

## Memo

To: Consents

From: Peter Renshaw, Harbourmaster

## Re: Navigation Safety Report for Proposed Boat Ramp at Māpua

### *Purpose of this Report*

This memo evaluates the navigation safety implications of the proposed boat ramp proposed by RM230253 at Māpua, providing recommendations for mitigating potential risks.

This memo will be used by the Council reporting officers to inform the staff report going to the commissioners (42A report)

### *The Proposal*

The Māpua Community Boat Ramp Trust has applied for resource consent to construct and operate a boat ramp in the coastal marine area at Māpua. The proposal includes:

- Construction of an 11m wide boat ramp with a 1V:8H gradient, extending 38-40m into the Waimea Estuary.
- Associated consents for access, parking, signage, stormwater, and earthworks.
- Site has significant tidal flows

### *Navigation Safety*

Navigation safety refers to the measures and practices that ensure the safe movement and operation of vessels in a waterway. It involves preventing collisions, groundings, and other incidents by managing the interactions between vessels, structures, natural objects, and activities such as swimming. Effective navigation safety minimizes risks and enhances the overall safety of maritime operations.

The applicant has provided two key reports on boat ramp safety

The OCEL report on Boat Ramp currents by G.C.Tear – CPEng.

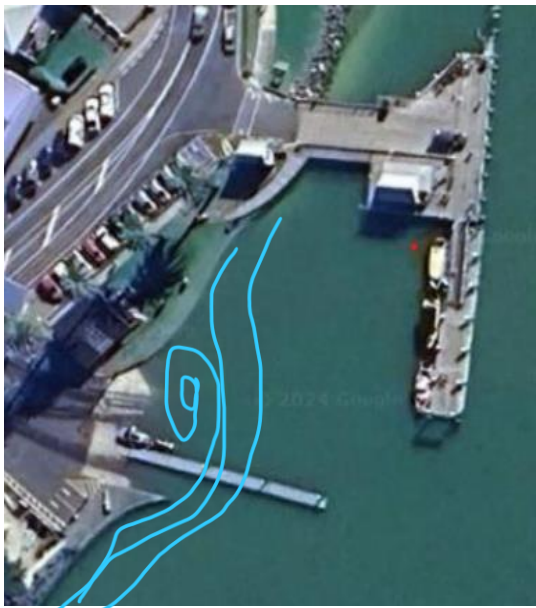
Application for Resource Consent for Māpua Boat Ramp – Navigation Safety Assessment by Capt. J. V. Dilley, Master Mariner and V. J. Muir

## Navigation Safety Assessment

Concerns raised:

### 1. Tidal Effects on Launching and Retrieval:

- Significant tidal range in Tasman Bay, this coupled with a large estuary results in significant volumes of water moving through the Mapua Channel
- The initial application contained a report by OCEL report indicates that tidal flow at the ramp site is manageable, with slower currents near the waterline. Meaning a degree of skill would be needed to maneuver a vessel through the faster current but the current would slow before the vessel gets to close to the trailer.
- OCEL report concludes that the proposed ramp could be an all tide ramp for experienced boat operators aware of the strong flow conditions once the boat is off the trailer.
- The Navigation safety assessment uses a few examples of ramps in locations with similar current, however they all have some form of current deflector creating a safe eddy in which to approach the ramp this is not evident in the application.



Left: Whitianga ramp not one I have personally visited but is well know for having current I would consider it close to the current found at Grossi point.

Right: Half moon bay, I have used several times, and it has no current worth considering in the basin close the ramp the current kicks in around the red line.

- OCEL state that setting the ramp bank into the bank is not possible at Mapua because of the contaminated ground, so it has to be groyne protected for use on an ebb tide



- This image is a small single lane ramp in Tasmania swan river note the dug-out ramp set back and the floating dock running parallel not perpendicular to the current. There is also a debris deflector at either side not easily visible in the image

- This ramp is on a 35-degree angle to the flow allowing for an easier approach to the trailer. I do not know the location but there is a sandy beach just down stream for

vessel to land on to sort out the trailer and await their turn.

- The applicant proposes moving a couple of moorings to allow more space to maneuver, using a floating barriers.
- I strongly recommend the inclusion of a small floating dock running parallel to the current, close to shore, as an essential safety measure. However, vessels should not be left unattended on this dock. Historically, the current has caused multiple vessels to sink when moored alongside the existing floating dock and main wharf. This highlights the critical need for careful management and additional safety features to prevent similar incidents.



This vessel got swamped when the tide changed from bow on to stern too whilst unattended. Sinking the vessel and rotating her upside down under the floating dock at Mapua.

## 2. Interaction with Moored Vessels:

- Potential conflicts with moored vessels can be minimized by relocating moorings and providing clear signage.

