

12 Eudlo Creek

Eudlo Creek is a feeder tributary to the Maroochy River. It flows from the Blackall Range near Eudlo and joins the river approximately 950 metres upstream of the Sunshine Motorway Bridge at Maroochydore. Eudlo Creek is very popular for different types of ship operations and activities, particularly kayaks, canoes and water skiing.

Land use along the banks of Eudlo Creek is predominantly native vegetation, with relatively small areas of commercial development at Maroochydore. The Eudlo Creek Conservation Area follows the creek's northern bank for approximately 2.4 kilometres upstream of the Eudlo Creek Bridge near Maroochydore; and the Buderim Conservation Park follows the creek's southern bank for approximately 1.1 kilometres upstream of the conservation area at Kunda Park. Rural residential development occupies only a very small area of the creek's northern bank along its upper reach. The majority of the creek's banks retain their native riparian vegetation. The creek also forms part of the Maroochy fish habitat area under fisheries legislation.

The Reference Group is not aware of any environmental issues, such as erosion or bank instability, which may present a problem within Eudlo Creek.

The waters of Eudlo Creek are navigable for small ships up to six metres in length. The depth of navigable waters is often quite shallow – less than one metre at lowest astronomical tide in many areas of the channel, with mud flats becoming exposed at low tides adjacent to the creek's western bank. The width of navigable water is approximately 90 metres or less. There is also a 90° bend in the creek near the middle of the area where water skiing activities are currently permitted, approximately 620 metres from the start of that area. The width of navigable water at the bend is approximately 70 metres. The clearance height of the Eudlo Creek Bridge at Diddillibah is about 3 metres at highest astronomical tide. Reports from shipping inspectors suggest the presence of submerged logs and other underwater obstructions near the upstream end of the area used for water skiing, as well as further upstream.

The Maroochy River Resort is set on the waterfront of a small man-made lagoon connected to the creek, just upstream of the Eudlo Creek Bridge. The lagoon joins the creek approximately 560 metres upstream of its confluence with the Maroochy River. A number of kayaks, canoes and paddle craft are offered for hire from the resort; however, these craft are supposed to be used only on waters of the lagoon. A BoatSafe Training Organisation also utilises facilities at the resort for the delivery of BoatSafe training courses on Saturdays, depending on participant numbers.

The waters of Eudlo Creek used for water skiing activities are those from 50 metres upstream of a public boat ramp adjacent to the Lions Park off Fishermans Road at Maroochydore to 1,150 metres upstream of the same boat ramp. This part of Eudlo Creek has been used for water skiing activities since at least the 1960s. There are sand shoals within this area; the depth of navigable water is from 0.9 to 1.9 metres at lowest astronomical tide. Information from the Maroochy River Water Ski

Association suggests that experienced water skiers avoid water skiing activities in the creek during low tide. It is also well known that the Maroochy River Water Ski Association and the Sunshine Coast Kayak Club have previously expressed different views about the nature and suitability of water skiing and passive craft activities on this part of the creek.

In late 2007, following discussions with the Sunshine Coast Regional Council, the Maroochy River Water Ski Association and the Sunshine Coast Canoe Club (as the kayak club was then known) participated in a resolution process that culminated in the production of a code of conduct for water skiers and paddlers on Eudlo Creek. The purpose of the code was to articulate shared understandings and relevant obligations for both user groups, with a view to ensuring safe and harmonious enjoyment of the waterway. The Reference Group noted that it is timely to review the code, with support from Maritime Safety Queensland.

There are no aids to navigation in the creek, but there is a series of speed signs and water skiing signs erected both within the creek and near its mouth.

The public boat ramp in the Lions Park off Fishermans Road is the only boat ramp with direct access to Eudlo Creek.

The club house for the Sunshine Coast Kayak Club is situated adjacent to a public car park at the southern end of the Lions Park. There is a picnic area and children's playground nearby. A community market also takes place on a grassed area near the intersection of Fishermans Road and David Low Way every Sunday morning from 6 am to midday.

