

# Queensland Recreational Boating Facilities Demand Forecasting Study 2022

Statewide Summary



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Author	Daniel Wishaw, Nicholas Heiner, Geoff Long
Reviewed By	Katrina O'Malley-Jones
Project Manager	Daniel Wishaw

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## Definitions

Term	Definition
All-tide (for boat ramps)	Access from a boat ramp to the open sea with an approach depth of 0.5m below LAT or deeper and a depth at boat ramp toe of 0.5m below LAT or deeper.
All-tide (for landings)	Access from a gangway-access pontoon or jetty to the open sea with an approach depth of 1.5m below LAT or deeper and a depth on at least one face of the pontoon of 1.5m below LAT or deeper.
BIP	Boating Infrastructure Program – a sub-program within MSQ's Maritime Assets and Infrastructure Program
Boat ramp	A foreshore concrete ramp with a slope designed for vehicular launching and retrieving of recreational boats.
Breakwater	A structure constructed over the seabed and/or the foreshore, usually rising to a height above high tide, designed to provide protection to landward areas by limiting penetration of wave action or currents.
CTU	Car-trailer unit space – a parking space for a typical car with a boat trailer attached.
Demand	Demand is the requirement of the boat-owning population for facilities to launch/retrieve trailer boats and/or to berth suitable boats at a given year to service their average (non-peak period) needs. In most locations demand is based on vessel registrations and is expressed in terms of boat ramp lanes or in number of 12m berths at landings.
Effective capacity	For a boat ramp, effective capacity (effective lanes) means the number of boat ramp lanes after adjusting for anticipated unavailability due to unacceptable wave action (>0.2m wave height) or water depth, usage constraints such as the lack of adequate parking, and improvements to efficiency or launch/retrieval throughput such as floating walkways or pontoons.
FHA	Fish Habitat Area, declared under the Fisheries Act, 1994
FIFO	Fly-in fly-out, where skilled workers travel from their city or central location home communities to a remote site to perform their duties often in blocks of time that provide regular, non-weekend, days off.
Fixed sloping walkway	A fixed sloping structure installed at the side of a boat ramp to assist launching/retrieval of trailer boats, and dry embarkation/disembarkation from trailer boats. It is sloped to allow use at varying tide heights – sometimes with sections of different slope.
Floating walkway	Multiple connected/hinged flotation modules configured to assist launching/retrieval of trailer boats, and dry embarkation/disembarkation from trailer boats at most if not all stages of the tide. Floating walkways are connected to a concrete shore abutment allowing pedestrian and assisted wheelchair access.
Gangway-access pontoon	A platform/module that always floats, where a boat can be secured alongside on one or more faces. Pontoons are usually separated from a boat ramp and have a hinged articulated gangway for access to the shore via an abutment.
GBR	Great Barrier Reef
GCWA	Gold Coast Waterways Authority

Term	Definition
Landing	A landing is a jetty or gangway-access pontoon that facilitates berthing of vessels and transfer of passengers and stores. They are most often associated with non-trailable vessels
Landside	Refers to areas above high-water mark, often used to denote the location of and type of infrastructure.
LAT	Lowest Astronomical Tide, used as Chart Datum on navigational charts.
LGA	Local Government Area
Managing authority	Councils, port authorities, water storage managers as listed in schedule 1 of the Transport Infrastructure (Public Marine Facilities) Regulation 2011
MCU	Material change of use under the planning scheme
MNES	Matter of national environmental significance under the Environment Protection and Biodiversity Conservation Act 1999
MSQ	Maritime Safety Queensland
NC Act	Nature Conservation Act 1992
Near all-tide	Access from a boat ramp to the open sea with a minimum approach depth of 0.5m below LAT and minimum depth at the boat ramp of 0.5m below LAT for 80 percent or more of the tidal range (time measured over a year).
Parking - Formalised	A sealed, line-marked parking area for car-trailer units, providing adequately sized parking spaces, roadways and turning circles.
Parking – Semi-formalised	An all-weather non-sealed parking area, with markers to delineate adequately sized car-trailer unit parking bays and turning circles. Markers can be concrete blocks, pavement markers (e.g. retro-reflective raised markers) or other permanent instalment to show parking bays.
Parking – Informal overflow	A naturally surfaced area available for use as overflow parking on the design boating day, signed as such. To have mixed-use purpose (e.g., parkland) when not being utilised as overflow parking.
Part-tide	Boat ramps that do not meet near all-tide or near all-tide requirements.
PV	Passenger vehicle (i.e., car – as opposed to car-trailer unit).
Port Authority	An organisation that is responsible for the management of one or more ports on the Queensland coast.
Population Centre	Official named urban settlements (populated places) that have been sourced from the Queensland Place Names Database.
Registration activation rate	The percentage of registered vessels liable to be in use on any given good weather weekend day
Shortfall	The number of effective boat ramp lanes or landings required to meet demand for a given timeframe. Negative shortfall signifies an oversupply for the time period nominated.
SPL	Strategic Port Land
Study	The Recreational Boating Facility Demand Forecasting Study 2022, including this document.

Term	Definition
TMR	Department of Transport and Main Roads
Water Storage Authority	Includes Seqwater, Sunwater
Waterside	Refers to areas below high-water mark, often used to denote the location of and type of infrastructure, including dredged channels and breakwaters.
WHA	World Heritage Area
#	Number

# 1 Introduction

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## 1.1 Background and context

BMT has been appointed to undertake the Recreational Boating Facilities Demand Forecasting Study 2022 (‘the Study’) by Maritime Safety Queensland (MSQ), a branch of the Queensland Department of Transport and Main Roads (TMR), on behalf of all public recreational boating facility managers and owners across Queensland. The Study supersedes the 2017 study of the same name and is intended to report on recreational boating facility demand, capacity, and shortfall over a 20-year period at a Local Government Area (LGA) scale across Queensland.

## 1.2 Purpose

The purpose of the Study is to report on the forecast need for public recreational boating facilities in Queensland and recommend viable project proposals to enhance the state-wide capacity of boating infrastructure to satisfy demand for boat launching and landing. The reports document demand within each LGA, considering factors such as:

- demand from recreational boat users residing in the subject council area
- demand from recreational boat users residing in other council areas and affecting the subject council area
- tourism demand (from whatever source, including interstate)
- demand created by destinations that are reached across water via ‘gateway’ landing and launching facilities (destinations may include locations on the mainland, islands, and offshore/inshore waters).

The Study is publicly available but intended primarily for the use of councils, port authorities, water storage authorities, the Gold Coast Waterways Authority (GCWA) and MSQ in informing budgets and planning of forward works programs.

## 1.3 Scope

A report for each LGA within Queensland as well as a state-wide summary report (this report) has been produced to detail recreational boating facility demand and capacity for Queensland. Each LGA report summarises demand pressures from vessel registration data, population statistics, assumptions around local usage and the movement of vessels into and out of the LGA, and existing capacity and recommends opportunities to satisfy any shortfall. This state-wide report supports the LGA reports and provides context at a state level for demand pressures, current capacity, equity of access to facilities and state-wide priority for major boating facilities. Recommendations proposed in each report are non-regulatory in nature and are intended to be used as part of a broader suite of information to identify priority investment in recreational boating infrastructure at a local and state level.

The Study reports on publicly accessible recreational boating facilities for use by registered vessels. This includes boat ramps, floating walkways, pontoons, fixed sloping walkways and supporting car and trailer parking at each facility. The Study does not include recommendations for facilities that are used primarily for commercial purposes, private facilities, non-motorised recreation such as launching canoes and stand-up paddle boards, and fishing platforms.

Information used within the Study have been sourced from the 2021 Australian Census (ABS, 2021), recreational boat vessel registrations, consultation with facility owners, managers, and stakeholders,



the 2022 Queensland Government Get-Involved recreational boating facilities survey (MSQ, 2022), previous versions of this Study (GHD 2011, GHD 2017) and human movement statistics.

Demand pressure is established primarily on statistics derived from registration of recreational vessels and population data. However, non-statistical forms of demand are also reflected in Study recommendations. Existing and forecast demand is evaluated over a 20-year period and recommendations are made on how this demand might be met over that period. Recommendations may include improvements to both landside and waterside capacity depending on the facility.

#### 1.4 Limitations and assumptions

The development of recommendations within the Study are undertaken at pre-concept level, however, the scale of the Study precludes a detailed assessment of each of the recommendations put forward which may include:

- detailed vehicular traffic flow and interactions
- geotechnical assessments
- wave or hydrodynamic modelling
- detailed engineering assessments.

Each of the above assessments are considered in a preliminary manner, however, it is expected that detailed assessment of each of these will need to be completed during further design and planning. Recommendation costings for construction costs are to a 50% scale and are not inclusive of design, planning, approvals, or land acquisition costs.

The statistical model for the Study uses publicly available datasets or datasets acquired during the Study by stakeholders or third parties. Critical assumptions made during this Study, where further research and/or data could yield improvements for future Studies includes:

- Vessel activation rates: this is the proportion of vessels assumed to be active from the total fleet on a 'good boating day'.
- Boat ramp lane capacity: the number of vessels that can be launched and retrieved in the daylight hours per day.
- Queuing facility efficiency improvements: the improvement factor applied for certain queuing facilities at boat launching facilities.
- Landing usage: the number of vessels requiring deep-draught landings in an LGA at any given time.

Details on these assumptions are provided in the LGA-scale reports.

## 2 Study Methodology

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The methodology developed for this Study combines robust statistical inputs with local context gathered through extensive consultation with facility users, managers and owners. By approaching the Study in this manner, the methodology provides consistency on a state-wide scale while remaining flexible to local or site-specific needs. The following sub-sections detail the Study methodology:

### 2.1 Statistical modelling

The Study has developed a model for assessing the statistical capacity and demand of recreational boat launching and landing facilities. The complete methodology for these calculations is provided in Annex A and Annex B respectively. The statistical capacity is subtracted from the statistical demand to derive the overall shortfall of effective boat ramp lanes and boat landings for 2021, as well as in five year increments out to 2041. Recommendations for upgrading existing or constructing new recreational boating facilities are made to minimise this shortfall over time.

#### 2.1.1 Capacity modelling

The existing capacity of recreational boat launching facilities is calculated using the number of boat ramp lanes along with consideration of the environmental factors and queuing facilities that support boat launching. A summary of the capacity statistics is provided in section 3. Environmental factors include tidal access, and exposure to currents and wave conditions, as determined through local knowledge, the consultation process, and by reviewing aerial imagery (Nearmap and Queensland Globe) and hydrographic maps (ELVIS and Navionics) where available. Queuing facilities such as gangway-access pontoons, floating walkways, fixed sloping walkways and queuing beaches all increase the effective capacity of a boat ramp by improving the efficiency of launching and retrieving vessels in various ways. The capacity of recreational boat landing facilities is calculated by the available working faces at deep-draught landings, which are typically gangway-access pontoons and in rare cases jetties, that have suitable sheltering and bathymetry accessible by deep-draught vessels.

#### 2.1.2 Demand modelling

The demand for recreational boating facilities is calculated using inputs from the 2021 Census (Australian Bureau of Statistics, 2021), population projections (QGSO, 2018), vessel registration data (TMR, 2021) and inter-LGA vessel flow determined from human movement statistics. The population and registration statistics are combined to derive a trend over the last 15 years of proportional vessel ownership, measured in the number of registered vessels per 1,000 residents. Trends in proportional vessel ownership and population growth are then used to estimate the future fleet sizes for each LGA.

For each LGA the 'activation rate' is derived based on remoteness, proportion of blue-collar workers, average age, and whether an LGA is adjacent to the coast – resulting in a rate of between 6% and 15%. The total fleet is multiplied by the activation rate to determine the 'active fleet' to approximate the number of vessels from the total fleet that are assumed to be active on a 'good boating day'. The target of a 'good boating day' represents typical demand experienced outside of peak periods, such as holidays.

The 'active fleet' may use facilities within the home LGA or cross LGA borders to use facilities in other LGAs. This inter-LGA movement is determined by using more than half a million individual data points of human movement statistics at boat ramps across the state. The human movement statistics are provided by a third party and include information on the time of use and the home LGA (LGA of origin) of the boat ramp users. Once the 'active fleet' is distributed using the human movement statistics, the

demand for boat launching and landing facilities is derived for each LGA, with application of the growth calculations informing the demand pressure for the years 2021, 2026, 2031, 2036 and 2041.

The capacity of existing facilities is subtracted from the demand to derive the shortfall for all time periods. A summary of the demand statistics is provided in section 4, while the workflow for the capacity, demand, shortfall, and recommendation process is provided in Figure 2.1.

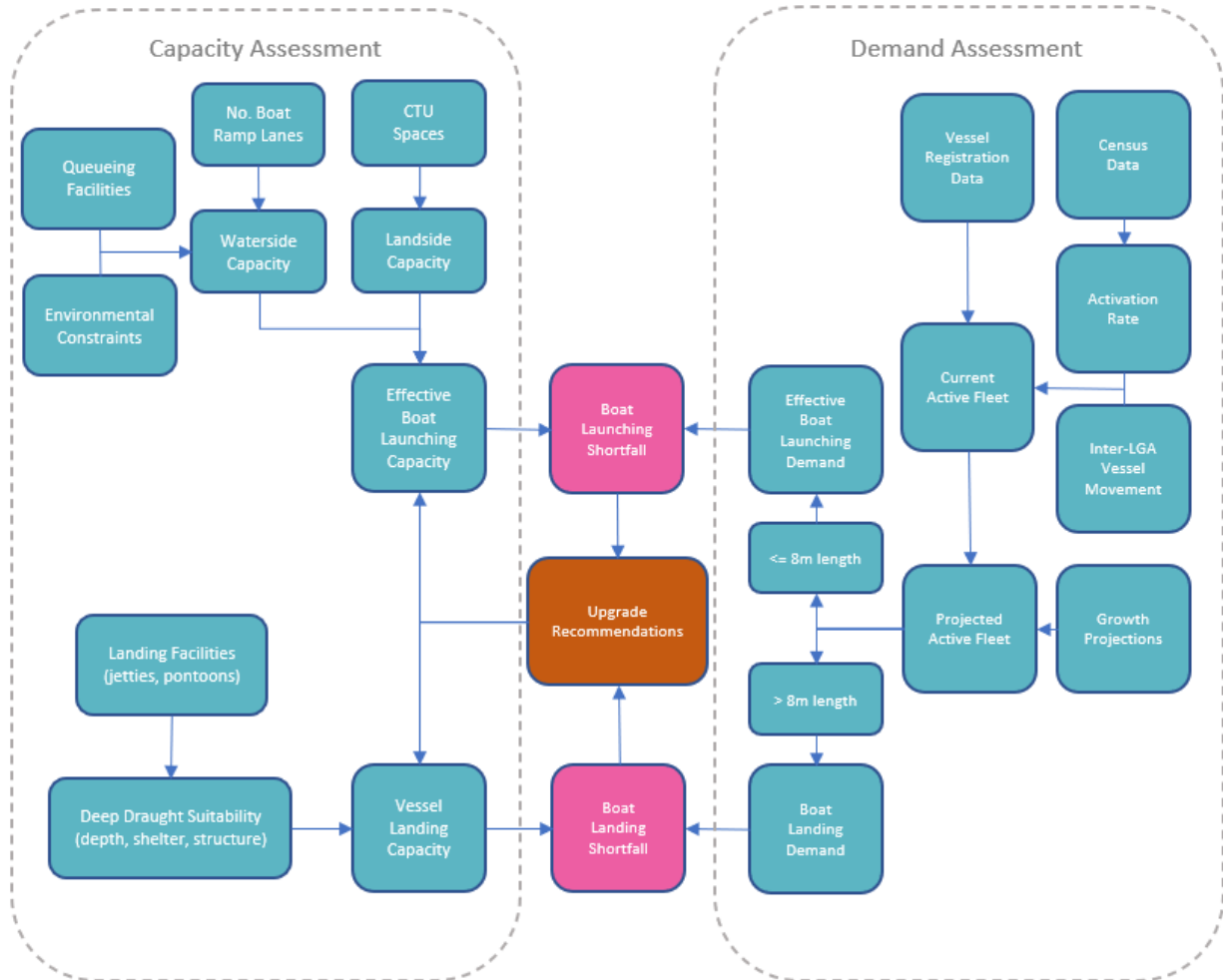


Figure 2.1 Process flow for deriving Study statistics

## 2.2 Stakeholder engagement

Throughout the Study process, the Study team sought to engage with as many stakeholders of recreational boating facilities as possible so that the reporting and final recommendations incorporated a wide range of viewpoints. The Study team invited every local government agency, water authority, and port authority in Queensland as well as selected recreational groups, volunteer marine rescue and coastguard organisations to discuss their regional recreational boating facilities. Face-to-face and/or virtual meetings with these organisations were held in conjunction with Maritime Safety Queensland, with a list of organisations attending these meetings provided in Annex C

The meetings allowed stakeholders to discuss specific facilities that they owned, managed or used to discuss the usability of the facility, capacity limitations, suggestions for future improvements, destinations and uses of the facility, alternative facilities and user groups. As well as the facility scale discussion, stakeholders were invited to discuss LGA or regional scale issues with respect to demand satisfaction, key destinations, safety, usability, access and suggested improvements or new facility locations.

In conjunction with the meetings conducted, TMR hosted a recreational boat user survey through the Queensland State Government “Get Involved” platform that received 2,773 responses, that are broken down by LGA in Figure 2.2. Recurring themes for individual LGAs from the written feedback in the survey are summarised for each of the relevant LGAs, with the following state-wide summary statistics:

- A total of 2,773 valid responses were received.
- 77% of respondents used a power trailer boat, with 8% using a personal water craft (jet-ski) and 10% using a yacht or non-trailable power boat.
- 70% of respondents used a vessel between 4.5m and 8m, with a further 24% using a vessel shorter than 4.5m.
- 63% of respondents used their boat 3-4 times a month, with a further 33% using their boat at least once a month.
- 69% of respondents travelled less than 30 minutes to launch their vessel, with only 8% travelling greater than 1 hour.
- 94% of respondents indicated their vessel was less than 8 tonnes.
- 66% of users identified floating walkways as their preferred queuing facility, with 29% and 21% of users identifying gangway-access pontoons and queuing beaches respectively. Note: this question allowed more than one preference.
- 65% of respondents noted that facilities were currently sufficient for their needs.

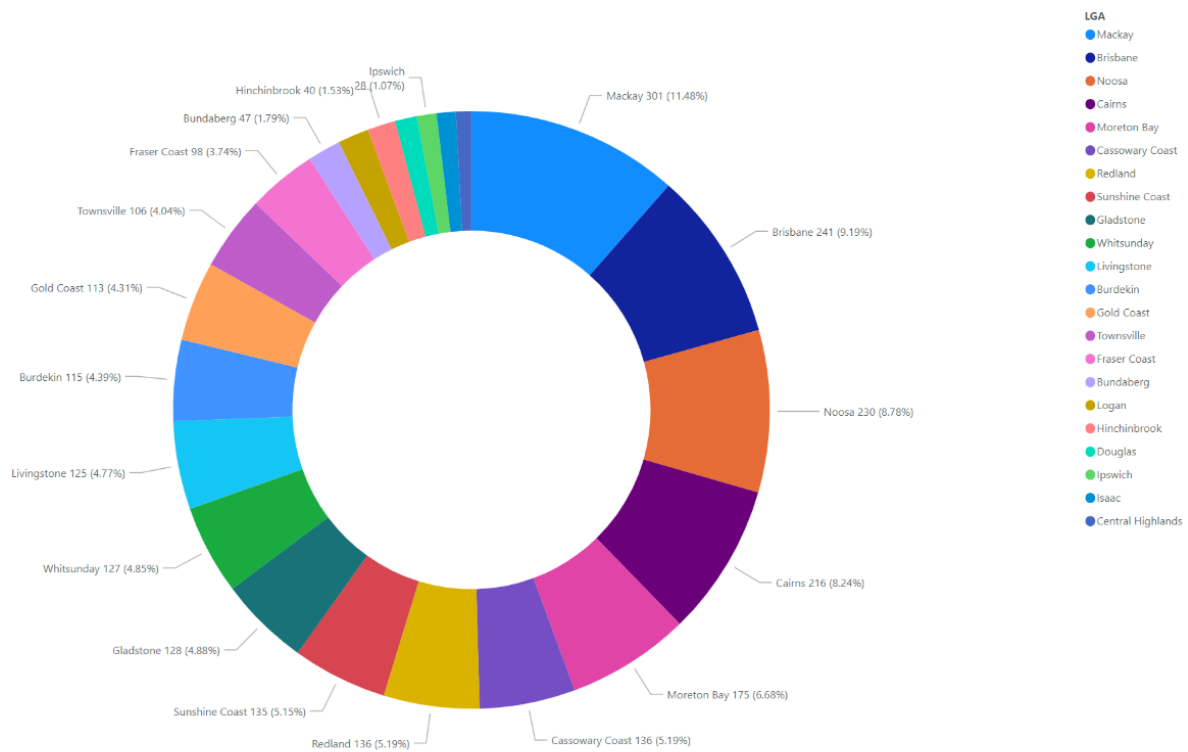


Figure 2.2 Raw count and percentage of responses to the TMR survey by LGA, for LGAs with at least 20 responses

### 2.3 Capacity improvement recommendations

Recommendations to increase the capacity of existing facilities or provide additional capacity at new facilities are proposed by the Study at varying priority between priority 1 (for immediate planning and design) and priority 4 (for construction within 20 years) to minimise the shortfall for recreational boating facilities. Priority is placed on maximising capacity of existing facilities, prior to recommending construction of new facilities, where possible.

In addition to the statistical demand and to destination-driven demand, the Study also considers non-statistical demand pressures at facilities identified through site visits and consultation. However, non-statistical demand has not been exhaustively examined for all facilities – as it was not a primary Study objective. Non-statistical demand pressures could warrant upgrades to facilities even where statistical demand is satisfied by existing capacity.

Non-statistical demand pressures are generally classified into the following categories:

- **Amenity:** Amenity describes the functional usability of the facility including the desire to provide dry entry and exit facilities, facilities that provide easy access and/or access for persons with restricted mobility.
- **Safety:** Safety demand includes protection from currents and waves or contact with marine creatures such as sharks, jellyfish, and crocodiles.
- **On-water congestion:** Where existing queuing facilities are unable to efficiently meet the needs of the facility. Such deficiency may warrant additional queuing facility capacity to optimise boat launching and retrieval.



The presence of a non-statistical demand pressure at a facility may not warrant upgrades where other suitable facilities are reasonably available. A summary of the recommendations from the Study is provided in section 5.

## 3 Capacity Summary

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### 3.1 LGA scale capacity

The Study methodology (section 2) for capacity determines the LGA-scale capacity of recreational boat launching and landing facilities for all LGAs in Queensland. The methodology is described in detail in Annex B, while Annex D provides the following summary statistics for each LGA:

- number of registered boats
- number of public boating facilities
- number of formal boat ramp lanes
- number of all-tide boat ramp lanes
- number of near all-tide boat ramps
- number of part-tide boat ramp lanes
- effective capacity of boat ramp lanes
- effective capacity of public landings.

The distribution of recreational boating capacity, measured in effective boat ramp lanes and vessel landings is shown in Figure 3.1 and Figure 3.2 respectively. The distribution highlights that capacity of boat launching facilities is mainly focussed along the eastern coastline between the NSW border and Cairns. The south-east Queensland LGAs have the highest counts of effective boat launching capacity, which is consistent with population distribution.

