



DIRK HARTOG ISLAND

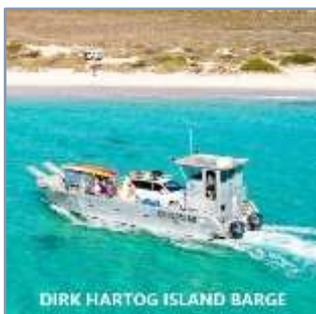
RECREATION & TOURISM OPPORTUNITIES ANALYSIS

JULY 2023



PREAMBLE

There is a groundswell of interest in Dirk Hartog Island (Wirruwana) due to the 400 year celebration of Dirk Hartog's landing on the island in 1616, strong visitation to WA's coastal tourism destinations and World Heritage Areas in particular, and the island's ecological restoration project. Drivers of *future* growth in visitation to Dirk Hartog Island include development of eco-tourism accommodation on freehold land, additional recreation and tourism infrastructure within the National Park, tour operators offering a wider range of experiences appealing to a wider audience, and a wider range of options to access the Island. Balance is required in maintaining an ecologically sustainable environment as visitation grows.



This report presents a recreation and tourism opportunities analysis for Dirk Hartog Island - Wirruwana. It identifies opportunities available, issues and challenges to address, and recommendations to improve visitor experiences whilst aiming to *sustainably* manage the island's natural and cultural values. The report outlines recommendations centred around niche recreation and tourism experiences, discrete visitor activities, upgrades to tourism infrastructure, and improved access. Being a remote island it will remain an adventurous and challenging nature-based destination.

However, tourism's evolution is expected to elevate the island's status as a refugium, an iconic and unique wilderness tourism experience steeped in nature, heritage and adventure.

The challenge will be preserving the Island's ecological values and naturalness from the adventurous spirit of visitors following in the footsteps of explorers who landed on the island over 400 years ago.

ACKNOWLEDGEMENT OF COUNTRY

We respectfully acknowledge the Traditional Owners of Country, The Malgana People, and their continuing connection to land, sea & community. We pay our respects to them and their cultures, and to the elders past, present and emerging.

DISCLAIMER

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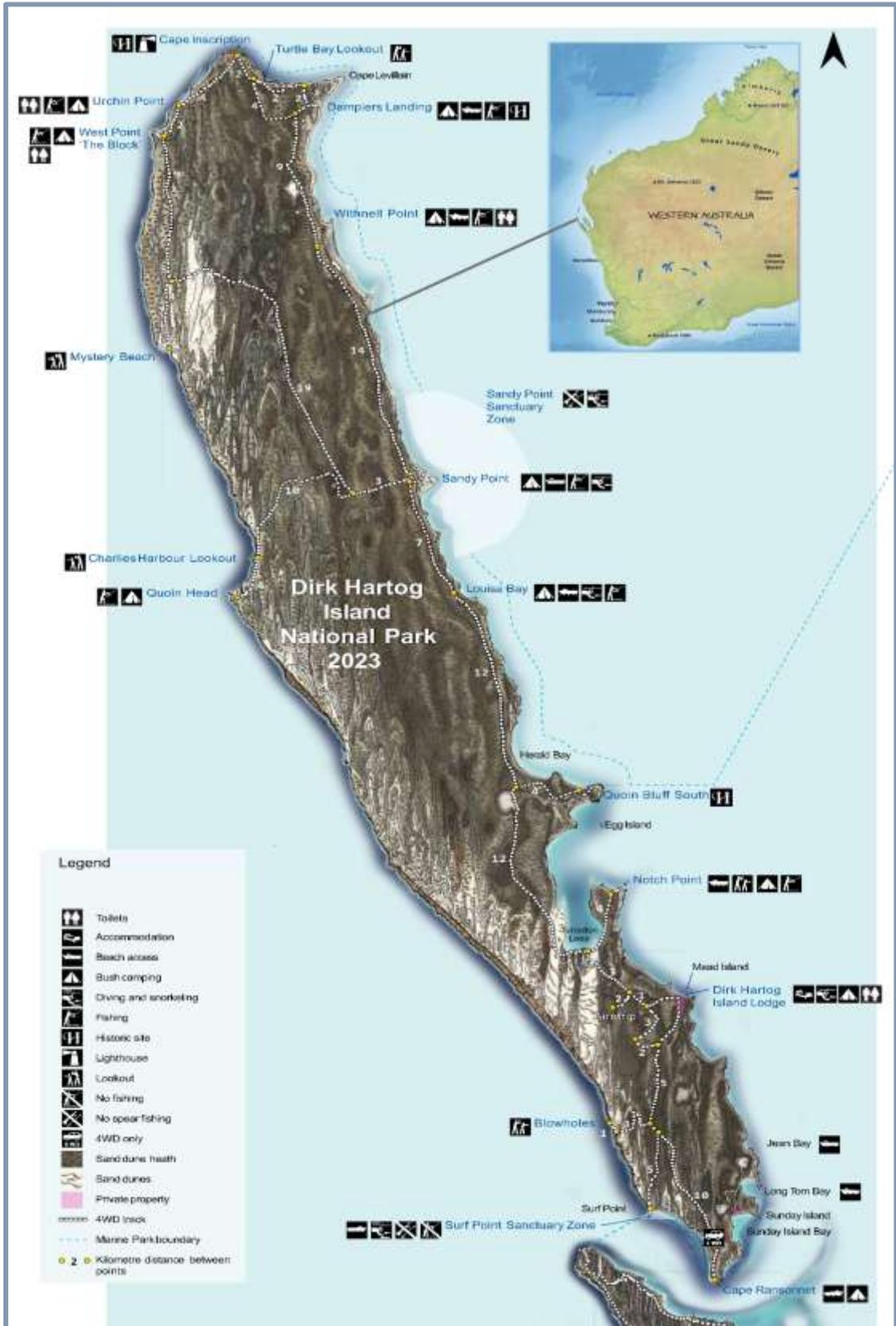
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“The ‘tourism product’ is what the customer buys; the ‘tourism experience’ is what they remember ” (Tourism & Events Queensland).

DIRK HARTOG ISLAND



EXECUTIVE SUMMARY

Dirk Hartog Island is a 63,000ha national park and eco-tourism destination within the Shark Bay World Heritage Area. It is the largest island in Western Australia, a wilderness that is largely undeveloped and home to a unique growing terrestrial sanctuary (i.e. the Return to 1616 Ecological Project). The island is foremost a national park, with the primary purpose of conservation and protection of threatened fauna and flora, surrounded by an abundance of spectacular marine life. Visitors enjoy the Island as a remote, wilderness eco-destination steeped in adventure and outdoor recreation including marine-aquatic and terrestrial activities. Potential future development on island freehold-leasehold land could introduce 300+ additional eco-accommodation units that bring significantly more tourists, tour operators, visitor-services infrastructure, and environmental impacts. The challenge is to ensure the World Heritage Area, its scientific endeavour values, and the globally-recognised '1616 Ecological Restoration Project', are preserved for future generations to develop further knowledge, experiences and appreciation.

Dirk Hartog Island has potential to be a world-leading eco-tourism destination as outlined in the island's vision based on stakeholder views and feedback.

DHI will be a world leading nature-based adventure tourism destination rich in heritage, cultural, terrestrial, aquatic and social experiences, a place where adventurous travellers immerse in a unique, sustainable wilderness environment that engulfs their heart, soul and mind, inspiring appreciation and conservation among current and future generations.

The Department of Biodiversity Conservation and Attractions commissioned this study to investigate ways to improve and diversify visitor experiences whilst protecting Dirk Hartog Island's unique natural and cultural values. The study was to identify the opportunities available, the issues and challenges to address, and recommendations to improve visitor experiences. Based on a desktop review, extensive consultation and high-level analysis, this *Opportunity Analysis* presents recommendations for the sustainable management and development of a unique, remote island, eco-tourism destination. The findings are to inform a joint management plan being prepared by DBCA and the Malgana Aboriginal Corporation for terrestrial conservation reserves within the Malgana Native Title area.

The Island's transition from pastoral lease to national park in 2009 resulted in five freehold / leasehold lots covering 76.3ha zoned special purpose that allows for the development of off-grid, low impact, eco-tourism accommodation and related services. The Lots are largely undeveloped and present *significant* potential to expand the Island's short stay accommodation capacity by up to 317 units supporting up to 1590 overnight visitors, compared to 170 overnight visitors currently.

Development of eco-accommodation on Dirk Hartog Island is expected to bring an increase in overnight and day trip visitors, which could support a wider range of access options such as fast-boat, plane, helicopter, barge and ferry. The existing self-contained, self-guided

visitors will be joined by guided, hosted, serviced visitors supported by operators and staff aided by new infrastructure, facilities and dedicated plant/equipment. Forecasts suggest visitor levels could grow from 7,400 in 2023 to over 16,000 by 2031 - *if the island were to be partially developed* - or over 70,000 visitors annually if fully developed. However, a range of challenges could delay development on the Island including:

- Barge access is the main conveyor of 4WD visitors. Capacity is limited. Alternative landing sites are limited and barge-landing infrastructure is not under consideration.
- The island is 'off-grid' with no power, water or drainage infrastructure. Services must be developed in compliance with National Park & World Heritage Area requirements.
- Climate imposes a 6-month peak visitation period (April to September); strong winds, high temperatures and cyclones can make visitation October to March uncomfortable.
- Limited light aircraft service the island daily, year-round, but are not night-rated, cannot land during or after rain, and operate on an as-needed charter basis.
- Fast-boat access has recently been established by tour / accommodation operators; there is no *regular* fast-boat service to ferry day trip visitors or short stay campers.
- The island's 200km road network is unsealed, single lane, traversing over sand dune, rock, birrida (mud) and corrugated substrates. Strictly high clearance 4WD only. Conditions suit slow speed, 20-40kmh, making travel time consuming while visitors recognise higher rates of wear and tear on vehicles.
- The island has no shops or support services. Visitors, tour operators and staff must be self-contained, fully provisioned and equipped to address the 'unexpected'.
- Local Planning Scheme has rigorous requirements (covenants) when landowners are making improvements that adds to cost and timelines.
- Limited mobile phone connectivity - communication. Some sites have better connectivity than others. SMS and voice messaging is not always reliable for emergency purposes.
- Evacuation relies largely on the existing barge service, with limited capacity & weather constraints, or light plane that cannot land during the night or during-after rain.
- Emergency response is largely reliant on first responders from Denham. Limited response capacity on DHI. Delays can be substantial.

Notwithstanding the challenges Dirk Hartog Island offers a wide range of opportunities to support sustainable eco-tourism within a national park. For example:

- Commercial opportunities potentially include hire shop, wellness facility, pop-up catering van, regular fast-boat transfers, nocturnal tours near campgrounds, marine tours, supply shop, shuttle service, 4WD repair-transport service and regular passenger ferry-barge service.
- Visitor activity opportunities include cultural experiences, wildlife viewing trails (terrestrial), hiking / kayak trail, maritime heritage precinct, cultural appreciation trail / precinct, nature walks, pastoral heritage precinct, self-drive (4WD) trails, kiteboarding / foiling / windsurfing, snorkelling - freediving sites and catch-release fishing.

The eco-tourism potential of Dirk Hartog Island is significant with a range of untapped visitor experiences available. Unlike mainland destinations the island is strategically advantaged



as an eco-tourism destination aided by the Return to 1616 Ecological Restoration Project and its associated scientific community, abundant marine life in the surrounding waters, large land mass to disperse visitors to ensure solitude and privacy, extensive range of adventure and recreation activities, nationally and internationally important heritage values and physical isolation from the mainland making it exclusive and unique. In leveraging these advantages the recommendations to improve and diversify visitor experiences on Dirk Hartog Island include:

- Establish two new self-drive Loops. Mystery Loop (north) & Blowholes Loop (south).
- Establish a 'Cape to Cape' hiking / kayak trail; from Cape Ransonnet to Cape Inscription; potentially a 'great walk' candidate for tours and day treks.
- Investigate the installation of low-key coastal lookouts to view marine life.
- Promoting the values of Cape Inscription as a National Heritage Place and developing the area as a 'must see' heritage experience.
- Develop year-round beach sites with protected calm shallow shores by installing wind-shade shelters to facilitate spring-summer use (i.e. during the 'windy' season).
- Install moorings and/or shore-based anchoring systems at recognised boating sites and naturally protected coves / bays to facilitate recreational boating visitors.
- Develop 'nature' walks at each NP campground that provides opportunity for visitors to encounter resident fauna in their natural habitat (i.e. the Return to 1616 Project).
- Investigate the development of 4-5 *premium* nature-based camp sites at remote, secluded sites within the NP.
- Investigate the establishment of a group camp site for tour operators hosting small groups overnight.
- Establish 'Gateway' entry nodes at Shelter Bay & Cape Ransonnet with amenities & information to welcome and inform visitors (until new modes of access are established at alternative locations).
- Establish toilets at all NP campgrounds and major NP day use sites;

Managing and preserving the Island's natural and cultural values will be paramount in striving for genuinely sustainable tourism at an iconic, eco-tourism destination. Joint management of the national park is currently being negotiated with the Malgana People bringing traditional culture and values to the park and visitor management. A planning framework is presented based on adaptive management supported by comprehensive park information, knowledge sharing - digitally, tour guides, 'friends of DHI', a rigorous monitoring-management system and collaborative research aided by the scientific community underlying the 1616 Project's ecological restoration program.

An extensive list of actions is presented 'subject to DBCA assessment of sites, impacts and Park objectives'.

SECTION 1 - PRELUDE

introduction

This report informs the preparation of a joint management plan for Shark Bay's terrestrial reserves, which includes Dirk Hartog Island National Park. It was scoped to review the opportunities available, the issues and challenges to address, and recommendations to improve visitor experiences on Dirk Hartog Island whilst preserving natural and cultural values. It draws extensively from DBCA reports and plans, land planning documents, ecotourism and sustainability case studies and visitor market reports. Literature review, stakeholder consultations and data analysis also informed key findings and recommendations. The project was undertaken during February to June 2023.

project objectives

Objectives in the Project Brief include:

- identify opportunities for visitors to experience the ecological restoration project and nature-based experiences;
- identify opportunities for visitors to experience the island's historic locations and events;
- provide recommendations on improving and diversifying visitor experiences;
- identify issues to address to facilitate visitation and visitor management that is appropriate and sustainable;
- review land tenures in determining potential scenarios for land use and development; and
- provide guidelines for nature-based experiences and tourism development.

methodology

The methodology included the following steps.

STEP	TASKS
Desktop review	Review reports on park management, land planning, island tourism, eco-accommodation development, Shark Bay region, Dirk Hartog Island, visitor markets, tourism trends, and sustainable tourism.
Stakeholder Consultation	Consult with stakeholders from Shark Bay, Dirk Hartog Island, Federal - State - Local Government, tourism operators, and tourism industry; topics explored include opportunities, challenges, risks, sustainability, access, accommodation & visitor experiences.
Analysis	Review data on visitation, visitor interests-motivations & profiles; prepare & assess visitation and development scenarios.
Reporting	Prepare a draft report for review and a final report.

SECTION 2 - REGIONAL CONTEXT

SHARK BAY

Introduction

Dirk Hartog Island is located on the western edge of Shark Bay, which is Australia's largest enclosed marine embayment and hosts a diverse range of marine communities including corals, seagrass meadows, mangroves and hypersaline communities (DBCA 2018). Covering approximately 13,000 square kilometres, Shark Bay is home to extensive seagrass meadows and an impressive variety of marine fauna that contribute to the areas World Heritage listing. The region has a semi-arid climate with hot, dry summers (20°- 35°C) and mild winters (10°- 20°C). Annual rainfall averages 200mm to 300mm with over half falling during the May to August visitor season. The cyclone season runs from November to June and cyclones frequent the area every 4-5 years on average. The 'Bay' has comparatively calm waters from March to August but strong trade winds from September to March make for choppy, rough waters demanding caution and safety.

Climate Statistics - Denham (source: BOM)

In the following table bold font indicates maximum values highlighting seasonal differences. Implications: most of the rain falls during peak visitor season; strong winds & high temperatures coincide with low visitor season; Shoulder season combines wind, rain and warm-hot temperatures.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Mean Rainfall mm	7	16	14	14	36	54	39	22	8	6	3	2
Mean No. Days Rain >1.0mm	0.7	1	1	1	3	5	4	3	2	1	0.5	0.3
Mean Max Temperature °C	31	32	31	29	26	23	22	23	24	26	28	29
Mean Min Temperature °C	22	23	22	20	17	14	13	13	15	17	19	21
Mean 9am Wind Speed Km/h	26	24	22	17	13	13	12	14	17	21	23	25
Mean 3pm Wind Speed Km/h	27	25	23	18	15	15	15	17	21	25	27	28
VISITOR SEASON	LOW		SHOULDER		PEAK			SHOULDER		LOW		

Overview

Location

Denham is the main town and the closest service centre to DHI, which is 40km west of Denham. Denham is 830km (9hrs) by car and 710km (2hrs) by plane from Perth. The nearest regional city is Geraldton 4.5hrs south by road; and the nearest regional town is Carnarvon 3.5hrs north by road. Shark Bay airport has a daily passenger service to Perth and Carnarvon. The main industries are pastoral, mining, fishing, services and tourism. The Shire of Shark Bay has a resident population of around 1069 (ABS, 2023).



Climate Change

Climate change predictions (2007-2047) for Shark Bay include a rise in temperatures (1° - 2.5°C), a significant decline in rainfall (-5% to -20%), an increase in evaporation, an increase in winds, a sea level rise of about 17cm, and an increase in extreme weather events (e.g. cyclones & thunderstorms) (DEC 2011, CSIRO 2007). Generally, climate change is expected to increase the acidity of oceans, as well as increase storm surge impacts, causing damage to infrastructure (DEC 2008). Whilst locally increasing the frequency of marine heat wave events that may lead to enhanced coral bleaching, and more frequent seagrass die-off events.

Tourism

Tourism is important to the Shark Bay economy contributing around \$103M in tourism expenditure annually (TWA 2023). Peak visitation is May to August, when the local climate is warmer than the cool-wet winters of southern WA. Annual visitation to Shark Bay averages 124,000 with each visitor spending \$191 per day on average (TWA 2023). Tourism supports local employment and enterprise with businesses offering marine tours, eco-cultural tours, fishing charters, nature tours, dive tours, water sports hires/rentals, hospitality and accommodation. For many visitors Shark Bay is a primary destination and for others it is part of a multi-destination trip, which contributes to an average length of stay of 4.7 nights. Post-COVID, visitor origins are predominantly intrastate (85%) followed by interstate (12%) and international (3%). The main visitor experiences centre on coastal-marine environments and activities such as fishing, swimming, snorkelling, boating, kayaking and wildlife appreciation (dolphins, whales, dugongs, sharks & turtles).

Dirk Hartog Island relies on Denham as the main supply centre offering provisions and services delivered by air and sea. Seasonality limits growth in Shark Bay's tourism sector, however, improved access and/or more accommodation and tours on DHI has potential to grow Shark Bay's tourism capacity. DHI is predominantly an extended stay destination accessed via barge or fast boat. Day trip visitors to DHI are the minority and generally access the island via plane, helicopter or boat from Denham. Shark Bay's tourism economy will grow in parallel with the growth of tourism on DHI.

SBWHA

Shark Bay World Heritage Area was established in 1991, with the site satisfying all four of UNESCO's criteria for natural heritage values. Covering 23,000km² it includes Shark Bay Marine Park, Francois Peron National Park, Hamelin Pool Marine Nature Reserve, Zuytdorp Nature Reserve and Dirk Hartog Island National Park. The area is famous for its extensive sea grass meadows, Hamelin Pool Stromatolites, its diverse marine wildlife including dugongs, dolphins and whales, shell beach and coastal scenery. The area offers a unique collection of wildlife, flora and stunning scenery including sheltered bays and coves, many with pristine water. DHI contributes to the integrity of the Shark Bay World Heritage values by acting as a refuge for threatened species.

Dirk Hartog Island

Known by the traditional owners, the Malgana people, as Wirruwana, DHI was named after Dutch explorer Dirk Hartog who visited DHI in 1616. DHI is WA's largest island and a remote eco-tourism destination. DHI is accessed mostly via 4WD on a barge from Shelter Bay (Edel Land proposed NP) with light plane and fast-boat services also available from Denham. DHI is a 4WD-only destination





offering remote National Park camping or privately operated homestead amenities with hospitality, cabins and tours. Popular visitor activities include fishing, swimming, snorkelling, paddling / kayaking, boating, 4WD'ing, sightseeing, wildlife appreciation and camping. DBCA and Malgana Aboriginal Corporation are in the process of negotiating the potential joint management of terrestrial reserves in the Malgana NT area, including for DHI NP. An operations base has been established at Herald Bay to assist in managing the Park, the Return to 1616 Project¹ and tourism activities.

In 1616, Dutch captain Dirk Hartog and crew were the first Europeans to land on Western Australia. The heritage site at Cape Inscription, where a pewter plate was affixed to record the landing, is also home to an historic lighthouse and keeper's quarters. Cape Inscription is registered on the national heritage list.

The 1616 Project is an ecological restoration project that offers visitors the opportunity to experience fauna and flora rehabilitation. DHI is also steeped in culture and history with Inscription Point being one of the first recorded sites visited in Australia by European explorers in 1616. As a former pastoral property, DHI has over 180km of unsealed 4WD tracks across varying types of terrain, making it strictly for high-clearance 4WD's only. DHI is an adventure destination with a rich tapestry of nature-based activities, terrestrial and aquatic, and experiences supported by important heritage and cultural values. However, the Island is challenged by the need to conserve the integrity of the national park, preserving the aims of the ecological restoration project and nationally significant heritage sites, whilst limiting the impacts of visitors and tourism development. As a national park, conservation is an over-arching management focus of the Island.

