

# Gippsland Lakes – Ocean Entrance and Bar

## **WARNING:**

Vessel operators are advised that the Lakes Entrance Bar can be extremely dangerous to navigate and lives have been lost when vessels have broached, swamped or capsized in the breaking surf. A Bar crossing should only be attempted by persons with local knowledge and night crossings should only be attempted by experienced Masters and Skippers with extensive knowledge of the Bar.

## **Description**

### **The Entrance Piers**

The Entrance to the Gippsland Lakes is characterised by the prominent Eastern and Western Piers. Beacons have been established at the head of each Pier and at night they are distinguished by lit Aids to Navigation as follows.

**Eastern Pier** – East Entrance is a light beacon 12m in height. Light characteristics Fixed Green (F.G) and Flashing Green (Fl.G.3s) Starboard hand Lateral Marks. If the Lakes Entrance Bar is closed both Green Lights will be extinguished and replaced by a Fixed Yellow Light (F.Y). See below for further details concerning Lakes Entrance Bar Closure. The Eastern Entrance Light is known locally as the **“Green Light”**

Under normal circumstances the beacon on the Eastern Entrance Pier is also utilised as the **“Front Lead”** and is characterised by a Fixed Blue (F.Bu.) vertical bar day and night leading line light. At times the **“Front Lead”** may be shifted to other special beacons to indicate the best available depth of water to cross the Bar. The other lights indicated above remain stationary on the **“Green Light”** beacon. A Notice to Mariners will be issued if the leading line to cross the bar is changed.

**Western Pier** – West Entrance is a beacon with the single Light Characteristic Flashing Red (Fl.R.2.5s). This light is utilised as a Port Hand Lateral Mark and is not used to indicate the best water to cross the bar nor does its characteristic change during Bar Closures.

Further information about the Entrance Piers can be viewed on the Gippsland Ports Waterways Online mapping tool at [Gippsland Ports - Waterways Online v2 \(arcgis.com\)](http://arcgis.com)

### **Lakes Entrance Bar**

The Lakes Entrance Bar extends approximately 500 metres to seaward from the Entrance Piers in a general southerly direction. Sea swells almost always breaks over the shallow ridge of the Bar, east of the fairway, known locally as the **“Eastern Spit”** and at times over the shallow ridge of the Bar, west of the fairway, known locally as the **“Western Spit”**. The swell usually rolls in across the fairway without breaking, but in heavy weather the Bar may become dangerous and unfit for navigation. Close to real time video can be viewed from webcams during daylight hours which give the mariner an idea of the sea conditions existing at the time. See the webcam link below (p.20) for access.

## “Leads in Line”

Gippsland Ports has established "**Leads in Line**" for the purpose of assisting safe navigation.

The "**rear lead**" is a blue LED lit triangle, apex pointing down, situated in position 37° 53.316' South, 147° 58.394' East, and locally known as the "**Flagstaff**". The lit triangle is visible by day and night. This mark remains constant and is not relocatable.

The "**front lead**" is a blue LED lit vertical bar, which may be positioned at strategic beacon locations ranging from 50 to 190 metres in front (to seaward) of the rear mark.

Following maintenance dredging the normal position for the "**front lead**" is located on the well – recognised, "**Green Light**" a starboard hand lateral mark located on the end of the Eastern Pier. To assist marking the deepest water on the bar other beacons have been established to the west of the "**Green Light Line**" and are numbered 1,2,3,4,5,6,7, and also to the east of the "**Green Light Line**" and are numbered 8, 9,10,11,12. These other beacons which the "**front lead**" may be located on are marked with triangles, apex up.

At any given time when a transit line joining the "**rear lead**" and the "**front lead**" is extended seawards it will coincide with the deepest fairway line to enter and exit the Port. The "**front lead**" will be moved from time to time whenever the fairway position or alignment has changed, as a consequence of the naturally occurring sand movement, determined following bathymetric survey results.

Regardless of the establishment of these "**leads in line**" caution must be exercised whenever navigating in the vicinity of The Entrance. Severe weather conditions between dredging, can cause a rapid and significant reduction in depth and/or change in the alignment of the fairway over the Bar.

### **WARNING:**

During times of prolonged South Easterly weather significant sea swell heights can make attempting Bar crossings dangerous. The level of risk increases when combined with the run of the ebb tide against the sea and swell. Yawing or broaching on inbound voyages may produce a deeper draft. On outbound voyages lift caused by significant swell heights may cause deep drafted vessels to take the bottom.

Mariners are advised that the depth and width of the fairway cannot be guaranteed and is constantly changing. No warranty whatsoever can be given for the depth and/or width of the dredged fairway. Gippsland Ports conducts Bathymetric surveys on a regular basis. The most recent survey information can be downloaded from the Gippsland Port website, please see below (p20) for details.

## Lakes Entrance Bar Approach from Seaward

From the West the coastline between Shoal Inlet and Lakes Entrance is low and featureless. Mt Taylor North of Bairnsdale is a prominent land mark. From the East, Red Bluff stands 49m high on the shoreline 4.4 nautical miles to the ENE of the Entrance to the Gippsland Lakes.