The distribution of public vessel landings is strongly concentrated in south-east Queensland, where most deep-draught vessels are registered. As well as providing capacity to the local fleet of deep-draught vessels within each LGA, there is a need to provide suitable landings for vessels cruising along the east coast of Queensland. These facilities are required to support the provisioning of vessels (and pickup/setdown of passengers) as they travel along the coast, and to provide access to desirable land-based destinations. Private marina facilities may be used by cruising vessels where there is an expectation of a prolonged stay that requires protected mooring or berthing. The Queensland east coast network is generally well serviced with public landing facilities, however there is a substantial gap between Gladstone and Airlie Beach (Whitsunday LGA) that is only serviced by one jetty in Rosslyn Bay, in Livingstone LGA – and a further major gap between Cooktown and Thursday Island

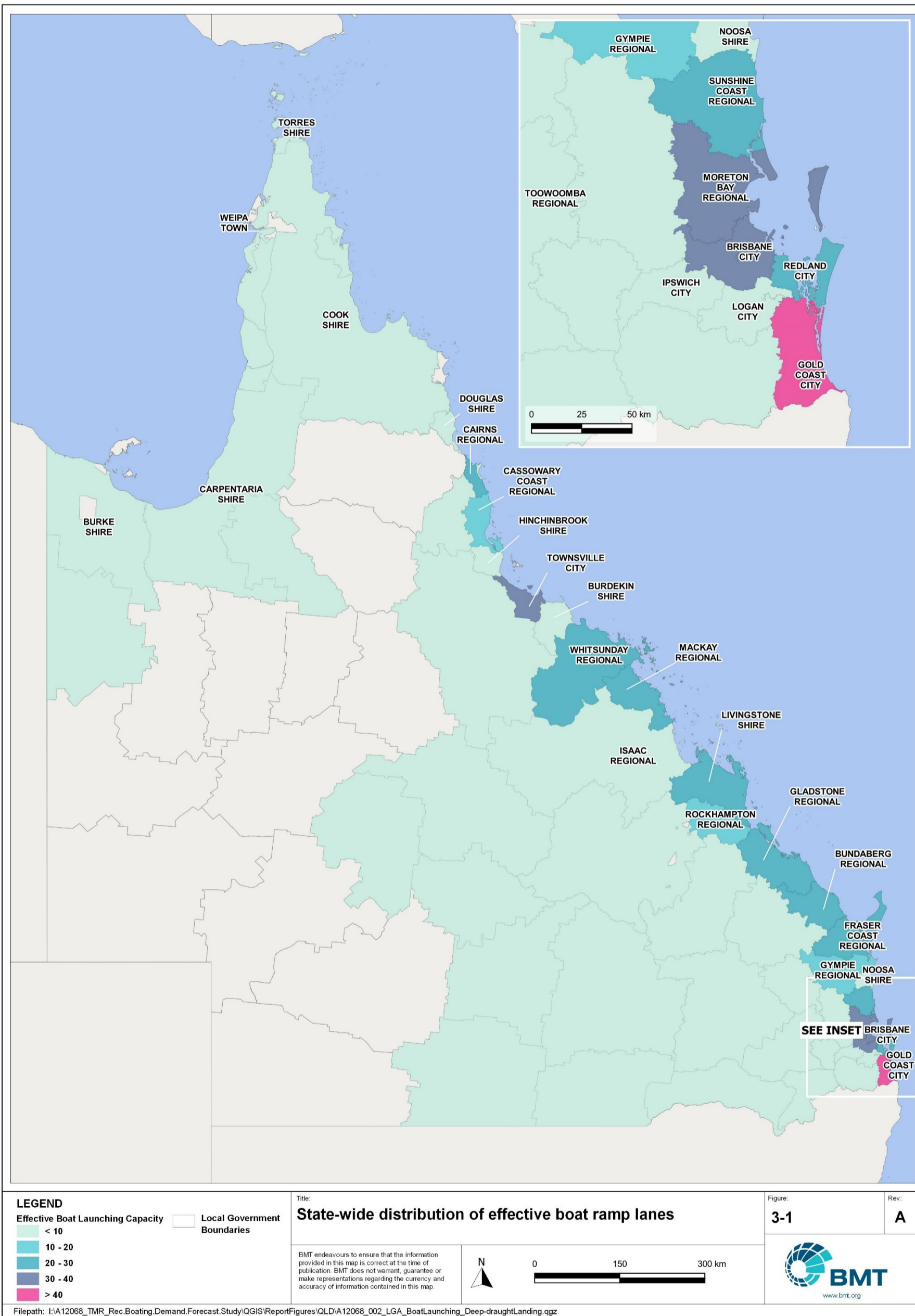


Figure 3.1 State-wide distribution of effective boat ramp lanes

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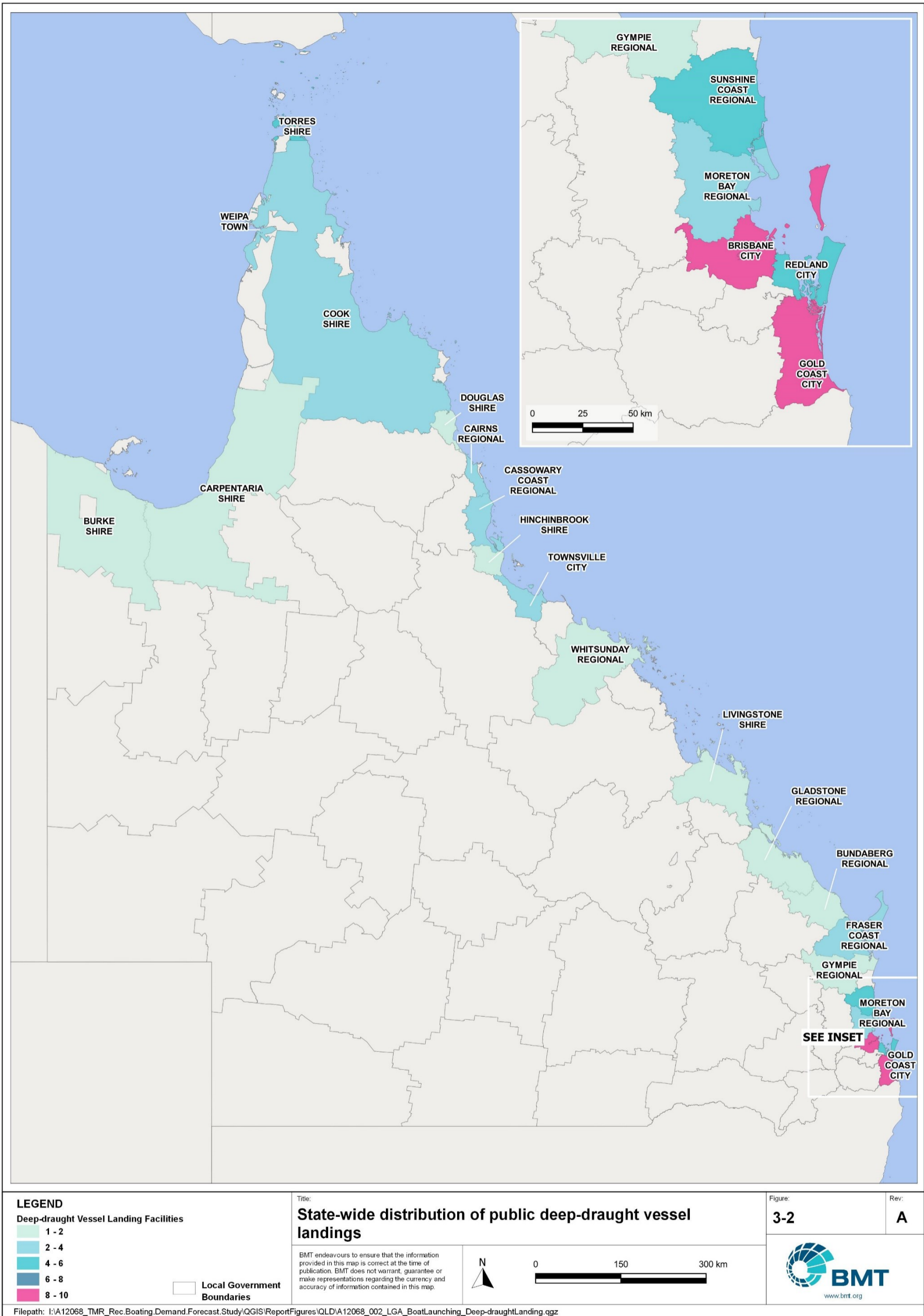


Figure 3.2 State-wide distribution of public deep-draught vessel landings

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### 3.2 Access to unrestricted open-water accessible all-tide or near all-tide facilities

MSQ has a long-term vision to provide access to facilities that provide sheltered and unrestricted all-tide or near all-tide access to the open water (henceforth referred to as open water facilities) along the Queensland coast, such that all significant population centres are within one hour's driving range as far as practical (TMR, 2020). For this purpose, the Study has defined relevant towns as being within the coastal strip if within 30km of the Queensland coastline. The vision (TMR, 2020) is applied to the coastal strip between the NSW border and Cooktown. Consultation throughout the Study has highlighted that this vision is important with users/stakeholders, and with organisations that own and manage boating facilities. As such, the Study uses a statistical approach to quantify this vision to allow it to be measured and tracked over time. To do this, the Study calculates the travel time from all Population Centres (DoR, 2022) within the coastal zone to the nearest open water facility, regardless of which LGA it is in. This is accomplished using mapped road networks and assigning speed limits to each type of road as follows:

- for restricted roads, 40km/hr
- for local roads, 60km/hr
- for connector roads, 70km/hr
- for distributor roads, 80km/hr
- for highways, 100km/hr.

Maps and statistics for individual LGAs are provided in the relevant LGA Study reports, with a state-wide map provided in Figure 3.3. The results indicate that MSQ is generally achieving its vision, except within Isaac LGA, which has a large tidal range, very small coastal communities and no cost-effective opportunities for construction of a suitable open-water accessible facility. Burdekin LGA also has no open water facilities within the LGA but road travel to facilities in Townsville or Whitsunday LGAs is possible within 60 minutes.

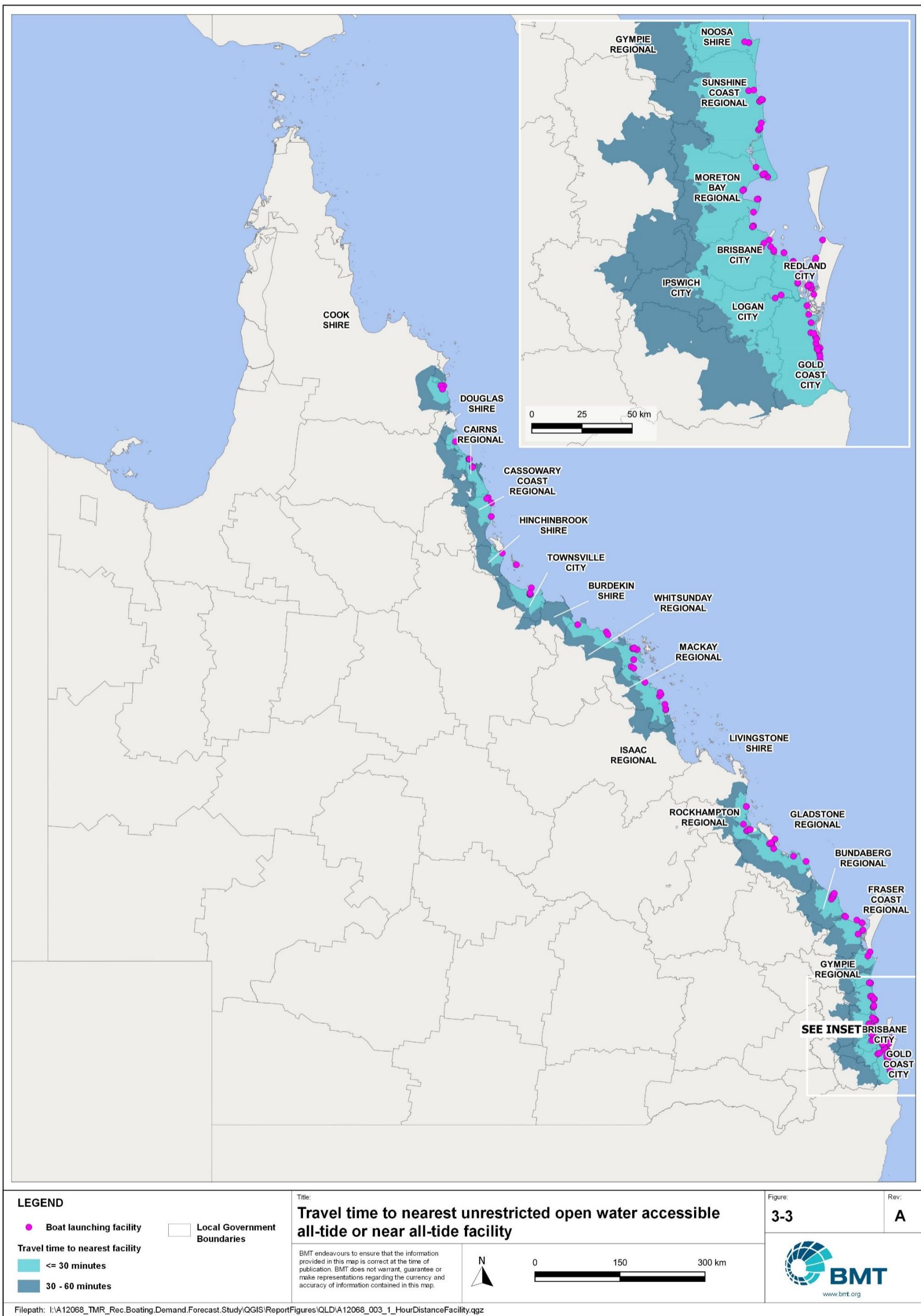


Figure 3.3 Travel time to nearest unrestricted open-water accessible all-tide or near all-tide facility

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## 4 Demand and Shortfall Summary

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The Study methodology (section 2) for demand determines the LGA-scale demand for recreational boat launching and landing facilities for all LGAs in Queensland. Boat launching demand is calculated by determining the number of vessels less than or equal to 8m in length within the LGA and multiplying this by the 'activation rate', which is the percentage of vessels assumed to be active on an average 'good boating day', and inclusion, or subtraction, of any vessels flowing into or out of the LGA.

Deep-draught vessel landing demand is calculated by determining the number of vessels greater than 8m in length operating within an LGA and assuming that 5% of these will require a landing at any given time. The full methodology is described in detail in Annex A, while Annex E provides summary existing demand statistics for each LGA using the following criteria:

- demand for recreational boat launching facilities
- shortfall of effective boat launching facilities
- demand for recreational landing facilities
- shortfall of boat launching facilities that provide unrestricted all-tide or near all-tide access to open water for the applicable LGAs
- shortfall of boat landing facilities.

The demand for effective boat ramp lanes is mapped in Figure 4.1. The shortfall of effective boat ramp lanes per LGA is shown in Figure 4.2 for LGAs with at least one boat launching facility, and mapped for all LGAs in Figure 4.3. The overall satisfaction of current demand, that is, the ratio of existing capacity to existing demand, for large (containing at least six facilities) LGAs is provided in Figure 4.4 along with the state-wide demand satisfaction level.

The demand for boat launching facilities is derived from the number of vessels within the LGA as well as the net inflow of vessels from other LGAs. The inter-LGA movement uses movement statistics to determine the LGA-of-origin of a sample of users at each boating facility across Queensland. The statistics recorded more than half a million individual users of boat launching facilities, with an assumed capture rate of between 15% and 30%, as verified by comparison with facilities using continuous counting of boat traffic. This data was used to provide a relative reference between facilities, with the understanding that the data is counting mobile devices recorded in the capture area and not actual boats. The total numbers of recorded devices at each boat launching facility is provided in Annex A. The net inflow for any LGA is calculated from the inter-LGA movement of vessels, with net-inflow of vessels in the active fleet mapped in Figure 4.5 and significant individual LGA exchanges mapped in Figure 4.6. Figure 4.7 highlights LGAs where the percentage of recreational boating facility users within the LGA are a minority of total users, indicating a high demand from users originating from outside the LGA.

### 4.1 Shortfall of unrestricted open-water accessible all-tide or near all-tide facilities

In conjunction with the whole-of-LGA shortfall, the shortfall of the subset of facilities that provides unrestricted all-tide or near all-tide access to open water (open water facility) is also considered. The demand on these facilities is considered by combining an approximation (the same as the GHD (2017) study) and by using the human movement statistics to evaluate the relative proportion of use of these facilities. The following two scenarios are assessed and averaged to determine the demand for, and shortfall in, open water facilities:

Scenario 1: 80% of larger vessels and 20% of smaller vessels from the local fleet and 80% of the visiting fleet use facilities with unrestricted open water access.

Scenario 2: Distributing the fleet between facilities as per the human movement statistics.

This analysis identifies in some LGAs a specific shortfall at these facilities, independently of whether the overall capacity is being met, and indicates where increased capacity should be targeted. The open water shortfall is provided with the demand statistics (Annex E) for selected LGAs. The largest shortfall of open water capacity is in LGAs with the largest overall shortfall – Gold Coast, Sunshine Coast and Fraser Coast. This suggests that, for these LGAs, higher priority recommendations should seek to enhance open water capacity before other upgrades or new facilities are considered.

The existing open water shortfall in Cairns, Livingstone, Whitsundays, and Cassowary Coast LGAs highlights a significant shortfall for open water facilities that are all addressed through high priority recommendations, or in the case of Cairns, through the completion of the new facility currently under construction at Yorkeys Knob. Open water shortfall is a key area of concern for stakeholders in Mackay as well, and while the statistics identify this issue, it is not as pronounced as for the previously mentioned LGAs. This suggests that the issue in Mackay appears to be a distribution problem, with users unable to easily redistribute from an overflowing Mackay Harbour. Consequently, increased capacity that can work in conjunction with the Mackay Harbour facility is a priority 1 recommendation.

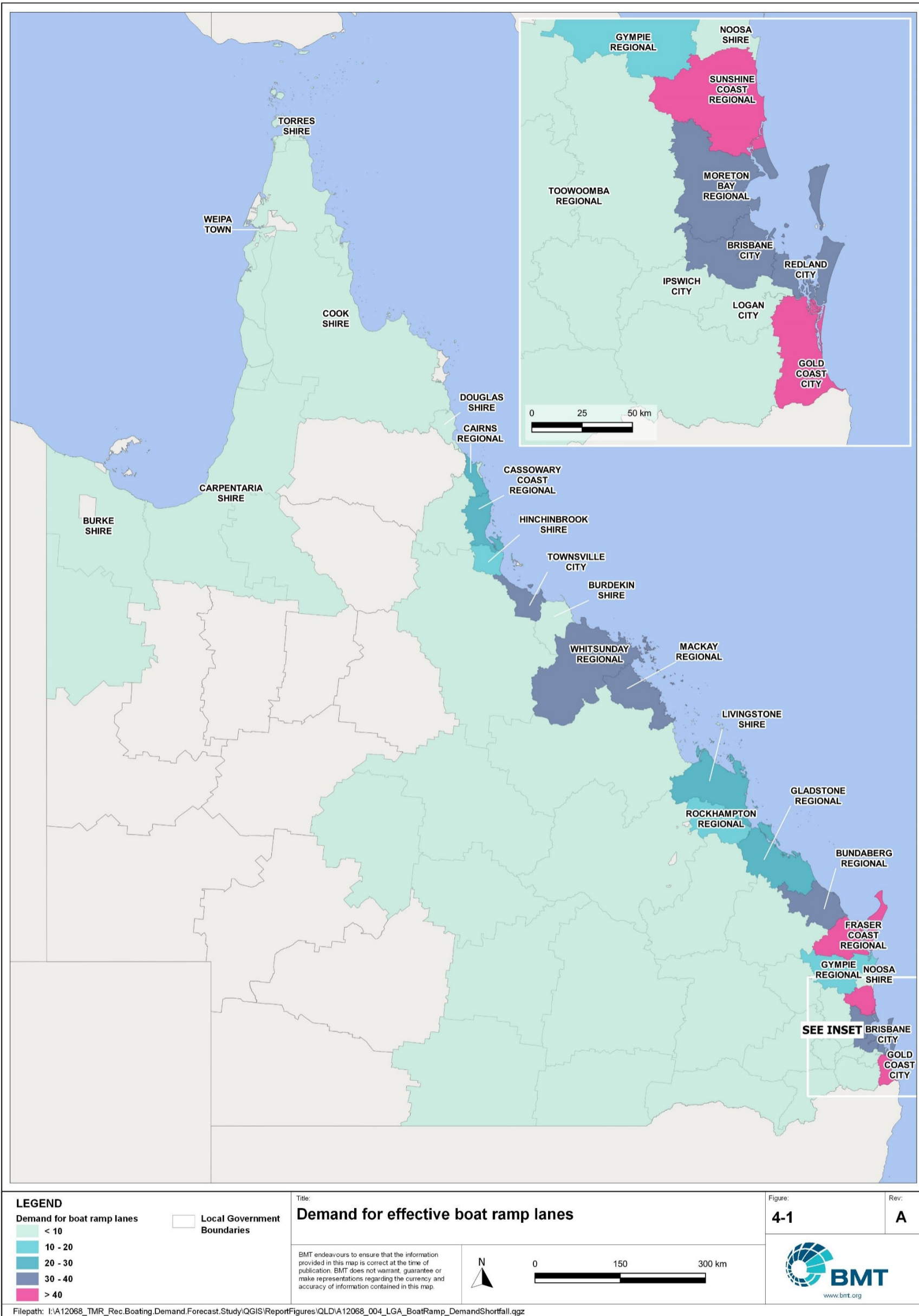


Figure 4.1 Demand for effective boat ramp lanes

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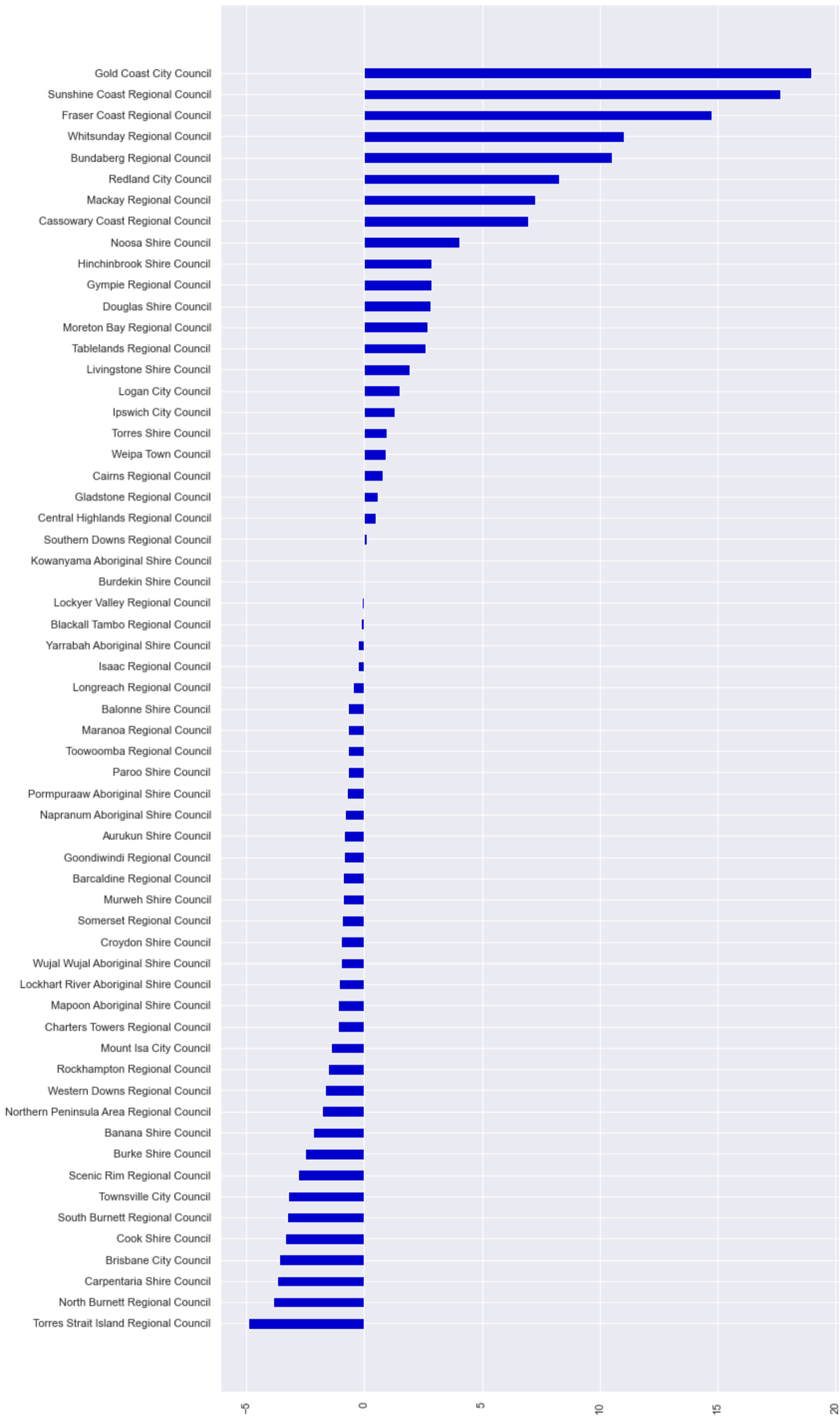


