

# Assessment form

Marine park management

## Permits for (State only) marine parks

### CLASS ASSESSMENT

Navigation of a managed vessel (hovercraft) in Great Sandy Marine Park  
Version 1, January 2014 – *Marine Parks (Great Sandy) Zoning Plan 2006*

Endorsed by: Jamie Seeleither Date: AUG 2016

#### Nature and extent of proposal

This class assessment covers all zones of the Great Sandy Marine Park for:

1) Navigation of a managed vessel - hovercraft.

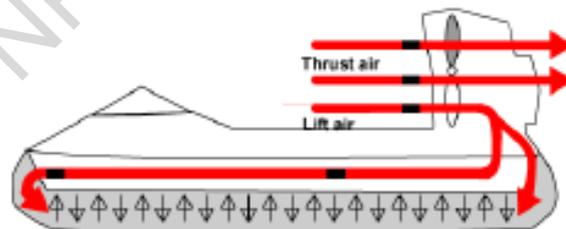
For the purpose of this assessment, navigation of a hovercraft is driving the hovercraft in tidal land and tidal waters of the Great Sandy Marine Park. Navigation may be for a commercial purpose e.g. a scenic tour or boat cruise or for a recreational purpose.

2) Vessel charter involving the navigation of a managed vessel - hovercraft.

**This class assessment does not include:**

- The conduct of activities in addition to the navigation of the hovercraft that also require permission e.g. diving or fishing associated with a tourism program, research, collecting, media. A class assessment or standard long assessment must be completed.
- Navigation of a hovercraft for the purpose of conducting motorised water sports e.g. hovercraft rides with intentional spins and freestyling.
- Use of a hovercraft for the purpose of conducting commercial whale watching.
- The installation and/or operation of a facility to facilitate navigation of the managed vessel.
- Another purpose e.g. organised events involving hovercraft

#### How Hovercraft Work



Hovercraft are vehicles designed to be supported by a cushion of air. They are propelled by two streams of air from a large fan. Air from the fan directed out the back gives you forward thrust and air from the fan directed downwards, becomes contained within the flexible skirt to give lift. The hovercraft rides approximately 25cm above the surface of the water on the cushion of air. All hovercraft have positive flotation and will float when sitting stationary, even when the skirt is deflated. Small recreational craft generally have one fan and one or two 2 or 4 stroke engine. A system of rudders behind the fan control the direction of the craft and body weight is also used to control direction. The rubber skirt consists of multiple segments to make replacing damaged skirts cheaper and easier. Operation of a hovercraft requires skill. Large open spaces are often necessary for amateur operators to practice controlling their direction and manoeuvring. Hovercraft do not have any underwater appendages, i.e. no propeller or rudder, and because they have no displacement they cause virtually no wash. Drag rails and a drag flap may be fitted on the hull and skirt to protect them from damage and abrasion from contacting the substrate. Because hovercraft travel on the surface rather than in the water

hovercraft specialise in accessing areas otherwise inaccessible to boats, such as on land. All exhaust is directed into the air environment.

## Definitions, legislative provisions and interpretations

### **Marine Parks Act 2004**

**Aircraft** does not include a hovercraft.

**Boat** includes a ship, submersible boat, raft or pontoon but does not include a hovercraft or personal water craft.

**Vessel** means a barge, boat, ferry, hovercraft, personal water craft, water taxi or other thing capable of carrying people or goods through water, but does not include an aircraft.

### **Marine Parks (Great Sandy) Zoning Plan 2006**

**Managed vessel** means any of the following—

- (a) a hovercraft;
- (b) a wing in ground effect craft, within the meaning of the *Transport Operations (Marine Safety) Regulation 2004*;
- (c) a hydrofoil;

A **Tourism Program** means an activity whether consisting of a single act or a series of acts, that —

- (a) is carried out in the course of carrying on a business; and
- (b) is, or includes, the provision of transport, accommodation or services for tourists or for persons who include tourists.

**Navigate** includes moor, or anchor, in the course of navigation. For the purpose of this assessment, navigate means driving the craft.

**Tourist** means a person who is in the marine park mainly for recreation, including, for example, recreational fishing or collecting.

**Vessel charter** means an activity, whether consisting of a single act or a series of acts, involving a vessel that

- (a) is available for charter or hire; and
- (b) is being used in the course of carrying on a business that is, or includes, the provision of accommodation, transport or services for a purpose other than an educational program or tourism program; and
- (c) travels in or into the marine park; and
- (d) is not merely transiting through the park by the most direct and reasonable route to a place outside the park.

## Other legislation

### **Environmental Protection Act 1994 (EPA Act)**

#### **S440 Offence of causing environmental nuisance**

- (1) A person must not wilfully and unlawfully cause an environmental nuisance.
- (2) A person must not unlawfully cause an environmental nuisance.

**Environmental nuisance** is unreasonable interference or likely interference with an environmental value caused by—

- (a) aerosols, fumes, light, noise, odour, particles or smoke; or
- (b) an unhealthy, offensive or unsightly condition because of contamination; or
- (c) another way prescribed by regulation.

Unreasonable interference is not defined in the EPA Act or Regs. The Macquarie dictionary defines 'unreasonable' as not guided by reason or good sense, not based on or in accordance with reason or sound judgement.

#### **S440ZA Operating power boat engine at premises**

- (1) A person must not operate, or permit the operation of, a power boat engine at premises in a way that makes audible noise—

- (a) on a business day or Saturday, before 7a.m. or after 7p.m; or
  - (b) on any other day, before 8a.m. or after 6.30p.m.
- (2) In this section—

*Operate*, a power boat engine, includes flushing the engine.

*Boat* means a boat, ship or other vessel of any size or kind, and includes a hovercraft.

**Environmental Protection (Noise) Policy 2008 (EPP)**

Schedule 1 of the EPP sets out the *Acoustic quality objective*, for an area or place i.e. the maximum level of noise that should be experienced in the acoustic environment of the area or place. For the marine park the objective is to be ‘the level of noise that preserves the amenity of the existing marine park’.

**Recreation Areas Management Act 2006**

**131 Unauthorised use of recreational craft**

A person must not use or operate a recreational craft in a recreation area unless the use or operation is authorised—(a) by the chief executive’s written approval; or(b) under a regulation.

**Recreational craft** means a hot-air balloon, hang-glider, hovercraft, parachute, paraglider, ultralight aircraft or other craft or device prescribed under a regulation.

Landing a recreational craft (s131) in a recreation area requires an authority regardless of the nature of the activity i.e. recreational or commercial.

**Transport Operations (Marine Safety) Regulation 2004**

**S90 Hovercraft**

- (1) A person who holds a licence to operate a commercial ship as its master is not appropriately licensed to operate a commercial ship that is a hovercraft unless—
  - (a) the person satisfies the general manager the person is competent to operate a hovercraft of the intended size in the intended area of operation; and
  - (b) the general manager amends the person’s licence to permit the operation of the hovercraft in the intended area of operation.
- (2) The general manager may require the person to give the general manager a practical demonstration of the person’s skills in operating a hovercraft.
- (3) If the general manager is satisfied the person is competent to operate a hovercraft, the general manager must amend the person’s licence accordingly.
- (4) The procedure for amending the licence is in part 6, division 4.
- (5) This section applies despite anything in sections 88 and 98.

A commercial hovercraft must also be registered as a commercial ship. Recreational hovercraft are also considered small boating craft for the purpose of registration.

Hovercraft do not require an Australian builders plate.

The *Transport Operations (Marine Pollution) Act 1995* outlines restrictions on discharging sewage in Moreton Bay. Under these provisions commercial vessels are required to have facilities to contain and treat sewage.

**Other approvals/permits/licences required**

<p>QPWS permit (e.g. CAP, Scientific, Educational)</p>	<ul style="list-style-type: none"> <li>• Commercial Tour Operator Permit – if going ashore to a Protected Area managed under the <i>Nature Conservation Act 1992</i>.</li> <li>• Commercial Activity Permit – if using Recreation Areas managed under the <i>Recreation Areas Management Act 2006</i> for a commercial purpose.</li> <li>• Recreational craft approval – if using a recreational craft within a RAM area</li> </ul>
<p>Other agency permits or approvals (e.g. DPIF, QT)</p>	<ul style="list-style-type: none"> <li>• All commercial vessel operations are required to notify the Regional Harbour Master before the commencement of operation.</li> <li>• Use of Council foreshore for a commercial purpose may require approval from the Local Council</li> <li>• MSQ – hovercraft licence endorsement for commercial operators</li> </ul>

## Site information

### Ramsar listed

The Great Sandy Strait within the Great Sandy Marine Park is listed as a wetland of international importance under the Ramsar Convention (Appendix 1, Map 1). Ecological characteristics for which the Great Sandy Strait was declared a Ramsar Site include the extensive intertidal areas of seagrass, mangroves and salt marsh which support species of marine invertebrates, which include:

- 18 of the 24 species of shorebirds under the JAMBA, ROKAMBA and CAMBA agreements;
- nine species of mangrove and five species of seagrass;
- 27 species of molluscs belonging to 17 families;
- Four species of sea turtles – the green, loggerhead, hawksbill and flatback, plus two further occasional visitors leatherback and Pacific ridley;
- seagrass beds provide habitat and feeding grounds for a significant population of dugong.
- three species of dolphins are found – Bottlenose dolphin, Common dolphin and Indo-Pacific humpback dolphins.

As a party to the Ramsar Convention the Department of National Parks, Recreation, Sport and Racing is responsible for ensuring that activities do not alter the Ecological character for which Great Sandy Strait was identified as a Ramsar Wetland

### Adjacent to a protected area

There are a number of Protected Areas within or adjacent to the Great Sandy Marine Park (Appendix 1, map 2). These include:

#### National Parks

- Duck Island (*no management plan*)
- Little Woody Island (*no management plan*)
- Big Woody Island (*no management plan*)
- Fraser Island (*has a management plan*)
- Southern Cooloola (*has a management plan*)

#### Conservation Parks

- Kauri Creek
- Double Island Point – 4 ha
- Sandy Cape – 3 ha
- Mon Repos - 45 ha (*has a management plan*)
- Great Sandy - 658 ha

Fraser Island and Inskip Peninsula are also managed under the *Recreation Areas Management Act* (2006) as recreation areas.

### High Ecological Value area

The Australian and New Zealand Environment Conservation Council (ANZECC 2000) and the Queensland Water Quality Guidelines (QWQG 2006) identify three levels of aquatic ecosystem condition. High Ecological Value Waterways (HEV) areas are “unmodified or other highly valued systems that are to be afforded a high degree of protection by ensuring that there is no reduction in the existing water quality”

There are a number of HEV areas within the Great Sandy Marine Park (Schedule 1 of EPP Water (including plans) - EHP). Refer to Appendix 1 – Maps 5a-c.

### Recreation area

Queensland has seven recreation areas established under the *Recreation Areas Management Act 2006*. In recreation areas, nature-based recreation is encouraged but carefully planned and managed to protect these places for conservation. Recreation areas in the Great Sandy Marine Park include Fraser Island, Inskip Peninsula and part of Cooloola. A commercial activity permit is required for tourism operators who wish to access RAM areas.

Recreation areas are generally managed by the Queensland Parks and Wildlife Service. Recreation areas are partly managed on a user-pays basis. Camping fees and vehicle permit fees are used to help manage the recreation areas.

## Site Values

**a) Environment** – comment on e.g. substrate, dominant vegetation, tidal regime, faunal use, significance.

Great Sandy Marine Park is characterised by many habitat types including mangroves, saltmarsh, saltpans, seagrass beds, coral communities, rocky reefs, ocean beaches and mud flats.

The conservation of these habitats through the *Marine Parks (Great Sandy) Zoning Plan 2006* is important for the survival of the marine species that inhabit them, for example:

- the region is one of only four areas along the eastern Australian coast recognised as a Wetland of International Significance (under the Ramsar Convention), for migratory shore birds (including endangered species). Australia also has agreements with the Governments of Japan, China and the Republic of Korea for the protection of migratory birds and their important habitat areas;
- seagrass beds in the marine park support a population of dugong that is the southern most distribution for dugong along the eastern coastline of Australia and the largest population of dugong living adjacent to a major human population;
- six of the seven species of marine turtles worldwide can be found in Great Sandy Marine Park. Olive ridley, leatherback and flatback turtles occur rarely and hawksbill turtles occur more frequently. In addition, the Bay has the largest concentration of resident feeding green turtles in Australia (the population is estimated to be in the thousands) and supports the largest loggerhead turtle feeding population in eastern Australia. All species of turtle are listed as either endangered or vulnerable under the *Nature Conservation (Wildlife) Regulation 1994*.
- grey nurse sharks (*Carcharias taurus*) aggregate at Wolf Rock which is critical habitat for these species within Great Sandy Marine Park including those sites declared as grey nurse shark areas. Grey nurse sharks are listed as endangered under the *Nature Conservation (Wildlife) Regulation 1994*.
- there are at least 46 species of temperate and tropical Scleractinian coral in the marine park. The Great Sandy coral communities provide critical habitat for a range of animals including fish, crustaceans, molluscs and worms. Major habitats include offshore reefs (e.g. 6 mile, and the Sponge Gardens), inshore fringing reefs (e.g. adjacent Woongarra Coast, Point Vernon and Torquay and artificial reefs (e.g. Roy Rufus).
- Several species of dolphins are found in Great Sandy Marine Park including the bottlenose (*Tursiops truncatus* and *Tursiops aduncus*) and Indo-Pacific humpback dolphins (*Sousa chinensis*). Several species of whales are also seen in park at different times of the year, the most noteworthy (for tourism purposes) being the humpback whale. Under the *Nature Conservation Act 1992* and the *Nature Conservation (Wildlife Management) Regulation 2006* all cetaceans indigenous to Australia are protected. Whales and dolphins may be disturbed by the presence of people, whether they are on the land, in a boat or aircraft as well as activities such as swimming and diving, feeding, touching, and making noise. The potential problems from disturbance may include disruption of behaviour, displacement from important habitat areas, and reduced breeding success.

**b) Uses** – comment on current use and uses of adjoining areas.

Great Sandy Marine Park offers opportunities for a wide range of water-based activities including recreational fishing, sailing, boating, water skiing, parasailing, jet skiing, sail boarding, scuba diving, snorkelling, bird watching and marine research. The bay is easily accessible to the Hervey Bay and surrounding areas population and has the features necessary for such activities including sheltered waters, diversity of environments and infrastructure such as boat ramps, car parking, marinas and marine services.

The operation of hovercraft for recreational boating in comparison to displacement hull vessels or personal watercraft (PWC) is not common. Hovercraft have a relatively flat hull therefore they have limited ability to operate in open water or sea swell. Therefore the majority of hovercraft navigation in Hervey Bay and the Great Sandy Strait is in smooth and partially smooth waters, particularly tidal tributaries and shallow intertidal areas. Recreational hovercraft are registered as small craft and the only way to distinguish hovercraft from other vessels in records held by QLD Transport is if the description includes hovercraft or a recognisable hovercraft model name. The Qld hovercraft club also has a code of conduct for operating hovercraft which members abide by (see Appendix 3). This code also applies to visiting hovercraft from affiliated interstate clubs.

The *Marine Parks (Great Sandy) Zoning Plan 2006* identifies different zones within the marine park, states the objectives for each zone and identifies the level of protection for the zone. The zoning plan lists the activities

which can occur as of right and those that have entry and use provisions and those for which a permit is required.

With regards to a request to operating a hovercraft within the marine park, a permit is required to operate for both recreational and commercial use. Hovercrafts are considered a managed vessel under the zoning plan; this is to ensure that this activity is conducted in a manner that this compatible with other activities and the environment. Great Sandy Marine Park permits are at no cost and can be issued for up to three years. Additional approvals needs to be sought by Fraser Coast Regional Council and MSQ (Harbour Master).

Additionally, the **Great Sandy Region Management Plan (The Plan)** states: ***hovercraft will not be permitted to operate in Great Sandy Strait, Tin Can Bay and the Noosa River other than to transfer passengers on approved transit routes.*** As such, this type of use/vessel will not be permitted within those locations as the Great Sandy Strait is listed as a wetland of international importance, which provides for shallow seagrass beds, mangrove forests, salt marshes and saltpans. These areas are also important feeding grounds for shorebirds, dugong, turtles, dolphins and fish.