Maritime Safety Queensland erected a tide gauge in Eudlo Creek, which gathered data for tidal information. The agency established the time difference for tides in Eudlo Creek with tides in the Mooloolah River, the nearest standard port:

- high tide for Eudlo Creek – high tide for Mooloolah River +100 minutes, with an actual ratio of 0.83
- low tide for Eudlo Creek – low tide for Mooloolah River +55 minutes, with an actual ratio of 0.45.

This means that low tide for Eudlo Creek occurs 55 minutes later than low tide for the Mooloolah River, and that the height of low tide in the creek is less than half the height of low tide in the river.

It is also important to highlight that tidal conditions at any location may be affected by meteorological conditions and seasonal variations.

Maritime Safety Queensland does not conduct regular hydrographic surveys of Eudlo Creek. The most recent survey was conducted during February 2001, but it only included those waters of the creek from its mouth to near the end of the water skiing area.

12.1.1 Waterway users and issues

The user density for Eudlo Creek ranges from very low to high during weekends, public holidays and school holidays, depending on the time of day.

The waterway users of Eudlo Creek are mainly:

- dinghies and speed boats engaged in recreational fishing
- fast moving personal watercraft
- fast moving speed boats and personal watercraft towing water skiers and wake boarders
- slow moving hire and drive dinghies and pontoon boats
- slow moving passive craft, like kayaks and canoes.

It is also reasonable to expect swimmers in the water, including children, near a little beach on the creek's eastern bank about 200 metres upstream from the public boat ramp. The width of navigable water near this beach is approximately 70 metres.

The Sunshine Coast Kayak Club uses the creek near its club house as a marshalling area and also the start and finish line for aquatic events, such as kayak races. It is not uncommon for there to be more than 60 kayaks participating in these events.

The Maroochy River Water Ski Association also regularly uses the creek for water skiing activities, where not prohibited. Eudlo Creek has been a very popular location for this type of activity for more than 50 years.

The little beach is also used by the operators of speed boats and personal watercraft towing water skiers, not members of the local water ski association, as a start and finish point for their water skiing activities.

The *Sunshine Coast Vessel Activity Survey 2009* reported 225 observations of ships on Eudlo Creek during a 12 hour period on 11 April 2009. This number included 127 recreational speed boats, 41 recreational personal watercraft and 54 paddle craft, which represented about 19 ship movements per hour. An analysis of ship observations revealed an operational pattern: paddle craft primarily in the morning; and personal watercraft during the afternoon. This was the first time that a survey of this nature was conducted for Eudlo Creek.

Maritime Safety Queensland also performed observations of Eudlo Creek during short periods on 41 days from 3 April 2010 to 30 May 2010. The agency reported observations of 580 ships and 80 people either swimming or recreationally fishing from the shore. The number of ships included 495 paddle craft, 11 speed boats, 35 water skiers and 15 personal watercraft. The vast majority of paddle craft activities appeared to be finished by mid-morning; and most water skiing, personal watercraft and swimming activities seemed to occur from 12 pm onwards.

The Reference Group identified a number of waterway issues for Eudlo Creek:

- natural features of the creek – depth and width of navigable water, and underwater obstructions
- increased numbers of paddlers during aquatic and school events – up to 60 participants
- interaction and congestion of different types of ships from the creek's mouth to near the club house of the Sunshine Coast Kayak Club during weekends and holidays – most popular boat ramp for the Maroochy River system

- location of the club house within the area used for water skiing – paddlers launch into this area
- conflict between water skiers and paddlers – the turning and drop-off point for water skiers is the same as the launching point for paddlers
- effects from wake boarding – particular types of wake boarding boats are designed to generate large wash
- effects of wash from high-speed ship operations on the operations of passive craft
- contraventions of water skiing requirements and operational speed limits
- at times, the creek's capacity for water skiing activities appears to be reached or exceeded.