## 3. Debris Impact:

- Site is know to have significant debris (see OCEL report)
- Regular checks and maintenance by the Māpua Boat Club could ensure debris does not obstruct the ramp.



Left: debris the proposed ramp site

Middle: Mapua debris wharf

Right: debris raft at Mapua

**4. Increased BOAT? Traffic Density:**

- Increased traffic near the ramp will be managed by existing/proposed navigation safety laws and bylaws.-

**5. Effect on Other Users:**

- The presence of the ramp will be well-publicized, and signage will inform other users of potential hazards.

**6. Impact on Swimmers and Wharf Jumpers:**

- Vessels must adhere to speed limits near the wharf, and the proposed ramp will not interfere with current swimming and jumping activities.

**7. Risks of Crossing the Māpua Bar:**

- Mapau Bar is relatively shallow with strong onshore winds in the afternoon making it challenging to cross without experience. I agree with Dilley *“It is well known that there are risks associated with crossing bars, and this is no different for the Māpua bar”*. People already launch boats at Grossi Point and Rought Island, the addition of one more ramp is unlikely to change the risk.??
- Risks associated with bar crossings will be managed through education, signage, and information provided by the Māpua Boat Club, in conjunction with the TDC Harbourmaster office.

**8. Absence of a Floating Jetty:**

- OCEL report sates *“Because of the strong flows across the ramp we do not recommend using plastic pontoons in this situation, boats can be pinned against the pontoons and find it difficult to get off and the pontoons represent an obstruction to the flow.”* This contradicts the report by (Capt. J.

V. Dilley), where other sites have floating pontoons.



- Unlike other examples cited in the applicant's report (Capt. J. V. Dilley), the proposed boat ramp does not include a floating jetty. This omission could pose a safety issue, as there would be no secure location for vessels to wait while the ramp is occupied or while trailers are being maneuvered.
- The Tasman District Council has received numerous complaints from residents about the lack of floating docks at council-owned ramps. A floating jetty would provide a safe and convenient place for vessels to be secured temporarily, reducing the risk of collisions and congestion at the ramp.
- It is recommended that a floating jetty be included in the design to enhance safety and operational efficiency. This addition would align with best practices observed at other busy boat ramps and address the concerns raised by the community.

#### 9. **Floating Barrier Design:**

- The floating barrier should be designed to be swim-safe, using large foam floats and a large-sized line to prevent propellers from getting entangled. This design would also provide a secure hold for swimmers and paddle craft if needed, ensuring their safety while navigating near the boat ramp.

#### *Recommendations*

To further enhance navigation safety, the following measures are recommended:

- **Enhanced Signage:** Install clear and informative signage at the boat ramp and along the channel, including QR codes linking to detailed safety information.
- **Regular Maintenance:** Ensure regular inspection and maintenance of the boat ramp and surrounding areas to remove debris and address any hazards.
- **User Education:** Provide educational materials and sessions for boat ramp users on safe navigation practices, particularly regarding tidal conditions and bar crossings.
- **Floating Barriers:** Consider the installation of floating barriers to prevent conflicts between vessels and other users, such as swimmers and kayakers. The barriers should be swim-safe, using foam floats and large-sized lines to prevent propeller entanglement and provide a secure hold for swimmers.
- **Coordination with Mooring Owners:** Work closely with mooring owners to relocate moorings as necessary to avoid conflicts with boat ramp operations.
- **Inclusion of a Floating Jetty and breakwater:** Incorporate a floating jetty into the boat ramp design to provide a safe and secure location for vessels to wait, enhancing

overall safety and efficiency. This could be as simple as a few posts to lean on behind a small breakwater or a floating dock

### *Conclusion*

#### Conclusion

The proposed boat ramp at Māpua raises significant navigation safety concerns, particularly regarding its location and the absence of essential safety features. The risk assessment conducted by Jim Dily highlights the critical need for a breakwater and a floating dock, as all comparable ramps referenced in the assessment include such facilities.

The current proposal lacks a floating jetty, which poses a substantial safety risk by not providing a secure location for vessels to wait while the ramp is occupied or trailers are being maneuvered. Additionally, the strong tidal conditions and potential for increased traffic density further exacerbate these risks.

To mitigate these serious safety concerns, it is imperative to incorporate a breakwater and a floating dock into the design. These additions will significantly enhance the safety and operational efficiency of the boat ramp, aligning with best practices observed at other busy boat ramps and addressing the community's concerns.

Without these critical safety measures, the proposed boat ramp could lead to increased risks of collisions, congestion, and other navigation hazards. Therefore, it is strongly recommended that the design be revised to include a breakwater and a floating dock to ensure the safety of all users

The posed launching ramp can be used as an all tide launching ramp for **experienced boat operators** (emphasis added)