



Safety and Environmental Management Plan

East Gippsland Ports of
Gippsland Lakes, Snowy River and Mallacoota

2005 – 2008



Third Edition
19 September 2007

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Safety and Environmental Management Plan
for
East Gippsland Ports of Gippsland Lakes,
Snowy River and Mallacoota

2005 – 2008

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Plan Endorsement

This Management Plan, prepared under Part 6A of the *Port Services Act 1995* (Vic.), provides the basis and direction of Safety and Environmental Management within Gippsland Ports.

The Management Plan intends to promote best practice safety and environmental performance across all aspects of port activities and encourage management of related issues arising from port activities and operations for the benefit of employees, port users, neighbours and the wider Victorian community.

During plan preparation, Gippsland Ports consulted a range of agencies, stakeholder, community groups and individuals. Gippsland Ports will always seek to strengthen these relationships and further encourage each and every one to participate in safety and environmental management.

Gippsland Ports expresses its thanks to all participants.

Bernie Smith

Chairman

Gippsland Ports Committee of Management Incorporated

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Prelude to the **Third Edition**

In **September 2007**, Gippsland Ports undertook an internal annual review of its Safety and Environmental Management Plan.

The review examined all aspect of the plan and found that:

- The plan accurately depicts the current safety and environmental status of the ports;
- Progress has commenced with the implementation of risk reduction measures, although due to a recent organisational restructure and extended Government funding timeframes, program rollout delays are anticipated;
- The current controls are adequate and are performing satisfactorily; and
- The plan was updated with amendments registered in the document status and record located on page iii of this plan.

In addition, Gippsland Ports is able to state that in the last twelve months:

- There have been several **vessel groundings in and around the entrance at Lakes Entrance port**;
- There have been major changes to key legislation including the consolidation of the Victorian OH&S regulations 2007 that affect all of Gippsland Ports;

Dredging activities for the year 2007 were dramatically affected by 2 natural events;

- **Shoaling of the entrance channel in March and again in April/May '07**

Due to continuous south east weather patterns and lack of inflows into the Lakes an unprecedented amount of sand entered the entrance channel in March causing the entrance channel to be severely restricted in available depths, this situation reoccurred in Late April 07.

- **Floods in late June and early July '07**

The Gippsland Lakes catchment area received over 250 millimetres of rain in a 10 day period in late June. This resulted in the worst floods for over 10 years.

However there was a benefit to the channels and bar at Lakes Entrance as the flood waters scoured a considerable amount of sand from the channels and out to sea. It has been calculated from hydrographic surveys that over 300, 000 M3 of sand was taken from inside Gippsland Ports dredging areas and out to sea.

As a result the entrance channel, the inner channels, and the bar channel at Lakes Entrance are in the best condition for navigability for many years.

- There have been no major changes in the nature, scale or extent of port activities; and
- It has initiated the 'Lakes Entrance Sand Management Program' involving the trial of a new and improved sand management system. This program will ensure that the entrance to the Port of Gippsland Lakes remains safe and navigable well into the future. The program will involve:
 - Trialling of a Trailer Suction Hopper Dredge;
 - Implementation of a monitoring regime for sand movement;
 - Installation of trial sand bypass pumps at the entrance breakwaters with sand pumped to a suitable discharge point(s) along the coast;
 - Improvements and repairs to the existing Sand Transfer Station;
 - Replacement of the cutter suction with the new Kalimna; and
 - Development of specification for replacement of the April Hamer dredger.

1 Summary

1.1 Aim of the Safety and Environmental Management Plan

Gippsland Ports intends to utilise this plan as a management tool to systematically examine the full scope of activities in its ports and to ensure that all significant safety and environmental risks are identified and controlled.

1.2 Funding

Gippsland Ports relies greatly on an annual Victorian State Government operating grant for it to undertake its responsibilities. The operating grant is administered by the Department of Sustainability and Environment through a Management Agreement. Consequently, the success and viability of this plan is subject to adequate continued future funding.

1.3 Description of the ports and their key activities

The Port of Gippsland Lakes is the second largest (in area) of the five Gippsland Ports. The port covers an area of 421.2 km² and includes the lower reaches of the Latrobe, Nicholson, Mitchell and Tambo Rivers plus the Lakes of Wellington, Victoria and King.

Access to the ocean is via Lakes Entrance. This man made entrance was opened in 1889 and has provided an important contribution to the region's history and economy since that time.

The Port provides a base for one of Australia's largest fishing fleets. Extensive wharf infrastructure in Lakes Entrance is used to service the fishing fleet working out of the Port. Their catches are marketed through the Lakes Entrance Fisherman's Co-operative who provide 40% of Melbourne's fish market, are major suppliers to Sydney and have multi-million dollar export contracts. Fish landings to the port vary from 5,000 to 9,000 tonnes annually and represent a value to the Victorian community in the order of AU\$150 million¹.

The Port encompasses one of Australia's largest and most beautiful inland waterways stretching from Sale in the west to Lakes Entrance in the east. These waterways are a haven for recreational boating and fishing or just holidaying on the edge of lakes or ocean. Many parts of the Lakes are accessible by boat. Gippsland Ports provide public jetties at some of the more popular destinations such as Steamer Landing, Spermwhale Head, Barrier Landing, Flagstaff and Ocean Grange. Many people utilise their own boat, whilst some lease a permanent berth at their favourite location. There are boats for hire from many of the operators in the area. These include day boats, cabin cruisers and yachts.

Key facilities in the Port of Gippsland Lakes include the 150 tonne slipway and boat repair yard located at Paynesville and a 100 tonne travel lift at Bullock Island. The 75 tonne slipway at Lakes Entrance has been decommissioned.

There is a Sand Transfer Station (STS) and associated piping located at Lakes Entrance on the western end of Long Island adjacent to The Narrows. Piping from the STS is buried along the seaward foreshore and the discharge pipe resurfaces approximately 800 metres east of the Eastern Breakwater.

The Port of Snowy River covers an area of 49.3 km² and is located where the Snowy River meets the sea. The area is a popular tourist destination and provides river, estuary and offshore fishing. Campers and bushwalkers utilise the series of local wildlife reserves and conservation parks, whilst the area includes boat access for the lower parts of the Snowy and Brodribb Rivers.

The Port of Mallacoota covers an area of 32.3 km² and is located on the eastern tip of Victoria. The port encompasses an extensive estuarine system where the Wallagaraugh, Genoa and Little Rivers enter Top and Bottom Lakes.

¹ Seafood Industry of Victoria (2004) <http://www.siv.com.au/lakesentrance.html>

Mallacoota is a major tourist destination as it is surrounded by Croajingolong National Park. Commercial fishery at Mallacoota is based on abalone and the fleet use the East Gippsland Shire boat ramp at Bastion Point to gain access to the open sea. A 16 tonne slipway operates adjacent to the main boat ramps. Gippsland Ports undertakes the slippings and launchings however once a vessel is slipped, maintenance work is carried out by the owner, charterer, contractors and/or support personnel. An induction process is presented by the slipway operator. The main wharf is predominately used by recreational vessels since a large build of sand has occurred inside the inlet entrance.

The Port of Snowy River and Port of Mallacoota entrances to the sea are subject to closure due to sand movement. This event occurs from time to time and the entrances are reopened mechanically.

Gippsland Ports provides information and support for industry, tourists and boat operators in the area. This includes details of facilities throughout the port and a guide to navigation throughout the Lakes with locality maps of boat ramps, public facilities, map grid references, boating zone information, destination jetties and more. Apart from general port services, Gippsland Ports undertakes dredging, berthing and mooring allocation, public jetty servicing and maintenance, assistance with mooring of vessels, tide and channel information, operation and hire of a 12 tonne mobile crane and excavator and boatyard maintenance and repair operations at Lakes Entrance and Paynesville.

Dredging operations are undertaken on the Lakes Entrance Bar and the channels leading to Lakes Entrance and Paynesville (refer to Appendix V – Dredging Summary). The principle equipment utilised is the side-casting dredge – ‘April Hamer’, the cutter suction dredge ‘Melbourne’ (temporary chartered) and the STS. The cutter suction dredge – ‘Sandpiper’ has been decommissioned and replaced with the ‘Kalimna’.

1.4 Major tenants, licensees and service providers

A major stakeholder at the Port of Gippsland Lakes is the Fishermen's Co-Operative Society Limited (LEFCOL) incorporated in 1964. It is the largest Co-operative of its kind in Australia. The Co-op started as a gear store but has expanded its role and now provides services such as ice and bin provisions, unloading and consigning facilities, marketing advice and administrative and political support. The Co-op is very active in both the Commonwealth and State consultation processes as a representative for industry in the eastern region. The Co-op is a major supplier to the Victorian fresh fish market and also represents a considerable proportion of the fresh fish consigned to the Sydney fresh fish market. LEFCOL occupies land on Bullock Island under a Crown Lease with the Department of Sustainability and Environment. Being a Co-operative much of the profits are distributed back to the fisher.

A fishmeal factory was built next to the Co-op in 1965 to process pilchards (*Sardinops neopilchardus*) and anchovies (*Engraulis australis*). The boats using purse seines would bring in 100 tonnes per trip. Such large volumes were caught that much of the local stock was fished out and the factory closed. Pilchard stocks recovered but were again devastated in 1995 by the herpes like virus that affected the entire southern Australian coastline.

Deep-sea trawlers started working from the port from 1976. These boats fish in the South East Fishery and were involved in the development of catching orange roughy. Prawn fishing started in the mid 1970s using small boats. The season is variable with school prawns (*Metapenaeus macleayi*) and eastern king prawns (*Melicertus plebejus*) being harvested. Squid fishing is the latest fishing activity to be added to the port. Starting in 1988, the boats fish at night. The best catches recorded were between eight and ten tonnes a night.

Current fishing operations in the area includes:

- The last Danish seine trawl fleet in Australia (17 boats)
- Deep water board trawlers (5 boats)
- A shark fishing fleet (6 boats)
- Estuarine fishermen who fish the Gippsland Lakes (18 boats)
- A scallop harvesting fleet that also catch squid when in season (30 boats)
- Rock lobster (3 boats)

- A fleet of inshore vessels (6 boats) who ply their trade in diverse forms of fishing close to the coast including prawn fishing
- Bait fishers who supply recreational anglers (9 boats)²

The exit of twenty two fishing boats in Lakes Entrance under the Commonwealth's buy back program sees the fleet drop by 34%.

At the end of 2007, Gippsland Ports had allocated 387 berths for occupation throughout the Port of Gippsland Lakes. A further 95 new applicants await allocation. Furthermore, all 194 swing moorings are occupied with 32 new applicants on the waiting list. There are approximately 100 fishing boats operating out of Lakes Entrance and 5 leases including 2 floating restaurant (boats), 2 charter vessels and 1 police boat.

The Port of Mallacoota has 7 berths and 26 swing moorings allocated and occupied. There is also a single lease for a charter vessel operating in the area.

1.5 Significant safety hazard risk contributors and associated controls

Gippsland Ports has identified 125 significant safety hazards that occur throughout the various ports of East Gippsland. These hazards stem from public recreational, commercial and Gippsland Ports activities. The majority of significant safety hazards refer to deficient, defective or no safety equipment, strong currents, inclement weather, lack of experience or knowledge and slip trip or falls. A number of measures have been identified to control hazards including establishing a detailed Port Waterways Safety Management Plan, an education strategy and safety patrols.

The remainder of significant safety hazards refer to emergency situations such as collisions with other boats or infrastructure and explosions or fire. The measures listed to control these hazards include the development of an Emergency Management Plan, a review of Local Knowledge Certificates management, establishment of safety management criteria for permits and lease agreements and the establishment of safety boating charts.

The controls listed above are additional to any existing controls and together these measures will improve safety hazard risk management.

1.6 Significant environmental impact risk contributors and associated controls

Gippsland Ports has identified 133 significant environmental impacts that occur throughout the various ports of East Gippsland. These impacts stem from public recreational, commercial and Gippsland Ports activities. The majority of significant environmental impacts refer to wastes or contaminants entering the immediate environment. A number of measures have been identified to control wastes including establishing a detailed Port Waterways Environmental Management Plan, a Waste Management Plan, an education strategy, a monitoring regime and environmental inspections.

The remainder of significant environmental impacts refer to emergency situations, the alteration or disturbance of coastal and lake processes, a lack of planning, training, auditing and inadequate, insufficient experience in local knowledge. The measures listed to control these impacts include the development of an Emergency Management Plan, a Long Term Management Plan for Dredging, a detailed Port Waterways Environmental Management Plan and the establishment of environmental management criteria for permits and licences and a review of Local Knowledge Certificate management.

The controls listed above are additional to any existing controls and together these measures will improve environmental impact risk management.

1.7 Triggers for review

Gippsland Ports will undertake an annual internal review (scheduled to be completed by the end of each financial year) and a triennial external independent review of this plan. Additional reviews will be

² Seafood Industry of Victoria (2004) <http://www.siv.com.au/lakesentrance.html>

considered whenever any incidents or near miss incidents, changes to key legislation or regulations or changes in the nature, scale or extent of port activities occur.

1.8 Accountable contact person within the port organisation

The accountable contact person within Gippsland Ports who is responsible for managing queries relating to the management plan is:

Greg Creedon
Environment, Health and Safety Manager

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2 Introduction

In early 2000 the Minister for Ports announced that Professor Bill Russell was to undertake a Review of Victorian Port Reform. The independent review recommended a number of changes aimed at improving the effectiveness and efficiency of Victorian Ports.

The Government's response to the Russell Report was to commit to a range of actions across aspects of port management including safety and environment management. These actions are intended to address perceived inadequacies in the Victorian port management system.

In 2003 the *Port Services Act 1995* was amended to include a broad legislative scheme requiring port managers to develop and implement Safety and Environmental Management Plans (SEMPs) for their ports.

SEMPs are intended to be a management tool to assist port managers in systematically examining the full scope of activities in their ports to ensure that all significant risks are identified and controlled. This will assist in a smoother integration of the different safety and environment regulatory regimes that currently apply³.

Gippsland Ports is the local port manager for designated Ports of Anderson Inlet, Corner Inlet and Port Albert, Gippsland Lakes, Snowy River and Mallacoota. To comply with legislative requirements Gippsland Ports has developed and is now implementing SEMPs for these ports.

Gippsland Ports has taken 'reasonable steps' to involve all tenants, licensees, stakeholders and service providers. Participation of organisations is a key element in the successful development and implementation of the SEMPs. Gippsland Ports has further consulted the local community in the development and implementation of SEMPs (refer to Section 8 – Consultation Process Outline).

2.1 Port functions

Gippsland Ports has been appointed under the *Port Services Act 1995* to be the port manager for the local ports in Gippsland. Gippsland Ports has the following functions under this Act:

- To manage the operations of the port, particularly with respect to shipping and boating activities in the port, with a view to ensuring that those operations are carried out safely, efficiently and effectively;
- To provide, develop and maintain port facilities, including wharves, jetties, slipways, breakwaters, moorings, buildings and vehicle parks;
- To provide, develop and maintain, in accordance with any relevant standards developed by the Director of Marine Safety, navigational aids in the port;
- To carry out the functions and powers of a local authority in respect of any State waters within the port;
- To provide, develop and maintain, in accordance with any relevant standards developed by the Director of Marine Safety, navigation channels in the port;
- To manage the operations of the port, and the construction and operation of port facilities and navigation channels in a manner that minimises the risk of environmental damage;
- To participate in the control of marine and land pollution in the port as a relevant statutory authority under the Victorian component of the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances;
- To allocate and manage moorings and berths in the port;
- To exercise any other functions of the port manager of a local port under the *Port Services Act* or any other Act
- To undertake dredging as per Section 44E of the *Port Services Act 1995*.

The Director of Marine Safety required Gippsland Ports to appoint a Harbour Master. The functions of a Harbour Master are as follows:

³ Department of Infrastructure (2004) Ministerial Guidelines for Port Safety & Environmental Management Plans

- To control and direct vessels entering and leaving the waters for which he or she has been engaged, including the time and manner of doing so,
- To control and direct the navigation and other movement of vessels in those waters;
- To control and direct the position where and the manner in which any vessel may anchor or be secured in those waters;
- To control and direct the time and manner of taking in or discharging from any vessel of cargo, stores, fuel, fresh water and water ballast in those waters;
- To control and direct the securing or removal of any vessel in those waters in, from or to any position the Harbour Master thinks fit;
- Any other functions that are conferred on Harbour Masters by or under the Marine Act or any other Act.

The *Port Services (Local Ports) Regulations 2004* gives the port manager the power to authorise activities such as:

- Setting aside areas for certain purposes;
- Fuelling operations;
- Activities on or adjacent to navigation aids;
- Movement of explosives through a local port;
- Discharge of explosives or fireworks;
- Vehicle access to designated areas;
- Commercial or industrial activities e.g. private jetty development over port waters;
- Special events e.g. triathlons, yachting regattas and the like;
- Electrical installations on port structures;
- Mooring and berthing of vessels in local port waters.

Gippsland Ports is not responsible for:

Private, commercial, industrial, council or other government agency related infrastructure that may be located within port waters and/or port land.

2.2 Gippsland Ports Occupational Health & Safety Policy

We are committed to achieve the highest standard of safety and health in all of the activities in which we engage.

We will

- Provide a safe and healthy working environment for all employees, contractors and visitors.
- Identify and assess and then either eliminate or control all hazards to safety and health as the leading item in a total risk management process.
- Conduct our operations in compliance with all relevant legislation, regulations, standards, licenses and codes.
- Seek continuous improvement in all aspects of work processes and procedures and set objectives and targets to measure improvement.
- Ensure that there is effective involvement, reporting and open communication on all safety and health matters at all levels in the organisation.
- Require employees, contractors and visitors to abide by all policies and rules that have been formulated in the interest of safety and health.
- Ensure that all employees, contractors and key suppliers have the necessary knowledge and skills to undertake their work in a safe and healthy manner.
- Encourage everyone to carry this commitment to Safety & Health from our workplace to our homes.
- Continually aim to improve the Health and Safety Management Plan.
- Investigate the implementation of OH&S systems certification

2.3 Gippsland Ports Environmental Policy

We are committed to achieve the highest standard of care for the natural environment in all of the activities in which we engage.

We will:

- Conduct our operations in compliance with all relevant environmental regulations, licenses and legislation as a minimum condition and contribute to the development of laws and regulations which may affect our business.
- Identify, monitor and manage environmental risks arising from our operations.
- Seek continuous improvement in environmental performance, operational processes, waste management and the use of resources.
- Provide appropriate training and awareness for all employees on environmental issues.
- Communicate regularly with employees about our aim and about individual responsibilities.
- Inform our customers and suppliers of our aim and of their responsibilities in relation to our business.
- Encourage berth holders & users of our facilities to reduce any detrimental impacts.
- Communicate with stakeholders, the community and governments about our environmental performance
- Continually improve the Environmental Management Plan.
- Investigate the implementation of Environmental systems certification

2.4 Port safety objectives and targets

Gippsland Ports has established six key safety objectives in line to meet the requirements of its policy and to manage the significant safety hazards listed in section 5.9. The objectives are:

1. To undertake or participate in the planning and management of sustainable port safety outcomes;
2. To provide a safe port environment for all users;
3. To eliminate work-related injuries and illness arising from its operations;
4. To encourage tenants, service providers and the community to eliminate work-related injuries and illness arising from their activities and operations;
5. To communicate, educate and inform commerce, industry, relevant agencies and the public of port related safety management issues; and
6. To maintain and continually improve the Safety Management Plan.

Targets have been identified and set in order to achieve these objectives. Targets and their relationship to the controls for significant safety hazards are listed in section 6.2.

2.5 Port environmental objectives and targets

Gippsland Ports has established five key environmental objectives in line to meet the requirements of its policy and to manage the significant environmental impacts listed in section 5.10. The objectives are:

1. To undertake or participate in the planning and management of sustainable port environmental outcomes;
2. To prevent or minimise pollution arising from its operations;
3. To communicate, educate and inform commerce, industry, relevant agencies and the public of port related environmental management issues;
4. To encourage tenants, service providers and the community to minimise waste, prevent pollution, utilise resources efficiently and reduce environmental impacts; and
5. To maintain and continually improve the Environmental Management Plan.

Targets have been identified and set in order to achieve these objectives. Targets and their relationship to the controls for significant environmental impacts are listed in section 6.3.

2.6 Role of the plan in the port's management of safety and environmental matters

The role of this plan is to act as an over arching instrument to guide, equip and direct staff, organisations, tenants, stakeholders, licensees, service providers, agencies and community members to fulfil outcomes for effective and efficient safety and environmental management within the ports of East Gippsland.

The plan does not intend to displace or supersede past or proposed day to day operational activities and documentation such as audits, assessments, controls or other safety and environmental programs, instead it encapsulates and compliments current and future safety and environmental management practices.

3 Port Description

For maps of the Ports of Gippsland Lakes, Snowy River and Mallacoota, refer to Appendix VI.

3.1 Port of Gippsland Lakes – physical boundaries and area of management

The Port of Gippsland Lakes is an extensive system of estuarine lakes and wetlands forming a coastal complex separated from Bass Strait by the Ninety Mile Beach barrier dunes. Several large rivers discharge into the system, which has a permanent artificial opening at Lakes Entrance. Much of the Gippsland Lakes are navigable, although shallow near-shore areas often comprise dense sea grass meadows.

Extending from Sale to Lakes Entrance, the port covers all waters of the Gippsland Lakes including Lake Wellington, Lake Victoria, Lake King, numerous 'arms' and the lower reaches of the Latrobe River (to the Port of Sale), Avon River, Perry River, Mitchell River (to Lind and Eastwood Bridges), Nicholson River, and Tambo River (to Battens Landing). Waters of Bass Strait up to three nautical miles offshore from Lakes Entrance are included.

The port area of management covers 421.2 km² and overlays or is adjacent to significant areas such as the Gippsland Lakes Coastal Park, Lakes National Park, Wildlife Reserves, Reserved Crown land and Gippsland Lakes Ramsar Site as listed under the International Convention on Wetlands (Iran 1971).

The port features an extensive open-water estuarine ecosystem which includes: seagrass meadows, fringing reed beds, salt marshes, swamp paperback wetlands, intertidal sandy beaches and spits, large and diverse populations of marine and estuarine fish species, approximately 80 species of waterbirds and waders including breeding colonies of several rare and endangered species and an important habitat for migratory bird species.

3.2 Port of Snowy River – physical boundaries and area of management

The Port of Snowy River is a convoluted river estuary located on the Snowy River and Brodribb River floodplain and includes shallow wetland lagoons trapped behind coastal barrier dunes. Floodwaters and ocean waves shift the entrance considerable distances along the coast.

Port waters comprise the lower Snowy and Brodribb Rivers downstream from Marlo Road, including The Slips, French's Narrows and waters of Bass Strait up to three nautical miles offshore from Marlo.

The port area of management covers 45.7 km² and overlays or is adjacent to significant areas such as Marlo Coastal Reserve, Marlo Foreshore Reserve, Lake Corringale and Lake Wat Wat Wildlife Reserve and Reserved Crown land.

The port features a variety of estuarine and wetland ecosystems which include: fringing reed beds, estuarine saltmarsh, seagrass meadows, swamp paperbark thickets, intertidal sandy beaches and spits, large and diverse populations of marine and estuarine fish species, significant populations of waterbirds and waders including breeding colonies of several rare and endangered species and an important habitat for migratory bird species.

3.3 Port of Mallacoota – physical boundaries and area of management

The Port of Mallacoota is an inlet formed by a drowned river valley system fed by the Genoa and Wallagaraugh Rivers. A convoluted shoreline forms two distinct lakes (Top and Bottom) with many sheltered arms. Lower reaches of the inlet are characterised by small islands, shallow sandbars and spits.

Port waters include the entire inlet from just above Gipsy Point at the convergence of the Genoa and Wallagaraugh Rivers down to the entrance and include ocean waters out to Bastion Point.

The port area of management covers 32.3 km² and overlays or is adjacent to significant areas such as Croajingalong National Park, Mallacoota Foreshore Reserve and Reserved Crown land.

The port features a variety of estuarine and lake ecosystems which include: fringing swamp paperback thickets, fringing eucalypt and rain forest flora, fringing reed beds, fringing estuarine saltmarsh, seagrass meadows, intertidal sandy beaches and spits, substantial and diverse populations of estuarine and river fish species, significant populations of waterbirds and waders and important habitat for migratory bird species.

3.4 Identification and location of key tenancies located within the port boundary

There are a variety of tenancies and licensees within the ports boundary. Most of these are small commercial, personal enterprises or agency outposts located close to the water or on jetties. Table 3.5 below outlines existing leases and licences.