The Maroochy River Water Ski Association presented a document to the Reference Group that set out a number of points for consideration in relation to water skiing activities on Eudlo Creek, including:

- information and warning signs
- direction of navigation
- ship length
- length of tow ropes
- number of ships engaged in water skiing at one time
- tidal state, indicated by a tide board or other marker
- wake boarding and use of air chairs
- safety management plan, incorporating an induction program and a water skiing roster system
- code of conduct.

The Reference Group carefully examined these points when developing the solutions to address the waterway issues on the creek. The association's document is captured as item P5298 on Sunshine Coast office container 245/00012.

The Sunshine Coast Kayak Club also presented a document to the Reference Group that set out its position in relation to water skiing activities. The Reference Group carefully considered this document when developing the regulatory solutions for the creek. The club's document is captured as item P5307 on Sunshine Coast office container 245/00012.

Maritime Safety Queensland has received eight reports of marine incidents in Eudlo Creek since July 2000. Two of these involved collisions, one was the swamping of a passive craft by a speed boat, and four were water skiing incidents. The water skiing incidents resulted in injuries to four people, three of whom required hospitalisation.

12.1.2 Existing legislative requirements

A speed limit of 6 knots applies to all ships on waters of Eudlo Creek and the connected waterway from and including the Eudlo Creek Bridge on David Low Way to waters 50 metres upstream of the public boat ramp in Fisherman's Road. This speed limit was fixed by gazette notice on 21 May 2004.

A general smooth water speed limit of 40 knots applies to all ships on all other waters of Eudlo Creek because no other speed limit has been fixed for the waterway. The general speed limit was also fixed by gazette notice on 21 May 2004.

A speed limit of 30 knots or less applies to all personal watercraft used for hire and drive operations, following recommendations from a coronial report in March 2010. The speed limit was fixed by gazette notice on 27 May 2011.

The operational speed limits provided by sections 127, 127A and 128 of the *Transport Operations (Marine Safety) Regulation 2004* also apply.

All waters of Eudlo Creek, except for those 50 metres upstream of the public boat ramp in Fishermans Road to 1,150 metres upstream of the same boat ramp, are stated by gazette notice as waters where water skiing is an activity that endangers marine safety. The gazette notice was published on 28 February 1997.

Maritime Safety Queensland has received a number of complaints regarding the operations of speed boats and personal watercraft on Eudlo Creek. Reports from shipping inspectors also suggest that speed boats and personal watercraft regularly contravene operational speed limits and water skiing requirements, particularly the personal flotation device requirement and the observer requirement.

12.1.3 Recommendations

Eudlo Creek is a narrow and shallow waterway, often subject to high levels of ship traffic on weekends, public holidays and school holidays, depending on the time of day. The waters of the creek used for water skiing activities are also shallow, especially at low tide.

The Reference Group recognises the importance and popularity of Eudlo Creek for different types of on-water activities, both active and passive uses.

The Reference Group believes that specific information and education for the recreational boating community, to raise awareness of waterway issues on Eudlo Creek, is fundamental to the success of any new regulatory regime.

The Reference Group also believes that high-speed ship operations upstream from the upstream boundary of the existing water skiing prohibition are unsafe.

The Reference Group fully appreciates the concerns of all stakeholders, as well as the effect that an expanded regulatory regime could have on users of Eudlo Creek. The group highlights the overarching general safety obligation imposed on all persons involved with ship operations, particularly owners and masters. The group also acknowledges the difficulties associated with the practical enforcement of a regulatory regime that contains many elements. In arriving at its recommendations, the Reference Group followed principles set out in section 7.

However, the Reference Group's members expressed two different views on the most appropriate way to ensure marine safety —

1. Some members believe that the existing water skiing prohibition should be maintained, augmented with certain regulatory conditions and other safety

management arrangements that could include:

- maximum length of a ship towing a water skier – 6.1 metres
- maximum number of tow lines attached to a ship – one
- maximum number of ships engaged in the activity at one time – three
- maximum length of the tow line – 18.3 metres
- prohibition on water skiing on some low tides, indicated by a tide board
- standard direction of navigation – anti-clockwise so that ships towing water skiers pass port to port
- prohibitions on wake boarding, towing of tubes, and use of air chairs and other hydrofoil-type water skis
- rostering for water skiing activities.

