



MINERALOGY PTY. LTD.

Recreational Use Management Plan

Iron Ore Mine and Downstream Processing, Cape
Preston, Western Australia

Mineralogy Pty Ltd

October 2006

Recreational Use Management Plan

Prepared for

Mineralogy Pty Ltd

Prepared by

Maunsell Australia Pty Ltd

Level 1, 629 Newcastle Street, PO Box 81, Leederville 6902, Western Australia
T +61 8 9281 6100 F +61 8 9281 6295 www.maunsell.com

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Prepared by Jamie Shaw

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1.0 Introduction

1.1 Background

Mineralogy Pty Ltd (the proponent), proposes the development of an iron ore mine and downstream processing facilities at Cape Preston, 80km south west of Karratha.

In response to project environmental impact assessment requirements as determined by the Environmental Protection Authority (EPA), a Public Environmental Review (PER) was submitted to the Authority in December 2000 (HGM, 2000). The PER was supplemented with a Supplementary Environmental Review (SER) in February 2002 to address changes to the project design being sought by the proponent (HGM, 2002). Under the proposal assessed by the EPA pursuant to the PER and SER, and a subsequent successful application for a non-substantial change to the assessed project pursuant to Section 45(c) of the *Environmental Protection Act 1986*, the project would entail an annual mining rate of approximately 67.4 Mt and annual production of the following:

- Concentrate – approximately 19.6 Mt;
- Pellets – approximately 13.8 Mt; and
- Direct reduced/hot briquetted iron – approximately 4.7 Mt.

Through the Section 45 (C) process seeking Ministerial approval for a non-substantial change to the assessed project, it was made clear that the stockpiling and export of concentrate was intended and in this regard, it should be noted that the Minister's approval of the proposed change was unconditional.

The Ministerial Statement for the project was issued in October 2003, subject to a number of Conditions and the Proponent's Commitments. One of these Commitments was for the preparation of a Recreational Use Management Plan for the life of the project.

1.2 Relevant Legislation and Guidelines

State Government Legislation	Application
<i>Environmental Protection Act 1986</i>	PER assessment and Ministerial approval process, and Section 45 (C) non-substantial change
<i>Conservation and Land Management Act 1984</i>	Protection and management of land vested for conservation purposes
<i>Wildlife Conservation Act 1957</i>	Governs human interaction with native wildlife
<i>Maritime Archaeology Act 1973</i>	Governs human interaction with shipwrecks
<i>Mineralogy Iron Ore Processing Agreement Act 2002</i>	Act under which the project is developed
<i>Aboriginal Heritage Act 1972</i>	Protection of Aboriginal heritage sites
Best Practice Guidelines. Commonwealth Department of Environment and Heritage	
Planning a Workforce Environmental Awareness Training Programme 1995	

1.3 Purpose of this Document

To satisfy the conditions set down by the Minister for the Environment in Condition 13.1 of the Ministerial Statement No. 000635 (Minister for the Environment, 2003). Ministerial Condition 13.1 requires that:

Prior to the commencement of ground disturbing activities, the proponent shall prepare a Recreational Use Management Plan, to the requirements of the Minister for the Environment and Heritage on advice of the Environmental Protection Authority.

This Plan shall include:

- 1. a strategy to maintain public access to recognised "visitor locations" including the Fortescue River mouth and permanent pools along the river (as committed to by the proponent);*
- 2. consideration and steps to facilitate maintenance of appropriate fishing practices by employees (as committed to by the proponent); and*
- 3. strategies to protect popular "visitor locations" (such as the mouth of the Fortescue River and permanent pools along it).*

1.4 Objectives of this Document

This Recreational Use Management Plan is to be used in conjunction with the project Environmental Management System and Construction Environmental Management Plan. The objectives of this Recreational Use Management Plan are to:

- minimise impact of mine employees and subcontractors on the "visitor locations" within the vicinity of the project site;
- ensure that access to popular "visitor sites" is maintained for the use of the general public; and
- ensure that employees and contractors use appropriate fishing practices.

1.5 Responsibilities and Reporting

Overall responsibility for ensuring that site environmental management requirements are met will rest with the proponent's Environmental Manager. In respect of this Recreational Use Management Plan, this responsibility will include:

- ensuring that all personnel, both the proponent's workforce and contract personnel, conform with requirements pursuant to the Management Plan;
- ensuring that contractor staff are fully inducted and aware of their environmental responsibilities and obligations;
- ensuring that monitoring requirements are being met.

Contracting companies employed at the site will have to appoint an environmental representative. The key responsibilities of this representative will be to:

- maintain routine contact with the proponent's Environmental Manager to ensure that environmental objectives of this plan are being met;
- provide monthly reports to the proponent's Environmental Manager on environmental issues and conduct regular audits; and
- ensure that all management aims and monitoring requirements of this Recreational Use Management Plan are being met.

1.6 Consultation

Pursuant to Environmental Impact Assessment requirements under the *Environmental Protection Act (1986)*, Comprehensive consultation with stakeholders and members of the community has been undertaken. The outcomes of these negotiations were used to develop the commitments provided by Mineralogy and presented in the Public and Supplementary Environmental Review documents (HGM 2000, 2002) and, ultimately, in the development of this environmental management plan.

2.0 Project Description

2.1 Project Outline

The proponent plans to mine the George Palmer Orebody, which is located approximately 80km south west of Karratha and 25 km south of Cape Preston in the Pilbara region of Western Australia. A stockyard and laydown area will be constructed at Cape Preston. Preston Island is the intended location for the port facilities. Figure 2.1 depicts the location of the site in a regional context. The major components of the project are:

- open pit mine;
- desalination plant;
- HBI (Hot Briquetted Iron) plant;
- DRI (Direct Reduced Iron) plant;
- pellet plant;
- concentrator plant;
- tailings dam;
- system of conveyors and a service road to Cape Preston;
- product stockpile (HBI, DRI, pellets, concentrate) and adjacent general laydown areas at Cape Preston
- causeway to Preston Island;
- jetty to the load out / port facilities;
- port facilities; and
- accommodation for employees and construction staff.

Figure 2.1 - Regional setting of project area

3.0 Management Issues

The following sections identify the various activities that may be undertaken by project staff. The potential impacts resulting from recreational activities are also identified. Management of these impacts are tabled in Section 3.5, while management requirements for specific locations are outlined in Section 4.6

3.1 Recreational Activities

Although remote, Cape Preston and the Fortescue River mouth are widely used by Pilbara residents and tourists for recreational pursuits, particularly fishing. Long term campers regularly stay at the river mouth for periods of up to several months. During high tide, the Fortescue River is accessible by boat to a point some 2km upstream of the river mouth. There are also a number of seasonally variable pools along the Fortescue River and its tributaries which are currently accessed via a network of minor tracks throughout the project area. The location, size and number of these pools vary depending on seasonal conditions and river flows. A boat ramp carved into the river bank is located at the river mouth and is presently maintained by the owners of Indian Ocean Pearls, who have established a permanent camp near the river mouth. Their operations are located approximately 3km offshore, west from Cape Preston. Rubbish bins provided by the Roebourne Shire are emptied weekly during peak season and fortnightly during the off season. The camping season traditionally runs between Easter and September / October, depending on the seasonal conditions.

In addition to the mainland visitor points mentioned above, there are several islands located off the Pilbara coast which form the Great Sandy Island Nature Reserve (GSINR). Furthermore, the Dampier to Cape Preston Marine Management Area will incorporate a number of other islands. Special regulations will be applied to control the impact of visitors on these islands. These regulations will vary depending on the classification of the island to which they apply.

Minesite personnel are likely to participate in:

- fishing (open water, river and beach)
- boating
- camping / picnics
- nature watching
- swimming

3.2 Environmental Issues

The project site is located on a remote stretch of coast. To its west, the Great Sandy Island Nature Reserve (GSINR) incorporates 26 islands as a 'B' Class Reserve for the 'Conservation of Flora and Fauna' (HGM, 2004). Figure 3.1 shows the extent of the Nature Reserve as described by CALM (Department of Conservation and Land Management, now part of Department of Environment and Conservation), although it should be noted that the plan incorrectly excludes Preston Island from the reserve. The reserve does not affect the activities that can be undertaken in the marine environment around the islands. To the east, CALM proposes the creation of the Dampier Archipelago Marine Park and Cape Preston Marine Management Area (CPMMA) (Figure 3.2). It should be noted that the various management zones indicated in Figure 3.2 are in draft form, and are subject to change prior to finalisation of the Indicative Marine Management Plan (CALM, 2003). Many of the islands in the Dampier Archipelago are already classed as nature reserves. The formation of the CPMMA will have implications for future utilisation of the marine environment, in particular with the formation of no-take zones. No take zones are considered important tools for

managing fisheries, with ample evidence suggesting that the establishment of no-take zones has direct effects on the levels of fish stocks within them and in adjacent waters (Colman & Simpson, 1999).

Figure 3.3 indicates land use zones within the Cape Preston region, which are defined in Table 3.1. The map will be issued to all staff during inductions to ensure that recreational pursuits are compatible with the management objectives for the surrounding environment.

Zone	Purpose and Permitted Activity	Vested in
Conservation Zone	Conservation of marine organisms – fishing prohibited at all times	CALM
Conservation Zone	Outside of CALM conservation zones, but considered important enough to warrant protection from fishing	Mineralogy
Terrestrial Exclusion Zone	No vehicular access permitted at any time. Established for the protection of native flora and fauna	Mineralogy
Aquaculture Lease	Established for the purposes of commercial aquaculture operations. Access to these zones by members of the public is restricted	Department of Planning and Infrastructure
Moderate Protection Zone	Established for the purposes of protecting Mineralogy operations from encroachment by unauthorised personnel.	Mineralogy
Seasonal Exclusion Zone	Established for the protection of nesting turtles and birds. Access is permitted except during nesting periods as determined by CALM officers	Mineralogy / CALM
Recreational Access	For the purposes of beach access for fishing and other recreational pursuits	Mineralogy

Table 1 - Definition of project environmental management zones

3.2.1 Great Sandy Island Nature Reserve

Many of the islands in the reserve are inaccessible and well protected from human impacts. Day trippers, however, regularly visit a number of islands, from Pannawonica (Kozyrski, pers. comm. 2004). The islands are known to be valuable nesting grounds for a variety of seabirds, providing important undisturbed nesting and refuge sites protected from introduced ground predators common on the mainland (CALM 2000). While none of the islands within the GSINR is listed as significant breeding grounds for turtles (CALM 2000), it is possible that many of the islands with sandy beaches may be used by the five species of turtle occurring along the Pilbara coast.

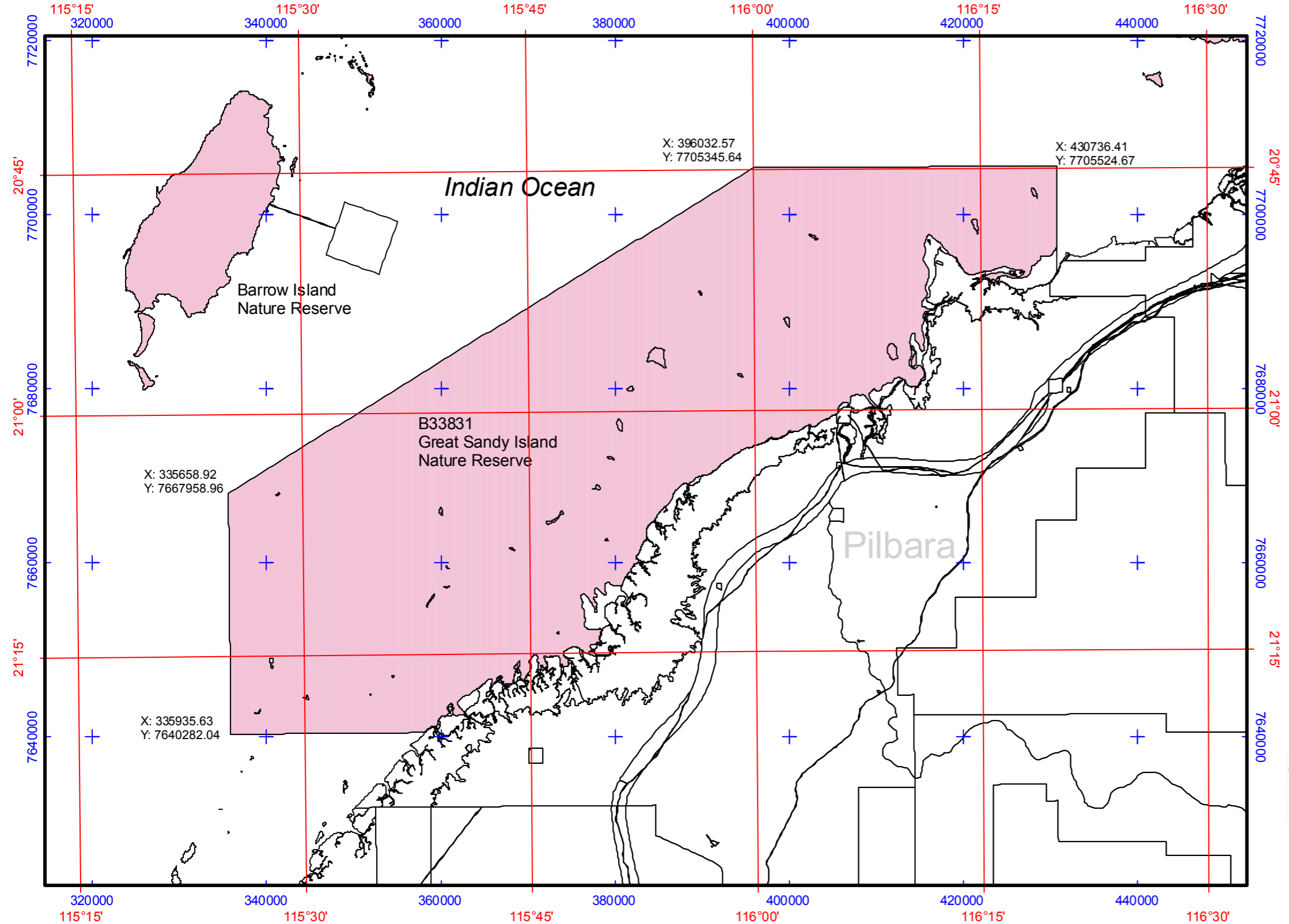
Human activities can significantly affect nesting birds. Some species build nests on the beach sand above the high water mark, which to the untrained eye can be very difficult to identify (Watson, pers. comm. 2004). Visitors to the islands during nesting season have the potential to unwittingly trample the nests and disturb brooding adults. For this reason, the islands are closed to access during nesting periods.

Turtle nesting season occurs between August and March. Successful incubation of turtle eggs requires ventilated, low salinity, high humidity nest sites that are not subject to flooding or erosion and have a temperature range of 25^o – 33^oC (Environment Australia, 2003). Human activities can impose significant pressure on nesting turtles. The most serious threat results from increased human night time presence on beaches used by the turtles. This can result in nesting females shifting their nesting sites, sometimes being forced to use less suitable beaches, or aborting or delaying egg laying. Artificial light sources also have the effect of disorientating the females after they have laid their eggs, and hatchlings, which require reflected moonlight to find the water after hatching.

Figure 3.1 - Great Sandy Island Nature Reserve.

(Reproduced with permission from the Department of Conservation and Land Management)

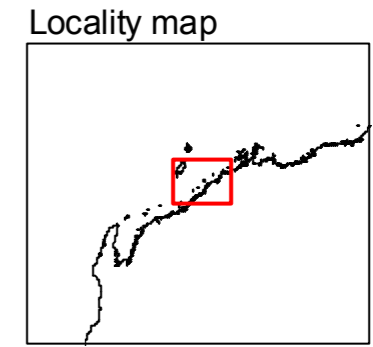
Great Sandy Island Nature Reserve



Legend

Cadastre (Land Parcels)

- CALM - Nature Reserve
- Cadastre (Land Parcels)



N

Scale 1:500,000
1cm represents 0.5km

0 10 20 30 40 Kilometers

GDA
Projection: Universal Transverse Mercator,
MGA Zone 50. Datum: GDA94

Produced Under the Direction of
Keiran McNamara Executive Director
Department of Conservation & Land Management.

Graticule shown at 15 minute intervals.
Grid shown at 20000 metre intervals.

The Dept. of Conservation and Land Management does not guarantee that this map is without flaw of any kind and disclaims all liability for any errors, loss or other consequence which may arise from relying on any information depicted

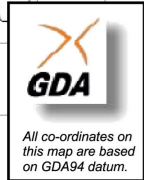
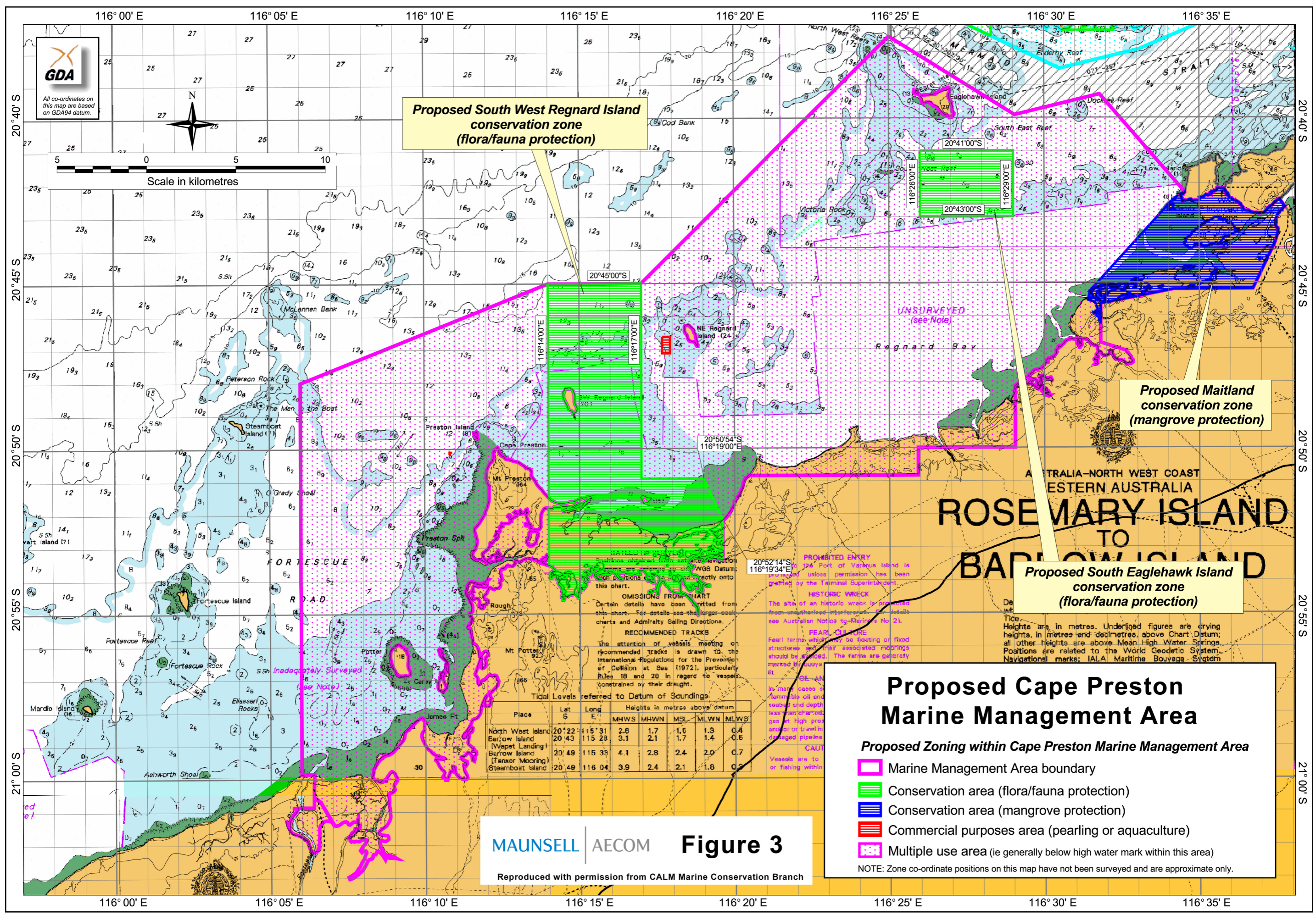
Reproduced with permission from CALM Marine Conservation Branch.