3.5 Table of lessees and licensees				
Name	Port	Facility	Year commenced	Term
A B Hunter Fishing	GL	Western Yard - Bullock Island (48 m ²)	1/01/2003	No fixed term
BS Bolding Pty Ltd - (Ferry Café Site)	GL	Area near L/E Eastern Wharf	1/01/2003	5 years
Bulls Cruisers	GL	House & Land Paynesville	1/12/2005	2 yrs
Bulls Cruisers	GL	Boat berths Paynesville	1/12/2005	2 yrs
Burraboogie Boat Repairs	GL	Shed at Paynesville Boatyard	2003	No fixed term
Charisma Fishing	GL	Western Yard - Bullock Island (48 m ²)	1/01/2003	No fixed term
Department of Primary Industries	GL	Western Residence	1/04/2004	No fixed term
LEFCOL	GL	Unloading Jetty 1	1/07/2006	3 years
LEFCOL	GL	Unloading Jetty 2	1/07/2006	3 years
Leftrade	GL	Fuel jetty	1/07/2006	3 years
Mallacoota Community Association	MA	Mallacoota Wharf Shed	1/07/2003	No fixed term
Nautilus Floating Restaurant - McKenzie	GL	Area at Lakes Entrance Western Boat Harbour	1/09/2005	5 years
Peels Tourist & Ferry Service	GL	Section of Jetty - Post Office Jetty	1/02/2005	5 years
R Friend	GL	Western Yard - Bullock Island (48 m ²)	1/01/2003	No fixed term
Rob Ashworth - Shipwright	GL	Shed at Paynesville Boatyard	2003	No fixed term
Shayne Clarke	GL	Eastern Residence		No fixed term
Slurry Systems	GL	Western Yard - Bullock Island (172 m ²)	1/01/2003	No fixed term
Victoria Police (Water Police)	GL	Premises in Boatyard Paynesville	1/07/2005	3years

3.6 Dangerous goods and hazardous materials storage facilities

Gippsland Ports have dedicated licensed dangerous goods and hazardous materials storage facilities in both the Paynesville and Lakes Entrance depots of East Gippsland. There are appropriate fully bunded chemical storage containers at both Paynesville and Lakes Entrance. There are small amounts (<100 litres) of particular flammable materials such as paints and solvents stored in approved cabinets at Bullock Island and Paynesville Boatyard.

Fuel storage includes:

- One – 5,000 litre diesel underground storage tank at Paynesville Boatyard. The fuel is used for in-house operations;
- One – 5,000 litre unleaded petrol underground storage tank at Paynesville Boatyard. The fuel is used for in-house operations; and
- One – 30,000 litre diesel underground storage tank at Bullock Island, Lakes Entrance (owned and operated by LEFCOL.).

Waste oil facilities include:

- Four – 200 litre drums at Paynesville Boatyard; and
- A – 20 litre drum collection point located within Eastern Harbour, Lakes Entrance.

3.7 International vessel quarantine requirements

On July 1 2001, Australia introduced mandatory ballast water management requirements to reduce the risk of introducing harmful aquatic organisms into Australia's marine environment through ship's ballast water. The Australian Quarantine and Inspection Service (AQIS) is the lead agency for the management of ballast water taken up overseas. All internationally trading vessels are required to manage their ballast water in accordance with AQIS requirements⁴.

By law, all ships (including vessels less than 25 metres in length) arriving into Australia must arrive in a first port of entry. There are only four proclaimed first ports of entry into Victoria for international vessels. These are:

- Geelong;
- Melbourne;
- Portland; and
- Westernport.

When a vessel arrives at a proclaimed first port of entry, it must arrange for quarantine clearance.

There should not be any international vessels landing in Gippsland. Any breaches of the law and other compliance concerns should immediately be reported to AQIS on the 'Redline' number – 1800 803 006. General enquiries can be directed through to 1800 020 504.

Information relating to commodity restrictions and the declaration of prohibited items can be obtained from AQIS on 1800 814 788 or www.affa.gov.au.

3.8 Domestic vessel quarantine requirements

Vessel owners, Masters and agents must comply with Victorian domestic ballast water management arrangements and ensure that there are no discharges of high risk ballast water into Victorian State waters. All ship owners and Masters should be aware of their ballast water responsibilities prior to entering Victorian State waters. It is of paramount importance that the management of domestic ballast is undertaken in a manner that does not compromise the safety of the ship and its crew.

If any ship is carrying domestic ballast water it must complete a Ballast Water Log. This log must be completed even if the ship does not intend to discharge the domestic ballast water. The Victorian Environment Protection Authority (EPA) has produced a Guide for Ships' Masters and Agents Completing the EPA Domestic Ballast Water Management Forms. This document provides ship Masters and agents with guidance on how to fill out the domestic ballast management forms.

The Victorian Ballast Water Report Form and the Ballast Water Log should be sent to EPA 48 hours prior to the ship entering Victorian state waters. If ships' Masters or agents have any difficulties in complying with the domestic ballast water management arrangements they should contact EPA Ballast Water Officers as soon as possible to discuss management options.

No domestic ballast water discharge is permitted in Victorian State waters unless approval has been granted from EPA in writing. Submitting forms to EPA prior to entering Victorian State waters will avoid any unnecessary delays.

The EPA is proposing to introduce the Environment Protection (Ships' Ballast Water) Regulations 2006 in the later half of 2006 that specify:

- Ballast water reporting requirements for owners and masters of ships with capacity to carry ballast water;
- Offences for ship owners and masters for not meeting reporting and/or paying prescribed fees; and
- A cost recovery fee structure for administering the ballast water management system and its implementation by the EPA.

⁴ Department of Agriculture, Fisheries and Forestry (2006) www.affa.gov.au

Further information can be obtained from EPA Victoria:

Telephone: (03) 9695 2547
Facsimile: (03) 9695 2520
Email: ballast.water@epa.vic.gov.au
Website: www.epa.vic.gov.au/water/industry/ballast_water.asp

Gippsland Ports plays an important support role in implementing the Victorian domestic ballast water management arrangements. Gippsland Ports will assist with the dissemination of information about policy and domestic ballast water management obligations to port users, provide advice to EPA regarding expected shipping arrivals and incorporate domestic ballast water management arrangements into port Safety and Environmental Management Plans.

3.9 Slipways

The Port of Gippsland Lakes includes a 150 tonne slipway and boat repair yard located at Paynesville. Gippsland Ports undertakes all facets of work within the boat yard. The slipway accepts both commercial and recreational vessels which may have work undertaken directly by Gippsland Ports staff or by the owner, charterer, contractors and/or support personnel. There is a computer based induction process for all outside personnel that covers such topic as OH&S issues, hot works, environmental controls, material safety and reporting regime for incidents. Adjacent to the slipway and boat yard are maintenance berths and jetties.

A 100 tonne travel lift at Bullock Island, Lakes Entrance became operational in July 2005. Gippsland Ports personnel undertake travel lift and hydroblasting operations only and all other maintenance work is carried out by owner, charterer, contractors and or support personnel. Similar to Paynesville there is an induction process. The 75 tonne slipway at Lakes Entrance is decommissioned.

Mallacoota has a 16 tonne slipway operating adjacent to the main boat ramps. Gippsland Ports undertakes slippings and launchings however once a vessel is slipped, maintenance work is carried out by the owner, charterer, contractors and or support personnel. An induction process is also undertaken at this facility.

3.10 Coastal and National Parks

The Ports of Gippsland Lakes, Snowy River and Mallacoota abut National and Coastal Parks.

The Port of Gippsland Lakes is in a Ramsar site covering an area of approximately 60,000 hectares which includes Lake Wellington, Lake Victoria and Lake King systems. The Lakes National Park is situated 20 kilometres on the western side of Lakes Entrance. The Gippsland Lakes Coastal Park includes the land along the coast immediately to the west of the Entrance. The land to the east of Lakes Entrance, and the islands near the Entrance (namely Rigby, Fraser and Flannagan Islands) are not included in the Gippsland Lakes Coastal Park. Within the Lakes there are various other reserves.

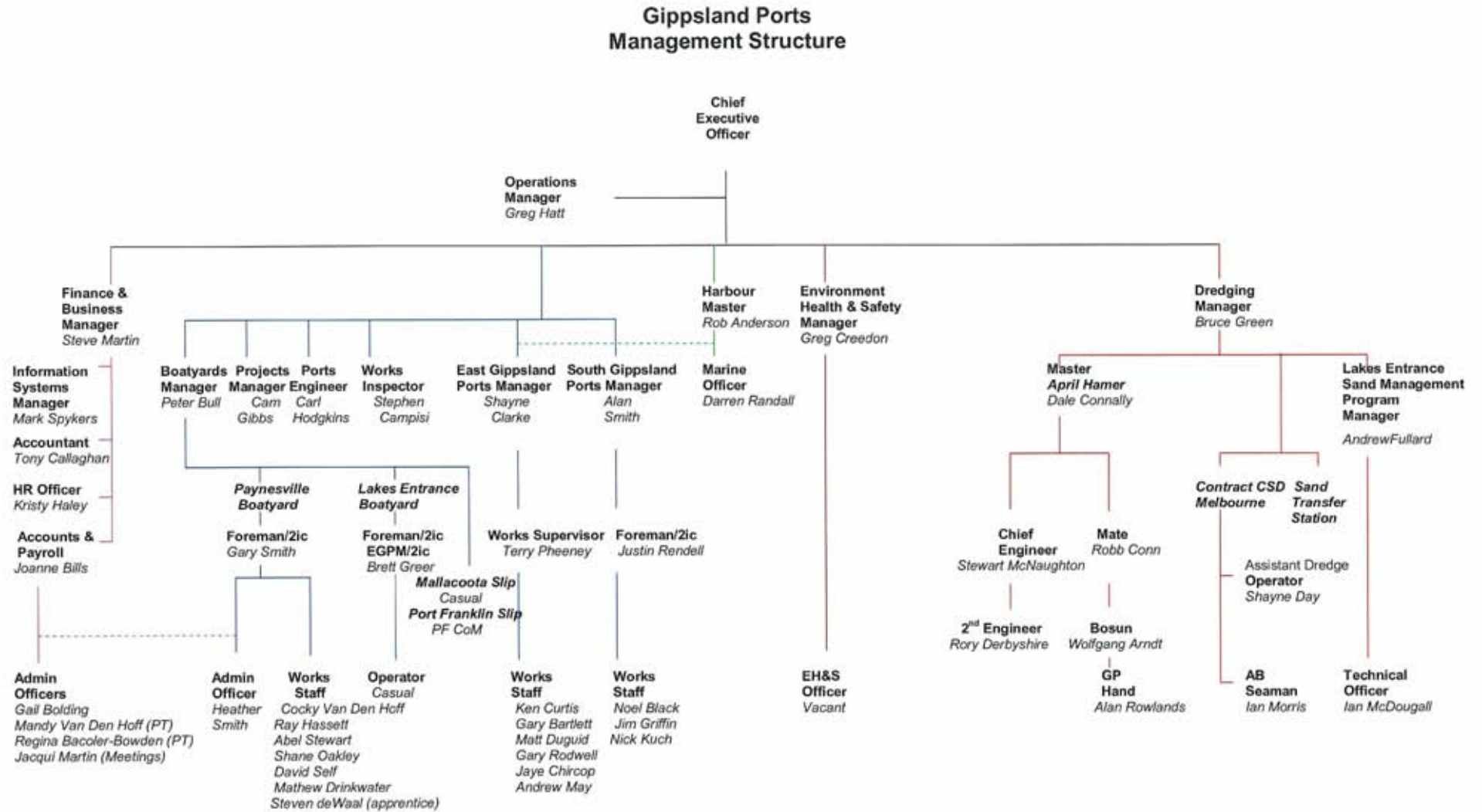
The Port of Snowy River is adjacent to Marlo Coastal Reserve, Marlo Foreshore Reserve, Lake Corringale and Lake Wat Wat Wildlife Reserve. The eastern tip of the port waters is adjacent to Cape Conran Coastal Park.

The Port of Mallacoota is surrounded by Croajingalong National Park and Mallacoota Foreshore Reserve.

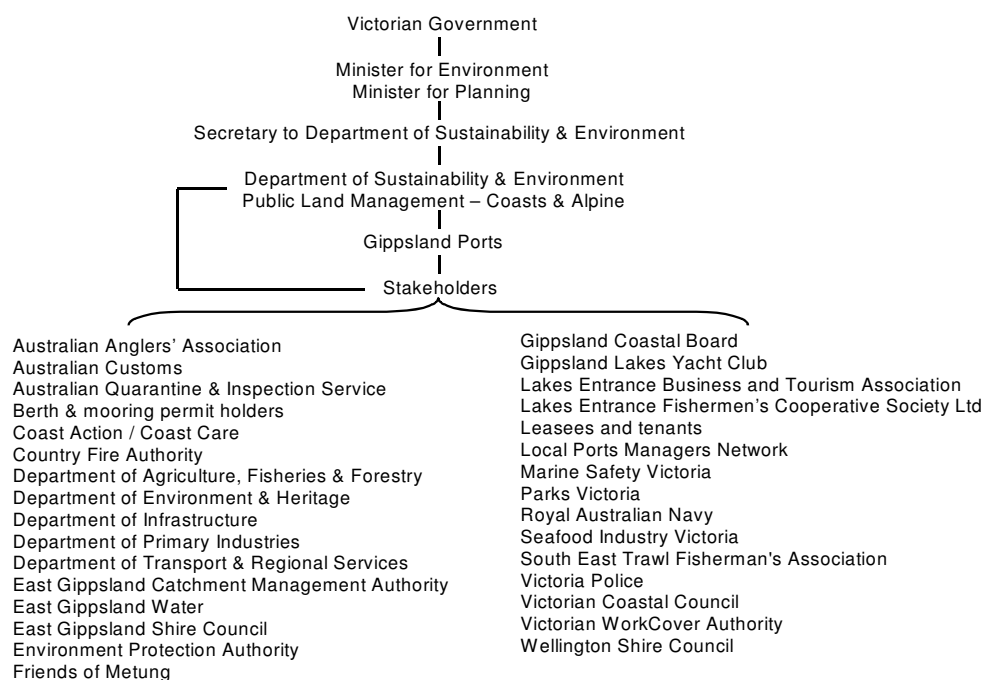
Gippsland Ports provides input into the planning and implementation of marine safety initiatives with parks and adjacent waters. Parks Victoria undertake environmental and visitor management throughout these parks. Further information regarding Coastal and National Parks can be downloaded from the Parks Victoria website www.parkweb.vic.gov.au or by telephoning 13 1963 (Parks Information and Emergency Calls – 24 hours).

4 Organisational Functions

4.1 Internal port structure and interactions



4.2 External port structure and interactions



4.3 Persons responsible for safety and environmental management

Gippsland Ports believes that all port and associated users, temporary visitors through to permanent residents including staff, associated organisations, tenants, licensees, service providers, agencies and community members are responsible for safety and environmental management. This plan is not exclusive to Gippsland Ports nor is it a final document. This plan will develop and continually improve over time to act as an overarching instrument to guide, train, inform and provide direction to Gippsland Ports staff, associated organisations, tenants, stakeholders, licensees, service providers, agencies and community members for participation in fulfilling the outcomes for effective and efficient safety and environmental management within the ports of East Gippsland.

Gippsland Ports will allocate human resources and forecast budgets to assist in the implementation of this plan.

5 Risk Assessment

Effective management of safety hazards and environmental impacts and their associated risks involves a structured and systematic approach to analysing and assessing risk which enables controls to be targeted to provide efficient, cost-effective solutions which achieve the desired safety and environmental outcomes.

5.1 Risk assessment framework

The development of Gippsland Ports Risk Assessment Framework is based on the application of the following Australian-New Zealand and International Standards:

- AS/NZS 4360:2004 Risk Management;
- AS/NZS 4801:2001 Occupational health and safety management systems – Specification with guidance for use;
- AS/NZS ISO14001:2004 Environmental management systems – Specification with guidance for use; and
- AS/NZS ISO14004:2004 Environmental management systems – General guidelines on principles, systems and supporting techniques.

The framework was further presented to the Department of Sustainability and Environment, Environment Protection Authority, Department of Infrastructure and Parks Victoria for comment and appraisal. After consideration and inclusion of agency comments the framework was endorsed and became effective.

5.2 Risk assessment process

Risk assessment or risk evaluation involves comparing the level of risk found during the analysis process with previously established risk criteria. The assessment involves comparison of alphanumerical level of risk against criteria which is then expressed as a value of extreme, high, medium or low risk. The output list of risk (or risk register) is a prioritised list of risks requiring action. Focus will be placed on extreme and high risks which are deemed to be significant. Low and medium risks may fall into an acceptable level of risk category though these will be monitored and periodically reviewed to ensure they remain acceptable. A review of all risks is to be conducted annually or if there is a major change in the nature of an activity conducted at the port and significant new hazards or impacts are identified or introduced. It is intended that this task will be undertaken in conjunction with a review of the Gippsland Ports Emergency Management Plan.

Gippsland Ports has established the following risk qualitative measures and matrix (Tables 5.3 – 5.6 below) to assess safety hazards and environmental impacts associated with key activities, products and services within the various ports that it manages.

The risk assessment process involves Gippsland Ports management, staff and stakeholders taking a unified approach towards relating safety hazards and environmental impacts to applicable consequence and likelihood descriptors to finally obtain a level of risk. Working examples of how this is achieved is set out below.

5.3 Table of safety hazard consequence descriptors

1 – Insignificant	2 – Minor	3 – Moderate	4 – Major	5 – Catastrophic
<ul style="list-style-type: none"> Minor injuries immediately treated on-site with first aid treatment No need to contact regulatory authorities No fines or prosecution 	<ul style="list-style-type: none"> Moderate injuries requiring medical treatment but without hospital admission Need to contact regulatory authorities due to potential non-compliance Possible fines 	<ul style="list-style-type: none"> Serious and / or extensive injuries requiring medical treatment with hospital admission Need to contact regulatory authorities due to non-compliance Possible fines and prosecution 	<ul style="list-style-type: none"> Paraplegia, quadriplegia, brain damage or death Need to contact regulatory authorities due to non-compliance Fines and prosecutions likely 	<ul style="list-style-type: none"> Multiple deaths Need to contact regulatory authorities due to non-compliance Severe fines and prosecutions likely and/or employees / directors jailed

5.4 Table of environmental impact consequence descriptors

Components	1 – Insignificant	2 – Minor	3 – Moderate	4 – Major	5 – Catastrophic
Species	No observable impacts to local viability of non-endangered species	Short term impacts to local viability of non-endangered species	Long term impacts to local viability of non-endangered species	Impacts likely to result in upward change in status of one or more endangered and threatened species	Extinction of one or more species or life cycle of species impaired
Environmental Stress	Effects not transmitted and not accumulating	In most cases, effects not transmitted or accumulating	Effects can be transmitted or accumulate	Effects are transmitted and/or accumulate	Effects are synergistic or cumulative, and/or are easily transmitted and/or accumulate
Ecosystems	Localised temporary effects on environment within natural variability	Localised temporary effects on environment beyond natural variability	Alteration or disturbance of a component of an ecosystem but sustainability unaffected	Alteration or loss of sustainability of one or more ecosystems or several components of these systems	Irreversible damage to one or more ecosystems or landforms
Sustainability (& Resources)	No effect on resources or sustainability	Demands placed on selected resources with no observable effect on sustainability	Limitations placed on selected resources with long term sustainability unaffected	Loss of sustainability of unique habitats, landforms or selected resources	Loss of sustainability of most resources
Bio-regional Outcomes	Area of <500 m ² of limited environmental significance affected	Area of >500 m ² and <1,000 m ² of limited environmental significance affected	Area of >1,000 m ² and <10,000 m ² of limited environmental significance affected	Relatively widespread impacts of area >10,000 m ² and <10 square kilometres	Area affected is >10 square kilometres or any area of international, national, state or local significance is affected
Commercial & Legal Relationships	May need to contact regulatory authorities to notify of situation	Need to contact regulatory authorities due to potential non-compliance	Need to contact regulatory authorities due to non-compliance	Need to contact regulatory authorities due to non-compliance	Need to contact regulatory authorities due to non-compliance
Commercial & Legal Outcomes	No fines or prosecution	Possible fines	Possible fines and/or prosecution	Fines and/or prosecution impending	Fines and prosecution impending and/or employees/directors jailed

5.5 Table of safety hazard and environmental impact likelihood descriptors

	A	B	C	D	E
Indicative frequency	<ul style="list-style-type: none"> Almost certain 1 or more incidents in 1 month 	<ul style="list-style-type: none"> Likely 1 or more incidents in 1 year 	<ul style="list-style-type: none"> Moderate 1 or more incidents in 5 years 	<ul style="list-style-type: none"> Unlikely 1 or more incidents in 10 year 	<ul style="list-style-type: none"> Rare 1 or more incidents in 100 years
General definition	<ul style="list-style-type: none"> Is expected to occur in most circumstances 	<ul style="list-style-type: none"> Will probably occur in most circumstances 	<ul style="list-style-type: none"> Should occur some time 	<ul style="list-style-type: none"> Could occur at some time 	<ul style="list-style-type: none"> May occur at some time but only in exceptional circumstances

5.6 Risk assessment matrix

		Consequence				
		1	2	3	4	5
Likelihood	A	HIGH	HIGH	EXTREME	EXTREME	EXTREME
	B	MEDIUM	HIGH	HIGH	EXTREME	EXTREME
	C	LOW	MEDIUM	HIGH	EXTREME	EXTREME
	D	LOW	LOW	MEDIUM	HIGH	EXTREME
	E	LOW	LOW	MEDIUM	HIGH	HIGH

Key Outcomes:

Extreme (Significant)	Immediate action required
High (Significant)	Detailed research and management planning required
Medium	Management responsibility must be specified
Low	Management by routine procedures

5.7 Safety hazard risk assessment example

The example activity 'boat operations' can bare many safety hazards. One safety hazard includes the scenario by where the boat operator may slip trip or fall into the water.

To assess the level of risk for this safety hazard one would firstly match it to the most relevant and practical consequence descriptor category from Table 5.3 above. During this process many questions and scenarios may be raised that will add to the determination. In this case they may include: what would generally be the outcome if someone fell off a boat and entered the water? Would the person survive? Would they be conscious? Is there always a second person on the boat to assist or raise the alarm?

During this process, it is important to maintain an objective viewpoint. One critical point is to ensure that safety hazards are assessed without controls. Assessing with controls undervalues the risk. Controls are processes, systems and mechanical devices that are put in place to prevent or reduce the severity of the safety hazard. In our case, sample safety hazard controls may include training and lifejackets. Controls themselves come with inherent risks and should be evaluated for their effectiveness over time and not at this stage. Therefore as part of the assessment one must assume a worst-case scenario, that the person is not trained for the situation and did not wear a lifejacket.

Therefore under these circumstances, the person may die. This may classify the consequence as major (4).

The next step is to identify the likelihood of this safety hazard occurring. This is done by choosing the appropriate definition listed in Table 5.5 and further asking: what is the likelihood of this occurring? Have there been any past incidents and/or near misses?

An example for the likelihood of this occurring may be moderate (D) as records show that this has occurred in the last ten years.

Extrapolating from Table 5.6, a consequence of 4 and a likelihood of D will intersect and give us a high risk outcome. All high and extreme risk outcomes will be deemed as significant and therefore must incorporate detailed research, management planning and action.

5.8 Environmental impact risk assessment example

The example activity of 'boat operations' can bare many environmental impacts. Examples include the contamination of soil, water or air which may originate from the spillage of fuel during fuelling or if the boat's fuel tank ruptures or leaks.

To assess the level of risk for this environmental impact one would firstly match it to the most relevant and practical consequence descriptor category from Table 5.4 above. During this process many questions and scenarios may be raised that will add to the determination. In this case they may include: The size of the spill? What would generally be the outcome if fuel leaked from the boat or the pump? Would it pollute not only the water but also the nearby beach or the air? Would it affect fish, birds or even humans? Is the area affected of international, national or state significance?

During this process, it is important to maintain an objective viewpoint. One critical point is to ensure that the environmental impacts are assessed without controls. Assessing with controls undervalues the risk. Controls are processes, systems and mechanical devices that are put in place to prevent or reduce environmental impacts. In this case, environmental impact controls may include training, containment devices, fuel cut of switches and valves. Controls themselves come with inherent risks and should be evaluated for their effectiveness over time and not at this stage. Therefore as part of the assessment one must assume a worst-case scenario, that the person is not trained for the situation, the fuel could not be contained, there is no fuel isolation switch in sight and 100 litres of diesel fuel entered the waters of a National Park.

Depending on the size of the fuel spill (in our case <100 litres), humans may not be directly affected but other organisms such as endangered or threatened fish and birds possibly will, even though the impacts are localised and short term, the spill occurred in a National Park and authorities (eg. EPA

and Parks Victoria) will need to be contacted immediately. This may classify the consequence as Catastrophic (5).

