
Time of application	:	<ul style="list-style-type: none"> • In cereals: Wheat pre-sowing. Wheat, barley and oats post-emergence. • In pasture: apply at early flowering to prevent seed formation. The addition of 750 mL - 1 L of 2,4-D amine (500 g/L) will improve the control.
Remarks	:	<ul style="list-style-type: none"> • Ensure chlorsulfuron is thoroughly dissolved when using small quantities prior to adding to tank mix. • May also be used for spot spraying, roadsides etc. Can be used in non-legume pastures. Spot spraying recommendations are based on 20 g/ha. • An application of 1g/L through a blanket wiper can also be effective in pasture where reduced damage to subterranean clover is desired.
More information and other control methods	:	Application of 10 – 15 g/ha at flowering prevents seed formation. Addition of 2,4 –D amine at 10 mL/10 L or 1 L/ha will improve control of seed formation.

Herbicide	:	Metsulfuron methyl (various trade names - APVMA site)
Active ingredient	:	600 g/kg metsulfuron-methyl (Group B)
Rate of product per hectare	:	5 g
Rates of dilution for spot spraying	:	0.5 g in 100 L water
Wetting agent dilution	:	1:400
Time of application	:	In cereals - Pre-sowing in wheat only. Post-emergence in wheat and barley. In pastures - At flowering of Patersons curse for seed control.
Remarks	:	More effective on older plants, i.e. August – September.
More information and other control methods	:	Addition of 2,4 –D amine @ 1 L/ha of 500 g/L or 0.8 L of 625 g/L will improve control of seed formation.

Herbicide		Triasulfuron (various trade names - APVMA site)
Active ingredient		714 g/kg triasulfuron (Group B)
Rate of product per hectare		a) 30 g b) 15 g
Package size		
Time of application		a) Apply pre-emergence to wheat only. b) At early flowering of Paterson's curse for control of seed formation on plants growing along road sides.
Remarks		For seed set control. Addition of 0.75-1.0 litre 2,4-D amine (500 g/L) or 0.6 – 0.8 L/ha of the 625 g/L 2,4-D amine concentration will give a quicker kill of seeds.
More information and other control methods		<ul style="list-style-type: none"> • Triasulfuron, metsulfuron or chlorsulfuron @ 1 g/L of water are effective for controlling seed set when used through a 'Blanket wiper' on plants that have run up in pasture. • Resistance has developed to these chemicals so it is important to rotate use. • Results are poorer once green/black seeds of Paterson's curse are present.

Herbicide	:	Glyphosate + 2,4-D LV ester (various trade names - APVMA site)
Active ingredient	:	1) 360 g/litre or 2) 450 g/L glyphosate (Group M) + 600 g/litre or 680 g/L 2,4-D LV ester (Group I) Other concentrations of glyphosate are available. Adjust rates if using them.
Amount of product per 10 litres water	:	1) 5 mL or 2) 4 mL + 5 mL LV ester
Rate of product per hectare	:	1) 500 mL 2) or 400 mL + 500 mL of 2,4-D LV ester
Time of application	:	At early flowering
Remarks	:	Where Paterson's curse is growing in drains or near water courses the herbicide Roundup Biactive® should be used. An APVMA permit is required to apply 2,4-D ester (80%) from 1 September until 1 May. Alternative formulations of 2,4-D are available to substitute the 80% formulation. Rates should be adjusted for the different formulations.
More information and other control methods	:	Glyphosate is suitable for spot spraying in non-selective situations. Care should be taken to check for restricted spraying permits when applying 2,4-D ester. This treatment is only suitable in cereal growing areas where there are no commercial vineyards or tomato gardens

Herbicide	:	Jaguar®
Active ingredient	:	250 g/L bromoxynil (Group C) + 25 g/L diflufenican (Group F)
Rate of product per hectare	:	500 - 750 mL/ha
Time of application	:	Lower rate for plants with less than 2 leaves, higher rates for plants with up to 4 leaves.
Remarks	:	Registered in cereals and pastures, including cover crops in vineyards.
More information and other control methods	:	Similar product Barracuda registered @ 600 mL for small Paterson's curse.

Herbicide	:	Tigrex®
Active ingredient	:	250 g/L MCPA (Group I) + 25g/L diflufenican (Group F)
Rate of product per hectare	:	1 L/ha
Time of application	:	Up to 4 leaf stage
Remarks	:	Clovers should have 3 trifoliolate leaves.
More information and other control methods	:	Some yellowing of clovers may occur. Check label for tolerance of various clovers.

Herbicide	:	Broadstrike®
Active ingredient	:	800 g/kg flumetsulam (Group B)
Rate of product per hectare	:	25 g/ha
Wetting agent dilution	:	1:400 BS 1000 or Uptake® at 500 mL/100L
Remarks	:	Safe on clovers. Appears more effective in the south west. Clovers should have 3 trifoliolate leaves. Paterson's curse around metro areas has developed resistance to this herbicide as well as the sulfonyl areas.
More information and other control methods	:	Restrictions on grazing or cutting for stockfeed as follows: <ul style="list-style-type: none"> • medic/clover 3 days, • wheat 8 weeks after treatment • Improved control has been obtained when this product is mixed with terbutryn (Igran) @ 300-500 mL/ha. If using this mixture with Broadstrike, do not use the spraying oil Uptake®. Only use a non ionic wetting agent.



Other relevant information related to this topic:

- [Quarantine WA](#)
- [Permitted and quarantine species list](#)
- [CSIRO biological control](#)
- [Paterson's curse](#) (Farmnote 33/2005)
- [How to control Paterson's curse](#) (Note 169)
- [Off-label permit of a registered agvet chemical product](#)
(Declared plants: Permit number – per13236)
- [Off-label permit \(olp\) for use of a registered agvet chemical product](#)
(Environmental weeds: Permit number – per13333)
- For description and distribution <http://florabase.dec.wa.gov.au/browse/profile/6681>

Appendix D

Drainage Management Plan

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Monkey Mia Dolphin Resort

Drainage Management Plan

Prepared for
RAC Tourism Assets Pty Ltd
by Strategen

June 2016

Monkey Mia Dolphin Resort

Drainage Management Plan

Strategen is a trading name of
Strategen Environmental Consultants Pty Ltd
Level 1, 50 Subiaco Square Road Subiaco WA 6008
ACN: 056 190 419

June 2016

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

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The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: RAC Tourism Assets Pty Ltd

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Preliminary Draft Report	A	For client review	D White, B Downe/ A Welker, D Goundrey	Electronic	29 April 2016
Final Report	0	Stakeholder comment	B Downe, A Welker/ D Goundrey	Electronic	24 June 2016

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Appendix 1 Risk matrix

1. Summary

This Drainage Management Plan (DMP) is submitted in accordance with Ministerial Statement (MS) 709 Condition 7 for the Monkey Mia Dolphin Resort expansion (the Project) by RAC Tourism Assets Pty Ltd (RAC).

Table 1 below presents the environmental management targets to measure achievement of the conditioned environmental objective that must be met through implementation of this DMP.

Table 1: Environmental management targets

Required information	Response	
Title of proposal	Expansion of the Monkey Mia Dolphin Resort Monkey Mia, Shark Bay.	
Proponent	RAC Tourism Assets Pty Ltd.	
Ministerial Statement number	709.	
Purpose of this Condition EMP	The Drainage Management Plan is submitted to fulfil the requirements of Condition 7 of the above Statement.	
EPA's environmental objective for the key environmental factors	Environmental factor	EPA environmental objective
	Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
	Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.
Management targets	Environmental factor	Management targets
	Factor 4 Inland Waters Environmental Quality	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment (T4.1).
	Factor 5 Marine Environmental Quality	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the marine environment. (T5.1) Prevent potential contaminants from the Project area entering the marine environment. (T5.2)

Corporate endorsement

I hereby certify that to the best of my knowledge, the Condition EMP provisions within this Drainage Management Plan are true and correct and address the legal requirements of condition 7 of Ministerial Statement No.709

[Signature of duly authorised proponent representative]

Name:

Signed:

Designation:

Date:

2. Context, scope and rationale

RAC owns and manages the current Monkey Mia Dolphin Resort located within a World Heritage area on a Shire of Shark Bay reserve. Approval under the *Environmental Protection Act 1986* (EP Act) to expand the resort was granted through issue of MS 709 on 28 December 2005.

As per MS 709, the expansion of the resort comprises the expansion of the existing resort area, the provision of staff accommodation facilities and an upgrade to the wastewater treatment plant (the Project, Figure 1). The Project commenced in 2013 with the upgrade to the wastewater treatment plant, which was subsequently completed in 2014.

2.1 Scope

Condition 7 of MS 709 requires the proponent to prepare a DMP to ensure that stormwater runoff from the Project is being appropriately managed through the Project's drainage system during the operation phase (post construction phase) of the Project.

All actions associated with the management of drainage during construction are contained within the Construction Management Plan (CMP).

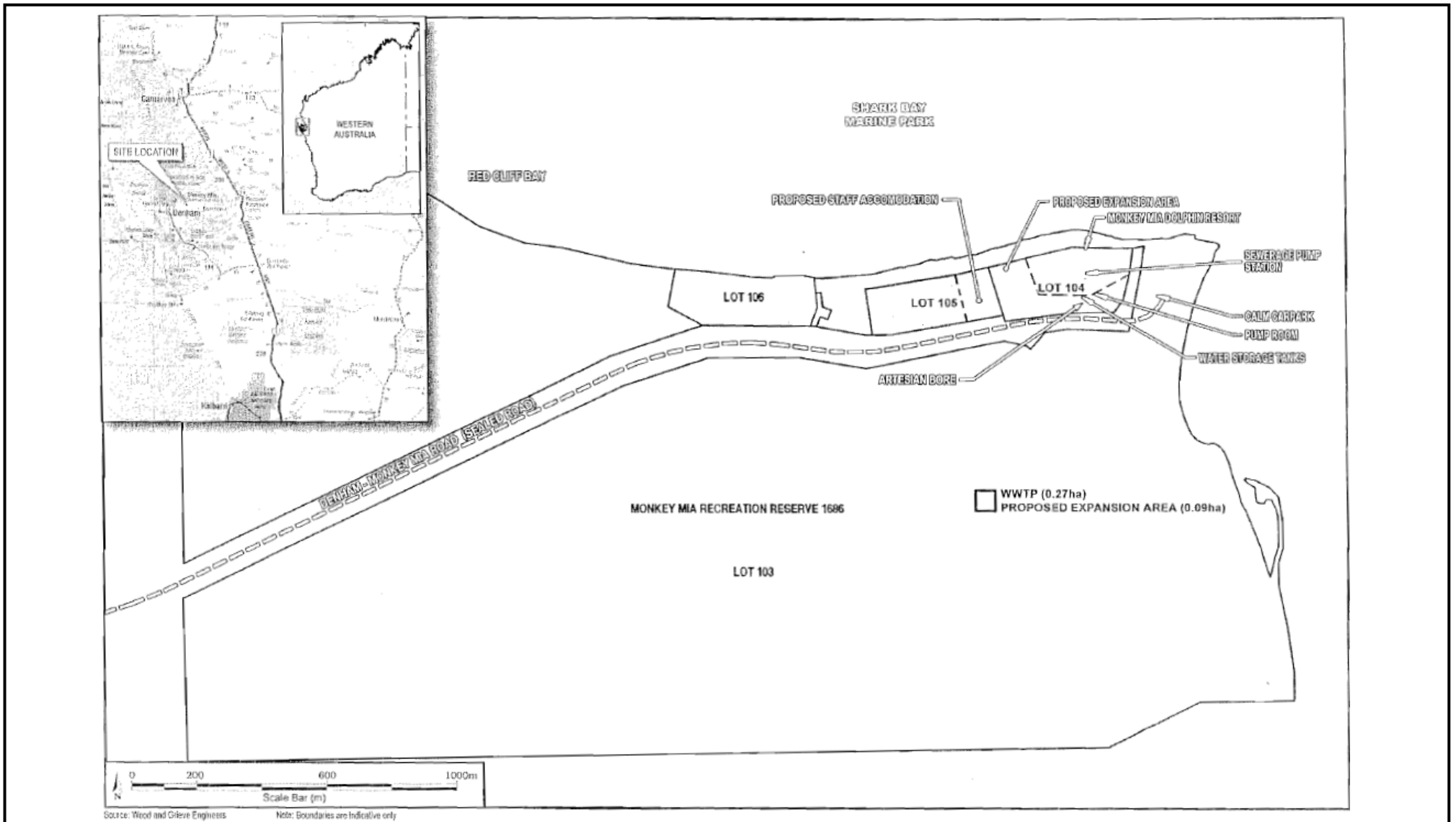
Given that the upgrading of the waste water treatment plant was completed in 2014, this DMP specifically refers to the drainage management system associated with the resort expansion area and staff facilities area (Figure 2).

2.1.1 Key environmental factors

The environmental factors, EPA objectives and environmental aspects of the Project are provided in Table 2.

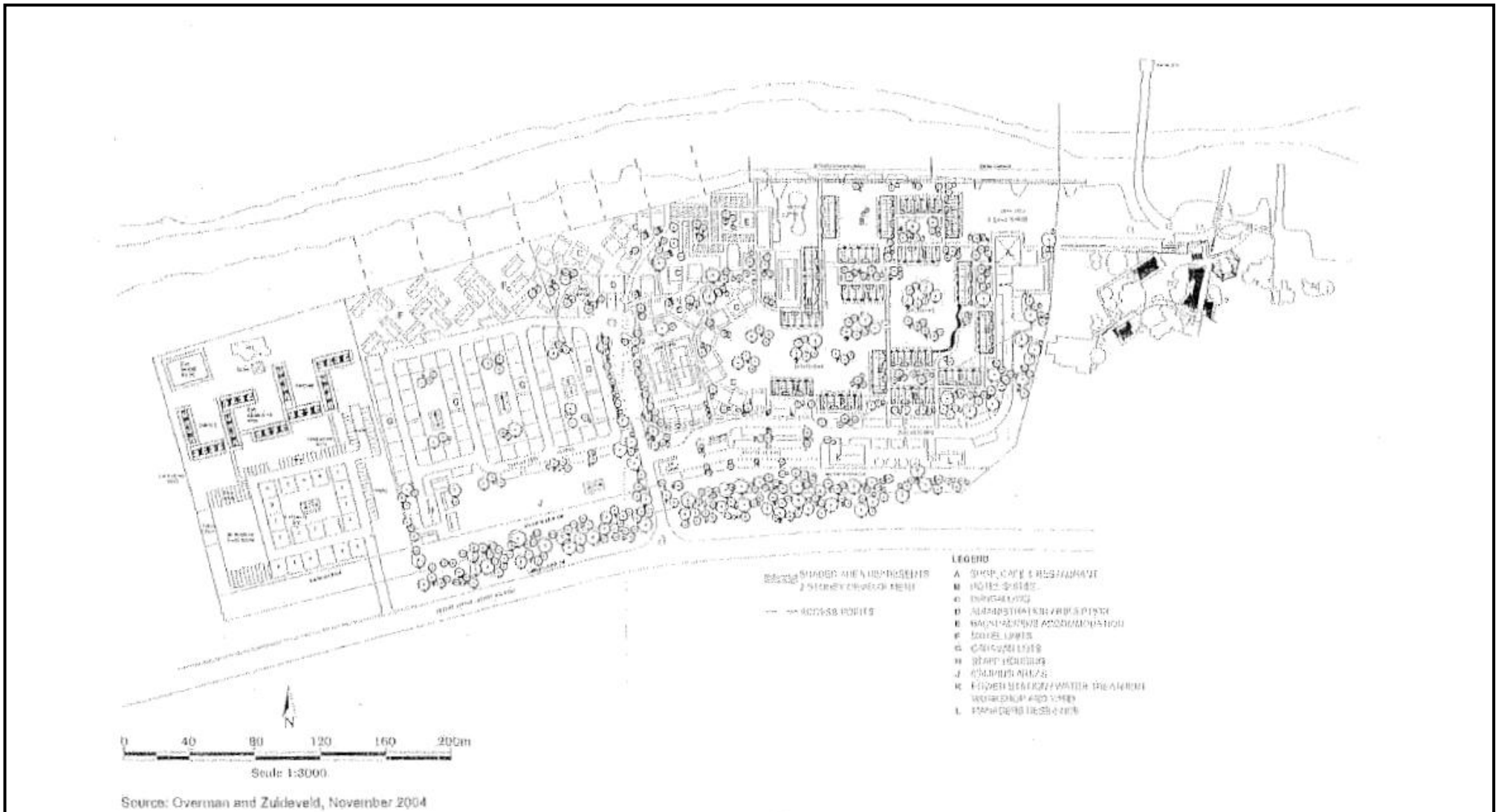
Table 2: Key environmental factors, objectives and Project environmental aspects

Factor	EPA objective	Environmental aspects of the Project
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	Uncontrolled stormwater drainage has the potential to impact marine flora through smothering from sediment transport.
Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.	



Source: MS 709

Figure 1: Monkey Mia Dolphin Resort, noting expansion areas for the resort



Source: MS 709

Figure 2: Monkey Mia Dolphin Resort expansion area and staff facilities

2.2 Requirements of MS 709

This DMP is submitted in accordance with condition 7 of MS 709. Table 3 details the requirements of this condition and also indicates which sections of this DMP they are addressed.

Table 3: Requirements of condition 7 of MS 709

Condition	Requirement	Section in DMP
7-1	Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Drainage Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority. This Plan shall address:	DMP
	1. management of stormwater quality and quantity;	Section 3 & 3.3
	2. potential for erosion, local flooding and contaminant discharge;	Section 3 & 3.3
	3. minimising pollutants at their source; and	Section 3 & 3.3
	4. pollutant removal.	Section 3 & 3.3
	Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained: <ul style="list-style-type: none"> • Department of Conservation and Land Management; and • Shire of Shark Bay. 	Section 6
7-2	The proponent shall implement the Drainage Management Plan required by condition 7-1.	Section 2
7-3	The proponent shall make the Drainage Management Plan required by condition 7-1 publicly available.	Section 4.1

2.3 Rationale and approach in meeting the environmental objective

The approach for managing any potential drainage impacts is to develop a comprehensive management program that identifies:

- management risks
- key management based targets
- management actions
- monitoring measures
- review and revision requirements.

An adaptive risk based management approach has been developed in order to create a robust management system, that prioritises and manages significant risks using the mitigation hierarchy (i.e. avoid, minimise, manage, rehabilitate and offset).

This management approach allows for flexibility, to enable the management program to adapt to any changes in the Project conditions, as well as to respond to the dynamic nature of the surrounding environment. The methodology for the risk-based approach is provided in Appendix 1.

2.3.1 Rationale for choice of management targets

Management targets (Table 5) were selected in order to prioritise the risks identified for the Project, and are based on a review of:

- available data for the region
- the relationship between the project aspects and the environmental factors
- industry standards and legislative requirements
- the requirements of MS 709.

3. Drainage management

The objective of the DMP is to identify the management provisions RAC proposes to implement to manage and minimise potential impacts from stormwater drainage during the operation phase of the Project in order to:

- meet the EPA's objectives for inland waters environmental quality and marine environmental quality as described in Table 2
- meet the requirements of MS 709 (Table 3).

The Construction Management Plan provides controls to ensure the potential impacts are contained by preventing stormwater egress during the construction phase.

3.1 Management actions

Risk-based management actions have been identified and prioritised Table 4 based on the methodology provided in Appendix 1. These management actions focus on Project operation activities that have the highest likelihood of causing environmental impact, and were specifically developed to reduce potential impacts of operation activities upon the surrounding marine environment.

Table 4: Risk-based management actions

Risk and key impacts	DMP management action reference	Management actions	Risk-based priority	Timing	Relevant management target
Uncontrolled stormwater drainage has the potential to impact marine flora through smothering from sediment transport.	DMP 1	Maintain unsealed areas such as grassed camping areas and unsealed car parks to contain and infiltrate significant stormwater flows.	High	Operation	T4.1 and T5.1
	DMP 2	Direct stormwater flows from roofs, roads, access ways and other impervious surfaces to areas that are unsealed to enable infiltration close to source.	High	Operation	T4.1 and T5.1
	DMP 3	Maintain pollutant removal devices (i.e. oil, sediment and gross pollutant traps) to any outlet and overflow structure.	High	Operation	T5.2
	DMP 4	Ensure chemical and fuel storage areas are bunded.	High	At all times	T5.2
	DMP 5	'Cyclone Management Plan' to include protocols to reduce the stormwater impacts from cyclonic rainfall. Protocols will include inspections of the stormwater containment system and the site to prevent discharge to the foreshore/marine environment.	High	Operation	T4.1 and T5.1
	DMP 6	Remove sediment and debris from manholes/interceptor pits.	Medium	Operation	T4.1 and T5.1
	DMP 7	Induct all visitors to the resort on arrival of the stormwater protocols.	High	At all times	T4.1 and T5.1
	DMP 8	Provide educational material in each accommodation unit/room outlining the stormwater system.	High	At all times	T4.1 and T5.1

3.2 Management target

Management targets have been developed to measure and report against the proposed RAC environmental objective (Table 5).

Table 5: Management targets

Environmental factor	EPA environmental objective	Management targets (Unique identifier)
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment (T4.1).
Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the marine environment. (T5.1) Prevent potential contaminants from the Project area entering the marine environment. (T5.2)

3.3 Monitoring

The purpose of monitoring program is to inform, through the management targets, if the environmental objective is being achieved, as well as to determine if management actions need to be reviewed and revised.

Table 6 outlines the monitoring program proposed to be undertaken by RAC.

Table 6: Monitoring program to achieve management targets

DMP monitoring action	Indicator	Parameter	Monitoring method	Frequency	Location	DMP management action reference	Relevant management target
DMP M1.	Inspections of the stormwater system demonstrate that sediment and debris is not present.	Sediment	Visual assessment	Monthly	Stormwater system manholes /pits	DMP 3 DMP 6	T4.1 and T5.1
DMP M2.	Inspections of chemical and fuel storage areas demonstrate that no spills/leaks have occurred.	Contaminants	Visual assessment	Weekly	Chemical and fuel storage areas	DMP 4	T5.2

4. Review and revision of management actions

In the event that management targets are not met, RAC will investigate the potential cause and any potential impacts that may have resulted. If the management targets are not met, and it is deemed to be the result of the project, the corrective actions detailed in Table 7 will be implemented.

Table 7: Corrective actions

DMP corrective action	Performance indicator	Action	Responsibility	DMP monitoring reference	Relevant management target
DMP CA1.	Sediment and/or debris present in the stormwater system	<ol style="list-style-type: none"> 1. Investigate cause and determine source. 2. Remove sediment/debris. 3. Continue monitoring. 4. Revise and update risk assessment and management actions where applicable. 	RAC	DMP M1	T4.1 and T5.1
DMP CA2.	Spills and/or loss of containment has occurred at the chemical/fuel storage area	<ol style="list-style-type: none"> 1. Investigate cause. 2. Report spill to DPaW, DER and Shire of Shark Bay. 3. Immediately cleanup and undertake remediation. 4. Review procedures and undertake further training of staff. 5. Continue monitoring. 6. Revise and update risk assessment and management actions where applicable. 	RAC	DMP M2	T5.2

4.1 Reporting provisions

The performance of the DMP will be assessed annually against the management targets in Table 5, and will be reported on as part of the Compliance Assessment Report (CAR). The DMP reporting template is presented in Table 8. This DMP is to be made publically available in accordance with condition 7-3 of MS 709.

4.1.1 Reporting on exceedance of the management target

In the event that management targets are not met during the reporting period, a written report will be included in the CAR detailing the corrective actions that were undertaken, and the effectiveness of the corrective actions to rectify any potential impacts.

Table 8: Environmental management plan reporting table

Condition environmental objective and management target set in the Condition EMP		Reporting on the management objective and management target	Status ¹
EPA objective	Management target		
<p>Factor 4 Inland Waters Environmental Quality To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.</p>	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment (T4.1). 	Prevented sediment from the Project area entering the ground and surface water environment.	<ul style="list-style-type: none"> Yes No
<p>Factor 5 Marine Environmental Quality To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.</p>	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the marine environment. (T5.1). 	Prevented sediment from the Project area entering the marine environment.	<ul style="list-style-type: none"> Yes No
	<ul style="list-style-type: none"> Prevent potential contaminants from the Project area entering the marine environment. (T5.2) 	Prevented potential contaminants from the Project area entering the marine environment.	<ul style="list-style-type: none"> Yes No

Notes:

¹The status of achievement of the condition environmental objectives is indicated by the following symbols:

- Condition environmental objective achieved
- Condition environmental objective not achieved

5. Adaptive management

RAC will implement an adaptive management system to provide a robust management plan, which effectively meets the environmental objectives. To achieve this, the DMP will be reviewed on an annual basis to ensure that the plan takes into consideration amendments to operations, monitoring results, audits, continuous improvement and changes in regulatory and corporate requirements. If revised, a copy of the revised DMP will be provided to the OEPA as part of the CAR.

6. Stakeholder consultation

Consistent with the EPA's expectations for this DMP, RAC consulted with a number of stakeholders during the development of the plan.

This section provides a summary of consultation that occurred and key comments received from each stakeholder (Table 9)

Table 9: Stakeholder consulted, comments and responses

Organisation(s)	Comments	RAC response to comments/concerns
Xx To be updated once consultation finalized xx		

7. References

RPS Bowman Bishaw Gorham (RPS) 2004, *Expansion of Monkey Mia Dolphin Resort Public Environmental Review (EPA Assessment Number 1455)*, report prepared for Monkey Mia Dolphin Resort Pty Ltd, Perth, June.

Appendix 1
Risk matrix

Risk-based priority

A risk assessment determines whether a hazard could harm the environment. The following stages are undertaken once an environmental hazard has been identified

- Stage 1: Risk identification to identify and document environmental risks and impacts associated with the organisation activities, goods and services
- Stage 2: Qualitatively ranking potential environmental impacts to establish relative significance
- Stage 3: Establishing and documenting control measures to mitigate potentially significant environmental impacts.

RAC shall control all environmental risks identified within the organisation to an extent that is practically possible (Table A 1), once they have been identified through the risk management and identification process.

Risk ranking is generally undertaken by assigning likelihood and consequence levels to each identified activity or issue and determining risk levels through the use of a risk matrix. After completing this process management measures are implemented and a residual risk is determined.

Table A 1: Qualitative risk rating matrix

Likelihood	Consequences			
	Critical (4)	Major (3)	Moderate (2)	Minor (1)
Almost Certain (A)	VH	VH	H	M
Likely (B)	VH	VH	H	M
Unlikely (C)	VH	H	M	L
Rare (D)	H	M	L	L

VH	Very High	Immediate action required. Task stopped.
H	High	Senior Management attention needed.
M	Medium	Management responsibility must be specified.
L	Low	Manage by routine procedures.

Table A 2: Likelihood Classification

Likelihood	Description
Almost Certain (A)	Event is a common or frequent occurrence and is expected to occur daily
Likely (B)	Event is expected to occur annually.
Unlikely (C)	Event may occur. If the event has occurrence in the project area it is very infrequent. It is likely to have occurred within the industry.
Rare (D)	The event is unlikely to not occur in the project area but has been known to occur infrequently within the industry. The event may occur at a frequency of more than 10 years.

Table A 3: Consequence Classification

Consequence	Definition
Critical (4)	Environment: Long term large scale damage to habitat or environment. Legal: Non-compliance having a critical financial or community profile impact. Community: Widespread community disruption with significant adverse economic impact.
Major (3)	Environment: Severe impact requiring remedial damage to environment. Legal: Non-compliance and having high financial or community profile impact. Community: Extensive community complaints extending beyond the region or adverse state level media coverage. Wider community disruption up to 7 days with adverse economic impact.
Moderate (2)	Safety: Moderate impact on environment. No long term or irreversible damage. Legal: Non-compliance having moderate financial or community profile impact. Community: Widespread local complaints or adverse regional media coverage. Isolated community disruption up to 3 days with limited adverse economic impact.
Minor (1)	Environment: Minor breach of environmental policy. Negligible impact on environment. Legal: Technical breach with no sanction. Community: Few complaints or minor adverse media coverage. Negligible impact on reputation. Isolated community disruption up to 1 day with minimal economic.

When determining risk controls, the hierarchy of risk controls, summarised in Table A 4 must be considered.

Table A 4: Hierarchy of risk controls

Option	Examples
Elimination	Stop using equipment or substance, or stop undertaking the procedure causing the risk.
Substitution	Use an alternative substance, equipment or process which poses less risk.
Isolation	Separate receivers from the source of the risk.
Engineering Controls	Reduce exposure to the risk by making physical changes to equipment, procedures or the work environment (e.g. using dust control measures on equipment).
Change work practices	Adopt work procedures which minimise exposure to the risk (e.g. wet sweeping a dusty environment rather than dry sweeping, to minimise the amount of airborne dust).

Appendix E

Nutrient and Irrigation Management Plan

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Monkey Mia Dolphin Report

Nutrient and Irrigation Management Plan

Prepared for
RAC Tourism Assets Pty Ltd
by Strategen

June 2016

Monkey Mia Dolphin Report

Nutrient and Irrigation Management Plan

Strategen is a trading name of
Strategen Environmental Consultants Pty Ltd
Level 1, 50 Subiaco Square Road Subiaco WA 6008
ACN: 056 190 419

June 2016

Limitations

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Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: RAC Tourism Assets Pty Ltd

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Preliminary Draft Report	A	For client review	D White, B Downe / A Welker, D Goundrey	Electronic	13 May 2016
Final Report	0	Stakeholder comment	D White, B Downe / A Welker, D Goundrey	Electronic	24 June 2016

Filename: RAC16009_01 R008 Rev 0 - 24 June 2016

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Appendix 1 Risk matrix

1. Summary

This Nutrient and Irrigation Management Plan (NIMP) is submitted in accordance with Ministerial Statement (MS) 709 Condition 8 for the Monkey Mia Dolphin Resort expansion (the Project) by RAC Tourism Assets Pty Ltd (RAC).

Table 1 below presents the environmental criteria to measure achievement of the conditioned environmental outcome that must be met through implementation of this NIMP.

Table 1: Environmental criteria

Required information	Response	
Title of proposal	Expansion of the Monkey Mia Dolphin Resort Monkey Mia, Shark Bay.	
Proponent	RAC Tourism Assets Pty Ltd.	
Ministerial Statement number	709.	
Purpose of this Condition EMP	The Nutrient and Irrigation Management Plan is submitted to fulfill the requirements of Condition 8 of the above Statement.	
EPA's environmental objective for the key environmental factors	Environmental factor	EPA environmental objective
	Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
	Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.
Management targets	Environmental factor	Management target
	Factor 4 Inland Waters Environmental Quality	<ul style="list-style-type: none"> No waterlogging within irrigated areas. (T4.2) No increase in soil nutrient above the loading rate. (T4.3).
	Factor 5 Marine Environmental Quality	<ul style="list-style-type: none"> Prevent potential contaminants from the Project area entering the marine environment. (T5.2).

Corporate endorsement

I hereby certify that to the best of my knowledge, the Condition EMP provisions within this Nutrient and Irrigation Management Plan are true and correct and address the legal requirements of condition 8 of MS 709.

[Signature of duly authorised proponent representative]

Name:

Signed:

Designation:

Date:

2. Context, scope and rationale

RAC owns and manages the current Monkey Mia Dolphin Resort located within a World Heritage area on a Shire of Shark Bay reserve. Approval under the *Environmental Protection Act 1986* (EP Act) to expand the resort was granted through issue of MS 709 on 28 December 2005.

As per MS 709, the expansion of the resort comprises the expansion of the existing resort area, the provision of staff accommodation facilities and an upgrade to the wastewater treatment plant (the Project, Figure 1). The Project commenced in 2013 with the upgrade to the wastewater treatment plant, which was subsequently completed in 2014.

2.1 Scope

Condition 8 of MS 709 requires the proponent to prepare a Nutrient and Irrigation Management Plan (NIMP) to ensure that nutrient and irrigation applications from the Project are being appropriately managed.

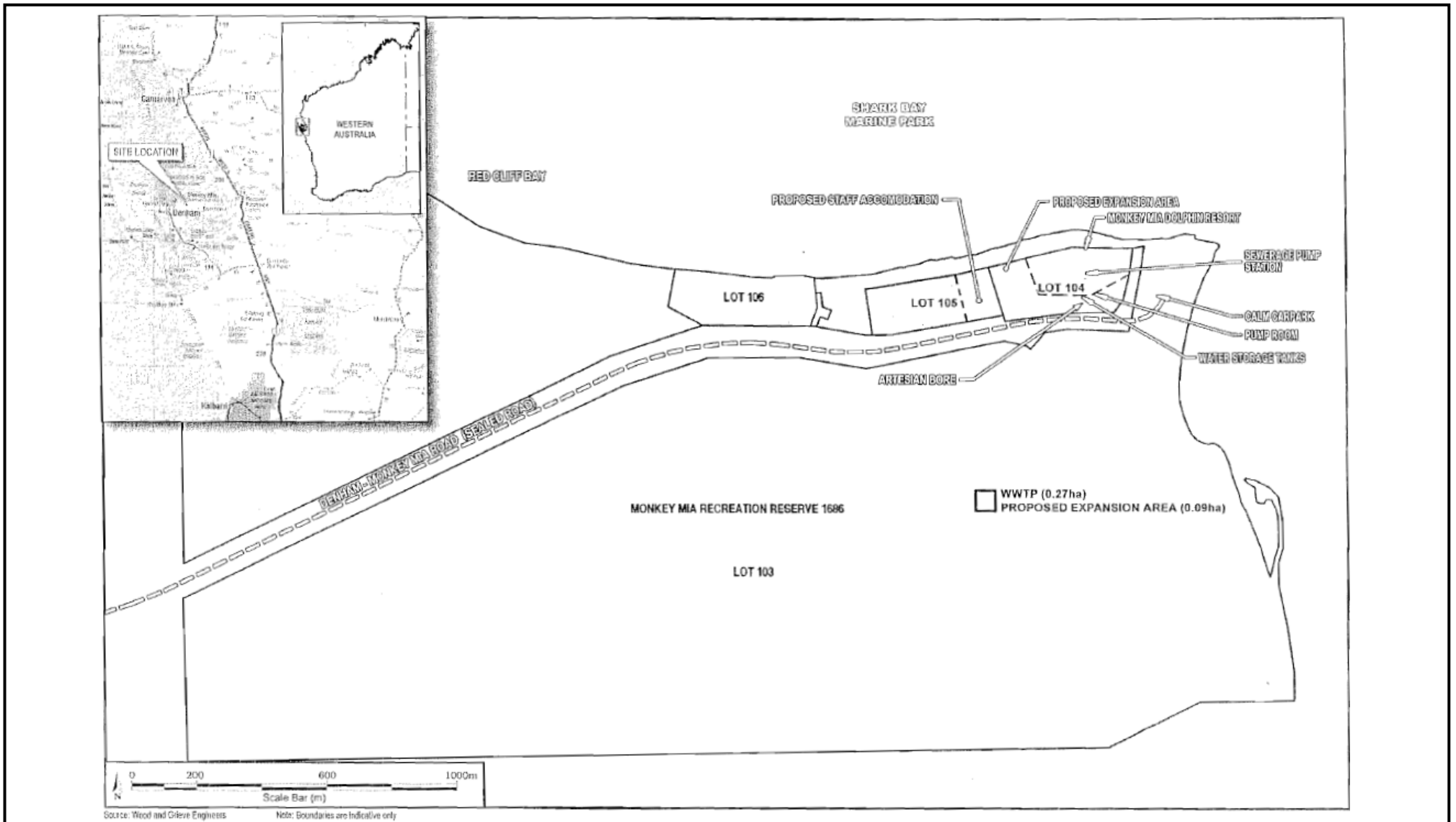
Given that the upgrading of the waste water treatment plant was completed in 2014, and no waste water is proposed to be used for irrigation within the resort area, this NIMP specifically refers to the nutrient and irrigation management system used for the landscaping areas within the resort expansion area and staff facilities area (Figure 2).

2.1.1 Key environmental factors

The environmental factors, EPA objectives and environmental aspects of the Project are provided in Table 2.

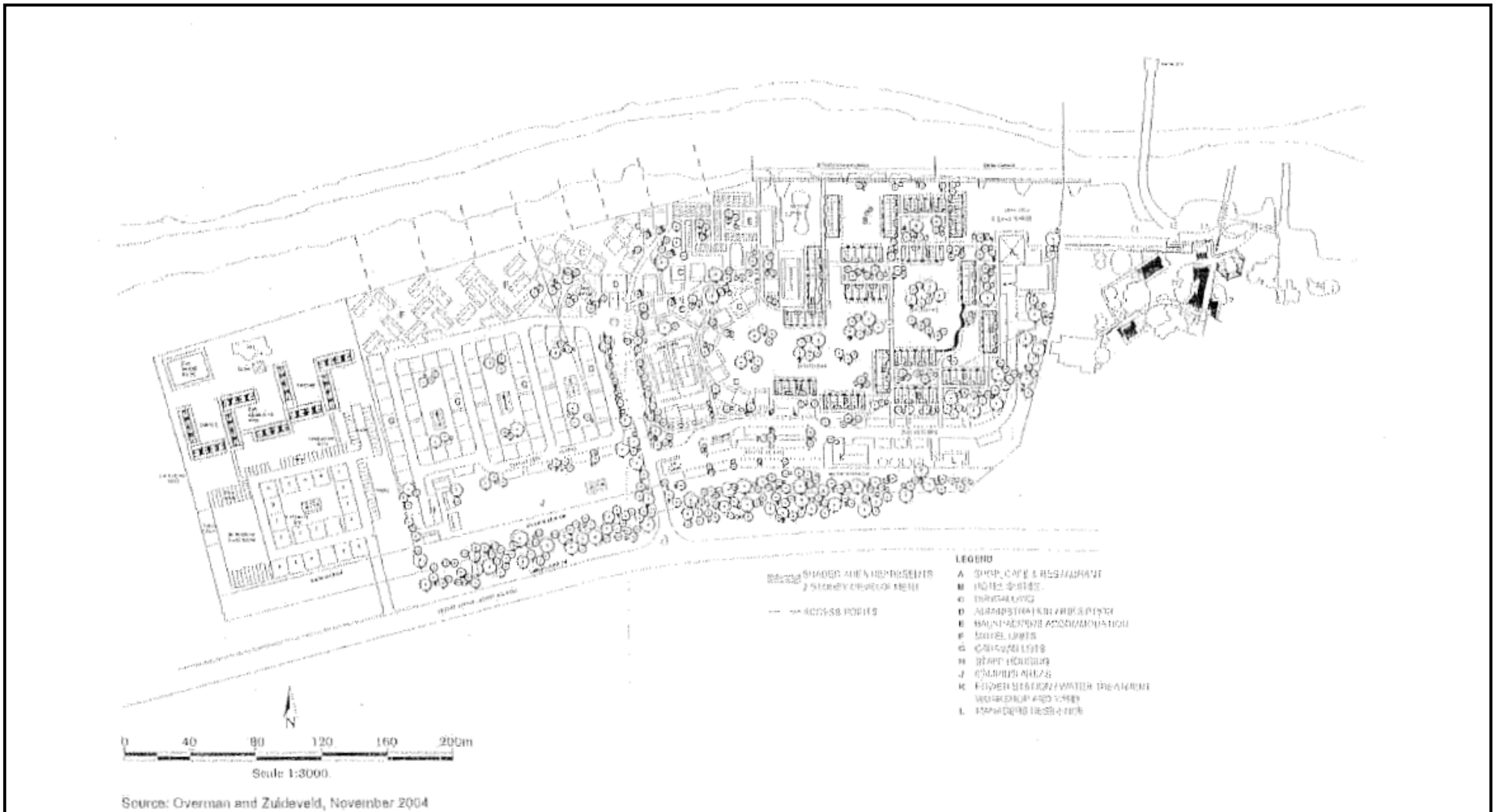
Table 2: Key environmental factors, objectives and environmental aspects

Factor	EPA objective	Environmental aspects of the Project
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Uncontrolled application of irrigation water has the potential to result in waterlogging which may discharged into the marine environment. Unregulated application of fertiliser has the potential to impact on the marine environment during high rainfall events (e.g. cyclonic events)
Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.	



Source: MS 709

Figure 1: Monkey Mia Dolphin Resort, noting expansion areas for the resort



Source: MS 709

Figure 2: Monkey Mia Dolphin Resort expansion area and staff facilities

2.2 Requirements of MS 709

This NIMP is submitted in accordance with condition 8 of MS 709. Table 3 details the requirements of this condition and also indicates which sections of this NIMP they are addressed.

Table 3: Requirements of condition 8 of MS 709

Condition	Requirement	Section in NIMP
8-1	Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Nutrient and Irrigation Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority. This Plan shall address:	NIMP
	1. method of application of nutrients;	Section 3 & 3.3
	2. irrigation program;	Section 3 & 3.3
	3. water conservation;	Section 3 & 3.3
	4. recommendation for low nutrient and water requirement plants and grasses; and	Section 3 & 3.3
	5. prescribed fertiliser applications.	Section 3 & 3.3
	Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained: <ul style="list-style-type: none"> Department of Conservation and Land Management; and Shire of Shark Bay. 	Section 6
8-2	The proponent shall implement the Nutrient and Irrigation Management Plan required by condition 8-1.	Section 2 & 4
8-3	The proponent shall make the Nutrient and Irrigation Management Plan required by condition 8-1 publicly available.	Section 4.1

2.3 Rationale and approach in meeting the environmental objective

The approach for managing any potential nutrient and irrigation impacts is to develop a comprehensive management program that identifies:

- management risks
- key management based targets
- management actions
- monitoring measures
- review and revision requirements.

An adaptive risk based management approach has been developed in order to create a robust management system, that prioritises and manages significant risks using the mitigation hierarchy (i.e. avoid, minimise, manage, rehabilitate and offset).

This management approach allows for flexibility, to enable the management program to adapt to any changes in the Project conditions, as well as to respond to the dynamic nature of the surrounding environment. The methodology for the risk-based approach is provided in Appendix 1.

2.3.1 Rationale for choice of management targets

Management targets in Table 5 were selected in order to prioritise the significant risks identified for the project, and are based on:

- review of available data for the region
- the relationship between the Project aspects and the environmental factors
- industry standards and legislative requirements
- the requirements of MS 709.

3. Nutrient and irrigation management

The objective of the NIMP is to identify the management provisions RAC proposes to implement to manage and minimise potential impacts from irrigation during operation in order to:

- meet the EPA's objectives for inland waters environmental quality and marine environmental quality as described in Table 2
- meet the requirements of MS 709 (Table 3).

3.1 Management actions

Risk-based management actions have been identified and prioritised in Table 4 based on the methodology provided in Appendix 1. These management actions focus on Project operation activities that have the highest likelihood of causing environmental impact, and were specifically developed to reduce potential impacts of activities upon the surrounding environment.

Table 4: Risk-based management actions

Risk and key impacts	NIMP management action reference	Management actions	Risk-based priority	Timing	Relevant management target
Uncontrolled application of irrigation water has the potential to result in waterlogging.	NIMP 1	Design, install and test the irrigation system to prevent water logging and erosion.	High	Prior to operation	T4.2
	NIMP 2	Use a probe (or other device) for measuring soil moisture content to ensure over-irrigation does not occur.	High	During operation	T4.3
	NIMP 3	Cease irrigation prior to and during forecast high rainfall events and when soil field capacity has been reached.	High	During operation	T4.3
	NIMP 4	Schedule irrigation based on soil moisture level, plant requirements (lawn and native plantings), weather conditions, evaporation and transpiration rates.	High	Prior to operation	T4.3
Unregulated application of fertiliser has the potential to impact on the marine environment.	NIMP 5	Landscaped areas (open space and streetscapes) to be planted with native species occurring within and adjacent to the Monkey Mia Reserve, as agreed by the Shire of Shark Bay.	High	Prior to operation	T5.2
	NIMP 6	Turfed areas to be planted using a grass species with: <ul style="list-style-type: none"> • high salt tolerance • low water requirements • low nutrient requirements as agreed by the Shire of Shark Bay.	High	Prior to operation	T5.2
	NIMP 7	Fertiliser application loading rates will be determined and provided to the OEPA once master planning for the resort has been finalised and final areas (m ²) of lawn and native planting are known.	High	Prior to operation	T4.3
	NIMP 8	Slow release fertiliser will be applied in accordance with the nutrient loading rates and manufacturers' instructions.	High	During operation	T4.3
	NIMP 9	If required all pesticide and herbicides will be applied according to the manufacturers' specifications.	Medium	During operation	T5.2
	NIMP 10	Fertiliser, pesticide and herbicides will not be applied to waterlogged soil.	High	During operation	T4.2
	NIMP 11	Soil nutrients, pH and EC will be assessed to measure the efficiency of applied nutrients and determine whether deficiencies or toxicities are occurring.	High	Annually, during operation	T5.2
	NIMP 12	Fertiliser, pesticide and herbicides used on-site will be stored in accordance with the Explosives and Dangerous Goods Act 1961 and requirements outlined in the Material Safety Data Sheets for the products.	High	At all times	T5.2

3.2 Management target

Management targets have been developed to measure and report against the proposed RAC environmental objective (Table 5).

Table 5: Management targets

Environmental factor	EPA environmental objective	Management targets (Unique identifier)
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> No waterlogging within irrigated areas. (T4.2) No increase in soil nutrient above the loading rate. (T4.3).
Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent potential contaminants from the Project area entering the marine environment. (T5.2).

3.3 Monitoring program

The purpose of monitoring program is to inform, through the management targets, if the environmental objective is being achieved, as well as to determine if management actions need to be reviewed and revised.

Table 6 outlines the monitoring program proposed to be undertaken by RAC.

Table 6: Monitoring program to achieve management targets

NIMP monitoring action number	Indicator	Parameter	Monitoring method	Frequency	Location	Relevant NIMP management action reference	Relevant management target
NIMP M1.	No waterlogging within irrigated areas of the resort	Irrigation flow	Meter reading	Weekly	Water meter	NIMP 1 NIMP 2	T4.2
NIMP M2.		Soil moisture	Soil moisture probe	Weekly	Irrigated areas	NIMP 3 NIMP 4	T4.2
NIMP M3.	No excess application of nutrients from irrigation	Soil nutrients	Nutrient audit/assessment	Annually	Irrigated areas	NIMP 6 NIMP 7 NIMP 8 NIMP 9 NIMP 10 NIMP 11 NIMP 12	T4.3 and T5.2

4. Review and revision of management actions

In the event that management targets are not met, RAC will investigate the potential cause and any potential impacts that may have resulted. If the management targets are not met, and it is deemed to be the result of the project, the corrective actions detailed in Table 7 will be implemented.

Table 7: Corrective actions for management targets

NIMP corrective action	Performance indicator	Action	Responsibility	Relevant NIMP monitoring action reference	Relevant management target
NIMP CA1.	Waterlogging in the irrigated areas	<ol style="list-style-type: none"> 1. Investigate cause, including assessing irrigation rates and timing. 2. Implement corrective actions which could include reducing irrigation rates and informing staff of correct procedures as required. 3. Monitor to ensure remedial measures are successful. 4. Revise and update risk assessment and management actions where applicable. 	RAC	NIMP M1 NIMP M2	T4.2
NIMP CA2.	Increase in nutrient levels above loading rates	<ol style="list-style-type: none"> 1. Investigate cause. 2. Implement corrective actions, which could include reducing fertiliser application rates and informing staff of correct procedures as required. 3. Monitor to ensure remedial measures are successful. 4. Revise and update risk assessment and management actions where applicable. 	RAC	NIMP M3	T4.3 and T5.2

4.1 Reporting provisions

The performance of the NIMP will be assessed annually against the management targets in Table 5, and will be reported on as part of the Compliance Assessment Report (CAR). The NIMP reporting template is presented in Table 8. This NIMP will also be made publically available in accordance with condition 8-3 of MS 709.

4.1.1 Reporting on exceedance of the management target

In the event that management targets are not met during the reporting period, a written report will be included in the CAR detailing the corrective actions that were undertaken, and the effectiveness of the corrective actions to rectify any potential impacts.

Table 8: Environmental management plan reporting table

Condition environmental objective and management target set in the Condition EMP		Reporting on the management objective and management target	Status ¹
EPA objective	Management target		
Factor 4 Inland Waters Environmental Quality To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> No waterlogging within irrigated areas. (T4.2). 	No waterlogging within irrigated areas.	<ul style="list-style-type: none"> Yes No
	<ul style="list-style-type: none"> No increase in soil nutrient above the loading rate. (T4.3). 	No increase in soil nutrient above the loading rate.	<ul style="list-style-type: none"> Yes No
Factor 5 Marine Environmental Quality To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent potential contaminants from the Project area entering the marine environment. (T5.2). 	Prevented potential contaminants from the Project area entering the marine environment.	<ul style="list-style-type: none"> Yes No

Notes:

¹The status of achievement of the condition environmental objectives is indicated by the following symbols:

- Condition environmental objective achieved
- Condition environmental objective not achieved

5. Adaptive management

RAC will implement an adaptive management system to provide a robust management plan, which effectively meets the environmental objectives. To achieve this, the NIMP will be reviewed on an annual basis to ensure that the plan takes into consideration amendments to operations, monitoring results, audits, continuous improvement and changes in regulatory and corporate requirements. If revised, a copy of the revised NIP will be provided to the OEPA as part of the CAR.

6. Stakeholder consultation

Consistent with the EPA's expectations for this NIMP, RAC consulted with a number of stakeholders during the development of the plan.

This section provides a summary of consultation that occurred and key comments received from each stakeholder (Table 9).

Table 9: Stakeholder consulted, comments and responses

Organisation(s)	Comments	RAC response to comments/concerns
Xx To be updated once consultation finalized xx		

7. References

RPS Bowman Bishaw Gorham (RPS) 2004, *Expansion of Monkey Mia Dolphin Resort Public Environmental Review (EPA Assessment Number 1455)*, report prepared for Monkey Mia Dolphin Resort Pty Ltd, Perth, June 2004.

Appendix 1
Risk matrix

Risk-based priority

A risk assessment determines whether a hazard could harm the environment. The following stages are undertaken once an environmental hazard has been identified

- Stage 1: Risk identification to identify and document environmental risks and impacts associated with the organisation activities, goods and services
- Stage 2: Qualitatively ranking potential environmental impacts to establish relative significance
- Stage 3: Establishing and documenting control measures to mitigate potentially significant environmental impacts.

RAC shall control all environmental risks identified within the organisation to an extent that is practically possible (Table A 1), once they have been identified through the risk management and identification process.

Risk ranking is generally undertaken by assigning likelihood and consequence levels to each identified activity or issue and determining risk levels through the use of a risk matrix. After completing this process management measures are implemented and a residual risk is determined.

Table A 1: Qualitative risk rating matrix

Likelihood	Consequences			
	Critical (4)	Major (3)	Moderate (2)	Minor (1)
Almost Certain (A)	VH	VH	H	M
Likely (B)	VH	VH	H	M
Unlikely (C)	VH	H	M	L
Rare (D)	H	M	L	L

VH	Very High	Immediate action required. Task stopped.
H	High	Senior Management attention needed.
M	Medium	Management responsibility must be specified.
L	Low	Manage by routine procedures.

Table A 2: Likelihood Classification

Likelihood	Description
Almost Certain (A)	Event is a common or frequent occurrence and is expected to occur daily
Likely (B)	Event is expected to occur annually.
Unlikely (C)	Event may occur. If the event has occurrence in the project area it is very infrequent. It is likely to have occurred within the industry.
Rare (D)	The event is unlikely to not occur in the project area but has been known to occur infrequently within the industry. The event may occur at a frequency of more than 10 years.

Table A 3: Consequence Classification

Consequence	Definition
Critical (4)	Environment: Long term large scale damage to habitat or environment. Legal: Non-compliance having a critical financial or community profile impact. Community: Widespread community disruption with significant adverse economic impact.
Major (3)	Environment: Severe impact requiring remedial damage to environment. Legal: Non-compliance and having high financial or community profile impact. Community: Extensive community complaints extending beyond the region or adverse state level media coverage. Wider community disruption up to 7 days with adverse economic impact.
Moderate (2)	Safety: Moderate impact on environment. No long term or irreversible damage. Legal: Non-compliance having moderate financial or community profile impact. Community: Widespread local complaints or adverse regional media coverage. Isolated community disruption up to 3 days with limited adverse economic impact.
Minor (1)	Environment: Minor breach of environmental policy. Negligible impact on environment. Legal: Technical breach with no sanction. Community: Few complaints or minor adverse media coverage. Negligible impact on reputation. Isolated community disruption up to 1 day with minimal economic.

When determining risk controls, the hierarchy of risk controls, summarised in Table A 4 must be considered.

Table A 4: Hierarchy of risk controls

Option	Examples
Elimination	Stop using equipment or substance, or stop undertaking the procedure causing the risk.
Substitution	Use an alternative substance, equipment or process which poses less risk.
Isolation	Separate receivers from the source of the risk.
Engineering Controls	Reduce exposure to the risk by making physical changes to equipment, procedures or the work environment (e.g. using dust control measures on equipment).
Change work practices	Adopt work procedures which minimise exposure to the risk (e.g. wet sweeping a dusty environment rather than dry sweeping, to minimise the amount of airborne dust).

Appendix F

Foreshore Management Plan

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Monkey Mia Dolphin Resort

Foreshore Management Plan

Prepared for
RAC Tourism Assets Pty Ltd
by Strategen

June 2016

Monkey Mia Dolphin Resort

Foreshore Management Plan

Strategen is a trading name of
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June 2016

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

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Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: RAC Tourism Assets Pty Ltd

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Preliminary Draft Report	A	For client review	B Downe, D White / A Welker, D Goundrey	Electronic	13 May 2016
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Appendix 2 Revegetation species list (Weston 2002)

1. Summary

This Foreshore Management Plan (FMP) is submitted in accordance with Ministerial Statement (MS) No.709 Conditions 9 for the Monkey Mia Dolphin Resort Expansion (the Project) by RAC Tourism Assets Pty Ltd (RAC).

Table 1 below presents the environmental management target/s to measure achievement of the conditioned environmental objective that must be met through implementation of this Condition EMP.

Table 1: Environmental management targets

Required information	Response	
Title of proposal	Expansion of the Monkey Mia Dolphin Resort, Monkey Mia, Shark Bay.	
Proponent	RAC Tourism Assets Pty Ltd.	
Ministerial Statement number	709.	
Purpose of this Condition EMP	The Foreshore Management Plan is submitted to fulfil the requirements of condition 9 of the above Statement.	
EPA's environmental objective for the key environmental factor	Environmental factor	EPA environmental objective
	Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.
	Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.
Management targets	Environmental factor	Management target
	Factor 1: Terrestrial Environmental Quality	<ul style="list-style-type: none"> No erosion within the foreshore area adjacent to the resort (T1.1) No uncontained refuse within the project area or in the surrounding environment. (T1.3).
	Factor 2 Amenity	<ul style="list-style-type: none"> Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2).

Corporate endorsement

I hereby certify that to the best of my knowledge, the Condition EMP provisions in within this Foreshore Management Plan are true and correct and address the legal requirements of condition 9 of Ministerial Statement No. 709.

[Signature of duly authorised proponent representative]

Name:

Signed:

Designation:

Date:

2. Context, scope and rationale

RAC owns and manages the current Monkey Mia Dolphin Resort located within a World Heritage area on a Shire of Shark Bay reserve. Approval under the *Environmental Protection Act 1986* (EP Act) to expand the resort was granted through issue of MS 709 on 28 December 2005.

As per MS 709, the expansion of the resort comprises the expansion of the existing resort area, the provision of staff accommodation facilities and an upgrade to the wastewater treatment plant (the Project, Figure 1). The Project commenced in 2013 with the upgrade to the wastewater treatment plant, which was subsequently completed in 2014.

2.1 Scope

Condition 9 of MS 709 requires the proponent to prepare a Foreshore Management Plan (FMP) to ensure operation activities are managed to minimise the potential impacts upon the foreshore environment (Figure 2).

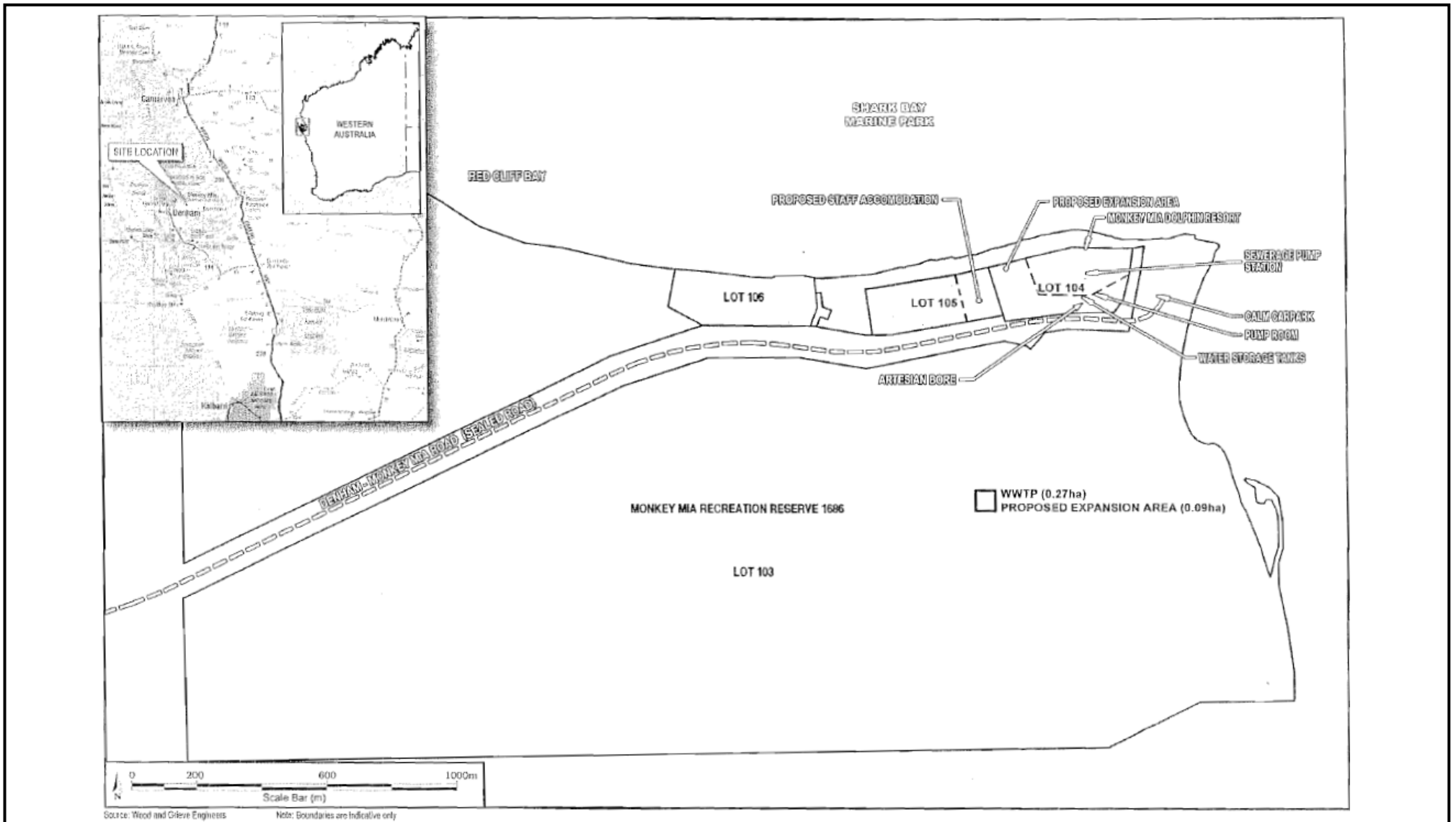
In implementing this FMP, RAC recognise that the foreshore (adjacent to the project) is vested in the Conservation and Parks Commission and managed by the Department of Parks and Wildlife (DPaW).

2.1.1 Key environmental factors

The environmental factors, EPA objectives and environmental aspects of the Project are provided in Table 2.

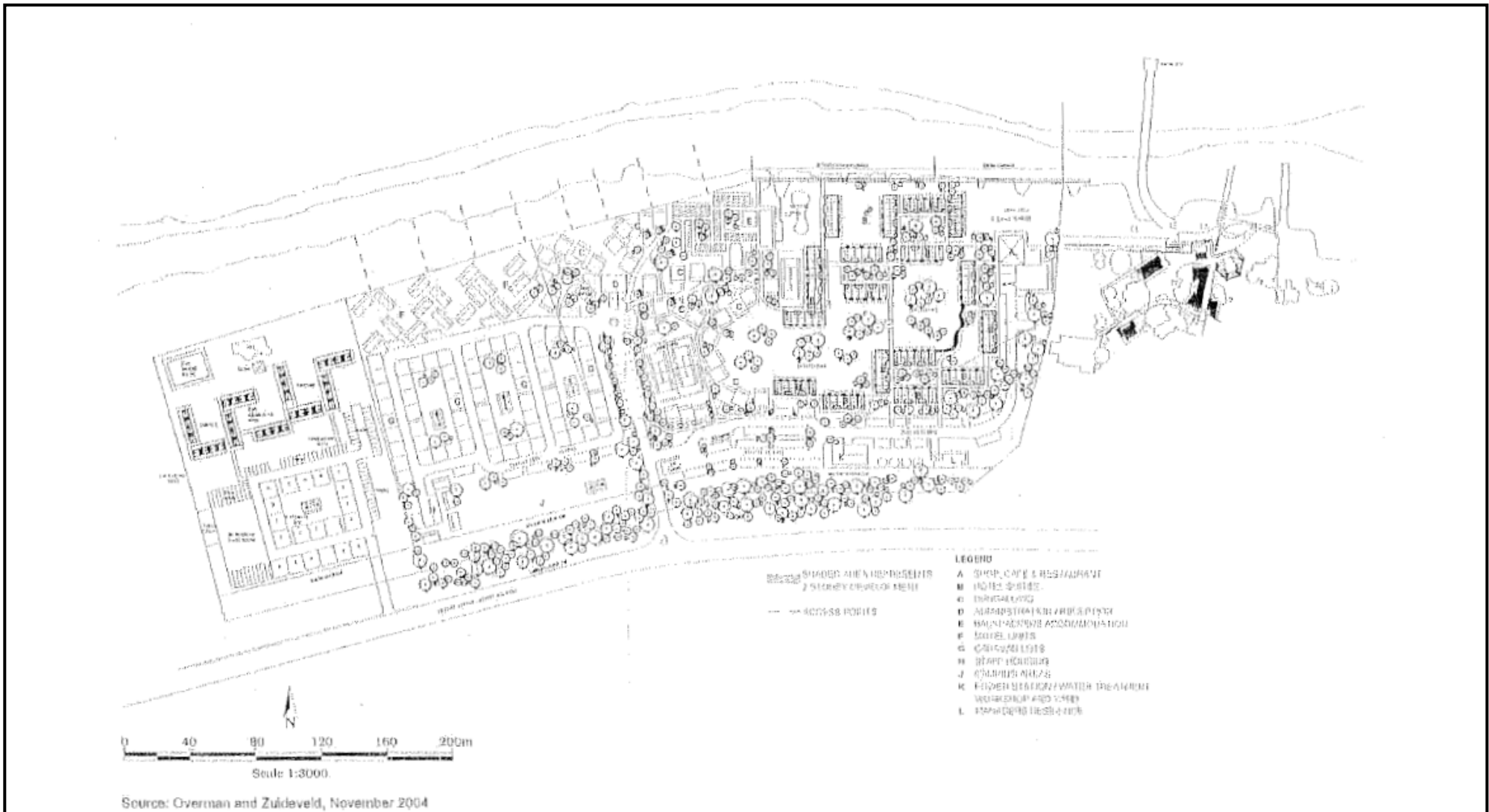
Table 2: Key environmental factors, objectives and Project environmental aspects

Factor	EPA objective	Environmental aspects of the Project
Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.	<ul style="list-style-type: none"> Uncontrolled access to the foreshore area has the potential to degrade vegetation leading to erosion.
Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Unregulated disposal of rubbish within the foreshore area has the potential to impact on the amenity of the area.



Source: MS 709

Figure 1: Monkey Mia Dolphin Resort, noting expansion areas for the resort



Source: MS 709

Figure 2: Monkey Mia Dolphin Resort expansion area and staff facilities

2.2 Requirements of MS 709

This FMP is submitted in accordance with condition 9 of MS 709. Table 3 details the requirements of condition 9 and also indicates which sections of this FMP they are addressed.

Table 3: Requirements of condition 9 of MS 709

Condition	Requirement	Section in FMP
9-1	Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Foreshore Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority. This plan shall address:	FMP
	1. minimising risk of dune erosion;	Section 3 & 3.3
	2. formalised access points;	Section 3 & 3.3
	3. definition of dune preservation and fencing areas;	Section 3 & 3.3
	4. rehabilitation and restoration of foreshore areas, incorporating stabilisation;	Section 3 & 3.3
	5. identification of species to be planted;	Section 3 & 3.3
	6. education and signage;	Section 3 & 3.3
	Note: in preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agency will be obtained: <ul style="list-style-type: none"> Department of Conservation and Land Management. 	Section 6
9-2	The proponent shall implement the Foreshore Management Plan required by condition 9-1.	Section 2 & 4
9-3	The proponent shall make the Foreshore Management Plan required by condition 9-1 publically available.	Section 4.1

2.3 Rationale and approach

The approach for managing any potential operation impacts is to develop a comprehensive management program that identifies:

- management risks
- key management based targets
- management actions
- monitoring measures
- review and revision requirements.

An adaptive risk based management approach has been developed in order to create a robust management system, that prioritises and manages significant risks using the mitigation hierarchy (i.e. avoid, minimise, manage, rehabilitate and offset).

This management approach allows for flexibility, to enable the management program to adapt to any changes in the Project conditions, as well as to respond to the dynamic nature of the surrounding environment. The methodology for the risk-based approach is provided in Appendix 1.

2.3.1 Rationale for choice of management targets

The management targets (Table 5) were selected in order to prioritise the risks identified for the Project, and are based on a review of:

- available data for the region
- the relationship between the project aspects and the environmental factors
- industry standards and legislative requirements
- the requirements of MS 709.

3. Foreshore management

The objective of the FMP is to identify the management provisions RAC proposes to implement to manage and minimise the potential impacts of operation activities upon the foreshore environment in order to:

- meet the EPA's objectives for amenity and terrestrial environmental quality as described in Table 2
- meet the requirements of MS 709 (Table 3).

3.1 Management actions

Risk-based management actions have been identified and prioritised in Table 4 based on the methodology provided in Appendix 1. These management actions focus on Project operation activities that have the highest likelihood of causing environmental impact, and were specifically developed to reduce potential impacts of operation activities upon the foreshore environment.

The foreshore (adjacent to the project) is vested in the Conservation and Parks Commission and managed by the Department of Parks and Wildlife (DPaW). The area of foreshore directly adjacent to the DPaW regional office (Figure 3) is proposed to be excluded from RAC rehabilitation and erosion requirements due to the existing degraded nature and function of the area in relation DPaW operations.



Figure 3: Foreshore rehabilitation exclusion zone

Table 4: Risk-based management actions

Risk and key impacts	FMP management action reference	Management actions	Risk-based priority	Timing	Relevant management target
Uncontrolled access to the foreshore area has the potential to degrade vegetation leading to erosion.	FMP 1	Provide formalised pedestrian access paths to the beach.	High	At all times	T1.1
	FMP 2	If required, undertake revegetation of areas disturbed by Project activities as detailed in the contingency actions in Table 7.	Medium	If required	T2.2
	FMP 3	Install signage and fencing to ensure access to the foreshore is via the designated access tracks and boardwalks.	High	At all times	T1.1
	FMP 4	If required, provided an extended raised boardwalk that is constructed to specifications agreed by DPaW.	Medium	At all times	T1.1
	FMP 5	Induct all visitors to the resort of the necessity to follow only authorised and signed access routes to the beachfront.	Medium	At all times	T1.1
	FMP 6	Provide educational material in each accommodation unit/room providing clear details and maps showing access routes from the accommodation to the beachfront.	Medium	At all times	T1.1
Unregulated disposal of rubbish within the foreshore area has the potential to impact on the amenity of the area.	FMP 7	Induct all visitors to the resort of the necessity to follow resort waste disposal protocols.	Medium	At all times	T1.3
	FMP 8	Provide educational material in each accommodation unit/room outlining the waste disposal protocols including: <ul style="list-style-type: none"> • all rubbish (cans, bottles, plastics, paper) to be returned to the resort for disposal • no rubbish to be dumped or left on the foreshore areas. 	Medium	At all times	T1.3
	FMP 9	Install signage at each access way to the beachfront informing visitors of rubbish disposal protocols.	Medium	At all times	T1.3

3.2 Management target

Management targets have been developed to measure and report against the proposed RAC environmental objective (Table 5).

Table 5: Management targets

Environmental factor	EPA Environmental objective	Management targets (Unique identifier)
Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.	<ul style="list-style-type: none"> No erosion within the foreshore area adjacent to the resort. (T1.1) No uncontained refuse within the project area or in the surrounding environment. (T1.3)
Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2)

3.3 Monitoring program

The purpose of monitoring program is to inform, through the management targets, if the environmental objective is being achieved, as well as to determine if management actions need to be reviewed and revised.

Table 6 outlines the monitoring program proposed to be undertaken by RAC.

Table 6: Monitoring program to achieve management targets

FMP monitoring action number	Indicator	Parameter	Monitoring method	Frequency	Location	Relevant FMP management action reference	Relevant management target
FMP M1	No erosional features within the foreshore area adjacent to the resort.	Erosion	Site inspection	Annually during the peak visitor period	Within the foreshore area adjacent to the resort.	FMP 10	T1.1
FMP M2	No loss of vegetation within the foreshore area due to impacts from Project activities	Vegetation	Site inspection	Bi-annually	Within the foreshore area adjacent to the resort.	FMP 11	T2.2
FMP M3	The beach is free of rubbish	Littering	Site inspection	Weekly	Within the foreshore area adjacent to the resort.	FMP 12	T1.3

4. Review and revision

In the event that management targets are not met, RAC will investigate the potential cause and any potential impacts that may have resulted. If the management targets are not met, and it is deemed to be the result of the project, the corrective actions detailed in Table 7 will be implemented.

Table 7: Corrective actions

FMP corrective action number	Performance indicator	Action	Responsibility	Relevant FMP monitoring action reference	Relevant management target
FMP CA1	Erosion within the foreshore area adjacent to the resort.	<ol style="list-style-type: none"> 1. Investigate cause. 2. Implement appropriate control to reduce or rectify impact which could include: <ol style="list-style-type: none"> a. Restricting access to areas that are impacted b. Changing the access route and install additional fencing in consultation with DPaW c. Undertaking rehabilitation of the eroded area in consultation with DPaW. 3. Continue annual monitoring. 4. Revise and update risk assessment and management actions where applicable. 	RAC	FMP M1	T1.1
FMP CA2	Loss of terrestrial vegetation within the foreshore area due to impacts from Project activities	<ol style="list-style-type: none"> 1. Investigate cause. 2. Implement appropriate control to reduce or rectify impact which could include: <ol style="list-style-type: none"> a. Restricting access to areas that are impacted b. Changing the access route and install additional fencing in consultation with DPaW c. Undertaking revegetation of the impacted area in consultation with DPaW. Rehabilitation will include replanting of species from the local area as listed in Appendix 2. 3. Continue annual monitoring. 4. Revise and update risk assessment and management actions where applicable. 	RAC	FMP M2	T2.2
FMP CA3	Rubbish observed in foreshore areas	<ol style="list-style-type: none"> 1. Investigate cause. 2. Clean-up and correctly dispose of the material. 3. Review procedures for waste disposal. 4. Revise and update risk assessment and management actions where applicable. 	RAC	FMP M3	T1.3

4.1 Reporting provisions

The performance of the FMP will be assessed annually against the management targets in Table 5, and will be reported on as part of the Compliance Assessment Report (CAR). The FMP reporting template is presented in Table 8. This FMP will also be made publically available in accordance with condition 9-3 of MS 709.

4.1.1 Reporting on exceedance of the management target

In the event that management targets are not met during the reporting period, a written report will be included in the CAR detailing the corrective actions that were undertaken, and the effectiveness of the corrective actions to rectify any potential impacts.

Table 8: Environmental management plan reporting table

Condition environmental objective and management target set in the FMP		Reporting on the management objective and management target	Status ¹
EPA objective	Management target		
Factor 1 Terrestrial Environmental Quality To maintain the quality of land and soils so that the environment values, both ecological and social, are protected.	<ul style="list-style-type: none"> No erosion within the foreshore area adjacent to the resort. (T1.1) No uncontained refuse within the project area or in the surrounding environment. (T1.3). 	No erosion within the foreshore area adjacent to the resort.	<ul style="list-style-type: none"> Yes No
Factor 2 Amenity To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2). 	The amenity of the area and health of the surrounding environment was minimised and maintained.	<ul style="list-style-type: none"> Yes No

¹Notes: The status of achievement of the condition environmental objectives is indicated by the following symbols:

- Condition environmental objective achieved
- Condition environmental objective not achieved

5. Adaptive management

RAC will implement an adaptive management system to provide a robust management plan, which effectively meets the environmental objectives. To achieve this, the FMP will be reviewed on an annual basis to ensure that the plan takes into consideration amendments to operations, monitoring results, audits, continuous improvement and changes in regulatory and corporate requirements. If revised, a copy of the revised FMP will be provided to the OEPA as part of the CAR.

6. Stakeholder consultation

Consistent with the EPA's expectations for this FMP, RAC consulted with a number of stakeholders during the development of the plan.

This section provides a summary of consultation that occurred and key comments received from each stakeholder (Table 9).

Table 9: Stakeholders consulted, comments and responses

Organisation(s)	Comments	RAC response to comments/concerns
Xx To be updated once consultation finalized xx		

7. References

RPS Bowman Bishaw Gorham (RPS) 2004, *Expansion of Monkey Mia Dolphin Resort Public Environmental Review (EPA Assessment Number 1455)*, report prepared for Monkey Mia Dolphin Resort Pty Ltd, Perth, June 2004.

Weston AS 2002, *Vegetation and Rare Flora Surveys Concept Development Plan Areas Monkey Mia Resort Shire of Shire Bay*, prepared for Bowman Bishaw Gorham Environmental Management Consultants, Perth, Western Australia, 8 February 2002.

Appendix 1
Risk-matrix

Risk-based priority

A risk assessment determines whether a hazard could harm the environment. The following stages are undertaken once an environmental hazard has been identified

- Stage 1: Risk identification to identify and document environmental risks and impacts associated with the organisation activities, goods and services
- Stage 2: Qualitatively ranking potential environmental impacts to establish relative significance
- Stage 3: Establishing and documenting control measures to mitigate potentially significant environmental impacts.

RAC shall control all environmental risks identified within the organisation to an extent that is practically possible (Table A 1), once they have been identified through the risk management and identification process.

Risk ranking is generally undertaken by assigning likelihood and consequence levels to each identified activity or issue and determining risk levels through the use of a risk matrix. After completing this process management measures are implemented and a residual risk is determined.

Table A 1: Qualitative risk rating matrix

Likelihood	Consequences			
	Critical (4)	Major (3)	Moderate (2)	Minor (1)
Almost Certain (A)	VH	VH	H	M
Likely (B)	VH	VH	H	M
Unlikely (C)	VH	H	M	L
Rare (D)	H	M	L	L

VH	Very High	Immediate action required. Task stopped.
H	High	Senior Management attention needed.
M	Medium	Management responsibility must be specified.
L	Low	Manage by routine procedures.

Table A 2: Likelihood Classification

Likelihood	Description
Almost Certain (A)	Event is a common or frequent occurrence and is expected to occur daily
Likely (B)	Event is expected to occur annually.
Unlikely (C)	Event may occur. If the event has occurrence in the project area it is very infrequent. It is likely to have occurred within the industry.
Rare (D)	The event is unlikely to not occur in the project area but has been known to occur infrequently within the industry. The event may occur at a frequency of more than 10 years.

Table A 3: Consequence Classification

Consequence	Definition
Critical (4)	Environment: Long term large scale damage to habitat or environment. Legal: Non-compliance having a critical financial or community profile impact. Community: Widespread community disruption with significant adverse economic impact.
Major (3)	Environment: Severe impact requiring remedial damage to environment. Legal: Non-compliance and having high financial or community profile impact. Community: Extensive community complaints extending beyond the region or adverse state level media coverage. Wider community disruption up to 7 days with adverse economic impact.
Moderate (2)	Safety: Moderate impact on environment. No long term or irreversible damage. Legal: Non-compliance having moderate financial or community profile impact. Community: Widespread local complaints or adverse regional media coverage. Isolated community disruption up to 3 days with limited adverse economic impact.
Minor (1)	Environment: Minor breach of environmental policy. Negligible impact on environment. Legal: Technical breach with no sanction. Community: Few complaints or minor adverse media coverage. Negligible impact on reputation. Isolated community disruption up to 1 day with minimal economic.

When determining risk controls, the hierarchy of risk controls, summarised in Table A 4 must be considered.

Table A 4: Hierarchy of risk controls

Option	Examples
Elimination	Stop using equipment or substance, or stop undertaking the procedure causing the risk.
Substitution	Use an alternative substance, equipment or process which poses less risk.
Isolation	Separate receivers from the source of the risk.
Engineering Controls	Reduce exposure to the risk by making physical changes to equipment, procedures or the work environment (e.g. using dust control measures on equipment).
Change work practices	Adopt work procedures which minimise exposure to the risk (e.g. wet sweeping a dusty environment rather than dry sweeping, to minimise the amount of airborne dust).

Appendix 2
Revegetation species list
(Weston 2002)

Taxon Name	Form	Code	MonMia	CALM	Res Ext	TP Ext	Comments
<i>Acacia drepanophylla</i>	Sh MT	P3, e?	x	mmia01	-	E of	e in Wannoo to Yaringa Stns
<i>Acacia ramulosa</i> var. <i>ramulosa</i>	Sh MT		x	mmia01	-	x	
<i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i>	Sh MT	n	x	mmia02	x	x	TK: n of subsp is on Yaringa Stn
<i>Acacia synchronicia</i>	Sh MT		?	mmia01	-	-	
<i>Acacia tetragonophylla</i>	Sh MT		x	mmia01	-	x	
<i>Adriana tomentosa</i>	Sh M		x	-	-	-	
<i>Alectryon oleifolius</i> subsp. <i>oleifolius</i>	Sh MT		x	mmia01	-	x	
<i>Amyema preissii</i>	Sh P		x	-	x	x	on <i>Acacia sclerosperma</i> & <i>A. tetr.</i>
<i>Angianthus cunninghamii</i>	Sh S		x	-	-	-	
<i>Anthobolus foveolatus</i>	Sh M	n	x	-	-	x	TK: n is in F Peron N P
<i>Austrostipa crinita</i>	Gr		?	mmia01	-	-	
<i>Austrostipa elegantissima</i>	Gr		?	mmia01	-	-	
<i>Avicennia marina</i>	Tr VS		x	-	-	-	very few, young trees; < 0.5 m
<i>Brachychiton gregorii</i>	Tr S		x	-	-	near	very few in Monkey Mia Reserve
<i>Brachyscome latisquamea</i>	Vi/He	s	x	mmia01	-	x	Vi/He SM. TK: s is Tamala Stn
* <i>Brassica tournefortii</i>	He		x	01, 02	x	x	
<i>Calocephalus francisii</i>	He		x	mmia02	?	x	dead and very dry
<i>Carpobrotus candidus</i> ms	He		x	-	x	-	flowers white
* <i>Cenchrus ciliaris</i>	Gr		?	mmia01	-	-	
<i>Chenopodium gaudichaudianum</i>	Sh M		?	mmia01	-	-	
<i>Chthonocephalus oldfieldianus</i>	He	P1, n	?	-	-	-	nr old M Mia tip; new sp. for WHA
<i>Chthonocephalus tomentellus</i>	He	P2	?	-	-	-	GJK: rd sand 3 km W of M Mia
<i>Commicarpus australis</i>	Sh/Vi		x	mmia01	-	x	Sh/Vi M.
<i>Crassula colorata</i> var. <i>colorata</i>	He S	n	?	mmia02	-	-	CM: n in WHA
<i>Dodonaea inaequifolia</i>	Sh M		?	mmia01	-	-	
<i>Enchylaena tomentosa</i>	Sh S		?	mmia01	-	-	
<i>Eragrostis dielsii</i>	Gr		x	-	-	x	dead and very dry
<i>Eremophea aggregata</i>	Sh S	e?	?	mmia01	-	-	TK: largely restricted to WHA
<i>Eremophila clarkei</i>	Sh MT		?	mmia01	-	-	
<i>Eremophila maitlandii</i>	Sh MT		x	-	-	x	
<i>Euphorbia drummondii</i>	He		?	mmia01	-	-	
<i>Exocarpos aphyllus</i>	Sh MT		x	01, 02	x	x	
<i>Frankenia pauciflora</i>	Sh S		x	-	-	-	TK: type is from WHA
<i>Gnephosis arachnoidea</i>	He		?	mmia01	-	-	

Taxon Name	Form	Code	MonMia	CALM	Res Ext	TP Ext	Comments
<i>Grevillea eriostachya</i>	Sh T		x	-	-	x	
<i>Gyrostemon ramulosus</i>	Tr S		x	-	x	-	
<i>Halosarcia halocnemoides</i> subsp. <i>tenuis</i>	Sh S		x	-	-	-	
<i>Halosarcia indica</i> subsp. <i>bidens</i>	Sh S		x	-	-	-	
<i>Halosarcia pruinosa</i>	Sh S		x	-	-	-	
<i>Hibiscus sturtii</i> var. <i>truncatus</i>	Sh S		?	mmia01	-	-	
<i>Lechenaultia linarioides</i>	Sh M		x	mmia02	x	x	TK: n in FPerNP; very distinct form
<i>Lepidium biplicatum</i>	Sh S	P2, n?	?	-	-	-	n in Yaringa Str, PGW: 2km W MMia
<i>Maireana tomentosa</i>	Sh S		x	mmia01	-	x	
<i>Marsdenia australis</i>	Vi		x	-	-	x	= <i>Leichardtia australis</i>
<i>Marsdenia graniticola</i>	Sh S	n	?	mmia01	-	-	TK: <i>Gymnea "granitica"</i> ; n in FPerNP
<i>Nitraria billardierei</i>	Sh M		x	mmia02	near	-	
<i>Olearia occidentissima</i>	Sh S	P2, e	?	mmia01	-	-	CM: e in WHA, widespread on P Pen
<i>Persoonia bowgada</i>	Sh M	n	x	-	-	x	TK:P sp(Crav.7112), n on Nanga Str
<i>Pimelea microcephala</i>	Sh M		?	mmia01	-	?	
<i>Podolepis canescens</i>	He		?	mmia01	-	-	
<i>Porana sericea</i>	Vi		x	mmia01	-	x	
<i>Ptilotus divaricatus</i> var. <i>divaricatus</i>	Sh M		x	mmia01	-	x	
<i>Ptilotus obovatus</i> var. <i>obovatus</i>	Sh M		x	mmia01	-	x	
<i>Ptilotus villosiflorus</i>	He		?	mmia02	-	-	
<i>Rhagodia latifolia</i> subsp. <i>latifolia</i>	Sh M		x	mmia01	-	x	
<i>Rhagodia preissii</i> subsp. <i>obovata</i>	Sh SM		x	mmia02	x	x	
<i>Rhodanthe condensata</i>	He		?	mmia02	-	-	
<i>Rhodanthe humboldtiana</i>	He		?	mmia01	-	-	
<i>Rhyncharrhena linearis</i>	Vi		?	mmia01	-	-	
<i>Salsola tragus</i>	He		x	-	-	-	= <i>Salsola kali</i>
<i>Santalum spicatum</i>	Tr S		?	mmia01	-	-	TK: s of subsp nov; only on beach
<i>Sarcocornia quinqueflora</i>	Sh S		x	-	-	-	
<i>Scaevola spinescens</i>	Sh M		x	mmia01	-	x	
<i>Scaevola tomentosa</i>	Sh M		x	mmia01	-	x	
<i>Scholtzia leptantha</i>	Sh SM		x	mmia02	x	-	= <i>S. umbellifera</i> & <i>Thryp. sp.</i> in part
<i>Sida calyxhymenia</i>	Sh SM		?	mmia01	-	-	
<i>Solanum lasiophyllum</i>	Sh S		x	mmia01	-	x	
<i>Solanum orbiculatum</i> subsp. <i>orbiculatum</i>	Sh MS		x	01, 02	-	x	

07/02/2002 Table B1a Flora Recorded in Monkey Mia Reserve (by taxon name / mmB1a)

3

Taxon Name	Form	Code	MonMia	CALM	Res Ext	TP Ext	Comments
<i>Sondottia glabrata</i>	He	P2, e	?	-	-	-	TK:e in WHA. PGW:clay 2kmW MMia
<i>Spinifex longifolius</i>	Gr		x	mmia02	x	-	
<i>Sporobolus virginicus</i>	Gr		x	-	x	-	
<i>Stylobasium spathulatum</i>	Sh M		x	01, 02	?	x	
<i>Threlkeldia diffusa</i>	Sh SM		x	mmia01	?	x	

Appendix G

Environmental Management System

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Monkey Mia Dolphin Resort

Environmental Management System

Prepared for
RAC Tourism Assets Pty Ltd
by Strategen

June 2016

Monkey Mia Dolphin Resort

Environmental Management System

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June 2016

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: RAC Tourism Assets Pty Ltd

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Draft Report	A	For client review	D White, D Goundrey / J Mitchell	Electronic	6 April 16
Revised Draft Report	B	For client review	D White, D Goundrey / J Mitchell	Electronic	13 May 16
Final Report	0	Stakeholder comment	D Goundrey	Electronic	23 June 16

Filename: RAC16009_01 R002 Rev 0 - 23 June 2016

Acronyms and definitions

A range of acronyms, technical terms and timing of monitoring and management measures are used throughout this Environmental Management System (EMS) manual. The definitions are listed in Table A1.

Table A1: Acronyms and definitions

Acronym		Definition
AER	Annual Environmental Report	Annual Environmental Report is required under EP Act Licence (L7426/2000/8) for the wastewater treatment plant.
CAP	Compliance Assessment Plan	Audit program required under Ministerial Statement 709 schedule 2 proponent commitment.
CAR	Compliance Assessment Report	Annual compliance report to be submitted to the OEPA by the proponent in accordance with the CAP.
CMP	Construction Management Plan	Management plan required under Ministerial Statement 709.
DER	Department of Environment and Regulation	State government Western Australia that focuses on environmental regulation, approvals and appeals processes, and pollution prevention.
DMP	Drainage Management Plan	Management plan required under Ministerial Statement 709.
DoW	Department of Water	The Department of Water is a state agency and plans and manages all water resources throughout Western Australia.
DPaW	Department of Parks and Wildlife	The Department of Parks and Wildlife protects and conserves the State's natural environment on behalf of the people of Western Australia.
EMP	Environmental Management Plan	Environmental Management Plan addressing RAC-specific environmental management requirements and procedures.
EMS	Environmental Management System	An EMS is designed to outline the interrelated and interacting elements of an organisation (in this case, the RAC) to manage environmental aspects, fulfil environmental compliance obligations and address environmental risks and opportunities through established policies, objectives and processes to achieve these objectives.
EP Act	<i>Environmental Protection Act 1986</i>	Western Australian legislation to provide for an Environmental Protection Authority, for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	National legislation which focuses on the protection of matters of national environmental significance, with the states and territories having responsibility for matters of state and local significance.
FMP	Foreshore Management Plan	Management plan required under Ministerial Statement 709.
ISO 14001	International Organisation of Standardisation 14001	ISO 14001 is a series of documents relating to the development and implementation of an Environmental Management System (EMS). ISO 14001:2015 defines the requirements for the EMS and provides guidance for its use.
OEPA	Office of the Environmental Protection Authority	Supports the Environmental Protection Authority (EPA) in conducting environmental impact assessments.
MS	Ministerial Statement	Ministerial Statements 709 and 919.
NIMP	Nutrient and Irrigation Management Plan	Management plan required under Ministerial Statement 709.
RAC	RAC Australia Pty Ltd	Proponent and project developer.
RAC GM	RAC General Manager	Proponent general manager for the project.
SoSB	Shire of Shark Bay	Local government for Monkey Mia.
WWTP	Wastewater Treatment Plant	Abbreviation for wastewater treatment plant.