These members believe that a system incorporating these elements would achieve an acceptable level of marine safety and allow the continuation of certain water skiing activities. They also believe that a maximum ship length of 6.1 metres should relieve concerns about excessive wash and the interaction of powered ships with paddle craft, because speed boats designed specifically for wake boarding and wash generation are generally built over this length.

2. Other members believe that the speed limit for the creek from its entrance to the end of the existing water skiing area (except for the 6 knots speed zone) should be reduced from 40 to 20 knots and that the existing water skiing prohibition should be expanded to include all waters of the creek. This position effectively ends all water skiing activities on Eudlo Creek.

The members supporting the latter position believe that high-speed operations and water skiing activities endanger marine safety, because of the creek's natural features and the level of ship traffic. These members contend that a ship's master navigating the creek at high speed and towing a water skier is unable comply with the operational speed limits of the *Transport Operations (Marine Safety) Regulation 2004* and rules 6, 8 and 9 of the Collision Regulations.

As mentioned elsewhere in this report, a contravention of one of these legislative requirements may cause a marine incident, which in turn, may be evidence of a contravention of the general safety obligation.

Consequently, the Reference Group believes that the existing regulatory regime for Eudlo Creek should be expanded to provide a better marine safety system, and therefore makes the following recommendations, including recommendations for a new water skiing prohibition and speed limit as options:

General recommendations

- 1 – Enforcement presence
- 4 – New speed signs
- 5 – New water skiing signs
- 6 – Update Beacon to Beacon
- 7 – Review of new speed limits and water skiing prohibitions by December 2012

Specific recommendations

47 – Eudlo Creek – existing speed limits of 6 knots

That the General Manager should maintain the existing speed limits of 6 knots for all ships on waters of Eudlo Creek and the adjoining lagoon from Eudlo Creek Bridge on David Low Way at Maroochydore to 50 metres upstream of the public boat ramp in Fishermans Road at Maroochydore.

48 – Eudlo Creek – new speed limit of 6 knots

That the General Manager should fix by gazette notice a new speed limit of 6 knots for all ships on waters of Eudlo Creek upstream from 1,150 metres upstream of the public boat ramp in Fishermans Road at Maroochydore.

49A – Eudlo Creek – existing speed limit 40 knots and new water skiing prohibition, on conditions – Option 1

That the General Manager should maintain the existing speed limit of 40 knots for all ships on certain waters of Eudlo Creek, namely:

- *waters from the creek's confluence with Maroochy River to Eudlo Creek Bridge*
- *from 50 metres upstream of the public boat ramp in Fishermans Road at Maroochydore to 1,150 metres upstream of the public boat ramp in Fishermans Road at Maroochydore; in conjunction with*

That the General Manager should state by gazette notice a new water skiing prohibition for all waters of Eudlo Creek, except for waters from 50 metres upstream of the public boat ramp in Fishermans Road at Maroochydore to 1,150 metres upstream of the public boat ramp in Fishermans Road at Maroochydore, providing the following conditions are met:

- *a ship towing a water skier must not be more than 6.1 metres in length*
- *there must not be more than one tow line attached to a ship; or alternatively*

49B – Eudlo Creek – new speed limit 20 knots and new water skiing prohibition – Option 2

That the General Manager should fix by gazette notice a new speed limit of 20 knots for all ships on certain waters of Eudlo Creek, namely:

- *waters from the creek's confluence with Maroochy River to Eudlo Creek Bridge*
- *from 50 metres upstream of the public boat ramp in Fishermans Road at Maroochydore to 1,150 metres upstream of the public boat ramp in Fishermans Road at Maroochydore; in conjunction with*

That the General Manager should state by gazette notice a new water skiing prohibition for all waters of Eudlo Creek.