Figure 2

Produced at 10:55 on April 5, 2004

Figure 3.2 - Proposed Cape Preston Marine Management Area

(Reproduced with permission from the Department of Conservation and Land Management).



Scale in kilometres
5 0 5 10

Proposed South West Regnard Island conservation zone (flora/fauna protection)

Proposed Maitland conservation zone (mangrove protection)

Proposed South Eaglehawk Island conservation zone (flora/fauna protection)

Proposed Cape Preston Marine Management Area

Proposed Zoning within Cape Preston Marine Management Area

- Marine Management Area boundary
- Conservation area (flora/fauna protection)
- Conservation area (mangrove protection)
- Commercial purposes area (pearling or aquaculture)
- Multiple use area (ie generally below high water mark within this area)

NOTE: Zone co-ordinate positions on this map have not been surveyed and are approximate only.

MAUNSELL | AECOM Figure 3
Reproduced with permission from CALM Marine Conservation Branch

Tidal Levels referred to Datum of Soundings

Place	Lat S	Long E	Heights in metres above datum				
			MHWS	MHWN	MSL	MLWN	MLWS
North West Island	20° 22'	115° 31'	2.6	1.7	1.6	1.3	0.4
Barrow Island (Wapet Landing)	20° 43'	115° 28'	3.1	2.1	1.7	1.4	0.6
Barrow Island (Tanker Mooring)	20° 49'	115° 33'	4.1	2.8	2.4	2.0	0.7
Steamboat Island	20° 49'	116° 04'	3.9	2.4	2.1	1.8	0.9

WATERLOO PENINSULA
Positions obtained from aerial navigation systems are referred to the WGS Datum. Such positions do not necessarily apply to this chart.

OMISSIONS FROM CHART
Certain details have been omitted from this chart. For details see the larger scale charts and Admiralty Sailing Directions.

RECOMMENDED TRACKS
The attention of vessels meeting on recommended tracks is drawn to the International Regulations for the Prevention of Collision at Sea (1972), particularly Rules 18 and 26 in regard to vessels constrained by their draught.

PROHIBITED ENTRY
The Port of Victoria Island is prohibited unless permission has been granted by the Terminal Superintendent.

HISTORIC WRECK
The site of a historic wreck is protected from unauthorized interference. For details see Australian Notices to Mariners No 21.

PEARL CULTURE
Pearl farms which may be floating or fixed structures and their associated moorings should be avoided. The farms are generally marked by buoyage.

PEARS
In many cases of flammable oil and seabed and depth less than charted, gas at high pressure or travel in damaged pipelines.

CAUTION
Vessels are to avoid or fly within

Tide Heights are in metres. Underlined figures are drying heights, in metres and decimetres, above Chart Datum; all other heights are above Mean High Water Springs. Positions are related to the World Geodetic System. Navigational marks; IALA Maritime Buoyage System.

3.2.2 Cape Preston Marine Management Area

A marine management area differs from a marine nature reserve or park in that they allow multiple uses including, very importantly, conservation and protection of the marine environment (CALM, 2003). The *Conservation and Land Management Act* states that a marine management area is established ‘...for the purpose of managing and protecting the marine environment so that it may be used for conservation, recreation, scientific and commercial purposes. Commercial purposes include:

- a) aquaculture, commercial fishing and pearling activity;
- b) mining, within the meaning of the *Mining Act 1978*;
- c) seismic surveys and exploration drilling for petroleum; and
- d) production of petroleum and associated activities’.

Several marine habitats occur within the proposed CPMMA, supporting over 2000 species of marine organisms. Those habitats occurring in the vicinity of Cape Preston are:

- rocky shores, shoreline reef platforms and offshore intertidal reefs;
- intertidal mud / sand shoals and beaches;
- mangrove and salt marsh communities;
- coral communities; and
- subtidal sand/silt/rubble and limestone pavement with macroalgae and seagrass.

Public attention usually focuses on the larger marine animals, such as whales, fish and turtles, however their conservation depends on the protection and responsible management of the whole marine environment. The most common species of general interest encountered within the CPMMA are whales, turtles and dugongs.

Several eco-tourism enterprises have been established along the Western Australian coast to allow the public to view migrating whale populations. They are managed under the *Wildlife Conservation Act* and operators adhere to a strict set of guidelines controlling the way they interact with marine mammals. Increased pressure from individual boat operators has the potential to cause significant disturbance to the migratory habits of these species.

Dugongs feed primarily on seagrass beds. The most significant populations of dugongs occur further south, at Shark Bay, however there have been several reported sightings of individuals grazing around the Dampier Archipelago. Dugongs are susceptible to injury from boat propellers, particularly in the more shallow waters where they tend to graze. They are listed under “*other specially protected fauna*” in Schedule 4 of the *Wildlife Conservation Act* (CALM, 2000).

Recreational fishing is a popular pastime along the entire Pilbara coast, with most activity focused around the islands and reefs of the proposed marine reserve. The Pilbara region has one of the highest boat ownership rates in Australia (CALM 2003). The formation of the CPMMA will create certain ‘no take’ zones to provide a point of reference for monitoring and research. Apart from depleting natural fish stocks, increased fishing pressure also has the potential to cause damage to submerged habitats through poor deployment of anchors and moorings.

3.2.3 Terrestrial Environment

The CPMMA incorporates the transitional zone between the marine and terrestrial environments. Much of this zone comprises extensive mangrove communities. Mangrove communities are considered to be highly valuable ecosystems, and many of the mangals found in the Pilbara region have been assessed as having international biodiversity and ecological significance, including the communities east of Cape Preston and at the Fortescue River delta (CALM, 2003). Formal legislation protects Mangroves throughout the state. Any developments likely to impact upon them are subject to environmental impact assessment by the Department of Environment, (DoE, now part of Department of Environment and Conservation) and EPA.

Cape Preston is surrounded by mangroves in pristine condition. Two conservation zones within the CPMMA have been designed to protect mangrove communities, one of which is located immediately east of Cape Preston and is designated as a conservation zone for the protection of flora and fauna.

Mangrove communities are susceptible to a number of disturbances, namely alterations to tidal movements, aggregation of non degradable waste materials within their extensive and complex root systems and trampling by fishing for mud crabs. Four wheel drive (4WD) activity, overfishing and pollution, particularly from oil spills and dust, can also cause a decline in the health of the community.

The Pilbara scenery is renowned for its spectacular and rugged beauty and is an attractive drawcard to many 4WD owners. The use of 4WDs allows for greater access to the coast line, opening up more fishing locations to exploitation. They also enable people to travel well off the beaten track, providing opportunities for tourism and sight seeing further inland. Vehicles have the potential to cause considerable damage to native vegetation and soil structure when travelling off road and 4WD owners need to be mindful of the consequences of their movements with regards to their impact on native vegetation. Furthermore, when travelling inland, it is most likely that pastoral land will be traversed, and care must be taken to ensure that the activity does not negatively impact on the pastoral owner's capacity to operate (refer also to Section 3.3.2).

3.3 Social Issues

In addition to potentially affecting the natural environment, project related recreational activity could also affect certain social values in the vicinity of Cape Preston. Social values relate to the human usage of the area and include indigenous and maritime heritage, commercial and recreational usage, aesthetic qualities, science and education. Popular visitor nodes and neighbouring land uses are depicted on Figure 3.3. Specific locations of popular pools along the Fortescue are omitted. These pools, while often remaining for long periods of time, regularly change location or dry up in response to floods and droughts.

3.3.1 Commercial Fisheries

Commercial fishing, including pearling, crabbing, prawning and collection of corals and aquarium species currently occurs throughout the CPMMA. In particular, Indian Ocean Pearls operates from a base at the mouth of the Fortescue River, with their pearling lease located about 3km west of Cape Preston. Increased boating traffic, associated with an increased number of boat owners accommodated at the mine, could impinge on those operations.

3.3.2 Pastoral Land

The land surrounding the proposed project site is subject to the Mardie Station Pastoral Lease. Impact on pastoral operations as a result of project related recreational activity is likely to be fairly low. The greatest potential impact in this regard would arise from project personnel accessing particular sites within the Pastoral Lease and possibly interfering with pastoral infrastructure. 4WD motorists should also take care to remain on established tracks as much as possible in order to avoid damaging the native vegetation that stock depends on for their survival. Shooting should also be prohibited on the pastoral lease. It is normally regarded as common courtesy to request permission from pastoralists prior to travelling across their lease.

3.3.3 Anthropological Heritage

Several aboriginal heritage sites have been identified around the Cape Preston area. A survey conducted in 2001 identified a total of 145 Aboriginal archaeological sites in the vicinity of the project area, of which 92 were within the project boundaries (Quatermaine, 2001). The survey covered only a 10% sample area, and the volume of finds within that area indicates the potential existence of other archaeological material (Quatermaine, 2001). In addition, a number of the sites are classified as restricted, because of their cultural significance, including burial grounds, mythological sites and traditional Law sites (O'Connor, 2003). These areas should not be visited or disturbed by non-Aboriginal people and accordingly, recreational activities have the potential to conflict with the wishes of the traditional land owners in these respects.

Many shipwrecks have occurred along the Pilbara coast since Europeans first charted it in 1628. These sites attract both natural biota, by providing alternative habitats as well as people, due to improved fishing and diving opportunities. Increased visitor numbers has the potential to affect these sites by increased irresponsible waste disposal and physical disturbance.

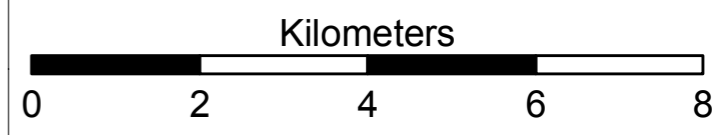
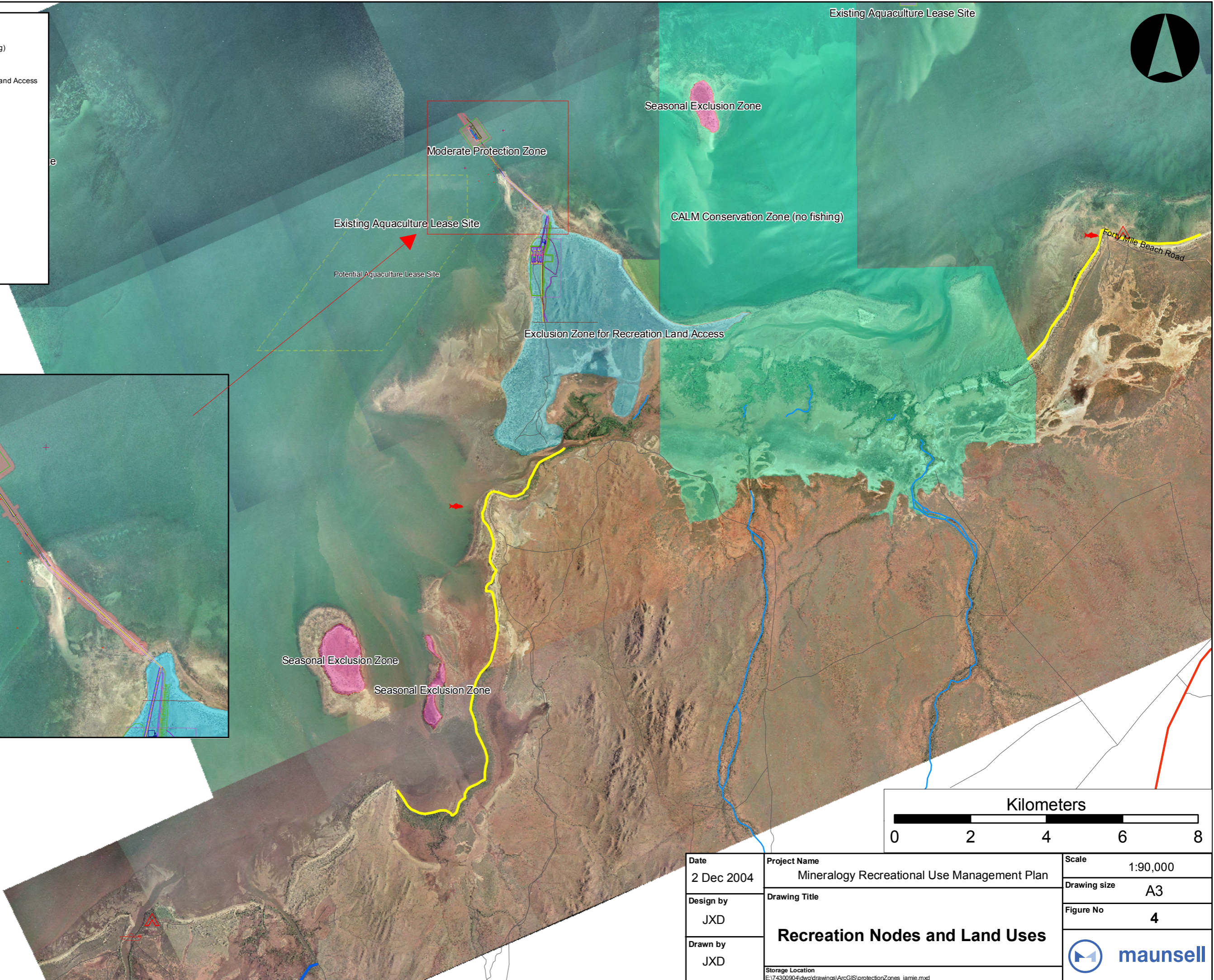
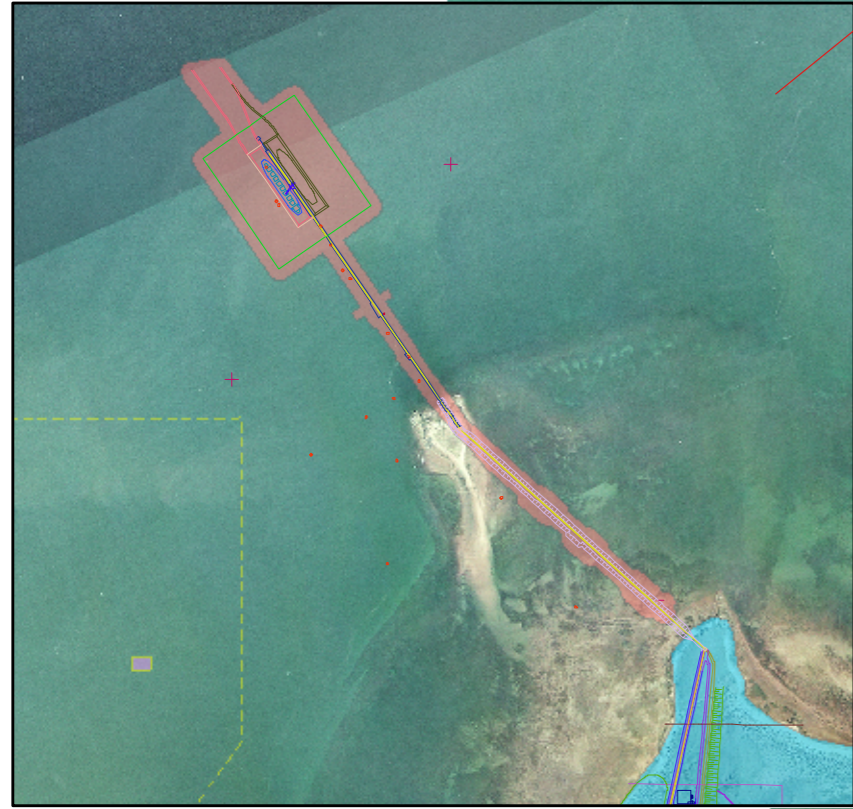
3.3.4 Remote Values

One of the major attractions of the Pilbara coast is its remoteness and virtual pristine condition along much of its length. Cape Preston falls into this category. Much of the coast either side of the cape is undisturbed, as is much of the land around it, although the Fortescue River mouth is heavily infested with mesquite. Years of uncontrolled activity along the coast has resulted in several rough tracks leading to various points of interest, mainly for fishing, but also for camping and other activities. Increased human presence at the site has the potential to cause higher rates of erosion of unformed tracks and more damage to mangroves and other coastal habitats. Increased numbers of visitors will also have the effect of reducing the remoteness of the area for which it is currently valued.

Figure 3.3 - Project Environmental Management Zones

Legend

- CALM Conservation Zone (no fishing)
- Conservation Zone (no fishing)
- Exclusion Zone from Recreational Land Access
- Existing Aquaculture Lease Site
- Moderate Protection Zone
- Potential Aquaculture Lease Site
- Seasonal Exclusion Zone
- Recreational Access
- Camping Site
- Fishing Spot
- Boat ramp
- Minor Roads
- Major Roads
- Highways



Date	2 Dec 2004	Project Name	Mineralogy Recreational Use Management Plan	Scale	1:90,000
Design by	JXD	Drawing Title	Recreation Nodes and Land Uses	Drawing size	A3
Drawn by	JXD			Figure No	4
Storage Location			E:\74300904\dwg\drawings\ArcGIS\protectionZones_jamie.mxd		



3.4 Management Procedures

Objective:

- To limit the impact on the surrounding environment of all recreational activities undertaken by mine employees.
- To ensure that any activities which are deemed to be adversely affecting the surrounding environment are modified and addressed.

The key management strategy will be education. All staff, including contract personnel, will be inducted to site with a comprehensive set of environmental guidelines to manage the way in which they interact with their surroundings. Key management requirements are tabled in Section 4.6. With regards to any recreational activities undertaken by site staff, the induction will:

- provide a map of the marine environment around Cape Preston, indicating no-take zones, conservation status of the various marine management areas and location of other industries and any associated exclusion zones;
- provide a map of the terrestrial environment, including visitor locations, access tracks and any prohibited areas;
- provide guidance on appropriate behaviour at visitor nodes and advice regarding minimising impacts;
- provide advise on appropriate behaviour around large marine organisms including (but not limited to) whales, dugongs and turtles;
- provide clear guidance on regulations regarding boat handling within nature reserves, such as moorings and anchorages;
- advise on the rules and regulations governing access to islands within the GSINR and CPMMA;
- advise on 'good neighbour' behaviour with regards to other land users, including pastoralism, tourism and aquaculture;
- provide advise regarding appropriate 4WD behaviour with regard to protection of mangroves and native vegetation;
- provides clear information regarding bag and size limits for recreational fishing, including netting, spearfishing, coral collecting, shell fishing and aquarium fish collecting;
- encourages record keeping with regards to fish catches, marine mammal, turtle and bird sightings and;
- establish guidelines on accessing cultural heritage sites

In addition to providing employees and contractors with induction guidelines, the proponent will:

- realign and maintain any access tracks currently utilised to access visitor points that will be disrupted by the project;
- rehabilitate any exploration or construction phase tracks no longer required in order to limit vehicular movements in any sensitive areas;
- maintain the boat ramp at the Fortescue River mouth;
- supplement the Council waste collection programme from the Fortescue camping area, if determined to be necessary in consultation with the Shire of Roebourne;
- sponsor or undertake monitoring of favoured nesting locations of sea birds to assist with advice regarding access to GSINR islands in consultation with DEC Karratha;
- assist as agreed through consultation with DEC in achieving adopted management objectives for the CPMMA and GSINR; and
- maintain a register of complaints relating to project related recreational activities.