Figure 4.2 Shortfall of effective boat ramp lanes per LGA for LGAs with a boat launching facility

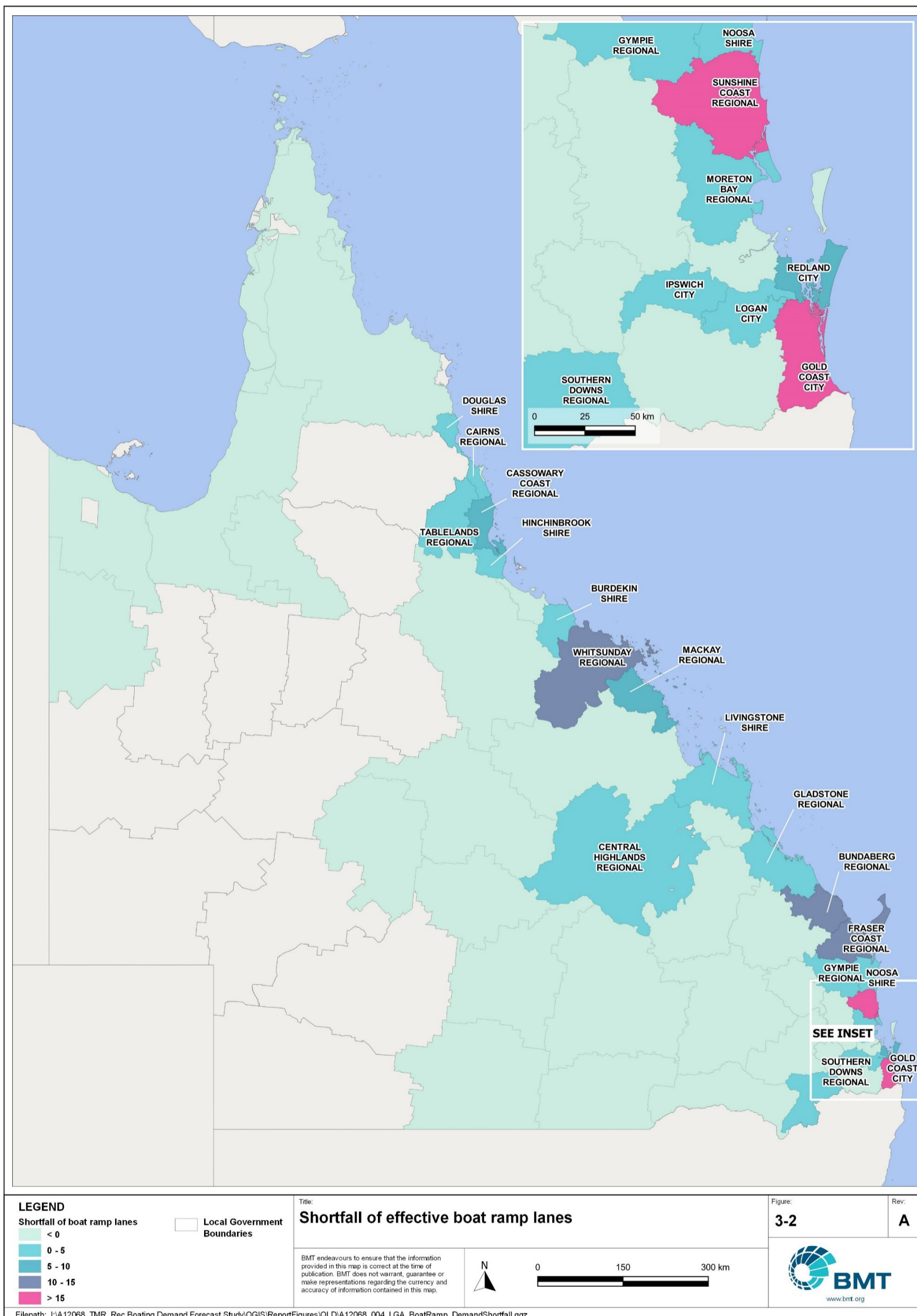


Figure 4.3 Shortfall of effective boat ramp lanes

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### Existing Demand Satisfaction for Large LGAs

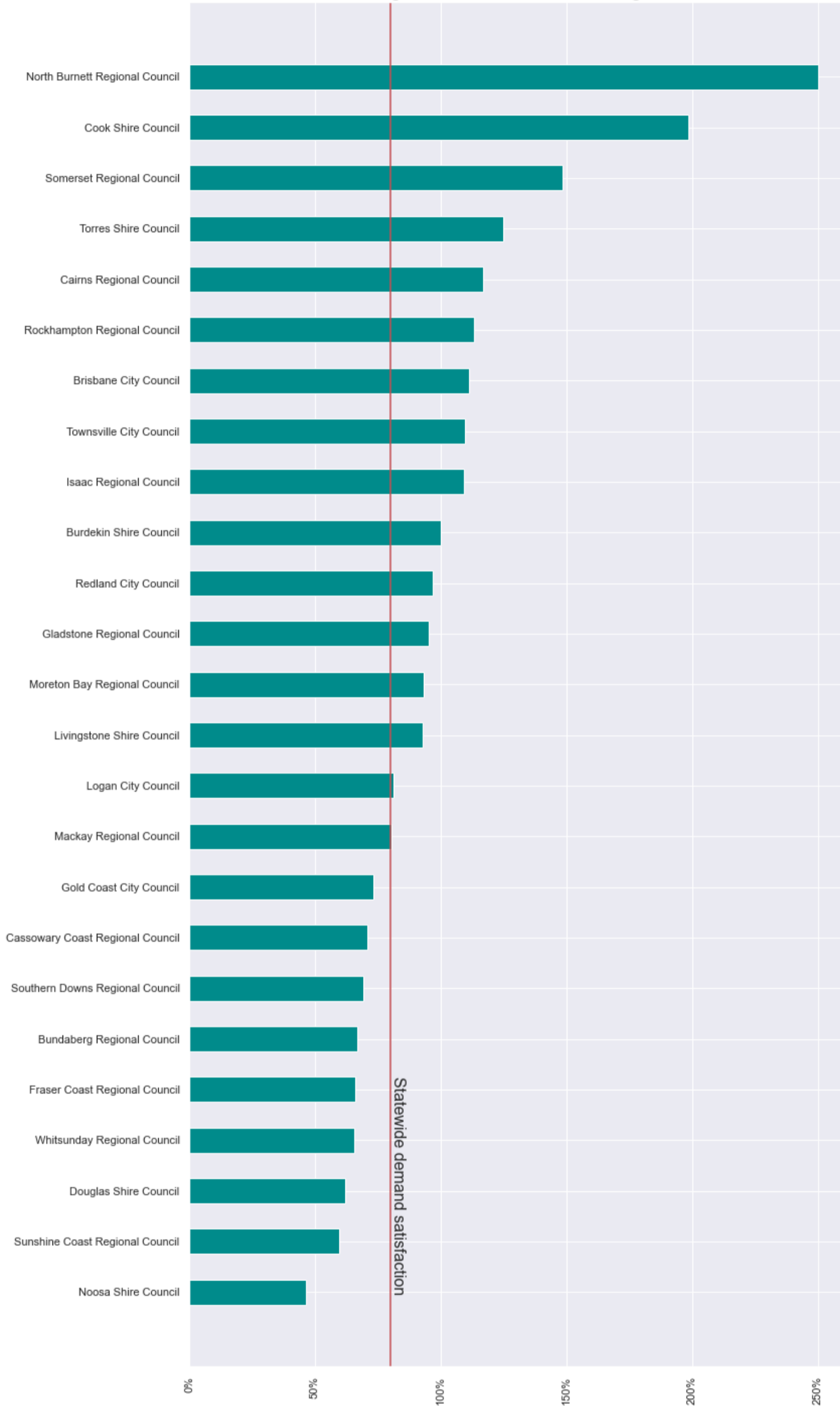


Figure 4.4 Current demand satisfaction from existing facilities per LGA for LGAs with six or more facilities

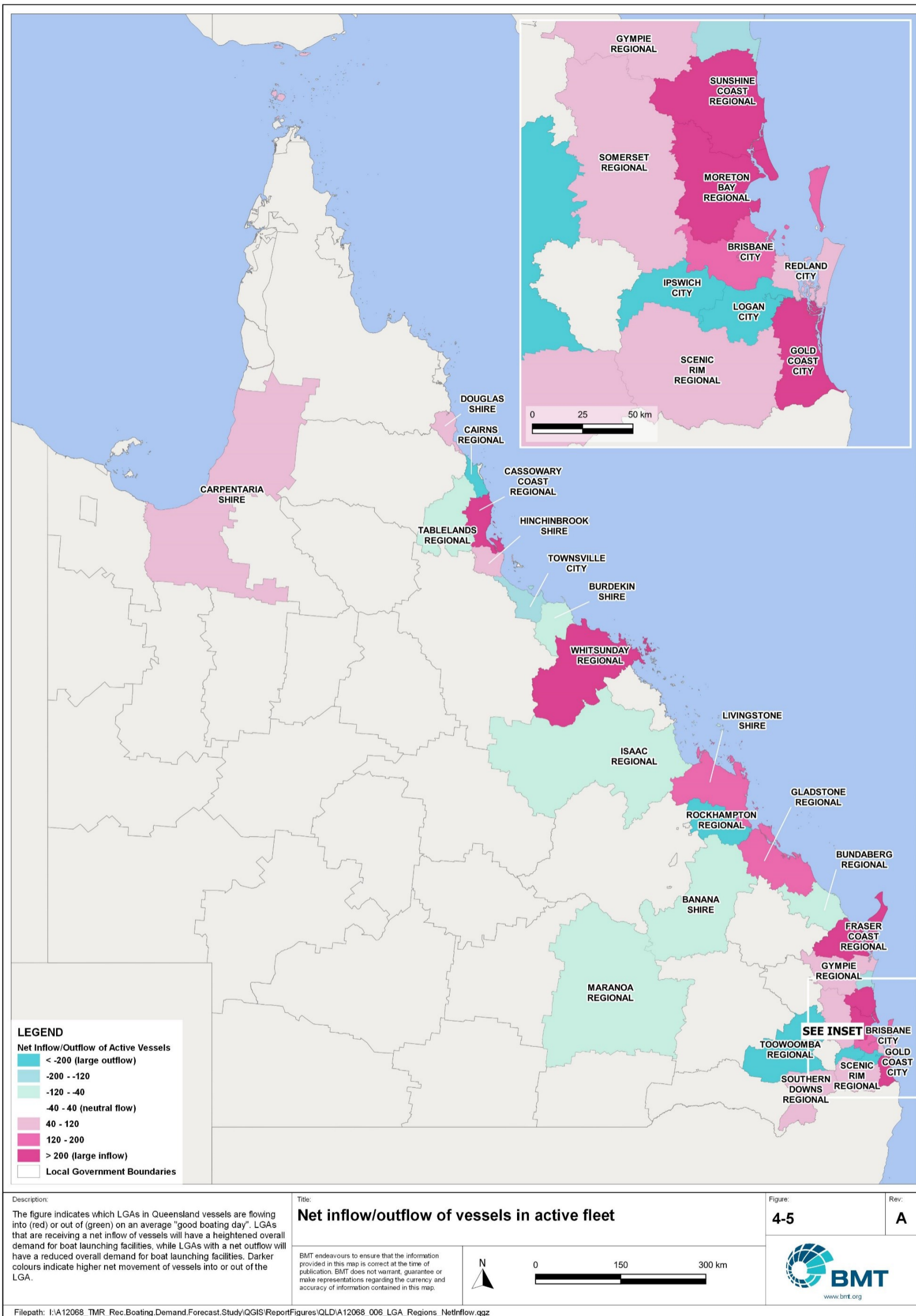


Figure 4.5 Net inflow/outflow of vessels in active fleet

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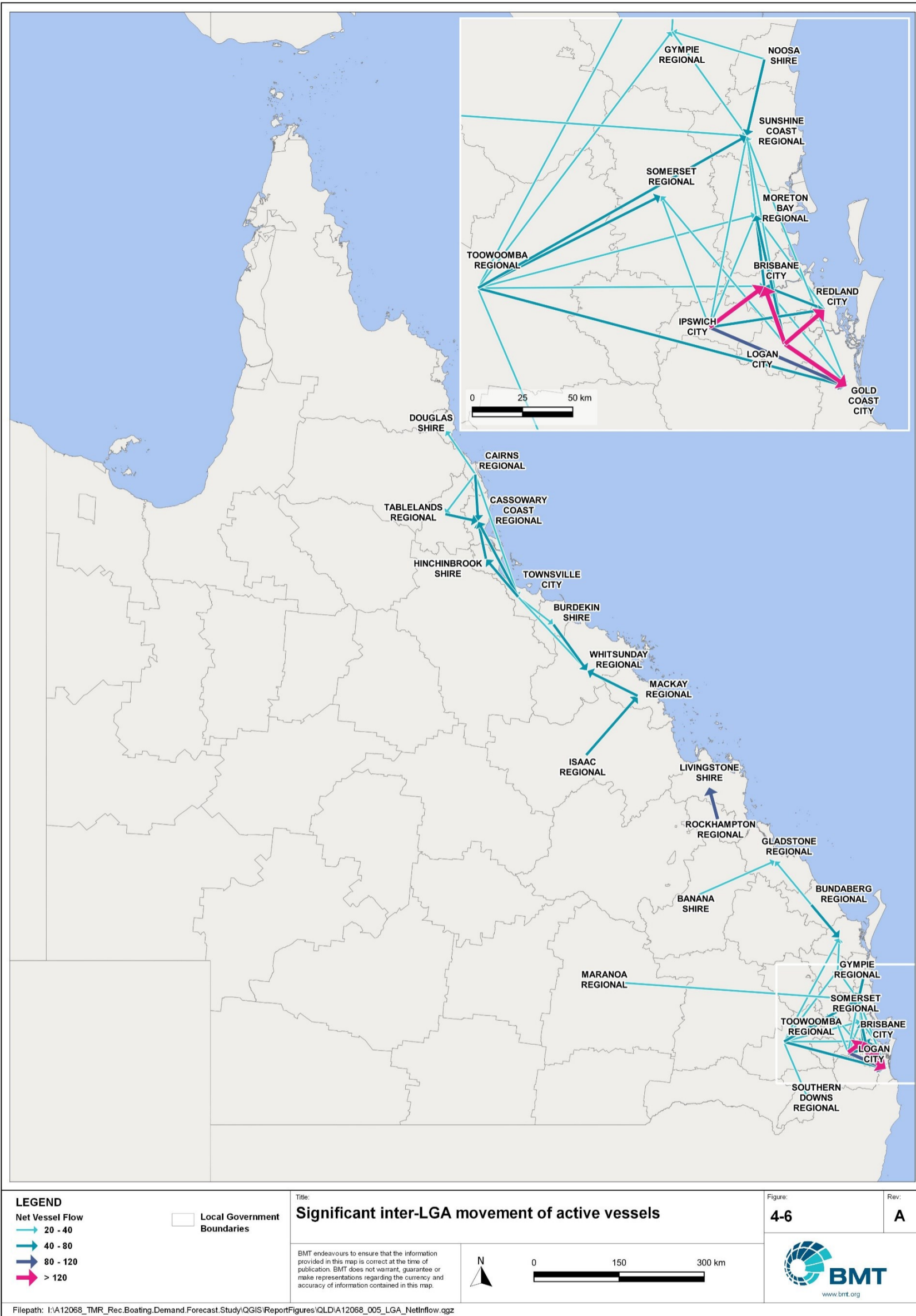


Figure 4.6 Significant inter-LGA movement of active vessels

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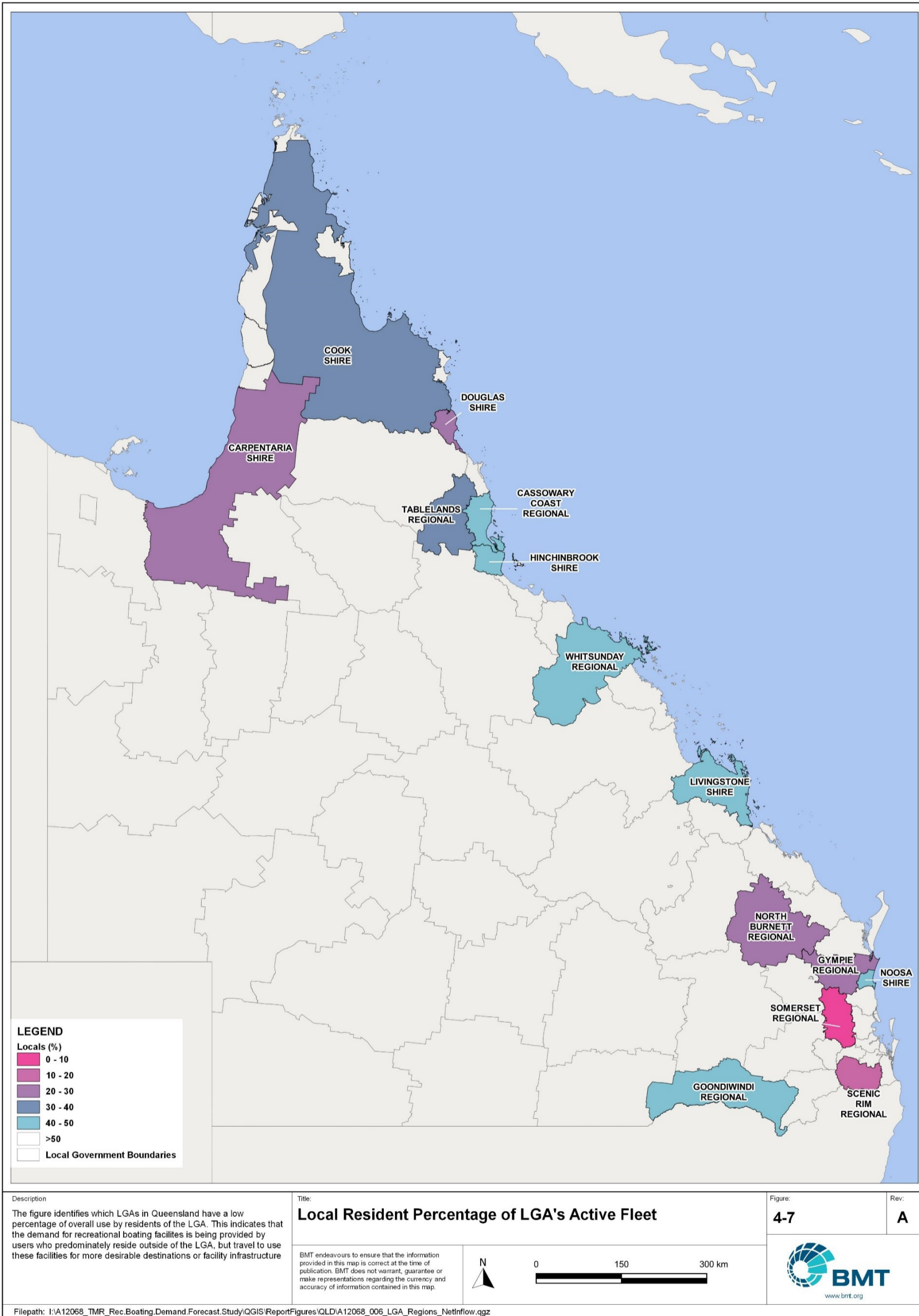


Figure 4.7 Local resident percentage of LGA's active fleet

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## 5 Recommendations

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Where identified statistical shortfall or non-statistical issues with existing recreational boating facilities are identified, the Study makes recommendations for new facilities or to improve the capacity, amenity or safety of existing facilities. These recommendations are made for each LGA where required, with the full detail of each recommendation provided in the LGA report and a summary of the recommendations provided in Annex G. Recommendations are presented in four categories for implementation within the 20-year planning period of this Study, with the following projected timelines for implementation:

- Priority 1: For immediate planning and design, to provide capacity as soon as possible.
- Priority 2: Planning and design intended to provide capacity within 5-10 years.
- Priority 3: Planning and design intended to provide capacity within 10-15 years.
- Priority 4: Planning and design intended to provide capacity within 15-20 years.

The recommendations are structured to include consideration of reasonable timelines for implementation. This may include consideration for budgetary processes, planning, environmental approvals, consultation periods, and construction. The priority selection of recommendations aligns with TMR's *Marine Infrastructure and Facilities Plan* (TMR, 2020) guidelines, namely:

- 1. priority to be given to the provision of sheltered all-tide or near all-tide launching facilities giving access to the open sea on an all-tide or near all-tide basis.*
- 2. part-tide facilities (for launching or access) may be provided where there is demand and dredged access is not feasible. For instance, beach access or open beach ramps may be provided where there is sufficient demand and no suitable nearby sheltered waterway*
- 3. the most economically viable options will take precedence, including the expansion of existing facilities, and the changing of existing foreshore land uses. In many cases, limiting or avoiding dredging and/or breakwater costs will be a crucial factor*
- 4. a goal of providing access to sheltered all-tide or near all-tide boat launching facilities within one hour's drive for significant communities*

Consequently, higher order recommendations need to address, where possible, the provision of facilities that provide maximum benefit in the widest range of environmental conditions. Lower order recommendations consist of solutions where there is reduced adherence to the TMR guidelines and/or there are prospective delivery constraints that may result in long lead times to resolve.

The 2017 GHD study provided similarly-based recommendations, which are reviewed throughout this Study and either carried through fully (with some minor tweaks), partially carried through, or not carried through (for stated reasons). The Study proposes a total of 155 recommendations across the state, with 15% of these carried through from the 2017 study, 13% partially carried through from the 2017 study and 72% as new recommendations not from the 2017 study. These 155 recommendations are broken down by priority and associated improved effective capacity as follows:

- Priority 1: 43 recommendations (28%), 88.8 effective lanes
- Priority 2: 52 recommendations (34%), 68.6 effective lanes
- Priority 3: 44 recommendations (28%), 52.7 effective lanes
- Priority 4: 16 recommendations (10%), 30.4 effective lanes.