**c) Cultural and heritage** – include e.g. traditional Aboriginal use, scenic or other amenity value.

Cultural historic heritage values within the marine park include the remains of shipwrecks, old oyster leases, log dumps and jetties. Sites or site complexes that are potentially significant but whose specific location, integrity and significance in the marine park is not clear include World War II RAAF plane wrecks, dugong rendering and butchering stations, Wathumba shark factory and oystering camps.

The Queensland Heritage Register (established under the *Queensland Heritage Act 1992*) is a list of places, natural formations, buildings and sites of cultural heritage significance in and to Queensland. It includes entries for Woody Island lighthouses and ancillary building site, Double Island Point Lightstation and Sandy Cape Lighthouse. Whilst not within the boundary of the marine park these sites have a natural affiliation with the marine park and add to the amenity of the marine park.

A number of sites and places of Aboriginal cultural and spiritual significance exist in the cultural landscape of the Great Sandy region. These include sacred animals, stone-walled fish traps, including one of the largest fish trap complexes recorded in Australia, shell middens, grinding grooves, waterways of significance in the practise of culture and traditional food sources. If managed properly it is unlikely that any of these sites would be affected by the proposed activities.

Animals that live in Great Sandy of significance to Traditional Owners for hunting purposes include dugong and turtles. This permit does not cover a tourist activity that involves marine mammals, turtles or sharks so traditional hunting should not be affected by this proposal.

## Public notice

If the Chief Executive considers the grant of a permit may have a significant impact on the use and non-use values of a marine park or if it restricts reasonable use or enjoyment of a part of the marine park by persons other than the applicant for the permit, the Chief Executive may request the applicant to give public notice of the application.

The vast majority of activities assessed under this class assessment do not require public notification and if a public notice is deemed necessary the use of the class assessment may not be appropriate. However, if sufficient supporting information is obtained to demonstrate sufficient public support for the proposed activity then the use of class assessment may be appropriate. The assessing officer should discuss options with their supervisor prior to proceeding with the class assessment if they consider that a public notice may be required.

**use and non-use values**, of a marine park, include values derived from each of the following—

- (a) taking, using, visiting or viewing the park's natural or cultural resources;
- (b) the ecological functions and processes of the park's environment;
- (c) the park's potential future use or benefit, including, for example, its use for biodiscovery;
- (d) the mere existence of the park's natural and cultural resources;
- (e) the use or non-use of the park's natural and cultural resources by future generations.

## Assessment of application

### Permit Assessment Criteria

1. In assessing applications for permission, in accordance with section 10 of the *Marine Parks Regulation 2006*, the chief executive must have regard to the matters listed below.

*Proposed conduct* is the conduct or activity proposed to be permitted under the permission.

- (a) **The potential impact on the environment and the cultural resources of the marine park or part.**  
Q. *What impact is the proposed conduct likely to have on the environment and cultural resources of the marine park? Consideration to be given to the nature, scale, extent, location of the proposed activity and the cultural values of the area where the activity is to be conducted.*

In many respects hovercraft may be considered more environmentally friendly than conventionally powered vessels as they produce less pollution, have no propellers or protruding underwater appendages that can cause injuries to marine wildlife. However hovercraft are unlike any other craft and their capability to operate on tidal land warrants different concerns for the environment, particularly with respect to accessing and damaging sensitive habitats and disturbing wildlife.

Seagrasses are marine flowering plants adapted to living in the soft sediments of estuarine environments. Seagrasses are a productive and ecologically significant feature of the estuarine environment, supporting many coastal fisheries. Studies have also shown the importance of seagrass as a food source to dugongs (*Dugong dugong*) and green turtles (*Chelonia mydas*) (Limpus and Limpus 2000, Lanyon 2003). Ten species of seagrass have been identified within the bioregion (EPA 2005, Duke et al.2003).

Hervey Bay is a large embayment (3,940 km<sup>2</sup>) situated on Queensland's southern coast. Extensive intertidal banks (2,307 km<sup>2</sup>) consisting of fine to medium grained sands fringe the landward component of the bay supporting extensive yet sparse seagrass meadows. The tidal range in this region is up to 4.1m. Seagrass meadows in Hervey Bay are one of the largest single areas of seagrass resources on the eastern Australian seaboard. Seagrasses are a major component of the Hervey Bay marine ecosystem and their contribution to the total primary carbon production is the basis for such regionally important dugong and turtle populations and productive fisheries. Six species of seagrass have been reported from Hervey Bay (*Halophila spinulosa*, *Halophila ovalis*, *Halophila decipiens*, *Zostera capricorni*, *Halodule uninervis* and *Ruppia maritima*).

Mangroves form extensive and diverse ecosystems with at least eight species occurring throughout the estuarine and inshore areas of the bioregion (Duke et al. 2003) and are internationally recognised through Ramsar in the Great Sandy region. These ecosystems provide important habitat and nursery area for juvenile fish, crabs and prawns. Green turtles have also been observed feeding on the fruit of the grey mangrove, (*Avicennia marina*) (Limpus and Limpus 2000).

#### Impacts to habitat

The properties that influence the impact of air cushioned vehicles on terrain surfaces include the cushion pressure, the air flow escaping under the skirt and the contact between the skirt and the terrain. Worst case impacts include compaction and erosion of sediments and uprooting vegetation.

As hovercraft don't operate as a displacement vessel, they have very little, if any wake, therefore minimising the potential for wash and erosion. Erosion however is possible from the pressurised air acting on dry sandy beaches. This is not likely to be noticeable in dynamic sandy environments where natural erosion and accretion is likely to move more sand than a hovercraft e.g. ocean beaches. However erosion prone foreshore areas may be negatively impacted by repetitive hovercraft use and be counterproductive to beach nourishment programs.

Hovercraft sit on a cushion of air contained in a rubber skirt. Air pressure being pushed down fills the skirt and exerts pressure on the surface of the water/substrate. The pressure acting on the substrate by a hovercraft is much lower than a vehicle or a person as the weight is evenly spread across a larger surface area and studies have shown that the air cushion pressure in itself has little effect on the substrate or vegetation (Brooks 2010, Fancy 1982).

However excess pressurised air that escapes can cause surface sediments and water to shift and remove dead, loose and shallow rooted vegetation. This may be problematic in areas where hovercraft are repetitively

used e.g. launching and retrieving locations. Accordingly access and egress from the marine park for both recreational and commercial operators should only be via formal locations e.g. boat ramps, to reduce erosion impacts at a particular location unless specifically assessed and approved (**Condition and Code of practice - 1**).

Movement of surface water is an action that normally occurs with each tide and on a much greater scale, therefore the ecosystem has evolved to tolerate such movements (I.L. Brooks 2010). Following a hovercraft pass I.L Brooks (2010) reported that 'the mud surface takes on a slightly 'brushed' appearance which persists for a few hours before the original appearance is regained'. During a field inspection for CVL871 John Olds noted *'there were some visible lines through the seagrass in the direction of the hovercraft's travel*. Such impacts are likely to be superficial and therefore only short term. Fancy 1982 found two operational characteristics which affect the degree of terrain degradation, being speed and number of passes. The degree of degradation appeared proportional to the number of passes and increased speed caused greater degradation. As the hovercraft skims on the surface water it may drag the skirt across the substrate depending on the air gap between the skirt and the substrate. Raised surface features also received the greatest impact. The combined effect of the air flow and skirt contact action can be more significant than the sum of the two effects individually (Fancy 1982).

Repetitive contact with the substrate is more likely to result in damage to the substrate, therefore repetitive passes of the same exposed mudflats and sandbanks should be minimised. The code of practice for the recreational sporting hovercraft club outlines hovercraft should avoid passing the same point repeatedly in the one day. A similar measure is outlined in the Code of Practice (**Code of practice - CONDITION.**) and operators must also avoid navigating on exposed mudflats and sandbanks (**Code of practice - CONDITION**).

Commercial hovercraft are likely to have a higher payload i.e. carrying more passengers and weight, and will need to use greater speed than a 2 person recreation craft to get onto and move across exposed mudflats and sandbanks and operate more frequently. Accordingly, the locations where commercial craft are authorised to operate on exposed banks will be assessed and condition on a case by case basis. **Condition.**

The air flow and skirt contact can also damage seagrass. Abele and Brown (1977) studied the effect of mid-sized hovercraft on wet and dry tundra near Alaska. It was found that surface damage was limited to detached vegetation with weak root systems with no other surface damage occurring. Similar impacts to Australian vegetation is expected i.e. shallow rooting species such as *Halophila ovalis* may be disturbed if driven over when exposed.

Seagrass in the bay is detached by currents, wind wave action and vessel damage on a regular basis with detached seagrass washing up in large piles along the high tide mark causing some concern for residents. Fancy (1982) reported that the contact between the vehicle skirt and the terrain caused progressive degradation with repeated traffic with a smaller air gap being responsible for greater degradation in both dry and wet vegetated areas. Trial passes over wet vegetation with some air gap resulted in a minor detachment of dry vegetation and wet vegetation being bent in the direction of travel. Trial passes with no air gap resulted in breaking stems and detachment of dry vegetation and general abrasion, matting of vegetation into the organic mat and removal of mosses.

During a field inspection for CVL871 John Olds noted *'we visually assessed the impact on exposed seagrass by placing a 50x50cm quadrant onto the seagrass and passing over it with the hovercraft. There appeared to be little impact although the quadrant was blown approx 50cm to one side. There were also two very obvious sets of mollusc eggs exposed in the seagrass by the hovercraft. It is difficult to say how much this craft impacts such marine habitat but it is certain that it has some impact and therefore particularly in Conservation and Protection Zones a precautionary approach would be most appropriate'*.

In addition to the potential to detach vegetation the pressurised air on the seagrass may displace epiphytic growth. Epiphytic growth on seagrass leaves and stems provides food for fish and invertebrates and contributes to the primary production of the marine ecosystem. The displacement of epiphytes from seagrass may affect grazing potential and primary productivity.

Evidence exists that hovercraft have the potential to damage marine plants and vegetation, however impacts from infrequent and irregular navigation over exposed seagrass beds, such is the nature of recreational hovercraft, is likely to be sustainable. Different craft will also have a different magnitude of impact. Recreational craft are generally smaller and less robust than craft used for a commercial purpose. Prohibiting navigation of hovercraft over exposed seagrass beds will exclude access to many intertidal sand banks and mudflats in Hervey Bay and the Great Sandy Strait. It will be difficult for hovercraft operators to know which banks and flats are void of marine plants and equally difficult for QPWS to enforce such conditions. Therefore it is proposed to

allow recreational hovercraft be allowed to traverse seagrass areas but should be encouraged to avoid navigating on exposed sandbanks and mudflats where marine plants are present. This measure is included in the **Code of Practice - CONDITION**.

The navigation of a hovercraft for a commercial purpose however is more likely to stick to a regular route resulting in repetitive and regular use of certain locations. Potential impacts are more likely to result in actual impacts and environmental degradation. Accordingly the navigation of hovercraft for a commercial purpose should not be authorised to traverse exposed sandbanks with marine plants and take the most direct route when accessing and egressing exposed mudflats and sandbanks in the marine park. **Condition**

The other common cause of damage to seagrass by vessels is from anchoring in seagrass areas. Due to the ability of hovercraft to go ashore hovercraft are more likely to come to rest on the beach as opposed to being secured by anchor in the water. In some cases where a shoreline is too steep for a hovercraft to get up the hovercraft may need to be anchored. The applicant will be provided with **advice** in relation to anchoring best practice to minimise damage to seagrass.

While mangroves pneumatophores are some what resilient to the effects of trampling and are likely to withstand the pressure of a hovercraft, hovercraft are not likely to be driven over such areas as the potential to damage the skirt is high.

#### Impacts to fauna

Sandbanks and mudflats can be very diverse habitats, supporting many invertebrate species critical to fisheries productivity and the ecology of the marine environment. The impact of hovercraft on the organisms that inhabit these habitats is not well studied. Benthic environments are sensitive to impacts from trampling and off road driving for example and permanent damage, such as voiding areas of fauna and flora, compaction or erosion can result from repetitive trampling and use of vehicles in coastal habitats.

Dr Thomas Schlacher of Sunshine Coast University has published many papers demonstrating that 4WD vehicles driven on coastal beaches reduce the abundance of ghost crabs, impair the burrowing performance of clams and reduce the number of species and density of macrobenthic assemblages. Despite much less downward pressure being exerted by hovercraft a similar impact may result from pressurized air escaping from the hovercraft skirt into more fluid intertidal habitats where burrows belonging to yabbies, crabs and worms for example are present.

Per square inch hovercraft exert very little pressure on the ground, therefore whilst large molluscs or surface dwelling worms may be touched by the crafts skirt, direct damage to epifauna is unlikely. However the hovercraft can expose epifauna by moving surface waters and sediment and may potentially force them from their burrows.

After the hovercraft traversed seagrass beds during the field inspection for CVL871 as mentioned above, Nicola Udy observed worms on the top of the substrate that were not there prior to the hovercraft passing. Greg Skilleter is of the opinion that it is more likely that the hovercraft made the worms more visible as the water washed over them. Greg has advised that there are very few surface dwelling worms and they are not rare or in small abundances. However Nicola is certain that the worms have been forced from their burrows as opposed to being uncovered. Greg Skilleter advised that there are very few polychaetes that live in permanent burrows in soft sediments and he is of the opinion that a hovercraft would not affect them at all.

An exhaustive literature search on the impact of hovercraft on intertidal invertebrates only found one paper by McGorty et al 1976. This paper concluded that there was no evidence to suggest that the hovercraft significantly reduced the density of invertebrates in the hovercraft flight path. Anecdotal evidence exists from studies in the United Kingdom and the Gold Coast Broadwater by Airlift hovercraft that the passage of hovercraft over inter-tidal areas caused no damage to invertebrates. Attempts to contact airlift hovercraft on the Gold Coast to discuss these findings were futile. As there are few studies that are conclusive about environmental impacts of hovercraft and anecdotal evidence is contradictory, precautionary measures are required to ensure that traversing of benthic habitats does not alter benthic communities and have ecological consequences over the long term.

Therefore recreational hovercraft should be encouraged to avoid traversing exposed sandbanks and mudflats, especially obvious productive areas e.g. areas with seagrass (**Code of practice – CONDITION**). While it will be difficult to identify such areas and the presence of values at a location is likely to change over time adopting this measure and additional measures in the code for example avoiding repetitive operation in the same location on any one day may assist to reduce impacts. The

navigation of commercial hovercraft on exposed banks will be assessed and conditioned to avoid such productive areas e.g. with marine plants and invertebrate burrows on a case by case basis. **CONDITION.**

Qld Fisheries were consulted regarding a hovercraft operation in MBMP where they provided the following advice: *'Fish habitats are considered a community resource and Fisheries Queensland seek to ensure that equitable community access to fish habitat resources is maintained. Fisheries Queensland supports recreational fishing activities and would not support a proposal that negatively impacted upon community access or the ability of recreational fishers to fish or access fishing grounds within the proposed operational route'*.

Fisheries Queensland was concerned with the activity traversing exposed tidal flats and shallow water habitats (including seagrass) due to potential detrimental impact to these fish habitats and marine fauna (for example soldier crabs) and also the potential of the tour to prevent access to these resources by recreational fishers.

Measures outlined above i.e. avoid traversing exposed areas and repetitive operations at the same location will assist to protect fisheries values and reduce conflict with marine park users. Where a commercial hovercraft proposes to traverse an exposed area, this will be assessed and conditioned on a case by case basis.

Disturbance to marine megafauna and reptiles by hovercraft is not well studied. What we know about hovercraft and their potential to impact wildlife is their absence of underwater appendages reduces the potential for injury such as propeller cuts or vessel strike to wildlife such as turtle and dugong. Hovercraft also create little underwater noise as all mechanical components are above the water. Direct impacts to marine wildlife is not of concern. Hovercraft, like any craft have the potential to pursue and approach marine mammals. The *Nature Conservation (Wildlife Management) Regulation 2006* contains provisions to minimise the impacts of humans on cetaceans by regulating the behaviour of individuals in close proximity to whales and dolphins. Specifically, section 338A to 338S regulates the way in which boats, including hovercraft can be operated around whales and dolphins and the way people must behave around whales and dolphins.