3.5 Management Actions

Table 2 - Summary of Management Action

Item	Impact	Action	Procedure	Action Responsibility
3.5.1	Potential for mine staff to encroach on no-take zones	<ul style="list-style-type: none"> Staff Inductions 	<ul style="list-style-type: none"> No take zones will be indicated on regional maps and will be issued to all staff during inductions 	<ul style="list-style-type: none"> Environment Manager
3.5.2	Disturbance to nesting birds	<ul style="list-style-type: none"> Staff Inductions Inspections Information from CALM Officers 	<ul style="list-style-type: none"> All staff will be informed of the impacts that their actions may have on nesting birds and at what times access to islands is prohibited Monitor island access during nesting seasons CALM Officers to provide advice to Environmental Manager regarding onset of nesting times 	<ul style="list-style-type: none"> Environment Manager CALM
3.5.3	Disturbance to nesting turtles	<ul style="list-style-type: none"> Staff Inductions Inspections Minimise light spill 	<ul style="list-style-type: none"> All staff will be informed of the impacts that their actions may have on nesting turtles Monitor for onset of nesting activities and make staff aware Design lighting to ensure that light spill is directed away from nesting locations as much as practicable 	<ul style="list-style-type: none"> Environment Manager Construction / Design Manager
3.5.4	Pressures on marine organisms from private vessels	<ul style="list-style-type: none"> Staff Inductions 	<ul style="list-style-type: none"> All staff will be informed of the potential to cause harm to marine organisms through boating activities Particular emphasis will be placed on behaviour around large marine organisms such as whales, turtles and dugongs 	<ul style="list-style-type: none"> Environment Manager
3.5.5	Impacts from Recreational Fishing <ul style="list-style-type: none"> excessive fish take destruction of habitat 	<ul style="list-style-type: none"> Staff inductions Liaison with regulatory authorities Adherence to published guidelines 	<ul style="list-style-type: none"> Inductions to include information regarding bag limits, no take zones and netting restrictions as applicable under relevant guidelines Induction to include information regarding potential for damage arising from anchors and moorings and present relevant guidelines Regulatory authorities to provide information to Mineralogy regarding impacts on fish stocks 	<ul style="list-style-type: none"> Environment Manager CALM / Fisheries Officers

Item	Impact	Action	Procedure	Action Responsibility
3.5.6	Impacts on Mangrove communities <ul style="list-style-type: none"> • disturbance from 4WD activities • litter • oil spills • dust 	<ul style="list-style-type: none"> • Staff inductions 	<ul style="list-style-type: none"> • Inductions to provide: <ul style="list-style-type: none"> - information regarding sensitivity of mangroves to disturbance - importance of remove litter - impacts resulting from oil spills and dust 	<ul style="list-style-type: none"> • Environment Manager
3.5.7	Impacts from 4WD use	<ul style="list-style-type: none"> • Staff inductions • Inspections 	<ul style="list-style-type: none"> • Inductions to include advise regarding: <ul style="list-style-type: none"> - importance of remaining on established tracks wherever possible - respect for popular visitor nodes • Periodic inspections of tourist points by regulatory authorities to determine appropriate behaviour 	<ul style="list-style-type: none"> • Environment Manager • Regulatory Authorities
3.5.8	Loss of social values <ul style="list-style-type: none"> • remote values • European and Aboriginal heritage 	<ul style="list-style-type: none"> • Staff inductions 	<ul style="list-style-type: none"> • Encourage low impact behaviour when visiting remote areas • provide advice regarding appropriate behaviour around wrecks, Aboriginal heritage sites, and other sites of heritage value 	<ul style="list-style-type: none"> • Environment Manager
3.5.9	Impact to neighbouring land users <ul style="list-style-type: none"> • pastoral • commercial fisheries 	<ul style="list-style-type: none"> • Staff inductions 	<ul style="list-style-type: none"> • Inductions to provide staff with guidance on appropriate behaviour around neighbouring land users and the potential impact that their behaviour may have 	<ul style="list-style-type: none"> • Environment Manager

4.0 Monitoring

4.1 Performance Indicators

The proponent will ensure implementation of all realistic measures to prevent or minimise the impact from project related recreational activities and will monitor the success of these measures against the performance indicators and measures outlined in Table 4.1.

Performance Indicator	Performance Measure
Avoidance / minimisation of complaints from neighbouring land users	Number of complaints and whether this number reduces through time
Timely and appropriate response to complaints received	Variable depending on the nature of the complaint
Compliance (by company and contract personnel) with guidelines and conditions set out in the employee induction with regards to fishing catch limits	Number of infringements issued by the regulator(s)
Maintenance of the public facilities at the Fortescue River mouth and other key visitor locations	In response to inspections and complaints
Avoidance of detrimental impact on the quality and abundance of terrestrial flora and fauna in the GSINR and CPMMA attributable to project related recreational activities	Number of infringements / directives issued by CALM
Avoidance of detrimental impact on the quality and abundance of marine flora and fauna in the GSINR and CPMMA attributable to project related recreational activities	Number of infringements / directives issued by CALM

Table 3- Summary of Performance Indicators and Measures

Through the application of these performance indicators in conjunction with ongoing assessment of achievements against management goals, the proponent will ensure continual environmental performance improvement is undertaken during the life of the project. The proponent will review performance measures in accordance with the project Environmental Management System.

4.2 Complaints Procedure

A register of complaints will be established and maintained by the Mine Environmental Officer. All complaints received will be investigated and the management programme reviewed if necessary. Any remedial action which may be required will be undertaken. A summary of complaints received and actions taken to resolve them will be included in the relevant environmental performance reports to the regulatory agencies.

4.3 Monitoring Programme

The Mine Environmental Officer, in consultation with DEC officers, will undertake monitoring. A monitoring programme will be developed in consultation with the regulatory authorities to enable the effectiveness of the Recreational Use Management Plan to be determined, and the proposed procedures to be reviewed and modified as appropriate. Unless otherwise specifically requested by the regulatory agencies, monitoring will take the form of visual observations, conducted on a monthly basis and will include surveys to determine seabird nesting times, maintaining records of marine wildlife sightings, observations of recreational activities being undertaken by employees and

spot inspections of employee fish takes. Regular inspections of recreational sites and facilities will also be undertaken. Additionally, project personnel will be encouraged to record sightings and incidents while pursuing recreational activities.

4.4 Training

All project personnel will undergo a site specific environmental induction before commencing work at the operation. The induction process will include information regarding the responsibilities and expected behaviour of all personnel toward the environment, and will provide necessary awareness of recreational impacts and how those impacts will be manifested. Maps outlining access to various areas will be issued and updated as required.

In order to regulate boat off shore activities, all boat owners will be required to demonstrate to the company that they have the necessary skill level and experience to operate boats (eg small boat handling licence) in order to keep boats on site. This requirement will also satisfy part of the company health and safety management strategy.

Regular toolbox meetings will also be held to reinforce a positive attitude towards environmental management and to highlight any issues that arise during the life of the project. A record of all training will be maintained.

4.5 Records and Reporting

All records created for the Recreational Use Monitoring Programme will be collated and reported on a regular basis to the relevant regulatory agencies (eg EPA, DoE, CALM and the Shire of Roebourne). Records will be maintained in accordance with the Project Environmental Management System. All non-conformances will be reported immediately to the relevant body and will be summarised in the next regular environmental review report.

4.6 Management Requirement Summary

Table 4 - Summary of Management requirements at specific sites

Site	Activity	Potential Impact	Control Measure	Consequence	Likelihood	Risk
Fortescue River Mouth	Fishing	Increased pressure on local fish stocks	Employees will be informed of bag and size limits	4	B	H
		Increased disposal of fish processing waste	All fish processing waste to be disposed of correctly	3	B	M
		Increased quantities of non-bio waste	Responsible fishing practices, including waste disposal and collection will be encouraged	4	B	H
	Boat Launching	Increased traffic on boat ramp, causing more rapid decline in condition	Boat ramp and tracks will be regularly inspected and maintained by Mineralogy as necessary to accommodate increased traffic	2	A	L
		Higher Impact on roads and tracks to boat launching area		2	A	L
	Use of Facilities	Increased disposal of waste	Facilities currently limited to rubbish bins provided by Shire Council. Mineralogy may have to consider taking on role if increased pressure results in excess waste being generated	4	A	H
	Camping	Increased number of campers at camp site	Encourage mine staff to return to mine camp after day's activities to reduce impact on tourists	3	D	M

Site	Activity	Potential Impact	Control Measure	Consequence	Likelihood	Risk
Fortescue River Pools	Swimming	Disturbance to river banks	Education of mine personnel as to appropriate behaviour at popular visitor sites	2	C	L
	Camping / Picnics	Fire places	Encourage personnel to use gas cookers and portable BBQs and not to set camp fires	5	B	X
		Fire places	Encourage personnel to use gas cookers and portable BBQs and not to set camp fires	5	B	X
		Increased Waste	All waste to removed from recreational sites and returned to mine camp for disposal	4	A	H
		Ground Disturbance	Educate mine personnel to the damage caused by ground disturbances	3	B	M
		Disturbance of vegetation	Encourage personnel to use gas cookers and portable BBQs and not to set camp fires. Employees to remain in designated recreational areas	4	C	H
		Accumulation of waste	All mine personnel to remove waste and dispose of on-shore at designated waste disposal sites	5	B	X

Site	Activity	Potential Impact	Control Measure	Consequence	Likelihood	Risk
Great Sandy Island Nature Reserve	Boating	Disturbance to marine fauna	Education of mine personnel as to appropriate boat handling within nature reserve	4	A	H
	Camping / Day tripping	Improper moorings	Implement DoC mooring policy in marine conservation reserves	3	B	M
		Increased pressure on nesting birds	Camping prohibited on islands at all times.	5	A	X
			Education programmes to aid in identification of nesting sites			
	Nature Study	Increased pressure on bird life	No access to islands during nesting	4	C	H
		Increased pressure on bird life	No access to islands during nesting	4	C	H
		Increased pressure on nesting turtles and marine mammals	Turtle nesting and marine mammals to be viewed under strict guidelines proscribed by DoC	5	C	H
		Increased pressure on coral communities	All diving activities to be undertaken in accordance with recreational diving guidelines and codes of conduct.	5	B	X
			Delineate exclusion zones for coral protection			

Site	Activity	Potential Impact	Control Measure	Consequence	Likelihood	Risk
Neighbouring Users	Pearling (Indian Ocean Pearls)	Disturbance of pearling operations	Delineate exclusion zone for mine personnel and stress importance of good neighbourly relations	3	A	M
	Pastoralism (Mardi Station)	Interference with normal pastoral activities	Inform mine personnel of acceptable behaviour on pastoral leases	2	D	VL
	Tourism	Increased population at remote camping sites	Encourage mine personnel to avoid public camp sites	3	A	M

Key to Qualitative Risk Values

Table A: Qualitative Measure of Consequence or Impact

Level	Descriptor	Description of Occurrence
1	Insignificant	Minimal impact on receiving environment.
2	Minor	Short term impact only, to limited area.
3	Moderate	Medium term impact or large area impacted.
4	Major	Extensive and significant impact on receiving environment.
5	Catastrophic	Extensive, significant impact with long term effect on receiving environment.

Table B: Qualitative Measure of Likelihood

Level	Descriptor	Description of Occurrence
A	Certain	Expected to occur in most circumstances
B	Likely	Probably occur in most circumstances
C	Possible	Might occur in some circumstances
D	Unlikely	Could occur in few circumstances
E	Rare	May occur in exceptional circumstances
F	Impossible	Cannot occur due to circumstances

Table C: Qualitative Risk Analysis Matrix - Level of Risk

LIKELIHOOD		CONSEQUENCE				
		1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A	Certain	VL	L	M	H	X
B	Likely	VL	L	M	H	X
C	Possible	VL	L	M	H	H
D	Unlikely	N	VL	L	M	M
E	Rare	N	N	VL	L	L
F	Impossible	N	N	N	N	N

Legend

Level	Descriptor	Description
X	Extreme	Immediate action required
H	High	Senior management action
M	Moderate	Management responsibility
L	Low	Managed by routine procedures
VL	Very Low	No control measures necessary
N	Nil	No risk evident (results from no likelihood and/or no consequence)

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Appendix A - Recreational Fishing guidelines – Pilbara & South Coast Regions 2003/04

Possession Limits...

There is a limit on the quantity of recreationally-caught finfish you may possess in WA. The possession limit is a key conservation measure that prevents the accumulation of excessive quantities of fish by individuals on a fishing trip, and sets a clear ceiling for socially acceptable catch levels.

Each person may have a maximum of:

- 20 kilos of fillets or pieces of fish; or
- 10 kilos of fillets or pieces of fish plus one day's bag limit of whole fish; or
- Two days' bag limit of whole fish.

These limits apply only to finfish, but some specific 'baitfish' species are excluded from the possession limit. Species excluded are hardyheads (*Atherinidae*), pilchards and scaly mackerel ('mulies') (*Clupeidae*), anchovies and whitebait (*Engraulididae*) and garfish (*Hemirhamphidae*). All other fish are included within the possession limit.

Possession limits apply throughout WA but **do not apply** in your permanent place of residence. Boats, cars, caravans and tents are not considered permanent places of residence.

Transporting and storing your fish

All recreationally caught fish which are being transported or stored must be labelled under the following circumstances:

- Where fish are being commercially consigned or transported;
- Where more than an individual possession limit is stored in a container;
- On premises involved in the commercial take, processing, transport, storage, sale or dealing with fish.

The label attached to the package or container must be clearly visible and must contain the full name of the owner. Labels must be at least 75mm long and 25mm wide.

Fish commercially consigned for transport on a truck or aircraft will be considered the property of the person who consigned it, until it is in the possession of the recipient.

Processing your catch at sea

Category 1 and 2 Fish can be filleted or trunked at sea provided the fillet/trunk length is longer than 30cm and the skin and scales are attached. Fillets must be stored flat in a form that can be measured.

The 30cm fillet length requirement does not apply to anglers on a trip involving an overnight stay on an island. Anglers that can demonstrate they are returning from an overnight stay on an island may have fillets of any length.

Category 3 Fish may be filleted or trunked at sea provided the skin is attached to the fillet/trunk. A minimum fillet length does not apply to Category 3 Fish. Should anglers wish to land more

than one day's bag limit of fish or filleted fish on extended trips, they will need to keep a record of the voyage, including their departure date and time; the time the boat is at sea; the route taken; and any stops made.

Where an angler has been at sea, or staying on any island, for more than one day, they may accumulate up to the possession limit of whole (or trunked) fish or filleted fish.

Legal fishing gear

State-wide fishing rules limit you to a maximum of three hooks or gangs of hooks per line. Shore-based recreational anglers may use a maximum of two fishing lines. Rods and lines must be attended. This rule prevents anglers unfairly 'staking out' large areas of shoreline or jetty, to the exclusion of others, during peak fishing times.

Spearfishing on compressed air or when free diving is generally permitted, except in marine parks and reserves where fishing on compressed air is often prohibited. Specific species may also not be taken by spear - see guides on individual marine parks for details.

The following fishing methods are illegal for recreational fishing:

- Unattended lines, either on a boat or shore.
- Explosives, firearms, fish poisons or jaggling.
- Nets finer than 6kg (0.35mm diameter) monofilament line.
- Crab and cobbler pots.
- Fish traps and dredges.
- All 'commercial' fishing gear, such as purse-seine nets, trawls, longlines, droplines, etc.

Further information:

Visit the Department of Fisheries' website on: www.fish.wa.gov.au or contact:

DEPARTMENT OF FISHERIES

3rd floor, The Atrium,
168 St George's Terrace, Perth, 6000
Ph (08) 9482 7333, Fax (08) 9482 7389
e-mail: headoffice@fish.wa.gov.au

ALBANY REGIONAL OFFICE

Suite 7, Frederick House
70-74 Frederick Street ALBANY 6330
Ph (08) 9841 7766, Fax (08) 9842 1112

BROOME REGIONAL OFFICE

Port of Pearls House
401 Port Drive PO BOX 71 BROOME 6725
Ph (08) 9193 8600, Fax (08) 9193 8699

ESPERANCE REGIONAL OFFICE

Bandy Creek Boat Harbour,
PO BOX 798 ESPERANCE 6450
Ph (08) 9071 1839 Fax (08) 9071 4122

KARRATHA REGIONAL OFFICE

Unit1, 17-19 Crane Circle, KARRATHA 6714
Ph (08) 9144 4337 Fax (08) 9144 1951

Recreational Fishing -

Pilbara/Kimberley & South Coast Regions 2003/04



The management arrangements contained in this guide are currently under review. New rules for recreational fishing in the Pilbara/Kimberley (the waters north of Ashburton River) and Southern Regions (the waters east of Black Point) will be developed during 2004 to manage the increase in recreational fishing pressure that has occurred in these regions over the past decade.

These changes are aimed at more effectively managing our finfish stocks on a regional basis and will complement the regional strategies recently implemented in the West Coast and Gascoyne regions.

Protected species

These species are totally protected and may not be taken:

Potato cod (*Epinephelus tukula*)

Leafy seadragon (*Phycodurus eques*)

Whale shark (*Rhiniodon typus*)

Great white shark

(*Carcharodon carcharias*)

Humphead maori wrasse

(*Cheilinus undulatus*)

Grey nurse shark

(*Carcharias taurus*)



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May 2004



Fish for the future



Prize fish - 4 of each species, total mixed bag of 8

Prize fish are highly sought after for their catching or eating qualities and some are vulnerable to overfishing.

Billfish such as marlin, sailfish and swordfish (Families *Xiphiidae* and *Istiophoridae*) - **mixed bag of 4**

Cobia (*Rachycentron canadus*)

Cods (Family *Serranidae*) **mixed bag of 4** (inc. Harlequin fish and Breaksea cod) Fish over 1200mm or 30kg are protected

Breaksea cod [300mm]

Coral Trout (*Plectropomus spp*) [450mm]

Dhufish, WA (*Glaucosoma hebraicum*) [500mm]

Mackerel, Spanish broad-barred (*Scomberomorus semifasciatus*) [750mm]

Mackerel, wahoo (*Acanthocybium solandri*) and

Spanish narrow-barred (*Scomberomorus commerson*) [900mm]

Mackerel, shark (*Grammatorcynus bicarinatus*)

Spotted and Qld school (*Scomberomorus spp*) [500mm]

Mahi mahi (dolphinfish - *Coryphaena hippurus*)

Mulloway (*Argyrosomus hololepidotus*) and **Northern mulloway** (*Protonibea diacanthus*) **combined bag of 4** [500mm]

Queenfish (*Scomberoides commersonianus*)

Salmon, Australian (*Arripis truttaceus*) [300mm]

Samson fish (*Seriola hippos*) [600mm]

Sharks (all species except protected ones) **mixed bag of 4**

***Trout, brown & rainbow combined bag of 4** (*Salmo trutta* and *Oncorhynchus mykiss*) see separate guide for details of fishing rules [300mm]

Tuna, Southern bluefin (*Thunnus maccoyii*)

Yellowtail kingfish (*Seriola lalandi*) [600mm]

Reef fish - mixed bag of 8

Reef fish are usually resident species and are highly vulnerable to overfishing.