50 – Eudlo Creek – new warning signs

That Maritime Safety Queensland should erect three new warning signs at strategic locations in Eudlo Creek to warn waterway users about obstructions and hazardous conditions that affect navigation:

- *at the end of the existing water skiing area – one warning sign – POTENTIAL OBSTRUCTIONS / NAVIGATE WITH CAUTION*

- *near the public boat ramp – one warning sign – SHALLOW WATERWAY / NAVIGATE WITH CAUTION*
- *near the public boat ramp – one warning sign – BUSY WATERWAY (with graphical symbols for powered ship, personal watercraft, water skiing, sailing ship and paddle craft) NAVIGATE TO CONDITIONS.*

51 – Eudlo Creek – new code of conduct

That Maroochy River Water Ski Association and Sunshine Coast Kayak Club, with support from Maritime Safety Queensland, should develop and implement a code of conduct for water skiers and paddlers on Eudlo Creek (subject to recommendations 49A or 49B).

52 – Eudlo Creek – new safety management plan

That Maroochy River Water Ski Association, with support from Maritime Safety Queensland, should develop and implement a new safety management plan for water skiing activities on Eudlo Creek, incorporating the following:

- *maximum ship length – 6.1 metres*
- *maximum number of tow lines – one*
- *maximum number of ships at one time – three*
- *maximum length of tow lines – 18.3 metres*
- *standard direction of navigation on the creek – anti-clockwise so that ships towing water skiers pass port to port*
- *safety induction program – ship masters and water skiers before participating in water skiing activities on the creek*
- *water skiing roster – club members and visitors*
- *tidal information – time difference from Mooloolaba Boat Harbour*
- *local information – potential obstructions to navigation and other hazards on the creek*
- *strong discouragement for certain activities – wake boarding, towing of tubes, and use of air chairs and other hydrofoil-type water skis*
- *information signs – ship length, tow lines, direction of navigation, tidal information*
- *warning signs – erected by Maritime Safety Queensland.*

This recommendation is subject to recommendations 49A or 49B.

53 – Maroochy River (Areas 6 and 7) and Eudlo Creek – new education campaign

That Maritime Safety Queensland should develop and implement a new recreational boating education campaign for Maroochy River and Eudlo Creek to raise community awareness about:

- *different types of ship operations and activities reasonably expected between Bli Bli and Maroochydore*
- *water skiing on Eudlo Creek (subject to recommendations 49A or 49B)*
- *freestyling restriction for personal watercraft*
- *operational speed limits for ships and personal watercraft.*

The education campaign could include:

- information packs
- information on Maritime Safety Queensland's website
- information on Department Transport and Main Road's Facebook and Twitter pages
- links from Maritime Safety Queensland's website to other government websites
- links from websites owned by external entities to Maritime Safety Queensland's website (subject to approval where necessary)
- articles in Maritime Safety Queensland's publication *Seascope*
- notices to mariners.

The Reference Group identified two issues for Eudlo Creek that may be addressed through a marine zone:

- wake generation by certain types of speed boats used for wake boarding – primarily their interaction with other types of craft, which sometimes results in contraventions of an operational speed limit for wash
- higher risks posed by certain water skiing activities, namely towing of tubes, air chairs and other hydrofoil-type water skis – due to the level of ship traffic, the depth of water in the creek, and in the case of tubes, the lack of control that might be exercised by a water skier participating in that activity.