Amendments made to the regulation in May 2013, resulted in hovercraft being defined as a 'prohibited vessel' and subject to changes in proximity distances to whales and dolphins.

*Minimum distance for a prohibited vessel (s338L of the regulation)*

A person in control of a prohibited vessel must not, without a reasonable excuse—

- (a) bring the vessel any closer than 300m to a whale or dolphin, other than a whale or dolphin listed as a special management marine mammal or a marine mammal in a special management area; or
- (b) bring the vessel to a position that would cause a whale or dolphin to come closer than 300m to the vessel if the mammal continued on its direction of travel.

*Minimum distance for people in the water (s338Q of the regulation)*

Persons in or entering the water must be at least 100m from whales and 50m from dolphins.

However, the regulation states under Section 338A that marine mammal provisions do not apply to a person acting under –

- (a) a scientific purposes permit

**prohibited vessel** means a hovercraft, hydrofoil, jet ski, motorised diving aid, parasail or wing in ground effect craft.

This assessment does not include navigation of a hovercraft for the purpose of conducting commercial whale watching and the permit holder is not permitted to whale watch under this permit. Whilst advertising whale watching does not breach QPWS regulations compliance should be flagged to GSMP compliance staff for operators that are advertising commercial whale watching. While hovercraft are unlikely to be operated in offshore areas where whales are more regularly encountered, as a precaution marine park tour operators accessing whale watching areas (if advertising whale watching or not) must clearly state that 'this permit does not authorise the conduct of whale watching in the marine park'. The legislative approach distance to dolphins and whales has been included in the information notice.

Shorebirds are an integral component of GSMP and Great Sandy Strait wetland ecosystems, providing important biological, aesthetic, scientific and cultural values of both national and international significance. The region is one of only four areas along the eastern Australian coast recognised as a Wetland of International Significance under the RAMSAR Convention, important for migratory shorebirds (including endangered species). Australia also has agreements with the Governments of Japan, China and the Republic of Korea for the protection of migratory birds and their important habitat areas (JAMBA, CAMBA, RoKAMBA). The principal expectation of contracting parties to the Ramsar Convention is to promote the "wise use" of wetlands, which,

once listed as internationally important, should be managed in a way that protects the ecological characteristics for which they are recognised.

Internationally significant shorebirds inhabit the bioregion, which comprises part of the East Asian-Australasian Flyway. The region's shorebirds have received international recognition through the Japan-Australia Migratory Bird Agreement (JAMBA), the China-Australia Migratory Bird Agreement (CAMBA), and the Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA) (SEQ RCMP – supporting document 2006). The Great Sandy Strait and Moreton Bay are recognised as two of Australia's top 12 shorebird habitats (SEQRCMP – supporting document 2006, Draft WBBRCMP 2007, EPA 2005).

Protecting shorebirds from disturbance is one of the key management strategies identified in the Shorebird Management Strategy for Moreton Bay endorsed by the Department, and launched by the Minister, in 2005

The *Marine Parks (Great Sandy) Zoning Plan 2006* provides reference to 'disturbing shorebirds'. Specifically, provisions applicable to hovercraft include:

- A person must not cause unreasonable disturbance to shorebirds in the marine park, by navigating an aircraft or vessel through a group of feeding or roosting shorebirds; and
- A person must not cause unreasonable disturbance to a shorebird's habitat.

Disturbance to shorebirds, both resident and migratory, is well documented as a stressor which affects their long term survival and breeding success. Disturbance to shorebirds could range from a minor response e.g. head turning to major i.e. causing them to take flight consequently abandoning resting and feeding behaviours. The affect of such disturbance can also be more critical to their survival at different times of year, such as in the summer months when migratory species are building up fat reserves within Hervey Bay and Great Sandy Strait so they can return to their breeding grounds. Shorebirds are particularly sensitive at roost sites because they are concentrated in small areas often with some distance to the nearest suitable alternative roost site. There is also some evidence that disturbance at low tide feeding areas can lead to site abandonment, which in essence is a loss of habitat.

The distance at which shorebirds are disturbed is difficult to determine and the potential for shorebirds to be disturbed varies with the species of shorebirds and the degree of habituation by the birds to such disturbance. The navigation of a hovercraft, particularly in shallow areas close to banks and mangroves, has the potential to disturb shorebirds from roosting and feeding activities.

Observations by John Olds during a field inspection for a proposed hovercraft operation (CVL871) noted: *"It became apparent that shorebirds roosting and feeding on banks adjacent to nav channels appeared ambivalent to the craft when it was in the nav channel, however this changed when the craft was outside the channels. It seems that birds have habituated to vessels operating in nav channels and will allow such vessels to pass quite close (ie within 50-100m). Birds feeding and roosting were more readily disturbed by the hovercraft when it was operating outside nav channels"*.

*"Following this we then headed off north and eventually west in the main navigation channel past Woogoompah Island and into the unmarked channel behind Woogoompah Is. While travelling in this unmarked channel we disturbed many flocks of feeding shorebirds, which were apparently not used to such vessels or perhaps any vessels travelling in this area. The tide was very low and the hovercraft was able to quite easily proceed over exposed intertidal flats"*.

During field trials for an assessment of a hovercraft adventure tours approximately 18 pelicans were observed roosting less than 100m away from the hovercraft mooring at Horizon Shores and were not disturbed by take off and noise trial activities. However following an emergency nose dive to stop the craft within close proximity to mangroves a number of shorebirds were observed flying above the mangroves, presumably disturbed by the hovercraft whilst roosting.

Studies have shown that increased lateral distance is the most consistent predictive parameter associated with shorebird disturbance. Conditions placed on motorised water sport permits have imposed 200m and 300m (for parasailing) buffer distances to shorebird roost sites, unless navigating within a channel. The increased noise associated with hovercraft may cause disturbance at a greater distance than a vessel or PWC. However due to the difficulty in determining suitable distances and difficulty with enforcing distances the preferred approach is for potentially disturbing activities to avoid navigating near shorebird sites all together unless they are operating within a marked navigation channels. This approach has been taken when authorising jet boat tours and personal water craft tours. Where a commercial hovercraft operation provides a proposed route of operation this should be assessed for the potential to disturb shorebirds and the route negotiated and conditioned accordingly.

Both commercial and recreational operators are required to comply with the shorebird disturbance provisions. Recreational hovercraft operators generally seek permission to operate their hovercraft in all areas of the marine park. Therefore maps of shorebird roost sites will be made available to operators so that they can avoid these areas **and** the code of practice will include that operators must not travel within 200m of these sites unless navigating in a marked navigation channel (**code of practice - CONDITION.**). While providing maps of shorebird roost sites may assist them to comply with these provisions the maps do not encompass all potential shorebird habitat such as feeding areas which are most likely to be disturbed by hovercraft operating on exposed sandbanks and mudflats. Requiring hovercraft to navigate within marked navigation channels will minimise the potential for shorebird disturbance however this approach is considered stringent considering that navigation can also occur outside of navigation channels without disturbing shorebirds. Therefore the onus will be placed on the operator to identify the presence/absence of shorebirds prior to deciding to drive over an exposed intertidal sand bank or mudflat and not operate on exposed mudflats and sandbanks when shorebirds are present (**Code of practice – CONDITION**) While the number of birds found at sites varies throughout the year, it is recommended that conditions to protect shorebirds apply all year round to provide protection to both migratory and resident shorebirds.

### **The precautionary principle**

The precautionary principle asks if the proposed activity constitutes a threat of serious and irreversible environmental damage, but for which there is a lack of full scientific certainty. Due to the uncertainty of the impacts hovercraft may have on some values of the marine environment a number of conditions / operating guidelines are recommended.

#### **(b) Options for monitoring, managing and mitigating the potential impact on the environment and the cultural resources of the marine park or part.**

*Q. What are the potential impacts on the environment and cultural resources of the marine park that may need to be monitored, managed or mitigated as a result of the proposed activity and what are the options for monitoring, managing and mitigating these potential impacts?*

The table below summarises the impacts, management approach and means for mitigating impacts. The measures to mitigate impacts include development of a code of practice for recreational hovercraft operators. A number of specific permit conditions have been recommended to manage commercial and recreational hovercraft navigation. In addition to the measures outlined in the table below the submission of data returns is a standard requirement of all tourist program, vessel charter, education program and research permits. This data allows us to identify highly used/impacted areas and is requested with a view to further managing the activity. The provision of data from recreational hovercraft navigation is not going to tell us anything more than how many times a hovercraft was operated and where they went. Any major issues associated with their operation is most likely to be reported by the public. Therefore the provision of a data return will not be required from recreational hovercraft operators but will be required for commercial hovercraft navigation i.e. vessel charter using a hovercraft (see Appendix 7). Where the navigation is associated with another permission i.e. the conduct of a tourist, research or education program the reporting condition and return form associated with this activity will apply.

(c) **The objectives of the zone/s as set out in the zoning plan.**

*Q. Is the proposed conduct consistent with the objectives of the zone/s in which the activity is to be carried out?*

The objects to be achieved for the marine park include the purpose of the Act, the objectives of zones and designated areas. The main purpose of the Act is to provide for the 'conservation of the marine environment'. The proposed activity is being assessed for conduct in all zones of the Great Sandy Marine Park (which includes tidal land and tidal water).

General use zone

The objects to be achieved for the general use zone are—

- (a) to provide for the conservation of the areas of the marine park within the zone; and
- (b) subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use of the areas.

Habitat protection zone

The objects to be achieved for the habitat protection zone are—

- (a) to provide for the conservation of the areas of the marine park within the zone through the protection and management of sensitive habitats that are generally free from potentially damaging activities; and
- (b) subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use of the areas.

Conservation park zone

The objects to be achieved for the conservation park zone are—

- (a) to provide for the conservation of the areas of the marine park within the zone; and
- (b) subject to the objective mentioned in paragraph (a), to provide opportunities for reasonable use and enjoyment, including, for example, limited extractive use, of the areas.

Conservation means the preservation of areas which are significant, culturally or scientifically, in their natural state; the management of the natural environment to ensure that it is not destroyed in the process of development (Macquarie Dictionary 2<sup>nd</sup> Edition).

A number of measures in the code of practice and permit conditions are proposed to protect sensitive habitats i.e. shorebird areas, seagrass beds and mangrove areas and to continue to allow reasonable use of the zone by other marine park users. Provided the applicant complies with the code of practice or permit conditions the proposed activity will achieve the objectives for the General Use, Habitat Protection and Conservation Park zones.

Marine national park zone

The objects to be achieved for the marine national park zone are—

- (a) to provide for the protection of the natural integrity and values of the areas of the marine park that are generally free from extractive activities; and
- (b) subject to the objective mentioned in paragraph (a), to provide opportunities for particular activities, including, for example, the presentation of the values of the marine park, to be undertaken in relatively undisturbed areas within the zone.

Natural integrity of a zone includes the environments structure, its function and its value to humans. A hovercraft operating in a marine national park zone is unlikely to affect integrity of environmental functions (if conducted in accordance with the code of practice and recommended permit conditions) however it may affect the value of the zone as perceived by humans. MNPZ's in GSMP represent different habitat types, different use values, with different levels of natural integrity. The operation of a hovercraft in Go Slow Areas for natural values is not supported. Of the remaining MNPZ's, a number of zones also present high natural values and the operation of a hovercraft is likely to affect the presentation of these values, potentially affecting the conduct of other activities to be undertaken in undisturbed areas within the zone. Accordingly, the navigation of a hovercraft in these zones is not supported.

Navigation of hovercraft is considered consistent with the purpose of a marine national park zone where values are conserved and natural integrity, including the ability to use and enjoy the area is also maintained. Recreational hovercraft will be encouraged to adopt a code of practice which will reduce their potential to cause impacts and commercial hovercraft operators will be assessed and conditioned to protect the values and maintain objectives of the zones. Therefore the operation of hovercraft in accordance with the code of practice (recreational) and permit conditions (commercial) is considered consistent with the objectives of MNPZ's.

In addition to the code of practice and permit conditions outlined at the end of this document, where relevant the following information will be provided to the permit holder in their information notice to assist them in achieving the objectives of the marine park:

- Go slow areas for turtle and dugong
- Disturbance of shorebirds
- Proximity to whales and dolphins
- Disposal of rubbish and litter laws
- Effluent discharge regulations
- No anchoring areas

The following advice and environmental best practice guidelines will also be provided:

- Anchoring on coral or seagrass

**(d) Any written submission received about the application in response to a public notice given under s. 15.**

*Q. Does the proposed conduct fall within section 15 of the Regulation? If it does were any public submissions received? If 'yes' provide a summary of the public comments.*

If the Chief Executive considers the grant of a permit may have a significant impact on the use and non-use values of a marine park or if it restricts reasonable use or enjoyment of a part of the marine park by persons other than the applicant for the permit, the Chief Executive may request the applicant to give public notice of the application.

Navigation of a hovercraft may impact on use and enjoyment of the marine park by reducing the amenity of an area in the marine park or adjacent to the marine park.

The noise associated with the navigation of a hovercraft, particularly larger commercial hovercraft or repetitive use of hovercraft in one location, has the potential to become a nuisance for marine park users and adjacent residential areas. Apart from freestyling prohibition areas in the Great sandy Strait and distance off requirements for freestyling PWC, there are no MSQ laws preventing hovercraft from freestyling. This assessment does not cover the use of hovercraft for intentional freestyling activities, usually associated with a tourist program.

Where a commercial hovercraft operation proposes use tidal land this may be problematic where this occurs in an inappropriate location and on a frequent and regular basis. In this case the adjacent National Park or Local Council should be consulted by the applicant and assessing officer. Where hovercraft, commercial or recreational, proposes to land on a RAM area i.e. at Fraser Island they will also require a licence to operate a recreational craft.

**The navigation of a hovercraft in accordance with the code of practice for recreational hovercraft or permit conditions as outlined in this class assessment, however a [public notice is required](#) for applications to ensure a precautionary principle, this then fit within and agree to be conducted in accordance with this assessment.**

**(e) Any other matters relevant to the orderly and proper management of the marine park.**

*Q. Are there any matters relevant to ensuring the orderly and proper management of the marine park which should be considered e.g. would approval of this application set a precedent regarding future activities, or significantly increase the demand for management resources and are there more prudent and feasible alternatives available? If so, identify and discuss the issues of concern or interest.*

The *Marine Parks (Great Sandy) Zoning Plan 2006* identifies different zones within the marine park, states the objectives for each zone and identifies the level of protection for the zone. The zoning plan lists the activities which can occur as of right and those that have entry and use provisions and those for which a permit is required.

With regards to a request to operating a hovercraft within the marine park, a permit is required to operate for both recreational and commercial use. Hovercrafts are considered a managed vessel under the zoning plan; this is to ensure that this activity is conducted in a manner that this compatible with other activities and the

environment. Great Sandy Marine Park permits are at no cost and can be issued for up to three years. Additional approvals need to be sought by Fraser Coast Regional Council and MSQ (Harbour Master).

Additionally, the **Great Sandy Region Management Plan (The Plan)** states: **hovercraft will not be permitted to operate in Great Sandy Strait, Tin Can Bay and the Noosa River other than to transfer passengers on approved transit routes.** As such, this type of use/vessel will not be permitted within those locations as the Great Sandy Strait is listed as a wetland of international importance, which provides for shallow seagrass beds, mangrove forests, salt marshes and saltpans. These areas are also important feeding grounds for shorebirds, dugong, turtles, dolphins and fish.

### **Precedents on high impacts tourism programs in GSMP.**

Jet boat, jet ski and flyboard have been assessed and authorised in GSMP. Measures to manage hovercraft are consistent with permits granted for these activities.