Emperor, Blue lined (*Lethrinus laticaudis*) [320mm]

Emperor, red (*Lutjanus sebae*) [410mm]

Groper & tuskfish excluding western blue groper (baldchin *C. rubescens*, blue tuskfish *C. cyanodus* & black spot tuskfish *C. shoeneinii*) [400mm]

Snapper, pink (*Pagrus auratus*) [410mm]
In Wilson Inlet, minimum size is [280mm]

Snapper, North-west (*Lethrinus spp*) and all other *Lethrinus* species [280mm]

Snapper, queen (blue morwong - *Nemadactylus valenciennesi*) [410mm]

Spangled emperor *Lethrinus nebulosus* [410mm]

Key angling & sport fish - 8 per fisher

An important protection category - cobbler and tailor stocks have declined in recent years, with fish often caught before spawning.

Bonito (*Sarda orientalis*, *Cybiosarda elegans*)

Cobbler (*Cnidoglanis macrocephalus*) [430mm total length]

Tailor (*Pomatomus saltatrix*) [300mm]

Mangrove jack (*Lutjanus argentimaculatus*) [300mm]

Fingermark bream (*Lutjanus russelli*)

Giant threadfin salmon (*Eleutheronema tetradactylum*)

Table fish - 20 per fisher

This group contains many of WA's most popular angling species and bag limits are crucial for maintaining future stocks.

Bream, black, northwest black and yellowfin (*Acanthopagrus butcheri*, *A. palmaris*, *A. latus*) [250mm]

Flathead (*Platycephalus spp*) [300mm] and **flounder** (*Pseudorhombus spp*) **combined bag limit of 20** [250mm]

Leatherjackets (Family *Monacanthidae*) [250mm]

Pike (*Dinolestes lewini*) and **snook** (*Sphyraena novaehollandiae*) **combined bag limit of 20** [300mm]

Skipjack trevally (*Pseudocaranx spp*) [250mm]

Snapper, red (*Centroberyx spp*) [230mm]

Tarwhine (silver bream - *Rhabdosargus sarba*) [230mm]

Threadfin (bluenose salmon) **northern, Gunther's** and **black-finned salmon** (*Polydactylus spp*)

Whiting, King George (*Sillaginodes punctata*) [280mm]

Bread & butter fish - 40 per fisher - no legal size

'Bread and butter' species are all fish not listed in other categories and include: **garfish** (*Hyporhamphus spp*), **Australian herring** (*Arripis georgianus*), **blue mackerel**, (*Scomber australasicus*), **sea and yellow eye mullet** (*Mugil cephalus*, *Aldrichetta forsteri*) and **western sand, school and yellowfin whiting**, (*Sillago spp*). **Baitfish of the sardine and anchovy families** (*Clupeidae* and *Engraulididae* - **mullies, whitebait, scaly mackerel, anchovies**), **redfin perch, goldfish, carp and tilapia** are not included in this category.

Cephalopods and Echinoderms

Squid, octopus, cuttlefish - combined bag limit 15 per fisher, boat limit of 30

Sea urchins - daily bag limit 40

Shellfish - 2 litres

A mixed bag of 2 litres of whole edible shellfish applies, unless a separate bag limit is specified.

***Abalone, greenlip** and **brownlip** - see separate guide for details of fishing rules

***Abalone, Roe's** - see separate guide for details of fishing rules

Mussels - bag limit 9 litres

Crustacea

Crab, mud - bag limit 10 combined **green** [150mm] **brown** [120mm]

Crab, blue swimmer - bag limit 24, boat limit 48 (min. 2 people) [127mm]

Cherabin - bag limit 9 litres gear restrictions apply

***Marron** - see separate guide for details of fishing rules

Prawns, king and school - bag limit 9 litres

***Western, Southern & Tropical rock lobster** - see separate guide for details of fishing rules

Special bag limits

***Barramundi** (*Lates calcarifer*) - possession limit 2 [550mm]

Special rules apply in the lower Ord River, Fitzroy River and Broome area - see separate guide for details of fishing rules.

Groper, western blue (*Achoerodus gouldi*) - daily bag limit 1 [500mm]

What fishing licences do I need?

In WA, licences are required for the following:

- Rock Lobster - \$31
- Abalone - \$36
- Marron - \$21
- South-West Freshwater Angling - \$21
- Net Fishing (set, haul and throw nets) - \$26
- All categories (all of the above) - \$72

You may apply for a licence at Department of Fisheries' offices or Australia Post. Licence holders can renew their licence on-line at www.fish.wa.gov.au

All revenue from recreational fishing licences is used to protect and conserve our vulnerable fish stocks and help ensure a healthy future for recreational fishing throughout the State.

Application of size limits

Note: all minimum size limits apply to both commercial and recreational fishers.

Appendix B - Recreational Net fishing Guidelines for WA 2004

A code of practice for fishing

How we fish now will decide the future of WA's recreational fishing. Everyone involved in this activity needs to take personal responsibility for helping to conserve fish stocks.

The Recreational Fishing Advisory Committee gave the following view of recreational fishing:

"To aim to catch a feed for oneself and family and, for a variety of personal reasons, to enjoy the experience along the way."

This aim was supported by thousands of fishers across WA.

An evolving code of practice for recreational fishing states that true recreational fishers:

- Catch fish for themselves and family, not for sale or financial gain.
- Help conserve fish breeding stocks by returning excess and undersize fish alive to the water.
- Take old fishing line, plastic bags and other rubbish to a bin for proper disposal.
- Take care of access tracks and camping areas to avoid environmental damage.

Illegal fish sales

It is illegal for recreational fishers to sell their catch.

Illegal fish selling operations pose a major threat to inshore fish stocks. Severe penalties (a fine plus 10 x the value of the catch) apply and all gear used in the operations may be confiscated.

If you observe illegal fishing or fish sales, please note details such as car/boat registration numbers and description of offender(s) and call the Department of Fisheries on the 24-hour FISHWATCH number (1800-815-507) or at a local office.

Further information

Visit the Department of Fisheries' website on:

www.fish.wa.gov.au

or contact

DEPARTMENT OF FISHERIES

3rd Floor, The Atrium,
168 St George's Terrace, Perth, 6000
Ph (08) 9482 7333, Fax (08) 9482 7389
e-mail: headoffice@fish.wa.gov.au

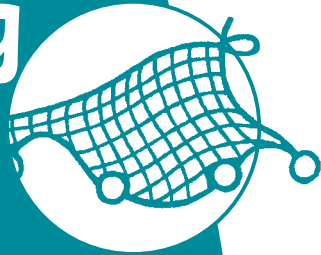


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LICENSED FISHERY

Recreational Net Fishing 2004

In Western Australia



Types of Netting Allowed

SET (OR 'GILL') NETTING

- Net setting across channels used by boats or preventing access to jetties is banned.
- Only sandbags or anchors should be used to hold set nets in place. Metal stakes can not be used.
- In most waters, nets must be lifted and cleared every hour. See inside for more details.

HAUL NETTING

- Haul nets may only be hauled by hand.
- All inland waters are closed to haul netting.
- Mesh sizes apply to haul nets. See inside for details.

THROW NETTING

- Mesh sizes and a maximum radius size apply to throw nets.

Protected Species

There are a number of fish species that must not be netted or targeted by recreational netters. They are:

- Barramundi
- Freshwater cobbler
- Brown trout
- Rainbow trout
- Redfin perch
- Blue swimmer crab



Department of
Fisheries



Fish for the future

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1.0 INTRODUCTION

Recreational netting has long been considered by some fishers as a relaxing way to enjoy the outdoors and catch a feed of fish, in a similar way to angling but employing a different fishing technique.

Net fishing is the only means of catching certain target species such as mullet and baitfish however, if used inappropriately, nets are capable of high catches of indiscriminate species including undersize fish. For this reason, their use is managed in a manner aimed at protecting fish stocks by minimising excessive catches of both target and non-target species.

Concerns about the level of bycatch and conflict issues with other user groups has led to several major management changes to the recreational netting rules from 1 October 2003.

There is now a total ban on *set netting* in the Mid-West, Perth & Mandurah and South-West Regions with the exception of the Peel/Harvey and Leschenault Estuaries and the Hardy Inlet, where conditional set netting is still permitted.

Reviews into the future management of recreational fishing in the Kimberley/Pilbara and South Coast Regions has commenced and it is likely that further management changes will be introduced in these regions in 2004.

How we fish now will decide the future of WA's recreational fishing. Everyone involved in angling or net fishing needs to take personal responsibility for helping to conserve fish stocks.

1.1 Types of netting allowed

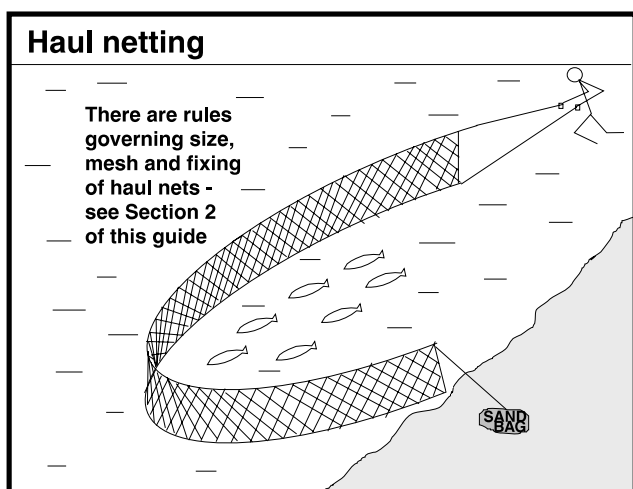
Recreational net fishing in WA is permitted to be carried out by three methods. These are:

- set (or 'gill') netting
- haul netting
- throw (or cast) netting

To conserve fish stocks, limitations apply to the type of gear used and where netting may be carried out. Details are given in Chapter 2 of this guide.

*Recreational net fishing is only permitted in WA's ocean and estuarine waters (i.e. those waters under the influence of tides) - **not in fresh water**. The majority of WA's estuarine waters are **closed** (to protect juvenile fish stocks).*

Commercial netting methods, such as purse seine and trawling, are illegal for recreational purposes in WA. It is also illegal for recreational fishers to sell their catch, with severe penalties (a fine plus 10 times the value of the catch, plus confiscation of gear) applying.



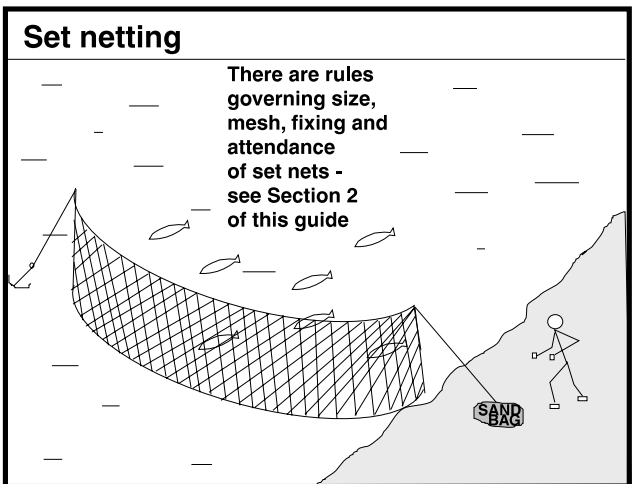
Haul netting is carried out in ocean waters only, from a beach or boat. A net of up to 60m in length is 'shot' into the water, in an attempt to encircle a group of fish before it is hauled in.

One end of the haul net may be fixed to the beach and a rope attached to the other. Once in the water, the net is kept constantly moving towards the beach.

In contrast, where permitted, **set netting** is carried out in estuaries or from beaches, where a net of up to 60m in length is firmly anchored at both ends in the outgoing/incoming tide. Set nets are fixed in position and catch fish entirely by 'gilling' them.

Throw (or cast) netting is the throwing and slow retrieval of a small circular net of up to three metres radius. Protected fish (undersize) cannot be retained for use as bait.

To prevent excessive catches and the destruction of totally protected (undersize) fish, netting is severely restricted in WA waters and netters, in general, must lift and clean their nets of the fish at least once an hour.



1.2 Licensing requirements

A recreational net fishing licence is required for haul, set ('gill') and throw (cast) netting. A licence is not required for crab drop/scoop netting or prawn netting.

Licences are available from Department of Fisheries offices and Australia Post outlets.

1.2.1 Licensing and Aboriginal Australians

Under the *Fish Resources Management Act 1994*, Aboriginal Australians who wish to carry out haul, set or throw netting in accordance with continuing Aboriginal tradition - to feed themselves or their family, but not for commercial purposes - are released from the requirement to hold a recreational fishing licence endorsed for netting.

However, Aboriginal Australians who do not hold a recreational fishing licence endorsed for netting should use a gear identification number on their nets, made up of their full date of birth, prefixed with the letter "A", e.g. A 29/3/59.

Bag, size and possession limits (as detailed in the Department of Fisheries *Regional Fishing Guides*) and netting rules, closures and attendance requirements, as shown in this guide, apply to all Aboriginal Australians.

1.3 Using This Book

There are general rules that apply to all three forms of recreational net fishing - set (or 'gill'), haul and throw (or cast) netting - such as daily bag limits and the use of one net only at a time. However, due to the differing gear and techniques used, there are a number of rules that are specific to each type of recreational netting.

The majority of WA's inland waters (rivers, estuaries, inlets, creeks, lakes and their entrances) are closed to netting. *The inland waters listed in Section 3 of this guide are only those wholly or partially **open** to netting. Any inland waters not listed in this guide are therefore totally **closed** to netting.*

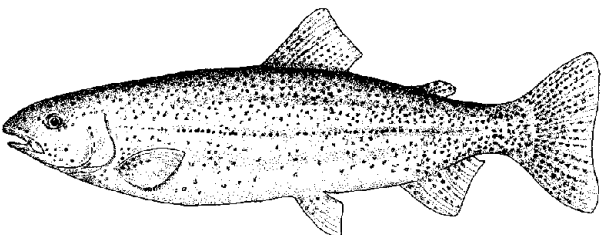
Similarly, as the majority of WA's coastal waters are open to netting, *the coastal waters listed in Section 3 of this guide are only those wholly or partially **closed** to netting.*

The maps in the guide are intended as an aid to help recreational net fishers with some of the boundaries of open/closed areas of water. *They should not be used for navigational or legal purposes.*

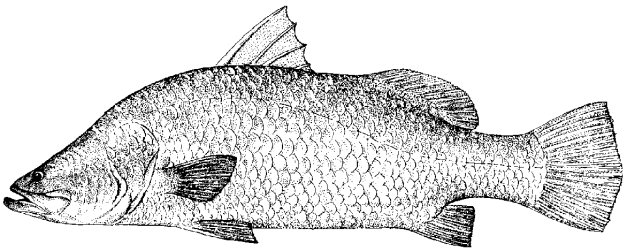
For finding exact locations of boundaries, in conjunction with the guide, it is suggested the appropriate map or chart be obtained from the Department of Land Information or Department of Planning and Infrastructure.

Two species of trout (brown and rainbow) are stocked in some dams and waters in WA's South West.

Netting for trout is prohibited and most areas are closed to trout fishing between 1 May and 31 August. Trout may be caught using a rod or hand line and fishers should consult Department of Fisheries brochures or the website for rules concerning trout fishing.



Barramundi (illustrated below) are one of six fish species that recreational net fishers are forbidden to catch, or attempt to catch. Further details are given in Section 2.1.3 of this brochure.



2.0 THE RULES

2.1 General rules for recreational set, haul and throw netting

This section has been compiled from Department of Fisheries legislation. The information is current at the date of printing, but may change at later dates.

If you are in doubt about the meaning of any of the following rules, please contact your nearest Fisheries Office for clarification before going net fishing.

You should be aware that all fishing activities may be subject to optical surveillance by Fisheries Officers.

Breaking the rules of recreational netting may result in an infringement notice or legal action being initiated against you.

2.1.1 Gear identification

When you purchase your recreational netting licence, you will be issued with a gear identification number. This number is composed of the initials of your first given name and surname, the month of your birth and the last two numbers of the year of your birth. You can continue to use the same number each year

Therefore, if your name is **John Smith** and you were born in *August 1957*, your gear ID number would be **JS0857**. The 08 part of the gear ID is derived from August being the eighth month of the year.

If you are an Aboriginal Australian, you are released from the requirement to hold a recreational netting licence. However, your gear ID should consist of your full date of birth, prefixed with the letter "A", e.g. A 29/3/59.

Set ('gill') and haul nets must have end floats of at least 15cm in diameter, stamped or branded with the

user's gear ID number. This must be displayed with letters and numbers *at least 6cm high and 1cm wide*.

Gear ID numbers are not required to be displayed on throw (cast) nets.

2.1.2 Bag, size and possession limits

The daily bag, size and possession limits of fish caught by set, haul and cast netting, where permitted, are the same as for recreational angling and fully described in the *Regional Recreational Fishing Guides*.

Only people who assist with a net and individually hold recreational netting licenses may take up to their daily bag limit from the net.

Once all the netters that possess licences have each caught their daily bag limit, the net/nets must be removed from the water.

Any fish caught that are undersize or in excess of daily bag limits should be gently returned to the water immediately.

The timeframe for a daily bag limit is midnight until midnight the following day.

2.1.3 Prohibited and protected species

There are a number of fish species that a recreational net fisher is forbidden to catch, or attempt to catch.

The prohibited species are:

- Barramundi (*Lates calcarifer*)
- Freshwater cobbler (*Tandanus bostocki*)
- Brown trout (*Salmo trutta*)
- Rainbow trout (*Oncorhynchus mykiss*)
- Redfin perch (*Perca fluviatilis*)
- Blue swimmer crab (*Portunus pelagicus*)

All these fish may only be taken by means of a single rod, reel and line, or hand line. In the case of blue

swimmer crabs, these may only be taken using a hand scoop net, drop net or wire hook and by hand.

Any protected or prohibited species accidentally caught must be gently returned to the water immediately.

2.1.4 Use/carrying of nets

Only one net may be used at a time by a person holding a recreational netting licence.

Whilst a boat may be used to assist in the positioning of a recreational set net or haul net, it cannot be used to trawl these nets. Fishers 'on foot' (i.e. walking on the beach/sea bottom) may drag a haul net.

Where permitted, set netting is only allowed up to 800m seaward from the low water mark.

Nets must be drawn carefully from the water, so as not to kill fish caught in them.

Take care if you are travelling on or near waters closed to netting - carrying a fishing net on closed waters, or on land adjacent to them, is prohibited (except where specific permission has been granted by the Department of Fisheries).