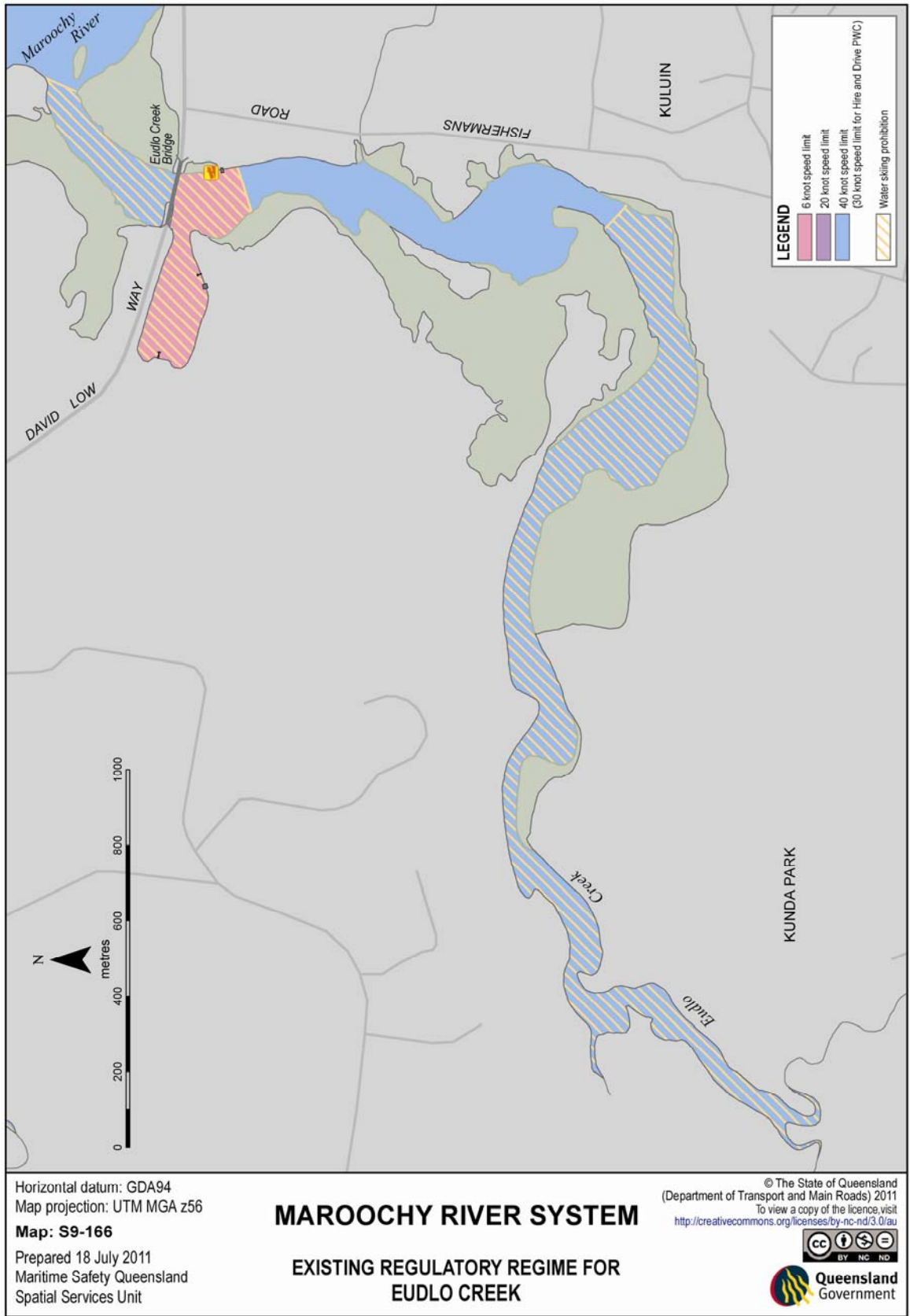
Consequently, the Reference Group also makes the following recommendation:

8 – Maroochy River system – proposal for a marine zone

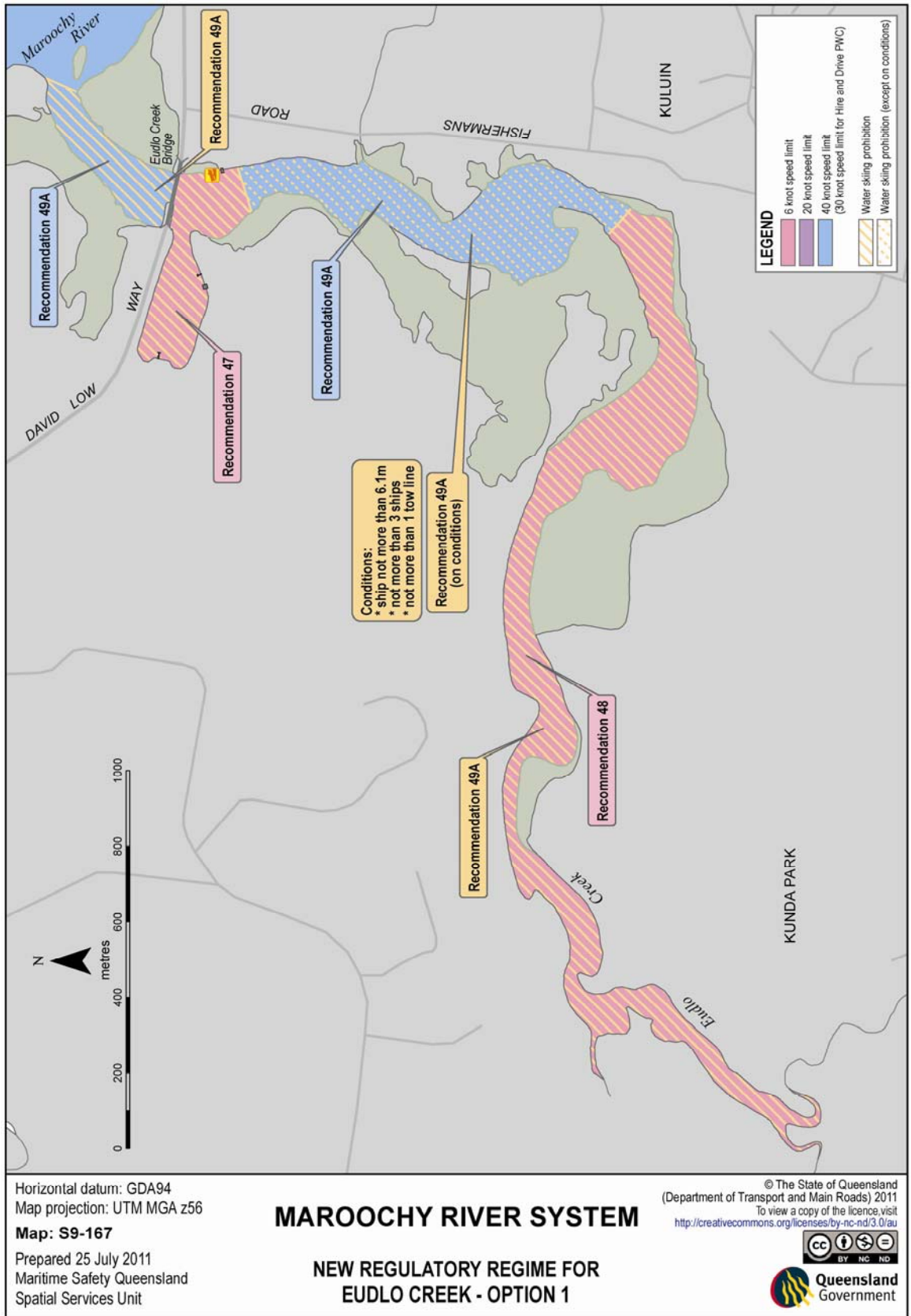
That Sunshine Coast Regional Council should consider a proposal for a marine zone, as envisaged by part 9A of the Transport Operations (Marine Safety) Regulation 2004, to manage certain types of water skiing activities on Eudlo Creek by a requirement that:

- *a ship more than 6.1 metres in length must not be operated on the creek for wake boarding*
- *a ship must not be operated on the creek for towing of tubes and hydrofoil-type water skis.*