The Entrance to the Gippsland Lakes lies at the Western end of the township of Lakes Entrance. Mt Barkly rises prominently to 70m behind the Entrance Piers and has a distinguishing tower of 9m exhibiting a light with flash sequence Oc.4s. A steep bluff about 40m high extends east and west from Mt Barkly peak.

Mariners should be aware of the rate of the tidal stream (“current speed”) in the Entrance Channel by consulting the “near real time” Tidal information on the Gippsland Ports Website (see link below page 20). Slack Water in the Entrance Channel can occur approximately between 1 hour and 3 hours after High Water or Low Water, depending on tide phases (neaps & springs) and weather patterns.

Prolonged easterly weather events normally associated with meteorological High Pressure Systems can cause abnormally low tides in the lower reaches of the Gippsland Lakes including Lakes Entrance. Likewise in prolonged westerly or southerly wind events normally associated with Low Pressure Systems can cause abnormally high tides in the lower reaches of the Gippsland Lakes.

Mariners are advised that the best time to cross the Lakes Entrance Bar is in daylight, with swells less than 1.5m, close to “Slack Water” in the Entrance Channel. Slack water means the time when the flow of the tidal stream current is zero in the Entrance Channel.

Mariners are advised that the approach to the Lakes Entrance Bar should begin no less than 1 nautical mile to seaward from the Entrance Piers and that the line of approach should be close to the “**leads in line**” indicating the deepest water and to avoid crossings near the Eastern or Western Spits. During the approach Mariners should take note of the sea state and any tidal set that may be occurring. Mariners should not attempt a Bar crossing when surf is breaking across the entire width of the bar.

## Lakes Entrance Bar Closure

In the event that an incident occurs on the Lakes Entrance Bar which constitutes a hazard to navigation Gippsland Ports shall assess the nature of the hazard and if necessary close the Ocean Entrance and Bar. Mariners will be advised by Notice to Mariners, local news bulletins and media notifications via the Gippsland Ports App and Facebook Page.

Should the Ocean Entrance and Bar be closed the following signals will be shown and alterations made to light beacons as follows;

### Eastern Pier Head (Lat. 37° 53.414'S Lon. 147° 58.422'E)

- The fixed Green Light and the Flashing Green Light (Fl.G.3s.) will be extinguished and replaced by a single fixed yellow light with nominal range of 7 nautical miles.
- An Isolated Danger mark of two black balls in a vertical line will be suspended from a yardarm on the light structure.
- The Blue front and rear leading lights will remain lit unless there is potential for the fairway to become or is obstructed, in which case the leading lights shall be extinguished.

## Cunninghame Arm Entrance Light (Lat. 37° 53.223'S Lon. 147° 58.240'E)

- The Flashing Green Light (Fl.G.3s.) on the Jetty marking the South side of the Entrance to Cunninghame Arm will be extinguished and replaced by a single Flashing Yellow Light (Fl.Y.3s) with a nominal range of 7 nautical miles.
- An Isolated Danger mark of two black balls in a vertical line will be suspended from a yardarm on the light structure.

During the period when the above signals are shown, a 24hr radio watch will be maintained by Gippsland Ports on VHF Ch16.

### **WARNING**

**Mariners are advised not to attempt navigating the Entrance Channel or the Bar area when the signals listed above are displayed.**

Further information can be obtained from:

Gippsland Ports Website

Recent hydrographic surveys:-

[http://www.gippslandports.vic.gov.au/bathymetric\\_surveys.php](http://www.gippslandports.vic.gov.au/bathymetric_surveys.php)

Near real time Waves, Currents, Tides and Weather:-

<http://www.gippslandports.vic.gov.au/boating/waves-tides-and-weather/lakes-entrance-waves-tides-and-weather/>

Webcams:-

<http://www.gippslandports.vic.gov.au/webcams.php>

Australian Charts AUS357

ENC Cell AU438147

Notices to Mariners

Australian National Tide Tables (ANTT)