2.2 Specific set netting rules

Recreational set netters should also read Section 2.1, which deals with the general rules applying to recreational netting.

2.2.1 Setting nets in navigation channels/near service jetties

Under Department of Planning and Infrastructure rules, setting fishing nets across channels used by boats is banned. It is also prohibited to set nets in such a manner that prevent access to service jetties by boats (that is, setting nets from service jetties).

2.2.2 Setting nets

The use of metal stakes, such as star pickets, for holding set nets in place is prohibited. Sandbags or anchors are recommended for this purpose and must be immediately removed from the ocean/estuary floor when the net is taken from the water.

At all times, a set net must have one edge floating on the surface of the water, i.e. its float line/top edge. Sunken nets are extremely dangerous and prohibited.

Setting a net within 50m of another set net is prohibited.

2.2.3 Attending/cleaning set nets

When using a set net in any WA waters open to recreational netting, netters must remain in attendance (within 100m) of their net.

When using set nets in inland waters open to recreational netting, netters must lift and clean their net once an hour.

*The only exceptions to these two rules is **on a seasonal basis**, in the Peel - Harvey Estuary on Wednesday nights, or in Wilson Inlet (near Denmark) on Wednesday nights. These are the **only** times and places where unattended set netting is permitted in WA.*

2.2.4 Specifications for set nets

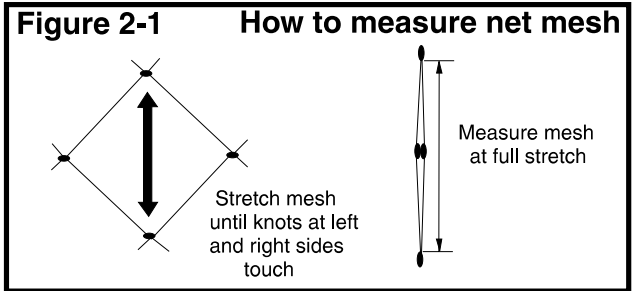
All set nets must be made of material that is not less than 0.35mm in diameter. This specification is equivalent to 6kg monofilament line and prevents the use of overly efficient 'mist nets'.

The length of recreational set nets must not exceed 60m in length, while the depth, or 'drop', of the nets must not exceed 25 meshes (i.e. 25 mesh 'cells' from top to bottom of the net). There must be no bags or pockets in the net.

Fishers can roll up and securely tie off older-style nets, with deeper drops, at the 25 mesh mark, provided the extra meshes cannot 'fish'.

When a set net is to be used in inland waters, its mesh size must not measure less than 63mm or more than 87mm.

Similarly, when a set net is to be used in ocean waters, its mesh size must not measure less than 75mm or more than 114mm.



A net mesh is measured by stretching it so that the two knots on the left and right hand sides of the mesh meet. The size of the mesh is then the distance between the inside of the knots at the top and bottom of the mesh (see Figure 2-1).

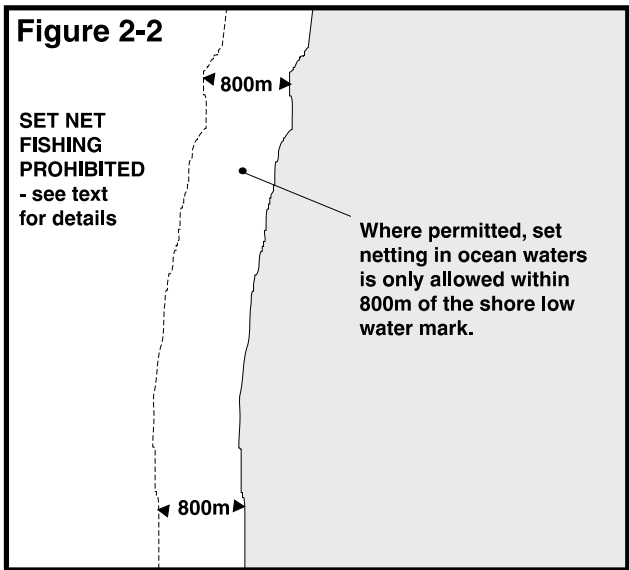
Fine mesh mist nets which use very fine monofilament material are strictly prohibited for net fishing.

2.2.5 General description of waters open/closed to set netting

The majority of WA's **inland waters** (rivers, estuaries, inlets, creeks, lakes and their entrances) are **closed** to set netting all year. *Those inland waters open to set netting for all or part of the year are described in Section 3 of this guide - if an inland water is not listed, it is **closed!***

The majority of WA's inshore **ocean waters** in the Gascoyne and Great Southern regions are **open** to set netting all year. Where permitted, set netting in ocean waters is only allowed within 800m of the shore low water mark (Figure 2-2), in order to protect tailor and shark stocks.

*Those ocean waters **closed** to set netting for all or part of the year are described in Section 3 of this guide.*



2.3 Specific haul netting rules

Recreational haul netters should also read Section 2.1, which deals with the general rules applying to recreational netting.

2.3.1 Use of haul nets

Haul nets may only be hauled by hand, i.e. not by boats or mechanical devices. They may be shot/retrieved from a boat as *long they are not trawled*.

2.3.2 Securing haul nets

The ropes used on a haul net should be a maximum of 25m in length. This prohibition serves to limit the capture area of a haul net.

2.3.3 Specifications for haul nets

All haul nets must be made of material that is not less than 0.35mm in diameter. This specification is equivalent to 6kg monofilament line and prevents the use of overly efficient 'mist nets'.

The length of recreational haul nets must not exceed 60m in length, while the depth, or 'drop', of the nets must not exceed 25 meshes (i.e. 25 mesh 'cells' from top to bottom of the net). There must be no bags or pockets in the net.

Fishers can roll up and securely tie off older-style nets, with deeper drops, at the 25 mesh mark, provided the extra meshes cannot 'fish'.

The mesh size of a haul net must not measure less than 51mm or more than 114mm.

A net mesh is measured by stretching it so that the two knots on the left and right hand sides of the mesh meet. The size of the mesh is then the distance between the inside of the knots at the top and bottom of the mesh (see Figure 2-1).

Fine mesh mist nets and commercial trawling/dredging gear are strictly prohibited for haul net fishing.

A smaller mesh size is permitted for haul nets than set nets because the techniques used allow the quick release of undersized or excess fish.

2.3.4 General description of waters open/closed to haul netting

All of WA's **inland waters** (rivers, estuaries, inlets, creeks, lakes and their entrances) are **closed** to haul netting all year.

In contrast, the majority of WA's **ocean waters** are **open** to haul netting all year.

*Those ocean waters **closed** to haul netting for all or part of the year are described in Section 3 of this guide.*

2.4 Specific throw netting rules

Recreational throw netters should also read Section 2.1, which deals with the general rules applying to recreational netting.

2.4.1 Specifications for throw nets

The radius of a throw net (from its central retrieval point to the lead line) must *not* exceed 3m.

The mesh size of a throw net must *not* exceed 25mm.

A net mesh is measured by stretching it so that the two knots on the left and right hand sides of the mesh meet. The size of the mesh is then the distance between the inside of the knots at the top and bottom of the mesh (see Figure 2-1).

2.4.2 General description of waters open/closed to throw netting

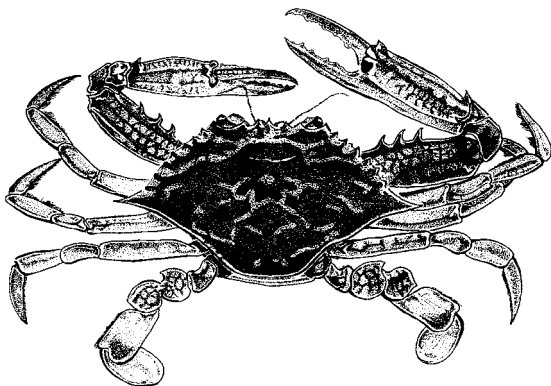
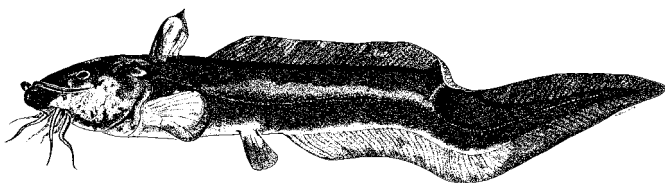
The majority of WA's **inland waters** (rivers, estuaries, inlets, creeks, lakes and their entrances) are **closed** to throw netting all year. *Those inland waters **open** to throw netting for all or part of the year are described in Section 3 of this guide - if an inland water is not listed, it is **closed!***

All of WA's ocean waters are open to throw netting; **excluding** Sanctuary Zones in Marine Parks/Reserves, total fishing exclusions zones, and any other area which is closed to all types of netting at all times.

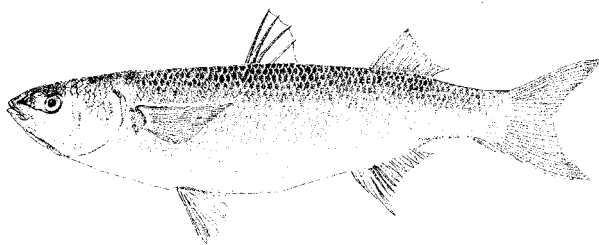
Recreational fishers are prohibited from netting for the blue swimmer crabs and freshwater cobbler found in WA's southern estuaries.

Crabs may only be caught by hand, non-piercing wire hooks, wire scoop nets or drop nets. Crabs caught in set nets may not be kept and should be released carefully and immediately.

Freshwater cobbler may only be caught using one hand line or rod per angler.



Mullet (illustrated below) is a group of fish species not commonly caught by angling. They were identified during the 1993 recreational netting review as the primary target for set and haul netting in WA.

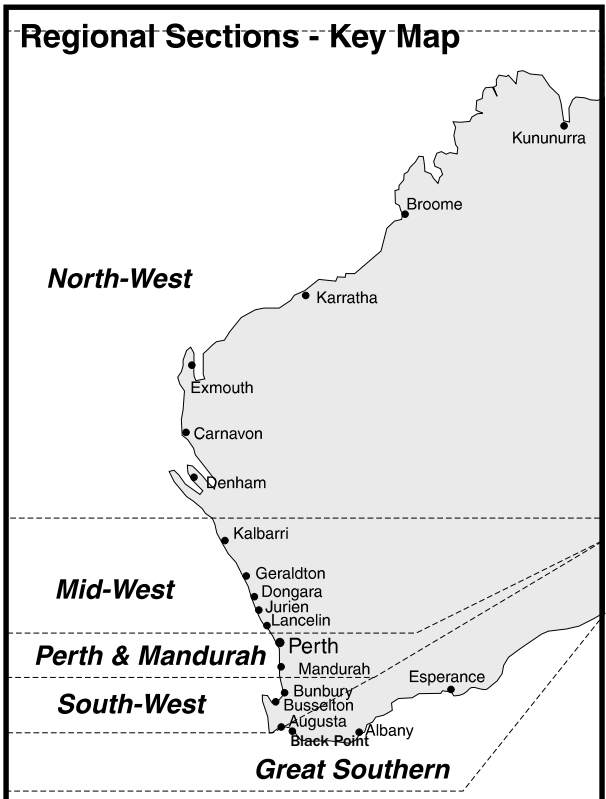


3.0 WATERS OPEN/ CLOSED TO NETTING

3.1 Overview

For ease of use of this section of the guide, WA has been divided into five regional areas:

- North-West
- Mid-West
- Perth Metropolitan/Mandurah
- South-West
- Great Southern



The boundaries of these five regional sections are shown in the *Regional Sections - Key Map*. There are separate parts of the chapter devoted to each region, covering both inland and coastal waters.

The majority of WA's inland waters (rivers, estuaries, inlets and lakes) are **closed** to recreational netting. In contrast, the majority of WA's ocean waters (i.e. water directly off the coast) are **open** to netting.

It should be noted that, where permitted, recreational set netting is only allowed within 800m of the shore low tide mark - see section 2.2.5 of guide.

For the sake of economy, the inland waters listed in this section therefore are those open to netting, while the ocean waters listed are those closed to netting.

Please note that the open/closed waters listed below are ONLY a guide and circumstances can change. Recreational netters are advised to seek guidance from the Department of Fisheries office closest to where they intend to netting. The information is current at the time of printing, but may change at later dates.

Breaking the rules of recreational netting may result in an infringement notice or legal action against you. This section must be read in conjunction with Section 2 of the guide (“the rules”).

3.2 North-West Waters

For the purposes of this guide, the 'North-West' is that region stretching from the Northern Territory border, through the Kimberleys, Port Hedland, Exmouth/Carnarvon, Shark Bay to 27°s latitude, and east of these places towards the WA/SA border.

As WA's North-West is a huge area, encompassing many thousands of kilometres, for the sake of clarity, this section has been split into the following sub-sections:

- Kimberley area
- Pilbara area
- Exmouth to Carnarvon area
- Shark Bay to 27°s latitude

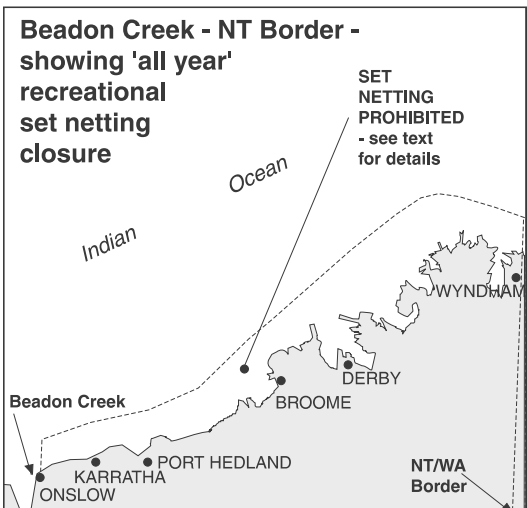
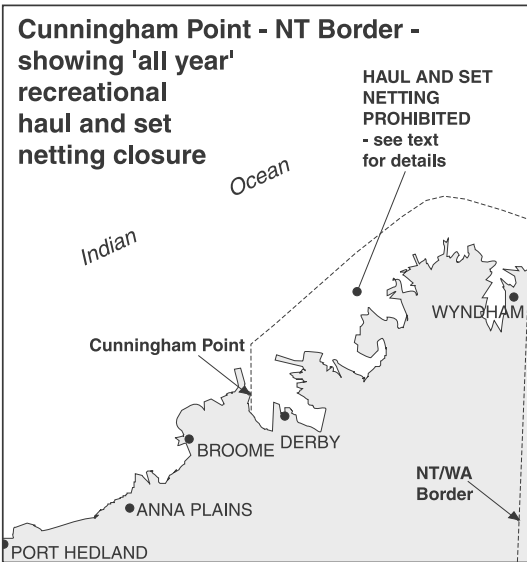
These sub-sections will list all of the ocean and inland waters in them that are closed/open, respectively, to recreational netting during the year, along with any specific conditions and dates. ***The information is current at the time of printing, but may change at later dates.***

It should be noted that recreational set netting, where permitted, is only allowed up to 800m seaward of the low water mark. Where this guide says an area is closed/open to 'recreational netting', the term refers to haul, set and throw netting.

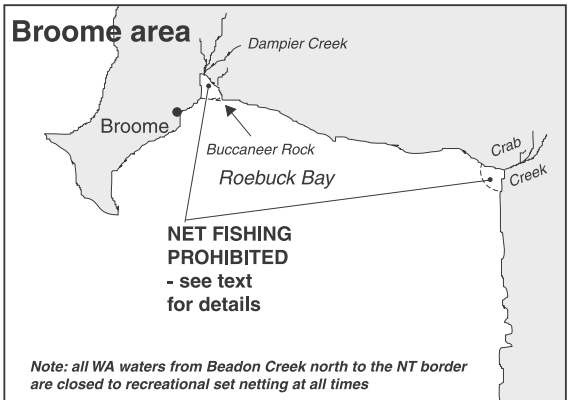
3.2.1 Kimberley area

- **Set netting** is banned at all times **east from Beadon Creek** (Onslow) to the Northern Territory Border.
- **Haul netting** is banned at all times **east from Cunningham Point** (King Sound) to the Northern Territory Border.
- **Haul netting** is banned from 19 degrees south latitude (**Cape Jaubert at the Northern end of the Eighty Mile Beach**) to **Cunningham Point (King Sound)** from **1 December in any one year, to the following 31 January.**

- **Broome (Willie and Barred Creek)** All waters in Willie and Barred Creek, including their tributaries and the waters within a 400m radius of their mouths, are closed to recreational haul and set netting at all times.
- **Broome (Crab and Dampier Creek)** All waters in Crab Creek, Dampier Creek and Roebuck Bay north of a line passing east to west through Buccaneer Rock are closed to recreational haul and set netting at all times.

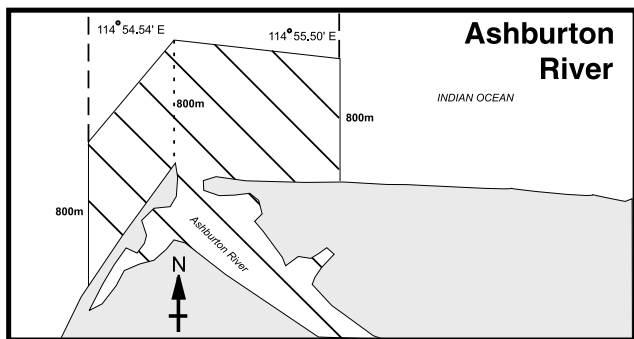


- **Whistle Creek (south of Lagrange Bay)** All waters in Whistle Creek and Admiral Bay east of a line drawn from Tryon Point to Cape Duhamel are closed to recreational haul and set netting at all times.
- **Throw netting (inland waters)** The Minister for Fisheries has recently approved amending fisheries legislation to permit the use of thrown nets in all inland waters of the Pilbara and Kimberley region north and east of Onslow for the take of cherabin and baitfish of the sardine, bony herring, hardyhead, anchovy, mullet and garfish families (families *Clupeidae*, *Atherinidae*, *Engraulididae*, *Mugilidae* and *Hemiramphidae*).
Please contact your nearest Department of Fisheries Office for information on when these changes will be implemented.



3.2.2 Pilbara area

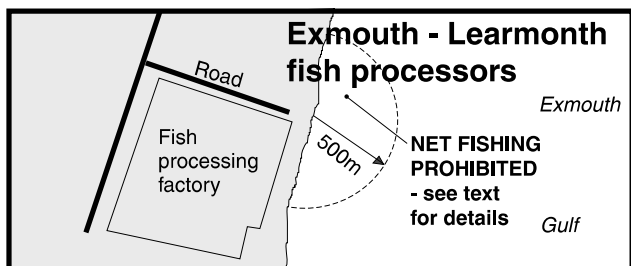
- **Onslow (Beadon Point to Third Street)** All waters within 450m of the low water mark between Beadon Point and Third Street are closed to recreational netting at all times.
- **Onslow Creeks** All creeks whose mouths fall within a 9km radius of Beadon Bay groyne are closed to recreational netting at all times.
- **Ashburton River** The Ashburton River and its tributaries are closed to recreational set and haul netting at all times. Also closed is the area around the Ashburton River mouth within 800m of high water mark and between 114° 54.54' east longitude and 114° 55.50' east longitude.