The recommendations are distributed across Queensland with the number of recommendations and total cost by district (TMR's 12 roads administration districts) presented in Table 5.1. The statistics show that the recommendations are well distributed across the districts, except for Fitzroy District, which has a significant deep-water expansion of Rosslyn Bay – proposed to add more all-tide open-water accessible capacity to meet well established demand shortfall. State-wide, the mean estimated cost (+/- 50%) is \$2.1 million per recommendation, with a median cost of \$642,000 per recommendation.

**Table 5.1 Recommendations by TMR district**

District	Number	Proportion	Value	Proportional value
Darling Downs	2	1%	\$2,368,557	1%
Far North	25	16%	\$33,777,639	15%
Fitzroy	11	7%	\$79,609,751	34%
Mackay/Whitsunday	16	10%	\$26,465,063	11%
Metropolitan	22	14%	\$24,721,128	11%
North Coast	30	19%	\$24,921,187	11%
Northern	9	6%	\$5,634,758	2%
South Coast	22	14%	\$18,965,165	8%
Wide Bay/Burnett	19	12%	\$16,350,578	7%
<b>Total</b>	<b>156</b>		<b>\$293,921,536</b>	

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## Annex A Demand Study

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## Annex B Capacity Assessment Methodology

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### B.1 Boat ramps

#### B.1.1 Introduction

Boat ramps are facilities used for launching and retrieving trailable vessels, typically up to 8m in length (with some exceptions), to and from the water. Boat ramps consist of one or more lanes. Their use is supported by landside and waterside (in many cases) infrastructure to improve efficiency. In some instances, the usability of a facility can be adversely affected by environmental constraints such as low water levels, currents, or wave exposure, reducing the overall availability of the facility. Together, consideration of the number of boat ramp lanes, the supporting infrastructure, and environmental constraints results in the facility having a capacity described in terms of 'effective lanes' that may or may not be equal to the number of actual boat ramp lanes.

To maximise usage of each facility, the landside and waterside capacity should be balanced. Each facility will have a calculated 'effective' capacity for both the landside and waterside elements, with the limiting element dictating the facility's overall effective capacity. Recommendations for works or infrastructure promote balancing these two capacity elements by either improving the limiting element for optimised facility effectiveness or by increasing the overall 'effective capacity' through changes to both elements.

#### B.1.2 Boat ramp capacity

The overall capacity of each boat launching facility is limited by the effective capacity of either the waterside or landside elements. The waterside capacity is informed by the number of boat ramp lanes and the number and type of queuing facilities, such as pontoons, floating walkways, queuing beaches and fixed sloping walkways. Waterside capacity may also be limited by the available water depth in the adjacent waterbody or exposure to environmental, or other physical, factors.

Landside capacity is governed by the availability of nearby space and facilities for parking of car-trailer units (CTU), the provision of rigging and de-rigging facilities, and provision of single car parking spaces (single cars may otherwise be obliged to park in CTU spaces).

While it is expected that facilities will have their own characteristics influencing efficient use, this Study applies an approach that is consistent across the entire state and consistent with previous study editions (GHD, 2011, 2017).

The effective waterside capacity of a boat launching facility is determined as being:

- the ability to support 40 vessels being launched and retrieved per day per lane (see section B.1.3)
- influenced by exposure to wave, tide, and current conditions (see section B.1.4)
- supported by queuing facilities that assist in the efficient use of the boat ramp (see section B.1.4).

Calculation of landside capacity is in line with the TMR guideline (TMR, 2020), which requires less provision of CTU parking per lane than the Australian standard (AS3962 Table 7.1), and advises:

- 10 CTUs for a single lane boat ramp accessed by an unsealed road, or 15 CTUs accessed by a sealed road

- 45 CTUs for a two-lane boat ramp
- 70 CTUs for a three-lane boat ramp
- 90 CTUs for a four-lane boat ramp.

A notable difference from the 2017 study is the recognition and inclusion of land areas close to existing boating facilities that are unsealed and/or not line marked where parking of CTUs occurs and is not discouraged. These areas of informal parking have been identified on aerial imagery and through discussions with managing authorities. Each informal area has been assumed to be available for CTU parking only 50% of the time to account for conflicts with other uses (for example, markets), inefficient parking practices, or poor ground conditions. The rate of parking has been calculated as:

- for linear areas where nose-to-tail parking is expected – 1 CTU per 13m
- for linear areas with enough space to allow side-by-side parking – 1 CTU per 3m, provided there is a minimum distance of 15m from the road or manoeuvring area
- for large areas – 1 CTU per 100m<sup>2</sup>.

### B.1.3 Boat ramp capacity basis

The number of vessels per day each boat ramp lane can support is based on the Australian Standard for the Design of Marinas (AS3962-2001) and previous study editions (GHD, 2011 and 2017).

Research on boat ramp lane efficiency described in the previous study (GHD, 2017) identified that 40 vessels per lane per day was a reasonable compromise between 50 vessels per lane per day (representing congested conditions) and 30 vessels per lane per day (representing unhampered conditions). For context, the 40 vessels per lane per day rate represents a vessel launch or retrieval every 9 minutes per lane within an average normally used period of 12 hours per day.

During this Study, BMT has sought to validate the assumptions presented above, and those relating to capacity modification, by undertaking a literature review, conducting site visits that included observations of launching and retrieving manoeuvres, and reviewing video recordings of boats launching and retrieving at popular boating facilities. The literature review included a boat ramp efficiency investigation undertaken by BMT on the Mornington Peninsula, Victoria (BMT, 2015) and a review of standards from other Australian states and countries that undertake similar studies. The onsite and video analysis provided the opportunity to observe recreational boat operators using facilities included in the Study but did not include observation of total throughput during high demand periods. This assessment was undertaken during site visits across Queensland, and a full day of video recording at Manly Boat Harbour (north ramp) in Brisbane.

The New South Wales and Victoria governments are currently in a planning phase for boating infrastructure and there are presently no publicly accessible documents identifying how those jurisdictions calculate boat ramp lane capacity. The Western Australia government has commissioned studies of the Perth region and the southwest region (Western Australia Department of Transport, 2019 and 2021) that indicate a base rate of 50 vessels per lane per day, with no modifiers applied. Internationally, studies from Florida in the USA (Bell, 2022 and Swett et. al, 2012) assumed that total vessel launch plus retrieval time is between 20 to 40 minutes (18 to 36 vessels per day), although no evidence is provided to support this assumption.

The Mornington Peninsula report (BMT, 2015) collected boat launch and retrieval data for 6 boat ramp facilities on the Mornington Peninsula across 9 days, including the peak Australia Day holiday. Total throughput was assessed for each facility on days where there was constant pressure for launching and retrieving boats with results between 30 and 70 vessels per lane per day for the various facilities. When adjusted for queuing modifications, a baseline rate of between 20 and 50 vessels per lane per day was identified. Of the facilities, the higher rates were achieved where sufficient parking was provided and both waterside and landside queuing facilities existed.

Observations of recreational boat users launching and retrieving their vessels undertaken through the site visits and the analysis of video footage showed that:

- Most observed launches were of 'multi-person' boats, which made launching and retrieving boats more efficient.
- Almost all users were able to launch and/or retrieve their boat within the 9-minute target time, when adjusted for queuing facility efficiency.
- There was a preference to launch adjacent to a floating walkway, where one was available. At facilities where a queuing facility is not immediately adjacent to the lane it is expected that average launch times may slightly increase during busy periods.

While the observations that were made generally aligned with expectations, a more in-depth review of capacity assumptions was outside of the scope of the Study. For future studies there would be value in undertaking a more thorough, data-driven investigation of the assumptions about boat ramp lane capacity, both at its base level and modified by queuing facilities. During this Study period, MSQ was trialling a boat ramp camera system, which may well assist with future assessments of capacity assumptions. Overall, the preliminary investigations undertaken as part of the Study suggest that the base rate of 40 vessels per lane per day adopted in previous studies is, for the time being, appropriate.

#### B.1.4 Boat ramp efficiency modifications

The waterside capacity of boat ramp lanes can be reduced by environmental factors that include:

- Water levels: Mainly relating to tidal areas this factor considers the reduction in the amount of time the boat ramp is available to launch and retrieve vessels over the full tidal cycle, thus reducing the overall capacity of the facility. For all-tide access, the boat ramp and connecting channel to the open sea are available during all tidal conditions and therefore available 100% of the time. For near all-tide access the boat ramp and the connecting channel to the open sea are assumed to be available, on average, for 80% of the tidal cycle. For part-tide access the boat ramp and its access channel are available less than 80% of the time. A modification factor of 0.8 is applied for near all-tide facilities and 0.5 for part-tide facilities.
- Wave and current conditions: In areas where vessel launching and retrieval may be intermittently impacted by waves (most commonly on beach ramps, but not exclusively) or strong currents (such as in rivers), a modification factor of 0.5 is applied.

Conversely, effective boat ramp capacity can be improved through the use of well-designed queuing facilities. Queuing facilities aim to improve amenity, safety, and efficient use of the boat ramp by accelerating one or more of the following phases of boat launching, with the opposite steps required for retrieval:

1. manoeuvring for launching, including for CTU entering the queuing area for the boat ramp and reversing into position for launch
2. launching and securing the launched vessel
3. moving the launch vehicle from the boat ramp to the parking area
4. removing the vessel from the waterside queuing facility.

A range of waterside queuing facilities are in use in Queensland boating infrastructure, which modify different phases of the total launching process. These include:

- Floating walkways and fixed sloping walkways: Positioned to abut a boat ramp lane, these structures aim to:
  - improve amenity – such as to assist embarking/disembarking passengers, provide a refuge from in-water contact with crocodiles and so on.
  - make securing the vessel and removing the vehicle from the boat ramp more rapid, while freeing the boat ramp for subsequent users.
- Pontoons: Also used by deep-draught vessels, these structures improve the ability to secure the vessel and clear the boat ramp, but there is usually some time lost returning to recover the launch vehicle compared with the above options as they are generally positioned slightly further away from the ramp.
- Queuing beaches: These also provide a place to secure the vessel close to the boat ramp, although they are generally not as fast to use as pontoons.

As observed throughout the Study site visits, each of these queuing facility types can support a limited number of boat ramp lanes depending on the available space on the queuing facility. The 2017 study (GHD) applied a blanket uplift for all boat ramp lanes where a queuing facility was provided. However, the number of lanes each type of queuing facility can realistically support varies. Accordingly, this Study has provided limitations to the number of boat ramp lanes that can benefit from each queuing facility, based on the number of “working faces” (or water frontage for a queuing beach) provided, where the “working face” is a face that allows temporary securing of vessels during launching or retrieval. The adopted improvement factors and supported lanes are summarised in Table B.1.

**Table B.1. Queuing facility efficiency modifiers**

Queuing facility	Modification factor	Supported lanes
Floating walkway (lanes adjacent to walkway)	1.7	1 Lane/face
Floating walkway (lanes not adjacent to walkway)	1.3	1 Lane/face
Fixed sloping walkway	1.7	1 Lane/face
Pontoon	1.2	2 Lanes/face
Queuing beach	1.1	Site-based

In other states in Australia, reversing queuing bays are more commonly used than in Queensland. These are CTU waiting bays at the head of the boat ramp that are aligned with each boat ramp lane. CTU waiting bays reduce the time of the first phase of boat launching by allowing waiting CTU's to be ready to reverse as soon as the lane becomes clear. The BMT (2015) study on the Mornington Peninsula included facilities with and without these bays. Boat ramps that included reversing queuing bays achieved 50% greater throughput. Facilities that have implemented this approach in Queensland

include North Street Southport, Urangan Boat Harbour, Townsville Recreational Boating Park, and the (under construction late 2022) boat ramp at Yorkeys Knob.

### B.1.5 Accessibility from boat launching facilities

Recreational boat users will typically select the boat launching facility most appropriate or convenient to the activity they are seeking to undertake, the anticipated weather/wave conditions, and their destination. Each facility within an LGA will provide a varying degree of access to different destinations and for different activities. During the Study, consultation with stakeholders highlighted the following general types of destinations and activities:

- open water/offshore: typically accessed for visiting offshore islands or remote beaches, snorkelling or diving locations, deep sea fishing and general recreation
- creeks and estuaries: typically accessed for fishing, crabbing, wildlife observation, skiing and general recreation
- freshwater: typically accessed for skiing, fishing, wildlife observation and general recreation.

These destinations are typically serviced by different types of recreational vessels. Inshore locations including creeks, estuaries and other freshwater locations are typically patronised by vessels less than 4.5m, except for ski boats, which can be much larger than this. Open water locations typically require larger boats for access as these vessels are more capable of managing a wide range of wave conditions and can carry sufficient fuel to access distant destinations. Smaller vessels may be able to access close destinations on good weather days, and larger vessels may choose to access inshore destinations, particularly on poor weather days.

Consequently, the following aspects are used to classify how well a facility provides open water access:

- Open-water access: There are no restrictions between the facility and open water.
- Depth-limited access: There are depth restrictions between the facility and open water that limit navigable access to part of the tidal range. This differs from tidal constraints at the actual facility, which might be usable at all tides, but offshore access is limited by a downstream bar or delta.
- Distance-limited access: The distance from the facility to the open water is unrealistic for typical boat users. This distance is assumed to be about 4.5km between the facility and open water to rate as 'distance limited', with travel times increased further where portions of the access channel are regulated by speed limits.
- Infrastructure-limited access: There are man-made obstacles between the facility and open water, such as above-ground pipeline crossings, low bridges or weirs that impede navigable access to open water.
- Beach ramps: These provide open-water access but are typically constrained by environmental conditions such as wave exposure and tide levels. The capacity of these facilities has been individually assessed based on consultation and other data sources.
- Freshwater: There is no access to open water.

Certain facilities, particularly those in fresh water, may be constrained by periods of drought, or debris deposition after rainfall events that limit access to destinations, and therefore whether a facility will provide useful boat launching capacity. While it is noted that drought and rainfall may affect the overall capacity of boat launching within an LGA, and given that the timing of such events is not readily predictable, their impact on capacity has not been evaluated.

## Annex C Consultation Summary

Table C.1. List of organisations consulted during the Study

Region/Organisation	Organisation type
North Queensland	
Burdekin Shire Council	Local Government Authority
Burke Shire Council	Local Government Authority
Cairns Regional Council	Local Government Authority
Carpentaria Shire Council	Local Government Authority
Cassowary Coast Regional Council	Local Government Authority
Charters Towers Regional Council	Local Government Authority
Cook Shire Council	Local Government Authority
Croydon Shire Council	Local Government Authority
Douglas Shire Council	Local Government Authority
Etheridge Shire Council	Local Government Authority
Flinders Shire Council	Local Government Authority
Hinchinbrook Shire Council	Local Government Authority
Kowanyama Aboriginal Shire Council	Local Government Authority
Mapoon Aboriginal Shire Council	Local Government Authority
Mount Isa City Council	Local Government Authority
Napranum Aboriginal Shire Council	Local Government Authority
Northern Peninsula Area Regional Council	Local Government Authority
Pormpuraaw Aboriginal Shire Council	Local Government Authority
Torres Shire Council	Local Government Authority
Torres Strait Island Regional Council	Local Government Authority
Townsville City Council	Local Government Authority
Weipa Town Council	Local Government Authority
Port of Townsville	Port Authority
Ports North	Port Authority
Cairns Stock Fishing Group	Recreational Group
Carefish	Recreational Group
Edmonton Amateur Fishing Club	Recreational Group

Region/Organisation	Organisation type
<b>Central Queensland</b>	
Banana Shire Council	Local Government Authority
Barcaldine Regional Council	Local Government Authority
Gladstone Regional Council	Local Government Authority
Isaac Regional Council	Local Government Authority
Livingstone Shire Council	Local Government Authority
Mackay Regional Council	Local Government Authority
Rockhampton Regional Council	Local Government Authority
Whitsunday Regional Council	Local Government Authority
Gladstone Port Corporations	Port Authority
North Queensland Bulk Ports	Port Authority
Mackay Tournament Anglers	Recreational Group
Reef Marine	Commercial enterprise
Mackay Recreational Fishers Alliance Inc.	Recreational Group
Mackay and District Amateur Fishing Clubs Association Inc.	Recreational Group
VMR Mackay	Marine Rescue Organisation
VMR Midge Point	Marine Rescue Organisation
Laguna Quays Marina	Marina Operator
<b>Southern Queensland</b>	
Bundaberg Regional Council	Local Government Authority
Fraser Coast Regional Council	Local Government Authority
Goondiwindi Regional Council	Local Government Authority
Maranoa Regional Council	Local Government Authority
North Burnett Regional Council	Local Government Authority
South Burnett Regional Council	Local Government Authority
Southern Downs Regional Council	Local Government Authority
Toowoomba Regional Council	Local Government Authority
Western Downs Regional Council	Local Government Authority
Sandy Straits Coastguard	Marine Rescue Organisation
VMR Hervey Bay	Marine Rescue Organisation
Tin Can Bay Coastguard	Marine Rescue Organisation

Region/Organisation	Organisation type
<b>North Coast</b>	
Moreton Bay Regional Council	Local Government Authority
Noosa Shire Council	Local Government Authority
Sunshine Coast Regional Council	Local Government Authority
Mooloolaba Coastguard	Marine Rescue Organisation
Caloundra Coastguard	Marine Rescue Organisation
Noosa Coastguard	Marine Rescue Organisation
Noosa Boating and Fishing Alliance	Recreational Group
<b>Metropolitan</b>	
Brisbane City Council	Local Government Authority
Ipswich City Council	Local Government Authority
Redland City Council	Local Government Authority
Port of Brisbane	Port Authority
VMR Raby Bay	Marine Rescue Organisation
VMR North Stradbroke	Marine Rescue Organisation
VMR Victoria Point	Marine Rescue Organisation
Brisbane Coastguard	Marine Rescue Organisation
<b>South Coast</b>	
Gold Coast City Council	Local Government Authority
Logan City Council	Local Government Authority
<b>Other</b>	
Maritime Safety Queensland	State Agency
MSQ State boat harbours unit	State Agency
Gold Coast Waterways Authority	State Agency
Seqwater	Water Authority
Sunwater	Water Authority
TMR Recreational Boat User Survey	Recreational Group
Queensland Recreational Boating Council	Recreational Group
Sunfish	Recreational Group



## Annex D Capacity statistics by LGA

Table D.1. Capacity statistics by LGA

LGA	Fleet size	Facilities	Total lanes	All-tide lanes	Near all-tide lanes	Part-tide lanes	Effective capacity	Public Landings
Aurukun Shire Council	16	1	1	1	0	0	0.9	0
Balonne Shire Council	377	2	3	3	0	0	1.5	0
Banana Shire Council	1230	5	5	5	0	0	3.3	0
Barcaldine Regional Council	211	1	1	1	0	0	1.0	0
Barcoo Shire Council	45	0	0	0	0	0	0.0	0
Blackall Tambo Regional Council	87	1	1	1	0	0	0.3	0
Bouila Shire Council	17	0	0	0	0	0	0.0	0
Brisbane City Council	30528	21	42	40	0	2	34.3	10
Bulloo Shire Council	15	0	0	0	0	0	0.0	0
Bundaberg Regional Council	10340	19	33	30	0	3	21.3	2
Burdekin Shire Council	3536	11	18	4	0	14	9.6	0
Burke Shire Council	51	1	3	3	0	0	2.5	1
Cairns Regional Council	11553	14	37	30	6	1	28.0	3
Carpentaria Shire Council	229	3	9	9	0	0	7.4	1
Cassowary Coast Regional Council	4616	18	26	11	0	15	17.0	6
Central Highlands Regional Council	2165	2	3	3	0	0	2.0	0

LGA	Fleet size	Facilities	Total lanes	All-tide lanes	Near all-tide lanes	Part-tide lanes	Effective capacity	Public Landings
Charters Towers Regional Council	744	2	2	2	0	0	2.0	0
Cherbourg Aboriginal Shire Council	0	0	0	0	0	0	0.0	0
Cloncurry Shire Council	181	0	0	0	0	0	0.0	0
Cook Shire Council	622	8	9	6	0	3	6.8	3
Croydon Shire Council	20	1	1	1	0	0	1.2	0
Diamantina Shire Council	5	0	0	0	0	0	0.0	0
Doomadgee Aboriginal Shire Council	4	0	0	0	0	0	0.0	0
Douglas Shire Council	1904	6	11	7	1	3	4.6	2
Etheridge Shire Council	75	0	0	0	0	0	0.0	0
Flinders Shire Council	139	0	0	0	0	0	0.0	0
Fraser Coast Regional Council	12615	26	44	26	4	14	28.6	3
Gladstone Regional Council	8074	21	39	30	4	5	25.6	1
Gold Coast City Council	45820	38	61	59	2	0	52.1	8
Goondiwindi Regional Council	929	3	5	5	0	0	3.8	0
Gympie Regional Council	4527	5	14	13	0	1	11.3	1
Hinchinbrook Shire Council	2378	5	10	1	6	3	8.6	2
Hope Vale Aboriginal Shire Council	34	0	0	0	0	0	0.0	0
Ipswich City Council	6750	4	4	3	0	1	2.5	0
Isaac Regional Council	1840	6	6	2	0	4	3.3	0
Kowanyama Aboriginal Shire Council	18	1	1	1	0	0	0.0	0

LGA	Fleet size	Facilities	Total lanes	All-tide lanes	Near all-tide lanes	Part-tide lanes	Effective capacity	Public Landings
Livingstone Shire Council	5577	15	28	16	4	8	25.5	1
Lockhart River Aboriginal Shire Council	26	2	3	3	0	0	1.3	0
Lockyer Valley Regional Council	2028	1	1	1	0	0	1.0	0
Logan City Council	14627	8	10	9	0	1	6.5	1
Longreach Regional Council	215	1	1	1	0	0	1.0	0
Mackay Regional Council	14885	24	39	10	16	11	29.8	0
Mapoon Aboriginal Shire Council	19	0	0	0	0	0	0.0	0
Maranoa Regional Council	760	2	2	2	0	0	2.0	0
Mareeba Shire Council	1919	0	0	0	0	0	0.0	0
Mckinlay Shire Council	82	0	0	0	0	0	0.0	0
Moreton Bay Regional Council	25793	23	51	41	0	10	36.2	3
Mornington Shire Council	29	0	0	0	0	0	0.0	0
Mount Isa City Council	971	2	3	3	0	0	2.5	0
Murweh Shire Council	196	1	1	1	0	0	1.0	0
Napranum Aboriginal Shire Council	20	0	0	0	0	0	0.0	0
Noosa Shire Council	5146	9	12	2	9	1	5.8	0
North Burnett Regional Council	845	6	6	6	0	0	5.8	0
Northern Peninsula Area Regional Council	79	3	3	2	1	0	1.9	0
Palm Island Aboriginal Shire Council	95	0	0	0	0	0	0.0	0