The 1616 Ecological Restoration Project aims to restore the ecological condition of DHI to pre-European discovery and the subsequent settlement by miners, fishers and pastoralists. The 1616 Project has involved the removal of feral animals before the translocation of native fauna (many of which are listed as threatened) while also undertaking weed control of selected priority weeds. The 1616 Project is expected to continue until 2030. The ecological reconstruction of DHI provides an opportunity to improve the conservation status of several threatened fauna, showcase wildlife management, and add value to Shark Bay as a premier wildlife conservation area (DEC 2012, p.50). Visitors to DHI benefit from experiencing a 'refugium' of native animals and regenerating vegetation, seemingly untouched by time, effectively taking visitors back to before explorers arrived.

The island itself is about 80 kilometres long and between 3 to 12 kilometres wide, covering around 63,000 hectares. During 1860 to 2007 the Island was mined for guano, occupied as a base for pearling, and used as a pastoral grazing lease. The WA Government purchased the pastoral lease and established the Dirk Hartog Island National Park in 2009.

¹ Translocated animals are to include Brushtailed mulgara, Banded hare-wallaby, Boodie, Chuditch, Desert Mouse, Dibbler, Shark Bay bandicoot, Heath mouse, Western grasswren, Greater stick-nest Rat, Woylie, Shark Bay mouse, Rufous hare-wallaby. Source: <https://www.sharkbay.org/restoration/dirk-hartog-island-return-1616/>



SECTION 3 - DIRK HARTOG ISLAND

SITUATION ANALYSIS

Tourism

Tourism is one of the world's largest industries. Globally, it grows in line with world population and visitor travel patterns, with an influx of visitors causing new destinations to emerge and later rejuvenate to retain visitors and sustain the tourism economy. The seasonal flow of visitors to a destination drives cycles in expenditure, investment, capacity, impacts and management responses.

Tourism can be sustainable if management systems address existing *and* anticipated economic, social and environmental impacts. In practice however, this is rarely achieved. Nature based tourism destinations such as DHI are vulnerable to the impacts associated with growth in visitors and tourism infrastructure. Tourism on DHI is expected to evolve from a small scale, nature-based camping, self-guided focus to a larger realm that includes eco-accommodation, guided tours, ancillary services and higher levels of infrastructure imposing a significantly larger impact on the natural environment. The challenge is to expand the infrastructure and facilities on DHI sufficiently to activate opportunity for visitors to more effectively experience and appreciate its uniqueness, without destroying its distinctive qualities, values and appeal.

DBCA (2011) acknowledged that 'as visitation increases, there will need to be an increasing role for the Parks and Visitor Services program to deal with visitor risk management, the upgrade, development and maintenance of visitor facilities and the provision of information at key sites on the island. A permanent ranger presence on the island is required once suitable accommodation facilities are constructed' (p.41). In the interim, park rangers frequent during the 'visitor season' to ensure visitor activities and impacts are managed appropriately.

Tourism Trends

Globally, niche tourism experiences are displacing mass tourism and over-tourism in particular. Tourists are seeking new opportunities that are ecologically sustainable, socially equitable and personally attractive on a health, wellness and spiritual level. Trends in tourism are concerned with:

Eco-conscious: tourists are becoming more environmentally conscious when travelling; making decisions based on carbon emissions, energy miles, plastic use, recycling, climate impacts and sustainability.

All inclusive: accessible tourism, enabling travel by people of all ages and all abilities; making tourism accessible to everyone.

Culinary experiences: experiencing a local culture by tasting local cuisine prepared authentically, preserving tradition, exhibiting culinary pride using local ingredients, served in a customary setting.

Responsible 'Green' travel: using accommodation and transport that is genuinely sustainable, with minimal environmental impact, helping protect and preserve the planet, and support and benefit local communities.

Experiential Tourism: experiencing new or unique activities, immersing into a destination like a local, indulging in authentic experiences, learning about local culture, discovering unexpected experiences.

Delightful Destinations: seeking places that deliver relaxation, exploration and inspiration; that bring a healthier wellbeing, a stronger sense of self, an insightfulness, and a greater appreciation of places that enrich the body, spirit and mind.

Tourism Audit - Dirk Hartog Island

A review of DHI's tourism follows with an assessment of accommodation, activities, attractions, amenities and awareness.

Key Findings

Strengths:	<ul style="list-style-type: none"> Remote location, wilderness-intensive destination. Wide range of nature and adventure based attractions and activities. Strong appeal for nature enthusiasts, adventure seekers and expeditioners. Controlled number of overnight visitors within NP. Exclusivity. Privacy. East coast DHI has sheltered bays, scenic shorelines & abundant marine life. West coast DHI has exposed open ocean, steep cliffs and rocky shores.
Characteristics:	<ul style="list-style-type: none"> National Park setting enriched with translocation of endangered fauna. World Heritage and Marine Park Area. Strong conservation focus. Nationally important heritage site. Important fauna conservation site. Minimal services and support. Safety requires visitor discretion. Short stay accommodation with hospitality at DHI Homestead precinct. Nature-based campgrounds/camp sites & remote day use sites within the NP. Limited tourism infrastructure within NP. Toilets at three of nine NP sites. 4WD access only. Unsealed one-lane road, corrugated, sandy, rocky & slow.
Products Offered:	<ul style="list-style-type: none"> 15-minute barge trip to access DHI; carrying one 4WD with trailer at a time. Light aircraft flies from Shark Bay to DHI; daily flights, air charter basis. Fast boat service Denham to DHI operated by DHI Lodge & tour operators. Guided 4WD tours available from the Homestead to select sites on DHI. Helicopter access to DHI, and scenic island tours, available from Shark Bay. Eight camping nodes within the NP hosting 20-vehicles / 56 overnight visitors. 30 camp sites and 9 rooms at DHI Lodge capable of hosting 100+ visitors. DHI Lodge offers a café, bar & restaurant facility for guests and island visitors.
Constraints & Challenges:	<ul style="list-style-type: none"> Limited access for 4WD campers-visitors via barge from Shelter Bay. Road to-from Shelter Bay can close for several days after rain events.

Mobile phone networks on DHI are poor. No connectivity in some areas of DHI. Poor quality roads suit travelling at 20-40km/h; 3hrs drive 80km, end to end. Time consuming driving to day use sites; poor roads can damage vehicles. No support services on DHI. Visitors & operators must be self-reliant. Emergency or medical events rely on external providers to evacuate visitors. Strong trade winds October to March, affecting outdoor activities. West coast DHI, high-risk area due high swell, current, wind & cliffs. Rain events on DHI make roads slippery, challenging and risky. Limited supplies on DHI, limited options to get supplies to DHI.

Accommodation

DHI National Park

DHI National Park has 8 coastal camping areas² with **capacity** to physically host up to 34 vehicles (noting that the current limit is 20 vehicles) and up to 112 overnight (camping) guests. National Park camp sites have no power, water or rubbish collection and require 4WD access. Three of eight camping areas have toilets. One camping area is 'unofficial' and another is for pre-departure use only (shown separately below). National Park camping details shown below (note visitor-vehicle columns show physical not permitted capacity).

Camping Area	Infrastructure	No. Visitors (per night)	No. Vehicles (max. capacity)
Notch Point	Beach-side. Medium area, 2 sites, suitable for 2 vehicles. No facilities. Shoreline is a designated boat-camping area.	4-8	2
Louisa Bay	Beach-side. Medium area, suitable for up to 4 vehicles. No facilities. Shoreline is a designated boat-camping area.	8-16	4
Sandy Point	Beach-side. Medium area, suitable for up to 2 vehicles. No facilities. Small hut nearby. Camping area is within a sanctuary zone, no boat fishing allowed in the vicinity.	4-8	2
Withnell Point	Beach-side. Medium area, three sites, suited to group camping, maximum 4 vehicles per area. Small hut. Toilet and cubicle for showering (byo shower & water). Shoreline is a designated boat-camping area.	12-24	12
Dampiers Landing	Beach-side. Small area, 1 site, suitable for up to 3 vehicles (trailers not recommended). No facilities.	4-16	3
Urchin Point	Atop cliff, overlooking ocean & rocky shore. Small area, 1 site, suitable for up to 3 vehicles. Small hut. Toilet and shower cubicle (BYO shower & water).	4-12	3
West Point 'The Block'	Atop cliff, overlooking ocean & rocky shore. Medium area, 2 sites, suitable for up to 3 vehicles. Small hut. Toilet and shower cubicle (BYO shower & water).	8-12	4
Quoin Head	Atop cliff, overlooking ocean & rocky shore. Medium area, 1 site, suitable for up to 4 vehicles. No facilities.	4-16	4
TOTAL		48 - 112	34
Unofficial Sites			
Turtle Bay	Atop cliff, overlooking bay. Small area suitable for 1 vehicle only. No facilities. Unofficial site, not in NP Mngt Plan.	2-3	1

² Source: DEC 2012 Mngt Plan, DHI camping (booking) websites & Google Earth (observed online March 2023).

Camping Area	Infrastructure	No. Visitors (per night)	No. Vehicles (max. capacity)
Cape Ransonnet	1 night stay only. For visitors departing via barge early the next day. Small area, potentially 2-3 vehicles. No facilities. Unofficial, proposed new site for pre-departure use only.	4-9	2

DHI NP currently has a limit of 20 vehicles staying at NP camping areas at any one time. Implication, on certain occasions including peak times, some NP camp sites can be vacant or under-utilised. Similarly, 20 'permitted' vehicles could equate to up to 80 visitors staying in NP camping areas compared to a potential upper limit of around 112 visitors. The potential 'slack' in physical capacity could be used to grow visitation without introducing additional infrastructure or camp sites.

Boat-based camping is permitted at three camping areas (Notch Pt, Withnell Bay & Louisa Bay). No boat-based camping is allowed at remote sites or any other NP camping areas.

DHI NP has shelter huts at West Point and Urchin Point for campers to use for protection from the elements (e.g. wind & rain), socialising and gathering. The Lighthouse Keepers Quarters³ at Cape Inscription is a heritage listed building with the capability of (potentially) hosting short stay accommodation but is currently earmarked for interpretation and visitor information.

DHI Lodge

The Eco Lodge has six (6) double/king single rooms with ensuites (18 PAX). Minimum 5 nights stay. The Ocean Villa has 3 bedrooms (6 PAX), bathroom, kitchenette, dining area and outdoor deck. Minimum 5 nights stay.

Homestead Bay and Salty's Camp, has 27 unpowered camp sites (60+ PAX), camp kitchen, drinking water, toilets (2) & showers (2). Minimum 3 nights stay includes barge transfer to-from DHI for two adults & car/trailer.

Buddy's and Jed's Beach camps are (2) private beachside camping areas, for families & groups (8+ PAX each area) with safari tented - camp kitchen, toilets, showers, drinking water & BBQ's. BYO car & camping equipment.

DHI Lodge currently has overnight accommodation capacity for 100+ PAX and potentially 30+ vehicles.

The National Park and DHI Lodge have collective capacity to host 60+ vehicles or around 200+ overnight visitors per night during peak periods. National Park planning documents imposed an initial limit of 10 vehicles staying in the NP and currently allows 20 vehicles. DHI could potentially host in excess of 60+ vehicles per night.

Overnight visitors staying on DHI during 2023 is estimated to range from 5500 to 8500, depending on length of stay, access & closures, availability of barge services and fly-in / boat-in visitor levels. Planning documents (DEC 2012, p.146) indicate less than 500 visitors per year - *ten years ago*.

³ The Lighthouse Keepers Quarters building is currently DPLH tenure but in the process of being transferred to conservation estate.



Access

DHI Lodge operate a barge, which can carry one 4WD with or without a trailer from Shelter Bay to DHI (maximum combined length of 10.6m meaning conventional caravans cannot be brought onto DHI).

The barge departs from the shore at Shelter Bay, east of Steep Point and arrives on the beach 200m west of Cape Ransonnet, on the southern end of DHI. Beach driving (4WD) onto and off the barge, with or without a trailer. Typical barge journey is 15 minutes each way. The barge can deliver around 2 vehicles per hour to and from DHI. The Island could host 60+ vehicles during peak periods, which could take up to three days to evacuate 60+ vehicles (e.g. in the event of a cyclone).



There is no fuel on DHI. Self-drive (4WD) visitors to DHI require sufficient fuel to travel 700km from Overlander to DHI and back to Overlander (to refuel). Emergency fuel supplies are available on DHI if required.

DHI Lodge offer a 'fast boat' service for premium overnight guests, departing from Denham, arriving at Homestead Bay (1hr trip each way).

Ocean Park operate a 'fast-boat' transporting visitors to DHI for guided 4WD and marine tours (i.e. Ocean Park use the Barge 2-3 times p.a.; using vehicles stored on DHI for island tours).

Light aircraft, charter service, flies from Denham-Monkey Mia to DHI, when required. There is a small airstrip 2km west of DHI Homestead, a disused airstrip also exists near Sunday Island Bay (southern end of DHI) and a new airstrip is under construction west of Herald Bay, currently used for the 1616 Project and the transfer of animals, supplies, personnel, etc.

A helipad is located near the Lighthouse (Cape Inscription), mostly for use by AMSA to service the lighthouse. Private users of the helipad require AMSA permission.

Shark Bay tour operators currently offer day tours to DHI via car or boat, departing from Denham. If given more options and better access they would consider using helicopters and light planes to open up new experiences creating new visitor opportunities.

Amenities

DHI Lodge offer bar-café facilities at select hours (i.e. seasonal). The Lodge has a gin distillery.

There are no shop, fuel or repair services available on DHI. Visitors must come self-contained.

DHI Lodge offers toilets and showers for campground guests with 6 toilet pans for 30+ camp sites for around 70+ guests.

Three of nine camping areas within the National Park have a toilet facility.

There is no potable water available on DHI. Visitors must come self-contained.

DHI Eco Lodge sell water if required.

Activities



DHI is near the western-most point of Australia and is recognised as one of Australia's best shore-based fishing locations. Optimum time is April to August when the weather is cooler, wind is calmer, and both migratory and resident fish are in abundance. Rock-cliff fishing from exposed western shores is the target of 'seasoned' fishers. In comparison, most of the protected eastern shores can be safely fished by novices, children and families.

Sandy Point (sanctuary zone) hosts a significant coral site close to shore that is easily accessible by swimmers and snorkellers. Similar near-shore coral sites extend from Surf Point to Cape Ransonnet, and around to Sunday Island, aided by the nutrient rich waters of South Passage.

DHI offers a wide range of activities as outlined below. Many of the activities are similar to those available along the Ningaloo Coast, Shark Bay and Coral Coast, although with significantly fewer visitors, especially during off-peak periods (e.g. Sept-Nov & Mar-Apr).

ACTIVITY	DESCRIPTION & LOCATIONS
Camping	8 designated areas in the NP. Off-grid, no utilities. Three NP camp areas have facilities and/or a small hut. NP also has one transit camp (Cape Ransonnet). Privately operated DHI Lodge has two camping areas with facilities.
Walking	Interpretive visitor signage at Cape Inscription. Informal walk opportunities at most camp & day use sites.
Fishing	Many fishing sites around DHI. Higher-risk cliff fishing on western shores. Safe beach fishing on eastern shores. The range and quality of resident-migratory fish is world renowned.
Wildlife Appreciation	Bird watching and fauna viewing (dusk, dawn, night time) is available across DHI. Most of the terrestrial animals are part of the Ecological Restoration '1616 Project'. Driving at night is discouraged. Marine wildlife and resident / migratory birds can be viewed year round.
Kayaking & SUPPING	Several protected shores & coves including Tetraddon Loop, Long Tom Bay, Herald Bay, Sunday Island Bay, Withnell Point, Louisa Bay & Quoin Bluff South. Strong winds Oct to Feb can impede safe kayaking & supping.
Swimming & Snorkelling	Many protected shores and coves on the eastern side of DHI, with easy access for swimming & snorkelling in relatively calm conditions (subject to prevailing winds & current).
Surfing	Subject to swell size & direction, sea state-condition, and wind direction-strength. Turtle Bay, Charlies Harbour, Mystery Beach & Surf Point.
Dinghy & Boating	Protected shores and coves on eastern side of DHI. Boat launching possible at Tetraddon Loop, Sunday Island Bay, Notch Point, Sandy Point, Withnell Point and Homestead Bay.
Mountain Biking	No dedicated MTB tracks on DHI. Some of the tracks in & around camp areas could potentially be used for mountain bike riding.
Kiteboarding Windsurfing	Strong winds November to March. Barge service to DHI closes December to February. Light-moderate winds April to October. Best (safest) launching from protected eastern shores.
Hiking	No dedicated hiking trails with facilities on DHI. Seasoned hikers use existing vehicle tracks and/or follow eastern shoreline, for example, from the Homestead to Cape Inscription.
Wildlife viewing	No dedicated sites or lookout facilities on DHI. Raised headlands & cliffs provide lookout opportunities to view whales, manta rays, dolphins, sharks, sting ray, dugongs and turtles.
Aquatic immersion	Protected eastern shores provide opportunity to swim-snorkel and view marine life. Schools of Nervous Sharks gather at Surf Point Jul to Oct, for a 'swimming with sharks' opportunity.
4WD'ing	A high clearance 4WD is required to access all areas of DHI. Some tracks are especially 'offroad', for example, driving across sand dunes, rocky outcrops & beaches.

DHI Lodge offer a range of activities, some packaged with tours including:

Marine eco-tour, sunset viewing tour, 4WD adventure tour, guided coastal walks, yoga-wellness program and bespoke packages (e.g. weddings, small events, tour groups, etc). For example:

- 5 nights/6 days eco package, 'fast' boat transfer to DHI, island tours, ensuite accommodation and meals provided.
- 5 nights/6 days adventure package, BYO 4WD, barge transfer to DHI, daily lunch hamper, and last sunset tour.
- 5 nights/6 days wellness retreat package, 'fast' boat transfer to DHI, ensuite accommodation, yoga, meditation, cooking classes, tours and meals provided.

DHI has a unique range of 'natural events' at select times of the year that visitors can experience including:

- Surf Point, July to November, hundreds of Nervous Sharks gather in shallow water.
- Blowholes provide a spectacular upwards spray of ocean with a distinctly loud 'whoosh' sound especially when the swell is over 2.5m; year round.
- Turtle Bay, Loggerhead Turtle nesting (Nov-Jan) and hatching (Jan-Mar).
- South of Cape Levillain, turtles nest and hatch on the beach Nov-Mar. Public viewing is allowed subject to protocols developed for the Ningaloo-Cape range area.
- Herald Heights, highest point on DHI, 180m above sea level, provides a vantage point to view the sunset over the ocean. Colloquially known as Australia's last sunset.
- Rose Lake, a unique pink lake, named after the wife of explorer Louis de Freycinet.
- Humpback whale migration, July to September, viewable from Cape Inscription, Turtle Bay and most sites on the western side of DHI.
- Bird watching, Ospreys & Sea Eagles, and the endangered Black and White Wren, can be viewed year round at select sites.
- Dolphins, Manta Rays, Dugongs, Sharks and sting rays can be viewed along coastal shores, year round.

The seasonality of marine species is presented graphically later in the report.

Attractions

DBCA 2012 identified a range of attractions - day use sites⁴ on DHI. Some of the sites have been earmarked for upgrades, subject to resource availability. For example, Cape Inscription has undergone assessment and conceptual planning (2007-2010) as a heritage-cultural node. The twelve attractions - sites listed below require a minimum two days to visit.

SITE / PLACE	LEVEL & TYPE OF ATTRACTION
Dampier Memorial Perseverant Camp Cape Levillain	Major. Heritage. Interpretation
Cape Inscription	Major. Heritage. Sightseeing, interpretation & lookout. Walks. Aquatic

⁴ Shark Bay Terrestrial Reserves & Proposed Reserve Additions, Management Plan. 2012 DEC. P.152

SITE / PLACE	LEVEL & TYPE OF ATTRACTION
Cape Ransonnet	Minor. Barge arrival point. Interpretation & education.
Surf Point	Minor. Aquatic-marine life. Sightseeing & interpretation.
Blowholes	Minor. Physical feature. Lookout & sightseeing.
Zuytdorp Cliff Lookout	Minor. Physical feature. Lookout & sightseeing
Notch Point	Minor. Heritage-Cultural. Aquatic. Sightseeing & interpretation.
Quoin Bluff South	Minor. Cultural-Heritage. Sightseeing & interpretation.
Herald Bay	Minor. Cultural-heritage. Aquatic. Sightseeing & interpretation.
Turtle Bay Lookout	Minor. Cultural-Heritage. Walks. Aquatic. Lookout & sightseeing.
Charlies Harbour Quoin Head	Minor. Aquatic. Fishing. Sightseeing.
Mystery Beach	Minor. Aquatic. Fishing. Sightseeing.

Commencing in 2023, a Shark Bay tour operator is planning to run 4WD buses on DHI to provide guided tours to sites including those listed above. The 13-22 seat buses will be stationed on DHI during the visitor season and could potentially offer shuttle services to fly-in visitors, for example, staying at the Lodge (or future eco-accommodation on freehold lots).

Awareness

DHI is communicated via websites, social media, videos (YouTube) and print publications (e.g. maps, guidebooks, holiday guides, magazines, etc). The main websites are outlined below.