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1. Introduction

This document is an Environmental Management System (EMS) manual that has been prepared for the proposed Monkey Mia Dolphin Resort expansion (the Project) as depicted in Figure 2. This EMS outlines the environmental management requirements, and responsibilities, which will be implemented to comply with legal obligations, particularly Ministerial Statement (MS) 709 and MS 919.

The current OEPA nominated proponent for the project is RAC Tourism Assets Pty Ltd (RAC). If RAC wish to relinquished the nomination, it will apply for a transfer of proponentcy within 60 days of such change as per MS 709 (Appendix 3).

1.1 Project background

RAC owns and manages the current Monkey Mia Dolphin Resort located within a World Heritage area on a Shire of Shark Bay reserve, adjacent to the Department of Parks and Wildlife (DPaW) Monkey Mia Visitor Centre. Approval under the *Environmental Protection Act 1986* (EP Act) to expand the resort was granted to the former proponent Monkey Mia Dolphin Resort Pty Ltd through issue of MS 709 on 28 December 2005. Subsequent approval extending the period for substantial commencement was granted to Aspen Parks Property Management Ltd (Aspen) under MS 919 on 18 December 2012.

As per MS 709, the expansion of the resort involves the expansion of the existing resort area, the provision of staff accommodation facilities and an upgrade to the wastewater treatment plant. The project commenced in 2013 with the upgrade to the wastewater treatment plant, which was subsequently completed in 2014.

Since the release of MS 709, project lot references and boundaries have been subject to change with the lodgement of deposited plans 55359 and 54332 (Figure 2). The amendments to lot references and boundaries have impact on the approved project area.



Figure 1: Monkey Mia Dolphin Resort amended lot references

1.2 Purpose and scope

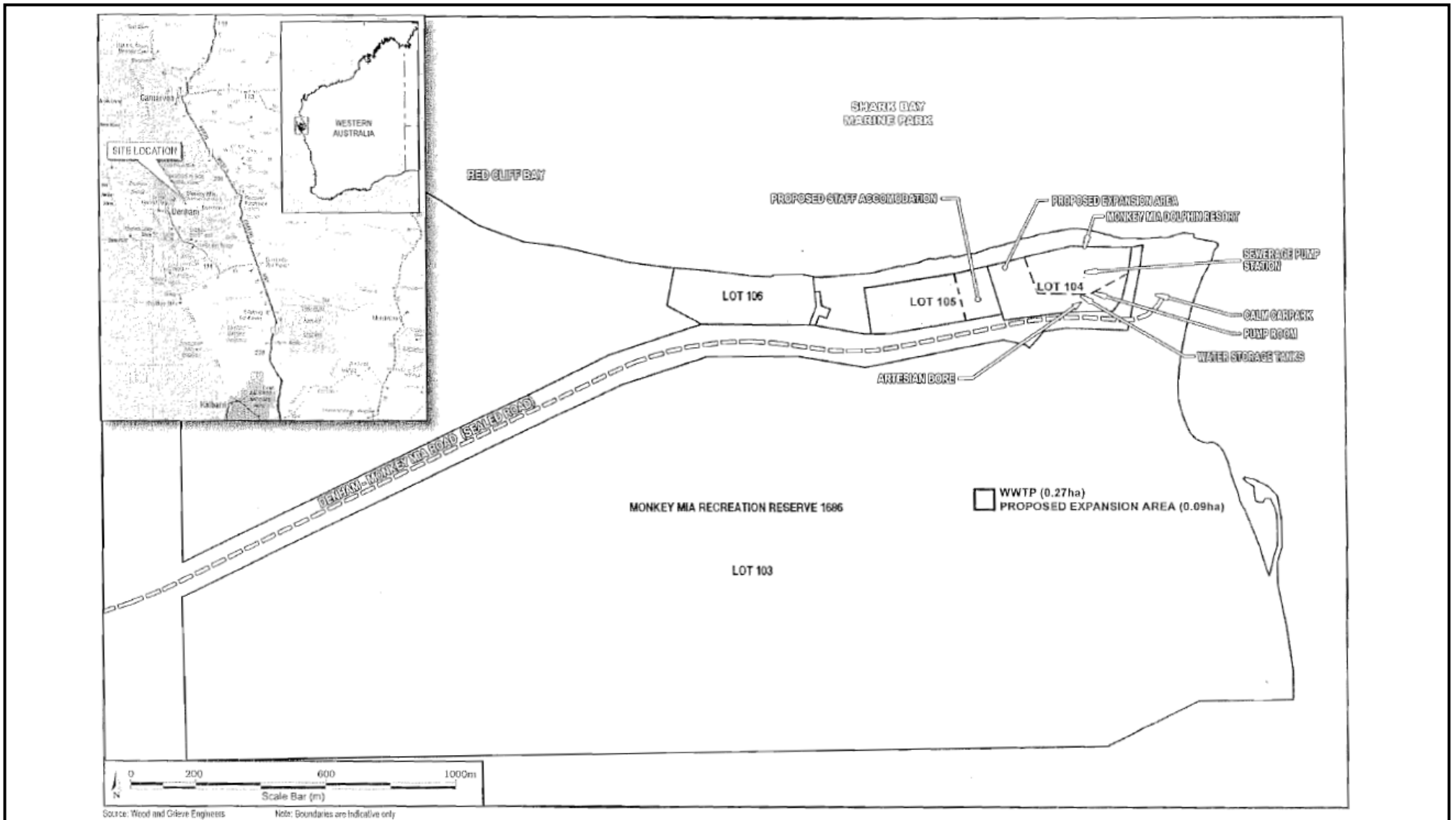
The purpose of this EMS is to provide a structured environmental management approach to assist RAC to manage the potential environmental impacts and improve environmental performance of the Project.

The scope of the EMS is to fulfil the requirements of commitment 1 of MS 709, through addressing the EMS requirement within Table 1 with respect to the following plans:

- Construction Management Plan (CMP)
- Drainage Management Plan (DMP)
- Foreshore Management Plan (FMP)
- Nutrient and Irrigation Management Plan (NIMP)
- Compliance Assessment Plan (CAP).

Table 1: MS 709 schedule 2 proponent commitment regarding EMS

Item	Requirement	Section
Commitment 1	Have in place, and make publically available an Environmental Management System (EMS) for this project, which will include:	Sec 2
	(a) Environmental policies specific to the proposed resort and wastewater treatment plant facilities and corporate commitment to it.	Sec 3 & Sec 4
	(a) Environmental Management Program with specific Management Plans to address the environmental impacts, including: <ul style="list-style-type: none"> • Foreshore Management Plan; • Nutrient and Irrigation Management Plan; and • Wastewater Treatment Management Plan. 	Sec 6.1
	(b) Implementation and operation of actions to meet environmental performance.	Sec 2, Table 3
	(c) Setting of appropriate objectives and targets, to meet environmental performance.	Sec 6, Table 3
	(d) Measurement and evaluation of environmental performance.	Sec 9
	(e) Creation of appropriate management structures and responsibilities including human, equipment and financial resources.	Sec 5
	(f) Training, including induction, in environmental management procedures.	Sec 8
	(g) Development of communication procedures to staff, visitors, members of the community and government officers, and communicating relevant procedures and requirements to suppliers and contractors.	Sec 7
	(h) Development of performance monitoring and measurement procedures on the key features of the proposal which may impact on the environment.	Sec 9
	(i) Development of corrective and preventative procedures.	Sec 7.2 & Sec 9.4
(j) Development of management review and feedback procedures.	Sec 9	



Source: MS 709

Figure 2: Monkey Mia Dolphin Resort, noting expansion areas for the resort

2. EMS objectives

The objectives of the EMS are to:

- ensure compliance with MS 709 and MS 919
- comply with RAC's environmental policy as detailed in Section 3
- reduce and minimise the potential impacts of construction and operation activities on the environment through the implementation of management plans and procedures
- effectively communicate the requirements of the EMS
- ensure all incidents are assigned a severity level and managed appropriately (as detailed in Section 7.2)
- ensure the EMS is revised and amended as required.

The EMS applies to the construction and operation of the Project and will be made publically available in accordance with the Office of the Environmental Protection Authority (OEPA) guidance (OEPA 2012).

Detailed environmental objectives and targets associated with each aspect of the Project having the potential to impact the environment, are provided in Table 3.

3. Environmental policy

At the RAC, we accept our responsibility to help protect the natural environment and mitigate the impacts of climate change. We're striving for continuous improvement to make sure our operations are more sustainable and to help reduce our impact on the environment.

3.1 Our environmental commitment statement

- We accept our responsibility to help protect the natural environment and mitigate the impacts of climate change.
- The RAC and our people will strive for continuous improvement to make our own operations more sustainable and to reduce our impact on the environment.
- We will influence, educate and inform our members on ways they can contribute to a more sustainable future whilst ensuring our members have access to a range of sustainable mobility options.
- We will work with governments, industry and other stakeholders to deliver better outcomes for members, the community and the environment.

4. Legal and other requirements

4.1 Summary of requirements

The key legal and environmental requirements that relate to the establishment and operation of the Project are outlined within Section 4.1.1 to Section 4.1.3.

4.1.1 Federal environmental legislation

Federal legislation that may have the potential to be applicable to the project includes the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), which aims at protecting matter of national environmental significance.

The Project was referred under the EPBC Act to the then Department of the Environment and Heritage on the 7 August 2003, and was deemed a non-controlled action on the 9 October 2003 (EPBC 2003/1146). As such, as long as the project does not significantly change from what was referred, the project does not need any further approval under the EPBC Act.

4.1.2 Western Australian environmental legislation

Western Australian and Australian environmental legislation applicable to the management of the Project includes:

- *Aboriginal Heritage Act 1972* for the protection of Aboriginal sites
- *Bush Fires Act 1954* for the prevention, control and extinguishment of bushfires
- *Conservation and Land Management Act 1984* for the management of impacts on public land and on specially listed flora and fauna
- *Environmental Protection Act 1986* for undertaking environmental impact assessment, clearing and pollution control
- *Land Administration Act 1997* for the management of Crown Land
- *Rights in Water and Irrigation Act 1914* for the management and licensing of construction of wells, water abstraction, taking of surface water from watercourses, and issuing permits for disturbance of bed and banks of watercourses
- *Soil and Land Conservation Act 1945* for the conservation of soil and land resources
- *Wildlife Conservation Act 1950* for the conservation of all fauna species including listed threatened species
- *Planning and Development Act 2005* for the planning and development of land for urban, suburban and rural purposes
- *Native Title Act 1993* for the rights and interests that are possessed under the traditional laws and customs of Aboriginal peoples and Torres Strait Islanders in land and waters, and that are recognised by common law
- *Fish Resources Management Act 1994* for the conservation, development and sharing of the fish resources of the State for the benefit of present and future generations.

MS 709 and MS 919

MS 709 was issued by the WA Minister for the Environment following environmental impact assessment under the EP Act to the former proponent Aspen Parks Property Management Ltd (Aspen). Subsequent approval extending the period for substantial commencement was granted under MS 919 on 18 December 2012. Proponency for MS 709 and MS 919 now sits with RAC. Refer to Appendix 3 to view MS 709 and MS 919.

EP Act Licence (L7426/2000/8)

This licence outlines effluent quality and discharge limit requirements for the Monkey Mia Dolphin Resort WWTP. The licence includes a requirement for an Annual Environmental Report that details the monitoring data collected from 1 April to 31 March (Appendix 5). The Annual Environmental Report is to be submitted by 30 June the same year. A licence amendment to upgrade the wastewater treatment plant was issued by DER on 2 April 2015 (Appendix 5).

4.1.3 Other key policies/documents

A range of planning and policy documents informed Project environmental assessment and approval. Of these the following remain current and relevant:

- Monkey Mia Reserve Management Plan (1993)
- Shark Bay Marine Reserves Management Plan (1996)
- Expansion of Monkey Mia Dolphin Resort Public Environmental Review (Assessment Number 1455), prepared for Monkey Mia Dolphin Resort Pty Ltd (RPS Bowman Bishaw Gorham 2004)
- Shark Bay World Heritage Property 2008-2020
- Shark Bay Local Planning Strategy (2013)
- The Shire of Shark Bay Local Tourism Planning Strategy (2014)
- Shark Bay Region Plan 1997 / Shark Bay Regional Strategy (1997)
- State Coastal Planning Policy (2013)
- Monkey Mia Concept Development Plan (2002).

These documents are available through the Project website.

5. Roles and responsibilities

Table 2 provides a summary of the roles and responsibilities for key personnel nominated to ensure implementation of the EMS. The roles and responsibilities will be reviewed as per Section 9.5, and as associated EMPs and other relevant management system components are developed.

Table 2: Roles and responsibilities

Role	Responsibility
General Manager RAC Parks and Resort Operations (RAC GM)	<ul style="list-style-type: none"> has the overall responsibility for the implementation and regular review of this EMS the roles below may be delegated to a contractor by RAC GM if the roles are delegated, RAC GM has the responsibility to audit compliance and ensure any contingency actions are implemented.
Site Manager	<ul style="list-style-type: none"> overall accountability for auditing and compliance assessment with this EMS to ensure it is maintained and meets objectives and targets responsibility over environmental incident reporting and public complaints register provide technical and training support to all Project personnel to ensure this EMS is understood, implemented correctly and complied with implement and maintain this EMS, review its effectiveness and review the implementation as required may delegate all or part responsibility to an appropriately qualified person.
Site environmental manager	<ul style="list-style-type: none"> undertake tasks that are delegated by the Site Manager.
Contractors	<ul style="list-style-type: none"> ensure wastewater treatment plant is operated in accordance with all legal requirements and relevant management plans ensure resort expansion is constructed and operated in accordance with all legal requirements and relevant management plans ensure staff accommodation facilities are constructed and operated in accordance with all legal requirements and relevant management plans.
All site personnel	<ul style="list-style-type: none"> must receive induction prior to commencement of work on site comply with all legal requirements and the requirements of this EMS attend environmental inductions and any other training required in the EMS.

6. Implementation and operation

6.1 Environmental Management Program

An Environmental Management Program has been developed to achieve the specific environmental objectives and management targets for the Project as associated with MS 709 (Table 3).

Further plans, programs and procedures will be added if required as the EMS is implemented and revised as per Section 9.5.

Table 3: Key Environmental Management Program associated with MS 709

Environmental factor	EPA Environmental objective	Management targets (unique identifier)	Relevant management plan
Factor 1 Terrestrial Environmental Quality	To maintain the quality of land and soils so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> No erosion within the foreshore area adjacent to the resort. (T1.1) No unauthorised loss or degradation of vegetation outside the project areas. (T1.2) No uncontained refuse within the project area or in the surrounding environment. (T1.3) 	<ul style="list-style-type: none"> Foreshore Management Plan (<i>Condition 9 of MS 709</i>) Construction Management Plan (Commitment 2 under Schedule 2 of MS 709)
Factor 2 Amenity	To ensure that impacts to amenity are reduced as low as reasonably practicable.	<ul style="list-style-type: none"> Maintain the amenity of the area and the health of the surrounding environment by minimising indirect impacts such as dust and noise from Project construction activities. (T2.1) Protect the amenity and surrounding environment by limiting disturbance where possible and by progressive revegetating disturbed areas. (T2.2) 	<ul style="list-style-type: none"> Construction Management Plan (Commitment 2 under Schedule 2 of MS 709) Foreshore Management Plan (<i>Condition 9 of MS 709</i>)
Factor 3 Terrestrial Fauna	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.	<ul style="list-style-type: none"> Protect fauna and its habitat by ensuring no unauthorised clearing or earthworks. (T3.1) No fauna mortality resulting from the Project construction activities. (T3.2) 	<ul style="list-style-type: none"> Construction Management Plan (Commitment 2 under Schedule 2 of MS 709)
Factor 4 Inland Waters Environmental Quality	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the ground and surface water environment (T4.1). No waterlogging within irrigated areas. (T4.2) No increase in soil nutrient above the loading rate. (T4.3) 	<ul style="list-style-type: none"> Drainage Management Plan (<i>Condition 7 of MS 709</i>) Nutrient and Irrigation Management Plan (<i>Condition 8 of MS 709</i>) Construction Management Plan (Commitment 2 under Schedule 2 of MS 709)
Factor 5 Marine Environmental Quality	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.	<ul style="list-style-type: none"> Prevent sediment from the Project area entering the marine environment. (T5.1) Prevent potential contaminants from the Project area entering the marine environment. (T5.2) 	<ul style="list-style-type: none"> Drainage Management Plan (<i>Condition 7 of MS 709</i>) Nutrient and Irrigation Management Plan (<i>Condition 8 of MS 709</i>) Construction Management Plan (Commitment 2 under Schedule 2 of MS 709)

7. Communication and document control procedures

The following section identifies how RAC can internally and externally communicate and document their environmental obligations with personnel, contractors, government officers and visitors. These communication and document control procedures ensure RAC comply with the requirements of MS 709 and MS 919 and other environmental requirements.

7.1.1 Communication

Internal communication

Internal communication methods by which this EMS and associated EMPs are communicated to RAC site personnel include the following:

- initial induction before commencement of construction and operational activities
- regular site management meetings where the environment is part of the agenda
- quarterly progress reports on implementation of environmental management measures
- review and implementation of annual environmental reports.

Environmental awareness is promoted via oral media and written material presented through the above communication forums.

External communication

External communications to visitors, guests, members of the community, and government officers may include the following, as applicable:

- meetings and correspondence with appropriate regulatory authorities and stakeholders, including submission of compliance and performance reports
- handling of, and responding to, complaints or requests
- raising awareness of visitors, guests and the community about important environmental values of Monkey Mia through, for example, educational signage and brochures.

All external communication must be endorsed for release by the RAC GM.

7.1.2 Document control

A register of documents and records, manuals, information and education packages, registers, forms and external documents relevant to the EMS are to be kept.

All EMS records are filed with the Site Manager. Records of the following will be kept as a minimum:

- records of competence assessment of employees or roles performing tasks that have potential to cause significant environmental impact (e.g. Job Safety Analysis records, safety management plans, incident reporting and investigation procedure)
- records of training (e.g. induction registers and induction material)
- records of external communication (e.g. visitors educational material, photos of educational signage)
- documented decision about external communication about significant environmental aspects external documents (e.g. complaint register, record of meeting minutes)
- records of monitoring and measurement (e.g. document register and checklist with monitoring and management tasks)
- records of results of corrective and preventative action (e.g. incident report forms, compliance assessment report)

- records of management review of EMS (e.g. subsequent revisions of the EMS to be listed in the document control table)
- records of internal and external audits (e.g. retain all internal and external audit reports)
- records to demonstrate compliance to management actions.

7.2 Environmental incident reporting

Environmental incidents are events or occurrences that result in, or have the potential to result in, unacceptable impacts to the environment. In the event of an environmental incident, the person responsible will implement the Environmental Incident Reporting Procedure (Appendix 1) below.

1. The person responsible (or first on the scene) will record the incident in the Environmental Incident Report Form and will notify the Site Manager.
2. The Site Manager will determine the level of incident risk as follows:
 - (a) LEVEL 1: Minor non-adherence to procedure, and/or negligible environmental impact
 - (b) LEVEL 2: Minor non-adherence to procedure and minor environmental impact that requires little management to be rectified
 - (c) LEVEL 3: Moderate breach of procedure and/or environmental impact that requires management/mitigation to be rectified
 - (d) LEVEL 4: (serious incident) Extreme breach of procedure and/or environmental impact that could lead to a breach of environmental approval conditions.
3. Site Manager will investigate the cause of the incident and record relevant information (e.g. date, time, details of incident, person/s responsible if known, measures put in place to rectify or contain the incident) within seven days of the incident occurring.
4. Site Manager will implement actions to mitigate environmental harm or potential harm and monitor the effectiveness of these actions.
5. Depending on the severity of the incident, Site Manager will report the incident to regulatory authorities, RAC General Manager (RAC GM) and relevant stakeholders as required. Level 3 and 4 incidents may be reported to the appropriate regulatory authorities as deemed appropriate (e.g. OEPA, SoSB, DPaW, Department of Water (DoW) and DER).
6. Site Manager will review and revise management measures as appropriate to prevent reoccurrence.

The Emergency Response Procedure identifies where an environmental incident will require an emergency response (Appendix 2).

8. Training, awareness and competence

An Environmental Training Program will be developed and delivered by RAC to all site personnel and construction contractors associated with the Project. The program will outline environmental construction/operation practices and will also include the education and/or training material required by the CMP, DMP, FMP and NIMP.

8.1.1 Inductions

The objective of the induction is to provide environmental training and education material that increases environmental awareness of all involved personnel to enable them to understand their environmental responsibilities and minimise environmental impacts.

All employees and contractors will receive environmental training, to ensure they are aware of their responsibilities and are competent to carry out their work in an environmentally acceptable manner. Environmental requirements shall be explained to all site personnel during their employment induction. Ongoing instruction and knowledge updates will be provided when required. Employment inductions will be recorded.

8.1.2 Employee training

RAC will ensure all staff and supervisory personnel performing duties required by this EMS are briefed on the environmental impacts and obligations associated with the Project. Where a training requirement in environmental management and environmental best construction/ operation practice is identified, arrangements will be made for training to be facilitated.

Raising environmental awareness through employee training will be conducted focusing on the following key environmental characteristics associated with Project construction and operation:

- impacts of clearing, including management of fauna and weeds during clearing, construction and operation
- Aboriginal heritage sites surrounding the Project area
- maintenance of visual amenity during construction activities
- direct and indirect impacts from construction activities on adjacent areas including the coastal foreshore; and on groundwater and marine water quality.

Where specific competencies for specific roles have been identified (refer to Section 5), RAC will ensure that personnel employed for these roles have the appropriate training.

8.1.3 Subcontractor awareness

RAC will ensure its contractors are aware of all relevant environmental requirements prior to contracting. This includes:

- the environmental policy
- significant environmental aspects and related actual or potential environmental impacts associated with their work
- implications of not conforming with the EMS requirements, including not fulfilling RAC compliance obligations.

9. Performance review and continuous improvement

9.1 Management review

RAC GM shall review the EMS annually to ensure its continuing suitability, adequacy and effectiveness. The management review shall include consideration of:

- the status of actions from previous management reviews
- changes in Project construction and operation activities including the environmental aspects of the Project
- the extent to which management targets have been achieved
- information on the Project's environmental performance, based on internal and external reporting including auditing and monitoring results
- adequacy of resources to fulfil the commitments within the EMS and associated plans
- relevant communications from stakeholders
- opportunities for continual improvement.

9.2 Reporting

RAC will undertake internal record keeping, and external reporting in accordance with this EMS and supporting management plans and legal requirements. Reporting will be undertaken as outlined in the following sections.

9.2.1 Internal reporting

Performance reporting will be implemented to produce systematic, comprehensive and informative reports on the environmental management and monitoring activities during the construction/operation period of the Project.

9.2.2 External reporting

MS 709 and MS 919

Compliance auditing and reporting requirements under MS 709 and MS 919 are outlined in the Compliance Assessment Plan (CAP; Appendix 6).

Compliance reporting to the OEPA will be undertaken by RAC on an annual basis in accordance with the CAP detailing a general overview of operational activity and compliance with the conditions of MS 709 and MS 919. This annual Compliance Assessment Report (CAR) will include a summary of environmental performance in relation to the conditions of approval.

Reports will be provided to the OEPA and also made publicly available in accordance with the agency's guidelines.

EP Act Licence (L7426/2000/8)

This licence outlines effluent quality and discharge limit requirements for the Monkey Mia Dolphin Resort WWTP. This licence requires the licensee to submit an Annual Environmental Report (AER) that details the monitoring data collected from 1 April to 31 March. The AER must be submitted to the Chief Executive Office of the Department of Environment Regulation (DER) within 91 calendar days after the end of the annual period (i.e. by 30 June). The licence, including the requirements of the AER, is provided in Appendix 5. Reports will be provided to the DER and also made publicly available in accordance with the agency's guidelines.

9.3 Auditing schedule

9.3.1 Internal auditing of EMS

An annual audit will be undertaken of the Project by a suitably qualified auditor. The audit scope will include addressing the implementation of this EMS and associated plans and programs.

A copy of the audit report will be provided to RAC as soon as practicable after the annual audit. RAC will make evidence available and provide site inspection access for this audit as required.

9.3.2 External auditing of EMS

As per Section 9.2.2, an annual Compliance Assessment Report (CAR) is required to be submitted to the OEPA to comply with MS 709. The CAR will include compliance assessment of plans and programs required to be prepared and implemented by MS 709, including the EMS.

9.4 Public complaint resolution

RAC will establish and maintain a system of records (Project Complaints Register) to fully document complaint handling. For those community issues that are relevant to RAC operations within the Project area, the person receiving a complaint will record the details of the complaint and complainant's information in the Project Complaints Register including:

- date and time of the complaint
- name of the person who received/recorded the complaint
- method by which the complaint was made, e.g. phone, letter, etc.
- details of the complainant (name, address and location of area affected if relevant)—if information not provided, include note to that effect in register
- nature of the complaint
- meteorological conditions occurring at the time of the complaint/event, if relevant to the complaint, and any project-related activities.

The Site Manager will be responsible for:

1. Determining whether the complaint constitutes an environmental incident and if so, implementing the requirements outlined in the Environmental Incident Reporting Procedure (Section 7.2).
2. Initiating investigations and/or responsive actions as appropriate according to the nature of the complaint.
3. Reporting back to the complainant on the investigations and responsive actions taken (including supplementary monitoring and corrective actions) as well as the nature and outcome of the complaint/incident.
4. Requesting the complainant provide brief comment on level of satisfaction with handling of complaint and outcome.

RAC will be responsible for recording the following in the Project Complaints Register:

- investigations undertaken in relation to the complaint
- action taken in relation to the complaint (including supplementary monitoring and corrective actions)
- reasons for taking no action in relation to the complaint (if such a decision was made)
- time and date of follow-up contact with the complainant
- nature of and outcomes from the follow-up contact with the complainant.

This complaints procedure will be reviewed annually throughout the duration of the construction and operation phases of the Project and as required in response to changes in legislative requirements, changes in regulatory and corporate RAC requirements and environmental initiatives.

9.5 Review and revision

This EMS will be reviewed annually during construction and operation phases of the Project. In addition, continuous improvement of environmental management will occur in response to environmental incident resolutions, monitoring results and audit findings.

The EMS documentation will be:

- easily located and logically filed in electronic copy, including identification of date of issue
- available for all relevant personnel
- periodically reviewed and revised as necessary (Section 9.1)
- removed from all points of issue when superseded by revised documents.

10. References

- RPS Bowman Bishaw Gorham 2004, Expansion of Monkey Mia Dolphin Resort Public Environmental Review (Assessment Number 1455), prepared for Monkey Mia Dolphin Resort Pty Ltd, Perth, February 2004.
- Department of the Environment and Conservation (DEC) 2008, *Shark Bay World Heritage Property Strategic Plan 2008-2020*, Australian Government, Perth, 2008.
- Department of Conservation and Land Management (CALM) 1993, *Shark Monkey Mia Reserve: draft management plan*, Perth, 1993.
- Department of Conservation and Land Management (CALM) 1996, *Shark Bay Marine Reserves Management Plan 1996-2006*, Management Plan No. 34, Perth, 1996.
- International Organisation for Standardisation (ISO) 2015, *ISO 14001 2015: Environmental management systems – Requirements with guidance for use*, ISO 14001:2015, third edition, 15 September 2015.
- Landvision & Tourism Key 2014, *The Shire of Shark Bay Local Tourism Planning Strategy*, final report, December 2014.
- Office of Environmental Protection Authority (OEPA) 2012, *Post Assessment Guideline for Making Information Publicly Available*, OEPA, Perth, August 2012.
- State Planning Policy 2013, *State Coastal Planning Policy No. 2.6*, Planning and Development Act 2005, 30 July 2013.
- Taylor Burrell Town Planning and Design 2002, Monkey Mia Concept Development Plan.
- Western Australian Planning Commission 1997, *Shark Bay Regional Strategy*, Perth, October 1997.
- Grey and Lewis Landuse Planners 2013, *Shire of Shark Bay Local Planning Strategy*, endorsed by the Western Australian Planning Commission, 27 August 2013.

Appendix 1
Environmental Incident Report

XXRAC to provide XX

Appendix 2
Emergency Response Procedure

XXRAC to provide XX

Appendix 3
Ministerial Statements 709 and 919



Statement No.

MINISTER FOR THE ENVIRONMENT; SCIENCE

000703

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)

EXPANSION OF THE MONKEY MIA DOLPHIN RESORT
MONKEY MIA, SHARK BAY

Proposal: The expansion, incorporating construction and operation of the Monkey Mia Dolphin Resort through expansion of the existing resort area, provision of staff accommodation facilities and upgrading of the wastewater treatment plant, as documented in schedule 1 of this statement.

Proponent: Monkey Mia Dolphin Resort Pty Ltd

Proponent Address: 262 Stirling Highway, CLAREMONT WA 6010

Assessment Number: 1455

Report of the Environmental Protection Authority: Bulletin 1165

The proposal referred to above may be implemented by the proponent subject to the following conditions and procedures:

1 Implementation

1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions and procedures of this statement.

2 Proponent Commitments

2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this statement.

Published on

28 DEC 2005

3 Proponent Nomination and Contact Details

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.
- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.

4 Commencement and Time Limit of Approval

- 4-1 The proponent shall substantially commence the proposal within five years of the date of this statement or the approval granted in this statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

1. the environmental factors of the proposal have not changed significantly;
2. new, significant, environmental issues have not arisen; and
3. all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

5 Compliance Audit

- 5-1 The proponent shall prepare an audit program and submit compliance reports to the Department of Environment which address:

1. the status of implementation of the proposal as defined in schedule 1 of this statement;
2. evidence of compliance with the conditions and commitments; and
3. the performance of the environmental management plans and programs.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

- 5-2 The proponent may submit a report prepared by an independent auditor to the Chief Executive Officer of the Department of Environment on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating whether the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.

6 Thick-billed Grasswren (*Amytornis textilis textilis*) Habitat

- 6-1 To allow for the protection of part of a territory of the Thick-billed Grasswren, the proponent shall retain a buffer area of *Acacia* sp. along the southern side of the Denham-Monkey Mia Road, for the length of the resort, including the resort expansion area and staff accommodation area, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management.

This buffer area shall be approximately 600 metres in length and not less than 15 metres wide.

- 6-2 Prior to commencement of construction within the white coastal sandplain area, the proponent shall undertake a survey during the nesting season to determine the presence of Thick-billed Grasswren nests in the area proposed to be cleared, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management.
- 6-3 Prior to commencement of clearing where a particular area is to be cleared in the following 12 months, the proponent shall repeat the survey referred to in condition 6-2, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management.
- 6-4 The proponent shall only undertake clearing of vegetation within the white coastal sandplain area after the Thick-billed Grasswren fledglings have left their nests.
- 6-5 The proponent shall retain local native vegetation within the white coastal sandplain development area, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

7 Drainage Management Plan

- 7-1 Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Drainage Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This plan shall address:

1. management of stormwater quality and quantity;
2. potential for erosion, local flooding and contaminant discharge;
3. minimising pollutants at their source; and
4. pollutant removal.

Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained:

- Department of Conservation and Land Management; and
- Shire of Shark Bay.

- 7-2 The proponent shall implement the Drainage Management Plan required by condition 7-1.
- 7-3 The proponent shall make the Drainage Management Plan required by condition 7-1 publicly available.

8 Nutrient and Irrigation Management Plan

- 8-1 Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Nutrient and Irrigation Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This plan shall address:

1. method of application of nutrients;
2. irrigation program;
3. water conservation;
4. recommendation for low nutrient and water requirement plants and grasses; and
5. prescribed fertiliser applications.

Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained:

- Department of Conservation and Land Management; and
- Shire of Shark Bay.

- 8-2 The proponent shall implement the Nutrient and Irrigation Management Plan required by condition 8-1.

8-3 The proponent shall make the Nutrient and Irrigation Management Plan required by condition 8-1 publicly available.

9 Foreshore Management Plan

9-1 Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Foreshore Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

This plan shall address:

1. minimising risk of dune erosion;
2. formalised access points;
3. definition of dune preservation and fencing areas;
4. rehabilitation and restoration of foreshore areas, incorporating stabilisation;
5. identification of species to be planted; and
6. education and signage.

Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agency will be obtained:

- Department of Conservation and Land Management.

9-2 The proponent shall implement the Foreshore Management Plan required by condition 9-1.

9-3 The proponent shall make the Foreshore Management Plan required by condition 9-1 publicly available.

Procedures

- 1 Where a condition states “to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority”, the Environmental Protection Authority will provide that advice to the Department of Environment for the preparation of written notice to the proponent.
- 2 The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment.
- 3 Where a condition lists advisory bodies, it is expected that the proponent will obtain the advice of those listed as part of its compliance reporting to the Department of Environment.

Notes

- 1 The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment over the fulfilment of the requirements of the conditions.
- 2 The proponent is required to apply for a Works Approval and Licence for the wastewater treatment plant component of this project under the provisions of Part V of the *Environmental Protection Act 1986*.
- 3 Within this statement, to “have in place” means to “prepare, document, implement and maintain for the duration of the proposal”.

Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT; SCIENCE

28 DEC 2005

The Proposal (Assessment No. 1455)

The expansion (construction and operation) of the Monkey Mia Dolphin Resort, incorporating the expansion of the existing resort area through provision of additional guest accommodation facilities, provision of staff accommodation facilities and an upgrading of the wastewater treatment plant.

The resort expansion area is within Reserve 40727, described as Lot 104 on DP28250. The staff accommodation area is within proposed Lot 105 on plan 19786 and the wastewater treatment plant expansion area is adjacent to the existing wastewater treatment plant within proposed Lot 103 on plan 19786. See figures 1 and 2 (attached).

Table 1 – Key Proposal Characteristics

Element	Description
Major components	<ul style="list-style-type: none"> • expansion of existing resort area • provision of staff accommodation facilities • upgrading of the existing wastewater treatment plant using a Membrane Bioreactor Package Plant
Resort Expansion Area	Up to 3.1 hectares
Staff Accommodation Area	Up to 2.3 hectares
Wastewater Treatment Plant Area	Up to 0.36 hectares (total area)
<i>Resort Expansion</i>	
Function Rooms	one
Two storey development	Approximately one third of the resort
Hotel Suites	Up to 100 (total)
Bungalows	Up to 30 (total)
Budget Accommodation	Up to 120 bed (total)
Motel units	Up to 70 (total)
Caravan Lots	Up to 71 (total)
Camping Area	Up to 4400 square metres (total) (accommodating approximately 260 people)
Tennis Courts	three (total)
Swimming Pool	6 metre pool and spa (self-contained)
Manager's Residence	one
Parking	Provision for approximately 200 cars and 2 buses within resort. Provision for approximately 55 cars and 24 boat/trailer bays within staff accommodation area.
Vegetation Clearing	Up to 3.1 hectares of White Coastal Sandplain vegetation
Construction	No pindan sand will be transported to the beach area adjacent to the resort and expansion area.

Staff Accommodation Facilities	
Suites	Up to 36
Caravan park sites	Up to 24
Swimming Pool	Up to 100 square metre pool (self-contained)
Vegetation clearing	Up to 2.3 hectares of White Coastal Sandplain vegetation
Wastewater Treatment Plant	
Membrane bioreactor package plant	Up to 0.36 hectares (total area). Existing ponds used for storing treated effluent and sludge.
Vegetation clearing	Up to 0.09 hectares of Red Coastal Sandplain vegetation, adjacent to cleared area for the existing wastewater treatment plant.

Figures (attached)

Figure 1: Monkey Mia Dolphin Resort location and expansion areas for the resort, staff accommodation and wastewater treatment plant.

Figure 2: Layout of the resort expansion area and staff accommodation area.

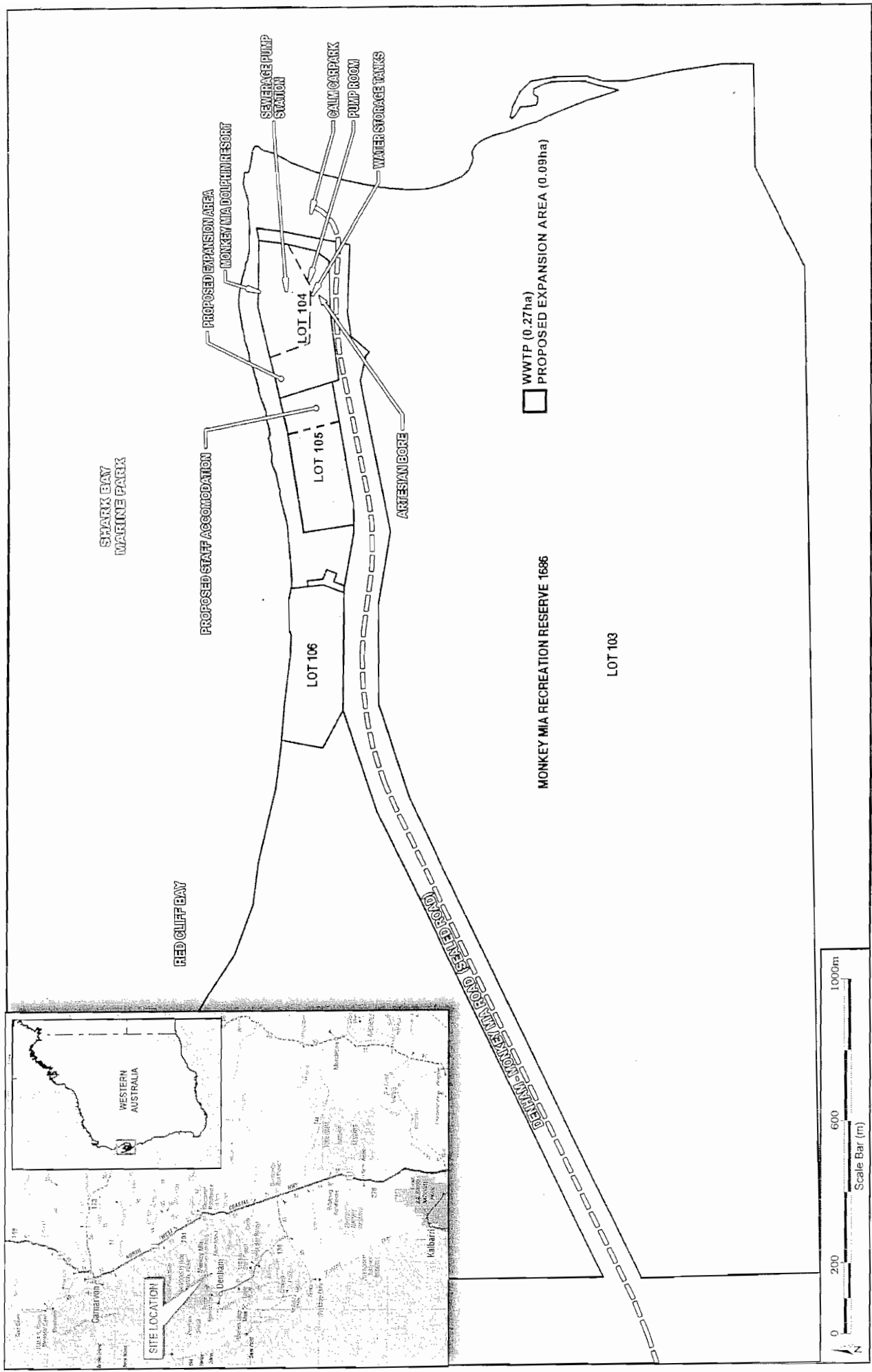
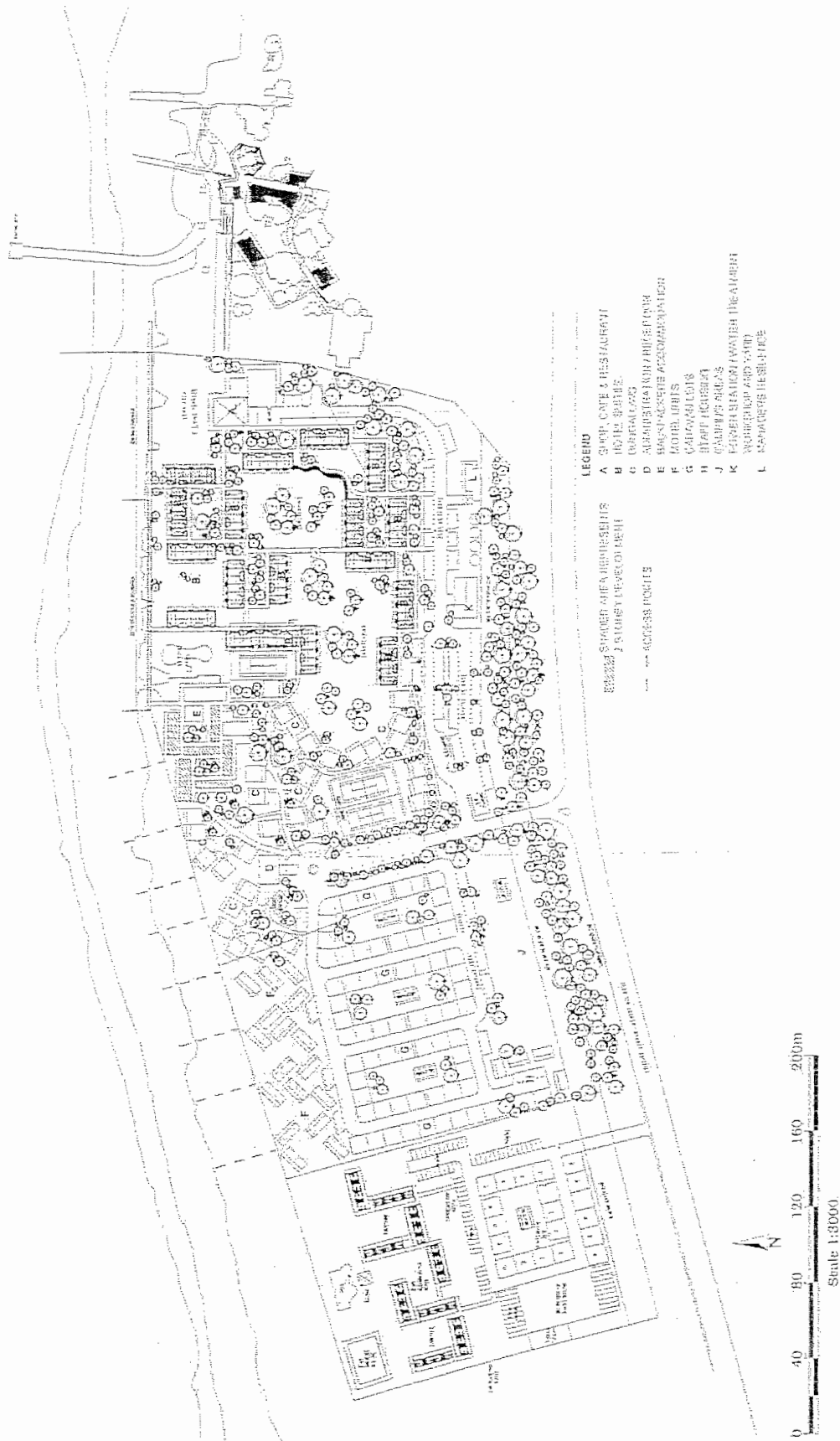


Figure 1 : Monkey Mia Dolphin Resort location, noting expansion areas for the resort.



Source: Overman and Zuidveeld, November 2004

Figure 2: Layout of the expansion and redevelopment of the resort and staff accommodation areas.

Proponent's Environmental Management Commitments

April 2005

**EXPANSION OF THE MONKEY MIA DOLPHIN RESORT
MONKEY MIA, SHARK BAY**

(Assessment No. 1455)

Monkey Mia Dolphin Resort Pty Ltd

Proponent's Environmental Management Commitments – April 2005

EXPANSION OF THE MONKEY MIA DOLPHIN RESORT, MONKEY MIA, SHARK BAY (Assessment No. 1455)

Note: The term “commitment” as used in this schedule includes the entire row of the table and its six separate parts as follows:

- a commitment number;
- a commitment topic;
- the objective of the commitment;
- the ‘action’ to be undertaken by the proponent;
- the timing requirements of the commitment; and
- the body/agency to provide technical advice to the Department of Environment.

No	Topic	Objective	Action	Timing	Advice
1.	Environmental Management System	<p>To ensure environmental best practice in accordance with EPA's Guidance Statement Number 43.</p> <p>The aim of the EMS is to ensure the operations of the Monkey Mia Dolphin Resort are in accordance with the commitments outlined in this statement.</p>	<p>Have in place, and make publicly available an Environmental Management System (EMS) for this project, which will include:</p> <p>(a) Environmental policies specific to the proposed resort and wastewater treatment plant facilities and corporate commitment to it.</p> <p>(a) Environmental Management Program with specific Management Plans to address the environmental impacts, including:</p> <ul style="list-style-type: none"> • Foreshore Management Plan; • Nutrient and Irrigation Management Plan; and • Wastewater Treatment Management Plan. <p>(b) Setting of appropriate objectives and targets, to meet environmental requirements.</p> <p>(c) Implementation and operation of actions to meet environmental performance.</p> <p>(d) Measurement and evaluation of environmental performance.</p> <p>(e) Creation of appropriate management structures and responsibilities including human, equipment and financial resources.</p>	Prior to construction and post-construction	CALM

No	Topic	Objective	Action	Timing	Advice
2.	Construction Activities	To manage and minimise the potential impacts of construction activities upon the surrounding environment and visual amenity.	<p>(f) Training, including induction, in environmental management procedures.</p> <p>(g) Development of communication procedures to staff, visitors, members of the community and government officers, and communicating relevant procedures and requirements to suppliers and contractors.</p> <p>(h) Development of performance monitoring and measurement procedures on the key features of the proposal which may impact on the environment.</p> <p>(i) Development of corrective and preventative procedures.</p> <p>(j) Development of management review and feedback procedures.</p> <p>Prepare a Construction Management Plan, which will include:</p> <p>(a) management of noise and dust impacts;</p> <p>(b) minimising visual impacts;</p> <p>(c) provision of fencing, appropriate storage facilities and locations; and</p> <p>(d) containment of all earthworks to avoid affecting the beach.</p>	Prior to construction	SoSB and CALM
3.	Construction Activities	As for commitment 2.	Implement the Construction Management Plan.	During construction.	SoSB and CALM
4.	Aboriginal Heritage and Culture	To fulfil the requirements stipulated on the Section 18 clearance of the <i>Aboriginal Heritage Act 1972</i> .	<p>(a) Undertake an ethnographic and archaeological survey of the proposed wastewater treatment plant site before construction occurs.</p> <p>(b) If any Aboriginal material is uncovered as a result of earthmoving activities work will immediately cease in that area and the discovery will be reported to the relevant authorities.</p> <p>(c) Project personnel and construction workers will be informed of the requirement of the <i>Aboriginal Heritage Act 1972</i> with regards to interference with aboriginal sites.</p>	Prior to construction	DIA

Abbreviations:

CALM: Department of Conservation and Land Management
DIA: Department of Indigenous Affairs
EMS: Environmental Management System

EPA: Environmental Protection Authority
SoSB: Shire of Shark Bay

THIS DOCUMENT

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Published on: 18 December 2012

Statement No. 919

**STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL
(PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**EXPANSION OF THE MONKEY MIA DOLPHIN RESORT
MONKEY MIA, SHARK BAY**

Proposal: The expansion, incorporating construction and operation of the Monkey Mia Dolphin Resort through expansion of the existing resort area, provision of staff accommodation facilities and upgrading of the wastewater treatment plant, as documented in Schedule 1 of Ministerial Statement 709.

Proponent: Aspen Parks Property Management Ltd
Australian Company Number 096 790 331

Proponent Address: Level 8, Septimus Roe Square
256 Adelaide Terrace
PERTH WA 6000

Assessment Number: 1922

Report of the Environmental Protection Authority Number: 1452

Previous Report of the Environmental Protection Authority: Bulletin 1165

The implementation of the proposal to which the above report of the Environmental Protection Authority relates is subject to the conditions and procedures contained in Ministerial Statement No. 709, as amended by the following:

Condition 4 of Ministerial Statement 709 is deleted, and replaced with:

4 Time Limit for Proposal Implementation

4-1 The proponent shall not commence implementation of the proposal after the expiration of 5 years from the date of this statement, and any commencement, within this 5 year period, must be substantial.

4-2 Any commencement of implementation of the proposal, within 5 years from the date of this statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of 5 years from the date of this statement.

[Signed 17 December 2012]

**HON BILL MARMION MLA
MINISTER FOR ENVIRONMENT; WATER**

Appendix 4
Works approval W4851/2010/1



Government of Western Australia
Department of Environment and Conservation

Your ref: W4851/2010/1
Our ref: 2011/000031-1
Enquiries: Clint Joseph
Phone: 9964 0943
Fax: 9964 0948
Email: clint.joseph@dec.wa.gov.au

Mr Brendan Toohey
Development Manager
Aspen Parks Property Management Ltd
PO Box Z5025, St Georges Terrace
PERTH WA 6831

Dear Mr Toohey

WORKS APPROVAL W4851/2010/1

Monkey Mia Dolphin Resort
Crown Reserve 1686, Edel Location 80 and Lot 3000 on Plan 74107
Monkey Mia Road, Shark Bay WA 6537

I refer to your application received 17 December 2010, for approval to carry out works at the above premises. The works approval W4581/2010/1 (attached) has been granted subject to the conditions specified therein.

The granting of this works approval does not remove the need to obtain any approvals required by other authorities before work commences.

I draw your attention to the General Conditions section of this works approval which requires you to submit a Compliance Document to verify compliance with the conditions of works approval upon completion of construction. This will enable an application for a licence or the amendment of an existing licence to be assessed.

If you are concerned about, or object to any aspect of the works approval you may lodge an appeal with the Minister for the Environment within 21 days from the date on which you receive this works approval. The Office of the Appeals Convenor can be contacted on 6467 5190 to find out the procedure and fee. Members of the public may also appeal the conditions of the works approval. The Appeals Registrar at the Office of the Appeals Convenor can be contacted after the closing date of appeals to check whether any appeals were received.

If you have any questions relating to the conditions of works approval, please contact Clint Joseph at the Midwest regional office on 9964 0943.

Yours sincerely,

Carissa Aitken
Sector Manager Resource Industries
15 October 2012

DIRECTOR GENERAL AND ENVIRONMENTAL SERVICES DIVISIONS: The Atrium, 168 St Georges Terrace, Perth, Western Australia 6000
Phone: (08) 6467 5000 Fax: (08) 6467 5562 TTY: 1880 555 630

PARKS AND CONSERVATION SERVICES DIVISIONS: Executive: Corner of Australia II Drive and Hackett Drive, Crawley, Western Australia 6009
Phone: (08) 9442 0300 Fax: (08) 9386 1578 Operations: 17 Dick Perry Avenue, Technology Park, Kensington, Western Australia 6151
Phone: (08) 9219 8000 Fax: (08) 9334 0498 TTY: 9334 0546

POSTAL ADDRESS FOR ALL DIVISIONS: Locked Bag 104, Bentley Delivery Centre, Western Australia 6983

www.dec.wa.gov.au
wa.gov.au

WESTERN AUSTRALIA

DEPARTMENT OF ENVIRONMENT & CONSERVATION

Environmental Protection Act 1986

WORKS APPROVAL

WORKS APPROVAL NUMBER: W4851/2010/1

FILE NUMBER: 2011/000031-1

NAME AND ADDRESS OF OCCUPIER:

Aspen Parks Property Management Ltd
Level 3, 129 St Georges Terrace
PERTH, WA, 6000
ACN: 096 790 331

NAME AND LOCATION OF PREMISES:

Monkey Mia Dolphin Resort
Crown Reserve 1686, Edel Location 80 and Lot 3000 on Plan 74107, Monkey Mia Road,
Shark Bay WA 6537
(as depicted in Attachment 1)

Environmental Protection Regulations 1987

CLASSIFICATION(S) OF PREMISES:

Schedule 1 – Category Number 54

COMMENCEMENT DATE OF WORKS APPROVAL: Monday, 15 October 2012

EXPIRY DATE OF WORKS APPROVAL: Wednesday, 14 October 2015

CONDITIONS OF WORKS APPROVAL:

As described and attached:

CONDITIONS (11)
ATTACHMENTS (1)



.....
Carissa Aitken

Officer delegated under Section 20
of the *Environmental Protection Act 1986*

Date of Issue: Monday, 15 October 2012

WESTERN AUSTRALIA
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Environmental Protection Act 1986

WORKS APPROVAL NUMBER: W4851/2010/1

FILE NUMBER: 2011/000031-1

CONDITIONS OF WORKS APPROVAL

DEFINITIONS

In these conditions of works approval, unless inconsistent with the text or subject matter:

"AS/NZS 3735" means the most recent version of Australian/New Zealand Standard 3735 – Concrete structures retaining liquids.

"AS/NZS 5667.10" means the most recent version of Australian/New Zealand Standard 5667.10 Water Quality – Sampling - Guidance on sampling of waste waters;

"Commissioning" means the operation and testing that verifies the works and all relevant systems, plant, equipment and assemblies have been installed, tested, operated and performed in accordance with the requirements of the relevant works approval and are fit for the intended purpose prior to the commencement of commercial operation;

"Director" means Director, Environmental Regulation Division of the Department of Environment and Conservation for and on behalf of the Chief Executive Officer as delegated under Section 20 of the *Environmental Protection Act 1986*;

"Director" for the purpose of correspondence means-

Regional Manager, Midwest Region
Department of Environment and Conservation
PO Box 72
Geraldton 6531

Telephone: (08) 9921 5955
Facsimile: (08) 9964 0948

"kl/day means kilolitres per day;

"MBR" means Membrane Bio Reactor;

"mg/L" means milligrams per litre;

"NATA" means the National Association of Testing Authorities;

"Partial commissioning" means that stage of commissioning when the quality of treated effluent consistently remains at or below all the targets specified in Table 1 of condition 7 for two consecutive monitoring periods; and

"Pond #1" means existing primary pond.

GENERAL CONDITIONS

GENERAL CONSTRUCTION AND OPERATIONAL DESCRIPTION

- 1 The works approval holder shall construct the works in accordance with the works approval application dated 17 December 2010 and the documentation entitled "Works Approval Application - Monkey Mia Dolphin Resort Wastewater Treatment Plant Upgrade Application for DEC Works Approval", 16 December 2010, Permeate Partners.

Where the details and commitments of the documents listed in condition 1 above are inconsistent with any other condition of this Works Approval, the latter shall prevail.

- 2 The works approval holder shall ensure that all concrete structures for retaining liquids are built in accordance with AS/NZS 3735.

WESTERN AUSTRALIA
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Environmental Protection Act 1986

WORKS APPROVAL NUMBER: W4851/2010/1

FILE NUMBER: 2011/000031-1

SUBMISSION OF COMPLIANCE DOCUMENT

- 3 Subject to condition 1, the works approval holder shall submit a compliance document to the Director following the construction of the works outlined in the Works Approval application and supporting documentation, and prior to commissioning of the same. The Compliance Document shall certify that the works were constructed in accordance with the conditions of Works Approval and documentation supporting the application to construct the works, and shall be signed by an authorised officer of Aspen Property Management Limited, with the printed name and position of that person within the company, and preferably will contain the Company seal.

OPERATION AND MAINTENANCE MANUAL

- 4 The works approval holder shall submit to the Director prior to commissioning of the works, an Operation and Maintenance Manual for the Monkey Mia Dolphin Resort MBR.

COMMISSIONING

- 5 The works approval holder shall commission the Monkey Mia Dolphin Resort MBR for a period not exceeding three months.
- 6 The works approval holder shall notify the Director in writing one week prior to the commencement of commissioning of the Monkey Mia Dolphin Resort MBR.
- 7 The works approval holder shall ensure that the water quality monitoring occurs during the commissioning period of the Monkey Mia Dolphin Resort MBR, such that the water quality of the effluent is monitored once discharge occurs and at the frequency stated in Column 2 of Table 1 thereafter for the parameters in Column 1 of Table 1.

Table 1: MBR water quality monitoring requirements and targets during commissioning

Column 1 Parameters	Column 2 Monitoring Frequency	Column 3 Targets
5 day Biological Oxygen Demand (Filtered)(mg/L)	Fortnightly	<30
Total Nitrogen(mg/L)	Fortnightly	<40
Total Phosphorous (mg/L)	Fortnightly	<10
E. Coli (cfu/100mL)	Fortnightly	<100
Total Suspended Solids(mg/L)	Fortnightly	<30
pH	Fortnightly	6.5 – 8.5

- 8 The works approval holder shall ensure that all water samples required by condition 7 are collected, handled and preserved in accordance with AS/NZ 5667.10 and have analysis conducted by an organisation with current NATA accreditation for the specified parameter.
- 9 The works approval holder shall provide a commissioning report to the Director as part of the compliance document referred to in condition 3 at the completion of partial commissioning of the Monkey Mia Dolphin Resort MBR.
- 10 The works approval holder shall ensure that the commissioning report required in condition 9 includes, but is not limited to, an assessment of the water quality results from the monitoring required in condition 7 against the targets in Column 3 of Table 1.

FLOW MONITORING DEVICES

- 11 The works approval holder shall install flow monitoring devices for the purpose of monitoring and recording the daily volumes of effluent discharged from the wastewater treatment plant into the environment.

WESTERN AUSTRALIA

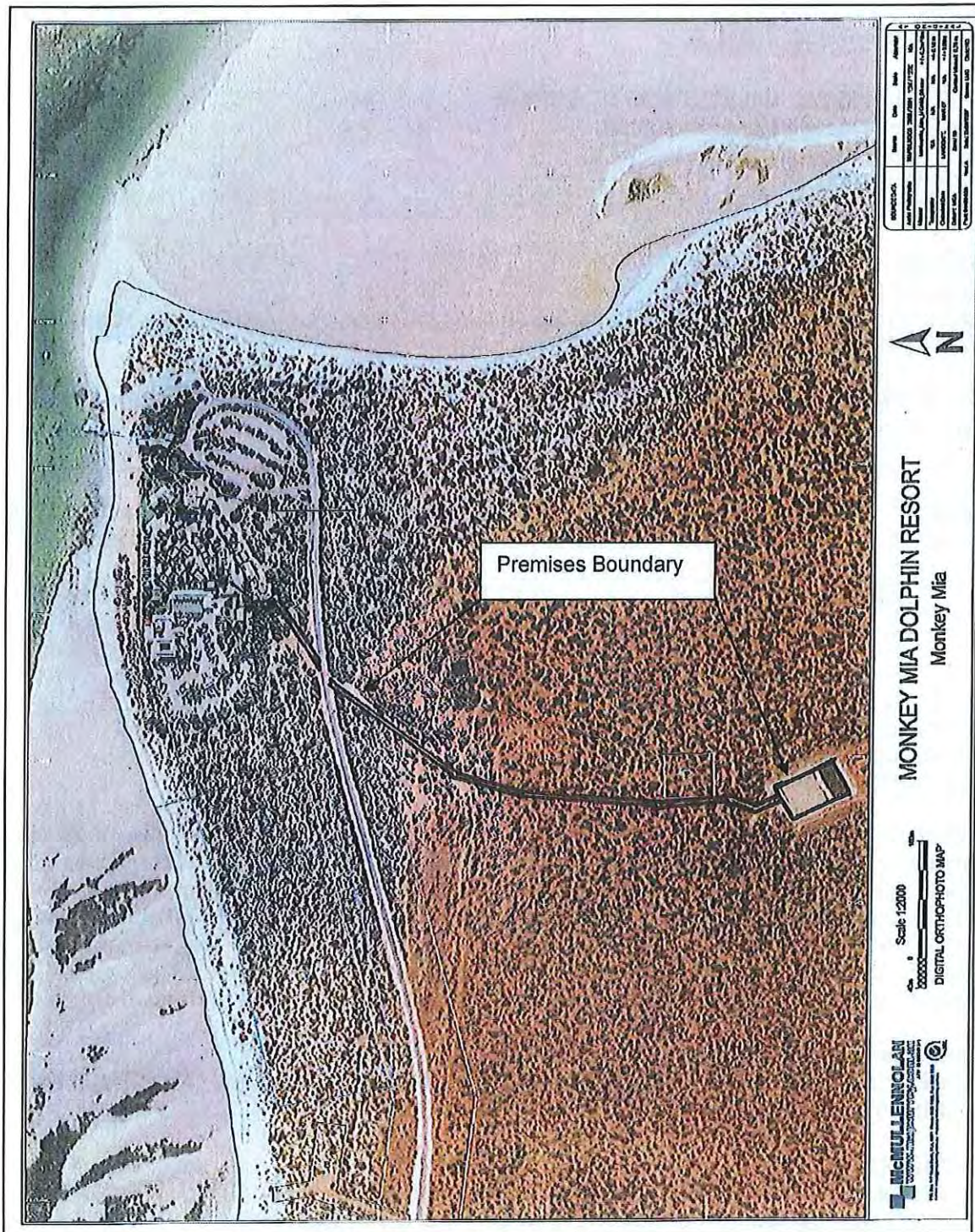
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Environmental Protection Act 1986

WORKS APPROVAL NUMBER: W4851/2010/1

FILE NUMBER: 2011/000031-1

Attachment 1 – Plan of Premises





WORKS APPROVAL NUMBER: W4851/2010/1
FILE NUMBER: 2011/000031-1
APPLICATION DATE: 17/12/2010
EXPIRY DATE: 14/10/2015

PREMISES DETAILS

WORKS APPROVAL HOLDER AND OCCUPIER

Aspen Parks Property Management Ltd
Level 3, 129 St Georges Terrace
PERTH, WA, 6000
ACN: 096 790 331

PREMISES

Monkey Mia Dolphin Resort
Portion of Crown Reserve 1686, Edel Location 80 and Lot 300 on Plan 74107 Monkey Mia Road
SHARK BAY, WA, 6537

PRESCRIBED PREMISES CATEGORY

Table 1: Prescribed premises summary

Category number*	Category Description*	Category Production or Design Capacity*	Premises Production or Design Capacity#	Premises Fee Component**
54	Sewage facility	100 cubic metres or more per day	100 cubic metres per day	Not more than 200 cubic metres per year

* From Schedule 1 of the Environmental Protection Regulations 1987

From application

** From Schedule 4 of the Environmental Protection Regulations 1987

This Environmental Assessment Report (EAR) has been drafted for the purposes of detailing information on the management and mitigation of emissions and discharges from the prescribed premises. The objective of the EAR is to provide a risk assessment of emissions and discharges, and information on the management of other activities occurring onsite which are not related to the control of emissions and discharges from the prescribed premises activity. This does not restrict Department Environment and Conservation (DEC) to assessing only those emissions and discharges generated from the activities that cause the premises to become prescribed premises.

Basis of Assessment

The Monkey Mia Dolphin Resort has been assessed as 'prescribed premises' category number 54 under Schedule 1 of the Environmental Protection Regulations 1987.

Category 54 is described as 'Sewage facility: premises –

- (a) on which sewage is treated (excluding septic tanks); or
- (b) from which treated sewage is discharged onto land or into waters.

Aspen Parks Property Management Ltd currently operates a wastewater treatment plant (WWTP) which receives sewage from the Monkey Mia Dolphin Resort (MMDR) and the DEC facilities at Monkey Mia. The sewage is treated via two oxidation ponds and then discharged into infiltration swales.



The current production rate of the WWTP is 70 cubic metres per day (m³/day) which is below the production or design capacity for category 54 of 100 m³/day. The decision to license rather than register the premises was made in 2000 due to the sensitive nature of the environment in which the premises is located. The existing WWTP is prone to unstable performance, particularly in periods of high loading, and on a number of occasions has breached licence (L7426/2000) conditions.

MMDR are proposing to upgrade the WWTP and install a 100m³/day membrane bioreactor to improve the treated wastewater quality and wastewater treatment plant performance.

1.0 BACKGROUND

1.1 GENERAL COMPANY DESCRIPTION

MMDR including the WWTP, is owned and operated by Aspen Parks Property Management Ltd (Aspen), a Western Australian based unlisted property fund which owns a number of holiday destinations in Australia.

A caravan park was originally established at Monkey Mia in the 1970's and was gradually upgraded to a resort in the 1980's. Monkey Mia Dolphin Resort Pty Ltd operated the resort until 2005 when it was purchased by Aspen.

Previous to the WWTP, septic tanks were used to dispose of wastewater from the caravan park and resort. Construction of the WWTP commenced in 1999 and was completed in 2000, with a licence being issued the same year.

A works approval was issued to Monkey Mia Dolphin Resort Pty Ltd in October 2001 for the construction of a second infiltration swale. Another works approval was issued in January 2004 for the construction of a third infiltration swale and an irrigation area to dispose of treated effluent in the case of the swales becoming full.

Aspen Parks Property Management (ASPEN) submitted a works approval for the Membrane Bioreactor (MBR) on 17/12/2010. The property on which the MBR is to be located was jointly owned by DEC and the Shire of Shark Bay. DEC management then proposed that a reserve covering the necessary area required to accommodate the MBR and associated ponds be excised from Reserve 1686 and be vested with the Shire of Shark Bay, this would allow the works approval to be issued and ASPEN to commence with the development of the MBR. On 21 August 2012 a new reserve was created and the Shire of Shark Bay now have sole vestment of Lot 3000 on Plan 74107. A letter dated 12 October 2012 confirmed that the Shire of Shark Bay were in the process of negotiating a lease agreement with ASPEN.

1.2 LOCATION OF PREMISES

The premises is located approximately 27 kilometres north east of Denham within Portion of Crown Reserve 1686, Edel Location 80 and Lot 300 on Plan 74107 Monkey Mia Road, it borders the Shark Bay Marine Park and lies within the Shark Bay World Heritage Area (see Attachment 1).

The WWTP is surrounded by shoreline to the north and east. At its closest point the WWTP is approximately 640 metres from the ocean.

Climate

Shark Bay has an arid to semi-arid climate characterised by hot dry summers and mild dry winters. Summer minimum and maximum temperatures typically average near 20°C and 35°C respectively, while in winter, temperatures average around 10°C and 20°C respectively.



The average monthly evaporation is approximately 156mm, with the highest levels of evaporation occurring during the months of November, December and January (with values ranging from 200mm to 226mm) and the lowest levels of evaporation occurring during the months of June, July and August (with values ranging from 81mm to 95mm).

Soils and Landscape

The WWTP is located approximately 625 metres (m) south of MMDR at an elevation of 20 m Australian Height Datum (AHD). It is located on red coastal sandplain with gently undulating slopes. The dominant soil type within this soil-landscape system is deep red sand.

The area where the WWTP is located slopes towards the east at an approximate 1:20 slope for 150 m then decreases in slope prior to dropping away steeply to about 3 m AHD.

Vegetation

The dominant landform-vegetation unit found within the WWTP area is the Red Sandplain unit. The vegetation is dominated by *Acacia ramulosa*, which is a spreading shrub that grows up to 3 m in height. The vegetation on the red sandplain is typical of most of the northern Peron Peninsula with some *Acacia tetragonophylla* and *Heterodendrum oleifolium*. The Red Sandplain vegetation has considerably higher species richness than the Coastal Sandplains on the margin of the peninsula.

Hydrogeology

Due to the lack of detailed knowledge of the groundwater and hydrogeology near the WWTP at Monkey Mia, and the poor treatment and subsequent discharge of effluent to the environment, DEC added a condition to MMDR's licence requiring them to undertake an investigation (by 17 December 2010) of the groundwater and hydrogeology at the WWTP. Report no. D10246:3 was submitted to DEC on 17/12/2010. The results of the above report indicates that the impact of the WWTP on the groundwater is limited to an area from the WWTP towards the south west away from the ocean.

1.3 PROCESS DESCRIPTION

Sewage currently generated at MMDR and DEC facilities gravitates to a pump station at the resort, where it is macerated and then pumped approximately 625 m south to the WWTP.

The existing WWTP consists of the following key characteristics:

- 40 m³/day capacity;
- a primary oxidation pond measuring 46.3 x 46.3 m;
- a secondary oxidation pond measuring 46.3 x 23.3 m;
- pond depths of 1.5 m with 0.5 m freeboard;
- pond liners of 1.5 mm HDPE;
- infiltration swales; and
- 1.8 m high cyclone fence surrounding the prescribed premise area.



Proposed Plant Upgrade

System description

Following the upgrade, wastewater infrastructure (See process flow diagram Attachment 3) will include;

- central pump station and rising main to the WWTP (existing);
- inlet screening (new);
- wastewater balance tank (new);
- biological treatment (new);
- membrane filtration (new);
- infiltration via swales (existing);
- sludge drying bed using Pond #2 (new / existing secondary pond);
- emergency storage using Pond #1 (new / existing primary pond); and
- chemical storage and dosing (new).

Concrete structures for retaining liquids

Aspen have commenced site works at the MMDR Waste Water Treatment Plant (WWTP) premises in preparation for the building of the MBR plant prior to the issuing of the necessary Works Approval. DEC requested confirmation from ASPEN that all concrete structures for retaining liquids will comply with AS 3735-2001. ASPEN e-mailed a certificate of adequacy confirming that all structures for retaining liquids will be built complying to AS 3735 – 2001.

Inlet screening

All wastewater from the rising main will be passed through a 2mm screen to protect the downstream membranes. As the existing pump station contains maceration, all material arriving at the screens will already be <5mm in particle size. The screened wastewater will be directed to the wastewater balance tank and the screenings to a screenings bin, which will be emptied on a regular basis. The dewatered screenings will be disposed of at a licensed landfill site. If both the duty and standby screens are unavailable, the raw sewage will be diverted by gravity to the emergency storage pond. Overflow from each screen will also be directed by gravity to the emergency storage.

Wastewater balance tank

A wastewater balance tank will be used to buffer diurnal flows thus providing a steady feed stream to the biological reactor. The balance tank also provides an opportunity for dilution and / or neutralisation of any contaminant in the wastewater that might be harmful to the biological process. Finally the balance tank also provides a mechanism to temporarily halt the processing of wastewater (without using the emergency storage) should there be a problem with the downstream equipment. The screened wastewater will then be pumped to the biological reactor based on the level in the wastewater balance tank (sewage availability) and the level in the biological reactor (capacity availability). A mixer will be used to suspend solids in the wastewater balance tank.

Infiltration Swales

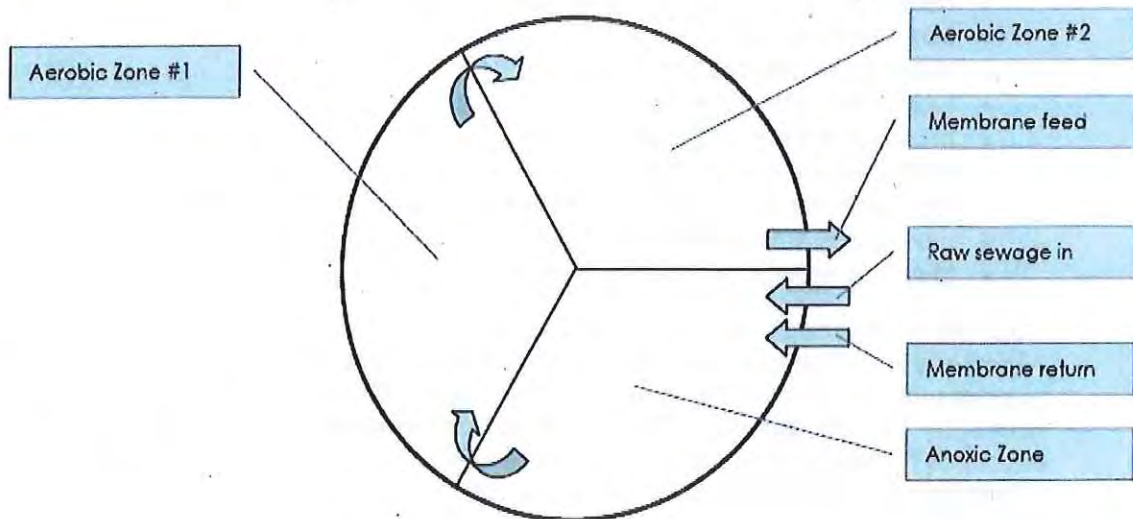
The swale base is consistent with loamy sand which is estimated to have an infiltration rate of 12mm/h. This equates to 130m³ /d for the 1.5 swales which will allow more infiltration than the design capacity of 100m³ /d. Effluent discharged to the swales is relatively consistent with no rapid large volumes being discharged. MMDR confirmed that daily monitoring of the swales will be undertaken to ensure that no overtopping occurs.

Biological reactor

The biological reactor consists of an activated sludge process in a Modified Ludzack-Ettinger (MLE) configuration as detailed in Figure (1) below. The movement of the wastewater between anoxic and aerobic zones enables high levels of nitrogen and Biological Oxygen Demand (BOD) reduction.



Figure 1



As noted in Figure 1 above, raw sewage will enter the anoxic zone and combine with the return mixed liquor from the membrane tank. The feed to the membrane tank will be taken from Aerobic Zone #2. A mixer will be used to suspend solids in the anoxic zone and provide good contact between the incoming wastewater and the mixed liquor. The aerobic zones will be aerated using fine bubble diffusers installed in the base of the biological reactor. The wastewater / mixed liquor will flow between the zones by gravity. The overflow from the biological reactor will be directed via gravity to the emergency storage. To ensure the treated wastewater quality is achieved, key process indicators for the biological reactor such as flow, dissolved oxygen, mixed liquor suspended solids and pH will be continuously monitored via the site Supervisory Control and Data Acquisition (SCADA).

Membrane filtration

Membrane filtration will be used to separate the treated wastewater from the mixed liquor. The small pore size of the membrane (ie 0.04 μ m) results in the rejection of solids, and the majority of pathogens, at the membrane surface, whilst water passes through.

Membrane permeability is maintained by:

- aeration at the base of the membranes to dislodge solids from the membrane surface;
- periodic backpulsing of the membranes; and
- periodic chemical cleaning of the membranes.

The permeate pump operates based on biological reactor level and directs filtered water directly to the infiltration swales. The mixed liquor from the membrane tank is returned to the anoxic zone by gravity. To ensure membrane filtration performance is maintained key process indicators such as flow, trans-membrane pressure and permeate turbidity will be continuously monitored via the site SCADA.



MBR Design parameters

Parameter	Units	Design
Biochemical Oxygen Demand (BOD)	mg/L	<30
Total Nitrogen	mg/L	<40
Total Phosphorus	mg/L	<10

Sludge drying bed using Pond #2 (existing secondary pond)

The existing Pond #2 will be converted into a series of sludge drying beds to process the Waste Activated Sludge (WAS) from the biological reactor. The WAS will leave the bioreactor at 1% solids and be thickened / dried to ~40% solids prior to off-site disposal at licensed landfill site. Filtrate from the drying beds will be returned back to the inlet screen.

Key design features of the sludge drying beds include:

- four cells rotated in series;
- maximum sludge thickness 200mm; and
- average drying time >50 days.

Emergency storage using Pond #1 (existing primary pond)

The existing Pond #1 will be converted into emergency storage for one or a combination of raw sewage, excess treated water and general plant overflows. As required, the contents of the emergency storage will be transferred to the inlet screen and be processed through the WWTP.

Key design features of the emergency storage include:

- total volume of 4,287m³;
- working volume of 3,215m³; and
- emergency storage return pump.

Chemical storage and dosing

Sodium hypochlorite and citric acid will be used for periodic membrane cleaning. The storage tank and dosing pumps will be designed and banded in accordance with AS3780-2000.

Key design features of the chemical storage systems include:

- storage volume of 500L for sodium hypochlorite with duty / standby dosing pumps; and
- storage volume of 150L for citric acid with duty only dosing pump.

Commissioning

MMDR are proposing to undertake commissioning of the MBR under the works approval. Wastewater will be discharged to the infiltration swales during this time. Commissioning will occur for a period of approximately one month, with MMDR undertaking monitoring during this period to verify the operational performance of the MBR against the design specifications.

1.4 REGULATORY CONTEXT

1.4.1 Part IV Environmental Protection Act 1986, Environmental Impact Assessment

Plans to expand MMDR, including the WWTP, were referred to the Environmental Protection Authority (EPA) in September 2002, with the level of assessment being set at Public Environmental Review (PER). A draft PER was released for public comment by the proponent (Monkey Mia Dolphin Resort Pty Ltd) in June 2004.



The design proposed for the WWTP in the PER involved the use of larger primary and secondary oxidation ponds and a new evaporation pond, occupying a total area of 3.2 ha. The area occupied by the existing WWTP is 1.76 hectares (ha).

Following the release of the PER and submissions made during the comment period, the proponent modified the proposal for the WWTP. The proponent proposed a membrane bioreactor plant, which uses a biological reaction process combined with a microfiltration membrane system.

The EPA released their report and recommendations in February 2005 (Bulletin Number 1165). Ministerial Statement Number 703 was released by the Minister for the Environment and Science in December 2005 and included a number of Ministerial Conditions.

Aspen have not commenced 'substantive works' within 5 years of the approval which expired on 28 December 2010.

On 15 October 2010, Aspen requested an extension of their approval, however, the Office of the Environmental Protection Authority (OEPA) stated that DEC's support for their proposal for an extension is contingent on Aspen fully addressing the outstanding items in the two Environmental Protection Notices (EPN) (dated 7 May 2010 and 22 June 2010) and Section 90 notice (dated 1 November 2010).

DEC issued an Environmental Protection Notice Certificate of Revocation to Aspen on 2 November 2011.

1.4.2 Part V Environmental Protection Act 1986, Environmental Management

Construction of the original WWTP commenced in November 1999 without a works approval. The Department of Environmental Protection (DEP) stopped the works by the proponent until a works approval was obtained. DEP did not take any enforcement action at the time.

In 2001, the infiltration swales were at capacity and the proponent released sewage from the WWTP to surrounding vegetation without authorisation. DEP prepared a prosecution brief, however, no enforcement action was pursued.

Since 2001, licence limits for effluent water quality prior to discharge to the infiltration swales have been exceeded at some time during each reporting period. Since 2005 the limits for total nitrogen and total phosphorus have been exceeded in five of the six sampling periods every year.

A sewage leak at the Monkey Mia Dolphin Resort in April 2010 contaminated the groundwater below the resort and sea water adjacent to the resort. DEC issued an EPN to Aspen (resort owner) on 7 May 2010 to take action to stop the leaks and undertake all necessary works to prevent reoccurrence. Aspen carried out repairs and replacement of equipment within the resort sewer system. This was completed by 21 May 2010 and led to a reduction in bacteria levels.

A second EPN was issued on 22 June 2010 after testing revealed an increase in bacteria levels. The EPN sought to prevent further discharges and to ensure Aspen was responsible for the monitoring program. Aspen's response was inadequate and DEC wrote to Aspen on 17 July 2010 instructing them on actions that were required by 22 July 2010.



DEC first wrote to Aspen on 16 September and subsequently on 19 September and 1 October 2010 regarding a potentially large loss of effluent from the treatment ponds into the groundwater and issued Aspen with Section 90 notice on 1 November 2010.

1.4.3 Other DMA's Legislation Which Applies

The treatment of wastewater is also managed under the *Health Act 1911* and Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974. Aspen have already acquired approval from the Department of Health regarding the operation of the WWTP.

1.4.4 Rights in Water Irrigation Act 1914

The property owners do not hold a Groundwater Licence (GWL) under the *Rights in Water Irrigation Act 1914* within the prescribed premise area.

1.4.5 Local Government Authority

The MBR and swales will be located on Lot 3000 on Plan 74107. The land has been excised from the Reserve and is under the management of the Shire of Shark Bay. The Shire of Shark Bay is currently negotiating a leases agreement with Aspen and has no objection with the building of the MBR on Lot 3000 on Plan 74107.

2.0 STAKEHOLDER AND COMMUNITY CONSULTATION SUBMISSIONS RECEIVED DURING 21 DAY PUBLIC COMMENT PERIOD

The Application for Licence details for this facility was advertised in the West Australian newspaper on 17 January 2011 as a means of advising stakeholders and to seek public comments. No submissions were received.

3.0 EMISSIONS AND DISCHARGES RISK ASSESSMENT

DEC considers that conditions should focus on regulating emissions and discharges of significance. Where appropriate, emissions and discharges which are not significant should be managed and regulated by other legislative tools or management mechanisms.

The following section assesses the environmental risk of potential emissions from the MMDR. In order to determine the site's appropriate environmental regulation, an emissions and discharges risk assessment was conducted of the MMDR using the environmental risk matrix outlined in Appendix A. The results of this are summarised in Table 2 below.



Table 2: Risk assessment and regulatory response summary table.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation, tools, agencies)
Dust emissions	Emission significance of 1 Construction: A minimal amount of dust will be generated from minor excavation. Emissions are not expected to be significant.	No known or expected socio-political interest/impact. Nearest sensitive receptor is 20km away.	E Other management mechanisms	WA - No conditions	NA	General provisions of the Environmental Protection Act 1986 (EP Act).
	Not applicable Operation: No emissions expected.	NA	NA	NA	NA	
	Not applicable Construction: No emissions expected. Emission Significance of 2. Operational: Areas that could emit odour are:	Low. Closest sensitive receptor is the resort, approximately 700 m north of premises.	D Other management mechanisms	Lic - generic conditions relating to odour management	N/A	
	<ul style="list-style-type: none"> - Emergency storage pond Low odour expected. The wastewater that is diverted to the emergency storage pond will be returned to the system as soon as practically possible. - Sludge drying bed Low odour expected. The design sludge age at full capacity is >25 days to increase the stability of the sludge discharge to the drying beds. Sludge that is applied to the drying beds will be <200mm thick. - Wastewater balance tank Low odour expected. Odour emissions from the wastewater balance tank will be minimised by limiting the resident time of the raw wastewater in the wastewater balance tank to <24 hours. The wastewater balance tank will be covered and vented ~7m above ground / ~3m above top of tank. - Inlet screens Low odour expected. Odour emissions from the inlet screens will be minimised by limiting the resident time of the raw wastewater in the wastewater balance tank to <24 hours. The inlet screens will be covered and vented ~7m above ground / ~1m above top of screens. Dewatered and washed screenings will then be stored in a sealed bin prior to weekly collection and off-site disposal. - Biological reactor Low odour expected. Aerobic conditions will be maintained in the biological reactor to eliminate the generation of offensive odours. 					



ENVIRONMENTAL ASSESSMENT REPORT

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation, tools, agencies)
	Probes will continuously monitor the dissolved oxygen levels in the biological reactor and adjust the speed of the process blowers (installed duty / standby) accordingly. - Membrane filtration Low odour expected. The membrane tank is fed continuously from the biological reactor. Aerobic conditions will be maintained in the biological reactor to eliminate the generation of offensive odours. Not applicable Construction: Noise emissions expected very low.	Low Closest sensitive receptor is the resort, approximately 700 m north of premises. Low. Closest sensitive receptor is the resort, approximately 700 m north of premises.	NA E Other management mechanisms	WA - No condition Lic - No condition	N/A N/A	
	Emission Significance of 1 Operation: All noise levels from pumps, screws and cyclic valves will be less than 70dBA at 1m. Not applicable Construction: Waste expected to be minimal.	NA	NA	WA - No condition	NA	
	Emission Significance of 2 Operation: All dewatered activated sludge and dewatered screenings will be disposed of at a licensed landfill site. Not applicable Construction: No hydrocarbons will be stored on site during construction.	Low. Closest sensitive receptor is the resort, approximately 700 m north of premises. NA	D Other management mechanisms NA	Lic - Generic conditions relating to solid waste management. NA	N/A NA	
	Emission Significance of 1 Operation: Sodium Hypochlorite (500 L) and Citric Acid (150 L) for disinfection and membrane cleaning will be stored on site. The storage tanks and dosing pumps will be designed and stored in accordance with AS 3780-2000. Not applicable Construction: No liquid waste expected during construction.	Low. No known or expected socio-political interest/ impact. NA	D Other management mechanisms. NA	Lic - Generic conditions relating to hydrocarbon / chemical storage. NA	NA NA	
	Emission Significance of 1 Operation: Emergency storage pond. The wastewater that is diverted to the emergency storage pond will be returned to the system as soon as practically possible. This pond is a HDPE lined pond. Emission Significance of 2 Construction: MMDR will undertake commissioning of the plant	Low. No known or expected socio-political interest/ impact. Low. Moderate level of interest from	E WA no conditions D WA -	Lic - Generic conditions relating to liquid waste management. WA - conditions	NA NA	



ENVIRONMENTAL ASSESSMENT REPORT

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation, tools, agencies)																					
	<p>during the works approval phase for a period of one month. Commissioning is required to be undertaken to verify the operational performance of the MBR against the design specifications prior to the licence being issued. During this period, wastewater will be discharged to the infiltration swales. To ensure that discharges are managed during this period, DEC will include standard commissioning conditions within the works approval, including monitoring of treated waste water and submission of a commissioning monitoring report.</p> <p>A flow meter is required to ensure the accurate measurement of wastewater discharged to the infiltration swales. As a flow meter has not been proposed to be installed, DEC will require its installation as a condition of works approval.</p> <p>MMDR have advised DEC that they propose to construct all concrete structures in accordance with AS 3735-2001. DEC has previously raised concerns with MMDR regarding the standard of construction of other concrete structures in the sewage infrastructure. To ensure that the upgraded WWTP is constructed in accordance with the Australian Standard and prevent leakage from the concrete tanks, DEC will require this as a condition of licence.</p> <p>Minimal amount of liquid waste will be discharged during commissioning of the MBR. Targets required during commissioning are:</p> <table border="1"> <thead> <tr> <th>Column 1 Parameters</th> <th>Column 2 Monitoring Frequency</th> <th>Column 3 Targets</th> </tr> </thead> <tbody> <tr> <td>5 day Biological Oxygen Demand (Filtered)(mg/L)</td> <td>Fortnightly</td> <td><30</td> </tr> <tr> <td>Total Nitrogen(mg/L)</td> <td>Fortnightly</td> <td><40</td> </tr> <tr> <td>Total Phosphorous (mg/L)</td> <td>Fortnightly</td> <td><10</td> </tr> <tr> <td>E. Coli (cfu/100mL)</td> <td>Fortnightly</td> <td><100</td> </tr> <tr> <td>Total Suspended Solids(mg/L)</td> <td>Fortnightly</td> <td><30</td> </tr> <tr> <td>pH</td> <td>Fortnightly</td> <td>6.5 – 8.5</td> </tr> </tbody> </table>	Column 1 Parameters	Column 2 Monitoring Frequency	Column 3 Targets	5 day Biological Oxygen Demand (Filtered)(mg/L)	Fortnightly	<30	Total Nitrogen(mg/L)	Fortnightly	<40	Total Phosphorous (mg/L)	Fortnightly	<10	E. Coli (cfu/100mL)	Fortnightly	<100	Total Suspended Solids(mg/L)	Fortnightly	<30	pH	Fortnightly	6.5 – 8.5	<p>community. Approximately 700 m from Monkey Mia Dolphin Resort.</p>	<p>monitoring conditions</p>	<p>relating to, water quality targets for discharges during commissioning, length of commissioning, and submission of commissioning monitoring report. Condition requiring the submission of a Operation and Maintenance Manual. Condition requiring the installation of a flow meter and construction of concrete structures (Tanks) in accordance with AS 3735.</p>		
Column 1 Parameters	Column 2 Monitoring Frequency	Column 3 Targets																									
5 day Biological Oxygen Demand (Filtered)(mg/L)	Fortnightly	<30																									
Total Nitrogen(mg/L)	Fortnightly	<40																									
Total Phosphorous (mg/L)	Fortnightly	<10																									
E. Coli (cfu/100mL)	Fortnightly	<100																									
Total Suspended Solids(mg/L)	Fortnightly	<30																									
pH	Fortnightly	6.5 – 8.5																									



Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation, tools, agencies)
	<p>To ensure that MMDR maintain and operate the MBR plant appropriately, DEC will require MMDR to provide an operations and maintenance manual under conditions of works approval. MMDR will submit to the DEC before commissioning an operations and maintenance manual for the MBR. The operations and maintenance manual shall include but is not limited to:</p> <ul style="list-style-type: none"> • Design Criteria and Components • Monitoring • Maintenance • Operation e.g SCADA controls for operation • Process Control • Manual Operation Details e.g manual start-up, operation and shut down procedures • Troubleshooting Table of potential problems, possible causes and remedial actions • Emergency responses and notification procedures <p>Emission Significance of 3. Operation: The hydrological report (Report No. D10246.3) prepared by RPS for Monkey Mia and submitted to DEC 17/12/2010, concluded the following:</p> <p>(i) The depth to groundwater in the vicinity of the WWTP is about 25m.</p> <p>(ii) Five groundwater monitoring bores (WWTP1 – WWTP5) were installed (see Attachment 2):</p> <ul style="list-style-type: none"> • WWTP1 – adjacent to the primary pond • WWTP2 – adjacent to the infiltration swales • WWTP3 and WWTP4 – at the expected down-gradient flow direction • WWTP5 – at the expected upgradient flow. <p>(iii) Data logging and groundwater analytical results confirmed that the groundwater flow is away from the coast and that tidal influence extends as far as the WWTP.</p> <p>(iv) Groundwater beneath the WWTP will not reach the ocean.</p> <p>(v) Salinity profiling of the five groundwater monitoring bores did not detect any fresh water with the salinity being between 5000mg/L and 20 000mg/L.</p> <p>The analytical results of the groundwater indicate that the impact of the WWTP on the groundwater is limited to an area from the WWTP towards the south-west, away from the ocean and does not exceed the relevant Department of Health (DOH) (2006) guideline for nonpotable use.</p>	<p>Medium. Moderate level of interest from community. Approximately 700 m from Monkey Mia Dolphin Resort.</p>	<p>C Licence conditions (limits).</p>	<p>Current licence includes conditions for monitoring of effluent quality discharge, groundwater monitoring and limits for discharges to infiltration swales.</p>	<p>N/A</p>	



4.0 GENERAL SUMMARY AND COMMENTS

Due to the existing WWTP being prone to unstable performances, the management of the MMDR committed to improve the quality of the effluent discharge to the environment through the proposed implementation of a MBR.

