

# Coastal Public Safety Risk Assessment

Main Report - Risk Assessment and Treatment Plan  
Tweed Local Government Area  
Final Report, Version 1.0, June 2013



AUSTRALIAN  
**COASTSAFE**



[watersafety.nsw.gov.au](http://watersafety.nsw.gov.au)  
A NSW Government water safety initiative



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## Executive Summary

This report contains findings and recommendations which align with current International and Australian standards, guidelines and best practice risk management processes. The report contains information specific to locations under the authority of Tweed Shire Council and the National Parks and Wildlife Service (NPWS) - Office of Environment and Heritage.

- |                                |                               |
|--------------------------------|-------------------------------|
| 1. Flagstaff/Duranbah          | 6. North Beach/South Bogangar |
| 2. Fingal/Letitia Spit         | 7. Hastings Point Inlet       |
| 3. Dreamtime/Kingscliff/Cudgen | 8. Cudgera                    |
| 4. Bogangar/Cabarita           | 9. Pottsville                 |
| 5. Norries Head                | 10. Wooyung                   |

### Activities/Facilities

The Tweed Local Government Area (LGA) is a popular destination which sees year round public usage and recreational activity; including swimming, surfing (inc. all surfcraft), fishing, snorkelling/diving, boating, and walking.

A number of facilities support coastal usage and activities including well maintained car parks and key beach access, lifeguard and lifesaving supervision, holiday accommodation options, coastal walks, a number of public toilets/changing rooms, BBQ's, picnic tables and playgrounds.

### Hazards/Risks

Though outlined in more detail within the report and in Appendix B, the Tweed LGA has a number of consistent hazards due to the geography and high energy nature of the area.

Based on the risk assessment in Appendix B, these are the hazards that have been rated with the greatest inherent risk for the Tweed LGA:

Strong ocean/tidal/rip currents:	As a result of wave action and beach type
Waves/waves overwashing:	As a result of model wave height and exposure to ocean swells
Inshore holes/deep water:	As a result of coastal processes, wave action and beach type
Slippery rocks:	As a result of coastal geography/break walls and wave action
Shallow sandbanks/shore dump:	As a result of coastal process, wave action and beach type
Submerged rocks:	As a result of coastal geography and sand movement
Stingers/sharks:	As a result of marine life
Cliffs:	As a result of coastal geography
Rock shelves/platforms:	As a result of coastal geography
Boating traffic:	As a result of human interaction

Based on risk analysis of these hazards, it has been identified that they pose risk to the following types of recreational users:

Strong ocean/tidal/rip currents	Swimmers, surf craft users, fishermen, rock platform users
Waves/waves overwashing:	Swimmers, surf craft users, fishermen, rock platform users
Inshore holes/deep water:	Swimmers, fishermen
Slippery rocks:	Fishermen, rock platform users
Shallow sandbanks/shore dump:	Swimmers, surf craft users
Submerged rocks:	Swimmers, surf craft users, fishermen
Stingers/sharks:	Swimmers, surf craft users
Cliffs:	Fishermen, walkers, sight seers
Rock shelves/platforms:	Surf craft users, fishermen, rock platform users
Boating traffic:	Swimmers, surf craft users, boaters

Existing Risk Treatments

Land Managers in partnership with a number of other organisations have implemented the below risk treatment initiatives within the Tweed LGA. These include:

- System of supervision
- Education and awareness programmes
- Safety signage
- Local emergency marker system

## SUMMARY OF KEY RECOMMENDATIONS

Please note:

- The below recommendations are provided as options for guidance only and will not be binding to the Land Manager
- The below recommendations are in no particular order in regards to prioritisation
- Further explanation to the recommendations should also be referenced and can be found on the corresponding pages

### **Recommendation 1**

**The Tweed Shire Council should consider implementing the following treatment options:**

#### **Strategic Coordination:**

- 1.1 Beach usage and incident data (drowning incidents, emergency callouts, lifesaving and lifeguard statistics) should be used when making informed decisions about the implementation of risk treatments for coastal safety. (p.33)
- 1.2 The 'Tweed Beach Safety Liaison Committee' should continue to hold regularly scheduled surf liaison meetings as an effective forum to raise safety issues and implement strategies in the Tweed coastal environment. The committee should have a standing item on all future meeting agendas titled 'coastal risk management – status and issues', or similar. Recommendations found in this report can be addressed in this agenda item. (p.36)
- 1.3 Treatment options in this report should be implemented using a staged/prioritisation approach, based on evidence. (p.43)