COMMUNICATION TYPE	PURPOSE	COMMENTS
Website www.dirkhartogisland.com.au	Promotes DHI Lodge. Book accommodation & tours at the Lodge and camping in the NP. Provides detailed information for visitors.	Targets eco-tourists and adventurers. Promotes DHI as a unique island oasis. Offers an array of land & sea activities. NP camp sites can be booked via the DHI Lodge website (under agreement with DBCA).
Website www.exploreparcs.dbca.wa.gov.au/park/dirk-hartog-island-national-park	Promotes DHI National Park. Provides information for visitors.	Promotes DHI as a culture, heritage, nature & adventure destination. Strong focus on biosecurity, Malgana People & 1616 Project.
Website www.sharkbay.org/place/dirk-hartog-island-national-park/	Promotes Shark Bay World Heritage Area, including DHI. Provides information for visitors.	Promotes DHI as a significant heritage & important conservation site (ecological restoration project).
Website	Promotes Dirk Hartog	Promotes DHI as a remote

COMMUNICATION TYPE	PURPOSE	COMMENTS
https://www.australiascoralcoast.com/destinations/shark-bay/dirk-hartog-island	Island and Shark Bay World Heritage Area. Provides information for visitors.	wilderness for fishing, exploring, relaxing and immersing in nature.
Website https://www.westernaustralia.com/au/attraction/dirk-hartog-island	Promotes Dirk Hartog Island. Provides information for visitors.	Promotes DHI as a fishing, heritage and marine / terrestrial eco-tourism destination for overnight & day trip visit.

Reviews on [TripAdvisor](#) rate Dirk Hartog Island as either excellent or very good. Common terms used by visitors to describe Dirk Hartog Island include fast boat, life adventures, eco lodge, remote location, Steep Point, national park, reef sharks, inscriptions, corrugations and Denham.

Reviews on TripAdvisor rate DHI Lodge as either excellent or very good. Common terms used by visitors to describe DHI Lodge include bucket list, camp kitchen, exploring the island, barge, fishing, wildlife, Denham and camping.

Safety Management

Currently, emergency evacuation from DHI is facilitated largely by DHI Lodge, who also operates the barge, taking visitors and vehicles to-from DHI. SMS messages are used to inform campers - 4WD owners of pending actions-programs to evacuate, when required. Evacuations are mostly via barge from Cape Ransonnet (i.e. 4WD, trailer & visitors). Connectivity can be poor in some areas making SMS unreliable. Park Rangers patrol NP sites to help coordinate and evacuate visitors from DHI. Roads are accessible 24/7 subject to dry conditions. Heavy rain or flash flooding can make some sections of road impassable or unsafe. Visitors are kept informed by SMS and or Park Rangers if-when road hazards or travel precautions arise.

The airstrip near to the Homestead is on a birrida, making it susceptible to flooding from rain and can be temporarily unusable or closed during and after a rain event. Homestead staff monitor the condition of the airstrip and communicate with pilots when required and available.

Visitor injuries and incidents requiring outside assistance are directed to the Homestead. Evacuation by plane or boat can be subject to available personnel or a suitable plane / boat.

Future increases in visitors will result in higher demand for injury management, evacuations and outside assistance. Better safety management, for example, may require better connectivity, clearer details of first responders, emergency contact numbers, and more effective awareness-understanding of Island evacuation protocols to ensure DHI's remoteness is managed effectively.

Ancillary Services

Ancillary services are the 'extras' that help make the visitor experience more comfortable and enjoyable. Examples include food & beverage, grocery store, fuel, rental & hire, information centre, health-medical support, tour booking hub, entertainment venue(s) and transport providers. DHI has very limited ancillary services. The DHI Lodge offers visitors access to a café, restaurant and bar, and if circumstances arise will supply / sell water, fuel and basic provisions including short stay

accommodation, if available. Ancillary services are expected to grow as visitor levels increase, however, in the interim they will be constrained by access, utilities, staff and seasonality.

1616 Project

Prior to 1616, DHI would have been in pristine condition with at least 13 ground-dwelling native mammal species including boodies, woylies, Shark Bay bandicoots, chuditch and dibblers. From the 1860s until 2007, DHI was occupied as a pastoral station running sheep, then in 1910 goats were introduced by lighthouse keepers to provide meat and milk, and soon after feral cats were introduced. In 2009 the privately held pastoral lease was purchased by the Western Australian Government to convert most of the island to national park. With only three small mouse-sized native mammals surviving, an opportunity arose to restore DHI to its natural environment (DPAW 2015).

The vision for the 1616 Project's ecological restoration is:

“to create a special place with healthy vegetation and ecosystem processes that support the full suite of terrestrial native mammal species that occurred there at the time of Dirk Hartog's landing in 1616, and that this is highly valued and appreciated by the community”

Stage One was successfully completed during 2011-2018 with the world's largest whole of island feral cat, goat and sheep eradication. This brought the project to the global forefront of science, conservation and land management; stage one also included weed management, vegetation reconstruction and fire management (DPAW 2015).

Stage Two, commencing in 2019, is currently 'in progress' and includes the re-introduction of up to 10 species of native mammal, one species of bird, and the introduction of two threatened mammal species.

DHI has become a refuge for rufous and banded hare-wallabies, dibblers, greater stick-nest rats, Shark Bay bandicoots, Shark Bay mouse, western grasswren and brush-tailed mulgara. Future translocations include chuditch, desert mouse, heath mouse, woylie and boodies. When the Return to 1616 Project nears completion in 2030 the Island will be home to a wide range of small mammals that visitors will find spread across the Island making for an experience similar to when Dirk Hartog arrived in 1616. This offers enormous potential to elevate the island's eco-tourism status and value *globally*.

Values

The intrinsic natural values of DHI have changed from pastoralism to tourism and conservation (DPAW 2015). Conservation values assigned to the Shark Bay World Heritage Area by UNESCO are especially relevant to DHI and include:

- 1) *Superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.*

- 2) *Outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.*
- 3) *Containing the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.*

The values outlined above could be adopted as guiding principles when evaluating proposed activities within DHI NP. For example, if no negative impacts on the values, the proposed activity could be endorsed provided no subsequent changes affect the World Heritage values.

One of four criteria for which Shark Bay was listed as a World Heritage Area was:

'it supported important and significant natural habitats where threatened species of animals of outstanding universal value still survive'.

The 1616 Project is vitally important in providing a means to enhance the values of the World Heritage Area in respect to threatened fauna conservation. The 1616 Project and the Park's conservation management is pivotal in DHI being recognised as a globally significant refugium for threatened and endangered species.

Sense of Place

'Sense of place' is the feeling someone attaches to a specific location. It encompasses the elements that a place represents, and the feelings it can inspire such as connection, belonging, appreciation and reverence. A strong sense of place can develop into an enduring bond with a 'place'.

DHI offers an impressive range of natural features, historic sites, heritage-cultural backgrounds and activities-experiences. The natural environment exhibits wilderness, nature and beauty, with limited evident change from human activity. The remote Island sits within a World Heritage Area and is maintained and conserved as a national park. DHI's sense of place lies in the seemingly untouched quality of its natural environment, both terrestrial and aquatic.

Sustainability is a critical part of DHI's sense of place. It involves understanding the management of DHI's natural environment (e.g. 1616 Project, biosecurity & conservation); appreciating the way in which heritage and culture is preserved and shared (e.g. interpretation, sites of interest & immersion); and recognising the support for and benefits to local community (e.g. access, jobs, enterprise, events & infrastructure).

The concept of 'sense of place' is a dynamic, evolving system that requires constant management to ensure visitors and stakeholders appreciate the uniqueness and the qualities of a place such as DHI. To this end, visitors to DHI must be encouraged to explore, engage and develop a connection with the 'place' by establishing a deep understanding of the natural environment as well as the history and culture of the island (e.g. through information and education). And also by facilitating opportunity

to interact, share and develop their bond with fellow visitors and the community. DHI's sense of place is potentially strong. Further upgrades to infrastructure and improvements to activities-experiences that contribute to the betterment of DHI should ultimately result in further positive outcomes for the environment, the community and the people, including visitors. Fostering a heightened sense of belonging and interconnectedness is paramount, evidenced through visitors expressing strong bonds and supporting DHI through respectful, appreciative responses and behaviour. Central to this concept is the development of visitor understanding of the shared responsibilities that come with visiting a unique place including careful trip planning to: manage campsites to prevent food-scrap being accessible to native wildlife, correctly storing and removing rubbish, avoid bringing firewood onto the island, avoid lighting fires, avoid driving dusk to dawn (i.e. at night), accept that a remote experience may involve vehicle wear and tear, and driving will be inherently slow. A central purpose of this report is to identify and help facilitate opportunity for visitors to explore, engage and develop a connection to DHI.



Strategic & Statutory Planning

The Shire of Shark Bay Local Planning Scheme No. 4, gazetted 1st October 2018, and updated 13 September 2022, and the Shire of Shark Bay Local Planning Strategy Parts 1 & 2 (2013), provided the following details on freehold and leasehold land on DHI.

DHI has five freehold / leasehold lots occupying 76.3ha; with 'special use' zoning for low impact eco-tourism accommodation and related services; where up to 317 accommodation units can be developed; capable of hosting 1590 overnight guests; subject to a range of conditions - covenants. Details for each freehold Lot are presented below.

DHI Freehold / Leasehold Lots

Lot No.	Tenure & Size	Zoning	Location	Permitted Use (& examples)	Conditions - Covenants
62	Freehold 40.6ha	Special Use	Homestead Lodge (referred to as the 'homestead' lot)	Low impact eco-tourism ⁵ . Short stay accommodation. The use is not permitted unless the local government has exercised discretion by granting development approval.	No sub-division of lots permitted (unless permission is given by a government agency). Covenants apply to a portion of Lot 62, and administered by Minister for Lands. Maximum 213 accommodation ⁶ units with internal floor area not exceeding 200m ² . Maximum stay 3 months per calendar year except for the caretaker & family. Non-native flora and fauna not allowed on DHI land.
303	Freehold 17.3ha	Special Use	Homestead Precinct - north 'Adjacent Lot' (referred to as the 'adjacent' lot)	Eco tourism. Shire of Shark Bay discretionary approval required for short term & worker accommodation, camping, caravan park, B & B, holiday house, guest - recreational facilities, convenience - liquor store, restaurant-café-shop, tourist development, airfield,...	No sub-division of lots permitted. Local Development Plan <i>may be</i> required that addresses: Management Plan. Detailed design guidelines. Coastal setbacks. Bushfire management. Environmental (impact) report. Foreshore Management Plan. Visual Impact Assessment. Outline Development Plan. Shark Bay Shire has discretion regarding services including water, effluent disposal, electricity, waste disposal, drainage, communications and/or other. Developments likely to have a significant impact on the areas World Heritage values may be required to refer to Commonwealth Minister for the Environment for assessment before proceeding. Maximum 51 accommodation ⁷ units with internal floor area not exceeding 90m ² . Maximum stay 3 months per year except for the caretaker & family. Non-native flora and fauna not allowed on DHI land.
304	Freehold 11.3ha	Special Use	Sunday Island Bay - north	Low impact eco-tourism. Same as above.	Same as Lot 303 above. Maximum 33 accommodation ⁸ units with internal floor area not exceeding 90m ² .

⁵ Ecotourism is defined as ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation. Source: Shark Bay Local Planning Strategy Pt 1, p.63. Low impact is defined as low impact on the environment having regard to the number of tourists visiting the land and the facilities and other services provided for their use. Source: State Agreement in Relation to Dirk Hartog Island July 2005.

⁶ The 2005 State Agreement specifies the number of accommodation units is not to exceed a number equal to six times the land area. For example, 35.6ha x 6 = 213. For Lot 62, the 35.6ha is the 40.6ha lot size minus 5ha allocated to the original homestead.

⁷ The 2005 State Agreement specifies the number of accommodation units at the 'adjacent' (homestead) lot is not to exceed a number equal to three times the land area. For example, 17.3ha x 3 = 51.

⁸ The 2005 State Agreement specifies the number of accommodation units at Sunday Island Bay lot is not to exceed a number equal to three times the land area. For example, 11.3ha x 3 = 33.

Lot No.	Tenure & Size	Zoning	Location	Permitted Use (& examples)	Conditions - Covenants
305	Freehold 4.6ha	Special Use	Sunday Island Bay - south	Low impact eco-tourism. Same as above.	Same as above (Lot 303) Maximum 13 accommodation ⁸ units with internal floor area not exceeding 90m ² .
Lot 300	Lease 2.5ha	Special Use	Cape Levillain. Near Turtle Bay. Set back 65m land side from coastal dunes.	Eco-tourism Low-impact eco-tourism. Short stay accommodation.	Lease is established under Section 100 of the CALM Act. Shire of Shark Bay to issue lease (or DBCA if it holds title to DHI Reserves) as a portion of Reserve 14198 (as per State Agreement 18 July 2005).
Reserves 14918 12715 45498 46663	Crown Reserve 298ha	National Heritage	Cape Inscription	Lighthouse. Dirk Hartog Landing Memorial. Inscription posts from Hartog's and Vlamingh's landing. Lighthouse Keepers Quarters.	Located within DHI NP. Conditions as per NP (CALM Act). Reserve 14918 is on the Register of the National Estate. 243ha of reserve 14918 is vested with the Shire of Shark Bay as a historical reserve. R12715 - Inscription Posts (0.48ha) R45498 - Lighthouse (0.07ha) R46663 - Lighthouse keepers quarters (1.55ha)
Lot 351 R50326	Reserve ~5ha	Special Use	Tumbledown Point	For the Use & Benefit of Aboriginal People	As set out in the Indigenous Land Use Agreement.

Relevant legislation includes, but is not limited to, the following.

- Conservation and Land Management Act 1984 (CALM Act).
- Wildlife Conservation Act 1950.
- Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).
- Environmental Protection Act 1986 (EP Act)
- Biosecurity and Agriculture Management Act 2007
- Western Australian Maritime Archaeology Act 1973
- Aboriginal Cultural Heritage Act 2021
- Bush Fires Act 1954
- Heritage of Western Australia Act 1990
- Land Administration Act 1997
- Native Title Act 1993
- Plant Diseases Act 1914
- Biological Control Act 1986

Culture & Heritage

European explorers put the Shark Bay region 'on the map'. Dutch explorer Dirk Hartog, was the first known European to land on WA's coast at Cape Inscription (on DHI) in 1616, and the first evidenced site of European landing in Australia. Dutch navigator Willem de Vlamingh visited Cape Inscription in 1697. English explorer William Dampier, explored the area in 1699, and named it "Shark's Bay". French explorer, St. Alouarn landed at Cape Inscription in 1772 (and claimed Australia for France). French explorer Baudin visited Shark Bay in 1801. French explorer De Freycinet visited Peron Peninsula in 1818 (and later published the first complete map of Australia's coastline). These exploratory visits were significant in helping establish Australia within trade routes and global affairs (DEC 2008, p.12).

French explorer, St Alouarn (1772), recorded seeing smoke as they sailed past DHI whilst crew landing on DHI found evidence of fires and a cleared area for dancing. Several midden sites have since been located on DHI and documented in pre-settlement history.

Early European settlement was associated with guano, pearling, pastoral and whaling activities. Whaling occurred in the area from 1792 to 1963 but no land sites associated with early whaling have been found. Guano mining was the first terrestrial industry in Shark Bay and attempts to stop illicit activities resulted in the Government establishing a military outpost at Quoin Bluff on DHI (1850), where the remains of the military camp can still be found. Pearling began in Shark Bay in the 1850's and small pearling camps were established on the eastern shores of DHI (e.g. Notch Point, Tumbledown & Tetradon Loop). Pearling flourished from the 1860's to 1920's involving Europeans, Malays, Chinese and Aborigines but declined in the 1930's. Pastoral activity began on DHI in 1860. The first pastoral lease was issued in 1868 closely followed by a second lease over the southern part of DHI, and then various lessees until 2005 when the WA Government purchased the lease to establish a national park. Several pastoral out-camps were constructed on DHI including at Sammy Well near Cape Levillain. Building ruins and various pastoral infrastructure still remain at Sandy Bay and Herald Bay.

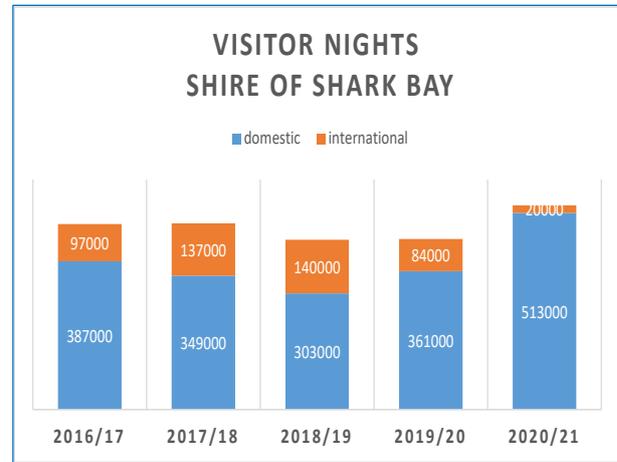
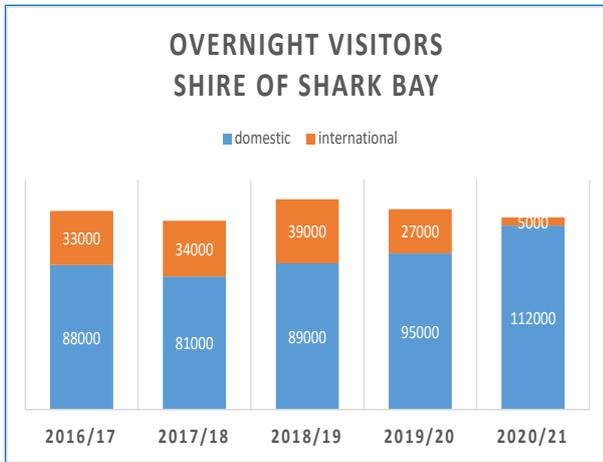
Visitor Preferences

Overview of tourism visitation to Shark Bay follows.

During 2016 to 2021 *domestic* overnight visitation to the Shire of Shark Bay has been growing at 7%p.a. with visitor nights growing at 10%p.a. International visitation has declined since COVID but is expected to resume in the medium term (e.g. 2024-2025). Shire of Shark Bay has averaged 93,000 domestic and 27,000 international visitors annually and forecasted growth suggests 141,000 domestic and 9,000 international visitors by 2024-2025. Some of the growth will overflow to DHI.

Average trip length to the Shire of Shark Bay is 4.6 days, average trip spend is \$682, and the average daily spend is \$171.

Overnight Visitors & Visitor Nights



Activities undertaken by visitors to the Shires of Shark Bay and Carnarvon show a preference for outdoor-nature, active outdoor and social activities. The motivation to visit the Coral Coast and Shark Bay-Carnarvon is supported by a range of activities such as beach, walking, snorkelling, fishing, sightseeing, eating out and visiting friends & relatives. Destinations that offer a range of attractions/activities, translating into a wider choice of itinerary options, can exert a stronger influence on the motivation to visit a particular destination. Put differently, destinations with a variety of experiences are better placed to hold a uniqueness in the minds of visitors, which can further differentiate the destination and help capture a larger share of the visitor market. This is consistent with reviews on travel-related websites (e.g. TripAdvisor). DHI offers a range of activities similar to Shark Bay that would similarly influence the motivation to visit DHI. Refer to the table below.

Activities Undertaken by Visitors

Category	Activity Undertaken	% of Total Visitors	
		Coral Coast	Shark Bay Carnarvon
Outdoor - Nature	Go to the beach	53%	51%
	Visit national parks	25%	22%
	Bushwalking / walks	21%	14%
Active Outdoor	Fishing	25%	22%
	Snorkelling	10%	20%
	Windsurfing, Sailing, Kayaking	11%	np
Arts / Heritage	Visit museum or galleries	7%	np
	Visit heritage building, site or monument	8%	np
Social Activities	Eat out at a restaurant - cafe	47%	48%
	Sightseeing - looking around	27%	31%
	Visiting friends & relatives	18%	13%

Source: TRA 2023 np - not publishable due small sample size & limited reliability of the data.

Comparative Sites

DHI is a unique island-based National Park currently accessible by light plane, boat, or a barge carrying a vehicle and its passengers. DHI NP limits the number of camp sites, vehicles and visitors. There are few, if any, equivalent sites in Australia. Island-based national parks such as Fraser Island, North Stradbroke Island and Magnetic Island (Qld) have a ferry / barge carrying vehicles and visitors, however, they also have a higher level of infrastructure including hotels, resorts, apartments, shops, campgrounds, sealed roads, utilities, services *and* residents. In Western Australia, two sites similar to DHI are Woody Island and Mackerel Islands - Thevenard Island, as outlined below. Two small, remote island sites in South Australia are included for comparison purposes.