OFFICER PREPARING REPORT

Clint Joseph

Position: Environmental Officer
Midwest Regional Office
Department of Environment and Conservation
9964 5955
12 October 2012

ENDORSEMENT

Craig McLernon

Position: Regional Leader
Midwest Regional Office
Department of Environment and Conservation
99215955
12 October 2012



APPENDIX A: EMISSIONS AND DISCHARGES RISK ASSESSMENT MATRIX

Table 3: Measures of Significance of Emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95 th Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50 th Percentile)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 4: Socio-Political Context of Each Regulated Emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

*This is determined by the DoE using the DoE "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.

Table 5: Emissions Risk Reduction Matrix

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS

A = Do not allow (fix)

B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)

C = licence condition (setting targets + EMPs - longer timeframes)

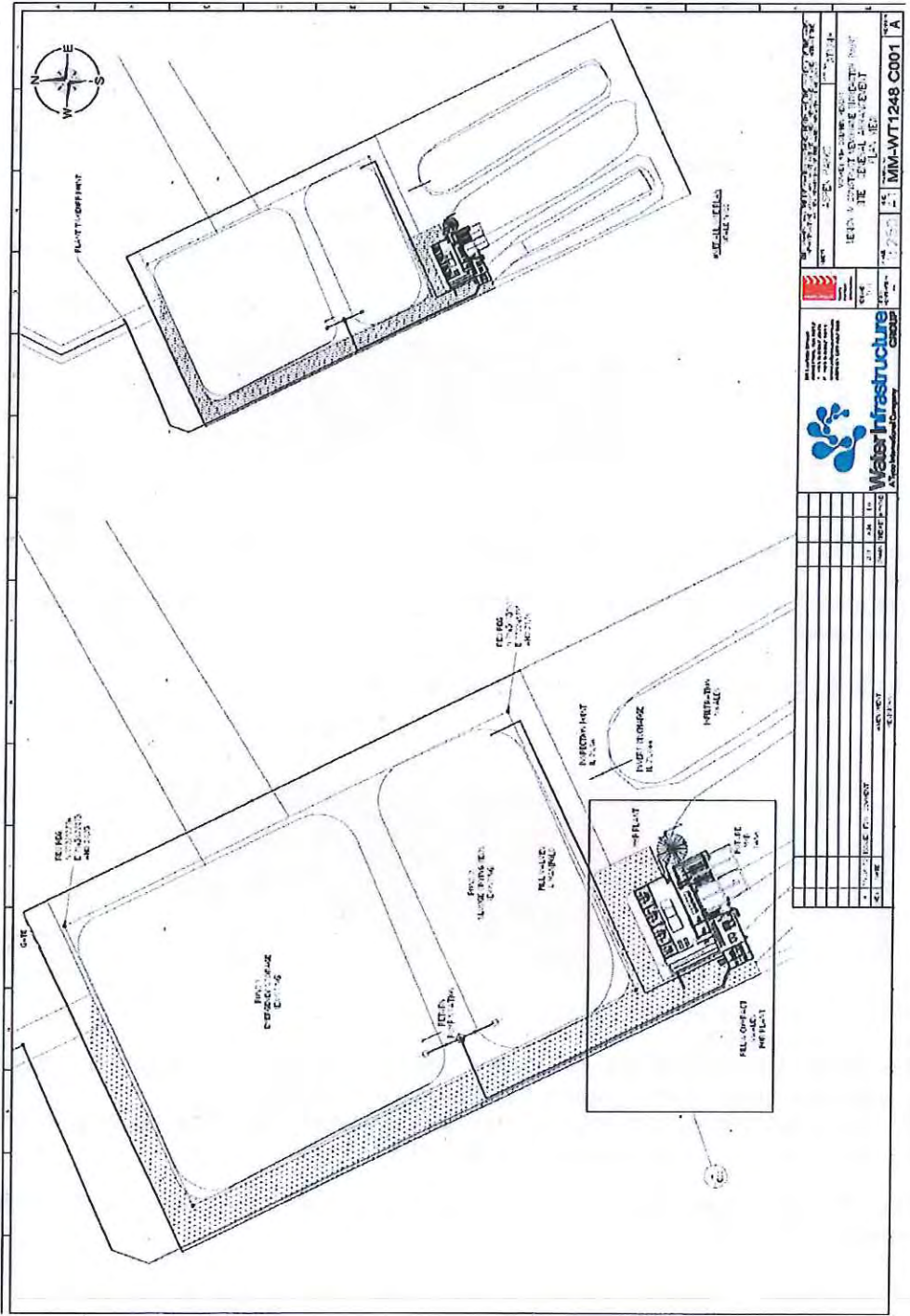
D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools

E = No regulation, other management mechanisms

Note: The above matrix is taken from the DoE Officer's Guide to Emissions and Discharges Risk Assessment May 2006.

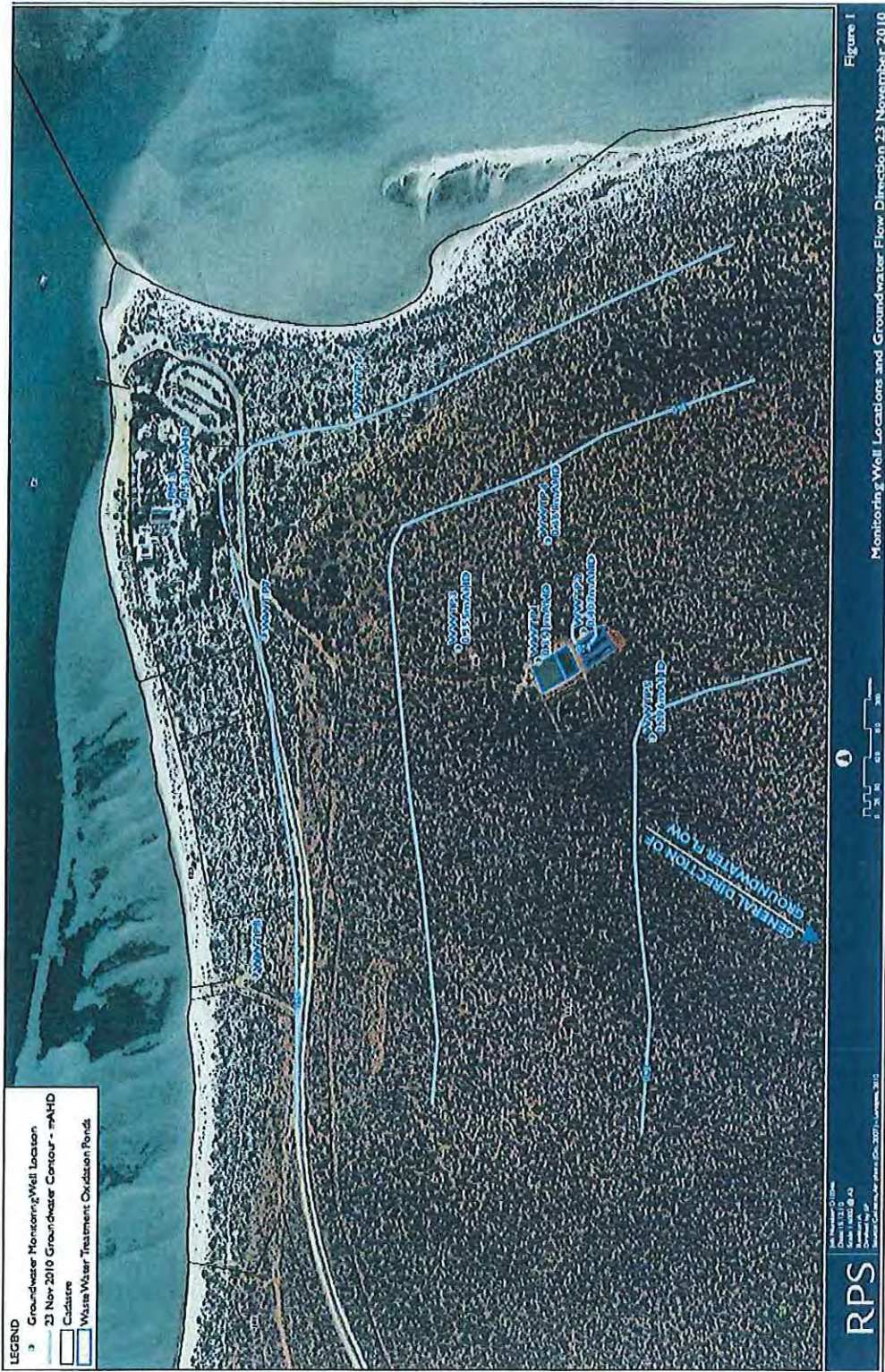


Attachment 1



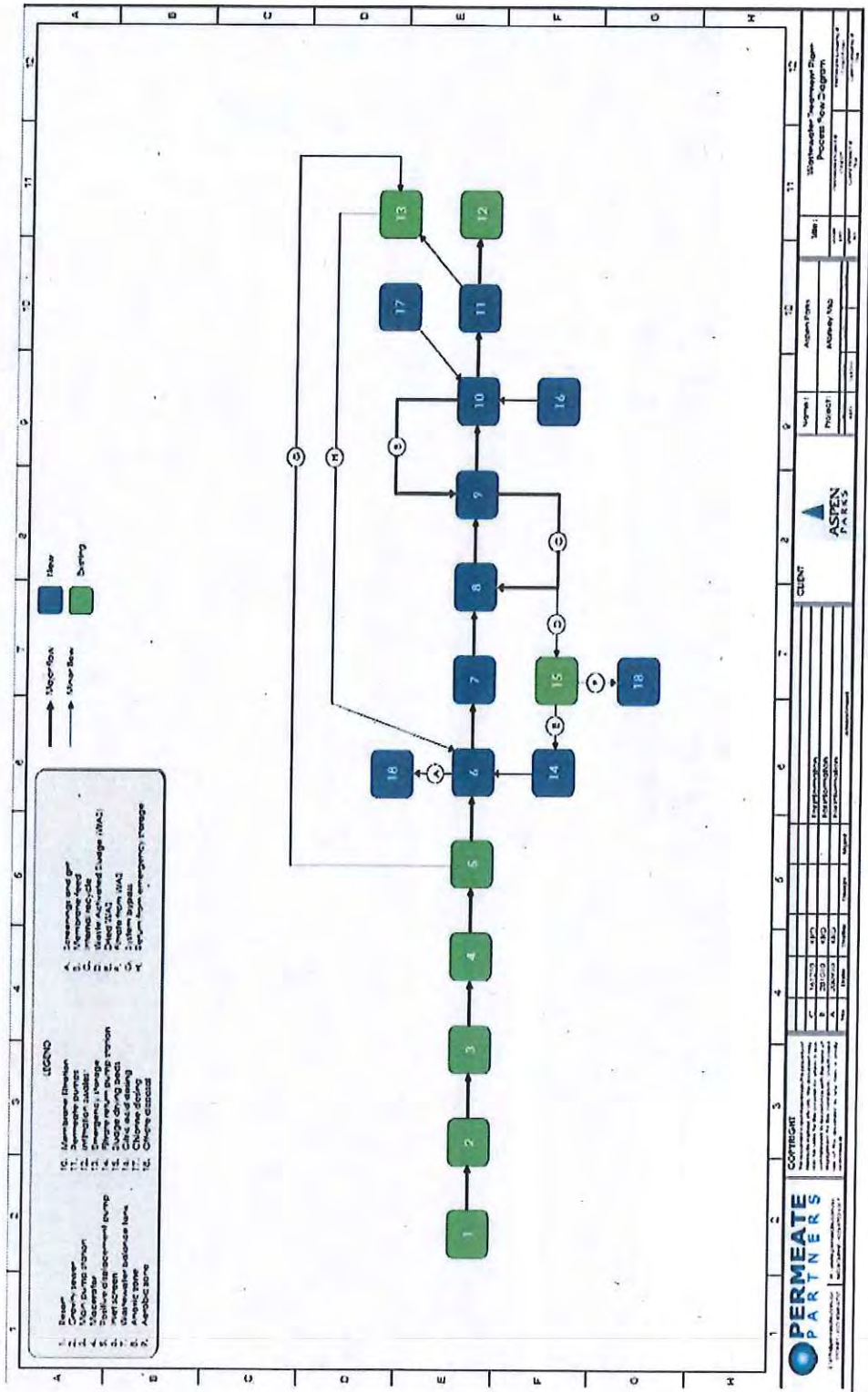


Attachment 2





Attachment 3



Appendix 5

EP Act Amended Licence L7426/2000/8



Government of **Western Australia**
Department of **Environment Regulation**

Your ref L7426/2000/8
Our ref 2011/003272-2
Enquiries Rachel Vukmirovic
Phone (08) 9964 0901
Fax (08) 9964 0977
Email rachel.vukmirovic@der.wa.gov.au

Mr Tom Donaldson
Development Manager
PO Box Z5025
St Georges Tce
PERTH WA 6831

Dear Mr Donaldson

ENVIRONMENTAL PROTECTION ACT 1986: LICENCE GRANTED

Premises:

Monkey Mia Dolphin Resort
Monkey Mia Road, SHARK BAY WA 6537

Licence Number: L7426/2000/8

A licence under the *Environmental Protection Act 1986* (the Act) has been granted for the above premises. The Department of Environment Regulation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper.

The licence includes attached conditions. Under section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to \$125,000 and a daily penalty of up to \$25,000.

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at admin@appealsconvenor.wa.gov.au.

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Rachel Vukmirovic on (08) 9964 0901.

Yours sincerely

Stephen Checker
Officer delegated under section 20
of the *Environmental Protection Act 1986*

2 April 2015

The Atrium, 168 St Georges Terrace, Perth WA 6000
Phone (08) 6467 5000 Fax (08) 6467 5562
Postal Address: Locked Bag 33, Cloisters Square, Perth WA 6850
www.der.wa.gov.au



Licence

Environmental Protection Act 1986, Part V

Licensee: Aspen Parks Property Management Ltd
Licence: L7426/2000/8

Registered office: Level 3, 129 St Georges Terrace
PERTH WA 6000

ACN: 096 790 331

Premises address: Monkey Mia Dolphin Resort
Lot 556 on Plan 404665, a 15 metre wide parallel easement for the rising main on a portion of Lot 555 on Plan 404665, a 15 metre wide parallel easement for the rising main on a portion of Lot 300 on Plan 51888, a 15 metre wide parallel easement for the rising main on a portion of Lot 130 on Plan 54332 and the macerator pit on a portion of Lot 130 on Plan 54332.
Monkey Mia Road, SHARK BAY WA 6537 as depicted in Schedule 1

Issue date: Thursday, 2 April 2015

Commencement date: Tuesday, 7 April 2015

Expiry date: Monday, 6 April 2020

Prescribed premises category
Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
54	Sewage facility premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters.	100 cubic metres or more per day	150 cubic metres per day

Conditions

This Licence is subject to the conditions set out in the attached pages.

.....
Officer delegated under section 20
of the *Environmental Protection Act 1986*



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Introduction

This Introduction is not part of the Licence conditions.

DER's industry licensing role

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This licence is issued under Part V of the Act. Conditions contained within the licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.



- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Other Guidelines which you should be aware of include:

- *Western Australian Guidelines for Biosolids Management*, Department of Environment and Conservation, December 2012 (as amended from time to time).

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

The Monkey Mia Wastewater Treatment Plant (WWTP) is located approximately 27 kilometres north east of Denham. The WWTP Premises boundary borders the Shark Bay Marine Park and lies within the Shark Bay World Heritage Area. The design capacity of the WWTP is 150 cubic metres per day (m^3/day), which exceeds the production or design capacity for category 54 of 100 m^3/day .

Wastewater generated from the Monkey Mia Dolphin Resort (MMDR), and adjacent Department of Parks and Wildlife visitors centre gravitates via a system of pipes to a pump station located within the MMDR. At this point the waste is macerated and pumped approximately 800 metres (m) south east of the resort to the WWTP. After maceration, wastewater from the rising main is passed through a 2mm drum screen to a wastewater balance tank. The wastewater balance tank is used to buffer diurnal flows, provide an opportunity for dilution and/or neutralisation, and provide a mechanism to temporarily halt processing of wastewater should there be a problem with the downstream equipment. Screened wastewater is then pumped to the biological reactor which involves a Modified Ludzack-Ettinger (MLE) activated sludge process. The movement of the wastewater between anoxic and aerobic zones enables high levels of Nitrogen (N) and Biochemical Oxygen Demand (BOD) reduction. To ensure the treated wastewater quality is achieved, key process indicators for the biological reactor such as flow, dissolved oxygen, mixed liquor suspended solids and pH is continuously monitored via the site Supervisory Control and Data Acquisition (SCADA) system.

Membrane filtration is then used to separate the treated wastewater from the mixed liquor. The small pore size of the membrane (0.04 μm) results in the rejection of solids and the majority of pathogens. The filtered water is directed to the infiltration swale for disposal. The depth to groundwater at the Premises is 25 metres. To ensure membrane filtration performance is maintained key process indicators such as flow, trans-membrane pressure and permeate turbidity is also continuously monitored via the site SCADA system.



Due to a significant discharge event in 2010, the proponent was required to prepare and implement a Groundwater Monitoring Program which includes both groundwater and marine surface water monitoring requirements. Elements of this monitoring program have now been adopted under this licence.

The WWTP Premises also contains a 1930kVA power station and a reverse osmosis plant which discharges <37.5kL/day of brine waste into the swale.

This Licence is the successor to licence L7426/2000/7 and has been converted to a new format REFIRE licence.

The licences and works approvals issued for the Premises since 21/02/2000 are:

Instrument log		
Instrument	Issued	Description
W2939/2000/1	21/02/2000	Works Approval
L7426/2000/1	07/04/2000	Licence
L7426/2000/2	01/05/2001	Licence reissue
W3449/2000/1	17/10/2001	Works Approval
L7426/2000/3	17/04/2002	Licence reissue
L7426/2000/4	14/04/2003	Licence reissue
W3889/2000/1	12/01/2004	Works Approval
L7426/2000/4	07/04/2004	Licence reissue
L7426/2000/6	07/04/2007	Licence reissue
L7426/2000/7	07/04/2010	Licence reissue
W4851/2010/1	15/08/2012	Works Approval
L7426/2000/8	02/03/2015	Licence reissue

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION



Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period from 1 April until 31 March in the following year;

'AS/NZS 2031' means the Australian Standard AS/NZS 2031 *Selection of containers and preservation of water samples for microbiological analysis*;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

'AS/NZS 5667.9' means the Australian Standard AS/NZS 5667.9 *Water Quality – Sampling – Guidance on sampling from marine waters*;

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

'averaging period' means the time over which a limit or target is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means:

Manager Licensing (Waste North)
Department of Environment Regulation
Locked Bag 33 Cloisters Square
PERTH WA 6850
Telephone: (08) 9333 7510
Facsimile: (08) 9333 7550
Email: industry.regulation@der.wa.gov.au;

'cfu/100mL' means colony forming units per 100 millilitres;

'code of practice for the storage and handling of dangerous goods' means document titled "*Storage and handling of dangerous goods: Code of Practice*" published by the Department of Mines and Petroleum, as amended from time to time;

'dangerous goods' has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;



'environmentally hazardous material' means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'fugitive emissions' means all emissions not arising from point sources identified in Sections 2.2, 2.3, 2.4 and 2.5;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'leachate' means liquid released by or water that has percolated through waste and which contains some of its constituents.

'Licence' means this Licence numbered L7426/2000/8 and issued under the Act

'Licensee' means the person or organisation named as Licensee on page 1 of the licence;

'MPN/100mL' means most probable number per 100 millilitres;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'process equipment' means any wastewater or sludge containment infrastructure or wastewater treatment vessel;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia;

'Waste Code' means the Waste Code assigned to a type of controlled waste for purposes of waste tracking and reporting as specified in the Department of Environment Regulation "Controlled Waste Category List" (July 2014), as amended from time to time;

'wastewater treatment vessels' means any vessel or tank containment infrastructure associated with the treatment of wastewater; and

'µS/cm' means microsiemens per centimetre.



- 1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this licence.
- 1.1.4 Any reference to a guideline or code of practice in the Licence means the version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 General conditions

- 1.2.1 Nothing in the Licence shall be taken to authorise any emission that is not mentioned in the Licence, where the emission amounts to:
 - (a) pollution;
 - (b) unreasonable emission;
 - (c) discharge of waste in circumstances likely to cause pollution; or
 - (d) being contrary to any written law.
- 1.2.2 The Licensee shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.
- 1.2.3 The Licensee, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous substances are stored in accordance with the code of practice for the storage and handling of dangerous goods.
- 1.2.4 The Licensee shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 1.2.5 The Licensee shall:
 - (a) implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises; and
 - (b) treat contaminated or potentially contaminated stormwater as necessary prior to being discharged from the Premises.¹

Note 1: The *Environmental Protection (Unauthorised Discharges) Regulations 2004* make it an offence to discharge certain materials into the environment.

1.3 Premises operation

- 1.3.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit, and/or target in this section.
- 1.3.2 The Licensee shall only allow waste to be accepted on to the Premises if:
 - (a) it is of a type listed in Table 1.3.1; and
 - (b) the quantity accepted is below any limit listed in Table 1.3.1; and
 - (c) it meets any specification listed in Table 1.3.1

Table 1.3.1: Waste acceptance

Waste	Waste Code	Quantity limit	Specification
Putrescible and Organic wastes			
Sewage	N/A	150 m ³ /day	Accepted through sewer inflow(s) only
Reverse osmosis brine waste	N/A	Not specified	Accepted for disposal into infiltration swale only



1.3.3 The Licensee shall ensure that the wastes accepted onto the Premises are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process requirements described in that table.

Table 1.3.2: Waste processing		
Waste type	Process	Process requirements
Sewage	Biological reaction process combined with a ultrafiltration membrane system	Treatment of sewage waste shall be targeted at or below the treatment capacity of 150 m ³ /day
Sewage sludge	Storage	Stored in emergency holding pond 2 prior to disposal at an appropriate waste facility

1.3.4 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.3.3.

Table 1.3.3: Containment infrastructure		
Vessel or compound	Material	Requirements
Main pump station	Raw sewage	Sump/pump
Macerator	Raw sewage	Pumps
Inlet screen (Drum Screen)	Grit and screenings	Stored in a sealed bin
Wastewater balance tank	Wastewater	Concrete tanks designed to achieve a permeability of 10 ⁻⁹ m/s or less
Anoxic zone		
Aerobic zone		
Membrane filtration		
2 holding tanks	Treated wastewater	Polypropylene
Evaporation/infiltration swale	Treated wastewater and reverse osmosis brine waste	Unlined infiltration swale
Emergency holding pond 1 (former primary treatment pond)	Wastewater	HDPE lined Wastewater to be returned to the start of the treatment process
Emergency holding pond 2 (former secondary treatment pond)	Wastewater and sewage sludge	HDPE lined and capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system Wastewater to be returned to the start of the treatment process

1.3.5 The Licensee shall manage all wastewater holding ponds and infiltration swale such that:

- overtopping of the ponds/swale does not occur;
- a freeboard equal to, or greater than, 300mm is maintained;



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Department of **Environment Regulation**

- (c) the integrity of the containment infrastructure is maintained;
 - (d) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter;
 - (e) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond/swale surfaces; and
 - (f) vegetation is prevented from encroaching onto the inner pond embankments.
- 1.3.6 The Licensee shall:
- (a) implement security measures at the site to prevent as far as is practical unauthorised access to the site;
 - (b) undertake regular inspections of all security measures and repair damage as soon as practicable; and
 - (c) ensure the entrance gates are closed and locked when the site is closed or unmanned.



2 Emissions

2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit, or target specified in any part of section 2 of this Licence.

2.2-2.4 Point source emissions to air, surface water and groundwater

There are no specified conditions relating to point source emissions to air, surface water and groundwater in this section.

2.5 Emissions to land

2.5.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.5.1 and identified on the Map of emission points and monitoring locations in Schedule 1 it is done so in accordance with the conditions of this licence.

Emission point reference	Emission point reference on Map of emission points and monitoring locations	Description	Source including abatement
L1	Final effluent discharge point	Discharge from WWTP to evaporation/infiltration swale	Treated wastewater pipeline from wastewater treatment plant

2.5.2 The Licensee shall not cause or allow emissions to land greater than the limits listed in Table 2.5.2.

Emission point reference	Parameter	Limits (including units)	Averaging period
L1	Biochemical Oxygen Demand	< 30 mg/L	Spot sample
	Total Nitrogen	< 40 mg/L	
	Total Phosphorus	< 10 mg/L	

2.6 Fugitive emissions

There are no specified conditions relating to fugitive emissions in this section.

2.7 Odour

2.7.1 The Licensee shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises.

2.8 Noise

There are no specified conditions relating to noise in this section.



3 Monitoring

3.1 General monitoring

3.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all marine water sampling is conducted in accordance with AS/NZS 5667.9;
- (c) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- (d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
- (e) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
- (f) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

3.1.2 The Licensee shall record production or throughput data and any other process parameters relevant to any non-continuous monitoring undertaken.

3.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer’s specifications.

3.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2-3.4 Monitoring of point source emissions to air, surface water and groundwater

There are no specified conditions relating to monitoring of point source emissions to air, surface water and groundwater in this section.

3.5 Monitoring of emissions to land

3.5.1 The Licensee shall undertake the monitoring in Table 3.5.1 according to the specifications in that table.

Table 3.5.1: Monitoring of emissions to land					
Emission point reference	Monitoring point reference	Parameter	Units	Averaging period	Frequency
L1	Final effluent discharge point	pH ¹	Non specified	Spot sample	January April June July September October
		Biochemical Oxygen Demand	mg/L		
		Total Dissolved Solids			
		Nitrate as N			
		Nitrite as N			
		Ammonia as N			
		Total nitrogen as N			
		Total phosphorus as P	cfu/100 mL		
<i>Escherichia coli</i>					

Note 1: In-field non-NATA accredited analysis permitted.



3.6 Monitoring of inputs and outputs

3.6.1 The Licensee shall undertake the monitoring in Table 3.6.1 according to the specifications in that table.

Input/output	Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Inflow – main sewer inlet	Inflow meter	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Discharge – final effluent discharge to swale	Outflow meter	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous

3.7 Process monitoring

There are no specified conditions relating to process monitoring in this section.

3.8 Ambient environmental quality monitoring

3.8.1 The Licensee shall undertake the monitoring in Table 3.8.1 according to the specifications in that table.

Monitoring point reference and description	Parameter	Units	Averaging period	Frequency
Groundwater monitoring bore locations: WWTP1 WWTP2 WWTP3 WWTP4 WWTP5 WWTP6 WWTP7 WWTP8	pH ¹	None specified	Spot sample	January April July October
	Standing water level ¹	m(AHD)		
	Total Dissolved Solids	mg/L		
	Nitrate as N			
	Nitrite as N			
	Total Nitrogen as N			
	Total Phosphorus as P			

Note 1: In-field non-NATA accredited analysis permitted.

3.8.2 The Licensee shall undertake the monitoring in Table 3.8.2 according to the specifications in that table.



Table 3.8.2: Monitoring of ambient groundwater quality at the Monkey Mia Resort

Monitoring point reference and description	Parameter	Target including units ¹	Averaging period	Frequency
Monitoring bores at the Monkey Mia Resort: MB1 MB2 MB2-1 MB2-3 MB3 MB4 MB6 MB7 MB8 T1 T2 T3 RM1 RM2 RM3	Enterococci	≤10 MPN/100mL	Spot sample	January April July October
	<i>Escherichia coli</i>	≤10 cfu/100mL		

Note 1: Management actions are specified in conditions 3.8.3 and 3.8.4 when the targets in Table 3.8.2 have been exceeded.

3.8.3 The licensee shall undertake a repeat sample as soon as practicable of any monitoring bore that exceeds any target specified in Table 3.8.2.

3.8.4 The Licensee shall undertake the following contingency measures when a repeat sample collected under condition 3.8.3 is found to exceed a target in Table 3.8.2.

- a) Immediately investigate to find and repair the source of any leak;
- b) Undertake weekly groundwater sampling from the bore(s) that detected a target exceedance specified in Table 3.8.2, and one bore either side of the affected bore(s); and
- c) Undertake the monitoring specified in Table 3.8.3 according to the specifications in that table.

Table 3.8.3: Monitoring of ambient sea water quality

Monitoring point reference and description	Parameter	Units	Averaging period	Frequency
Sea water monitoring locations: SW1 SW2 SW3 SW4	Enterococci	MPN/100ml	Spot sample	Weekly
	<i>Escherichia coli</i>	Cfu/100ml		

3.8.5 The Licensee shall continue the weekly sampling outlined in conditions 3.8.4 (b) and 3.8.4 (c) until two consecutive samples of the affected groundwater bore(s) fall below the targets specified in Table 3.8.2.

3.9 Meteorological monitoring

There are no specified conditions relating to meteorological monitoring in this section.



4 Improvements

4.1 Improvement program

4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.

4.1.2 The Licensee, for improvements not specifically requiring a written submission, shall write to the CEO stating whether and how the Licensee is compliant with the improvement within one week of the completion date specified in Table 4.1.1.

Table 4.1.1 : Improvement program		
Improvement reference	Improvement	Date of completion
IR1	The Licensee shall prepare and submit to the CEO a Wastewater Disposal Plan (WDP). The WDP shall include but not be limited to, an assessment of the potential impacts to the environment on-site, and the disposal capacity associated with the disposal of reverse osmosis brine waste and wastewater effluent	30/06/2015



5 Information

5.1 Records

- 5.1.1 All information and records required by the Licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 5.1.2 The Licensee shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
 - (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 5.1.3 The Licensee shall complete an Annual Audit Compliance Report (AACR) indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 5.1.4 The Licensee shall:
- (a) implement a complaints management system that shall record the following information (if known or provided) about complaints received at the Premises concerning any environmental impact of the activities undertaken at the Premises:
 - (i) name and address of the complainants (if consented);
 - (ii) date and time of complaint;
 - (iii) date and time of alleged incident;
 - (iv) alleged source of the incident;
 - (v) general description of the alleged incident, including any environmental or health impacts reported by the complainant;
 - (vi) wind direction, wind speed and temperature at time of alleged incident;
 - (vii) likely source of the alleged incident; and
 - (viii) actions taken by licensee to address complaint, including the outcome of any investigation(s) and action(s) to verify any impacts.
 - (b) complete an annual analysis and review of complaints recorded under 5.1.4(a) to identify any common factors and root cause of complaints and proposals to address these.

5.2 Reporting

- 5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 91 calendar days (i.e. by 30 June) after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.



Table 5.2.1: Annual Environmental Report		
Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
-	A list of any monitoring methods used to collect and analyse the data required	
-	Summary of any changes to site boundaries, surface drainage channels and on-site or off-site impacts or pollution	
-	Summary of any issues raised by DER (including inspections) during the reporting period	
-	Record of all sludge removal from ponds	
Table 1.3.1 and 1.3.2	Summary of any treatment capacity target exceedances and any action taken	
1.3.5	Summary of any freeboard limit exceedances and any action taken	
	Summary of any overtopping events and action taken	
Table 3.5.1	Monitoring of any emissions to land	
	Contaminant loading (kg/day) to swale at emission points L1 of parameters monitored in Table 3.5.1 (all except pH and <i>Escherichia coli</i>)	
Table 3.6.1	Monitoring of input and output	
Table 3.8.1	Monitoring results of ambient groundwater quality	
Table 3.8.2	Monitoring results of ambient groundwater quality in Monkey Mia Resort	
5.1.3	Compliance	
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

- 5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains:
- (a) any relevant process, production or operational data recorded under condition 3.1.3; and
 - (b) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets; and

- 5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO at the Contact Address according to the specifications in that table.

Table 5.2.2: Non-annual reporting requirements				
Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties

5.3 Notification

- 5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO at the Contact Address and in accordance with the notification requirements of the table.



Table 5.3.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement ¹	Format or form ²
-	Taking process equipment offline for maintenance works that may result in increased odour emissions.	No less than 72 hours in advance of works.	None specified
-	Removal of sewage sludge from a treatment pond, wastewater treatment vessel, sewage sludge storage pond or Geobag.	No less than 14 days in advance of works ³ .	
1.3.1, 2.1.1, 2.5.2 and 3.8.2	Breach of any limit or target specified in the Licence	Part A: As soon as practicable as but no later than 5pm of the next working day. Part B: As soon as practicable.	N1
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution.		
3.1.5	Calibration report	As soon as practicable.	None specified

Note 1: No notification requirement in the Licence shall negate the requirement to comply with s72 of the Act.

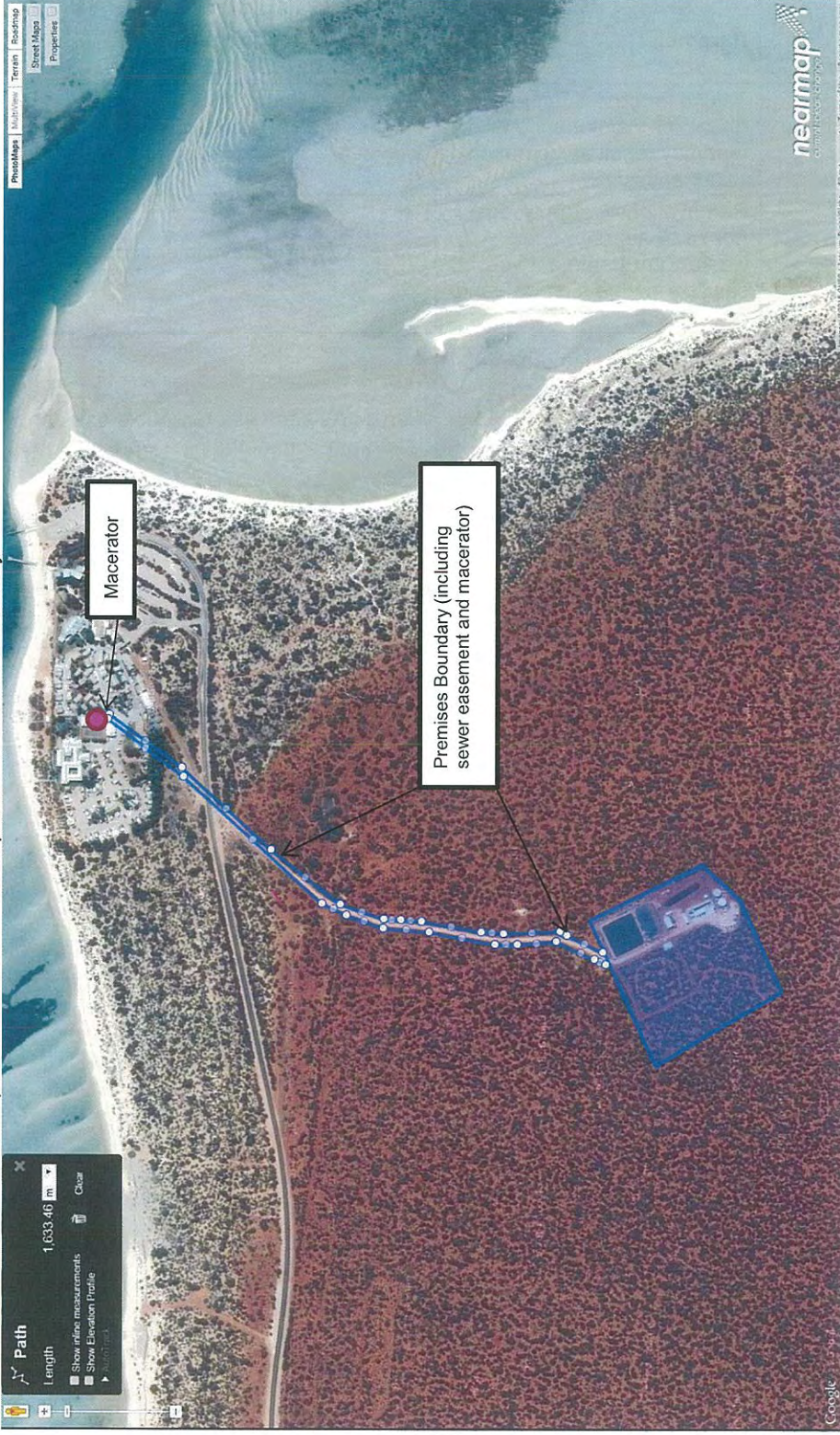
Note 2: Forms are in Schedule 2

Note 3: The following information shall be included: (i) when desludging is proposed to occur, (ii) the desludging method, (iii) action to mitigate potential odour impacts.

Schedule 1: Maps

Premises map

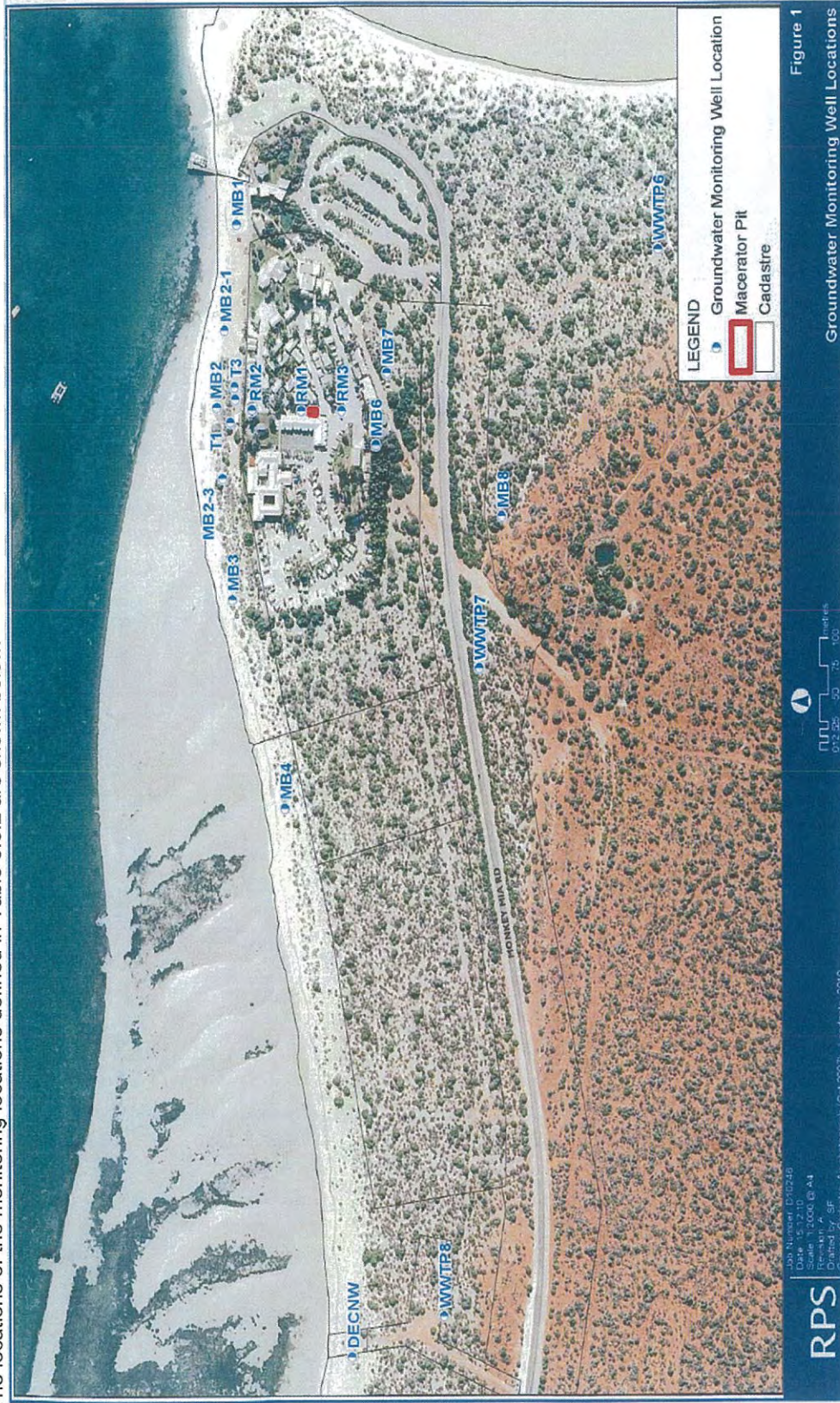
The Premises is shown in the map below. The blue line depicts the Premises boundary.





Monitoring bores at the Monkey Mia Resort

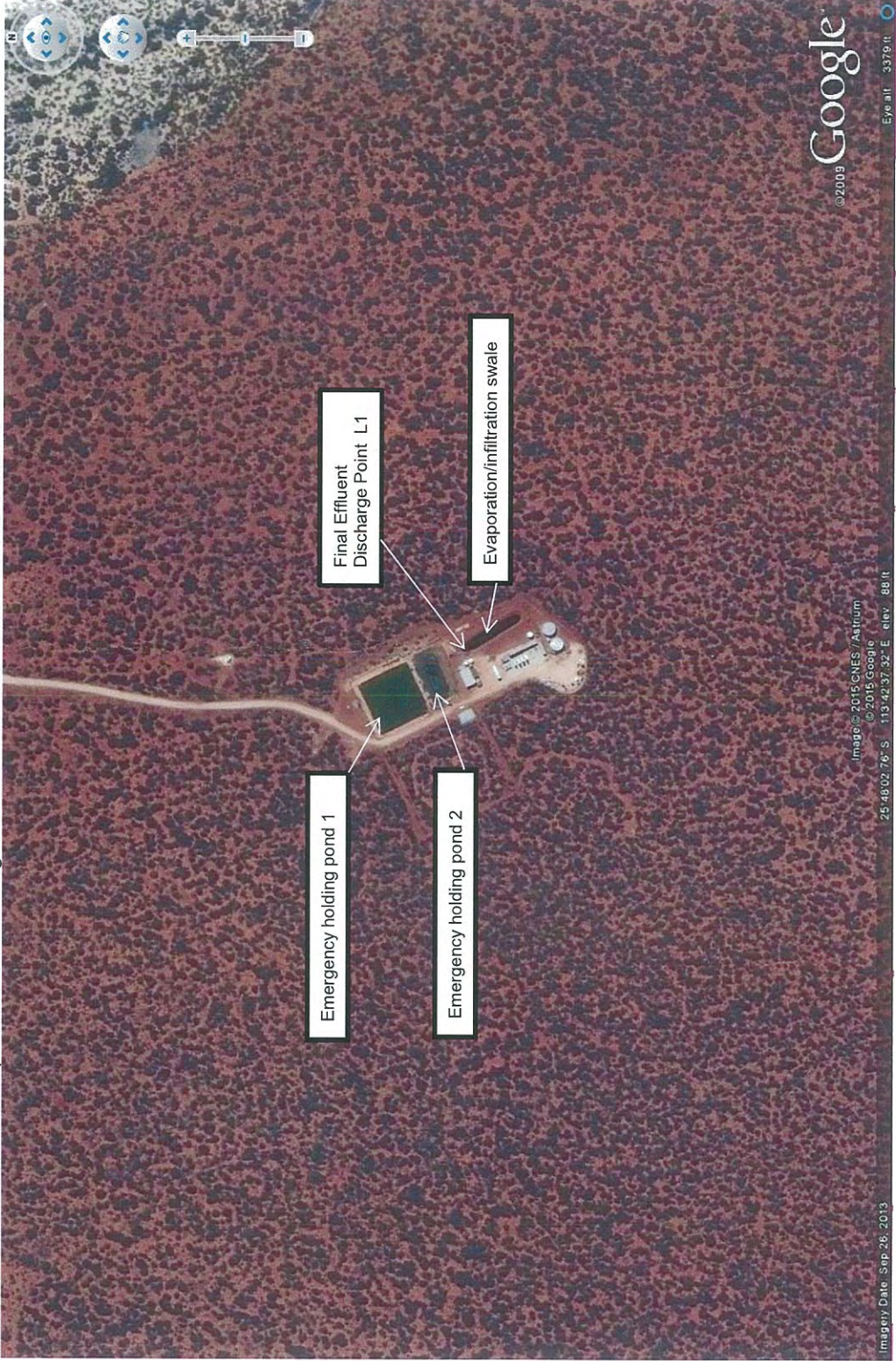
The locations of the monitoring locations defined in Table 3.8.2 are shown below.





Map of emission points and monitoring locations

The locations of the emission points and monitoring locations defined in Tables 2.5.1 and 3.5.1 are shown below.



Groundwater monitoring bore locations

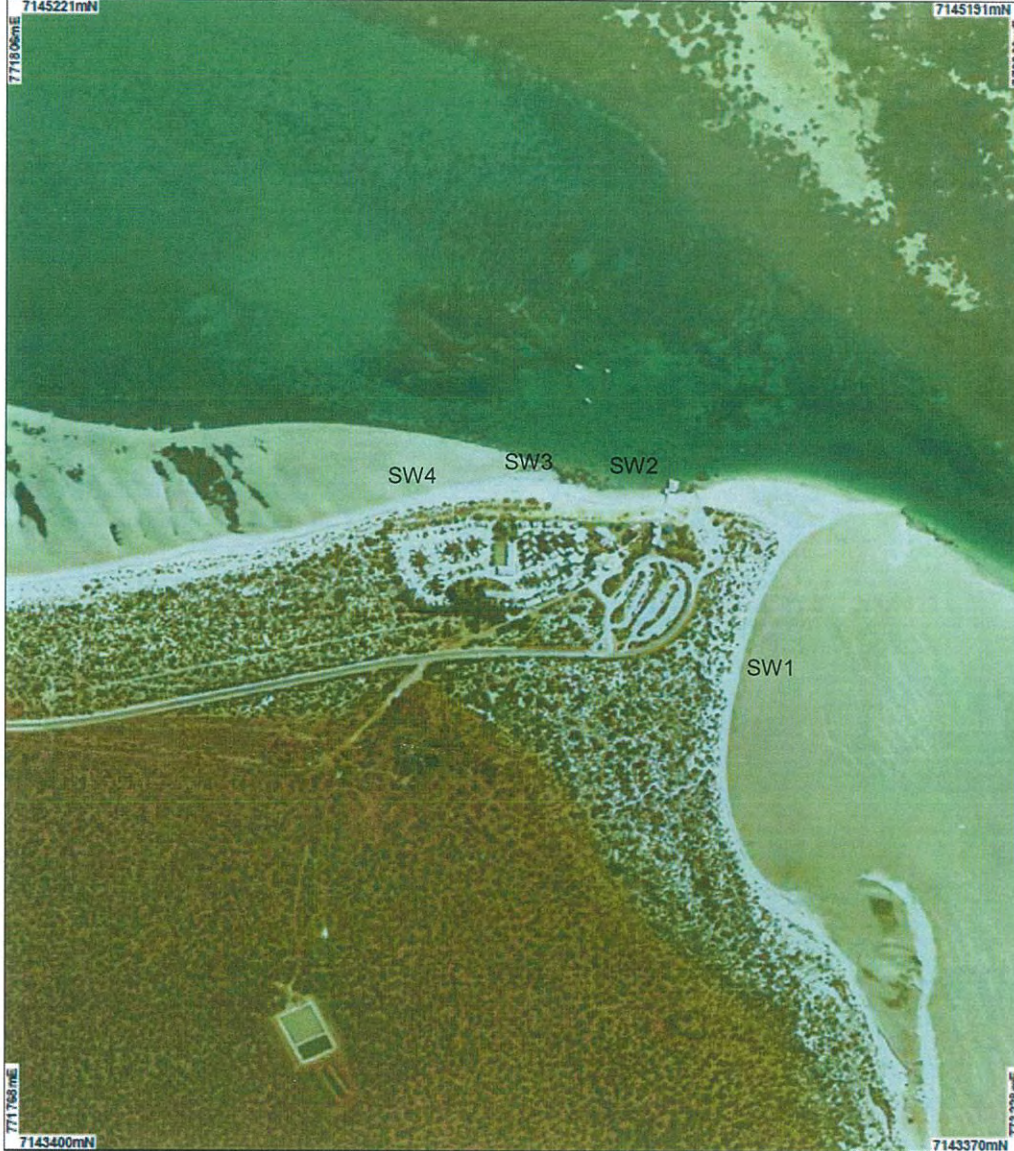
The locations of the monitoring locations defined in Table 3.8.1 are shown below.





Map of sea water sampling points

The locations monitoring locations defined in Table 3.8.3 are shown below.



LEGEND
shark bay 3.4m Lithomosaic -
Landgate 2002

N
0 ——— 200 m

Scale 1:0036
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: richely
Prepared for:
Date: 25/03/2015 1:28:03 PM

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.

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Department of Environment Regulation
WA Govt Copyright 2012

¹ Project Data. This data has not been quality assured. Please contact map author for details.



Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes Please proceed to Section C

No Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



SECTION B DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the non compliance occurred, if applicable:	
c) Was this non compliance reported to DER?:	
<input type="checkbox"/> Yes	<input type="checkbox"/> Reported to DER verbally Date _____
	<input type="checkbox"/> Reported to DER in writing Date _____
<input type="checkbox"/> No	
d) Has DER taken, or finalised any action in relation to the non compliance?:	
e) Summary of particulars of the non compliance, and what was the environmental impact:	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram):	
g) Cause of non compliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the non compliance:	
i) Action taken or that will be taken to prevent recurrence of the non compliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



SECTION C

SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____

SIGNATURE: _____

NAME:
(printed) _____

NAME:
(printed) _____

POSITION: _____

POSITION: _____

DATE: ____/____/____

DATE: ____/____/____

SEAL (if signing under seal)



Licence: L7426/2000/8 Licensee: Aspen Parks Property Management Ltd

Form: N1 Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number: L7426/2000/8	
Name of operator	Aspen Parks Property Management Ltd
Location of Premises	Monkey Mia WWTP
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	



Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Aspen Parks Property Management Ltd	
Date	



Decision Document

Environmental Protection Act 1986, Part V

Licensee: Aspen Parks Property Management Ltd

Licence: L7426/2000/8

Registered office: Level 3, 129 St Georges Terrace
PERTH WA 6000

ACN: 096 790 331

Premises address: Monkey Mia Dolphin Resort
Lot 556 on Plan 404665, a 15 metre wide parallel easement for the rising main on a portion of Lot 555 on Plan 404665, a 15 metre wide parallel easement for the rising main on a portion of Lot 300 on Plan 51888; a 15 metre wide parallel easement for the rising main on a portion of Lot 130 on Plan 54332 and the macerator pit on a portion of Lot 130 on Plan 54332.
Monkey Mia Road, SHARK BAY WA 6537

Issue date: Thursday, 2 April 2015

Commencement date: Tuesday, 7 April 2015

Expiry date: Monday, 6 April 2020

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Rachel Vukmirovic
Licensing Officer

Decision Document authorised by: Stephen Checker
Acting Manager Licensing (Waste North)



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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application for a works approval or licence, and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1 and 5.1.2.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/>	
	New Licence <input checked="" type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	54	150 cubic metres per day
Application verified	Date: 27/02/2015	
Application fee paid	Date: 27/02/2015	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
		Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
		Ministerial statement No: 919 EPA Report No: 1452
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If Yes, include details here, e.g. Site is subject to SO ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

The Monkey Mia Wastewater Treatment Plant (WWTP) is located approximately 27 kilometres north east of Denham. The WWTP Premises boundary borders the Shark Bay Marine Park and lies within the Shark Bay World Heritage Area. The design capacity of the WWTP is 150 cubic metres per day (m^3/day), which exceeds the production or design capacity for category 54 of 100 m^3/day .

Wastewater generated from the Monkey Mia Dolphin Resort (MMDR), and adjacent Department of Parks and Wildlife visitors centre gravitates via a system of pipes to a pump station located within the MMDR. At this point the waste is macerated and pumped approximately 800 metres (m) south east of the resort to the WWTP. After maceration, wastewater from the rising main is passed through a 2mm drum screen to a wastewater balance tank. The wastewater balance tank is used to buffer diurnal flows, provide an opportunity for dilution and/or neutralisation, and provide a mechanism to temporarily halt processing of wastewater should there be a problem with the downstream equipment. Screened wastewater is then pumped to the biological reactor which involves a Modified Ludzack-Ettinger (MLE) activated sludge process. The movement of the wastewater between anoxic and aerobic zones enables high levels of Nitrogen (N) and Biochemical Oxygen Demand (BOD) reduction. To ensure the treated wastewater quality is achieved, key process indicators for the biological reactor such as flow, dissolved oxygen, mixed liquor suspended solids and pH is continuously monitored via the site Supervisory Control and Data Acquisition (SCADA) system.

Membrane filtration is then used to separate the treated wastewater from the mixed liquor. The small pore size of the membrane ($0.04\mu m$) results in the rejection of solids and the majority of pathogens. The filtered water is directed to the infiltration swale for disposal. The depth to groundwater at the Premises is 25 metres. To ensure membrane filtration performance is maintained key process indicators such as flow, trans-membrane pressure and permeate turbidity is also continuously monitored via the site SCADA system.

Due to a significant discharge event in 2010, the proponent was required to prepare and implement a Groundwater Monitoring Program which includes both groundwater and marine surface water monitoring requirements. Elements of this monitoring program have now been adopted under this licence.

The WWTP Premises also contains a 1930kVA power station and a reverse osmosis plant which discharges $<37.5kL/day$ of brine waste into the swale.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2.5	OSC	OSC1.2.5 replaces condition W2(i) and W4(i) in the previous licence.	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .
Premises Operations	L1.3.1-1.3.6	OSC	The previous licence had conditions relating to the former wastewater treatment plant on site (primary and secondary facultative ponds). The WWTP has since been upgraded to a membrane bioreactor plant, condition W1(a) is therefore not reflected in the reissued licence. The primary and secondary ponds are now being utilised for emergency wastewater and sludge storage purposes. Numerical limits will be set through condition OSC1.3.2 and OSC1.3.5, therefore condition OSC1.3.1 regarding the recording and investigation of exceedances of limits has been included. OSC1.3.2-1.3.4 describe the waste acceptance, processing and containment infrastructure at the premises. OSC1.3.4 and table 1.3.3 set requirements for the containment infrastructure and replaces condition W1(c) and W2(iii) of the previous	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations, 2004</i> .



DECISION TABLE

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
			<p>licence. OSC1.3.5 replaces condition W2(ii), (iv), (v) and W4 (i) – (iii) of the previous licence. OSC1.3.5(f) refers to the emergency holding ponds only. Turf growing on the embankments of the swale ensures the structural integrity of the swale embankment. OSC1.3.6 replaces condition W10(a), W10(b) and W10(c) of the previous licence. W4(iv) regarding a fence limiting access for animals has not been reflected in the reissued licence. There is a fence around the premises boundary.</p> <p><u>Emission description</u> <i>Emission:</i> Discharge of effluent due to overtopping of infiltration swale. <i>Impact:</i> Uncontrolled discharge to the environment and damage to swale embankment. <i>Controls:</i> Use of emergency holding ponds to store wastewater during peak flows. The holding ponds are HDPE lined.</p> <p><u>Risk assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Risk rating:</i> Low</p> <p><u>Regulatory controls</u> A freeboard limit of 300mm or more is to be maintained as specified by condition 1.3.5(b).</p> <p><u>Residual risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Rare</p>	



DECISION TABLE

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Emissions general	L2.1.1	OSC	<i>Risk rating: Low</i> Numerical and descriptive limits will be set through condition OSC2.5.2, table 2.5.2 and OSC2.7.1, therefore condition OSC2.1.1 regarding the recording and investigation of exceedances of limits has been included.	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .
Point source emissions to air including monitoring	L2.2 L3.2	N/A	There are no point source emissions to air from the premises that require regulation through this section, SC1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .
Point source emissions to surface water including monitoring	L2.3 L3.3	N/A	There are no point source emissions to surface water from the premises that require regulation through this section, SC1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .
Point source emissions to groundwater including monitoring	L2.4 L3.4	N/A	There are no point source emissions to groundwater from the premises that require regulation through this section, SC1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> . <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .



DECISION TABLE

Works Approval / Licence section	Condition number W = Works Approval L = Licence	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
Emissions to land including monitoring	L2.5.1-2.5.2 and L3.5.1	OSC	<p>OSC2.5.1 and table 2.5.1 have replaced condition W1(b). There is now one infiltration swale (formerly three swales) at the premises.</p> <p>OSC2.5.2 replaces condition W5(b)(i) – (iii) of the previous licence. The limits and parameters are the same as in the previous licence.</p> <p>OSC3.5.1 and table 3.5.1 replaces conditions W5(a) in the previous licence. The monitoring parameters and frequency of sampling are the same as in the previous licence with the exception of Total Kjeldahl Nitrogen. Monitoring of the incoming discharge pipe is not a requirement of the reissued licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>



Fugitive emissions	L2.6	N/A	Fugitive emissions have not been reassessed as part of this licence reissue. There are no specified conditions relating to fugitive emissions in this section, SC1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> .
Odour	L2.7.1	OSC	<p><u>Emission description</u> <i>Emission:</i> Odour from WWTP processes (WWTP within 500m of the resort). <i>Impact:</i> Nuisance odour. <i>Controls:</i> The wastewater is treated within the MLE process before being held in enclosed polyethylene tanks. The treated wastewater is then discharged to the swale. The macerator is located at the Monkey Mia resort and is within an enclosed building. Untreated wastewater is only held within the holding ponds during peak flows.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk rating:</i> Moderate</p> <p><u>Regulatory controls</u> OSC2.7.1 has been added to the licence regarding the control of odour at the premises.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk rating:</i> Moderate</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>
Noise	L2.8	N/A	Noise has not been reassessed as part of this licence reissue. As the previous licence did not impose controls on noise, no specified conditions have been included in this section. The <i>Environmental Protection (Noise) Regulations 1997</i> and SC1.2.1 apply.	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Noise) Regulations 1997</i>.</p>



<p>Monitoring general</p>	<p>L3.1.1</p>	<p>OSC</p>	<p>OSC3.1.1 has replaced conditions W9(a) and W9(b) in the previous licence. OSC3.1.2 is an explanatory condition relating to non-continuous monitoring. OSC3.1.3-3.1.4 are explanatory conditions relating to the calibration of monitoring equipment. Additional requirements for the sampling of marine water in accordance with AS/NZS 5667.9 has been included due to the contingency monitoring requirements. Note: The requirement in W9(b) for analysis in accordance with APHA-AWWA-WEF is not reflected in this reissue as this is no longer a DER requirement.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p>
<p>Monitoring of inputs and outputs</p>	<p>L3.6.1</p>	<p>OSC</p>	<p>OSC3.6.1 details the requirements of the licensee to undertake monitoring of the parameters listed in table 3.6.1. This is necessary for the comparison with the daily sewage treatment target volume. OSC3.6.1 replaces condition W3 of the previous licence.</p>	<p><i>Environmental Protection Act 1986</i></p>
<p>Process monitoring</p>	<p>L3.7</p>	<p>N/A</p>	<p>Process monitoring has not been reassessed as part of this licence reissue. As the previous licence did not require any process monitoring, no specified conditions have been included in this section.</p>	<p>N/A</p>
<p>Ambient quality monitoring</p>	<p>L3.8.1 L3.8.2-3.8.5</p>	<p>OSC NSC</p>	<p>Ambient groundwater monitoring around the WWTP has not been reassessed as part of this reissue. OSC3.8.1 has been included as an explanatory condition relating to the information in table 3.8.1. The parameters listed in table 3.8.1 are the same as the parameters listed in condition W6(a) in the previous licence, except for the inclusion of standing water level. The monitoring frequency is the same as in the previous licence. <u>Emission description</u> <i>Emission:</i> Discharge of untreated wastewater due to leakage in the sewerage network at the Monkey Mia resort. <i>Impact:</i> Potential for localised contamination of surrounding soils, contamination of groundwater and sea water at and around the resort. <i>Controls:</i> Monkey Mia resort staff undertake repeat monitoring of bores that show a detectable reading of microbiological parameters. <u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate <u>Regulatory Controls</u></p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p>



			<p>Due to a significant discharge event in 2010 from the sewerage network at the resort, ambient groundwater conditions have been applied to the licence to ensure the protection of the marine waters at and around the resort. NSC3.8.2 and table 3.8.2 have been included in the licence to specify the location of the monitoring bores at the resort, and the parameters and frequency of sampling. Targets of ≤10 cfu/100ml (enterococci is reported as MPN/100ml) have been applied to enterococci and <i>Escherichia coli</i> as a trigger for contingency measures. NSC3.8.3 specifies that a repeat sample is taken as soon as practicable of any monitoring bore that exceeds any target in table 3.8.2. NSC3.8.4 specifies the contingency measures that must be applied if a sample collected under NSC3.8.3 also exceeds a target specified in table 3.8.2. Some of these contingency measures have been adapted from condition W6(b) of the previous licence. NSC3.8.5 specifies that the weekly sampling outlined in NSC3.8.4(b) and NSC3.8.4(c) is to continue until two consecutive samples of the affected groundwater bore(s) fall below the targets specified in Table 3.8.2.</p> <p>Note: The requirement in W6(c) for a DEC Shark Bay District Manager to be present during sampling is not reflected in this reissue as this is not a DER requirement.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	
Meteorological monitoring	L3.9	N/A	<p>Meteorological monitoring requirements have not been reassessed as part of this licence reissue. As the previous licence did not require meteorological monitoring no specified conditions have been included in this section.</p>	N/A
Improvements	L4.1.1	NSC	<p>Improvement condition NSC4.1.1 has been added to the licence that requires the Licensee to submit a Wastewater Disposal Plan (WDP). This has been set as a requirement to ensure that there is adequate on-site capacity for the disposal of both wastewater effluent and reverse osmosis brine waste. This is in response to a request for an emergency discharge via irrigation at the premises during July 2014. The holding capacity of the ponds and swale had reached capacity due to lower than normal evaporation rates and high tourist numbers at the resort at that</p>	General provisions of the <i>Environmental Protection Act 1986</i> .



Information	L5.3.1	OSC	time. SC5.1.3 has replaced condition G2 in the previous licence. SC5.2.1 has replaced condition G1(a), G1(b), S2, W7 and W8 in the previous licence. OSC5.3.1 and table 5.3.1 replace condition G3 and S1 of the previous licence. Table 5.3.1 also includes other notification parameters. The licence is recommended for a five year period in accordance with standard DER procedure. There are no factors that warrant a reduction in the standard five year period.	General provisions of the <i>Environmental Protection Act 1986</i> .
Licence Duration	N/A	N/A		N/A



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
9/03/2015	Application advertised in West Australian (or other relevant newspaper)	Nil comments received	-
26/03/2015	Proponent sent a copy of draft instrument	Comments received 27/03/2015	Minor administrative changes to tables 1.3.2-1.3.3



Appendix A RISK ASSESSMENT MATRIX

Note: These matrix are taken from the Corporate Policy Statement No.7 – Operational Risk Management

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High

Appendix 6
Ministerial Statements 709 & 919
Compliance Assessment Plan (CAP)



intelligent outcomes | respected experience

Monkey Mia Dolphin Resort, Shark Bay

Compliance Assessment Plan Statement 709

Prepared for
RAC Tourism Assets Pty Ltd
by Strategen

May 2016

Monkey Mia Dolphin Resort, Shark Bay

Compliance Assessment Plan Statement 709

Strategen is a trading name of
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ACN: 056 190 419

May 2016

Limitations

Scope of services

This report ("the report") has been prepared by Strategen Environmental Consultants Pty Ltd (Strategen) in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen has also not attempted to determine whether any material matter has been omitted from the data. Strategen will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen. The making of any assumption does not imply that Strategen has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

Client: RAC Tourism Assets Pty Ltd

Report Version	Revision No.	Purpose	Strategen author/reviewer	Submitted to Client	
				Form	Date
Draft Report	A	For client review	D White / J Mitchell, D Goundrey	Electronic	15 Mar 2016
Revised Report	B	For client review	D White / J Mitchell, D Goundrey	Electronic	11 Apr 2016
Final Report	0	For submission to OEPA	J Mitchell	Electronic	6 May 2016

Filename: RAC16009_01 R001 Rev 0 - 6 May 2016

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1. Introduction

RAC Tourism Assets Pty Ltd (RAC; the proponent) proposes to expand Monkey Mia Dolphin Resort (the Project; Figure 1). The Project involves the construction of and operation of the Monkey Mia Dolphin Resort through the expansion of the existing resort area, provision of staff accommodation facilities and upgrading of the wastewater treatment plant (Figure 2).

This document presents the Compliance Assessment Plan (CAP), prepared to guide assessment of compliance throughout the life of the Project against conditions of approval issued pursuant to Part IV of the *Environmental Protection Act 1986* (EP Act).

1.1 Background

RAC owns and manages Monkey Mia Dolphin Resort located within a World Heritage area on a Shire of Shark Bay reserve, adjacent to the Department of Parks and Wildlife (DPaW) Monkey Mia Visitor Centre.

Approval under the EP Act to expand the Monkey Mia Dolphin Resort was granted to the former proponent Monkey Mia Dolphin Resort Pty Ltd through issue of Ministerial Statement (MS) 709 on 28 December 2005. Subsequent approval extending the period for substantial commencement was granted to Aspen Parks Property Management Ltd (Aspen) under MS 919 on 18 December 2012.

The proposal is described in MS 709 as the following:

The expansion, incorporating construction and operation of the Monkey Mia Dolphin Resort through expansion of the existing resort area, provision of staff accommodation facilities and upgrading of the wastewater treatment plant, as documented in schedule 1 of Ministerial Statement 709.

The approved expansion of the Monkey Mia Dolphin Resort commenced in October 2012 with the construction of the waste water treatment plant, one of the three main proposal components as described in schedule 1 of MS 709.

On 21 December 2015 the Office of the Environmental Protection Authority (OEPA) issued a notice to Aspen of a compliance audit to be undertaken by the proponent, addressing the period 28 December 2005 to 28 December 2015. This audit was to be the first formal assessment undertaken of the approval and was required to be submitted by 29 January 2016, with a subsequent extension granted by the OEPA to 1 April 2016.

1.2 Purpose of Compliance Assessment Plan

The purpose of this CAP is to comply with condition 5 of MS 709, which requires the proponent to prepare an audit program and submit compliance reports to the OEPA (formerly the Department of Environment as named in MS 709). This CAP also complies with MS 919 which supersedes condition 4 of MS 709. This CAP is to be submitted as a draft as an appendix with the first compliance assessment report required by the OEPA to be submitted by 1 April 2016, and may be amended prior to the subsequent compliance assessments, based on OEPA advice.

Since MS 709 was issued the OEPA has released guidelines regarding compliance assessments (Section 1.2.1). The audit program required by MS 709 will be based on the contemporary approach embodied by these current OEPA guidelines, including reference to the audit program required under condition 5-1 of MS 709 as a CAP.

Condition 5-1 of MS 709 states:

5 Compliance Audit

- 5-1 *The proponent shall prepare an audit program and submit compliance reports to the Department of Environment which address:*
1. *the status of implementation of the proposal as defined in schedule 1 of this statement;*
 2. *evidence of compliance with the conditions and commitments; and*
 3. *the performance of the environmental management plans and programs.*

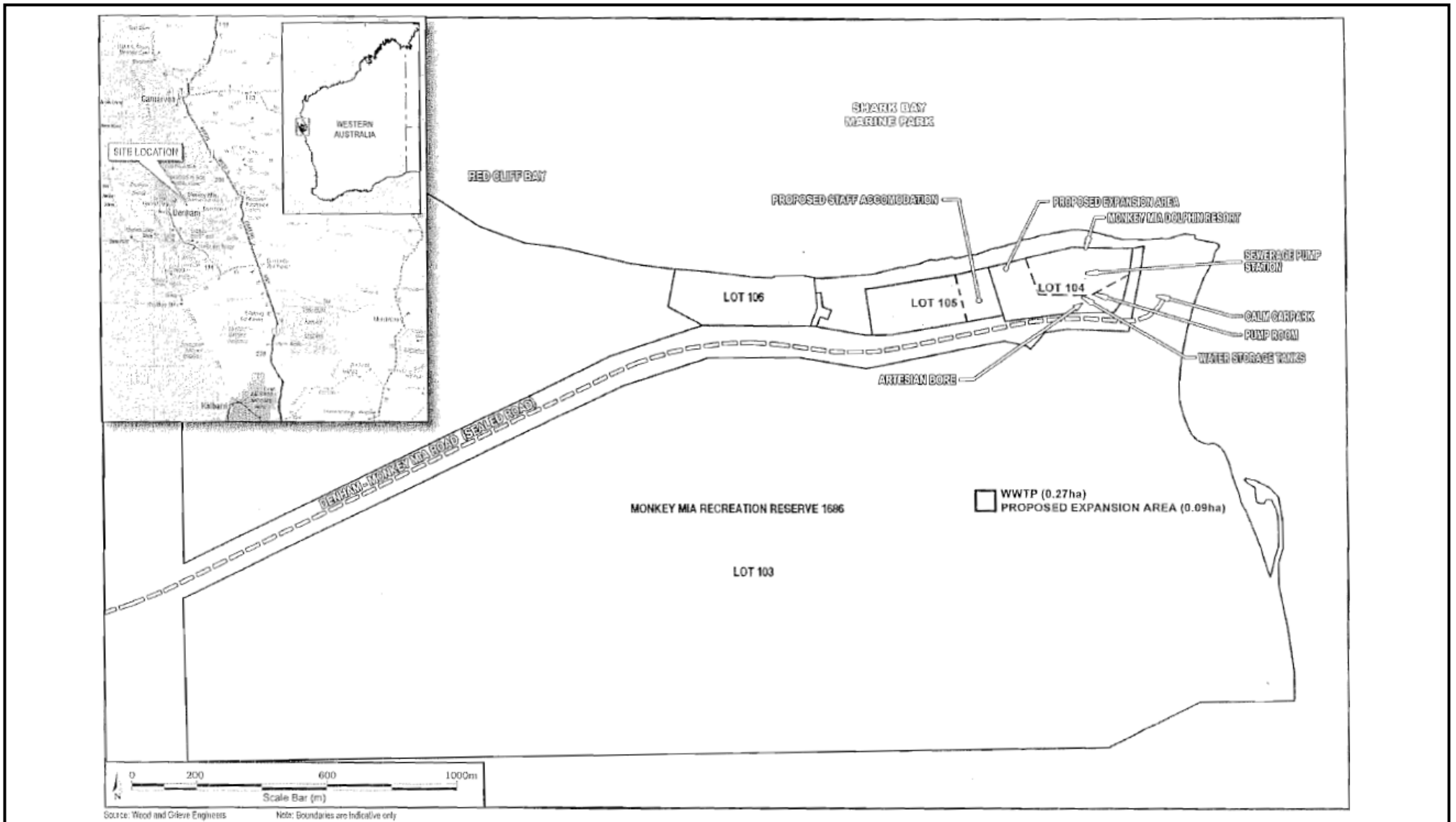
Note: Under sections 48(1) and 47(2) of the Environmental Protection Act 1986, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

- 5-2 *The proponent may submit a report prepared by an independent auditor to the Chief Executive Officer of the Department of Environment on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating whether the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.*

1.2.1 Compliance Assessment Plan guidelines

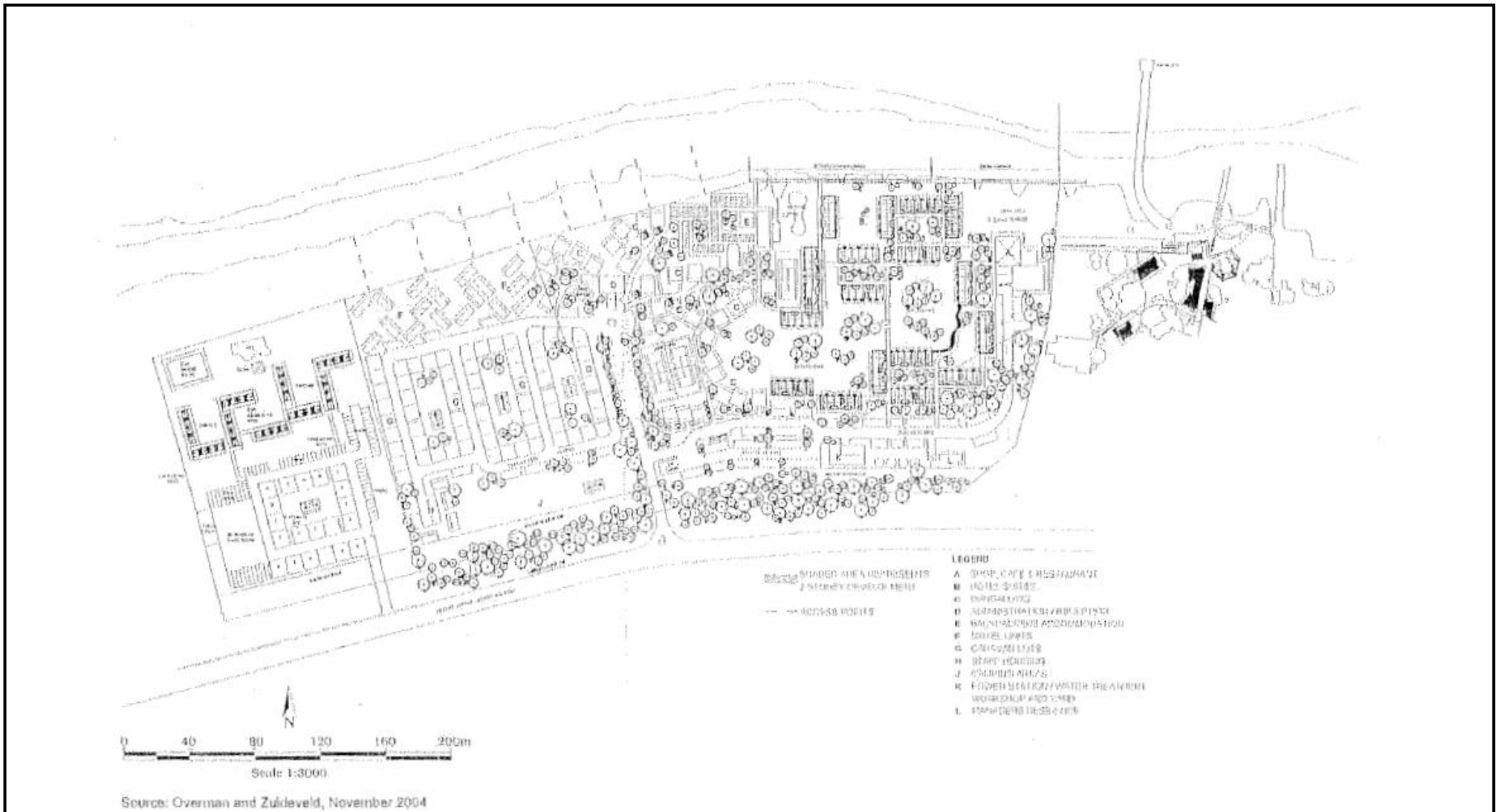
This CAP has been prepared in accordance with the following guidance:

- *Post Assessment Guideline for Preparing a Compliance Assessment Plan (OEPA 2012a)*
- *Post Assessment Guideline for Preparing an Audit Table (OEPA 2012b)*
- *Post Assessment Guideline for Making Information Publicly Available (OEPA 2012c).*



Source: MS 709

Figure 1: Monkey Mia Dolphin Resort, noting expansion areas for the resort



Source: MS 709

Figure 2: Layout of the expansion and redevelopment of the resort and staff accommodation areas

2. Compliance Assessment Plan

2.1 Approach and timing of compliance assessments

2.1.1 Approach

An Compliance Assessment Report (CAR) will be submitted to the Chief Executive Officer of the OEPA (formerly CEO of the Department of Environment) as required by condition 5-2 of MS 709.

Information used in annual compliance assessments will be collected by suitably qualified, independent auditors undertaking the following steps:

- one or more annual site inspections as required
- on-site and off-site consultation and interviews of proponent, subcontractor or other personnel in positions appropriate to inform the audit process
- compilation, review and assessment of documentary evidence.

To validate that information provided and related analysis is sufficient to support any determination of compliance, evidence used to inform the assessment should be verifiable and a true and accurate record. Assessments will be based on sampling of evidence where appropriate. The proponent will be responsible for ensuring documentary evidence is provided to the auditors in either hard or electronic formats and for maintaining records of all evidence used to inform the assessment (Section 2.3.2).

2.1.2 Subsidiary plans

Conditions of MS 709 require the preparation of an audit program, submission of compliance reports to the Department of Environment and the implementation of a number of subsidiary plans (Table 1).

To ensure assessments of compliance status address implementation of the below plans, performance against these plans will be reported in the annual CAR to comply with condition 5-2 of MS 709. The CAR will include (Section 2.4):

- an overall statement of compliance with the requirement to implement each plan
- a declaration of compliance status for each of the key requirements and/or objectives of each plan
- information/documentation which supports/verifies the declared compliance status
- a review of the performance against the monitoring requirements, summary of the results and interpretation of analysis of the results of the required monitoring of each plan and advice as to whether the monitoring results demonstrate applicable criteria have been met during the reporting period.

Table 1: Subsidiary plans required by MS 709

Condition (commitment)	Plan
709: M2 (709:P2)	Construction Management Plan
709: M7	Drainage Management Plan
709: M8	Nutrient and Irrigation Management Plan
709: M9	Foreshore Management Plan

2.1.3 Frequency and timing of reporting

The frequency and timing of reporting have been nominated based on the calendar year for the audit period as timing requirements for the assessment and submission of compliance reports were not specified in MS 709.

The proponent will assess its compliance with MS 709 annually. MS 709 was issued on 28 December 2005, with the first CAR (required by OEPA notice) reporting on the period to 28 December 2015, with submission by 1 April 2016.

The second CAR will address a compliance period of 29 December 2015 to 31 December 2016 and will be submitted to the CEO of the OEPA by 31 March 2017. Subsequent CARs will address the compliance period from 1 January to 31 December with each report submitted to the CEO of the OEPA by the annual date of 31 March following the conclusion of the compliance period.

The frequency of the CAR will be reviewed on annual basis to align with key development and construction timeframes.

2.2 Reporting potential non-compliances and corrective measures

Potential non-compliances and corrective and preventative measures taken will be described in an 'Audit results' section of the annual CAR (Section 2.4). This section will include reference to a statement of compliance prepared in accordance with the OEPA *Post Assessment Form for a Statement of Compliance* and endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf, to be included as an appendix with the final submitted report.

2.3 Audit table

An audit table has been prepared to address condition 5-1 of MS 709 (Table 2). The audit table is based on a draft table supplied by the OEPA to Strategen on 12 February 2016. The draft table:

- has had further detail added as part of this CAP to guide future assessments
- has been prepared to comply with condition 5-1 of MS 709
- has been prepared in accordance with OEPA guidelines.

The audit table contains each condition separated into audit elements for auditing purposes, and includes the following headings:

- Audit code: Ministerial Statement reference number
- Subject: the environmental theme/issue
- Requirement: what the proponent must do
- How: the manner in which the requirements of an audit element should be achieved
- Evidence: information or data collected to verify compliance, i.e. report/letter/site inspection requirements
- Phase: project phase applicable to audit element
- Timeframe: specific timing for achieving the requirements of an audit element
- Status: notes about the fulfilment of compliance using compliance status terms
- Further information: additional comments to support compliance findings, where required.

Note the table is a summary of conditions in MS 709 and the statement should be referred to directly for matters requiring additional clarification or information.

Audit table notes:

- Code prefixes: M = Minister's condition, P = Proponent's commitment.
- Acronyms list: CEO = Chief Executive Officer of OEPA; DIA = Department of Indigenous Affairs, DoE = Department of the Environment; DEC = Department of Environment and Conservation; DER = Department of Environment Regulation (formally DEC); DPaW = Department of Parks and Wildlife (formerly CALM); EPA = Environmental Protection Authority; Minister for Env = Minister for the Environment; OEPA = Office of the Environmental Protection Authority (formerly DEC, DoE); CALM = Department of Conservation and Land Management.

Table 2: Audit table for MS 709 and 919

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M1.1	Implementation.	The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions and procedures of this statement.	Implement the Proposal as documented in Schedule 1 of this Statement subject to the conditions and procedures of this Statement.	Annual Compliance Assessment Report (CAR).	Overall.	Ongoing.		
709:M2.1	Proposal Commitments.	The proponent shall implement the environmental management commitments documented in schedule 2 of this statement.	Implement the Environmental Management Commitments documented in Schedule 2 of this Statement.	Annual CAR.	Overall.	Ongoing.		
709:M3.1	Proponent Nomination and Contact Details.	The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the <i>Environmental Protection Act 1986</i> is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.	The proponent nominated by the Minister of the Environment under s 38(6) or (7) is responsible for implementation of the Proposal until the Minister has revoked this nomination and nominated another person in respect of the Proposal under s 38(7) of the EP Act.	Annual CAR. Written nomination of proponenty notice from Minister. Written application to change nominated proponent under s 38(6a) of the EP Act.	Overall.	Ongoing.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M3.2	Proponent Nomination and Contact Details.	If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.	Should the proponent wish to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this Statement, endorsed by the replacement proponent.	Endorsed letter and copy of MS 709 to the CEO of the OEPA.	Overall.	Ongoing.		
709:M3.3	Change in Name or Address.	The nominated proponent shall notify the Department of Environment of any change of contact name and address within 60 days of such change.	Notify OEPA (formerly DoE) of any change of contact name and address within 60 days of such change.	Written notification to the CEO of the OEPA.	Overall.	Within 60 days of change.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M4.1 (replaced by 919:M4-1)	Time Limit on Commencement Approval.	The proponent shall not commence implementation of the proposal after the expiration of 5 years from the date of this statement, and any commencement, within this 5 year period, must be substantial.	Substantially commence the Proposal within 5 years of the date of this Statement, or the approval granted in this Statement shall lapse and become void.	Written advice to the CEO of OEPA. Audit site inspection.	Design.	By 17 December 2017.	CLD.	In a letter dated 19 March 2015 Strategen, acting on behalf of the proponent, provided evidence that the expansion of the Monkey Mia Dolphin Resort had substantially commenced and upgrade to the WWTP had been completed in 2014 (2015-0001098255). The OEPA advised the proponent that it considered the proposal to expand the Monkey Mia Resort to have substantially commenced in a letter dated 8 April 2015 (2015-0001103465).
709:M4.2 (replaced by 919:M4-2)	Extension of Time Limit for Substantial Commencement.	Any commencement of implementation of the proposal, within 5 years from the date of this statement, must be demonstrated as substantial by providing the CEO with written evidence, on or before the expiration of 5 years from the date of this statement.	If not commenced within five years of the date of the statement, make an application for extension of approval beyond the approved 5 year time limit.	Written advice to the CEO of OEPA.	Design.	Prior to 17 December 2017.	CLD.	The OEPA advised the proponent that it considered the proposal to expand the Monkey Mia Resort to have substantially commenced in a letter dated 8 April 2015 (2015-0001103465).