The next step is to identify the likelihood of this environmental impact occurring. Choosing the appropriate definition listed in Table 5.5 and further asking what would be the likelihood of this occurring? Have there been any past incidents and/or near misses?

An example for the likelihood of this occurring may be unlikely (D), as records show a spill of this type has occurred once in the last ten to twenty years.

Extrapolating from Table 5.6, a consequence of 5 and a likelihood of D will intersect and give us an extreme risk outcome. All high and extreme risk outcomes will be deemed as significant and therefore must incorporate detailed research, management planning and action. If the above scenario did not occur in a National Park but rather in open coastal waters with some distance from significant areas, then the consequence attained may be 3. With likelihood unchanged at D, a medium risk outcome is then achieved. Low and medium risk outcomes may not be classified as significant but they still must be managed appropriately to prevent these risks from escalating and becoming significant.

A risk management workshop was conducted on the 17th July 2007 at the GP Bairnsdale office. GP participants included:

- Boatyards Manager
- Chief Executive Officer
- Dredging Manager
- East Gippsland Ports Manager
- Environment, Health and Safety Manager
- Finance and Business Manager
- Harbour Master
- Operations Manager
- Ports Engineer
- Projects Manager
- South Gippsland Ports Manager

The workshop participants followed the risk management methodology and provided specific risks, undertook a risk assessment and identified and reviewed current and additional treatment options. The information is presented in the Risk Register and the Risk Treatment Register.

Future workshops may be conducted in particular during the annual review process.

5.9 Safety hazard risk register

The register below documents all significant land and water based activities that are conducted within the port, including those undertaken by tenants, licensees and service providers and further identifies and rates associated safety hazards.

Safety Hazard Number	Activity	Location of Activity GL - Gippsland Lakes SR - Snowy River MA - Mallacoota	Activity Map					Safety Hazard	Consequence	Likelihood	Significance	Control Register Group Number
			Outside port waters	In port waters	Transfer from port water to port land at the berth	On port land	Transfer to or from port land					
Specific Activity Location: 1. Sale 2. Marlay Point 3. Seacombe 4. Loch Sport 5. Duck Arm 6. Newland Arm 7. Eagle Point 8. Paynesville 9. McMillan Strait 10. Bunga Arm 11. Mitchell River 12. Nicholson River 13. Johnsonville 14. Metung 15. Bancroft Bay 16. Mosquito Point 17. Nungerner 18. North Arm 19. Lakes Entrance 20. Snowy River 21. Marlo 22. Brodribb River 23. Gipsy Point 24. Karbeethong 25. Coulls Inlet 26. Mallacoota 27. Bastion Point							Colour Key:	Low Risk	Medium Risk			
								High Risk	Extreme Risk			
General Public												
263	Fishing (from boat, pier, surf or riverbank)	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	4	C	E	1	
264			✓	✓	✓		Deficient, defective or no safety equipment	4	C	E		
265			✓	✓	✓		Deficient, defective or no signage or navigational aids	4	C	E		
266	Boating	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	4	C	E		
267			✓	✓	✓		Deficient, defective or no safety equipment	4	C	E		
268			✓	✓	✓		Deficient, defective or no signage or navigational aids	4	C	E		
269			✓	✓	✓		Collision with other boats, infrastructure, swimmers or other obstructions	4	C	E		
270			✓	✓	✓		Channel blockage due to boat/vessel grounding or sinking	4	C	E		
271	Jet skiing	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	3	C	E		
272			✓	✓	✓		Deficient, defective or no safety equipment	3	C	H		
273			✓	✓	✓		Deficient, defective or no signage or navigational aids	3	C	H		
274			✓	✓	✓		Collision with other boats, infrastructure, swimmers or other obstructions	4	C	E		
275	Sailing	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	4	D	E		
276			✓	✓	✓		Deficient, defective or no safety equipment	4	D	E		
277			✓	✓	✓		Deficient, defective or no signage or navigational aids	4	D	E		
278			✓	✓	✓		Channel blockage due to boat/vessel grounding or sinking	4	D	E		
279	Canoeing	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	3	C	H		
280			✓	✓	✓		Deficient, defective or no safety equipment	3	C	H		
281			✓	✓	✓		Deficient, defective or no signage or navigational aids	3	C	H		

282	Swimming	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	4	C	E	
283			✓	✓	✓		Deficient, defective or no safety equipment	4	C	E	
284			✓	✓	✓		Deficient, defective or no signage or navigational aids	4	C	E	
285	Beach activities	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	4	C	E	
286			✓	✓	✓		Deficient, defective or no safety equipment	4	C	E	
287			✓	✓	✓		Deficient, defective or no signage or navigational aids	4	C	E	
288			✓	✓	✓		Needlestick	3	D	M	
289	Wind surfing	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	4	C	E	I
290			✓	✓	✓		Deficient, defective or no safety equipment	3	C	H	
291			✓	✓	✓		Deficient, defective or no signage or navigational aids	3	C	H	
292	Surfing (including biscuit or skimming)	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
293			✓	✓	✓		Deficient, defective or no safety equipment	3	C	H	
294			✓	✓	✓		Deficient, defective or no signage or navigational aids	4	C	E	
295	Cycling	GL, SR, MA				✓	Slip, trip or fall	3	C	H	
296						✓	Collision with other cyclists, pedestrians, vehicles or infrastructure	3	C	H	
297						✓	Deficient, defective or no safety equipment	3	C	H	
298	Trail bike riding	GL, SR, MA				✓	Slip, trip or fall	3	C	H	
299						✓	Collision with other cyclists, pedestrians, vehicles or infrastructure	3	C	H	
300						✓	Deficient, defective or no safety equipment	3	C	H	
301	Water-skiing	GL, SR, MA		✓	✓	□	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
302				✓	✓	□	Deficient, defective or no safety equipment	3	C	H	
303				✓	✓	□	Deficient, defective or no signage or navigational aids	3	C	H	
304	Parasailing	GL, SR, MA	✓	✓	✓	□	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
305			✓	✓	✓	□	Deficient, defective or no safety equipment	3	C	H	
306			✓	✓	✓	□	Deficient, defective or no signage or navigational aids	3	C	H	
307	Kite surfing	GL, SR, MA	✓	✓	✓	□	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
308			✓	✓	✓	□	Deficient, defective or no safety equipment	3	C	H	
309			✓	✓	✓	□	Deficient, defective or no signage or navigational aids	3	C	H	
310	Diving	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
311			✓	✓	✓		Decompression illness (bends)	3	C	H	
312			✓	✓	✓		Deficient, defective or no safety equipment	3	C	H	
313			✓	✓	✓		Deficient, defective or no signage or navigational aids	3	C	H	
314	Snorkelling	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
315			✓	✓	✓		Deficient, defective or no safety equipment	3	C	H	

316			✓	✓	✓		Deficient, defective or no signage or navigational aids	3	C	H	
317			✓	✓	✓	✓	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
318	Ultralighting	GL, SR, MA	✓	✓	✓	✓	Deficient, defective or no safety equipment	3	C	H	
319			✓	✓	✓	✓	Deficient, defective or no signage or navigational aids	3	C	H	
320			✓	✓	✓	✓	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
321	Hovercraft	GL ¹⁹	✓	✓	✓	✓	Deficient, defective or no safety equipment	3	C	H	
322			✓	✓	✓	✓	Deficient, defective or no signage or navigational aids	3	C	H	
323			✓	✓	✓	✓	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
324	Organised sporting events	GL, SR, MA	✓	✓	✓	✓	Deficient, defective or no safety equipment	3	C	H	
325			✓	✓	✓	✓	Deficient, defective or no signage or navigational aids	3	C	H	
326				✓	✓		Strong currents, inclement weather, lack of experience or knowledge	3	C	H	
327	Surf life saving	GL ¹⁹ , MA ²⁷		✓	✓		Deficient, defective or no safety equipment	3	C	H	
328				✓	✓		Deficient, defective or no signage or navigational aids	3	C	H	
329	Hunting (adjacent islands)	GL, SR, MA				✓	Accidental discharge of firearm	3	C	H	II
330	Fossicking	GL, SR, MA		✓		✓	Slip, trip or fall, cuts or abrasions	2	C	M	
331	Promenading	GL, SR, MA				✓	Slip, trip or fall	2	C	M	
332	Bird watching	GL, SR, MA				✓	Slip, trip or fall	2	C	M	
333	Whale watching	GL, SR, MA	✓	✓			Slip, trip or fall	2	C	M	
334	Horse riding	GL, SR, MA				✓	Slip, trip or fall	2	C	M	
335	Boat hire, charter or touring	GL ^{8,14,19} , SR ²⁰ , MA ^{23,26}	✓	✓	✓		Collision with other boats, infrastructure, swimmers or other obstructions	4	C	E	I
336	Boat launching and retrieval	GL ^{1,2,3,4,8,11,12,13,14,17,19} , SR ^{21,22} , MA ^{23,26,27}				✓	Collision with other boats, infrastructure, swimmers or other obstructions	3	C	H	
337	Anchoring	GL, SR, MA	✓	✓			Collision with other boats or infrastructure	3	D	M	
338	Swing mooring	GL ^{6,7,9,14,15,16,17,18} , MA ^{24,25}		✓			Collision with other boats or infrastructure	3	D	M	
339	Vessel salvage	GL, SR, MA	✓	✓	✓	✓	Collision with other boats or infrastructure	3	C	H	III
340			✓	✓	✓	✓	Slip, trip or fall	3	C	H	
341	Yacht and boat club operations	GL ^{1,2,4,8,14,19} , SR ²¹	✓	✓	✓	✓	Collision with other boats, infrastructure, swimmers or other obstructions	3	C	H	I
342			✓	✓	✓	✓	Slip, trip or fall	3	C	H	
343	Slipway operations	GL ^{1,8,14,19} , MA ²⁶		✓	✓	✓	Collision with other boats or infrastructure	3	D	M	
344				✓	✓	✓	Slip, trip, falling from heights or falling objects	3	C	H	IV
345	Owner DIY vessel maintenance	GL, SR, MA		✓	✓	✓	Collision with other boats or infrastructure	3	D	M	
346				✓	✓	✓	Slip, trip or fall	3	D	M	
347	Owner DIY infrastructure maintenance	GL, SR, MA		✓	✓	✓	Collision with other boats or infrastructure	3	D	M	

348				✓	✓	✓		Slip, trip or fall	3	D	M		
349	Contractor vessel maintenance	GL ^{1,8,14,19} , MA ²⁶		✓	✓	✓		Collision with other boats or infrastructure	3	D	M		
350				✓	✓	✓		Slip, trip or fall	3	D	M		
351	Solid waste disposal	GL ¹⁹		✓	✓	✓		Exposure to contaminants	2	C	M		
352	Liquid waste disposal	GL ¹⁹		✓	✓	✓		Exposure to contaminants	2	C	M		
353	Disposal of boat toilet (porta-potty) waste to toilet dump	GL ^{1,5,8,10,14,19} , MA ²⁶			✓	✓		Exposure to contaminants	2	D	M		
354						✓	✓		Inappropriate or non existing dedicated facility	3	C	H	I
355	Fuelling (hydrocarbons) from a fixed installation	GL ^{8,14,19}		✓	✓	✓		Explosion or fire	3	C	H	I & III	
356				✓	✓	✓		Exposure to contaminants	2	C	M		
357	Fuelling (hydrocarbons) not from a fixed installation	GL, SR, MA		✓	✓	✓		Explosion or fire	3	C	H	I	
358				✓	✓	✓		Exposure to contaminants	2	C	M		
359	Pyrotechnic displays	GL ^{8,19}		✓	✓	✓		Close proximity exposure to explosives	3	C	H	VI	
360				✓	✓	✓		Deficient, defective or no safety equipment	3	C	H		
361	Washing of various craft	GL, SR, MA		✓	✓	✓		Exposure to contaminants	2	C	M		
362	Vehicle operations & movements	GL, SR, MA			✓	✓		Collision with cyclists, pedestrians, infrastructure or other vehicles	3	C	H	I & VII	
Commerce & Industry													
363	Fishing	GL, SR, MA	✓	✓	✓			Strong currents, inclement weather, lack of experience or knowledge	4	D	H	I	
364				✓	✓	✓			Deficient, defective or no safety equipment	4	D		H
365				✓	✓	✓			Deficient, defective or no signage or navigational aids	4	D		H
366	Non-shipping operations	GL ¹⁹			✓	✓	✓	Strong currents, inclement weather, lack of experience or knowledge	3	C	H		
367						✓	✓	✓	Deficient, defective or no safety equipment	3	C		H
368						✓	✓	✓	Deficient, defective or no signage or navigational aids	3	C		H
369						✓	✓	✓	Collision with other boats, infrastructure, swimmers or other obstructions	3	C		H
370				✓	✓	✓	Channel blockage due to ship/vessel grounding or sinking	3	C	H			
371	Boat hire, charter and touring	GL ^{8,14,19} , MA ²⁶	✓	✓	✓			Strong currents, inclement weather, lack of experience or knowledge	3	C	H	I & VI	
372				✓	✓	✓			Deficient, defective or no safety equipment	3	C		H
373				✓	✓	✓			Deficient, defective or no signage or navigational aids	3	C		H
374				✓	✓	✓			Collision with other boats, infrastructure, swimmers or other obstructions	3	C		H
375	Floating restaurants	GL ¹⁹		✓	✓	✓		Strong currents, inclement weather, lack of experience or knowledge	2	D	L	I & VI	
376					✓	✓	✓		Deficient, defective or no safety equipment	3	C		H
377					✓	✓	✓		Deficient, defective or no signage or navigational aids	3	C		H
378					✓	✓	✓		Collision with other boats, infrastructure or swimmers	3	C		H

379	Pedestrian access	GL, SR, MA			✓	✓	✓	Obstructions (eg. boat bows jetty overhang)	2	C	M	
380					✓	✓	✓	Slip, trip or fall	2	C	M	
381	Solid waste treatment and/or disposal	GL ¹⁹	✓	✓	✓		Exposure to contaminants	2	C	M		
382	Liquid waste treatment and/or disposal	GL ¹⁹	✓	✓	✓		Exposure to contaminants	2	C	M		
383	Disposal of boat toilet (porta-potty) waste to toilet dump	GL ¹⁹ , MA ²⁶	✓	✓	✓		Exposure to contaminants	2	D	L		
384			✓	✓	✓		Inappropriate or non existing dedicated facility	3	C	H	I	
385	Fishing transfers	GL ^{2,8,19} , SR ²¹ , MA ^{26,27}		✓	✓	✓	Slip, trip or fall	2	C	M		
386	Net stretching and repairs	GL ¹⁹		✓	✓		Slip, trip or fall	2	C	M		
387	Loading/unloading of goods & freight	GL ^{14,19} , MA ^{26,27}	✓	✓	✓	✓	Failure of infrastructure (eg. exceeding vehicular weight capacity of pier)	3	C	H	VII	
388			✓	✓	✓	✓	Slip, trip or fall	2	C	M		
389	Slipway operations	GL ^{1,8,14,19} , MA ²⁶	✓	✓	✓		Collision with other boats or infrastructure	3	D	M		
390			✓	✓	✓		Slip, trip, falling from heights or falling objects	3	C	H	IV	
391	Wet berth vessel maintenance	GL, SR, MA	✓	✓	✓		Slip, trip or fall	2	C	M		
392	Sand blasting (grits)	GL ^{8,19}		✓	✓		Exposure to contaminants	2	C	M		
393	Spray painting (solvents & emulsions)	GL ^{8,14,19} , MA ²⁶		✓	✓		Exposure to contaminants	2	C	M		
394	Degreasing (solvents)	GL, SR, MA		✓	✓		Exposure to contaminants	2	C	M		
395	Lubricating (grease & oil)	GL, SR, MA		✓	✓		Exposure to contaminants	2	C	M		
396	Fuelling (hydrocarbons) from a fixed installation	GL ^{8,14,19}	✓	✓	✓		Inadequate or no spill containment or spill response materials	2	C	M		
397			✓	✓	✓		Explosion or fire	3	D	M		
398			✓	✓	✓		Exposure to contaminants	2	C	M		
399	Washing of various equipment	GL, SR, MA	✓	✓	✓		Exposure to contaminants	2	C	M		
400	Retail sales	GL ¹⁹			✓	✓	Slip, trip or fall	2	C	M		
401	Mobile vehicle operations & movements	GL, SR, MA		✓	✓		Collision with cyclists, pedestrians, infrastructure or other vehicles	3	D	M		
402	Fixed plant equipment operations (marine)	GL ¹⁹	✓	✓	✓		Deficient or defective safety equipment	4	D	H	V	
403			✓	✓	✓		Power failure to equipment or other equipment	2	C	M		
404	Towing of equipment	GL ¹⁹	✓	✓	✓	✓	Collision with pedestrians, infrastructure or other vehicles	2	D	L		
405	Vehicle & plant maintenance	GL, SR, MA	✓	✓	✓		Exposure to moving parts	3	C	H	V	
406	Boat launching, operations and retrieval	GL ^{1,8,14,19} , MA ²⁶		✓			Collision with other boats, infrastructure, swimmers or other obstructions	3	C	H	I	
407					✓			Slip, trip or fall	3	C		H
408	Vessel salvage	GL, SR, MA	✓	✓	✓	✓	Collision with other boats or infrastructure	3	C	H	III	
409			✓	✓	✓	✓	Slip, trip or fall	3	C	H		
410	Contractor activities	GL ^{8,19} , MA ²⁶	✓	✓	✓	✓	Slip, trip or fall	3	C	H	IV	
411	Tenant activities	GL, SR, MA	✓	✓	✓	✓	Slip, trip or fall	3	C	H	IX	

412	Pollution control (response)	GL, SR, MA	✓	✓	✓	✓	Exposure to contaminants	2	C	M		
413	Owner DIY vessel maintenance	GL, SR, MA		✓	✓	✓	Slip, trip or fall	3	C	H	I	
414	Property (land) development	GL				✓	Housekeeping	2	C	M		
Gippsland Ports												
415	Maintenance dredging (actual, planned or potential)	GL, SR, MA		✓	✓		□	Creation of obstacles (eg. sand bars, spits & non navigable channels)	3	D	M	
416				✓	✓			Strong currents, inclement weather	3	D	M	
417				✓	✓			Deficient or defective safety equipment	3	D	M	
418				✓	✓			Collision with other boats, infrastructure, swimmers or other obstructions	3	D	M	
419				✓	✓			Overdredging (damage to other infrastructure) / Underdredging (shoaling)	2	A	H	I
420				✓	✓			Power failure to sand transfer system & major navigation lights	3	D	M	
421				✓	✓			Slip, trip or fall	3	D	M	
422	Capital dredging	GL		✓	✓			Creation of obstacles (eg. sand bars, spits & non navigable channels)	3	C	H	I
423				✓	✓			Strong currents, inclement weather	3	D	M	
424				✓	✓			Deficient or defective safety equipment	3	D	M	
425				✓	✓			Collision with other boats, infrastructure, swimmers or other obstructions	3	D	M	
426				✓	✓			Overdredging (damage to other infrastructure) / Underdredging (shoaling)	2	A	H	I
427				✓	✓			Slip, trip or fall	3	D	M	
428	Dredging equipment maintenance	GL ^{8,19}		✓	✓			Mechanical failure (eg. boom bearing & stress testing)	3	D	M	
429				✓	✓			Deficient or no critical maintenance regime (or program)	3	D	M	
430				✓	✓			Deficient quantity or no spare parts (eg. suction pump)	3	D	M	
431				✓	✓			Dredging equipment offline and in disrepair	3	D	M	
432	Hydrographic surveying	GL, SR, MA		✓	✓			Strong currents, inclement weather	3	D	M	
433				✓	✓			Deficient or defective safety equipment	3	D	M	
434				✓	✓			Collision with other boats, infrastructure, swimmers or other obstructions	3	D	M	
435				✓	✓			Slip, trip or fall	2	C	M	
436				✓	✓			Deficient, inappropriate or lack of data	3	C	H	VIII
437	Property acquisition & management	GL, SR, MA			□	✓	Housekeeping	1	C	L		
438					□	✓	Structural integrity of buildings and equipment housings	2	C	M		
439	Property (land) infrastructure improvement	GL			✓	✓	✓	Deficient or defective safety equipment	3	D	M	
440						✓	✓	✓	Housekeeping	1	C	L
441	Property (water) infrastructure improvement	GL, MA		✓	✓			Deficient or defective safety equipment	3	D	M	
442					✓	✓			Housekeeping	1	C	L
443	Construction of entrance to sea or lakes	GL ¹⁹ , SR ²¹ , MA ²⁶		✓	✓			Creation of obstacles (eg. sand bars, spits & non navigable channels)	3	C	H	I

444			✓	✓			Creation or alleviation of extreme water variation (elevated water)	3	C	H	
445			✓	✓			Strong currents, inclement weather	3	D	M	
446			✓	✓			Deficient or defective safety equipment	3	D	M	
447			✓	✓			Damage to other infrastructure	3	D	M	
448			✓	✓			Slip, trip or fall	3	D	M	
449	Property leasing (tenancy)	GL, SR, MA	✓	✓	✓	✓	Housekeeping	1	C	L	
450	Private jetties maintenance	GL, SR, MA	✓	✓	✓		Deficient or no critical maintenance regime (or program)	3	D	M	
451	Public jetties maintenance	GL, SR, MA	✓	✓	✓		Deficient or no critical maintenance regime (or program)	3	D	M	
452	Berths and moorings maintenance	GL, SR, MA	✓	✓	✓		Deficient or no critical maintenance regime (or program)	3	D	M	
453	Marina infrastructure maintenance	GL, SR, MA	✓	✓	✓		Deficient or no critical maintenance regime (or program)	3	D	M	
454	Retaining walls maintenance	GL ¹⁹ , MA ²⁰	✓	✓	✓		Deficient or no critical maintenance regime (or program)	3	D	M	
455	Pile driving	GL, SR, MA	✓	✓	✓		Strong currents, inclement weather	3	D	M	
456			✓	✓	✓		Deficient or defective safety equipment	3	D	M	
457			✓	✓	✓		Damage to other infrastructure	3	D	M	
458			✓	✓	✓		Slip, trip or fall	3	D	M	
459	Beach renourishment	GL	✓				Deficient or no critical maintenance regime (or program)	3	D	M	
460	Bank maintenance and stabilisation	GL, MA	✓				Deficient or no critical maintenance regime (or program)	3	D	M	
461	Provision and maintenance of underwater cables	GL	✓	✓			Deficient or no critical maintenance regime (or program)	3	D	M	
462			✓	✓			Inadequately marked channels	3	D	M	
463	Deployment and recovery of navigation aids (buoys)	GL, SR, MA	✓	✓			Deficient or no critical maintenance regime (or program)	3	D	M	
464			✓	✓			Inadequately marked channels	3	D	M	
465	Navigation aids maintenance	GL, SR, MA	✓	✓			Deficient or no critical maintenance regime (or program)	3	D	M	
466			✓	✓			Insufficient and inadequately marked channels	3	D	M	
467	Mobile vehicle operations & movements	GL, SR, MA			✓	✓	Collision with cyclists, pedestrians, infrastructure or other vehicles	3	D	M	
468	Fixed plant equipment operations	GL, SR, MA			✓	✓	Collision with pedestrians, infrastructure or other vehicles	3	D	M	
469	Towing of equipment (via road)	GL, SR, MA			✓		Deficient or no critical maintenance regime (or program)	3	D	M	
470	Vehicle maintenance	GL, SR, MA			✓		Deficient or no critical maintenance regime (or program)	3	D	M	
471	Fixed plant maintenance	GL, SR, MA			✓		Deficient or no critical maintenance regime (or program)	3	D	M	
472	Floating plant maintenance	GL	✓	✓			Deficient or no critical maintenance regime (or program)	3	D	M	
473	Mobile crane and excavator hire	GL, MA			✓		Collision with pedestrians, infrastructure or other vehicles	3	D	M	
474	Slipway operations	GL ¹⁹ , MA ²⁰	✓	✓	✓		Collision with other boats or infrastructure	3	D	M	
475			✓	✓	✓		Deficient or no critical maintenance regime (or program)	3	D	M	
476			✓	✓	✓		Scaffolding structural integrity	3	D	M	
477			✓	✓	✓		Slipway apron structural integrity	3	D	M	