### **Conditions for jet boat tours**

- maintain a distance of 60m from a shoreline with a visible dwelling or campground unless travelling within a navigation channel or at 6 knots or less;
- maintain a distance of 60m from a mangrove forest unless travelling within a navigation channel or at 6 knots or less;
- not freestyle within 200m of a shoreline with a visible dwelling or campground;

#### *Jet boat tours*

- (l) When traversing the Great Sandy Strait (northern section) and shallow water areas, the permit holder is to adhere to the following:
  - (a) the jet boat must not be operated in a way or at a speed that could reasonably be expected to result in the striking of a turtle or marine mammal.
  - (b) the jet boat is required to keep within the navigational channel on route to the Mary River, although can deviate from the navigational channel to access Big Woody Island whilst operating within the Ramsar Wetland area.
- (m) The jet boat must travel past sensitive receptors e.g. visible dwellings, commercial businesses, campgrounds or anchorages, at a distance that keeps the noise levels below 75dB when recorded from the receptor.
- (n) The jet boat must not be operated in a way that causes noise that is of nuisance to the public and operate at noise levels acceptable to the public.
- (o) After starting the jet boat, they must where possible move directly away from the start up location (i.e. bathing/foreshore reserve).
- (p) The jet boat must not operate in a way that makes audible noise before 7am or after 7pm on a business day or Saturday or before 8am or after 6:30pm on any other day.
- (q) The jet boat tour is to be conducted in the area specified on Map 4.

For the purpose of these conditions (i) **audible noise** means noise that can be clearly heard by an individual who is an occupier of a building and (ii) conduct an activity with **minimal impact** meaning operating with minimal noise and/or disturbance within an environmentally sensitive area (i.e. shorebird roost and feeding area).

## Conditions for flyboard

### *Flyboard/s*

- (f) The flyboard/s must not be operated in a manner that causes re-suspension of sediment or erosion.
- (g) Initial operation of the flyboard/s must not take place within any coral or seagrass substrate areas outlined in map 3.
- (h) The flyboard activity must avoid interfering with underwater communities which includes coral reefs and seagrass beds as outlined map 3.
- (i) The flyboard/s is excluded from the following designated areas within the Great Sandy Marine Park (refer to map 3):
  - (a) Shorebird Roost and Feeding Designated Areas within the (a) the Great Sandy Area (Ramsar Wetland) and (b) Pelican Banks, the flyboard/s are required to be operated at least 200m from Pelican Banks with minimal impact.
  - (b) Fraser Island Recreation and World Heritage Area requires the flyboard/s to be conducted a minimum of 500 metres out from the shoreline (i.e. mean low water mark)
- (j) Operation of the flyboard/s is restricted to the hours between sunrise and sunset unless otherwise approved.

## Conditions for PWC tours and hire

- be conducted within the hours of 7.00am and 7.00pm Monday to Saturday or 8.00am and 6.30pm on Sunday;
- maintain a distance of 60m from a mangrove forest unless travelling within a marked navigation channel or at 6 knots or less;
- not freestyle within 200m of a shoreline with a visible dwelling(s) or campground(s);

### *Personal water craft tour*

- (c) Refueling of personal watercraft is not to be undertaken on the water or on intertidal areas.
- (d) Personal watercraft must not be operated in a manner that causes re-suspension of sediment or erosion during the tour.
- (e) The personal watercraft tour is to be conducted in the area specified on Map 1.

## Conditions of hovercraft tours

- (a) Hovercraft tours must following the same conditions a outlined below:
  1. Hovercraft (managed vessel) entry and egress to the marine park must only be via formalised access points (e.g. boat ramps) or via water bodies adjoining the marine park.
  2. Hovercraft must not traverse exposed seagrass beds, mudflats, saltmarsh, salt pans, sandbanks and other exposed intertidal areas including beach not open to vehicles. This includes not traversing the real time water line associated drainage lines and other shallow water bodies within areas of exposed mudflats or other intertidal areas.
  3. Hovercraft must maintain a distance of at least 200m from shorebird roost sites unless navigating in a marked navigation channel.
  4. Hovercraft must travel past areas with visible dwellings, campgrounds or anchored vessels at a distance that keeps the noise levels below 75db when recorded from the receptor.

5. Hovercraft must not cause noise that is of nuisance to the public and must operate at noise levels acceptable to the public.
6. After starting up, hovercraft must where possible, move away as quickly as practicable from that location.
7. Hovercraft must not operate in a way that makes audible noise before 7am or after 7pm on a business day or Saturday or before 8am or after 6:30pm on any other day.
8. Other than at formal access points, traversing, landing/ take off must not be conducted within 100m of other people within the marine park (people in water and on beach).
9. Hovercraft must not repetitively operate in the same location on any one day.
10. Hovercraft are not permitted to operate in designated shorebird roosting and feeding area/s unless navigating a marked navigational channel.
11. Hovercraft are not permitted to operate in Great Sandy Strait and Tin Can Bay Ramsar wetland of international importance (see attached Map 1).
12. Hovercraft are not permitted to operate in turtle and dugong feeding and resting designated go slow area.
13. Hovercraft are not permitted to operate in the Mon Repos marine turtle designated area and turtle protection area (see attached map 2)
14. Hovercraft are not permitted to operate within the Fraser Island World Heritage Area without a permit to land a recreational craft or a commercial activity permit.
15. Refuelling of personal watercraft must not be undertaken on the water.

### **Precedents around the state.**

#### **Precedents around the state - GBR**

Commonwealth plans of management e.g. Cairns Area Plan of Management, Hinchinbrook Area Plan of Management, and Whitsunday Plan of Management (WPOM) generally limit hovercraft to intensively used areas and/or areas outside of locations. A location is generally the area within the 500 metre line of the edge of a reef and a Locality is a specified area around and island, bay, reef or cay.

The WPOM does allow high speed vessels, including hovercraft, to transit setting areas. Generally settings/ locations encompass waters surrounding any islands.

A permit is required to navigate a hovercraft in all zones of the State Great Barrier Reef Coast and Commonwealth Great Barrier Reef Marine Parks. Historically four permits in total had been issued for the navigation of hovercraft (three recreational and one commercial). Jackie Chappell advised that there are no current permits issued for navigation of a hovercraft.

Two of the above three applications for navigation of a recreational hovercraft were for <sup>s.73</sup> [REDACTED] in the vicinity of Magnetic Island and Cleveland Bay (assessment can be found on CVL197 folio 7).

Conditions included:

- The permittee must not operate the hovercraft for motorised watersports within the Bays of Magnetic Island
- The permittee must maintain a record of the dates and beach locations visited
- The permittee must inform the managing agency of any complaints received
- Hovercraft must maintain 300m from whales and dolphin as per restrictions for jet skis.
- Maintain a minimum approach distance of 100m from the high water mark
- Not approach closer than 100m of people in the water
- Not access to intertidal areas surrounding magnetic island except to embark or disembark passengers
- The hovercraft must travel in a direct line when accessing and departing from locations
- Not approach closer than 300m of other people along the beach
- Not access any vegetated area on the beach
- Not approach within 150m of wader birds, 100m of turtles and dugong
- Operate at 4knots when within intertidal areas

The permit also restricted areas of operation e.g. no access between Rollingstone Bay and Picnic Bay. Hovercraft access to beaches adjoining national parks was not considered consistent with maintaining the setting of the national park.

The applicant appealed the decision stating that 'conditions placed on the permit are too restrictive to enable reasonable use of the vessel'. The decision and permit conditions were upheld.

This assessment has considered the same issues outlined in the GBRMPA assessment. However this assessment is for all zones of the Moreton Bay marine park. In absence of a management plan that identifies sites that are to be managed for low key recreational activities a detailed assessment of all areas (i.e. their existing and future desirable use) is required. As opposed to this lengthy process this assessment has focussed on social and environmental impacts and management of such will be applied across zones to the level as prescribed under the objects of each zone.

EHP administers the *Environmental Protection Act 1994* and Regs and *Environmental Protection (Noise) 2008* (EPP noise) within state lands.

**Environmental Protection Act 1994 – S440 Offence of causing environmental nuisance**

- (1) A person must not wilfully and unlawfully cause an environmental nuisance.
- (2) A person must not unlawfully cause an environmental nuisance.

*Environmental nuisance* is unreasonable interference or likely interference with an environmental value caused by—

- (a) aerosols, fumes, light, noise, odour, particles or smoke; or
- (b) an unhealthy, offensive or unsightly condition because of contamination; or
- (c) another way prescribed by regulation.

Unreasonable interference is not defined in the EPAct or Regs. The Macquarie dictionary defines 'unreasonable' as not guided by reason or good sense, not based on or in accordance with reason or sound judgement. Advice from DERM Senior Environmental Scientists Toshi Yoshino regarding ways hovercraft can reduce environmental nuisance have been incorporated into the code of practice and permit conditions.

*Environmental Protection Act 1994 s 440Z operation of a powerboat in a waterway.*

- (1) A person must not use a power boat, or permit the use of a power boat, in a waterway for a power boat sport if the use makes audible noise for the same affected building for more than a continuous period of 2 minutes—
  - (a) on a business day or Saturday, before 7a.m. or after 7p.m; or
  - (b) on any other day, before 8a.m. or after 6.30p.m.

*Audible noise* means noise that can be clearly heard by an individual who is an occupier of a building.

(2) For subsection (1), an individual is taken to be able to clearly hear a noise if he or she can hear the noise from the part of the building occupied by the individual that is most exposed to the noise.

*Power boat sport* means— (a) a sport in which a person is towed by a line attached to a power boat, including, for example, a person water skiing or riding on a toboggan or tube; or (b) operating a jet ski or other power-driven personal watercraft, other than for fishing. **This does not capture the type of craft and location subject of the current proposal.**

*Waterway* means any of the following— (a) a creek, river, stream or watercourse; (b) an inlet of the sea into which a creek, river, stream or watercourse flows; (c) a dam or weir.

The *Environmental Protection Regulation 1998* (s6ZE) used to limit noise from a powerboat on a waterway to 75dB for 2 minutes when 30m from the vessel.

While these provision do not apply to the operation of hovercraft tours, it can be used to guide acceptable noise criteria i.e. appropriate operating hours and acceptable noise limits i.e. 75dB.

Adherence to recommended permit conditions will minimise potential nuisance noise complaints.

### **Environmental Protection (Noise) Policy 2008**

Schedule 1 of the EPP identifies the acoustic quality objective for the marine park to be ‘the level of noise that preserves the amenity of the existing marine park’.

*Acoustic quality objective*, for an area or place, means the maximum level of noise that should be experienced in the acoustic environment of the area or place.

The measures identified below in section 3 criteria (a) should be adequate to avoid any possible implications for the orderly and proper management of the marine park with respect to noise complaints from adjacent users of the Marine Park.

### **Interpretation of zoning plan**

Under section 100 a person must not navigate (which includes anchor) a vessel in the marine park for more than 120 days. This however does not apply to a person navigating under a permit and the permit granted must stipulate permission for anchoring longer is one of the authorised activities. This assessment does not cover anchoring hovercraft for longer than what is allowed as of right.

## **2. In accordance with section 10 of the *Marine Parks (Great Sandy) Zoning Plan 2006*, the chief executive must consider the following matters for applications for permission:-**

- (a) **whether the proposed entry to or use of the zone will have an unacceptable environmental impact on the zone;**

The navigation of a hovercraft has the potential to cause unacceptable environmental impacts as outlined in criteria 1 (a). A number of conditions and codes of practice, as outlined in criteria 1 (b), will be imposed on the activity to ensure that the impacts will be within acceptable limits.

- (b) **whether the proposed entry to or use of the zone is consistent with the maintenance of the biological diversity and ecological functioning of the marine park;**

The proposed conduct is consistent with the maintenance of biological diversity and ecological functioning of the marine park.

- (c) **whether the proposed entry to or use of the zone will cause a loss of vegetation essential to the natural productivity of the marine park;**

There is the potential for marine park vegetation to be damaged by hovercraft navigating over seagrass beds exposed at low tides. Therefore recreational hovercraft users will be discouraged from traversing of exposed seagrass beds and commercial operators will not be permitted to traverse exposed seagrass areas.

- (d) **whether the proposed entry to or use of the zone will prejudice the natural amenity and condition of the marine park;**

Maintenance of natural condition and amenity is only an explicit objective of Marine National park zones. In all other zones reasonable use is supported. Whether or not the activity will prejudice the natural amenity and condition is subject to how the activity is perceived by different people. Any undesirable response to the

proposed activity will be temporary in most part. Commercial navigation of a hovercraft has a greater potential to prejudice the natural amenity and condition of the marine park due to its frequent and consistent nature and public opinion should be sought where this may result.

- (e) **any effect the proposed entry to or use of the zone will have on the environment as a result of the marine park's natural hydrological pattern or natural coastal processes;**

While minor erosion of dry sandy beaches may occur, the proposed conduct is not expected to affect the marine park's natural tidal flushing pattern or natural coastal processes.

- (f) **the cumulative impact on the marine park of the proposed entry to or use of the zone and any other entry to or use of the marine park, particularly the cumulative impact of small-scale developments for which an environmental impact statement is not required;**

GSMP is an aquatic playground. The navigation of hovercraft could historically be conducted without approval unless it involved a commercial purpose. Accordingly, recreational hovercraft have essentially been unregulated until recently and no complaints/issues have been brought to the attention of QPWS. Regulated hovercraft i.e. those requiring a permit, have historically only been approved in areas where existing use is high and existing amenity and natural values are low.

Code of practice and permit conditions are recommended to manage potential environmental impacts on marine park values therefore the only likely impact in a cumulative nature is the presence of an additional vessel operating on the waterway. The cumulative impact of this activity is considered minor given that many vessels and craft utilise the waterways.

Pollution and rubbish add to the degradation of the environment from ship and vehicle sourced pollution e.g. effluent and rubbish if not properly managed. The *Transport Operations (Marine Pollution) Act 1995* outlines restrictions on discharging sewage in Hervey Bay and GSS. Under these provisions commercial vessels are required to have facilities on board to contain and treat sewage. Permit advice will ensure the applicant is aware of these requirements. Recreational hovercraft are unlikely to have toilet facilities.

Persons carried onboard the hovercraft may also generate rubbish which is no different from any other recreational vessel and a person must not dispose of litter in the marine park. Tourist programs in particular may generate significantly more waste through the provision of food during the activity, therefore it is a condition of all tourist permits that they have rubbish disposal facilities on board the permitted vessel/s. This matter is dealt with under the assessment of the tourism activity.

Data returns for commercial hovercraft navigation will assist in the identification of cumulative impacts of high visitation at particular sites.

In addition to existing noise generated by vessels, PWC, seaplanes and jet boats waterways users and adjacent residential areas will be subject to the cumulative noise of all craft. Whilst noise levels emitted from small hovercraft may be comparable to other recreational craft, it will cumulatively add to the noise experienced by users of the Marine Park and adjacent areas.

- (g) **the effect of the proposed entry to or use of the zone on shorebirds, particularly international migratory species of shorebird; and the need to protect shorebirds and the habitat of shorebirds;**

See section 1 criteria (a). The proposed conduct is not expected to affect shorebirds, particularly international migratory bird species and their habitat if legislative requirements, code of practice and permit conditions are adhered to.

- (h) **if the proposed entry to or use of the zone involves the entry to or use of a designated area—the objects of the area.**

Designated areas aim to manage specific issues in certain areas of the marine park. Four designated areas relate to the navigation of hovercraft in the marine park:

#### Go Slow areas for turtles and dugongs

The objects of a go slow area for turtles and dugong are—

- (a) to protect turtles and dugong; and
- (b) to protect turtle and dugong habitats; and
- (c) to minimise death, harm or distress caused directly or indirectly to turtles and dugong, in particular, by the operation of vessels or other human activities.

A person must not do any of the following in a go slow area for turtles and dugong—

- (a) operate a vessel in a planing or non-displacement mode;
- (b) operate a vessel for motorised water sports;
- (c) operate a vessel in a way or at a speed that could reasonably be expected to result in striking a turtle or dugong.

Hovercraft have no underwater appendages and the hull sits out of the water when the cushion is full of air, therefore determining when the craft is planing is difficult. While the potential for hovercraft to strike turtle and dugong is reduced hovercraft are not exempt from turtle and dugong go slow area provisions and therefore must not operate in a manner that could reasonably be expected to result in striking a turtle or dugong. Therefore the permit holders will be provided with **advice** regarding these Go Slow Areas in the information notice.