Name	Location	Features & Activities	Accommodation	Comments
Woody Island	Esperance	Walking Trails Snorkelling Swimming Nature appreciation Composting toilets Rainwater tanks Boardwalks Visitor Centre Kiosk & Bar Tours	Standard tents (\$120/night) Safari Tents (\$160/night) Family tents (\$180/night) Luxury Tents (\$260/night) Bush camp sites (\$60/night) Campers Kitchen	16km off Esperance. Access via 40-minute ferry trip or helicopter. Ferry fares (return trip): Adult \$125 Pensioner \$105 Student \$85 Children \$65 www.woodyisland.com.au
Mackerel Islands	Onslow Thevenard Island	Fishing Swimming Snorkelling Kayaking (hire) Inflatable boat (hire) Stand-up Paddle Board Fishing (tours-hires) Walk trails Stargazing Dine under the stars Guest laundry Conference facilities Shuttle Service Swimming pool Gymnasium General store Fuel facilities	10 person Beachfront cabin, \$1100/night incl 2 persons. 6 person Beachfront cabin, \$680/night incl 2 persons. 4 person Beachfront cabin, \$490/night incl 2 persons. No camping. No campgrounds.	22km off Onslow. Access by boat or charter plane. Ferry prices (return): Adult \$120 Children \$60 Family (2A+2C) \$300 25 private boat moorings. \$20 / night. Fuel available. VHF radio monitored. www.mackerelislands.com.au
Mundoo Island	Goolwa - Hindmarsh Island SA	Cattle station. Remote camping. Kayaking. Fishing. Dinghy - boating. Swimming. Bird watching. Beach (Coorong).	10-12 camp sites. No facilities. Self-contained campers only. Escorted entry on & off the property - island (fees apply). \$20/adult per night. \$10/children per night. Paid-guests only. No visitors on the island.	A cattle & sheep station allowing small groups of self-contained campers onto Mundoo & Ewe Islands. 40+km ² (4000 ha). 80km south-east of Adelaide, near the Murray River & Coorong. Access via road from Goolwa & Hindmarsh Island. Self-contained campers only. Must have porta-loos. No facilities on the island. No digging holes, no burying waste. Access can be limited at times. No pets. No moving site-to-site. http://mundooisland.com.au/camping/

Name	Location	Features & Activities	Accommodation	Comments
Nuyts Archipelago	Ceduna SA	Remote island. National Park. Fishing Swimming Day hikes Wildlife appreciation. Snorkelling. Guided tours. Swag camping.	Swag accommodation on the island. No dedicated camp sites. Nature-based camping. Small groups only. Charter boat access only.	11km off the Ceduna coast. Access by charter boat, operating eco-tours, sanctioned by Parks & Wildlife. Small groups, 4-6 people. Guided nature tours. Catering by the tour operator. No infrastructure on the island. Prices on application (tour & season dependent). https://www.epcruises.com.au/nuyts-expeditions.php

planning framework

This report is to inform a joint management plan for Shark Bay's terrestrial reserves, which includes DHI NP. As such, at a preliminary planning stage, this report aims to provide information that will help clarify objectives, timelines, and resource requirements. Specifically, it sets out to address some of the requisites of a planning framework including:

- Identification of high level goals (e.g. sustainability & infrastructure)
- Estimation of resources (e.g. Rangers & staff accommodation)
- Identification of tasks (e.g. action plan)
- Estimation of timelines (e.g. eco-accommodation development scenario)
- Risk parameters (e.g. biosecurity & visitor safety)
- Broad strategy for implementation (e.g. diversifying visitor experiences)
- Monitoring and feedback (e.g. data collection &

To be effective, a planning framework must be flexible with the ability to adapt as circumstances change. Similarly, it must provide assessment criteria to monitor progress and guide responses for adjustments over time. Potentially, the DBCA and Malgana AC will be jointly responsible for establishing and organising the DHI NP planning framework, presented graphically on a following page. The national park is vested in the Conservation and Parks Commission and proposed to be jointly managed by DBCA and Malgana AC.



Visitor management policies and procedures currently used to assist with the sustainable management of DHI national park include:

- A clear mission that emphasizes sustainability and refugium initiatives.
- A program to actively monitor flora, fauna, land quality and protect natural resources.
- A safety and security plan including emergency response procedures for visitors.
- A visitor education and outreach program to inform visitors about the parks' natural features, conservation, biosecurity and management challenges.
- A system for monitoring and managing visitor use and associated impacts.
- Requiring visitors to take responsibility for their own safety and remain on designated paths-tracks-roads and within the boundaries of defined areas.
- Procedures for properly disposing of waste, controlling litter and minimising pollution.
- No motorized all-terrain vehicles except for maintenance and emergency response purposes.
- No dogs, cats or feral animals to ensure the safety of wildlife and visitors.

- No recreational hunting-shooting and no unsustainable fishing activities.
- Lawful Authority required for special activities (e.g. research projects, events, etc.).
- A no fire policy (with exceptions for cultural purposes).

Eco-Accommodation Options

Special use zoning of freehold land on DHI requires proponents to develop low impact eco-tourism accommodation or related services. The accommodation can range from canvas tents to semi-permanent structures (eco-tents) to permanent structures (cabins, park homes & villas).

'Eco-cabins' are typically small, off-grid, well-appointed and designed to



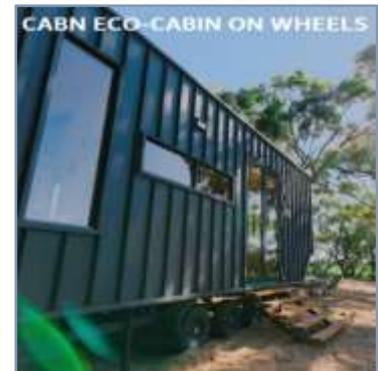
accommodate 2-3 people and located at a remote, secluded site where the main feature is a nearby 'experience' steeped in nature, wilderness and the outdoors. Cabins can be supplied pre-built, trucked to site, built on site in modular (kit) form, or mounted on skids with / without wheels for towing. Cleaning and servicing cabins are typically undertaken by contractors living in proximity or in some cases landowners / managers living nearby.

There are currently two entities operating in WA that will fund, build and operate 'tiny' eco-accommodation cabins on land owned or leased by a third party. URL's are listed below.

CABN <https://cabn.life/>

HEYSCAPES <https://heyscape.com.au/>

There are two entities operating in WA that will co-build and manage eco-accommodation on land owned or leased by a third party. URL's are listed below. Examples of cabins shown right.



UNYOKED <https://www.unyoked.co/>

HIDDEN CABINS <https://www.hiddencabins.com.au/>

There are a range of tents used for eco-accommodation projects with varying levels of luxury, often supplied in kit form, with a range of accessories available to suit a project's budget and desired market. Examples are shown below.



Preliminary indications suggest Lot 304, Sunday Island Bay, may use rigid cabins delivered to site in kit form and built in clusters sharing utilities and infrastructure. Similarly, Lot 300, Cape Levillain, is investigating the construction of resort-style rooms with high quality amenities-facilities found at a luxury facility. An eco-development on leasehold land within the NP would be expected to use modular, build-on-site, semi-rigid tents with ensuites (see eco-tent photos above) supported by communal hospitality - social spaces. In the event of strong demand for accommodation on DHI there is a possibility that Lot 62 and Lot 303 could establish temporary tents as a precursor to upgrading to semi-rigid cabins-tents affording a higher level of luxury. DHI would be best served if short stay accommodation ranged from standard to deluxe to luxury, with room tariffs (nightly fee) ranging from low to mid to high level, thus supporting a wider range of the potential visitor market, which can help sustain patronage-utilisation across a wide range of economic cycles.

Island Ferry - Barge Comparison

DHI currently relies on a single operator of a small, light barge to transfer visitors and their 4WD with/without a trailer from Shelter Bay to Cape Ransonnet. An increase in visitors to DHI, especially day trip visitors and short stay overnight visitors (e.g. 1-2 nights), may in future require a second larger barge or ferry. Island ferry-barge services are presented below for comparative purposes.

Island & Vessel Type	Service Offered	Visitor Levels, Distance & Time
Stradbroke Island, Qld Large barge carrying multiple passengers, cars & provisions.	Car + trailer <10m, including 2 adults, \$320 to \$510 return.	Approx. 380,000 visitors p.a. 13km / 7nm off the mainland. 50-minute one-way barege trip.
Fraser Island, Qld	Car + trailer <10m, including 2 adults, \$488 return.	Approx. 350,000+ visitors p.a. 7km / 4nm off the mainland.

Large barge carrying multiple passengers, cars & provisions.		30 minute one-way barge trip.
Magnetic Island, Qld Large ferry carrying multiple passengers, cars & provisions.	Car + trailer <10m, including 2 adults, \$480 return.	Approx. 300,000 visitors p.a. 8km / 5nm off the mainland. 40 minute one-way ferry trip.
Kangaroo Island, SA Large ferry carrying multiple passengers, cars & provisions.	Car + trailer <10m, including 2 adults, \$660 return.	Approx. 290,000 visitors p.a. 18km / 9nm off the mainland. 45 minute one-way ferry trip
Dirk Hartog Island, WA Light barge carrying 1 car & trailer and 2-6 passengers.	Car + trailer <10.6m, including 2 adults, \$750 return.	Approx. 8,000 visitors p.a. 1.8km / 1nm off the mainland. 15 minute one-way barge trip

SECTION 4 - VISITOR MARKET

visitor segments

There is no primary data to profile DHI's current visitor market or visitor segments. 'Likely' segments are presented based on secondary data and visitor profiles adapted from similar studies.

At a broad level, DHI's Visitor origin is:

	Intrastate	Interstate	International
Pre-COVID	60%	30%	10%
Post-COVID	90%	8%	2%

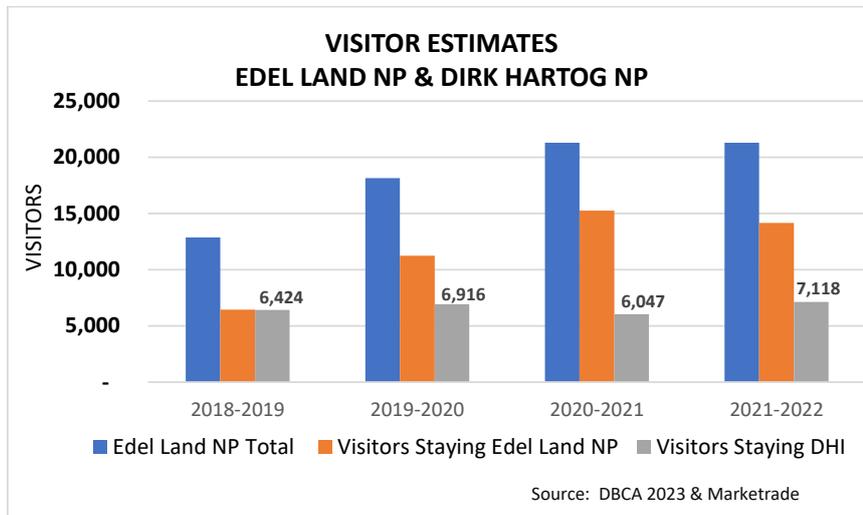
DHI's visitor market includes families, friends, solo travellers and groups (e.g. clubs, schools, friends-families & scientists). Visitor 'activity' segments include fishing enthusiasts, 4WD enthusiasts, campers, expedition travellers, and passive enthusiasts (nature, heritage & culture). Profiles of visitors to DHI based on psychographics (activities & interests) are summarised below. Future improvements in access to, and accommodation on DHI, is expected to increase visitation by 'Indulger' and 'Value Hunter' segments, for example, staying in serviced accommodation and enjoying guided tours.

Segment & Estimated % of Total	Activities	Interests
Campers	Holidaying & staying in swags,	Camping with friends & family in unique & scenic places. Discovering - sightseeing surrounding areas.

40%	tents, camper trailers, hybrid vans, caravans and rooftop tents.	Camp-cooking, relaxing & socialising around a campsite. Outdoor, social and educational activities. Nature, heritage, sport & recreation interests. Low-medium budget, value-driven lifestyle.
4WD'ers & Expeditioners 25%	Travelling to places where only 4WD's can go.	4WD'ing with friends, family & groups. Exploring (4WD'ing) unique & interesting places. Camping & socialising with fellow 4WD enthusiasts. 4WD equipped for expeditions & exploring remote places. Outdoor, social and educational activities. Heritage, culture, nature & sport interests. Low-medium budget, value-driven lifestyle.
Fishers 20%	Rock, cliff, beach, boat & kayak fishing.	Fishing to catch dinner, release or for personal achievement. Fishing with friends & family. Visiting unique places to fish. Having specialised equipment to fish & to access unique places. Socialising with family, friends and colleagues. Low-medium budget & value-driven lifestyle.
Indulgers 10%	Visiting unique places for quality experiences, discovery & self-enrichment.	Quality accommodation & hospitality. Scenic & informative tours & experiences. Social activities in quality settings, with a distinct sense of place. Travelling in comfort to interesting places. Educational, cultural, wellness & entertainment activities. Medium-high budget & quality-driven lifestyle.
Value Hunters 5%	Travelling to globally significant sites such as Wonders of the World, World Heritage, iconic sites, etc...	Travelling to significant places for learning & appreciation. Quality accommodation that captures the 'place'. Quality, local hospitality and cultural facilities. Scenic & informative tours & experiences. Social & cultural activities inspired by the 'place'. Education & learning activities, especially about the 'place'. Immersing-supporting local heritage, culture & community. Medium to high budget & values-driven lifestyle.

DHI visitation

Reliable visitor data for DHI is not available. Estimated visitors to Edel Land NP (DBCA 2023) includes visitors transiting through to DHI via Shelter Bay. Edel Land NP campground booking data has been used to determine estimates for DHI visitors arriving via the barge from Shelter Bay, which range from 6,424 to 7118 visitors in recent years. Visitors also arrive at DHI via plane, fast-boat and private boat / yacht although no data is available and hence estimates have been used. Overall visitation to DHI in recent years has informed visitor projections, which range from 6800 in 2019 to 7800 in 2024, as shown on a following page.



PROJECTED VISITORS & NIGHTS DHI						
YE June 30	2019	2020	2021	2022	2023	2024
Visitors p.a.	6800	7200	6300	7600	7400	7800
Vehicles p.a.	2400	2550	2200	2700	2600	2800
Visitor Nights on DHI p.a.	30600	32400	28350	34200	33300	35100
Visitor Nights in DHI NP p.a.	7400	7600	8000	8500	8250	8500
Visitor Nights at Lodge p.a.	23200	24800	20350	25700	25050	26600

demand drivers & visitor trends

DHI freehold / leasehold land owners have an entitlement to develop up to 317 low impact eco-tourism accommodation units including ‘glamping’ style facilities. The global glamping market is expected to continue growing at 14% p.a. (TWA 2021), driven by:

- consumer willingness to spend on modern amenities while camping,
- high disposable income,
- a rising need for getaways from the stresses of daily life,
- an increasing desire to unwind in healthy ways, and
- a desire for eco-friendly vacations.

In WA, there is significant growth in the glamping sector among the 18-50 age group, driven by the rising trend of camping, social media influences, and a desire to experience glamping. High-end glamping experiences are also popular among 50-70yo travellers seeking immersion, all-inclusive experiences and high-value pampering (TWA 2021).

In Australia, self-drive camping & caravanning is expected to continue growing at 5-7%p.a. driven by:

- rising awareness of sustainable living and environmentally friendly camping,
- advances in technology & innovation enabling higher level of comfort when travelling,
- improved connectivity and mobile technology enabling working while travelling,
- stronger interest in undertaking outdoor recreation and leisure activities, and
- wellness & seeking ways to relax, unwind, and take a break from the stresses of life.

Within Australia the registration of caravans, campervans and camper trailers has grown from 679,000 in 2018 to over 773,000 in 2021; annual growth in excess of 32,000 p.a.; the number of self-drive caravanners-campers on the road any one time in Australia has increased to over 96,000; travellers are dispersing further into Australia's regional and remote areas as a result.

Global Future of Tourism Demand

Tourism Australia's study of the *global future of tourism demand* (2022) aimed to identify how travellers categorise & cluster experiences when making travel decisions. Research determined that the strongest demand *now and into the future* is for adventure experiences; nature and heritage based experiences; & sensory experiences (2022, p.55). Ideally, these should form the basis for what destinations offer and promote. Three experiences in particular are widely available on DHI and highly relevant in the future planning & development of tourism on DHI:

Heritage experiences: 'experiencing a destinations history through its places and people'.

Adventure experiences: 'transport-based journeys, activity and exploration, on water, land & sky'.

Nature experiences: 'immersion into nature via landmarks and wildlife'.

Sensory experiences such as food & drink, arts, wellness, and popular (social) experiences are lacking on DHI due to remoteness, infrastructure limitations and the national park setting (i.e. a

Sustainable Tourism

Tourism Australia (2022, p.94) identified a range of sustainable tourism practices and assessed the importance and willingness of visitors to pay. The practices are 'front of mind' when visitors assess travel options, destinations and tourism activities and should remain integral in planning-developing recreation and tourism. The sustainable tourism practices include:

- ✓ Offsetting travel emissions, e.g. carbon offset programs.
- ✓ Using eco-friendly or sustainable transport to get around.
- ✓ Staying in eco-friendly accommodation, e.g. using renewable energy sources.
- ✓ Protecting (not damaging) the land or natural environment in the places you visit.
- ✓ Participating in active conservation or rehabilitation programs.
- ✓ Ethical treatment of animals and wildlife.
- ✓ Ethical treatment of local people, e.g. fair pay.
- ✓ Supporting local businesses, e.g. buying local products or services.
- ✓ Respecting and preserving the cultural heritage of the destination or community.
- ✓ Respecting and following cultural practices and customs.

remote island and 'A' Class Reserve). However, sensory experiences may eventuate at some of the proposed eco-accommodation facilities on DHI's freehold / leasehold land, driving *future* growth in demand and visitation.

TA's research determined more than one third of international travellers coming to Australia are motivated to spend quality time with others, get in touch with nature, seek relaxing holidays, seek wellbeing, exploring new destinations, learning new experiences and pursuing a sense of adventure. Tourism Australia identified four types of travellers as the target market for Australia:

- Reconnection Traveller - motivated to spend quality time with loved ones; relaxing and escaping the daily grind; having fun with friends and people.
- Into Nature Traveller - motivated to get in touch with nature; want to escape, feel secure and comfortable; have a sense of adventure; have a focus on mental or physical wellbeing.
- Exploration Traveller - motivated to explore new destinations, learn and experience new things; immerse themselves in a different culture or way of life;
- Adventure Traveller - motivated to seek destinations and experiences that evoke adventure and thrill seeking; have an underlying need for stimulation and escape; connects with remoteness and ruggedness; is activity oriented.

TA's visitor types resemble segments profiled elsewhere within Australia's domestic visitor market and should inform the planning and development of recreation and tourism on DHI.

Aboriginal Tourism

The *Western Australian Aboriginal Tourism Action Plan 2021-2025* (JINA) prepared by WAITOC aims to deliver three *tangible* outcomes:

1. Make WA the leading Australian destination for Aboriginal tourism;
2. Build capacity for Aboriginal people to participate in the tourism industry; and
3. Facilitate development of Aboriginal cultural tourism experiences.

JINA initiatives relevant to DHI include:

- Support the development of cultural tourism through Indigenous Land Use Agreements.
- Promote and diversify the range of Aboriginal tourism offerings for the cruise market.
- Aboriginal Ranger Program (DBCA) including tour guide training.
- Support Aboriginal people starting their own tourism business.
- Support Aboriginal employment and economic development through trails projects.

It is anticipated that DHI's Aboriginal heritage will be presented at numerous sites across DHI, delivered through Aboriginal tours, and will remain an integral component of information available to visitors. Any joint management arrangement between DBCA and Malgana People will be facilitated through the NP management plan (e.g. Rangers, interpretation, enterprise, training & tours). It is anticipated visitors to DHI seeking Aboriginal Heritage experiences will have opportunity across a range of sites and mediums.

Island Tourism

Tourism WA's draft *sub regional destination management plan* for the Shark Bay region includes the following recommendations for DHI.

- **Quality Accommodation** - Eco-accommodation on Dirk Hartog Island. Reduce the reliance on camping and develop semi-permanent eco structures, aiming to position Dirk Hartog Island as the Gascoyne's unique coastal experience.
- **Know our markets** - Reconnect with international markets. Shark Bay over-indexes for international markets compared to the rest of WA. There is an opportunity to refocus attention to the region beyond the dolphins in international markets. A hero / iconic landmark is needed - *potentially Dirk Hartog Island*. Domestic markets and target audiences have been established.
- **Space** - Solitude in a vast landscape. Limited access to Dirk Hartog Island and limited capacity at DHI Lodge provides opportunity to experience the landscape in solitude.

Shark Bay Town Planning Scheme allows for development up to 317 low impact eco-tourism accommodation units on Dirk Hartog Island, across five freehold / leasehold lots. Development of eco-accommodation on DHI will enable cross-promotion with similar WA island destinations, quality eco-retreat facilities, and premium nature-based experiences across WA. Recent developments in intra-regional passenger flights, growth in cruise and expedition-class ships, and anticipated re-emergence of international visitors are key drivers of potential growth for DHI.

demand scenario

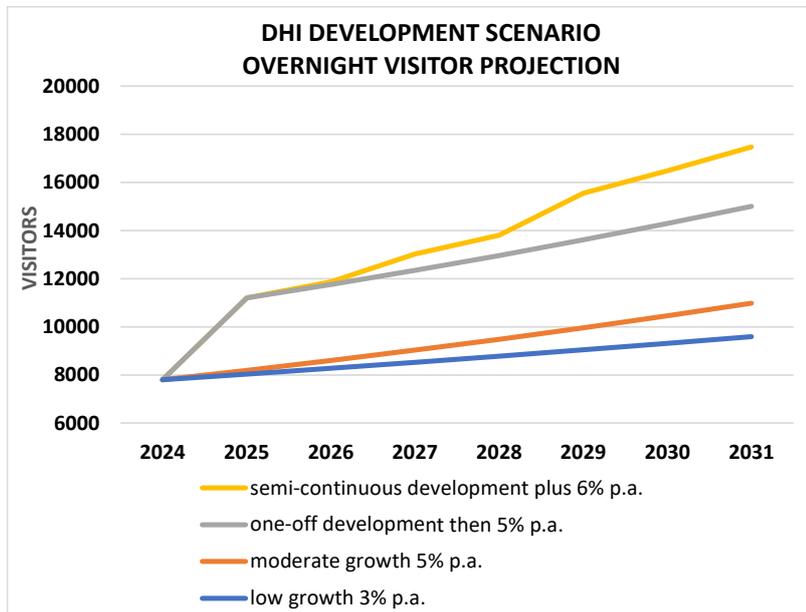
Visitation to DHI is expected to grow at 3-6%p.a. in the coming years due to:

- Increase in tours bringing visitors to DHI via fast-boat and to a lesser extent plane.
- Increase in DHI promotion appealing to visitor interest in wellness, nature & adventure.
- Potential new accommodation bringing new services, tours & improved choices for visitors.
- Continued strong interest in Ningaloo bringing visitors to marine experiences on DHI, and
- Improved intra-regional flight services & better linkages with WA's iconic tourism areas.