478				✓	✓	✓	Failure of infrastructure (eg. hauling winch wire breakage)	3	D	M	
479				✓	✓	✓	Inappropriate or non existing pre and post use inspection regime	3	D	M	
480				✓	✓	✓	Inadequate, insufficient or inappropriate workplace signage	3	D	M	
481				✓	✓	✓	Slip, trip, falling from heights or falling objects	3	D	M	
482	Sand blasting (grits)	GL ^{8,19} , MA ²⁶			✓	✓	Inappropriate or non existing dedicated facility	2	C	M	
483					✓	✓	Exposure to contaminants	2	C	M	
484	Spray painting (solvents & emulsions)	GL ^{8,19} , MA ²⁶			✓	✓	Inappropriate or non existing dedicated facility	2	C	M	
485					✓	✓	Exposure to contaminants	2	C	M	
486	Degreasing (solvents)	GL, MA			✓	✓	Exposure to contaminants	2	C	M	
487	Lubricating (grease & oil)	GL, SR, MA			✓	✓	Exposure to contaminants	2	C	M	
488	Confined space entry	GL ^{8,19} , MA ²⁶		✓	✓	✓	Deficient, defective or no safety equipment	4	E	H	V
489				✓	✓	✓	Inadequate or insufficient experience	4	E	H	
490				✓	✓	✓	Inadequate, inappropriate or no regular competency assessment	4	E	H	
491				✓	✓	✓	Slip, trip or fall	3	D	M	
492	Fuel containment and supply (under or above ground storage tanks)	GL ^{8,19}				✓	Inadequate or inappropriate storage of flammable goods	2	C	M	
493						✓	Deficient or no critical maintenance regime (or program)	2	C	M	
494						✓	Exposure to contaminants due to leakage	2	C	M	
495	Fuelling (hydrocarbons) fixed and non fixed	GL, SR, MA		✓	✓	✓	Inadequate or no spill containment or spill response materials	2	C	M	
496				✓	✓	✓	Explosion or fire	3	D	M	
497				✓	✓	✓	Exposure to contaminants	2	C	M	
498	Washing of various equipment	GL, SR, MA		✓	✓	✓	Exposure to contaminants	2	C	M	
499	Boat launching, operations & retrieval	GL ^{1,2,3,4,8,11,12,13,14,17,19} , SR ^{21,22} , MA ^{23,26,27}			✓		Slip, trip or fall	2	C	M	
500	Vessel salvage	GL, SR, MA	✓	✓	✓	✓	Slip, trip or fall	2	C	M	
501	Solid waste treatment and/or disposal	GL ^{8,19}		✓	✓	✓	Exposure to contaminants	2	C	M	
502	Liquid waste treatment and/or disposal	GL ^{8,19}		✓	✓	✓	Exposure to contaminants	2	C	M	
503	Sewerage pump out barge operation	GL ¹⁹		✓	✓	✓	Exposure to contaminants	2	C	M	
504	Clearance of flotsam and jetsam	GL, SR, MA		✓	✓		Creation of obstacles (eg. sand bars, spits & non navigable channels)	3	D	M	
505				✓	✓		Strong currents, inclement weather	3	D	M	
506				✓	✓		Deficient or defective safety equipment	3	D	M	
507				✓	✓		Slip, trip or fall	3	D	M	
508	Demolition of old structures	GL, SR, MA		✓	✓	✓	Deficient, defective or no safety equipment and/or exposure to asbestos	3	C	H	I
509				✓	✓	✓	Slip, trip or fall	3	D	M	

510	Bunkering operations	GL ¹⁹		✓	✓			Explosion or fire	3	D	M	
511				✓	✓			Exposure to contaminants	2	C	M	
512	Rescue operations	GL, SR, MA	✓	✓	✓	✓	✓	Strong currents, inclement weather, lack of experience or knowledge	3	D	M	
513			✓	✓	✓	✓	✓	Deficient, defective or no safety equipment	3	D	M	
514			✓	✓	✓	✓	✓	Deficient, defective or no signage or navigational aids	3	D	M	
515			✓	✓	✓	✓	✓	Slip, trip or fall	3	D	M	
516	Pollution and spill response	GL, SR, MA	✓	✓	✓	✓	✓	Exposure to contaminants	2	C	M	
517	Terrestrial pest and weed control	GL, SR, MA				✓		Exposure to herbicides or pesticides	2	C	M	
518	Marine pest control	GL, SR, MA		✓	✓			Exposure to antifouling agents	2	C	M	
519	Mobile marine research	GL, SR, MA	✓	✓	✓	□		Strong currents, inclement weather, lack of experience or knowledge	3	C	H	I
520			✓	✓	✓	□		Deficient, defective or no safety equipment	3	C	H	
521			✓	✓	✓	□		Deficient, defective or no signage or navigational aids	3	C	H	
522			✓	✓	✓	□		Collision with other boats, infrastructure, swimmers or other obstructions	3	C	H	
523			✓	✓	✓	□		Channel blockage due to boat/vessel grounding or sinking	3	C	H	
524	Fixed marine research	GL, SR, MA	✓	✓	✓			Deficient or no critical maintenance regime (or program)	3	D	M	
525			✓	✓	✓			Inadequately marked channels	3	D	M	
526	Emergency management	GL, SR, MA	✓	✓	✓	✓	✓	Lack of planning and/or testing	2	C	M	
527			✓	✓	✓	✓	✓	No action taken due to not being informed	2	C	M	
528			✓	✓	✓	✓	✓	Inadequate or deficient reporting system	2	C	M	
529	Activation of emergency response plans	GL, SR, MA	✓	✓	✓	✓	✓	Lack of planning and/or testing	2	C	M	
530			✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
531	Public access management	GL			✓	✓	✓	Unrestricted public access	2	C	M	
532	Establish and/or manage leases and agreements	GL, SR, MA		✓	✓	✓		Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
533				✓	✓	✓		Lack of planning, training, auditing and/or reporting	2	C	M	
534				✓	✓	✓		Inadequate, insufficient experience in local knowledge	3	B	H	IX
535	Issue, approve and/or manage permits, licences for individuals, organisations or other agency activities	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
536			✓	✓	✓	✓	✓	Lack of planning, training, auditing and/or reporting	2	C	M	
537			✓	✓	✓	✓	✓	Inadequate, insufficient experience in local knowledge	3	B	H	VI
538	Harbour control function	GL ¹⁹	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
539	Harbour master directions	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
540	Issuing of notices to mariners	GL, SR, MA	✓	✓	✓	□	□	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
541	Zoning of waters (speed limits)	GL, SR, MA	✓	✓	✓	□	□	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
542	Tide and channel information	GL	✓	✓	✓	□	□	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
543	Interaction with the public	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	

544	Interaction with industry	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
545	Interaction with other agencies	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
546	Local knowledge certificates (pilotage)	GL ¹⁹		✓	✓	✓		Inadequate, insufficient experience in local knowledge	3	B	H	X
547				✓	✓	✓		Inadequate, inappropriate or no regular competency assessment	3	B	H	
548	National Pollution Inventory	GL, SR, MA	✓	✓	✓	✓	✓	No emission estimation data (toxic contaminants)	3	B	H	XI
549			✓	✓	✓	✓	✓	No report submitted to relevant authorities	3	B	H	
550	Climate change	GL, SR, MA	✓	✓	✓	✓	✓	Lack of monitoring, planning, preparation and conservation	3	C	H	XII
551			✓	✓	✓	✓	✓	Failure of infrastructure	3	C	H	
552			✓	✓	✓	✓	✓	Creation or alleviation of extreme water variation (elevated water)	3	C	H	
553			✓	✓	✓	✓	✓	Creation of obstacles (eg. sand bars, spits & non navigable channels)	3	C	H	
554			✓	✓	✓	✓	✓	Strong currents, inclement weather, lack of experience or knowledge	3	C	H	

5.10 Environmental impact risk register

The register below documents all significant land and water based activities that are conducted within the port, including those undertaken by tenants, licensees and service providers and further identifies and rates associated environmental impacts.

Gippsland Ports (East Gippsland) Environmental Impact Risk Register															
Environmental Impact Number	Activity	Location of Activity GL - Gippsland Lakes SR - Snowy River MA - Mallacoota	Activity Map					Environmental Impact	Consequence	Likelihood	Significance	Control Register Group Number			
			Outside port waters	In port waters	Transfer from port water to port land at the berth	On port land	Transfer to or from port land						Colour Key:		
														Low Risk	Medium Risk
														High Risk	Extreme Risk
<small>Specific Activity Location: 1.Sale 2.Marlay Point 3.Seacombe 4.Loch Sport 5.Duck Arm 6.Newland Arm 7.Eagle Point 8.Paynesville 9.McMillan Strait 10.Bunga Arm 11.Mitchell River 12.Nicholson River 13.Johnsonville 14.Melung 15.Bancroft Bay 16.Mosquito Point 17.Nungurner 18.North Arm 19.Lakes Entrance 20.Snowy River 21.Marlo 22.Brodribb River 23.Gipsy Point 24.Karbeeithong 25.Coulls Inlet 26.Mallacoota 27.Bastion Point</small>															
General Public															
203	Fishing (boat, pier, surf or riverbank)	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
204	Boating	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
205			✓	✓	✓			Wake & wash - erosion of river and lake banks	1	B	M				
206	Jet skiing	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
207			✓	✓	✓			Wake & wash - erosion of river and lake banks	1	B	M				
208	Sailing	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
209	Canoeing	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
210	Swimming	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
211	Beach activities	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
212	Wind surfing	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
213	Surfing (including biscuit or skimming)	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M				
214	Cycling	GL, SR, MA				✓		General wastes - contamination of beaches, soil, water or air	1	B	M				
215	Trail bike riding	GL, SR, MA				✓		General wastes - contamination of beaches, soil, water or air	1	B	M				
216	Water-skiing	GL, SR, MA		✓	✓	□		General wastes - contamination of beaches, soil, water or air	1	B	M				
217	Parasailing	GL, SR, MA	✓	✓	✓	□		General wastes - contamination of beaches, soil, water or air	1	B	M				
218	Kite Surfing	GL, SR, MA	✓	✓	✓	□		General wastes - contamination of beaches, soil, water or air	1	B	M				
219	Diving	GL, SR, MA	✓	✓	✓	□		General wastes - contamination of beaches, soil, water or air	1	B	M				

220	Snorkelling	GL, SR, MA	✓	✓	✓	□	General wastes - contamination of beaches, soil, water or air	1	B	M
221	Ultralighting	GL, SR, MA	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	1	B	M
222	Hovercraft	GL ¹⁹	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	1	B	M
223	Organised sporting events	GL, SR, MA	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	1	B	M
224	Surf life saving	GL ¹⁹ , MA ²⁷		✓	✓		General wastes - contamination of beaches, soil, water or air	1	B	M
225	Hunting (on adjacent islands)	GL, SR, MA				✓	General wastes - contamination of beaches, soil, water or air	1	B	M
226	Fossicking	GL, SR, MA		✓		✓	General wastes - contamination of beaches, soil, water or air	1	B	M
227	Promenading	GL, SR, MA				✓	General wastes - contamination of beaches, soil, water or air	1	B	M
228	Bird watching	GL, SR, MA				✓	General wastes - contamination of beaches, soil, water or air	1	B	M
229	Whale watching	GL, SR, MA	✓	✓			General wastes - contamination of beaches, soil, water or air	1	B	M
230	Horse riding	GL, SR, MA				✓	General wastes - contamination of beaches, soil, water or air	1	B	M
231	Boat hire, charter or touring	GL ^{8,14,19} , SR ²⁰ , MA ^{23,26}	✓	✓	✓		Spill contamination of beach, soil, water or air	2	B	H
232	Boat launching and retrieval	GL ^{1,2,3,4,8,11,12,13,14,17,19} , SR ^{21,22} , MA ^{23,26,27}			✓		Spill contamination of beach, soil, water or air	2	B	H
233	Anchoring	GL, SR, MA	✓	✓			Mechanical damage to seabed and benthic flora	2	B	H
234	Swing mooring	GL ^{6,7,9,14,15,16,17,18} , MA ^{24,25}		✓			Mechanical damage to seabed and benthic flora	2	B	H
235	Vessel salvage	GL, SR, MA	✓	✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H
236	Yacht and boat club operations	GL ^{1,2,4,8,14,19} , SR ²¹	✓	✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H
237	Slipway operations	GL ^{1,8,14,19} , MA ²⁶		✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
238				✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H
239	Owner DIY vessel maintenance	GL, SR, MA		✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
240				✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H
241	Owner DIY infrastructure maintenance	GL, SR, MA		✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
242				✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H
243	Contractor vessel maintenance	GL ^{1,8,14,19} , MA ²⁶		✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
244				✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H
245	Solid waste disposal	GL ¹⁹		✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
246				✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H
247	Liquid waste disposal	GL ¹⁹		✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
248				✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H
249	Disposal of boat toilet (porta-potty) waste to toilet dump	GL ^{1,5,8,10,14,19} , MA ²⁶			✓	✓	Inappropriate disposal of wastes - contamination of soil, water or air	3	B	H
250					✓	✓	Inappropriate disposal of wastes - contamination of sewer	3	B	H
251	Fuelling (hydrocarbons) from a fixed	GL ^{8,14,19}		✓	✓	✓	Fugitive air emissions	1	B	M

252	installation			✓	✓	✓		Explosion or fire	3	E	M		
253				✓	✓	✓		Spill contamination of beach, soil, water or air	3	B	H	I	
254	Fuelling (hydrocarbons) not from a fixed installation	GL, SR, MA		✓	✓	✓		Explosion or fire	3	E	M		
255				✓	✓	✓		Spill contamination of beach, soil, water or air	3	B	H	I	
256	Pyrotechnic displays	GL ^{8,19}		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	C	H	I & II	
257				✓	✓	✓		Spill contamination of beach, soil, water or air	2	C	M		
258	Washing of various craft	GL, SR, MA		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	2	A	H	I	
259				✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H		
260				✓	✓	✓		Spill contamination of beach, soil, water or air	2	A	H		
261				✓	✓	✓		Excessive use of natural resources - water	1	A	H		
262	Vehicle operations & movements	GL, SR, MA			✓	✓		Spill contamination of beach, soil, water or air	2	B	H		
Commerce & Industry													
263	Fishing	GL, SR, MA	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	A	H	I	
264				✓	✓	✓			Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B		H
265				✓	✓	✓			Spill contamination of beach, soil, water or air	2	C		M
266	Non shipping operations	GL ¹⁵			✓	✓	✓	General wastes - contamination of beaches, soil, water or air	1	A	H	I	
267					✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H		
268						✓	✓	✓	Spill contamination of beach, soil, water or air	2	C		M
269	Boat hire, charter and touring	GL ^{8,14,19} , MA ²⁶	✓	✓	✓			General wastes - contamination of beaches, soil, water or air	1	A	H	I	
270				✓	✓	✓			Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B		H
271				✓	✓	✓			Spill contamination of beach, soil, water or air	2	C		M
272	Floating restaurants	GL ¹⁹		✓	✓	✓		General wastes - contamination of beaches, soil, water or air	1	A	H	I	
273					✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B		H
274					✓	✓	✓		Spill contamination of beach, soil, water or air	2	C		M
275	Pedestrian access	GL, SR, MA			✓	✓	✓	General wastes - contamination of beaches, soil, water or air	1	A	H		
276	Solid waste treatment and/or disposal	GL ¹⁹		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I	
277					✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of sewer	3	B		H
278					✓	✓	✓		Spill contamination of beach, soil, water or air	2	C		M
279					✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B		H
280	Liquid waste treatment and/or disposal	GL ¹⁹		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H	I	
281					✓	✓	✓		Spill contamination of beach, soil, water or air	2	C		M
282	Disposal of boat toilet (porta-potty)	GL ¹⁹ , MA ²⁶		✓	✓	✓		Inappropriate disposal of wastes - contamination of soil, water or air	3	B	H	I	

283	waste to toilet dump			✓	✓	✓		Inappropriate disposal of wastes - contamination of sewer	3	B	H	
284	Fishing transfers	GL ^{2,8,19} , SR ²¹ , MA ^{26,27}			✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
285	Net stretching and repairs	GL ¹⁹			✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
286	Loading/unloading of goods & freight	GL ^{14,19} , MA ^{26,27}		✓	✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
287	Slipway operations	GL ^{1,8,14,19} , MA ²⁶		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
288	Wet berth vessel maintenance	GL, SR, MA		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
289	Sand blasting (grits)	GL ^{8,19}			✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
290	Spray painting (solvents & emulsions)	GL ^{8,14,19} , MA ²⁶			✓	✓		Fugitive air emissions	1	C	L	
291					✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
292	Degreasing (solvents)	GL, SR, MA			✓	✓		Fugitive air emissions	1	C	L	
293					✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
294	Lubricating (grease & oil)	GL, SR, MA			✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
295	Fuelling (hydrocarbons) from a fixed installation	GL ^{8,14,19}		✓	✓	✓		Fugitive air emissions	1	B	M	
296				✓	✓	✓		Explosion or fire	3	E	M	
297				✓	✓	✓		Spill contamination of beach, soil, water or air	3	B	H	
298	Washing of various equipment	GL, SR, MA		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
299				✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H	
300	Retail sales (township vicinity)	GL ¹⁹				✓	✓	General wastes - contamination of beaches, soil, water or air	1	C	L	
301	Mobile vehicle operations & movements	GL, SR, MA			✓	✓		Air emissions	1	B	M	
302					✓	✓		Noise	1	C	L	
303	Fixed plant equipment operations (marine)	GL ¹⁹		✓	✓	✓		Air emissions	1	B	M	
304				✓	✓	✓		Noise	1	C	L	
305	Towing of equipment	GL ¹⁹		✓	✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
306	Vehicle & plant maintenance	GL, SR, MA		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
307	Boat launching, operations & retrieval	GL ^{1,8,14,19} , MA ²⁶			✓			Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
308	Vessel salvage	GL, SR, MA		✓	✓	✓	✓	Spill contamination of beach, soil, water or air	2	B	H	
309				✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	3	C	H	
310	Contractor activities	GL ^{8,19} , MA ²⁶		✓	✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
311	Tenant activities	GL, SR, MA		✓	✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
312	Pollution control (response)	GL, SR, MA		✓	✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
313	Owner DIY vessel maintenance	GL, SR, MA			✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
314	Property (land) development	GL, SR, MA				✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
315						✓		Spill contamination of beach, soil, water or air	3	C	H	

Gippsland Ports											
316	Maintenance dredging (actual, planned or potential)	GL, SR, MA	✓	✓		☐	Alteration to coastal processes (tidal flows at dredge site & spoil ground)	4	B	E	III
317			✓	✓			Disturbance/release of clean sediment - destruction of marine life	3	B	H	
318			✓	✓			Disturbance/release of clean sediment - creation of turbid waters	3	B	H	
319			✓	✓			Disturbance/release of contaminated sediment - destruction of marine life	4	B	E	
320			✓	✓			Consumption of fuel - depletion of natural resources	1	B	M	
321			✓	✓			Consumption of fuel - contamination of air	1	B	M	
322			✓	✓			Ballast water uptake and discharge - introduction of exotic marine species	4	B	E	VII
323			✓	✓			Noise	1	C	L	
324	Capital dredging	GL	✓	✓			Removal and relocation of clean sediment - stability of structures and slopes	4	B	E	IV
325			✓	✓			Alteration to coastal processes (tidal flows at dredge site & spoil ground)	4	B	E	
326			✓	✓			Disturbance/release of clean sediment - destruction of marine life	3	B	H	
327			✓	✓			Disturbance/release of clean sediment - creation of turbid waters	3	B	H	
328			✓	✓			Disturbance/release of contaminated sediment - destruction of marine life	4	C	E	
329			✓	✓			Consumption of fuel - depletion of natural resources	1	B	M	
330			✓	✓			Consumption of fuel - contamination of air	1	B	M	
331			✓	✓			Ballast water uptake and discharge - introduction of exotic marine species	4	B	E	VII
332	✓	✓			Noise	1	C	L			
333	Dredging equipment maintenance	GL ^{8,19}	✓	✓			Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
334	Hydrographic surveying	GL, SR, MA	✓	✓			General wastes - contamination of beaches, soil, water or air	1	C	L	
335	Property acquisition & management	GL, SR, MA			☐	✓	Inherent contamination	3	D	M	
336	Property (land) infrastructure improvement	GL, MA		✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
337				✓	✓	✓	Noise	1	C	L	
338	Property (water) infrastructure improvement	GL, MA	✓	✓			General wastes - contamination of beaches, soil, water or air	2	C	M	
339			✓	✓			Noise	1	C	L	
340	Construction of entrance to sea or lakes	GL ¹⁹ , SR ²¹ , MA ²⁶	✓	✓			Alteration to coastal processes (tidal flows at dredge site & spoil ground)	4	B	E	IV
341			✓	✓			Disturbance/release of clean sediment - destruction of marine life	4	B	E	
342			✓	✓			Disturbance/release of clean sediment - creation of turbid waters	4	B	E	
343			✓	✓			Disturbance/release of contaminated sediment - destruction of marine life	4	B	E	
344			✓	✓			Consumption of fuel - depletion of natural resources	1	B	M	
345			✓	✓			Consumption of fuel - contamination of air	1	B	M	
346			✓	✓			Noise	1	C	L	
347	Property leasing (tenancy)	GL, SR, MA	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	

348	Private jetties maintenance	GL, SR, MA	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
349	Public jetties maintenance	GL, SR, MA	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
350	Berths and moorings maintenance	GL, SR, MA	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
351	Marina infrastructure maintenance	GL, SR, MA	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
352	Retaining walls maintenance	GL ¹⁹ , MA ²⁰	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
353	Pile driving	GL, SR, MA	✓	✓	✓	Alteration to coastal processes	3	C	H	V
354			✓	✓	✓	General wastes - contamination of beaches, soil, water or air	3	C	H	
355			✓	✓	✓	Noise	3	C	H	
356			✓	✓	✓	Vibration	3	C	H	
357	Beach renourishment	GL	✓			General wastes - contamination of beaches, soil, water or air	3	C	H	III & IV
358	Bank maintenance and stabilisation	GL, MA	✓			General wastes - contamination of beaches, soil, water or air	2	C	M	
359	Provision and maintenance of underwater cables	GL	✓	✓		Alteration of coastal processes	2	C	M	
360			✓	✓		Vandalism	2	C	M	
361	Deployment and recovery of navigation aids (buoys)	GL, SR, MA	✓	✓		General wastes - contamination of beaches, soil, water or air	2	C	M	
362			✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	2	C	M	
363	Navigation aids maintenance	GL, SR, MA	✓	✓		General wastes - contamination of beaches, soil, water or air	2	C	M	
364			✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	2	C	M	
365	Mobile vehicle operations & movements	GL, SR, MA			✓	Air emissions	1	B	M	
366					✓	✓	Noise	1	C	L
367	Fixed plant equipment operations (marine)	GL, SR, MA			✓	Air emissions	1	B	M	
368					✓	✓	Noise	1	C	L
369	Towing of equipment (via road)	GL, SR, MA			✓	General wastes - contamination of beaches, soil, water or air	3	C	H	I
370	Vehicle maintenance	GL, SR, MA			✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
371	Fixed plant maintenance	GL, SR, MA			✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
372	Floating plant maintenance	GL	✓	✓		General wastes - contamination of beaches, soil, water or air	2	C	M	
373	Mobile crane and excavator hire	GL, MA			✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
374	Slipway operations	GL ^{8,19} , MA ²⁰	✓	✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
375	Sand blasting (grits)	GL ^{8,19} , MA ²⁰		✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
376	Spray painting (solvents & emulsions)	GL ^{8,19} , MA ²⁰		✓	✓	Fugitive air emissions	1	B	M	
377					✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
378	Degreasing (solvents)	GL, MA		✓	✓	Fugitive air emissions	1	B	M	
379					✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H
380	Lubricating (grease & oil)	GL, SR, MA		✓	✓	Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	