Even when operating slowly, hovercraft generate significant noise in comparison to a vessel that is travelling at non-planing speed. Therefore the navigation of a hovercraft within a go slow area for natural values is not considered consistent with the intent of the area. Other craft with comparable noise levels e.g. PWC are not allowed within Go Slow Areas for natural values if conducting motorised water sports i.e. if not taking the most direct and reasonable route between two places.

**3. In assessing applications for permission, in accordance with section 11 of the Marine Parks Regulation 2006, the chief executive may have regard to the following matters.**

**(a) The effect on public appreciation, understanding and enjoyment of the marine park.**

*Q. Will the proposed conduct have an impact on public appreciation, understanding and enjoyment of the marine park?*

Hovercraft, like any other craft, provide a means to explore and learn about the natural and cultural resources of the marine park however in doing so they may also have an adverse impact on the public and their ability to use and appreciate the Marine Park. Hovercraft have the potential to impact on use and enjoyment of the marine park in a number of ways including by altering the amenity of the marine park and adjacent areas and/therefore displacing users and values which users have come to enjoy. The potential for hovercraft to be more noticeable to members of the public is not only due to them being loud but because the noise emitted is different from recreational vessels and PWC which people have become accustomed to.

Use and enjoyment of the marine park is largely linked to the amenity of a location i.e. the pleasant or normally satisfactory aspects of a location which contributes to its overall character and the enjoyment of residents or visitors. So while hovercraft may be audible the ability for the noise to be a 'nuisance' to users and degrade the amenity of the marine park will be determined by a number of factors including the location of the craft with respect to sensitive receptors (e.g. campgrounds, dwellings, anchorages etc), the proximity of the craft to users and the frequency of operation. The ambient or background noise levels can be used as a measure of the existing amenity at a location. Impact on amenity, appreciation and enjoyment can therefore be determined by considering the noise levels emitted from hovercraft in context of existing amenity and acceptable/ regulatory noise limits.

Hovercraft use air drive fans for propulsion. Moving air at speed will, unavoidably, generate some noise. In addition, the engines and exhausts generate some noise. The major noise factor with any hovercraft is the air-propeller noise, which in any case is largely directional in characteristic. Table 3 below shows the noise emitted from hovercraft in relation to other aquatic craft and common noises.

**Table 3.** Comparison of existing noise sources in the Marine Park.

Existing activities	Noise (dB)	Details
7.26m commercial hovercraft (MAN112)	83dB 88dB 91dB 95dB	8m from craft at 3000rpm (MAN112 DERM) 8m from craft at 4000rpm 15m from craft at 5000rpm Inside the craft at >5000rpm
Hovercraft (CVL871)	95 - 100	15m from craft (CVL871 EPA)
Hoverjet (3.4m recreational)	88-90dB	@ 15m from craft (Hovertechnics Inc)
Hovpods (4.0m recreational)	81dB	@25m from craft at maximum speed
Airboat	84.0 91.2	LAS max at 70m (CVL886 EPA) LAS max at 25m
Jet boat	78.5	Average max all sites and distances combined

	94.0	In jet boat (CVL1095 EPA)
PWC	74	LA max 100m offshore at Currigee (CVL1095 EPA)
Outboard powered vessel	75-85	At 50ft Source Lanpheer, R.A (2000)
Vacuum cleaner	70	at 10 ft source <sup>1</sup>
Seaplane take off	57	@ 350 metres Source <sup>2</sup>

It is important to note that human 'perceived loudness' doubles for every 10dB. For example, the human ear detects each 10dB increase in noise as being equivalent to a doubling of loudness. So in reality, if a person was to here the ambient (background) noise at Horizon Shores (40dB) and then the hovercraft at 83dB it would appear more than 16 times louder. Both recreational and commercial hovercraft are likely to emit noise considerably higher than the existing marine park environment.

Under the *Environmental Protection Act 1994* it is an offence to cause an environmental nuisance i.e. unreasonable interference or likely interference with an environmental value caused by noise for example. In Lanpheer 2000 EPA research revealed that annoyance resulting from intrusive noise varies greatly among individuals. Human reaction to extraneous noise depends heavily on what type of activity they are engaged in at the time of the noise intrusion. Generally, activities requiring higher levels of mental concentration are more easily disrupted by intrusive noise. Therefore calculating the noise levels likely to be experienced at a receptor in the marine park and adjacent to is a means to assess impacts on amenity and marine park users.

World Health Organisation (WHO) guidelines state that 'during the day time no one is seriously annoyed by a noise of LAeq 55dB'. The US EPA regulates noise using a shore or pass by limit of 75 dB (and stationary limit of 90 dB) as the acceptable noise level emitted from vessels. 75dB also used to be used in the superseded Environmental Protection Act as an acceptable emission criteria for a period less than 2 minutes. Higher pass by levels i.e. 75dB are generally accepted as the noise is only experienced for one or two minutes.

Therefore 55dB is the level at which the hovercraft noise is considered to be negligible in terms of impacts to the public and degrading amenity of a location. 75dB is the maximum allowable noise level allowed for a short period of time in order for the hovercraft to not be a nuisance or degrade the amenity of a location.

In order to meet the acoustic quality objective of the marine park, Senior Environmental Officer Toshi Yoshino recommended that hovercraft should not approach within 200m of a sensitive receptor (e.g. areas where the public are likely to be disturbed such as at their house, campground or anchorage) and hovercraft should stay a minimum of 100m away from sensitive receptors when in transit.

The distance at which a hovercraft can be operated from a receptor within acceptable limits can be calculated given the known decibels. Sound pressure level drops by 6 dB with each doubling of distance from the source (<http://www.sengpielaudio.com/calculator-distancelaw.htm>).

**Table 4:** Noise level predictions at known distances (calculated by Kristy Currie)

Hovpod		Hoverjet/ hoverstar	
Noise (dB)	Distance	Noise (dB)	Distance
81	25	90	15
<b>75</b>	<b>50</b>	84	30
69	100	<b>78</b>	<b>60</b>
63	200	<b>72</b>	<b>120</b>
57	400	66	240

Table 4 above identifies that at distance of between 50-120m, depending on the craft, is required to keep noise levels below an acceptable pass by level of 75dB. The 3.4m hoverjet had comparable noise levels to the 7.26m canair twin fan commercial hovercraft shown below in table 5.

**Table 5.** Noise level predictions at known RPM and distances (calculated by Kristy Currie for MAN112)

<sup>1</sup> <http://www.maine.gov/spo/landuse/docs/techassist/techassistbulletins/noisetabulletin.pdf>

<sup>2</sup> <http://www.environment.nsw.gov.au/resources/parks/REFKuringgaichaseNoiseReport.pdf>

3000RPM (start engines & idle)		4000RPM (cruising)		5000RPM (starting on water)	
Noise (dB)	Distance	Noise (dB)	Distance	Noise (dB)	Distance
83	8m	88	8m	91	15m
77	16m	82	16m	85	30m
<b>71</b>	<b>32m</b>	<b>74</b>	<b>32m</b>	79	45m
65	64m	68	64m	<b>73</b>	<b>90m</b>
		66	96m		
59	128m	62	128m	61	260m
<b>56</b>	<b>192m</b>	<b>59</b>	<b>192m</b>		
<b>53</b>	<b>256m</b>	<b>56</b>	<b>256m</b>	<b>55</b>	<b>520m</b>

Calculations in table 4 and 5 support Toshi's recommendations that hovercraft should not approach within 200m of a sensitive receptor and stay a minimum of 100m away from sensitive receptors to achieve an acceptable pass by level of 75dB.

Toshi advised that adherence to the 100m and 200m rules will assist to meet the acoustic quality objective and maintain the amenity of the marine park and hearing the levels for a minute or two should not adversely affect the use and amenity of the marine park.

Hovercraft are likely to emit different noise levels due to modification, maintenance and also under various operating conditions. Therefore the distance off required will vary between craft and imposing a standard distance off for all hovercraft may be unfair to operators, particularly operators who go to lengths modifying their craft to minimise noise.

Therefore the other option, which the Qld sporting hovercraft club has done, is placed the onus onto each craft owner/operator that they do not emit greater than 75dB at any one location. The Qld sporting hovercraft club code of practice currently states:

- Travel past waterside residences at a distance that keeps the noise levels below 75dB when recorded from the shore.

This places the responsibility on the owner/operator to know how loud their hovercraft is and manage their conduct and distance off accordingly.

While it is likely to be easier to enforce a distance i.e. x meters from a sensitive receptor as opposed to identifying if a hovercraft has emitted more than 75dB at a location, there may actually be no issue or disturbance to the public from the hovercraft operating closer than X meters. Therefore placing the onus on the operator to operate their craft at a distance that does not expose the public to > 75dB and disturb the public and relying on public complaints to identify where hovercraft noise is an issue is the preferred approach (**Code of practice - CONDITION.**) In the case of commercial hovercraft operation a detailed assessment of noise levels at a particular operating location may be conducted. Due to the potentially higher frequency of commercial hovercraft navigation a permit condition requiring the hovercraft to maintain X meters from the shoreline and anchored vessels can be imposed..

Taking off from the water requires the highest revs and is the loudest activity associated with hovercraft navigation. The Qld sporting hovercraft club code of practice currently states that they will not cause noise that is of nuisance to the public and operate at noise levels acceptable to the public. Therefore stopping and starting locations must be carefully considered by the hovercraft operator to minimise noise impacts. The use of tidal land for landing by commercial hovercraft will be assessed and conditioned on a case by case basis. (**Condition**). Recreational hovercraft will be encouraged where possible to move away from the start up location (**Code of practice – CONDITION**).

The investigation undertaken by Toshi also found that noise emitted from hovercraft changes with the speed and revs of the craft which is influenced by the surface it is operating on with more rpm required to start the craft on the water than on a sandbank. Table 5 shows only a difference of 12dB between the craft at idle and the craft under full revs which indicates that reducing the speed does not result in a significant reduction in noise emissions. The position of the craft with respect to the receptor also affected the loudness of the noise i.e. standing alongside the craft was much louder than standing at its bow or stern.

In consideration of the above the following measures are recommended under the code of practice to reduce noise impacts:

7. The hovercraft must not cause noise that is of nuisance to the public and operate at noise levels acceptable to the public.
  8. After starting the hovercraft, the hovercraft should move away as quickly as possible from the start up location
  9. Not operate in a way that makes audible noise before 7am or after 7pm on a business day or Saturday or before 8am or after 6:30pm on any other day.
- Audible noise* means noise that can be clearly heard by an individual who is an occupier of a building.

According to the noise levels in table 3, at 100m a hovercraft will be comparable to the navigation of a PWC at the same distance. PWC are not prohibited from entering any zones due to their noise levels and it may be considered inequitable if we placed greater restrictions on hovercraft. Freestyling of PWC is managed under Maritime Safety laws adjacent to residential areas which indirectly minimises noise impacts. The proposed approach to managing hovercraft is essentially the same i.e. they must manage their conduct adjacent to residential areas by operating an appropriate distance away.

#### Frequency

Apart from commercial hovercraft operations, recreational hovercraft are likely to be navigated infrequently. Provided the noise levels are maintained at an acceptable level with respect to proximity to users at locations the frequency of trips will be irrelevant.

#### Locations

Hovercraft navigation will encompass both natural and highly disturbed waterways throughout the marine park. Many highly pristine areas have been set aside as Go Slow Areas for natural values. Hovercraft will not be permitted access to these areas.

The hovercraft sporting club conduct regular group hovercraft rides. Where physical displacement of other marine park users is likely at a location a permit will be required to conduct an organised event that has more than a negligible impact on the marine park. No complaints regarding these groups rides have been received by QPWS.

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Impacts	Issue	Factors	Management approach	Mitigation/ Monitoring
Impact to users	Noise	Distance to amenity and marine park use	<p>Hovercraft should only be supported in areas where existing vessel use is high and the operation is not likely to further degrade the natural amenity or condition of the area.</p> <p>A hovercraft must not approach within 200m of a sensitive receptor. Assess and condition the use of tidal land for commercial hovercraft.</p>	<p><b>Hovercraft are not supported in Go Slow Areas for Natural values</b></p> <p><b>Code of practice</b> for recreational hovercraft:  <b>6.</b> Travel past sensitive receptors e.g. a visible dwelling, campground or anchorage, at a distance that keeps the noise levels below 75dB when recorded from the receptor  <b>7.</b> The hovercraft must not cause noise that is of nuisance to the public and operate at noise levels acceptable to the public.  <b>8.</b> After starting the hovercraft, the hovercraft should, where possible, move away as quickly as possible from the start up location  <b>10.</b> Traversing, landing/ take off on exposed intertidal areas must not be conducted within 100m of other people within the marine park (in water and on beach).</p> <p><b>Permit condition</b> for commercial hovercraft  (a) Landing/ take off of the hovercraft is authorised to occur X times per day at the following locations:  (i)XXXX shown on Attachment X;  (ii) Maintain a distance of Xm from anchored vessels and the shoreline when navigating.</p>
		Frequency	If noise nuisance is minimised by operating away from sensitive receptors i.e. dwellings, campgrounds and anchorages, frequency and duration does not require further regulation. However the activity must be conducted in accordance with the EPAct.	<p><b>Code of practice</b> for recreational hovercraft:  <b>9.</b> Not operate in a way that makes audible noise before 7am or after 7pm on a business day or Saturday or before 8am or after 6:30pm on any other day.  <i>Audible noise</i> means noise that can be clearly heard by an individual who is an occupier of a building.</p> <p><b>Permit condition</b> for commercial hovercraft:  Not operate before 7am or after 7pm on a business day or Saturday or before 8am or after 6:30pm on any other day;</p>
	Occupying tidal land	Group rides/ club events	Recreational hovercraft operate sporadically throughout the marine	Conduct a separate assessment and permit as 'another purpose' if impacts are likely .

	used for recreation	Size of recreation area	<p>park however group rides have the potential to conflict with other recreational users.</p> <p>Assess landing/take off location of commercial operators and ensure that they do not land within 200m of a sensitive receptor.</p>	<p><b>Permit condition</b> - Commercial hovercraft</p> <p>(b) Landing/ take off of the hovercraft is authorised to occur X times per day at the following locations:</p> <p>(i)XXXX shown on Attachment X;</p>

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- (b) **The potential impact on other conduct in the relevant area or nearby areas, or in the marine park, that is being undertaken, is planned, is in progress or is reasonably foreseeable at the time of consideration of the application, whether or not related to or a consequence of the proposed conduct.**

*Q. Will the proposed conduct have an impact on other activities in the area or nearby areas or other areas of the marine park? Activities can be already be being undertaken, are planned, are in progress or may be undertaken in the reasonably foreseeable future at the time of assessing the application. Does the proposal conflict or complement other existing uses and users at the same location or in nearby areas? Will the proposal affect the future or desirable use of the area or nearby areas*

Hervey Bay is located to other regional population centres and as such, experiences very high levels of both commercial and recreational use. A wide range of water-based activities already occur within Great Sandy Marine Park including fishing, sailing, power boating, water skiing, parasailing, jetskiing, sailboarding, scuba diving, bird watching and snorkelling. The foreshore area of Hervey Bay receives the heaviest boating use for most activities because of the sheltered waters and proximity to many boat-launching facilities.

The proposed conduct i.e. navigation of hovercraft is a comparable recreational use. Boating users groups are not likely to be affected by the navigation of hovercraft in the marine park as hovercraft, like other craft will be required to share access to the marine park with other users. Where a future activity such as an organised event may affect use of the waterways, hovercraft operators will be provided with the same opportunity as other recreational users to comment on the proposal. Apart from group hovercraft rides, the nature of recreational hovercraft use will mean use is spread throughout the marine park, reducing potential impact on other conduct.

Commercial hovercraft may however have an expectation that access to the marine park will be unobstructed by other recreational users as opposed to sharing the resource. This is obviously driven by their need to make money and therefore more likely to result in conflict with other users. Additionally commercial hovercraft may wish to access highly scenic areas which are also popular with recreational users. Therefore an assessment of the existing use at a particular site is required for commercial hovercraft navigation to ensure that the site has the capacity to deal with the additional use and not affect existing use at that location.