Four visitation (demand) scenarios are presented below based on variations in DHI accommodation development and overnight capacity. DHI visitor levels could grow from 7,800 in 2024 to 17,500 by 2031 depending on:

- 1) No new accommodation. Low visitor growth at 3% p.a.
- 2) No new accommodation. Moderate visitor growth at 5% p.a.
- 3) One-off increase in accommodation (e.g. Sunday Island Bay). Moderate growth at 5% p.a.

4) Semi-continuous growth in accommodation (i.e. across sites). Moderate growth at 6% p.a.



Accommodation development scenarios are examined in a later section.

Visitor Impacts

DHI visitor origins are expected to return to pre-COVID as international travel increases and interstate vitiation grows, possibly after 2024-2025. The types of visitors to DHI are expected to change as the range of accommodation, hospitality & transport options increase. For example, as DHI becomes more widely promoted to interstate and international visitors, and more short stay accommodation is developed, it is expected that more fly-in and boat-in visitors will emerge seeking all-inclusive itineraries, serviced accommodation and guided tours. This will include day trip visitors. The expected change in visitor types could have varying impacts on the environment as outlined below (i.e. based on qualitative assessment; see below for details).

VISITOR TYPE	Element A B C D E F	IMPACT ON ECO-DESTINATION			
		LOW (6-9)	MEDIUM (10-15)	HIGH (16-18)	EXTREME (19-24)
Yacht (private & charter)	1 2 1 1 1 2	8			
Boat (private & charter)	1 2 1 2 1 2	9			
Fast Boat	2 2 2 1 1 1	9			
Superyacht	1 3 2 2 1 1		10		
Sea Plane	1 3 2 2 1 1		10		
Light Plane	1 3 2 3 1 1		11		

Expedition Cruise Ship	2 3 2 3 1 1		12		
Helicopter	2 2 2 3 2 2		13		
4WD (via barge)	3 3 1 3 3 3			16*	

* The impact of 4WD groups with multiple heavy trailers & a large 'group' footprint could potentially be higher.

Qualitative assessment scale:

1 = Low impact. 2 = Medium impact. 3 = High impact. 4 = Extreme impact. Sum of scores = overall impact.

Visitor impact on DHI uses a *qualitative assessment* of six elements including:

- A. Likely number of visitors using the respective mode of transport (*more = higher impact*).
- B. Infrastructure required & impacts associated with mode of transport (*more = higher impact*).
- C. Ancillary services & associated impacts to host visitors & experiences (*more = higher impact*).
- D. Range-dispersal of visitor activities undertaken on DHI (*more = higher impact*).
- E. Duration of visitor stay, and duration of visitor season, on DHI (*longer = higher impact*).
- F. Guided versus self-guided visitor activities (*self-guided = higher impact*).

SECTION 5 - CONSULTATION

Key Findings

Phone and online discussions were undertaken with stakeholders during February-April 2023.

A selection of key findings is presented below.

Aspirations

DHI NP should aspire to.....

- Increase day trip visitors from Denham to grow DHI visitation; this requires more operators and services on DHI such as increased access to-from Denham and shuttles on DHI for day visitors (e.g. pick-up / drop-off points and tours)
- DHI should be an iconic sustainability destination with minimal infrastructure; showcasing 1616 Project, explorer heritage, marine eco-tourism & a variety of eco-accommodation; DHI should remain largely 'untouched' except for development in freehold areas and visitor infrastructure at major day use areas.
- Upgrade DHI NP campgrounds with toilets, signage, walking and hiking tracks; make each camping area a 'hub' that visitors explore and recreate locally.
- Ensure DHI remains a pristine World Heritage destination and an important refugium for threatened / endangered animals.
- The scale of DHI allows for a selection of: remote camping / accommodation that offer seclusion, privacy and naturalness, with affordable *and* premium prices for generic and exclusive experiences respectively; and activities at a range of remote sites focusing on

heritage, nature and aquatic-marine realms supported by (digital) information that inspires and educates visitors of its unique values.

Tourism

Influences affecting tourism in WA and the Coral Coast...

- Tourism WA is aiming to establish a network of signature experiences across WA centred around unique, iconic attractions & activities with a mix of accommodation options nearby.
- Tourism at the Abrolhos Islands is evolving; access via charter & private boat is not well supported and instead fly-in (helicopter & light plane) and expedition class ships are emerging as preferred modes of access; this may bring more regional capacity leading to a potential increase in visitors to DHI.
- New *intra-regional* flights linking Kununurra, Broome, Port Hedland, Karratha, Exmouth and Geraldton could bring additional fly-in visitors to the region; staying at DHI Lodge and possibly new eco-accommodation proposed for DHI.
- Strong growth in passenger volumes aboard Kimberley cruise ships may lead to more visits to Shark Bay / DHI during April-May as ships transit from Perth to the Kimberley.
- For many overseas and interstate visitors WA is a long haul destination; there's a renewed focus within WA on high yield, premium experiences where quality amenities at exclusive sites are promoted through specialist channels.
- Tour operators anticipate an increase in interstate and overseas visitors transiting to DHI via air & boat; leading to more day trip and overnight packages offering hospitality, guided tours, recreation activities, wellness programs and nature based experiences.
- More tours on DHI will require closer collaboration on accessing NP sites, improving on-ground infrastructure, 1616 Project and trialling new tours that improve visitor experiences; success will require reliable passenger flights linking DHI to Shark Bay and Perth.
- Anticipated growth of tourism at the Abrolhos, Ningaloo Coast, Mackerel Islands and Dampier Archipelago is expected to support growth in intra-regional air services linking eco-accommodation sites along WA's coast; this will enable high-end packages, attracting interstate and overseas visitors during the peak season, and intrastate visitors during the shoulder-low season. DHI will benefit.

Visitor Experiences

Opportunities to improve visitor experiences on DHI.....

- There is strong growth potential for fast-boat tours from Denham to Homestead Lodge / Sunday Island Bay; offering heritage, 1616 Project, culture, scenery, marine activities & catering; day trip & overnight tours; utilising 4WD buses-vehicles stationed on DHI.
- Shark Bay Discovery Centre; DBCA's Return to 1616 virtual reality tour currently on display at the Shark Bay Discovery Centre could also be presented at DHI Lodge to increase visitor knowledge of 1616 Heritage and supplemented with DHI's conservation role as a refugium.
- Semi-protected north-facing bays⁹ on DHI could have shade-wind shelters installed to make the beaches user friendly during the warm-windy season Oct-Mar; thus extending the visitor

⁹ Examples include Notch Point, Quoin Bluff South, Herald Bay, Louisa Bay, Sandy Point, Withnell Point & Cape Levillain.

season by providing a wider variety of visitor experiences such as windsurfing, kite surfing and foiling during the hot-windy season, and swimming at calm, protected shores.

- A walk / kayak trail along DHI's eastern shores similar to the Cape-to-Cape trail attracting enthusiasts and day walkers; a walk trail with overnight shelters would support new tour / service options.

Infrastructure, Amenities & Access

- A new, larger barge service between Denham and DHI requires a landing facility near Herald Bay or Homestead Bay such as a shore-ramp for passengers & trucks to drive on-off; a bigger barge would need to travel to Geraldton (220nm) for major refit / repairs and could be offline for 3-4 weeks annually; barge viability is more likely after freehold lots are developed and deliveries to DHI increase; a new barge service would provide further capacity and assurance during evacuations; A new barge loading facility is being constructed at Carnarvon;
- Development of freehold lots will increase the transport of visitors, provisions and support services to DHI; centralising infrastructure & facilities at Herald Bay or Homestead Bay creating a 'services node' with moorings, barge landing, airstrip nearby, heli-pad, utilities, worker accommodation, storage facility (fridge/freezer) and support facilities (e.g. workshop, medical-first aid, store-shop, etc) would create a pivotal hub for visitors and operators.
- Cape Inscription upgraded as a significant heritage node with interpretation, boardwalks, lookout, shade shelter, toilets, water, accommodation (in Keepers Cottage), and a designated parking area; enabling visitors to stay longer; making Cape Inscription an important 'must see' visitor node given its' national heritage significance.

Development Opportunities

- DHI has five freehold/leasehold lots, with 3 months maximum stay; it will require additional modes of access, new modes of on-island transport (e.g. shuttle service) and new social - hospitality - supply services, especially during peak periods.
- DHI's remoteness, cost of development & staffing challenges may lead to 'less than maximum' number of eco-accommodation units being built; semi-permanent tents / eco-tents may be required in the short-medium term until access and services expand to support growth.
- Freehold Lot 304, Sunday Island Bay, is proposing 33 off-grid accommodation eco-pods clustered into five groups; with onsite managers-staff; no on-site hospitality or shuttle services; guests arriving mostly via 4WD from Shelter Bay, a minority arriving by plane or boat; guests will bring all necessary provisions, supplies, linen, and take their rubbish on departure (or pay a disposal fee); some guests will patronise Homestead hospitality services.
- Tours in Francois Peron NP have grown to include guided 4WD tours, marine activities, cultural walks-talks and sightseeing (via 4WD); similar is envisaged on DHI if operators have access to sites for short stay (overnight), day trips and a base camp to store essential equipment, vehicles & provisions.

Issues

Constraints and challenges influencing DHI's future.....

- DHI is constrained by remoteness, lack of infrastructure, challenging roads and terrain, limited modes of access and limited services; these limitations support the current low volume destination; addressing these problems will enable volume growth.
- Higher levels of visitor infrastructure will bring significant challenges such as staffing, repairs, supplies-services, damage-vandalism, etc; staff-worker facilities will be pivotal but challenging to operate reliably due to remoteness and lack of infrastructure; this could impede the growth of DHI.
- Increasing the range of tourism operators (e.g. tours & services) on DHI will require staff accommodation that currently doesn't exist; accommodation will require additional infrastructure to sustain workers (e.g. water, power, sewerage, provisions, connectivity, waste management, transport, etc); current options include siting worker accommodation on freehold lots at/near the Homestead or Sunday Island Bay; a majority of DHI's attractions are at the northern end and western coast, which is distant from worker and visitor accommodation areas, leading to increased traffic on roads.
- DHI roads stretch for over 160km; most are corrugated, in poor condition and of varied surface type (4WD); travelling at 20-30km/h is required to minimise damage to road and vehicle; typically 3 hours is required to get from south to north (i.e. 84km) and 2 hours travel to visit the west coast (i.e. 56km); visitors need to drive for 8-10hrs to visit popular sites; slow travel means longer travel time to access the airport, barge departure point, homestead (for help) and eco-accommodation sites; visitors unaccustomed to slow travel on rough roads may be discouraged from re-visiting.
- DHI has limited supplies of 'basic raw materials' to build, repair and maintain a network of unsealed roads; borrow pits are in short supply; cost of bringing in road materials is prohibitive and logistically challenging; regular minor repairs to 'critical' sections of road are required; road maintenance should include grading-scraping *immediately after rain* when the roads are softer and damaged sections can be easily smoothed; much of the roads on DHI are likely to remain corrugated-rough and warrants trialling alternative approaches to improve road quality and visitor experiences.
- Retaining DHI's 'sense of place' (e.g. NP + WHA values) needs less not more infrastructure; as a wilderness destination DHI should limit infrastructure to discrete nodes.
- Turtle Bay is a critically important nesting area for Loggerhead Turtles; monitoring programs run from Oct to Apr and visitors-campers are not allowed in the vicinity, especially at night; May to Sept, outside the turtle season, the (unofficial) camp site at Turtle Bay could be added to the *official* list of sites, being one of a few in WA that is north facing, with a protected shoreline, stunning views, surrounded by nature.
- Tour operators prefer a 'base camp' on DHI near to where they can *reliably* fly in (e.g. Herald Bay airstrip); rather than regularly accessing DHI via boat, barge, or helicopter; ideally, operators would construct & maintain a base camp at Herald Bay in agreement with DBCA; a base camp might include a 4-sided structure, shade-cloth walls, rigid roof (rain & solar harvesting); provide storage of vehicles, equipment and provisions used during the visitor season (Apr-Oct); access could at times be via helicopter, which may require a helipad nearby.

- Away from the Homestead, DHI has very few facilities-toilets, and not all visitors dispose of waste correctly with some areas showing signs of rubbish and neglect; as a minimum, NP camping areas and day use sites require toilets to address the current waste problem; and to ensure the pristine nature of the island is not at risk.
- The largest visitor group on DHI are self-drive 4WD campers / fishers / holiday-makers; this group is also likely to be the most impactful because of poor road-track conditions and 4WD'ers quest to explore places; less impactful visitor groups may be those arriving on yachts/boats, helicopters and planes; more visitors having less impact would be ideal, however, improved infrastructure to attract and host these visitors will also impact DHI; risk is DHI losing its naturalness & appeal due to infrastructure.
- Shelter Bay is currently the entry point to DHI via barge. Visitors in 4WD's can gather there for hours awaiting departure with no toilets, limited information (e.g. biosecurity, 1616, wayfinding, NP protocols, etc), no orderly system for queuing or beach parking, and rubbish aplenty in the surrounding area; Shelter Bay and Cape Ransonnet need upgrades to become the 'gateway' to DHI; alternative transport to DHI such as plane/helicopter/boat may increase in future and until then the DHI experience deserves a 'gateway' worthy of a signature destination.
- Travellers-tourists are starting to shy away from carbon-intensive tourism; accommodation guests are increasingly booking 'low carbon' options; boat-yacht-barge-4WD transfers to-from DHI will remain carbon-intensive for the medium term; it is important that eco-accommodation on DHI is developed and promoted as zero-carbon; time will come where DHI will require recharging stations for electric 4WD's, which will need to be solar / wind powered given the absence of a central power supply; DHI may not be zero-carbon for some time, which may deter some visitors.
- Power, water and sewerage on DHI will always be problematic due to WH, NP, remoteness and seasonality; maintaining 'serviced' operations will be challenging and at times some rooms-sites may be closed until repairs can be made; over time this may adversely impact visitor reviews and perceptions of DHI (i.e. as unreliable).
- Accommodation on DHI may be vulnerable to changes in staffing and irregular - unreliable servicing of rooms, guests, transfers, etc; accommodation operators may have to offer rooms on a self-service basis with BYO linen & food, self-catering, self-cleaning of rooms, etc;

Risks

- Biosecurity is hard to enforce; best approach is education and communication; a drive-through cleaning station could be installed at Shelter Bay to wash the underneath of vehicles of invasive pests, bacteria, soil, etc; biosecurity requires collaboration between Shire of Shark Bay, DBCA, Fisheries, DHI Lodge and tour operators focusing on communication-education, self-inspection of vehicles-trailers, reporting-rewarding feral-invasive sightings, protocols and 24/7 hotline to manage a breach.
- 4WD visitors currently arrive and depart DHI via barge west of Cape Ransonnet; in the event of an uncontrolled fire on the southern end of DHI, and with strong southeast/south/southwest trade winds, a fire would move northwards; when visitors are evacuating they would drive southwards through the fire to exit via Cape

Ransonnet; alternatively, visitors staying on DHI to wait out a fire may be exposed to flare ups, smoke and road closures; alternative barge landing sites may be required, however, this would cause longer barge travel times, taking longer to evacuate DHI.



SECTION 6 - CONSTRAINTS & CHALLENGES

Risks to be managed on DHI as visitation and tourism activities grow include:

- Environmental Damage: Threats to native and re-introduced species, damage to plant and animal habitats, and impacts to the island's ecology. Among the drivers of risk are recreational activities such as fishing, boating, camping, four wheel driving and transport activities including planes, helicopters and boats.
- Resource Management: A heightened need to manage resources such as water and waste responsibly; including the supply and use of water, waste disposal, and ensuring the activities to support tourism are not damaging the environment.
- Climate Change: Including changes in sea level, rising tidal / storm surge, extreme weather events, species migration, storms and erosion, and heatwaves; important that DHI *continuously* adapts to the changing conditions to remain a sustainable destination for visitors.
- Safety and Security: Safety and security are essential on a remote island; security threats must be addressed in a timely manner, and contingencies are in place to bolster safety and security such as connectivity, mobile first responders, coordinated emergency protocols and rapid transfers off the island.
- Cultural & Heritage Sensitivity: DHI has been the home of indigenous people for millennia; early explorers and pastoralists have contributed to DHI's heritage and



sense of place; cultural and heritage sensitivity is required when planning, managing and communicating tourism infrastructure and visitor activities.

Constraints and challenges specific to DHI include:

Tourism

An increase in tourism on DHI could significantly impact marine and terrestrial environments through visitor activities such as 4WD adventures, waste, incursion into habitat, boating mishaps / activities, vandalism, fire, disease and invasive pests. Priority should be protecting DHI's universal values through a program of *sustainable* tourism development. However, "what may appear as sustainable solutions in a short-term perspective, might turn out to be unsustainable in a longer term perspective" (Fredman & Sandell 2018, p.13). Monitoring and minimising visitor impacts will be imperative. Important that monitoring stations, data collection, base data, program evaluations and ongoing improvements are resourced within a management plan and operate continuously.

Artesian bores in Shark Bay - DHI have salinity levels of 2000-4500mg/l with groundwater temperatures ranging from 32°C to 62°C (DEC 2012, p. 38); scope exists to investigate the establishment of 'hot springs' on DHI similar to Francois Peron homestead. Hot springs on DHI would add capacity to support 'wellness' experiences, which is commonly sought after by high net worth visitors staying in eco-accommodation. However, a hot spring on DHI could attract visitors 'after dark' when temperatures are cooler leading to increased vehicle traffic risking 'road kill' of native animals.

Short Stay Accommodation

Shire of Shark Bay planning scheme allows for the development of up to 317 low impact, short stay eco-accommodation units on DHI. The complex and costly process of land assembly, to develop short stay accommodation on DHI, can be a significant barrier to developers. For example, research suggests the cost of complying with fire and emergency requirements can exceed the cost of eco-facilities (Tourism WA 2021). DHI is a salt-intensive island, with salt-tolerant flora, of low flammability, and no history of extreme fires. The cost of complying with fire and emergency obligations may result in responses that go against aesthetics, low-impact and functionality, which are requirements of the planning scheme.

Climate

DHI's climate out to 2047 is expected to become hotter, drier, windier and stormier, and sea levels are expected to rise by 17cm (DEC 2011, CSIRO 2007/2015/2022). DHI's visitor season may be shortened to May-September. Some coastal sites may become inaccessible or uninhabitable due to inundation and shore erosion. Storm and tidal surge may increase impacting low lying, shallow, coastal zones. Lightning induced fires may increase in frequency. Evacuation of visitors due to extreme weather or fire events may become more frequent. Tourism on DHI will need to adapt, for example, by focusing on sustainable areas (nodes) that support activities suited to a hotter, drier, windier climate with an increased frequency of climate-induced impacts. Some sites on DHI will come to be less sustainable than others.

Transport

DHI will always rely on transport services for island access, supplies and evacuation. Reducing transport emissions will be difficult without significant advances in electrification or hydrogen-



powered transport. Costs to upgrade transport to net-zero will be significant. In the interim, it will be necessary to offset transport emissions through carbon offset programs.

Anticipated growth in short stay accommodation on DHI will increase usage of power, water, food and consumables, and will also increase the production of waste for recycling. A larger barge or ferry will be required with the size / capacity determined by the level of self-sufficiency engineered into DHI's infrastructure. For example, the number of self-sufficient days before supplies are needed from the mainland will be a critical element. A longer gap between barge-ferry replenishment will require more effective logistics/storage on DHI to enable longer stays on the island (and vice versa). Storage capacity and logistics will be critical in managing growth in short stay accommodation.

Ecological Restoration

The 1616 Project and the growing population of native wildlife will be vulnerable to invasive pests, animals, disease, vehicle and visitor impacts long after 2030. The growth in native animal and visitor populations on DHI will result in more negative human-wildlife interactions (e.g. Boodies and Shark Bay Mice raiding camps for food). Driving between sunset and sunrise will risk 'road kill' of threatened wildlife. The risk of spread of disease to DHI's native animals may also increase over time. The Return to 1616 Project is potentially DHI's most valuable feature but also one of the most vulnerable. Restrictions such as no driving between sunset and sunrise may be required.

Limits of Acceptable Change

Negative impacts from tourism visitors can be catastrophic if greater than the environment's natural ability to restore itself. That is, when visitor impacts are no longer within the limits of acceptable change. An underlying premise is that as the level of tourist development on DHI increases, and the number of visitors grow, DHI may approach or exceed a sustainable level of tourism evident by a decrease in the Island's biophysical and ecological wellbeing. Negative impacts to avoid include soil erosion, habitat loss, pollution (e.g. waste, rubbish, light, noise), loss of naturalness and pressure on endangered species. Impacts left unabated could significantly threaten continuity of the 1616 Project and jeopardise the values of the National Park and World Heritage Area.

Increase in visitors to DHI will bring an increase in vehicles contributing to: track damage, an increase in vehicle collision, damage to flora, and wildlife injuries due to vehicles (e.g. road kill).

A range of baseline data and records at day use and overnight camping areas, with high *and* low visitor traffic, will be required to determine acceptable / unacceptable impacts, and to assist in gauging the success of rehabilitation programs and benchmarking against sites unaffected by visitors. The potential future addition of up to 317 eco-accommodation units on DHI, capable of hosting over 60,000 visitors annually, could have unfathomable impact that requires quality base line data from the outset on tourism 'hot spots' and popular access routes (e.g. roads / tracks / pathways).