381	Confined space entry	GL ^{8,19} , MA ²⁰		✓	✓	✓		General wastes - contamination of beaches, soil, water or air	3	C	H	
382	Fuel containment and supply (under or above ground storage tanks)	GL ^{8,19}				✓		Fugitive air emissions	1	B	M	
383					✓			Potential leakage of storage tank(s) - contamination of soil and water	3	C	H	I
384	Fuelling (hydrocarbons) fixed and non fixed	GL, SR, MA		✓	✓	✓		Fugitive air emissions	1	B	M	
385				✓	✓	✓		Explosion or fire	3	E	M	
386				✓	✓	✓		Spill contamination of beach, soil, water or air	3	B	H	
387	Washing of various equipment	GL, SR, MA		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
388	Boat launching, operations & retrieval	GL ^{1,2,3,4,8,11,12,13,14,17,19} , SR ^{21,22} , MA ^{23,26,27}			✓			General wastes - contamination of beaches, soil, water or air	2	A	H	I
389	Vessel salvage	GL, SR, MA	✓	✓	✓	✓		Spill contamination of beach, soil, water or air	2	B	H	
390				✓	✓	✓	✓		General wastes - contamination of beaches, soil, water or air	3	C	
391	Solid waste treatment and/or disposal	GL ^{8,19}		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
392				✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H	
393				✓	✓	✓		Spill contamination of beach, soil, water or air	2	C	M	
394	Liquid waste treatment and/or disposal	GL ^{8,19}		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
395				✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of sewer	3	B	H	
396				✓	✓	✓		Spill contamination of beach, soil, water or air	2	C	M	
397	Sewerage pump out barge operation	GL ¹⁹		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
398				✓	✓	✓		Spill contamination of beach, soil, water or air	2	C	M	
399	Clearance of flotsam & jetsam in waterways	GL, SR, MA		✓	✓			Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	I
400				✓	✓			General wastes - contamination of beaches, soil, water or air	3	C	H	
401	Demolition of old structures	GL, SR, MA		✓	✓	✓		Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
402				✓	✓	✓		General wastes - contamination of beaches, soil, water or air	3	C	H	
403	Bunkering operations	GL ¹⁹		✓	✓			Inappropriate disposal of industrial wastes - contamination of soil, water or air	3	B	H	
404				✓	✓			Spill contamination of beach, soil, water or air	2	C	M	
405	Rescue operations	GL, SR, MA	✓	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	2	C	M	
406	Pollution and spill response	GL, SR, MA	✓	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	3	C	H	I & VI
407	Terrestrial pest and weed control	GL, SR, MA				✓		Bioaccumulation of herbicide & pesticide chemicals in animals	3	C	H	VII
408						✓			Destruction of non target species	4	C	
409	Marine pest control	GL, SR, MA		✓	✓			Bioaccumulation of antifouling chemicals in non target species	4	C	E	VIII
410				✓	✓				Destruction of non target species	4	C	
411	Mobile marine research	GL, SR, MA	✓	✓	✓	□		General wastes - contamination of beaches, soil, water or air	3	C	H	I
412	Fixed marine research	GL, SR, MA	✓	✓	✓	□		General wastes - contamination of beaches, soil, water or air	3	C	H	

413			✓	✓	✓	✓	✓	Lack of planning	3	C	H	IX
414	Emergency management	GL, SR, MA	✓	✓	✓	✓	✓	No external reporting of accidents or incidents	3	C	H	
415			✓	✓	✓	✓	✓	Inadequate or deficient reporting system	3	C	H	
416	Activation of Emergency Response Plans	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	4	E	H	
417			✓	✓	✓	✓	✓	General wastes - contamination of beaches, soil, water or air	3	C	H	
418	Public access management	GL			✓	✓	✓	General wastes - contamination of beaches, soil, water or air	3	C	H	I
419				✓	✓	✓		Inadequate, insufficient or inappropriate dissemination of information	4	E	H	X
420	Establish and/or manage leases & agreements	GL, SR, MA		✓	✓	✓		Lack of planning, training, auditing and/or reporting	3	C	H	
421				✓	✓	✓		Inadequate, insufficient experience in local knowledge	4	B	E	
422			✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	4	E	H	
423	Issue, approve and/or manage permits, licences for individuals, organisations or other agency activities	GL, SR, MA	✓	✓	✓	✓	✓	Lack of planning, training, auditing and/or reporting	3	C	H	
424			✓	✓	✓	✓	✓	Inadequate, insufficient experience in local knowledge	4	B	E	
425	Harbour control function	GL ¹⁹	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
426	Harbour master directions	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
427	Issuing of notices to mariners	GL, SR, MA	✓	✓	✓	□	□	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
428	Zoning of waters (speed limits)	GL, SR, MA	✓	✓	✓	□	□	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
429	Tide and channel information	GL, MA	✓	✓	✓	□	□	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
430	Interaction with the public	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
431	Interaction with industry	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
432	Interaction with other agencies	GL, SR, MA	✓	✓	✓	✓	✓	Inadequate, insufficient or inappropriate dissemination of information	3	E	M	
433				✓	✓	✓		Inadequate, insufficient experience in local knowledge	4	B	E	XI
434	Local knowledge certificates (pilotage)	GL ¹⁹		✓	✓	✓		Inadequate, inappropriate or no regular competency assessment	4	B	E	
435	National Pollution Inventory	GL, SR, MA	✓	✓	✓	✓	✓	No emission estimation data (ozone depleting substances & greenhouse gases)	3	B	H	XII
436			✓	✓	✓	✓	✓	No report submitted to relevant authorities	3	B	H	
437			✓	✓	✓	✓	✓	Lack of monitoring, planning, preparation and conservation	3	C	H	XIII
438			✓	✓	✓	✓	✓	Alteration and/or degradation of estuarine ecology	3	C	H	
439			✓	✓	✓	✓	✓	Alteration of coastal processes (coastal plains & estuarine boundaries)	4	D	H	
440	Climate change	GL, SR, MA	✓	✓	✓	✓	✓	Extinction of one or more species or life cycle of species impaired	4	D	H	
441			✓	✓	✓	✓	✓	Environmental stress effects transmitted and/or accumulate	4	D	H	
442			✓	✓	✓	✓	✓	Loss of sustainability of resources (e.g. fisheries)	4	D	H	
443			✓	✓	✓	✓	✓	Irreversible damage to ecosystems	5	E	H	
444			✓	✓	✓	✓	✓	Contamination of soil, water and/or air	3	C	H	

6 Risk Treatment and Management

6.1 Control measures

The implementation of existing and additional controls will ensure that Gippsland Ports Safety and Environment Policy, objectives and targets are achieved. To further enhance this process, each existing and additional safety and environmental control measure will be assessed for effectiveness.

In assessing control measures, the concept of a 'hierarchy of controls' is used⁵.

The hierarchy of controls recognises that different types of controls have inherently different effectiveness and/or reliability. For new or additional controls, where reasonable and practicable, upper hierarchy controls will be favoured.

The hierarchy of controls include:

1. Elimination
2. Substitution
3. Engineering controls
4. Administrative (procedural) controls
5. Personal protective equipment

Each existing and proposed control will be allocated a number and/or colour code to indicate its position in the hierarchy of controls.

The assessment of controls is to be undertaken by Gippsland Ports Management at each review stage of the plan.

⁵ AS/NZS 4801:2001 – Occupational health and safety management systems – specification with guidance for use, Appendix A4.4.6.4, pg. 20

6.2 Significant safety hazard control register

The register below outlines specific controls to be implemented and the objectives and targets to eliminate, prevent or reduce the risks associated with significant safety hazards listed in the safety hazard risk register (Section 5.9).

Group Number	Significant Safety Hazard Number	Existing Controls		Additional Controls		Person(s) Responsible for the Implementation of Controls	Objectives, Targets (referenced in section 2.3) and Timeframes	Estimated Cost (initial)	Ongoing Cost (per year)	
		Control Hierarchy Colour Code	1. Elimination	2. Substitution	3. Engineering control					4. Administrative (procedural) control
* hazard listed in more than one control group; TBD - to be determined										
I	263 - 287, 289 - 328, 335 - 336, 341 - 342, 354 - 355*, 357, 362*, 363 - 371*, 372* - 374*, 376* - 378*, 384, 406 - 407, 413, 419, 422, 426, 443 - 444, 508, 519 - 523	Warning and restrictions signage				Develop and implement a Port Waterways Safety Management Plan in conjunction with relevant agencies	Harbour Master	Objectives: 1 & 2 Target: One plan for Gippsland Lakes (GL); one for Snowy River (SR); one for Mallacoota (MA) Due: SR & MA - 31 December 2007; GL 31 December 2008	\$50K	TBD
		Dissemination of various existing education material				Review existing material; Formalise communication channels with MSV and develop a communication strategy in unison	Harbour Master	Objectives: 4 & 5 Target: Information disseminated in an efficient and timely manner Due: Review by 31 December 2006; Implement strategy by 30 June 2007	\$20K	TBD
		Asbestos register				Undertake a hazardous materials audit on any building to be demolished and update the asbestos register as required	Environment, Health and Safety Manager	Objectives: 1 & 2 Target: 100% compliance with all related regulatory requirements Due: Update of asbestos register by 31 December 2008	\$20K	TBD
		Random and seasonal safety patrols (conducted by Victoria Police); Limited seasonal safety patrols conducted by GP				Establish a patrol strategy with Victoria Police and maintain a regular GP safety patrol of all port facilities and waters	Harbour Master	Objectives: 1 & 2 Target: Implementation of a regular safety patrol Due: Strategy developed by 30 June 2006; Patrols to commence by 01 September 06	\$45K Gippsland Lakes only	\$45K Gippsland Lakes only
		Dredge utilising 'April Hamer and Kalimna				Hydrographic surveying and contingency plans for plant failure or downtime	Dredging Manager	Objectives: 1 & 2 Target: 100% coverage of required surveys sites; implement contingency plans Due: GL - 31 December	TBD	TBD

					2007; SR & MA - 31 December 2008		
II	329	Firearm safety course as per Victoria Police requirements for licensees	Refer all firearm related matters to appropriate agency	Victoria Police and/or Parks Vic	Objective: 2 Target: 100% compliance of all related regulatory requirements Due: Ongoing, as required	N/A	N/A
III	339 - 340, 355*, 408 - 409	None	Develop Emergency Management Plan and implement training program	Environment, Health and Safety Manager	Objectives: 1 & 2 Target: Completion and implementation of the plan; review and exercise Due: Completion - 31 December 2005; initiate exercise by 31 December 2006	\$15K	TBD
IV	344, 390, 410	Access controls (induction program); Signage; Site audits and barriers	Review slipway (slipping) procedures and continue to educate users; Achieve consistency across sites	Boat Yard Managers	Objectives: 3 & 4 Target: Zero incidents Due: 31 December 2006	\$10K	TBD
V	402, 405, 488 - 490	Operating procedures, maintenance program and awareness training	Review procedures and maintenance program; Introduce training program and competency assessment	Local Port Managers, Boat Yard Managers and Operators	Objectives: 1, 2, 3, 4 & 5 Target: Zero incidents Due: 30 June 2007	\$75K	TBD
VI	359 - 360, 376* - 378*, 537, 371* - 374*	Issue, approve and/or manage permits for individuals, organisations or other agency activities (as per <i>Port Services Act 1995</i>)	Review and establish procedures and protocols for effective management	Marine Officer	Objectives: 2 & 4 Target: 100% compliance by all permit applicants and holders Due: Permit process in place by 31 December 2005	\$5K	\$5K
			As part of application, conduct risk assessment of activities requiring a permit and further instigate an awareness program	Marine Officer	Objectives: 2 & 4 Target: Review all applications Due: 30 June 2006	\$10K	\$10K
VII	362*, 387	Current examination of wheel loading for each berth; Permits and limited signage	Develop and implement a Wharf Wheel Loading Specification and Site Management Plan	Port Engineer and Local Port Managers	Objectives: 2, 3 & 4 Target: 100% compliance by all vehicle owners and drivers Due: 31 December 2006	\$50K	TBD

VIII	436	Partial survey of waterways and Boating Guides	Conduct extensive survey of waterways	Dredging Manager	Objectives: 1 & 2 Target: 100% coverage of required surveys sites Due: Develop survey outline by 31 Dec 2006; survey East Gippsland Ports by 31 December 2008	\$250K	TBD
		None (No Safety Boating Charts or Local Waterways Charts)	Develop Safety Boating Charts	Dredging Manager	Objective: 1 & 2 Target: 100% coverage of ports Due: GL, SR, MA - 31 December 2007	\$75K	TBD
IX	411, 534	Lease agreements	Develop a generic lease document; Review and establish procedures and protocols relating to safety onsite	Finance Manager	Objective: 4 Target: 100% compliance by all lease holders (renewed leases) Due: 30 June 2006	\$15K	TBD
X	546 - 547	Local Knowledge Certificates	Review and establish in conjunction with MSV procedures and protocols for the effective management of local knowledge certificates	Harbour Master	Objectives: 2, 4 & 5 Target: Zero incidents Due: 31 December 2008	\$5K	TBD
XI	548-549	None (National Pollution Inventory)	Undertake emission estimations and submit report to relevant authorities	Environment, Health and Safety Manager	Objective: 2, 3, 4 & 5 Target: 100% compliance Due: 30 June 2008	\$5K	TBD
XII	550-554	None (Climate change)	Undertake annual greenhouse gas emission estimations arising from GP activities and determine increase or decrease	Environment, Health and Safety Manager	Objective: 1, 2, 3 & 4 Target: Capture of greenhouse gas emission data Due: 30 June 2008; ongoing	\$5K	TBD
			Investigate & incorporate greenhouse gas reduction/mitigation technologies & practices for GP business and operations	Environment, Health and Safety Manager	Objective: 1, 2, 3 & 4 Target: TBD Due: 30 June 2008	TBD	TBD

	Applicable to all	None	Contract professional legal services to review legal compliance register and identify legislation and related documentation directly affecting GP day to day activities	Environment, Health and Safety Manager	Objective: 6 Target: 100% compliance of all related regulatory requirements Due: 30 June 2006	\$10K	TBD
	Applicable to all	None	Contract professional auditing services to review and certify the Safety Management Plan	Environment, Health and Safety Manager	Objective: 6 Target: 100% compliance of all related regulatory requirements Due: 30 June 2006	\$10K	TBD
	Applicable to all	None	Conduct Safety Management Plan awareness training for all relevant personnel	Environment, Health and Safety Manager	Objective: 6 Target: 100% of all operational staff Due: 31 December 2006; Ongoing	\$5K	TBD
	Applicable to all	None	Contract professional services or employ a permanent person to facilitate the development and implementation of the Safety Management Plan	Environment, Health and Safety Manager	Objective: 6 Target: 100% implementation of SEMP's existing and additional controls Due: 31 June 2006	\$25K	\$25K

6.3 Significant environmental impact control register

The register below outlines specific controls to be implemented and the objectives and targets to eliminate, prevent or reduce the risks associated with significant environmental impacts listed in the environmental impact risk register (Section 5.10).

Group Number	Significant Environmental Impact Number	Existing Controls		Additional Controls		Person(s) Responsible for the Implementation of Controls	Objectives, Targets (referenced in section 2.4) and Timeframes	Estimated Cost (initial)	Ongoing Cost (per year)
		Control Hierarchy Colour Code	2. Substitution	4. Administrative (procedural) control					
		1. Elimination	3. Engineering control	5. Personal protective equipment					
* impact listed in more than one control group; TBD - to be determined									
I	231 - 250, 253, 255 - 256*, 258 - 262, 263 - 264, 266 - 267, 269 - 270, 272 - 273, 275 - 277, 279 - 280, 282 - 289, 291, 293 - 294, 297 - 299, 305 - 315, 333, 369 - 371, 374 - 375, 377, 379 - 381, 383, 386 - 392, 394 - 395, 397, 399 - 403, 406*, 411 - 412, 418	Warning and restrictions signage		Develop and implement a Port Waterways Environmental Management Plan in conjunction with relevant agencies	Harbour Master	Objectives: 1 Target: One plan for Gippsland Lakes (GL); one for Snowy River (SR); one for Mallacoota (MA) Due: SR & MA - 31 December 2007; GL 31 December 2008	\$50K	TBD	
		Paynesville Boatyard solid waste interceptor pit, Gippsland Lakes sewer barges and oil waste collection		Develop & implement a Ports Waste Management Plan; Implement or improve solid & liquid waste collection & treatment at slipway & boat maintenance facilities	Operations & Local Port Manager	Objectives: 2 Target: 100% compliance with prescribed waste regulations Due: 31 December 2006	\$20K (WMP); \$500K (WTF)	TBD	
		Dissemination of various existing education material		Develop and communicate an education strategy to inform port users of port facilities, waste management, navigation rules, anchoring locations and safe havens	Harbour Master	Objective: 3 Target: Information disseminated in an efficient and timely manner Due: Review by 31 December 2006; Implement strategy by 31 December 2007	\$10K	TBD	
		None		Establish a monitoring regime for underground storage tanks; Key stakeholder at Gippsland Lakes to supply GP with results	LEFCOL	Objectives: 2 Target: Zero tank leakages Due: 30 June 2006	\$10K (program) \$20K (testing)	TBD	
		Ad-hoc environmental inspections		Establish and maintain a regular environmental inspections of all port facilities and waters	Harbour Master	Objectives: 3 & 4 Target: Implementation of a regular environmental inspection Due: Inspections to	\$50K	TBD	

					commence by 01 September 2006		
		Gippsland Region Marine Pollution Contingency Plan		Harbour Master	Objectives: 1 Target: 100% response to pollution incidents Due: Ongoing	\$10K	TBD
		Gippsland Ports in house bunkering procedure; Ongoing review and training		Master - April Hamer	Objectives: 2 Target: Zero incidents Due: Ongoing	\$5K	TBD
II	256*	Issue, approve and/or manage permits for individuals, organisations or other agency activities (as per <i>Port Services Act 1995</i>)	Review and establish procedures and protocols for effective management	Marine Officer	Objective: 4 Target: 100% compliance by all permit applicants and holders Due: Permit process in place by 31 December 2005	\$5K	TBD
III	316 - 319, 357*	None	Long Term Management Plan for Dredging (Lakes Entrance) 2005 - 2015	Dredging Manager	Objectives: 1 & 2 Target: 100% compliance with LTMP for Dredging (Lakes Entrance) 2005 - 2015 Due: 31 December 2005	\$70K (planning)	\$1.8M (dredging)
IV	324 - 328, 340 - 343, 357*	None	State and Federal environmental dredging permits	Dredging Manager	Objectives: 1 & 2 Target: 100% compliance with all related regulatory requirements Due: Ongoing	TBD	TBD
V	353 - 356	None	Develop site specific Environmental Management Plans and procedures	Environment, Health and Safety Manager	Objectives: 1 & 2 Target: 100% coverage of ports Due: Ongoing, as required	TBD	TBD
VI	406*	Perform the duties of the Regional Oil Pollution Coordinator	Existing Gippsland Region Marine Pollution Contingency Plan	Harbour Master	Objectives: 1 Target: 100% response to pollution incidents Due: Ongoing	TBD	TBD

VII	322, 331, 407 - 408	As per DSE and EPA requirements		Harbour Master, Dredging Manager, Environment, Health and Safety Manager	Objective:1 Target: Report any incidents to DSE and EPA; develop reporting procedure and register Due: 30 June 2006	TBD	TBD
VIII	409 - 410	Limited knowledge	Participate in collective baseline studies for exotic marine pests (GP, DSE, EPA & DPI)	Environment, Health and Safety Manager	Objective: 1 & 3 Target: As required Due: 01 January 2008	TBD	TBD
IX	413 - 417	None	Develop Emergency Management Plan and implement training program	Harbour Master	Objective: 1 Target: Effectively and efficiently respond to all emergencies Due: 31 December 2005	\$15K	TBD
X	419 - 424	None	Develop and incorporate environmental criteria into leases, agreements, permits and licenses	Finance Manager	Objective: 4 Target: 100% compliance by all (renewed) lease, permit and licence holders Due: 30 June 2006	\$15K	TBD
XI	433 - 434	Local Knowledge Certificates	Review and establish in conjunction with MSV procedures and protocols for the effective management of local knowledge certificates	Harbour Master	Objective: 4 Target: Zero incidents Due: 31 December 2008	\$5K	TBD
XII	435-436	None (National Pollution Inventory)	Undertake emission estimations and submit report to relevant authorities	Environment, Health and Safety Manager	Objective: 2, 3, & 4 Target: 100% compliance Due: 30 June 2008	\$5K	TBD
XIII	437 - 444	None (Climate change)	Undertake annual greenhouse gas emission estimations arising from GP activities and determine increase or decrease	Environment, Health and Safety Manager	Objective: 1, 2, 3 & 4 Target: Capture of greenhouse gas emission data Due: 30 June 2008; ongoing	\$5K	TBD

			Investigate & incorporate greenhouse gas reduction/mitigation technologies & practices for GP business and operations	Environment, Health and Safety Manager	Objective: 1, 2, 3 & 4 Target: TBD Due: 30 June 2008	TBD	TBD
	Applicable to all	None	Contract professional legal services to review legal compliance register and identify legislation and related documentation directly affecting GP day to day activities	Environment, Health and Safety Manager	Objective: 5 Target: 100% compliance of all related regulatory requirements Due: 30 June 2006	\$10K	TBD
	Applicable to all	None	Contract professional auditing services to review and certify the Environmental Management Plan	Environment, Health and Safety Manager	Objective: 5 Target: 100% compliance of all related regulatory requirements Due: 30 June 2006	\$10K	TBD
	Applicable to all	None	Conduct Environmental Management Plan awareness training for all relevant personnel	Environment, Health and Safety Manager	Objective: 5 Target: 100% of all operational staff Due: 30 June 2006; Ongoing	\$5K	TBD
	Applicable to all	None	Contract professional services to continue and ensure the development and implementation of the Environmental Management Plan	Environment, Health and Safety Manager	Objective: 5 Target: 100% implementation of SEMP's existing and additional controls Due: 30 June 2006	\$25K	\$25K

6.4 Risk treatment and emergency management

Gippsland Ports recognised that the development of this plan will not completely eliminate risks associated with port operations and activities. The risks that remain are known as 'residual risk'.

To counteract this, Gippsland Ports **have developed** an Emergency Management Plan to ensure that response and recovery arrangements are in place in the advent of emergency situations. **The Gippsland Ports Emergency Management Plan can be located at any of the Area Managers offices.**

7 Implementation, Review and Revision

7.1 Safety and environment management systems

Over the years, Gippsland Ports has established procedures and protocols to manage issues pertaining to safety and environmental management. With the advent of this plan, Gippsland Ports has formalised its management systems by reviewing existing practices and procedures and incorporating these into the development and implementation of a Safety and Environmental Management Manual (SEMM). At the time of SEMP Second Edition publication (July 2006), the SEMM contained the following elements:

- **Occupational Health & Safety Policy**
- **Environment Policy**
- Safety & Environment Policy Review Procedure
- Drug and Alcohol Policy
- Safe Driving Policy
- Safe Driving Policy Acknowledgement Form
- Vehicle Purchase Policy
- Safety Hazard & Environmental Impact Identification Procedure
- Safety Hazard & Environmental Impact Risk Assessment Framework
- Safety Hazard & Environmental Impact Risk Registers
- Objectives and Targets Procedure
- Safety and Environmental Management Plan (SEMP) Procedure
- Structure and Responsibility Procedure
- Training, Awareness and Competence Procedure
- Safety & Environmental Training Matrix
- Communications (and Public Consultation) Procedure
- Legal and Other Requirements Procedure
- Occupational Health, Safety and Environment Committee Procedure
- OHS&E Committee Members Contact Details
- Safety & Environment Documentation Procedure
- Safety & Environment Documentation Control Procedure
- Safety & Environment Document Control Register
- Safety & Environment Obsolete Document Control Register
- Operational Control Procedure
- Standard Operational Control Procedures Register
- Safety & Environment Emergency Preparedness and Response Procedure
- Safety & Environment Monitoring and Measurement Procedure
- Safety & Environment Monitoring and Measurement Plan
- Nonconformance, Corrective & Preventative Action Procedure
- Nonconformance Report and Corrective Action Report (NCR)
- Nonconformance and Corrective Action Register
- Risk / Event Report Procedure
- Radiation Incident Reporting
- Reporting Systemic, Operational, Marine Risks or Events
- Risk / Event Report Register
- Injury Report Procedure
- Injury Report
- Injury Register
- Return to Work Policy
- Return to Work Plan
- Safety & Environment Records Procedure

- Safety & Environment Audit Procedure
- Safety & Environment Audit Program
- Safety & Environment Management Review Procedure
- **Infectious Disease Policy**
- **First Aid Waste**
- **Fire Prevention Policy**
- **Thermal Environment Management Policy**

7.2 Regulatory compliance register

The register below outlines key safety legislation, agreements, conventions, standards and other related documentation that Gippsland Ports must comply with. Highlighted rows indicate documentation pertaining to day-to-day activities. Legislated acts and regulations are in italics.