#### **Education:**

- 1.4 Existing education and awareness programmes within the Tweed Local Government Area should continue to be implemented and reviewed. (p.47)
- 1.5 Education and awareness programmes should include standardised key safety messages which are recognised by the aquatic safety industry e.g. (Water Safety NSW website, 'watersafety.nsw.gov.au'). (p.47)
- 1.6 Display safety information (e.g. posters) which promotes key water safety messages, at amenity blocks and visitor information displays directly located around coastal beach access. (p.47)
- 1.7 Work with peak coastal water safety agencies to conduct surf safety programmes at local public schools. (p.47)
- 1.8 Land Managers and key stakeholders should continue to promote and encourage rock fishermen to wear lifejackets. (p.47)

#### **Signage:**

- 1.9 Standardised water safety signage that aligns to Australian standards and best-practice 'style' should be implemented at the locations listed in Appendix A. This may include the maintenance and upgrade of existing signage through planned works schedules, the consolidation of multiple existing signs into a single sign (less signs) or the removal of unnecessary signage. (p.52)
- 1.10 Temporary signage should be used at locations where there is a higher risk of injury due to temporary hazards such as dangerous access, beach erosion and debris. (p.52)

#### **Access:**

- 1.11 Formal access tracks identified in Appendix A should continue to be regularly maintained through ongoing infrastructure and capital works programmes. This will encourage formal access use (rather than informal), enhance the effectiveness of water safety signage and minimise the quantity of signage needed. (p.56)

- 1.12 Informal access tracks identified in Appendix A should be considered for redirection or consolidation, in order to promote/facilitate the use of formal access. (p.56)

**Surveillance and Supervision:**

- 1.13 The level of lifeguarding services provided (staffing levels, operational dates, patrol hours and locations) should be reviewed on a regular basis to ensure the most suitable and effective service is provided. (p.70)
- 1.14 Explore the means to fund an increase to the Tweed lifeguard service at Duranbah to patrol all weekends during the surf life saving season. Lifeguards should also patrol every day during the summer months. (p.70)
- 1.15 Explore the means to fund an increase to the Tweed lifeguard service at Kingscliff to provide year round patrols, excluding when the volunteer lifesavers patrol the beach on weekends and public holidays (during the surf life saving season). (p.70)
- 1.16 After the contract for Salt expires, it is recommended that lifeguard patrol coverage is decreased as funding can be used at other priority locations such as Duranbah and Kingscliff. However, as the beach is backed by large resorts and new development, a lifeguard service should still operate during the school holiday periods (spring, summer and autumn). Lifeguards should also patrol every day during the summer months (weekdays). (p.70)
- 1.17 Explore the means to fund an increase to the Tweed lifeguard service at Cabarita to patrol every day during the summer months (weekdays). (p.71)
- 1.18 Explore the means to fund an increase to the Tweed lifeguard service at Pottsville North to provide coverage on weekends from the end of the summer school holidays until the start of the autumn school holidays. (p.71)
- 1.19 Utilise the 'Lifesaving Service Level Calculator' on an annual basis, or as population densities change significantly, to measure the extent of increased beach usage in proximity to the proposed Kings Forest property development at Cabarita. (p.71)

**Monitor and Review:**

- 1.20 In consultation with relevant stakeholders this document should be reviewed annually to measure the effectiveness of any risk mitigation strategies and drowning prevention initiatives that have been implemented. (p.78)
- 1.21 All drowning prevention strategies should be documented and incorporated into the relevant strategic and management plans. This will ensure consistency throughout the management area and a structured approach to maintenance. (p.78)

**Recommendation 2**

**The National Parks and Wildlife Service - Office of Environment and Heritage should consider implementing the following treatment options**

**Strategic Coordination:**

- 2.1 Beach usage and incident data (drowning incidents, emergency callouts, lifesaving and lifeguard statistics) should be used when making informed decisions about the implementation of risk treatments for coastal safety. (p.33)
- 2.2 A staff member from NPWS should be represented on the 'Tweed Beach Safety Liaison Committee' which acts as an effective forum to raise safety issues and implement strategies in the Tweed coastal environment. (p.36)



- 2.3 Treatment options in this report should be implemented using a staged/prioritisation approach, based on evidence. (p.43)

**Education:**

- 2.4 Display safety information (e.g. posters) which promotes key water safety messages, at amenity blocks and visitor information displays directly located around coastal beach access. (p.47)
- 2.5 Land Managers and key stakeholders should continue to promote and encourage rock fishermen to wear lifejackets. (p.47)