LGA	Fleet size	Facilities	Total lanes	All-tide lanes	Near all-tide lanes	Part-tide lanes	Effective capacity	Public Landings
Paroo Shire Council	44	1	2	2	0	0	1.0	0
Porpuraaw Aboriginal Shire Council	12	1	2	0	0	2	0.8	0
Quilpie Shire Council	54	0	0	0	0	0	0.0	0
Redland City Council	14117	27	47	40	5	2	28.3	7
Richmond Shire Council	85	0	0	0	0	0	0.0	0
Rockhampton Regional Council	5568	9	20	19	0	1	13.3	0
Scenic Rim Regional Council	2141	5	7	7	0	0	5.0	0
Somerset Regional Council	1703	9	16	16	0	0	8.8	0
South Burnett Regional Council	2017	4	8	8	0	0	4.8	0
Southern Downs Regional Council	1536	7	7	7	0	0	3.6	0
Sunshine Coast Regional Council	22256	24	42	21	16	5	27.9	5
Tablelands Regional Council	2422	4	4	4	0	0	3.0	0
Toowoomba Regional Council	6259	1	1	1	0	0	1.0	0
Torres Shire Council	319	6	11	11	0	0	1.8	5
Torres Strait Island Regional Council	27	16	16	6	8	2	6.3	1
Townsville City Council	13704	20	43	37	1	5	37.3	4
Weipa Town Council	476	2	3	3	0	0	2.5	1
Western Downs Regional Council	2311	3	3	3	0	0	2.8	0
Whitsunday Regional Council	6779	15	26	21	0	5	21.0	2
Winton Shire Council	60	0	0	0	0	0	0.0	0

LGA	Fleet size	Facilities	Total lanes	All-tide lanes	Near all-tide lanes	Part-tide lanes	Effective capacity	Public Landings
Woorabinda Aboriginal Shire Council	9	0	0	0	0	0	0.0	0
Wujal Wujal Aboriginal Shire Council	5	1	1	1	0	0	1.0	0
Yarrabah Aboriginal Shire Council	46	1	1	0	0	1	0.3	0

## Annex E Demand Statistics

Table E.1. Demand statistics by LGA

LGA	Existing launching demand	Existing shortfall of boat launching capacity	Existing open water boat launching shortfall	Existing landing demand	Existing shortfall of boat landing capacity
Aurukun Shire Council	0.0	-0.9	-	0.0	0
Balonne Shire Council	0.8	-0.7	-	0.0	0
Banana Shire Council	1.1	-2.2	-	0.0	0
Barcaldine Regional Council	0.1	-0.9	-	0.0	0
Barcoo Shire Council	0.0	0.0	-	0.0	0
Blackall Tambo Regional Council	0.1	-0.1	-	0.0	0
Bouila Shire Council	0.0	0.0	-	0.0	0
Brisbane City Council	30.7	-4.6	-3.2	6.0	10
Bulloo Shire Council	0.0	0.0	-	0.0	0
Bundaberg Regional Council	31.8	10.5	5.9	1.6	2
Burdekin Shire Council	9.6	0.0	-	0.4	0
Burke Shire Council	0.0	-2.5	-	0.0	1
Cairns Regional Council	28.8	6.8	7.1	3.7	3
Carpentaria Shire Council	3.7	-3.7	-1.3	0.1	1
Cassowary Coast Regional Council	23.9	6.9	5.1	1.1	6

LGA	Existing launching demand	Existing shortfall of boat launching capacity	Existing open water boat launching shortfall	Existing landing demand	Existing shortfall of boat landing capacity
Central Highlands Regional Council	2.5	0.5	-	0.0	0
Charters Towers Regional Council	0.9	-1.1	-	0.0	0
Cherbourg Aboriginal Shire Council	0.0	0.0	-	0.0	0
Cloncurry Shire Council	0.0	0.0	-	0.0	0
Cook Shire Council	3.4	-3.4	-2.1	0.1	3
Croydon Shire Council	0.2	-1.0	-	0.0	0
Diamantina Shire Council	0.0	0.0	-	0.0	0
Doomadgee Aboriginal Shire Council	0.0	0.0	-	0.0	0
Douglas Shire Council	7.4	2.8	2.6	1.2	2
Etheridge Shire Council	0.0	0.0	-	0.0	0
Flinders Shire Council	0.0	0.0	-	0.0	0
Fraser Coast Regional Council	43.3	14.7	8.7	3.1	3
Gladstone Regional Council	26.9	1.3	-1.7	1.4	1
Gold Coast City Council	71.1	19.5	9.4	10.6	8
Goondiwindi Regional Council	2.9	-0.9	-	0.0	0
Gympie Regional Council	14.1	2.8	1.8	0.8	1
Hinchinbrook Shire Council	11.5	2.8	2.6	0.8	2
Hope Vale Aboriginal Shire Council	0.0	0.0	-	0.0	0
Ipswich City Council	3.8	1.3	-	0.0	0

LGA	Existing launching demand	Existing shortfall of boat launching capacity	Existing open water boat launching shortfall	Existing landing demand	Existing shortfall of boat landing capacity
Isaac Regional Council	3.0	-0.3	-	0.3	0
Kowanyama Aboriginal Shire Council	0.0	0.0	-	0.0	0
Livingstone Shire Council	27.4	3.6	5.2	2.1	1
Lockhart River Aboriginal Shire Council	0.2	-1.0	-1.1	0.0	0
Lockyer Valley Regional Council	0.9	-0.1	-	0.0	0
Logan City Council	8.0	1.5	-	0.0	1
Longreach Regional Council	0.5	-0.5	-	0.0	0
Mackay Regional Council	37.0	7.3	4.1	2.1	0
Mapoon Aboriginal Shire Council	0.0	0.0	-	0.0	0
Maranoa Regional Council	1.3	-0.7	-	0.1	0
Mareeba Shire Council	0.1	0.1	-	0.0	0
Mckinlay Shire Council	0.0	0.0	-	0.0	0
Moreton Bay Regional Council	38.9	2.7	2.2	3.8	3
Mornington Shire Council	0.0	0.0	-	0.0	0
Mount Isa City Council	1.1	-1.4	-	0.0	0
Murweh Shire Council	0.1	-0.9	-	0.0	0
Napranum Aboriginal Shire Council	0.2	0.2	0.2	0.0	0
Noosa Shire Council	8.9	3.1	3.7	1.2	0



LGA	Existing launching demand	Existing shortfall of boat launching capacity	Existing open water boat launching shortfall	Existing landing demand	Existing shortfall of boat landing capacity
North Burnett Regional Council	1.9	-3.8	-	0.0	0
Northern Peninsula Area Regional Council	0.1	-1.8	-1.8	0.0	0
Palm Island Aboriginal Shire Council	0.0	0.0	-	0.0	0
Paroo Shire Council	0.3	-0.7	-	0.0	0
Pormpuraaw Aboriginal Shire Council	0.0	-0.8	-	0.0	0
Quilpie Shire Council	0.0	0.0	-	0.0	0
Redland City Council	36.6	10.3	2.8	6.7	7
Richmond Shire Council	0.0	0.0	-	0.0	0
Rockhampton Regional Council	11.7	3.0	2.5	1.3	0
Scenic Rim Regional Council	2.2	-2.8	-	0.0	0
Somerset Regional Council	7.8	-0.9	-	0.0	0
South Burnett Regional Council	1.5	-3.3	-	0.0	0
Southern Downs Regional Council	3.7	0.1	-	0.0	0
Sunshine Coast Regional Council	41.0	15.4	11.0	3.7	5
Tablelands Regional Council	5.6	2.6	-	0.0	0
Toowoomba Regional Council	0.3	-0.7	-	0.0	0
Torres Shire Council	2.8	1.0	0.6	0.1	5

LGA	Existing launching demand	Existing shortfall of boat launching capacity	Existing open water boat launching shortfall	Existing landing demand	Existing shortfall of boat landing capacity
Torres Strait Island Regional Council	1.4	-15	-	1.1	0
Townsville City Council	34.1	-3.2	-10.8	2.2	4
Weipa Town Council	3.4	0.9	0.3	0.0	1
Western Downs Regional Council	1.1	-1.7	-	0.0	0
Whitsunday Regional Council	32.0	11.0	8.0	3.7	2
Winton Shire Council	0.0	0.0	-	0.0	0
Woorabinda Aboriginal Shire Council	0.0	0.0	-	0.0	0
Wujal Wujal Aboriginal Shire Council	0.0	-1.0	-	0.0	0
Yarrabah Aboriginal Shire Council	0.0	-0.3	-	0.0	0



## Annex F State-wide human movement reports by facility

Table F.1. Human movement reports by facility

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
1	AB23	Jacobs Well, Pimpama Jacobs Well Road	Gold Coast City Council	20721	2.22%	11%
2	RF81	Scarborough, Thurecht Parade	Moreton Bay Regional Council	19643	2.11%	20%
3	MA81	Mooloolaba, Parkyn Parade (Upstream)	Sunshine Coast Regional Council	17805	1.91%	18%
4	RD52	Cleveland, William Street	Redland City Council	17337	1.86%	24%
5	RF12	Clontarf, Pelican Park, Thomas Street	Moreton Bay Regional Council	16211	1.74%	16%
6	MK20	Mackay, Mulherin Drive	Mackay Regional Council	16117	1.73%	39%
7	RD36	Victoria Point, Colburn Avenue (north)	Redland City Council	15883	1.70%	22%
8	GB21	Main Beach, Muriel Henchman Drive (Southern)	Gold Coast City Council	14267	1.53%	8%
9	HB71	Urangan, Jetty Road (north-east)	Fraser Coast Regional Council	13093	1.41%	28%
10	RF71	Scarborough, Bird O'Passage Parade	Moreton Bay Regional Council	13068	1.40%	13%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
11	GB62	Southport, Marine Parade & Broad Street	Gold Coast City Council	13017	1.40%	7%
12	GC70	Southport, North Street	Gold Coast City Council	12584	1.35%	7%
13	WI81	Tin Can Bay, Norman Point	Gympie Regional Council	12403	1.33%	57%
14	LB82	Buddina, Adaluma Avenue	Sunshine Coast Regional Council	12021	1.29%	12%
15	CB32	Bongaree, Fifth Avenue (North)	Moreton Bay Regional Council	11233	1.21%	11%
16	LV71	Rosslyn Bay, Anchor Drive (eastern)	Livingstone Shire Council	11097	1.19%	64%
17	MA11	Maroochydore, Bradman Avenue	Sunshine Coast Regional Council	10996	1.18%	11%
18	RD61	Wellington Point, Main Road	Redland City Council	10909	1.17%	15%
19	TV71	Townsville, Ross Creek (upstream)	Townsville City Council	10823	1.16%	30%
20	CB40	Bellara, Marine Parade (South)	Moreton Bay Regional Council	10580	1.14%	11%
21	GB11	Main Beach, Waterways Drive	Gold Coast City Council	9829	1.05%	5%
22	GB91	Paradise Point, Donald Avenue	Gold Coast City Council	9508	1.02%	5%
23	BB85	Manly Boat Harbour, Fairlead Crescent	Brisbane City Council	9423	1.01%	12%
24	HB58	Burrum Heads, Lions Park	Fraser Coast Regional Council	9240	0.99%	20%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
25	AB12	Santa Barbara, Pinnaroo St	Gold Coast City Council	9193	0.99%	5%
26	GB93	Paradise Point, Oxley Drive	Gold Coast City Council	8919	0.96%	5%
27	RD16	Weinam Creek boat ramp	Redland City Council	8896	0.95%	12%
28	GC28	Oxenford, Old Pacific Hwy	Gold Coast City Council	8805	0.94%	5%
29	BC78	Cabbage Tree Creek upstream in SBH	Brisbane City Council	8228	0.88%	11%
30	GB41	Labrador, Southern end of Marine Parade	Gold Coast City Council	7886	0.85%	4%
31	CP21	Boyne Island, David Bray Park	Gladstone Regional Council	7558	0.81%	20%
32	BC16	Colmslie, Lytton Road	Brisbane City Council	7282	0.78%	10%
33	TV61	Magnetic Island, Horseshoe Bay	Townsville City Council	7168	0.77%	20%
34	GL11	Toolooa, Gladstone - Benaraby Road	Gladstone Regional Council	7031	0.75%	19%
35	MK11	Mackay, River Street	Mackay Regional Council	6892	0.74%	17%
36	NS11	Noosaville, Albert Street	Noosa Shire Council	6853	0.74%	65%
37	BB11	Wynnum, Glenora Street	Brisbane City Council	6662	0.71%	9%
38	LB31	Golden Beach, Churchill Street	Sunshine Coast Regional Council	6531	0.70%	7%
39	MA14	Maroochydore, Fishermans Road	Sunshine Coast Regional Council	6449	0.69%	7%
40	GC27	Eagleby, River Hills Road	Logan City Council	6375	0.68%	44%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
41	MA15	Twin Waters, Nojoor Road	Sunshine Coast Regional Council	6116	0.66%	6%
42	GB16	Broadbeach, T E Peters Drive	Gold Coast City Council	5995	0.64%	3%
43	WT05	Airlie Beach, Abell Point Marina	Whitsunday Regional Council	5902	0.63%	21%
44	RD30	Victoria Point, Masters Avenue	Redland City Council	5596	0.60%	8%
45	BC51	Indooroopilly, Meiers Road	Brisbane City Council	5581	0.60%	7%
46	GC15	Palm Beach, Thrower Drive	Gold Coast City Council	5559	0.60%	3%
47	MA17	Maroochydore, Picnic Point	Sunshine Coast Regional Council	5559	0.60%	6%
48	AB32	Steiglitz, Cabbage Tree Point Road	Gold Coast City Council	5538	0.59%	3%
49	GC75	Upper Coomera, Gawler Place	Gold Coast City Council	5421	0.58%	3%
50	BB31	Nudgee Beach, Nudgee Road	Brisbane City Council	5405	0.58%	7%
51	BU22	Bundaberg, Queen Street	Bundaberg Regional Council	5364	0.58%	19%
52	CB23	Burpengary, Uhlmann Road	Moreton Bay Regional Council	5255	0.56%	5%
53	HI32	Dungeness, Dungeness-Lucinda Road	Hinchinbrook Shire Council	5239	0.56%	72%
54	MV21	Seventeen Seventy, Captain Cook Drive (1770)	Gladstone Regional Council	4969	0.53%	13%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
55	PR12	Griffin, Dohles Rocks Road	Moreton Bay Regional Council	4829	0.52%	5%
56	CB48	Spinnaker Sound, Sandstone Point, Kal Ma kuta Drive	Moreton Bay Regional Council	4809	0.52%	5%
57	BC66	Jindalee boat ramp, Noolinga Street	Brisbane City Council	4788	0.51%	6%
58	TV30	Townsville Recreational Boating Park	Townsville City Council	4777	0.51%	13%
59	BC96	Deep Water Bend, Bald Hills, Wyampa Road	Brisbane City Council	4727	0.51%	6%
60	BB71	Manly Boat Harbour, South	Brisbane City Council	4660	0.50%	6%
61	EK33	Somerset Dam, Kirkleigh (North)	Somerset Regional Council	4479	0.48%	33%
62	LB21	Pelican Waters, Raleigh Street	Sunshine Coast Regional Council	4403	0.47%	5%
63	BC19	South Brisbane, Riverside Drive	Brisbane City Council	4392	0.47%	6%
64	AC22	Nerang, Ferry Street	Gold Coast City Council	4292	0.46%	2%
65	WO71	Burnett Heads Boat Harbour	Bundaberg Regional Council	4266	0.46%	15%
66	LB75	Minyama, Outrigger Island	Sunshine Coast Regional Council	4212	0.45%	4%
67	GC16	Currumbin, Panorama Drive	Gold Coast City Council	4170	0.45%	2%
68	WT07	Cannonvale, Altmann Avenue "VMR Ramp"	Whitsunday Regional Council	4153	0.45%	15%



Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
69	LB12	Golden Beach, Short Street	Sunshine Coast Regional Council	4140	0.44%	4%
70	RK15	Robert Clark Drive, Callaghan Park	Rockhampton Regional Council	4118	0.44%	30%
71	BB25	Whyte Island, Port of Brisbane, Port Drive	Brisbane City Council	4111	0.44%	5%
72	WO65	Sandy Hook, Branyan Drive (upstream)	Bundaberg Regional Council	4023	0.43%	14%
73	GB71	Runaway Bay, Ray Street	Gold Coast City Council	3831	0.41%	2%
74	GB86	Hollywell, Howard Street	Gold Coast City Council	3823	0.41%	2%
75	AC24	Coomera, Tallawood Road	Gold Coast City Council	3704	0.40%	2%
76	EK31	Somerset Dam, The Spit	Somerset Regional Council	3691	0.40%	27%
77	CB66	Toorbul, First Avenue	Moreton Bay Regional Council	3681	0.40%	4%
78	DS71	Port Douglas, Ashford Avenue	Douglas Shire Council	3644	0.39%	43%
79	WI31	Carlo Point, Carlo Road	Gympie Regional Council	3625	0.39%	17%
80	LB11	Pelican Waters, June Street	Sunshine Coast Regional Council	3616	0.39%	4%
81	AB11	Hope Island, Boykambil Esplanade South	Gold Coast City Council	3589	0.39%	2%
82	HB25	Torquay, Bideford Street	Fraser Coast Regional Council	3570	0.38%	8%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
83	CN22	Cairns, Portsmith, Tingira Street	Cairns Regional Council	3495	0.38%	22%
84	LB41	Caloundra, Tripcony Lane	Sunshine Coast Regional Council	3410	0.37%	3%
85	AB17	Coomera, Colman Road	Gold Coast City Council	3398	0.36%	2%
86	GL89	Gladstone Marina, Alf O'Rourke Drive	Gladstone Regional Council	3288	0.35%	9%
87	EK34	Somerset Dam, Kirkleigh (South)	Somerset Regional Council	3285	0.35%	24%
88	HB12	River Heads (West), Ariadne Street	Fraser Coast Regional Council	3239	0.35%	7%
89	CB21	Beachmere, Saint Smith Road	Moreton Bay Regional Council	3029	0.33%	3%
90	MB21	Maryborough, South Street	Fraser Coast Regional Council	2991	0.32%	6%
91	MA21	Bli Bli, Muller Park Road	Sunshine Coast Regional Council	2973	0.32%	3%
92	WT10	Airlie Beach, Port of Airlie	Whitsunday Regional Council	2963	0.32%	11%
93	BW11	Bowen, Horseshoe Bay Road	Whitsunday Regional Council	2929	0.31%	11%
94	RK31	Rockhampton Ski Gardens - Ramsden Street	Rockhampton Regional Council	2921	0.31%	22%
95	PI21	Seaforth, Victor Creek	Mackay Regional Council	2866	0.31%	7%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
96	RD45	Cleveland, Emmet Street (Toondah Harbour)	Redland City Council	2847	0.31%	4%
97	HB35	Point Vernon, Alpin Street	Fraser Coast Regional Council	2729	0.29%	6%
98	BC25	Albion, Beaumont Street	Brisbane City Council	2723	0.29%	4%
99	LO11	Carbrook, Skinners Road	Logan City Council	2682	0.29%	19%
100	CP11	Tannum Sands, Wild Cattle Creek Road	Gladstone Regional Council	2681	0.29%	7%
101	JS30	Clump Point heavy-duty boat ramp	Cassowary Coast Regional Council	2653	0.28%	19%
102	CN21	Fearnley Street	Cairns Regional Council	2557	0.27%	16%
103	BW12	Yasso Point, Bowen	Whitsunday Regional Council	2545	0.27%	9%
104	LB51	Kings Beach, Margaret Street	Sunshine Coast Regional Council	2497	0.27%	3%
105	PI12	Bucasia, Bucasia Esplanade	Mackay Regional Council	2487	0.27%	6%
106	TV91	Pallarenda, Marlow Street	Townsville City Council	2484	0.27%	7%
107	RK32	Rockhampton, Quay Street	Rockhampton Regional Council	2427	0.26%	18%
108	WI11	Borumba Dam, Imbil	Gympie Regional Council	2422	0.26%	11%
109	AC23	Carrara, Carrara Road	Gold Coast City Council	2407	0.26%	1%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
110	PP71	Dingo Beach	Whitsunday Regional Council	2401	0.26%	9%
111	BC08	Kookaburra Park, Karana Downs	Brisbane City Council	2392	0.26%	3%
112	NS32	Tewantin, Lake Street	Noosa Shire Council	2386	0.26%	23%
113	HB38	Gatakers Bay, Corfield Street	Fraser Coast Regional Council	2355	0.25%	5%
114	RD71	Thorneside, Helen Street	Redland City Council	2352	0.25%	3%
115	CB52	Sandstone Point, Kal Ma kuta Drive	Moreton Bay Regional Council	2325	0.25%	2%
116	GC78	Helensvale, Condamine Crescent	Gold Coast City Council	2307	0.25%	1%
117	IS21	Woodgate, First Avenue	Bundaberg Regional Council	2304	0.25%	8%
118	LV21	Coorooman Creek	Livingstone Shire Council	2284	0.25%	13%
119	MK60	Kinchant Dam, Kinchant Dam Road	Mackay Regional Council	2282	0.24%	5%
120	AB72	Alberton, Alberton Road	Gold Coast City Council	2217	0.24%	1%
121	TH51	Bushland Beach, Marina Drive	Townsville City Council	2201	0.24%	6%
122	GB81	Hollywell, Jasmine Avenue	Gold Coast City Council	2187	0.23%	1%
123	WO11	Riverview, Elliot Heads	Bundaberg Regional Council	2153	0.23%	8%
124	RB52	Coochiemudlo, Tageruba Street	Redland City Council	2126	0.23%	3%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
125	WK10	Leslie Dam (highest/upper ramp)	Southern Downs Regional Council	2091	0.22%	58%
126	BC11	Pinkenba, Kirra Street	Brisbane City Council	2078	0.22%	3%
127	TV51	Magnetic Island, Picnic Bay	Townsville City Council	2062	0.22%	6%
128	WI50	Bullock Point	Gympie Regional Council	2030	0.22%	9%
129	CP16	Awoonga Dam	Gladstone Regional Council	2020	0.22%	5%
130	JS47	Mourilyan Harbour, Mourilyan Harbour Road	Cassowary Coast Regional Council	2010	0.22%	14%
131	WP53	Weipa, Rocky Point, Marina Road	Weipa Town Council	1957	0.21%	52%
132	TH61	Rasmussen, Loam Island, Illuta Street	Townsville City Council	1952	0.21%	5%
133	CP26	Boyne Island, Alexander Street	Gladstone Regional Council	1897	0.20%	5%
134	PP21	Shute Harbour, Shute Harbour Road	Whitsunday Regional Council	1825	0.20%	7%
135	CB11	Deception Bay, Bayview Terrace	Moreton Bay Regional Council	1814	0.19%	2%
136	GB92	Paradise Point, Turana Street	Gold Coast City Council	1805	0.19%	1%
137	LB71	Currimundi, Lara Street	Sunshine Coast Regional Council	1787	0.19%	2%
138	RK11	Rockhampton, Reaney Street	Rockhampton Regional Council	1785	0.19%	13%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
139	WP55	Weipa, Evans Landing	Weipa Town Council	1783	0.19%	48%
140	IS11	Walkers Point	Bundaberg Regional Council	1768	0.19%	6%
141	GC41	Surfers Paradise, Naples Avenue	Gold Coast City Council	1754	0.19%	1%
142	CP41	Calliope River, south bank, beside old Bruce Highway	Gladstone Regional Council	1721	0.18%	5%
143	AB61	Waterford, Larry Storey	Logan City Council	1720	0.18%	12%
144	NM02	Lake Baroon (South)	Sunshine Coast Regional Council	1706	0.18%	2%
145	DS48	Dayman Point, Daintree Road	Douglas Shire Council	1688	0.18%	20%
146	JS31	Kurrimine Beach, Bramble Street	Cassowary Coast Regional Council	1674	0.18%	12%
147	LM01	Fairbairn Dam	Central Highlands Regional Council	1646	0.18%	100%
148	RD56	Cleveland, Shore Street	Redland City Council	1638	0.18%	2%
149	IP20	North Ipswich, Fitzgibbon Street	Ipswich City Council	1599	0.17%	31%
150	EM11	Yungaburra, Tinaburra Drive	Tablelands Regional Council	1576	0.17%	40%
151	GC81	Hinze Dam (West)	Gold Coast City Council	1546	0.17%	1%
152	DS43	Lower Daintree, Cape Tribulation Road	Douglas Shire Council	1468	0.16%	17%
153	BC61	Fig Tree Pocket, Fig Tree Pocket Road	Brisbane City Council	1458	0.16%	2%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
154	SA12	Sarina Beach, Sunset Drive, Perpetua Point	Mackay Regional Council	1450	0.16%	3%
155	CO14	Cooktown, Charlotte Street	Cook Shire Council	1434	0.15%	62%
156	MG51	Cairns, Stratford, Greenbank West Road	Cairns Regional Council	1429	0.15%	9%
157	MB61	Poona, Owen Cox Street	Fraser Coast Regional Council	1400	0.15%	3%
158	WI21	Toolara	Gympie Regional Council	1390	0.15%	6%
159	MV31	Turkey Beach, Hancock Street	Gladstone Regional Council	1361	0.15%	4%
160	BH21	Moogerah Dam, Muller Park (Northern)	Scenic Rim Regional Council	1344	0.14%	36%
161	AT11	Tinaroo Township, Church Street - on a Sunwater storage	Tablelands Regional Council	1341	0.14%	34%
162	GB84	Hollywell, Holly Avenue	Gold Coast City Council	1340	0.14%	1%
163	MB51	Maaroom, Granville Road	Fraser Coast Regional Council	1338	0.14%	3%
164	GL31	Hanson Road, Powerhouse, NRG, Calliope River	Gladstone Regional Council	1338	0.14%	4%
165	MB40	Tuan, Bottlebrush Drive (Downstream)	Fraser Coast Regional Council	1322	0.14%	3%
166	TV11	Railway Estate, Barnicle Street (Downstream)	Townsville City Council	1312	0.14%	4%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
167	BW81	Bowen, Starboard Drive	Whitsunday Regional Council	1308	0.14%	5%
168	RB47	Macleay Island, Dalpura Street	Redland City Council	1302	0.14%	2%
169	IP11	Goodna, Noel Kelly Drive	Ipswich City Council	1280	0.14%	25%
170	MG41	Packers Camp, Mackey Creek	Cairns Regional Council	1274	0.14%	8%
171	PP15	Proserpine River, Conway Road	Whitsunday Regional Council	1273	0.14%	5%
172	LO31	Carbrook, Riedel Road	Logan City Council	1268	0.14%	9%
173	AB50	Yatala, Patterson Road	Gold Coast City Council	1267	0.14%	1%
174	MT31	Karalee, Park Road	Ipswich City Council	1266	0.14%	25%
175	BN23	Groper Creek Settlement, Hinkson Esplanade (Downstream)	Burdekin Shire Council	1259	0.14%	23%
176	TO41	Horn Island, Airport Road	Torres Shire Council	1257	0.13%	51%
177	KL11	Lake Monduran	Bundaberg Regional Council	1254	0.13%	4%
178	CB71	Donnybrook, Grant Lane	Moreton Bay Regional Council	1244	0.13%	1%
179	BC94	Bald Hills, Barungwarra Reserve	Brisbane City Council	1227	0.13%	2%
180	CW41	South Mission Beach, Kennedy Esplanade	Cassowary Coast Regional Council	1217	0.13%	9%
181	AB65	Bethania, Federation Drive	Logan City Council	1184	0.13%	8%
182	RB82	Dunwich, Yabby Street	Redland City Council	1163	0.12%	2%



Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
183	MG63	Edmonton, Fisherman Road	Cairns Regional Council	1129	0.12%	7%
184	TV53	Magnetic Island, Nelly Bay Harbour	Townsville City Council	1127	0.12%	3%
185	BU24	Kalkie, McGills Road	Bundaberg Regional Council	1124	0.12%	4%
186	IS31	Buxton, Powers Street	Bundaberg Regional Council	1121	0.12%	4%
187	CA41	Karumba Point, Palmer Street	Carpentaria Shire Council	1108	0.12%	46%
188	MA31	Dunethin Lake, Lake Dunethin Road	Sunshine Coast Regional Council	1100	0.12%	1%
189	NM01	Lake Baroon (North)	Sunshine Coast Regional Council	1082	0.12%	1%
190	CA21	Karumba, Gilbert Street	Carpentaria Shire Council	1080	0.12%	45%
191	TH11	Balgal Beach, Marlin Street	Townsville City Council	1067	0.11%	3%
192	LA11	Laidley, Lake Dyer	Lockyer Valley Regional Council	1067	0.11%	100%
193	BU15	Fairymead, Fairymead Road	Bundaberg Regional Council	1051	0.11%	4%
194	BW64	Molongle Creek eastern 2x3.5m lane ramp	Whitsunday Regional Council	1034	0.11%	4%
195	CW15	Cardwell, Port Hinchinbrook	Cassowary Coast Regional Council	1031	0.11%	7%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
196	GC25	Burleigh Heads, Awoonga Avenue	Gold Coast City Council	1024	0.11%	1%
197	ST11	Storm King Dam	Southern Downs Regional Council	1018	0.11%	28%
198	MG80	Cairns, Trinity Park, Schooner Road	Cairns Regional Council	1004	0.11%	6%
199	HI21	Taylors Beach, Boat Ramp Rd	Hinchinbrook Shire Council	971	0.10%	13%
200	RB92	Amity Point, Claytons Road	Redland City Council	969	0.10%	1%
201	MT11	Chuwar, Mount Crosby Road	Ipswich City Council	962	0.10%	19%
202	MG21	Deeral, Ross Road	Cairns Regional Council	956	0.10%	6%
203	SA22	Grasstree Beach, Boat Ramp Road	Mackay Regional Council	956	0.10%	2%
204	MM10	Mount Morgan, William Street	Rockhampton Regional Council	952	0.10%	7%
205	RK21	Rockhampton, Larcombe Street	Rockhampton Regional Council	948	0.10%	7%
206	JS71	Innisfail, Edith Street	Cassowary Coast Regional Council	946	0.10%	7%
207	PI45	Mount Jukes, Howell's Road (Constant Creek)	Mackay Regional Council	944	0.10%	2%
208	MG91	Yorkeys Knob, Buckley Street	Cairns Regional Council	927	0.10%	6%
209	TO22	Thursday Island, Rosehill dinghy harbour boat ramp	Torres Shire Council	911	0.10%	37%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
210	GW20	Goondiwindi Water Park	Goondiwindi Regional Council	905	0.10%	40%
211	HB41	Toogoom, Toogoom Road	Fraser Coast Regional Council	877	0.09%	2%
212	BH11	Maroon Dam, Slater Park	Scenic Rim Regional Council	866	0.09%	23%
213	LV41	Mulambin, Yeppoon - Emu Park Road	Livingstone Shire Council	859	0.09%	5%
214	MK41	Andergrove, Apsley Way	Mackay Regional Council	847	0.09%	2%
215	TH31	Giru, Cungulla, Cromarty Creek Boat Ramp Road	Burdekin Shire Council	835	0.09%	16%
216	WO61	Four Knots Point, Strathdees Road	Bundaberg Regional Council	832	0.09%	3%
217	LV67	Stanage Bay, Banksia Road	Livingstone Shire Council	823	0.09%	5%
218	CP12	Tannum Sands, Tiller Street (Ibis Park)	Gladstone Regional Council	816	0.09%	2%
219	SR01	Wyaralong Dam	Scenic Rim Regional Council	807	0.09%	22%
220	MB90	Tiaro, Petrie Park	Fraser Coast Regional Council	794	0.09%	2%
221	EK25	Wivenhoe Dam, Logan Inlet	Somerset Regional Council	793	0.09%	6%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
222	CW61	Rungoo, Fishers Creek	Cassowary Coast Regional Council	776	0.08%	5%
223	MO51	Cania Dam	North Burnett Regional Council	772	0.08%	47%
224	PR16	Strathpine, Learmonth Street	Moreton Bay Regional Council	770	0.08%	1%
225	MB43	Boonooroo, Bates Street	Fraser Coast Regional Council	769	0.08%	2%
226	MK30	Pleystowe	Mackay Regional Council	758	0.08%	2%
227	JS51	Flying Fish Point, Flying Fish Point Road	Cassowary Coast Regional Council	739	0.08%	5%
228	CB61	Toorbul, Moffat Esplanade	Moreton Bay Regional Council	729	0.08%	1%
229	SBURN1	Boondooma Dam, Bush Camp Road	South Burnett Regional Council	728	0.08%	35%
230	MG31	Bellenden Ker, Russell River Road	Cairns Regional Council	727	0.08%	5%
231	WO64	Burnett Downs, Rustic Road	Bundaberg Regional Council	712	0.08%	3%
232	LO21	Tanah Merah, Tansey Drive	Logan City Council	707	0.08%	5%
233	BC72	Shorncliffe, Jetty Street	Brisbane City Council	696	0.07%	1%
234	GL27	Curtis Island	Gladstone Regional Council	691	0.07%	2%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
235	ID11	Coolmunda Dam	Goondiwindi Regional Council	687	0.07%	31%
236	JS56	Coconuts, Fern Avenue	Cassowary Coast Regional Council	686	0.07%	5%
237	LB55	Coochin Creek, Roys Road	Sunshine Coast Regional Council	681	0.07%	1%
238	BH22	Moogerah Dam - Muller Park (South)	Scenic Rim Regional Council	676	0.07%	18%
239	CW33	Hull River Heads, Tully - Hull Road	Cassowary Coast Regional Council	675	0.07%	5%
240	RD11	Redland Bay, Moores Road	Redland City Council	674	0.07%	1%
241	MK42	Seagull Street Slade Point boat ramp	Mackay Regional Council	674	0.07%	2%
242	CB64	Meldale, Way Street	Moreton Bay Regional Council	672	0.07%	1%
243	HI11	Forrest Beach, Sheoak Street	Hinchinbrook Shire Council	668	0.07%	9%
244	MK51	Murray Creek, Landing Road	Mackay Regional Council	666	0.07%	2%
245	MG12	Bramston Beach	Cairns Regional Council	666	0.07%	4%
246	DS34	Daintree Township, Stewart Street	Douglas Shire Council	659	0.07%	8%
247	PI14	Dunrock, Dunrock Esplanade	Mackay Regional Council	657	0.07%	2%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
248	GW11	Goondiwindi, Marshall Street	Goondiwindi Regional Council	653	0.07%	29%
249	MB31	Beaver Rock, Beaver Rock Road	Fraser Coast Regional Council	649	0.07%	1%
250	BN71	Barramundi Creek , Morris Creek Road	Burdekin Shire Council	641	0.07%	12%
251	DS12	Newell, Rankin Street	Douglas Shire Council	627	0.07%	7%
252	BN41	Ocean (Mud) Creek, Ayr	Burdekin Shire Council	619	0.07%	12%
253	MR31	Freshwater Point, Miran Kahn Drive	Mackay Regional Council	612	0.07%	1%
254	MG52	Machans Beach, Barron River Esplanade	Cairns Regional Council	596	0.06%	4%
255	CW51	South Mission Beach, Jackey Jackey Street	Cassowary Coast Regional Council	588	0.06%	4%
256	CO31	Bloomfield River, Ayton, Esplanade	Cook Shire Council	587	0.06%	25%
257	TH21	Saunders Beach, Boat Ramp Road	Townsville City Council	581	0.06%	2%
258	BD16	Clairview, Colonial Drive	Isaac Regional Council	581	0.06%	36%
259	MN52	Bjelke-Petersen Dam (East)	South Burnett Regional Council	573	0.06%	28%
260	PI31	Carpet Snake Point, St Helens Beach	Mackay Regional Council	571	0.06%	1%
261	BN62	Jerona, The Esplanade	Burdekin Shire Council	569	0.06%	11%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
262	GL86	Gladstone, Morgan Street	Gladstone Regional Council	569	0.06%	2%
263	GO31	Booyan, Baillies Road	Bundaberg Regional Council	543	0.06%	2%
264	SA31	Half Tide Tug Harbour	Mackay Regional Council	541	0.06%	1%
265	BN11	Inkerman, Peak Road (Wallace Landing)	Burdekin Shire Council	537	0.06%	10%
266	BA11	Callide Dam, Calvale Road (Lower Level)	Banana Shire Council	533	0.06%	60%
267	MA75	Coolum, West Coolum Road	Sunshine Coast Regional Council	528	0.06%	1%
268	AT31	Tinaroo Dam, Black Gully Road	Tablelands Regional Council	526	0.06%	13%
269	BT10	Winfield, Rocky Point Road, Colonial Cove, Baffle Creek	Bundaberg Regional Council	522	0.06%	2%
270	EK21	Wivenhoe Dam, Wivenhoe-Sommerset Road - Billies Bay	Somerset Regional Council	519	0.06%	4%
271	CH11	Chinchilla Weir - Chinchilla Tara Road	Western Downs Regional Council	518	0.06%	73%
272	MK55	Teemburra Dam, Lucas Paddock Road	Mackay Regional Council	517	0.06%	1%
273	HB15	Lenthalls Dam	Fraser Coast Regional Council	515	0.06%	1%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
274	PP12	Wilson Beach, Wilson Beach Road	Whitsunday Regional Council	514	0.06%	2%
275	NS71	Boreen Point, Orchard Avenue	Noosa Shire Council	509	0.05%	5%
276	ST15	Glenlyon Dam	Southern Downs Regional Council	496	0.05%	14%
277	LV12	Nerimbera, St Christopher's Chapel Road	Livingstone Shire Council	496	0.05%	3%
278	GC80	Hinze Dam (East)	Gold Coast City Council	492	0.05%	0%
279	MG42	Second Beach, Pine Creek Yarrabah Road, Yarrabah	Cairns Regional Council	491	0.05%	3%
280	AT21	Tinaroo Dam, Bruce Road	Tablelands Regional Council	455	0.05%	12%
281	MG81	Thomatis (Richters) Creek, Holloways Beach, Acacia Street	Cairns Regional Council	454	0.05%	3%
282	WT13	Mandalay, Mandalay Road	Whitsunday Regional Council	453	0.05%	2%
283	RB15	Russell Island, Alice Street (Jock Kennedy Park)	Redland City Council	450	0.05%	1%
284	GH51	Claude Wharton Weir	North Burnett Regional Council	445	0.05%	27%
285	HB51	Burrum Heads, Burrum Heads Road	Fraser Coast Regional Council	443	0.05%	1%
286	GO11	Winfield, Winfield Road	Bundaberg Regional Council	442	0.05%	2%



Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
287	BD21	Carmila, Carmila Beach Road	Isaac Regional Council	434	0.05%	27%
288	LV66	Corbetts Landing northern ramp	Livingstone Shire Council	416	0.04%	2%
289	FY12	Port Alma, Port Alma Road	Rockhampton Regional Council	409	0.04%	3%
290	LV11	Keppel Sands, Limpus Avenue	Livingstone Shire Council	404	0.04%	2%
291	GO21	Miara, Boat Ramp Road	Bundaberg Regional Council	400	0.04%	1%
292	CO34	Seisia, Seisia Road	Northern Peninsula Area Regional Council	399	0.04%	86%
293	SA14	Koumala, Landings Road	Mackay Regional Council	399	0.04%	1%
294	NS41	Lake MacDonald	Noosa Shire Council	394	0.04%	4%
295	MN51	Bjelke-Petersen Dam (West)	South Burnett Regional Council	393	0.04%	19%
296	TI81	Tinnanbar, Boat Ramp Drive	Fraser Coast Regional Council	393	0.04%	1%
297	GL81	Gladstone, Goondoon Street	Gladstone Regional Council	389	0.04%	1%
298	BN31	Plantation Creek (western ramp - no FW)	Burdekin Shire Council	385	0.04%	7%
299	BE21	Logan Reserve, Henderson Road	Logan City Council	383	0.04%	3%
300	RB13	Russell Island, Wahine Drive	Redland City Council	383	0.04%	1%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
301	MI20	Lake Moondarra	Mount Isa City Council	377	0.04%	95%
302	PI11	Eimeo, Sunset Boulevard	Mackay Regional Council	375	0.04%	1%
303	WN11	Boondooma Dam	South Burnett Regional Council	371	0.04%	18%
304	LV51	Thompson Point	Livingstone Shire Council	364	0.04%	2%
305	SA21	Campwin Beach, Boat Ramp Road	Mackay Regional Council	353	0.04%	1%
306	DS15	Cooya Beach, Bouganvillea street	Douglas Shire Council	348	0.04%	4%
307	BL11	St. George, Bowen Street	Balonne Shire Council	343	0.04%	77%
308	JS36	Cowley Beach, Bambarook Road	Cassowary Coast Regional Council	337	0.04%	2%
309	CO51	Mapoon, Cullen Point	Mapoon Aboriginal Shire Council	337	0.04%	100%
310	HB46	Pacific Haven, Pacific Haven Crescent	Fraser Coast Regional Council	331	0.04%	1%
311	HB56	Burrum Heads, Ross Street	Fraser Coast Regional Council	314	0.03%	1%
312	EK11	Atkinson Dam, Atkinson Dam Road	Somerset Regional Council	305	0.03%	2%
313	BN82	Ayr, Philips Camp Road	Burdekin Shire Council	304	0.03%	6%
314	TH45	Townsville, Bluewater, Purono Parkway	Townsville City Council	293	0.03%	1%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
315	BG10	Lake Paradise, Main Dam	North Burnett Regional Council	292	0.03%	18%
316	JS32	Kurrimine Beach, Maria Creek	Cassowary Coast Regional Council	287	0.03%	2%
317	PI84	Midge Point	Mackay Regional Council	281	0.03%	1%
318	HI61	Halifax, Mona Road	Hinchinbrook Shire Council	278	0.03%	4%
319	CT10	Charters Towers Weir	Charters Towers Regional Council	274	0.03%	60%
320	EK38	Somerset Dam, Westvale Road	Somerset Regional Council	273	0.03%	2%
321	MB11	Maryborough, Granville, Raglan Street	Fraser Coast Regional Council	273	0.03%	1%
322	LV31	Fisherman Beach, Hill Street, Emu Park	Livingstone Shire Council	272	0.03%	2%
323	LH51	Longreach, Longreach to Winton Road	Longreach Regional Council	270	0.03%	100%
324	MV15	Baffle Creek, Coast Road	Gladstone Regional Council	270	0.03%	1%
325	TH41	Bluewater Beach, Bluewater Road	Townsville City Council	269	0.03%	1%
326	LV16	Keppel Sands, Taylor Street, South (Musa) Head	Livingstone Shire Council	262	0.03%	2%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
327	EK23	Wivenhoe Dam, Hamon Cove	Somerset Regional Council	251	0.03%	2%
328	HB62	Howard, Powerhouse Drive	Fraser Coast Regional Council	243	0.03%	1%
329	NS45	Lake MacDonald (western)	Noosa Shire Council	242	0.03%	2%
330	BD17	Sand Fly Creek, Clairview north	Isaac Regional Council	239	0.03%	15%
331	BK11	Burketown, Truganini Road	Burke Shire Council	235	0.03%	100%
332	MR11	Eungella Dam, Eungella Dam Road	Mackay Regional Council	230	0.02%	1%
333	CA12	Normanton, Landsborough Street	Carpentaria Shire Council	230	0.02%	10%
334	PP41	Shingley Beach, Abell Point Marina	Whitsunday Regional Council	227	0.02%	1%
335	RF41	Scarborough, Flinders Parade	Moreton Bay Regional Council	226	0.02%	0%
336	LR01	Quintell Beach, Lockhart River	Lockhart River Aboriginal Shire Council	222	0.02%	93%
337	TO20	Cooby Dam	Toowoomba Regional Council	213	0.02%	100%
338	BN51	Rita Island, Hodder Road (Hell Hole Landing)	Burdekin Shire Council	213	0.02%	4%
339	CW16	Cardwell, Meunga Creek Boat Ramp Road	Cassowary Coast Regional Council	210	0.02%	1%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
340	DA52	Lake Theresa, Theresa Creek Dam	Isaac Regional Council	190	0.02%	12%
341	CO27	Cooktown, Marton, Ida Street	Cook Shire Council	187	0.02%	8%
342	CT20	Burdekin Falls Dam	Charters Towers Regional Council	183	0.02%	40%
343	LO41	Albert River Park	Gold Coast City Council	179	0.02%	0%
344	NA10	Napranum, Ooningan Street	Napranum Aboriginal Shire Council	169	0.02%	100%
345	AU01	Aurukun, Mackenzie Drive	Aurukun Shire Council	167	0.02%	100%
346	HI41	Cassady Creek, Cassady Beach Road	Hinchinbrook Shire Council	151	0.02%	2%
347	TO10	Cressbrook Dam	Somerset Regional Council	151	0.02%	1%
348	CW17	Cardwell, Sheridan Street	Cassowary Coast Regional Council	147	0.02%	1%
349	TM11	Glebe Weir, Glebe weir Road	Banana Shire Council	143	0.02%	16%
350	NS75	Cooroibah, Bundoora Street	Noosa Shire Council	142	0.02%	1%
351	BC23	Lota, Cobar Street	Brisbane City Council	142	0.02%	0%
352	CW22	Tully Heads, Galmahra Street	Cassowary Coast Regional Council	138	0.01%	1%
353	TH35	Toomulla, Herald Street	Townsville City Council	135	0.01%	0%
354	ML11	Condamine, Caliguel Lagoon	Western Downs Regional Council	135	0.01%	19%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
355	MV11	Rosedale, Ferry Road (Baffle Creek)	Gladstone Regional Council	130	0.01%	0%
356	RF51	Margate, Eveline Street	Moreton Bay Regional Council	125	0.01%	0%
357	TS25	St Pauls (Moa) barge/boat ramp	Torres Strait Island Regional Council	125	0.01%	32%
358	PA11	Cunnamulla, Burrenbilla Road	Paroo Shire Council	123	0.01%	100%
359	CR01	Croydon, MCArthur Street	Croydon Shire Council	118	0.01%	100%
360	WT12	Peter Faust Dam via Proserpine	Whitsunday Regional Council	118	0.01%	0%
361	TA01	Tambo Dam	Blackall Tambo Regional Council	115	0.01%	100%
362	CO41	Cooktown, Annan River	Cook Shire Council	114	0.01%	5%
363	DA53	Lake Theresa, Theresa Creek Dam west	Isaac Regional Council	112	0.01%	7%
364	BL20	Dirranbandi, Charles Street	Balonne Shire Council	102	0.01%	23%
365	TS01	Saibai barge/boat ramp	Torres Strait Island Regional Council	99	0.01%	26%
366	CW25	Carmoo, Hull Drive	Cassowary Coast Regional Council	96	0.01%	1%
367	BA41	Baralaba, Neville Hewitt Weir	Banana Shire Council	96	0.01%	11%
368	TS10	Boigu barge/boat ramp	Torres Shire Council	73	0.01%	3%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
369	BD11	Waverley Creek / St. Lawrence, Settlement Road	Isaac Regional Council	72	0.01%	4%
370	CP52	Ramsay Crossing	Gladstone Regional Council	68	0.01%	0%
371	MD11	Mundubbera, Jones Weir	North Burnett Regional Council	66	0.01%	4%
372	WC11	Yengarie, Pleasant View Road	Fraser Coast Regional Council	65	0.01%	0%
373	BA51	Castle Creek, Junction Park, Theodore (Informal)	Banana Shire Council	64	0.01%	7%
374	CP51	The Narrows	Gladstone Regional Council	62	0.01%	0%
375	CH12	Chinchilla Weir - Archers Crossing Road	Western Downs Regional Council	60	0.01%	8%
376	TSIRC01	Badu Barge Ramp	Torres Strait Island Regional Council	60	0.01%	16%
377	AR10	Muttaburra, Broadwater	Barcaldine Regional Council	56	0.01%	100%
378	GL21	Curtis Island, South End Terrace	Gladstone Regional Council	56	0.01%	0%
379	BA21	Moura, Dawson Highway	Banana Shire Council	54	0.01%	6%
380	TS60	Poruma (Coconut) barge/boat ramp	Torres Shire Council	53	0.01%	2%

Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
381	WR10	Surat, Carnarvon Hwy	Maranoa Regional Council	51	0.01%	100%
382	IJ20	Injino, Ware Street	Northern Peninsula Area Regional Council	49	0.01%	11%
383	LO42	Alexander Watt Park	Logan City Council	46	0.00%	0%
384	TO50	Hammond Island barge/boat ramp	Torres Shire Council	46	0.00%	2%
385	PY10	Lake Paradise, Mingo Crossing	North Burnett Regional Council	42	0.00%	3%
386	TS45	Masig (Yorke) barge/boat ramp	Torres Shire Council	41	0.00%	2%
387	TS55	Iama (Yam) barge/boat ramp	Torres Shire Council	38	0.00%	2%
388	TS05	Dauan barge/boat ramp	Torres Strait Island Regional Council	34	0.00%	9%
389	TS65	Warraber (Sue) barge/boat ramp	Torres Shire Council	33	0.00%	1%
390	BH23	Moogerah Dam (Western)	Scenic Rim Regional Council	27	0.00%	1%
391	TS20	Kubin (Moa Island) barge/boat ramp	Torres Strait Island Regional Council	26	0.00%	7%
392	MK70	Laguna Quays Marina	Mackay Regional Council	25	0.00%	0%
393	TS35	Erub (Darnley) barge/boat ramp	Torres Strait Island Regional Council	24	0.00%	6%
394	MI11	Lake Julius	Mount Isa City Council	19	0.00%	5%



Rank	Facility ID	Facility Name	LGA	Number of reports	Percentage of State-wide reports	Percentage of in-LGA reports
395	IJ10	Inang Apudra Jackey Jackey, Seisia Road	Northern Peninsula Area Regional Council	17	0.00%	4%
396	TV18	Townsville, Ross River Dam	Townsville City Council	16	0.00%	0%
397	CO33	Claudie River (Lockhart River Community)	Lockhart River Aboriginal Shire Council	16	0.00%	7%
398	TS50	Ugar (Stephen) barge/boat ramp	Torres Strait Island Regional Council	13	0.00%	3%
399	MW10	Charleville, Ward River, Diamantina Developmental Road	Murweh Shire Council	12	0.00%	100%
400	ED11	Wuruma Dam	North Burnett Regional Council	9	0.00%	1%
401	BW10	Collinsville, Bowen River Weir	Whitsunday Regional Council	7	0.00%	0%
402	TS30	Mabuiag barge/boat ramp	Torres Strait Island Regional Council	5	0.00%	1%
403	DA51	Blackwater - Bedford Weir	Central Highlands Regional Council	5	0.00%	0%
404	CO29	Marina Plains, Lakefield	Cook Shire Council	4	0.00%	0%
405	CO30	Starcke River	Cook Shire Council	2	0.00%	0%

## Annex G Recommendation Summary

Table G.1. Recommendation summary

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Metro	1	Brisbane City Council	Meiers Road, Indooroopilly	\$-	\$83,411.23	Formalise 15 CTU spaces.	Yes
Metro	1	Brisbane City Council	Noolinga Road, Jindalee	\$-	\$165,061.23	Expand parking area into park to the south to achieve 45 CTU spaces.	Yes
Metro	1	Brisbane City Council	Manly Boat Harbour, South	\$211,672.74	\$-	Construct one new boat ramp lane to the west of existing floating walkway.	Yes
Central QLD	1	Bundaberg Regional Council	Burnett Heads Boat Harbour	\$473,647.39	\$120,401.84	Add 25 additional CTU spaces. Move existing floating walkway to a central position on the ramp. Replace existing jetty with a pontoon that can provide queuing for the boat ramp, dinghy parking and a deep-draught vessel landing.	Partial
Central QLD	1	Bundaberg Regional Council	Walkers Point	\$1,153,966.01	\$202,741.84	Formalise 45 CTU spaces. Install breakwater and floating walkway as per the Burrum Heads (Lions Park) site across the river.	Yes
North QLD	1	Cairns Regional Council	Deeral	\$574,062.69	\$140,641.84	Formalise parking for 30 CTUs to the west of the site. Install fixed sloping walkway on the downstream side.	Partial
North QLD	1	Cairns Regional Council	Tingira South	\$3,485,851.25	\$10,748,637.98	Install 2x4-lane boat ramps with 2 floating walkways on each ramp. Install 240 CTUs to replace or supplement existing capacity at Fearnley St and Tingira St facilities.	No
North QLD	1	Cairns Regional Council	Marlin Parade pontoon	\$97,850.58	\$-	Install pontoon suitable for short term mooring of 2x deep-draught vessels and capacity for tender tie up.	No
North QLD	1	Cassowary Coast Regional Council	Coconuts	\$-	\$99,241.84	Formalise grass verge to the east to fit 18 CTUs parking spaces, trialling signage before formalisation with markers/linework.	No
North QLD	1	Cassowary Coast Regional Council	Mourilyan Harbour	\$1,536,354.52	\$-	Reclaim land, construct revetment and add 2 lanes and a floating walkway to the west of the existing ramp.	No
North QLD	1	Douglas Shire Council	Ashford Avenue, Port Douglas	\$-	\$125,277.84	Reconfigure existing carpark to maximise parking capacity by providing hybrid parking spots for CTUs and passenger vehicles.	No
North Coast	1	Fraser Coast Regional Council	River Heads	\$587,746.49	\$2,159,599.38	Reclaim land to construct a parking area for 80 CTUs. Construct two new boat ramp lanes to the east of the existing River Heads (west) boat ramp.	Yes
North Coast	1	Fraser Coast Regional Council	Urangan State Boat Harbour	\$-	\$251,005.90	Expand landside facilities by providing 40 new CTU parking spaces. A recommended example configuration is on the verge of the Esplanade. Investigate the requirement to build a culvert or redirect natural drainage channel.	No
North Coast	1	Fraser Coast Regional Council	Beaver Rock	\$627,481.73	\$428,411.23	Construct two new boat ramp lanes, raising facility to four lanes total. Provide 100 CTU spaces in a semi-formalised parking area. Construct gangway-access pontoon on the downstream side of the ramp.	Yes
Central QLD	1	Gladstone Regional Council	Seventeen Seventy, Captain Cook Drive	\$2,348,806.23	\$1,371,483.68	Realign road and upgrade facility to include 4-lanes with 2 floating walkways and a greater capacity parking area with 130 CTU parking spaces.	Yes
Metro	1	Gold Coast City Council	North Street, Southport	\$-	\$158,161.23	Maximise capacity of existing parking area by reducing roadway lanes from 10m wide to 7m and adding a fourth bay of parks, increasing capacity by 45-50 CTU spaces. 25 parks in new southern bay to be mixed-use, shared by CTUs and passenger vehicles (e.g., CTU only until 9am) to negate the loss of 25 passenger vehicle parks.	No

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Metro	1	Gold Coast City Council	Marine Parade, Labrador	\$77,625.00	\$-	Expand this facility to provide a secondary deep-draught vessel berth. A T-shaped pontoon would allow berthing on either side of the stem. As a further recommendation (Priority 3), expand this facility further by adding another 2 deep-draught vessel berths. Provision of these vessel berths should be incorporated into master planning for this area.	No
Metro	1	Gold Coast City Council	Cabbage Tree Point, Steiglitz	\$1,645,231.06	\$520,370.52	Expand the waterside facilities to include 4 lanes with 2 centralised floating walkways and construct a car park with 120 CTU spaces.	Partial
North Coast	1	Gympie Regional Council	Norman Point, Tin Can Bay	\$1,092,269.66	\$129,411.23	Construct a new boat ramp lane on the northern side of the existing ramps, and 2 new floating walkways on the outside lanes, and 20 additional CTU parking spaces.	No
North QLD	1	Hinchinbrook Shire Council	Dungeness	\$827,137.79	\$-	Construct a third floating walkway adjacent to the northernmost (downstream) ramp lane, and a new ramp lane to the south of the existing southern floating walkway. Reconstruct retaining wall/revetment.	No
Metro	1	Ipswich City Council	Noel Kelly Drive, Goodna	\$950,468.35	\$239,660.85	Stage 1: Realign the boat ramp to face downstream, replacing the one existing lane with a two-lane facility with a centralised floating walkway or fixed sloping walkway. Formalise parking (including required earthworks – 1m cut/fill) to provide 15 CTU parking spaces and a turnaround facility at the top of the hill. After maximising parking capacity at the ramp, consider options for overflow parking nearby.	Yes
Central QLD	1	Livingstone Shire Council	Rosslyn Bay Boat Harbour (western breakwater)	\$49,759,428.89	\$11,687,762.51	Expand the facility with a new boat launching facility with 4 boat ramp lanes and 2 floating walkways, each with two launch/retrieve working faces. This will require construction of new breakwaters, and land reclamation for 120 CTU parks. This option for location considers the western breakwater of the current harbour. Extensive construction works would be required. To provide 'leave the vessel' queuing, either the two floating walkways will need to be extra-long, or a separate gangway-access pontoon will be needed.	No
Central QLD	1	Livingstone Shire Council	Rosslyn Bay Boat Harbour (eastern breakwater)	\$56,873,296.92	\$8,300,748.01	Expand the facility with a new boat launching facility with 4 boat ramp lanes and 2 floating walkways, each with two launch/retrieve working faces. This will require construction of new breakwaters, and land reclamation for 120 CTU parks. This option for location considers the eastern breakwater of the current harbour. Extensive construction works would be required. To provide 'leave the vessel' queuing, either the two floating walkways will need to be extra-long, or a separate gangway-access pontoon will be needed.	No
Central QLD	1	Livingstone Shire Council	Rosslyn Bay Boat Harbour (DDL)	\$260,606.35	\$-	Replace commercial jetty with a pontoon that can provide deep-draught landing facility.	No
Metro	1	Logan City Council	Riedel Road, Carbrook	\$-	\$572,497.03	Formalise 65 CTU parking spaces, on either side of Riedel Road. Widen the road to improve safety for reversing and queuing vehicles and provide a turn-around area.	Yes
North QLD	1	Mackay Regional Council	Mulherin Drive, Mackay Harbour	\$427,937.64	\$-	Extend existing floating walkways by 20-30m each (as lease boundaries allow).	No
North QLD	1	Mackay Regional Council	East Point, Mackay	\$2,562,200.92	\$4,125,462.68	Construct a new 4-lane boat ramp with 2 centralised floating walkways and 150 CTU spaces. Investigate the requirement for dredging at the ramp and any potential conflicts with the existing submerged river training wall. Works to align with development of the East Point residential area including the road network.	Partial
North QLD	1	Mackay Regional Council	Victor Creek, Seaforth	\$2,180,442.44	\$-	Expand facility to 5 lanes with 2 floating walkways by constructing two new boat ramp lanes and a new floating walkway and relocating/replacing existing floating walkway to a more central position.	Partial
Metro	1	Moreton Bay Regional Council	Burpengary, Uhlmann Road	\$-	\$478,133.22	Increase parking to 75 CTU spaces, with options for development at the existing parking site or reclaiming land to the west along Uhlmann Road.	Partial

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Metro	1	Moreton Bay Regional Council	Dohles Rocks	\$-	\$182,311.23	Acquire land to install 80 additional CTU spaces, which can be constructed in two stages.	Yes
North Coast	1	Noosa Shire Council	Thomas Street/ Albert Street	\$112,044.27	\$100,661.23	Reconfigure parking to allow for 51 CTU spaces, relocate the floating walkway to the centre of the boat ramp on the Albert St ramp and extend by 1 module.	No
North Coast	1	Noosa Shire Council	Tewantin, Lake Street	\$313,723.96	\$78,811.23	Convert existing car-only parking to hybrid CTU parking to accommodate an additional 17 CTUs. Install downstream floating walkway with return to accommodate cross-river commuter boats and remove jetty when it reaches the end of its life.	No
North Coast	1	Noosa Shire Council	Hilton Esplanade	\$378,003.63	\$845,423.54	Reclaim land and raise above the existing SLR hazard level for construction of 45 CTU spaces and 2-lane boat ramp with a centralised floating walkway.	No
North Coast	1	Noosa Shire Council	Noosa Woods pontoon	\$157,560.61	\$-	Replace existing jetty structure with pontoon.	No
Metro	1	Redland City Council	Weinam Creek (Stages 1 and 2)	\$1,534,829.91	\$734,922.45	Construct new 3-lane ramp with two floating walkways on the southern bank of Weinam Creek. Construct parking for 130 CTUs in 2 stages (first 85 CTUs, then a further 45). Redirection of the boardwalk may be required (to be completed first, as to not disrupt commuter thoroughfare). Convert existing CTU spaces (adjacent existing ramp) to other uses.	No
Metro	1	Redland City Council	William Street, Cleveland	\$3,542,803.56	\$1,388,661.23	Construct 3 boat ramp lanes and 2 floating walkways to upgrade each ramp to 4 lanes with 2 central floating walkways. Maximise formal parking in the park adjacent (330+ CTU spaces can be achieved). Provide sufficient room for rigging and de-rigging without causing traffic congestion. Create a queuing beach on the southern shoreline of the harbour. Construct a new breakwater to protect the facility from westerly winds/waves. Construct a T-shaped gangway-access pontoon on the new breakwater for 2 deep-draught vessel berths.	Yes
Central QLD	1	Rockhampton Regional Council	Rockhampton Boathouse, Quay Street	\$111,688.44	\$-	Construct a gangway-access pontoon for deep-draught vessel landing.	Yes
North Coast	1	Sunshine Coast Regional Council	Golden Beach, Churchill Street - Stage 1	\$-	\$41,905.37	Stage 1 works consist of converting existing passenger vehicle parks to CTU spaces for additional 14 CTU spaces.	No
North Coast	1	Sunshine Coast Regional Council	Golden Beach, Churchill Street - Stage 2A	\$-	\$714,899.80	Reclaim land to provide 45 additional CTU parking spaces.	No
North Coast	1	Sunshine Coast Regional Council	Golden Beach, Churchill Street - Stage 2B	\$-	\$185,761.23	Construct new overflow parking area on land parcel on Lamerough Pde to the west, providing 50 new CTU parking spaces.	No
North QLD	1	Tablelands Regional Council	Church Street, Tinaroo	\$652,926.05	\$412,041.84	Construct a second boat ramp lane adjacent to the existing and a gangway-access pontoon (to sufficient distance out from the shore so as to be in the water during times of low water-levels). Construct a formalised parking area for 55 CTUs, sealed roadway from the end of Church Street to the boat ramp and a rigging/derigging facility.	No
Far North QLD	1	Torres Shire Council	Rosehill and/or Quarantine	TBC	TBC	Redevelop one or both sites to provide 4-lane boat ramp with floating walkway and a dinghy harbour with pontoon landing for at least 40 dinghies.	No
Central QLD	1	Whitsunday Regional Council	Grubby Bay	\$3,482,058.78	\$5,933,203.34	Reclaim land for new facility that includes 130 CTUs and a 4-lane boat ramp with 2 floating walkways. Facility will need a breakwater to the south to protect from wave action.	No
Metro	2	Brisbane City Council	Nudgee Road, Nudgee Beach	\$-	\$819,647.27	Stage 1 – reconfigure existing parking area to optimise space and allow for 62 CTU spaces. Stage 2 – expand parking area to the south to increase capacity to 106 CTU Spaces.	Partial

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
						Stage 3 – expand southern parking area to provide an extra 22 CTUs, 128 total.	
Central QLD	2	Bundaberg Regional Council	Riverview, Elliott Heads	\$995,118.58	\$222,291.84	Install breakwater, remove existing gangway-access pontoon and install floating walkway or fixed sloping walkway subject to a detailed suitability assessment. Formalise carparking to provide suitable capacity for facility.	No
Central QLD	2	Bundaberg Regional Council	Four Knots Point	\$1,059,505.70	\$257,941.84	Formalise 45 CTU spaces. Widen ramp and construct a central fixed sloping walkway.	Yes
North QLD	2	Burdekin Shire Council	Cromarty Creek, Giru	\$871,462.81	\$-	Reconstruct existing boat ramp, expanding the facility to 2 lanes with a centralised floating walkway or fixed sloping walkway. New ramp to extend further into the channel than existing or be relocated (using same carpark) to Haughton River, to allow self-scouring of the ramp – hydrographic survey dependent.	No
North QLD	2	Cassowary Coast Regional Council	Hull River. Hull Heads	\$210,895.91	\$149,841.84	Construct a new boat ramp lane to the south of the existing ramp. Formalise 40 CTU parking spaces on Tully Hull Road to the south.	No
Far North QLD	2	Cook Shire Council	Cooktown, Marton Ida Street	\$155,250.00	\$-	Add gangway-access pontoon to downstream side of ramp breakwater.	No
North QLD	2	Douglas Shire Council	Dayman (Rocky) Point, Daintree Road	\$295,254.28	\$162,721.84	Conduct traffic assessment to improve safety and navigability of the intersection of the boat ramp access road with Mossman-Daintree Road. Consider widening the road to accommodate turning/merging lanes, installing traffic mirrors, reducing the speed limit to 60km/h and resurfacing the approach to the intersection from the boat ramp. Upgrade the facility to 2-lanes and extend the ramp to 0.5m LAT to achieve all-tide launching capacity. Semi-formalise parks to the east (with concrete blocks/markers) but leave an informal parking arrangement to the west. Seal the roadway from the Mossman-Daintree Road to the boat ramp.	No
North QLD	2	Douglas Shire Council	Dayman (Rocky) Point, Daintree Road (Option 2)	\$712,754.42	\$4,507,360.66	Conduct a coastal processes study into the impact of extending the existing breakwater with a northward bend, and construct if viable. Expand the facility to a 2-lane boat ramp with centralised queuing structure. Queuing structure type to be determined by wave study into extreme (cyclonic) wave climate and community consultation (noting floating walkway is most desirable but may be unfeasible). Reclaim land to the north to expand CTU parking capacity to 60 parks. Works should be considered in addition to the proposed works outlined in Option 1.	No
North QLD	2	Douglas Shire Council	Lower Daintree, Cape Tribulation Road	\$901,487.82	\$481,041.84	Relocate the floating walkway to the centre lane at the end of its design life. This may require reconstruction of the boat ramp lanes for launching and retrieving vessels. Extend the ramp to improve self-scouring and low-tide access. Maximise landside CTU parking capacity, once ongoing landside works are complete, to allow 45 CTU parking spaces (consider semi-formalisation to maintain aesthetic).	No
North Coast	2	Fraser Coast Regional Council	Tuan, Bottlebrush Road	\$-	\$191,241.84	Determine feasibility of new parking area for 40 CTU parking spaces, increasing the total number of spaces to 60.	No
North Coast	2	Fraser Coast Regional Council	Toogoom	\$676,745.16	\$872,952.93	Construct an extra boat ramp lane to the west of the existing 2-lane facility and install a floating walkway on the central lane. Construct a new CTU parking area in vacant block nearby (with potential for minor raising of land levels required). Formalise a footpath from the car park to the boat ramp.	No
Metro	2	Gold Coast City Council	Old Pacific Highway, Oxenford	\$220,802.30	\$42,990.31	Construct a centralised floating walkway. Expand parking by 11 CTU spaces.	Yes
Metro	2	Gold Coast City Council	Donald Avenue, Paradise Point	\$-	\$113,580.61	Expand the current car park to the north. Works can be staged to allow expansion by 14 CTU spaces in Stage 1, then a further 26 CTUs in Stage 2.	No

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Metro	2	Gold Coast City Council	Loders Creek, Labrador	\$614,679.26	\$142,061.23	Stage 1: Rebuild existing 2-lane ramp to provide 2 lanes with a centralised floating walkway. Construct new car park with 28 additional CTU spaces. Stage 2: Expand car park further to provide another 27 CTU spaces.	
Metro	2	Gold Coast City Council	Pinnaroo Street, Santa Barbara	\$699,348.35	\$312,261.23	Reconfigure carpark to add 25 CTU spaces, taking total parking spaces to 47. Add a new boat ramp to the north and install a floating walkway on the existing northern ramp lane.	No
Metro	2	Gold Coast City Council	Cavill Ave, Surfers Paradise	\$77,625.00	\$-	Expand this facility to provide a secondary deep-draught vessel berth. One suggested layout for this is a T-shaped pontoon, allowing berthing on either side of the stem.	No
Metro	2	Gold Coast City Council	Ray Street, Runaway Bay	\$220,802.30	\$-	Construct a floating walkway adjacent to the boat ramp.	No
North Coast	2	Gympie Regional Council	Carlo Road, Carlo Point	\$-	\$140,911.23	Stage 1 – construct 15 CTU parking spaces. Stage 2 – Construct a further 10 CTU parking spaces.	No
North QLD	2	Hinchinbrook Shire Council	Taylor's Beach	\$901,487.82	\$251,041.84	Construct additional boat ramp lane and a fixed sloping walkway, if a feasibility study and community consultation confirms it is appropriate, to the north of the existing facility. Expand parking area by 40 CTUs to reach capacity of 60.	Partial
Metro	2	Ipswich City Council	Fitzgibbon Street, North Ipswich	\$552,005.75	\$83,411.23	Construct a fixed sloping walkway if floating infrastructure is unviable and expand the carpark to provide an additional 20 CTU parking spaces (including 6 mixed-use parks in the centre of the existing car park).	Partial
North QLD	2	Isaac Regional Council	Carmilla Beach	\$1,417,646.34	\$93,721.84	Expand to 2-lane facility with a central fixed sloping walkway, formalising 10 CTU spaces in an all-weather parking area and maintaining informal overflow area. Remove large rock at the toe of the ramp during construction.	Yes
North QLD	2	Isaac Regional Council	St Lawrence Creek	\$618,387.72	\$131,349.84	Conduct feasibility assessment into establishing a facility here, considering current velocities and mobility of channels. If feasible, construct a one-lane boat ramp with a fixed sloping walkway and 10 formalised CTU spaces.	No
Central QLD	2	Livingstone Shire Council	Stanage Bay, Banksia Road	\$-	\$3,822,551.41	Stage 1: Formalise parking with concrete blocks to achieve 30 parks. Stage 2: Increase parking to 46 CTUs. Stage 3: Increase parking to 79 total.	Partial
Central QLD	2	Livingstone Shire Council	Roslyn Bay Boat Harbour	\$-	\$4,386,614.34	Add 90 car parks in the road reserve to the south of the harbour adjacent Breakwater Drive.	No
Central QLD	2	Livingstone Shire Council	Nerimbera, St Christophers Chapen Road	\$148,917.91	\$-	Add gangway-access pontoon to the south (downstream side) of the ramp. Consider the impacts of submerged rocks offshore from this location (indicated by green buoy).	No
Metro	2	Logan City Council	River Hills Road, Eagleby	\$1,379,288.27	\$196,991.84	Realign boat ramp to face downstream and expand the waterside facilities to provide a centralised floating walkway, as well as two boat ramp lanes (as existing). Add 20 CTU spaces to provide 65 total. Restore the natural profile of the riverbank at the existing boat ramp location.	Yes
North QLD	2	Mackay Regional Council	River Street, Mackay (Stage 1)	\$-	\$559,583.68	Stage 1: Construct a new parking area with 30 CTU spaces (taking total to 41), as well as a new connection road and roundabout from Victoria St. This will require reconstruction of the flood levee in the existing parkland. Stage 2: Construct a new parking area to the east of the existing passenger vehicle carpark, taking total number of CTU parks to 90.	No
North QLD	2	Mackay Regional Council	Howells Road, Constant Creek	\$1,038,033.70	\$-	Construct a second boat ramp lane, as well as a queuing structure (selection of structure type to be informed by a feasibility study of floating infrastructure at the site, and impact of tidal/current flows, sedimentation and debris loading).	Partial