International
Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds in Danger of Extinction and their Environment 1974
Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment 1986
Basle Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, 1989 (Basle Convention)
Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986
Convention for the Protection of the World Cultural and Natural Heritage 1972
Convention of Biological Diversity, Rio de Janeiro, 1992
Convention on International Trade in Endangered Species 1973
Convention on the Conservation of Migratory Species of Wild Animals, Bonn 1979
Convention on the Conservation of Nature in the South Pacific 1976
Convention on Wetlands of International Importance (RAMSAR), Iran 1971
Food and Agriculture Organisation of the United Nations International Code of Conduct for Sustainable Fishing 1995
Guidelines for the Control and Management of Ships' Ballast Water to Minimise the Transfer of Harmful Aquatic Organisms and Pathogens (IMO) 1997
International Convention for the Prevention of Pollution from Ships (MARPOL), 1973/78
International Convention for the Safety of Life at Sea (SOLAS) 1974
International Convention on Prevention of Marine Pollution by Dumping of Wastes and other Matter, London 1972
International Maritime Organisation Dangerous Goods Code (IMDG Code) 2004
Kyoto Declaration and Plan of Action on the Sustainable Contribution of Fisheries to Food Security 1997
South Pacific Regional Environment Program Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region 1986
South Pacific Regional Environment Program Protocol for the Prevention of Pollution of the South Pacific Region by Dumping 1986
The Jakarta Mandate on Marine and Coastal Biological Diversity 1995
The United Nations Convention on the Law of the Sea (UNCLOS) 1982
United Nations Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks 1992
United Nations Commission on Environment and Development (UNCED) 1992
Agenda 21, Chapter 17 (covering the protection and use of oceans, seas and coastal areas) 1992
United Nations Framework Convention on Climate Change 1992
Commonwealth (National/Federal)
<i>Aboriginal & Torres Strait Islander Heritage Protection Act 1984</i>
<i>Australia's Ocean Policy 1998</i>
<i>Australian Ballast Water Management Requirements (AQIS) 2001</i>
<i>Endangered Species Protection Act 1992</i>
<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<i>Environment Protection and Biodiversity Conservation Regulations 2000</i>
<i>Environment Protection (Sea Dumping) Act 1981</i>
<i>Environment Protection (Sea Dumping) Regulations 1983</i>
<i>Historic Shipwrecks Act 1976</i>
<i>Historic Shipwrecks Regulations 1978</i>
<i>Maritime Transport Security Act 2003</i>
<i>Maritime Transport Security Regulations 2003</i>
<i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i>
<i>National Environment Protection Measures (Implementation) Regulations 1999</i>
<i>National Greenhouse Strategy 1998</i>
<i>National Standards for the Control of Major Hazard Facilities 2002</i>
<i>National Strategy for Ecologically Sustainable Development 1992</i>
<i>National Strategy for the Conservation of Australia's Biological Diversity 1996</i>

<i>Occupational Health and Safety (Maritime Industry) Act 1993</i>
<i>Occupational Health and Safety (Maritime Industry)(National Standards) Regulations 2003</i>
<i>Occupational Health and Safety (Maritime Industry) Regulations 1995</i>
<i>Ozone Protection and Synthetic Greenhouse Gas Management Act 1989</i>
<i>Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995</i>
<i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>
<i>Protection of the Sea (Prevention of Pollution from Ships) (Orders) Regulations 1994</i>
<i>Protection of the Sea (Harmful Anti-Fouling Systems) Act 2006</i>
<i>Quarantine Act 1908</i>
<i>Quarantine Regulations 2000</i>
<i>Road Transport Reform (Dangerous Goods) Act 1995</i>
<i>Road Transport Reform (Dangerous Goods) Regulations 1997</i>
<i>Whale Protection Act 1980</i>
State (Victoria)
<i>Aboriginal Heritage Act 2006</i>
<i>Aboriginal Heritage Regulations 2007</i>
<i>Building Act 1993</i>
<i>Building Regulations 1994</i>
<i>Catchment and Land Protection Act 1994</i>
<i>Catchment and Land Protection Regulations 2002</i>
<i>Coastal Management Act 1995</i>
<i>Conservation, Forests and Lands Act 1987</i>
<i>Conservation, Forests and Lands (Contracts) Regulations 2000</i>
<i>Conservation, Forests and Lands (Infringement Notice) Regulations 2002</i>
<i>Crown Land (Reserves) Act 1978</i>
<i>Crown Land Reserves (Gippsland Port Reserve) Regulations 1996</i>
<i>Crown Land Reserves (Gippsland Port) (Extension of Application) Regulations 1996</i>
<i>Dangerous Goods Act 1985</i>
<i>Dangerous Goods (Explosives) Act 1988</i>
<i>Dangerous Goods (Storage and Handling) Regulations 2000</i>
<i>Emergency Management Act 1986</i>
<i>Emergency Management Regulations 2003</i>
<i>Environmental Effects Act 1978</i>
<i>Environment Protection Act 1970</i>
<i>Environment Protection (Fees) Regulations 2001</i>
<i>Environment Protection (Prescribed Waste) Regulations 1998</i>
<i>Environment Protection (Residential Noise) Regulations 1997</i>
<i>Environment Protection (Scheduled Premises & Exemptions) Regulations 2007</i>
<i>Environment Protection (Vehicle Emissions) Regulations 2003</i>
<i>Equipment (Public Safety) Act 1994</i>
<i>Equipment (Public Safety) (General) Regulations 1995</i>
<i>Equipment (Public Safety) (Incident Notification) Regulations 1997</i>
<i>Extractive Industries Development Regulations 2007</i>
<i>Fences Act 1968</i>
<i>Fisheries Act 1995</i>
<i>Fisheries Regulations 1998</i>
<i>Flora and Fauna Guarantee Act 1988</i>
<i>Flora and Fauna Guarantee Regulations 2001</i>
<i>Freedom of Information Act 1982</i>
<i>Freedom of Information Regulations 1998</i>
<i>Gas Industry Act 1994</i>
<i>Gas Industry Act 2001</i>
<i>Gas Safety Act 1997</i>
<i>Gas Safety (Gas Installation) Regulations 1999</i>
<i>Health Act 1958</i>
<i>Health (Pest Control) Regulations 1992</i>
<i>Health (Radiation Safety) Regulations 2007</i>
<i>Heritage Act 1995</i>
<i>Heritage (General) Regulations 1996</i>
<i>Heritage (Historic Shipwrecks) (General) Regulations 1996</i>
<i>Heritage (Infringement Notice) Regulations 2002</i>
<i>Heritage Rivers Act 1992</i>
<i>Industrial Waste Management Policy (Prescribed Industrial Waste) 2000</i>
<i>Industrial Waste Management Policy (Protection of the Ozone Layer) 2001</i>
<i>Industrial Waste Management Policy (National Pollution Inventory) 1998</i>
<i>Industrial Waste Management Policy (Waste Acid Sulfate Soils) 1999</i>
<i>Land Act 1958</i>
<i>Land Act Regulations 1996</i>
<i>Land (Surf Life Saving Association) Act 1967</i>
<i>Landlord and Tenants Act 1958</i>

Landscape Setting Types for the Victorian Coast 1998
Litter Act 1987
Major Events (Crowd Management) Act 2003
Marine Act 1988 (including Standards and Determinations issues by the Director)
Marine Regulations 1999
National Environment Protection Council (Victoria) Act 1995
National Parks Act 1975
National Parks (Park) Regulations 2003
Occupational Health and Safety Act 2004
Occupational Health and Safety Regulations 2007
Ombudsman Act 1973
Pipelines Act 2005
Parks Victoria Act 1998
Planning and Environment Act 1987
Planning & Environment Regulations 1998
Pollution of Waters by Oil and Noxious Substances Act 1986
Pollution of Waters by Oil and Noxious Substances Regulations 2002
Port Services Act 1995
Port Services (Local Ports) Regulations 2004
Radiation Regulations 2007
Road Management Act 2004
Road Management (General) Regulations 2005
Road Management (Works & Infrastructure) Regulations 2005
Road Safety Act 1986
Road Transport (Dangerous Goods) Act 1995
Seafood Safety Act 2003
State Environment Protection Policy (Waters of Victoria) 1988
State Environment Protection Policy (Groundwaters of Victoria) 1997
State Environment Protection Policy (The Air Environment) 1988
State Environment Protection Policy (Air Quality Management) 2001
State Environment Protection Policy (Ambient Air Quality) 1999
State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 1989
State Environment Protection Policy (Prevention and Management of Contaminated Land) June 2002
Victoria's Biodiversity: Directions in Management 1997
Victoria's Biodiversity: Our Living Wealth 1997
Victoria's Biodiversity: Sustaining Our Living Wealth 1997
Victorian Coastal Strategy 2002
Victorian Heritage Strategy 2000-2005, 2000
Victorian Heritage Strategy: Shipwrecks 2000-2005, 2000
Water Act 1989
Water Industry (Waterways Land) Regulations 2002
Waste Management Policy (Ships' Ballast Water) 2004
Whistleblowers Protection Act 2001
Whistleblowers Protection Regulations 2001
Wildlife Act 1975
Wildlife Regulations 2002
Wildlife (Whales) Regulations 1998
Local/Regional
East Gippsland Regional Catchment Strategy 2004
East Gippsland Shire Planning Scheme
Gippsland Boating Coastal Action Plan 2002
Gippsland Coastal Waters Coastal Action Plan 2001
Gippsland Lakes Coastal Action Plan 1999
Wellington Shire Planning Scheme
Associated Guidelines & Standards
A Guide to the Measurement and Analysis of Noise (EPA Victoria) 1991
A Guide to the Sampling and Analysis of Waters, Wastewaters, Soils and Waste (EPA Victoria) 2000
Aquatic and Recreational Signage Style Guide (Life Saving Victoria)
AS 1657 Fixed Platforms, Walkways, Stairways and Ladders – Design, Construction and Installation 1992
AS 1940 Storage and Handling of Flammable and Combustible Materials 1993
AS/NZS 4360:2004 Risk Management
AS/NZS 4801:2001 Occupational Health and Safety Management Systems – Specification with guidance for use
AS/NZS ISO 14001:1996 Environmental Management Systems – Specifications with guidance for use
Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Environment Australia) 2000
Australian Code for the Transport of Dangerous Goods by Road and Rail (6 th Edition) 1998
Best Practice Guidelines for Waste Reception Facilities at Ports, Marinas & Boat Harbours in Australia and New Zealand (ANZECC)
Bunding Guidelines (EPA Victoria) 1992
Cleaner Marinas: EPA guidelines for protecting Victoria marinas (EPA Victoria)

Code of Practice – Confined Spaces (VWA) 1997
Code of Practice for the Control of Effluent from Service Stations (AIP) 1992
Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Systems (AIP) 2002
Code of Practice for the Removal and Disposal of Underground Petroleum Storage Tanks (AIP) 1994
Code of Practice – Septic Tanks On-Site Domestic Wastewater Management (EPA Victoria) 1996
Construction Techniques for Sediment Pollution Control (EPA Victoria) 1991
Control of Erosion on Construction Sites (Soil Conservation Authority) 1987
CS FP 001:1995 Fire Emergency Response
Disinfection of Treated Wastewater – Guidelines for Environmental Management (EPA Victoria) September 2002
Dutch Guidelines 1986
Environmental Auditor (Contaminated Land) - Guidelines for Issue of Certificates and Statements of Environmental Audit (EPA Victoria) June 2002
Environmental Guidelines for Major Construction Sites (EPA Victoria) 1996
Framework for Undertaking Work Near Overhead and Underground Assets (VWA) 2004
Groundwater Sampling Guidelines (EPA Victoria) 2000
Guidelines for Dredging 2001 (EPA Victoria) 2001
Guidelines for Powered Mobile Plant (VWA) 1997
Guidelines for the Assessment and Management of Contaminated Sites (ANZECC) 1992
Guidelines for the Monitoring & Assessment of Coastal Point Source Discharges (EPA Victoria) 1999
Guidance on OHS Reporting in Annual Reports (NOHSC) 2004
Guidelines on the Design, Installation and Management Requirements for Underground Petroleum Storage Systems (EPA Victoria) 2003
HB 76:2004 Dangerous Goods – Initial Emergency Response Guide
Identification of PCB Containing Capacitors (ANZECC) 1997
Industrial Equipment Requiring Certificates of Competency to Use or Operate (VWA) 1996
Industry Standard for Concrete Cutting and Drilling (VWA) 1999
Managing Safety in Your Workplace (VWA) 2003
National Pollution Inventory Guide (Environment Australia) 2000
Noise Control Guidelines (EPA Victoria) 1992
Officewise – A Guide to Health and Safety in the Office (VWA) 1997
Prevention of Bullying and Violence at Work Guidance Note (VWA) 2003
Protocol for Environmental Management – Domestic Ballast Water Management in Victorian State Waters (EPA Victoria) 2004
Protocol for Environment Management: Greenhouse Gas Emissions and Energy Efficiency in Industry (EPA Victoria) 2002
Protocol for Environment Management: Minimum Control Requirements for Stationary Sources (EPA Victoria) 2002
Siting and Design Guidelines for Structures on the Victorian Coast (Victorian Coastal Council) 1998
Use of Reclaimed Water – Guidelines for Environmental Management (EPA Victoria) 2002

7.3 Internal / external review and update of management plans

Gippsland Ports will undertake an internal review of the Safety and Environmental Management Plan on an annual basis (scheduled to be completed by the end of each financial year).

The internal review will address the following:

- Currency;
- Progress in implementation of risk reduction measures;
- Adequacy and performance of current controls; and
- The need to update any or all sections of the plan.

Additional reviews will be considered whenever any of the following occur:

- Incidents and near miss incidents;
- Changes to key legislation or regulations; and
- Changes in the nature, scale or extent of port activities.

Gippsland Ports will engage an external, third party review of the Safety and Environmental Management Plan on a triennial basis (every three years). This review will provide an independent assessment of the plan, drawing attention to any areas of concern and/or opportunities for improvement. The plan will be amended to reflect any changes.

Gippsland Ports will establish an audit procedure outlining the programme and methodology for undertaking annual internal and triennial external reviews to ensure that planned arrangements are being implemented and participating staff are appropriately trained. Tenants, licensees and service providers will be encouraged to participate in the triennial review process.

7.4 Incident management register

Gippsland Ports has established a Risk / Event Report – RER 01 (refer to Appendix II). Once complete the report must be actioned and the details entered into the Risk / Event (Incident) Management Register and kept on file for a minimum of 7 years. The Risk / Event Report and the Risk / Event (Incident) Management Register should be reviewed as part of the internal review process.

8 Consultation Process Outline

Public consultation is an important step in the SEMP's process. With local ports in Victoria being different in size and playing different roles in the community, the level of public consultation for SEMP's will vary⁶. It is vital that the development and implementation of the SEMP's incorporate a systematic and transparent consultative process. Due to the geographical size of the ports and the vast number of berth and mooring holders, Gippsland Ports has decided to notify the public via notices in local newspapers and its website and to further address key stakeholders by letter.

In early November 2004, a public notice outlining details of the consultative process and the opportunity to review a draft port activities list was placed in the following newspapers:

- Mallacoota Mouth
- Snowy River Mail
- Lakes Entrance Post
- Bairnsdale Advertiser
- Bairnsdale News
- Gippsland Times
- Yarram Standard
- Foster Mirror
- The Great Southern Star (Leongatha)
- The Sentinel Times (Korumburra and Wonthaggi)

The draft list of activities was placed on the Gippsland Ports website and distributed throughout the following libraries:

- Wellington Library Service, 70 Foster Street, Sale, 3850 (coverage – Yarram and Sale)
- East Gippsland Shire Library, 22 Service Street, Bairnsdale 3875 (coverage – Bairnsdale, Lakes Entrance, Paynesville and Mallacoota)
- West Gippsland Regional Library, 65 Victoria Street, Warragul, 3820 (coverage – Foster, Leongatha, Wonthaggi, Inverloch and Korumburra)

During December 2004 Gippsland Ports staff attended a one-day risk assessment workshop to assess a first draft list of activities and associated risks (as outlined in Section 5). Representation at this workshop included the Victoria Police (Gippsland Water Police) and a regional environmental consultancy that provided valuable statistics used to identify and assess significant risks.

In January 2005 a letter outlining the SEMP's program and an invitation to attend a program briefing was issued to key stakeholders. This second higher level briefing / workshop was run on the 3 February 2005 to further discuss key activities and associated risks within the ports of East Gippsland. Invitees included:

- Department of Infrastructure
- Department of Sustainability and Environment
- East Gippsland Catchment Management Authority
- East Gippsland Shire Council
- East Gippsland Water
- Environment Protection Authority
- Ethos NRM (Environmental Consultants)
- Gippsland Coastal Board
- Gippsland Ports Board Member
- Hazcon (Safety Consultants)
- Lakes Entrance Business and Tourism Association
- LEFCOL
- Marine Safety Victoria
- Parks Victoria

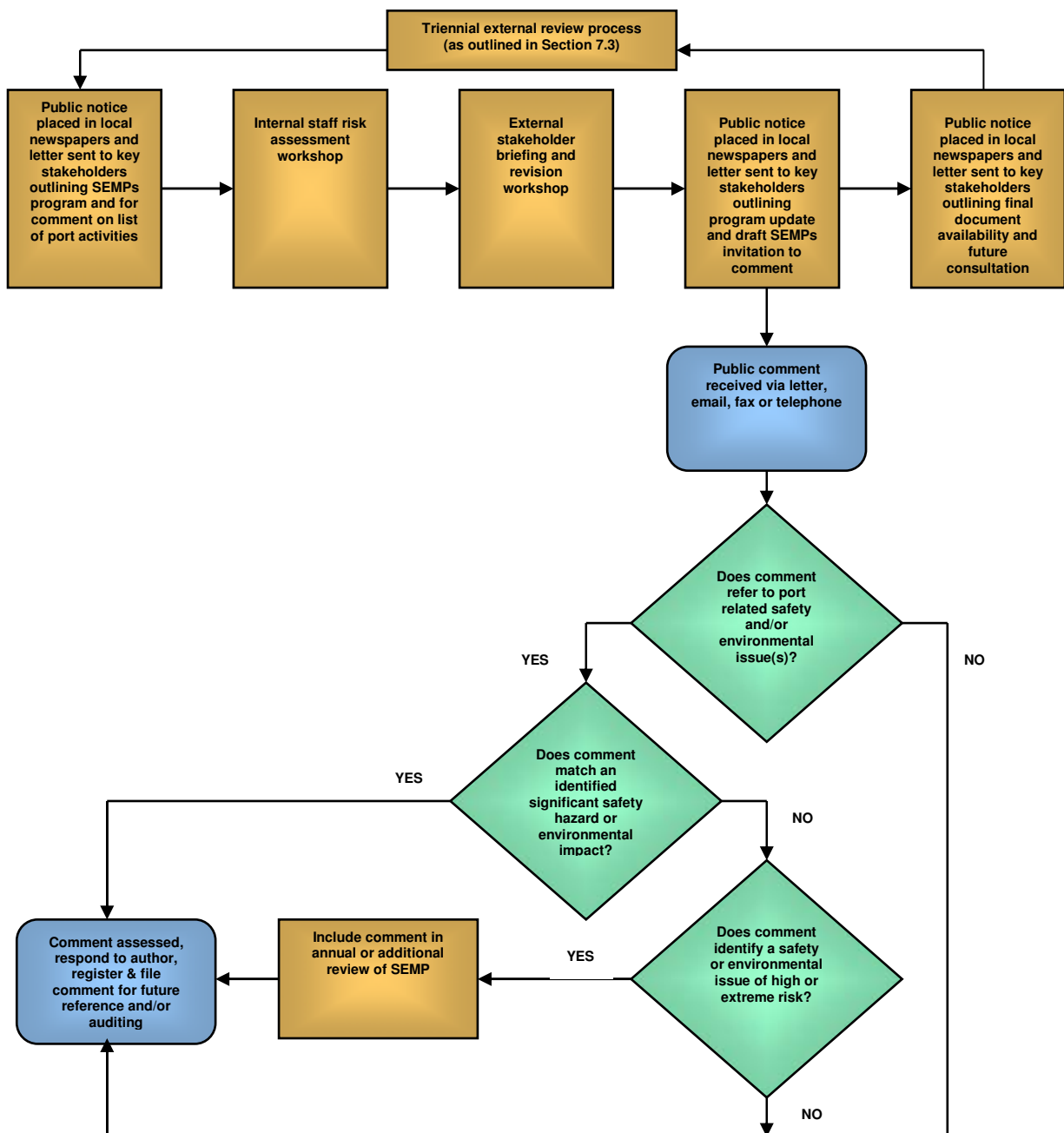
⁶ Department of Sustainability & Environment (December 2004) Guidelines for Public Consultation, Safety & Environmental Management Plans

- Victoria Police – Gippsland Water Police
- Victorian WorkCover Authority
- Wellington Shire Council

The draft SEMP's were released for public comment on the 10 March 2005. A public notice was placed in local newspapers and key stakeholders were sent a letter. The plans were further made available through local libraries and the Gippsland Ports website.

Comments on the draft SEMP's were sought in relation to the likely effects that these plans may have on individuals through to organisations and any further related information or insights into activities and risks that should be addressed. The public comment period ended on the 19 April 2005.

All comments were assessed against the 'Ministerial Guidelines for Port Safety & Environmental Management Plans (February 2005)' for relevance, inclusion or omission. A public notice will be placed in local newspapers and key stakeholders will be sent a letter outlining final document availability and information regarding future consultation. Diagrammatic representation of the consultation and public comment assessment process undertaken by Gippsland Ports is illustrated below.



9 Publication and Availability of Management Plans

A copy of the Safety and Environmental Management Plan will be:

Available for viewing at all Gippsland Port offices and depots;

- Gippsland Ports Head Office
97 Main Street
(PO Box 388)
Bairnsdale Victoria 3875
Telephone: (03) 51500 500
- Lakes Entrance Depot
Bullock Island
Lakes Entrance Victoria 3909
Telephone: (03) 5155 1588
- Paynesville Boatyard
Slip Road
Paynesville Victoria 3880
Telephone: (03) 5156 6352
- Port Welshpool Depot
Lewis Street
Port Welshpool Victoria 3965
Telephone: (03) 5688 1303; and

Available to download on the Gippsland Ports website – www.gippslandports.vic.gov.au

The following agencies, organisations and stakeholders have been provided with a copy of this plan:

- Department of Infrastructure
- Department of Sustainability and Environment
- East Gippsland Catchment Management Authority
- East Gippsland Shire Council
- Environment Protection Authority
- Ethos NRM Pty Ltd
- Gippsland Coastal Board
- Gippsland Lakes Charter Boat Association
- Hazcon
- Lakes Entrance Fishermen's Co-operative Society Limited (LEFCOL)
- Mallacoota Abalone Co-operative
- Marine Safety Victoria
- Parks Victoria
- Victorian WorkCover Authority
- Wellington Shire Council

Appendix I – Definitions

Consequence

The outcome of an event expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain. There may be a range of possible outcomes associated with an event.

Control

The process of elimination or minimisation of risks.

Environment

Surroundings in which an organisation operates, including air, water, land and natural resources, flora, fauna, humans and their interaction.

Environmental aspect

Element of an organisation's activities, products or services that can interact with the environment.

Environmental impact

Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services.

Environmental impact risk assessment

Overall process of identifying activities, products or services and estimating the magnitude and significance of risk and deciding what actions will be taken.

Environmental objective

Overall environmental goal, arising from the Environmental Policy that the organisation has set itself to achieve and which is quantified where practicable.

Environmental target

A detailed performance requirement, quantified where practicable, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Event

An incident or situation, which occurs in a particular place during a particular time interval.

Frequency

A measure of the rate of occurrence of an event expressed as the number of occurrences of an event in a given time.

Likelihood

Used as a qualitative description of probability or frequency.

Probability

The likelihood of a specific event or outcome, measured by the ratio of specific events or outcomes to the total number of possible events or outcomes.

Risk

The chance of something happening that will have an impact upon objectives. It is measured in terms of consequence and likelihood.

Risk management

The culture, processes and structures that are directed towards the effective management of potential opportunities and adverse effects.

Risk management process

The systematic process of management policies, procedures and practices as applied to the tasks of establishing the context, identifying, analysing, evaluating, treating, monitoring and communicating risk.

Safety hazard

A source or a situation with a potential to cause harm or loss in terms of human injury or ill-health, damage to property, damage to the environment, or a combination of these.

Safety hazard risk assessment

Overall process of identifying activities, products or services and estimating the magnitude and significance of risk and deciding what actions will be taken.

Safety objective

Overall environmental goal, arising from the Safety Policy that the organisation has set itself to achieve and which is quantified where practicable.

Safety target

A detailed performance requirement, quantified where practicable, applicable to the organisation or parts thereof, that arises from the safety objectives and that needs to be set and met in order to achieve those objectives.

Appendix II – Risk / Event Report

Risk / Event Report (RER)			
Instructions <ul style="list-style-type: none"> This form is to be used by any Gippsland Ports staff member, contractor, tenant or licensee to report a current or potential hazardous situation, risk, safety related event or near miss that has the potential to affect staff, public, customers, equipment, property or the environment. If you are in any doubt, please submit a report. After completion, fax the report to Gippsland Ports Environment, Health and Safety Manager – Fax: (03) 5152 4772. If the event caused injury or was otherwise a serious incident, notify your supervisor and/or relevant emergency service immediately. An Injury Report and the Injury Register will need to be completed. Reports are regarded as confidential, and should not be discussed with uninvolved third parties. Your report should include as much information as possible and any suggestions you may have to rectify the problem. 	Date Stamp		
	Office Use Only		Ref:
Date: / /	Subject: (eg. Ship collided with wharf)		
Priority: What is your assessment of the urgency of this issue? (tick relevant box)	Critical :	Urgent :	Routine :
Location:		Time (24hr):	
Environment / Weather:			
Details: Describe below the details of the risk or event and related actions of personnel			
Suggestions: Do you have any recommendations / actions to rectify the problem or prevent recurrence?			
Details of person lodging report	Name:	Signature:	Date: / /
Report received by Environment, Health & Safety Mgr	Name:	Signature:	Date: / /
Department Manager or other Agency notified	Department/Agency:	Acknowledgement Action: YES / NO	Date: / /
Data entered into system register & report filed	Name:	Signature:	Date: / /

Land and Waters to be Designated Ports:

Port of Gippsland Lakes

Plan No. Legl. /04 – 116 (refer to Appendix VI, Sections 15.1 – 15.6)

+ Land in the Township of Lakes Entrance, Parish of Colquhoun, being part of the reserved Crowns Lands being part of CA 83C. Reference plan LE/27.5.96. Locally known as Scallop wharf and slipway (refer to Appendix VI, Section 15.9).