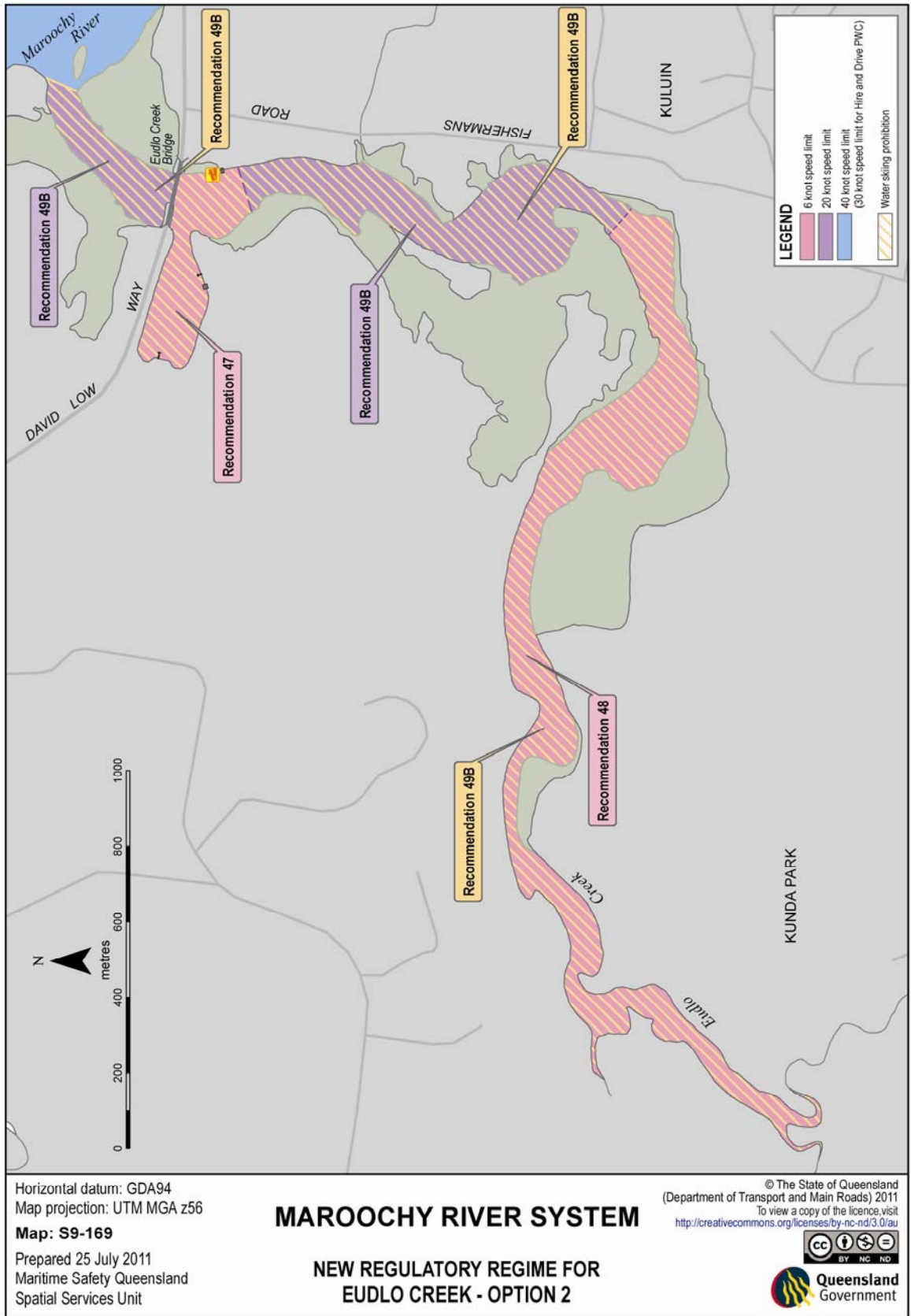
Maps that depict the existing regulatory regime and the new regime recommended by the Reference Group can be found on pages 102 to 104.



Map S9-166 – Existing regulatory regime for Eudlo Creek



Map S9-167 – New regulatory regime for Eudlo Creek – Option 1



Map S9-169 – New regulatory regime for Eudlo Creek – Option 2