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Metro	2	Moreton Bay Regional Council	Scarborough Boat Harbour	\$-	\$-	Consider opportunities through the Scarborough boat harbour master planning process and the planning and design of other recommended sites, to provide a new or improved facility that improves access, increases capacity and provides more deep-draught landings.	No
Metro	2	Moreton Bay Regional Council	Pelican Park, Clontarf (Option 2)	\$1,295,008.26	\$7,616,460.74	Reclaim land to the west to construct 160+ CTU spaces. Demolish existing ramp and construct new boat ramp (2-lane with central floating walkway) in the northern revetment area. Investigate the need for a secondary breakwater to the west to form a mini-harbour.	No
Metro	2	Moreton Bay Regional Council	Pelican Park, Clontarf (Option 3)	\$-	\$511,717.23	Relocate the public infrastructure (playground, BBQs, picnic tables) to the open parkland north of the existing carpark. Construct a new, standalone parking area for at least 67 CTU parking spaces.	No
Metro	2	Moreton Bay Regional Council	Pelican Park, Clontarf (Option 1)	\$-	\$96,061.23	Reopen and formalise overflow parking area, allowing construction of 46 CTU spaces to 109 total with minimal reconfiguration. Parking can be semi-formalised with geo-grid or concrete marker blocks to maintain mixed-use values. Relocate 15 car-only parking spaces.	No
North Coast	2	Noosa Shire Council	Moorindil Street, Tewantin	\$195,915.50	\$143,211.23	Formalise a single-lane boat ramp with 15 CTU parking spaces. Vehicle traffic flow should be considered, particularly in relation to managing conflicts with long queues for the North Shore ferry. Potential widening of Moorindil Street may be required to accommodate this and allow thoroughfare. Safety considerations (clear signage) should be included to ensure no conflict with the adjacent ferry operations.	Partial
Central QLD	2	North Burnett Regional Council	Claude Wharton Weir	\$148,917.91	\$-	Construct gangway-access pontoon.	No
Far North QLD	2	Northern Peninsula Area Regional Council	Seisia Road, Seisia	\$423,345.48	\$-	Formalise the existing informal boat launching lane. To be supported by a detailed coastal processes study to determine the impact of a slab-on-ground ramp, or whether a piled ramp is more appropriate.	No
Metro	2	Redland City Council	Tina Avenue, Lamb Island	\$726,876.19	\$122,511.23	Construct a single lane ramp with a floating walkway and 15 CTUs. In accordance with the bathymetric study, a causeway will be needed to provide near all-tide access to the proposed ramp.	Yes
Metro	2	Redland City Council	Wellington Point	\$3,155,684.24	\$2,996,525.22	Reclaim land to the south of the existing southern boat ramp to expand CTU parking capacity, relocating fifteen passenger vehicle parks for a net gain of 75 CTU parking spaces. Provide wave sheltering by reconstructing the existing breakwater between the north and south ramp and constructing a new breakwater arm from the reclaimed area to form a mini-harbour around the existing southern dredge area. Construct two new floating walkways (one on an existing central boat ramp lane, one to the south of the ramp) and a new boat ramp lane, expanding the facility to 4-lanes with 2 floating walkways. Create a sandy queuing beach to the north of the ramp.	No
Metro	2	Redland City Council	Russell Island, Jock Kennedy Park	\$84,669.10	\$123,661.23	Formalise 20 new CTU spaces and build retaining wall if required. Extend the causeway by 10-15m (approx.) and rebuild the boat ramp to access 0.5m below LAT.	No
Metro	2	Redland City Council	Thorneside, Helen Street	\$585,210.74	\$238,661.23	Add a second boat ramp lane and floating walkway. Increase CTU parking spaces to 60+ total, expanding into the verge on the adjacent street, accommodating existing trees and potentially using a geo-grid surface or delineated with concrete blocks. Separate the CTU parking area from the roadway through a concrete median, similar to the existing at the southern car parks. Construct a roundabout as a turn around facility.	Partial
Other	2	Somerset Regional Council	Somerset Dam, Kirkleigh (North)	\$-	\$63,420.92	Formalise existing hardstand area into 45 CTU spaces.	No

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Other	2	Somerset Regional Council	Somerset Dam, Kirkleigh (South)	\$-	\$77,508.42	Create 10 formal CTU spaces at the top of the ramp with 15 semi-formal CTU spaces to the west as an overflow park.	No
Other	2	Southern Downs Regional Council	Leslie Dam	\$1,425,286.43	\$788,020.54	Duplicate and extend the upper ramp and provide a pontoon for use when the water level is high. Construct gentle batter slopes on the side of the ramp to ensure there is no abrupt drop-off. Formalise 40 CTU parking spaces.	No
North Coast	2	Sunshine Coast Regional Council	Parkyn Parade, Mooloolaba	\$-	\$5,363,455.68	Level 1: Reconfigure parking to achieve 155 CTU spaces. Level 2: Construct a second storey that can accommodate a further 80 CTU spaces.	No
North Coast	2	Sunshine Coast Regional Council	Fishermans Road, Maroochydore	\$597,353.47	\$260,005.23	Add 45 CTU parking spaces by semi-formalising the existing grass parking area to the east, providing hybrid parks for both CTUs and passenger vehicles. Construct an extra 2 boat ramp lanes and another central floating walkway.	No
North Coast	2	Sunshine Coast Regional Council	Short Street, Caloundra	\$443,373.59	\$223,711.23	Widen boat ramp to allow for floating walkway. Construct 50 CTU spaces.	No
North Coast	2	Sunshine Coast Regional Council	Bells Creek	\$420,004.04	\$265,709.23	New 2 lane boat ramp with floating walkway and 65 CTU spaces.	No
Far North QLD	2	Torres Shire Council	Airport Road, Horn Island	TBC	TBC	Extend the exiting gangway-access pontoon and provide dinghy tie-up fingers on the landside.	No
Far North QLD	2	Torres Shire Council	Idabu Pontoon, Engineers Jetty	TBC	TBC	Extend the existing Idabu pontoon to the west and provide dinghy tie-up fingers on the landside.	No
North QLD	2	Townsville City Council	Bushland Beach, Marina Drive	\$-	\$354,035.84	Expand parking area to provide 75 CTU spaces, semi-formalised with markers/concrete blocks.	No
North QLD	Townsville City Council	2	Ross Creek deep-draught	\$413,820.72	\$-	Demolish existing jetty on Ross Creek and install new gangway-access pontoon further downstream on the north side of the creek.	No
Far North QLD	2	Weipa Town Council	Evan's Landing	\$1,114,926.38	\$175,483.68	Construct a third boat ramp lane. Reconfigure the parking area to allow for 75 CTU parking spaces. Investigate the feasibility of creating an overflow parking area to the north-west.	No
Central QLD	2	Whitsunday Regional Council	Bowen Boat Harbour, Starboard Drive	\$980,081.98	\$196,686.51	Add an additional boat ramp lane and floating walkway.	No
Central QLD	2	Whitsunday Regional Council	Abell Point Marina Pontoon	\$1,270,779.44	\$-	Reconstruct pontoon to integrate with new floating walkway for the boat ramp, while providing berthing space for four deep-draught vessels as well as tenders on the northern and eastern faces of the structure.	No
Metro	3	Brisbane City Council	Kirra Street, Pinkenba	\$835,481.56	\$-	Widen existing ramp to place floating walkway between boat ramp lanes.	No
Metro	3	Brisbane City Council	Fig Tree Pocket	\$-	\$137,461.23	Formalise 15 CTU spaces in the open space to the south-west.	No
Metro	3	Brisbane City Council	Glenora St, Wynnum	\$754,548.93	\$2,144,796.52	Upgrade to a 3-lane facility with a central floating walkway (presently 2-lane with no queuing infrastructure). Reclaim land to the north of the entrance channel (approx. 110 x 80m) and construct 110 CTU spaces. Construct gangway-access pontoon for queuing and temporary berthing deep-draught landing.	No
Metro	3	Brisbane City Council	North Shore, Hamilton	\$754,548.93	\$429,561.23	Upgrade to a 3-lane facility with a central floating walkway (presently 2-lane with no queuing infrastructure). Reclaim land to the north of the entrance channel (approx. 110 x 80m) and construct 110 CTU spaces. Construct gangway-access pontoon for queuing and temporary berthing deep-draught landing.	No

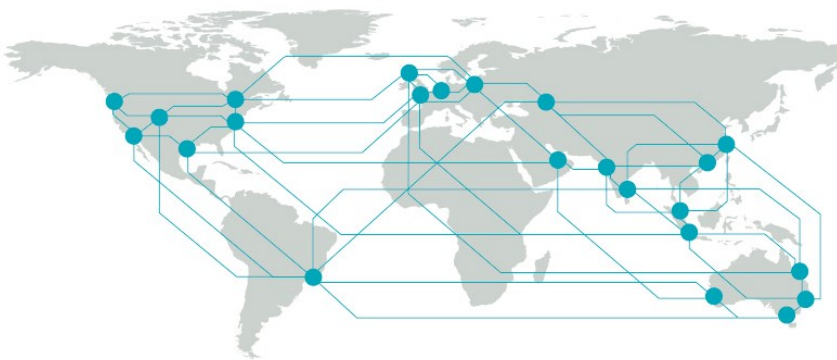


Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Central QLD	3	Bundaberg Regional Council	Sandy Hook	\$148,917.91	\$218,841.84	Formalise 45 CTU spaces and install pontoon.	Partial
North QLD	3	Burdekin Shire Council	Groper Creek, Hinkson Esplanade	\$471,833.50	\$176,866.84	Construct a 2-lane ramp with centralised queuing structure if deemed feasible in place of the southern (downstream) ramp. Conduct a flood current investigation to determine the viability of a floating walkway or fixed sloping walkway as a queuing structure. Semi-formalise the parking area to allow for 40 CTU parking spaces.	No
North QLD	3	Cairns Regional Council	Cairns, Trinity Park	\$97,850.58	\$129,141.84	Install additional 12 CTU spaces. Create queuing lane for access to the boat ramp. Install gangway-access pontoon.	No
North QLD	3	Cassowary Coast Regional Council	Campbell St, Innisfail	\$1,405,492.17	\$744,320.54	Construct a 2-lane boat ramp with a central queuing structure (fixed sloping walkway likely best option due to flood current velocities) and 45 CTU parking spaces.	No
Far North QLD	3	Cook Shire Council	Cooktown, Annan River	\$579,606.04	\$-	Add fixed sloping walkway to existing boat ramp.	No
North QLD	3	Douglas Shire Council	Mowbray River	\$650,558.57	\$658,826.40	Construct a new 2-lane ramp with a central floating walkway and 45 CTU spaces.	No
North Coast	3	Fraser Coast Regional Council	Maryborough, South Street	\$-	\$303,330.61	Reconfigure and expand car park to allow for 65 CTU spaces.	Yes
North Coast	3	Fraser Coast Regional Council	Lenthalls Dam	\$163,262.91	\$117,911.23	Construct a second boat ramp lane and expand parking to 30 CTU parking spaces total.	Yes
North Coast	3	Fraser Coast Regional Council	Gatakers Bay, Corfield Street	\$910,116.73	\$331,668.74	Expand facility by constructing another boat ramp lane to the west of the existing ramp and installing a fixed sloping walkway over the existing lane, making this a 2-lane facility with a centralised walkway. Expand parking area to add another 35 CTU spaces, matching construction to existing parking area (semi-formalised with grass, investigate hybrid parking arrangement for PVs and CTUs).	No
North Coast	3	Fraser Coast Regional Council	Poona, Owen Cox Street	\$798,072.46	\$-	Expand the ramp to include a second boat ramp lane and a fixed sloping walkway.	No
Metro	3	Gold Coast City Council	Alberton Road, Alberton	\$-	\$163,911.23	Expand parking area to provide a further 28 CTU spaces.	Yes
Metro	3	Gold Coast City Council	Boykambil Esplanade, Hope Island	\$474,809.59	\$133,130.61	Stage 1: Expand existing 1-lane ramp by adding 1 additional lane and a centralised floating walkway, add 22 CTU parking spaces. Stage 2: Expand parking area to provide a further 13 CTU parking spaces.	No
Metro	3	Gold Coast City Council	North Street, Southport	\$754,548.93	\$6,629,822.45	Construct a secondary launching/retrieval facility to the north-west of the existing boat ramp, consisting of two boat ramp lanes and a central floating walkway. Expand parking area to the north and south (approx. 10-15m) to accommodate a second storey of parking area, for a net gain of 55-60 CTU parking spaces. Maintain an open-air circulation road around the outside of the multi-storey parking complex to avoid placing height restrictions on towed vessel heights.	No
Metro	3	Gold Coast City Council	Colman Road, Coomera (Option 1)	\$754,548.93	\$669,097.03	Expand existing 1-lane ramp by adding 1 lane and a centralised floating walkway. Expand the landside facilities by constructing a parking area to cater for 65 CTUs.	No
Metro	3	Gold Coast City Council	Colman Road, Coomera (Option 2)	\$754,548.93	\$186,911.23	Expand existing 1-lane ramp by adding 1 lane and a centralised floating walkway. Expand the landside facilities by constructing a smaller parking area to cater for 25 CTUs.	No
Metro	3	Gold Coast City Council	Pool Street, Hope Island (Option 1)	\$152,404.37	\$98,821.23	Construct a new 1-lane boat ramp with 15 CTU spaces at the end of Starry Place.	No

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Metro	3	Gold Coast City Council	Pool Street, Hope Island (Option 2)	\$373,206.67	\$136,311.23	Construct a new 1-lane boat ramp with 15 CTU spaces at the end of Nelson Avenue.	No
Other	3	Goondiwindi Regional Council	Goondiwindi Water Park	\$155,250.00	\$-	Install gangway-access pontoon, provided a detailed assessment of the site confirms it is safe to do so in the water-skiing area.	No
North Coast	3	Gympie Regional Council	Norman Point, Tin Can Bay	\$1,068,530.21	\$173,111.23	Construct a new 2-lane boat ramp with a floating walkway and 43 CTU parking spaces adjacent to the existing facility. Remove the existing gangway-access pontoon, to be replaced with a floating walkway with a heavy-duty outer section, designed to accommodate landing for deep-draught vessels. Consideration is to be given to a future expansions of the Norman Point boat harbour during master planning.	No
North Coast	3	Gympie Regional Council	Bullock Point	\$-	\$324,504.13	Construct 15 CTU parking spaces and a turnaround facility on Bullock Point Road.	No
North QLD	3	Hinchinbrook Shire Council	Cassady Creek	\$894,768.66	\$472,301.84	Construct a new 2-lane boat ramp with centralised floating walkway, turnaround area and 35 CTU parking spaces. Construct a roadway from the existing road to the ramp site.	No
Metro	3	Ipswich City Council	Park Road, Karalee	\$835,000.00	\$360,000.00	Construct an additional boat ramp lane and a centralised queuing structure (floating walkway preferred, or fixed sloping walkway if current flow forces dictate). Expand parking area to provide a total of 35 CTU spaces.	No
North QLD	3	Isaac Regional Council	Theresa Creek Dam	\$253,075.10	\$-	Construct a second boat ramp lane adjacent to the first. Semi-formalise a parking area for 35 CTUs if required, in line with the Master Plan.	No
Central QLD	3	Livingstone Shire Council	Corbetts Landing	\$317,694.86	\$92,745.92	Semi-formalise parking area with concrete blocks or markers to achieve 31 new CTU spaces (in two stages). Conduct feasibility study into the construction of a floating walkway to the south, bending angled via a 'return' to be parallel to flood flows, and construct if feasible.	Partial
Metro	3	Logan City Council	Larry Storey Park, Albert Street, Waterford	\$552,005.75	\$136,771.23	Construct an additional parking area for 30 CTUs, taking the total CTU parking capacity to 37. Consider the installation of hybrid parks, available to both passenger vehicles and CTUs. Install a fixed sloping walkway on the upstream side of the existing boat ramp.	No
North QLD	3	Mackay Regional Council	Midge Point - Jimmys Rock Road	\$-	\$518,279.41	Construct a new parking area with 25 CTU spaces within the road reserve.	No
North QLD	3	Mackay Regional Council	Half Tide Tug Harbour	\$-	\$78,541.84	Reconfigure parking layout to allow for 15 extra CTU spaces.	No
Metro	3	Moreton Bay Regional Council	Marine Parade, Bellara	\$-	\$169,661.23	Expand parking area to allow 25 additional CTU parking spaces.	Partial
North Coast	3	Noosa Shire Council	Gympie Terrace pontoon	\$157,560.61	\$-	Replace existing jetty structure with pontoon. Suggest including sewage pump-out facility at this location to service the deep-draught vessels and shallow-draught houseboats using the Noosa River. The suggested configuration for the pontoon can readily be expanded to cater for more vessels if that is deemed necessary adequate pump-out capacity.	No
North Coast	3	Noosa Shire Council	Chaplin Park	\$515,209.27	\$199,561.23	Install 2-lane boat ramp with floating walkway and 30 CTUs. Parking area can be constructed to include 20 CTU parking spaces in Stage 1 and a further 10 in Stage 2.	Yes
Far North QLD	3	Northern Peninsula Area Regional Council	Jackey Jackey, Seisia Road	\$155,250.00	\$-	Construct a gangway-access pontoon.	No
Metro	3	Redland City Council	Victoria Point gangway-access pontoon	\$129,375.00	\$-	Construct a new gangway-access pontoon for deep-draught vessel access. An amendment to the existing approved dredge footprint will be required.	No

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
Central QLD	3	Rockhampton Regional Council	Robert Clark Drive, Callaghan Park	\$-	\$264,841.84	Construct additional carpark with 54 CTU spaces.	No
Central QLD	3	Rockhampton Regional Council	Quay Street	\$1,183,084.58	\$126,670.92	Reconfigure car park to maximise number of CTU spaces, without compromising the usability for launching. Relocate the floating walkway to the north side of the ramp.	No
Other	3	Somerset Regional Council	Somerset Dam, The Spit	\$-	\$151,970.92	Formalise parking with 35 CTU spaces on existing hardstand.	Partial
North Coast	3	Sunshine Coast Regional Council	Muller Park, Bli Bli (Option 1)	\$671,941.67	\$340,321.23	Reconstruct the boat ramp in an area with full tide access and include a floating walkway. Expand parking via formalising 55 CTUs.	No
North Coast	3	Sunshine Coast Regional Council	Muller Park, Bli Bli (Option 2)	\$671,941.67	\$340,321.23	Reconstruct the boat ramp in an area with full tide access and include a floating walkway. Expand parking via formalising 85 CTUs.	No
North Coast	3	Sunshine Coast Regional Council	West Coolum Road, Coolum	\$363,981.90	\$176,561.23	Duplicate boat ramp lane and install fixed sloping walkway. Formalise 35 CTUs.	Partial
North QLD	3	Tablelands Regional Council	Tinnaburra Drive, Yungaburra	\$548,329.37	\$299,939.84	Construct a second boat ramp lane adjacent to the existing lane. Formalise 45 CTU parking spaces and a rigging/derigging area.	No
Central QLD	3	Whitsunday Regional Council	Conway Road, Proserpine	\$597,589.68	\$-	Add additional 2 lanes on the upstream side of the floating walkway.	No
Metro	4	Brisbane City Council	Deep-draught landing pontoon locations	\$-	\$-	Construct gangway-access pontoons for deep-draught vessel landings in high-use areas currently being developed.	No
North QLD	4	Burdekin Shire Council	Clare Weir, Clare	\$-	\$-	Construct a 1-lane boat ramp with 15 CTU parking spaces.	No
North QLD	4	Burdekin Shire Council	Kierles Landing, Sandhill Road, Rita Island	\$-	\$-	Construct a 2-lane boat ramp with a centralised floating walkway or fixed sloping walkway. Bank stabilisation and protection works will be required on either side, as well as current protection in the form of a breakwater and/or training wall to provide sheltered launching and retrieval during high current flows. Formalise a parking area on the road reserve for 80 CTU spaces.	Yes
North QLD	4	Cassowary Coast Regional Council	Port Hinchinbrook	\$-	\$-	Expand the car park, and dredge the channel to the ocean to allow all-tide access.	Partial
Metro	4	Gold Coast City Council	Steiglitz Major Boating Facility	\$-	\$-	Establish a new major boating facility by constructing a 4-lane boat ramp with 2 centralised floating walkways and 150 CTU spaces. Two potential sites within the locality of Steiglitz have been identified, both of which require acquisition of freehold land. Option 1 is on Cabbage Tree Point Road.	Yes
Metro	4	Gold Coast City Council	Marks Road, Woongoolba	\$-	\$-	Construct a single lane boat ramp and 15 CTU parking spaces.	Yes
Metro	4	Ipswich City Council	Monash Road, Redbank	\$-	\$-	Construct a 2-lane boat ramp with 45 CTU parking spaces.	No
North QLD	4	Isaac Regional Council	Meatworks Creek, Settlement Road	\$-	\$-	Construct a queuing facility at the boat ramp. Assess the suitability of a floating walkway, a fixed sloping walkway or a gangway-access pontoon.	No
Metro	4	Logan City Council	Logan Street, Eagleby, Albert River	\$-	\$-	Construct a one-lane ramp and 30 CTU spaces.	No
Metro	4	Moreton Bay Regional Council	Caboolture River	\$-	\$-	Provide 6 effective lanes of capacity along the Caboolture River. A large public facility should be considered as part of the North Harbour Marina development, if it progresses. In	No

Region	Priority	LGA	Site	Waterside cost	Landside cost	Recommendation	Carried Forward
						the case that this proposed development is not completed, other options along the Caboolture River should be considered to provide this amount of capacity.	
Metro	4	Redland City Council	The Esplanade, Karragarra Island	\$-	\$-	Conduct investigation and community consultation into best location for construction of a new 1-lane ramp with 15 CTU parking spaces to service the Karragarra recreational boating community. Consider sediment transport and a piled and elevated ramp structure to avoid impacts on natural sediment transport processes.	No
Metro	4	Redland City Council	Dunwich new boat launching facility	\$-	\$-	Conduct investigation and community consultation into best location for construction of a new 2-lane ramp with 45 CTU parking spaces to service the Dunwich community.	Partial
North Coast	4	Sunshine Coast Regional Council	Maroochy River	\$-	\$-	Investigate feasibility of these sites to determine most appropriate location to construct a 2-lane boat ramp with a floating walkway and 65 CTU parking spaces.	No
North Coast	4	Sunshine Coast Regional Council	Nojoor Road, Twin Waters	\$-	\$-	Expand facility to include a total of 4 boat ramp lanes and a total of 100 CTUs.	No
Central QLD	4	Whitsunday Regional Council	Molongle Creek	\$-	\$-	Expand car park to raise capacity to 85 CTU spaces.	No
<b>Subtotal</b>				<b>\$184,579,601</b>	<b>\$107,922,521</b>		
<b>Overall Total</b>					<b>\$292,502,123</b>		



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Level 5  
348 Edward Street  
Brisbane  
QLD 4000  
Australia  
+61 7 3831 6744

Registered in Australia  
Registered no. 010 830 421  
Registered office  
Level 5, 348 Edward Street,  
Brisbane QLD 4000 Australia

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