+ Land on Bullock Island being CA 84U containing 7336m² in the Parish of Colquhoun, locally known as the Port Depot (refer to Appendix VI, Section 15.10).

+ Land on Bullock Island being CA 84E in the Parish of Colquhoun, locally known as the Tank Farm (refer to Appendix VI, Section 15.10).

+ Land at Paynesville being CA 147D in the Parish of Bairnsdale, locally known as the Paynesville Slipyard (refer to Appendix VI, Section 15.11).

Port of Snowy River

Plan No. Legl. /04 – 117 (refer to Appendix VI, Section 15.7).

Port of Mallacoota

Plan No. Legl. /04 – 118 (refer to Appendix VI, Section 15.8).

(Gazettal reference: G25 27, June 1996)

Committee of Management – Local Port Facilities in Gippsland

Port of Gippsland Lakes

Bullock Island – CA 84U, Parish of Colquhoun temporarily reserved as a site for public purposes by Order in Council of 27 June 1995 (Rs 16/4354), (refer to Appendix VI, Section 15.10).

Bullock Island – The reserved Crown lands in the Parish of Colquhoun, reference plan LE/2.6.95A DNRE correspondence No. 16-1976, (refer to Appendix VI, Section 15.10).

Bullock Island – Ports Fuel Depot - CA 84E, Parish of Colquhoun temporarily reserved as a site for public purposes by Order in Council of 17 December 1996 (Rs 4567), (refer to Appendix VI, Section 15.10).

Lakes Entrance – The reserved Crown lands in the Township of Lakes Entrance, Parish of Colquhoun, reference plans LE/2.6.95B and LE/27.5.96 correspondence No. 16-1976 (refer to Appendix VI, Section 15.9).

Kalimna (Jemmy's Point Lighthouse) – The remaining land in the Township of Kalimna, Parish of Colquhoun temporarily reserved for lighthouse purposes by Order in Council of 26 March 1884, reference plan K/23.6.95 correspondence No. 16-2022

Paynesville – That part of McMillan's Strait permanently reserved for public purposes by Order in Council of 2 May 1881, reference plan B/28.4.95 correspondence No. 16/1980 (refer to Appendix VI, Section 15.11).

Paynesville – That part of the land in the Parish of Bairnsdale temporarily reserved as a site for public purposes by Order in Council of 21 January 1879, reference plan B/28.4.95 (refer to Appendix VI, Section 15.11).

Port of Snowy River

Lighthouse – The remaining land in the Township of Marlo, Parish of Orbost East temporarily reserved for a lighthouse by order in Council of 7 May 1889, reference plan M/11.5.95 DNRE correspondence Rs 7996

Jetty – The reserved Crown land in the Parish of Orbost East, reference plan No. EO/8.8.95 DCNR correspondence No. Rs 7996

Port of Mallacoota

The reserved Crown land in the Parish of Wau Wauka West reference plan No. M/10.5.95 DNRE correspondence No. 16/04181 (refer to Appendix VI, Section 15.12)

Local Authority

Appointment of Gippsland Ports Committee of Management as a Local Authority. Reference Gazettal notice G25 27 June 1996

Order declaring Gippsland Ports Committee of Management to be a Local Authority in respect to State Waters for Designated Ports of Gippsland Lakes, Snowy River and Mallacoota. Reference: Gazettal Notice G26, 2 July 1998.

Incorporation

Under Crown Land Reserves Act 1978, Gippsland Ports Committee of Management declared to be a corporation and assigned the name Gippsland Ports Committee of Management Incorporated. Reference: Gazettal Notice G26, 4 July 1996.

Appendix IV – Related Documentation

- Long Term Management Plan for Dredging (Lakes Entrance) 2005 – 2115
- Emergency Management Plan
- Safety & Environmental Management Manual

Appendix V – Dredging Summary

Dredging activities for the year 2007 were dramatically affected by two natural events;

Unprecedented shoaling of the entrance channel in March and again in April/May '07

Due to continuous south east weather patterns and lack of inflows into the Lakes an unprecedented amount of sand entered the entrance channel in March causing the entrance channel to be severely restricted in available depths. As a result the fishing fleet could not access the ocean. Gippsland Ports immediately mobilised heavy earthmoving equipment to clear the channel and this was successful.

Then again in late April the same situation happened. This event took longer to clear than the first incident, again with earthmoving equipment but the navigability of the entrance was restored later in the month.

Floods in late June and early July '07

The Gippsland Lakes catchment area received over 250 millimetres of rain in a 10 day period in late June. This resulted in the worst floods for over 10 years.

However there was a benefit to the channels and bar at Lakes Entrance as the flood waters scoured a considerable amount of sand from the channels out to sea. It has been calculated from hydrographic surveys that over 300, 000 m³ of sand was taken from inside Gippsland Ports dredging areas and out to sea.

As a result the entrance channel, the inner channels, and the bar channel at Lakes Entrance are in the best condition for navigability for many years.

Maintenance Dredging

The *April Hamer* and the *Melbourne* continued their dredging activities during the year maintaining the navigability of the bar, the entrance and inner channels (apart from the incidents above). Overall the build up of sand by natural causes was still marginally more than was dredged in the channels for the year, the net inflow being plus 300 m³ after over 200,000 m³ was removed to sea by dredging. The *April Hamer* does not remove sand it only pumps sand to the side, so their quantum of sand dredged does not effect the amount of sand removed from the system.

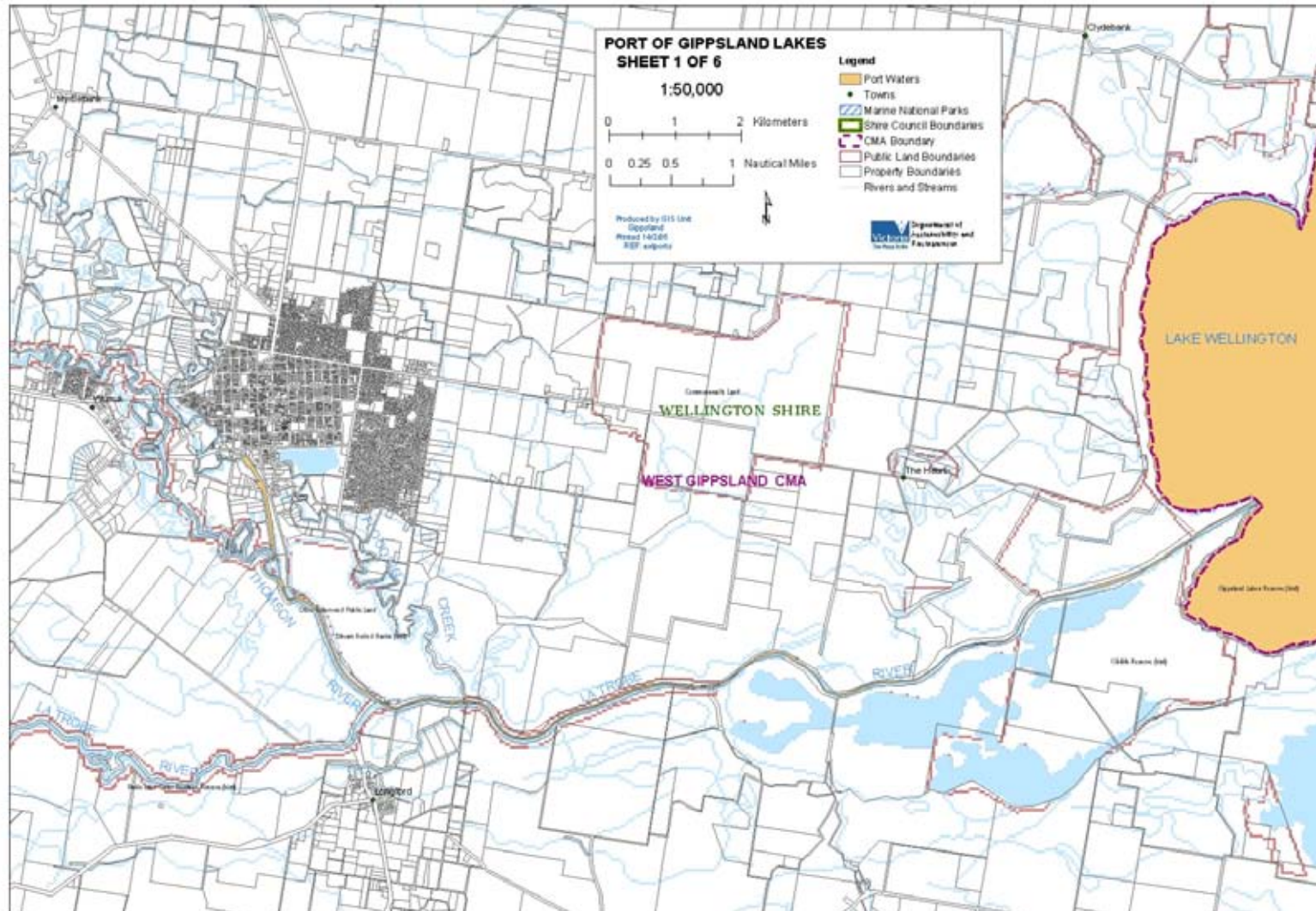
New Dredge.

In July '07 Gippsland Ports' new cutter suction dredge the "*Kalimna*"(replacing the contract dredge Melbourne) was delivered and immediately put to work dredging in the inner channels. After commissioning trials the dredge was accepted by Gippsland Ports in September.

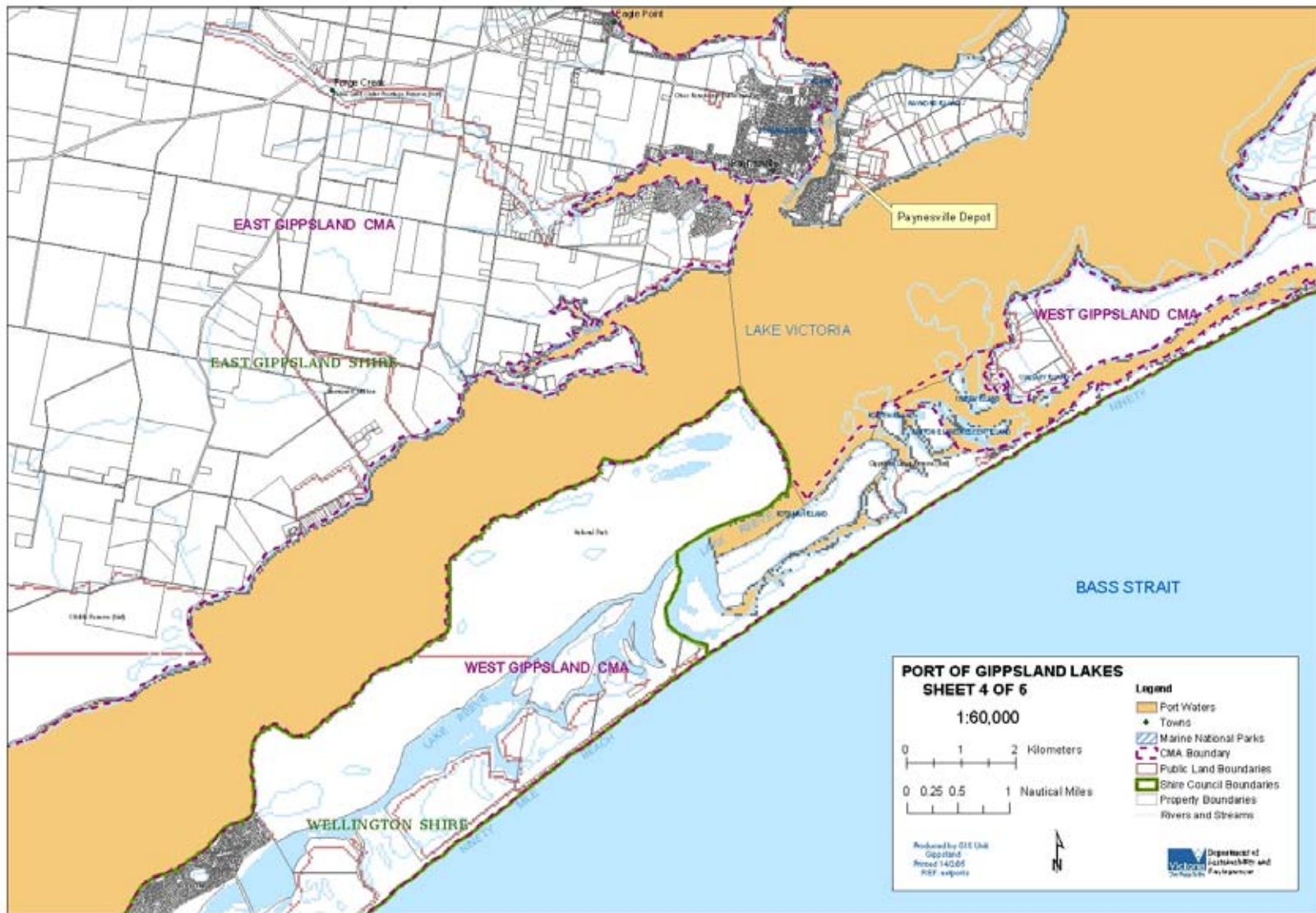
Port	Site	Purpose	Lead Agency	Repeat Interval	Last Event	Next Event	Sediment Testing	
GIPPSLAND LAKES	Aurora Channel		GP	As Required	1991			
	Avon River		GP	As Required	1989			
	Breakfast Camp		GP	As Required				
	Club Spit							
	Cunninghame Arm			GP	Ongoing	2005		
		Beach Nourishment* Special Zones (Water Skiing, etc.)		GP	As Required	1993		
	Dawsons Cove		GP	As Required	1986			
	Drews Landing		GP	As Required	1993			
	Eagle Point		GP	As Required	1993			
	Fort King		GP	As Required	1993			
	Grange Channel		GP	As Required	1990			
	Head (Burial Site)							
	Hollands Landing			GP	As Required			
	Hopetoun Channel			GP	As Required	2004		
	Lakes Entrance	Mooring Areas		EGSC	As Required			
	Latrobe River			GP	As Required	1994		
	Loch Sport			GP	As Required	1999		
	Loch Sport Channel			GP	As Required	1989		
	McLennan Strait East			GP	As Required	1989		
	McLennan Strait West			GP	As Required	1989		
	McMillan Straits			GP	As Required	1991		
	Marlay Point			GP/WSC	As Required	1994		
	Metung Lake King			GP	As Required	1993		
	Mitchell River			GP	As Required	1990		
	Mothers Beach			GP	As Required	1986		
	Newlands Arm			EGSC	As Required			
	Nicholson River			GP	As Required	1991		
	North Arm	Boat Ramps/Jetties		EGSC	As Required			
	North Arm			GP	As Required	1998		
	North Arm Park			GP	As Required	1993		
	North Arm Spit			GP	As Required	1993		
	Nungurner			GP	As Required	1993		
	Paynesville			GP	As Required			
	Paynesville			EGSC	As Required	1993		
	Raymond Island			GP	As Required	1992		
	Reeves Channel			GP	As Required	2006		
	Resides Beach			GP	As Required	1986		
	Steamer Channel			GP	As Required	1996		
	Steamer Landing			EGSC	As Required	1993		
	Steamer Landing			PV	As Required	1992		
Tambo River			GP	As Required	1991			
The Bar	Navigation Channels		GP	On going	2006	Ongoing		
The Grange			GP	As Required				

	The Narrows / Entrance and Channel		GP	Ongoing	2006	Ongoing	
	Wallaston Bay / Round		GEGAC	As Required	1998		
	Western Breakwater		GP	As Required			
MALLACOOTA	Adjacent Shoreline Drains	Remove Gravel Infill	EGSC			Unknown	
	Big Beach	Reopen Entrance	DSE	As required	Oct 2004		
	Various	Navigation Channels	GP		c1970	Unknown	
	Where Required	Beach Nourishment	EGSC			Unknown	
SNOWY RIVER	At Cliff Erosion Various	Navigation Channels	GP	20 years			
		Beach Nourishment	GP	10 years	Never		
		Reopen Entrance	DSE	As required	March 2004	Unknown	

Note: No attempt has been made to provide estimates of volumes requiring dredging as hydrographic surveys need to be undertaken.
 * Undertaken on behalf of Shire Council or Committee of Management







PORT OF GIPPSLAND LAKES
SHEET 4 OF 6
 1:60,000

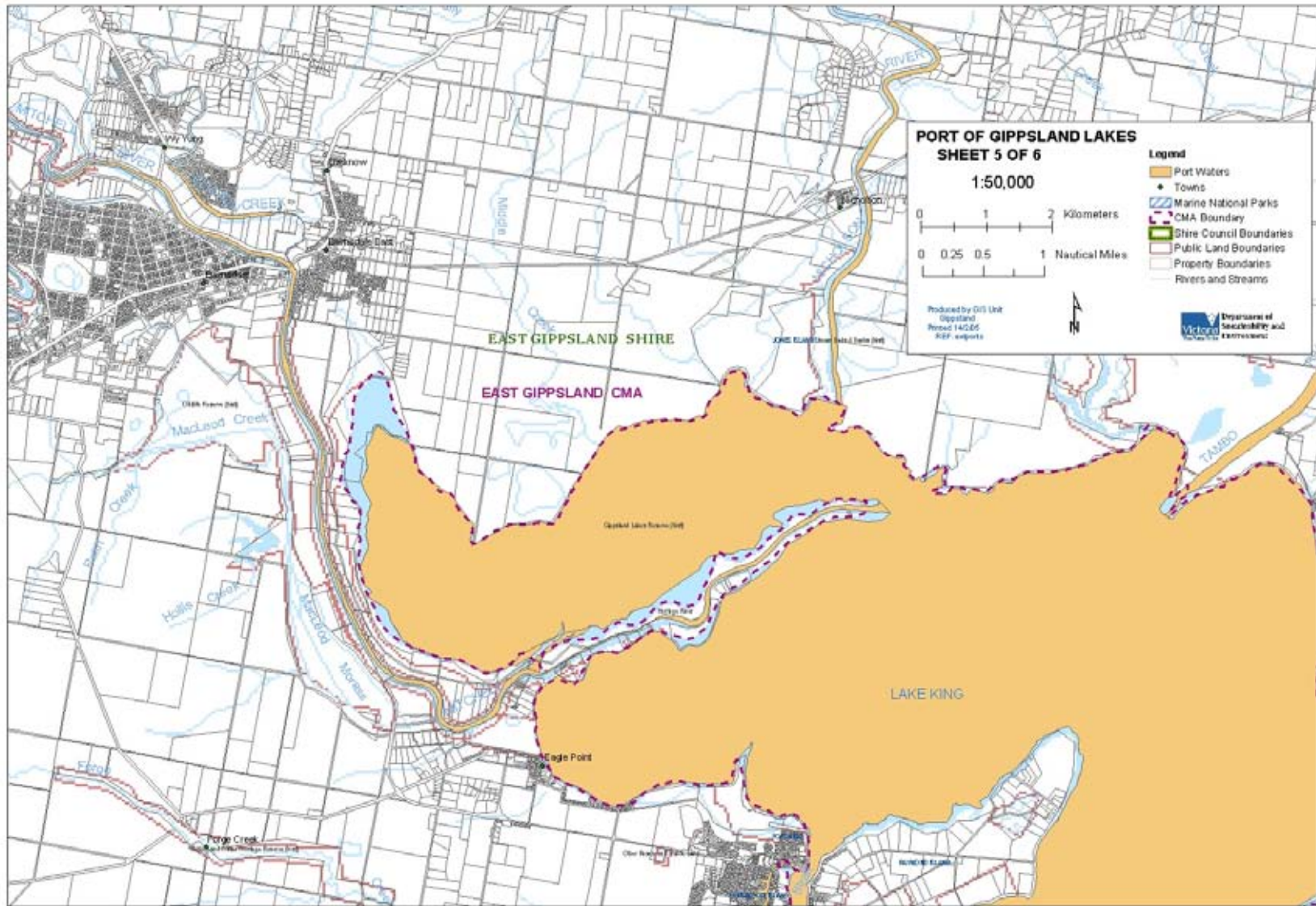
0 1 2 Kilometers
 0 0.25 0.5 1 Nautical Miles

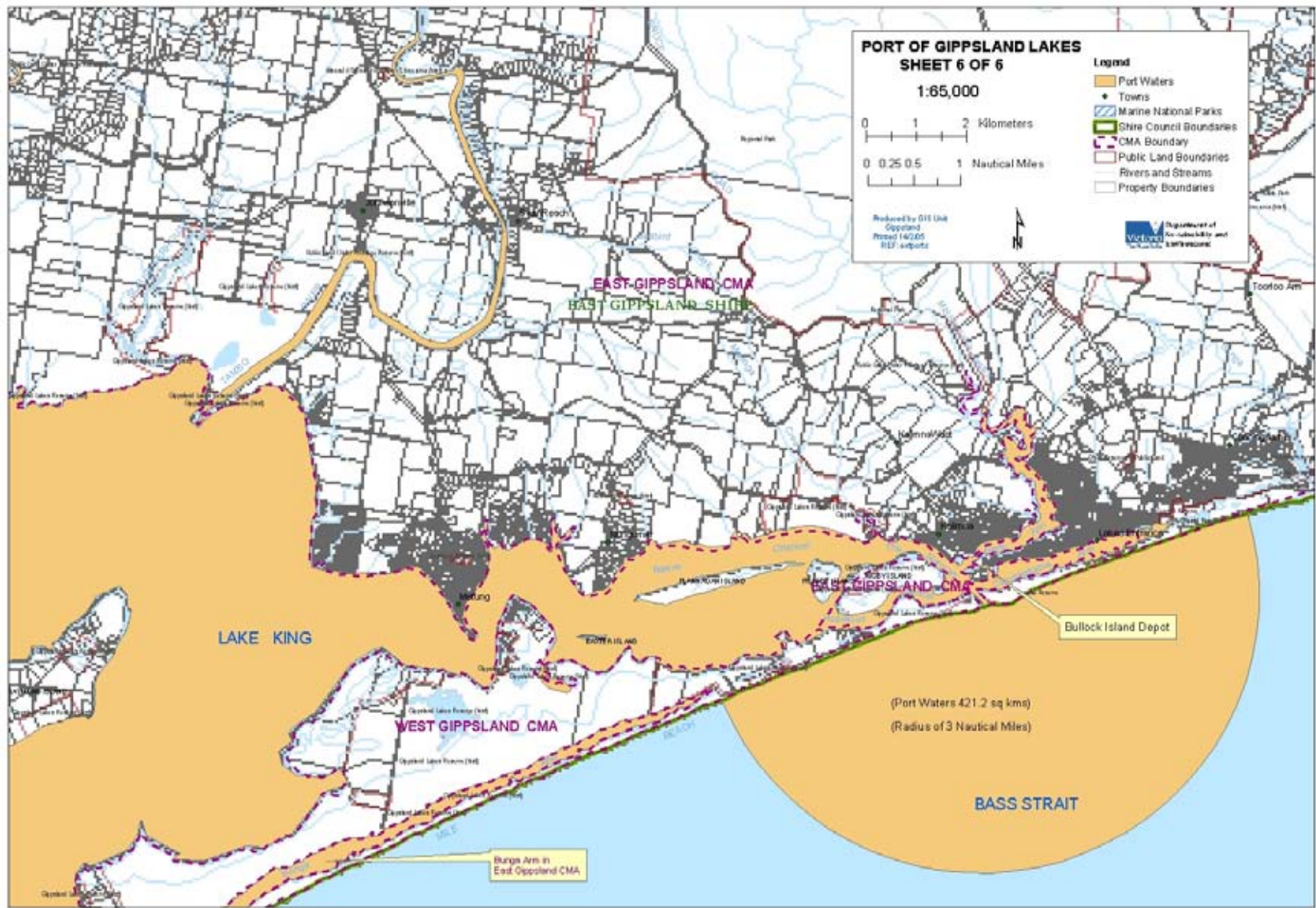
Produced by GIS Unit
 Gippsland
 Revised 14.05
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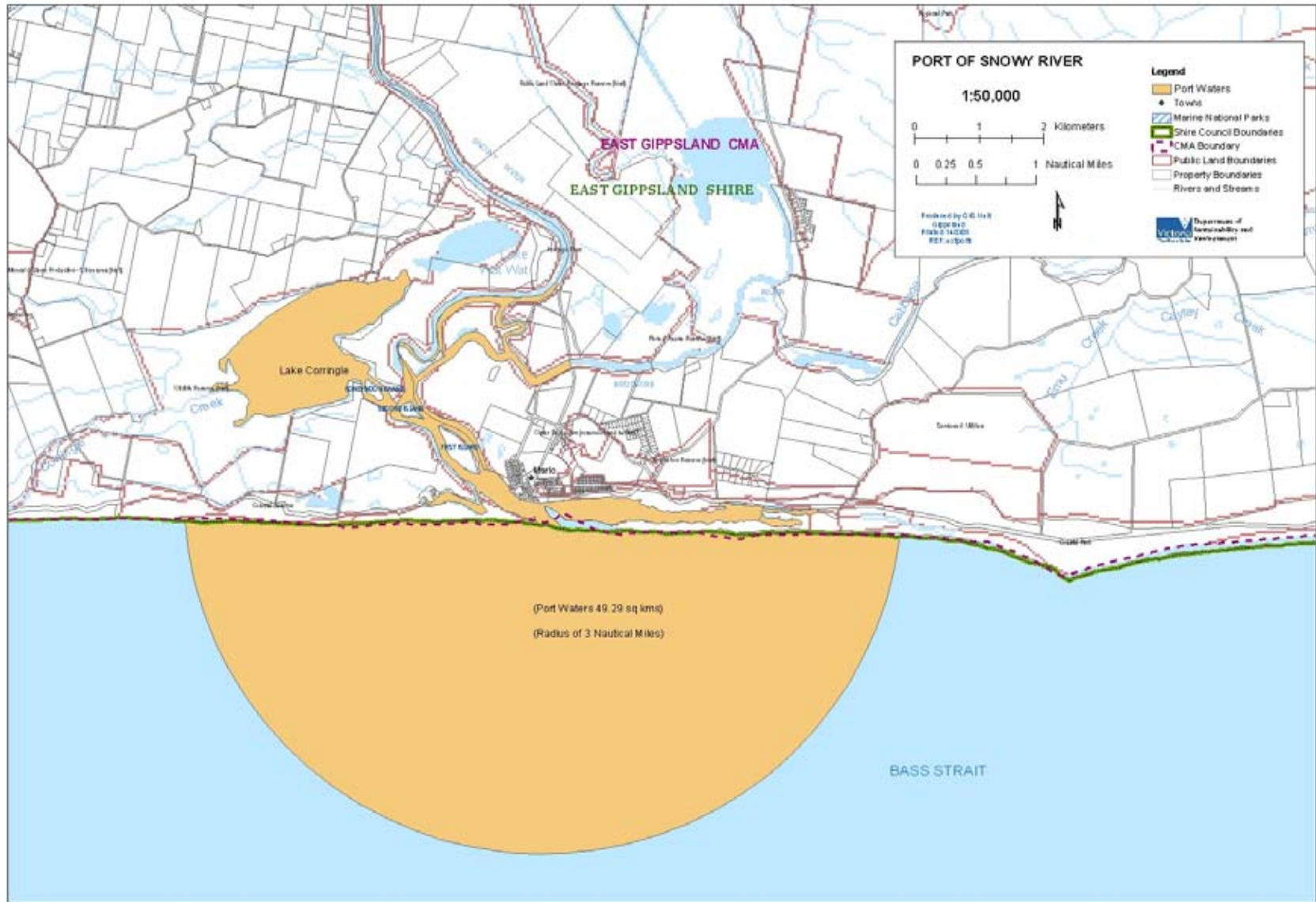
Legend