- **Port Hedland – creeks and rivers** All creeks and rivers between the Yule and the De Grey Rivers inclusive, including waters within a 400 metre radius of their mouths, are closed to recreational haul and set netting at all times.
- **Port Samson – inland waters** All inland waters within a 32 km radius of the Port Samson townsite are closed to *recreational set and haul netting*.

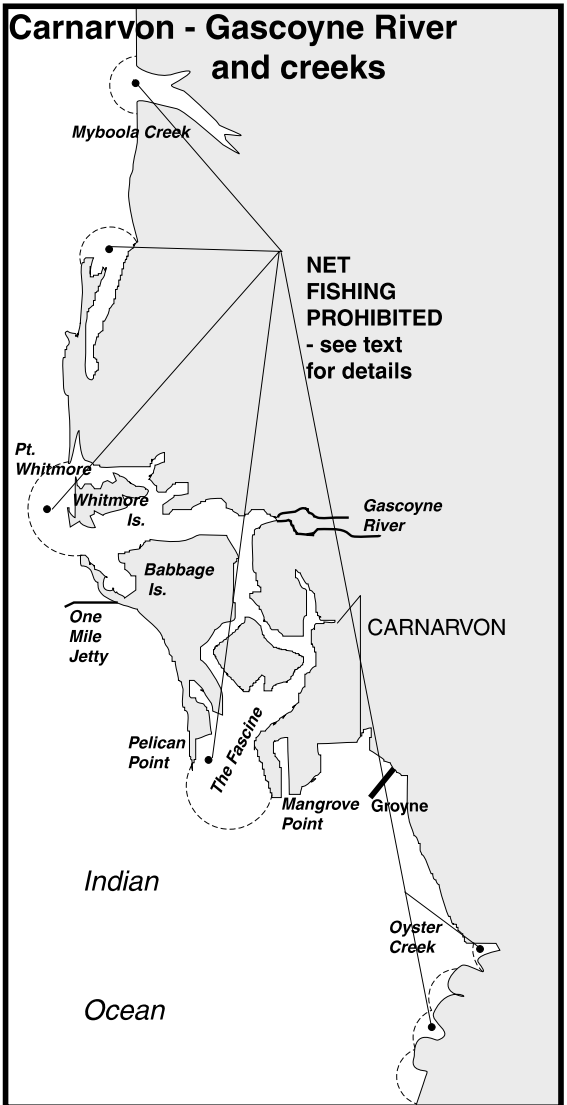
3.2.3 Exmouth - Carnarvon area

- **Exmouth Town Beach** all waters within 400m of the town beach high water mark (between 1000m north and south of Friedman Way) are closed to *recreational netting* at all times.
- **Learmonth Fish Processors (30km south of Exmouth)** All waters within 500m radius of the road 15393 are closed to *recreational netting* from 1 April to 30 September.



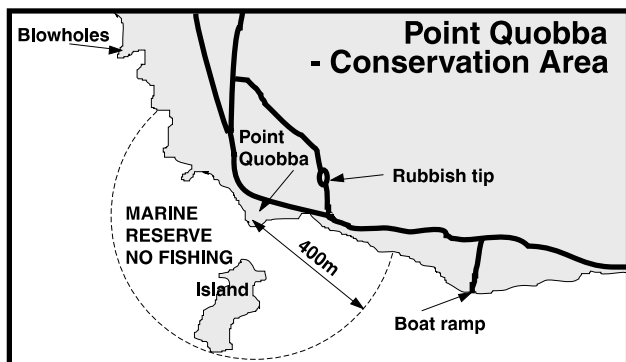
- **South Muiron Island (near Exmouth see map p.27)** All waters enclosed within an area one nautical mile (nm) by 0.5nm at the north-western tip of South Muiron Island are a marine sanctuary and closed to *recreational netting (all fishing)* at all times.

- **Ningaloo Marine Park** Special net fishing rules apply to Ningaloo Marine Park. For details, see the *Ningaloo Marine Park and Exmouth Gulf Fishing Guide*, available from the Department of Fisheries.
- **Carnarvon - Gascoyne River and creeks** All waters of the Gascoyne River, its tributaries, and those within a radius of 800m of each of its entrances into the ocean are closed to recreational netting at all times. All creeks from 10km north of Point



Whitmore to 5km south of Mangrove Point, including all waters within 400m radius of their mouths, are closed to *recreational netting* at all times.

- **Point Quobba Reef Observation Area (50km north of Carnarvon)** All waters within 400m radius of Point Quobba are a marine sanctuary and closed to *recreational netting* (*all fishing*) at all times.



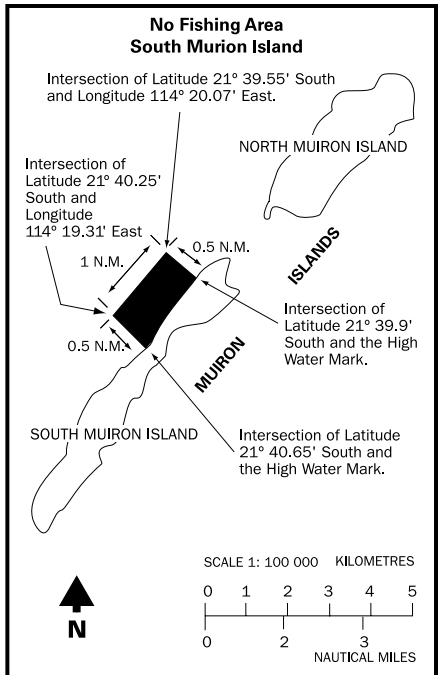
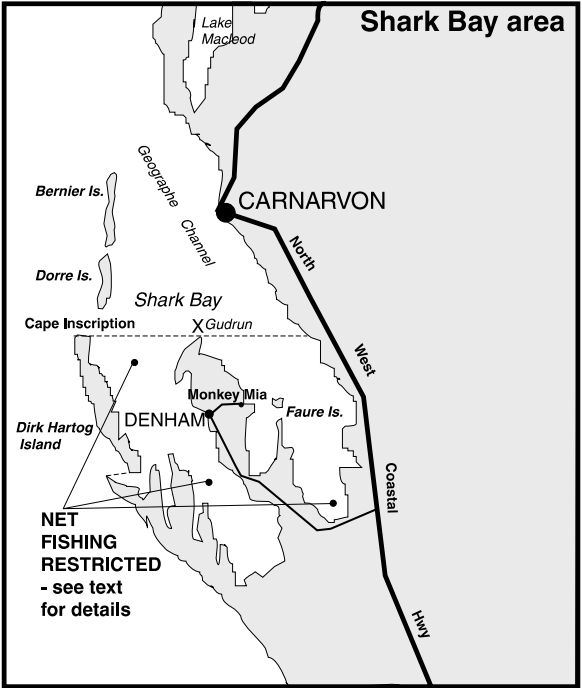
3.2.4 Shark Bay to 27°S latitude

- **Shark Bay** All waters within 500m radius of the wreck of the *Gudrun* (off Cape Peron North) are a marine sanctuary and closed to *recreational netting* (*all fishing*) at all times.

All waters within 800m radius of the north-west corner of the **Monkey Mia** jetty are closed to *recreational haul and set netting* at all times.

All waters within **Little Lagoon** (near Denham), its channel entrance, and the waters within 275m radius of the channel entrance are closed to *recreational netting* at all times.

In the waters off Shark Bay, south of a line drawn from Cape Inscription (on Dirk Hartog Island) due east to the mainland, no *recreational set netting* is allowed between one and a half hours after sunrise and one and a half hours before sunset. At all times, the net must be attended and an hourly 'check and clean' carried out.



3.3 Mid-West Waters

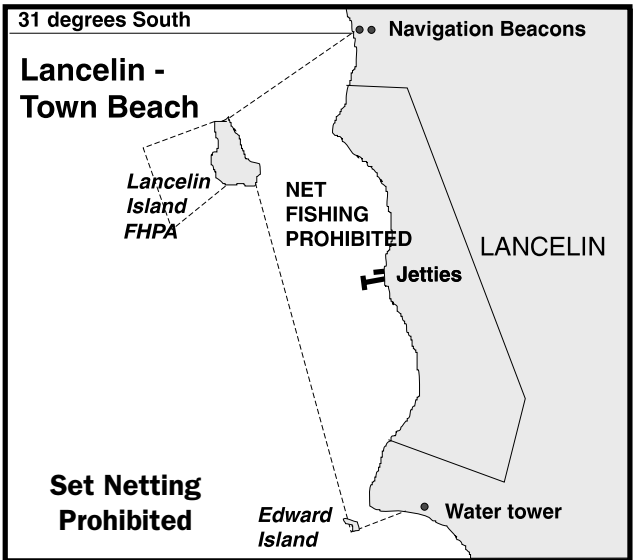
For the purposes of this guide, the 'Mid-West' is that region stretching from 27°S latitude south to Guilderton, and east of these places towards the WA/SA border. For further details, see the *Regional Sections - Key Map* at the beginning of the chapter.

This chapter sub-section will list all of the ocean and inland waters that are closed/open, respectively, to recreational netting during the year, along with any specific conditions and dates. **The information is current at the time of printing, but may change at later dates.**

- **Mid-West Waters** All Mid-West waters are closed to *recreational set netting* at all times.
- **Geraldton Harbour** All waters within Geraldton Harbour are closed to *recreational netting* at all times.
- **Houtman Abrolhos Islands** All waters within reef observation areas on the Houtman Abrolhos Islands are closed to *recreational netting* at all times. For further details, see *The Abrolhos Islands - a Visitor's Guide*, available from Department of Fisheries.
- **Port Denison** All waters within Port Denison Fishing Boat Harbour inshore of a line joining its two groynes are closed to *recreational netting* at all times.
- **Jurien Bay** All waters within 400 metres of the high water mark between 400 metres north of Jurien Boat Harbour and Shingle Avenue, including all waters inside the harbour, are closed to recreational netting at all times.
- **Cervantes** All waters within 400 metres of the high water mark between Green Street and Talavera Road are closed to *recreational netting* between 1 December and the following 31 May.
- **Lancelin Fish Habitat Protection Area** All waters within the Lancelin FHPA are closed to *recreational netting (all fishing)* at all times.

- **Lancelin/Guilderton** All waters adjacent to the Lancelin Townsite between Edward Island and Lancelin Island are closed to *recreational netting* at all times.

It should be noted that all waters of the Moore River are closed to recreational netting (including throw netting) at all times.

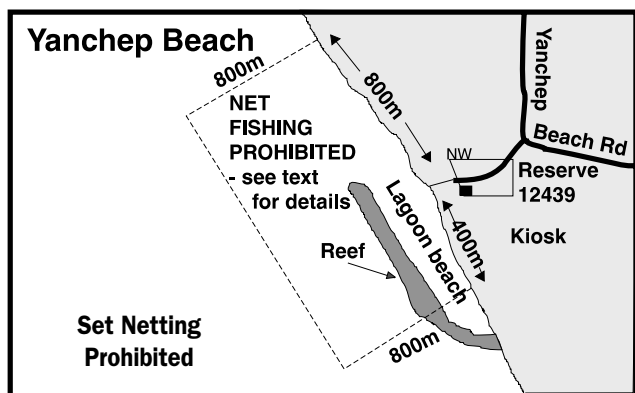


3.4 Perth Metro and Mandurah Waters

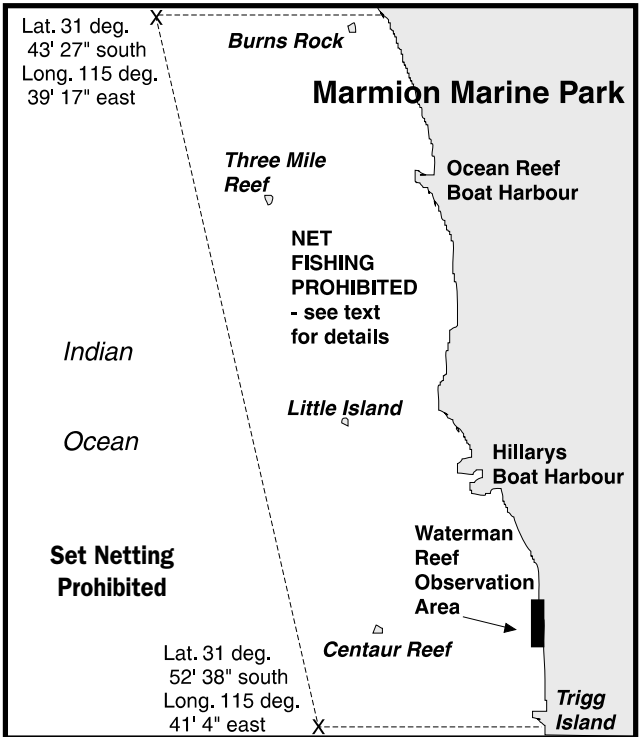
For the purposes of this guide, 'Perth Metropolitan' is that region stretching from Guilderton south to Preston Beach (south of Mandurah), and east of these places towards the WA/SA border. For further details, see the Regional Sections - Key Map at the beginning of the chapter. **The information is current at the time of printing, but may change at later dates.**

Where this guide says an area is closed/open to 'recreational netting', the term refers to haul, set and throw netting.

- **Perth Metro and Mandurah Waters** All Perth Metro and Mandurah waters are closed to *recreational set netting* at all times except the waters of the Peel/Harvey Inlet (see section on Peel/Harvey Inlet).
- **Yanchep Beach** All waters within 800m of the high water mark that lie within boundaries running 400m SE of the SW corner of Reserve 12439, and 800m NW of the NW corner of the said reserve are closed to *recreational netting* at all times.

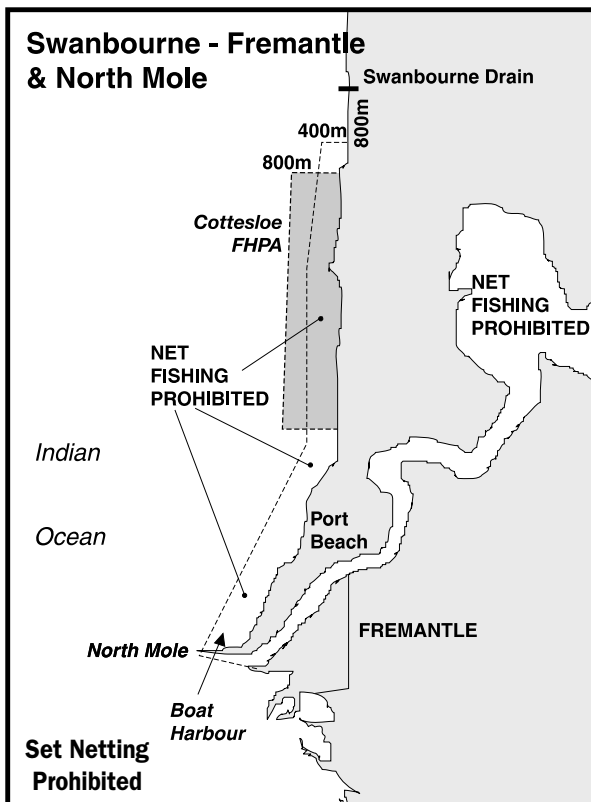


- **Marmion Marine Park (Burns Rock to Trigg Island)** All waters in the Marmion Marine Park, including the boat harbours at Hillarys and Ocean Reef, are closed to *recreational netting* at all times.



- **Scarborough Beach** All waters within 800m of the high water mark between Reserve Street and 400m south of Brighton Road are closed to *recreational netting* at all times.
- **City Beach** All waters within 800m of the high water mark between a point 800m north of the northern groyne to a point 800m south of the southern groyne are closed to *recreational netting* at all times.
- **Swanbourne Beach to Fremantle (Rous Head)** All waters within 400m of the high water mark from a point 800m south of Swanbourne Drain to Rous Head harbour wall are closed to *recreational netting* at all times.

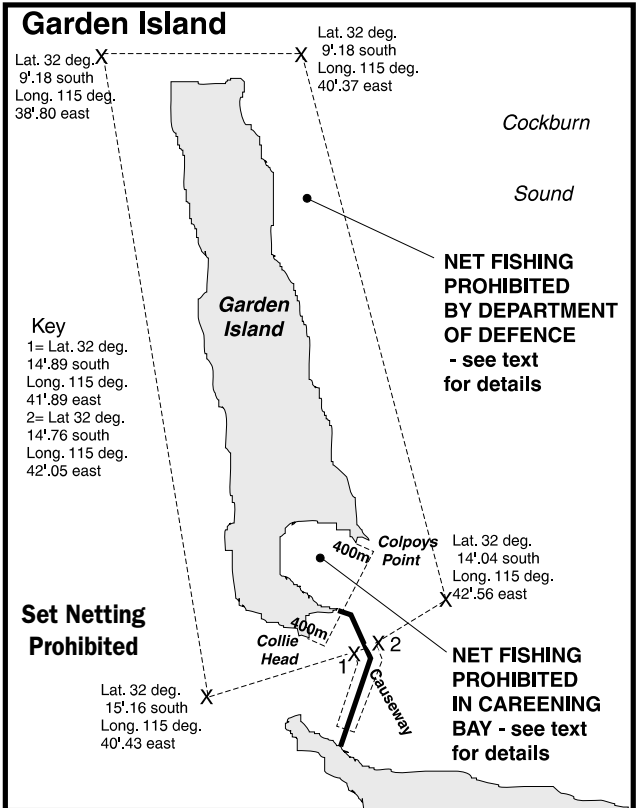
It should be noted that all waters of the Swan and Canning Rivers are closed to recreational netting (including throw netting) at all times.



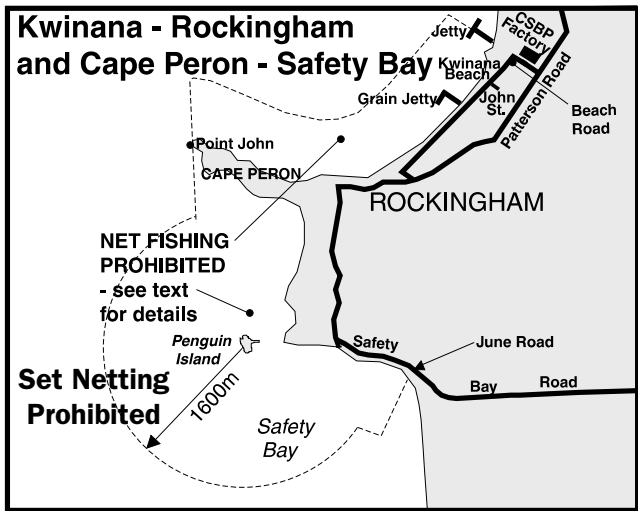
- **Cottesloe Fish Habitat Protection Area (FHPA)**
All waters within the Cottesloe FHPA are closed to *recreational netting (all fishing)* at all times.
- **North Mole Boat Harbour** All waters inside the harbour and within 200m of the harbour wall are closed to *recreational netting* at all times.
- **Rottne Island** All waters within 800m of the island are closed to *recreational netting* at all times.
- **South Beach (Fremantle)** All waters within 150m of the high water mark from the prolongation of Douro Road to the prolongation of Island Street, including all waters surrounding Douro Road groyne, are closed to *recreational netting* at all times.
- **Coogee Beach** All waters 460m north and south of the Beach Road prolongation are closed 400m seaward of the high water mark to *recreational netting* at all times.

- Garden Island (Fremantle)** All waters inside and 400m seaward of a line drawn from Colpoys Point to Collie Head, including Careening Bay, are closed to *recreational netting* at all times.