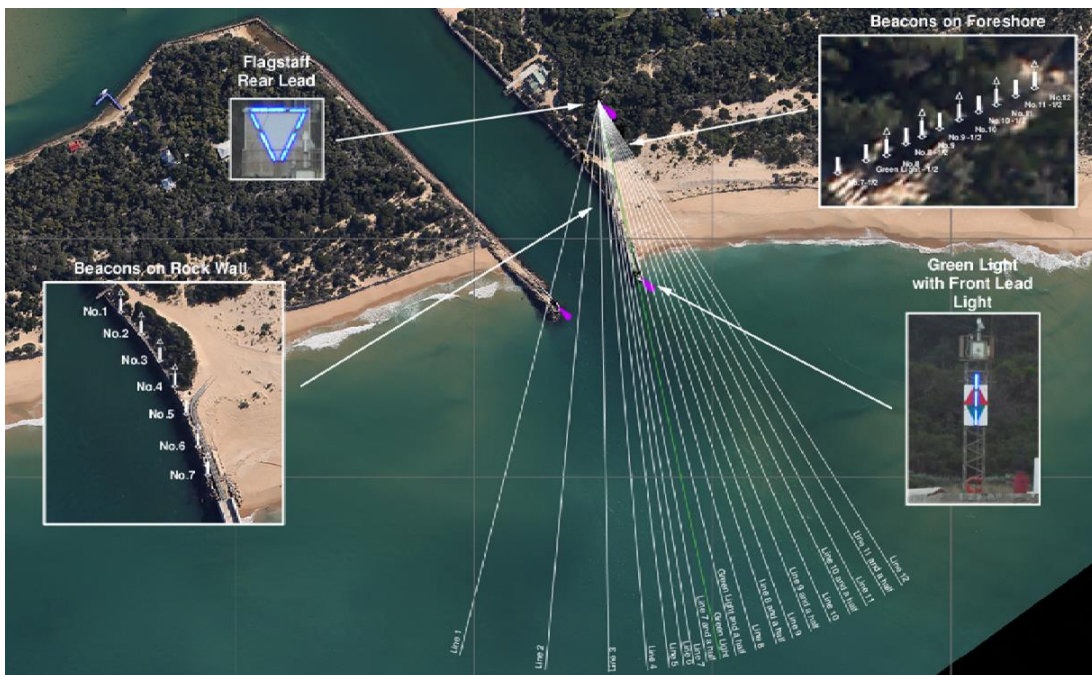
Victorian Tide Tables

Admiralty Sailing Directions Australia Pilot Vol. II

NP14. Admiralty List of Lights and Fog Signals Volume K NP83



The photo above is taken from seaward of the Entrance and illustrates the “Leads in Line” when the “front Lead” is located on the “Green Light”



The photo above illustrates the characteristics of the “Flagstaff Rear Lead” triangular blue LED light apex down, and the “Green Light Front Lead” vertical bar LED light. The Green Line indicates the line of approach with the “Leads in Line”. The Leading lights are available day and night.

## Rules for Navigation of the Entrance to the Gippsland Lakes

**Any Vessel in an emergency situation has priority passage over all other vessels.**

Rule 1: All vessels must keep clear of the Trailing Suction Hopper Dredger (TSHD) Tommy Norton while it is navigating through channels and fairways or carrying out dredging operations in The Narrows (Reeve Channel) or on the Lakes Entrance Bar.

Rule 2: Any vessels whether inbound or outbound through The Narrows (Reeve Channel) or on the Lakes Entrance Bar must not attempt to pass the TSHD Tommy Norton unless that vessel receives verbal permission from the Dredge Master on VHF Ch16. to do so.

Rule 3: A vessel given permission to pass the TSHD Tommy Norton must pass the dredge as directed by the Dredge Master.

Rule 4: All vessels must keep clear of the Cutter Suction Dredge “Kalimna” the “Transfer Booster Barge” and associated and interconnected surface pipelines. “Kalimna” will display the lights and shapes required under the COLREGS, indicating the side to pass the dredger.

Rule 5: A person in charge of a vessel departing Cunninghame Arm must keep out of the way of a vessel navigating The Narrows (Reeve Channel).

Rule 6: Where two vessels navigating The Narrows (Reeve Channel) near its junction with Cunninghame Arm are approaching each other on reciprocal or near reciprocal courses, the person in charge of the vessel stemming the tide must keep out of the way of the vessel proceeding with the tide.

Rule 7: The person in charge of a vessel which is proceeding outbound and navigating the waters to seaward of the Entrance Piers must keep out of the way of a vessel proceeding inbound over the Lakes Entrance Bar.

Rule 8: The person in charge of a vessel navigating the waters of the Port between the Entrance Piers and the outer edge of the Lakes Entrance Bar must maintain a minimum distance of 100 metres astern of any other vessel proceeding in the same direction.

Rule 9: Nothing in these rules shall exempt the person in charge of a vessel navigating the Entrance to the Gippsland Lakes from complying with the requirements of Marine Order Part 30 and the International Regulations for Preventing Collisions at Sea, 1972 (COLREGS).

Rule 10: A Transit Only Zone Rule is established at the confluence of the Bar and Entrance Channel, the Narrows, Reeve Channel, Hopetoun Channel and Cunninghame Arm. The Rule affects all vessels, excluding Gippsland Ports vessels engaged in dredging operations, infrastructure construction and maintenance and hydrographic Survey. The Rule establishes a Transit Only Zone in the area.

Vessel operators must not permit a vessel to be anchored in or allow the vessel to drift in or set fishing equipment in the Zone. Refer Section 24 VOZR Schedule 104.8 for map details.

*Refer to Vessel Operating & Zoning Rules (VOZR) for Victorian Waters, Schedule 104 at Section 24 of these Harbour Masters Directions for further information regarding local rules for the Port of Gippsland Lakes*