One user group that may be affected by the operation of hovercraft on exposed sandbanks and mudflats is bait collectors. Qld Fisheries identified this as an issue and requested that access to such resources should not be obstructed by hovercraft. Operating a hovercraft in close proximity to such users is also a safety issue and a larger buffer should be maintained from other users due to their difficulty to control. The sporting hovercraft code of practice states that 'hovercraft should not be operated in a manner that causes nuisance, noise or danger to others' and 'treating the general public with respect and communicating with them'. A permit condition placed was that 'Traversing, landing/ take off must not be conducted within 100m of people and/or anchored vessels within the marine park'. A similar measure will be adopted under the code of practice (**code of practice – CONDITION.**) and will be a future condition for commercial hovercraft. Conditions/ code of practice measures recommended above to protect environmental values e.g. hovercraft operators must avoid repetitive passes over exposed mudflats and sandbanks and avoid passing the same point repeatedly on any one day will ultimately reduce driving over intertidal areas and reduce potential conflict with other users in intertidal areas.

Impact on future or desirable use in terms of the public appreciation, understanding and enjoyment of the marine park is discussed above. Provided hovercraft owners navigate their craft in accordance with the code of practice and permit conditions there is not likely to be any impact on conduct in or adjacent to the marine park.

- (c) **Any policy or guideline issued by the chief executive about the management of the marine park or the performance of the chief executive's functions under the *Marine Parks Act*.**

*Q. Are there any policies or guidelines issued by the chief executive relevant to the management of the marine park or the performance of the chief executive's functions under the Marine parks Act that need to be considered. If so, identify and discuss the issues of concern or interest.*

There are no marine park policies relevant to the navigation of a managed vessel i.e. hovercraft within the Marine Park.

- (d) **If the application relates to an undeveloped project the cost of which will be large – the capacity of the applicant to satisfactorily develop and manage the project.**

*Q. Does the application include an undeveloped project – the cost of which will be large? If so, what is the capacity of the applicant to satisfactorily develop and manage the project?*

Not applicable to this assessment.

- (e) **If an approval or a permission under a law of the State or a law of the Commonwealth or another State is also required – whether the approval or permission has been, or is likely to be, granted and, if granted, the terms and conditions of it being granted.**

*Q. Are any other approvals required under Queensland or Commonwealth law for the proposed conduct eg Fisheries and Maritime Safety Queensland authorities, State environmental approvals, National Park permits, animal ethics etc? If so, has the approval or permission been or is likely to be granted? If 'yes' what are the terms and conditions of the approval / permission?*

All hovercraft must be registered with Maritime Safety Queensland and commercial vessels i.e. those used for carrying paying passengers, are required to hold a commercial survey. The survey takes into consideration the adequacy of the design and construction of the vessel and indicates the number of passengers that may be carried on board within certain conditions. The applicant has supplied registration details.

Landing a recreational craft (s131) in a recreation area requires an authority regardless of the nature of the activity i.e. recreational or commercial. There are no current pending applications or approvals for RAM areas within GSMP. Standard protocol for marine park permits is to not grant access to intertidal areas adjacent to RAM areas unless the relevant approval is obtained. This will also be re-iterated as advice in the information notice.

- (f) **Any relevant intergovernmental agreement, Australian or international agreement, code, instrument, protocol or standard.**

*Q. Are there any intergovernmental agreements or Australian or international agreements, codes, instruments, protocols or standards relevant to the marine park that should be considered? If so, identify and discuss the issues of concern or interest.*

Australia is a signatory to the following international conventions that aim to protect important environmental values:

- Ramsar Convention – Protection of the ecological characteristics of Internationally Significant wetlands
- Japan-Australia (JAMBA), China- Australia (CAMBA) and Republic of Korea-Australia (ROKAMBA) migratory bird agreements - for the protection of certain species of migratory birds and their habitats.
- Convention on Biological Diversity - Protection of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources
- Bonn Convention - Convention on the Conservation of Migratory Species of Wild Animals

The proposed activity may NOT occur within the GSS Ramsar Site. Under this convention DNPRSR is responsible for ensuring that the Ramsar principles are upheld and the ecological character of the Ramsar site for which it was declared are maintained. This includes protecting resident and migratory shorebirds and wetland habitat. Damage to habitat is not acceptable and code of practice measures and permit conditions will ensure the hovercraft do not damage seagrass, mangroves and diverse intertidal areas.

- (g) **Any relevant law of the State or of the Commonwealth or a relevant instrument.**

*Q. Are there any relevant laws of Queensland or the Commonwealth or a relevant instrument (eg a management plan or other document relevant to the marine park) that should be considered? If so, identify and discuss the issues of concern or interest.*

The following State and Commonwealth laws and instruments are relevant to the navigation of a managed vessel i.e. hovercraft:

#### State legislation and relevant instruments

- *Transport Operations (Marine Pollution) Act 1995* outlines restrictions on discharging sewage in Moreton Bay. Under these provisions commercial / recreational vessels are required to have facilities to contain and treat sewage onboard.
- *Transport Operations (Marine Safety) Act 1994* – all vessels must be registered with Maritime Safety Queensland including those undertaking commercial operations and must meet current survey requirements. Vessel registration details and maximum passenger numbers are included as a permit condition for recreational and commercial operators.

- *Fraser Island Recreation Area Management and supporting legislation* – Tidal land adjacent to Fraser Island is within both the Recreation area and marine park. As the navigation of a hovercraft in the RAM area requires approval under the RAM act the management of Fraser Island in accordance with the management plan will be executed via the RAM area approval. Commercial and recreational permits will exclude access to tidal land adjacent to the Fraser Island RAM area unless the additional permit has been obtained.
- *Great Sandy Region Management Plan (1994-2015) and a supporting Great Sandy Marine Park Strategic Directions (2009-15)* – numerous measures have been adopted to minimise impacts from recreational and commercial human activity in the marine park. These include:
  - Protection of environment: natural erosion processes managed in accordance with current coastal management plans and legislation; limit visitor infrastructure investment; enforce the restrictions on vehicle use on formed tracks and beaches only.
  - Education: interpretive material to educate and inspire conservation; commercial operators that develop awareness for the natural environment.
  - Shorebirds: implement the Shorebird Management Strategy.
- **The Queensland Coastal Plan** came into effect on 3 December 2012, replacing the *State Coastal Management Plan (2001)* and associated regional coastal management plans. It comprises two parts - the State Policy for Coastal Management and State Planning Policy 3/11: Coastal Protection. The *State Policy for Coastal Management* provides direction and guidance about the management of coastal land in Queensland in order to (among other things):-
  - avoid loss or damage of vegetation and habitat;
  - avoid intensive recreational activities impacting on ecological values or natural coastal forms and
  - control beach access, particularly by vehicles, to avoid erosion, protect ecological values, and ensure beach goers can enjoy the environment in safety.

Of relevance to the navigation of hovercraft in the marine park, and requiring consideration as part of this assessment, are specific policies on:-

- minimising impacts on erosion-prone areas and protecting dune vegetation (policy 3.2)
- the need for protection of areas of high ecological significance\* (policy 4.1 and 4.2)
- participation of Traditional Owners in the management of the coast (policy 5.1)
- ensuring public access to coastal areas is maintained or enhanced (policy 6.1)
- ensuring that exclusive private use of beaches and private access to the foreshore is avoided (policy 6.2)
- the need to encourage environmentally responsible behaviours in the community (policy 11.1)

\*Areas of high ecological significance include the protected area estate, endangered and of concern regional ecosystems, high value coastal wetlands, core essential habitat for selected threatened species and areas that support a critical life stage ecological process of a threatened species, such as feeding, breeding or roosting sites.

Considerations under the Coastal Plan are similar to the marine park zoning plan, therefore the proposed conditions and code of practice will also ensure the activity complies with the Coastal Plan.

#### **Nature Conservation (Wildlife Management) Regulation 2006**

The *Nature Conservation (Wildlife Management) Regulation 2006* outlines provisions for interactions with marine mammals to minimise harm and distress caused directly or indirectly to whales and dolphins by human activities. The *Nature Conservation (Dugong) Conservation Plan 1999* and *Nature Conservation (Whales and Dolphins) Conservation Plan 1997* have been repealed with new marine mammal regulations included in the *Nature Conservation (Wildlife Management) Regulation 2006*. Amendments to this legislation were enacted on the 10 May 2013.

The new legislation states changes to the proximity of boats, aircraft, helicopters and prohibited vessels (hovercraft, hydrofoil, jet ski, motorised diving aid, parasail or wind in ground effect craft), to whales and dolphins, and the speed at which boats must be operated in the vicinity of marine mammals.

Amendments made to the regulation resulted in hovercraft being defined as a 'prohibited vessel' and subject to changes in proximity distances to whales and dolphins.

*Minimum distance for a prohibited vessel (s338L of the regulation)*

A person in control of a prohibited vessel must not, without a reasonable excuse—

- (c) bring the vessel any closer than 300m to a whale or dolphin, other than a whale or dolphin listed as a special management marine mammal or a marine mammal in a special management area; or
- (d) bring the vessel to a position that would cause a whale or dolphin to come closer than 300m to the vessel if the mammal continued on its direction of travel.

*Minimum distance for people in the water (s338Q of the regulation)*

Persons in or entering the water must be at least 100m from whales and 50m from dolphins.

**prohibited vessel** means a hovercraft, hydrofoil, jet ski, motorised diving aid, parasail or wing in ground effect craft.

Advice will be provided in the accompanying information notice to permit holders addressing the matters outlined below. This will ensure that the proposed activities address relevant recommendations and management actions identified in the respective recovery plans, threat abatement plan or conservation plans.

- Approach distances to whales and dolphins
- Appropriate disposal of rubbish
- Go Slow Areas for Turtles and Dugongs
- Prohibition on commercial whale watching unless permission granted under the *Marine Parks Act 2004*

Provided the regulation is complied with the proposed activities are consistent with the objectives and management actions of the regulation outlined above.

#### Commonwealth legislation

- ***Environment Protection and Biodiversity Conservation (EPBC) Act 1999*** provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance. The matters of national environmental significance of direct relevance to this assessment include:-
  - wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
  - nationally threatened species and ecological communities and
  - migratory species

Hovercraft will be managed in the marine park so that they do not have an adverse impact on the Great Sandy Strait Ramsar site and broader designated areas within the marine park, nationally listed threatened species such as marine turtles, dugong and humpback whales and international migratory shorebirds.

- (h) **Any relevant recovery plan, wildlife conservation plan, threat abatement plan or approved conservation advice under the *Environment Protection and Biodiversity Conservation Act 1999* or any conservation plan under the *Nature Conservation Act 1992*.**

*Q. Are there any relevant recovery plans, wildlife conservation plans, threat abatement plans or approved conservation advice that should be considered? If so, identify and discuss the issues of concern or interest.*

A recovery plan is a document stating the research and management actions necessary to stop the decline, support the recovery and enhance the chance of long-term survival in the wild, of a protected species or community. Recovery plans are prepared for species and ecological communities listed as threatened under the *Environment Protection and Biodiversity Conservation Act 1999*. These plans remain in force until and unless the species is removed from the threatened list. Plans of relevance to this assessment include:

#### Recovery plans

- ***Humpback whale recovery plan 2005-2010***

Key objectives of the recovery plan include the recovery of humpback whale populations such that the species can be considered secure in the wild and the maintenance of protective measures for humpback whales from human threats.

Actions identified in the Plan of relevance to this assessment include:-

- Management of potential impacts of tourism
- Assessment and management of physical disturbance and development activities including the development of industry guidelines and State / Commonwealth government regulations such as those that pertain to approach distances for vessels and aircraft.

- o Implementation of education programs to inform marine users about best practice behaviours and regulations when interacting with whales.

#### Conservation Plans

Conservation plans *Nature Conservation (Dugong) Conservation Plan 1999* and *Nature Conservation (Whales and Dolphins) Conservation Plan 1997* were prepared under the *Queensland Nature Conservation Act 1992* and administered and approved by the State Minister. These conservation plans have since been repealed and new marine mammal regulations have been included in the *Nature Conservation (Wildlife Management) Regulation 2006*. Amendments to this legislation were enacted on the 10 May 2013.

The new legislation states changes to the proximity of boats, aircraft, helicopters and prohibited vessels (hovercraft, hydrofoil, jet ski, motorised diving aid, parasail or wind in ground effect craft), to whales and dolphins, and the speed at which boats must be operated in the vicinity of marine mammals.

- (i) **Whether the applicant is a suitable person to hold the permission having regard to-**
  - i. **the applicant's history in relation to environmental matters; and**
  - ii. **if the applicant is a body corporate the history of its executive officers in relation to environmental matters; and**
  - iii. **if the applicant is a company that is a subsidiary of another company (the parent body), the history of the parent body and its executive officers in relation to environment matters; and**
  - iv. **whether the applicant owes any amount payable under the Act**

*Q. Is the applicant a suitable person as prescribed in schedule 5 of the Regulation?*

In accordance with Schedule 5 of the *Marine Parks Regulation 2006* the applicant will/has declared that they have never had a Marine Parks Permit or corresponding authority cancelled and have not committed an offence against the *Marine Parks Act 2004*; *Nature Conservation Act 1992*, *Recreation Areas Management Act 1988* or *Forestry Act 1959* within the three years prior to applying for, or renewing, a marine park permit. Department enforcement registers have been checked as far as possible to confirm this declaration.

If the assessment is for renewal or amendment to an existing permit, the permit holder has complied with the existing permit conditions.

*Q. Does the applicant owe any fee or other amount payable under the Marine Parks Act?*

Not applicable to this assessment.

- (j) **The likely cumulative effect of the proposed use and other uses on a marine park.**

*Q. Is there likely to be a cumulative effect on the marine park as a result of the proposed conduct in combination with other uses of the marine park? If so, identify and discuss the issues of concern.*

GSMP is an aquatic playground. The navigation of hovercraft could historically be conducted without approval unless it involved a commercial purpose. In this regard hovercraft tours have historically only been approved in areas where existing use is high and existing amenity and natural values are low and stringent conditions imposed to manage potential environmental impacts on marine park values. Therefore the only impact in a cumulative nature is the presence of an additional vessel operating on the waterway. The cumulative impact of this activity is considered minor given that many vessels and craft utilise the waterways.

- (k) **Any other matters relevant to achieving the purpose of the Act.**

*Q. Are there any other matters that haven't been covered under any of the other assessment criteria that are important to the decision whether to grant a permit or not? If so, identify and discuss the matters of concern or interest.*

#### Public health and safety

There are safety risks associated with conduct of any activity in the marine park and the permit holder is responsible for assessing and managing risk associated with their activity and complying with Transport operations marine safety legislation with respect to maintaining their craft and qualifications. It is a **CONDITION** that the applicant holds public liability insurance in the event an accident occurs whilst conducting the proposed activity.

**Insurance cover**, for activities authorised under a permission or a commercial activity agreement, means a policy of insurance that insures the holder of the permission, or the other party to the agreement, against a

claim for damage, injury or loss to a person, and damage to property, arising from the activities to be conducted under the permission or agreement.

According to NPRSR's Operational Policy - Insurance and indemnity requirements for QPWS authorities public liability insurance is required for commercial tourism and recreation and recreational craft. Accordingly, holding adequate insurance is also a requirement of recreational hovercraft operators operating under the code.

### **Permission can not be granted if plan restricts the grant**

In assessing applications for permission, in accordance with section 20 of the *Marine Parks Regulation 2006*, the chief executive can not grant a permission for a marine park, or a part of a marine park, that is inconsistent with a zoning plan or management plan applying to the marine park.