Road Repairs

DEC 2012 reports DHI has 'a lack of basic raw materials' for road construction and maintenance (e.g. gravel, sand, limestone, blue metal); and this may lead to vulnerable and damaged sections of track requiring priority repairs, re-routing or temporary closure. Road-making borrow pits are a finite

resource on DHI, which will require alternative approaches to road maintenance. For example, using bitterns-brine to solidify calciferous sands, undertaking road repairs immediately after rain, regular scraping-dragging of damaged sections, enforcement of low-pressure tyres, and encouraging 4WD's to engage low-gear to reduce speeds. Roads on DHI have the potential to create significant risk and/or visitor dis-satisfaction if not managed effectively.

Access via Barge

Currently the DHI Lodge operate a barge between Shelter Bay and Cape Ransonnet during February to November. Occasional bad weather can temporarily stop barge operations. The barge can carry one 4WD with a trailer at a time (max combined length 10.6m). Caravans exceed maximum length and cannot be transported to DHI. Critical to barge operations is a 2m deep shoreline for safe navigation, manoeuvring and unloading. There are few, if any, alternative sites on DHI that are deep enough to safely receive the current barge. A shallower-draft barge operates in Shark Bay, which is occasionally used for one-off deliveries to DHI. Growth in visitation and supplies to DHI will eventually require a larger barge with increased carrying capacity. For example, a barge-ferry capable of carrying several cars with trailers, multiple visitors-passengers, supplies-consumables for DHI and heavy plant-equipment. A larger size and heavier displacement barge-ferry will require engineered landing facilities on DHI to safely expedite unloading / loading. A suitable site is to be investigated. Preliminary options include Herald Bay, Homestead Bay or the western tip of Notch point.

'Green' 4WD's

With the uptake of electric vehicles DHI *may* require recharging capability, at least until EV range extends beyond 700km. For example, a self-drive tour with stopovers at DHI's popular sites requires 250km of travel *plus* 350km round trip from Overlander-DHI-Overlander via Shelter Bay. The range capability of 'advanced' electric vehicles is currently around 500km. Next generation EV's are aiming for 700km-800km range and several car manufacturers are planning to release long-range electric 4WD's from 2024 onwards. Alternatively, if EV's were to access DHI from Denham this would require significantly less EV range, thus reducing demand for recharging on DHI.

Hydrogen powered vehicles (4WD's) are being developed by several manufacturers but currently face significant barriers including: high cost of hydrogen fuel; hydrogen fuelling stations require significant investment-infrastructure; technical complexity of hydrogen fuel cells; safely transporting & storing hydrogen; and overcoming public concerns for advanced fuels such as hydrogen. DHI may be a late adopter of hydrogen re-fuelling capabilities, for example, when large scale delivery services to-from Denham and DHI are established and WA has significant capacity to supply green hydrogen.

Access by Air & Boat

Currently there is no regular passenger service between Denham and DHI. A charter flight service is available from Denham to DHI most days of the year - *but the light aircraft are not rated for night landing on DHI*. Airstrips on DHI close during and after rain events. Boat from Denham to DHI is a 19 nautical mile one-hour crossing susceptible to high winds and choppy seas. Upon arrival at DHI there are no *dedicated* facilities for recreational boats to anchor-moor (i.e. Rottnest Island has designated anchoring areas, hire moorings, jetty pens to rent and beach anchor lines to access). Upgraded airstrips and boating facilities would significantly help grow visitor access to DHI.



Unsealed roads

DHI has around 160km of unsealed roads (former pastoral station tracks), mostly one-lane wide. Some sections are badly corrugated, rocky, sandy, narrow, with very few laybys or pullover bays, occasional blind spots, and well suited to slow speeds. Driving to the conditions helps minimise damage to tyres / vehicle, conserve fuel (none available on DHI) and avoid driving-veering off the road. As visitor levels increase so too will potential damage to vehicles, which will require recovery services to assist stranded vehicles and visitors. Some visitors arrive DHI with poor 4WD'ing skills, no knowledge of the road conditions, and unaware of the travel distances and travel times involved.

Biosecurity (1616)

DHI is a refugium for threatened and endangered species. It carries significant biological value as an island 'ark' for rare and endangered animals and a camping experience in this environment is unparalleled in Australia. A breakdown in biosecurity on DHI has potential to cause significant biological, environmental and economic loss. DBCA's Explore Parks website and Sharkbay.org provide a range of biosecurity advice including an induction video, information downloads, brochures, signage and occasional inspections-surveillance. Boats, vehicles (including trailers) and planes that visit DHI almost every day - that potentially aren't well informed of the biosecurity protocols - are a biosecurity risk. By far the greatest biosecurity risk would come from any future building of infrastructure which involves transportation of large quantities of building materials from the mainland. Dogs and cats, mice and rats, invasive insects or domesticated birds going astray on DHI could bring catastrophic consequences and every effort should be made to exclude them from DHI. Horse riding or tours involving non-native animals should not be permitted. Likewise offroad vehicles should not be permitted on the island. Communicating and educating visitors of the inherent risks, protocols and the need to be vigilant is paramount. *Pushing* biosecurity measures at each and every 'touch point' from pre-planning, travelling, visiting and leaving DHI is a necessity that will be a constant challenge to minimise biosecurity risk.

Boating

Anchoring or beaching are existing options for smaller, recreational boat users visiting DHI. Moorings in protected bays could be installed, for example, where shore-based camping is sustainable. For example, Tetradon Loop, Long Tom Bay or northern reaches of Herald Bay, sandy spit south of Withnell Point, or northern side of Tumbledown Point. Boat camping sites should aim to offer protection from currents, sea fetch and strong winds (especially south east to south west winds) as these elements can quickly move boats off anchor, onto shores or adrift into Shark Bay. DHI has limited sheltered anchorages other than Tetradon Loop and Long Tom Bay. In the event of strong winds, boat users will employ additional anchors and/or longer chains, thereby increasing the risk of damage to seagrasses, corals and seafloor. This should be contained to areas where the seafloor is less vulnerable (e.g. sandy substrate). Formalised areas, facilities and protocols for recreational boating is required to reduce risk to visitors and the environment.

Cyclones, Storms & Wind

DHI currently has capacity to host up to 50+ campers with tents, swags, trailers, rooftops, etc. Very few, if any tents etc are designed to withstand winds above 40knots. However, DHI can have 40knot





winds 'for days' during October to March, causing trouble for campers. Localised tropical storms (Dec to Apr) can bring intense short bursts of rain, hail, wind and lightning. DHI lies within WA's cyclone belt and is vulnerable to cyclones bringing wind gusts in excess of 100 km/h about once every five years on average¹⁰. Contingencies such as emergency shelters, impromptu evacuation, satellite messaging and responder support will need addressing in risk management plans as visitation grows.

Mobile Phone Networks

DHI's nearest mobile phone tower is at Denham. Telstra (3G & 4G) and Vodafone (3G & 4G) have coverage on some not all of DHI. Mobile phone signal on DHI is typically weak and not always accessible or reliable for voice or SMS. Visitors aged 25-50y.o. can be motivated to visit by linkages to technology (e.g. social media, instant messaging, web access, maps, etc). DHI's poor connectivity would lessen the motivation and experience of these visitors and reduce the appeal of visiting DHI. Emergency SMS messaging on DHI is not reliable. Rangers visit camp sites to convey important messages when required. Connectivity on DHI could be significantly improved in reducing risk and improving the wellbeing of visitors.

Emergency Help

Visitors to DHI are responsible for their health, safety and wellbeing. In emergency, fellow campers may offer assistance, if so inclined or capable. Mobile phone voice or SMS could be used to summons help from third parties, the Lodge or a Park Ranger (maybe), *if a mobile signal is available*. Alternatively, a satellite phone could be used to get outside assistance or a personal locator beacon (PLB) could be activated to muster a response. In some cases, a trip to DHI homestead may be appropriate. If evacuation by air is required, a call to RFDS would be necessary and/or transport to the airstrip. Emergency help on DHI is available if visitors are adequately equipped, suitably aware of protocols and potential responders, and/or willing-able to muster support from fellow visitors. Not all visitors have the necessary equipment, information or initiative. As visitation grows it will be important for visitors to have an 'emergency induction' before arriving on DHI.

Limited Facilities & Amenities

Outside of the homestead precinct there is no power or water and very limited (3) toilet facilities on DHI. There are no camp kitchens at NP camp sites or day use sites (as at May 2023). Two camp sites have a basic hut / shelter (not built to code). There are no bins on DHI and visitors 'take out what they bring in'. As a remote destination DHI requires visitors to be self-sufficient, not relying on third parties for supplies, utilities or support. This is an integral part of DHI's remote wilderness experience, away from the amenities of urbanised areas. DHI's limited infrastructure and need for self-sufficiency currently appeals to 7500 visitors annually. Future upgrades to infrastructure will increase the potential visitor market but may also erode some of its existing uniqueness and appeal.

Utilities - Water

Development of tourism accommodation on freehold sites requires the supply of potable water, principally sourced from groundwater (e.g. bore - well). Harvesting rainwater will not meet supply

¹⁰ Shire of Shark Bay Local Planning Strategy Part 2, 2013, p.15

requirements (e.g. a typical eco-accommodation guest can use 200ltrs of water per day). Seawater desalination generates a hyper-saline, mineral-heavy by-product (i.e. bitterns - brine) that will require disposing responsibly or re-purposing for use on land¹¹. Climate change may cause a failure to adequately recharge DHI's groundwater aquifers leading to the loss of long term supply of water. Accommodation of DHI will require a combination of water supply sources including harvesting rain, purifying groundwater, seawater desalination, and treatment of waste water (for non-potable uses such as toilets, washing linen, landscaping, dust suppression, roadworks, etc). Visitors will need to acknowledge that water on DHI is especially critical, highly valued and may have to be purchased.

Utilities & Services

Off grid utilities may be installed where services are needed to sustain visitors overnight or at day use sites (e.g. Freehold lots, Cape Inscription & Cape Ransonnet). DHI has above average wind and sunlight for renewable energy purposes and both wind/solar energy systems are currently used by the Lodge. Additional toilets are anticipated at select day use & camp sites¹². Increasing infrastructure such as water points has potential to impact DHI's values by facilitating longer stay but also necessary to diversify visitor experiences (e.g. overnight hiking trail, eco-accommodation, guided tours, services, etc). An increase in visitors will increase the amount of waste-rubbish on DHI, which will require a solution other than landfill such as a small waste-to-power facility (e.g. furnace), recycling capability, periodic removal via barge, or a commercial collection service (e.g. funded by a user-pays levy). An increase in utilities and services on DHI will require more regular servicing and repairs and potentially trained personnel living on the Island during peak periods.

Health Risks

Health risks include sunburn, mosquitoes, sand fleas, snakes, sharks, stinging / poisonous sea-life, rock fall, dehydration, drowning, accidental injury, and illness (e.g. gastro, food poisoning, etc). The need to access health providers (e.g. telehealth), first responders and RFDS will increase as visitation grows. Response plans and training will be of greater importance as visitation grows and the visitor season extends (e.g. heatwaves, dehydration & extreme conditions). Until Rangers are permanently stationed on DHI it may be appropriate (on a trial basis) to reduce vehicle limits during spring-summer when health risks could elevate.

Visitor Discomforts

DHI is subject to strong winds, storms, cyclones, extreme heat, remoteness-isolation, poor connectivity, poor quality road conditions and natural pests (flies, sand fleas, march flies, etc). Mobility-impaired visitors may be impacted by a range of discomforts until infrastructure is significantly upgraded. In the interim, DHI is unlikely to appeal to many inclusion / accessibility visitors. Some sites such as Cape Inscription and the Lodge may be better suited to addressing the requirements of inclusive / accessibility visitors.

¹¹ One option is to use the by-product repairing - upgrading tracks; mineral salts in 'brine' can help bind sand to form a crust.

¹² For example, Notch Point & Mystery Beach; and across all NP campgrounds.

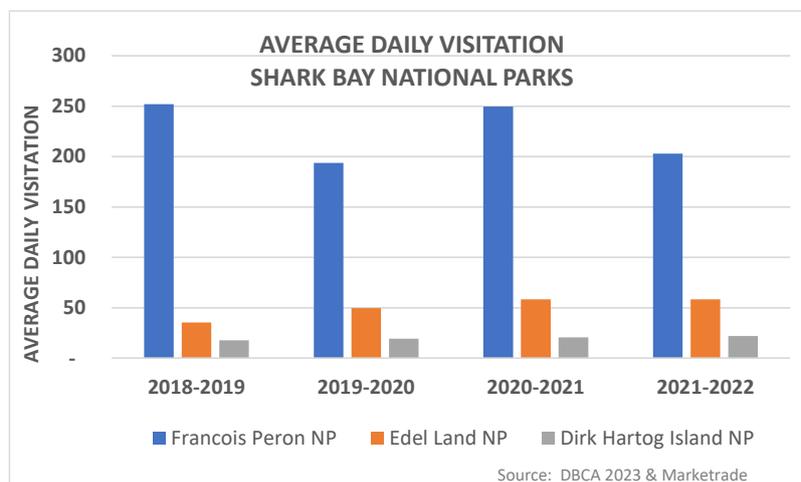


Eco-Tourism & Accommodation Development

Potentially up to 1590 *additional* people could be holidaying on DHI at any one time if freehold / leasehold lots are fully developed. This will require a significant increase in resourcing and infrastructure on DHI including staff, provisioning, utilities, waste management, vehicles, plant/equipment and worker accommodation. The scale of increase, around 9-times existing visitor and vehicle levels, could bring a significant impact on day use sites, roads-tracks, fish stocks, fauna kills, Island values, traffic levels and the quality of the visitor experience (e.g. tranquillity, isolation & wilderness). The siting of a service centre / works depot, facilities to house workers and road-traffic management will be critical as freehold lots are developed. Hosting 'works' facilities at eco-accommodation sites would go against convention and may jeopardise DHI's eco-tourism appeal.

NP Management

The requirement for Park Management to keep watch over DHI NP is expected to grow in proportion to visitation. Currently DHI has no Rangers permanently stationed on DHI. In comparison, Francois Peron and Edel Land National Parks have rangers on site (or in close proximity) year round. Adopting *average daily visitation* of 35-40 visitors in Edel Land NP as a 'benchmark' level of visitation for on-site rangers, suggests DHI could host permanent rangers after additional short stay accommodation is developed or visitor numbers increase. For example, once Lot 304 Sunday Island Bay is developed. At that point, average daily visitation on DHI will approach or exceed 35 visitors per day, similar to Edel Land NP (refer to the chart below). Monitoring visitor impacts and managing 'limits of acceptable change' would be greatly enhanced with rangers stationed permanently on DHI. As a priority, the previous masterplan for the 'Operations Base' at Herald Bay (DEC 2012) should be revisited, resourced and activated to bolster management capabilities on DHI.



Fire Management

DHI Park Operations have access to 'light' equipment for fire-fighting purposes, with minimal personnel stationed on DHI trained to fight fires, and no prescribed burning on DHI for environmental reasons. The expectation is fires on DHI will burn in short narrow bands due to high moisture and high salt content of island flora, that should naturally self-extinguish. In the event of a large fire

outbreak, aerial bombers cannot be easily mobilised to DHI. Further, fire retardant from aerial bombers could *significantly* damage threatened fauna. Visitors could face difficulty accessing exit points if trade winds forced a fire front north-wards. A risk management plan is required that includes appropriate visitor induction and fire management / evacuation protocols.

SECTION 7 - OPPORTUNITIES

Opportunities to improve and diversify the visitor experiences on DHI follow.

VISION FOR TOURISM ON DHI

A vision for recreation and tourism on DHI was outlined in a Management Plan (DEC 2012, p.145) as..... *Dirk Hartog Island National Park is to provide a combination of four-wheel drive destinations that offer a range of nature-based recreation and tourism opportunities and experiences in a remote and natural environment that is managed for ecological restoration.*

An alternative vision for recreation and tourism on DHI follows:

DHI will be a world leading nature-based adventure tourism destination rich in heritage, cultural, terrestrial, aquatic and social experiences, a place where adventurous travellers immerse in a unique, sustainable wilderness environment that engulfs their heart, soul and mind, inspiring appreciation and conservation among future generations.





Infrastructure & Accommodation Development

There is an expectation that during 2024 to 2034 that DHI will evolve and transform in response to everchanging conditions in the WA economy, the global tourism sector, the visitor market, and tourism development along WA's coast.

Infrastructure upgrades *within* DHI national park are currently a 'work in progress' with improvements to campsites and day use areas required. Larger, more *significant* upgrades to the national park and DHI freehold land will face constraints and challenges such as access, utilities, staff, planning approval and funding / resources.

Upgrades to the National Park could include, for example, infrastructure that improves island access; infrastructure that diversifies visitor activities (e.g. hiking/kayaking trail, drive trail, lookouts, walk trails, interpretive nodes, shade/wind shelters, toilets, parking areas & connectivity); plant/equipment/facilities that improve road-track condition; and enhancements to management of biosecurity. Development of DHI freehold land is restricted to low impact eco-tourism such as short stay accommodation including tents, cabins, pods & villas as well as facilities for hospitality / shop / rental-hire / information; and utilities including power, drainage & water.

Development of low impact eco-accommodation on DHI freehold land is at an early planning stage and is subject to planning approval and overcoming barriers associated with building and operating on DHI. Given these challenges, development of freehold land at Sunday Island Bay, Cape Levillain or the Homestead precinct may or may not eventuate in the short-medium term. A hypothetical 'scenario' is used to explore implications for DHI.

A *hypothetical* development scenario for DHI during 2024 to 2034 is presented on a following page highlighting linkages between eco-accommodation development and visitor levels. Under the assumed 5-stage scenario, overnight visitor capacity doubles from 175 to 388; annual visitor levels increase from 7500 to 15700; and vehicle numbers increase from 2700 to 5450. Potential eco-accommodation developments are shown in **red font**. Implications shown in **blue font** highlight economic - commercial influences and flow-on effects. Infrastructure and accommodation development on DHI is expected to bring opportunities, some of which are outlined on the following pages.

DIRK HARTOG ISLAND FREEHOLD LOTS					
Lot No.	Lot Size ha	Max. No. Eco - Accommodation Units	Max. Internal Floor Area m ²	Est. No. Guests	Est. No. Vehicles
62	40.6	213	200	1278	456
300	2.5	7	90	21	8
303	17.3	51	90	153	55
304	11.3	33	90	99	35
305	4.6	13	90	39	14
76.3		317		1590	568

DIRK HARTOG ISLAND 2024 - 2034 DEVELOPMENT SCENARIO LOW IMPACT ECO-ACCOMMODATION

#	Stage	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034			
1	Status Quo (as at 2023)	Nat. Park: 8 Camping Areas with 34 vehicle-sites; 20-vehicle (56 visitor) limit. DHI Lodge: 6 Rooms, 1 Villa, 27 Unpwr'd campsites & 2 Unpwr'd Group campsites, overnight visitor capacity of 120. Freehold Land: Lots 300, 303 & 304 Undeveloped. Lot 305 Developed - Private Use.								OVERNIGHT VISITOR CAPACITY:	175	ANNUAL VISITATION:	7500	No. VEHICLES p.a:	2700
2	Sunday Island Bay Lot 304 Development (33 eco-accom units allowed)	Nat. Park Camp Sites Unchanged. 20 Vehicle Limit increased to 30 (56 to 84 visitor limit). DHI Lodge (Lot 62) Unchanged. Overnight visitor capacity of 120. Sunday Island Bay Lot 304. +33 Eco-Pods (incl. 3 for staff & Mngt) Implications: Increase demand for supply-service vessel Denham to DHI; increase in Plane & Fast-Boat traffic to DHI; increase in services on DHI; increase day trip visitors & day site usage; increase in road traffic.								OVERNIGHT VISITOR CAPACITY:	+118 293	ANNUAL VISITATION:	+4500 12000	No. VEHICLES p.a:	+1600 4300
3	Homestead Lot 303 Development (51 eco-accom units allowed)	Nat. Park Campsites Unchanged. Vehicle limit 30. DHI Lodge (lot 62) Unchanged. Overnight visitor capacity of 120. Sunday Island Bay Lot 304 Unchanged. 33 Eco-Pods / Overnight capacity of 90. Homestead Lot 303. +10 Eco-Cabins / Pods Implications: increase in Plane, Fast-Boat & Supply Vessel traffic; increase in day trip visitors, premium visitors & services; longer visitor season.								OVERNIGHT VISITOR CAPACITY:	+30 323	ANNUAL VISITATION:	+1150 13150	No. VEHICLES p.a:	+400 4700
4	Nat. Park Eco-Resort Leasehold Land	Nat. Park Campsites Unchanged. 30 vehicle limit. DHI Lodge (Lot 62) Unchanged. Overnight visitor capacity of 120. Sunday Island Bay Lot 304 Unchanged. 33 Eco-Pods / 90 guest capacity. Homestead Lot 303 Unchanged. 10 Eco-Cabins / Pods / 30 guest capacity. Nat. Park Leasehold Land. +15 Eco Tents/Cabins (+ 4 for staff & Mngt) Implications: increase visitor access DHI via Plane, Boat & Barge; increase demand supply-vessel service; increase premium visitor levels; additional tours & services on DHI; increase use of day use sites. Increase vehicle traffic.								OVERNIGHT VISITOR CAPACITY:	+45 368	ANNUAL VISITATION:	+1750 14900	No. VEHICLES p.a:	+600 5300
5	Cape Levillain Lot 300 Luxury Resort (10 eco-accom units allowed)	Nat. Park Campsites Unchanged. 30 vehicle limit. DHI Lodge (Lot 62) Unchanged. Overnight visitor capacity of 120. Sunday Island Bay Lot 304 Unchanged. 33 Eco-Pods / 90 guest capacity. Homestead Lot 303 Unchanged. 10 Eco-Cabins / Pods / 30 guest capacity. Nat. Park Leasehold Land 15 Eco Tents/Cabins Unchanged. 45 guest capacity. Cape Levillain Lot 300. +10 Luxury Eco-Resort Rooms (+ staff / mngt quarters) Implications: increase visitor access DHI via Plane & Helicopter; increase premium visitor levels; increase vehicle / road traffic;								OVERNIGHT VISITOR CAPACITY:	+20 388	ANNUAL VISITATION:	+800 15700	No. VEHICLES p.a:	+150 5450

Commercial Services

An increase in eco-accommodation on DHI freehold / leasehold land will increase visitor levels and grow demand for commercial services that could further improve visitor experiences on DHI, including:

- Plane / Helicopter / Micro-light tour.
- Hire Shop (sup, kayak, snorkelling, fishing equipment, 4WD, dinghy).
- Hot spring, spa, sauna, wellness / yoga / meditation facility.
- Pop-up catering van-truck (takeaway meals, snacks, drinks & hampers).
- Regular fast-boat transfer Denham to DHI (for day trips & overnight visits).
- Astro-tourism, stargazing, telescopes (hire), tours & talks, events.
- Nocturnal tours / wildlife walks near camps (i.e. using red lights, no interaction, viewing only, specialist guides, no feeding, etc).
- Provision - supply shop (basic food, health, safety & essential supplies).