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M5.1	Compliance Reports.	<p>The proponent shall prepare an audit program and submit compliance reports to the Department of the Environment which address:</p> <ol style="list-style-type: none"> the status of implementation of the proposal as defined in schedule 1 of this statement; evidence of compliance with conditions and commitments; and the performance of the environmental management plans and programs. <p>Note: Under sections 48(1) and 47(2) of the <i>Environmental Protection Act 1986</i>, the Chief Executive Officer of the Department of Environment is empowered to monitor the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.</p>	Prepare an Audit Program and submit Compliance Reports.	<p>Compliance Assessment Plan (CAP).</p> <p>Annual Compliance Assessment Report (CAR).</p> <p>Transmittal documentation of CAP/CAR to the OEPA (formerly DoE).</p>	Overall.	Ongoing.		
709:M5.2	Proponent may submit independent auditors report.	The proponent may submit a report prepared by an independent auditor to the Chief Executive Officer of the Department of Environment on each condition/commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating whether the requirements of each condition/commitment have been fulfilled within the timeframe stated within each condition/commitment.	Proponent may submit an independent auditors report to the CEO of OEPA on each Condition/Commitment of this Statement which requires the preparation of a Management Plan, Programme, Strategy or System, stating whether the requirements of each Condition/Commitment have been fulfilled within the given time frame stated within each condition/commitment.	<p>Annual Compliance Assessment Report (CAR).</p> <p>Transmittal documentation of CAR to the CEO of OEPA (formerly DoE/DEC).</p>	Overall.	Ongoing.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M6.1	Thick-billed Grasswren (<i>Amytornis textilis textilis</i>) Habitat.	To allow for the protection of part of a territory if the Thick-billed Grasswren, the proponent shall retain a buffer area of <i>Acacia</i> sp. along the southern side of the Denham-Monkey Mia Road, for the length of the resort, including the resort expansion area and staff accommodation area, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management. This buffer area shall be approximately 600 metres in length and not less than 15 metres wide.	Retain a buffer area of <i>Acacia</i> sp. along southern side of Denham-Monkey Mia Road, for the length of the resort, including expansion area and staff expansion area. Buffer shall be 600 metres in length and not less than 15 metres wide.	Written approval from the Minister for Env. Surveyed map of the buffer area. Evidence of advice from EPA and DPaW (formerly CALM).	Overall.	Ongoing.		
709:M6.2	Survey of nesting area prior to clearing.	Prior to commencement of construction within the white coastal sandplain area, the proponent shall undertake a survey during the nesting season to determine the presence of Thick-billed Grasswren nests in the area proposed to be cleared, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management.	Prepare survey prior to commencement of construction within white sandplain area determining the presence of Thick-billed Grasswren nests during nesting season.	Surveyed map of the proposed area to be cleared. Written approval from the Minister for Env. Evidence of advice from DPaW (formerly CALM).	Design.	Prior to the commencement of construction within the white coastal sandplain area; during the nesting season.		
709:M6.3	Prior to clearing.	Prior to commencement of clearing where a particular area is to be cleared in the following 12 months, the proponent shall repeat the survey referred to in condition 6-2, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Conservation and Land Management.	Prior to commencement of clearing where a particular area is to be cleared in the following 12 months, the proponent shall repeat the survey from condition M6.2.	Surveyed map of the proposed area to be cleared. Written approval from the Minister for Env. Evidence of advice from DPaW (formerly CALM).	Design.	Prior to commencement of clearing where a particular area is to be cleared in the following 12 months.		
709:M6.4	Clearing to only take place within the white coastal sandplain area.	The proponent shall only undertake clearing of vegetation within the white coastal sandplain area after the Thick-billed Grasswren fledglings have left their nests.	Clearing only to take place on the white coastal sandplain area after the Thick-billed Grasswren fledglings have left their nests.	Map of areas cleared to date.	Design.	After the Thick-billed Grasswren fledglings have left their nests.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M6.5	Retain local native vegetation within the white coastal sandplain.	The proponent shall retain local native vegetation within the white coastal sandplain development area, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.	Retain local native vegetation within the white coastal sandplain development area.	Written approval from the Minister for Env. Evidence of advice from EPA.	Overall.	Ongoing.		
709:M7.1	Drainage Management Plan.	<p>Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Drainage Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.</p> <p>This Plan shall address:</p> <ol style="list-style-type: none"> 1. management of stormwater quality and quantity; 2. potential for erosion, local flooding and contaminant discharge; 3. minimising pollutants at their source; and 4. pollutant removal. <p>Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained:</p> <ul style="list-style-type: none"> • Department of Conservation and Land Management; and • Shire of Shark Bay. 	Prepare a Drainage Management Plan.	<p>Drainage Management Plan.</p> <p>Written approval from the Minister for Env.</p> <p>Evidence of advice from EPA.</p> <p>Written correspondence to OEPA demonstrating consultation with DPaW (formerly CALM) and SoSB.</p>	Design.	Prior to commencement of construction associated with the resort expansion.		
709:M7.2	Drainage Management Plan.	The proponent shall implement the Drainage Management Plan required by condition 7-1.	Implement the Drainage Management Plan required by condition 7.1.	Annual CAR.	Operation.	Ongoing.		
709:M7.3	Drainage Management Plan.	The proponent shall make the Drainage Management Plan required by condition 7-1 publicly available.	Make the Drainage Management Plan publicly available.	Drainage Management Plan publically available.	Design.	Ongoing.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M8.1	Nutrient and Irrigation Management Plan.	<p>Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Nutrient and Irrigation Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.</p> <p>This plan shall address:</p> <ol style="list-style-type: none"> 1. method of application of nutrients; 2. irrigation program; 3. water conservation 4. recommendation for low nutrient and water requirement plants and grasses; and 5. prescribed fertiliser applications. <p>Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agencies will be obtained:</p> <ul style="list-style-type: none"> • Department of Conservation and Land Management; and • Shire of Shark Bay. 	Prepare a Nutrient and Irrigation Management Plan.	<p>Nutrient and Irrigation Management Plan.</p> <p>Written approval from the Minister for Env.</p> <p>Evidence of advice from EPA.</p> <p>Written correspondence to OEPA demonstrating consultation with DPaW (formerly CALM) and SoSB.</p>	Design.	Prior to commencement of construction associated with the resort expansion.		
709:M8.2	Implementation of the Nutrient and Irrigation Management Plan.	The proponent shall implement the Nutrient and Irrigation Management Plan required by condition 8-1.	Implement the Nutrient and Irrigation Management Plan required by condition 8.1.	Annual CAR.	Operation.	Ongoing.		
709:M8.3	Make Nutrient and Irrigation Plan publicly available.	The proponent shall make the Nutrient and Irrigation Management Plan required by condition 8-1 publicly available.	Make Nutrient and Irrigation Plan publicly available by condition 8.1.	Nutrient and Irrigation Management Plan publically available.	Design.	Ongoing.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:M9.1	Foreshore Management Plan.	<p>Prior to commencement of construction associated with the resort expansion, the proponent shall prepare a Foreshore Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.</p> <p>This plan shall address:</p> <ol style="list-style-type: none"> 1. minimising risk of dune erosion; 2. formalised access points; 3. definition of dune preservation and fencing areas; 4. rehabilitation and restoration of foreshore areas, incorporating stabilisation; 5. identification of species to be planted; and 6. education and signage. <p>Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following agency will be obtained:</p> <ul style="list-style-type: none"> • Department of Conservation and Land Management. 	Prepare a Foreshore Management Plan.	<p>Foreshore Management Plan.</p> <p>Written approval from the Minister for Env.</p> <p>Evidence of advice from EPA.</p> <p>Written correspondence to OEPA demonstrating consultation with DPaW (formerly CALM).</p>	Design.	Prior to commencement of construction associated with the resort expansion.		
709:M9.2	Implement Foreshore Management Plan.	The proponent shall implement the Foreshore Management Plan required by condition 9-1.	Implement the Foreshore Management Plan.	Annual CAR.	Operation.	Ongoing.		
709:M9.3	Make Foreshore Management Plan publicly available.	The proponent shall make the Foreshore Management Plan required by condition 9-1 publicly available.	Make the Foreshore Management Plan by condition 9.1 publicly available.	Foreshore Management Plan publically available.	Design.	Ongoing.		
709:P1	Environmental Management System.	<p>Have in place, and make publically available an Environmental Management System (EMS) for this project, which will include:</p> <p>(a) Environmental policies specific to the proposed resort and wastewater treatment plant facilities and corporate commitment to it.</p>	Have in place an Environmental Management System and Make the Environmental Management System publicly available.	<p>Environmental Management System (EMS) document.</p> <p>EMS publically available.</p>	Design.	Prior to construction and post-construction.		

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
		<p>(b) Environmental Management Program with specific Management Plans to address the environmental impacts, including:</p> <ul style="list-style-type: none"> • Foreshore Management Plan; • Nutrient and Irrigation Management Plan; and • Wastewater Treatment Management Plan. <p>(c) Implementation and operation of actions to meet environmental performance.</p> <p>(d) Setting of appropriate objectives and targets, to meet environmental performance.</p> <p>(e) Measurement and evaluation of environmental performance.</p> <p>(f) Creation of appropriate management structures and responsibilities including human, equipment and financial resources.</p> <p>(g) Training, including induction, in environmental management procedures.</p> <p>(h) Development of communication procedures to staff, visitors, members of the community and government officers, and communicating relevant procedures and requirements to suppliers and contractors.</p> <p>(i) Development of performance monitoring and measurement procedures on the key features of the proposal which may impact on the environment.</p> <p>(j) Development of corrective and preventative procedures.</p> <p>(k) Development of management review and feedback procedures.</p> <p><i>Note: Advice from CALM.</i></p>						

Audit Code	Subject	Requirement	How	Evidence	Phase	Timeframe	Status	Further information
709:P2	Construction Activities.	<p>Prepare a Construction Management Plan, which will include:</p> <ul style="list-style-type: none"> (a) management of noise and dust impacts. (b) minimising visual impacts. (c) provision of fencing, appropriate storage facilities and locations. (d) containment of all earth works to avoid affecting the beach. <p><i>Note: Advice from SoSB and CALM.</i></p>	Prepare a Construction Management Plan.	Construction Management Plan.	Design.	Prior to construction.		
709:P3	Construction Activities.	<p>Implement the Construction Management Plan.</p> <p><i>Note: Advice from SoSB and CALM.</i></p>	Implement the Construction Management Plan.	Annual CAR.	Construction.	During construction.		
709:P4	Aboriginal Heritage and Culture.	<ul style="list-style-type: none"> (a) Undertake an ethnographic and archaeological survey of the proposed wastewater treatment plant site before construction occurs. (b) If any Aboriginal material is uncovered as a result of earthmoving activities work will immediately cease in that area and the discovery will be reported to the relevant authorities. (c) Project personnel and construction workers will be informed of the requirement of the <i>Aboriginal Heritage Act 1972</i> with regards to interference with Aboriginal sites. <p><i>Note: Advice from DIA.</i></p>	<ol style="list-style-type: none"> 1. Undertake an ethnographic and archaeological survey. 2. If any Aboriginal material is uncovered as a result of earthmoving activities immediately cease work in that area and report the discovery to the relevant authorities. 3. Inform project personnel and construction workers of the requirement of the <i>Aboriginal Heritage Act 1972</i> with regards to interference with Aboriginal sites. 	<p>Survey report.</p> <p>Incident register.</p> <p>Archaeologist's report regarding uncovered material.</p> <p>Record of report to authorities.</p> <p>Site induction records.</p>	Design.	Prior to construction.		

2.3.1 Project phases

The audit table uses a number of different project phases to describe the timing of the action (Table 3). Table 3 includes generic descriptions of project phases based on OEPA (2012b) guidance. Some elements of Table 3 may not apply specifically to this Project and is provided for guidance purposes only in the conduct of compliance assessments. The term 'pre-construction' referred to in the OEPA (2012b) guidance has been changed to 'design' in Table 3, in order to reflect the draft audit table provided by the OEPA.

For the purposes of guiding compliance assessments to MS 709, the three major design components outlined in Schedule 1 of MS 709 are proposed to be considered separate elements of the project, which are subject to separate progressions through each phase described in Table 3. These major design components are the:

- resort expansion
- staff accommodation facilities
- Wastewater Treatment Plan.

Table 3: Description of project phases used in audit table

Phase	Description
Design	No ground disturbance has commenced. Plans may be in development or approvals are being sought prior to ground disturbance.
Construction	Ground disturbance may have commenced, no waste emission from operations has commenced, limited waste emissions may have occurred during 'commissioning' under a works approval issued under the <i>Environmental Protection Act 1986</i> (EP Act); proposal has substantially commenced. .
Operation	The following may have occurred or may be occurring: ground disturbance; operations are producing waste emissions; 'commissioning' under a licence issued under the EP Act; development of a site; remediation activity prior to development of site; mining activity; subdivision of site.
Decommissioning	The following may occur during this phase: ground disturbance for rehabilitation purposes; post-remediation; post-reclamation; development following remediation where the main objective of the proposal was remediation; decommissioning.
Overall	This phase is used where an audit element applies during multiple phases of the project.

Source: OEPA (2012b).

2.3.2 Recording evidence

When implementing a requirement listed in the audit table or otherwise relevant to approvals, records that verify the timing and extent of implementation will be collected and retained to prove compliance with the approvals. These records may include:

- consultant or engineering reports
- copies of written advice from agencies or stakeholders indicating or confirming that they have been consulted with and are satisfied with the action that has been or will be undertaken
- photographs illustrating that the action has been completed – these should be appropriately logged with, for example, date, time, photographer and location
- quality assurance forms signed by an appropriate person
- monitoring data and analyses
- records of contractor contracts
- records of attendance at training or educational programs
- copies of educational and training programs
- copies of publications relevant to the project
- invoices from contractors for completion of the action.

RAC will retain this evidence.

2.3.3 Status

The 'Status' field of the audit table describes the implementation of the action and compliance with the audit element. Although the CEO of the OEPA makes the final determination of compliance, it is necessary to update this field each reporting period, as the project progresses. The OEPA (2012a, 2012b, 2012c and 2012d) has prepared updated guidance related to the preparation of compliance audits, including generic expressions that are used to identify the status of each action (Table 4).

Table 4: Action implementation status

Status	Description
Compliant (Conformant)	Implementation of the proposal has been carried out in accordance with requirements of the audit. (Conformant – as above in relation to actions of management plans / programmes).
Completed	A requirement with a finite period of application has been satisfactorily completed.
Not required at this stage	The requirements of the audit element were not triggered during the reporting period.
Potentially non-compliant (Potentially non-conformant)	Possible or likely failure to meet the requirements of the audit element. (Potentially non-conformant – as above in relation to actions of management plans / programmes required to be implemented by condition).
In process	Where an audit element requires a management or monitoring plan be submitted to the OEPA or another government agency for approval, that submission has been made and no further information or changes have been requested by the OEPA or the other government agency and assessment by the OEPA or other government agency for approval is still pending. Note the term 'In process' must only be used for the purpose stated.

Source: adapted from OEPA (2012b).

2.4 CAR table of contents

The table of contents of the CARs is detailed in Table 5. The structure of the report is guided by *Post Assessment Guideline No. 3 Preparing a Compliance Assessment Report* (OEPA 2012d).

Table 5: Table of contents for Compliance Assessment Report

Heading	Description
Introduction	Brief detail about the Project, including: <ul style="list-style-type: none"> project background project approvals proponent details.
Current status	Summary of the current implementation status of the Project, specifically milestones/achievements within the reporting period.
Audit methodology	Description of how the audit was undertaken including: <ul style="list-style-type: none"> audit plan: purpose and scope, audit period, audit criteria, methodology audit terminology.
Audit results	Inclusion of a statement as to whether proponent has been, is being, has not or is not over the reporting period, complying with the conditions of MS 709 & MS 919. Reporting of all potential non-compliances and non-conformances, and a description of the corrective and preventative actions taken. Inclusion of reference to a statement of compliance prepared in accordance with the OEPA <i>Post Assessment Form for a Statement of Compliance</i> , provided as an appendix to the CAR. Inclusion of the Ministerial Statement audit table in accordance with Table 2 of this CAP. Indication of any proposed changes to the CAP required by Condition 4-1.
Proposed Changes to CAP	Indication of any proposed changes to the audit program (now known as CAP) required by condition 5-1.

Heading	Description
Appendices	<ol style="list-style-type: none"> 1. Statement of compliance prepared in accordance with the OEPA <i>Post Assessment Form for a Statement of Compliance</i> and endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf. 2. MS 709 Schedule 1 audit table. 3. Subsidiary plans audit tables (potentially non-conformant items only). 4. Evidence (related to potential non-compliances/non-conformances only). 5. Summary table of evidence reviewed. 6. Other appendices may be included where relevant from time to time.

2.5 Public availability of compliance assessment reports

CARs relating to MS 709 will be made publicly available in accordance with the OEPA *Post Assessment Guideline for Making Information Publicly Available* (OEPA 2012c), and in accordance with amendments to this guidance as may occur from time to time.

3. References

Office of Environmental Protection Authority (OEPA) 2012a, *Post Assessment Guideline for Preparing a Compliance Assessment Plan*, OEPA, Perth, August 2012.

Office of Environmental Protection Authority (OEPA) 2012b, *Post Assessment Guideline for Preparing an Audit Table*, OEPA, Perth, August 2012.

Office of Environmental Protection Authority (OEPA) 2012c, *Post Assessment Guideline for Making Information Publicly Available*, OEPA, Perth, August 2012.

Office of Environmental Protection Authority (OEPA) 2012d, *Post Assessment Guideline for Preparing a Compliance Assessment Report*, OEPA, Perth, August 2012.

Appendix H

Coastal Hazard Risk Management and Adaptation Plan

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R772 Rev 2

June 2017

RAC Developments

**Monkey Mia Resort
Coastal Hazard Risk Management & Adaptation Plan**

marinas

boat harbours

canals

breakwaters

jetties

seawalls

dredging

reclamation

climate change

waves

currents

tides

flood levels

water quality

siltation

erosion

rivers

beaches

estuaries

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K1329, Report R772 Rev 2 Record of Document Revisions

Rev	Purpose of Document	Prepared	Reviewed	Approved	Date
A	Draft for MRA & Client review	B Smith	C Doak	C Doak	23.5.16
0	Issued for Client Use	B Smith	C Doak	C Doak	14.10.16
1	Revised and reissued	C Doak	T Hunt	C Doak	15.3.17
2	Updated with DoP Comments	C Doak	T Hunt	C Doak	16.6.17

Form 035 18/06/2013

Limitations of this Document

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1. Introduction

RAC has a publicly stated strategy of developing a portfolio of tourist accommodation assets in Western Australia. RAC's strategy focuses on accommodation product that provides its 900,000 Western Australian members, and the broader tourist community, with a better standard of mid-range, value for money, family friendly accommodation in iconic established tourist destinations around Western Australia. RAC's focus is on providing amenities that can be enjoyed by RAC members and non-members alike whilst also contributing to and supporting local communities in regional locations. To sustain the strategy, RAC seeks to achieve reasonable returns on member funds for reinvestment into the strategy.

In 2015 RAC Tourism Assets Pty Ltd (RAC) acquired the Monkey Mia Dolphin Resort (the Resort). The Resort is located at the popular Monkey Mia tourist destination within the UNESCO listed Shark Bay World Heritage area. Monkey Mia is world famous for offering close encounters with bottle-nosed dolphins on the beach and is the centre for global dolphin research. The researchers generally live in the resort.

The Resort has a coastal frontage (Figure 1.1) which is significant, as the risks posed to the site from coastal hazards need to be considered both now and into the future. However, notwithstanding the potential risks, but consistent with its Tourism Asset Strategy as set out above, the RAC is committed to pursue redevelopment of the resort. Redevelopment, for the benefit of its members and the broader community, will provide world class, yet affordable, family orientated accommodation and amenities, which will provide a boost to the WA Tourism Industry. Furthermore, the upgrade to the resort is a \$20 million dollar regional tourism investment that provides a once in a generation opportunity for the Shire of Shark Bay community, with the expanded Resort set to provide around 100 construction jobs and employment for up to 100 staff on completion.

Within Western Australia, State Planning Policy 2.6: State Coastal Planning Policy (SPP2.6; WAPC, 2013) provides guidance on the assessment of coastal hazard risks for assets or infrastructure located in close proximity to the coast. The objectives of SPP2.6 are wide ranging, however a key component of the policy is to provide focused areas of the coast for use by the public to access and enjoy the coastal amenity that is inherent in the Western Australian lifestyle. This includes allowing for tourism developments at appropriate locations through provision of access to the foreshore reserve in these areas. Table 1.1 provides further details of how the proposed redevelopment of the Resort is consistent with the stated objectives of SPP2.6.

Table 1.1 Alignment of Proposed Development with SPP2.6 Objectives

SPP2.6 Policy Objectives	Details of Proposed Resort Redevelopment
<p>1. Ensure that development and the location of coastal facilities takes into account coastal processes, landform stability, coastal hazards, climate change and biophysical criteria.</p>	<p>The Resort site is already significantly developed and has been in place for approximately 40 years. Over this time there is significant documented evidence that indicates that this section of coastline is stable.</p> <p>The proposed redevelopment includes only a minor additional built form of 12 <u>relocatable</u> cabins adjacent to the foreshore.</p>
<p>2. Ensure the identification of appropriate areas for the sustainable use of the coast for housing, tourism, recreation, ocean access, maritime industry, commercial and other activities.</p>	<p>The Resort and caravan park has existed for over 40 years in its current location and is strongly supported by key stakeholders including State and Local Governments, DPaW, the Aboriginal Community and the Denham residential and commercial community. The resort is already used for; tourism, recreation, ocean access, maritime industry, commercial and other activities.</p>
<p>3. Provide for public coastal foreshore reserves and access to them on the coast.</p>	<p>As above at (2).</p> <p>This site is extensively used by 100,000 local visitors, domestic and international tourists per annum with a long history of successful public access and cooperation with neighbouring managing authorities including the Shire and DPaW, who manage the foreshore reserve and who are strongly supportive of this project.</p>
<p>4. Protect, conserve and enhance coastal zone values, particularly in areas of landscape, biodiversity and ecosystem integrity, indigenous and cultural significance.</p>	<p>The resort enjoys the strong support of DPaW, the Shire and the local Aboriginal Community. The redevelopment includes, inter alia;</p> <ul style="list-style-type: none"> • the construction of the Malgana Aboriginal Cultural Centre; • accommodation for national and international dolphin researchers; • ablution and end of trip facilities for DPaW's day visitors; and • is supporting the redevelopment of DPaW's Dolphin Discovery Centre. <p>Discussions are currently underway for the resort to assume daily operational management of DPaW's visitor facilities.</p>

The guidance on the assessment of coastal hazard risk is provided within SPP2.6 in the form of a methodology to assess the potential extent of coastal hazard impacts, as well as for the development of a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP). Further details in this regard are also provided in the CHRMAP Guidelines (WAPC, 2014).

The key requirement of a CHRMAP is to develop a risk based adaptation framework for assets or infrastructure that could be at risk of impact by coastal hazards over the relevant planning timeframe. Importantly, the balance of these risks needs to be considered with reference to the

expected lifetime of the asset/infrastructure. In this regard, the requirements for tourism development within the Resort will be different to that which would be required for freehold residential development, for example. This is reflective of both the less critical nature, and shorter planning horizon (or time to asset replacement) of the proposed tourist infrastructure.

To provide guidance regarding the risks posed by coastal hazards, RAC engaged specialist coastal and port engineers, M P Rogers & Associates Pty Ltd (MRA), to complete a CHRMAP for the Resort. This CHRMAP covers the following key items.

- Establishment of the context.
- Coastal hazard assessment.
- Risk analysis and evaluation.
- Risk management and adaptation planning.
- Implementation Plan.

Details regarding each of these items will be provided in this report.



Figure 1.1 Location of the Resort

2. Context

2.1 Purpose

The potential vulnerability of the coastline and the subsequent risk to the community, economy and environment needs to be considered for any coastal development. Whilst this is important for the Resort, which is located immediately behind the coastal dunes and beach at Monkey Mia, it must be noted that it is an existing development and all further development will be occurring landward of the existing development and/or will be subject to mitigation management practices.

SPP2.6 requires that the responsible management authority prepares a CHRMAP where an existing or proposed development may be at risk from coastal hazards over the planning timeframe. The main purpose of the CHRMAP is to define areas of the coastline which could be vulnerable to coastal hazards and to outline the preferred approach to the monitoring and management of these hazards where required.

A CHRMAP can be a powerful planning tool to help provide clarity to existing and future developers, users, managers or custodians of the coastline. This is done by defining levels of risk exposure, management practices and adaptation techniques that the management authority considers acceptable in response to the present and future risks posed by coastal hazards.

Specifically, the purpose of this CHRMAP is as follows.

- Confirm the specific extent of coastal hazards.
- Outline the risks associated with the Resort and how this risk may change over time.
- Establish the basis for present and future risk management and adaptation, which will be used to inform the development of the masterplan for the redevelopment of the site.
- Provide guidance on appropriate management and adaptation planning for the future, including monitoring.

2.2 Objectives

The key objective of this plan is to assess the risks associated with the redevelopment of the Resort. Once these risks have been assessed, adaptation strategies can be developed to help mitigate the risks where necessary. These need to be considered in the context of the risks posed to existing assets, as any future mitigation strategies for existing assets may impact the proposed redevelopment.

Whilst the risks of coastal hazards are to be considered for different timeframes, the future behaviour of the shoreline could be variable for a variety of reasons. As a result, the requirement to consider the implementation of future adaptation strategies should be informed by an ongoing coastal monitoring regime. A recommended monitoring regime is included within this report.

2.3 Scope

The *CHRMAP Guidelines* (WAPC, 2014) provide a specific framework for the preparation of a CHRMAP. This is outlined in the flowchart presented in Figure 2.1 which shows the risk management and adaptation process.

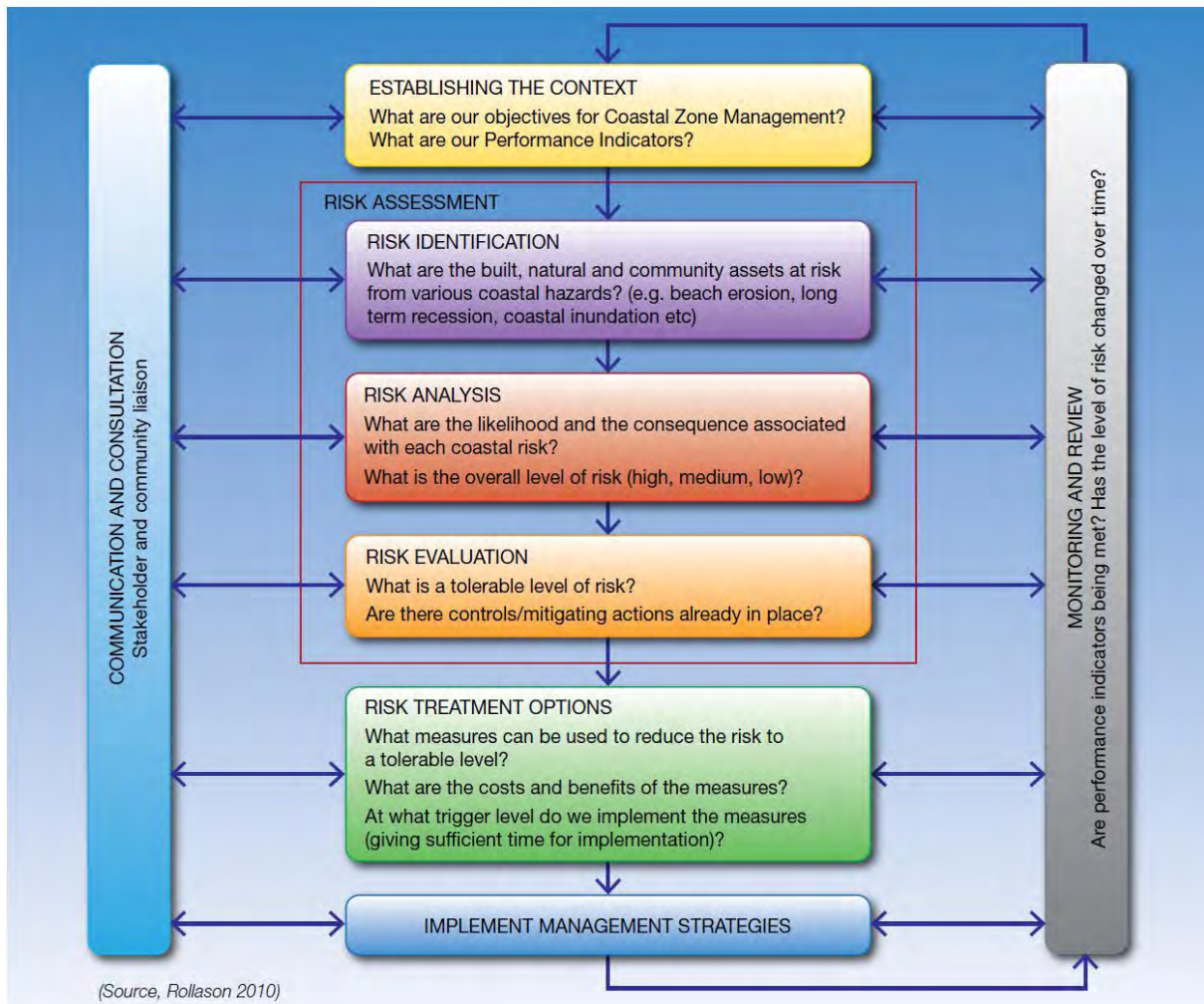


Figure 2.1 Risk Management & Adaptation Process Flowchart (WAPC 2014)

As presented in the flowchart, the process for the development of a meaningful CHRMAP requires a number of fundamental inputs. These inputs enable the assessment and analysis of risk, which should ultimately be informed by input received from key stakeholders, to help shape the subsequent adaptation strategies.

Whilst Monkey Mia is a tourist location, it has no long term residents except those that work in the resort and there are also no assets vested in the community, with all assets owned by RAC under what will become a 99 year lease. Notwithstanding, the engagement process has focused on the following key agencies/entities.

- Shire of Shark Bay.
- Department of Parks and Wildlife.
- Main Roads WA.
- Department of Aboriginal Affairs / Yamatji Marlpa, Aboriginal Corporation.
- Department of Fire and Emergency Services.
- Department of Lands.

- Shark Bay World Heritage Organisation.
- Community members within the Shire of Shark Bay.

Throughout this consultation process it has become apparent that the project enjoys strong stakeholder support, particularly from the State and Local Government, the aboriginal community and DPaW, as the managers of the adjacent land area.

The management of coastal hazard risk associated with the Resort will be required to present a proposed adaptation plan that is acceptable to the stakeholders. As a result, the approach that has been taken for this plan is to develop a management methodology that allows for flexibility into the future.

The development of the adaptation plan will be informed by the assessment of the coastal erosion and inundation hazards. Assessment of the coastal erosion hazards and coastal inundation will be presented within Section 3 of this report.

This CHRMAP will consider the potential risks posed by coastal hazards over a range of timeframes covering a 100 year planning horizon to the year 2115. This planning horizon is required by SPP2.6 for development on the coast.

Intermediate planning horizons will also be considered in order to assess how risk profiles may change in the future and to inform the requirement for adaptation strategies. Intermediate planning horizons that will be considered are below.

- Present Day.
- 25 years to 2040.
- 50 years to 2065.
- 75 years to 2090.

Based on the results of the risk assessment, risk mitigation strategies will be developed, where required, in order to provide a framework for future management. However, it is important to realise that the risk assessment will be based on the outcomes of the coastal vulnerability assessment, which, by their nature, are justifiably conservative. This is due to the uncertainty around coastal dynamics when predicting impacts over long timeframes. As a result, the framework for future risk management strategies should be considered to be a guide of future requirements.

The actual requirement for implementation of these management actions should ultimately be informed by a coastal monitoring regime. The purpose of this coastal monitoring regime would be to identify changes in the shoreline or sea level that could alter, either positively or negatively, the risk exposure of the proposed infrastructure. A recommended coastal monitoring regime is included within implementation plan presented within Section 8 of this report.

2.4 Site

Monkey Mia is located on a prominent foreland that protrudes into Shark Bay in the lee of a line of shore parallel and offshore sand flats (Short, 2006). The shore parallel sand flats narrow from around 1 km wide at Cape Rose, 9 km to the north, to around 50 m wide at the tip of Monkey Mia, where the jetty is located. The Resort is located adjacent to the shoreline on the northern side of

the foreland. The deeper water off the foreland is one reason why the dolphins can easily reach the shore, one of the few locations of this type within Shark Bay (Short, 2006). It is also the reason the Monkey Mia foreland was established early on as a pearling and fishing camp and boat launching area.

Adjacent to the Resort, the beach morphology is generally characterised by a 10 to 20 m wide beach backed by a low dune. A photographs of the shoreline in front of the existing Resort is provided in Figure 2.2.



Figure 2.2 Shoreline Fronting the Existing Resort

The low dune fronting the proposed Resort expansion is shown in Figure 2.3.



Figure 2.3 Dune Fronting the Proposed Resort Expansion

The Resort site is separated from the coastline by a dune reserve with a width of approximately 15 to 40 m. The elevation of the dune reserve is variable with a foredune height of approximately 2.5 mAHD and a height of the main dune ridge of around 3 mAHD. The foredune and main dune ridge are separated by swales with elevations down to around 2 mAHD. A plateau of around 3 mAHD exists on the southern side of the Resort, generally along the line of Monkey Mia Road. Figure 2.4 illustrates the change in elevation over the dune reserve, as well as over the site.

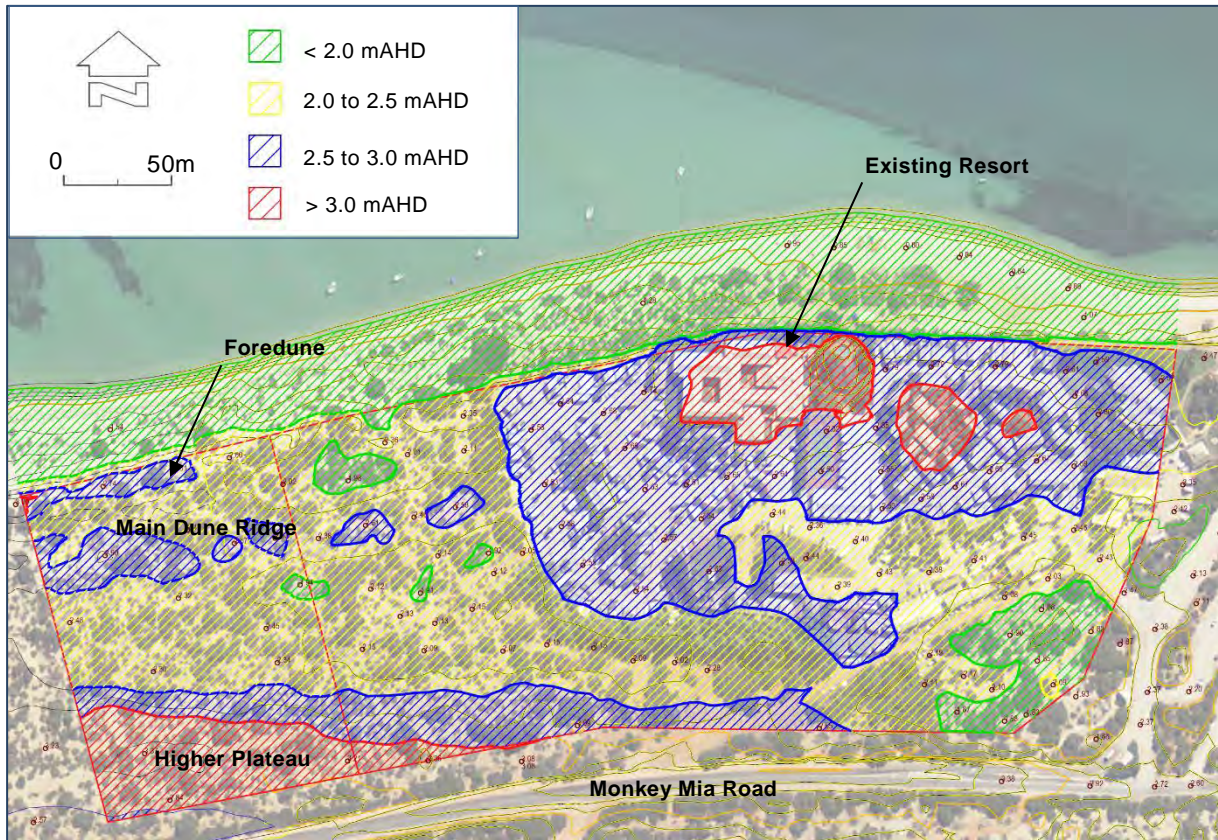


Figure 2.4 Site Elevations Plan

2.5 Stakeholder & Community Engagement

The proposed development at Monkey Mia is very different to the type of development that would normally require a Structure Planning process. One of the key differences is that Monkey Mia does not have a resident population, with the “local community” comprised of either patrons/tourists, resort staff and key statutory stakeholders as noted above. For this reason, consultation efforts have been focused on key stakeholders (such as government agencies) as a proxy for providing a view on the proposed development on behalf of the broader community of the State. Tourists utilising the resort have long called for an improvement to the aging facilities.

RAC and its project team have engaged extensively with government agencies and the local community during the preparation and lodgement of the Structure Plan for the Resort. A summary of the comments received from each stakeholder group is provided in Table 2.1. More detailed information surrounding the comments is provided in Appendix B.

The consultation for this project is ongoing, involving regular briefings to ensure all agencies and the community are fully briefed and aware of the redevelopment proposal as it progresses. Consultation shall continue when the Development Application is assessed by the Shire. This shall be subject to a separate referral and advertising process. As the subject site does not abut any residential or community development there are no immediate impacts from the proposed development.

The project has received strong community support, with the Shire of Shark Bay recently approving the proposed Structure Plan at its Council meeting on 22 February 2017. The Council’s decision was unanimous in favour of the proposal (refer to Appendix A – Council Resolution). The

Shire recognises the critical importance of this tourist node at Monkey Mia for Denham and the broader Shark Bay community and is supportive of the proposed cabins being located forward of the present day risk line (as will be presented in Section 3 of this report):

(ii) Monkey Mia is a well established, world known, vital tourist development within the Shire, which warrants special variation of State Planning Policy 2.6. Future development is likely to be in a transportable form that can readily relocated as part of any planned managed retreat, in the event of future coastal impact. (Council Resolution 22.02.17)

In summary, the project enjoys strong support from State, Shire, public and other statutory stakeholders including DPaW and the aboriginal community. Tourist guests and visitors have long called for this redevelopment. This is highlighted by the following key points.

- The project has unanimous Council support, having been approved at first presentation to council.
- No public submissions opposed to the development were received during the public advertising of the structure plan.

Table 2.1 Stakeholder & Community Engagement Summary

Stakeholder	Comments
<p>Shire of Shark Bay Council and Staff:</p> <p>All Shire of Shark Bay Councillors</p> <p>Paul Anderson – Chief Executive Officer</p> <p>Liz Bushby – Consultant Planner to the Shire.</p>	<p>Proposed coordinated redevelopment of the resort through the Structure Plan, which includes the proposed cabins forward of the present day boundary.</p>
<p>Shire of Shark Bay Community</p>	<p>The proposed redevelopment has been advertised to the Shire of Shark Bay community in accordance with the Shire’s advertising requirements (advertised for 28 days). No objections received to the proposal.</p>
<p>Yamatji Marlpa, Aboriginal Corporation</p>	<p>Adhering to the Native Title Agreement and complying with the Aboriginal Heritage Act 1972. No objections raised to the cabin development.</p> <p>Part of the project is the Malgana (Aboriginal) Interpretive Centre, constructed by RAC within the resort, which is key to the Native Title Agreement however will not be provided without the redevelopment occurring.</p>
<p>UNESCO World Heritage</p> <p>Shire President Cr Cheryl Cowell</p>	<p>Briefing regarding Structure Plan and future development.</p> <p>No objections raised to the cabin development.</p> <p>Comments provided:</p> <p><i>The Committee endorses the Royal Automobile Club's environmental policy, which acknowledges responsibility to protect the natural environment, mitigate negative impacts and pursue continuous improvement for more sustainable operations.</i></p> <p><i>It also supports the proposal to expand the Monkey Mia Dolphin Resort, with the expectation that any environmental impacts will be clearly articulated and measures taken to reduce and/or prevent these within the proposal area.</i></p>

Table 2.1(cont.) Stakeholder & Community Engagement Summary

Stakeholder	Comments
<p>Department of Parks and Wildlife</p> <p>Rod Quartemain – Policy and Tourism Branch Manager</p> <p>Steve Nicholson – District Manager</p> <p>Shawn DeBono – Manager Regional Parks Unit</p> <p>Nigel Sercombe – Regional Manager Shark Bay</p> <p>Sue Hancock – Regional Leader Parks and Visitor Services, Midwest Region</p>	<p>Briefing regarding Structure Plan and future development.</p> <p>Comments provided:</p> <p>In principle Parks and Wildlife is highly supportive of well managed and well considered nature based tourism ventures within the Shark Bay World Heritage Property, and acknowledges the significant contribution these ventures can make to enhancing the understanding, appreciation and enjoyment of the World Heritage values.</p> <p>The department has a strong interest in continuing to work collaboratively with RAC and the Shire-of Shark Bay over coming years with regard to the development of appropriate, integrated, complimentary and seamless visitor spaces and infrastructure that will continue to deliver a world class experience for visitors to Monkey Mia and the broader Shark Bay World Heritage Property.</p>
<p>Department of Lands</p> <p>Minister for Lands</p> <p>Minister of Environment, OEPA</p> <p>Federal Department of Environment and Energy.</p>	<p>Briefing regarding Structure Plan and future development.</p> <p>No objections raised to the cabin development.</p> <p>Ministerial (Environment) Approvals received as contained in Ministerial Statement 709 and 919 – “Expansion of Monkey Mia Dolphin Resort” with “Substantial Commencement formally acknowledged by OEPA following the recent \$6,500,000 existing investment in the new Waste Water Treatment plant and associate infrastructure constructed in 2013 to facilitate the redevelopment.</p>
<p>Main Roads WA</p> <p>Mark Wilson</p>	<p>Requirements for Traffic Impact Assessment and achieving suitable accessibility into site. No objections to proposal subject to conditions.</p> <p>Main Roads have proactively assisted with additional fire mitigation measures.</p>

2.6 Existing Planning Controls

The proposed redevelopment of the Monkey Mia Dolphin Resort had regard for a number of planning requirements and/or considerations. Details of these are provided within this sections.

2.6.1 Land Tenure & Ongoing Management

Reserve 40727 (Lot 130) is crown land vested to the Shire of Shark Bay under a Management Order. There is a 99 year lease agreement with RAC Tourism Assets Pty Ltd (RAC), expiring in April 2114. Lot 501 to the west is crown land owned by the State of Western Australia. It has no vesting and is leased to RAC Tourism Assets Pty Ltd. The Lease from State obligates the Lessee (RAC) to redevelop the resort by the “Deadline for Practical Completion”. If the resort is not

redeveloped "substantially in accordance with the Development Plans" as approved by the Minister for Lands' lease, RAC will forfeit its 99 year tenure which it has purchased. It is noted that the approved "Development Plans" appended to the lease show 24 beach side units as opposed to the 12 units now being proposed by RAC.

The terms of the lease ultimately provide protection to the State (in the context of insurance, make good, no liability). The terms of the lease are provided in Appendix C – Lease Extracts. In particular the following clauses should be noted.

"5.15 Insurance

- (a) The Lessee is responsible and liable for all improvements to be constructed on or brought onto the Leased Premises and must effect, maintain and keep or ensure any of the Lessee's employees, contractors or agents, if relevant, effects, maintains and keeps current, as required:*
 - (i) A contractor's risk policy to cover all works undertaken or to be undertaken in relation to the construction of the Improvements, against claims for loss, destruction or damage of or to property, and*
 - (ii) A policy of insurance for reinstatement or replacement of each Improvement (including plate glass) against loss or damage including by fire, flood, storm, tempest, rainwater, cyclones, explosions, smoke or lightning to its full insurable value."*

"5.18 Destruction of the Leased Premises

- (a) If the Leased Premises or any part of the Leased Premises is so destroyed or damaged as to require major building, the Lessee must within a reasonable time from the date of destruction or damage rebuild the Leased Premises to its original state and condition to the reasonable satisfaction of the Lessor, but subject to clause 5.18(b).*
- (b) Unless otherwise agreed by the Lessor, if the Leased Premises or any part of the Leased Premises is so destroyed or damaged as to require major rebuilding and the Lessee is unable to claim full reinstatement costs through its insurance policies, then the Lessee must expend all insurance monies received on rebuilding the Leased Premises as near as possible to its original state and condition to the reasonable satisfaction of the Lessor (for clarity, the Lessee is not required to undertake any rebuilding to the extent that the insurance monies received are not sufficient to fund that rebuilding)."*

The above terms of the lease very clearly set out the requirements in terms of future management and liabilities for RAC. RAC are fully cognisant of these terms and are committed to the ongoing management of risk and the acceptance of this risk as part of the future redevelopment of the site. This acknowledgement is discussed further in later stages of this report, however the acknowledgement, in addition to the acceptance of the lease conditions, is formally presented in Appendix D.

2.6.2 Strategic Planning Considerations

The Western Australian Planning Commission has recently released its Draft Gascoyne Coast Sub-Regional Strategy. The Monkey Mia Dolphin Resort is identified as a 'Tourism Centre'. According to the Strategy:

“Tourism centres have a small population base and their local economies are focused on tourism. These centres experience significant fluctuations in population due to the seasonal influxes of tourists; and as such are generally service and experience oriented with some associated retail functions. Despite sitting on the same level in the settlement hierarchy as Sub- regional centres, Tourism centres generally contain minimal civic and social infrastructure as they predominantly service an itinerant population base.”

The Strategy sets out three strategic directions in the context of encouraging tourism:

- Encourage the expansion and diversification of the tourism sector.
- Supporting the development of strategic and sustainable tourism and recreation infrastructure and services to cater for an anticipated increase in demand.
- More intensive, higher-impact tourism development should be concentrated in the existing regional and sub-regional centres of Carnarvon, Exmouth and Denham; and to a lesser degree in the tourism centres of Coral Bay and Monkey Mia.

The Shire of Shark Bay Local Tourism Strategy reflects the State’s direction, where the document states:

“The combination of all the attributes at Monkey Mia result in it being considered a “Strategic Tourism Site” and that its priority should always be to cater to tourist visitation, accommodation and activity. There is no justification to allow permanent residential use other than when associated with tourist activity for operators and staff.’

The Shire of Shark Bay’s Local Planning Strategy provides strategic planning direction for the next 15 years. The Strategy also recognises the potential for the expansion of the MMDR:

“To the immediate west of the Monkey Mia Dolphin Resort is undeveloped land also within the same ‘Special Use’ zone consisting of Lot 501 which is unallocated crown land and Reserve 49107. There is potential for more tourist uses subject to meeting environmental requirements. The land could also cater for any future expansion of Monkey Mia.”

The proposed Structure Plan is therefore consistent with the overarching state and local government strategic framework, which supports the development of this strategic tourism node. This aligns with the Development and Settlement Policy measures of SPP 2.6 referred to under 5.2 (iii):

“Ensure that when identifying areas suitable for development, consideration is given to strategic sites for coastal access and commercial development that is demonstrably dependent on a foreshore location...”

The Shire of Shark Bay Council’s approval of the Structure Plan on 22 February 2017 confirmed its position that Monkey Mia is considered a “...well established, world known, vital tourist development within the Shire, which warrants special variation of State Planning Policy 2.6.

Future development is likely to be a form that can be readily relocated as part of any planned managed retreat, in the event of coastal impact.”

2.6.3 Existing Planning Framework and Ministerial Approvals

Shire of Shak Bay Local Planning Scheme No.3

The majority of Reserve 40727 is zoned ‘Special Use’ under the Shire of Shark Bay Local Planning Scheme No 3 (LPS3). There are specific land use controls and conditions applicable to Monkey Mia listed in Schedule 4 of the Scheme.

Permissible land uses include:

- motel;
- short term accommodation;
- special facility;
- park home;
- caravan park;
- reception centre;
- residential building;
- office;
- shop;
- restaurant;
- carpark;
- staff accommodation;
- power generation plant; and
- desalination plant.

LPS3 also lists special conditions including that development be generally in accordance with an Outline Development Plan. The term Outline Development Plan is superseded by the term ‘Structure Plan’. With the introduction of the *Planning and Development (Local Planning Schemes) Regulations* in 2015, the existing Outline Development Plan provisions of LPS 3 are now superseded by the deemed provisions (Schedule 2) introduced under the Regulations, which include provisions relating to Structure Plans. The Structure Plan has been prepared in this context.

Ministerial Approvals

The Minister for Lands approved the expansion of the Resort project through a previous Master Plan prepared in 2013, which formed part of the lease arrangement. The Master Plan shows redevelopment along the northern boundary of the Resort site. Refer to Figure 2.5 below.

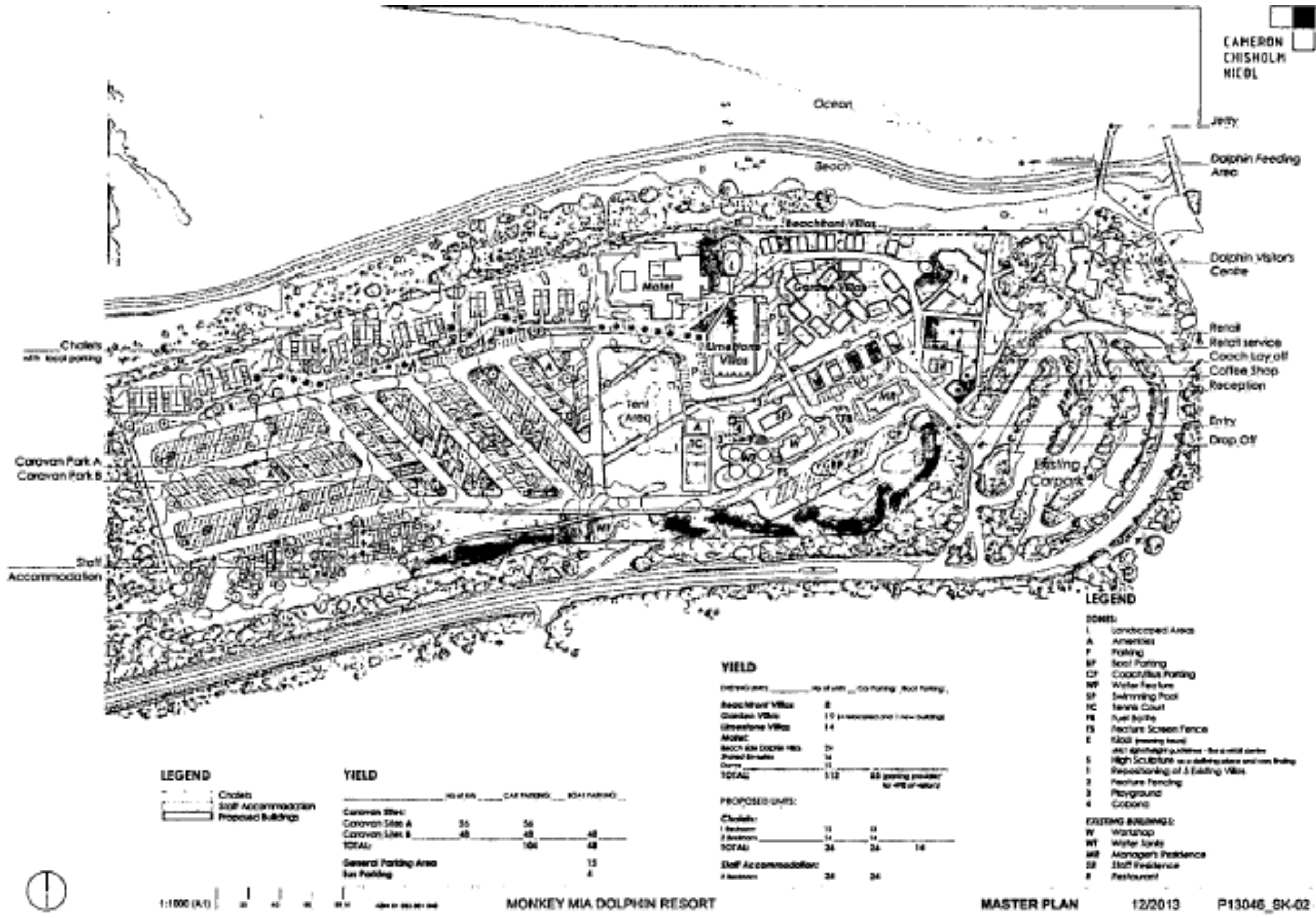


Figure 2.5 2013 Ministerially Approved Master Plan

Approval has also been granted under the Environmental Protection Act to expand the Monkey Mia Dolphin Resort through the issue of Ministerial Statement No.709 on 28 December 2005. This was issued to the former proponent Monkey Mia Dolphin Resort Pty Ltd. An approval extending the period for substantial commencement was granted under Ministerial Statement No. 919 on 18 December 2012.

The Office of the Environmental Protection Authority on 8 April 2015 confirmed that the project had substantially commenced through the completion of the waste water treatment plant. A Section 38(6) – Notice of Nomination as Proponent was issued by the Minister for Environment on 24 June 2016 to nominate the RAC as the proponent responsible for the expansion of the Monkey Mia Dolphin resort.

Environmental management planning documentation has been prepared by RAC's environmental consultant. The following documentation has been lodged as part of the Structure Plan:

- Construction Management Plan;
- Drainage Management Plan;
- Nutrient & Irrigation Management Plan;
- Foreshore Management Plan;
- Compliance Assessment Plan; and
- Environmental Management System.

The various management plans require approval under the conditions of the Ministerial Statement No. 709.

2.6.4 Environmental Requirements

Bushfire Prone Areas

Portions of the site are located within a designated bushfire prone area. In accordance with State Planning Policy 3.7 and the associated guidelines, the Structure Plan's internal road and tourist accommodation layout has been influenced significantly by the outcomes of the Bushfire Attack Level contour plan and associated Bushfire Management Plan. The useable footprint of the site is also compromised by a 15 metre wide vegetation strip which is to be protected (under Ministerial Statement No.709). This is located along the southern boundary of the subject site, adjacent to Monkey Mia Road.

Flora and Vegetation

There are two landform-vegetation units found within the proposed resort expansion area being the Coastal Sandplain and Coastal Dunes. The Coastal Sandplain unit is the white sandy flat area located between the coastal dunes and the Red Sandplain. The vegetation is dominated by *Acacia sclerosperma*, *Scholtzia* spp. and *Rhagodia preissii* with smaller depressions containing *Halosarcia* spp., *Frankenia pauciflora* and *Sporobolus virginicus*. The Coastal Dune unit forms a narrow strip adjacent to the beach and consists of sparse shrubland and spinifex. It is dominated by *Acacia sclerosperma*, *Spinifex longifolius*, *Halosarcia* spp. and *Sporobolus virginicus*.

The Monkey Mia Reserve Management Plan notes that there is only one saltpan (birrida) in the Monkey Mia reserve, near its western boundary, and that it contains saltbush, sapphires. Impacts

to clearing are managed through MS 709 conditions and through the implementation of the Environmental Management System.

Fauna

Fauna surveys were undertaken in accordance with the Environmental Protection Authority Guidance Statement 56. The report and recommendations of the Environmental Protection Authority (Bulletin 1165) identified potential impacts to fauna was limited to the Thick-billed Grass Wren. Thick-billed Grass Wren has recently been delisted from the EPBC Act and is classified as Priority 4 species under the Wildlife Conservation Act 1959. Priority 4 species are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.

Potential impacts to the Thick-billed Grass Wren (western sub-species) are managed through MS 709 Conditions and the implementation of the Environmental Management System.

Foreshore Area

The expansion of the Monkey Mia Dolphin Resort is not expected to directly impact upon the surrounding foreshore area. Development will be set back from the beach, and formalised access points will be created at several accommodation nodes. The provision of formalised access points will reduce the potential for erosion and loss of coastal landform stability. The implementation of the following management plans will be undertaken to mitigate these potential impacts:

- Foreshore Management Plan;
- Construction Environmental Management Plan; and
- Drainage Management Plan.

Opportunities to minimise the potential impacts to the foreshore reserve as a result of development are addressed through the Foreshore Management Plan prepared to satisfy MS 709.

2.7 Key Assets

The proposed redevelopment of the Monkey Mia Dolphin Resort is being prepared with the specific requirement to not impact the social and environmental values of the area, as to do so would be an unacceptable outcome to key stakeholders and would detract from the tourism potential for the site. As a result, the preservation of social and environmental values are considered to be inherent in the development of the redevelopment plan.

It has therefore been identified that, consistent with the lease agreement and planning and environmental requirements, a coastal adaptation strategy will need to be prepared to ensure that there is no impact on the social and environmental values of the area. This will require a coastal adaptation strategy that, pending the results of the coastal hazard assessment, ensures the resorts facilities are appropriately designed and managed to ensure no adverse impacts. In this regard, whilst the key social and environmental assets are discussed below, the planning for the development has already addressed the risks associated with these assets. Further details in this regard will be discussed below, as well as in later sections of this report.

2.7.1 Social Assets

The Monkey Mia Dolphin Resort itself is a key social asset and a domestically and internationally significant tourist destination. Expansion of the Resort will ultimately make this facility more

available to visitors, increasing tourism patronage – which is consistent with the Shire and State’s current objectives. The popularity of this asset is undeniably linked to the natural beauty of the adjacent beaches and the ability to interact with the dolphins. Whilst these are both considered to be environmental assets, the social importance of these cannot be underestimated. In this regard both of these assets must be preserved into the future. The planning for the proposed development ensures that this is the case.

Equally important is the cultural significance of the site. As outlined in the stakeholder consultation, whilst no specific culturally significant locations have been identified on site, RAC will continue to work with the Malgana People to ensure that any Aboriginal heritage issues are managed appropriately. In this regard, as there are no specific locations across the site further consideration of cultural sites is not possible within this report.

2.7.2 Environmental Assets

Section 2.6.4 provided details of the environmental requirements across the site. However, from a coastal perspective the most critical issue is the preservation of the adjacent beaches and the protection of the dolphins and other marine fauna. As stated previously, it is inherent within this proposal that a beach be maintained and that there be no impact on the dolphins. For this reason management and adaptation strategies have been proposed to circumvent any issues that could arise. Full details of these strategies will be discussed in later sections of this report, however, the strategies include:

- installation of shut off valves on services to prevent any potential leakage during severe coastal events;
- use of robust modular construction techniques to enable built form to be quickly relocated should the need arise; and
- recognition that facilities may need to be migrated landward in the future to avoid risks associated with coastal hazards.

Given that the above actions will be taken, it should be noted that the proposed project is expected to have many positive impacts on the local environment. Most significantly, the expansion of the Monkey Mia Dolphin Resort will increase the patronage of DPaW’s visitors’ centre which will increase the exposure of the dolphin research program and will also contribute additional funds to the research. Both of these are key objectives of DPaW and are a key reason behind their support of the project.

Further, the resort will continue to provide accommodation to the national and international dolphin researchers that have partnered with the resort for many years. The project includes a substantial upgrade to the researchers’ accommodation, provided by the RAC.

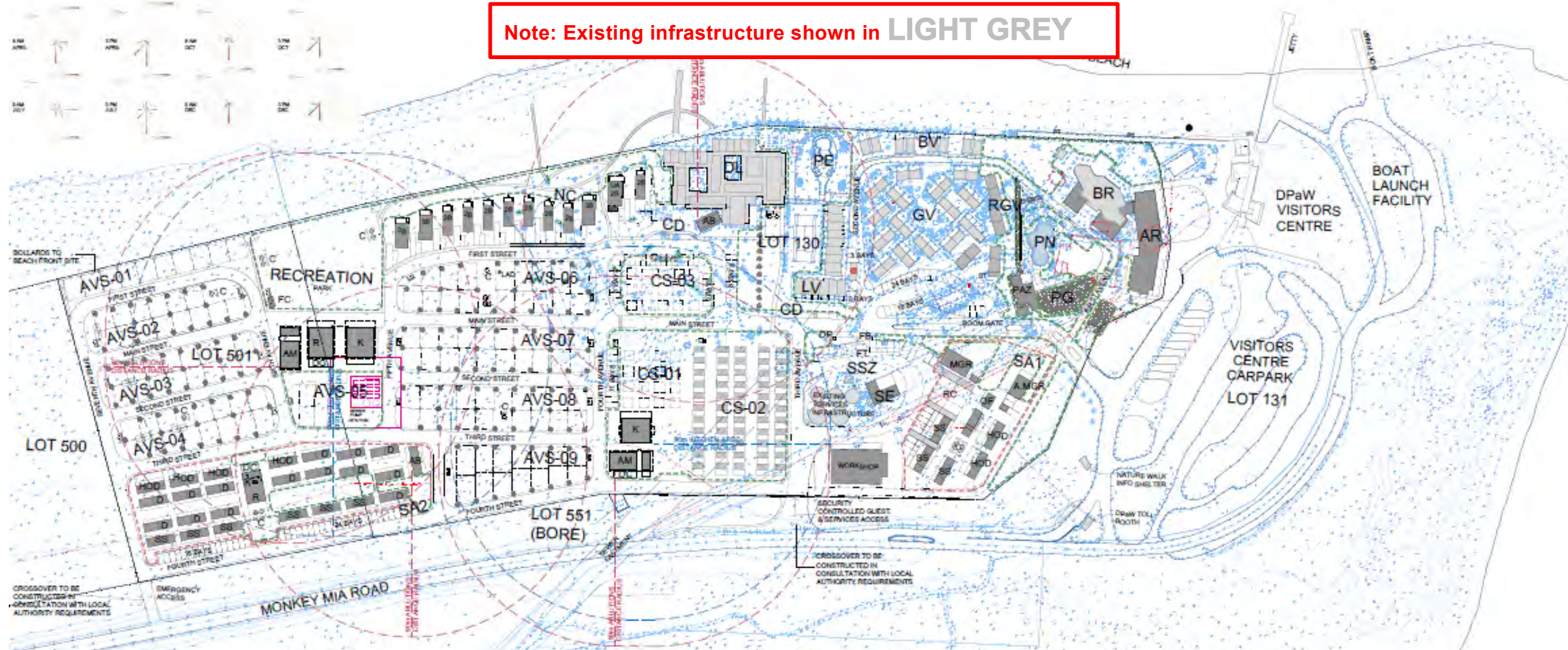
2.7.3 Economic Assets

A preliminary masterplan for the redevelopment of the Resort is presented in Figure 2.6. This preliminary masterplan has been included to show the types of assets that are expected on the site. It should be noted that the layout for the proposed development could change slightly from that shown in Figure 2.6. Nevertheless, any such changes to the layout would only be completed if the changes were consistent with the outcomes and recommendations of this CHRMAP.

The key economic assets (existing and proposed) within the Resort have been summarised in Table 2.2. As the management of social and environmental assets are inherent within the proposal, the risk assessment will focus on these assets. The purpose of this process is twofold.

First, to assist with the planning for the redevelopment of the Resort and the understanding of the financial risk exposure, and second, to help inform risk management strategies where required.

Note: Existing infrastructure shown in LIGHT GREY



LEGEND

EXISTING BUILDINGS	FC FISH CLEANING STATION	SA2 STAFF ACCOMMODATION AREA	CS CAMPING SITES (MIN SIZE 25m ² NOMINAL 50m ² AND MINIMUM REGULATION SEPARATION SHOWN. SITES MAY BE LARGER OR AGGREGATED FOR LARGER GROUPS AT REDUCED YIELD) SITE SERVICES ZONE (LAUNDRY, WORKSHOP ETC)
BR BOUGHSHED RESTAURANT	NC NEW CABINS	MGR MANAGER'S ACCOM.	SSZ SITE SERVICES ZONE (LAUNDRY, WORKSHOP ETC)
LV LIMESTONE VILLAS	2B 2 BED - NEW CABINS	A.MGR ASSISTANT MANAGER'S ACCOM.	FB FUEL BOWSER
GV GARDEN VILLAS	3B 3 BED - NEW CABINS	HD HEADS OF DEPARTMENT ACCOM.	FT FUEL TANK
BV BEACH FRONT VILLAS	UA 2B ACCESSIBLE 2 BED - NEW CABINS	PS PERMANENT STAFF ACCOM.	CD COACH DROP OFF
DL DOLPHIN LODGE	AD ADMINISTRATION / RECEPTION POOL AMENITY ZONE	RS RESEARCH STAFF ACCOM.	DP DUMP POINT
B1 - BEACHVIEW 1 BED	BOH BACK OF HOUSE	RDV RELOCATED GARDEN VILLAS	ST STORE RM
SE - SHARED ENSUITE 2 BED	M MALGANA CENTRE	AVS ACCOMMODATION VEHICLE SITES	RC RELOCATED CARAVANS (EXISTING)
D4 - 4 BED DORM	MR MEETING ROOM	AVSE ACCOMMODATION VEHICLE SITES WITH ENSUITES	OF OFFICE
D8 - 8 BED DORM	PE POOL EXISTING	AB RELOCATED EXISTING ABLUTION BLK	AR ARRIVALS BUILDING
DMA - DUTY MANGER'S ACCOMMODATION	PN PLAY GROUND	SE SERVICES ENCLOSURE	
	PG TOURIST RETAIL		
	TR CONVENIENCE RETAIL		
	CR STAFF ACCOMMODATION AREA		
	SA1 STAFF ACCOMMODATION AREA		

SYMBOL LEGEND

EXISTING BUILDINGS / INFRASTRUCTURE	GROUND WATER MONITORING WELL LOCATION
NEW BUILDINGS / REFURBISHED BUILDINGS	MACERATOR PIT
PROPOSED DP&W LAND TO BE MODIFIED	LANDSCAPED AREA
RELOCATION	STAFF AREA
DEMOLITION	LOCAL AUTHORITY DISCRETION REQUIRED FOR 90m RULE (CPOGR SCHEDULE 19.1) (2 NEW BEACHFRONT AND AVS-04 SITES)
ENSUITES	

STAFF ACCOMMODATION MODULES

[Symbol]	3 ROOM FULL MODULE - HEADS OF DEPARTMENT
[Symbol]	2 ROOM DOUBLE MODULE - DOUBLE
[Symbol]	1 ROOM SINGLE MODULE - SEASONAL & DP&W RESEARCH
[Symbol]	2 ROOM DOUBLE HALF MODULE - PERMANENT

LOCATIONS INDICATIVE ONLY TO INDICATE YIELD

YIELD TABLE

GUEST ACCOMMODATION	
ACCOMMODATION VEHICLE SITES (ALL NEW) 126	
AVS POWERED STANDARD	(102)
AVSE POWERED STANDARD WITH ENSUITES	(13)
AVS POWERED STANDARD ON BEACH FRONT	(11)
CAMPING SITES 90	
CS NEW UNPOWERED CAMP SITES	90
BUILT ACCOMMODATION 124	
DL EXISTING DOLPHIN LODGE	52
B1 BEACHVIEW 1 BED	24
SE SHARED ENSUITE 2 BED PER ENSUITE	(18)
D8 DORMS 8 BED UNITS	(7)
D4 DORMS 4 BED UNITS	(5)
LV EXISTING LIMESTONE VILLAS	14
BV EXISTING BEACH FRONT VILLAS	8
GV EXISTING DUPLEX GARDEN VILLAS	36
RDV RELOCATED DUPLEX GARDEN VILLAS	8
NC NEW CABINS ON BEACHFRONT - 2 BED (INCL. 1 ACCESSIBLE UNIT)	9
NEW CABINS ON BEACHFRONT - 3 BED	3
GUEST ACCOMMODATION SUBTOTAL	340

STAFF & DP&W RESEARCH ACCOMMODATION (ALL NEW U,O,N)

SA1* STAFF ACCOMMODATION	24
MGR MGR'S RESIDENCE	(1)
A.MGR ASST. MGR'S RESIDENCE	(3)
HD HEADS OF DEPARTMENT - FULL MODULE	(2)
RS RELOCATED CARAVANS - EXISTING	(5)
SS SEASONAL STAFF - QUARTER MODULE	(12)
OF OFFICE - (HALF MODULE - 2 ROOM)	(2)
SA2* STAFF ACCOMMODATION	55
HD HEADS OF DEPARTMENT - FULL MODULE	(2)
PS PERMANENT STAFF - (HALF MODULE)	(28)
SS SEASONAL STAFF - (QUARTER MODULE)	(24)
DMA EXISTING DUTY MANGER'S RESIDENCE (DOLPHIN LODGE)	1
STAFF & DP&W RESEARCH ACCOMMODATION SUBTOTAL	80
* ALLOCATION OF ACCOMMODATION IS INDICATIVE ONLY	
GUEST & STAFF ACCOMMODATION TOTAL ON COMPLETION	420



DRAWING ISSUED FOR DEVELOPMENT APPROVAL 16.06.17

MONKEY MIA DOLPHIN RESORT OVERALL MASTERPLAN

Monkey Mia Road Monkey Mia WA

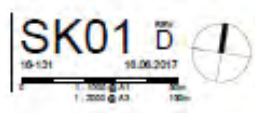


Figure 2.6 Preliminary Masterplan for the Resort
m p rogers & associates pl

Table 2.2 Key Assets within the Resort

Key Assets	Finished Floor Level
Cabins (proposed location in Figure 2.5)	>2.8 mAHD – Proposed
Caravan/Camping Sites	>1.9 mAHD – Existing & Proposed
Amenities Block	>2.8 mAHD – Proposed
Staff Accommodation	>2.8 mAHD – Proposed
Motel	3.0 mAHD – Existing
Limestone Villas	>2.5 mAHD – Existing
Beachfront Villas	>2.6 mAHD – Existing
Garden Villas	>2.4 mAHD – Existing & Proposed
Restaurant	>2.6 mAHD – Existing
Proposed Café, Shop & Reception Area	>2.4 mAHD – Proposed
Workshop Area	>2.2 mAHD - Existing

2.8 Success Criteria

The success criteria for the CHRMAP will ultimately be as follows.

- To understand the potential extent of impact of coastal hazards on the Resort.
- To understand the potential/likelihood of infrastructure within the Resort being impacted by coastal hazards over each planning horizon.
- To understand the consequences of infrastructure being exposed to the different coastal hazards.
- To determine total risk ratings for each item of infrastructure.
- Development of an acceptable risk management and adaptation strategy for the proposed development whilst considering the reasonable likelihood of protection for existing infrastructure.
- Development of an implementation plan to outline the requirements and responsibilities over time.

The outcomes of the success criteria listed above are presented in the following sections of the report.

3. Coastal Erosion Hazard Identification

An understanding of the coastal hazards and risks is critical for the assessment and determination of management and adaptation actions.

Schedule One of SPP2.6 presents the recommended methodology for calculation of coastal erosion hazards for coastal development. This assessment methodology requires that consideration be given to the potential impacts of each of the following.

- Severe storm erosion associated with the 100 year ARI event (termed the S1 Allowance).
- Long term shoreline movement (termed the S2 Allowance).
- Sea level rise (termed the S3 Allowance).
- Appropriate allowances for uncertainty.

The calculations of the erosion allowances are presented in the following sections.

3.1 S1 Erosion Allowance – Severe Storm Erosion

Severe storm events have the potential to cause increased erosion to a shoreline, through the combination of higher, steeper waves generated by sustained strong winds, and increased water levels. These two factors acting in concert allow waves to erode the upper parts of the beach not normally vulnerable to wave attack.

If the initial width of the surf zone is insufficient to dissipate the increased wave energy, this energy is often spent eroding the beach face, beach berm and sometimes the dunes. The eroded sand is transported offshore with the return water flow to form offshore bars. As these bars grow, they can cause incoming waves to break further offshore, decreasing the wave energy available to attack the beach. This is shown diagrammatically in Figure 3.1 for a sandy coastline.

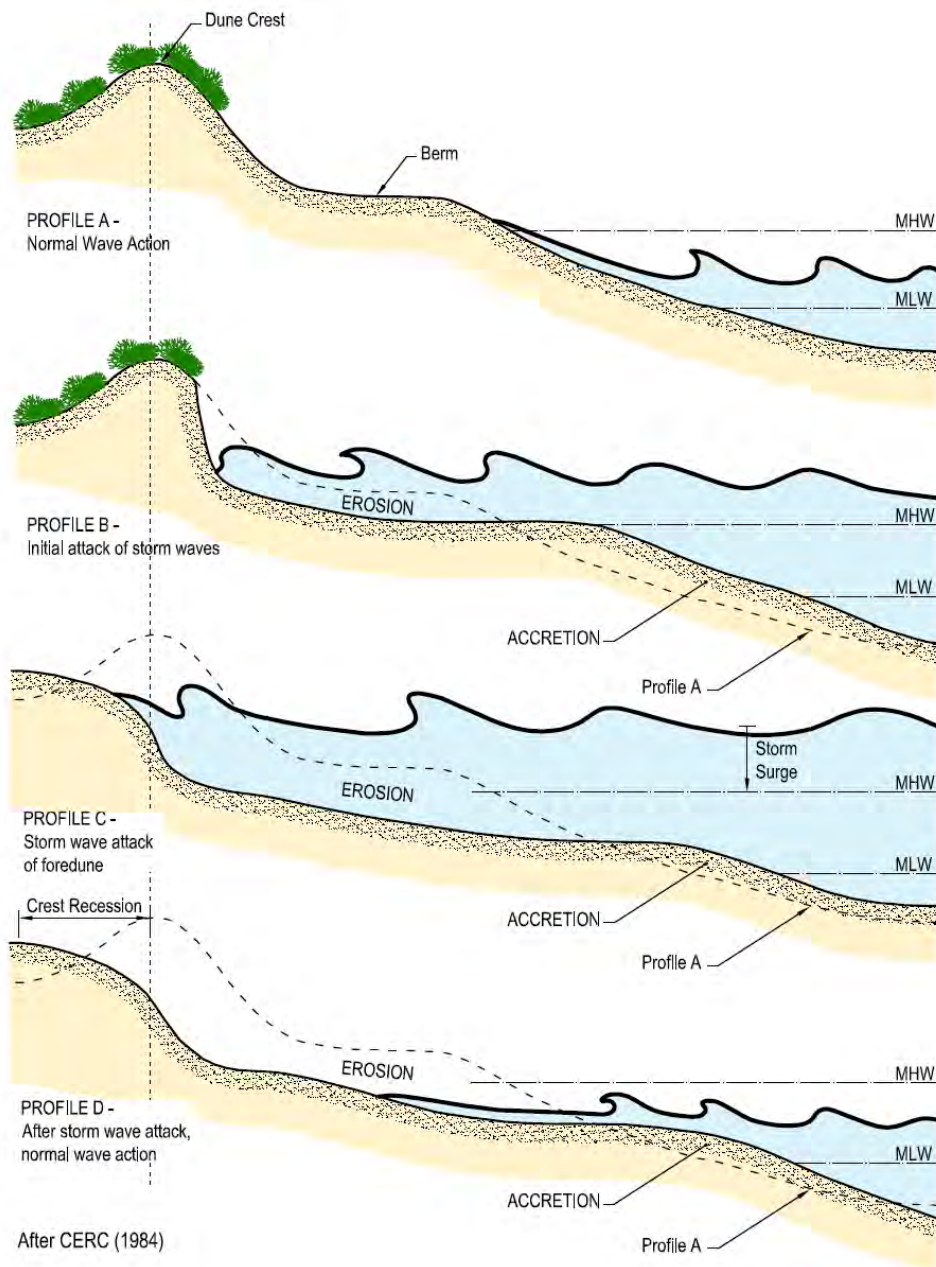


Figure 3.1 Storm Wave Attack

SPP2.6 recommends that potential cross shore erosion be determined by modelling the impact of an appropriate storm sequence using acceptable models such as SBEACH (WAPC, 2013). It is also specified that the modelled storm should have an annual exceedance probability (AEP) of 1% with regard to beach erosion. This is equivalent to a storm with an ARI of 100 years.

Monkey Mia is located in a cyclone prone area, which means that a cyclone is likely to represent the critical, 100 year ARI storm event for erosion at the Resort. Cyclones produce high waves and water levels for relatively short periods of time compared to severe storms associated with the passage of cold fronts in south-west Western Australia.

Given that the Resort is located at relatively low levels behind the beach and dune, cyclones with high water levels are likely to result in the most landward erosion extent. Cyclonic waves are also likely to be depth-limited offshore from the Resort due to the presence of the shallow, shore

parallel sand flat. The wave height is limited by the water depth above the sand flats. Therefore, the 100 year ARI event for erosion at the Resort was considered to be a cyclone with an approximate 100 year ARI water level at Monkey Mia.

MRA completed cyclone modelling of the Shark Bay region for the *Denham Storm Surge Inundation Study* (MRA, 2014). Output from the modelling was analysed to identify the extreme water levels at Monkey Mia. Results were in line with the extreme water levels calculated at Denham. These inundation levels are summarised in Table 3.1.

Table 3.1 Storm Surge Inundation Levels for Monkey Mia

ARI (years)	Inundation Level Present Day (mAHD)
20	1.9
50	2.4
100	2.7
500	3.3

Table 3.1 shows that the 100 year ARI water level at the shoreline is +2.7 mAHD at Monkey Mia. The cyclone modelling was analysed and a cyclone with a peak steady water level of +2.7 mAHD was extracted from the model. Figure 3.2 shows a spatial plot of the wave conditions at Monkey Mia at the peak of the 100 year ARI storm.

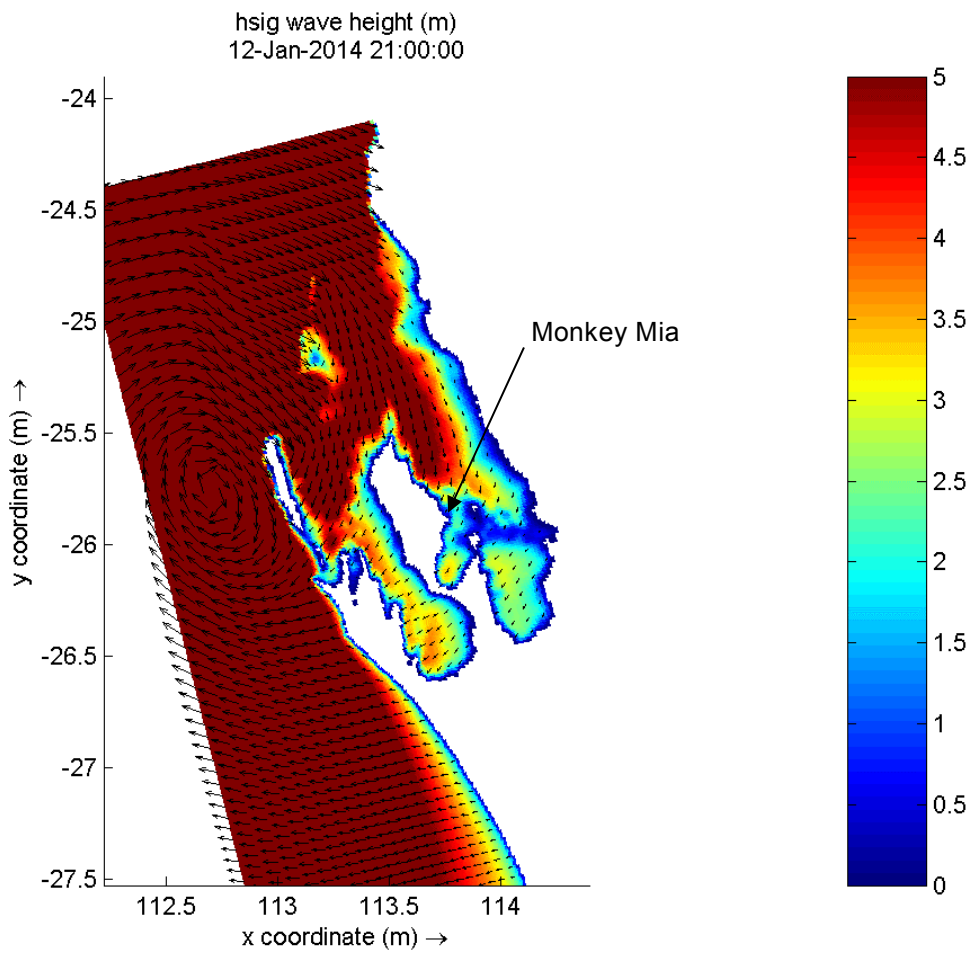


Figure 3.2 Wave Conditions in 100 year ARI Cyclone

Figure 3.3 shows the water level and wave heights at the -5 mAHD contour offshore from Monkey Mia during the passage of the 100 year ARI storm.

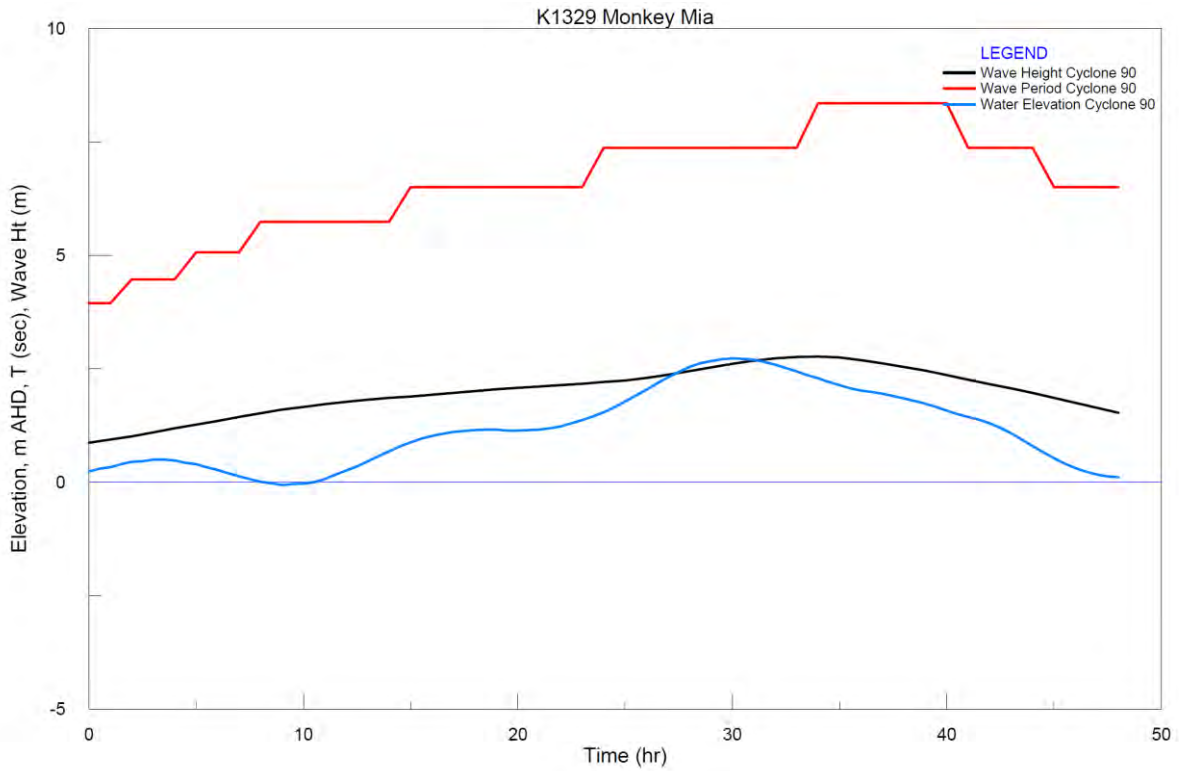


Figure 3.3 100 year ARI Storm Conditions

Seven SBEACH profiles were created extending from the shoreline to approximately 5 m water depth. The locations of the SBEACH profiles and their numbers are indicated on Figure 3.4.



Figure 3.4 SBEACH Profile Locations

The SBEACH profiles were compiled from the following sources.

- Site survey taken by McMullen Nolan in 2007.
- Nautical chart DMH - WA 661 for the Shark Bay area.

A low, retaining wall exists at the front of the Motel, Beachfront Villas and Restaurant. Details on this retaining wall are limited but it is not expected to have been designed to prevent erosion during cyclonic events. This wall was therefore not included in the SBEACH modelling.

A sediment size of 0.3 mm was used based on sediment samples completed in the Shark Bay area. The results of the SBEACH modelling are presented in Appendix A for the seven profiles.

In the lower western area (Profiles 1 to 3), the erosion typically extended past the foredune to the main dune ridge. In the higher eastern area (Profiles 4 to 7), the erosion typically extended approximately 15 to 20 m behind the low retaining wall. The modelled maximum extent of erosion is shown as a red line in Figure 3.5.

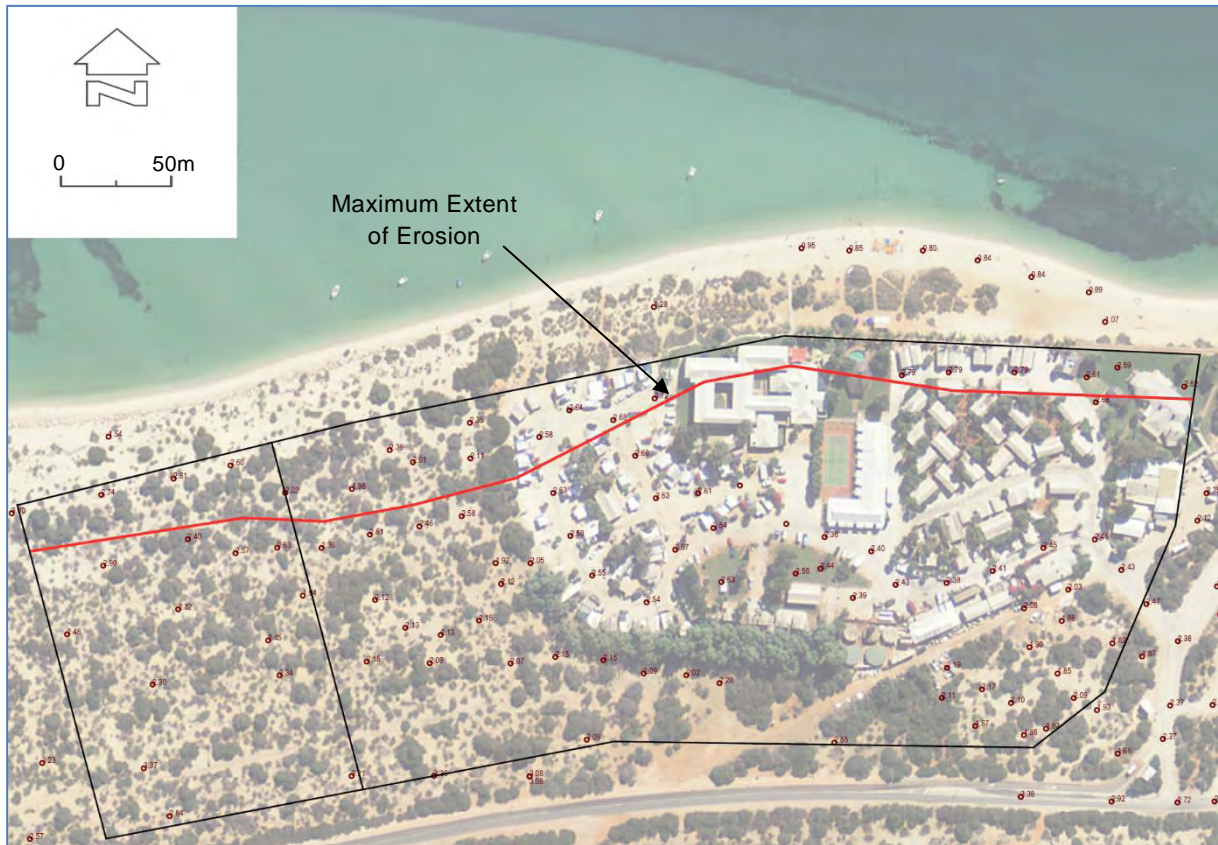


Figure 3.5 Maximum Extent of Erosion

3.2 S2 Erosion Allowance – Long Term Shoreline Movement

Historically, changes in shorelines occur on varying timescales from storm to post storm, seasonal and longer term (Short 1999). The S1 Erosion allowance accounts for the short term storm timescale of beach change. The S2 Erosion allowance is intended to account for the longer term movement of the shoreline that may occur within the planning horizon. To determine the S2 Erosion allowance, historical shoreline movement trends are examined and likely future shoreline movements predicted.

3.2.1 Shoreline Movement Analysis

SPP2.6 recommends that shoreline movement trends be based on the review of available shoreline records. This can include analysis of historical aerial photography, High Water Mark (HWM) surveys or previously extracted coastal vegetation lines available from DoT.

Available aerial photographs only extend back around 33 years to 1983. The following aerial photographs were purchased, rectified and the vegetation line extracted.