*Q. Is the proposed conduct consistent with the zoning plan and any relevant management plan for the area?*

**Navigation of a managed vessel i.e. hovercraft is not consistent with the objects of Go Slow Area for Natural Values. The navigation of hovercraft is consistent with remaining zones and designated areas.**

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## Recommended permit conditions (recreational hovercraft)

Relevant criteria	Suggested condition
	<p><b><u>LOCATION TO WHICH THIS PERMISSION APPLIES:</u></b> All general use, habitat protection, conservation park zones. MNPZ will be assessed accordingly</p> <p><b><i>(Excluding access to tidal land included in Fraser Island RAM Area)</i></b></p>
	<p><b>1. Location</b></p> <p>Activities described in the 'purpose of use and entry' of this permit must only take place in the locations described in 'Part A' of this permit.</p>
(1a) & (1b)	<p><b>3. Navigation of a managed vessel (recreational hovercraft)</b></p> <p>The permit holder must ensure that navigation of the managed vessel is conducted in accordance with the <i>Code of practice for navigation of recreational hovercraft</i> included as Attachment 1.</p>
	<p><b>Standard insurance &amp; indemnity conditions (as below)</b></p>

### **Definitions** (relevant to code of practice and permit conditions)

***Anchorage means*** a place designated for vessels to anchor

***Campground*** means a piece of land available for rent as a camp or caravan site to holiday makers.

***Dwelling*** means a house used as a residence.

***Shoreline*** means the location where the land adjoins the sea or a body of water.

## Recommended permit conditions (commercial hovercraft)

Relevant criteria	Suggested condition						
	<p><b><u>LOCATION TO WHICH THIS PERMISSION APPLIES:</u></b> All general use, habitat protection, conservation park zones.</p> <p><b><i>(Excluding access to tidal land included in Fraser Island RAM Area)</i></b></p>						
	<p><b>2. Location</b></p> <p>Activities described in the 'purpose of use and entry' of this permit must only take place in the locations described in 'Part A' of this permit.</p>						
(1a) & (1b)	<p><b>2. Approval of vessel(s) to be used</b></p> <p>(a) The following vessel(s) is authorised to be used under this permission:</p> <table style="margin-left: 40px;"> <tr> <td>Registered name:</td> <td>xxxxxxxxxxx</td> </tr> <tr> <td>Queensland Certificate of Registration number:</td> <td>xxxxxxxxxxx</td> </tr> <tr> <td>Maximum passengers:</td> <td>xxx</td> </tr> </table> <p>(b) Where the permit holder wishes to use a different vessel in substitution for a vessel nominated in paragraph (a) above, details of the proposed vessel must be provided in writing to the Chief Executive for approval.</p> <p>(c) Vessels other than those nominated in paragraph (a) must not be used under this permission without written permission of the Chief Executive.</p>	Registered name:	xxxxxxxxxxx	Queensland Certificate of Registration number:	xxxxxxxxxxx	Maximum passengers:	xxx
Registered name:	xxxxxxxxxxx						
Queensland Certificate of Registration number:	xxxxxxxxxxx						
Maximum passengers:	xxx						

### 3. Conduct of hovercraft tours

1. Hovercraft (managed vessel) entry and egress to the marine park must only be via formalised access points (e.g. boat ramps) or via water bodies adjoining the marine park.
2. Hovercraft must not traverse exposed seagrass beds, mudflats, saltmarsh, salt pans, sandbanks and other exposed intertidal areas including beach not open to vehicles. This includes not traversing the real time water line associated drainage lines and other shallow water bodies within areas of exposed mudflats or other intertidal areas.
3. Hovercraft must maintain a distance of at least 200m from shorebird roost sites unless navigating in a marked navigation channel.
4. Hovercraft must travel past areas with visible dwellings, campgrounds or anchored vessels at a distance that keeps the noise levels below 75db when recorded from the receptor.
5. Hovercraft must not cause noise that is of nuisance to the public and must operate at noise levels acceptable to the public.
6. After starting up, hovercraft must where possible, move away as quickly as practicable from that location.
7. Hovercraft must not operate in a way that makes audible noise before 7am or after 7pm on a business day or Saturday or before 8am or after 6:30pm on any other day.
8. Other than at formal access points, traversing, landing/ take off must not be conducted within 100m of other people within the marine park (people in water and on beach).
9. Hovercraft must not repetitively operate in the same location on any one day.
10. Hovercraft are not permitted to operate in designated shorebird roosting and feeding area/s unless navigating a marked navigational channel.
11. Hovercraft are not permitted to operate in Great Sandy Strait and Tin Can Bay Ramsar wetland of international importance (see attached Map 1).
12. Hovercraft are not permitted to operate in turtle and dugong feeding and resting designated go slow area.
13. Hovercraft are not permitted to operate in the Mon Repos marine turtle designated area and turtle protection area (see attached map 2)
14. Hovercraft are not permitted to operate within the Fraser Island World Heritage Area without a permit to land a recreational craft or a commercial activity permit.
15. Refuelling of personal watercraft must not be undertaken on the water.

(1b) & (3b)	<p><b>5. Data returns (see Appendix 4 for returns form)</b></p> <p>Returns must be submitted at three monthly intervals using the record sheets supplied as Attachment X and provide the following information:</p> <ul style="list-style-type: none"> <li>(i) the places landed/taken off from and traversed on each trip;</li> <li>(ii) the types of activities carried out at each of these places; and</li> <li>(iii) the number of persons participating in each trip.</li> </ul> <p>(b) The returns must be lodged with the Administration Officer, Tourism and Visitor Services, Department of National Parks, Recreation, Sport and Racing (DNPRSR) at:</p> <ul style="list-style-type: none"> <li>• Level 4, GPO Box 2454, BRISBANE QLD 4001;</li> <li>• Facsimile No. (07) 3330 5277; or</li> <li>• e-mail to <a href="mailto:approvals.southern@nprsr.qld.gov.au">approvals.southern@nprsr.qld.gov.au</a>.</li> </ul> <p>no later than 5.00pm on the fourteenth (14<sup>th</sup>) day of April, July, October and January for the preceding three months. A nil return must be submitted when no tourism program was undertaken during the return period.</p>
(1b)	<p><b>6. Indemnity</b></p> <p>(a) The permit holder:</p> <ul style="list-style-type: none"> <li>(i) indemnifies; and</li> <li>(ii) releases and discharges</li> </ul> <p>the State of Queensland (“the State”) from and against all actions, proceedings, claims, demands, costs, losses, damages and expenses which may be brought against or made upon the State, or which the State may pay, sustain or be put to by reason of, or in consequence of, or in connection with the occupation and use of the marine park by the Permit holder except to the extent of any negligent act of the State, its servants or agents.</p> <p>(b) The Permit holder must notify the Chief Executive in writing of any death, injury, loss or damage immediately upon becoming aware of such death, injury, loss or damage.</p>
(1b)	<p><b>7. Compliance with laws</b></p> <p>The permit holder must at its own expense comply with all acts of parliament, local laws, regulations or rules for the time being in force which apply to the marine park and/or the permit holder’s use of the marine park.</p>
	<p><b>8. No warranty</b></p> <p>(a) The State does not warrant that the marine park is free from defect or that it is safe or suitable for the permitted purpose.</p> <p>(b) The permit holder uses the marine park entirely at its own risk and acknowledges that it has checked the area to ensure that it is suitable for the permitted purpose.</p>

(3a)	<p><b>10. Public liability insurance</b></p> <p>(a) For the term of this permit, the permit holder must hold the following insurances:</p> <p>(i) a public liability insurance policy for not less than \$20 million arising from any one event in respect of the death of, or injury to persons, or loss or damage to property;</p> <p>(ii) insurance under the <i>Workers Compensation and Rehabilitation Act 2003</i> to cover workers, eligible persons, self employed contractors, directors, trustees and partners.</p> <p>(b) The insurance policies required under this condition must be held with an insurer that is registered with the Australian Prudential Regulation Authority and has an S&amp;P rating of no less than A-.</p> <p>(c) The insurance policies in place to cover the insurable interests pursuant to this condition must cover all invitees, employees, contractors, agents, members or clients of the permit holder and name the State as an interested party.</p> <p>(d) Before the permit holder undertakes any activities in the marine park, all insurances required by this condition must be in place.</p> <p>(e) In any circumstance where the insurances required under this permit are cancelled, altered or expire before the expiry date of this permit, the permit holder must cease all activities in the marine park until such time as alternative insurance policies that comply with the requirements of this condition have been obtained.</p> <p>(f) From time to time (but no more than once annually) the State, acting reasonably, may issue a notice to the permit holder increasing the minimum insurance cover required by this condition.</p> <p>The permit holder must provide copies of certificates of currency or the insurance policies documents required under this condition when requested by Chief Executive for audit or compliance checks.</p>
	<p><b>11. Breach and termination</b></p> <p>This permit will be terminated immediately upon the permit holder failing to comply with the provisions of the insurance and indemnity conditions.</p>

## Recommended advice – provided in information notice accompanying a permit

### Key permit requirements / relevant legislation

- Go slow areas for turtle and dugong
- Disturbance of shorebirds
- Proximity to whales and dolphins
- Disposal of rubbish (commercial only)
- Effluent discharge regulations
- No anchoring areas
- Access to national parks (need for a commercial tour operator permit under NCA)
- Access to recreation areas (need for a commercial activity permit or permit to operate a recreational craft)

### Best practice guidelines/ recommendations

### References

I. L. Brooks (2010) Environmental Impact Assessment for Langstone Harbour Board in connection with a managed access agreement at Langstone Harbour by the Hovercraft club of Great Britain.

Fancy, S.G (1982). Some aspects of environmental effects of air cushion vehicle operations in the arctic. State of Alaska Department of Transportation and Public Facilities Division of Planning and Programming Research section.

McGrorty S, Jenyon A, Williams Le B. (1976) Are Hovercraft a major cause of disturbance to intertidal invertebrates? Biological conservation (9).

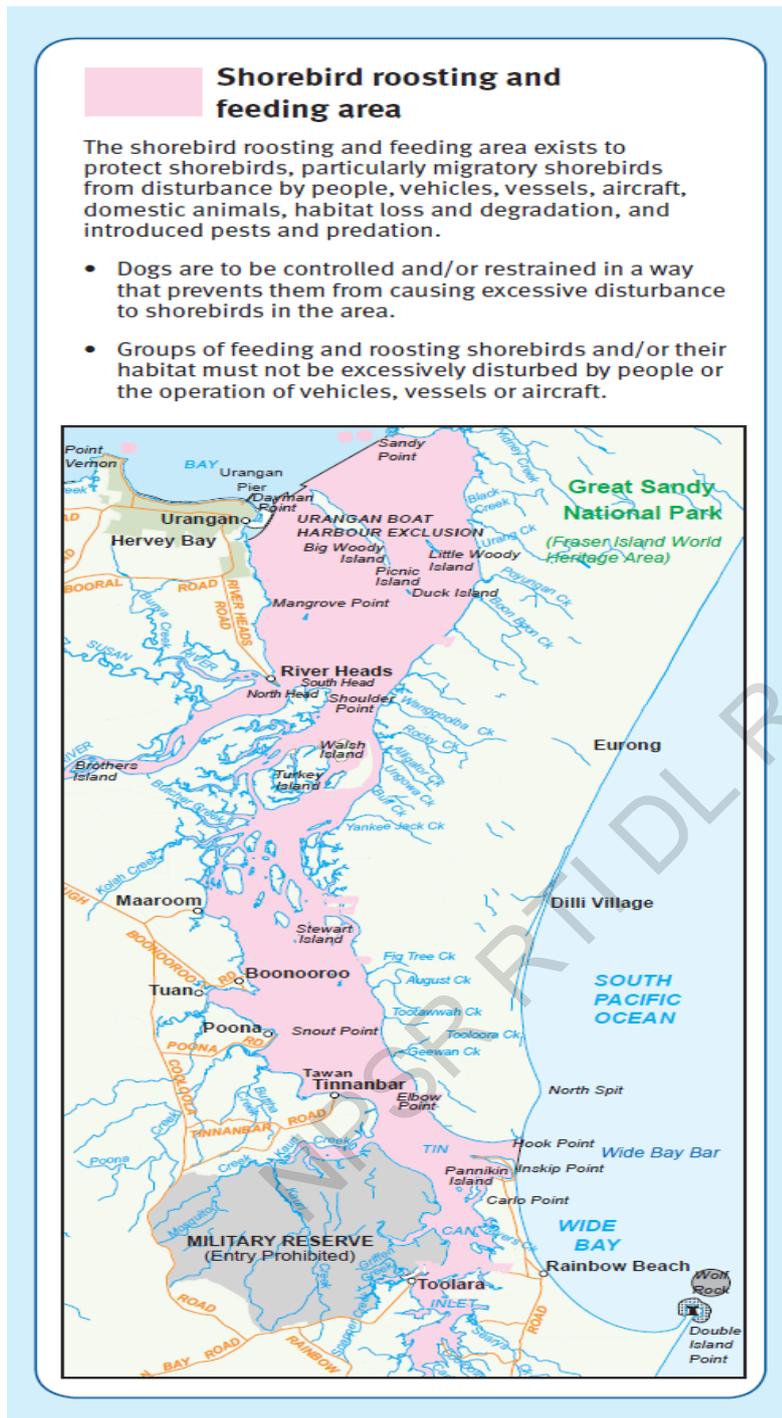
<http://www.airlifthovercraft.com/HovercraftInformation/HovercraftandtheEnvironment/tabid/74/Default.aspx>

<http://4wings.com.phtemp.com/faq/faq-envi.html>

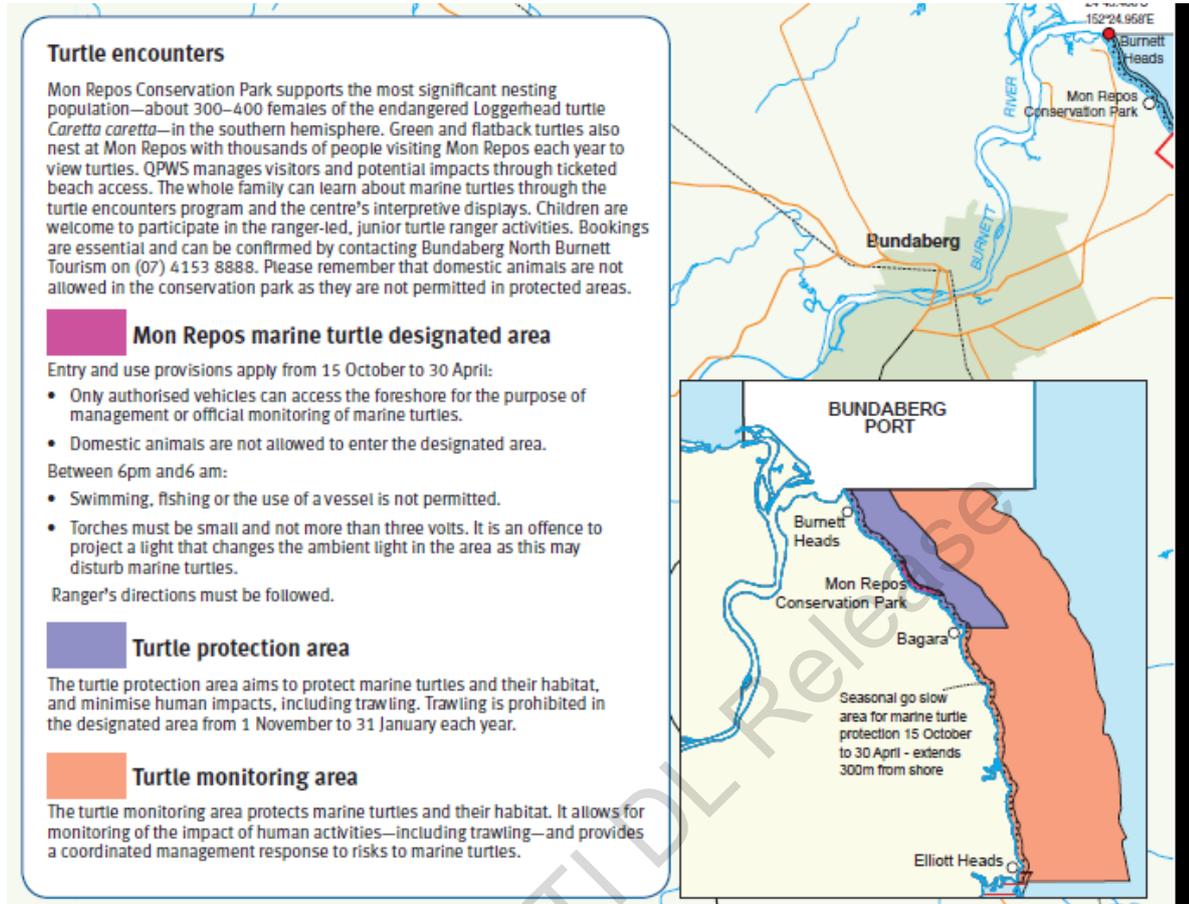
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# APPENDIX 1