**Signage:**

- 2.6 Standardised water safety signage that aligns to Australian standards and best-practice 'style' should be implemented at the locations listed in Appendix A. This may include the maintenance and upgrade of existing signage through planned works schedules, the consolidation of multiple existing signs into a single sign (less signs) or the removal of unnecessary signage. (p.52)

**Access:**

- 2.7 Formal access tracks identified in Appendix A should continue to be regularly maintained through ongoing infrastructure and capital works programmes. This will encourage formal access use (rather than informal), enhance the effectiveness of water safety signage and minimise the quantity of signage needed. (p.56)
- 2.8 Informal access tracks identified in Appendix A should be considered for redirection or consolidation, in order to promote/facilitate use of formal access. (p.56)

**Monitor and Review**

- 2.9 In consultation with relevant stakeholders this document should be reviewed annually to measure the effectiveness of any risk mitigation strategies and drowning prevention initiatives that have been implemented. (p.78)
- 2.10 All drowning prevention strategies should be documented and incorporated into the relevant strategic and management plans. This will ensure consistency throughout the management area and a structured approach to maintenance. (p.78)

**Recommendation 3**

**The Water Safety Advisory Council should consider implementing the following treatment options:**

**Strategic Coordination:**

- 3.1 A review be commissioned to analyse the historical environmental conditions at the time of recorded drowning deaths where the Bureau of Meteorology (BOM) is able to supply data. Such a report should identify the relevant trends and causal factors. (p.33)

**Education:**

- 3.2 Develop relationships with tourism agencies to expand on the coastal accommodation network programme with the aim of distributing standardised surf safety collateral e.g. brochures, flyers, pamphlets etc. to all coastal accommodation providers in the Tweed Local Government Area. (p.48)

**Signage:**

- 3.3 Work with Tourism NSW to encourage coastal accommodation providers (e.g. resorts and caravan parks) that have direct beach access to implement the use of temporary signage at the main entry points during

dangerous surf warnings issued by the Bureau of Meteorology (BOM) – warning the public of large/hazardous waves. (p.52)

**Emergency Marker Signage:**

3.4 With guidance from the NSW Government - Ministry for Police and Emergency Services and Land and Property Information a state-aligned emergency marker programme at all identified access locations should be implemented once such a programme is established. (p.54)

**Public Rescue Equipment:**

3.5 Explore the means to fund the expansion of the 'Angel Ring Project' in consultation with the Australian National Sports Fishing Association (NSW Branch) and the Recreational Fishing Alliance of NSW at the locations outlined in 'Appendix C'. (p.58)

**Recommendation 4**

**Australian CoastSafe, Surf Life Saving New South Wales, Surf Life Saving Far North Coast and local Clubs should consider implementing the following treatment options:**

**Strategic Coordination:**

4.1 The 'Tweed Beach Safety Liaison Committee' should continue to hold regularly scheduled surf liaison meetings as an effective forum to raise safety issues and implement strategies in the Tweed coastal environment. The committee should have a standing item on all future meeting agendas titled 'coastal risk management – status and issues', or similar. Recommendations found in this report can be addressed in this agenda item. (p.36)

**Emergency Marker Signage:**

4.2 To reduce the likelihood of confusion which may lead to delays in an emergency response, Australian CoastSafe will supply the Emergency Information Coordination Unit (EICU) (NSW LPI) with data and information collected referencing the existing localised marker system for inclusion in the Spatial Information and Mapping System (SIMS). (p.54)

**System of Supervision:**

4.3 Surf Life Saving New South Wales & Surf Life Saving Far North Coast should work with Fingal, Cudgen Headland, Salt and Cabarita Surf Life Saving Clubs to align volunteer patrolling hours to ensure consistent service delivery across the Tweed Coast. (p.71)

**Emergency Response:**

4.4 Explore the means to fund Emergency Response Beacons (mobile) at the following locations to be used in conjunction with lifesaving and lifeguard patrols:

- North Kingscliff Caravan Park (1.5km north of club)
- Fingal/Letitia Spit (1.7km north of club) (p.73)

4.5 Cross-border joint operations between surf rescue agencies and other emergency services operating in both NSW and QLD should be improved by developing formalised standard operating procedures. (p.77)

**Recommendation 5**

**The Australian National Sports Fishing Association (NSW Branch) and the Recreational Fishing Alliance of NSW should consider implementing the following risk treatment options:**

5.1 Install and maintain public rescue equipment e.g. life rings at the locations outlined in Appendix C (depending on the outcome of treatment option 3.5). Final positioning should be determined by ANSA NSW. (p.58)