- 1983 from Landgate.
- 1988 from Landgate.
- 1990 from Landgate.
- 2002 from Landgate.
- 2007 from Landgate.

- 2012 from Landgate.

The coastal vegetation lines were extracted from the aerial photographs using the methodology outlined in DoT (2009). The accuracy of the photogrammetry technique is expected to be in the order of $\pm 5\text{m}$.

The position of the vegetation line was analysed at 100 m chainages, as shown in Figure 3.6.

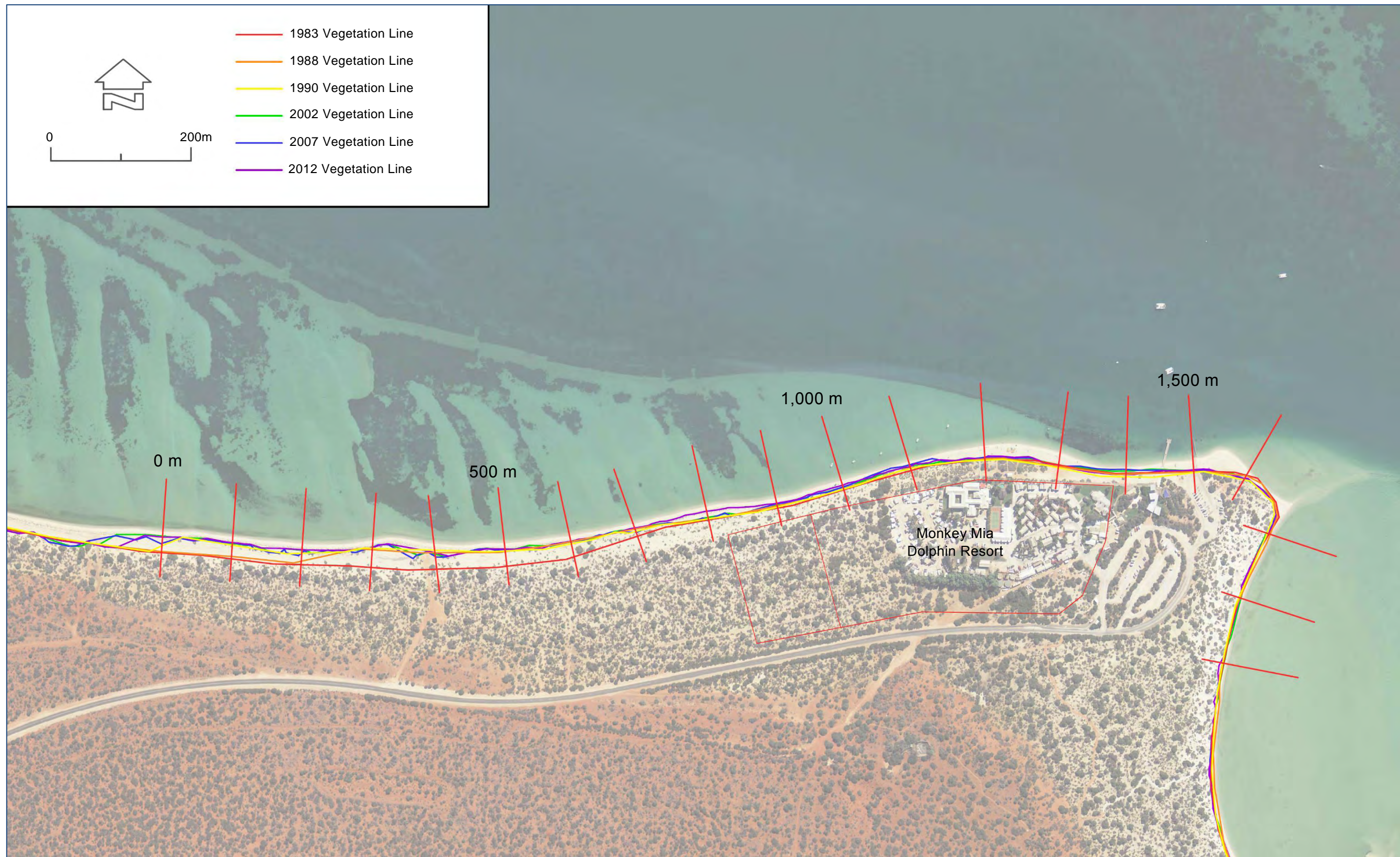


Figure 3.6 Shoreline Movement Plot & Chainages

The movements of the shoreline relative to the 1983 coastal vegetation line were estimated at each of the chainages and are presented in Figure 3.7.

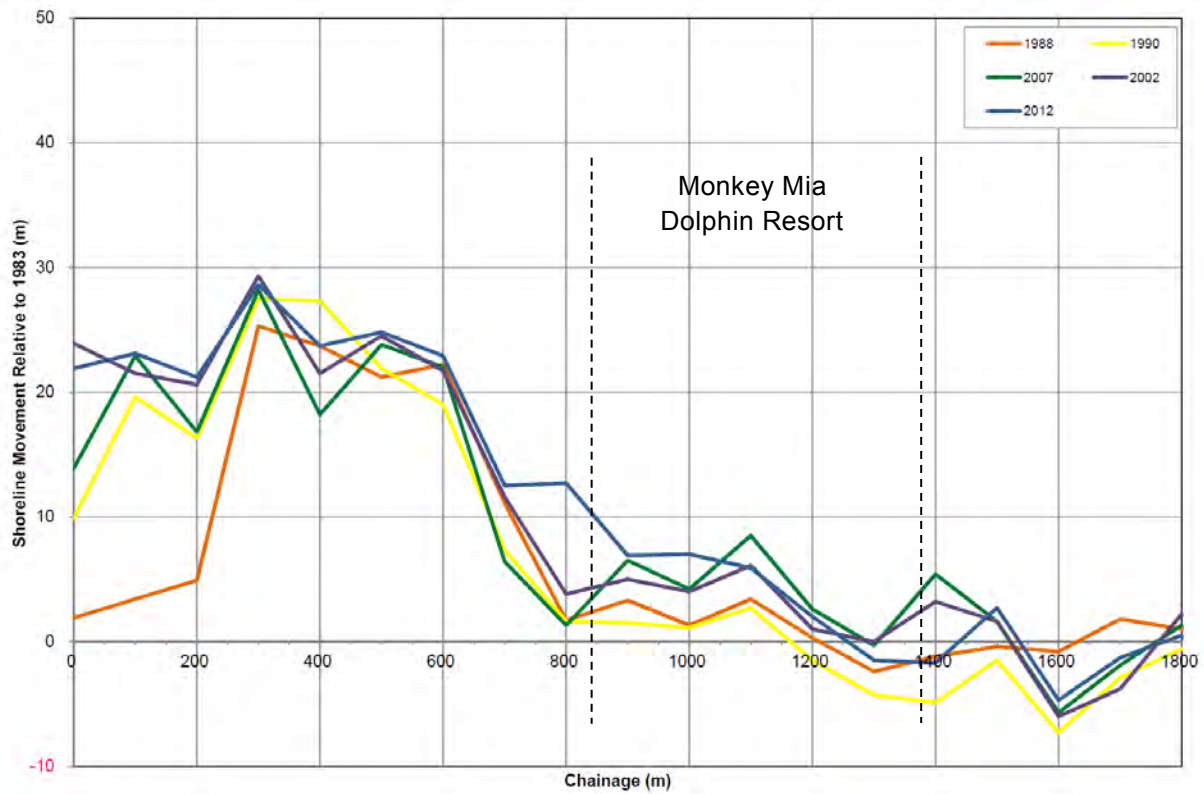


Figure 3.7 Shoreline Position Relative to 1983

The shoreline movement analysis shows that the shoreline fronting the Resort has remained stable since 1983. The shoreline has typically accreted over the 30 year analysis period. Chainage 1,300 m showed around 1.5 m of erosion since 1983 but this is in an area of very high pedestrian traffic, as the dolphins are fed directly in front of this location. This means that seaward growth of the vegetation line may have been limited by pedestrian traffic in the area.

Given such a small erosion and human influences at this chainage, an S2 Erosion Allowance of **0 m/yr** is recommended for the Resort in line with the methodology presented in the SPP2.6.

3.3 S3 Erosion Allowance – Sea Level Rise

The Intergovernmental Panel on Climate Change (IPCC) has presented various scenarios of possible climate change and the resultant sea level rise in the coming century. The range of these projections is shown in Figure 3.8 (IPCC 2013).

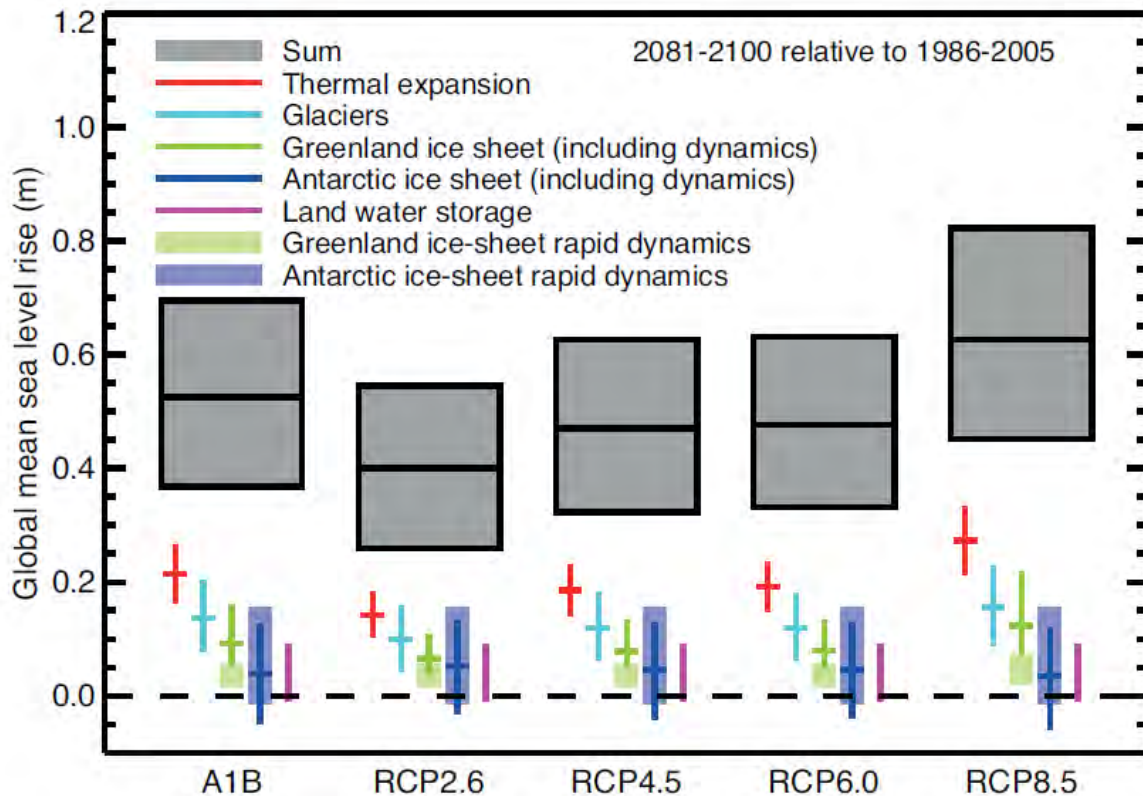


Figure 3.8 IPCC Scenarios for Sea Level Rise (IPCC 2013)

The results of the on-going increase in sea level and the anticipated impacts of accelerated increases are difficult to predict. Nevertheless, such increases in global sea level are likely to lead to beach erosion, as a sea level rise usually results in deepening of nearshore waters, allowing larger waves to reach the shore and erode the beach face (Bird 2000).

Komar (1998) provides a reasonable treatment for sandy shores, including examination of the Bruun Rule (Bruun 1962). The Bruun Rule relates the recession of the shoreline to the sea level rise and slope of the nearshore sediment bed:

$$R = \frac{1}{\tan(\theta)} S$$

where: R = recession of the shore.

θ = average slope of the nearshore sediment bed.

S = sea level rise.

The basic notion behind the Bruun Rule is that a sea level rise would cause erosion of the upper beach, and transference of sand from the beach to the adjacent sea floor. In due course, this process would restore the previous transverse profile in relation to the higher sea level, albeit at a more landward location (Bird 2000; Komar 1998).

DoT (2010) completed an assessment of the potential increase in sea level that could be experienced on the Western Australian coast in the coming 100 years. This assessment

[m p rogers & associates pl](#)

extrapolated work by Hunter (2009) to provide sea level rise values based on the IPCC (2007) A1FI climate change scenario projections to the year 2110. The derived sea level rise scenario was subsequently adopted by the Western Australian Planning Commission (and SPP 2.6) for use in coastal planning along the Western Australian coast. This is the sea level rise scenario adopted for this assessment and is presented in Figure 3.9.

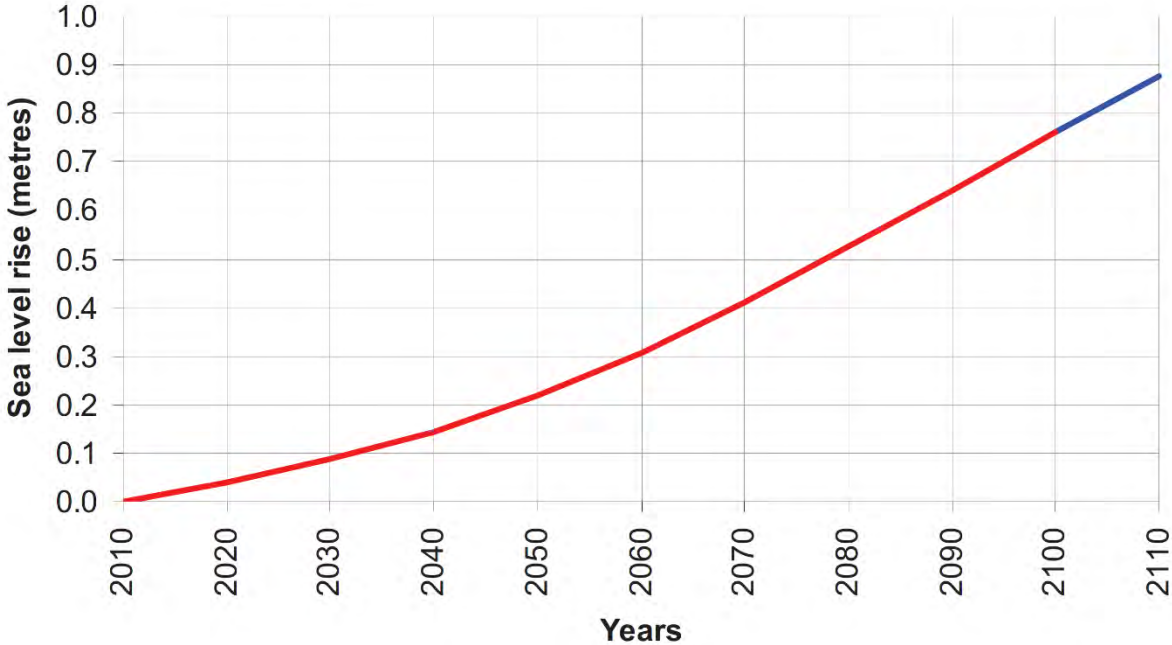


Figure 3.9 Recommended Sea Level Rise Scenario for Coastal Planning in Western Australia (DoT 2010)

SPP2.6 notes that the allowance for erosion caused by future sea level rise on sandy coast should be calculated as 100 times the adopted sea level rise value of 0.9 m over a 100-year planning horizon or 90 m.

Table 3.2 summarises the sea level rise values and S3 Erosion allowances for the range of previously presented planning horizons. A base year of 2015 was used to determine the sea level rise values presented in Table 3.2 and used in this assessment.

Table 3.2 Sea Level Rise Allowances

Planning Horizon	Potential Sea Level Rise (m)	S3 Erosion Allowance (m)
Present Day	0	0
2040	0.12	12
2065	0.34	34
2090	0.61	61
2115	0.90	90

Notes: 1. Based on recommendations in DoT (2010) with a 2015 base year.

3.4 Summary of Erosion Allowances

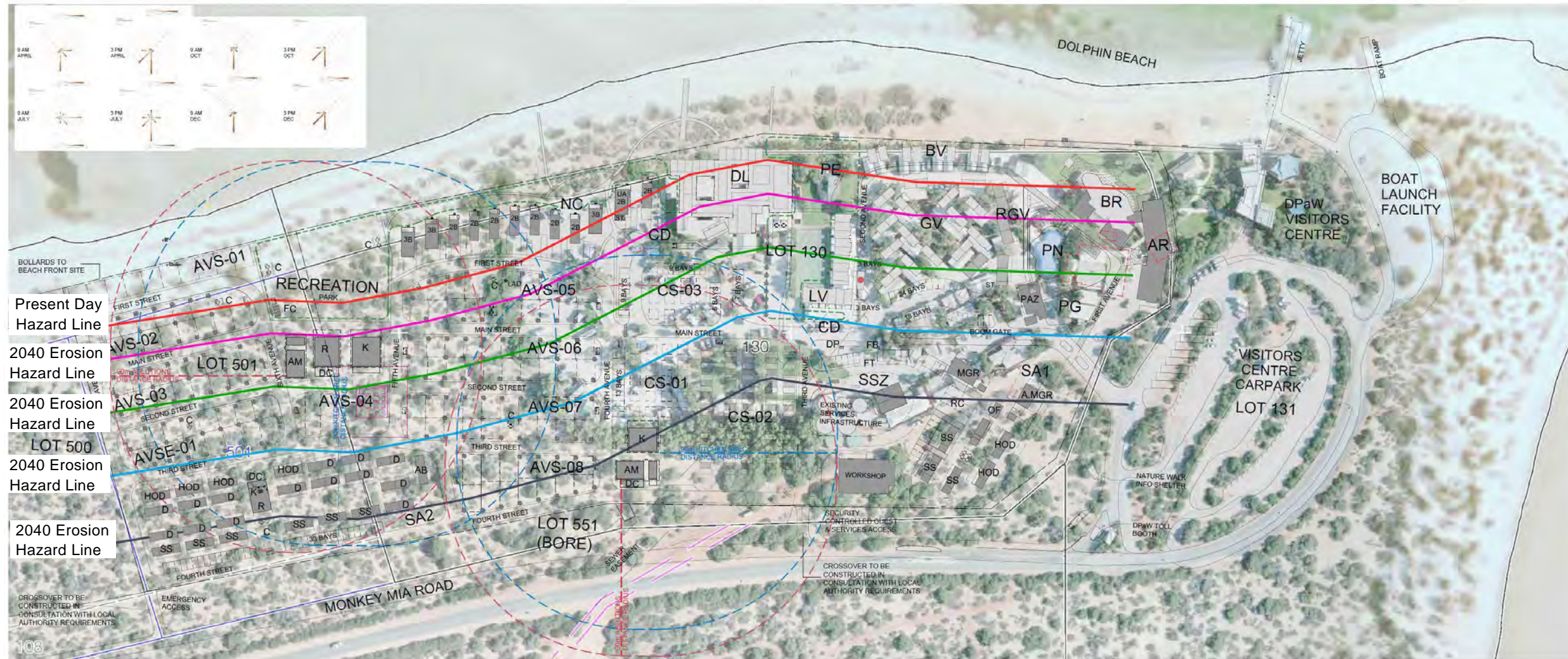
Each of the erosion allowances were determined over planning horizons to 2040, 2065, 2090 and 2115. A present day scenario was also considered. The allowances are combined with a 0.2 m/yr Factor of Safety to create a coastal erosion hazard line for each planning horizon. Table 3.3 summarises the coastal erosion allowance combinations.

Table 3.3 Allowance Combinations for Coastal Erosion

Planning Horizon	Allowance Combination	Allowance Distances
Present	S1 (100 year ARI storm erosion)	S1 (100 year ARI storm erosion)
2040	S1 (100 year ARI storm erosion) + S2 + S3 + Uncertainty	S1 (100 year ARI storm erosion) + 17m
2065	S1 (100 year ARI storm erosion) + S2 + S3 + Uncertainty	S1 (100 year ARI storm erosion) + 44m
2090	S1 (100 year ARI storm erosion) + S2 + S3 + Uncertainty	S1 (100 year ARI storm erosion) + 76m
2115	S1 (100 year ARI storm erosion) + S2 + S3 + Uncertainty	S1 (100 year ARI storm erosion) + 110m

It is important to understand that these coastal hazard lines are not intended to be predictions of the future shoreline location, but rather to provide conservative estimates of possible future shoreline retreat that are appropriate for consideration in coastal planning. For instance, assessment of aerial photography at the site since 1983 has shown that there has been very little movement of the shoreline, despite having been around 22 cyclone events that would have affected the area over the period. This provides an indication of the stability of the shoreline over the longer term. Nevertheless, the coastal hazard lines will be used in this plan to inform the potential future risk associated with the redevelopment and operation of the Resort.

Coastal erosion hazard lines for the Resort are presented in Figure 3.10.



LEGEND

EXISTING BUILDINGS

- BR BOUGHSHED RESTAURANT
- LV LIMESTONE VILLAS
- GV GARDEN VILLAS
- BV BEACH FRONT VILLAS
- DL DOLPHIN LODGE
- B1 - BEACHVIEW 1 BED
- SE - SHARED ENSUITE 2 BED
- D4 - 4 BED DORM
- D8 - 8 BED DORM
- DMA - DUTY MANGER'S ACCOMMODATION

BUILDINGS

- K CAMP KITCHEN
- R RECREATION BUILDING
- C BBQ AND SEATING CABANA
- AM AMENITY AREA
- DC DRYING COURT

SYMBOL LEGEND

- EXISTING BUILDINGS / INFRASTRUCTURE
- NEW BUILDINGS
- PROPOSED DPAW LAND TO BE MODIFIED
- RELOCATION
- DEMOLITION
- GROUND WATER MONITORING WELL LOCATION
- MACERATOR PIT
- LANDSCAPED AREA
- STAFF AREA
- LOCAL AUTHORITY DISCRETION REQUIRED FOR 90m RULE (CPCGR SCHEDULE 19.1) (2 NEW BEACHFRONT AND AVS-04 SITES)

STAFF ACCOMMODATION MODULES

- 3 ROOM FULL MODULE - HEADS OF DEPARTMENT
- 2 ROOM DOUBLE MODULE - DOUBLE
- 1 ROOM SINGLE MODULE - SEASONAL & DPAW RESEARCH
- 2 ROOM DOUBLE HALF MODULE - PERMANENT

STAFF ACCOMMODATION

- SA2 STAFF ACCOMMODATION AREA
- MGR MANAGER'S ACCOM.
- A.MGR ASSISTANT MANAGER'S ACCOM.
- HD HEADS OF DEPARTMENT ACCOM.
- PS PERMANENT STAFF ACCOM.
- SS SEASONAL STAFF ACCOM.
- RS RESEARCH STAFF ACCOM.
- RGV RELOCATED GARDEN VILLAS
- AVS ACCOMMODATION VEHICLE SITES
- AVSE ACCOMMODATION VEHICLE SITES WITH ENSUITES
- AB RELOCATED EXISTING ABLUTION BLK OFFICE
- AR ARRIVALS BUILDING

YIELD TABLE (REFER TO SPREADSHEET IN MASTERPLAN REPORT FOR DETAILED YIELD TABLE)

GUEST ACCOMMODATION

ACCOMMODATION VEHICLE SITES (ALL NEW)	YIELD
AVS POWERED STANDARD	(108)
AVSE POWERED STANDARD WITH ENSUITES	(15)
AVS POWERED STANDARD ON BEACH FRONT	(10)
CAMPING SITES	87
CS NEW UNPOWERED CAMP SITES	87
BUILT ACCOMMODATION	124
DL EXISTING DOLPHIN LODGE	52
B1 BEACHVIEW 1 BED	(24)
SE SHARED ENSUITE 2 BED PER ENSUITE	(16)
D8 DORMS 8 BED UNITS	(7)
D4 DORMS 4 BED UNITS	(5)
LV EXISTING LIMESTONE VILLAS	14
BV EXISTING BEACHFRONT VILLAS	8
GV EXISTING DUPLEXED GARDEN VILLAS	30
RGV RELOCATED DUPLEXED GARDEN VILLAS	8
NC NEW CABINS ON BEACHFRONT - 2 BED (INCL 1 ACCESSIBLE UNIT)	9
NC NEW CABINS ON BEACHFRONT - 3 BED	3
GUEST ACCOMMODATION SUBTOTAL	344

STAFF & DPAW RESEARCH ACCOMMODATION (ALL NEW U.O.N)

SA1* STAFF ACCOMMODATION	YIELD
MGR MGR'S RESIDENCE	(1)
A.MGR ASST. MGR'S RESIDENCE	(1)
HD HEADS OF DEPARTMENT - (FULL MODULE)	(2)
RC RELOCATED CARAVANS - (EXISTING)	(6)
SS SEASONAL STAFF - (QUARTER MODULE)	(12)
OF OFFICE - (HALF MODULE - 2 ROOM)	(2)
SA2* STAFF ACCOMMODATION	55
HD HEADS OF DEPARTMENT - (FULL MODULE)	(3)
PS PERMANENT STAFF - (HALF MODULE)	(28)
SS SEASONAL STAFF - (QUARTER MODULE)	(24)
DMA EXISTING DUTY MANGER'S RESIDENCE (DOLPHIN LODGE)	1
STAFF & DPAW RESEARCH ACCOMMODATION SUBTOTAL	80

* ALLOCATION OF ACCOMMODATION IS INDICATIVE ONLY

GUEST & STAFF ACCOMMODATION TOTAL ON COMPLETION 424



MONKEY MIA DOLPHIN RESORT
OVERALL MASTERPLAN

Monkey Mia Road
Monkey Mia WA

SK01 REV D
16.06.2017

1:1000 @ A1
1:2000 @ A3



Figure 3.10 Coastal Erosion Hazard Mapping Lines for the Shoreline Fronting the Resort

4. Coastal Inundation Hazard Identification

SPP2.6 requires that the allowance for inundation (termed the S4 Allowance) be taken as the maximum extent of inundation experienced during a water level event with a 0.2% AEP (500 year ARI) plus the appropriate allowance for sea level rise. This is the critical aspect when considering public safety and significant assets, however for tourist based assets where public safety is managed, consideration of less severe inundation events could be appropriate.

Assessment of the inundation levels requires consideration of peak storm surge, including wave setup. A storm surge occurs when a storm with high winds and low pressures approaches the coastline (refer Figure 4.1). The strong, onshore winds and large waves push water against the coastline (wind and wave setup) and the barometric pressure difference creates a region of high water level. These factors acting in concert create the storm surge. The size of the storm surge is influenced by the following factors.

- Wind strength and direction.
- Pressure gradient.
- Seafloor bathymetry.
- Coastal topography.

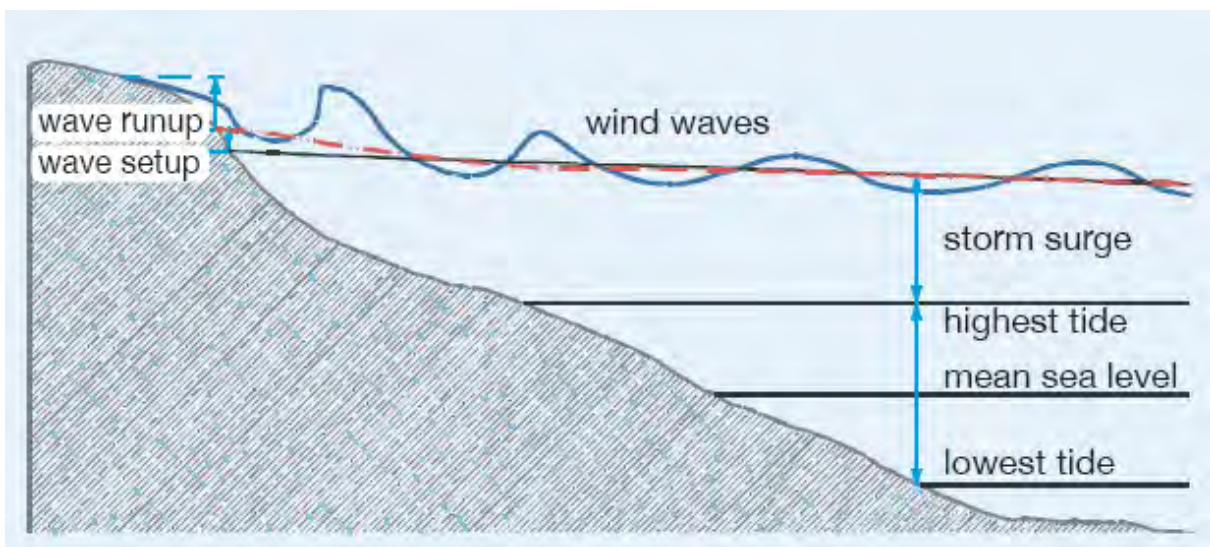


Figure 4.1 Storm Surge Components

At Monkey Mia, extreme water levels are most likely associated with the passage of cyclone events. As detailed previously, MRA has completed cyclonic storm surge inundation modelling for the Shark Bay region (MRA 2014). The results of the inundation study were previously presented in Table 3.1. This gave a 500 year ARI water level of +3.3 mAHD at Monkey Mia. The appropriate inundation allowances have been determined for each of the planning timeframes and are presented in Table 4.1.

Table 4.1 S4 Inundation Levels

Planning Horizon	Potential Sea Level Rise Allowance (m)	500 year ARI (mAHD)
Present Day	0	3.30
2040	0.12	3.42
2065	0.34	3.64
2090	0.61	3.91
2115	0.90	4.20

These potential inundation levels should be considered as part of the CHRMAP to comply with the requirements of SPP2.6.

5. Coastal Vulnerability

The vulnerability of the assets identified previously is related to their level of exposure to coastal hazards, as well as their sensitivity to the impacts caused by these hazards and their ability to respond to them (termed adaptive capacity). With the exception of the social and environmental assets, which will essentially be left to naturally respond to the impacts of coastal hazards, the assets that are being considered are built form assets. Therefore, whilst they are being constructed in a way that will allow the assets to be easily migrated in the future in response to elevated coastal hazard risk, the level of vulnerability of the assets will ultimately be linked to their level of exposure. Further consideration of the risk and future management and adaptation requirements will therefore be needed for these assets. Details of this risk assessment and future management and adaptation requirements are presented in subsequent sections of this report.

6. Risk Analysis

In accordance with WAPC (2014) a risk based approach has been used to assess the hazards and required mitigation and adaptation options for the Resort. As coastal hazards are the focus of this assessment, it is the likelihood and consequences of these coastal hazards that need to be considered. As stated previously, it is inherent in the redevelopment proposal that there be no negative social or environmental impacts as a result of this development, with mitigation strategies already highlighted to address these issues. The risk assessment is therefore completed for the existing and proposed infrastructure within the Resort.

6.1 Likelihood

Likelihood is defined as the chance of something happening (AS/NZS ISO 31000:2009). WAPC (2014) defines the likelihood as the chance of erosion or storm surge inundation occurring or how often they impact on existing and future assets and values. This requires consideration of the frequency and probability of the event occurring over a given planning timeframe.

The probability of an event occurring is often related to the AEP or the Average Recurrence Interval (ARI). The use of the AEP to define impacts of coastal hazards over the planning timeframe assumes that events have the same probability of occurring each year. In the case of climate change and sea level rise, which has a large influence on the assessed coastal hazard risk, this is not true. In addition, there is insufficient data available to properly quantify the probability of occurrence. A scale of likelihood has therefore been developed, which follows the Australian Standard Risk Management Principles and Guidelines (AS/NZS ISO 31000:2009). This is presented in Table 6.1.

Table 6.1 Scale of Likelihood

Rating	Description / Frequency
Almost certain	There is a high possibility the event will occur as there is a history of frequent occurrence 90-100% probability of occurring over the timeframe.
Likely	It is likely the event will occur as there is a history of casual occurrence 60-90% probability of occurring over the timeframe.
Possible	The event may occur 40-60% probability of occurring over the timeframe.
Unlikely	There is a low possibility that the event will occur 10-40% probability of occurring over the timeframe.
Rare	It is highly unlikely that the event will occur, except in extreme / exceptional circumstances. 0-10% probability of occurring over the timeframe.

The likelihood and consequences of coastal hazards are different for erosion and inundation. As a result, the likelihood and consequence of erosion and inundation should be considered separately. The likelihood of the coastal hazard impacts are discussed in the following sections.

6.1.1 Coastal Erosion

An assessment of the relative likelihood of each of the identified key assets being impacted by coastal erosion hazards has been completed and is presented in Table 6.2. The assessment was completed using the coastal hazard lines presented in Figure 3.10.

It is important to note that the hazard lines reaching a particular asset at the end of the planning timeframe do not necessarily mean this will occur. This is due to the fact that it requires all of the following to occur.

- Reversal of the shoreline movement trend in the future from accretion to erosion (ie the accretion trend reversing plus the additional allowance for uncertainty).
- The upper limit of erosion caused by sea level rise.
- The severe storm event to be experienced at the end of the planning timeframe (ie when the other allowances have been lost).

Only if all of these occur will the erosion hazard lines be realised. This has been considered in the assessment of likelihood.

Table 6.2 Assessment of Likelihood of Coastal Erosion Impact

Key Assets	Planning Timeframe				
	Present Day	2040	2065	2090	2115
Cabins (proposed location)	Rare	Unlikely	Likely	Almost Certain	Almost Certain
Caravan/Camping Sites ¹	Rare	Unlikely	Likely	Almost Certain	Almost Certain
Amenities Block	Rare	Rare	Likely	Almost Certain	Almost Certain
Staff Accommodation	Rare	Rare	Rare	Rare	Rare
Motel	Rare	Unlikely	Likely	Almost Certain	Almost Certain
Limestone Villas	Rare	Rare	Unlikely	Likely	Almost Certain
Beachfront Villas	Rare	Unlikely	Likely	Almost Certain	Almost Certain
Garden Villas	Rare	Rare	Possible	Almost Certain	Almost Certain
Restaurant	Rare	Unlikely	Likely	Almost Certain	Almost Certain
Proposed Café, Shop & Reception Area	Rare	Rare	Unlikely	Likely	Almost Certain
Workshop Area	Rare	Rare	Rare	Rare	Unlikely

Notes: 1. Based on most exposed location.

The assessment of likelihood of coastal erosion impact shows the following.

- None of the assets have a high likelihood of being impacted by coastal erosion at present.
- The potential for coastal erosion to impact the proposed cabins over a planning horizon to 2040 is Unlikely.
- The potential for coastal erosion to impact a number of existing assets such as the Motel, Beachfront Villas and Restaurant over a planning horizon to 2040 is also Unlikely.
- It is Almost Certain that coastal erosion will impact a number of assets over a planning horizon to 2090.

6.1.2 Coastal Inundation

Assessment of the likelihood of coastal inundation is slightly different to that for coastal erosion. This is due to the fact that the potential for coastal inundation will change in the future as the sea level rises. This means that an area that would only be inundated during a very severe event in the present day could potentially be inundated by a much less severe event in the future. Assessment of the probability of an area being inundated within a given planning horizon therefore needs to consider the changing probability of event occurrence throughout that planning timeframe.

As an example, based on the estimated inundation levels, an area with an elevation of around 3.1 mAHD would just be inundated by the 500 year ARI event in the present day. However, it would be inundated by the 150 year event in approximately 2065 and probably in the order of the 50 year event in 2115. Combining all of these probabilities of occurrence on an annual basis would mean that the actual chance of an area with an elevation of 3.1 mAHD being inundated over a planning horizon to 2115 would be around 55%. Similar probabilities of occurrence for different elevations and planning horizons are presented in Table 6.3. These probabilities have been used to determine the likelihood of each of the key assets being impacted by inundation for each planning timeframe.

Table 6.3 Cumulative Probability of Different Inundation Elevations over each Planning Horizon

Inundation Elevation (mAHD)	Planning Timeframe				
	Present Day	2040	2065	2090	2115
1.9	3%	67%	93%	99%	100%
2	3%	56%	87%	98%	100%
2.1	2%	47%	80%	96%	100%
2.2	2%	41%	72%	93%	99%
2.3	2%	36%	64%	88%	98%
2.4	1%	32%	58%	82%	96%
2.5	1%	29%	53%	76%	93%
2.6	1%	26%	49%	70%	88%
2.7	1%	24%	45%	65%	84%
2.8	1%	18%	39%	58%	77%
2.9	<1%	13%	30%	50%	69%
3	<1%	10%	24%	44%	63%
3.1	<1%	8%	18%	36%	55%
3.2	<1%	6%	15%	29%	48%

The results of the assessment of likelihood of coastal inundation for each of the key assets is presented in Table 6.4.

Table 6.4 Assessment of Likelihood of Coastal Inundation Impact

Key Assets	Finished Floor Levels (mAHD)	Present Day	2040	2065	2090	2115
Cabins (proposed location)	>2.1	Rare	Possible	Likely	Almost Certain	Almost Certain
Caravan/Camping Sites	>1.9	Rare	Likely	Almost Certain	Almost Certain	Almost Certain
Amenities Block	>2.1	Rare	Possible	Likely	Almost Certain	Almost Certain
Staff Accommodation	>2.5	Rare	Unlikely	Possible	Likely	Almost Certain
Motel	3.0	Rare	Rare	Unlikely	Possible	Likely
Limestone Villas	>2.5	Rare	Unlikely	Possible	Likely	Almost Certain
Beachfront Villas	>2.6	Rare	Unlikely	Possible	Likely	Likely
Garden Villas	>2.4	Rare	Unlikely	Possible	Likely	Almost Certain
Restaurant	>2.6	Rare	Unlikely	Possible	Likely	Likely
Proposed Café, Shop & Reception Area	>2.4	Rare	Unlikely	Possible	Likely	Almost Certain
Workshop Area	>2.2	Rare	Possible	Likely	Almost Certain	Almost Certain

6.2 Consequence

The second part of the risk assessment is determining the consequence of the coastal hazards on the Resort. A scale of consequence has been developed which provides a range of impacts and is generally consistent with the Australian Standard Risk Management Principles and Guidelines (ISO 31000:2009).

Table 6.5 Scale of Consequence

Rating	Social	Economic	Environment
Catastrophic	Loss of life and serious injury. Large long term or permanent loss of services, employment wellbeing, finances or culture (75% of community affected), international loss, no suitable alternative sites exist	Damage to property, infrastructure or local economy > \$20M	Major widespread loss of environmental amenity and progressive irrecoverable environmental damage
Major	Serious injury. Medium term disruption to services, employment wellbeing, finances or culture (<50% of community affected), national loss, limited alternative sites exist	Damage to property, infrastructure or local economy > \$5M to \$20M	Severe loss of environmental amenity and a danger of continuing environmental damage
Moderate	Minor injury. Major short or minor long term disruption to services, employment wellbeing, finances or culture (<25% of community affected), regional loss, many alternative sites exist	Damage to property, infrastructure or local economy > \$500,000 to \$5M	Isolated but significant instances of environmental damage that might be reversed with intensive efforts. Recovery may take several years.
Minor	Small to medium disruption to services, employment wellbeing, finances or culture (<10% of community affected), local loss, many alternative sites exist	Damage to property, infrastructure or local economy > \$50,000 to \$500,000	Minor instances of environmental damage that could be reversed. Consistent with seasonal variability, recovery may take one year.
Insignificant	Minimal short-term inconveniences to services, employment, wellbeing, finances or culture (<5% of community affected), neighbourhood loss, many alternative sites exist	Damage to property, infrastructure or local economy < \$50,000	Minimal environmental damage, recovery may take less than 6 months.

Similar to the assessment of likelihood, the consequence rating has been completed separately for coastal erosion and coastal inundation. Typically for infrastructure and assets, the consequences associated with coastal erosion are more significant than those associated with coastal inundation. This arises due to the fact that coastal erosion is generally more permanent and more difficult to overcome than coastal inundation. For instance if the foundations of a house were undermined by erosion it is likely that the house would fall. However if a house was inundated, while there may be some damage, structural failure would be less likely.

The consequence ratings for coastal erosion and coastal inundation are outlined in the following sections. These consequence ratings have been reviewed by key stakeholders, such as the Shire

of Shark Bay, throughout the consultation process, but are ultimately provided to inform RAC of the risks given their future management liabilities as outlined in Section 2.6.

6.2.1 Coastal Erosion

The assessed consequences of coastal erosion for each of the planning timeframes are outlined in Table 6.6. As shown in the table, the consequences of erosion vary for some key assets over different timeframes due to the potential effects of increased erosion. For instance, a small amount of erosion could expose the foundation of a house but not cause any significant damage, and would therefore be insignificant, however a larger amount of erosion could undermine this foundation, with the effect being far more severe.

Table 6.6 Assessment of Consequence of Coastal Erosion Impact

Key Assets	Present Day	2040	2065	2090	2115
Cabins (proposed location)	Moderate	Moderate	Moderate	Moderate	Moderate
Caravan/Camping Sites	Insignificant	Minor	Minor	Minor	Minor
Amenities Block	Insignificant	Insignificant	Moderate	Moderate	Moderate
Staff Accommodation	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
Motel	Moderate	Moderate	Moderate	Moderate	Moderate
Limestone Villas	Insignificant	Insignificant	Moderate	Moderate	Moderate
Beachfront Villas	Moderate	Moderate	Moderate	Moderate	Moderate
Garden Villas	Insignificant	Insignificant	Moderate	Moderate	Moderate
Restaurant	Moderate	Moderate	Moderate	Moderate	Moderate
Proposed Café, Shop & Reception Area	Insignificant	Insignificant	Moderate	Moderate	Moderate
Workshop Area	Insignificant	Insignificant	Insignificant	Insignificant	Moderate

The rationale behind the key consequence ratings for coastal erosion are provided below.

- Erosion is deemed to have an Insignificant consequence on an asset if the asset is landward of the coastal hazard line for the assessed planning horizon. For example, the Staff Accommodation has an Insignificant consequence of erosion over the planning horizons to 2110, as it is landward of the 2110 coastal hazard line.
- The consequence of erosion on assets with toilets or chemical storage was deemed to be Moderate, given the potential environmental impact of erosion of these assets. For

example, the Motel is seaward of the erosion line at present. Erosion of the Motel sewerage system during a cyclone event could lead to contamination of the surrounding, fragile environment, which may have a Moderate consequence.

- The consequence of erosion on the Caravan/Camping Sites was deemed to be Minor, given the relatively low cost to replace these assets.

6.2.2 Coastal Inundation

The assessed consequence of coastal inundation for each of the key assets and each of the planning timeframes is presented in Table 6.7. Importantly, this assessment of the consequence of coastal inundation has been completed on the basis that the public safety risk is managed for inundation events. Given that the major inundation events are likely to be associated with the passage of cyclone events, management of public safety is something that already occurs through the Resorts own emergency management plan and the emergency management procedures of the Department of Fire and Emergency Services. This is discussed further in Section 8.

Table 6.7 Assessment of Consequence of Coastal Inundation Impact

Key Assets	Present Day	2040	2065	2090	2115
Cabins (proposed location)	Minor	Minor	Minor	Minor	Minor
Caravan/Camping Sites	Minor	Minor	Minor	Minor	Minor
Amenities Block	Minor	Minor	Minor	Minor	Minor
Staff Accommodation	Minor	Minor	Minor	Minor	Minor
Motel	Minor	Minor	Minor	Minor	Minor
Limestone Villas	Minor	Minor	Minor	Minor	Minor
Beachfront Villas	Minor	Minor	Minor	Minor	Minor
Garden Villas	Minor	Minor	Minor	Minor	Minor
Restaurant	Minor	Minor	Minor	Minor	Minor
Proposed Café, Shop & Reception Area	Minor	Minor	Minor	Minor	Minor
Workshop Area	Minor	Minor	Minor	Minor	Minor

The impacts of inundation are assessed to be Minor for all the assets. This is due to the fact the cost for the repair of each of the assets after an inundation event would be expected to be less than \$500,000.

The consequence ratings above were based on Insignificant or Minor environmental impact from inundation. This assumes that the sewerage systems would be designed to accommodate inundation. Chemicals in the Workshop Area would also need to be stored in raised, bunded areas suitable to prevent loss to the surrounding environment during significant inundation events.

Again, it is noted this assessment is on the basis that public safety would already be managed by DFES initiatives, as discussed in detail in Section 8.

7. Risk Evaluation

7.1 Risk Evaluation Matrix

The risk rating from a risk assessment is defined as “likelihood” x “consequence.” A risk matrix defining the levels of risk from combinations of likelihood and consequence has therefore been developed for the coastal hazards. This risk matrix is generally consistent with WAPC (2014).

Table 7.1 Risk Matrix

RISK LEVELS		CONSEQUENCE				
		Insignificant	Minor	Moderate	Major	Catastrophic
LIKELIHOOD	Almost Certain	Low	Medium	High	Extreme	Extreme
	Likely	Low	Medium	Medium	High	Extreme
	Possible	Low	Medium	Medium	Medium	High
	Unlikely	Low	Low	Medium	Medium	Medium
	Rare	Low	Low	Low	Low	Low

A risk tolerance scale assists in determining which risks are acceptable, tolerable and unacceptable. The risk tolerance scale used for the assessment is presented in Table 7.2.

Table 7.2 Risk Tolerance Scale

Risk Level	Action Required	Tolerance
Extreme	Immediate action required to eliminate or reduce the risk to acceptable levels	Intolerable
High	Immediate to short term action required to eliminate or reduce risk to acceptable levels	Intolerable
Medium	Reduce the risk or accept the risk provided residual risk level is understood	Tolerable
Low	Accept the risk	Acceptable

The risk tolerance scale shows that the extreme and high risks need to be managed.

7.2 Risk Assessment

The risk assessment for the study area has been completed in accordance with the recommendations of AS5334 (Standards Australia, 2013), which requires a detailed risk analysis to include a vulnerability analysis to thoroughly examine how coastal hazards and climate change may affect the assets. This includes consideration of the adaptive capacity and vulnerability of an asset.

7.2.1 Coastal Erosion

Based on the results of the risk analysis completed previously, Table 7.3 presents the coastal erosion risk levels for each of the identified key assets. The order of the assessed risks in the table has been used to show the priority risk areas for each planning timeframe at the start of the table, with decreasing risk down the table.

Table 7.3 Preliminary Assessment of Coastal Erosion Risk Level

Key Assets	Assessed Risk Level				
	Present Day	2040	2065	2090	2115
Cabins (proposed location)	Low	Medium	Medium	High	High
Motel	Low	Medium	Medium	High	High
Beachfront Villas	Low	Medium	Medium	High	High
Restaurant	Low	Medium	Medium	High	High
Garden Villas	Low	Low	Medium	High	High
Limestone Villas	Low	Low	Medium	High	High
Amenities Block	Low	Low	Medium	High	High
Proposed Café, Shop & Reception Area	Low	Low	Medium	High	High
Caravan/Camping Sites	Low	Low	Medium	Medium	Medium
Workshop Area	Low	Low	Low	Low	Medium
Staff Accommodation	Low	Low	Low	Low	Low

The results of the assessment show that all assets have a Low risk of being impacted by erosion at present.

A number of existing and proposed assets have an assessed Medium risk of being impacted by erosion over the 25 year planning horizon to 2040. Based on Table 7.2, the Medium level risk is deemed to be tolerable, but steps should be taken to reduce the risk where possible. The proposed Cabins could be placed outside of the 2040 erosion hazard line to reduce the risk level to Low over the 25 year planning horizon to 2040.

These same assets have an assessed High risk of being impacted by erosion over the 50 year planning horizon to 2065. The likely service life of these assets would be in the order of 25 to 50 years. The coastal erosion risk should be re-assessed when these assets are replaced at the end of their service life. This would include a review of climate change impacts on shoreline movements, so that appropriate setback distances could be implemented.

The remainder of the assets have an assessed Low to Medium risk of being impacted by erosion over the 50 year planning horizon to 2065. Further consideration of the implications of these results are provided in the following section with regard to risk management.

7.2.2 Coastal Inundation

Based on the results of the risk analysis completed previously, Table 7.4 presents the coastal inundation risk levels for each of the identified key assets. The order of the assessed risks in the table has been used to show the priority risk areas for each planning timeframe at the start of the table, with decreasing risk down the table. Once again, this risk assessment is on the basis that public safety is effectively managed as discussed in Section 8.

Table 7.4 Preliminary Assessment of Coastal Inundation Risk Level

Key Assets	Assessed Risk Level				
	Present Day	2040	2065	2090	2115
Caravan/Camping Sites	Low	Medium	Medium	Medium	Medium
Cabins (proposed location)	Low	Medium	Medium	Medium	Medium
Amenities Block	Low	Medium	Medium	Medium	Medium
Workshop Area	Low	Medium	Medium	Medium	Medium
Garden Villas	Low	Low	Medium	Medium	Medium
Proposed Café, Shop & Reception Area	Low	Low	Medium	Medium	Medium
Staff Accommodation	Low	Low	Medium	Medium	Medium
Limestone Villas	Low	Low	Medium	Medium	Medium
Beachfront Villas	Low	Low	Medium	Medium	Medium
Restaurant	Low	Low	Medium	Medium	Medium
Motel	Low	Low	Low	Medium	Medium

The results of the assessment show that all assets have a Low risk of being impacted by inundation at present.

Low lying infrastructure, including the proposed Cabins, expanded Caravan Sites and Amenities Blocks have an assessed Medium risk of being impacted by inundation over the 25 year planning horizon to 2040. Based on Table 7.2, the Medium level risk is deemed to be tolerable, but steps should be taken to reduce the risk where possible.

The remainder of the assets have an assessed Low risk of being impacted by inundation over the 25 year planning horizon to 2040. This risk increases to Medium for a number of assets over the

50 year planning horizon to 2065, with the exception being the Motel, founded at around 3 mAHD (the highest level on the Resort site) and therefore not likely to be impacted by inundation events.

Further consideration of the implications of these results are provided in the following section with regard to risk management.

8. Risk Adaptation & Mitigation Strategies

SPP2.6 outlines a hierarchy of risk adaptation and mitigation options, where options that allow for a wide range of future strategies are considered more favourably. This hierarchy of options is reproduced in Figure 8.1.



Figure 8.1 Risk Management & Adaptation Hierarchy

These options are generally outlined below.

- Avoid – avoid new development within the area impacted by the coastal hazard.
- Retreat – the relocation or removal of assets within an area identified as likely to be subject to intolerable risk of damage from coastal hazards.
- Accommodation – measures which suitably address the identified risks.
- Protect – used to preserve the foreshore reserve, public access and public safety, property and infrastructure.

The assessment of options is generally done in a progressive manner, moving through the various options until an appropriate mitigation option is found.

8.1 Proposed Mitigation Strategies

8.1.1 Assets

The requirement for coastal hazard risk mitigation strategies within the Resort is ultimately informed by the risk tolerance of RAC. As acknowledged by acceptance of the terms of the lease agreement, as well as within the letter included in Appendix D, the risk for each of the assets (existing and proposed) individually and collectively has been accepted by RAC. This acceptance is on the basis that risk management and adaptation principles, as previously discussed and further outlined herein, are put in place.

A key element of this adaptation planning is the response to potentially increasing risks of coastal movement. The results of the risk assessment indicate that the level of risk posed to each of the individual assets is at a level that is generally tolerable to the RAC over their initial service life. However, beyond this initial service life, a decision will need to be made as to whether the assets

are relocated to an area further landward or are removed. This essentially adopts a **retreat** or **abandon** management approach, with the future decisions to be informed through the completion of an updated coastal hazard risk assessment at the time of asset replacement. This approach is also essential to ensure that social and environmental assets remain unaffected over the initial and future planning horizons.

Despite advice that the risks over the initial service life are acceptable to RAC, the As Low As Reasonably Practical (ALARP) approach has been adopted for the planning to reduce the extent of impacts should a severe event occur. The focus of this risk reduction is on the new cabins, as these are the items within the masterplan that would potentially be subject to the most adverse effects should coastal hazards be realised over the service life.

The proposed cabins will be designed in accordance with the minimum prescriptive requirements of codes and standards typically considered mandatory for cyclonic regional and coastal built forms. This will form the baseline design criteria for all modular units. Moreover, a review of the structural design of the proposed structures will include consideration of recorded and estimated storm and cyclone events where pressures (both water and wind) are known or predicted. This will form the ultimate design criteria where structural review(s) identify strategies beyond the baseline criteria that directly address site specific, historical and/or anticipated coastal hazards.

It is proposed that the cabins be constructed as individual units. Examples of cabins recently installed at the RAC's Pinnacles Holiday Park in Cervantes are shown in Figure 8.2. The same construction methodology for these cabins will be used for Monkey Mia. This will include a concrete slab construction that will provide a dead weight in the order of 28 to 30 t, which in itself will act to anchor the cabins in their locations during a cyclone event. Further details of the cabin construction are provided below.

- Cabin construction will be beyond the normal requirements for cyclonic rated building construction (ie wind pressures). The cabin structures are considered from the perspective of water pressure to withstand impact under wave surges and the like.
- Concrete precast slab base and cyclone rated structure will not 'break up' on inundation.
- Roof and wall framing will be designed accordingly with respect to both wind and water influence.
- Cabins will be easily relocatable on short term notice.
 - Cabin relocation rate of minimum 6 cabins per crane per 8 hour work day.
 - Ability to relocate 12 cabins in 24 hours in an emergency.
 - Can be moved without a crane (can be jacked up and moved on trailer/jinker).



Figure 8.2 Example of Modular Cabins

A reasonable precedence exists for the strategies outlined above given that modular construction and placement on sites subject to high wind and water pressures has occurred in other locations in the north-west and coastal areas of Western Australia.

In addition to the above, other design approaches are also proposed for the site to further incorporate the ALARP approach. This will include the following.

- Locating key service lines as far landward as possible to reduce the potential for exposure to coastal hazards.

- Incorporating systems that allow for easy isolation of services in different areas so that areas that could be at risk from coastal hazards are able to be shut down easily if required.
- Ensuring that sewer venting is located at elevations ideally above 3.5 mAHD for the initial service life of the structure to reduce the potential impacts, should inundation occur.
- Locating all electrical service points (GPO's, etc) as high as possible, or ideally above 3.5 mAHD for the initial service life, to reduce the impacts should inundation occur.
- Storing all hazardous materials at or above a level of 3.5 mAHD to reduce the risk of environmental damage should inundation occur.
- Development of a coastal hazard response plan that outlines steps to be taken by staff pre and post coastal hazard impact to manage and mitigate any risks. This includes the risk to public safety, which is discussed further in the following section.

Implementation of the above strategies will help to manage the risks to the overall asset that is the Monkey Mia Dolphin Resort. Furthermore, implementation of these items will also ensure that the social and environmental values of the area are maintained.

It is important to note that monitoring of the shoreline will form a key part of the adaptation planning response. Monitoring of the shoreline is discussed in Section 9.4. One of the main purposes of this monitoring is to provide an early indication of shoreline change that can be used to prompt adaptation measures, such as the **managed retreat** or **abandonment** (with removal) of certain assets.

The trigger for these management actions need to be related to the movement of the shoreline. For instance, if sustained erosion of the shoreline, observed over a period of years, results in shoreline retreat to the point where the shoreline (defined in this instance as the coastal vegetation line) is within 20 m of the proposed cabins, then specialist coastal engineering advice should be sought regarding the risk and the required timeframe for relocation/removal of the assets. If the shoreline comes within 10 m of the cabins then they should be relocated/removed.

If, on the other hand, the position of the shoreline (vegetation line) recedes to the point where these triggers are reached as a result of the passage of a storm/cyclone event, then specialist coastal engineering advice should be sought to ascertain the potential for recovery of the shoreline before any relocation is completed. The basis for this difference in response between erosion caused by chronic or acute events is driven by the different mechanisms that lead to the erosion in both cases.

Chronic erosion of the shoreline occurs due to creation of a net sediment deficit in an area, typically due to either imbalances in longshore transport rates or continual losses to the offshore environment. Such chronic erosion is often not reversible. Acute erosion, caused by cyclone or storm events, often results in sediment losses on the shoreline that are more temporary, with shoreline recovery often experienced thereafter. Thus, the requirement to trigger adaptation measures may, in some instances, be more pressing as a result of chronic erosion than from acute erosion.

Nonetheless, when adaptation is required, **managed retreat** should be undertaken, or alternatively, the assets may be **abandoned** (with removal) and not replaced. As an example, the end location of the cabins, after successive moves throughout a 100 year planning horizon, could be as shown in Figure 8.3. This would locate the cabins beyond the current 100 year erosion risk

line. However, as noted previously, any such move would need to satisfy both the planning requirements in place at that time, as well as the risk appetite of the RAC. It is acknowledged that if the shoreline recedes to the location of the 100 year erosion hazard line then not all assets that currently form part of the Resort could be retained, with some assets potentially having to be removed and not replaced.

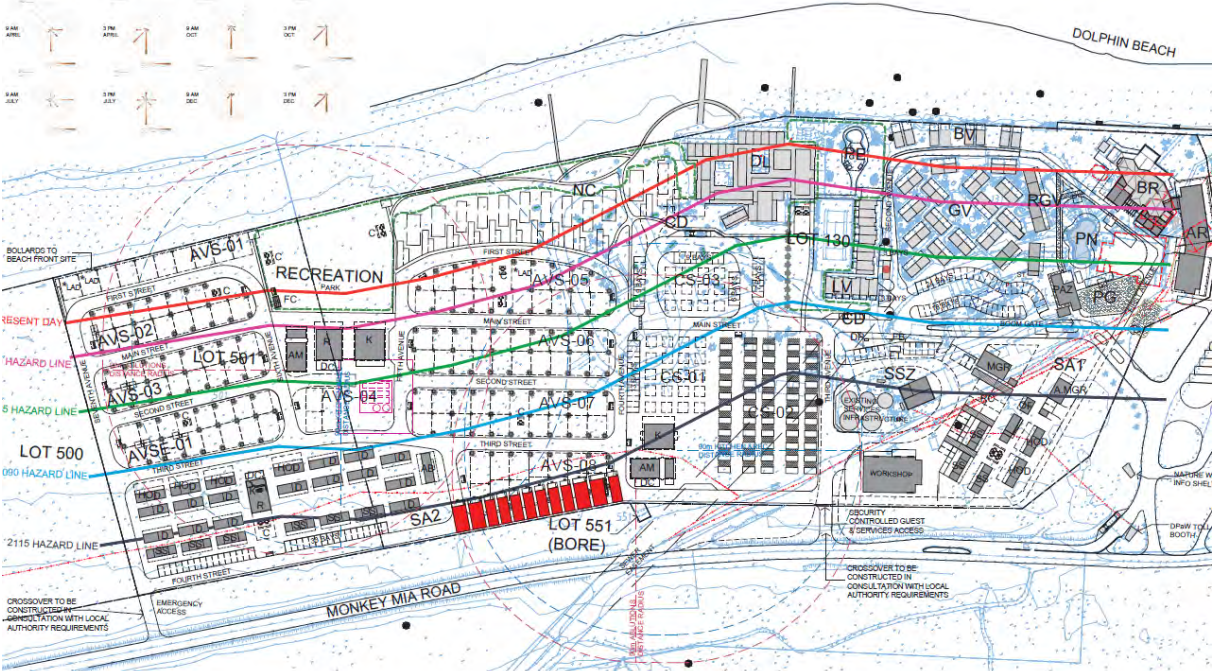


Figure 8.3 Example of Potential End Location of the Cabins Behind the 100 year Coastal Erosion Hazard Line

8.1.2 Public Safety

As outlined previously, the risk ratings that were determined for inundation hazards, and consequently the risk mitigation strategies outlined above, are provided on the basis that public safety is already managed by both the RAC and DFES. DFES’s management occurs along the entire coastline of Western Australia in response to cyclone events, which are the key contributor to inundation hazards at the Resort site (refer Section 3).

Essentially, to manage risks associated with cyclone inundation, DFES communicate with the Bureau of Meteorology to receive updates on the potential cyclone tracks and associated storm surge and areas of inundation. Evacuations are then completed as required in order to manage public safety prior to event impact.

It is also important to note that there would be some degree of self-management of these risks by patrons of the Resort at the time of such events, as many travellers (particularly caravanners and campers) would be aware of the risks and would likely leave the area before conditions became too severe. Nevertheless, despite the potential self-management by travellers and the management by DFES it is recommended that the RAC develop a specific inundation risk management plan for the Monkey Mia Dolphin Resort. This plan should outline steps that should be taken as severe events approach, as well as evacuation pathways and routes to relevant evacuation centres. It is recommended that this plan be developed in consultation with DFES and the Shire of Shark Bay.

As a result of the evacuation policies that are already in place, as well as any further development of these policies that may be required specifically for the Monkey Mia Dolphin Resort, the management of public safety due to coastal hazards is ensured. It must be noted that the Resort already has a mandatory evacuation policy for guests in the event of cyclone or other coastal risk warning.

8.2 Summary of Coastal Adaptation Approach

The potential future movement of the shoreline and the risk posed by extreme events necessitates the requirement for coastal adaptation and risk mitigation planning. The approach that has been adopted for the Monkey Mia Dolphin Resort has been outlined previously within this report, but is summarised below for clarity.

- Assets constructed as part of the redevelopment of the resort will either **accommodate** or **avoid** the risks posed by coastal hazards over their expected design life.
- **Accommodation** will be achieved through the use of appropriately designed infrastructure and systems that can withstand the impacts of coastal hazards over their initial service life. An example of this is the design of the beachfront cabins, which are being designed to **accommodate** potential loads associated with severe events and inundation.
- **Avoidance** of coastal hazard risks will be achieved over the given design lives for other, less transportable, infrastructure such as camp kitchens, ablutions, workshops, etc by locating these facilities landward of the hazard line corresponding to the design life of the infrastructure (ie assets with a 25 year design life are located landward of the 25 year erosion hazard line).
- **Managed Retreat** will be completed for the replacement of all assets upon fulfilment of their design lives, or at such time as shoreline monitoring indicates that it is required based on predefined triggers and specialist coastal engineering advice at the time. It is envisaged that managed retreat of assets could occur more than once over the coming 100 years. Each cycle of managed retreat would relocate the assets to locations determined by a coastal hazard risk assessment completed at that time.
- **Abandonment** (with removal) of certain infrastructure may be considered as part of any **managed retreat** sequence if the erosion of the shoreline reduces the available space to the extent that certain infrastructure can no longer be accommodated.
- Management of public safety would be achieved through existing and proposed management strategies that presently require evacuation of guests during cyclone or other coastal risk warnings.

9. Implementation Plan

The risk mitigation and adaptation strategy outlined in Section 8 set out the general proposed coastal management approach for the development. Direct guidance on when, what, how and by who these processes will be completed is provided within this implementation plan. For ease of reference, these details have been broken down to outline the requirements for each stage of the project and/or asset life.

9.1 Planning & Initial Construction

Coastal planning for this development, largely informed by the findings of this CHRMAP, have identified that a coastal hazard risk exists for both existing and proposed assets within the development. Generally in such scenarios there would be a requirement for a notification on title to ensure that the landowner/lessee was fully cognisant of the risks, however in this case the lease agreement is explicit with particular regard to the clauses presented in Section 2.6.1. These clauses essentially outline that there is a risk and that the responsibility for that risk lies solely with the RAC. This is something that has been accepted by RAC as acknowledged in Appendix D.

The other element that is key during the planning and construction phase is to ensure that the designs of each of the individual assets that comprise the redevelopment of the Monkey Mia Dolphin Resort are appropriate to be able to respond to the potential impacts of coastal hazards. The adoption of a readily relocatable modular building strategy addresses this element.

A summary of the requirements of the planning and construction stage is presented in Table 9.1.

Table 9.1 Implementation Plan Summary – Planning & Initial Construction Stage

Requirement	Timing	Responsibility
Acceptance of disclosed hazards/vulnerability	Planning Stage	RAC (note: completed through acceptance of lease agreement and letter contained in Appendix D)
Appropriate design of resort elements to ensure that risks are managed as best as possible	Planning & Construction Stage	RAC (supported by engaged design team)

9.2 Operation Over the Infrastructure Service Life

Over the service life of each of the assets there will be a requirement to monitor the shoreline to ascertain whether the risk to assets is increasing. Further details of the monitoring requirements are outlined in Section 9.4. This monitoring will be responsibility of the RAC.

If, at some stage during the service life of the infrastructure the risk from coastal hazards becomes untenable, the assets will be relocated in accordance with the managed retreat adaptation strategy. If this is not possible the assets will be removed and the site abandoned. In this way a foreshore area will always be maintained fronting the site.

The other items that need to occur during the operation are to ensure that the evacuation and emergency management procedures are enacted during extreme events. This will be the responsibility of RAC, but will ultimately be informed by advice from DFES prior to and during the passage of the events. This management will include both evacuation as well as management of the site, such as shut off of all services to ensure no spillage / leakage during the events.

A summary of the requirements during the operation of the assets over their service life is presented in Table 9.2.

Table 9.2 Implementation Plan Summary – Operation over the Infrastructure Service Life

Requirement	Timing	Responsibility
Monitoring coastal hazard risk to assess if risk becomes untenable and assets need to be relocated (Refer Section 9.4)	Operation over service life	RAC
IF REQUIRED Asset relocation / retreat in accordance with the requirements outlined in Section 9.3 OR Remove infrastructure and abandon for that particular asset	When risk level becomes untenable	RAC
Evacuation and Emergency Management (including shut off of services etc to manage environmental risks as required)	During extreme events over service life	RAC (will be informed by DFES advice prior to/during events)

9.3 Asset Replacement

Replacement of assets after their service life requires that they be relocated to an area where the risk to that asset over its service life is considered to be acceptable. To do this will require a revised coastal hazard risk assessment to be completed in accordance with the requirements at that time. The appropriate location for the replacement assets can then be chosen based on the acceptable risk level. Alternatively, that particular asset could be removed and not replaced, which is essentially an “abandon” management approach. The responsibility for these actions would rest with the RAC.

A summary of the requirements during the replacement of assets is presented in Table 9.3.

Table 9.3 Implementation Plan Summary – Operation over the Service Life

Requirement	Timing	Responsibility
Complete a revised coastal hazard risk assessment to quantify the risk level at that time	Planning for asset replacement	RAC
Determine appropriate retreat location for replacement infrastructure based on acceptable risk level OR Remove infrastructure and abandon for that particular asset	Planning for asset replacement	RAC

9.4 Monitoring & Review

Coastal monitoring and review is essential in order to track changes to the shoreline over time. Whilst the results of Section 3 provide an indication of the potential changes to the shoreline (and incorporate a justifiable level of conservatism), the system is inherently complex and the actual shoreline response could be different to that presented. Monitoring should therefore be completed to track changes over time and indicate whether the timing for risk mitigation should be adjusted. Triggers for further assessment of the shoreline movement have previously been discussed. As a result the following triggers will be used.

- Retreat of the shoreline (defined in this instance as the coastal vegetation line) to within 20 m of the proposed infrastructure as a result of chronic erosion will prompt review by a specialist coastal engineer to commence planning for managed retreat or abandonment of assets (with removal)
- Retreat of the shoreline to within 10 m of the proposed infrastructure caused by chronic erosion will prompt managed retreat or abandonment of assets (with removal)
- Retreat of the shoreline to within 20 m of the proposed infrastructure caused by acute erosion will prompt review by a specialist coastal engineering to ascertain the potential for recovery of the shoreline before any relocation is completed.

The shoreline monitoring should be completed using a combination of onsite measurements and photo-monitoring as well as review of aerial photography captured by Landgate.

If the rate of change in shoreline position observed during the monitoring is materially different from that allowed for with the erosion hazard assessment, it would be recommended that this CHRMAP be updated to quantify any changes to the risks posed by coastal hazards.

Likewise, should the State Government guidance on the required allowances for sea level rise change as a result of new information becoming available, the CHRMAP should also be updated. The responsibility for both of these actions would rest with the RAC.

A summary of the requirements for the monitoring and review is presented in Table 9.4.

Table 9.4 Implementation Plan Summary – Monitoring & Review

Requirement	Timing	Responsibility
Shoreline monitoring	Ongoing throughout the development – to be assessed on a yearly basis or as required based on the triggers being met or exceeded	RAC
Revision of CHRMAP	If shoreline behaviour changes substantially from that identified within this CHRMAP OR If guidance changes on potential future sea level rise	RAC

11. Conclusions

This CHRMAP has been completed to provide guidance on required adaptation and management actions associated with existing and proposed assets within the Monkey Mia Dolphin Resort. It has been completed in line with the recommendations of SPP2.6 and WAPC (2014).

The completion of the coastal hazard risk assessment for this site has shown that there is a risk of coastal hazards adversely impacting the site, however, over the initial planning horizon associated with the facilities (to the year 2040) the risk is deemed to be at an acceptable level (as advised by RAC). Despite the level of risk being acceptable, the ALARP approach has been adopted for the development and additional risk mitigation strategies have been proposed. This includes both a built form response for newly constructed assets as well as an overall management approach.

Finally, this plan was developed on the basis that the risk to public safety as a result of cyclone inundation is already managed within the Resort and by DFES. Regardless of this fact, it is recommended that RAC review its existing evacuation and cyclone event management plan for appropriateness for the expanded Resort. This plan should be reviewed in consultation with DFES and the Shire of Shark Bay.

Notwithstanding the results of the coastal hazard assessment, it is again noted that aerial photography of Monkey Mia Beach documenting 31 years of coastal processes and covering a period when around 22 cyclones would have influenced the shoreline, indicates that this is a stable coastal environment and that the risk assessment is balanced against the considerable social and economic benefit to the region created by this development, as provided for by SPP2.6 Item 4, Policy Objectives 2 and 3.

12. References

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13. Appendices

Appendix A Council Resolution 22 February 2017

Appendix B Detailed Stakeholder Comments

Appendix C Lease Document

Appendix D RAC Acknowledgement of Risk

Appendix E SBEACH Modelling Results

Appendix A Council Resolution 22 February 2017

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13.4 PROPOSED STRUCTURE PLAN – LOTS 130 AND 501 MONKEY MIA ROAD, MONKEY MIA P2024

AUTHOR

Liz Bushby, Gray and Lewis Land Use Planners

DISCLOSURE OF ANY INTEREST

Declaration of Interest: Gray and Lewis

Nature of Interest: Financial Interest as receive planning fees for advice to the Shire – Section 5.60A of *Local Government Act 1995*

Moved Cr Capewell

Seconded Cr Ridgley

Council Resolution

That Council:

1. **Recommend that Western Australian Planning Commission approve the Structure Plan lodged by TPG (planning consultants) for Lots 130 and 501 Monkey Mia Road, Monkey Mia subject to the following:**
 - (i) **The Statutory Report being modified to:**
 - (a) **Replace reference to the ‘Bushfire Management Plan (Appendix B)’ with reference to ‘a Bushfire Management Plan endorsed by the Shire of Shark Bay and the Department of Fire and Emergency Services’.**
 - (b) **Include a provision that ‘No development shall be permitted in Bushfire Attack Level-40 or Bushfire Attack Level-Flame Zone’.**
 - (c) **Include a provision that ‘The Shire may require the Bushfire Management Plan or Bushfire Attack Level assessment to be reviewed as part of future development stages’.**
 - (c) **Include a provision that ‘Management Plans are included in this Structure Plan Report as supporting information only, and require separate approval under the conditions of Ministerial Statement 709.’**
 - (d) **Include provisions to address the submission / conditions of Main Roads WA.**
 - (ii) **Approval of a Revised Bushfire Management Plan endorsed by the Department of Fire and Emergency Services and Shire of Shark Bay.**
2. **Advise the applicant that the Shire does not support the intensification of a vulnerable landuse within the higher Bushfire Attack Level-40 and Bushfire Attack Level-Flame Zone affected parts of the lots, and notes**

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that a revised Bushfire Management Plan is being progressed to address current State Planning Policy requirements, comments by Gray & Lewis, and Department of Fire and Emergency Service advice.

3. Note that the Structure Plan for Monkey Mia has been advertised for 28 days by publishing an advertisement in the Midwest Times, on the Shire website, and displaying a Public Notice in the Shire Administration office. Advertising closed on the 4 January 2017.
4. Note the Table of Submissions included as Attachment 4, and adopt the officer recommendations within Attachment 4.
5. Authorise the Chief Executive Officer to lodge the Structure Plan to the Western Australian Planning Commission with supporting information and advise as follows:
 - (i) The Shire understands that additional information is required to support the proposed Structure Plan and that issues such as Bushfire Management require resolution prior to the Structure Plan being considered by Western Australian Planning Commission. The Shire actively supports the Structure Plan and seeks to facilitate future development and expansion at Monkey Mia as it is a valuable asset which has potential to provide improved tourist facilities in a unique location.
 - (ii) Monkey Mia is a well established, world known, vital tourist development within the Shire, which warrants special variation of State Planning Policy 2.6. Future development is likely to be in a transportable form that can readily relocated as part of any planned managed retreat, in the event of future coastal impact.

6/0 CARRIED

BACKGROUND

- ***Location and surrounds***

The Monkey Mia Dolphin Resort is located within Reserve 40727. The Structure Plan will include Reserve 40727 and adjacent Lot 501 to the west (which is a vacant lot). Adjacent Reserve 49144 is under the care and control of the Department of Parks and Wildlife, and includes the Monkey Mia Visitor Centre and associated carpark.

Appendix B Detailed Stakeholder Comments

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ATTACHMENT # 4

Agency Comments	Applicant's response
<p><u>Main Roads WA</u></p> <p>Main Roads has no objection to the proposal subject to the Shire of Shark Bay imposing the following conditions:</p>	
<ul style="list-style-type: none"> No stormwater drainage shall be discharged onto the Monkey Mia Road reserve; 	<p>Noted. No objection (standard MRWA requirement).</p>
<ul style="list-style-type: none"> No vehicle access shall be permitted to or from Monkey Mia Road within the '15mwide Vegetation Buffer' except at the proposed access points; 	<p>Noted. The proposed access points are indicative under the Structure Plan. As the design is refined at Development Application stage there may be a need to adjust the location of the access points based on DFES requirements. This shall be done in collaboration with MRWA and DFES to ensure compliance with the relevant standards.</p>
<ul style="list-style-type: none"> The proposed emergency access point from Lot 501 shall only be permitted to comply with State Planning Policy No. 3.7 - Planning in Bushfire Prone Areas and when accommodation development commences on Lot 501; and 	<p>Noted. The access point at the workshop is for daily use. Not just emergency exit. The design of the emergency access point shall be provided at the detailed design stage.</p>
<ul style="list-style-type: none"> Satisfactory arrangements being made for the two access points to Monkey Mia Road to a standard of construction and design to the satisfaction of the Main RoadsWA. 	<p>Noted and agreed. The existing roads are shell grit. This is what is proposed.</p>
<p>In addition, Main Roads provides the following comments on the Traffic Impact Statement that shall need to be addressed at the development application stage:</p> <ul style="list-style-type: none"> Provide a scaled geometric layout for each proposed access point to Monkey Mia Road including the vehicle swept path movements of the largest type of vehicle using each access and location of any security control measures, such as a boom gate; 	<p>Noted and agreed.</p>

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<ul style="list-style-type: none"> How would the proposed emergency access point from Lot 501 be designed to restrict access for emergency purposes only; and 	Noted and agreed. This will be provided at the detailed design stage.
<ul style="list-style-type: none"> How would a boom gate at the security controlled guest access to Lot 130 deter pedestrians to access and cross over Monkey Mia Road to walk the Wulyibidi Yaninyina Trail. 	Noted. Vehicle and pedestrian numbers along Monkey Mia Road are very low. Sight lines are more than sufficient. This is not considered an issue.

Agency Comments	Applicant's response
<u>Department of Parks and Wildlife</u>	
In general terms, any development within the Shark Bay World Heritage Property must allow for visitors to enjoy and appreciate the values of Shark Bay by providing for compatible and sustainable recreational activities that do not adversely impact on the Shark Bay Marine Park, the World Heritage values or the overall integrity of the Shark Bay World Heritage Property.	<p>Noted and agreed. This Structure Plan provides a guiding planning framework to facilitate the redevelopment and expansion of the Monkey Mia Dolphin Resort for tourism purposes. It will guide development in an integrated and orderly manner through subsequent planning approvals in accordance with the Shire's Local Planning Scheme.</p> <p>The resort expansion has approval under the Environmental Protection Act 1986 (EP Act) and the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). RAC is required to implement a suite of environmental management documents which are applied and managed through the Environmental Management System. This provides a structured environmental management approach for the expansion of the resort.</p>
The Concept Yield Masterplan (CYM) on page 31 of the Plan shows two 'landscaped areas' that extend outside the resort lease area. One area is shown adjacent to the Parks and Wildlife Visitor Centre and labelled as 'Beachfront Plaza' and 'Village Green'. The second landscaped area is unlabeled and is situated at the entrance to the resort. Both these 'landscaped areas' are substantially located on the Conservation Park. The Masterplan also shows that the Parks and Wildlife office building is to be removed.	<p>Noted and agreed.</p> <p>Initial discussions with DPaW to create an integrated landscape and business and management plan for the retail, administrative and research functions have proved positive. The Concept Plan has therefore taken this into consideration. RAC shall continue to discuss the integration of the resort development with the Conservation Park area. The Concept Plan will continue to be refined and circulated to DPaW for awareness and comment.</p>

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<p>Although the Conservation Park is out of scope of the Plan, Parks and Wildlife is keen to see that any commercial development at Monkey Mia is complimentary to any future site development, and that development is well integrated and relatively seamless across these cross-boundary areas. Discussions between Parks and Wildlife and RAC to plan for the development of these interface areas is ongoing.</p>	
<p>The Concept Masterplan also shows that the existing public ablutions block is to be removed. As such it is important that the redevelopment provide adequate toilet facilities for day visitors who do not wish to use the resort's restaurant.</p>	<p>Noted.</p> <p>New ablutions are being provided based on visitor numbers. The reciprocal facility is planned immediately to the south of the Boughshed that is externally accessible and most likely to be used by visitors following dolphin feeding times and later in the day. The Boughshed demand on these facilities increases into the late afternoon and dinner service hours, when day visitors have left the property.</p> <p>Summary:</p> <ul style="list-style-type: none"> • Entry to the ablutions does not require that day visitors enter the restaurant. • There is a demonstrable reciprocal use pattern between day visitor and restaurant patrons. • The location of the facilities is on a clear line of site from the resort entry. • A wayfinding strategy will respond by providing appropriate directional indicators for the benefit of visitors to DPaW facilities
<p>With reference to the 15 metre buffer shown on the CYM, (and discussed in Section 3.5 on page 33 of the Plan), Parks and Wildlife has had recent discussion with RAC with respect to the reduction of the buffer from 15 metres to 5</p>	<p>Noted and agreed. Thick-billed Grass Wren has recently been delisted from the EPBC Act and is classified as Priority 4 species under the Wildlife Conservation Act 1959. Priority 4 species are adequately known, rare but not threatened or meet criteria for Near Threatened, or</p>

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<p>metres to allow for widening and landscaping of the main roadway within the resort area. Initially it was understood that the buffer was a visual buffer only and so the department had indicated the possibility of some flexibility in this area. However, it has come to light that this buffer is the subject of the Environment Protection Authority's Ministerial Statement 709 of November 2002 which directs that the 15 metre buffer be maintained for the protection of part of the territory of the thick-billed grass wren. This will require a process to amend that Ministerial Statement should the proposal to amend the buffer zone proceed.</p>	<p>that have been recently removed from the threatened list. A process is being undertaken to amend the Ministerial Statement to review this buffer zone. This is an important consideration in the context of the fire risk the 15m wide vegetation strip presents to the operations of the resort.</p>
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Agency Comments	Applicant's response
<p><u>Department of Parks and Wildlife</u></p>	
<p>While not specifically detailed in this plan it should be noted that there has been some recent discussion with RAC and Parks and Wildlife about possible access to local basic raw materials (gravel) to allow for surfacing of the development area. Permission was granted for samples to be taken for analysis from a number of previously rehabilitated gravel pits within Crown Reserve. Parks and Wildlife has advised RAC that a formal application must be submitted seeking Lawful Authority under the CALM Regulations 2002 (Regulation 35A Quarrying, removing or disturbing soil etc) to allow access to basic raw materials from the this reserve. The Shire of Shark Bay's approval will also be required because the reserve is jointly vested in the CALM Executive Body (Parks and Wildlife) and the Shire.</p>	<p>Noted. Not directly relevant to the Structure Plan proposal.</p>
<p>As you are aware Parks and Wildlife is an adjacent landholder having care and control over the adjacent Conservation Park, (Crown Reserve 49144, Lot 131 Monkey Mia Road). It appears that access to the existing main entry into the Monkey Mia resort is through a car park area on the Conservation Park. Parks and</p>	<p>Noted and agreed. RAC shall pursue an access arrangement with DPaW. The process shall be <u>initiated concurrent with</u> the development application (when the detailed design of the access points can be confirmed).</p>

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<p>Wildlife confirms that as there is no formal legal access arrangement with RAC. While an easement could be legally created under Section 144 of the Land Administration Act 1997 to provide sustained legal access, it would need to be granted by the Minister for Lands through the Department of Lands. Parks and Wildlife's preferred solution would be to grant a licence under Section 101 of the Conservation and Land Management Act 1984 to provide this access.</p>	
<p>Parks and Wildlife notes that RAC Resorts is seeking to create two new vehicle accesses from the resort lease area to the Monkey Mia Road. One access is for emergency egress and the other for access for guests who have already paid the Monkey Mia attraction fee. It is understood that the current RAC Resort lease does not extend to the Monkey Mia Road. Therefore there will need to be an extension to the current lease, or some other legal arrangement, to traverse the road reserve before entering the physical Monkey Mia Road (see attached maps of the tenure of the area).</p>	<p>Disagree. The proposed access point directly abuts the road reserve. There is no need to extend the lease boundary into the road reserve. The crossover will be designed to the satisfaction of MRWA.</p>
<p>The Ministerial Statement 709 specifies that advice from the Shire of Shark Bay and Parks and Wildlife is to be obtained in relation to a Drainage Management Plan and a Nutrient and Irrigation Management Plan. Parks Wildlife recommends that the Department of Environment Regulation should also be consulted with respect to these plans.</p>	<p>Noted and agree. RAC's consultants have been liaising with the DER regarding the documents as part of the Development Application proposal prior to submitting.</p>

Agency Comments	Applicant's response
<p><u>Department of Parks and Wildlife</u></p>	
<p>While it is understood that this Structure Plan is an overarching document and so is not intended to provide design detail, the following are key areas of concern to be considered as the</p>	<p>Noted. The sewerage treatment plant and potable water plant has been upgraded in 2013 to accommodate the resort expansion. The new membrane bio-reactor waste water treatment plant has been</p>

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<p>planning process unfolds.</p> <p>The management of sewage, waste water, and run-off needs to be addressed adequately, by providing detail on how solid and liquid sewage waste will be contained and managed. Given the close proximity to the marine park the management of sewage is particularly critical given the significant numbers of campers and visitors accessing the area and the potential impact from waste leaching into the marine park.</p>	<p>specifically designed and build to account for DPaW, EPA, DER concerns in this regard and is now fully tested, commissioned and operating for two years. All operational permits are now in place and regular bore testing regime in place. Water treatment for reuse in landscaping requires additional upgrades.</p> <p>This detail shall be provided as part of the Development Application.</p>
<p>The management of solid waste and litter is critical to keeping the foreshore and marine park free of litter and other debris generated from the site, both in the construction phase and during ongoing operations. It is recommended that the waste management plan take these issues into consideration</p>	<p>Noted. This shall be addressed as part of the final Construction Management Plan.</p>
<p>Management of visitor impacts such as pedestrian access onto the foreshore and into the marine park needs to be considered given the increased visitation and overnight accommodation offered. It will be important to understand how the visitors will be contained within the site, and how they will access the marine park. It is important that any issues of ad hoc development of tracks, site erosion, and vegetation loss are adequately addressed. In addition, this increased visitation is likely to have significant impact on the dolphin viewing area and its capacity to comfortably and effectively accommodate those engaged in the Dolphin Experience. It will therefore be critical to engage in close collaboration with Parks and Wildlife to facilitate good integrated cross-boundary planning and design for this key site.</p>	<p>Noted and agreed. RAC shall liaise with DPaW in this regard.</p>
<p>As the proposed further developments will require clearing of vegetation, the increased run off from additional drains, buildings, walkways and other hardened areas such as sealed carparks raises some concerns with regard to the management of this runoff and the movement of silt and</p>	<p>Noted and agreed. This shall be addressed as part of the Development Application.</p>

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<p>pollutants. Some consideration should be given to rehabilitation of any impacted areas using locally sourced native plants, particularly where there is increased risk of erosion by wind or water.</p>	
<p>With the development of the site and construction of buildings the impact on important aesthetic and visual values of the Shark Bay World Heritage Property. (ie land and seascapes, coastal scenery) must be considered in the design and placement of all infrastructure. Any development must be compatible with and not interfere with the enjoyment of the aesthetic values of the Shark Bay World Heritage Property.</p>	<p>Noted and agreed. This shall be addressed as part of the Development Application. The <u>architect is designing with reference to Peron Peninsular Colour Palette guidelines.</u></p>

<p>Agency Comments</p>	<p>Applicant's response</p>
<p><u>Department of Parks and Wildlife</u></p>	
<p>The impact of additional electric lighting should be taken into consideration. Light pollution can significantly alter the nighttime environment in natural areas. The nocturnal activity of marine animals such turtles can be adversely impacted by artificial lights.</p>	<p>Noted and agreed. This shall be addressed as part of the Development Application.</p>
<p>During construction and ongoing management of the site, the introduction of pest plants or diseases and/or contaminated materials must be taken into consideration. This is particularly important when sourcing basic raw materials.</p>	<p>Noted and agreed. This shall be addressed as part of the Development Application.</p>
<p>In principle Parks and Wildlife is highly supportive of well managed and well considered nature based tourism ventures within the Shark Bay World Heritage Property, and acknowledges the significant contribution these ventures can make to enhancing the understanding, appreciation and enjoyment of the World Heritage values.</p>	<p>Noted. RAC looks forward to continue its positive relationship with DPaW on this exciting project.</p>

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<p>The department has a strong interest in continuing to work collaboratively with RAC and the Shire-of Shark Bay over coming years with regard to the development of appropriate, integrated, complimentary and seamless visitor spaces and infrastructure that will continue to deliver a world class experience for visitors to Monkey Mia and the broader Shark Bay World Heritage Property.</p>	
--	--

Agency Comments	Applicant's response
<p><u>Department of Aboriginal Affairs</u></p>	
<p>The Department of Aboriginal Affairs (DAA) has undertaken a review of the location and confirms there are three reported Aboriginal heritage places where the mapping of these places intersect the area of the proposed structure plan. These places are lodged Aboriginal heritage place DAA 8778 (Monkey Mia) and registered Aboriginal Sites DAA 496 (Monkey Mia 5) and DAA 16214 (Monkey Mia Hill). A review of the information within the site files indicates the actual location of DAA 8778 is not located within the proposed structure plan area and is situated approximately 400m to the south. Similarly, it is likely both DAA 496 (Monkey Mia 5) and DAA 16214 (Monkey Mia Hill) are located on the south side of the Monkey Mia access road and outside of the proposed structure plan area.</p>	<p>Noted.</p>
<p>The Structure Plan report for the Monkey Mia Dolphin Resort, dated 26 October 2016, details consultation with Yamatji Marlpa Aboriginal Corporation (YMAC) has occurred , however that ethnographic and archaeological site identification surveys will be undertaken with the Malgana People to determine if</p>	<p>Noted. RAC recognises that the Monkey Mia area has a special cultural significance for the Malgana People. RAC is committed to working with the Malgana People to ensure that any Aboriginal heritage issues are managed appropriately and by agreement with the Traditional Owners. RAC has taken assignment of the</p>

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<p>Aboriginal sites exist within the development area and whether consent under section 18 of the <i>Aboriginal Heritage Act 1972</i> (AHA) is required if an Aboriginal heritage site cannot be avoided. Please note that if Aboriginal heritage places are identified during the heritage surveys, proponents are required under the AHA to report these findings to theDAA. This ensures the Register of Sites and Objects (Register) contains the most current information and improves the accuracy of the database (Register).</p>	<p>Native Title Agreement negotiated between the former resort operators (Aspen) and intends to uphold the undertakings of that Agreement. Consultation is already being undertaken with the Malgana Working Group as part of the Structure Plan and Development Application processes. Heritage Agreement currently in preparation for execution.</p>
<p>It is recommended that developers undertaking activities within the area for the proposal, are familiar with the State's Cultural Heritage Due Diligence Guidelines. These have been developed to assist proponents to identify any risks to Aboriginal heritage and to mitigate risk where heritage sites may be present. The guidelines are available at: http://www.daa.wa.gov.au/globalassets/pdf-files/ddg. If, after reviewing these guidelines, the developer has any queries regarding their responsibilities regarding the AHA, they should contact the DAA in the first instance.</p>	<p>Noted.</p>

Agency Comments	Applicant's response
<p><u>Department of Fire and Emergency Services (DFES)</u></p>	
<p>DFES do not support the structure plan as it proposes development (camping sites) in BAL- 40 and BAL-FZ without sufficient justification, and the BMP has not demonstrated to the fullest extent compliance to the bushfire protection criteria.</p> <p>A revised BMP for the proposed structure plan, in line with the points provided for the bushfire consultant following this letter, is required.</p>	<p>Noted. RAC's project team are working with DFES, the Shire, the Department of Lands and Main Roads WA to reach a mutually agreeable solution in relation to fire management. A revised BMP will be resubmitted to DFES in due course to ensure all matters are addressed appropriately prior to the Structure Plan being approved by the Western Australian Planning Commission.</p>

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Agency Comments	Applicant's response
<u>Shark Bay World Heritage</u>	
Following the Public Environmental Review in 2004, the Environmental Protection Authority identified issues relevant to the proposed expansion (Bulletin 1165). The complement of management plans appended to the Structure Plan, including the Foreshore Management Plan, Environmental Management System and Coastal Hazard Risk Management Plan, appear to address the majority of environmental factors previously highlighted in Ministerial Statements 709 and 919.	Noted.
The western subspecies of the Thick-billed Grasswren (<i>Amytornis textilis textilis</i>) is endemic to Western Australia and is currently only known from the Shark Bay region. Whilst this subspecies has experienced an historic decline, there is no current evidence to indicate further declines in numbers since 1910, with the surveys conducted in 1998 and 2003 indicating that populations (estimated at 21,500 in 2000) are stable. As such, this Grasswren has been deleted from the EBPC Act threatened species list vulnerable category. However, the Committee recommends on-going monitoring to ensure habitat and refuge areas within the proposal area are sufficient to maintain this status quo.	Noted. A Grasswren survey is currently being undertaken over the site.
Given that aesthetics of land and seascapes are included in the World Heritage values, the Committee suggests that construction materials, building designs and colours be sympathetic to the surrounding local environment to minimise visual impacts. To assist developers with this aspect of the values, the Committee commissioned a graphic artist to formulate colour palettes relative to areas of the World Heritage property, including Peron Peninsula. These palettes have also been adopted by the Shire of Shark Bay.	Noted. Materials and colour palettes shall be addressed in detail as part of the development application phase. The architect is designing with reference to Peron Peninsular Colour Palette guidelines.
Although the Monkey Mia dolphins are not specifically identified as a World Heritage value, the marine megafauna	Noted and agreed. RAC shall liaise with DPaW in this regard.