- Port Waters
- Towns
- Marine National Parks
- CMA Boundary
- Public Land Boundaries
- Shire Council Boundaries
- Property Boundaries
- Rivers and Streams

Department of
 Victoria
 Infrastructure and
 Planning

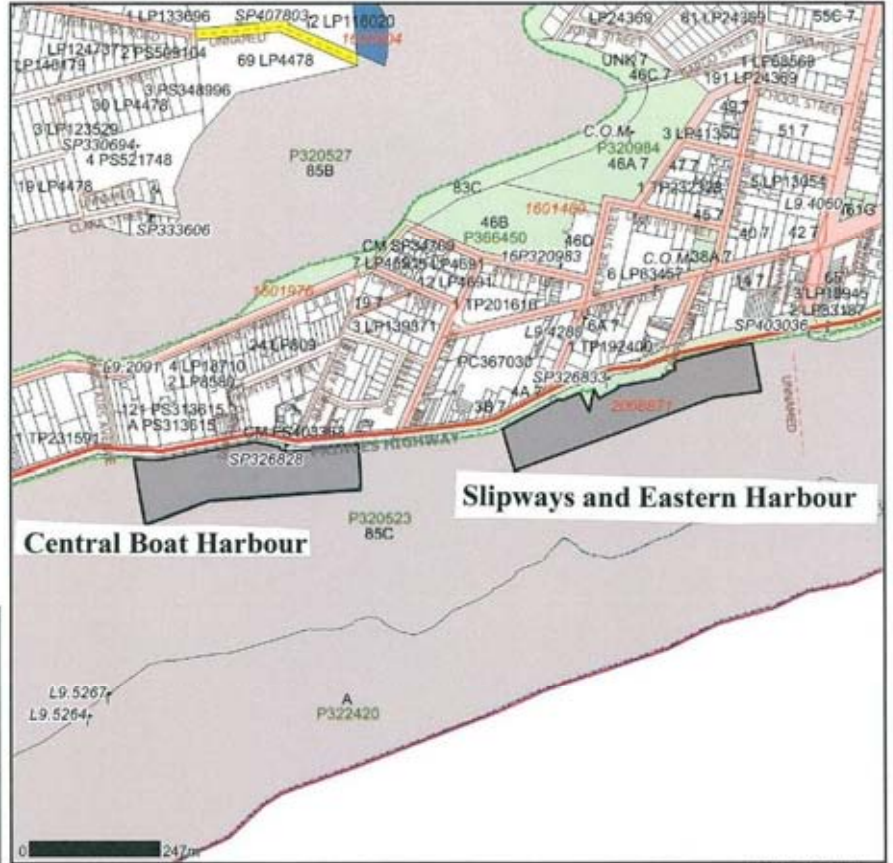






Reserve 2008871

as at Tue Jul 05 15:51:03 EST 2005



Reserve
 Tenure Type:
 Parish:
 Township:
 Area:
 Purpose:
 Local Name:
 Main Parcel:

RESERVE (COFM - OTHER) GAZETTED
 COLQUHOUN (2412)
 5.0000 Ha
 PUBLIC PURPOSE (PORTS)
 GIPPSLAND PORTS LAKES ENTRANCE
 P320523
 85C

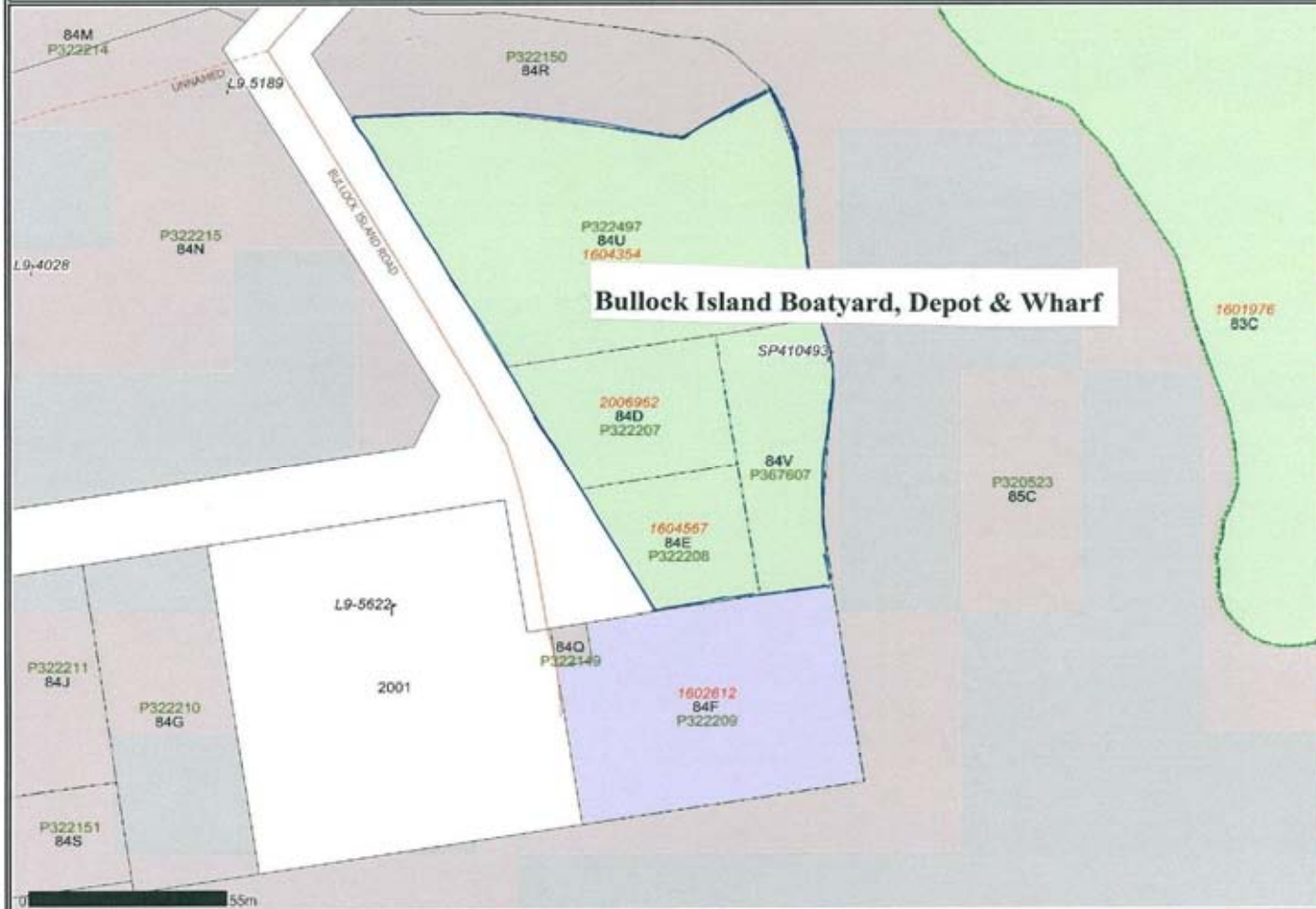
Description
 Crown Allotment:
 Map Reference:

Legend

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Crown Land Management
 GIPPSLAND Region
 Department of Sustainability and Environment
 Wesley House, 7 Service Street
 Bairnsdale 3875
 03 5152 0400





Legend

- CLM Plan Settings
- Applications
- Boundary and Range Lines
- Temporary Nature Rights
- Parish Boundaries
- Township Boundaries
- CLM Boundaries
- Roads
- Fireway
- Highway
- Artificial
- Controlled
- Local
- 2003 Track
- 4WD Track
- Unimproved
- Working Track
- Railways
- Railway
- Water_pond
- Water_rill
- Water_swamp
- Marshalling_pond
- Water_recess
- Waterway
- Water_flow
- Water_flow
- Water_flow
- Water_flow
- Water_flow
- Pipe
- Water Supply Intakes
- Pipe Intakes
- Parish
- Reserve
- Reserve - Disputed Management
- Reserve - Direct Management
- Tenure
- Shoring Licence
- Shoreland Licence
- Water Franchise Licence
- Water Supply Licence
- Pipe Licence
- License
- Shoring Licence
- Other Permits
- Crown or Traded Land
- Government Road
- State Status Government Road
- Government Road



Map Server: nremap:8080
Map Service: cmanager1_3

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Generated at <http://nremap:8080/MapShare.LAN/>

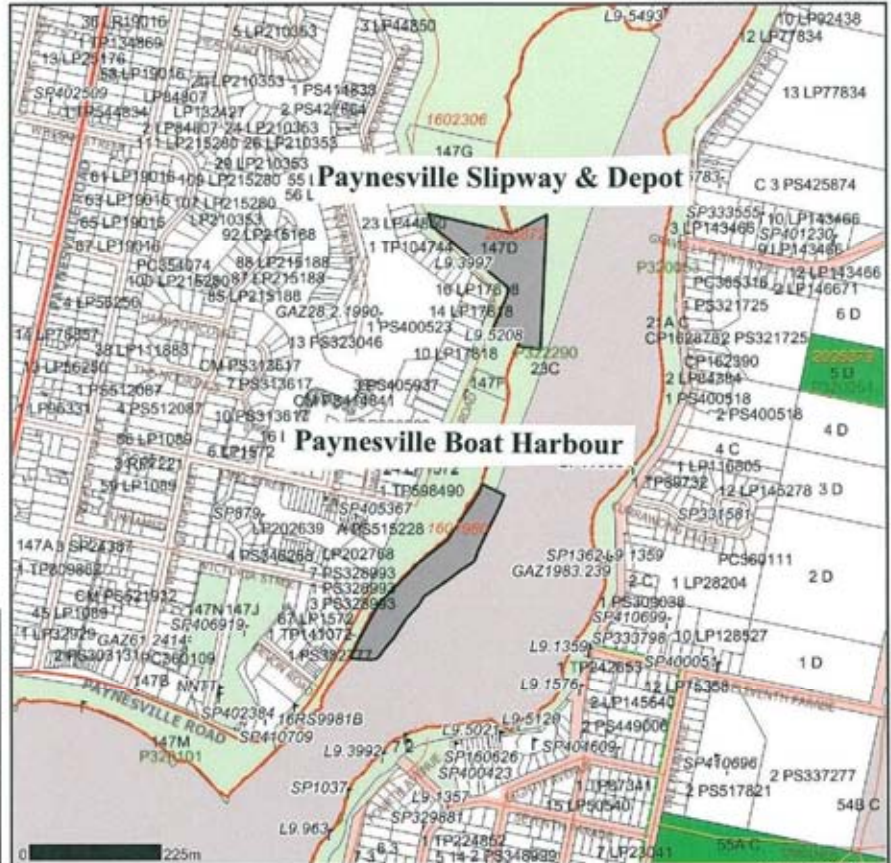
Produced on Tue Jul 05 15:55:18 EST 2005

Map Scale 1:1,577
NOT FOR NAVIGATION



Reserve 2008872

as at Tue Jul 05 15:52:38 EST 2005



Locality Map



Scale 1:10,000

Reserve
 Tenure Type:
 Parish:
 Township:
 Area:
 Purpose:
 Local Name:
 Main Parcel:

RESERVE (COFM - OTHER) GAZETTED
 BAIRNSDALE (2042)
 0.2302 Ha
 PUBLIC PURPOSES (PORTS DEPOT)
 GIPPSLAND PORTS PAYNESVILLE SLIPYARD
 P322687

Description
 Crown Allotment:
 Map Reference:

147D

Legend

Selected Feature			
CLM Plan Notings	Local	Pipe	Crown Parcels
Apleries	2WD Track	Water Supply Licence	Crown or Vested Land
Boundary and Range Lines	4WD Track	Pipe Licence	Government Roads
Temporary Apriary Rights	Unknown	Tract	Reserve
Parish Boundaries	Railway	Reserves - Delegated Management	Dual Status Government Road
Township Boundaries	bridge_rail	Reserves - Direct Management	Government Road
LGA Boundaries	tunnel_rail	Tenure	
Roads	rail_sidling	Grazing Licences	
Freeway	marshalling_yard_rail	Unused Road Licence	
Highway	rail_upgrade	Water Frontage Licence	
Arterial	rail	Water Supply Licence	
Collector (cont)	rail_disused	Pipe Licence	
	rail_light	Leases	
	rail_trail	General Licence	
	tram_stemmed		

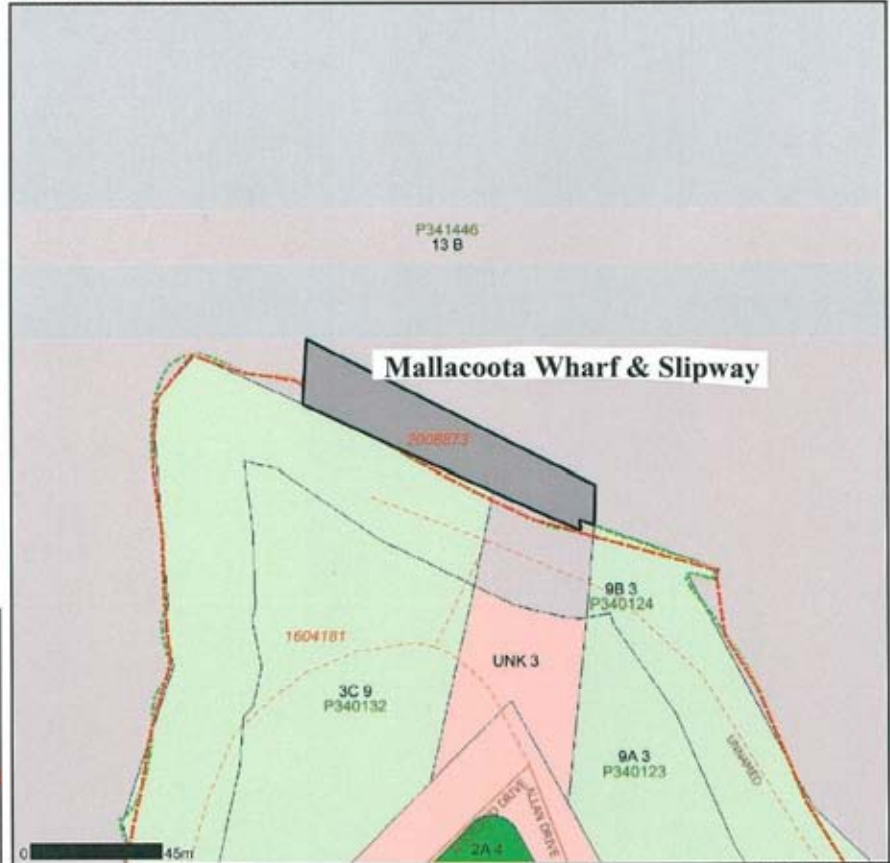
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Crown Land Management
 GIPPSLAND Region
 Department of Sustainability and Environment
 Wesley House, 7 Service Street
 Bairnsdale 3875
 03 5152 0400

Reserve 2008873

as at Tue Jul 05 15:53:45 EST 2005



Locality Map



Scale 1:2,000

Reserve
 Tenure Type:
 Parish:
 Township:
 Area:
 Purpose:
 Local Name:
 Main Parcel:

RESERVE (COFM - OTHER) GAZETTED
 WAU WAUKA WEST (3780)
 0.1500 Ha
 PUBLIC PURPOSES (MALLACOOTA WHARF GIPPSLAND PORTS)
 MALLACOOTA WHARF (GIPPSLAND PORTS)
 P341446

Description
 Crown Allotment:
 Map Reference:

13

Legend

Selected Feature			
CLM Plan Notings	Local	Pipe	Crown Parcels
Aplines	200 Track	Water Supply Licence	Crown or Waived land
Boundary and Range Licences	400 Track	Pipe Licence	Government Road
Temporary Agency Rights	Unknown	Parcel	Reserve
Parish Boundaries	Walking Track	Reserve - Delegated Management	Reserve - Direct Management
Township Boundaries	Railways	Tenure	Grazing Licence
LGA Boundaries	bridge_rail	Unsealed Road Licence	Water Frontage Licence
Roads	tunnel_rail	Water Supply Licence	Pipe Licence
Freeway	rail_sidng	Lease	General Licence
Highway	marshalling_yard_rail		
Arterial	rail_upgrade		
Collector (cont)	railway		
	rail_disused		
	rail_disman-td		
	rail_sight		
	rail_trest		
	stop_dismant-ld		

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Crown Land Management
 GIPPSLAND Region
 Department of Sustainability and Environment
 Wesley House, 7 Service Street
 Baimsdale 3875
 03 5152 0400

PORT SAFETY MANAGEMENT PLAN

**CERTIFICATE OF COMPLIANCE WITH PART 6A OF THE
PORT SERVICES ACT 1995**

PORT: Gippsland Lakes

PORT MANAGER: Gippsland Ports Committee of Management

CERTIFIED BY: Paul Fridell

In accordance with Section 91E of the *Port Services Act 1995* (the Act), I hereby certify that the port manager nominated above has prepared a Safety Management Plan for the port or the part of the port, also nominated above, for which it is the responsible port manager under the Act, that:

1. Adequately provides for the matters required by s.91D of the *Port Services Act 1995*; and
2. Has been prepared in accordance with Ministerial Guidelines made under s.91G of the *Port Services Act 1995*.

Certifier's Signature:



Date: 27/07/05

PORT ENVIRONMENT MANAGEMENT PLAN

**CERTIFICATE OF COMPLIANCE WITH PART 6A OF THE
PORT SERVICES ACT 1995**

PORT: Gippsland Lakes

PORT MANAGER: Gippsland Ports Committee of Management

CERTIFIED BY: Paul Fridell

In accordance with Section 91E of the *Port Services Act 1995* (the Act), I hereby certify that the port manager nominated above has prepared an Environment Management Plan for the port or the part of the port, also nominated above, for which it is the responsible port manager under the Act, that:

1. Adequately provides for the matters required by s.91D of the *Port Services Act 1995*; and
2. Has been prepared in accordance with Ministerial Guidelines made under s.91G of the *Port Services Act 1995*.

Certifier's Signature:



Date: 27/07/05

PORT SAFETY MANAGEMENT PLAN

**CERTIFICATE OF COMPLIANCE WITH PART 6A OF THE
PORT SERVICES ACT 1995**

PORT: Snowy River

PORT MANAGER: Gippsland Ports Committee of Management

CERTIFIED BY: Paul Fridell

In accordance with Section 91E of the *Port Services Act 1995* (the Act), I hereby certify that the port manager nominated above has prepared a Safety Management Plan for the port or the part of the port, also nominated above, for which it is the responsible port manager under the Act, that:

1. Adequately provides for the matters required by s.91D of the *Port Services Act 1995*; and
2. Has been prepared in accordance with Ministerial Guidelines made under s.91G of the *Port Services Act 1995*.

Certifier's Signature:



Date: 27/07/05

PORT ENVIRONMENT MANAGEMENT PLAN

**CERTIFICATE OF COMPLIANCE WITH PART 6A OF THE
PORT SERVICES ACT 1995**


PORT: Snowy River

PORT MANAGER: Gippsland Ports Committee of Management

CERTIFIED BY: Paul Fridell

In accordance with Section 91E of the *Port Services Act 1995* (the Act), I hereby certify that the port manager nominated above has prepared an Environment Management Plan for the port or the part of the port, also nominated above, for which it is the responsible port manager under the Act, that:

1. Adequately provides for the matters required by s.91D of the *Port Services Act 1995*; and
2. Has been prepared in accordance with Ministerial Guidelines made under s.91G of the *Port Services Act 1995*.

Certifier's Signature: 

Date: 27/07/05

PORT SAFETY MANAGEMENT PLAN

**CERTIFICATE OF COMPLIANCE WITH PART 6A OF THE
PORT SERVICES ACT 1995**

PORT: Mallacoota

PORT MANAGER: Gippsland Ports Committee of Management

CERTIFIED BY: Paul Fridell

In accordance with Section 91E of the *Port Services Act 1995* (the Act), I hereby certify that the port manager nominated above has prepared a Safety Management Plan for the port or the part of the port, also nominated above, for which it is the responsible port manager under the Act, that:

1. Adequately provides for the matters required by s.91D of the *Port Services Act 1995*; and
2. Has been prepared in accordance with Ministerial Guidelines made under s.91G of the *Port Services Act 1995*.

Certifier's Signature:



Date: 27/07/05

PORT ENVIRONMENT MANAGEMENT PLAN

**CERTIFICATE OF COMPLIANCE WITH PART 6A OF THE
PORT SERVICES ACT 1995**

PORT: Mallacoota

PORT MANAGER: Gippsland Ports Committee of Management

CERTIFIED BY: Paul Fridell

In accordance with Section 91E of the *Port Services Act 1995* (the Act), I hereby certify that the port manager nominated above has prepared an Environment Management Plan for the port or the part of the port, also nominated above, for which it is the responsible port manager under the Act, that:

1. Adequately provides for the matters required by s.91D of the *Port Services Act 1995*; and
2. Has been prepared in accordance with Ministerial Guidelines made under s.91G of the *Port Services Act 1995*.

Certifier's Signature:



Date: 27/07/05

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