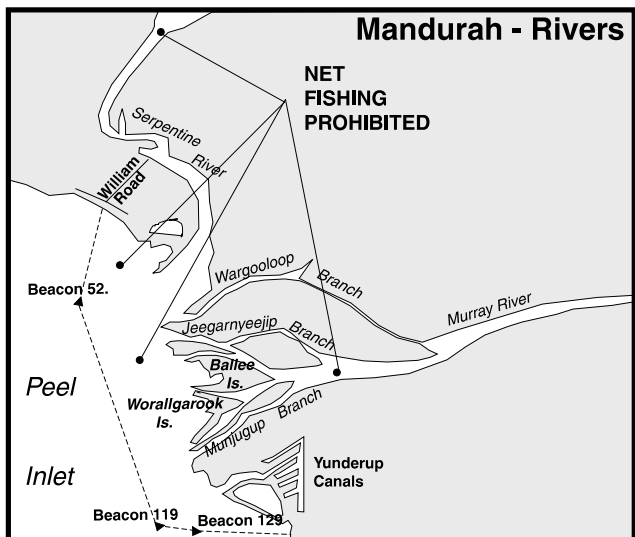
There is a Department of Defence ban on recreational netting all year within the Controlled Naval Waters of Garden Island - see map below for co-ordinates.

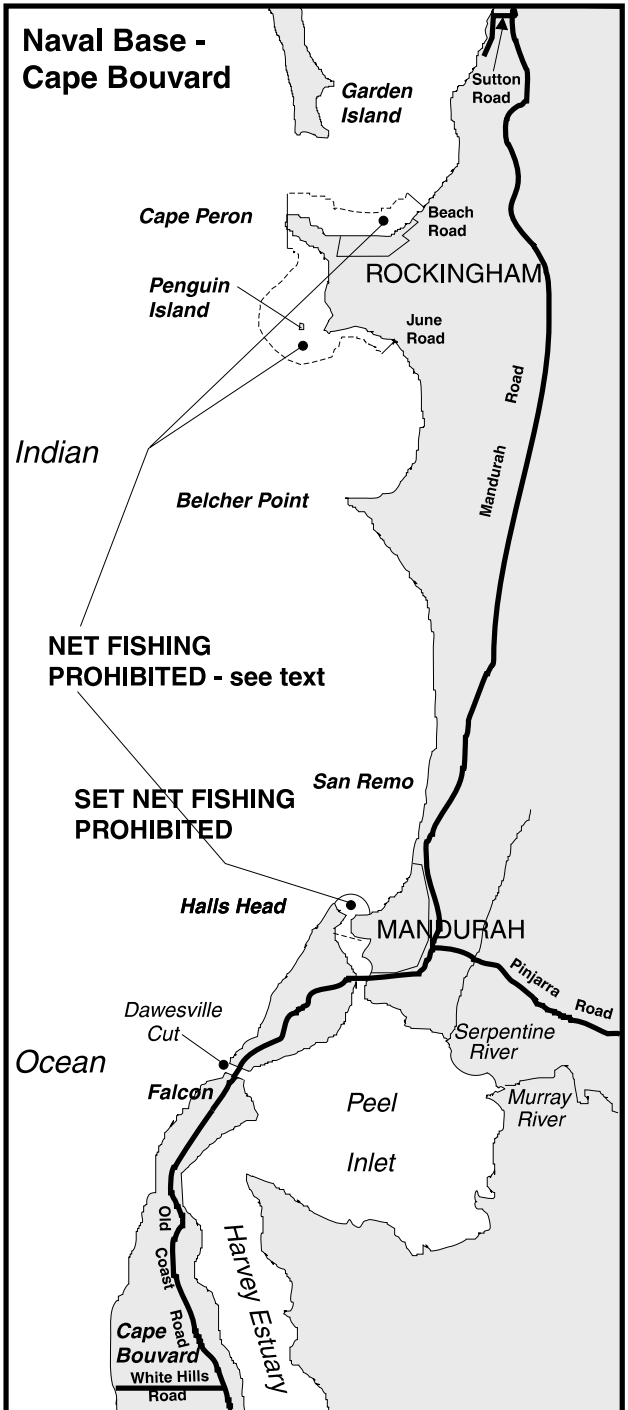


- Kwinana to Rockingham (Fremantle)** All waters within 800m of the high water mark from the tee-shaped CSBP jetty due west of the CSBP factory (prolongation of the east - west section of Kwinana Beach Road) to a line due north of Point John (Cape Peron) are closed to *recreational netting* at all times.



- Cape Peron to Safety Bay** All waters within 800m of the high water mark from a line due south of Point John (Cape Peron) to June Road (Safety Bay), including all waters within a 1600m radius of Penguin Island, are closed to *recreational netting* at all times.
- Peel-Harvey Inlet (Mandurah)** All waters of the Peel Inlet and the Harvey River estuary system are *conditionally open to recreational set and throw netting* **excluding** the Channel entrance to





Peel Inlet, the Yunderup canals, and the Harvey, Serpentine and Murray Rivers.

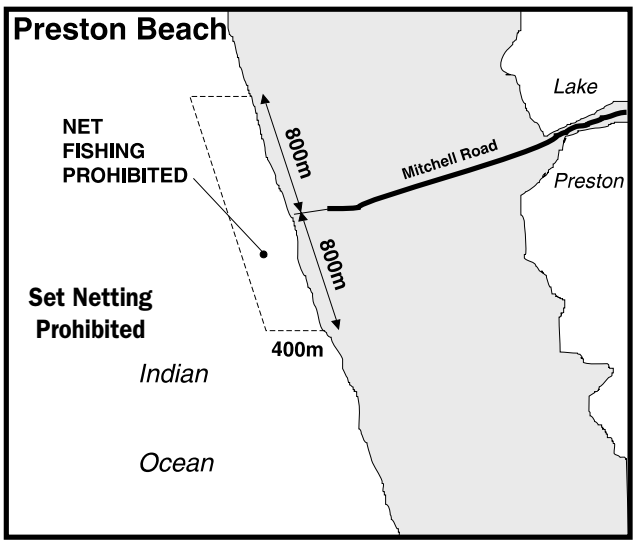
Recreational set netting is allowed in the Peel-Harvey Inlet (minus exclusions) on Wednesday nights from 1 November until the following 31 July, from one and a half hours before sunset to one and a half hours after the following sunrise. During this period, netters may leave their nets unattended, provided all nets are removed from the water by 8am each Thursday.

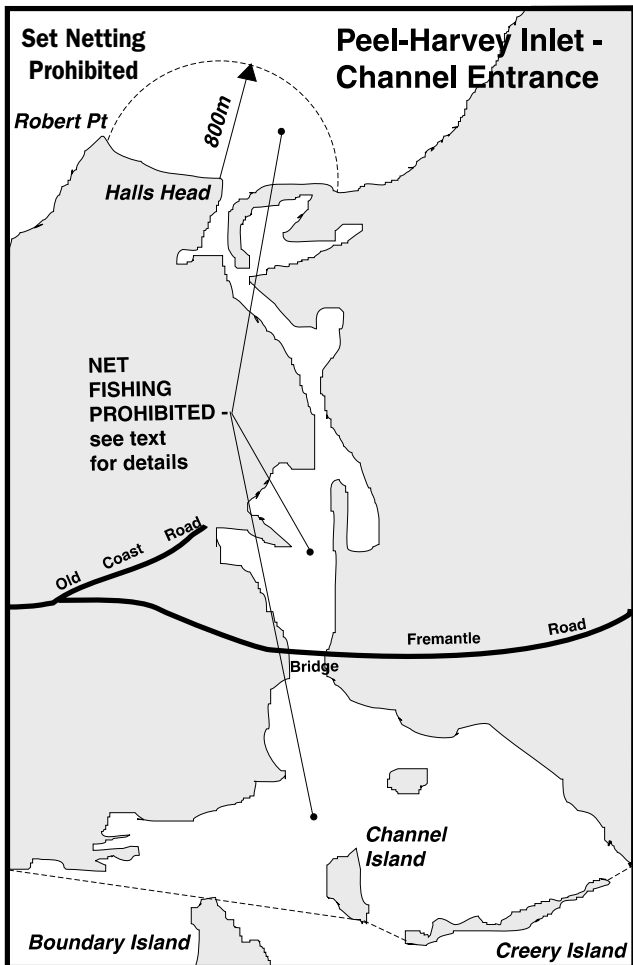
Set netting is totally banned in the Peel-Harvey Inlet during August, September and October, in the main cobbler breeding season.

Recreational throw netting (minus exclusions) is allowed in the Peel-Harvey Inlet at all times.

For further details of closures, see *Naval Base - Cape Bouvard, Peel-Harvey Inlet - Channel Entrance and Mandurah - Rivers* maps nearby.

- **Preston Beach** All waters within 400m of the low water mark between points 800m north and 800m south of the prolongation of Mitchell Road are closed to *recreational netting* at all times.





3.5 South-West Waters

For the purposes of this guide, 'South-West' is that region stretching south from Myalup Beach (near Mandurah) to Black Point. This includes Augusta and the Hardy Inlet.

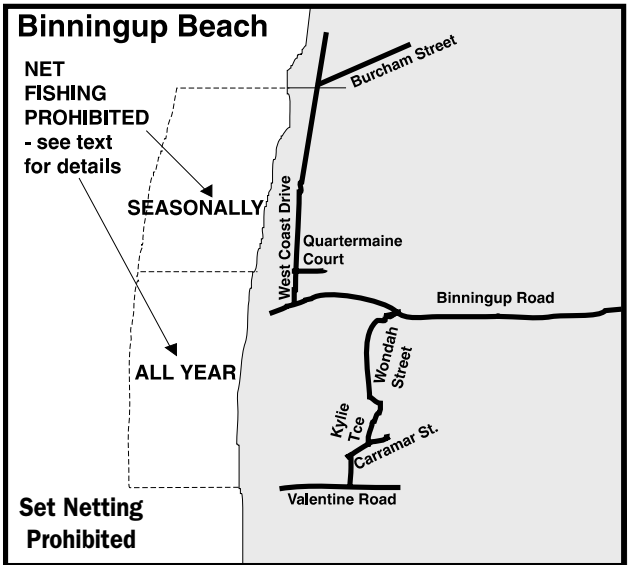
For further details, see the Regional Sections - Key Map at the beginning of the chapter. ***The information is current at the time of printing, but may change at later dates.***

Where this guide says an area is closed/open to 'recreational netting', the term refers to haul, set and throw netting.

- **South-West Waters** All South-West waters are closed to *recreational set netting* at all times except the waters of the Leschenault Estuary and Hardy Inlet. (see sections on the Leschenault Estuary and Hardy Inlet).
- **Myalup Beach** All waters within 400m of the high water mark between points 200m north and 200m south of the prolongation of Myalup Road are closed to *recreational netting* at all times.
- **Binningup Beach** All waters within 400m of the high water mark between Quartermaine Court and Valentine Road are closed to *recreational netting* at all times.

Those waters within 400m of the high water mark between Quartermaine Court north to where the western extension of the southern side of Burcham Street meets the beach (see map) are closed to *recreational netting* for two seasonal periods.

The waters are closed from 15 December to the following 15 February, and on weekends and public holidays from 16 February - 25 April.



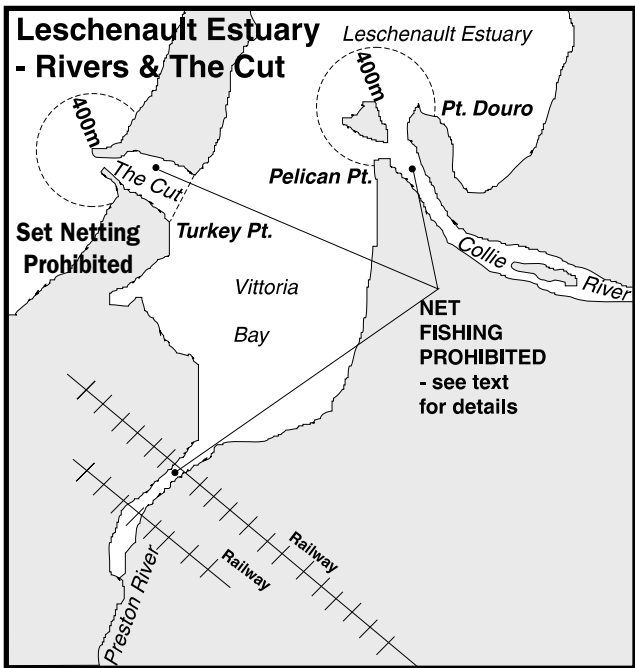
- **Leschenault Estuary system** All waters of the Leschenault Estuary system are conditionally open to *recreational set and throw netting* **excluding**:
 - all waters of the Collie River and waters of the Leschenault Estuary lying within a 400m radius of the northern-most extremity of Bar Island.
 - all waters of the channel connecting Leschenault Estuary to the sea known as “The Cut”, including those within a 400m radius of the western end of the northern-most groyne at its entrance into Koombana Bay.
 - all waters of the Preston River upstream from the northern-most railway bridge near its mouth.
 - all waters of the Leschenault Inlet (sometimes known as the “Deadwater”), including the Koombana Channel.
 - all waters of the Bunbury Inner Harbour Basin

Recreational set netting is allowed in the Leschenault Estuary (minus exclusions) on Wednesday and Friday nights from 1 November

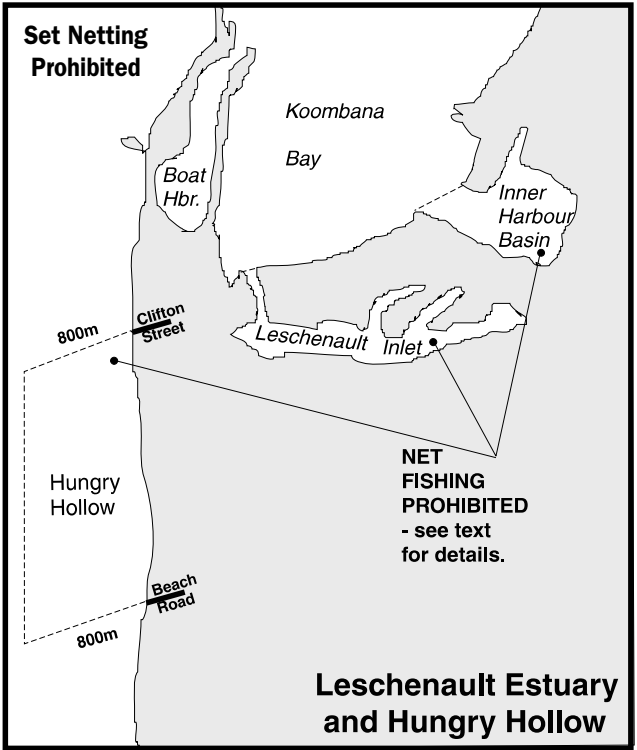
until the following 31 July, from one and a half hours before sunset to one and a half hours after the following sunrise, providing the net is attended and an hourly 'check and clean' is carried out.

Set netting is totally banned in the Leschenault Estuary system during August, September and October, in the main cobbler breeding season.

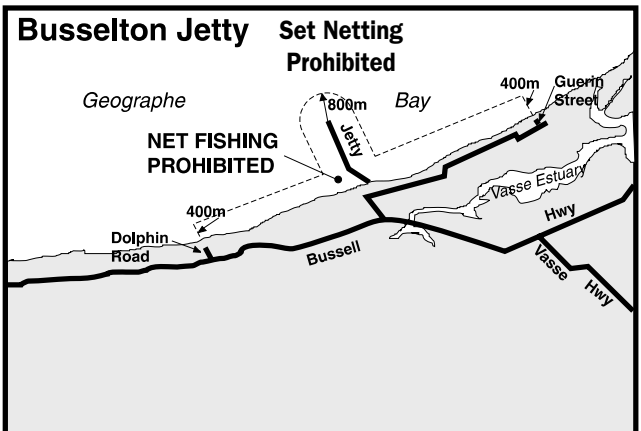
Throw netting (minus exclusions) is allowed in the Leschenault Estuary at all times.



- **Hungry Hollow** All waters within 800m of the high water mark between Clifton Street and Beach Road are closed to *recreational netting* at all times.
- **Peppermint Grove** All ocean waters within 400m of the high water mark between Cowrie Court and McCourt Place (the area between the two northern-most vehicle access tracks onto the beach) are closed to *recreational netting* at all times.



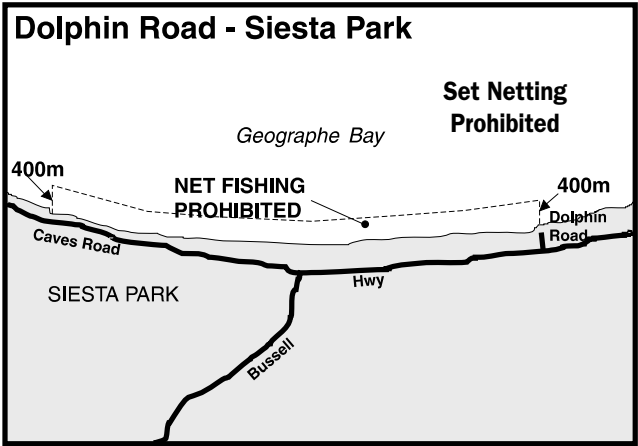
- **Busselton Jetty** All waters within 400m of the high water mark between Guerin Street and Dolphin Road, and within 800m of the jetty are closed to *recreational netting* at all times.



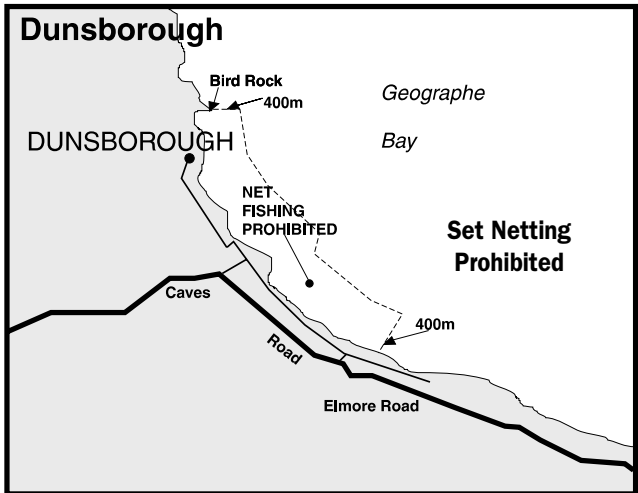
Some areas of water in Geographe Bay are closed to all recreational netting at peak holiday periods.