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<p>of Shark Bay is, and any cumulative impacts on the sensitive environment and the dolphins should be considered in relation to the carrying capacity of the area and the potential for the dolphin interactive experience to be compromised.</p> <p>It is understood that the current review of the management of the Monkey Mia dolphin provisioning program by Department of Parks and Wildlife will consider the expected growth in tourist visitation to the Resort, the current and raised pressures and the management strategies to mitigate these.</p>	
<p>The Committee endorses the Royal Automobile Club's environmental policy, which acknowledges responsibility to protect the natural environment, mitigate negative impacts and pursue continuous improvement for more sustainable operations.</p> <p>It also supports the proposal to expand the Monkey Mia Dolphin Resort, with the expectation that any environmental impacts will be clearly articulated and measures taken to reduce and/or prevent these within the proposal area.</p>	<p>Noted and agreed.</p>

Appendix C Lease Document

INSTRUCTIONS

1. If insufficient space in any section, Additional Sheet Form B1 should be used with appropriate headings. The boxed sections should only contain the words "See Annexure".
2. Additional Sheets shall be numbered consecutively and bound to this document by staples along the left margin prior to execution by parties.
3. No alteration should be made by erasure. The words rejected should be scored through and those substituted typed or written above them, the alteration being initialled by the persons signing this document and their witnesses.
4. Duplicates are not issued for Crown Land Titles.

NOTES

1. DESCRIPTION OF LAND

Lot and Diagram/Plan number or Location name and number to be stated.
 Extent – Whole, part or balance of the land comprised in the Certificate of Crown Land Title to be stated.
 The Certificate of Crown Land Title Volume and Folio number to be stated.

2. LIMITATIONS, INTERESTS, ENCUMBRANCES and NOTIFICATIONS

In this panel show (subject to the next paragraph) those limitations, interests, encumbrances and notifications affecting the land being leased that are recorded on the crown land title:

1. a) In the Second Schedule;
- b) If no Second Schedule, that are encumbrances.
3. (Unless to be removed by action or document before registration hereof)

4. Do not show any:
 (a) Easement Benefits or Restrictive/Covenant Benefits; or
 (b) Subsidiary interests or changes affecting a limitation, etc. that is to be entered in the panel (eg, if a mortgage is shown, do not show any partial discharges or any document affecting either).

The documents shown are to be identified by nature and number. The plan/diagram encumbrances shown are to be identified by nature and relevant plan/diagram.

If none show "nil".

3. LESSOR

State full name and address of Lessor/Lessors and the address/addresses to which future notices can be sent.

4. LESSEE

State full name of Lessee/Lessees and the address/addresses to which future notices can be sent. If two or more state tenancy eg. Joint Tenants, Tenants in Common. If Tenants in Common specify shares.

5. TERM OF LEASE

Term to be stated in years, months and days.
 Commencement date to be stated. Options to renew to be shown.

6. RECITE ANY EASEMENTS TO BE CREATED

Here set forth Easements to be created as appurtenant to the lease commencing with the words "together with" and/or any Reservations hereby created encumbering the lease commencing with the words "reserving to".

7. State amount of yearly rental in words

8. State term of payment

9. EXECUTION

A separate attestation is required for every person signing this document. Each signature should be separately witnessed by an Adult Person. The full name, address and occupation of the witnesses must be stated.

EXAMINED

**NO DUPLICATE
LEASE LODGED**

5/8/15

N 51538 L

Perth 12 Aug 2015 15:15:06



REG \$ 164.00

LEASE OF CROWN LAND (L)

see letter filed in

 NSLS37

LODGED BY *Clayton Utz*

ADDRESS *250 St Georges Terrace PER WA 6000*

PHONE No. *9426 8000*

FAX No. *9481 3095*

REFERENCE No. *80157790*

ISSUING BOX No. *148P*

PREPARED BY Herbert Smith Freehills
 Barristers & Solicitors

ADDRESS Level 36
 QV1 Building
 250 St Georges Terrace
 PERTH WA 6000

PHONE No. (08) 9211 7777

FAX No. (08) 9211 7878

INSTRUCT IF ANY DOCUMENTS ARE TO ISSUE TO OTHER THAN LODGING PARTY

Bit 2/3

TITLES, LEASES, DECLARATIONS ETC LODGED
 HEREWITH

1. _____	Received Items
2. _____	Nos.
3. _____	
4. _____	Receiving Clerk
5. _____	
6. _____	

Registered pursuant to the provisions of the TRANSFER OF LAND ACT 1893 as amended on the day and time shown above and particulars entered in the Register.

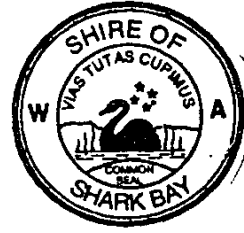


ATTESTATION SHEET

Executed by the parties as a Deed on the 21st day of April in the year 2015

LESSOR/LESSORS SIGN HERE (NOTE 9)

THE COMMON SEAL of the SHIRE OF)
SHARK BAY was hereunto affixed by the Shire)
President in the presence of the Chief Executive)
Officer)



[Signature] - Cheryl Lorraine Cowell
Shire President

[Signature] - Paul Gregory Anderson
Chief Executive Officer

see letter filed
in NS15377
17/8/15

LESSEE/LESSEES SIGN HERE (NOTE 9)

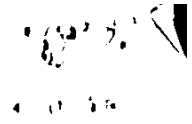
EXECUTED by ASPEN MONKEY MIA PTY LTD)
(ACN 116 296 265) pursuant to section 127 of)
the Corporations Act:)

[Signature]
(Signature of Secretary/Director)

Mandy Chiang
Company Secretary
(Name of Secretary/Director in full)

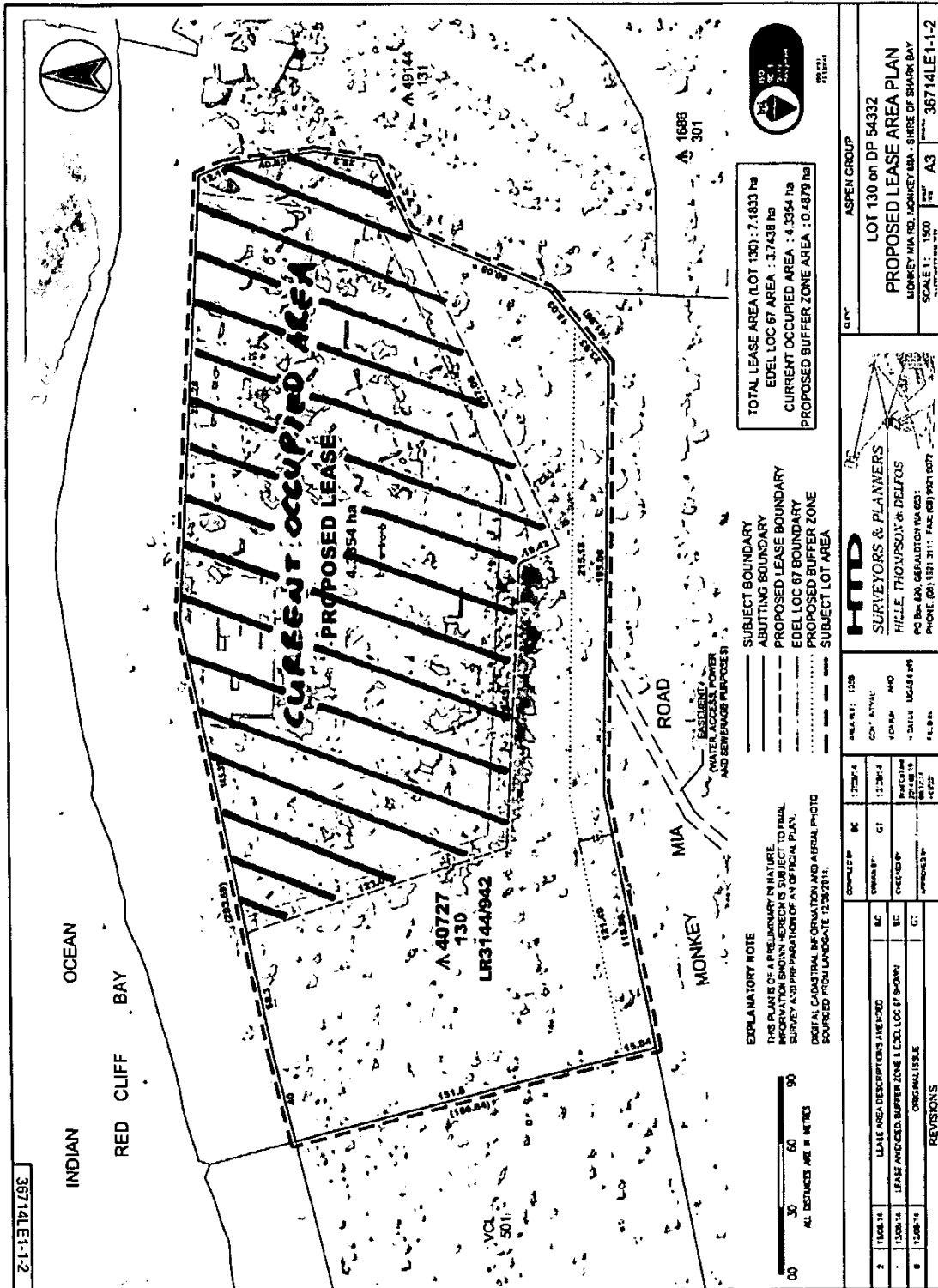
[Signature]
(Signature of Director)

Clement Salwin
(Name of Director in full)



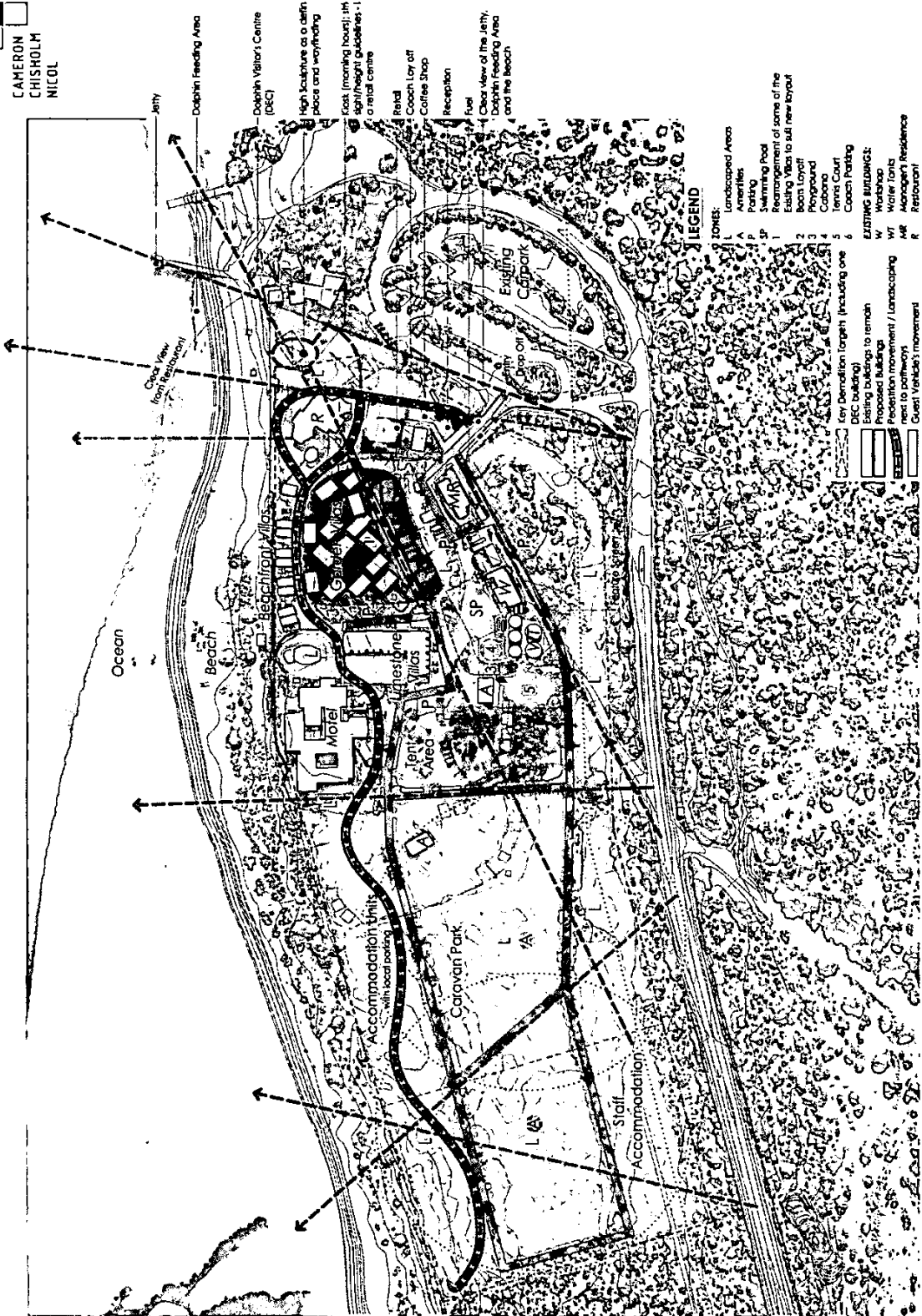
31298-15.01.09-MB-Extension of reserve 40727 Lease (Freehill's version)

Attachment 3 – Plan showing Current Occupied Area



31298-15.01.09-MB-Extension of reserve 40727 Lease (Freehill's version)

CAMERON
CHISHOLM
NICOL



122013 P13046_SK-01_A

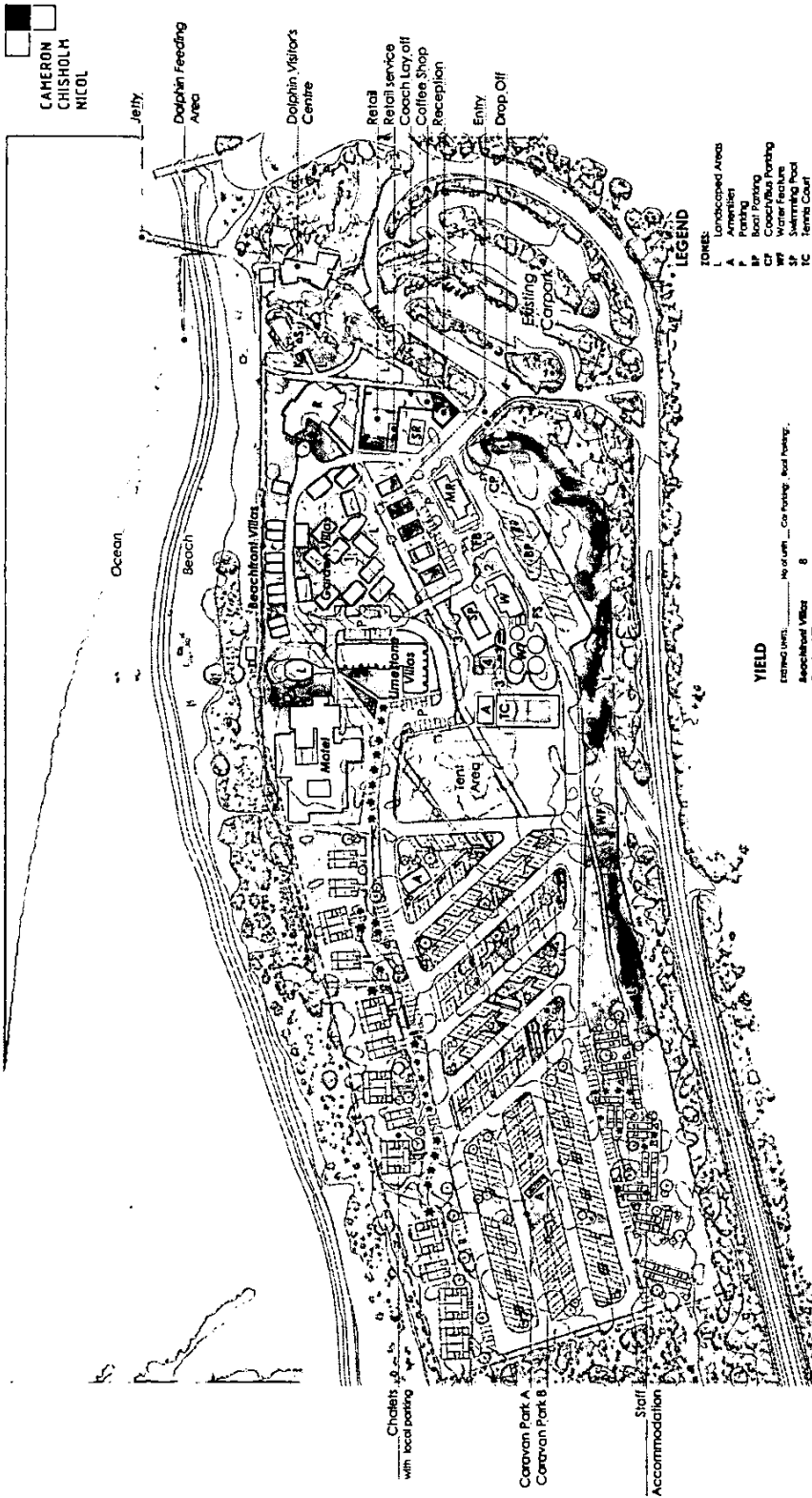
MASTER PLAN ZONING DIAGRAM

MONKEY MIA DOLPHIN RESORT

1:1000 (A1) 0 20 40 60 80 100

31298-15.01.09-MB-Extension of reserve 40727 Lease (Freehill's version)

Attachment 2 – Basic Plans



CAHERON
CHISHOLM
NICOL

LEGEND

- L Landscaped Area
- A Amenities
- P Parking
- BP Boat Parking
- CP Coachbus Parking
- SP Swimming Pool
- TC Tennis Court
- F Fuel Station
- FF Fencing - Screen Fence
- FF Fencing - Iron Mesh
- FF Fencing - High Security as a walking place and way home
- FF Fencing - Repositioning of 5 Existing Villan
- FF Fencing - Program
- FF Fencing - Coloured

YIELD

Item	No of units	Car Parking	Staff Parking
Beachfront Villas	8		
Garden Villas	19	19	
Beachfront Villas	14		
Beach Area Villas	24		
Beachfront Villas	14		
Beachfront Villas	14		
TOTAL	113	19	14

LEGEND

- Chabets
- Staff Accommodation
- Proposed Buildings

YIELD

Item	No of units	Car Parking	Staff Parking
Caravan Site A	56	56	
Caravan Site B	48	48	
TOTAL	104	104	4

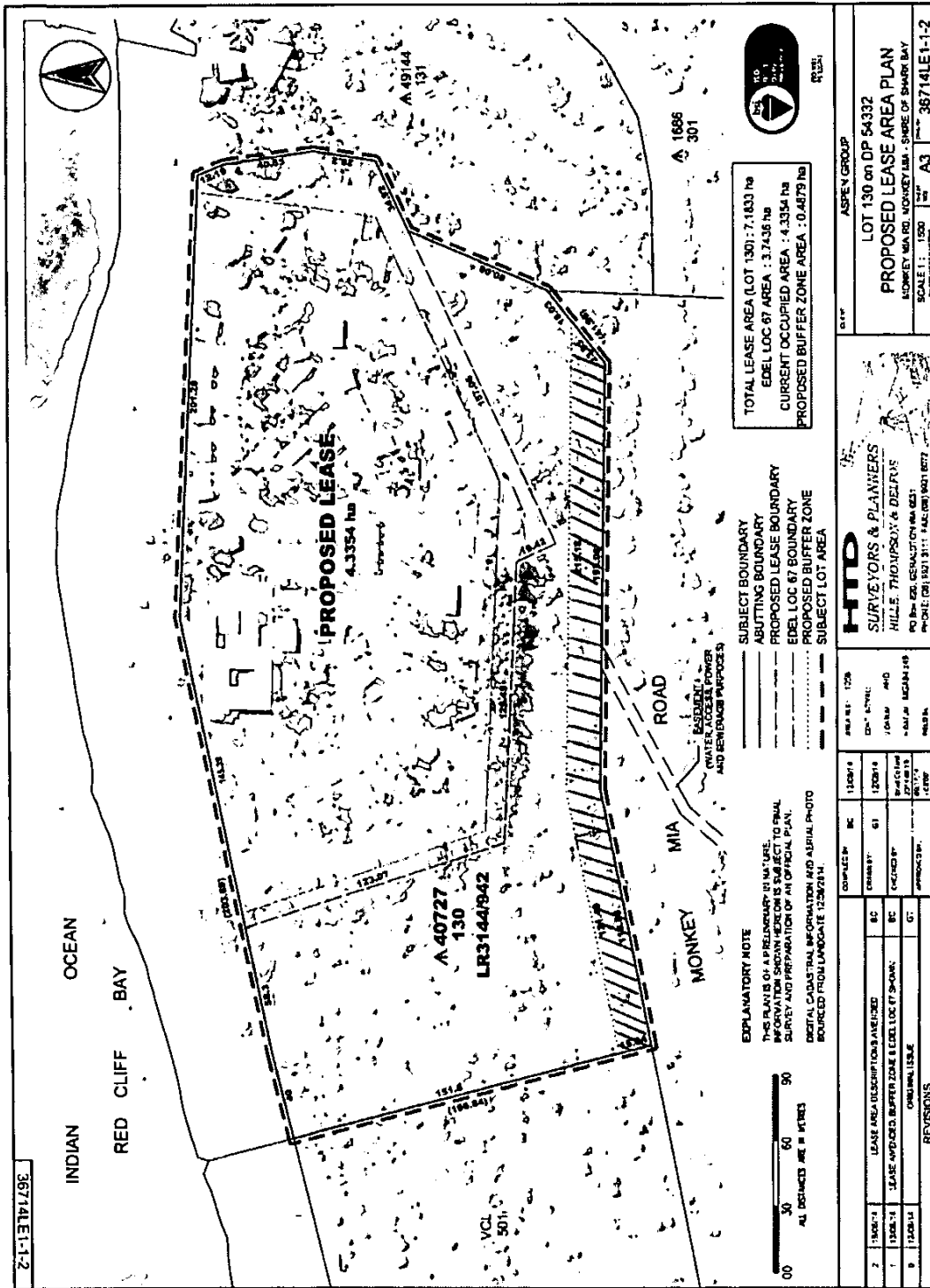
12/2013 P13046_SK-02

MASTER PLAN

MONKEY MIA DOLPHIN RESORT

31298-15.01.09-MB-Extension of reserve 40727 Lease (Freehill's version)


Attachment 1 – Buffer Zone Plan



31298-15.01.09-MB-Extension of reserve 40727 Lease (Freehill's version)

EXECUTION

Minister for Lands, hereby approves this
Lease for the purposes of section 18 of
the *Land Administration Act 1997*

APPROVED FOR THE PURPOSES OF SECTION 18
OF THE LAND ADMINISTRATION ACT 1997

by order of the Minister for Lands
This document is still subject to the registration
requirements of the Transfer of Land Act 1893.

NAME: Lily Sutomo
A/ SENIOR STATE LAND OFFICER
TEAM: Mid West

Manager, ~~Land Asset Management, Pilbara~~, for and on behalf of the Minister for Lands
RMS, Midwest

SCHEDULE

ITEM	TERM	DEFINITION
1.	Term	Ninety nine (99) years commencing from the Commencement Date.
2.	Rent	\$120,000 per annum plus GST payable annually in advance, but subject to clauses 5.1(b) and 5.2, plus Percentage Rent in accordance with clause 5.3.
3.	Rent Review Dates:	Every third anniversary of the Commencement Date
4.	Permitted Use	A holiday resort providing accommodation, caravan and camping facilities and other amenities and facilities connected with or associated with that use, including without limitation food, beverage and liquor sales.
5.	Address for payment of Rent	Shire of Shark Bay PO Box 126 Denham WA 6537
6.	Address for service of notice on Lessor	Chief Executive Officer Shire of Shark Bay PO Box 126 Denham WA 6537

given, give notice to the other party requiring that the Dispute be referred to a suitably qualified expert agreed by the parties (or nominated by the President of the Law Society of Western Australia if the parties cannot agree on the expert within 10 Business Days) for final determination ("Dispute Notice").

17.5 Expert Determination

Where the Instituting Party serves a Dispute Notice on another party, the Dispute shall be referred by the Instituting Party to the expert agreed or nominated under clause 17.4 ("Expert") for determination and the parties shall provide any information subsequently requested by the Expert promptly.

17.6 Expert's Decision Binding

The Expert's decision on a Dispute shall be final and binding on the Lessor and the Lessee.

17.7 Expert's Refusal or Failure to make a determination

If for any reason the Expert declines to resolve any Dispute or fails to make a determination within 6 months of the date on which the Dispute is referred then the resolution process instigated under this clause 17 shall cease with respect to that Dispute and the parties shall be at liberty to take whatever action they consider fit to resolve the Dispute thereafter.

EXECUTED as a Deed.

16.5 Tax invoice

Where GST is payable, the Lessor shall provide to the Lessee, a Tax Invoice in the format and form required as set out in the GST law.

16.6 Notification is conclusive

A written notification given to the Lessee by the Lessor of the amount of GST that the Lessor is liable to pay on a Taxable Supply made or to be made under this Lease is conclusive between the parties except in the case of an obvious error.

16.7 The Lessee Must Pay GST at Same Time

The Lessee must pay to the Lessor the amount of the GST that the Lessee is liable to pay under this Lease:

- (a) at the same time; and
- (b) in the same manner,

as the Lessee is obliged to pay for the Taxable Supply.

16.8 Apportionment of GST

Where a Taxable Supply is not separately supplied to the Lessee, the liability of the Lessee for any amount for GST, in relation to that Taxable Supply, is determined on the same basis as the Lessee's proportion of that Taxable Supply is determined.

17. DISPUTE RESOLUTION

17.1 Dispute and Initiating Notice

Where there is a dispute between any of the parties in respect of anything arising out of the provisions contained in clause 3, clause 4, clause 7 or clause 5.11 ("Dispute") either party ("Instituting Party") may, at any time, give notice ("Initiating Notice") to the other party containing full particulars of the Dispute, including terms proposed by the Instituting Party for settlement of the Dispute.

17.2 Response to Initiating Notice

The party to whom an Initiating Notice is given must give to the Instituting Party notice of its response ("Response") within 14 days after the date the Initiating Notice was given.

17.3 Response Binding

If within 14 days after the date a Response is given the Instituting Party gives to the other party notice that it is satisfied by that Response, it shall be binding on the parties.

17.4 Dispute Notice

If the Instituting Party is dissatisfied with a Response, or if the other party fails to give a Response, the Instituting Party may, within 28 days after the date the Initiating Notice was

14.13 Reference to "Lease"

A reference in this special term to "Lease" includes a reference to any tenancy or other rights whether legal or equitable under which the Lessee occupies or is entitled to occupy the Leased Premises, including but not limited to a tenancy for a fixed term, a periodic tenancy or a tenancy at will.

15. VARIATIONS MUST BE APPROVED BY MINISTER

- (a) The parties agree that each and every variation of this Lease that is agreed to shall be subject to and conditional upon the approval of the Minister and no variation of this Lease shall be of any effect whatsoever at law or in equity until the Minister has given approval.
- (b) The Lessor and Lessee agree that the terms and conditions contained in this paragraph (c) have been made entirely for the benefit of the Minister and they are intended to confer an irrevocable benefit on the Minister.

16. GOODS & SERVICES TAX

16.1 Definitions

In this clause the following terms have the following meanings:

"GST" has the meaning given in section 195-1 of the GST Act;

"GST Act" means *A New Tax System (Goods and Services Tax) Act 1999* and any legislation substituted for or amending that Act;

"GST law" has the meaning given in section 195-1 of the GST Act;

"Tax Invoice" has the meaning given in section 195-1 of the GST Act; and

"Taxable Supply" has the meaning given in section 195-1 of the GST Act.

16.2 Rent Exclusive of GST

The Rent and any other amounts payable by the Lessee to the Lessor, under this Lease, are exclusive of GST.

16.3 Lessee To Pay GST

The Lessee must pay additional to the Rent and any other amounts payable by the Lessee, any GST payable by the Lessor in respect of a Taxable Supply made under this Lease.

16.4 Variation of GST

Where GST is payable on Rent, the amount payable shall be the amount specified in tem 1A of the Schedule, until varied from time to time consequent upon each review of Rent in accordance with this lease.



- (b) extends to claims by the Lessor for loss or damage arising from the repudiation of this Lease or from breaches of the terms of this Lease, including, but not limited to:
 - (i) the Lessee vacating (otherwise than in accordance with the terms of this Lease) or abandoning the Leased Premises; or
 - (ii) the Lessor re-entering or terminating this Lease, including for the Lessee's repudiation of this Lease.

14.9 Lessor's rights under guarantee

The rights of the Lessor under the bank guarantee are not prejudiced or otherwise affected by anything which might otherwise affect the Lessor in law or in equity, including, but not limited to, one or more of the following:

- (a) the Lessor granting time or other indulgence to the Lessee;
- (b) acquiescence, delay, acts or omissions on the part of the Lessor;
- (c) an assignment, extension, sub-lease or variation of this Lease;
- (d) the death, dissolution or other incapacity of the Lessee;
- (e) the bankruptcy or liquidation of the Lessee or the appointment of a provisional liquidator or receiver or receiver and manager or any arrangement or composition for the benefit of the Lessee's creditors;
- (f) the invalidity or unenforceability of an obligation or liability of the Lessee under this Lease; or
- (g) the disclaimer of this Lease by a liquidator or trustee of the Lessee.

14.10 Lessor's right for payment

If a claim that a payment to the Lessor in connection with this Lease is void or voidable under laws relating to insolvency or protection of creditors is upheld, conceded or compromised, the Lessor is immediately entitled as against the Bank to the right for payment to which it would have been entitled under the bank guarantee if all or part of the payment had not been made.

14.11 Transfer of lease

If the benefit of this Lease is transferred or assigned by the Lessor to any person, the benefit of the bank guarantee extends to and is to be taken to be assigned to the transferee or assignee.

14.12 Lessor is entitled to recover

The Lessor is entitled to recover from the Lessee the Rent and any other money due and owing under this Lease, and damages arising out of the Lessee's breach or breaches without being limited to the bank guarantee.



- (d) The Lessor may only claim under the bank guarantee:
- (i) if any amounts payable under this Lease remain unpaid for 28 days after the Lessor has issued a Notice to the Lessee demanding payment; or
 - (ii) to recover the cost to the Lessor of rectifying any breach of any of the Lessee's Covenants (other than the covenant to pay amounts payable under this Lease) which has not been rectified by the Lessee within 28 days of a Notice from the Lessor to the Lessee for the Lessee to remedy the breach.

14.4 Replacement guarantee at rent review

The Lessee must at each Rent Review Date or at the determination of each review of the Rent or upon any increase in the Guaranteed Monies provide a replacement bank guarantee in an amount equal to the Guaranteed Monies (and where appropriate the Guaranteed Monies reasonably estimated by the Lessor) and containing the same terms and conditions as the previous bank guarantee.

14.5 Lessee to make good any deficiency

Upon each occasion when the Lessor has recourse to the bank guarantee, the Lessor shall be entitled by notice in writing to the Lessee to require the Lessee to top up the bank guarantee in relation to the call (and any previous calls) made by the Lessor ("the Deficiency"). Within seven (7) days of receipt by the Lessee of each such notice the Lessee must:

- (a) provide evidence to the Lessor of the reinstatement of the existing bank guarantee to the full amount prior to the occurrence of the Deficiency; or
- (b) provide to the Lessor a supplemental guarantee equal to the amount of the Deficiency, and the terms of this special term shall apply mutatis mutandis in relation to that supplemental guarantee.

14.6 No derogation

The rights of the Lessor pursuant to this special term shall not derogate from the other rights and remedies available to the Lessor under this Lease, at law and in equity in relation to any default of the Lessee pursuant to the terms of this Lease.

14.7 Release

Upon the expiration of the Term of this Lease and the vacation of the Leased Premises by the Lessee in accordance with the terms of this Lease, provided the Lessee has duly and punctually observed and is not then in default of the Lessee's Covenants, the Lessor shall release the bank guarantee to the Lessee.

14.8 Lessee's guarantee

The obligations in regard to the bank guarantee to be provided by the Lessee under this clause 14:

- (a) extend to all extensions and renewals of this Lease; and



14. BANK GUARANTEE

14.1 Lessee to provide bank guarantee

Prior to the Commencement Date the Lessee shall provide the Lessor with a bank guarantee from an Australian bank approved by the Lessor (which approval shall not be unreasonably withheld) ("**Bank**") on the following terms and conditions set out in this clause 14.

14.2 Guaranteed moneys

The Bank will undertake to unconditionally pay on demand to the Lessor any sum or sums which may from time to time be demanded in writing by the Lessor in respect of the Lessee's obligations to the Lessor in an amount not less than:

- (a) the amount equal to the Rent payable by the Lessee for the first Financial Year; and
- (b) for each subsequent Financial Year the amount equal to the total of Rent and Percentage Rent payable by the Lessee during the previous Financial Year,

("Guaranteed Monies"). For clarity, the Guaranteed Monies are only required to equal the total of the Rent and Percentage Rent payable by the Lessee during a single previous Financial Year and not for more than any one Financial Year at a time.

14.3 Term of Guarantee

- (a) The bank guarantee will remain in force until the earlier of:
 - (i) notice in writing having been received by the Bank from the Lessor that the bank guarantee is no longer required by the Lessor; and
 - (ii) payment to the Lessor by the Bank of the whole of the maximum amount payable thereunder or the balance remaining after any part payment or payments to the Lessor,

but can have an expiry date which is 3 years after the date that it is issued in which case subclauses (b) to (d) will apply.

- (b) If the bank guarantee has an expiry date and is due to expire in accordance with its terms, the Lessee must provide a replacement bank guarantee to the Lessor in the same form as the then current bank guarantee no less than 20 Business Days prior to the expiry of the bank guarantee. Once replaced in accordance with this clause 14.3(b), the new bank guarantee is the bank guarantee in accordance with its terms. The Lessor must return to the Lessee the expiring bank guarantee simultaneously with receipt of the new bank guarantee.
- (c) If the Lessee does not provide the replacement bank guarantee under clause 14.3(b), the Lessor is entitled to call and receive the full amount under the bank guarantee and hold the cash in lieu of the bank guarantee and the Lessor is only entitled to use the cash if the Lessor would have otherwise had a right to call on the bank guarantee under this Lease in respect of that matter.



provisions whether in respect of the Leased Premises or otherwise shall be deemed to be implied or to arise between the parties by way of collateral or other agreement.

11. TRUSTEE COVENANTS

Where any party executes this Lease in the capacity of a trustee pursuant to any trust deed, will, deed of settlement or other instrument whatsoever (in this clause called "the Trust Deed") that party (in this clause referred to as "Trustee") warrants and undertakes to and covenants with the lessor that:-

- (a) As trustee it has power under the Trust Deed:
 - (i) to enter into and execute this Lease; and
 - (ii) to be or become indebted to the Lessor and to enter into all other obligations in the manner and to the extent contemplated by this Lease
- (b) It is the sole trustee of the trusts created by the Trust Deed:
- (c) During the Term it will not without the prior written consent of the Lessor do any act or thing or omit to do any act or thing so as to harm or impair or be likely to harm this Lease or the covenants, terms and conditions thereof;
- (d) In the event of a new, substitute or custodian trustee being appointed under the Trust Deed it will procure that the new, substitute or custodian trustee shall enter into a deed in like form mutatis mutandis with this Lease, which deed shall be prepared by the Lessor's solicitors in a form acceptable to the Lessor at the reasonable cost in all respects of the Lessee including stamp duty.

12. MORATORIUM NEGATIVED

The application to this Lease of any moratorium or other Written Law having the effect of extending the Term reducing or postponing the payment of all or any part of the Rent, Percentage Rent or Outgoings or otherwise affecting the operation of the covenants, conditions and stipulations on the part of the Lessee to be performed or observed or providing for compensation, rights or privileges at the expense of the Lessor in favour of the Lessee or any other person is hereby expressly excluded and negatived.

13. RELEASE OF LESSOR

The term "Lessor" as used in this Lease so far as the covenants or obligations of the Lessor are concerned shall be limited to and mean only the management body for the time being of the Leased Premises and in receipt of the rents and profits of the Leased Premises at the time in question. If the Lessor's interest under this Lease is assigned or transferred in any way (other than by way of security) the Lessor named specifically in this Lease (and in the case of any subsequent assignments or transfers the then assignor or transferor) shall be automatically released and discharged from and after the date of assignment or transfer from all personal liability under this Lease.



PROVIDED THAT in exercising its rights under this clause the Lessor shall not interfere with the Lessee in its use and occupation of the Leased Premises more than is reasonably necessary.

10.2 Non-Merger

The terms or conditions of this Lease or any act matter or thing done under or by virtue of or in connection with this Lease or any other agreement between the parties to this Lease shall not operate as a merger of any of the rights and remedies of the parties in or under this Lease or in or under any such other agreement all of which shall continue in full force and effect.

10.3 Severance

In the event of any part of this Lease being or becoming void or unenforceable whether due to the provisions of any Written Law or otherwise then that part shall be severed from this Lease to the intent that all parts that shall not be or become void or unenforceable shall remain in full force and effect and be unaffected by any severance.

10.4 Act by Agent

All acts and things which the Lessor or the Lessee is required or empowered to do under this Lease may be done by the Lessor or the Lessee (as the case may be) or the solicitor, agent, contractor or authorised employee of the Lessor or the Lessee (as the case may be).

10.5 Exercise of Powers

The Lessor may exercise the Lessor's Powers without any notice being required (other than as provided in this Lease).

10.6 Proper Law

This Lease shall be governed by the law of Western Australia.

10.7 Effect of Execution

This Lease shall be binding upon each person who has executed it notwithstanding:-

- (a) the failure of any other person named as a party to execute it;
- (b) the avoidance or unenforceability of any part of this Lease; or
- (c) the avoidance or unenforceability of this Lease or any part of this Lease against any signatory or intended signatory.

10.8 Whole of Agreement

The Lessee acknowledges and declares that in entering into this Lease the Lessee has not relied on any promise, representation, warranty or undertaking given by or on behalf of the Lessor in respect to the suitability of the Leased Premises or the, facilities, amenities or services on the Leased Premises and that the covenants and provisions contained in this Lease expressly or by statutory implication cover and comprise the whole of the agreement between the parties and it is expressly agreed and declared that no further or other covenants or



- (i) clean;
- (ii) free from rubbish; and
- (iii) in a state of repair and condition,

consistent with compliance by the Lessee of the Lessee's covenants;

- (B) fill in, consolidate and level off any unevenness, excavation or hole caused by the Lessee or by the Lessee's use of the Surplus Area to the reasonable satisfaction of the Lessor;
 - (C) remove the Lessee Property except for any fixtures, fittings or any other property which are an integral part of or relate to services on, the Surplus Area unless required by the Lessor, to the Lessor's reasonable satisfaction;
 - (D) promptly make good to the reasonable satisfaction of the Lessor any damage caused by the removal in clause 9.3(b)(iii)(C); and
 - (E) promptly make good and rehabilitate the Surplus Area and remediate any Contamination and Pollution of or to the Surplus Area or the surrounding land arising from, or connected with, the use and occupation of the Surplus Area by the Lessee;
- (iv) this Lease will be varied in the following way:
- (A) clause 3 (New Resort Development) and all references to any part of clause 3 are deleted and do not apply; and
 - (B) clause 9 (Surrender of Surplus Area) and all references to any part of clause 9 are deleted and do not apply; and
- (v) a Rent Review will be carried out to determine the Market Rent payable for the Leased Premises, taking into account the surrender of the Surplus Area.

10. MISCELLANEOUS

10.1 Easements

The Lessor shall be entitled for the purposes of the provision of public or private access to and egress from the Leased Premises or support of structures erected at any time on or from adjoining lands or services including water, drainage, gas and electricity supply and telephonic and electronic communications or services to grant rights of support or enter into any arrangement or agreement with any of the owners, lessees or occupiers or others interested in any land adjacent or near to the Leased Premises or with any Governmental Agency as the Lessor thinks fit and the Lessor may likewise dedicate, transfer, grant or create any land easement or privilege in favour of such parties or in favour of any adjoining or neighbouring land or any Governmental Agency over or affecting the Leased Premises and this Lease shall be deemed to be subject to any such agreement, arrangement, right, easement or privilege

- (b) If a notice is issued pursuant to paragraph (a) above, the parties agree that clause 9.3 will apply.
- (c) The Lessee agrees that in consideration of the surrender of the Surplus Area under clause 9.3, the Lessee has no right to compensation under section 92 of the LAA.

9.2 Deadline for Practical Completion not complied with

- (a) If Practical Completion does not occur by the Deadline for Practical Completion under clause 3.6 (or, where applicable, the Extended Deadline for Practical Completion), then the Lessee must issue a notice in writing to the Lessor to surrender:
 - (i) the Surplus Area, and
 - (ii) the balance of the Term on and from 31 October 2028,such that this lease will continue over the balance of the Leased Premises not comprising the Surplus Area and expire on 31 October 2028, which notice must be given within 6 months after the Deadline for Practical Completion (or, where applicable, the Extended Deadline for Practical Completion).
- (b) When a notice is issued pursuant to paragraph (a) above, the parties agree that clause 9.3 will apply.

9.3 Surrender of Surplus Area

When a notice is issued pursuant to clauses 9.1 or 9.2, the parties covenant and agree that from the date 60 Business Days from the notice:

- (a) the Lessee surrenders:
 - (i) the Surplus Area; and
 - (ii) the balance of the Term on and from 31 October 2028,such that this lease will continue over the balance of the Leased Premises not comprising the Surplus Area and expire on 31 October 2028,
- (b) and in that regard:
 - (i) the Lessee will, as soon as practicable, arrange at its cost and expense for a survey to be prepared by a licensed surveyor to determine the extent of the Surplus Area and the balance of Leased Premises;
 - (ii) upon completion of the survey referred to in paragraph (i), to the reasonable satisfaction of the parties, the parties will execute and lodge at the Titles Officer a formal surrender of the Surplus Area, and the balance of the Term on and from 31 October 2028, and any other document required to effect the surrender; and
 - (iii) the Lessee must:
 - (A) surrender peaceably and yield up the Surplus Area to the Lessor:



over may be determined by either party giving one month's written notice to the other party of its intention to determine the holding over.

8.4 Lessor May Remedy Lessee's Default

If the Lessee omits or neglects to pay any money or to do or effect anything which the Lessee has agreed to pay, do or effect then on each and every occasion the Lessor shall be entitled, without prejudice to any rights or powers the Lessor may have, to pay the money or to do or effect the thing by itself as if it were the Lessee and for that purpose the Lessor may enter upon and remain on the Leased Premises for the purpose of doing or effecting any such thing and any moneys expended by the Lessor shall be repayable by the Lessee to the Lessor upon demand.

8.5 Waiver

No waiver by the Lessor of any of the Lessee's Covenants shall operate as a waiver of another breach of the Lessee's Covenants.

8.6 Notices

Any notice required to be served under this Lease shall be sufficiently served on the Lessee if left addressed to the Lessee on the Leased Premises or forwarded to the Lessee by post to the address of the Lessee specifically mentioned in this Lease (or as otherwise advised by the Lessee in writing from time to time as its address for service) and shall be sufficiently served on the Lessor if addressed to the Lessor and left at or sent by post to the Lessor's principal office for the time being and a notice sent by post shall be deemed to be given within 3 days of being posted unless the contrary is shown.

9. SURRENDER OF SURPLUS AREA

9.1 Condition Precedent Not Satisfied

- (a) If:
- (i) despite the reasonable endeavours of the Lessee, the Lessee forms the view (acting reasonably) that it will be unable to satisfy all of the Conditions Precedent on terms and conditions acceptable to the Lessee (acting reasonably); or
 - (ii) if clause 3.8(2) applies,
- then the Lessee must issue to the Lessor in writing a notice to surrender:
- (iii) the Surplus Area; and
 - (iv) the balance of the Term on and from 31 October 2028,
- such that this lease will continue over the balance of the Leased Premises not comprising the Surplus Area and expire on 31 October 2028.

8.2 Rights and Obligations at Termination of Lease

(a) Yielding Up:

- (i) On the expiration of the Term or within 3 months after the earlier determination of this Lease, other than under clause 3.6(b), the Lessee must:
 - (A) surrender peaceably and yield up the Leased Premises to the Lessor:
 - (1) clean;
 - (2) free from rubbish; and
 - (3) in a state of repair and condition, consistent with compliance by the Lessee of the Lessee's covenants;
 - (B) fill in, consolidate and level off any unevenness, excavation or hole caused by the Lessee or by the Lessee's use of the Leased Premises to the reasonable satisfaction of the Lessor;
 - (C) remove the Lessee Property except for any fixtures, fittings or any other property which are an integral part of or relate to services on, the Leased Premises unless required by the Lessor, to the Lessor's reasonable satisfaction;
 - (D) promptly make good to the reasonable satisfaction of the Lessor any damage caused by the removal in clause 8.2(a)(i)(C); and
 - (E) promptly make good and rehabilitate the Leased Premises and remediate any Contamination and Pollution of or to the Leased Premises or the surrounding land arising from, or connected with, the use and occupation of the Leased Premises by the Lessee.
- (ii) The obligations of the Lessee under this clause continue after the expiration or earlier determination of this lease.

(b) Improvements to vest in Crown

Subject to clause 8.2(a)(i)(C), it is agreed that the provisions of section 92 of the LAA apply to this Lease except as varied by this Lease.

8.3 Holding Over

If the Lessee remains in possession of the Leased Premises after the expiration of the Term then the Lessee shall be a 6 monthly tenant of the Lessor at a rent equivalent to the Rent payable by the Lessee at the expiration of the Term and otherwise on the same terms and conditions of this Lease (including payment of Percentage Rent and Outgoings). Any holding

- (2) being a company, an order is made or a resolution is passed for its winding up except for the purpose of reconstruction or amalgamation;
 - (3) being a company, ceases or threatens to cease to carry on business or goes into liquidation, whether voluntary or otherwise, or is wound up or if a liquidator or receiver (in both cases whether provisional or otherwise) is appointed;
 - (4) being a company, is placed under official management under the *Corporations Act 2001* or enters into a composition or scheme of arrangement;
- (C) Pursuant to the provisions for forfeiture under section 35 of the LAA.
- (ii) This Lease may be terminated under paragraphs (b)(i)(A) and (b)(i)(B) either by the Lessor giving notice to the Lessee or by the Lessor re-entering the Leased Premises without notice.
- (c) Compensation for termination
 - (i) Without limiting the Lessor's rights and remedies at law in respect of any breach of any term of this Lease, other than breach of clause 3.6, it is agreed that in the event of termination of this Lease pursuant to this clause or otherwise at law, the Lessee shall compensate the Lessor for all costs and losses incurred by the Lessor. Subject to paragraph (d) below, the losses to be so compensated include loss of rent in respect of the period from the time of termination to the time at which this Lease would otherwise have expired, up to a maximum of one years' Rent and Percentage Rent. The costs to be so compensated include reasonable legal costs.
 - (ii) The Lessor's entitlement to recover compensation or damages shall not be affected or limited by any of the following:
 - (A) The Lessee abandoning or vacating the Leased Premises;
 - (B) The Lessor electing to re-enter or to effect forfeiture of this Lease;
 - (C) The Lessor accepting any repudiation of this Lease by the Lessee;
or
 - (D) Conduct by any of the parties constituting a surrender by operation of law.
- (d) Mitigate Losses

The Lessor must take reasonable steps to mitigate its losses and endeavour to re-let the Leased Premises at a reasonable rent and on reasonable terms.

- (A) Clause 3.6 (Deadline for Practical Completion);
- (B) Clause 5.1 (Rent);
- (C) Clause 5.3 (Percentage Rent);
- (D) Clause 5.5 (Payment of Rates, Taxes and Utilities);
- (E) Clause 5.7 (Maintain and Repair Premises);
- (F) Clause 5.8 (Lessee's Environmental Obligations);
- (G) Clause 5.9 (Use of Premises);
- (H) Clause 5.11 (No Assignment, Subletting or Licensing);
- (I) Clause 5.14 (Not to Invalidate Insurance);
- (J) Clause 5.15 (Insurance);
- (K) Clause 5.16 (Indemnities etc);
- (L) Clause 14 (Bank Guarantee); and
- (M) Clause 16 (Goods & Services Tax).

(ii) In respect of the Lessee's obligation to pay Rent or make other payments, the acceptance by the Lessor of any late payment shall not constitute a waiver of the essentiality of the Lessee's obligation to make that payment or of the Lessee's continuing obligation to pay during the Term.

(b) Termination of Lease

(i) The parties agree that, in addition to any other ground for termination at law, and subject to section 81(1) of the *Property Law Act 1969* if it applies, this Lease may be terminated by the Lessor:

- (A) In the event of breach of an essential term of this Lease, other than a breach of clause 3.6, and failure by the Lessee to remedy the breach within twenty eight days or any longer period as is reasonable in the circumstances having regard to the nature of the breach, after service by the Lessor on the Lessee of written notice specifying the breach and requiring the Lessee to remedy it with the specified period; or
- (B) If the Lessee:
 - (1) becomes a bankrupt or enters an arrangement (formal or informal) with any of its creditors, or an administrator or a receiver or a receiver and manager is appointed to any of its assets;



under clause 7.1 within 60 days of the receipt by the Lessor of an invoice from the Lessee for these costs; and

- (E) the Lessee may set-off any amounts due but unpaid from the Lessor to the Lessee under clause 7.5(b)(iv)(D) from the Rent or any other amounts payable by the Lessee to the Lessor under this Lease.

7.6 Lessor breach of clause 7.1

- (a) Where the Lessor is in breach under clause 7.1 and the Lessor does not remedy that breach within 14 days of receiving written notice from the Lessee to do so, then:
 - (i) the Lessee may undertake any reasonable action to remedy the Lessor's breach (including, but not limited to, undertaking any repairs to the Bore); and
 - (ii) the Lessor must reimburse the Lessee for all reasonable costs incurred by the Lessee in remedying the Lessor's breach within 60 days of the receipt by the Lessor of an invoice from the Lessee for these costs.
- (b) The Lessee may set-off any amounts due but unpaid from the Lessor to the Lessee under clause 7.6(a) from the Rent or any other amounts payable by the Lessee to the Lessor under this Lease.

7.7 Access to alternative bore and costs for procuring alternative water where a Damage Event occurs or the Lessor is in breach of clause 7.1

During any period:

- (a) between a Damage Event occurring and the Bore being reinstated to the standard required to allow the Lessor to comply with its obligations under clause 7.1; or
- (b) during which the Lessor is in breach under clause 7.1,

the Lessor must provide the Lessee with access to, and permit the Lessee to take water from, the artesian bore operated by the Lessor at Denham (**Town Bore**) at no charge to the Lessee, subject to any constraints and conditions of the licence that the Lessor currently maintains to operate the Town Bore and also subject to the Lessee paying for all costs associated with the transportation of the water from the Town Bore to the Leased Premises.

8. MUTUAL AGREEMENTS

8.1 Default

- (a) Essential Terms:-
 - (i) Without limiting the provisions of this Lease which are essential terms it is agreed that each of the covenants by the Lessee contained in each of the following clauses is deemed to be an essential term of this Lease:



7.5 Damage Event

- (a) The Lessee acknowledges and agrees with the Lessor that in the event that the Bore is damaged by an act of God or some other event outside of the control of the Lessor so as to either destroy or damage the Bore or render the Bore unavailable to service the Leased Premises (**Damage Event**), the Lessor shall not be in breach of clause 7.1, subject to clause 7.5(b).
- (b) If a Damage Event occurs:
- (i) the Lessor must promptly notify the Lessee of the Damage Event;
 - (ii) the parties must meet and use reasonable endeavour to reach agreement on a strategy regarding:
 - (A) the work to be completed to reinstate the Bore to a standard which allows the Lessor to comply with its obligations under clause 7.1; and
 - (B) the timing for the commencement and completion of that work, that is acceptable to both parties (acting reasonably) having regard to the nature of the damage and destruction caused by the Damage Event (**Reinstatement Strategy**);
 - (iii) if the parties agree on a Reinstatement Strategy, the Lessor must:
 - (A) reinstate the Bore in accordance with the agreed Reinstatement Strategy; and
 - (B) notify the Lessee immediately after the Bore has been reinstated in accordance with the agreed Reinstatement Strategy; and
 - (iv) if:
 - (A) despite using reasonable endeavours to do so, the parties are unable to agree on a Reinstatement Strategy for the Bore within 14 days after a Damage Event; or
 - (B) the Lessor does not reinstate the Bore in accordance with any agreed Reinstatement Strategy (including within the timeframe set out under any agreed Reinstatement Strategy),then:
 - (C) the Lessee may repair and reinstate the Bore and the Lessor must immediately provide the Lessee with all reasonable access that the Lessee requires to the Bore for that purpose;
 - (D) the Lessor must reimburse the Lessee for all reasonable costs incurred by the Lessee in repairing and reinstating the Bore to the standard which allows the Lessor to comply with its obligations

during the Term, except during times of routine maintenance and servicing or repairs; and

(b) maintain, replace, promptly repair and keep the Bore in good, repair, order and condition and, without limiting the generality of the foregoing in any way, the Lessor shall:

- (i) keep the Bore in good running order and condition;
- (ii) replace the Bore or any part of the Bore which wears out or is damaged beyond repair; and
- (iii) give the Lessee at least 5 Business Days prior notice of any routine maintenance or servicing or repairs (except in the case of emergency repairs where the Lessor must give the Lessee as much notice as is reasonably practicable),

but subject to:

- (iv) any constraints and conditions of the licence that the Lessor currently maintains to operate the Bore (**Bore Operating Licence**); and
- (v) clauses 7.2 to 7.5(a) (inclusive).

7.2 Expiry or revocation of Bore Operating Licence

The Lessor's obligations under clause 7.1 cease to apply where the Lessor's Bore Operating Licence is revoked or unable to be renewed due to reasons or factors beyond the Lessor's control or the control of any agent, employee or contractor of the Lessor, provided that, if the Lessor's Bore Operating Licence expires or is revoked for any reason, the Lessor must use its best endeavours to renew the Bore Operating Licence or have the Bore Operating Licence reinstated (as applicable).

7.3 Specified Area Rate

The parties acknowledge and agree that in consideration of the Lessor complying with its obligations pursuant to clause 7.1, the Lessor will, and is entitled to, raise a specified area rate pursuant to the provisions of *Local Government Act 1995 (WA)* in respect of the Leased Premises in order to recover any costs related to the Bore.

7.4 Use of the Bore by third parties

The Lessee acknowledges that the Lessor may make the Bore available for the provision of water to other parties and furthermore that the Lessee does not have an exclusive right to the use of the Bore to service the Leased Premises, but without affecting the Lessor's obligations under clause 7.1 and the Lessor must not grant any rights to a third party in respect of the Bore which means that the Lessor is not able to comply with those obligations.

satisfaction of the Lessor (for clarity, the Lessee is not required to undertake any rebuilding to the extent that the insurance monies received are not sufficient to fund that rebuilding).

5.19 Abatement of Rent and Outgoings

- (a) Subject to paragraphs (b) and (c), if the Leased Premises is damaged or destroyed so as to be unfit for occupation or use then the Rent, Percentage Rent and Outgoings will abate in the proportion that the area of the Leased Premises that is fit for occupation and use bears to the area of the Leased Premises which is not fit for occupation and use.
- (b) Any abatement of Rent, Percentage Rent and Outgoings pursuant to this clause shall continue until the Leased Premises are reasonably fit for use and occupation again. The Lessee must however use its best endeavours to put the Leased Premises back into a fit and useable condition as quickly as practicable after any event of damage or destruction occurs.
- (c) Paragraph (a) shall not apply to the extent that damage or destruction to any part of the Leased Premises is caused or contributed to by any negligence, act or omission on the part of the Lessee.

5.20 Encroachments

The Lessee shall not, without the prior written consent of the Lessor agree to or allow any attempted encroachment by any person or property into, onto, over or against the Leased Premises or any part of the Leased Premises. The Lessee shall give immediate notice to the Lessor of any encroachment or attempted encroachment of which the Lessee becomes aware.

6. QUIET ENJOYMENT

The Lessee shall and may, except as provided in this Lease, peaceably possess and enjoy the Leased Premises during the Term without any interruption or disturbance from the Lessor or any other person or persons lawfully claiming by from or under the Lessor.

7. BORE

7.1 Lessor must ensure that Bore is available to service the Leased Premises

The Lessor must:

- (a) ensure that the Bore is at all times available, at no cost to the Lessee (subject to **Clause 7.3** of the Lease), to service the Leased Premises to:
 - (i) supply the level of water being supplied from the Bore to the Old Resort as at the Commencement Date; and
 - (ii) meet the future water supply requirements of the New Resort from the Bore as notified by the Lessee to the Lessor as part of the approval process for the New Resort under clause 3.3,

- (iv) the Lessee's activities, operations or business on, or other use of any kind of, the Leased Premises;
- (v) the presence of any Contamination, Pollution or Environmental Harm in on or under the Relevant Land to the extent caused or contributed to by the act, neglect or omission of the Lessee;
- (vi) any default by the Lessee in the due and punctual performance, observance and compliance with any of the Lessee's covenants or obligations under this Lease; or
- (vii) any negligent or other tortious act or omission of the Lessee,

such indemnity being reduced in proportion to the extent of such injury, loss or damage is caused or contributed to by the negligent or wrongful act or omission of the Lessor its employees, contractors or agents.

(e) The obligations of the Lessee under this clause:

- (i) are unaffected by the obligation of the Lessee to take out insurance, and the obligations of the Lessee to indemnify are paramount; and
- (ii) continue after the expiration or earlier determination of this Lease in respect of any act, deed, matter or thing occurring before the expiration or earlier determination of this Lease.

5.17 Mortgages and Charges

The Lessee shall not mortgage or charge its interest under this Lease or in any part of the Leased Premises:

- (a) without the written consent of the Minister pursuant to section 18 of the LAA; and
- (b) without the Lessor's consent,
 - (i) which must not be unreasonably withheld, conditioned or delayed; and
 - (ii) which is subject to the Lessee complying with all other relevant Written Laws.

5.18 Destruction of the Leased Premises

- (a) If the Leased Premises or any part of the Leased Premises is so destroyed or damaged as to require major rebuilding, the Lessee must within a reasonable time from the date of destruction or damage rebuild the Leased Premises to its original state and condition to the reasonable satisfaction of the Lessor, but subject to clause 5.18(b)
- (b) Unless otherwise agreed by the Lessor, if the Leased Premises or any part of the Leased Premises is so destroyed or damaged as to require major rebuilding and the Lessee is unable to claim full reinstatement costs through its insurance policies, then the Lessee must expend all insurance monies received on rebuilding the Leased Premises as near as possible to its original state and condition to the reasonable

- (i) a contractor's risk insurance policy to cover all works undertaken or to be undertaken in relation to the construction of the Improvements, against claims for loss, destruction or damage of or to property; and
 - (ii) a policy of insurance for reinstatement or replacement of each Improvement (including plate glass) against loss or damage including by fire, flood, storm, tempest, rainwater, cyclones, explosions, smoke or lightning to its full insurable value.
- (c) The Lessee must, upon the request of the Lessor, promptly apply the proceeds from any claim under such policy or policies to the reinstatement or replacement of any damaged or destroyed aspect of the Leased Premises and the Lessee shall, at the request of the Lessor, be obliged to claim on any such policy or policies in the event of any loss, damage or destruction except where the costs of reinstatement or replacement words will be met promptly by any third party, but subject to clause 5.18(b).
- (d) **Copies of Policies to be Provided to Lessor**
- The Lessee shall at the request of the Lessor promptly provide the Lessor with true copies of certificates of currency in relation to the insurance policies taken out under this clause from time to time.

5.16 Indemnities Etc

(a) **Generally**

The Lessee shall take and be subject to the same responsibilities in regard to persons and property to which the Lessee would be subject if during the Term the Lessee were the owner of the freehold of the Leased Premises.

(b) **Indemnity**

Without prejudice to the generality of paragraph (a) to the extent that the terms and conditions of any insurances effected by the Lessee or any moneys paid to the Lessor out of insurances effected by the Lessee do not fully indemnify the Lessor from and against all actions, claims, demands, notices, losses, damages, costs and expenses to which the Lessor shall or may be or become liable in respect of all or any of the matters referred to in sub-paragraph (i), (ii) and (iii) of this paragraph the Lessee shall indemnify the Lessor and the Minister and keep the Lessor and the Minister indemnified from and against all actions, claims, demands, notices, losses, damages, costs and expenses to which the Lessor and/or the Minister shall or may be or become liable in respect of all or any loss or damage to property or death or injury to any person of any nature or kind and however or wherever sustained caused by, contributed to, or arising out of, or in connection with:-

- (i) the use or occupation of the Leased Premises by the Lessee;
- (ii) any work carried out by or on behalf of the Lessee on the Leased Premises;
- (iii) the construction or removal of Improvements, undertaking any works preparatory to, incidental to, or connected with, the Improvements;



- (c) The Lessor and the Lessee agree that each of the terms contained in this clause 5.12 are essential terms of this Lease.

5.13 Comply With Written Laws Etc

- (a) Generally

The Lessee shall promptly comply with all Written Laws relating to the Leased Premises or the use of the Leased Premises.

- (b) No Warranty as to Use of Leased Premises

The Lessor gives no warranty as to the use to which the Leased Premises may be or are suitable to be put. The Lessee acknowledges that it has satisfied itself as to the requirements of all Written Laws in relation to the use of the Leased Premises and enters into this Lease with full knowledge of and subject to any prohibitions under any Written Law. The Lessee shall at its cost obtain any necessary consent required pursuant to any Written Law to enable it to occupy the Leased Premises for the purposes of its business.

5.14 Not to Invalidate Insurance

The Lessee shall not do or allow any act, matter or thing upon the Leased Premises or bring or keep anything on the Leased Premises whereby any insurance relating to the Leased Premises may be rendered void or voidable or whereby the rate of premium on such insurance shall be or be liable to be increased and the Lessee will pay all additional premiums of insurance on the Leased Premises (if any) required on account of the additional or increased risk.

5.15 Insurance

- (a) Public Risk Insurance

The Lessee must during the Term effect, maintain and keep current with an insurer of good repute a public risk insurance policy in respect of the Leased Premises in the amount of \$20,000,000 (twenty million dollars) for any one claim (or such other amount as the Lessor may reasonably require at any time and from time to time consistent with usual prudent commercial practice) and which includes the interests of the Lessor under this Lease and covers all claims and losses howsoever arising or caused, including but not limited to those in respect of:

- (i) injury to, or illness sustained by, or death of, any person;
 - (ii) any loss, damage or destruction to any property including to the property;
 - (iii) the loss of use of any property; and
 - (iv) liability arising out of any Contamination, Pollution or Environmental Harm of the Leased Premises.
- (b) The Lessee is responsible and liable for all Improvements on or to be constructed on or brought onto the Leased Premises and must effect, maintain and keep current or ensure any of the Lessee's employees, contractors or agents, if relevant, effects, maintains and keeps current, as required:

- (ii) is permitted to grant subleases or licences to commercial operators in connection with the proper use of the Leased Premises for the Permitted Use subject to the Lessee obtaining any prior written consent of the Minister required under the LAA and on the basis that any sublease or licence will not in any way relieve or be deemed to relieve the Lessee from the Lessee's Covenants.
- (g) The covenants and agreements of any sub-lessee shall be deemed to be supplementary to the Lessee's Covenants and shall not in any way relieve or be deemed to relieve the Lessee from the Lessee's Covenants.
- (h) On an assignment in accordance with this clause 5.11, the Lessee (as assignor) is released from its obligations under this Lease effective from the date of the assignment, except to the extent of any pre-existing breaches prior to the date of assignment.
- (i) Where the Lessee is a corporation (not being a corporation, or a wholly owned subsidiary of a corporation, whose shares are listed on any stock exchange in Australia or in any other place proposed by the Lessee and agreed to in writing by the Minister), any change in the identity of the owner of more than 50% of the voting rights in the Lessee, or in a corporation which is the owner of more than 50% of the voting rights in the Lessee or which has effective control of the Lessee, shall be deemed to be an assignment or disposition of or dealing with the Lessee's estate or interest in the Leased Premises or of its rights or powers under this Lease. Where any such change occurs without the prior written consent of the Minister, the Lessee shall be deemed to have committed a breach of this Lease at the time of the change.
- (j) The provision of sections 80 and 82 of the *Property Law Act 1969* are hereby excluded.
- (k) The Lessee acknowledges and agrees that the failure by either the Lessee or any other relevant party to comply strictly with each of the conditions, stipulations and requirements contained in this clause will constitute reasonable grounds upon which the Lessor may withhold its consent to any assignment or sub-letting proposed by the Lessee.
- (l) The Lessor and the Lessee agree that the terms and conditions contained in this clause 5.11 are essential terms of this Lease.

5.12 Trust

- (a) The Lessee shall not without the prior written consent of the Lessor:
 - (i) hold the Lessee's interest in this Lease on trust for any party other than a party expressly identified in this Lease; or
 - (ii) declare a trust of the Lessee's interest in this Lease.
- (b) Any holding in trust or declaration of trust, amendment, alteration, revocation or distribution contrary to this clause shall be deemed to be an assignment of the Lease to which all of the provisions of clause 5.11 shall apply.



may be made by or on behalf of the Lessor as to the respectability, responsibility and solvency of any proposed assignee.

- (c) Subject to clause 5.11(f), the Lessee must not, without the prior written consent of the Minister under the LAA and without the Lessor's prior written consent, sub-let (which expression shall be deemed to extend to and include permitting any licensee or concessionaire to conduct business on its own or any account) all or any part of the Leased Premises.
- (d) If the Lessee wishes to sub-let the Leased Premises the Lessor shall not unreasonably withhold its consent if:
 - (i) the provisions of the LAA and any other relevant Written Laws have been complied with respect to the proposed sub-letting, licence or concession;
 - (ii) the proposed sub-lessee, licensee or concessionaire is a responsible, reputable and solvent person (the onus of proof being on the Lessee); and
 - (iii) all Rent, Percentage Rent, Rates and Taxes and Outgoings then due or payable shall have been paid and there are no unremedied breaches of any of the Lessee's covenants.
- (e) If the Lessor consents to a sublease, licence or concession then:
 - (i) the Gross Sales of the business conducted in the area sub-let, licensed shall be brought into account in determining the Gross Sales of the Lessee for the purpose of clause 5.3 of this Lease and the Lessee shall be responsible for ensuring that all details relating to those Gross Sales are made available for accounting and auditing purposes under clause 5.3;
 - (ii) the Lessee shall prepare a sub-lease, licence or concession document which:
 - (A) is in a form approved by the Lessor's solicitors at the Lessee's reasonable expense and which must include obligations on the sub-lessee, licensee or concessionaire to provide details for the purposes of Gross Sales determinations under clause 5.3; and
 - (B) includes the Lessor as a party in whose favour the sub-lessee's, licensee's or concessionaire's covenants are also given.
- (f) The Lessee:
 - (i) may assign its interest in this lease or sub-let or licence any part or the whole of the Leased Premises to any Related Body Corporate of the Lessee subject to, in the case of an assignment, the Lessee and the assignee signing a deed, in a form acceptable to the Lessor (acting reasonably), requiring the assignee to comply with the Lessee's Covenants, but subject to the Lessee obtaining any prior written consent of the Minister required under the LAA and on the basis that any sublease or licence will not in any way relieve or be deemed to relieve the Lessee from the Lessee's Covenants; and

- (a) by the Lessor and its agents and servants to view the state of repair for the purposes of ensuring compliance by the Lessee with the Lessee's Covenants; or
- (b) by the Lessor and its agents, servants and contractors with workmen and others and all necessary plant, machinery and materials for the purposes of exercising any of the Lessor's Powers or to comply with any notice or order of any authority in respect of the Leased Premises for which the Lessor is liable;

5.11 No Assignment, Sub-letting or Licensing

- (a) Subject to clause 5.11(f), the Lessee must not, without the prior written consent of the Minister under section 18 of the LAA, and without the prior written consent of the Lessor,
 - (i) part with possession of, share possession of, sublet or license the Leased Premises or permit any licensee or concessionaire to conduct business on its own or any account from the Leased Premises; or
 - (ii) dispose of, deal with, or assign its estate or interest in the Leased Premises or its rights and powers as Lessee under this Lease; or
 - (iii) otherwise deal with any interest whatsoever in the Leased Premises or the Lessee's estate or interest under this Lease.
- (b) If the Lessee wishes to dispose of, deal with or assign its estate or interest in the Leased Premises or its rights and powers as Lessee under this Lease the Lessor shall not unreasonably withhold its consent if:
 - (i) the Lessee has the prior written consent of the Minister under the LAA;
 - (ii) the Lessee has otherwise complied with the provisions of the LAA and all other relevant Written Laws;
 - (iii) the proposed assignee is a respectable, responsible and solvent person (the onus of proof of which shall be upon the Lessee);
 - (iv) the Lessee procures the execution by the proposed assignee of a deed of assignment of this Lease to which the Lessor is a party prepared and completed by the Lessor's solicitors at the reasonable cost of the Lessee in all respects;
 - (v) all Rent, Percentage Rent, Rates and Taxes and Outgoings then due or payable shall have been paid and there shall not be any existing unremedied breach of any of the Lessee's Covenants;
 - (vi) the assignment contains a covenant by the assignee with the Lessor that the assignee will at all times during the continuance of the Term duly observe and perform all the Lessee's Covenants; and
 - (vii) the Lessee pays to the Lessor all proper and reasonable costs charges and expenses incurred by the Lessor of and incidental to any enquiries which

The Lessee shall not do, exercise or carry on or allow any other person or persons to do, exercise or carry on in the Leased Premises any noxious, noisome or offensive act, trade, business, occupation or calling or any act, matter or thing whatsoever which shall cause nuisance, damage or disturbance to the Lessor or occupier of any building in the neighbourhood.

(c) Signs

The Lessee shall not, without the prior consent of the Lessor (which consent shall not be unreasonably withheld), exhibit on or to the exterior or interior of the Leased Premises any signs or advertisements visible from outside the Leased Premises.

(d) Removal of Rubbish

The Lessee shall keep the Leased Premises free from rubbish and store and keep all trade waste, trash and garbage in proper receptacles.

(e) Not to Pollute, etc

The Lessee shall do all things necessary to minimise the short and long term impact that the Leased Premises and its use has on the environment and to prevent pollution or contamination of the Leased Premises and its surrounding environment by garbage, refuse, waste matter, oil and other pollutants. The Lessee shall immediately and thoroughly clean up all pollution or contamination which occurs at or emanates from the Leased Premises.

(f) Access by Members of the Public

The Lessee acknowledges that the Leased Premises forms part of a World Heritage Area and as a consequence the Lessee agrees that it shall not obstruct the free passage of members of the public over the general open spaces and general recreation areas on the Leased Premises ("Open Spaces"). The Lessee shall however be entitled to give reasonable directions to members of the public with respect to their entry onto and passage over the Open Spaces for reasonable purposes connected with the security of the Leased Premises and the safety of people and property on or about the Leased Premises.

(g) No Construction Etc in Buffer Zone

The Lessee shall not under any circumstances construct or erect or maintain any part of the New Resort or the Leased Premises on, below or above the area constituted by the Buffer Zone and the Lessee shall not under any circumstances allow or permit any temporary structure or object of any sort to be erected or located on or above the area constituted by the Buffer Zone except that the Lessee is entitled to construct or erect in the Buffer Zone landscaping and streetscaping works in connection with the approved New Resort.

5.10 Entry by Lessor and Others

The Lessee shall permit entry to the Leased Premises at all reasonable times upon giving to the Lessee reasonable notice (except in case of emergency when notice shall not be required):



use of the Leased Premises, whether the notice is served on Lessor or the Lessee.

- (ii) Without affecting:
 - (A) the obligations of the Lessee in this clause; or
 - (B) limiting any right of, or indemnity in favour of, the Lessor,

if any Contamination, Pollution or Environmental Harm occurs in breach of clause 5.8(a)(i)(D), the Lessee must do everything necessary to minimise the effect of the Contamination, Pollution or Environmental Harm as soon as reasonably practicable and must remediate any resultant damage and harm in compliance with any Environmental Notice or Environmental Law.
- (iii) If the Lessor believes on reasonable grounds that there may be any Contamination, Pollution or Environmental Harm of or to the Relevant Land, which was caused or contributed to by the Lessee or the Lessee's employees, agents, contractors, invitees or licensees, the Lessee must, within two months of receiving a request by the Lessor, provide to the Lessor a report prepared by an Environmental Expert at the expense of the Lessee and nominated by the Lessor, which identifies the nature and extent of any such Contamination, Pollution or Environmental Harm.
- (iv) The obligations of the Lessee under this clause continue after the expiration or earlier determination of this Lease.

(b) Dealings with Leased Premises

Subject to clause 5.11, the Lessee agrees that the Lessee will not dispose of, deal with or assign its estate or interest in the Leased Premises or its rights or powers as Lessee under this Lease, unless the Lessee has secured from the purchaser, transferee or assignee a deed of covenant with the Lessor in a form satisfactory to the Lessor (acting reasonably) to observe and perform the terms and conditions of this Lease, including in particular this clause, as if such person was a party to and had executed this Lease.

5.9 Use of Leased Premises

(a) Use

The Lessee shall only be entitled to use the Leased Premises for the Permitted Use and the Lessee must keep the Leased Premises open and carry on the business of that Permitted Use at all times except during the development of the New Resort and periods of Redevelopment (when, in the opinion of the Lessee, it may be necessary to close all or part of the Leased Premises for the purposes of demolition work, construction work or for reasons of public safety) or during other periods when it is necessary to close the Leased Premises for repairs, refurbishment, construction or on account of public safety.

(b) Offensive Activities

The Lessee shall not, except as provided for in clauses 3 and 4, without the prior consent of the Lessor and the Minister erect, alter, construct or demolish any building or other structure on the Leased Premises or any part of the Leased Premises that would leave the Leased Premises in a state that reflects a departure from the Concept Plan that was most recently approved or deemed to have been approved by the Minister.

5.8 Lessee's Environmental Obligations

(a) General obligations

(i) The Lessee:

- (A) must obtain any Authorisation required for any conduct, activity or use undertaken by the Lessee on the Leased Premises, including the Permitted Use before that conduct, activity or use is undertaken and to keep all such Authorisations in full force and effect throughout the term;
- (B) must use the Leased Premises in a manner which complies with each Environmental Law and each Authorisation held by the Lessee in accordance with clause 5.8(a)(i)(A);
- (C) must not do or omit to do any act which might directly or indirectly result in the revocation, suspension or modification of an Authorisation in relation to the Leased Premises or any conduct or activity relating to the use of the Leased Premises;
- (D) must not cause or permit the Lessee's employees, agents, contractors, invitees or licensees to cause any Contamination, Pollution or Environmental Harm of the Relevant Land;
- (E) must notify the Lessor immediately on becoming aware of:
 - (1) the existence of any Contamination affecting the Relevant Land;
 - (2) any Pollution affecting the Relevant Land;
 - (3) an Environmental Notice being served on the Lessee or any other person which relates to or arises from the Lessee's use of the Leased Premises; or
 - (4) the making of a complaint to any person, including but not limited to, the Lessee or the commencement of proceedings against the Lessee relating to an alleged failure by the Lessee to observe or perform an obligation under an Environmental Law or Authorisation; and
- (F) must, at the Lessee's cost, comply with every Environmental Notice issued in respect of, arising from or relating to, the Lessee's

5.6 Cost of Lease

- (a) The Lessee shall pay the Lessor's reasonable legal costs of and incidental to the preparation, negotiation and completion of this Lease, including without limitation the Lessor's reasonable legal costs on a solicitor client basis up to a maximum amount of \$15,000 plus GST; and
- (b) the Lessee shall pay the Lessor's reasonable costs (including any reasonable legal costs) of or incidental to any and every breach or default by the Lessee under this Lease and in or incidental to the proper exercise or attempted proper exercise of any right, power, privilege, authority or remedy of the Lessor under or by virtue of this Lease and the reasonable fees of all professional consultants reasonably and properly incurred by the Lessor in consequence of or in connection with any breach or default by the Lessee under this Lease.

5.7 Maintain and Repair Leased Premises

(a) Generally

The Lessee shall during the Term and for so long as the Lessee remains in possession or occupation of the Leased Premises, maintain, replace, repair and keep the Leased Premises and the Lessee Property clean and tidy and in good, repair, order and condition and, without limiting the generality of the foregoing in any way the Lessee shall:

- (i) keep all plant and equipment in good running order and condition;
- (ii) keep all boundary and other fences, paths and paved areas, lawns, trees, gardens and landscaping well maintained and tended;
- (iii) replace any plant or equipment which wears out or is damaged beyond repair;
- (iv) replace all electric light globes and fluorescent tubes in or about the Leased Premises which fail for any reason;
- (v) replace all damaged or broken glass in doors, windows or other areas of the Leased Premises irrespective of the cause of damage or breakage; and
- (vi) as often as is reasonable necessary in order to maintain a good appearance, re-paint or re-treat all parts of the Leased Premises and the Lessee Property that are usually painted or otherwise treated.

(b) No Repair or Maintenance Obligations on Lessor

Nothing in this Lease (whether express or implied) shall place any obligation of any type on the Lessor to repair, maintain or replace any part of the Leased Premises or the Lessee Property under any circumstances.

(c) No Alterations

- (i) to the extent that the Lessor is legally required to do so; or
 - (ii) to the Lessor's solicitor for the purpose of taking action or proceedings to recover unpaid Percentage Rent or otherwise advise the Lessor.
- (h) Default in Providing Gross Sales Information
- (i) If the Lessee shall be in default of any of its obligations under any of paragraphs (d), (e) or (f) then the Lessor may reasonably estimate the Gross Sales in which case the Lessor may produce to the Lessee a certificate as to the Lessor's estimate of the Gross Sales for the relevant Financial Year.
 - (ii) The estimated Gross Sales so certified by the Lessor shall be deemed to be the Lessee's Gross Sales until such time as the Lessee has fully observed and performed each of the covenants in paragraphs, (d), (e) and (f).
- (i) No Partnership

The Lessor is not and does not become a partner of the Lessee in the conduct of his business or participate in a joint venture with the Lessee under or by virtue of this Lease. The provisions of this Lease relating to Percentage Rent are intended solely for the purpose of providing a method whereby that rent is measured and ascertained.

5.4 Interest on Overdue Moneys

Without prejudice to the rights, powers and remedies of the Lessor that are otherwise provided for under this Lease, the Lessee shall pay to the Lessor on demand interest on any moneys that are due but unpaid for 7 days by the Lessee to the Lessor on any account whatsoever under this Lease. Interest shall be calculated from the due date for the payment of the moneys in respect of which the interest is chargeable until payment of these moneys in full and interest shall be recoverable as if it was Rent in arrears. For the purpose of this clause "interest" means interest at the Prescribed Rate calculated daily and capitalised on the last day of each calendar month.

5.5 Payment of Rates, Taxes and Utilities

- (a) The Lessee shall duly and punctually pay all Rates and Taxes and all telephone, water, excess water, electric, light, power and gas charges which charges assessments and costs now are or during the Term shall be charged upon or in respect of the Leased Premises or be payable by the owner or occupier in respect of the Leased Premises. Payments shall be made on or before the respective days or times upon which each amount becomes due or payable PROVIDED THAT the Lessee's liability for Rates and Taxes and other charges shall commence on the Commencement Date subject to any proportionate payment from the Commencement Date or to the expiration of the Term;
- (b) If any Outgoings item is not separately assessed in respect of the Leased Premises, the Lessee must pay a proportion of the Outgoings item being the same proportion that the total area of the Leased Premises bears to the total area of the land that is the subject of the assessment.

- (A) 30 June in each year;
- (B) the date of any assignment of this Lease; and
- (C) the date of expiration or sooner determination of this Lease,

produce to the Lessor a report from the Lessee's auditor or, if the Lessee does not employ an auditor, a certificate and report from an independent Accountant acting on behalf of the Lessee, accurately stating the total value of Gross Sales for the Financial Year or that part of it expiring on that date (as the case may be) together with an accurate breakdown of that total value. The certificate and report shall be in such form and style and shall contain such details as the Lessor may reasonably require.

(e) Inspection of Records

Whenever requested to do so by the Lessor, the Lessee shall promptly produce to the Lessor all books of account, sales records and other evidence as may be reasonably necessary to determine the value of the Gross Sales for a Financial Year.

(f) Audit of Records

- (i) The Lessor, by notice in writing to the Lessee, may require an investigation of the Lessee's sales records by an Accountant nominated by the Lessor for the purpose of verifying the accuracy or otherwise of any certificate or report provided by the Lessee;
- (ii) The Lessee shall permit the Lessor's Accountant to enter any relevant premises and to inspect and take extracts from the Lessee's books of account and records. The Lessee will promptly produce for inspection by the Lessor's Accountant all books of account, sales records and other evidence as may be reasonably required by the Lessor's Accountant and shall give all reasonable assistance for this purpose;
- (iii) The findings of the Lessor's Accountant shall be conclusive and binding on all parties as to the value of the Gross Sales for the Financial Year being investigated, except in the case of manifest error;
- (iv) If the findings disclose that the value of the Gross Sales in the report originally furnished by the Lessee is understated by more than 5%, the Lessee shall pay the costs of such investigation to the Lessor but, otherwise, the Lessor shall pay those costs;
- (v) If the value of the Gross Sales has been understated by the Lessee and, by reason of the understatement, the Percentage Rent has been under-assessed, the Lessee shall pay any deficiency in the Percentage Rent to the Lessor and subsequent instalments shall be calculated on the correct figures. If the Percentage Rent has been over-assessed, the Lessor shall allow the Lessee the appropriate refund or credit.

(g) Lessor to preserve secrecy

The Lessor will not, without the prior written consent of the Lessee, give to any person any information regarding the Gross Sales of the Lessee except:

- (i) where a Rent review is undertaken more than 12 months after a Rent Review Date, the Lessee must only pay the reviewed Rent on and from the date on which the Lessor gives notice of the relevant rent Review to the Lessee.

5.3 Percentage Rent

(a) Lessee to Pay Percentage Rent

The Lessee shall:

- (i) pay the Percentage Rent for the first Financial Year in a lump sum within 42 days after the end of that Financial Year; and
- (ii) for each subsequent Financial Year, pending its determination, pay the Percentage Rent progressively throughout the year by 12 instalments each being one-twelfth of the Percentage Rent for the previous Financial Year and payable on the first day of each month with an appropriate adjustment as provided in this Lease after the actual amount of Percentage Rent payable for the relevant Financial Year is determined.

(b) Yearly Adjustment

- (i) The Lessor shall calculate the Lessee's liability for the Percentage Rent for the first Financial Year and each subsequent Financial Year as soon as practicable after the end of the relevant Financial Year;
- (ii) Within 14 days after the Lessor advises the Lessee of the actual amount of the Percentage Rent payable for the relevant Financial Year, the Lessee shall pay any shortfall in, or the Lessor shall refund any surplus arising from, the amount previously paid by the Lessee on account of the Percentage Rent for that Financial Year.

(c) Gross Sales to be Aggregated upon Assignment

For the purpose of calculating the Percentage Rent payable in respect of any Financial Year in which the Lessee assigns this Lease, the Gross Sales for the period of the Financial Year prior to the date of assignment and the Gross Sales for the period of the Financial Year following from and including the date of assignment shall be aggregated.