With growth in tourism on DHI there will be anticipated changes to commercial environs including:

- Gradual shift towards higher tariff eco-accommodation (e.g. cabins, eco tents/pods); including catered & fully-serviced options.
- Comparatively slow (or no) increase in camp site supply and slow increase in camping fees; limited, if any, low fee 'walk-in' accommodation such as budget tents / rooms / dorms / beds.
- National Park camp grounds retain a *sustainable* capacity. For example, limited number of camp sites & vehicles. Less informal camping outside of designated areas, and enforcement of visitor-vehicle site allocations.
- Charter boat operators, expedition cruise ships, super yachts and private yachts increasing in number and anchoring-mooring nearby during Apr-Jun; marginal increase in shore landings/activities.
- Commercial sea, air & land tours offering a wider range of seasonal experiences & activities, progressing from general to niche market appeal, and growing in reach across DHI as overnight & day trip visitors increase.
- Increase in services such as hires, provisions, transfers, guided tours and niche offerings especially during peak visitation (May to Aug).
- Discovery of new experiences & natural features leading to new sites, changes in visitor dispersal patterns and wider range of potential impacts.



Marine Experiences

Dirk Hartog Island lies along marine migration pathways and is also host to an impressive variety of resident marine species. There is *significant untapped* opportunity for visitors to view marine species from land, boats, underwater and the air (i.e. planes & helicopters). The following table highlights *peak* times of the year to see marine species around DHI. Peak visitor season for DHI is May to September, which is outside the 'peak' viewing time for a majority of the marine species. It is anticipated the visitor season will gradually extend to allow opportunity to view marine species during September to March (whilst limiting interference with Loggerhead turtle sites). This will require, for example, the installation of lookouts / viewing platforms, information portals / QR codes & apps, walk trails to discrete sites, vehicle access to viewing areas, shade-wind shelters, etc. The lookout facility at Skipjack Point, Francois Peron NP, is a good example of a raised viewing facility (lookout) that can offer *spectacular* viewing opportunities for visitors including mobility-accessibility visitors.

Marine Species Peak Viewing Times Dirk Hartog Island	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
HUMPBACK WHALE					█	█	█	█	█	█		
MANTA RAYS	█	█	█	█						█	█	█
LOGGERHEAD TURTLES	█	█									█	█
GREEN TURTLES	█	█	█							█	█	█
LEATHERBACK TURTLES	█	█	█								█	█
SEA SNAKES	█	█	█	█						█	█	█
WHALE SHARKS			█	█	█	█	█					
INDO-PACIFIC BOTTLENOSE DOLPHINS	█	█	█	█						█	█	█
DUGONGS		█	█	█	█	█	█	█	█	█	█	
INDO-PACIFIC HUMPBACK DOLPHINS	█	█							█	█	█	█
COMMON BOTTLENOSE DOLPHINS	█	█	█	█	█	█					█	█
GREY NURSE SHARKS									█	█	█	█
BLUE SPOTTED STINGRAYS	█	█	█	█						█	█	█
REEF & OTHER SHARK VARIETIES	█	█	█									█
AUSTRALIAN SEA LIONS	█	█	█	█						█	█	█
AUSTRALIAN FUR SEALS	█	█									█	█
GREAT HAMMERHEAD SHARKS	█	█	█								█	█
GREAT WHITE SHARKS	█	█	█	█							█	█
KILLER WHALE (ORCA)				█	█	█	█	█	█	█		
SOUTHERN RIGHT WHALE					█	█	█	█	█	█		
SPERM WHALE					█	█	█	█				
DWARF MINKE WHALE						█	█	█	█	█		
FIN WHALE					█	█	█	█	█	█		
BLUE WHALE						█	█	█				
FALSE KILLER WHALE					█	█	█	█				

Recreational Activities

A range of recreational opportunities to diversify and improve visitor experiences on DHI follow.

ACTIVITY	DESCRIPTION	SEASON	COMMENTS
Marine Tours & Appreciation	Viewing marine life; fishing; scuba diving; freediving; snorkelling; scenic tour; wildlife interaction;	Apr to Sep	Subject to DBCA licensing; may require a central hub where boats / visitors gather & depart OR operators pick-up/drop-off from coastal sites; Shore-based viewing from lookouts.
Wildlife Viewing (terrestrial)	Self-guided along NP tracks, shores & roads; viewing scats, tracks, fauna & habitat; aided by QR codes/apps/info;	Year round	Peak season tours run by 'Friends of DHI', Rangers or TO's; some areas / sites may become popularised compounding impacts; scope to re-purpose unused pastoral tracks subject to DBCA assessment.
Hiking / Kayak Trail	Cape Ransonnet to Cape Inscription; 100km / 54 nautical miles; 6-8 day hike / 3-4 day kayak; staying overnight huts OR designated stopover sites;	Mar to Oct	Currently possible to hike / kayak DHI with DBCA permission; formalising a Cape to Cape walk using promotion, itinerary / huts / support / guides; wildlife-nature focus; organised by operators or self-guided. Potentially a 'great walk' candidate.
Maritime Heritage	Cape Inscription; explorer - maritime heritage; lighthouse & keepers precinct; walk trail to Dampiers Landing;	Mar to Oct	Potential to upgrade Cape Inscription as per 2010 concept plan (DEC); overnight accommodation; trails, lookout, boardwalk, info/QR codes, toilets, water, BBQ & shade shelters.
Cultural Appreciation	Guided terrestrial & aquatic tours; various NP sites / locations; tucker, medicine, lore, beliefs, dreamtime & heritage; facilitated by TO's.	Mar to Oct	Subject to DBCA licensing; may involve fire for demonstration - cultural purposes; could include overnight camps/tours, walking, kayaking, 4WD'ing & stargazing.
Nature Walks	Short self-guided walks in proximity to existing campgrounds; focus on nature, flora & fauna; aided by QR codes/apps/info;	Mar to Oct	Walking shorelines, hinterland, headlands & vantage points; turning camp areas into activity nodes; some areas richer / more experiential than others; minimal infrastructure.
Pastoral Heritage	Confined to Homestead precinct; shearing shed etc; pastoral heritage appreciation; self-guided & organised tours.	Year round	Facilitated / managed by DHI Lodge; supported by DBCA, WA Museum & Agencies; quality displays /exhibits; special events / talks.
Self-Drive Trail	Mystery drive loop; self-drive, 4WD only; Cape Inscription to Quoin Head to Sandy Pt to Cape Inscription; aided by QR codes/apps/info; Blowholes drive loop; self-drive; 4WD only; Tetradon Loop to west coast to Blowholes to Surf Point to Tetradon Loop; aided by QR codes / apps /info.	Mar to Oct	Self-guided approx. 80km/3hrs drive; 10-12 stopover sites (3-4hrs); full day itinerary; will require toilets, parking bays, wayfinding signage & trail information (QR codes / digital map). Refer to DEC 2012 (appendix). Self-guided approx. 40km/2hrs drive; 4-5 stopover sites (1-2hrs); half day itinerary; will require toilets, parking bays, wayfinding signage & trail information (QR codes / digital map).

ACTIVITY	DESCRIPTION	SEASON	COMMENTS
Kiteboarding, Foiling & Windsurfing	In protected bays offering calm-flat, shallow water; Tetradon Loop, Long Tom Bay and Herald Bay.	Oct to Mar	Utilising strong trade winds & protected waters; requires site access & shade-wind shelters; potentially large enthusiast market; camping or staying in serviced accommodation (freehold land).
Snorkelling	Self-guided snorkelling at sites with natural / unique features; Surf Pt, Sandy Pt, Turtle Bay, Withnell Pt & Sunday Is Bay.	Mar to Oct	Formalised through QR Codes / app / visitor info; viewing sharks, coral, turtles, dugongs & marine life; formal access trails & signage.
Fishing	Two types. <i>Enthusiast</i> - rock / cliff fishing along western shores. <i>Passive - recreational</i> - beach/shore fishing along protected eastern shores.	Mar to Oct	Cliff / Rock fishing from western shore is among Australia's best & has global recognition; requires enhanced safety facilities at popular & risky sites. Beach fishing from eastern shores requires basic safety / fishery regulation signage.

Homestead Precinct

The homestead precinct is one of five freehold / leasehold lots on DHI where low impact, eco-tourism short stay accommodation development is permitted. Details follow.

Lot No.	Area (ha)	Max. No. Units	Max. Int. Floor Area m ²	No. Overnight Guests
62	40.6	213	200	1278

- Freehold land.
- Zoned: Special Use. Permitted Use: Low impact eco-tourism.
- Currently: DHI Lodge. 9 rooms, 30+ unpowered campsites, bar / distillery, café & restaurant.
- Currently hosts approx. 6,000 overnight visitors p.a.
- Majority of Lodge guests arrive by barge / 4WD, minority by fast-boat & plane.
- Former pastoral homestead. Off-grid facility. DHI's default 'tourism hub'.
- Significant scope to expand eco-accommodation capacity (i.e. 213 units; 1278 overnight guests permitted).
- Could host additional hospitality, retail - shop, hire-rental, tours & transport services.
- Current status: Operational. Future plans for Lot 62 unknown.



DHI Lodge also operates the island's barge service. Currently displays pastoral heritage in the former shearing shed and the surrounding homestead precinct. Further pastoral heritage tours, talks, events

and activities would be complementary to the site and should be supported. Could become the main visitor hub on DHI hosting visitor services such as accommodation, hospitality, retail, hire-rental, transfers, tours, events, transport, etc (subject to Shire approval).

Homestead Bay North

Homestead Bay North is one of five freehold / leasehold lots on DHI where eco-tourism development is permitted. Details follow.

Lot No.	Area (ha)	Max. No. Units	Max. Int. Floor Area m ²	No. Overnight Guests
303	17.3	51	90	153

- Freehold land.
- Zoned: Special Use. Permitted Use: Low impact eco-tourism.
- Site is largely unimproved / undeveloped.
- Could host approx. 6000 overnight visitors p.a.
- Could host hospitality, retail-shop, hire-rental, tours & transport services.
- Current status: Dormant. Future plans for the site (Lot 303) unknown.

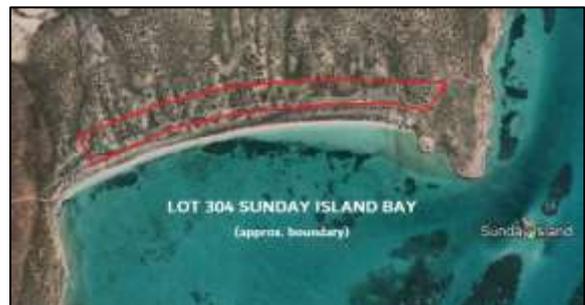


Sunday Island Bay

Sunday Island Bay is one of five freehold / leasehold lots on DHI where eco-tourism development is permitted. Details follow.

Lot No.	Area (ha)	Max. No. Units	Max. Int. Floor Area m ²	No. Overnight Guests
304	11.3	33	90	99

- Freehold land.
- Zoned: Special Use. Permitted Use: Low impact eco-tourism.
- 33 eco-pods proposed. 30 eco-pods for guests.
- Approx. 4,500 overnight visitors p.a.
- Majority of guests arriving by barge / 4WD until DHI infrastructure is upgraded.
- Off-grid, eco-accommodation proposed with no on-site catering. Staff to be housed on site.
- Could host hire-rental, transport & tours.
- Current status: pre-planning, local development plan, development application.



The Shark Bay Local Planning Scheme (Oct. 2018) does not allow subdivision of lots on DHI. Alternatively, landowners can facilitate leases, sale of shares (equity), time share, pre-sale / block bookings, or establish exclusivity agreements with tour operators and facility operators-managers.

Sunday Island Bay South

Sunday Island Bay South is one of five freehold / leasehold lots on DHI where eco-tourism development is permitted. Details follow.

Lot No.	Area (ha)	Max. No. Units	Max. Int. Floor Area m ²	No. Overnight Guests
305	4.6	13	90	39

- Freehold Land.
- Zoned: Special Use. Permitted Use: Low impact eco-tourism.
- Privately owned.
- Private use dwelling established on site.
- Off-grid. Seasonal use.
- Current status: developed for private use.



Turtle Bay - Cape Levillain

Turtle Bay - Cape Levillain is one of five freehold / leasehold lots on DHI where eco-tourism development is permitted. Details follow.

Lot No.	Area (ha)	Max. No. Units	Max. Int. Floor Area m ²	No. Overnight Guests
300	2.5	7	90	21

- Leasehold land.
- Zoned: Special Use. Permitted Use: Low impact eco-tourism.
- 10 luxury guest rooms proposed (plus staff accommodation).
- Approx. 800 overnight visitors p.a.
- Guests arriving by 4WD, fast-boat, plane & helicopter.
- Off-grid, luxury eco-facility, on-site hospitality & premium guest services (proposed concept).
- Current status: preliminary concept development.



Tumbledown Point

Reserve R50326 / Lot 351 at Tumbledown Point is for the use and benefit of Aboriginal People and the Malgana People in particular. Approximate site boundaries are shown below.



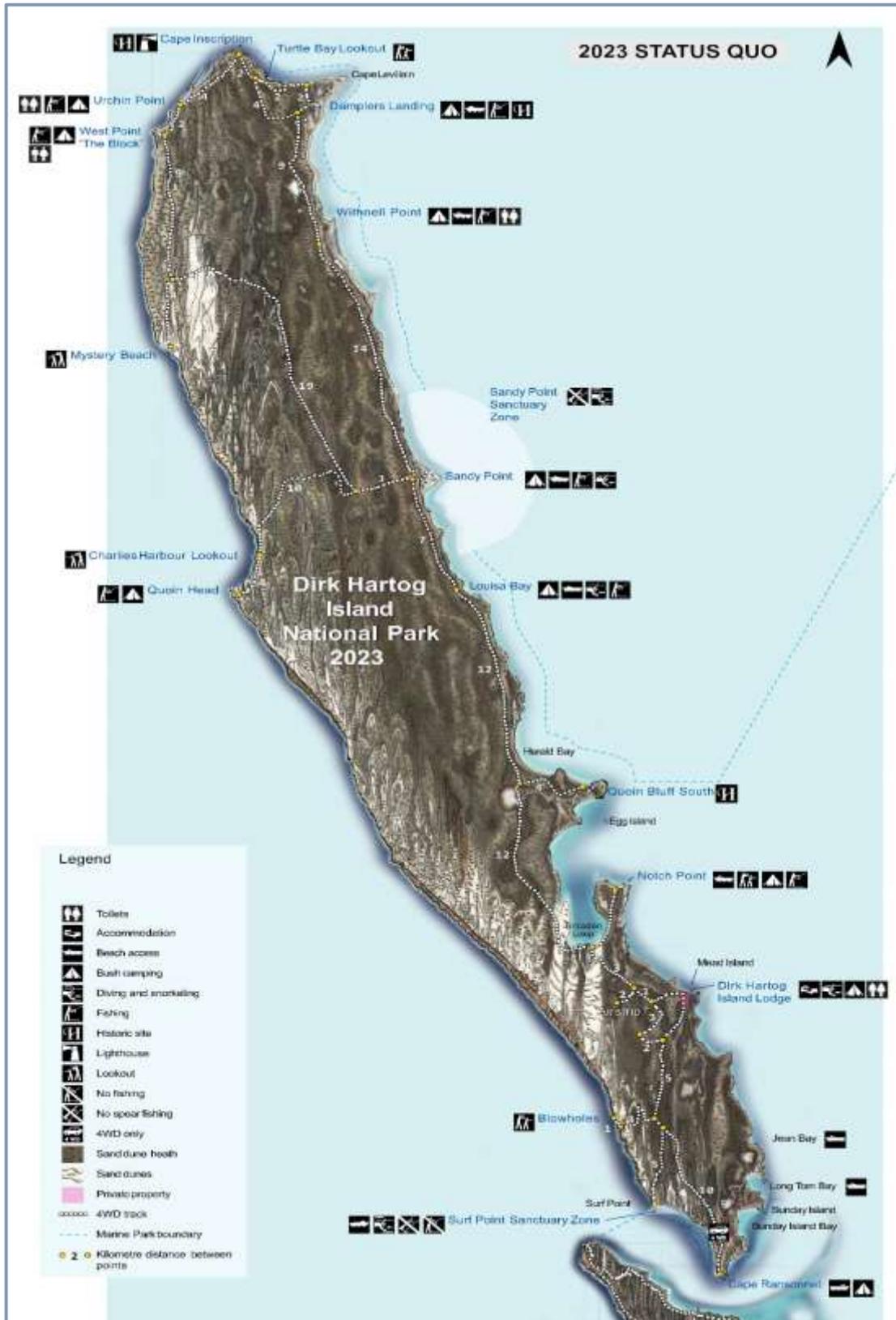
Dirk Hartog Island NP

Potential opportunities include:

- Northern and Southern visitor areas; each with day use sites & activities; serving visitors staying north & south (& future visitors staying Sunday Island Bay).
- Drive Loops. Mystery loop (north) & Blowholes Loop (south)
- Hiking / Kayak Trail; Cape to Cape; south to north; a 'great walk' candidate.
- Heritage node at Cape Inscription (upgraded as per 2012 master plan)
- Service node; to be investigated for locating at Herald Bay or Homestead Bay; purpose is to facilitate supplies-deliveries, operational services, tour operators & host essential infrastructure / plant / equipment.
- Hot spring - natural bath (location to be investigated; water source possibly Wapet Bore near Herald Bay Outcamp or other capped / closed bores on southern DHI)
- Day use site, Tetradon Loop Cove; a protected, calm, shallow beach, for kiteboarding, foiling, windsurfing, swimming, etc during the windy spring-summer season.
- Moorings and shore-based anchoring systems to facilitate recreational boating visitors, for day use and overnight stays.

- Short walk trails at campgrounds and day use sites; increasing recreation where NP visitors stay overnight.
- Wind-shade shelters at protected beaches to facilitate spring-summer visitation.
- NP campground limit of 30 (not 20) vehicles (up to 40 during peak periods or events).
- Cape Inscription Lighthouse Keepers Quarters upgraded to accommodate visitors.
- Group camp site for tour operators hosting small groups overnight (e.g. at a former outstation camp such as Herald Bay)
- 'Gateway' entry nodes at Shelter Bay & Cape Ransonnet with amenities & information.
- Multi-modal communication of biosecurity practices and protocols.
- Potable water supply available outside / away from DHI lodge (user pays, fees apply).
- Alternative approaches to improving road-track condition; making travel on DHI safer.
- Night rated airstrips; more resilient, less prone to flooding; enabling a better response capability in emergencies.
- Toilets at all NP campgrounds and popular NP day use sites; waste - pollution control.

A map of DHI follows showing key sites, roads and activity areas as at 2023; representing the **current** status of DHI. A similar map is used in a later section to highlight recommendations.



SECTION 8 - RECOMMENDATIONS & ACTIONS

RECOMMENDATIONS

To improve and diversify the visitor experiences on DHI the following is recommended:

- Continue educating DHI visitors on biosecurity requirements and responsible 4WD'ing *before they leave home* to reduce impacts, encourage safe practices and ensure that visitors are cognisant of the need to treat travelling and camping on DHI differently to any other camping experience and the need to share the responsibility required to maintain the ecology of the island.
- Upgrade roads-tracks on DHI with pull-over bays; more frequent maintenance of *severely* damaged sections; more directional-informational signage; and trial alternative methods of road repair to improve road quality over time.
- Create northern and southern visitor areas when presenting or communicating Park information to visitors; encourage visitors to explore areas close to their accommodation; aim is to reduce road usage / damage & traffic.
- Establish two new self-drive Loops. Mystery Loop (north) & Blowholes Loop (south).
- Establish a 'Cape to Cape' hiking / kayak trail; travelling south to north; Cape Ransonnet to Cape Inscription; a potential 'great walk' candidate for tours & day treks.
- Investigate the development of low-key sites as lookouts, overlooking coast and ocean, to view marine life and coastal environs.
- Upgrade Cape Inscription into a *nationally significant* high quality heritage node (i.e. similar to DEC 2012 master plan concept); create a 'must see' heritage experience for DHI visitors.
- Upgrade Cape Inscription Lighthouse Keepers Quarters to: accommodate visitors overnight, host small events / tours, enable scientists / specialists to stay overnight during field research.
- Commence master planning for a DHI service node; e.g. Herald Bay or Homestead Bay; service node is to facilitate DHI deliveries-despatches, operational services, essential infrastructure / plant / equipment, and host tour operators during peak visitor season; essentially a 'works depot' as DHI grows.
- Investigate the development of new, year-round, day use beach sites on protected shores, with calm shallow water; possibly Tetradon Loop, eastern end of the northern-most dunes; for kiteboarding, foiling, windsurfing and swimming during the spring-summer 'windy' season.