These areas are completely closed from 15 December - 15 February, but also at weekends and public holidays from 16 February - 25 April. The areas are:

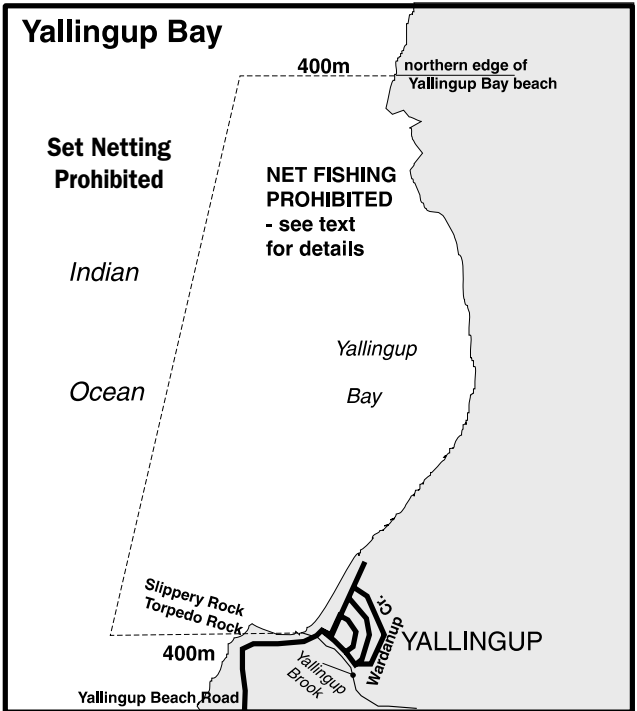
- **Dolphin Road - Siesta Park** All waters within 400m of the high water mark from Dolphin Road to approximately 1km west of Siesta Park groyne.



- **Dunsborough** All waters within 400m of the high water mark between the tall Norfolk Island pines approximately 450m east of the intersection of Elmore Road and Geographe Bay Road to Bird Rock.



- **HMAS Swan wreck site** All waters within 200m of the *HMAS Swan* wreck site are closed to *recreational netting* (all fishing) at all times.



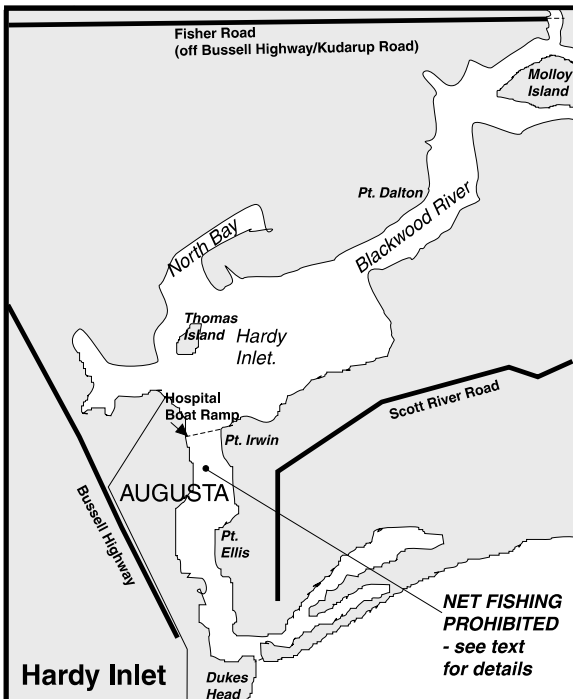
- **Yallingup Bay** All waters within 400m of the high water mark between the northern edge of the Yallingup Bay beach and Yallingup Brook's entry into the ocean are closed to *recreational netting* at all times.
- **Canal Rocks (near Yallingup)** All waters within an 800m radius of the centre of Canal Rocks are closed to *recreational netting* at all times.
- **Cowaramup Bay (Gracetown)** All waters within Cowaramup Bay are closed to *recreational netting* at all times.
- **Hardy Inlet and Blackwood Estuary (Augusta)** Waters of the Blackwood River and Hardy Inlet downstream of the Fisher Road boat ramp and north of a line drawn between Point Irwin and the Irwin Street boat ramp are conditionally open to *recreational set netting* (see over).

All waters, including Swan Lakes and the Deadwater, south of a line from Point Irwin to the Hospital boat ramp (Irwin Street) are closed to *recreational netting* at all times. All waters upstream of the Fisher Road Boat Ramp are closed to *recreational netting* at all times.

Recreational set netting is permitted in the Hardy Inlet/Blackwood Estuary (minus exclusions) from one and a half hours before sunset on 1 September until one and a half hours after sunrise on the following 31 May, providing the net is attended and an hourly 'check and clean' is carried out, during specified hours. During this period, it is permitted from one and half hours before sunset until one and half hours after the following sunrise.

Set netting is totally banned in the Hardy Inlet/Blackwood Estuary during June, July and August, to protect black bream stocks.

Recreational throw netting (minus exclusions) is allowed in the Hardy Inlet/Blackwood Estuary at all times.



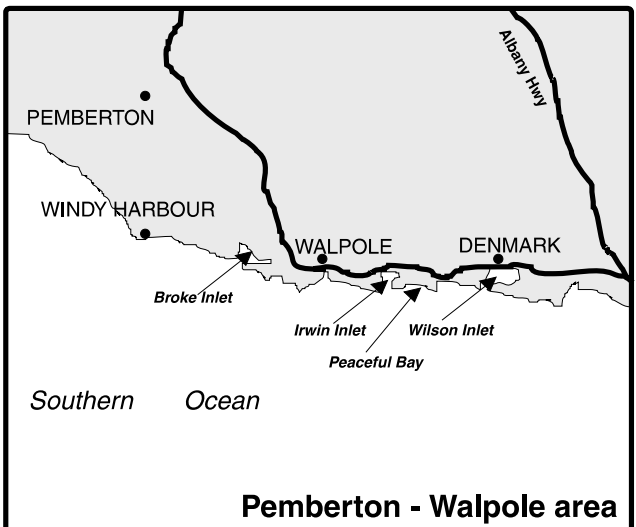
3.6 Great Southern Waters

For the purposes of this guide, 'Great Southern' is that region stretching from Black Point east to the WA/SA border. Note that Augusta and the Hardy Inlet have been included in the previous sub-section (*South-West Waters*).

For further details, see the *Regional Sections - Key Map* at the beginning of the chapter. **The information is current at the time of printing, but may change at later dates.**

It should be noted that recreational set netting, where permitted, is only allowed up to 800m seaward of the low water mark. Where this guide says an area is closed/open to 'recreational netting', the term refers to haul, set and throw netting.

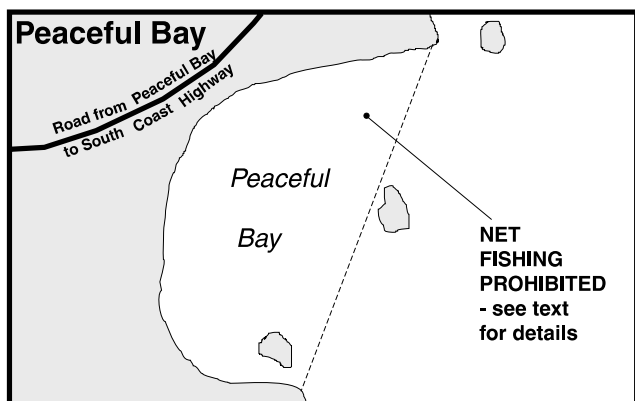
- **Windy Harbour** All waters within 400m of the high water mark of the Windy Harbour town beach are closed to *recreational netting* at all times.
- **Broke Inlet (20km west of Walpole)** All the waters of Broke Inlet and the waters of all rivers, streams and creeks that flow into the inlet are open to *recreational set netting* from 1 May until 31



October, providing the set net is attended and an hourly 'check and clean' is carried out. When the season is open, no netting is allowed between one and a half hours after sunrise and one and a half hours before sunset.

Recreational throw netting is permitted in the Broke Inlet at all times.

- **Peaceful Bay (near Walpole)** All waters from the high water mark to the rock in the centre of the mouth of Peaceful Bay are closed to *recreational set netting* at all times. The same waters are closed to *recreational haul netting* from midday 31 October until 4pm the following 1 May.

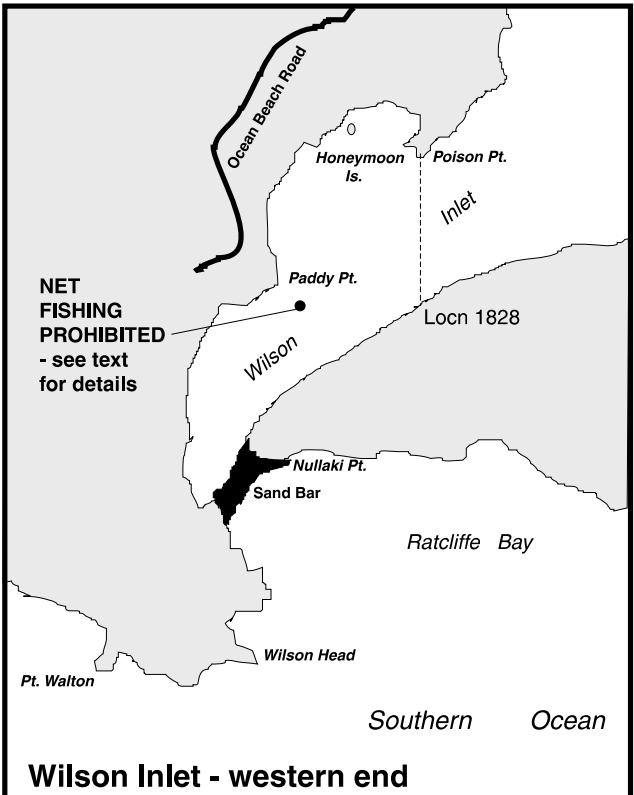


- **Irwin Inlet (20km east of Walpole)** All waters of Irwin Inlet and the waters of all rivers, streams and creeks that flow into the inlet (**excluding** the Bow River) are open to *recreational set netting* from 4pm on 1 May until midday 31 October, providing the set net is attended and an hourly 'check and clean' is carried out.

Recreational throw netting (minus exclusions) is permitted in the Irwin Inlet from 1 May to 31 October.

- **Wilson Inlet (near Denmark)** All waters of Wilson Inlet are conditionally open to recreational set and throw netting **excluding:**

- the waters of the inlet between the sand bar at the mouth of the inlet (low water mark of Ratcliffe Bay) and a line running approximately due south of Poison Point to the Nullaki shore.
- the waters of Hay River, its tributaries, and those within a radius of 400m from the mouth of the Hay River.
- the waters of the Sleeman River, its tributaries, and those within a radius of 400m of the mouth of the Sleeman River.
- the waters of the Denmark River, its tributaries, and those within a radius of 800m from the mouth of the Denmark River.

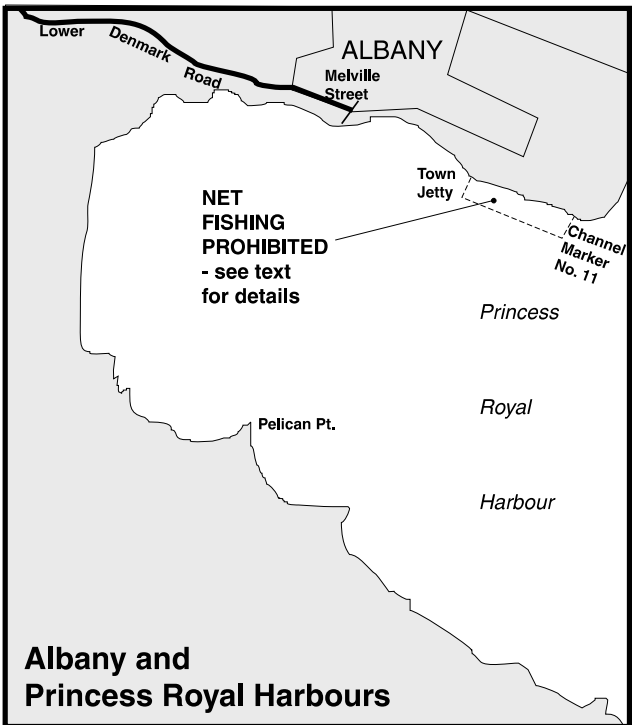


Recreational set netting (minus exclusions) is permitted during the following periods:

- (1) from one and a half hours before sunset on 1 March, ending one and a half hours after sunrise on 1 November.
- (2) from 5pm on 1 November, ending one and a half hours after sunrise on the following 1 March.

Unattended recreational set netting is permitted during the periods (1) and (2) on Wednesday evenings. On all other days during (1) and (2), the net must be attended and an hourly 'check and clean' carried out.

Recreational throw netting (minus exclusions) is permitted in Wilson Inlet at any time.



- **Princess Royal Harbour (Albany)** All waters of Princess Royal Harbour are conditionally open to recreational set netting, **excluding** those from the

low water mark between the town jetty and the location of the starboard channel marker No.11.

Recreational set netting (minus exclusions) is permitted during the following periods:

- (1) from one and a half hours before sunset on 1 March, ending one and a half hours after sunrise on 1 November.
- (2) from 5pm on 1 November, ending one and a half hours after sunrise on the following 1 March.

In areas where set netting is permitted, nets must be attended at all times and an hourly 'check and clean' carried out.

Recreational throw netting (minus exclusions) is permitted in the Princess Royal Harbour at any time.

- **HMAS Perth wreck site** All waters within 250m of the HMAS Perth wreck site are closed to *recreational netting (all fishing)* at all times.
- **Oyster Harbour (Albany)** All waters of Oyster Harbour are closed to *recreational set and haul netting* at all times.
- **Beaufort Inlet (40km west of Bremer Bay)** All waters of the Beaufort Estuary and the Pallinup River are conditionally open to *recreational set netting*.

Set netting is permitted one and half hours before sunset until one and a half hours after sunrise. At all times, the net must be attended and an hourly 'check and clean' carried out. Set nets must have a minimum mesh size of 76mm.

Recreational throw netting is permitted in the Beaufort Estuary and Pallinup River at all times.

- **Wellstead Estuary (Bremer Bay)** All waters of the Wellstead Estuary/Bremer River downstream of the "Narrows" are conditionally open to *recreational set netting*.

At all times, the net must be attended and an hourly 'check and clean' carried out.

Recreational throw netting is permitted in Wellstead Estuary downstream of the "Narrows" at all times.

- **Gordon Inlet and Gairdner River (15km north east of Bremer Bay)** All waters of the Gordon Inlet are conditionally open to recreational set netting at all times.

All waters of the Gairdner River downstream of a line joining Kent loc'n 1301 and SE corner of Kent loc'n 1295 (approximately 11.5km upstream from the mouth of the river at Gordon Inlet) are conditionally open to recreational set netting from 1 April to 30 November.

At all times, the net must be attended and an hourly 'check and clean' carried out.

Recreational throw netting is permitted in the Gordon Inlet and Gairdner River (minus exclusions) at all times.

- **Hamersley Inlet (20km west of Hopetoun)** All the waters of Hamersley Inlet and Hamersley River are conditionally open to *recreational set netting* at all times.

At all times, the net must be attended and an hourly 'check and clean' carried out.

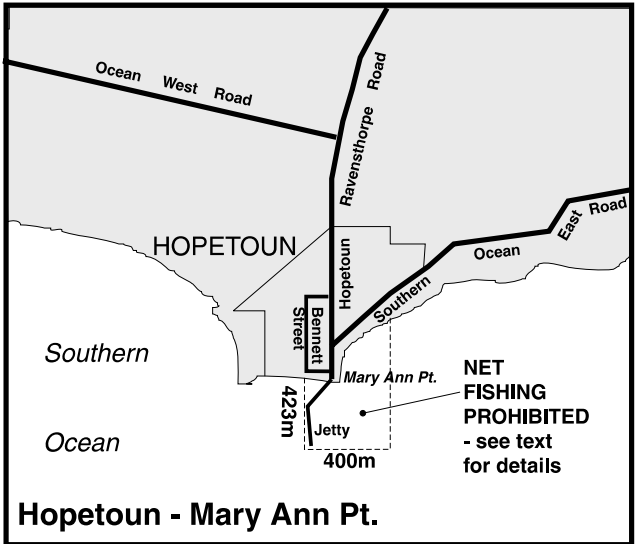
Recreational throw netting is permitted in the Hamersley Inlet and Hamersley River at all times.

- **Mary Anne Point (Hopetoun)** All waters within the area defined in the Hopetoun - Mary Anne Point map nearby are closed to recreational netting from 1 December to the last day of the following February.

- **Stokes Inlet (70km west of Esperance)** All waters of Stokes Inlet, including its tributaries and affluents, are conditionally open to recreational set netting from 1 May to 30 November.

Set netting is permitted during this period from one and half hours before sunset to one and a

half hours before sunrise. At all times the net must be attended and an hourly 'check and clean' carried out.



Recreational throw netting is permitted in the Stokes Inlet, its tributaries and affluents, at all times.

- **Esperance Bay** All waters from the high water mark north of a line between Dempster Head and the eastern groyne of Bandy Creek Harbour are closed to *recreational netting* from 1 December - 31 March.

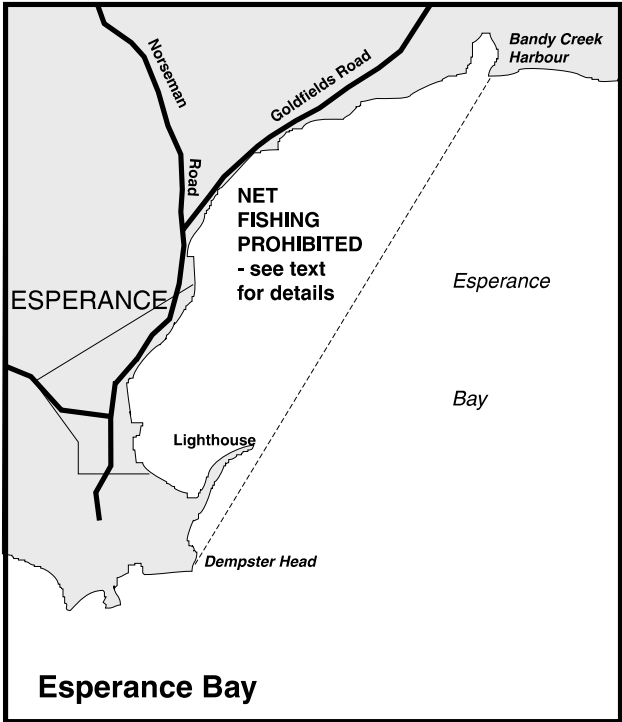
From 1 April - 30 November, recreational netting is only permitted between 7pm and the following 7am.

- **Esperance Jetty - artificial reef** All waters within 50m of the artificial reef are closed to *recreational netting (all fishing)* at all times.
- **Thomas River (95km east of Esperance)** All waters of the Thomas River, including those of its tributaries and affluents, are conditionally open to *recreational set netting*.

At all times, the net must be attended and an hourly 'check and clean' carried out.

Recreational throw netting is permitted in the Thomas River, its tributaries and affluents, at all times.

- **Sanko Harvest wreck** All waters within 500m of the *Sanko Harvest* wreck are closed to *recreational netting (all fishing)* at all times.



Department of Fisheries District Offices

If you are unclear about any of the information in this guide, please contact your nearest Department of Fisheries office.



Department of Fisheries telephone numbers:

Broome	(08) 9193 8600	PERTH	HEAD OFFICE (08) 9482 7333
Karratha	(08) 9144 4337	Fremantle	PERTH METRO (08) 9335 6800
Exmouth	(08) 9949 2755	Mandurah	(08) 9535 1240
Carnarvon	(08) 9941 1185	Bunbury	(08) 9721 2688
Denham	(08) 9948 1210	Busselton	(08) 9752 2152
Geraldton	(08) 9921 6800	Albany	(08) 9841 7766
Dongara	(08) 9927 1187	Esperance	(08) 9701 1839
Jurien Bay	(08) 9652 1048		
Lancelin	(08) 9655 1111		
Hillarys	(08) 9448 6028		