(d) Lessee to Record Gross Sales

The Lessee shall:

- (i) preserve for a period of not less than 2 years after the end of each Financial Year, accurate records sufficient to determine the value of the Gross Sales in each Financial Year;
- (ii) give to the Lessor, within 14 days after the end of each month, an accurate statement of the Gross Sales during the preceding month;
- (iii) not later than 60 days after each of the following:

- (A) fails to accept the nomination to act; or
- (B) fails to determine the Market Rent within 28 days of accepting the nomination to act; or
- (C) becomes incapacitated or dies; or
- (D) resigns as the nominee,

then either party may request the Valuer General of Western Australia to appoint another Valuer. However, in the case of a Valuer appointed by either party, the party appointing that Valuer ("**Appointing Party**") may appoint a replacement Valuer and shall make the replacement appointment promptly and in any event within 7 days of receiving a request from the other party to make a replacement appointment ("**7 Day Period**"). If a replacement appointment is not made by the Appointing Party within the 7 Day Period then the Appointing Party's right to appoint a replacement Valuer shall automatically lapse and the other party may then appoint a replacement Valuer.

- (d) the Market Rent so determined will, subject to paragraph (g) hereof, be the Rent payable by the Lessee in lieu of the Rent fixed by the Lessor;
- (e) the Lessor and the Lessee shall bear their own costs with respect to the Valuers respectively appointed by each party under paragraph (a) and all costs of the determination of the Market Rent by any third Valuer appointed under paragraph (c) will be borne equally by the Lessor and the Lessee;
- (f) if the Rent to be paid from a Rent Review Date has not been determined on or prior to that Rent Review Date then, during the period from and including the Rent Review Date up to and including the date on which the Rent ("**New Rent**") is determined ("**Interim Period**"), the Lessee shall pay the rent at the rate applicable immediately prior to that Rent Review Date ("**Interim Rent**"). Once the New Rent has been determined then the Lessee shall, within 14 days of the determination being notified to the Lessee, pay the Lessor an amount equal to the difference between the Interim Rent payable by the Lessee during the Interim Period and the amount which would have been payable during the Interim Period if the Lessee had paid the New Rent during that period;
- (g) the Rent payable by the Lessee after any review pursuant to this clause will not in any circumstances be less than the Rent payable by the Lessee immediately preceding the Rent Review Date in respect of which notice has been given;
- (h) the Lessor may institute a Rent review notwithstanding the Rent Review Date has passed and the Lessor did not institute a Rent review on or prior to that Rent Review Date, and in which case the Rent agreed or determined shall date back to and be payable from the Rent Review Date for which such review is made, but subject to clause 5.2(i); and



5.2 Rent Review

At any time not earlier than 4 months prior to each of the Rent Review Dates set out in the Schedule the Lessor may by notice in writing to the Lessee fix the Rent at an amount which in the opinion of the Lessor will be the then Market Rent and the amount so fixed will be the Rent payable by the Lessee as from the Rent Review Date in respect of which notice has been given

PROVIDED ALWAYS THAT:

- (a) if the Lessee considers the Rent fixed by the Lessor pursuant to this clause not to be the Market Rent the Lessee may, by notice in writing to the Lessor within 28 days after being notified (in relation to which time shall be of the essence), require the Rent to be determined by two Valuers, one appointed by the Lessor and one appointed by the Lessee who are to determine the Market Rent and the Valuers appointed by the Lessor and the Lessee in determining the Market Rent are to act as experts not arbitrators and provided the Valuers agree on a determination the parties shall be bound by that determination;
- (b) if the Lessee does not serve the notice referred to in paragraph (a) on the Lessor or if the Lessee does not appoint a Valuer within 14 days after service of the notice referred to in paragraph (a) (in relation to which time shall be of the essence), the Rent fixed by the Lessor will be payable by the Lessee from the Rent Review Date and shall be deemed to have been accepted by the Lessee;
- (c) if Valuers are appointed pursuant to paragraph (a) and those Valuers are unable to agree upon a determination of the Market Rent within 28 days of the date on which the last of those Valuers was appointed then:
 - (i) at the request of either party, by notice to the Valuers in writing ("**Request Notice**"), the Valuers shall be asked to jointly nominate and appoint a third Valuer to determine the Market Rent;
 - (ii) if the Valuers do not agree upon the nomination of a third Valuer within 7 days of the date of the Request Notice being served then either party may request the Valuer General of Western Australia to appoint a third Valuer to determine the Market Rent;
 - (iii) where a third Valuer is appointed pursuant to this paragraph (c):
 - (A) the third Valuer shall act as an expert not an arbitrator;
 - (B) the third Valuer's determination shall be final and binding upon the parties; and
 - (C) each of the original Valuers shall be entitled to make submissions to the third Valuer and any such submissions shall be made promptly in writing and shall be made in any event within any time periods advised by the third Valuer;
 - (iv) if any Valuer nominated or appointed pursuant to this clause:



- (b) whether or not the Development Plans are substantially in accordance with the Concept Plans for the purposes of clause 3.2,

then the Lessor and the Lessee shall meet and use their reasonable endeavours to resolve the dispute. If any dispute is not resolved by the parties after attempting to do so for at least 10 Business Days then, unless otherwise agreed by the Lessor and the Lessee, the dispute resolution provisions contained in clause 17 must be invoked.

4. REDEVELOPMENT BY THE LESSEE

4.1 Lessee may redevelop

The Lessee may Redevelop during the Term, however a Redevelopment Period shall not exceed 2 years unless otherwise approved by the Lessor in writing.

4.2 Redevelopment Terms

Except to the extent that there is any inconsistency with the express provisions of this clause 4.2 (in which case the provisions of this clause 4.2 shall prevail) all provisions contained in clause 3, (including, without limitation, the Conditions Precedent) shall apply mutatis mutandis to any Redevelopment as though the Redevelopment work was the construction of the New Resort. However, before the Lessee can exercise any of its rights in regard to any Redevelopment or invoke the provisions regarding Redevelopment prescribed in this clause, the Lessee must give to the Lessor and the Minister not less than 2 months' notice in writing of its desire to Redevelop and the notice shall:

- (a) state the approximate date upon which the Lessee wishes to commence the Redevelopment works; and
- (b) be accompanied by copies of Concept Plans for the proposed Redevelopment.

5. LESSEE'S COVENANTS

5.1 Rent

- (a) The Lessee shall pay the Rent (without set-off whether at law or in equity and free and clear of any deduction whatsoever, except where any set-off is permitted under this Lease) at the dates specified in the Schedule to the Lessor at its address or as the Lessor may direct in writing from time to time.
- (b) Notwithstanding any other provision of this Lease, from the Commencement Date until the Payment Date, the Lessee is only required to pay 60% of the Rent (being the proportion that the Current Occupied Area bears to the area of the Leased Premises) and, for clarity, the Lessee is forever released from paying the full amount of the Rent during that period.
- (c) On and from the Payment Date, the Lessee must commence paying the full amount of the Rent in accordance with this Lease.

- (d) If the Lessee cannot achieve Practical Completion by the Deadline for Practical Completion but the Lessee demonstrates to the reasonable satisfaction of the Lessor and the Minister prior to the Deadline for Practical Completion that the Lessee is able to achieve Practical Completion by the date which is 12 months after the Deadline for Practical Completion, then, despite clause 3.6(a), the Lessee must ensure that Practical Completion occurs by the date that is 12 months after the Deadline for Practical Completion or any later date agreed by the parties (**Extended Deadline for Practical Completion**).

3.7 Variation to Development Plans During Construction

Subject to meeting any statutory approval requirements the Lessee shall be entitled to make variations to the Development Plans during the period in which the New Resort is being constructed and those variations shall be implemented provided that the variations do not constitute any substantial departure from the Concept Plans previously approved (or deemed to have been approved) by the Minister or constitute a substantial departure from the Development Plans previously approved by the Lessor acting in its capacity as the management body for the Leased Premises under clause 3.3(a) unless the Lessee has obtained the Lessor's and the Minister's prior written consent to the variations.

3.8 Feasibility of New Resort

- (1) Subject to subclause (2) below, if the Lessee, acting reasonably, considers at any time that the New Resort is not feasible, including without limitation for the following reason or reasons:
- (a) the imposition of an unreasonable condition or obligation by an Authority;
 - (b) the existence of a restriction or limitation in respect of the Leased Premises which materially impacts upon the viability of the New Resort; or
 - (c) particular market conditions, general commercial factors or economic return factors, then:
 - (d) the Lessee must provide written notice to the Lessor that the Lessee considers the New Resort not to be feasible and provide the Lessor with full details of the reason or reasons for the Lessee's view; and
 - (e) within 10 Business Days after the receipt by the Lessor of the Lessee's notice issued under clause 3.8(1)(d), the Lessor and the Lessee must meet in good faith to endeavour to agree any measures that the Lessor or the Lessee could potentially undertake to make the New Resort feasible for the Lessee.
- (2) If the Lessor and the Lessee do not reach agreement in relation to measures that are to be undertaken to make the New Resort feasible for the Lessee within 20 Business Days after the receipt by the Lessor of the Lessee's notice issued under clause 3.8(1)(d), the Lessee must issue a notice under clause 9.1:

3.9 Disputes

If any dispute develops between the Lessor and the Lessee regarding:

- (a) variations to the Development Plans; or

(c) Other Approvals

All necessary approvals, consents and permits have been obtained with respect to the development of the Land and the New Resort as required under any other relevant Written Law.

(d) Minister's Consent to Mortgage

The consent of the Minister has been obtained to a mortgage of this Lease in favour of or any financier nominated by the Lessee. Such consent being unconditional or on conditions acceptable to the Lessee.

3.4 Obligations in regard to satisfaction of the Conditions Precedent

(a) Lessee's Obligations

The Lessee shall use its best endeavours to procure the satisfaction of the Conditions Precedent. The Lessee may waive the Conditions Precedent set out in clause 3.3(d) by giving a notice of waiver to the Lessor.

(b) Notification

The Lessee shall notify the Lessor in writing as soon as it becomes aware that an application which it has made in an effort to satisfy the Conditions Precedent (with the exception of any applications made to the Lessor) has been approved or rejected and the Lessee shall provide full details of any approvals and/or consents and any conditions attached to any approvals and/or consents.

3.5 Construction of the New Resort

When all of the Conditions Precedent have been satisfied on terms and conditions acceptable to the Lessee (acting reasonably), the Lessee shall construct the New Resort:

- (a) in a proper and workmanlike manner;
- (b) substantially in accordance with the Development Plans; and
- (c) in accordance with all Written Laws relating to the construction works.

3.6 Deadline for Practical Completion

- (a) Subject to clause 3.6(d), the Lessee must ensure that Practical Completion occurs within 10 years from the date of execution of this Lease (**Deadline for Practical Completion**).
- (b) Time shall be of the essence in all respects and if the Deadline for Practical Completion does not occur in accordance with clause 3.6(a) or, if applicable, by the Extended Deadline for Practical Completion under clause 3.6(d), then clause 9.2 will apply.
- (c) The Lessee and the Lessor agree that this clause 3.6 is an essential term of this Lease.

3. NEW RESORT DEVELOPMENT

3.1 Generally

The Lessee has agreed to re-develop the Leased Premises and establish the New Resort in accordance with and subject to the provisions and conditions contained in this clause 3 and the balance of this Lease.

3.2 Preparation and Ministerial Approval of Concept Plans

(a) Preparation and Delivery of Concept Plans

As soon as practicable after the Commencement Date the Lessee shall prepare Concept Plans for the New Resort and provide those Concept Plans to the Lessor and those Concept Plans must reflect the concept contemplated in the basic plans contained in Attachment 2 to this Lease and any amendments to the basic plans which are required by the Lessor (acting reasonably) and/or the Minister.

(b) Concept Plan Approval Process

- (i) Upon receiving the Concept Plans from the Lessee, the Lessor shall promptly refer them to the Minister for approval.
- (ii) The Lessee shall promptly attend to any variations to the Concept Plans requested by the Minister and the Lessee shall provide the amended Concept Plans to the Lessor to pass onto the Minister for consideration and approval (which approval may be conditional).
- (iii) If the Minister has not given approval/declined approval or requested amendment or further amendments to Concept Plans (or amended Concept Plans as the case may be) within 90 days of the date on which the Minister receives the Concept Plans and request for approval then the Concept Plans (or the amended Concept Plans as the case may be) shall be deemed to have been approved by the Minister.

3.3 Conditions Precedent to Construction

Following the Minister's approval (or deemed approval) of the Concept Plans, the Lessee shall not commence any construction or site works in regard to any stage of the New Resort until each of the following Conditions Precedent have been satisfied on terms and conditions acceptable to the Lessee (acting reasonably):

(a) Development Plans

Approval has been obtained from the Lessor (acting in its capacity as the management body for the Leased Premises) for the plans and specifications for the relevant stage of the New Resort works ("**Development Plans**"). The Lessor gives no warranty that the Lessor, in its capacity as a statutory authority, will issue any consents, approvals or other permission required by the Lessee under any statute.

(b) Not used

2. SURRENDER OF ORIGINAL LEASE AND GRANT OF NEW LEASE

2.1 Surrender of Original Lease

- (a) The Lessee hereby surrenders to the Lessor all of the Lessee's rights, title and estate in and to the Original Lease and the unexpired residue of the term of the Original Lease.
- (b) The Lessee agrees to do all things necessary or requested by the Lessor for the Original Lease to be removed or cancelled as an encumbrance on the certificate of Crown land title for the Leased Premises.
- (c) The Lessor and Lessee hereby release each other from all actions, claims or demands of any kind which either party may have had against the other with respect to any future breach or non-performance of any obligation under the Original Lease. However, nothing shall release the Lessor or the Lessee in respect of any outstanding breach or non-performance of any term under the Original Lease that occurred prior to the Commencement Date.

2.2 Grant of New Lease

The Lessor **HEREBY LEASES** to the Lessee and the Lessee hereby takes on lease the Leased Premises, subject to the Encumbrances, for the Term and subject to the observance and performance of the Lessee's Covenants.

2.3 Replacement Easement

- (a) The parties acknowledge that:
 - (i) an easement having registration number L848249 benefits the Original Lease (**Existing Easement**); and
 - (ii) the surrender of the Original Lease will have the effect of surrendering the Existing Easement.
- (b) The Lessor:
 - (i) acknowledges that, in conjunction with the grant of this Lease, the Lessee intends to request that the Minister grant a new easement on substantially the same terms as the Existing Easement which benefits this Lease (**New Easement**); and
 - (ii) agrees to provide any consent or approval of the Lessor that the Minister may require in order to grant the New Easement.



- (a) every covenant or agreement expressed or implied in this deed in which more than one person covenants or agrees shall bind each person jointly and severally;
- (b) reference to any party shall mean and include a reference to that party and that parties' successors, personal representatives and transferees;
- (c) the word "person" shall include a corporation;
- (d) words importing the singular shall include the plural and vice versa and any word or expression defined in the singular has the corresponding meaning if used in the plural and vice versa;
- (e) reference to a clause, recital, annexure or schedule is a reference to a clause, recital, annexure or schedule in or to this deed;
- (f) references in this deed to any agreement, instrument or other writing shall be deemed to include references to the agreement, instrument or other writing as varied or supplemented from time to time; and
- (g) references to any organisation, association, authority, public officer, body (whether statutory or otherwise) or government minister shall in the event of any such organisation, association, authority, public officer, body or government minister ceasing to exist or being reconstituted or renamed or replaced or the powers or functions thereof being transferred to any other organisation, association, authority, public officer, body or government minister be deemed to refer respectively to the organisation, association, authority, public officer, body or government minister established or constituted or replaced or renamed in lieu thereof or succeeding to the powers or functions thereof.

1.3 Headings

The headings shall not affect the interpretation or construction of this Lease.

1.4 Business Days

Where any act matter or thing is to be done under this Lease on a Saturday or a Sunday then that act, matter or thing may be done on the Monday immediately following the relevant Saturday or Sunday or in the event of a public holiday in Western Australia the act, matter or thing may be done on the working weekday immediately following that Public Holiday.

1.5 Statutes

Reference to a statute includes all amendments for the time being in force and the regulations by-laws or other orders for the time being made under that statute and any other statute enacted in substitution for it.

- (b) assuming the Assumed Vendor is not forced but is willing to convey the Leased Premises and the Assumed Purchaser is not forced but is willing to purchase the Leased Premises ;
- (c) assuming the Assumed Contract relates to the Leased Premises on the basis that the land is unimproved land to which connections to water, sewerage and electricity are not presently available but having due, proper and prudent regard at all times to:
- (i) the provisions of the Assumed Contract;
 - (ii) the use to which the Land could be put as at the date of the determination having regard to its current use;
 - (iii) the land being deemed to be unencumbered;

For the purposes of this paragraph (c), the expression “**unimproved land**” means land on which there are no improvements other than works and infrastructure in the nature of drainage, filling, excavation, grading or levelling of the land and the removal of rocks, stone or soil and the clearing of timber, scrub or other vegetation or debris;

- (d) assuming that in reaching agreement on the purchase price, the parties have due, proper and prudent regard to the relevant recent sales of land with comparable development potential;
- (e) assuming both the Assumed Vendor and the Assumed Purchaser have knowledge of and regard to all matters and circumstances relevant to determining the purchase price of the Land; and
- (f) assuming that the Lessor is not necessarily but may be the Assumed Vendor and assuming that the Lessee is not necessarily but may be the Assumed Purchaser.

“**Valuer**” means a natural person who has not less than 5 years experience (including not less than 2 years experience in Australia) and has experience in assessing the values of properties of a similar nature to the Leased Premises and:

- (a) is licensed under the *Land Valuers Licensing Act 1978*; or
- (b) is a member of the Australian Institute of Valuers and Land Economists (Inc.) (Western Australian Division); or
- (c) is a valuer employed in the office of the Valuer General of Western Australia.

“**Written Laws**” means every present and future Act of Parliament of the State and the Commonwealth and includes regulations, by-laws, proclamation or orders made pursuant to an Act or regulation.

1.2 Other Expressions

Unless the context otherwise requires:

"Redevelopment Date of Completion" means the date that the relevant Redevelopment works have reached the state of being reasonably fit for use and occupation for the purpose intended (minor defects and omissions excepted).

"Redevelopment Period" means a period commencing on the date that the relevant Redevelopment works commenced and expiring upon the Redevelopment Date of Completion.

"Related Body Corporate" has the meaning given in section 50 of the *Corporations Act 2001* (Cth).

"Relevant Land" means the Leased Premises and Surrounding Area.

"Rent" means the annual rent specified in item 2 of the Schedule.

"Rent Review Dates" means each date specified in item 3 of the Schedule for the review of the Rent.

"Replacement Lease" is defined in clause 9.1.

"Schedule" means the schedule to this Lease.

"Surrounding Area" means any land or water adjacent to or in the vicinity of the Leased Premises and the air generally above the Leased Premises, and includes an affected site within the meaning of that term as defined in the CSA.

"Surplus Area" means all those portions of the Leased Premises, save and except:

- (a) the Current Occupied Area;
- (b) at the date a notice is issued pursuant to clauses 9.1 or 9.2, the areas of all Redevelopments and buildings, improvements and works carried out on the New Resort (as determined by the Lessor acting reasonably); and
- (c) any other areas agreed by the Lessor and the Lessee.

"Term" means the term of this Lease set out on the front page commencing on the Commencement Date and includes any Further Term or any period during which the Lessee has possession of the Leased Premises.

"Titles Office" means the department responsible for the registration of dealings relating to land in the register kept pursuant to the *Transfer of Land Act 1893*.

"Unimproved Value of the Leased Premises" means the purchase price of the fee simple of the Leased Premises which would be agreed upon between a reasonably prudent vendor ("**Assumed Vendor**") and a reasonably prudent purchaser ("**Assumed Purchaser**"):

- (a) assuming the purchase price would be payable under a contract of sale of land ("**Assumed Contract**") containing so many of the covenants, terms and conditions of a contract for the sale of land that, as at the time of agreeing the purchase price, would be reasonably expected to appear in a contract for the sale of land in Western Australia and the Assumed Contract is an arm's length arrangement;

- (g) The Deed of Assignment made 30 November 2005 between the Lessor as lessor, Monkey Mia Investments Pty Ltd and Monkey Mia Holdings Pty Ltd as assignors and Monkey Mia Holdings Pty Ltd and the Lessee as assignee as tenants in common in equal shares;
- (h) The Deed of Assignment made 27 June 2008 between the Lessor as lessor, Monkey Mia Holdings Pty Limited as assignor (as to 1 half share) and the Lessee as assignee (such that the Lessee became the sole lessee);
- (i) The Extension of Lease entered into between the Lessor as lessor and the Lessee as Lessee dated 2014 extending the lease for a term of 15 years from 1 November 2013 to 31 October 2028.

"Outgoings" means the amounts payable under clause 5.5.

"Payment Date" means:

- (a) the date a building permit is issued for the New Resort or part thereof; or
- (b) the date five years from the Commencement Date

whichever is the earlier;

"Percentage Rent" means, in respect of each Financial Year, 0.33% of the Gross Sales in that Financial Year.

"Permitted Use" means the use of the Leased Premises described in item 4 of the Schedule.

"Pollution" means any thing that is pollution within the meaning of that term as defined in the Environmental Protection Act 1986 that is not authorised under any written law.

"Practical Completion" means the point where an occupancy permit has been issued for the New Resort, pursuant to the provisions of the *Building Act* 2011, developed substantially in accordance with the Concept Plans approved under clause 3.2(b) and completed substantially in accordance with the Development Plans;

"Prescribed Rate" means the rate of interest per annum charged by the Commonwealth Bank of Australia on overdraft loans of less than \$100,000 plus 3%. If more than one rate applies then the lowest rate shall be adopted.

"Rates and Taxes" means all rates, taxes, land tax (on a single ownership basis) metropolitan regional improvement tax, charges, levies and other assessments including municipal rates, which rates, taxes, charges, levies and other assessments now are or during the Term shall be charged upon or in respect of the Leased Premises or be payable by the owner or occupier in respect of the Leased Premises.

"Redevelop" shall mean any substantial extension, addition, renovation, improvement or expansion of a structural nature to all or any part of the New Resort and **"Redevelopment"** shall have a corresponding meaning.

"Lessee's Covenants" means each and every covenant contained or implied in this Lease to be observed and performed by the Lessee.

"Lessee Property" means all air conditioning, plant and equipment, carpets and floor coverings, curtains and blinds and other fixtures and fittings and all additions or modifications and replacements on the Leased Premises. Where the context requires, the expression includes any part or part of the Lessee Property.

"Lessor" means the party so described on the front page of this Lease and includes its successors and permitted assigns and, if the Lessor is a natural person, its executors, administrators and permitted assigns and, where the context permits, includes its employees, agents contractors, invitees and licensees.

"Lessor's Powers" means each and every right, power and remedy exercisable by the Lessor under this Lease.

"Market Rent" means 6% of the Unimproved Value of the Leased Premises.

"Minister" means the Minister for Lands, a body corporation under section 7 of the LAA.

"New Resort" means the expansion and redevelopment of the Old Resort in the manner contemplated by the basic plans contained in Attachment 2 to this Lease and in substantial accordance with the Concept Plans approved pursuant to clause 3 and in accordance with the Development Plans and, where the context requires, shall include any extensions, additions, improvements or expansions made or to be made from time to time.

"Old Resort" means the building complex and resort facilities situated on the Leased Premises as at the Commencement Date.

"Original Lease" means:

- (a) the Deed of Lease dated 1 November 1988 made between the Lessor as lessor and Wilfred Edward Mason and Hazel Stella Mason as lessee;
- (b) the Deed of Assignment of lease dated 17 March 1989 made between the Lessor as lessor, Wilfred Edward Mason and Hazel Stella Mason as assignor and the Lessee (then known as Sweetclove Nominees Pty Ltd) as assignee;
- (c) the Deed of Extension and Variation of Lease dated 1 November 1991 made between the Lessor as lessor and the Lessee as lessee;
- (d) the Deed of Variation of Lease dated 30 August 1993 made between the Lessor as lessor and the Lessee as lessee;
- (e) the Deed of Variation of Lease dated 9 November 1994 made between the Lessor as lessor and Lessee as lessee;
- (f) The Deed of Assignment made 8 May 2002 between the Lessor as Lessor, Monkey Mia Investments Pty Ltd as trustee for the Monkey Mia Caravan Park Unit Trust as Assignor, Monkey Mia Holdings Pty Ltd as trustee for the Monkey Mia Holdings Trust as Assignee and Graeme James Robertson as Guarantor;

Improvements means:

- (a) all buildings, facilities or structures, services and other fixtures and fittings comprising the New Resort and the Old Resort (as applicable) constructed on or installed by the Lessee upon the Leased Premises relating to its use of the Leased Premises for the Permitted Use;
- (b) any other improvements constructed by the Lessee under the terms of this Lease; and
- (c) any additions, replacement or alterations of the improvements referred to in paragraphs (a) and (b).

"Insolvency Event" means the happening of any of these events:

If the Lessee:

- (a) becomes bankrupt or enters into any form of arrangement (formal or informal) with any of its creditors, or an administrator or a receiver or a receiver and manager is appointed to any of its assets;
- (b) being a company, an order is made or a resolution is passed for its winding up except for the purpose of re-construction or amalgamation;
- (c) being a company, ceases or threatens to cease to carry on business or goes into liquidation, whether voluntarily or otherwise, or is wound up or if a liquidator or receiver (in both cases whether provisional or otherwise) is appointed; or
- (d) being a company, is placed under official management under the *Corporations Act 2001* or enters into a composition or scheme of arrangements;

"LAA" means the Land Administration Act (WA).

"Land" means Lot 130 on Deposited Plan 54332, being the whole of the land contained in Crown Land Certificate of Title Volume LR3144 Folio 942.

"Lease" means this lease as it is amended from time to time, varied, supplemented, replaced, extended, renewed or assigned, as permitted by this lease, and includes any deed of variation of this lease.

"Leased Premises" means the whole of the Land together with all improvements erected or installed at the Commencement Date by or on behalf of the Lessee or at any time thereafter during the Term by or on behalf of the Lessee, including all air conditioning, plant and equipment, carpets and floor coverings, curtains and blinds and other fixtures and fittings and all additions or modifications and replacements. Where the context requires, the expression includes any part or part of the Leased Premises.

"Lessee" means the party so described on the front page of this Lease and includes its successors and permitted assigns and, if the Lessee is a natural person, its executors, administrators and permitted assigns and, where the context permits, includes its employees, agents contractors, invitees and licensees.

- (b) all commissions on sales from vending machines where stock is supplied by a third party;
- (c) all deposits not refunded to purchasers, guests or others;
- (d) all orders taken at, in, from or upon the Leased Premises although the orders may be filled elsewhere;
- (e) all "Gross Sales" by any sub-lessee, concessionaire or licensee at, in, from or upon the Leased Premises determined in accordance with this same definition of "Gross Sales";
- (f) all amounts received by the Lessee by way of rent, commission, fee or dividend payable from any sub-lessee, licensee, concessionaire or any other person carrying a business of any kind within or from or in relation to the Leased Premises;
- (g) all bad debts previously written off in accordance with normal accounting practice and subsequently recovered;
- (h) all payments made by way of exchange of goods, merchandise or services or a combination of them;
- (i) all sales made by telephone, facsimile, electronic communication, Internet or similar medium whether or not by direct contact with the Lessee at the Leased Premises which results in a sale or distribution from the Leased Premises or which is deemed by the Lessee for its own purposes to be a sale from the Leased Premises;
- (j) all amounts of value added tax, retail turnover tax, consumption tax, goods and services tax or tax of a similar nature paid or payable to the Lessee, any sub-lessee, concessionaire or licensee of the Lessee by their respective customers or to the taxing authority in respect of any of the matters referred to in the definition of Gross Sales;
- (k) all sales made by employees, agents or representatives of the Lessee operating from or through the Leased Premises whether or not those sales are made at, in, from or upon the Leased Premises;
- (l) all charges made for repairing or altering any goods or like service rendered at, in, from or upon the Leased Premises;

BUT DOES NOT INCLUDE:

- (m) the net amount of discounts reasonably and properly allowed to any guest or customer in the usual course of business;
- (n) the amount of any cash or credit refund allowed on a transaction the proceeds of which have previously been included as Gross Sales where the merchandise is returned and the sale is cancelled or fees or tariffs for the services are refunded wholly or partly;
- (o) the amount of any instalment of purchase moneys refunded to guests or customers where a lay-by transaction is cancelled;

“Environmental Expert” means a reputable person who is suitably qualified and experienced in identifying and remediating Contamination, Pollution and Environmental Harm, to the reasonable satisfaction of the Lessor.

“Environmental Harm” has the same meaning as that term is defined in the *Environmental Protection Act 1986*.

“Environmental Law” means all planning, environmental, Contamination or Pollution laws and any regulations, orders, directions, ordinances or all requirements, permission, permits or licences issued thereunder.

“Environmental Notice” means any notice, direction, order, demand or other requirement to take any action or refrain from taking any action from any Governmental Agency, whether written or oral and in connection with any Environmental Law.

“Extended Deadline for Practical Completion” has the meaning given to that expression in clause 3.6.

“Financial Year” means respectively:

- (a) the period from and including the Commencement Date up to and including the next 30th day of June;
- (b) each successive full period of 12 months commencing on the first day of July and expiring on the 30th day of June during the Term; and
- (c) the period from and including the first day of July in the last year of the Term up to and including the date of expiry or sooner determination of the Term.

“Force Majeure Event” means any strike, lockout or other industrial dispute or disturbance, act of God, act of war or terrorism, nuclear fusion, earthquake, storm, tempest, cyclone, sea surge, shortage or unavailability of materials or labour, unavoidable accidents or any other event which could reasonably be considered to be beyond the control of the Lessee.

“Governmental Agency” means any government or any governmental, semi-governmental, administrative, fiscal or judicial body, department, commission, authority, tribunal, agency, statutory authority or entity.

“Gross Sales” means the entire amount of the actual sales prices and tariffs of all goods and merchandise (including food and drink of any kind) sold and the tariffs and charges for all accommodation and for all services of any description performed at, in, or supplied from or upon the Leased Premises (including any sales tax) whether wholly or partly for cash or on credit or wholly or partly payable in money or in kind and all other receipts of all business conducted at, in, from or upon the Leased Premises including, but without limiting the generality of the foregoing:

- (a) all resales of articles accepted as trade-ins on sales made at, in, from or upon the Leased Premises whether such resales are made at, in, from or upon the Leased Premises or elsewhere;

"Buffer Zone" means that area of the Leased Premises being 15 metres from the road reserve boundary on the southern side of the Leased Premises hachured on the plan contained in Attachment 1 this Lease.

"Concept Plans" means detailed drawings prepared by an architect engaged by the Lessee illustrating in adequate detail the Lessee's proposed concept, design and layout with respect to a proposed development or Redevelopment which plans must, without limitation, include:

- (a) adequately detailed drawings of the proposed development or Redevelopment which indicate the anticipated appearance of the proposed development or Redevelopment from two sides and from an aerial perspective;
- (b) adequately detailed drawings of the proposed development or Redevelopment which indicate the anticipated positioning of the proposed development or Redevelopment on the Leased Premises;
- (c) adequately detailed drawings of the proposed development or Redevelopment indicating the anticipated depth and height of each major aspect of the proposed development or Redevelopment and indicating the location and size of recreation areas and public open spaces;
- (d) adequately detailed drawings of the proposed development or Redevelopment indicating the colour schemes anticipated for the each exterior aspect of the proposed development or Redevelopment; and
- (e) an adequately detailed breakdown of the materials and finishes anticipated for each aspect of the proposed development or Redevelopment being proposed materials and finishes of a high quality and standard in all respects.

"Conditions Precedent" means each of the conditions precedent set out in clause 3.3 of this Lease.

"Commencement Date" means the date of this document and is to be inserted by either party on the front page of this Lease.

"Contamination" is the state of being contaminated as that term is defined in the *Contaminated Sites Act 2003*.

"Crown" means the Crown in right of the State of Western Australia.

"CSA" means the *Contaminated Sites Act 2003* even though all of its provisions may not have come into operation as at the date of this Lease.

"Current Occupied Area" means the land on which the Old Resort is located as at the Commencement Date and being that part of the Leased Premises shown and labelled as 'Current Occupied Area' on the plan contained in Attachment 3.

"Deadline for Practical Completion" has the meaning given to that expression in clause 3.6.

"Development Plans" shall have the meaning given to that expression in clause 3.3(a).

"Encumbrances" mean the encumbrances shown on the front page of this Lease.



LEASE

THIS DEED OF LEASE made the 21st day of April 2014 2015

BETWEEN:

- 1. SHIRE OF SHARK BAY of 65 Knight Terrace, Denham, Western Australia ("Lessor"); and
- 2. ASPEN MONKEY MIA PTY LTD (ACN 116 296 265) as trustee for the Aspen Monkey Mia Trust of Level 3, 129 St Georges Terrace ,, Perth, Western Australia ("Lessee")

RECITALS:

- A. The Lessor has care control and management of the Leased Premises pursuant to section 46 of the Land Administration Act 1997 ("LAA").
- B. The Lessee currently leases part of the Leased Premises from the Lessor under the Original Lease. The Original Lease expires on 31 October 2028.
- C. The Lessee has agreed to surrender and the Lessor has agreed to accept a surrender of the Original Lease.
- D. The Lessor has agreed to grant a new 99 year lease of the Leased Premises (which includes a larger land area than under the Original Lease) to the Lessee and the Lessee has agreed to take a lease of the Leased Premises and develop the New Resort on the Leased Premises, upon the terms and conditions contained in this Lease.
- E. The Minister has consented to the grant of this Lease.

THE PARTIES AGREE as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Lease unless the context otherwise requires:

"Accountant" means a member of the Institute of Chartered Accountants or the Australian Society of Certified Practising Accountants or any amalgamation of those two institutions.

"Authority" includes any public authority or utility service provider;

"Authorisation" includes the consent, authorisation, permit, licence, approval, agreement, certificate, authority or exemption from, by or with a Governmental Agency or acquired under any Written Law and all conditions attached to an authorisation.

"Bore" means the bore situated adjacent to the Leased Premises and which services the Leased Premises and the Old Resort as at the Commencement Date.

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21 April

2015

SHIRE OF SHARK BAY

(LESSOR)

AND

ASPEN MONKEY MIA PTY LTD (ACN 116 296 265)

as trustee for the Aspen Monkey Mia Trust

(LESSEE)

LEASE

DoL
DPI
Regional and Metropolitan Services
~~LAND ASSET MANAGEMENT SERVICES~~
Level 2, 140 William Street
~~1 MIDLAND SQUARE~~
Perth WA 6000
MIDLAND WA 6056

REF

31298-15.01.09-MB-Extension of reserve 40727 Lease (Freehill's version)

SUBJECT TO THE COVENANTS AND POWERS IMPLIED UNDER THE *LAND ADMINISTRATION ACT 1997*
AND THE *TRANSFER OF LAND ACT 1893* AS AMENDED (UNLESS HEREBY NEGATED OR MODIFIED)
AND ALSO TO THE COVENANTS AND CONDITIONS CONTAINED HEREIN.

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WESTERN AUSTRALIA
LAND ADMINISTRATION ACT 1997
TRANSFER OF LAND ACT 1893 as amended

LEASE OF CROWN LAND (L)

DESCRIPTION OF LAND (NOTE 1)

Lot 130 on Deposited Plan 54332

EXTENT

Whole

VOLUME

LR3144

FOLIO

942

LIMITATIONS, INTERESTS, ENCUMBRANCES and NOTIFICATIONS (NOTE 2)

1. K205178 – Reserve 40727 for the purpose of tourism development
2. H967578 – Management Order
3. H967577 – Taking Order

LESSOR/LESSORS (NOTE 3)

Shire of Shark Bay of Post Office Box 126, Denham

LESSEE/LESSEES (NOTE 4)

Aspen Monkey Mia Pty Ltd (ACN 116 296 265) of Level 3, 129 St Georges Terrace, Perth

TERM OF LEASE (NOTE 5)

99 years

Commencing from the

21st

day of

April

in the year

2015

THE LESSOR HEREBY LEASES TO THE LESSEE the land above described subject to the encumbrances as shown hereon (Note 6)

For the above term for the clear yearly rental of (Note 7) (see attached lease)
payable (Note 8) (see attached lease)

ORIGINAL

INSTRUCTIONS

1. If insufficient space in any section, Additional Sheet Form B1 should be used with appropriate headings. The boxed sections should only contain the words "See Annexure".
2. Additional Sheets shall be numbered consecutively and bound to this document by staples along the left margin prior to execution by parties.
3. No alteration should be made by erasure. The words rejected should be scored through and those substituted typed or written above them, the alteration being initialled by the person signing this document and their witnesses.
4. Duplicates are not issued for Crown Land Titles.

NOTES

1. DESCRIPTION OF LAND
Lot and Diagram/Plan number or Location name and number to be stated.
Extent - Whole, part, or balance of the land comprised in the Certificate of Crown Land Title to be stated.
The Certificate of Crown Land Title Volume and Folio number to be stated.
2. ENCUMBRANCES
To be identified by nature and number, if none show "nil".
3. LESSOR
State full name and address of the Lessor(s) and the address(es) to which future notices can be sent.
4. LESSEE
State full name and address of the Lessee(s) and the address(es) to which future notices can be sent.
5. TERM OF LEASE
Term to be stated in years, months and days.
Commencement date to be date, month and year. Options to renew to be shown.
6. RECITE ANY EASEMENTS TO BE CREATED
Here set forth Easements to be created as appurtenant to the lease commencing with the words "together with" and/or any Reservations hereby created encumbering the lease commencing with the words "reserving to".
7. RENTAL
State amount in words.
8. PAYMENT TERMS
State terms of payment. Eg, by instalments of \$.... payable on the day of each month/the months of in each year, commencing with a payment of \$1... on or before the day of .../execution of this lease by the Lessee.
9. EXECUTION
A separate attestation is required for every person signing this document. Each signature should be separately witnessed by an Adult Person. The full name, address and occupation of the witness must be stated.

EXAMINED

NO DUPLICATE
LEASE LODGED

17/8/15

N 83157 L

05 Aug 2015 10:34:18 Perth



REG \$ 164.00

LEASE OF CROWN LAND (L)

LODGED BY Department of Lands *Clayton UB*
 ADDRESS DoL - Mid West Gascoyne - Box 98C
Level 27 250 St Georges Terrace
Perth WA 6000
 PHONE No. *9426 8000*
 FAX No. *9481 3075 [G. Robinson]*
 REFERENCE No. *Lily Satomo - File 00932-1993/03 - Ph*
8552-4010 Fax 8552-4413-80157790
 ISSUING BOX No. *148 D*

PREPARED BY Department of Lands
 ADDRESS DoL - Mid West Gascoyne - Box 98C
 PHONE No.
 FAX No.

INSTRUCT IF ANY DOCUMENTS ARE TO ISSUE TO OTHER THAN LODGING PARTY

1/2

TITLES, LEASES, DECLARATIONS ETC LODGED HEREWITH

1.	Received Items
2.	Nos.
3.	
4.	Receiving Clerk
5.	
6.	

130098-001



Registered pursuant to the provisions of the TRANSFER OF LAND ACT 1893 as amended on the day and time shown above and particulars entered in the Register.



ATTESTATION SHEET

Dated this 30th day of July in the year 2015

LESSOR/S SIGN HERE (NOTE 9)

Signed _____ Signed _____

Signed for the STATE OF WESTERN AUSTRALIA for
and on behalf of the MINISTER FOR LANDS by
[Signature]
.....
MANAGER, MID WEST
a DL officer delegated the Minister's power under
Section 9 of Land Administration Act 1997 in the
presence of:
[Signature]
.....
PROJECT OFFICER (Libt Sutomo)

LESSEE/S SIGN HERE (NOTE 9)

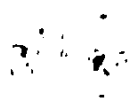
Signed EXECUTED BY Signed _____
ASPEN MONKEY MIA PTY LTD
ACN 116 296 265

In the presence of _____ In the presence of _____
presence of presence of

[Signature] [Signature]
SIGNATURE OF DIRECTOR SIGNATURE OF DIRECTOR/SECRETARY

Clement Salwin Men Chiang

NAME OF DIRECTOR NAME OF DIRECTOR/SECRETARY



15.5 NO COMPENSATION

Subject to section 92(3) of the LAA, the Minister is not liable to pay the Lessee any compensation in respect of any Improvements effected by the Lessee on the Leased Premises and remain on the Leased Premises at the expiration or earlier determination of this Lease.

15.6 NOT BUILD WITHOUT APPROVAL

The Lessee must not construct, effect, erect or undertake any improvements on the Leased Premises other than with the prior approval in writing of the Lessor and of any Governmental Agency whose approval is necessary to enable the work to be lawfully carried out. The Minister's approval may be subject to any conditions as the Minister sees fit.

15.7 NO RIGHT TO PURCHASE

The Lessee acknowledges and agrees that the grant of this Lease does not confer on the Lessee a right to purchase the Leased Premises.

15.8 SERVICES

The Minister, Lessor, the state government, any relevant local authority or any Governmental Agency will not be responsible for the provision or connection of any services to the Leased Premises.

15.9 COST OF SURVEY

The Lessee must pay to the Lessor on demand all reasonable costs of and incidental to the establishment and location by survey of the boundaries of the Leased Premises.

15.10 SURRENDER WHERE NOTICE IS ISSUED UNDER CLAUSE 9.1(A) OF THE MONKEY MIA RESORT LEASE

If the Lessor or the Lessee (as applicable) issues a notice under clause 9.1(a) or clause 9.2(a) of the Monkey Mia Resort Lease for the surrender of the 'Surplus Area' (as defined in the Monkey Mia Resort Lease) and the balance of the term of the Monkey Mia Resort Lease from 31 October 2028 (Surrender Notice), then on and from the date of the Surrender Notice, the Lessee is deemed to have surrendered the balance of the Term from 31 October 2028 such that the Term will expire on 31 October 2028.

15.11 SURRENDER OF LEASE AT LESSEE'S DISCRETION

- (a) The Lessee may at any time during the Term surrender this Lease to the Lessor, provided that the Lessee gives at least 3 months' notice of the surrender to the Lessor.
- (b) Upon the Lessee exercising its rights under Additional Provision 15.11(a):
 - (i) the Lessee must comply with its obligations under clause 10; and
 - (ii) the Lessee and the Lessor must enter into a deed of surrender of lease which records the surrender in a form acceptable to both parties (acting reasonably) and which includes a release of both parties from their obligations under this Lease on and from the date of surrender (but without prejudice to any party's obligations which arose prior to the date of surrender, including (but not limited to) any outstanding obligations of the Lessee under clause 6 (Lessee's Environmental Obligations).

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- (b) If, despite the Lessee's best endeavours, the Leased Premises are not reasonably fit for use and occupation again by the Reinstatement Deadline but the Lessee demonstrates to the reasonable satisfaction of the Lessor prior to the Reinstatement Deadline that the Lessee is able to reinstate the Leased Premises so that the Leased Premises are reasonably fit for use and occupation again by the date that is six months after the Reinstatement Deadline, then, despite additional provision 15.3(g), the Lessee must ensure that the Leased Premises are reasonably fit for use and occupation again by the date that is six months after the Reinstatement Deadline or any later date agreed by the parties (**Extended Reinstatement Deadline**)
- (c) Unless otherwise agreed by the Lessor, if the Leased Premises or any part of the Leased Premises is so destroyed or damaged as to require major rebuilding and the Lessee is unable to claim full reinstatement costs through its insurance policies, then the Lessee must expend all insurance monies received on rebuilding the Leased Premises as near as possible to its original state and condition to the reasonable satisfaction of the Lessor (for clarity, the Lessee is not required to undertake any rebuilding to the extent that the insurance monies received are not sufficient to fund that rebuilding), but subject to **additional provision 15.3(g)**.
- (d) **Subject to** additional provision 15.3(e) and 15.3(f), if the Leased Premises is damaged or destroyed so as to be unfit for occupation or use then the Rent and other amounts payable by the Lessee under this Lease will abate in the proportion that the area of the Leased Premises that is fit for occupation and use bears to the area of the Leased Premises which is not fit for occupation and use.
- (e) Any abatement of Rent and other amounts pursuant to this clause shall continue until the earlier of:
 - (i) the Reinstatement Deadline or, where applicable, the Extended Reinstatement Deadline; and
 - (ii) the date on which the Leased Premises are reasonably fit for use and occupation again. The Lessee must however use its best endeavours to put the Leased Premises back into a fit and useable condition as quickly as practicable after any event of damage or destruction occurs.
- (f) Additional provision 15.3(e)(e) shall not apply to the extent that damage or destruction to any part of the Leased Premises is caused or contributed to by any negligence, act or omission on the part of the Lessee.
- (g) If, despite the Lessee's best endeavours, the Leased Premises are not reasonably fit for use and occupation again by the Reinstatement Deadline or, where applicable, the Extended Reinstatement Deadline, then either the Lessor or the Lessee may terminate this Lease by written notice to the other.

15.4 FLOODING

Without limiting any other clause in this Lease, compensation will not be payable by the Lessor to the Lessee for damage to any property or Improvements of the Lessor or Lessee whatsoever, caused by flooding of the Leased Premises.

Development Due Date or any later date agreed by the parties (**Extended Development Due Date**).

- (iii) The Lessee must construct and complete the Development:
 - (A) with all due diligence and expedition and in a proper and workmanlike manner with suitable materials;
 - (B) in conformity with the Development Plan for the Development approved under additional provision (a)(ii);
 - (C) under the inspection and to the reasonable satisfaction of the Lessor; and
 - (D) in accordance with all other applicable Laws and the requirements of all relevant Governmental Agencies; and
- (iv) The Lessee must ensure that all buildings, erections, paving, drainage, roads and all other works comprising the Development comply with the reasonable requirements of the Lessor and the Lessee is to perform, discharge and execute all requisitions and works on the Leased Premises required by any Governmental Agency or under any applicable Law.

15.2 RENT COMMENCEMENT DATE AND RENT FREE PERIOD

- (a) Notwithstanding any other provision of this Lease, the Lessee is not required to pay the Rent that would otherwise be payable by the Lessee under this Lease during the period commencing on the Commencement Date and expiring on the date that is 6 years and 9 months after the Rent Payment Commencement Date (**Rent Free Period**).
- (b) The parties acknowledge that the Lessor is providing the Rent Free Period to the Lessee in consideration for the Lessee transferring the Exchange Land to the Lessor.
- (c) The Lessor agrees that, if any GST is payable by the Lessee on the supply of the Exchange Land by the Lessee to the Lessor, clause 14 (goods and services tax) applies to that supply (and for the avoidance of doubt, the supply of the Exchange Land is made under or in connection with this Lease, and the consideration to be provided by the Lessor for this supply can include an additional amount on account of GST as provided under clause 14).
- (d) For clarity, the Rent is to be reviewed in accordance with clause 3.2 on each Rent Review Date during the Rent Free Period even though the Lessee is not required to pay the Rent during the Rent Free Period due to this Additional Provision 15.2, so that the Rent payable at the expiry of the Rent Free Period is known and calculated at the expiry of the Rent Free Period.

15.3 DESTRUCTION OF THE LEASED PREMISES

- (a) If the Leased Premises or any part of the Leased Premises is so destroyed or damaged as to require major rebuilding, the Lessee must within a reasonable time from the date of destruction or damage rebuild the Leased Premises to its original state and condition to the reasonable satisfaction of the Lessor within 18 months after the destruction or damage occurred (**Reinstatement Deadline**), but subject to additional provisions 15.3(c) and 15.3(g).

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ANNEXURE "A"

ADDITIONAL PROVISIONS

15.1 DEVELOPMENT

(a) **Development Plan**

- (i) Prior to commencing any part of the Development, the Lessee must submit to the Lessor for approval a plan for construction of the Development (the **Development Plan**) which, among other things details:
 - (A) the plans and specifications for construction of the Development;
 - (B) the proposed timetable for construction of the Development; and
 - (C) the expected date of completion of the Development.
- (ii) Within such period as the Lessor may reasonably require of receiving the Development Plan, the Lessor may, in its absolute discretion either approve, reject, specify any amendments required to, or specify any conditions attached to approval of the Development Plan. If the Lessor specifies amendments or conditions to be attached to the Development Plan the Lessee shall make the necessary changes and resubmit the Development Plan to the Lessor for review as provided by additional provision (a)(i).
- (iii) The Development Plan approved by the Lessor under additional provision (a)(ii) must not be varied or amended without the prior written approval of the Lessor.

(b) **Commencing Development**

- (i) Prior to commencing construction of the Development, the Lessee must have obtained all necessary approvals, licence, permits, consents and authorisations (**Consents**) to the Development Plan and for the Development from all other relevant authorities or Governmental Agencies as may be relevant to the Development.
- (ii) The Lessee must comply with the Consents and keep all Consents current.

(c) **Construction of Development**

- (i) As soon as practicable after the Commencement Date, the Lessee (at its own cost and expense) must commence construction of the Development in accordance with the Development Plan and in any event must achieve Practical Completion within 10 years after the Commencement Date (**Development Due Date**).
- (ii) If the Lessee cannot achieve Practical Completion by the Development Due Date, but the Lessee demonstrates to the reasonable satisfaction of the Lessor prior to the Development Due Date that the Lessee is able to achieve Practical Completion by the date which is 12 months after the Development Due Date, then despite additional provision 15.1(c)(i), the Lessee must ensure that Practical Completion occurs by the date that is 12 months after the

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SCHEDULE

ITEM	TERM	DEFINITION
1.	Rent	\$32,400 per year, until varied in accordance with this Lease.
1A	GST on Rent (if applicable)	\$3,240 a year, until varied in accordance with this Lease.
2.	(a) Rent payment date(s):	1 January and 1 July of each year.
	(b) Rent Instalments (half yearly):	\$16,200 plus GST, until varied in accordance with this Lease.
3.	Rent Review Date:	Every third anniversary of the Commencement Date
4.	Permitted Use	A holiday resort providing accommodation, caravan and camping facilities and other amenities and facilities connected with or associated with that use, including without limitation food, beverage and liquor sales and any other use approved by the Lessor as part of the Lessor approving any Development.
5.	Address for payment of Rent	Regional and Metro Services Department of Lands PO Box 1143 WEST PERTH WA 6872 Attention: Manager, Accounting Services
6.	Address for service of notice on Lessor or Minister	Regional and Metro Services Department of Lands PO Box 1143 WEST PERTH 6872 Attention: Manager, Mid West Telephone: (08) 6552 4400 Fax: (08) 6552 4417
7.	Insurance	\$20,000,000

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14.9 SET-OFF OF GST LIABILITIES

The parties may agree to set-off liabilities, as between each other, for payment on account of GST determined under this clause 14 (including for the avoidance of doubt, in respect of the transfer of the Exchange Land in exchange for the provision of the Rent Free Period), but are still required to provide each other with Tax Invoices in this case.

15. ADDITIONAL PROVISIONS

The parties to this Lease shall be bound by and must comply with the additional provisions, if any, set out in Annexure "A" to this Lease.

The Rent, and any other consideration payable or provided by a party to the other party, for a supply made under or in connection with this Lease, is exclusive of GST.

14.2 LESSEE TO PAY GST

The Lessee is liable to pay additional to the Rent, and any other consideration payable or provided by the Lessee, any GST payable by the Lessor in respect of a Taxable Supply made under or in connection with this Lease.

14.3 VARIATION OF GST

Where GST is payable on the Rent, the amount payable shall be the amount specified in item 1A of the Schedule, until varied from time to time consequent upon each review of Rent in accordance with this Lease.

14.4 TAX INVOICE

Where GST is payable on a supply under or in connection with this Lease, the supplier shall provide to the recipient of the supply, a Tax Invoice in the format and form required as set out in the GST Law.

14.5 NOTIFICATION IS CONCLUSIVE

A written notification given to the recipient of a supply by the supplier of the amount of GST that the supplier is liable to pay on a Taxable Supply made or to be made under or in connection with this Lease is conclusive between the parties except in the case of an obvious error.

14.6 THE LESSEE MUST PAY GST AT SAME TIME

The Lessee must, subject to clause 14.9, pay to the Lessor the amount of the GST that the Lessee is liable to pay under or in connection with this Lease:

- (a) at the same time; and
- (b) in the same manner,

as the Lessee is obliged to pay for the Taxable Supply.

14.7 APPORTIONMENT OF GST

Where a Taxable Supply is not separately supplied to the Lessee, the liability of the Lessee for any amount for GST, in relation to that Taxable Supply, is determined on the same basis as the Lessee's proportion of that Taxable Supply is determined.

14.8 OTHER SUPPLIES

If there is a supply by any party, which is a Taxable Supply and is not covered by clause 14.2 (including for the avoidance of doubt the supply of the Exchange Land referred to in additional provision 15.2 of Annexure A in exchange for the provision of the Rent Free Period), then the consideration for the supply shall be increased by an amount calculated as:

A x R

where

A is the amount of the consideration for the supply apart from clause 14.2; and
R is the rate of GST applicable to the supply.

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13.6 SEVERABILITY OF PROVISIONS

If a court decides that any part of this Lease is void, voidable, illegal or unenforceable or this Lease would be void, voidable or unenforceable unless a part is severed from this Lease, then that part is severed from this Lease and does not affect the continued operation of the rest of this Lease.

13.7 APPLICABLE LAW

- (a) This Lease shall be construed and interpreted in accordance with the laws in force in the State of Western Australia.
- (b) The parties submit to the non-exclusive jurisdiction of the courts of Western Australia.

13.8 VARIATION

A variation of any provision of this Lease must be in writing and signed by the parties.

13.9 ACCRUED RIGHTS

The termination of this Lease (including without limitation, by way of forfeiture) does not affect the rights or remedies of the Lessor or the Minister against the Lessee in relation to a breach of this Lease by the Lessee before the termination of the Lease.

13.10 TRUST PROVISION

Where the Lessee executes this Lease in the capacity of a trustee pursuant to any trust deed, will, deed of settlement or other instrument whatsoever (in this clause called "the Trust Deed") the Lessee (in this clause referred to as "Trustee") warrants and undertakes to and covenants with the lessor that:-

- (a) as trustee it has power under the Trust Deed:
 - (i) to enter into and execute this Lease; and
 - (ii) to be or become indebted to the Lessor and to enter into all other obligations in the manner and to the extent contemplated by this Lease;
- (b) it is the sole trustee of the trusts created by the Trust Deed:
- (c) during the Term it will not without the prior written consent of the Lessor do any act or thing or omit to do any act or thing so as to harm or impair or be likely to harm this Lease or the covenants, terms and conditions thereof; and
- (d) in the event of a new, substitute or custodian trustee being appointed under the Trust Deed it will procure that the new, substitute or custodian trustee shall enter into a deed in like form mutatis mutandis with this Lease, which deed shall be prepared by the Lessor's solicitors in a form acceptable to the Lessor at the reasonable cost in all respects of the Lessee including stamp duty.

14. GOODS AND SERVICES TAX

14.1 CONSIDRATION EXCLUSIVE OF GST

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13.2 SUITABILITY AND SAFETY OF LEASED PREMISES

- (a) The Lessor or the Minister does not represent or warrant:
 - (i) that the Leased Premises are suitable to be used for the Permitted Use;
 - (ii) that any Improvements on the Leased Premises on the Commencement Date are suitable to be used for the Permitted Use; or
 - (iii) that the Leased Premises may lawfully be used for the Permitted Use.
- (b) Without affecting the generality of subclause (a), the Lessor or the Minister does not represent or warrant that the zoning of the Leased Premises will allow the Leased Premises to be used for the Permitted Use, whether with the approval or permission of the relevant planning authority or otherwise. It is the Lessee's responsibility to make its own enquiries about zoning, and the Lessee warrants that, before executing this Lease, the Lessee has done so to the Lessee's own satisfaction.
- (c) The Lessee acknowledges having satisfied itself that the Leased Premises are suitable and safe to be used for the Permitted Use and agrees to take all measures necessary to ensure that the Leased Premises remain safe and free from hazards to the Lessee and all persons entering the Leased Premises.

13.3 CONTAMINATION, POLLUTION OR ENVIRONMENTAL HARM

- (a) Neither the Lessor nor the Minister makes any representation or warranty concerning the existence or non-existence of Contamination, Pollution or Environmental Harm in relation to the Leased Premises.
- (b) The Lessee relies on its own investigations concerning the existence or non-existence of Contamination, Pollution or Environmental Harm in relation to the Leased Premises.

13.4 HOLDING OVER

- (a) If the Lessee continues to occupy the Leased Premises after the end of this Lease with the consent of the Lessor, the Lessee will do so as a 6 monthly tenant at a monthly rental, being one-twelfth of the Rent payable immediately before the end of this Lease.
- (b) When continuing as a tenant under subclause (a), the terms of this Lease will apply to the tenancy as far as they may be applicable.
- (c) Either the Lessor or the Lessee may end the 6 monthly tenancy created by subclause (a) by six month's notification to the other..

13.5 WAIVER

- (a) Failure to exercise or delay in exercising any right, power or privilege in this Lease by the Lessor or the Minister does not operate as a waiver of that right, power or privilege.
- (b) A single or partial exercise of any right, power or privilege does not preclude:
 - (i) any other or further exercise of that right, power or privilege; or
 - (ii) the exercise of any other right, power or privilege.

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11.2 REMEDY LESSEE'S DEFAULT

The Lessor may, but is not obliged to, remedy any default by the Lessee of its obligations under this Lease without notice (unless any clause specifically provides otherwise), including the payment of any moneys payable by the Lessee under this Lease.

11.3 RECOVER COSTS FROM LESSEE

If the Lessor carries out any works under clause 11.1 which it is the Lessee's obligation to do under this Lease or remedies a default under clause 11.2, the Lessee is to pay to the Lessor on demand all debts, costs and expenses, including legal costs and expenses, incurred by the Lessor as a result of carrying out those works or remedying that default.

12. NOTICES

12.1 SERVICE OF NOTICE ON LESSEE

Any notice or other document to be served on the Lessee under this Lease will be served in accordance with section 274 of the LAA.

12.2 SERVICE OF NOTICES ON LESSOR OR MINISTER

Any notice or other document to be served on the Lessor or the Minister under this Lease may be effected:

- (a) by delivering the document to the offices of the Department personally at the address set out at item 6 of the Schedule or at such other address previously notified to the Lessee by the Lessor or the Minister; or
- (b) by sending the document by letter (by pre-paid post) to the address or by facsimile to the facsimile number of the Department, as set out in item 6 of the Schedule or to such other address or facsimile number previously notified to the Lessee by the Lessor or the Minister.

12.3 REQUIREMENTS OF NOTICES SERVED ON THE LESSOR OR MINISTER

A notice or other document to be served on the Lessor or the Minister under this Lease must be signed by:

- (a) if given by an individual, by the person giving the notice;
- (b) if given by a corporation, by a director or secretary of the corporation; or
- (c) by a solicitor or other agent of the person giving the notice.

13. GENERAL PROVISIONS

13.1 EXCLUSION OF WARRANTIES

The Lessee acknowledges having inspected the Leased Premises and that in entering into this Lease the Lessee has not relied on any statement, representation or warranty (other than those implied by or deemed to have been given by law and which cannot be contracted out of) by or on behalf of the Lessor or the Minister whether express or implied, other than the statements representations and warranties expressly set out in this Lease.

- (A) clean;
 - (B) free from rubbish; and
 - (C) in a state of good repair and condition;
- (ii) fill in, consolidate and level off any unevenness, excavation or hole caused by the Lessee or by the Lessee's use of the Leased Premises to the reasonable satisfaction of the Lessor;
 - (iii) remove any fixtures, fittings or any other property installed by the Lessee on the Leased Premises as may be required by the Lessor;
 - (iv) promptly make good to the reasonable satisfaction of the Lessor any damage caused by the removal in subclause (a)(iii); and
 - (v) promptly make good and rehabilitate the Leased Premises and remediate any Contamination, Pollution or Environmental Harm of or to the Relevant Land arising from, or connected with, the use and occupation of the Leased Premises by the Lessee or the Lessee's employees, agents, contractors, invitees or licensees, whether such use and occupation is or was under the terms of this Lease or some other lease, licence or agreement.
- (b) The obligations of the Lessee under this clause continue after the expiration or earlier determination of this Lease.

10.2 IMPROVEMENTS TO VEST IN CROWN

It is agreed that the provisions of section 92 of the LAA apply to this Lease except as varied by this Lease.

11. LESSOR' S RIGHTS

11.1 RIGHT TO ENTER

- (a) The Lessor or any person authorised by the Lessor or the Minister may enter on to the Leased Premises at all reasonable times and on reasonable notice with all necessary plant, equipment and materials:
 - (i) to inspect the state and condition of the Leased Premises and the Improvements;
 - (ii) to repair, maintain or carry out any works in relation to the Leased Premises, which the Lessee is liable to do under this Lease and has failed to do within 28 days (or any longer period as may be reasonable in the circumstances having regard to the nature of the repair, maintenance or work required) of the Lessor serving notice on the Lessee requiring it to carry out those works;
 - (iii) to remove any harmful substance or carry out any maintenance or repairs to the Leased Premises; or
 - (iv) to comply with the requirements of any Governmental Agency.
- (b) The Lessor is not required to give any notice to the Lessee before entering on to the Leased Premises or carrying out any works under subclause (a) if the Lessor is of the opinion those works are of an emergency nature.

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- (b) This Lease may be terminated under subclauses (a)(i), (ii),(iii), (iv) and (v) either by the Lessor giving notice to the Lessee or by the Lessor re-entering the Leased Premises without notice.

9.3 AUTOMATIC TERMINATION

If:

- (a) the Monkey Mia Resort Lease is forfeited, surrendered, terminated or otherwise comes to an end for any reason whatsoever; or
- (b) the Lessee ceases to be an Approved Lessee or Sublessee of the Monkey Mia Resort Lease;

this Lease shall automatically terminate on the date of the relevant event occurring, without the need for the Lessor to give any notice to the Lessee. Such termination shall be without prejudice to any right of action of the Lessor in respect of any antecedent breach of the Lessee's covenants.

9.4 COMPENSATION FOR TERMINATION

- (a) Without limiting the Lessor's rights and remedies at law in respect of any breach of any term of this Lease, it is agreed that in the event of termination of this Lease pursuant to this clause or otherwise at law, the Lessee shall compensate the Lessor for all costs and losses incurred by the Lessor.
- (b) The losses to be so compensated in terms of subclause (a) include:
 - (i) loss of Rent in respect of the period from the time of termination to the time at which this Lease would otherwise have expired; up to a maximum of one years' Rent and
 - (ii) reasonable legal costs.
- (c) The Lessor's entitlement to recover compensation or damages shall not be affected or limited by any of the following:
 - (i) the Lessee abandoning or vacating the Leased Premises;
 - (ii) the Lessor electing to re-enter or to effect forfeiture of this Lease;
 - (iii) the Lessor accepting any repudiation of this Lease by the Lessee; or
 - (iv) conduct by any of the parties constituting a surrender by operation of law.
- (d) The Lessor must take reasonable steps to mitigate its losses and endeavour to re-let the Leased Premises at a reasonable rent and on reasonable terms.

10. RIGHTS AND OBLIGATIONS AT TERMINATION OF LEASE

10.1 YIELDING UP

- (a) On the expiration of the Term or within 3 months after the earlier determination of this Lease, the Lessee must, to the reasonable satisfaction of the Lessor:
 - (i) surrender peaceably and yield up the Leased Premises to the Lessor:

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9.2 TERMINATION OF LEASE

- (a) The parties agree that, in addition to any other ground for termination at law, and subject to section 81(1) of the *Property Law Act 1969* if it applies, this Lease may be terminated by the Lessor:
- (i) in the event of breach of an essential term of this Lease and failure by the Lessee to remedy the breach within 28 days (or any longer period as is reasonable in the circumstances having regard to the nature of the breach) after service by the Lessor on the Lessee of written notice specifying the breach and requiring the Lessee to remedy it;
 - (ii) Not used;
 - (iii) if the Lessee does not achieve Practical Completion by the Development Due Date (as defined in additional provision 15.1(c)) or, where applicable, the Extended Development Due Date (as defined in additional provision 15.1(c));
 - (iv) if, following Practical Completion, the Lessee ceases to use the Leased Premises for the Permitted Use, other than temporarily for repairs and maintenance or ceases to have the right under any Law to use the Leased Premises for the Permitted Use;
 - (v) if the Lessee:
 - (A) becomes bankrupt or enters into any form of arrangement (formal or informal) with any of its creditors, or an administrator or a receiver or a receiver and manager is appointed to any of its assets;
 - (B) being a company, or other body corporate, an order is made or a resolution is passed for its winding up except for the purpose of reconstruction or amalgamation;
 - (C) being a company, or other body corporate ceases or threatens to cease to carry on business or goes into liquidation, whether voluntary or otherwise, or is wound up or if a liquidator or receiver (in both cases whether provisional or otherwise) is appointed; or
 - (D) being a company, is placed under official management under the *Corporations Act 2001* or enters into a composition or scheme of arrangement,and without limiting the foregoing but for the avoidance of doubt, this subclause (a)(iii) applies to any such event that may occur in relation to the Lessee if it is an Aboriginal and Torres Strait Islander corporation under the *Corporations (Aboriginal and Torres Strait Islander) Act 2006 Cth*; or
 - (vi) if the Lessee is an Aboriginal and Torres Strait Islander corporation under the *Corporations (Aboriginal and Torres Strait Islander) Act 2006 Cth* and a determination is made by the Registrar under that Act that the Lessee is to be under special administration; or
 - (vii) if the Lessee abandons or vacates the Leased Premises; or
 - (viii) pursuant to the provisions for forfeiture under section 35 of the LAA.

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- (vii) to ensure that it does not at any time during the Term do or bring upon the Leased Premises anything which would cause the insurance policies to be rendered void or voidable; and
- (viii) to ensure that if the Lessee does anything or brings anything onto the Leased Premises which cause the rate of premium on the Insurance Policies to be increased, the Lessee will obtain insurance cover for such increased risk and pay all additional premiums in respect of the Leased Premises (if any) required on account of the additional risk caused by the use to which the Leased Premises is put by the Lessee.

8. QUIET ENJOYMENT

If the Lessee pays the Rent, rates and taxes and other charges referred to in clause 4 and does not breach the conditions of this Lease, the Lessee may occupy the Leased Premises during the Term without any interference from the Lessor and the Minister except where otherwise allowed by this Lease or the LAA.

9. DEFAULT

9.1 ESSENTIAL TERMS

- (a) Without limiting the provisions of this Lease which are essential terms it is agreed that each of the covenants by the Lessee contained in each of the following clauses is deemed to be an essential term of this Lease:
 - (i) Clause 3.1 (Payment of Rent);
 - (ii) Clause 4 (Other Payments by Lessee);
 - (iii) Clause 5.1 (Permitted Use);
 - (iv) Clause 5.2 (Compliance with Law);
 - (v) Clause 5.3 (Nuisance);
 - (vi) Clause 5.4 (Keep Clean and in Good Repair);
 - (vii) Clause 5.5 (Dealings with Interest in Lease or Leased Premises);
 - (viii) Clause 5.6 (Dealings with Leased Premises)
 - (ix) Clause 6 (Lessee's Environmental Obligations);
 - (x) Clause 7 (Indemnity, Release and Insurance);
 - (xi) Clause 14 (GST); and
 - (xii) Clause 15 and each additional provision incorporated by clause 15.
- (b) In respect of the Lessee's obligation to pay Rent or make other payments, the acceptance by the Lessor of any late payment shall not constitute a waiver of the essentiality of the Lessee's obligation to make that payment or of the Lessee's continuing obligation to pay during the Term.

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- (B) liability arising out of any Contamination, Pollution or Environmental Harm to the Relevant Land;
- (ii) a policy of insurance for each Improvement insured to its full insurable value on a replacement or reinstatement basis against loss or damage by fire, storm, tempest, rainwater, cyclones, explosion, smoke, lightning and such other risks against which in the Lessor's opinion a lessee may and does ordinarily insure, to their full replacement value.
- (b) Where applicable, the Lessee must during the continuance of this Lease effect, maintain and keep current and ensure that if applicable each of its contractors or subcontractors effects, maintains and keeps current:
 - (i) a contractors risk insurance policy to cover all other works undertaken or to be undertaken in relation to the construction of any development, for loss, destruction or damage of or to property insured arising from any one cause; and
 - (ii) an employer's indemnity insurance, including workers compensation insurance, in respect of all employees employed around or on the Leased Premises and in respect of any other liability under common law or any Law to pay damages or compensation.
- (b) The Lessee must submit to the Lessor on the Commencement Date and, promptly following any request by the Lessor during the Term, certificates of currency for each of the Insurance Policies.
- (c) The Lessee is:
 - (i) not to, and is not to permit any person to, do anything which adversely affects the continuation, validity, extent of cover or ability to make a claim under the Insurance Policies;
 - (ii) to notify the Lessor immediately if an event occurs which gives rise or might give rise to a claim under the Insurance Policies or which could prejudice the Insurance Policies;
 - (iii) to comply with the requirements of any Governmental Agency, the Insurance Council of Australia and any insurer in relation to fire protection of any Improvements , when they are being, or are constructed;
 - (iv) to expend any moneys received in respect of a claim made under the Insurance Policies referred to in subclause (a)(ii) and, if appropriate, subclause (b)(i) in reinstating or replacing the damaged or destroyed property in respect of which the claim was made;
 - (v) to ensure that under the Insurance Policies the insurer has no rights of subrogation against the Minister, the Crown or the Lessor, and the Lessee indemnifies the Minister, the Crown and the Lessor against any loss arising from a breach of this subclause;
 - (vi) to ensure that all premiums in respect of the Insurance Policies and renewals of Insurance Policies are paid punctually;

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- (i) are unaffected by the obligation of the Lessee to take out insurance, and the obligations of the Lessee to indemnify are paramount; and
- (ii) continue after the expiration or earlier determination of this Lease in respect of any act, deed, matter or thing occurring before the expiration or earlier determination of this Lease.

7.4 RELEASE

- (a) The Lessee:
 - (i) agrees to occupy, use and keep the Leased Premises at its own risk;
 - (ii) releases to the full extent permitted by law the Lessor from:
 - (A) any liability which may arise in respect of any accident or damage to property or death or injury to, or illness of, any person, of any nature in or near the Leased Premises;
 - (B) loss of or damage to fixtures or personal property of the Lessee; and
 - (C) all claims, actions, loss, damage, liability, costs and expenses arising from or connected with (directly or indirectly) the presence of any Contamination, Pollution or Environmental Harm in, on or under the Relevant Land at any time throughout the Term,except to the extent that such loss or damage is caused by the negligence of the Lessor.
- (b) The obligations of the Lessee under this clause continue after the expiration or earlier determination of this Lease in respect of any act, deed, matter or thing occurring before the expiration or earlier determination of this Lease.

7.5 INSURANCE

- (a) The Lessee must during the continuance of the Lease effect, maintain and keep current with an insurer approved by the Lessor:
 - (i) a public risk insurance policy in respect of the Leased Premises in the amount specified in item 7 of the Schedule for any one claim (or such other amount as the Minister may reasonably require at any time and from time to time consistent with usual prudent commercial practice) and which includes the interests of the Lessor under this Lease and covers all claims and losses, including but not limited to:
 - (A) those in respect of:
 - (1) any injury of, or illness to, or death of, any person;
 - (2) any loss, damage or destruction to any property including to the property of the Lessor; and
 - (3) the loss of use of any property, including the property of the Lessor; and

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7.2 LESSEE ASSUMPTION OF RESPONSIBILITIES

The Lessee agrees to take and be subject to the same responsibilities to which it would be subject in respect of persons and property if, during the Term it were the owner and occupier of the freehold of the Leased Premises.

7.3 INDEMNITY

(a) The Lessee must indemnify and keep indemnified the Lessor from and against all actions, claims, costs, proceedings, suits and demands whatsoever which may at any time be brought, maintained or made against the Lessor in respect of:

- (i) any loss whatsoever (including loss of use);
- (ii) injury or damage of, or to, any kind of property or thing (including the Leased Premises and the property of third parties); and
- (iii) the death of, or injury or illness sustained by, any person,

caused by, contributed to or arising out of, or in connection with, whether directly or indirectly:

- (A) the use or occupation of the Leased Premises by the Lessee;
 - (B) any work carried out by or on behalf of the Lessee under this Lease;
 - (C) the Lessee's activities, operations, business or other use of any kind under this Lease;
 - (D) the presence of any Contamination, Pollution or Environmental Harm affecting the Relevant Land caused or contributed to by the act, neglect or omission of the Lessee or its employees, agents, contractors, invitees or licensees;
 - (E) any default by the Lessee in the due and punctual performance, observance and compliance with any of the Lessee's covenants or obligations under this Lease; or
 - (F) any negligent or other tortious act or omission of the Lessee.
- (b) The Lessee indemnifies and must keep indemnified the Lessor from and against all claims, proceedings, suits, writs, demands and expenses relating to, or in respect of, the remediation of Contamination, Pollution or Environmental Harm required under any Environmental Notice, by any Law or by any Governmental Agency as a result of any Contamination, Pollution or Environmental Harm emanating on, or from, the Leased Premises as a result of, or relating to, the use or occupation of the Leased Premises by the Lessee.
- (c) The obligations of the Lessee under this clause:

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- (ii) must use the Leased Premises in a manner which complies with each Environmental Law and each Authorisation held by the Lessee in accordance with subclause (a)(i);
 - (iii) must not do or omit to do any act which might directly or indirectly result in the revocation, suspension or modification of an Authorisation in relation to the Leased Premises or any conduct or activity relating to the use of the Leased Premises;
 - (iv) must not cause or permit any Contamination, Pollution or Environmental Harm to the Relevant Land;
 - (v) must notify the Lessor immediately on becoming aware of:
 - (A) the existence of any Contamination affecting the Relevant Land which relates to or arises from the Lessee's use of the Leased Premises;
 - (B) any Pollution affecting the Relevant Land which relates to or arises from the Lessee's use of the Leased Premises;
 - (C) an Environmental Notice being served on the Lessee or any other person which relates to or arises from the Lessee's use of the Leased Premises; or
 - (D) the making of a complaint to any person, including but not limited to, the Lessee or the commencement of proceedings against the Lessee relating to an alleged failure by the Lessee to observe or perform an obligation under an Environmental Law or Authorisation; and
 - (vi) must, at the Lessee's cost, comply with every Environmental Notice issued in respect of, arising from or relating to the Lessee's use of the Leased Premises, whether the notice is served on the Lessor or the Lessee.
- (b) Without affecting:
- (i) the obligations of the Lessee in this clause; or
 - (ii) limiting any right of, or indemnity in favour of, the Lessor,
- if any Contamination, Pollution or Environmental Harm occurs in breach of subclause (a), the Lessee must do everything necessary to minimise the effect of the Contamination, Pollution or Environmental Harm as soon as reasonably practicable and must remediate any resultant damage and harm, to the reasonable satisfaction of the Lessor and in compliance with any Environmental Notice or Environmental Law.
- (c) The obligations of the Lessee under this clause continue after the expiration or earlier determination of this Lease.

7. INDEMNITIES, RELEASE AND INSURANCE

7.1 DEFINITIONS

For the purposes of clause 7.3, clause 7.4 and clause 7.5, the term **Lessor** includes the Crown, the Minister and the agents, servants, employees and contractors of the Lessor, the Crown and the Minister.

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5.7 LESSEE TO BE MONKEY MIA RESORT LESSEE

- (a) The Lessee must at all times be an Approved Lessee or Sublessee, and to that extent this Lease may be dealt with in accordance with clause 5.5 and this clause 5.7.
- (b) Without limiting clause 5.5, the Lessee must not assign or transfer its rights under this Lease, or grant any sublease or part with the possession of the whole of the Leased Premises, to any person other than to an Approved Lessee or Sublessee.
- (c) The Lessee must:
 - (i) notify the Minister of any proposed assignment, transfer or sublease of this Lease to an Approved Lessee or Sublessee at the same time as seeking approval under section 18 of the LAA to the relevant person being an Approved Lessee or Sublessee; and
 - (ii) deliver to the Minister a fully executed and stamped copy of any assignment, transfer or sublease of this Lease to an Approved Lessee or Sublessee as soon as reasonably practicable after its completion.

5.8 LESSEE NOT TO REMOVE MATERIALS EXCEPT WITH APPROVAL OF LESSOR

- (a) The Lessee must not mine, remove, extract, dig up or excavate any sand, stone, gravel, clay, loam, shell, or similar substance or permit any other person to undertake any such action without the prior approval in writing of the Lessor and subject to such conditions as the Lessor may determine.
- (b) Subclause (a) does not apply to any removal, digging up or excavation as may be necessary to construct or undertake any improvement or alteration authorised by or under this Lease, provided that any such removal digging up or excavation is undertaken in accordance with the requirements of that authority.

5.9 COST OF LESSEE'S OBLIGATIONS

Unless this Lease provides otherwise, anything that must be done by the Lessee under this Lease, whether or not at the request of the Lessor, must be done at the risk and cost of the Lessee.

5.10 REGISTRATION OF LEASE

The Lessee is to lodge this Lease for registration at the TLA Agency, within 30 days after it is executed by the Minister and the Lessee.

6. LESSEE'S ENVIRONMENTAL OBLIGATIONS

- (a) The Lessee:
 - (i) must obtain any Authorisation required for any conduct, activity or use undertaken by the Lessee on the Leased Premises, including the Permitted Use before that conduct, activity or use is undertaken and must keep all such Authorisations in full force and effect throughout the term;

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- (i) part with possession of, share possession of or sublet the Leased Premises;
 - (ii) mortgage, charge or in any way encumber the Lessee's estate or interest in the Leased Premises or its rights and powers as Lessee under this Lease;
 - (iii) dispose of, deal with, or assign its estate or interest in the Leased Premises or its rights and powers as Lessee under this Lease; or
 - (iv) otherwise deal with any interest whatsoever in the Leased Premises or the Lessee's estate or interest under this Lease.
- (b) Any consent given by the Minister under subclause (a) may be subject to such terms and conditions as the Minister in his/her absolute discretion may impose.
- (c) For the purposes of this clause 5.5, where the Lessee is a corporation (not being a corporation whose shares are listed on any stock exchange in Australia or in any other place proposed by the Lessee and agreed to in writing by the Minister), any change in the identity of the owner of more than 50% of the voting rights in the Lessee, or in a corporation which is the owner of more than 50% of the voting rights in the Lessee or which has effective control of the Lessee, shall be deemed to be an assignment or disposition of or dealing with the Lessee's estate or interest in the Leased Premises or of its rights or powers under this Lease.
- (d) Where any change referred to in subclause (c) occurs without the prior written consent of the Minister, the Lessee shall be deemed to have committed a breach of this Lease at the time of the change.
- (e) Without limiting subclause (a), the Lessee must not agree to or permit any encroachment or easement into, upon, over or against the Leased Premises or any part of the Leased Premises without the prior written approval of the Minister.
- (f) The Lessee agrees that the Minister may, before giving approval under section 18 of the LAA, in writing require:
- (i) such information concerning the transaction for which approval is sought as the Minister specifies; and
 - (ii) information furnished in compliance with subclause (f)(i) to be verified by statutory declaration.
- (g) The provisions of sections 80 and 82 of the *Property Law Act 1969* are hereby excluded.

5.6 DEALINGS WITH LEASED PREMISES

- (a) Subject to clause 5.5, the Lessee agrees that the Lessee will not dispose of, deal with or assign its estate or interest in the Leased Premises or its rights or powers as Lessee under this Lease, unless the Lessee has secured from the assignee a deed of covenant with the Lessor in a form satisfactory to the Lessor to observe and perform the terms and conditions of this Lease, as if such person was a party to and had executed this Lease.
- (b) On an assignment of this Lease by the Lessee in accordance with clauses 5.5 and 5.6, the Lessee (as assignor) is released from its obligations under this Lease effective from the date of the assignment, except to the extent of any pre-existing breaches prior to the date of assignment.

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5.3 NUISANCE

Except for the Permitted Use in clause 5.1, the Lessee must not carry on or permit to be carried on, on the Leased Premises:

- (a) any noxious or offensive activity, trade, business or calling;
- (b) anything which may be a nuisance;
- (c) anything which causes damage or loss to the Lessor or the owners or occupiers of any adjoining property or any other person; or
- (d) any illegal activity.

5.4 KEEP CLEAN AND IN GOOD REPAIR

- (a) The Lessee must at the Lessee's expense:
 - (i) keep and maintain the Leased Premises and all Improvements including without limitation any machinery, plant, equipment, fixtures and fittings installed by the Lessee in or on the Leased Premises, in good and safe repair and condition;
 - (ii) keep and maintain the Leased Premises clean and tidy;
 - (iii) make good any damage caused to the Leased Premises and all Improvements by the Lessee or the Lessee's employees, agents, contractors, invitees or licensees; and
 - (iv) shall upon expiry or earlier termination of this Lease yield up the Leased Premises and Improvements to the Lessor in a state of good and safe repair, to the reasonable satisfaction of the Lessor.
- (b) Without prejudice to the generality of subclause (a), for the avoidance of doubt the Lessee is obliged to:
 - (i) improve the Leased Premises and the Improvements being necessary to bring them to a state of good repair, including the rectification of any latent or inherent defects;
 - (ii) effect all necessary structural repairs to the Leased Premises and the Improvements where necessary to bring them to and maintain them in a state of good repair; and
 - (iii) effect all structural and other repairs and improvements necessary to the Leased Premises and the Improvements to comply with the requirements of any Governmental Agency whether imposed on the Lessee as occupier or the Lessor as proprietor.

5.5 DEALINGS WITH ANY INTEREST IN THIS LEASE OR THE LEASED PREMISES TO BE APPROVED BY THE MINISTER

- (a) It is agreed by the parties that section 18 of the LAA applies to this Lease and, without limiting the generality of that section, the Lessee must not, without the prior written consent of the Minister:

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- (i) all stamp duty and penalties payable on this Lease and any extension of the Term of this Lease (except to the extent that any penalties are payable due to an act or omission of the Lessor); and
- (ii) all reasonable costs relating to the registration of this Lease and any extension of the Term of this Lease.

4.5 INTEREST

- (a) If any amount payable by the Lessee under this Lease (whether formally demanded or not) is not paid within 30 days after it becomes due for payment, the Lessee is to pay to the Lessor interest on demand, on the amount from the due date for payment until it is paid in full.
- (b) Interest is to be calculated on a daily basis, at the Interest Rate.
- (c) Nothing in this clause affects or prejudices any other right that the Lessor may have in respect of the Lessee's failure to pay any amount by the due date for payment.

5. LESSEE'S GENERAL OBLIGATIONS

5.1 PERMITTED USE

- (a) This Lease confers on the Lessee a right to occupy and use the Leased Premises for the Permitted Use.
- (b) The Lessee must not use the Leased Premises or allow the Leased Premises to be used for any purpose other than the Permitted Use without the Lessor's consent.
- (c) On and from Practical Completion, the Lessee must put the Leased Premises to use for the Permitted Use and continue to do so and use the Leased Premises in accordance with the terms of this Lease and otherwise in a good and workmanlike manner and in accordance with sound business practice.
- (d) The Lessee must not make any alterations or additions to the Leased Premises without the Lessor's prior written consent.

5.2 COMPLIANCE WITH LAW

- (a) The Lessee must comply with all Laws and the requirements, notices or orders of any Governmental Agency having jurisdiction or authority in respect of one or more of:
 - (i) the Leased Premises;
 - (ii) the use and occupation of the Leased Premises; and
 - (iii) the Improvements, and without limitation, including any machinery, plant, equipment, fixtures and fittings of the Lessee on the Leased Premises.
- (b) On being served with a notice by the Lessor, the Lessee must punctually comply with any notice or direction served on the Lessor or the Minister by a Governmental Agency requiring the destruction of noxious animals, plants or pests or the carrying out of repairs, alterations or works to the Leased Premises.
- (c) The Lessee must obtain and keep current all permits, licences, approvals and consents required, to undertake any works on the Leased Premises or carry on a business on or from the Leased Premises, in relation to the activities permitted by the Permitted Use.

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the Leased Premises (and, for further clarity, the value of the infrastructure installed on the Leased Premises to bring such utilities to the Leased Premises is to be disregarded for the purposes of determining the market rent in accordance with this clause 3.2).

- (e) Until the Lessee is notified of the rent as varied, the Lessee must pay the Rent in effect prior to the variation.
- (f) When so notified, the Lessee must pay the Rent as varied and must also pay the amount of any consequential adjustment from the Rent Review Date until the date of such notification, but subject to clause 3.2(g).
- (g) If the Lessor does not notify the Lessee of the reviewed Rent within 12 months after the relevant Rent Review Date, the Lessor must not review the Rent until the next Rent Review Date (and, for clarity, the Lessee is only required to pay the Rent in effect prior to the Relevant Review Date until the next Rent Review Date).

4. OTHER PAYMENTS BY LESSEE

4.1 PAYMENT OF RATES, TAXES, ETC SEPARATELY ASSESSED

The Lessee must pay, when due and payable, all rates, taxes (including State land tax on a single ownership basis) and other charges (including impositions, assessments, outgoings, duties and fees) of any Governmental Agency which are separately charged upon the Leased Premises or imposed or levied upon the Lessor, the Minister or the Lessee in respect of the Leased Premises separately or the ownership of the Leased Premises separately.

4.2 PAYMENT OF SERVICE CHARGES SEPARATELY METERED

The Lessee must, in respect of the supply of any water, gas, electricity, telephone, waste disposal or other services separately metered or charged for the Leased Premises, pay all accounts when they become due and payable.

4.3 OVERLAP AND DAILY ACCRUAL

The rates, taxes, other charges and service charges referred to in clauses 4.1 and 4.2 include such of those items as arise during the Term as well as such of those items as arise before or after the Term but in respect of a period of time which overlaps the start or end of the Term.

4.4 LEGAL COSTS AND STAMP DUTY

- (a) The Lessee must pay to the Lessor the Lessor's reasonable legal and other costs and expenses arising out of this Lease, including those incurred:
 - (i) in relation to an assignment, subletting or surrender of this Lease;
 - (ii) in considering a request for any consent or approval by the Minister;
 - (iii) as a result of a default by the Lessee in performance of his obligations under this Lease; and
 - (iv) as a result of the exercise of any right, power, privilege, authority or remedy of the Lessor or the Minister in respect of this Lease, including the preparation and service of any notice referred to in clause 12.
- (b) The Lessee is to pay or reimburse the Lessor on demand for:

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- (b) the provisions of this Lease do not in any way affect, alter or derogate from the Lessor's or the Minister's rights or powers conferred under the LAA.

2.2 TRANSFER OF LAND ACT

Such of the covenants and powers as might otherwise be implied by the *Transfer of Land Act 1893* do not apply to this Lease and are not implied in this Lease unless expressly included.

3. RENT

3.1 PAYMENT OF RENT

The Lessee must pay to the Lessor the Rent:

- (a) by consecutive half yearly payments in advance on each Rent Payment Date, each payment being one-half of the Rent (excluding the first payment of Rent which must be proportionate if necessary); provided that, if item 2 of the Schedule specifies any other rent payment date(s) and corresponding amounts of Rent instalments, the Rent must be paid in such instalments on such date(s).
- (b) at the place and in the manner notified by the Lessor in writing at any time or in the absence of that direction, at the address specified in item 5 of the Schedule;
- (c) without deduction or abatement; and
- (d) without demand from the Lessor.