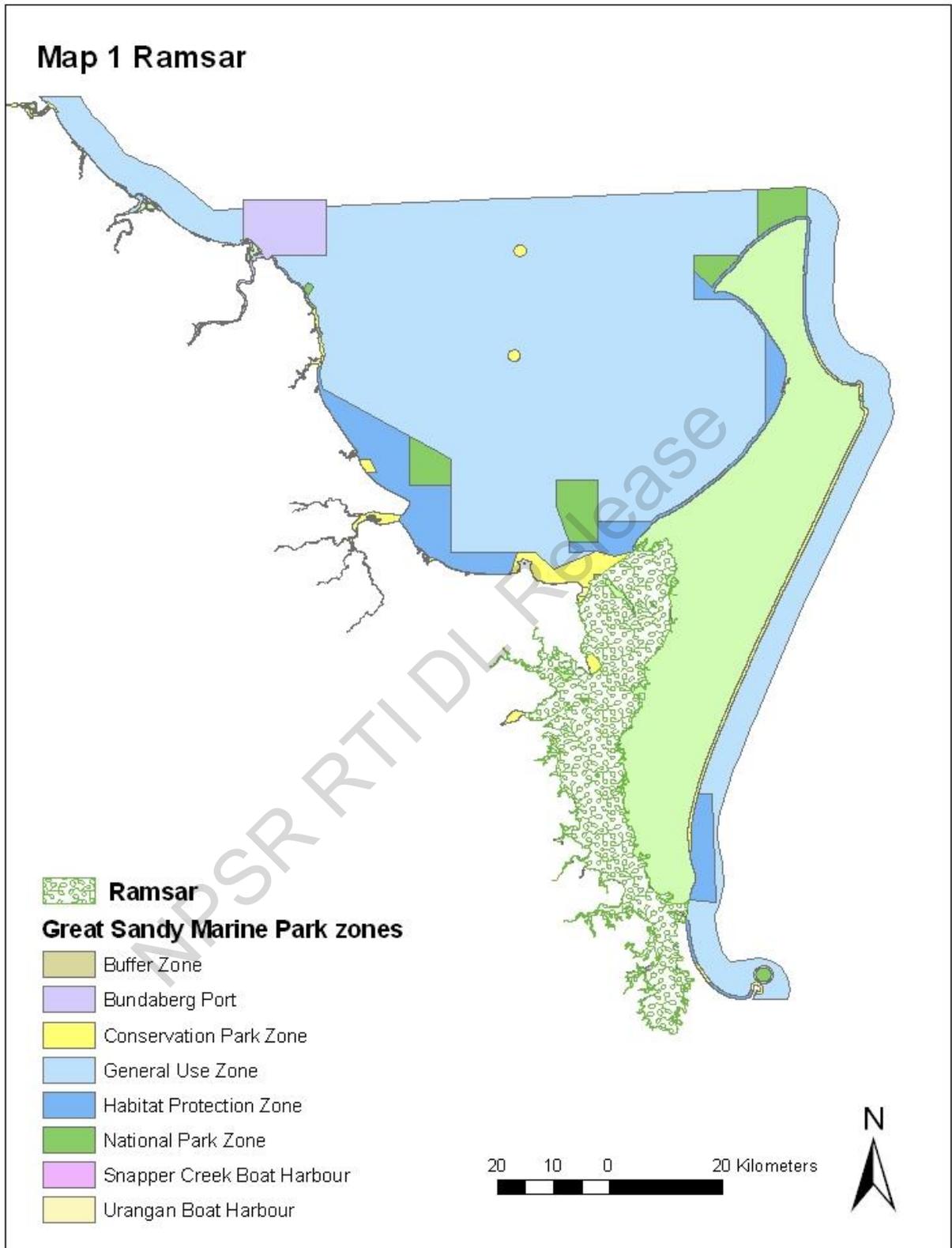
## MAP 1 – Shorebird Roost and feeding area within the Great Sandy Strait



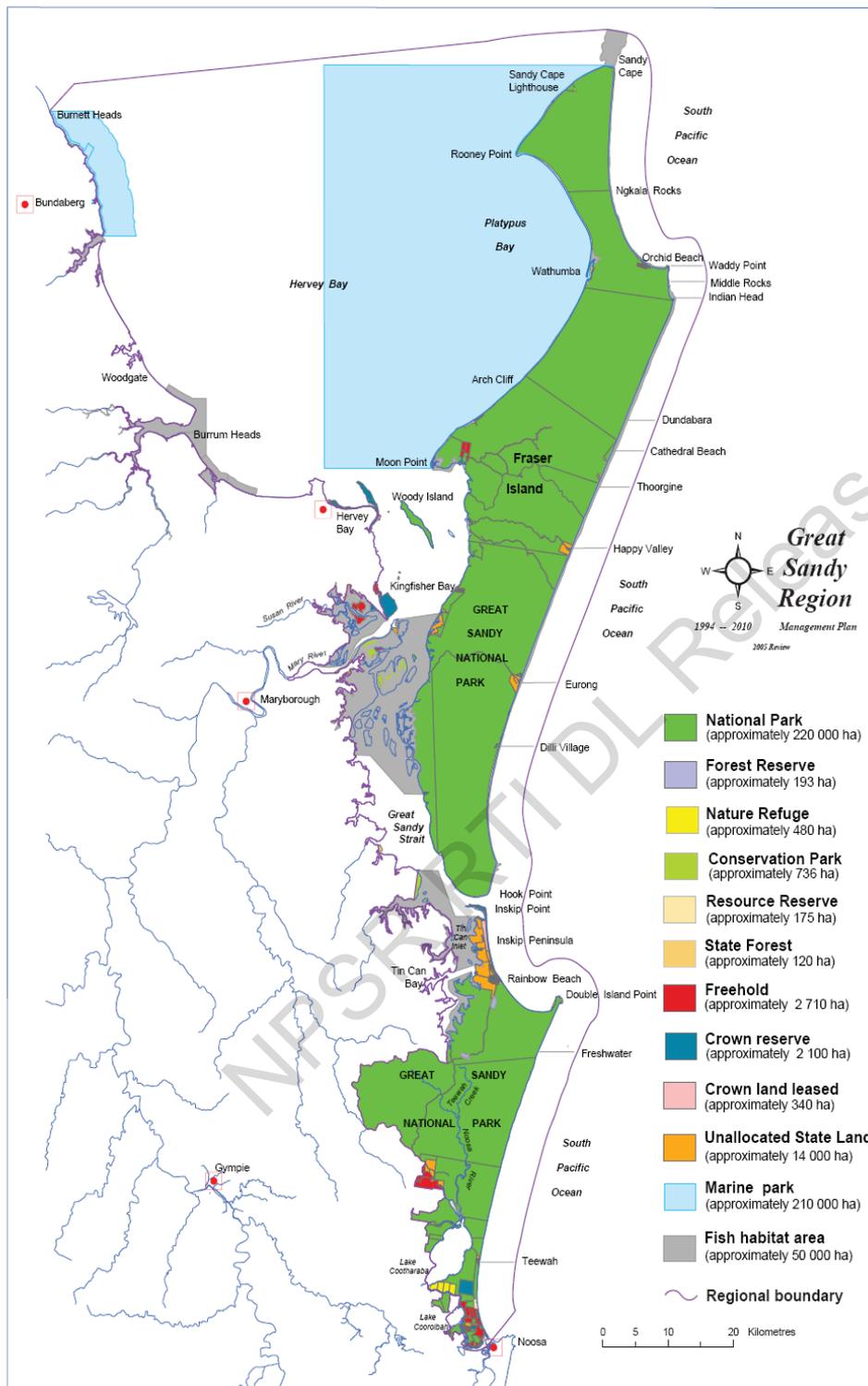
## MAP 2 – Mon Repos Marine Turtle Area or Turtle Protection Area



### Map 3 - Great Sandy Strait - Ramsar Wetland

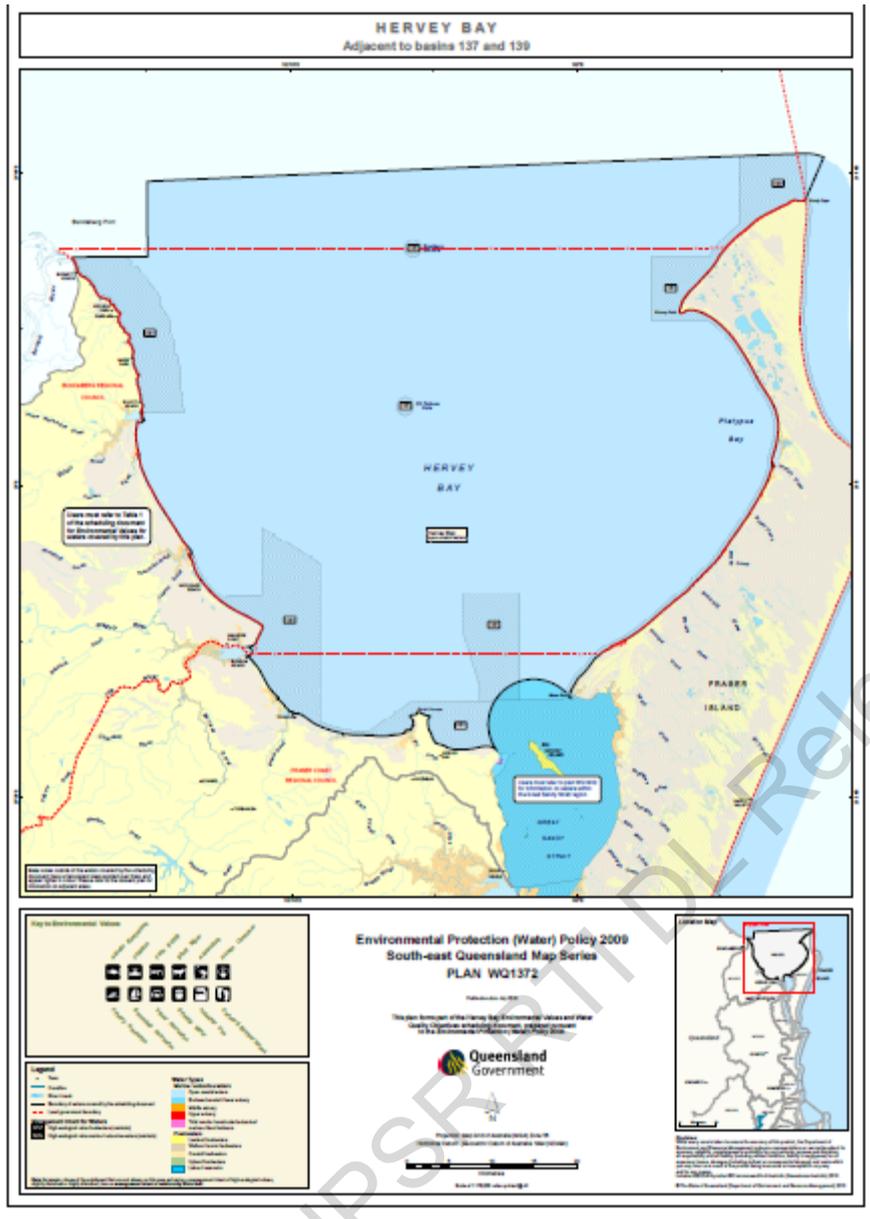


# MAP 4 – Great Sandy Region land tenures including fish habitat areas (2005)





Map 3.b High Ecological Value Areas (HEVs) – Hervey Bay

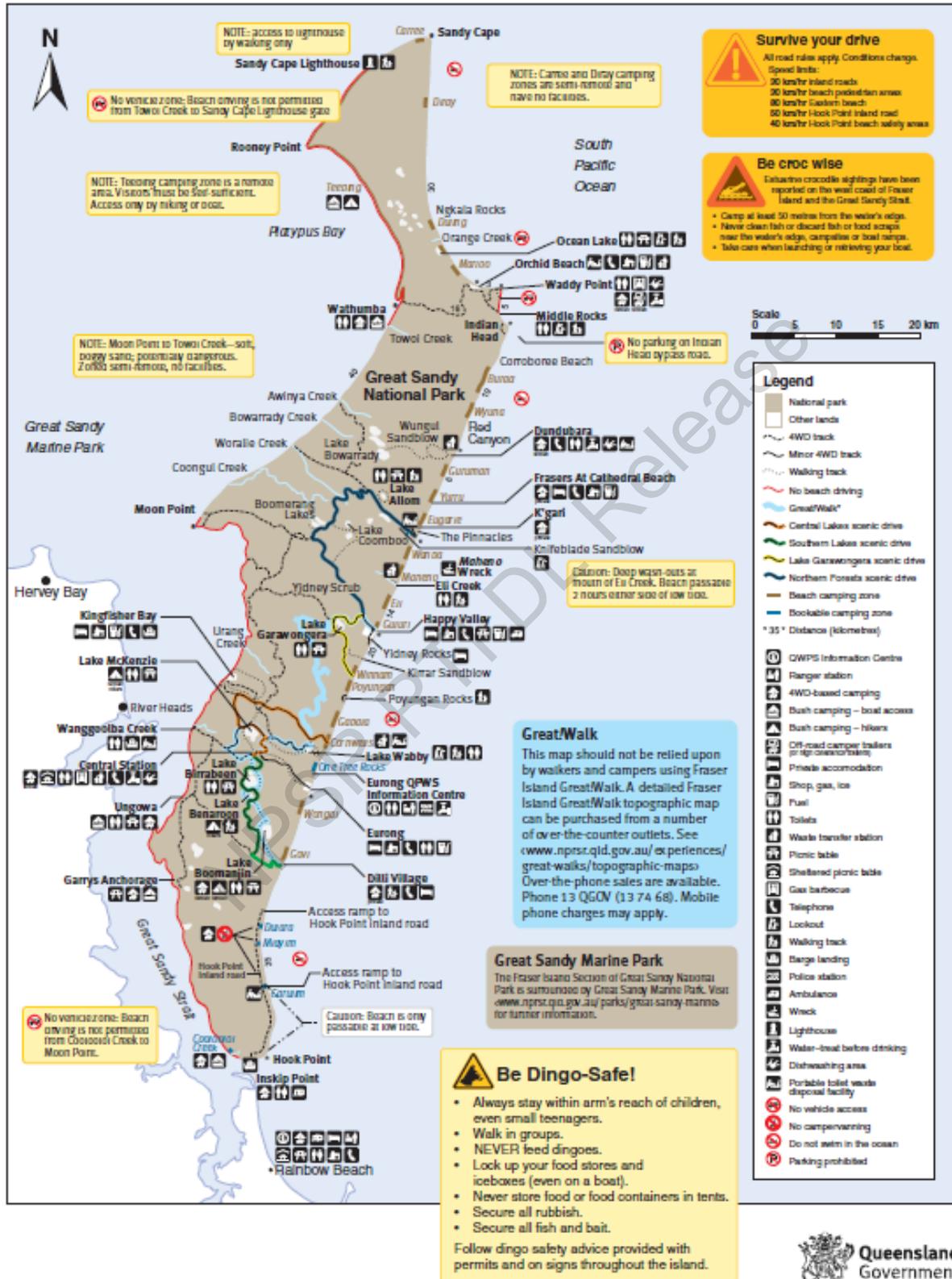




Map 6. Recreation Area – Fraser Island

# Great Sandy National Park map

## Fraser Island



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**APPENDIX 3** Examples of recreational and commercial hovercraft models



Hornet



Bill Baker Hovercraft (UK manufactured)



Hoverjet & Hoverstar (USA manufactured)



Hovpod (UK manufacturer)



Canair Hovercraft (MAN112)