- Investigate installation of moorings and/or shore-based anchoring systems to facilitate recreational boating for DHI visitors at existing boating sites and protected coves / bays.
- Establish (formalise) short 'nature' walks at all of the NP campgrounds; thus increasing recreation activities adjacent to where visitors stay overnight (rather than driving to distant sites); these will provide opportunity for visitors to explore local resident fauna & habitat (1616 Project).
- Establish 3-4 wind-shade shelters at protected beaches to facilitate spring-summer visitation.
- Investigate increasing NP limit of campground vehicles from 20 to 30¹³ (and temporarily up to 40 during events or school holidays).
- Investigate the development of 4-5 *premium* nature-based camp sites within the NP.
- Investigate the establishment of a group camp site for tour operators hosting small groups overnight (e.g. at a former outstation site at Herald Bay or Sandy Point).
- Establish 'Gateway' entry nodes at Shelter Bay & Cape Ransonnet with amenities, information and signage to welcome and inform visitors.
- Increase the vigour of multi-modal communication of biosecurity practices and protocols; aim to saturate visitors with biosecurity when pre-planning, trip preparation and during visitation.
- Investigate establishing potable water supplies away from DHI lodge on a user pays basis; facilitate the water needs of (ill prepared) day trip visitors and ensure overnight visitors (staying & touring) are suitably resourced at times of need & despair.
- Investigate upgrading *all* DHI airstrips to 'night rated' and engineered to a more resilient standard, less prone to flooding, enabling a better response capability in emergencies.
- Establish toilets at all campgrounds and major day use sites.
- Establish facilities to host (house) rangers on DHI during peak periods initially and permanently when visitor levels warrant.
- Investigate the merits of establishing an App that ALL visitors download before landing on DHI that provides site information, maps, itineraries, drive routes, 1616 Project details, emergency & biosecurity protocols, GPS-tracking (vehicle flows/visitor counts), weather (storm) forecasting, contact details, etc.
- Investigate restricting the use of all vehicles on DHI between sunset and sunrise to minimise animal 'hits' (e.g. road kill); including gradually phasing in restrictions; emergencies excepted.

Recommendations are shown graphically on a following page.

¹³ Rationale is currently *some* NP camp sites are occasionally vacant, including during peak periods. With robust base line data to assess individual NP camping areas an increase in the limit to 30 (or more) can be evaluated.



ACTIONS

The following actions are subject to 'DBCA assessment of sites, impacts and Park Objectives'.

Terrestrial

- Investigate the development of *premium* nature-based camp sites within the NP, potentially at Turtle Bay east, Shoal Bay 3.5km south of Withnell Pt, secluded beach-shore 7.5km south of Louisa Bay, Quoin Bluff South (shore); and 2.7km north of Tumbledown Point. Potentially co-located with / near Cape-to-Cape trail huts/amenities.
- Investigate site access to, and installation of, 3-sided wind-shade shelters on beaches with protected shorelines & calm shallow water; for example, Tetradon Loop, Long Tom Bay, Jean Bay, Herald Bay; to facilitate kitesurfing, windsurfing and foiling; shade shelters for day use only (no camping).
- Formalise campsites accessible by recreational boat users, for example, at Long Tom Bay, upper Tetradon Loop, Notch Point, Quoin Bluff South, Homestead Bay; investigate installation of a shore-based anchor system to secure 6m-8m boats stern-in / bow-out overnight (i.e. similar to Thomsons Bay, Rottnest); upgrade online information for boaters.
- Explore with DOT the installation of navigational aids (e.g. cardinal markers-buoys & lead markers), moorings and designated anchoring areas at protected sites (DEC 2012, p.25).
- Investigate the development of a self-guided 4WD heritage trail incorporating ruins, military camp, inscriptions, pastoral outcamps, maritime explorer camps, etc.
- Investigate nature walk trails with markers, wayfinding information and interpretation (QR codes); beginning/ending at NP campgrounds to encourage short walks from campsites.
- Investigate & identify suitable sections of DHI roads-tracks being designated as 'multi-purpose' MTB & 4WD use, for example, Cape Levillain to Cape Inscription, Cape Inscription to Mystery Beach, Sandy Point to Withnell Point. Or investigate re-purposing disused pastoral tracks for MTB use.
- Vigorously promote dark / night sky experiences in pre-planning information; list apps that may help visitors experience DHI's night sky with low light pollution; suitable apps include Night Sky, Star Walk 2, Sky Guide, Sky View, Star Chart, Go Skywatch;

Services

- Investigate facilitating the *growth* of scenic helicopter flights on DHI by granting permission to follow set routes and land at remote sites that offer a wider range of experiences on DHI.
- Support operators to establish 4WD hires on DHI to enable growth of boat / plane visitor arrivals and self-drive tour packages with accommodation, hospitality, flights and provisions.
- Encourage 4WD bus-coach operators to establish transfer / shuttle services linking accommodation areas with popular day use sites; signpost collection points at-near campsites where visitors can be picked up / dropped off; help minimise road use and vehicle traffic.

General

- Investigate the use of QR codes and *additional* digital (download) information to inform visitors of DHI's flora, fauna, seasonal & resident marine species, tracks-trails, day use sites, drive trails, pre-trip preparation, biosecurity requirements, and emergency response;
- Install wayfinding signs at turnoffs, junctions, day use areas; reduce navigation errors & oversights, etc, minimise unnecessary road use and traffic.
- Investigate the installation of low-key, minimal infrastructure lookouts, overlooking coast and ocean, to view marine life (e.g. Surf Point to view shark aggregations; Quoin Bluff South, Turtle Bay, Charlies Harbour & Cape Inscription).
- Investigate development of an app for DHI visitors incorporating 1616 project, heritage sites, day use and feature sites, GPS-guided mapping, biosecurity protocols, flora-fauna descriptions (incl scats & tracks), cultural-heritage information, suggested itineraries, emergency response information and tour-transport contacts. Phase out printed materials. App purchase could be included in DHI NP camping / park / access fees.
- Until alternative barge/ferry services commence, establish Cape Ransonnet as the 'gateway' entry point to DHI; install toilets, information / QR codes, shade shelter (waiting terminal) and parking area; establish similar at Shelter Bay.
- Establish suggested itineraries for each of DHI's four seasons and distribute via NP booking website (pdf download) and linked websites; include activities such as walking, swimming, snorkelling, bird / wildlife watching, kayaking / supping, stargazing, fishing, 4WD'ing, sight-seeing and relaxing; incorporate popular day use sites / feature sites, a map and suggested routes / travel times.
- Important preferences and basic requirements of visitors must be communicated through itineraries, pre-trip information and promotional messages; including safety, accessibility, accommodation, activities, amenities, sustainability, cost and risk management;

1616 Project

- Investigate '*pushing*' digital information to visitors on the 1616 Project upon booking a trip to DHI, for example, via downloads or weblinks; pushing information on DHI biosecurity requirements, flora/fauna, self-guided walks, how to identify footprints/scats/habitats, opportune viewing times, and 'taking only photographs and leaving only footprints'; making the 1616 Project a distinct activity for visitors. Alternatively, develop an App that *must be* downloaded to manage bookings and island access and includes comprehensive information.
- Investigate avenues to sustain funding for the 1616 Project beyond 2030; create a 'DHI friends group' or engage WA Parks Foundation to establish a program of corporate sponsorship, community donations, fundraising events, bequeaths and visitor / operator levies-donations to sustain DHI's fauna refugium status in perpetuity.

Culture & Heritage

- Investigate with Malgana AC the interpretation / communication of Malgana cultural heritage and cultural landscape (language, stories, songlines about places, land and sea country), traditional ecological knowledge (flora, fauna, landscapes, bush food and medicine), customary practices and enjoyment of country, responsibility for country; distribute information in digital / app mediums / QR.
- Investigate interpretation of DHI maritime history in collaboration with the WA Museum. Discrete interpretive panels (or QR codes) be installed at/near historic maritime sites with details also included in digital / app modes of communication.
- Investigate updating the 2010 Cape Inscription Management Plan Concept (DEC) to significantly upgrade the Cape Inscription precinct including upgrades to re-purpose the Lighthouse Keepers Quarters for overnight accommodation.
- Support DHI pastoral history displays / interpretation at the Homestead precinct, for example, in the old shearing shed; DHI Lodge supported in developing interpretive displays, tours, activities and communication that respectfully delivers pastoral heritage stories to visitors (e.g. support access to WA Museum's digital displays at SB Discovery Centre).

Nature-Based

- Establish a 4WD (70km) self-drive trail as the 'Mystery Drive Loop'. Refer to the Shark Bay Terrestrial Reserves and Proposed Reserves Management Plan 2012 (DEC, page 25). With wayfinding signage and digital / app information to enhance the visitor experience. Refer to this trail as the 'northern' loop when communicating visitor information.
- Investigate a 4WD route to establish a self-drive (38km) 'Blowholes Drive Loop' linking Tetradon Loop to coastal lookouts, Blowholes, Surf Point and the Homestead Precinct. With wayfinding signage and digital / app information to enhance the visitor experience. Refer to this trail as the 'southern' loop when communicating visitor information.

- Increase the NP's existing 20-vehicle limit to a 30-vehicle limit to better utilise existing infrastructure at existing campgrounds. Retain the eight existing NP campgrounds as a *minimum* number of camping areas.
- Investigate a hike / kayak trail from Cape Ransonnet to Cape Inscription with designated overnight facilities (e.g. water, toilets, huts & shade); user fees may apply; commercial tour operators be permitted to use *vacant* huts overnight to facilitate tours.
- Investigate where potential (future) conflict may arise between campers and day use visitors at popular sites; re-route roads to separate day use parking area away from camping areas; re-route beach access paths-trails away from camping areas; discourage day use visitors traversing through / near camping areas.
- Establish toilets in all NP camping areas and at popular/major day use areas such as Sandy Point, Cape Inscription and Cape Ransonnet (arrival gateway & campground);
- Investigate relocating *existing* on-beach campsites to behind the primary dunes - *where practical* - by rerouting access tracks to avoid damage to bird nests / eggs / habitats on shorelines; especially where beach access tracks are particularly soft-boggy and challenging for 4WD's to access campsites on beaches.
- Investigate the development of 3-4 premium, remote, single vehicle camp sites, with outstanding natural features (e.g. views, beach, privacy, sheltered from wind), with premium tariffs (e.g. 100% above standard). Possible sites to investigate include: sheltered bay 800m west-southwest of Tumbledown Point; sheltered cove 2600m south-southwest of Quoin Bluff South; beach-side east of Herald Bay Outstation; sandy shore 3500m north of Herald Bay Outstation; sandy headland 3600m south-southeast of Sandy Point shearing shed site; sheltered bay 560m west of Notch Point.

Inclusive - Mobility Visitors

- Investigate select NP sites to host facilities / infrastructure that support inclusive - mobility visitors. Suggestions include a floating dock at-near Homestead Bay for visitors arriving by boat; beach-friendly wheelchairs made available from DHI Lodge for use at NP sites; a dedicated camp site with inclusive-compliant facilities (e.g. a suitable site at Withnell Point campground; or the currently informal-unofficial Turtle Bay campsite re-assigned for inclusive only campers); There are currently no dedicated facilities for inclusive - mobility visitors on DHI.

Visitor Safety

- Continue educating DHI visitors on responsible 4WD'ing to reduce impacts and encourage safe 4WD practices such as engaging four-low 4WD (slow speed; not four-high, high speed),

reducing tyre pressure (15psi) on beaches & sand dunes, reducing the weight of towed boats and trailers, driving at low speeds (30kmh), using existing tracks on beaches & dunes, carry recovery gear (recovery boards, shovel & stretch strap), and using UHF radio to communicate with 4WD'ers.

- On the western side of DHI, at popular fishing sites with dangerous cliffs & rocky shores, install safety signs / information, safe anchor points & life rings to help reduce risk to recreational fishers. Liaise with RECFISHWEST.
- Upgrade roads-tracks on DHI with the addition of pull-over bays; more regular maintenance of severely damaged sections; additional wayfinding signage (e.g. before & at turnoffs; distance markers; speed limit signs); and trial alternative approaches to road repair-maintenance (e.g. re-purposing bitterns-brine, scraping immediately after rain, scraping equipment permanently residing at vulnerable sections of road and used regularly to repair trouble spots).
- Investigate *programmed* maintenance to airstrips/helipads across DHI; an increase in fly-in visitors will require more frequent assessment of landing sites, defects-impacts, and access to raw materials for strip/pad maintenance, to ensure operator & visitor safety.
- Investigate an app / weblink / digital downloads that provide visitors with information to facilitate evacuation / departure at short notice, such as contact details, transport options, first responders, outside assistance providers, sites to muster / evacuate from, and checklist procedures to follow. Communicated to visitors upon booking and reiterated on arrival at Gateways.
- Commence an education program with campers and day trip visitors on DHI to establish correct protocols for storing and managing food and rubbish (i.e. in sealed containers); Bettongs, chuditch and native animals will invade campsites for food and rubbish; DHI's fauna has potential to negatively affect the camping experience if correct protocols are not followed; campers feeding wildlife is not permitted.



Tourism Development

- Investigate the installation of small, renewable energy powered, [desalination](#) facilities at water points, for example, where hike-walk trails converge with day use sites, at Cape Inscription (a major hub), or a central location such as Louisa Bay; investigate water sold on a cost-recovery basis; commercial operators could own and manage the facilities.
- Investigate activating all three existing airstrips on DHI to maximise emergency response capabilities and improve the flexibility of flight (tour) operators servicing DHI across all weather scenarios; all three airstrips should be night-RFDS rated where possible.

- Investigate and identify protected shorelines with depths close to shore greater than 2.0m as potential sites for a barge / supply vessel / ferry landing facility; a shore-based ramp, floating dock or service jetty will be required in the medium term, with inclusive-mobility capability.
- Review the operations master plan for Herald Bay (DEC 2012) and investigate options to include sites / facilities for tour operators to establish a seasonal base that enables them to use the Herald Bay precinct for storage, transfers & deliveries; enabling a wider range of tours and visitors experiences, and assistance with emergency response.
- Investigate re-purposing the Sandy Point Shearing Shed (out station site) as a tour group camp site; would require toilet(s), a shade-wind shelter and cooking area; could also be used to accommodate groups during an event on DHI.

Biosecurity

- Maintain and *push* multiple channels of communication to educate visitors on the importance of biosecurity on DHI and the practices visitors should follow.
- Promote a checklist of biosecurity 'good practice' to visitors such as proper disposal of waste in bags in rigid containers away from fauna; cleaning 'soiled' equipment before departing home; recommended approaches to dispose of invasive pests found *after* arriving on DHI (e.g. mice, gecko's, insects, etc); undertaking pre-visit biosecurity checks at Shelter Bay (while waiting for the barge);
- Establish a biosecurity emergency contact number to report breaches, concerns or get help.
- Engage with the Department of Transport, Marine & Harbours, to include DHI biosecurity information on updates to digital marine charts used by visiting yachts / boats / ships; highlighting risks such as domestic pets, feral animals, disease, rubbish, waste disposal and hull cleaning; share the same with publishers of coastal cruising guides and marine publications dedicated to WA's coastline.

Sustainability

- Investigate engaging scientists / specialists to establish base line data to support annual monitoring of carrying capacity / limits of acceptable change in determining a sustainable level of recreational / tourism activities on a site-by-site and island-wide basis.
- Adopt controls/approaches within the proposed DHI NP management plan to minimise the impact of recreational / tourism activities by limiting - reducing visitor levels, prohibiting certain activities, closing access to certain sites, restricting access to certain types of transport, or banning certain equipment / plant; aim is to be *proactive* in minimising impacts before irreparable damage eventuates.

- Investigate opportunities to remove old rubbish tip waste and remnants from pastoral activities; this may require organised programs with Track Care, 4WD Groups and volunteers; programmed annual events could eventually shift focus onto maintaining naturalness and values.

Fees

- Investigate the introduction of user-pay fees to help sustain the natural, cultural and heritage values of DHI through the following:
 - National Park entry fee for overnight and day trip visitors.
 - Recreational boat landing / anchoring fee.
 - Surcharge levied on transport operators accessing DHI.
 - Airstrip surcharge per passenger, inbound and outbound.
 - Tiered camping fees; minimum fee for standard site with minimal features; premium fee for deluxe site with unique features such as privacy and isolation.
 - Friends of DHI membership fees.
 - Adopt a DHI mammal - local animal (for an annual fee).
 - Fee-paying volun-tourists to assist with monitoring, clean-ups & rehabilitation.
 - Public conservation fund to support projects & research.
 - Imposing fines and charges for not following DHI guidelines and protocols.
 - App with in-app purchases of *additional technical* information on flora, fauna, geology, marine environment, 1616 Project, conservation programs, etc.

Miscellaneous

- Investigate adopting a system whereby NP campers display 'proof of booking' on their vehicle dashboard when at camp sites; and increase random inspections by Rangers to identify campers without NP campground bookings.
- Investigate imposing minimum 3 night stay at any one NP camp site to reduce turnover of sites; impose 'no driving' from sunset to sunrise except in emergency; impose harsh penalties for dumping broken-unwanted items on DHI;

Stakeholders Consulted

In alphabetical order.

Australia's Coral Coast

Coral Coast Helicopters

Department of Biodiversity Conservation & Attractions

Department of Planning, Lands and Heritage

Dirk Hartog Island Lodge

Dirk Hartog Island Freehold Land Owners

Gascoyne Development Commission

Heyscape Tiny Cabins

Malgana Aboriginal Corporation

Monkey Mia Cruises

Ocean Park Aquarium

RAC - Monkey Mia Resort

Shark Bay Air Charter / Aviation

Shark Bay Discovery & Visitor Centre

Shark Bay Tourism Association

Shark Bay World Heritage Advisory Committee

Shire of Shark Bay

Tourism WA

Wula Gura Nyinda Eco Adventures

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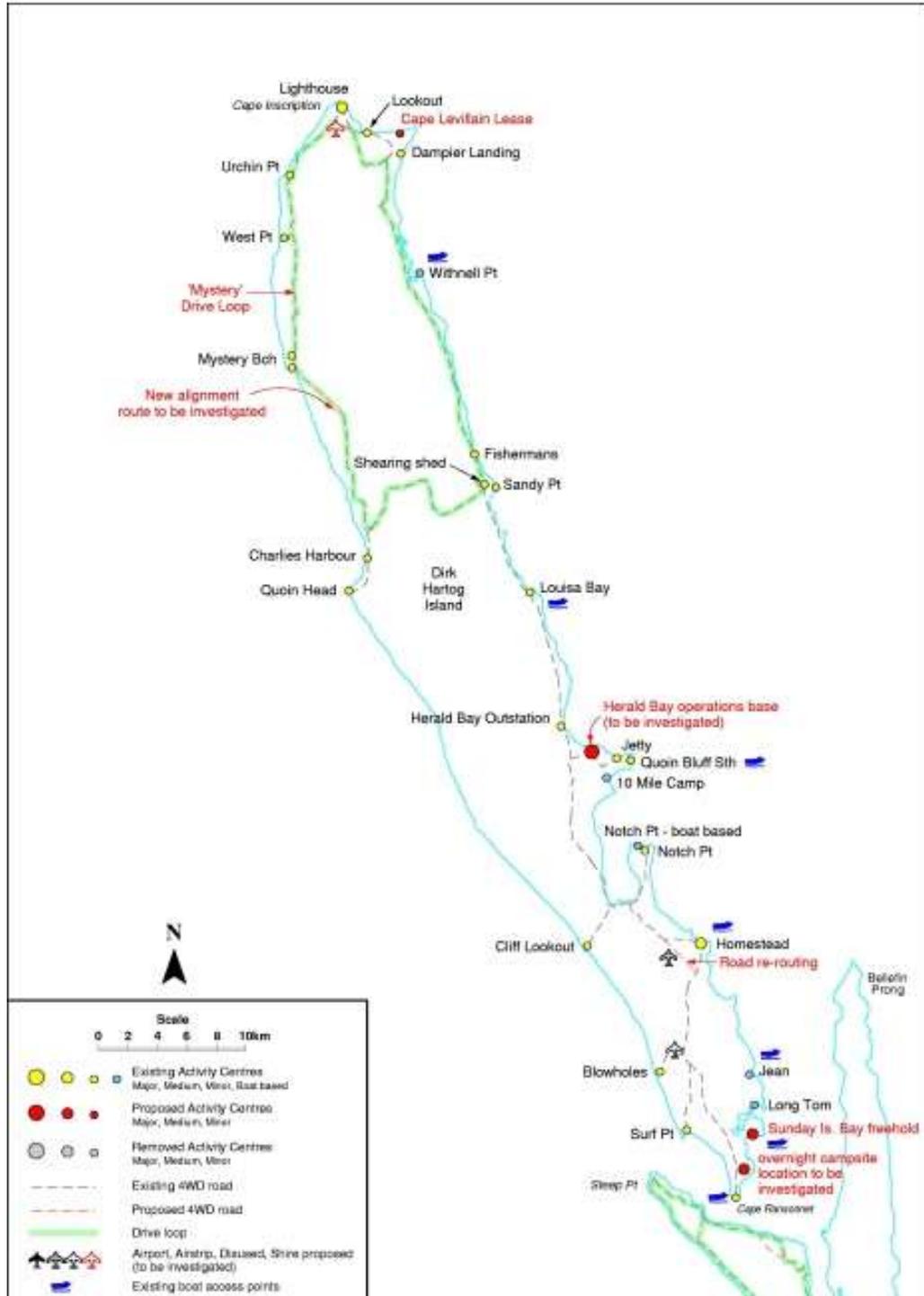
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Appendix

Dirk Hartog Island existing & proposed public access and recreation sites (DEC 2012, p. 209)





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