3.2 RENT REVIEW

- (a) The Rent will be varied on each Rent Review Date in accordance with this clause 3.2.
- (b) On each Rent Review Date, the Rent will be varied to reflect the market rent as determined by the Minister in consultation with the Valuer General as referred to in the Valuation of Land Act 1978.
- (c) For the purpose of that determination, the market rent shall be taken to be the rent obtainable at the time of the Rent Review Date in a free and open market as if all the relevant factors, matters or variables used in proper land valuation practice have been taken into account, on the basis that the Leased Premises comprise 'unimproved land' only to which connections to water, sewerage and electricity are not presently available and on the basis that the Leased Premises are unoccupied and available to let on similar terms to those contained in this Lease.
- (d) For clarity, the parties acknowledge that the Leased Premises are to be regarded as 'unimproved land' to which connections to water, sewerage and electricity are not available and further acknowledge that:
 - (i) it is the Lessee that owns and operates a nearby water processing, sewerage treatment and electricity generation facility that will supply utilities to the Leased Premises (this facility was constructed or acquired by the Lessee at considerable expense to the Lessee);
 - (ii) the Leased Premises currently have no connections to utilities; and
 - (iii) as part of any Development, the Lessee will be required, at its cost, to install the infrastructure required to bring utilities required for the Development to

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- (g) a reference to a party to this Lease includes that party's successors and permitted assigns and in the case of a natural person also includes that person's personal representatives and administrators;
- (h) where the day on or by which a thing is required to be done is not a Business Day that thing must be done on or by the succeeding Business Day;
- (i) a covenant or agreement by more than one person binds, and is enforceable against, those persons jointly and each of them severally;
- (j) no rules of construction apply to the disadvantage of a party because that party was responsible for the drafting of this Lease or of any of the provisions of this Lease;
- (k) references to statutes, regulations, ordinances and by-laws when contained in this Lease include amendments, re-enactments or consolidations of any of them and a reference to a statute includes every regulation, proclamation, ordinance and by-law issued under that statute;
- (l) a reference in this Lease to a subclause, paragraph or subparagraph is a reference to a subclause, paragraph or subparagraph in the clause or definition in which the reference appears; and
- (m) words that are defined in the LAA and used in this Lease have the same meaning given to them under the LAA.

1.3 PERFORMANCE OF FUNCTIONS BY MINISTER

All acts and things that the Lessor or the Minister is required or empowered to do under this Lease must be done by the Minister or the Minister's delegate appointed under section 9 of the LAA.

1.4 APPROVAL BY THE MINISTER

- (a) In any case where under this Lease the doing or executing of any act matter or thing by the Lessee is dependent on the approval or consent of the Minister, such approval or consent will not be effective unless it is given in writing and may be given or withheld by the Minister in the Minister's absolute discretion and may be given subject to such conditions as the Minister may determine unless otherwise provided in this Lease.
- (b) The Lessee agrees that any failure by the Lessee to comply with or perform a condition imposed under subclause (a) will constitute a breach of a condition or covenant under this Lease.

1.5 NATIVE TITLE

The Lessor represents and warrants to the Lessee that the Lessor has complied with all requirements of the *Native Title Act 1993* (Cth) in respect of the grant of this Lease.

2. APPLICATION AND EXCLUSION OF STATUTES

2.1 LAND ADMINISTRATION ACT

The Lessee and the Lessor agree that:

- (a) the provisions of the LAA relating to leases of Crown land granted under section 79 of the LAA apply to the Lessee; and

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Rent means the rent specified in item 1 of the Schedule as varied from time to time under this Lease.

Rent Payment Date means the first day of January and the first day of July of every year during the Term or such other date or dates as the Minister may specify.

Rent Payment Commencement Date means:

- (a) the date a building permit is issued for the Development or part thereof; or
 - (b) the date five years from the Commencement Date,
- whichever is the earlier;

Rent Review Date means each date specified in item 3 of the Schedule.

Schedule means the schedule to this Lease.

Surrounding Area means any land or water adjacent to or in the vicinity of the Leased Premises and the air generally above the Leased Premises, and includes an affected site within the meaning of that term as defined in the CSA.

Term means the 99 year term of this Lease as set out on the front page commencing on the Commencement Date and includes any other period during which the Lessee has possession of the Leased Premises.

Tax Invoice has the meaning given in section 195-1 of the GST Act.

Taxable Supply has the meaning given in section 195-1 of the GST Act.

TLA Agency means the department or other Governmental Agency responsible for the registration of dealings relating to land in the register kept pursuant to the TLA, which at the date of this document is Landgate established by the *Land Information Authority Act 2006* of Midland Square, Midland, Western Australia.

1.2 INTERPRETATION

In this Lease, unless the context otherwise requires:

- (a) headings or subheadings are inserted for guidance only and do not govern the meaning or construction of this Lease or of any provision contained in this Lease;
- (b) words expressed in the singular include the plural and vice versa;
- (c) words expressed in one gender include the other genders;
- (d) an expression importing a natural person includes a company, partnership, joint venture, association, corporation or other body corporate;
- (e) a reference to a thing includes a part of that thing but without implying that part performance of an obligation is performance of the whole;
- (f) references to parts, clauses and parties are references to parts and clauses of, and parties to, this Lease;

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Insurance Policies means each of the policies of insurance required to be taken out by the Lessee under clause 7.

Interest Rate means the rate determined under section 8(1)(a) of the *Civil Judgments Enforcement Act, 2004* from time to time.

LAA means the *Land Administration Act 1997*.

Law includes any requirement of any statute, regulation, proclamation, ordinance or by-law, present or future, and whether State, Federal or otherwise.

Lease means this lease, as it is amended from time to time, varied, supplemented, replaced, extended, renewed or assigned, as permitted by this lease, and includes any deed of variation of this lease.

Leased Premises means the land described on the front page of this Lease.

Lessee means Aspen Monkey Mia Pty Ltd (ACN 116 296 265) as trustee for the Aspen Monkey Mia Trust and, includes its successors and permitted assigns and if the Lessee is a natural person, its executors and administrators and permitted assigns (but subject to clause 5.7).

Lessor means the State of Western Australia acting through the Minister care of the Department.

Monkey Mia Resort means a resort located adjacent to the beach at Monkey Mia.

Monkey Mia Resort Lease means the Registered lease number N051538 in respect of the whole of Lot 130 on Deposited Plan 54322, being the whole of the land contained in Certificate of Title Volume LR3144 Folio 942 for the operation of the Monkey Mia Resort and the development, construction and operation of the New Resort on that land.

Minister means the Minister for Lands, a body corporate under section 7 of the LAA.

New Resort has the same meaning as given to that term in the Monkey Mia Resort Lease.

Permitted Use means the use of the Leased Premises described in item 4 of the Schedule.

Pollution means any thing that is pollution within the meaning of that term as defined in the EPA that is not authorised under any Law.

Practical Completion means the point where:

- (a) an occupancy permit or any other permit or approval (if required) has been issued for the Development, pursuant to the provisions of the *Building Act 2011* or any other Law; and
- (b) the Development has otherwise been completed substantially in accordance with the Development Plans such that the Development is able to be used for its intended purpose.

“Related Body Corporate” has the meaning given in section 50 of the *Corporations Act 2001* (Cth).

Relevant Land means the Leased Premises and Surrounding Area.

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Contamination is the state of being contaminated as that term is defined in the CSA.

Crown means the Crown in right of the State of Western Australia.

CSA means the *Contaminated Sites Act 2003*.

Department means the department principally assisting the Minister in the administration of the LAA being at the Commencement Date, the Department of Lands.

Development means the construction of that part of the New Resort that is to be located on the Leased Premises or the development of the Leased Premises for any other purpose approved by the Lessor in accordance with additional provision 15.1.

Encumbrances means the limitations, interests, encumbrances and notifications shown on the front page of this Lease.

Environmental Expert means a reputable person who is suitably qualified and experienced in identifying and remediating Contamination, Pollution and Environmental Harm, to the reasonable satisfaction of the Lessor.

Environmental Harm has the same meaning as that term is defined in the EPA.

Environmental Law means all planning, environmental, Contamination or Pollution laws and any regulations, orders, directions, ordinances or all requirements, permission, permits or licences issued thereunder.

Environmental Notice means any notice, direction, order, demand or other requirement to take any action or refrain from taking any action from any Governmental Agency, whether written or oral and in connection with any Environmental Law.

EPA means the *Environmental Protection Act 1986*

Exchange Land means the land known as the 'Mini Mia Land' and being Lot 94 on Deposited Plan 191948 and being the whole of the land comprised in the following share certificates of title:

- (a) Certificate of Title Volume 2223 Folio 665; and
- (b) Certificate of Title Volume 2223 Folio 666.

front page means the front page of this Lease, being in the form suitable for registration at the TLA Agency

Governmental Agency means any government or any governmental, semi-governmental, administrative, fiscal or judicial body, department, commission, authority, tribunal, agency, statutory authority or entity.

GST has the meaning given in section 195-1 of the GST Act.

GST Act means *A New Tax System (Goods and Services Tax) Act 1999* and any legislation substituted for or amending that Act.

GST Law has the meaning given in section 195-1 of the GST Act.

Improvements mean any building, facility or structure installed by the Lessee on the Leased Premises.

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DATE

This deed is made on the 30th day of July 2015

PARTIES

The parties to this Lease are the Lessor and the Lessee defined in clause 1.1.

RECITALS

- A. The Minister is authorised by section 79 of the LAA to grant leases of Crown land for certain purposes and on such terms and conditions as the Minister may determine.
- B. The Lessee is the lessee of the Monkey Mia Resort Lease.
- C. The Lessee requires a lease of the Leased Premises in order to undertake the Development.
- D. In consideration for the provision of the Rent Free Period by the Lessor under the Lease, the Lessee has agreed to transfer to the State in freehold the Exchange Land, free of all Encumbrances and any Contamination, at a date to be agreed by the Parties but prior to the grant of this Lease
- E. The Minister has agreed to grant to the Lessee and the Lessee has agreed to take a lease of the Leased Premises:
 - (a) provided that at all times the lessee of this Lease is the lessee of the Monkey Mia Resort Lease; and
 - (b) subject to the Encumbrances, for the Term and at the Rent and on and subject to the provisions of the LAA and the terms and conditions of this Lease.

AGREEMENT

The parties covenant and agree on the matters set out on the front page of this Lease and as follows:

1. DEFINITIONS, INTERPRETATION AND EXERCISE OF MINISTER’S POWERS

1.1 DEFINITIONS

In this Lease, the following definitions, together with those in the Schedule, apply unless the contrary intention appears:

Approved Lessee or Sublessee means a person approved under section 18 of the LAA as lessee of the Monkey Mia Resort Lease, or sublessee of a sublease of the whole of the Monkey Mia Resort Lease, including a person so approved as transferee of the lessee or sublessee.

Authorisation includes a consent, authorisation, permit, licence, approval agreement, certificate, authority or exemption from, by or with a Government Agency or required under any Law and all conditions attached to an authorisation.

Business Day means any day other than a Saturday, Sunday or State public holiday in Western Australia.

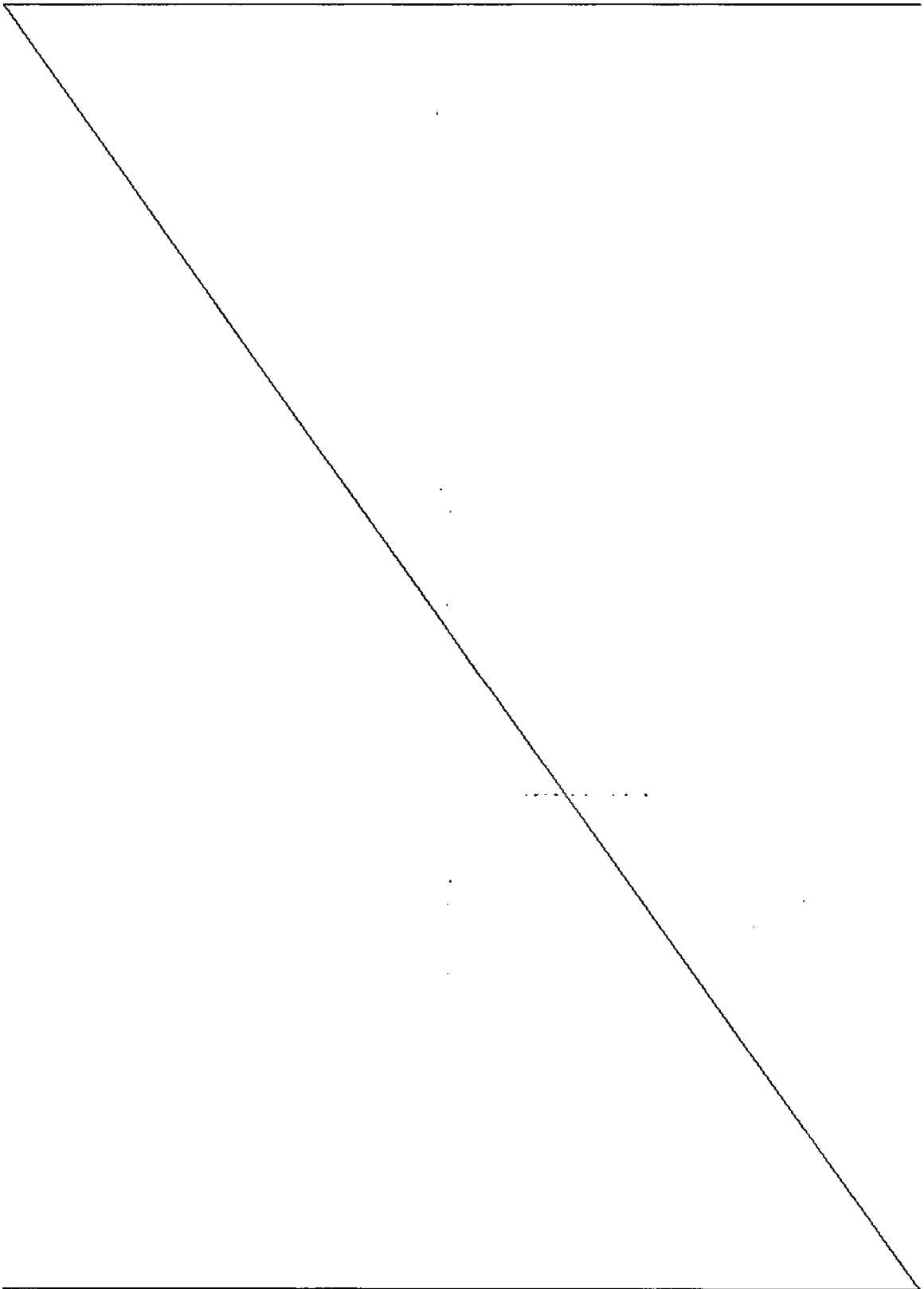
Commencement Date means the date shown on the front page of this Lease as the commencement date.

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FORM LAA-1022

TENURE CODE: GE

WESTERN AUSTRALIA
LAND ADMINISTRATION ACT 1997 as amended
TRANSFER OF LAND ACT 1893 as amended

LEASE OF CROWN LAND (L)

DESCRIPTION OF LAND (NOTE 1)

Lot 501 on Deposited Plan 55359

EXTENT

Whole

VOLUME

3144

FOLIO

940

ENCUMBRANCES (NOTE 2)

Nil

LESSOR/S (NOTE 3)

State of Western Australia acting through the Minister for Lands, a body corporate under the Land Administration Act 1997, care of Department of Lands, Level 2, 140 William Street, Perth, Western Australia 6000.

LESSEE/S (NOTE 4)

Aspen Monkey Mia Pty Ltd (ACN 116 296 265) of Level 3, 129 St Georges Terrace, Perth WA 6000 *formerly, now of level 3, westpac place, east Kent Street* Suite 9, 100 Railway Road, Subiaco, WA 6008

TERM OF LEASE (NOTE 5)

99 Years 0 Months 0 Days
Commencing from the 1st Day of July, 2015
With an option for a further term of 0 years.

THE LESSOR LEASES TO THE LESSEE the land above described subject to the encumbrances shown hereon (note 6)

for the above term for the clear yearly rental of (Note 7) in accordance with the lease agreement,

payable (Note 8) Six monthly in advance.

SUBJECT TO THE COVENANTS AND POWERS IMPLIED UNDER THE LAND ADMINISTRATION ACT 1997 & TRANSFER OF LAND ACT 1893 AS AMENDED (UNLESS HEREBY NEGATED OR MODIFIED) AND ALSO TO THE COVENANTS AND CONDITIONS CONTAINED HEREIN

*see Mge N83158
1/15/15
x*



Appendix D RAC Acknowledgement of Risk

21 February 2017

Mr David Sands
Senior Planning Officer
Department of Planning
140 William Street, WA 6000
Australia



Dear Sir

RE: Monkey Mia Dolphin Resort (MMDR) Redevelopment Structure Plan – Coastal Hazard Risk Management and Adaption Plan

RAC represents the interests of over 900,000 West Australian members as the leading advocate on mobility issues and challenges facing our State. Our purpose is to protect and enhance the lifestyles of our members with a focus on reinvesting profits to benefit members and the WA community (unlike a public company which must benefit shareholders). We service our members through a range of businesses including RAC Insurance, Roadside Assistance and Auto Services amongst others. Our newest business is RAC Parks & Resorts, established in 2015 to enhance the lifestyle of our members and complement our long history of providing travel services. Today we own 5 assets including RAC Monkey Mia Dolphin Resort in Shark Bay.

RAC is seeking to improve and expand the RAC Monkey Mia Dolphin Resort to further enhance its significance as a regional tourism asset for Western Australia and a center of regional employment. The redevelopment will see major capital investment into this asset and increase employment from some 60 to approximately 80 staff.

The assessment of coastal hazards, as outlined in the Coastal Hazard Risk Management and Adaptation Plan prepared by M P Rogers & Associates Pty Ltd, has highlighted that sections of the proposed development could be vulnerable to ocean inundation and/or shoreline erosion. RAC Tourism Assets Pty Ltd is fully aware of these risks and accepts that there will be a requirement to monitor the coastline and respond to these risks as and when they arise. It is accepted that this monitoring and management of these risks will be the full responsibility of RAC Tourism Assets. No input will be required by State or Local Government.

In understanding these risks, RAC Tourism Assets has completed a due diligence review of available options to help reduce risks to environment, property and public safety. This review has ultimately driven an innovative design approach that will allow risks associated with ocean inundation and/or shoreline erosion to be accommodated over the initial service life of the new structures proposed as part of the development. Thereafter, a managed retreat approach will be adopted for replacement infrastructure based on results of subsequent risk assessments.

Management of public safety during severe events (cyclones) is obviously paramount. In accordance with requirements for all development, RAC Tourism Assets will manage the risk to public safety during these events by ensuring early evacuation of patrons, the requirement for which will be determined in consultation with the Department of Fire and Emergency Services and the Shire of Shark Bay.

We thank you for your support of this significant regional project.

Regards

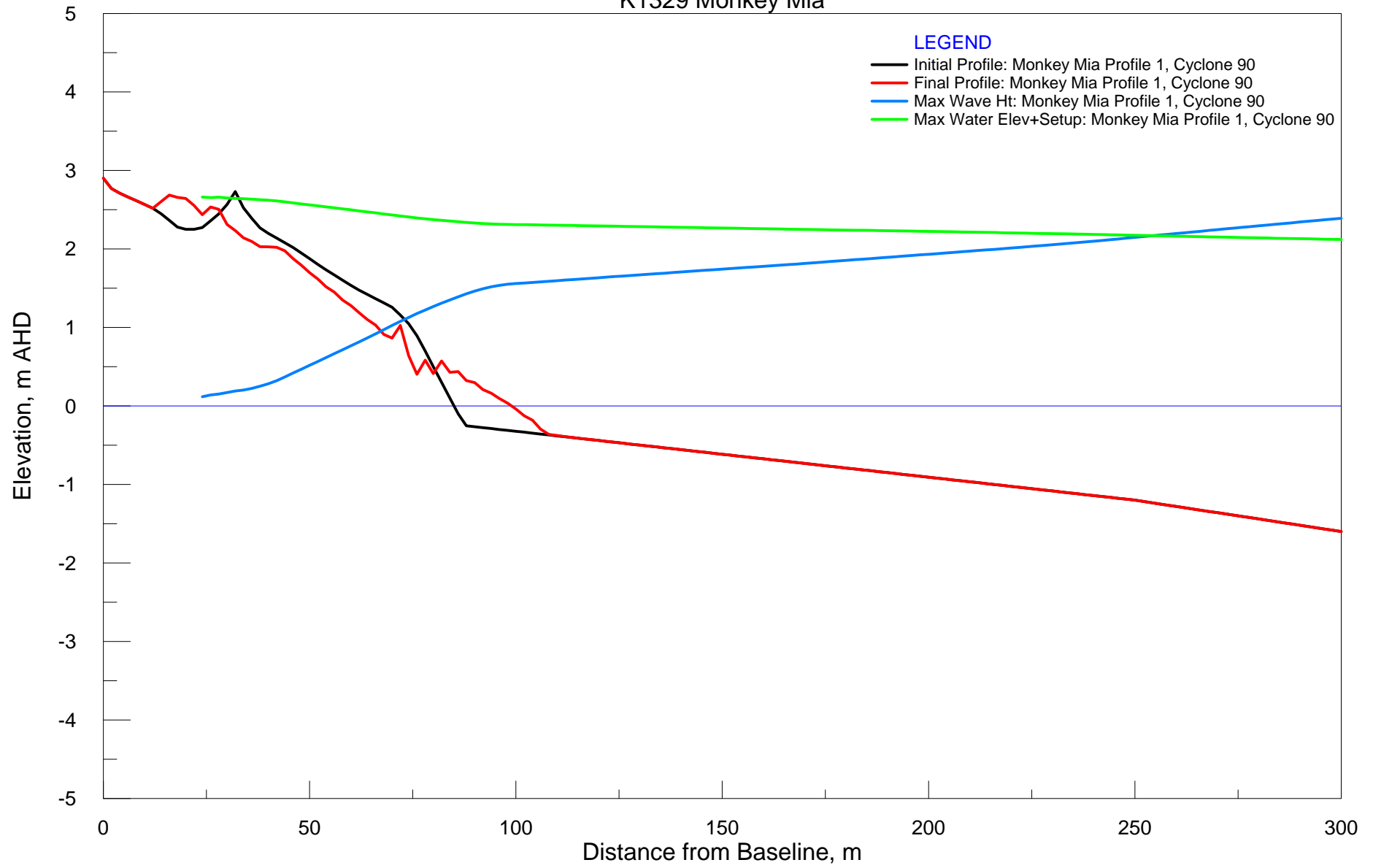
Yours faithfully

A handwritten signature in black ink, appearing to read 'Tony Pickworth', with a stylized, flowing script.

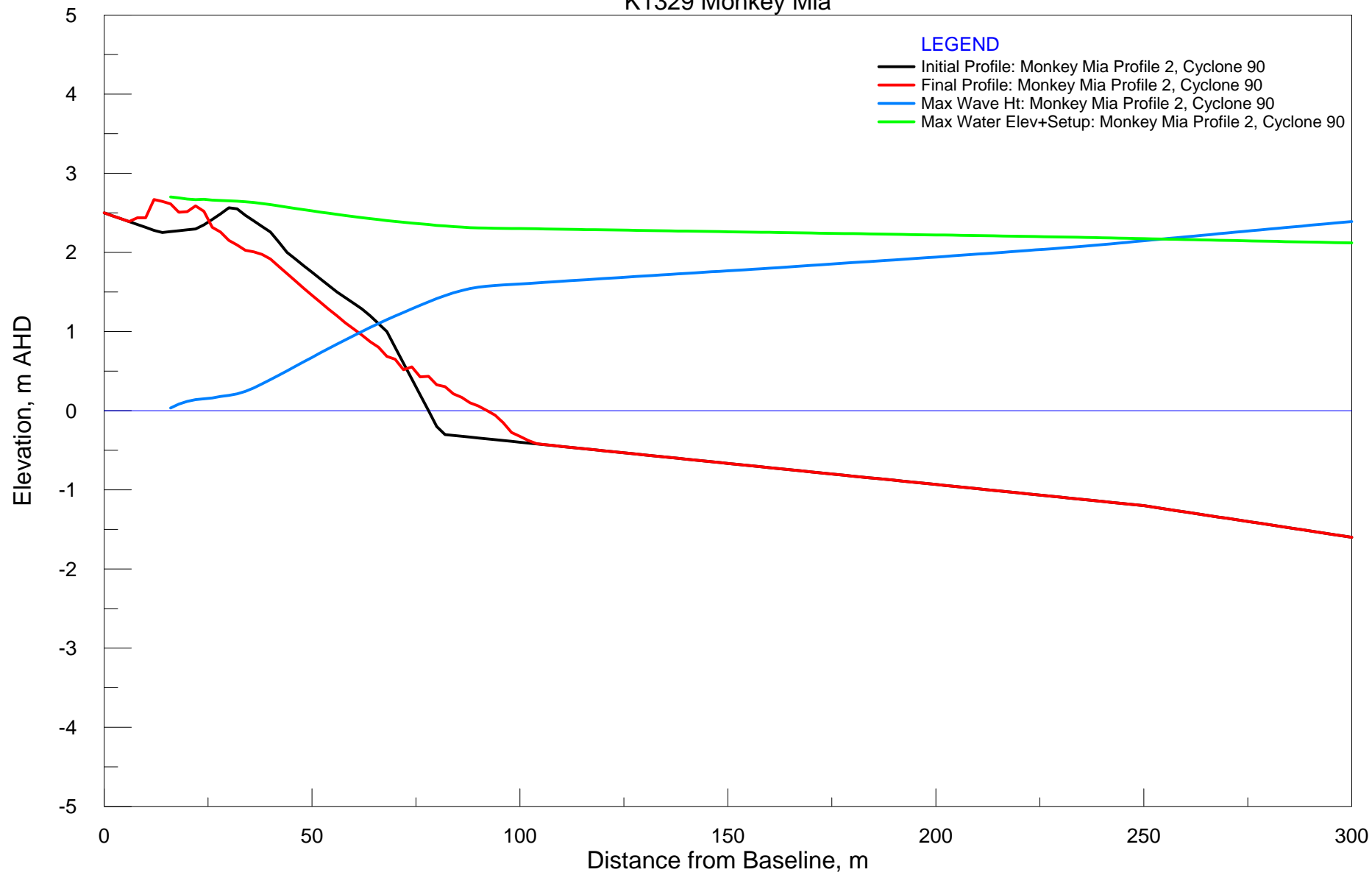
Tony Pickworth
Executive General Manager, Brand & Tourism

Appendix E SBEACH Modelling Results

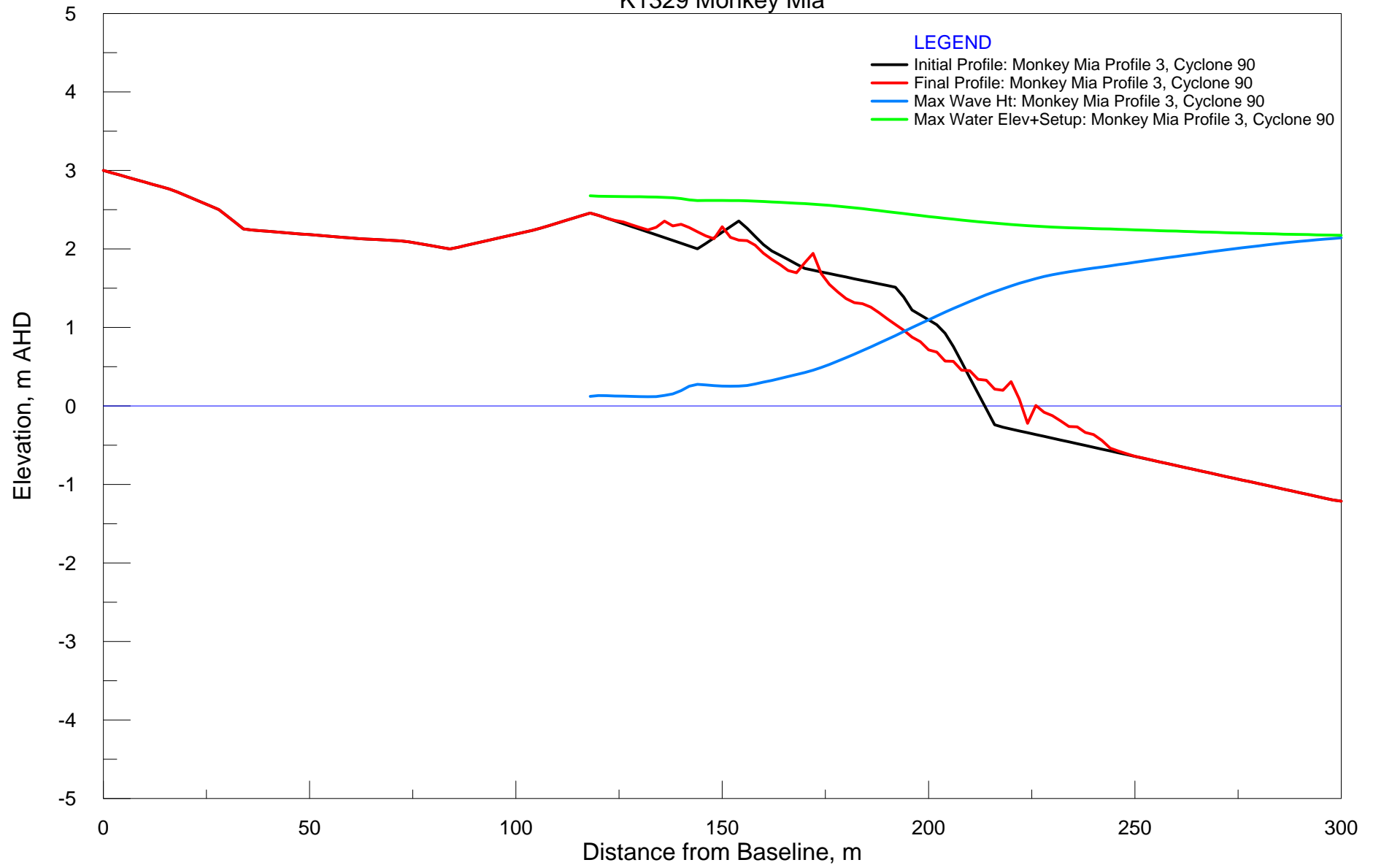
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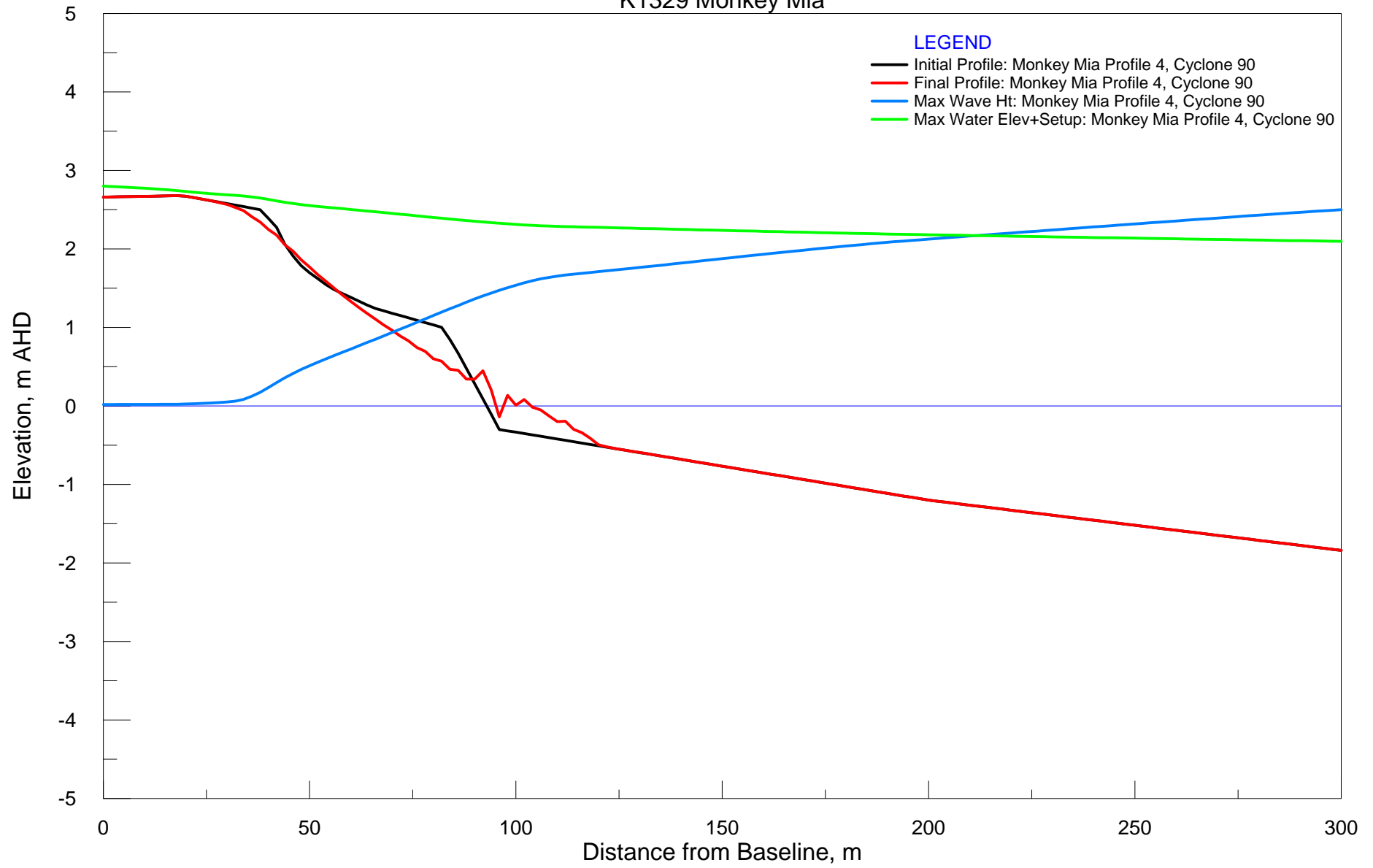
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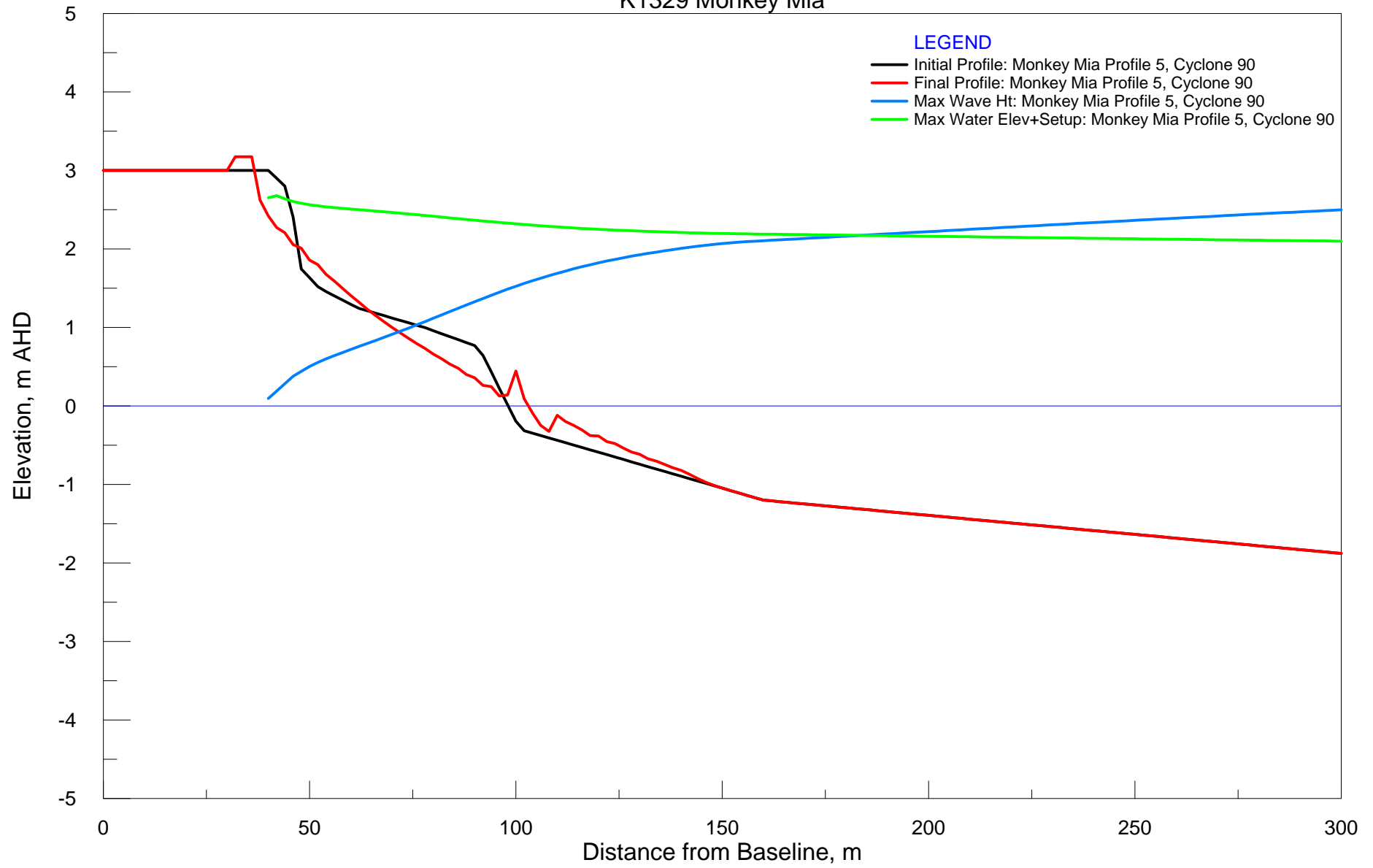
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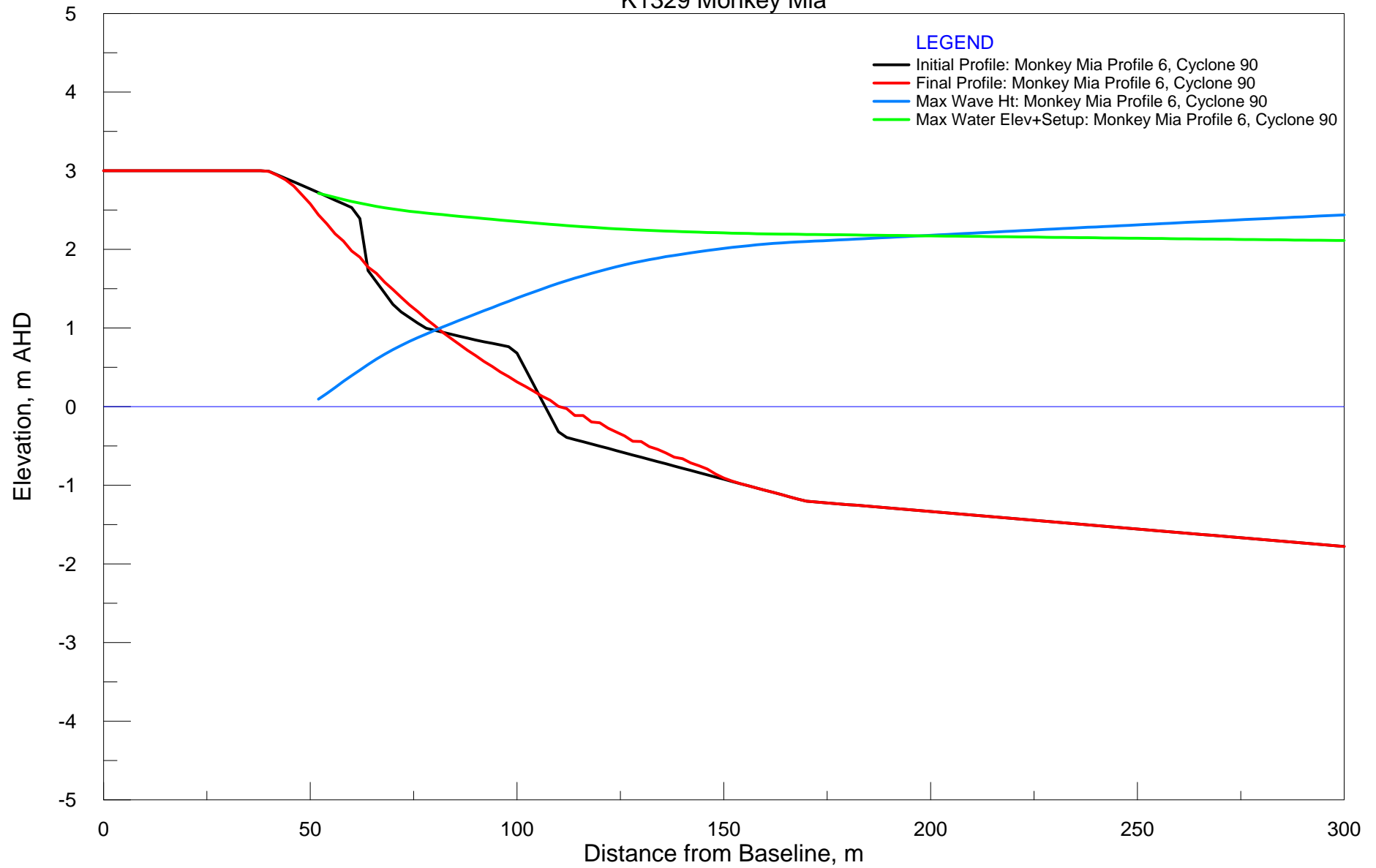
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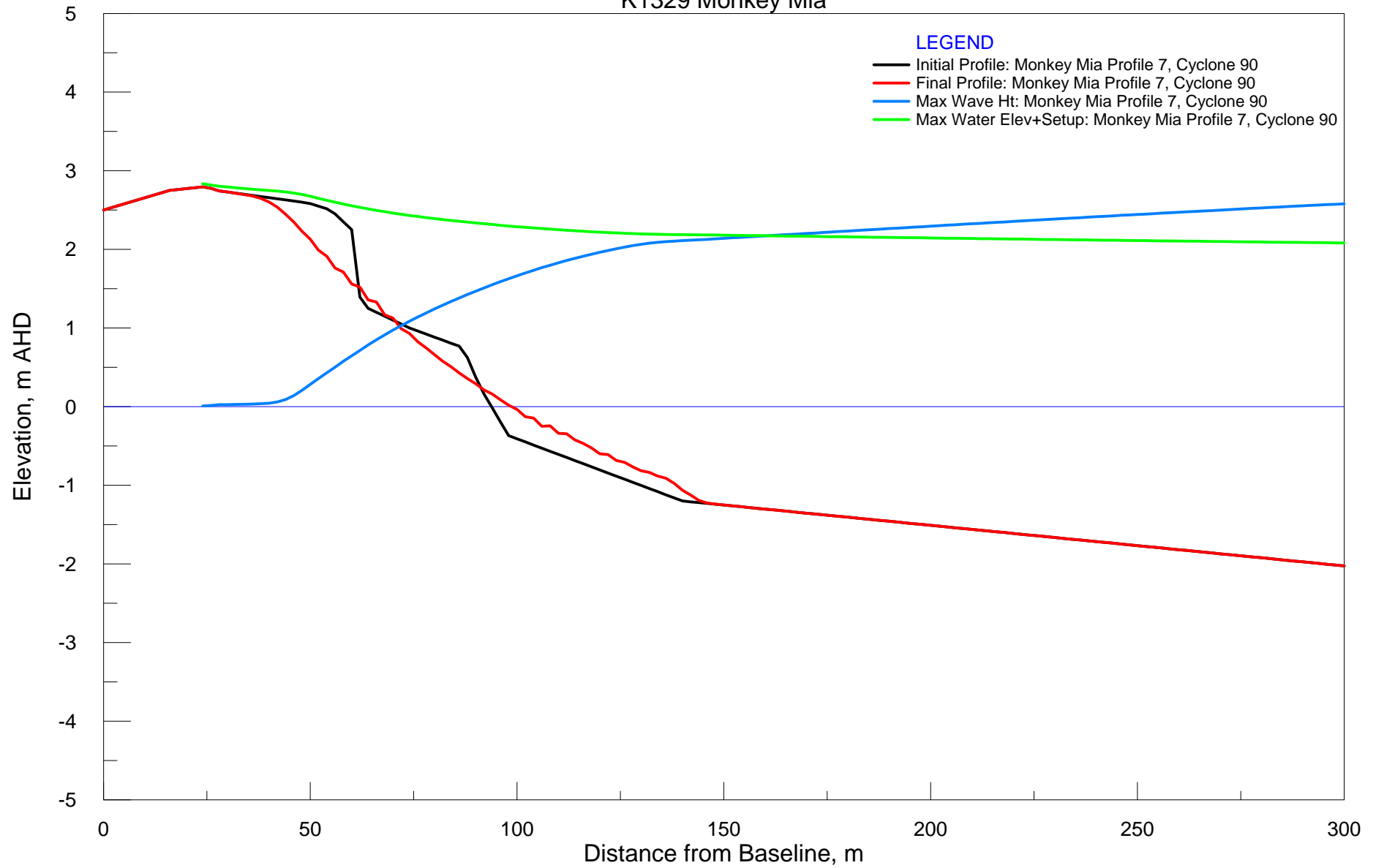
K1329 Monkey Mia



K1329 Monkey Mia



K1329 Monkey Mia



m p rogers & associates pl

www.coastsandports.com.au

Appendix I

Traffic Impact Statement



Monkey Mia Dolphin Resort

TRAFFIC IMPACT STATEMENT

PROJECT	81113-225 Monkey Mia Dolphin Resort			
Revision	Description	Originator	Review	Date
A	First Draft	CXS	CAS	14/10/16
0	Issued	CXS	CAS	17/10/16
1	Revised	CXS	CAS	19/10/16



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1. INTRODUCTION

1.1 Background

Flyt has been engaged by the RAC to prepare a Transport Assessment for the redevelopment of the Monkey Mia Dolphin Resort, located at Lot 130 and Lot 501 Monkey Mia Road, Monkey Mia.

The Shire of Shark Bay did not consider a Transport Assessment report to be necessary, however Main Roads WA (MRWA), as the owner of Monkey Mia Road, has requested a limited Traffic Impact Statement, in accordance with the WAPC's Transport Impact Assessment Guidelines.

This report constitutes the Traffic Impact Statement. It has been prepared to provide a brief outline of the transport related aspects of the proposed development focusing on specific issues set out by MRWA (refer to Section 9 of this report). The assessment indicated that there were no substantial impacts of the proposed expansion of the development site, even taking into consideration peak holiday movements.

1.2 Report Structure

This report has been prepared in accordance with the WAPC's Transport Impact Assessment Guidelines which were revised in August 2016. Given the remote location of the development site, certain elements of a regular transport impact statement have not been addressed due to lack of relevance. These include an assessment of public transport and pedestrian and cycle links to and from the site.

The report is structured as follows:

- ▶ Section 2: Proposed Development
- ▶ Section 3: Vehicular Access and Parking
- ▶ Section 4: Provision for Service Vehicles
- ▶ Section 5: Hours of Operation
- ▶ Section 6: Traffic Volumes
- ▶ Section 7: Pedestrian Facilities
- ▶ Section 8: Cycle Facilities
- ▶ Section 9: Site Specific Issues
- ▶ Section 10: Safety Issues
- ▶ Section 11: Traffic Impact Statement Checklist

2. PROPOSED DEVELOPMENT

2.1 Existing Land Use

This Section discusses the existing and proposed land uses at the Monkey Mia Dolphin Resort.

The subject site and its location within Monkey Mia is shown in Figure 1.

Figure 1 - Location of Resort within Monkey Mia



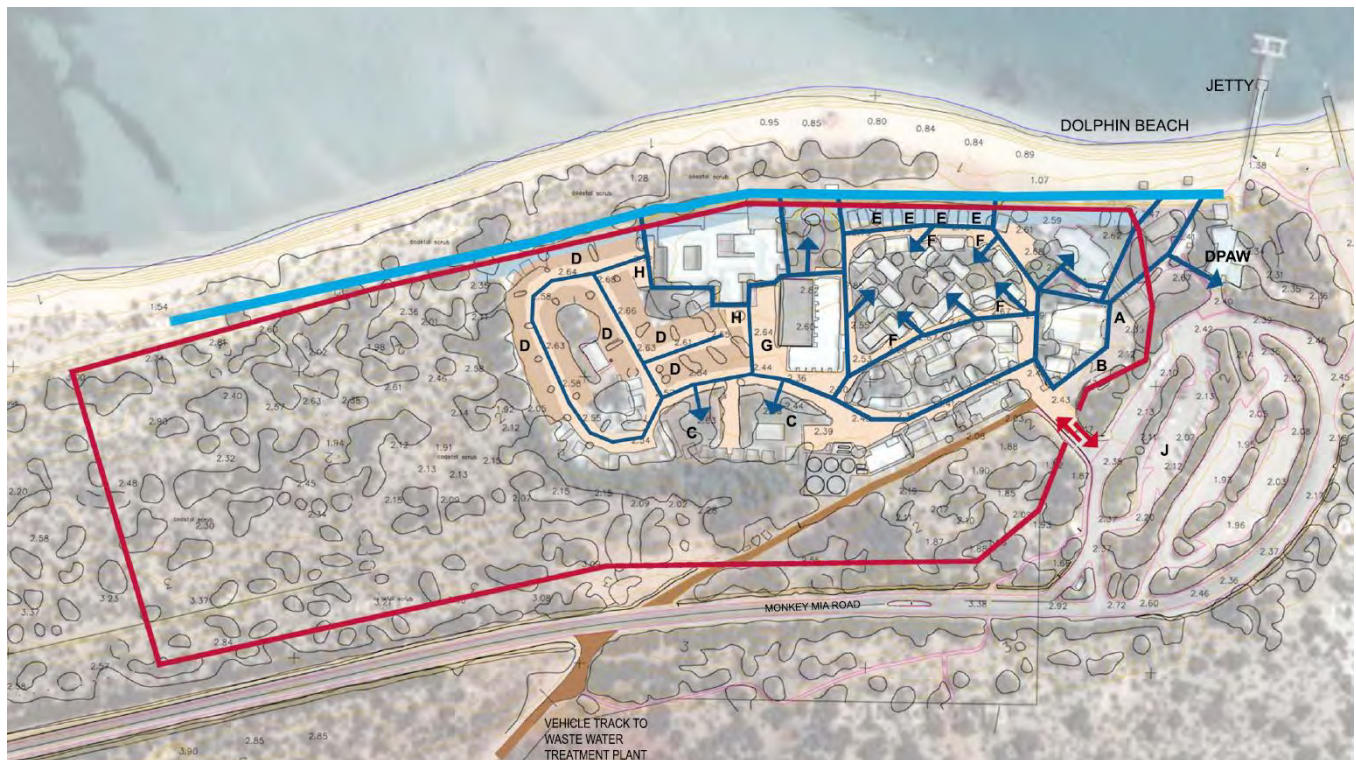
The existing Monkey Mia Dolphin Resort comprises:

- ▶ 204 tourist units/keys including:
 - ▶ hotel rooms and backpacker dorms;
 - ▶ caravan park powered sites;
 - ▶ camp sites;
- ▶ resort facilities such as shops, restaurants, bar, swimming pool and tennis courts.

There is a single access point for the entire site via Monkey Mia Road.

The existing facilities within the subject site are shown in Figure 2.

Figure 2 - Existing Land Use (source: Paterson Group Architects)



Legend

A SERVICE AREA FOR RETAIL AND ADMINISTRATION		UNOBSTRUCTED ACCESS FROM THE SITE TO THE BEACH
B FUEL SALES		BEACH PEDESTRIAN PATHWAY
C CAMPING AND PARKING		PEDESTRIAN MOVEMENT WITHIN THE SITE
D ACCOMMODATION VEHICLE SITE PARKING		VEHICLE MOVEMENT ZONE WITHIN THE SITE
E BEACH CABIN PARKING ADJACENT CABINS		SERVICE ROAD
F GARDEN VILLAS PARKING		SITE ENTRY / EXIT POINT
G LIMESTONE VILLAS PARKING		SUBJECT SITE
H BACKPACKERS PARKING		
J DAY VISITORS DPAW PARKING AND COACHES		

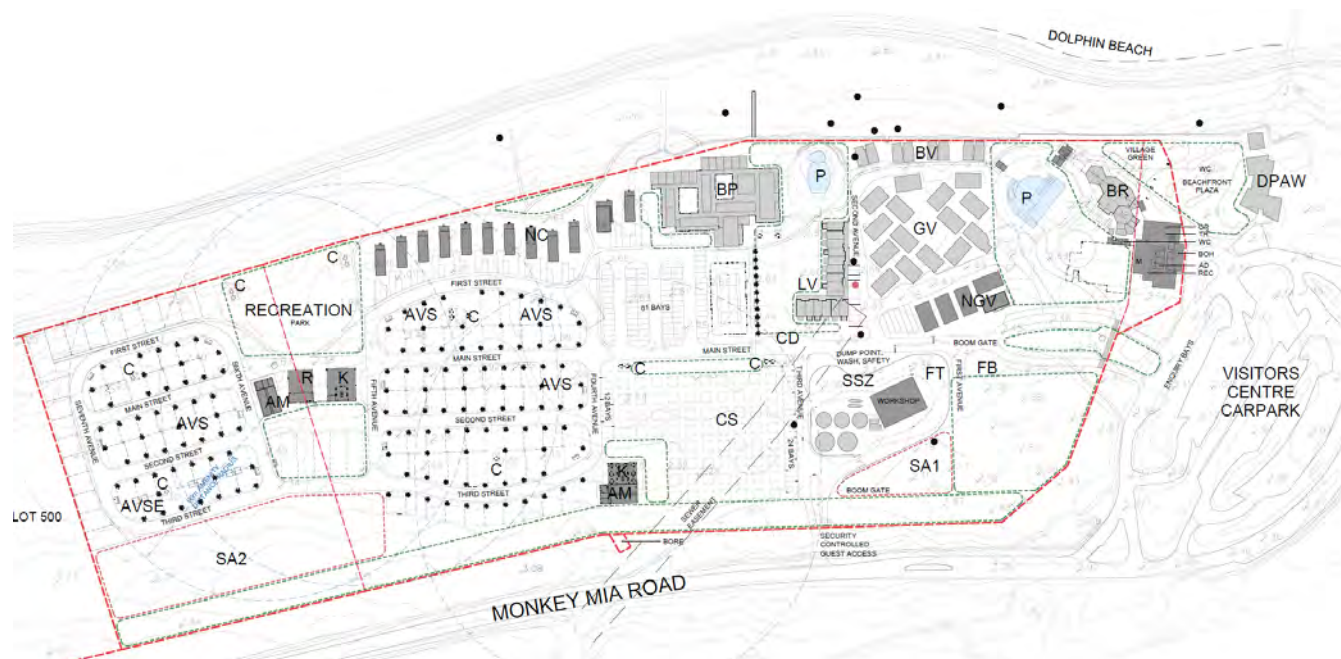
NOTE: ALL TRAFFIC AND PEDESTRIAN CIRCULATION IN RESORT IS CURRENTLY AN 8kph DUAL USE NETWORK

2.2 Proposed Land Use







The redevelopment is estimated to increase the accommodation units from 204 to approximately 318. There will also be additional guest facilities and a new internal street network. An additional access point is proposed and the guest arrival area will be integrated with the Department of Parks and Wildlife (DPAw) visitor centre.

The proposed redevelopment is outlined in Figure 3.

Figure 3 - Concept Yield Masterplan (source: Paterson Group Architects)














LEGEND

	EXISTING BUILDINGS / INFRASTRUCTURE	C	BBQ AND SEATING CABANA	AVSE	ACCOMMODATION VEHICLE SITES WITH ENSUITES
	NEW BUILDINGS	REC	RECEPTION	CS	CAMPING SITES (min REGULATION SIZE 5x5m AND SEPARATION SHOWN)
EXISTING BUILDINGS:		AD	ADMINISTRATION	SSZ	SITE SERVICING ZONE (LAUNDRY, WORKSHOP, ETC.)
BR	BOUGHSHED RESTAURANT	WC	TOILETS, STAFF AND GUEST AMENITY ZONE	FB	FUEL BOWSER
LV	LIMESTONE VILLAS	BOH	BACK OF HOUSE	FT	FUEL TANK
GV	GARDEN VILLAS	M	MALGANA CENTRE	CD	COACH DROP OFF
BV	BEACH FRONT VILLAS	MR	MEETING ROOM		LANDSCAPED AREA
BP	CURRENT BACKPACKERS OR REDEVELOPED FAMILY SUITES	P	POOL		STAFF AREA
DPAW	MONKEY MIA VISITORS CENTRE	TR	TOURIST RETAIL		GROUND WATER MONITORING WELL LOCATION
NEW BUILDINGS:		CR	CONVENIENCE RETAIL		MACERATOR PIT
K	CAMP KITCHEN	SA1	STAFF AREA		
R	RECREATION BUILDING	SA2	STAFF AREA		
NC	NEW CABINS	NGV	NEW GARDEN VILLAS		
AM	AMENITY AREAS	AVS	ACCOMMODATION VEHICLE SITES		

2.3 Context with Surrounds

Monkey Mia is located within the Shark Bay World Heritage Area, at the south-eastern end of the Francois Peron National Park. It is approximately 850km from Perth and 26km east of Denham, the closest town, via Monkey Mia Road.

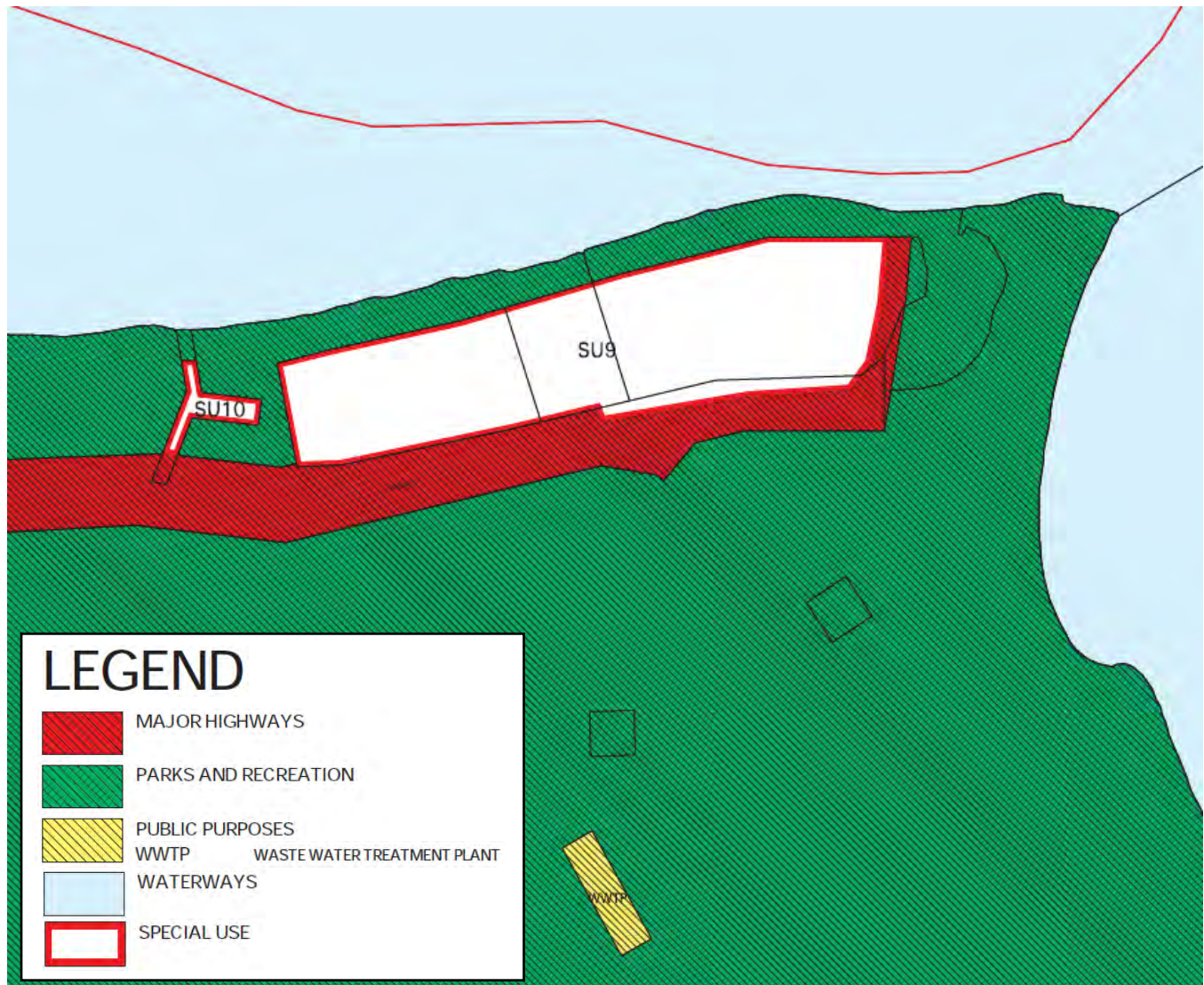
The resort itself is zoned as Special Use, with the following uses permitted:

-  motel;
-  short-term accommodation
-  special facility
-  park home park;
-  caravan park;
-  camping area;
-  reception centre;
-  residential building;
-  office;
-  shop;
-  restaurant;

- ▣ carpark;
- ▣ staff accommodation;
- ▣ power generation plant; and
- ▣ desalination plant.

Monkey Mia Road is zoned as a Major Highway. The remaining area is zoned Parks and Recreation. An extract of the Shark Bay Local Planning Scheme No. 3 for the Monkey Mia locality is shown in Figure 4.

Figure 4 - Extract from Local Planning Scheme No. 3 (source; Shire of Shark Bay)



3. VEHICLE ACCESS AND PARKING

This section describes the existing and proposed access and parking arrangements.

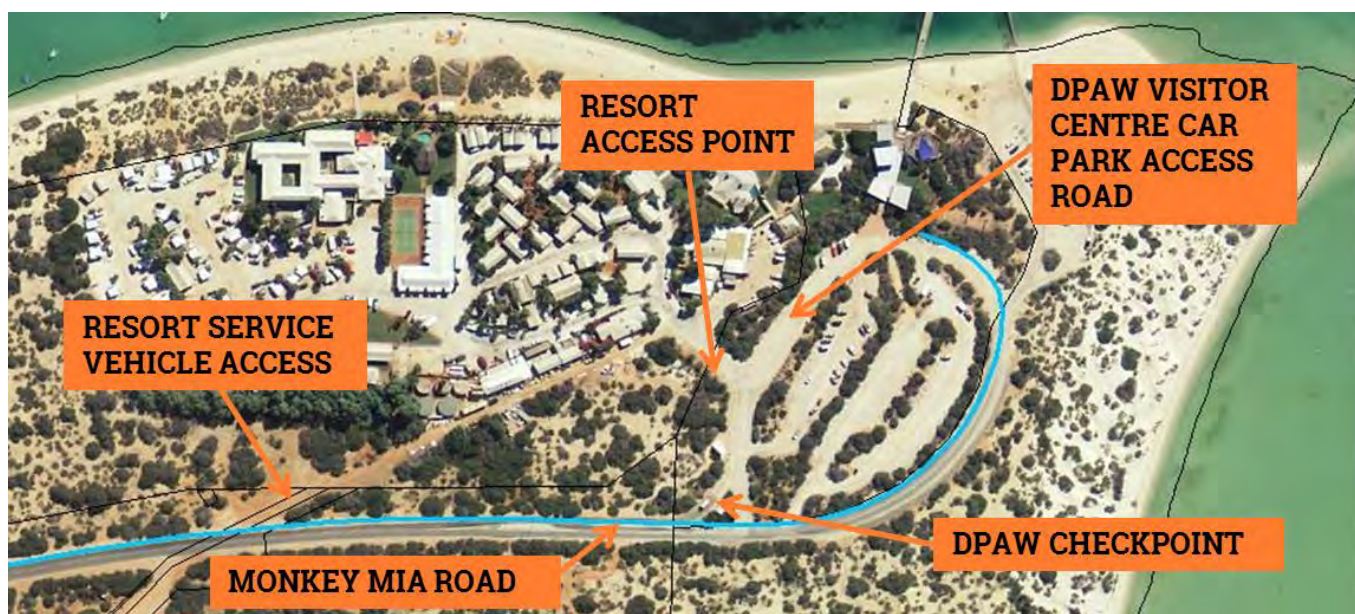
3.1 Existing

Access to the site is provided solely via Monkey Mia Road.

3.1.1 Access

Existing vehicle access to the Monkey Mia Dolphin Resort is via the DPaW visitor centre car park access road. The car park access road is accessed from Monkey Mia Road, with entering vehicles having to pass through a DPaW toll booth to purchase a pass for entry into the Monkey Mia Reserve. Vehicles with a valid Monkey Mia Reserve pass can bypass the DPaW toll booth and enter the DPaW visitor centre car park access road a further 30m to the east along Monkey Mia Road.

Figure 5 - Access to Monkey Mia Dolphin Resort



3.1.2 Parking

Guest and staff parking is contained within the resort, with parking bays adjacent to the various accommodation types.

3.2 Proposed

The existing access point from the visitor car park access road will be maintained, although the internal configuration will be modified. There will be no change to the intersection between Monkey Mia Road and the visitor centre car park access road. A secondary access is proposed, directly connecting to Monkey Mia Road at a location approximately 140m to the west of the existing intersection between Monkey Mia Road and the visitor centre car park access road.

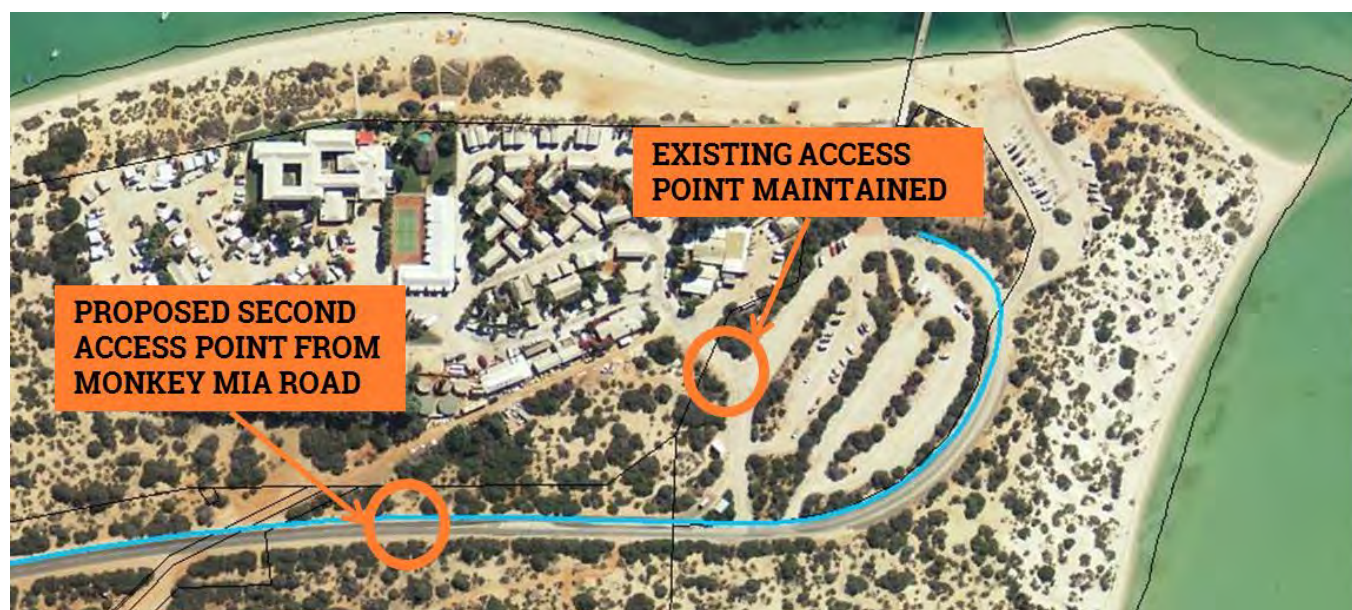
3.2.1 Access

The secondary access will be restricted to service vehicles and returning resort guests only (i.e. those who have already gone through the DPaW toll booth) and will be controlled via a boom gate. The boom gate will be located within the RAC land and not within the road reserve. This secondary access will allow resort guests and service vehicles to bypass queues which can form back from the DPaW checkpoint.

This proposed access intersection will be located within the existing 60 kph section of Monkey Mia Road. A 500m long 80 kph speed zone commences 140m west of the proposed second access intersection.

The locations of the proposed access points are shown in Figure 6.

Figure 6 - Location of Proposed Access Points



3.2.2 Parking

There will be an expansion in the number of parking bays in accordance with the increased number of accommodation units and staff. All parking will be accommodated on-site, with parking bays adjacent to the various accommodation types.

All parking areas will be designed in accordance with the appropriate Australian Standards.

4. PROVISION FOR SERVICE VEHICLES

4.1 Rubbish Collection

Rubbish collection vehicles will access the redeveloped site via the secondary access.

4.2 Emergency Vehicle Access

Emergency vehicles would have the opportunity to access the redeveloped site via both the main and secondary access in keeping with provisions set out under the *Road Traffic Code 2000* and *Road Traffic Act 1974*.

A dedicated emergency exit (for general vehicle access to Monkey Mia Road in the event of an emergency within the resort) is being considered for the western portion of the site. This access would be also available for use by emergency services vehicles should it be constructed.

4.3 Loading Facilities

Appropriate loading facilities will be located on site, accessed via either the main or secondary access points.

Fuel tankers will access the site through the secondary entry to unload at the tanks which are proposed to be located within the service compound. The proposed design of the compound permits tankers to turn around and exit via the secondary exit. The intersection of Monkey Mia Road and the secondary access road will need to accommodate the turning movements of the fuel tankers.

5. HOURS OF OPERATION

5.1 Hours

The redeveloped Monkey Mia Dolphin Resort will operate 24 hours a day. Guest reception, restaurants and bars will open from early morning until the evening.

6. TRAFFIC VOLUMES

6.1 Existing Traffic Volumes

The most recent traffic counts for Monkey Mia Road, north of Shark Bay Airport Road, were collected in July and early August 2016. Although the count site is located almost 18km to the west of the Monkey Mia Dolphin Resort, there are no other public roads between Shark Bay Airport Road and the visitor centre access road, therefore this location provides a reliable estimate for Monkey Mia Road in the vicinity of the Monkey Mia Dolphin Resort.

The traffic count data is summarised in Table 1.

Table 1 - Monkey Mia Road Traffic Volumes (source: MRWA)

Time	Northbound (to Resort)	Southbound (away from Resort)	Both Directions
AM Peak			
7:00 - 8:00 AM	40	4	44
8:00 - 9:00 AM	18	23	40
9:00 - 10:00 AM	21	36	57
PM Peak			
2:00 - 3:00 PM	16	19	35
3:00 - 4:00 PM	20	16	36
Daily Total	222	217	438

The traffic reflects the tourists arriving to view the dolphins in the early morning (and then departing after a couple of hours), with an average of 40 vehicles travelling north (towards Monkey Mia) between 7am and 8am, and an average of 36 vehicles travelling south (away from Monkey Mia) between 9am and 10am.

Heavy vehicles make up 11.1% of all traffic along Monkey Mia Road, which can be partly explained by tourist coaches and potentially vehicles towing boats, depending on the form of classification.

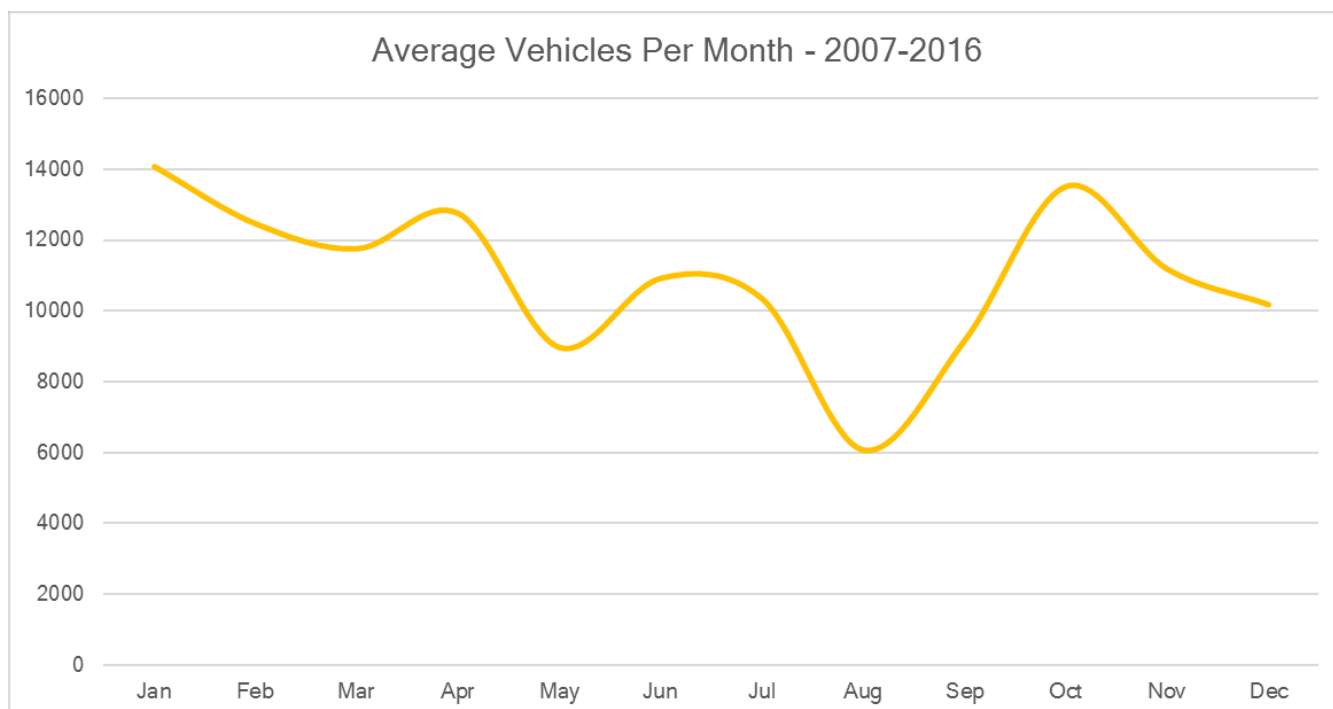
6.2 Visitor Profile

In order to inform the potential impact of higher tourist numbers during peak season, visitor information and vehicle count data was provided by the RAC. This information consisted of volumetric count data that has been collected since 2006 on Monkey Mia Road. The average of the ten years' worth of vehicle count data is set out in Figure 7. The patterns in this data set show, in respect of vehicle movements:

- ▶ There are clear increases in visitor numbers associated with all holiday periods - generally around Easter, mid-year semester school breaks, around October for the mid-semester break and January;
- ▶ July, when data was available from the MRWA counts discussed in Section 6.1, is considered an average month in terms of visitor traffic; and
- ▶ The highest volumes for the site are recorded in January, with an average of over 14,000 vehicle movements in a month.

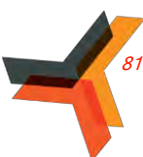
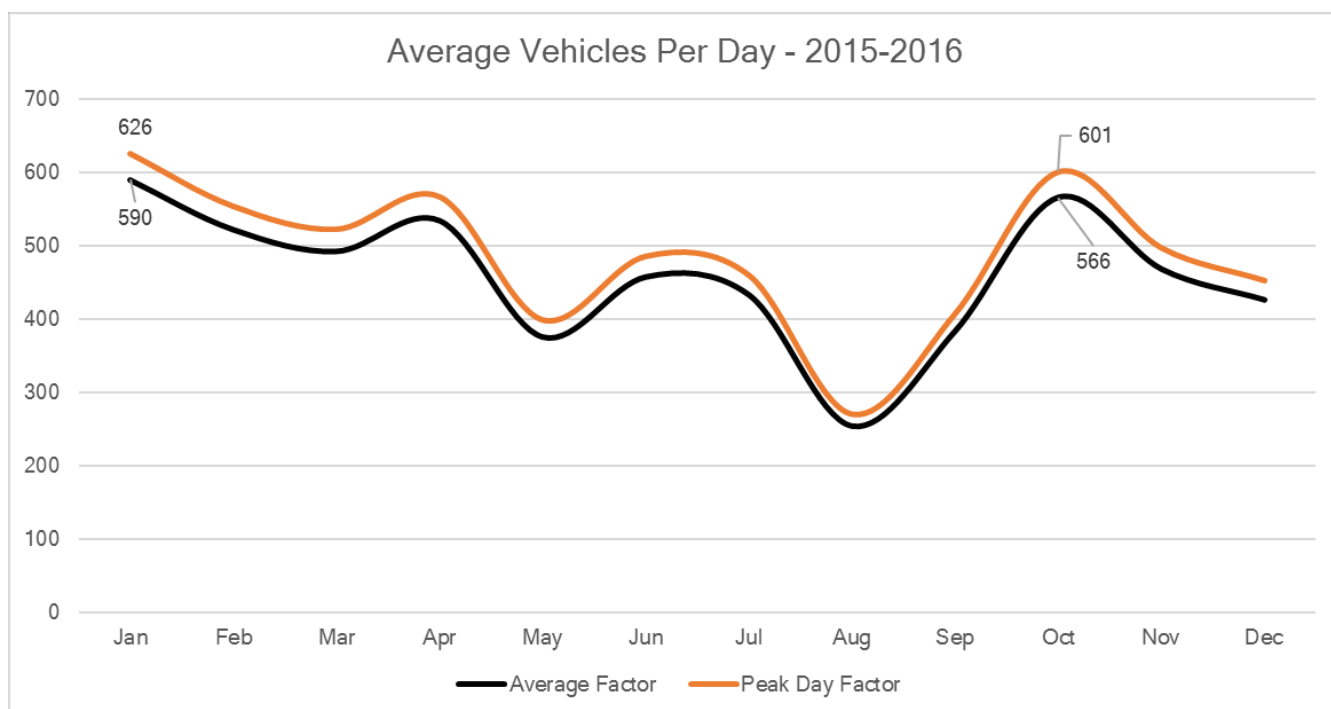
Some month saw "bumps" in data which could be attributed to one-off events such as a cyclone event or facilities at the camp itself.

Figure 7 - Average Vehicle Counts per Month 2006-2016 (source: RAC)



The profile showing the average two-way movements allowed for the month of July 2016 to be factored. This exercise was undertaken for all months to understand the highest use of Monkey Mia Road associated with the facility. These figures are set out in Figure 8. The highest peak day factor applied was then taken from counts on Fridays, the day when the most visitor numbers are recorded - most likely associated with arrivals into the site coming in for weekend periods. This profile shows that the highest factored volume per day is 626 vehicles in January with 319 vehicles from Monkey Mia and 307 vehicles to Monkey Mia.

Figure 8 - Average Vehicle Movements



6.3 Increased Traffic Associated with Development

As set out in Section 2.2, the redevelopment proposes to increase accommodation units from 204 to 318. This will be accompanied by additional guest facilities however the facilities will largely contain trips on site and therefore the trips associated with the accommodation were factored to represent current usage.

The total number of vehicle trips associated with the additional development has been taken from the existing traffic patterns discussed in the previous section. The calculations undertaken were completed for a Friday in July to represent what would be high forecast traffic loads against the known traffic data collected by MRWA. The impact of the development in comparison to an existing Friday in July is shown in Table 2.

Table 2 - Forecast Traffic Friday in July with Development

Time	Northbound Existing (to Resort)	Northbound Forecast (to Resort)	Southbound Existing (away from Resort)	Southbound Forecast (away from Resort)	Both Directions (Existing)	Both Directions (Forecast)
AM Peak						
7:00 - 8:00 AM	40	53	4	5	44	58
8:00 - 9:00 AM	18	24	23	31	40	53
9:00 - 10:00 AM	21	29	36	49	57	78
PM Peak						
2:00 - 3:00 PM	16	20	19	24	35	44
3:00 - 4:00 PM	20	25	16	20	36	45
Daily Total	222	293	217	281	438	574

With the development, it is expected to result in a total of an additional 136 vehicle trips on Monkey Mia for a comparable Friday in July. The total volume of traffic would increase to 574 vehicles per day.

For the height of the tourist season, the additional traffic associated with the development is largely forecast to stay the same (due to accommodation profiles and visitor rates), however the higher background traffic volumes influence the total vehicle volumes on Monkey Mia Road. As shown in Table 3, the total two-way traffic recorded on Monkey Mia Road is forecast to increase from an average of 626 vehicles (shown in Figure 8) to 781 vehicles per day.

The forecast two-way volume of traffic on this section of Monkey Mia Road is not anticipated to result in any design or congestion issues. The most likely implication is the platooning of vehicles behind slower moving vehicles (such as trucks, campervans or cars with caravans) along the length of Monkey Mia Road between Denham and Monkey Mia. There could be an increase in temporary waiting at the DPaW toll booth during busy periods, however the inclusion of the second access should reduce the contribution of resort traffic to the queues.

Table 3 - Forecast Traffic Friday in January with Development

Time	Northbound Forecast (to Resort)	Southbound Forecast (away from Resort)	Both Directions (Forecast)
AM Peak			
7:00 - 8:00 AM	77	8	85
8:00 - 9:00 AM	30	38	68
9:00 - 10:00 AM	35	60	95
PM Peak			
2:00 - 3:00 PM	33	40	73
3:00 - 4:00 PM	32	26	58
Daily Total	398	383	781

7. PEDESTRIANS

7.1 Existing Pedestrian Facilities within the Development

The internal road network within the existing Monkey Mia Dolphin Resort is a shared space for vehicles and pedestrians. Travel speeds are restricted to 8 kph.

There are also dedicated pedestrian paths to the resort amenities, beachfront and the DPaW visitor centre.

7.2 Proposed Pedestrian Facilities within the Development

The predominant movement of people within the redeveloped resort will be on foot. The redevelopment proposals include a network of dedicated pedestrian paths between accommodation areas, resort amenities, the beachfront and the DPaW visitor centre.

8. CYCLE FACILITIES

8.1 Existing Cycle Facilities within the Development

There are no dedicated cycle facilities within the Monkey Mia Dolphin Resort, however the internal road network shared space accommodates bicycles with a speed up to 8 kph.

8.2 Proposed Cycle Facilities within the Development

There are no dedicated cycle facilities proposed for the redevelopment of the Monkey Mia Dolphin Resort, however bicycles will be able to travel on the expanded internal road network shared space (as long as travel speeds are restricted to 8 kph).

9. SITE SPECIFIC ISSUES

9.1 Issues

A number of issues unique to this site have been raised by MRWA. Commentary on these issues is provided below:

- ▶ Bore access - the existing bore will be accessed from the resort's expanded internal road network and not from the existing gravel road via Monkey Mia Road.
- ▶ Access to waste water treatment plant (WWTP) - there are no plans to modify the gravel access to the WWTP.
- ▶ Emergency exit (different to emergency vehicle access) - The secondary access could serve as an emergency exit. A third and dedicated emergency exit (for access to Monkey Mia Road) is being considered for the western portion of the site.
- ▶ Access for fuel tankers - Fuel tankers will access the service station within the resort through the secondary access. From there they will unload at the proposed storage tanks within the service compound. The proposed design permits the tankers to turn around and exit via the secondary exit. The intersections of Monkey Mia Road with the secondary access road will need to accommodate the turning movements of the fuel tanker.
- ▶ Pedestrian movements to/from resort and DPaW visitor centre - The redevelopment proposals include a network of dedicated pedestrian paths between accommodation areas, resort amenities, the beachfront and the DPaW visitor centre.
- ▶ Pedestrian movements across Monkey Mia Road to the Wulyibibi Yaninyina Walking Trail - This crossing is the responsibility of MRWA. While the redevelopment is expected to increase traffic volumes along Monkey Mia Road by approximately 130-150 vehicles per day, the total number of vehicles is still low (between 570 and 780 vehicles per day depending on the time of year) and the speed limit 60 kph. During the peak hour, typically experienced between 9 and 10am, Monkey Mia Road is forecast to carry 95 vehicles, equivalent to one vehicle every 37 seconds. This should provide ample opportunity for pedestrians to cross the road to access the walking trail.

10. SAFETY ISSUES

10.1 Issues

As set out in Section 6.3, the volume of traffic associated with the development is unlikely to result in specific safety issues at the development site.

Given the nature of the attraction and the access controls in place, temporary queuing has been infrequently observed back from the toll booth gate at the busiest times associated with dolphin feeding. This is attributable to the short distance between Monkey Mia Road and the toll booth and the requirement for all vehicles to purchase a pass for entry into the Monkey Mia Reserve. The redevelopment of the resort could increase this queuing (as resort visitors will increase) however the inclusion of the second access will allow resort guests to bypass the toll booth once the initial pass has been purchased.

In respect of outgoing vehicles, the secondary egress point allows for the splitting of vehicles exiting the site.

No crash data was available for the site at the time the Transport Statement was completed.

For the internal design of the development, it has been set out to accommodate the proposed development in a slow-speed and limited access design. The secondary access will be restricted to service vehicles and returning resort guests only (i.e. those who have already gone through the DPaW toll booth) and will be controlled via a boom gate. A network of dedicated pedestrian paths has been included for movement between accommodation areas, resort amenities, the beachfront and the DPaW visitor centre. The internal road network shared space accommodates bicycles with a speed up to 8 kph as is typically the case with developments of this nature.

11. CONCLUSIONS

The redevelopment of the Monkey Mia Dolphin Resort is forecast to contribute an additional 130 - 155 vehicles a day to traffic volumes along Monkey Mia Road, depending on the time of year. While this represents an increase of between 22% and 31% over existing traffic volumes, the forecast total daily volume of between 570 and 780 vehicles is relatively low. The forecast volume is within the traffic carrying capacity of Monkey Mia Road and no upgrades are required.

The provision of a second access will allow service vehicles and returning resort guests to bypass the DPaW toll booth. The intersection of Monkey Mia Road and the secondary access road will need to accommodate the turning movements of fuel tankers, which are expected to be the largest vehicles to travel through this intersection.

12. TRANSPORT IMPACT STATEMENT CHECKLIST

ITEM	PROVIDED	COMMENTS/PROPOSALS
Proposed Development		
Existing land uses	✓	Section 2.1
Proposed land use	✓	Section 2.2
Context with surrounds	✓	Section 2.3
Vehicular Access and Parking		
Access arrangements	✓	Section 3.2
Public, private, disabled parking set down/ pick up	✓	Section 3.2
Service Vehicles (non-residential)		
Access arrangements	✓	Section 3
On/off site loading facilities	✓	Section 3
Service Vehicles (residential)		
Rubbish collection and emergency vehicle access	✓	Section 3
Hours of Operation	✓	
Traffic Volumes		
Daily or peak traffic volumes	✓	Section 4.1
Type of vehicles	✓	Section 4.1
Traffic Management on Frontage Streets	NA	Not applicable given nature and location of site
Public Transport Access		
Nearest bus/train routes	NA	
Nearest bus stops/train stations	NA	Not applicable given nature and location of site
Pedestrian/cycle links to bus stops/train station	NA	
Pedestrian Access/Facilities		
Existing pedestrian facilities within development	✓	Section 7.1
Proposed pedestrian facilities within development	✓	Section 7.2
Existing pedestrian facilities on surrounding roads	NA	Not applicable given nature and location of site
Proposals to improve pedestrian access	NA	
Cycle Access/Facilities		
Existing cycle facilities within development	✓	Section 8.1

ITEM	PROVIDED	COMMENTS/PROPOSALS
Proposed cycle facilities within development	✓	Section 8.2
Existing cycle facilities on surrounding roads	NA	Not applicable given nature and location of site
Proposals to improve cycle access	NA	
Site Specific Issues	✓	Section 9
Safety Issues		
Identify issues	✓	Section 10
Remedial measures	✓	Section 10