



Buoy Mooring Management Strategy

Draft for consultation
March 2017



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Our Vision

SUSTAIN. ENHANCE. PROMOTE.

A waterways network (and relevant facilities and reserves) that is sustainably managed to reflect and support an appropriate balance between the recreational, tourism, environmental, economic development and commercial aspirations and objectives of the Gold Coast community and visitors.

Gold Coast Waterways Authority (GCWA) is shining a spotlight on the future of the Gold Coast waterways to become something that residents can use, understand, protect, respect, enhance and enjoy as much as the city's beaches.

A key part of achieving this vision involves managing buoy mooring areas in Gold Coast waterways safely and responsibly to accommodate the Gold Coast's rapidly increasing population, while embracing new technology to reduce the impact of buoy moorings on the marine environment.

Boating activity on the Gold Coast waterways is growing steadily and 11% of Queensland's recreational boats are now located in the Gold Coast region. Based on the latest figures, there are now almost 28,000 recreationally registered boats and almost 700 domestic commercial vessels in the Gold Coast area. These statistics reinforce the importance of seeking a balanced solution for storing or mooring of boats throughout the Gold Coast in a number of ways, including:

- land dry-dock storage
- trailerable-sized vessels
- private pontoons
- vessel storage spaces provided at marinas
- anchoring in accordance with local anchoring and mooring restrictions
- buoy moorings.

Forecasting demand for buoy moorings and boat storage is challenging. Not all boat owners store their boats in or around the nearest waterway and vessel size and character differs substantially. Likewise, not all boats in and around a particular waterway are owned by people who live in the region.

While fewer in number, it is also important to consider the storage requirements for domestic commercial vessels. These types of vessels are primarily stored on water and many have similar storage requirements to recreational vessels.

A new strategy securing a sustainable approach

GCWA’s *Buoy Mooring Management Strategy (Draft)* is a proposed guiding framework for responsibly managing buoy moorings in Gold Coast waterways into the future. It is the next stage in a long-term consultation process that has actively sought community views through the *2014 Buoy Mooring Review*, which examined the way buoy moorings are installed, used and managed on the Gold Coast.

Recommendations from the *2014 Buoy Mooring Review* included, that:

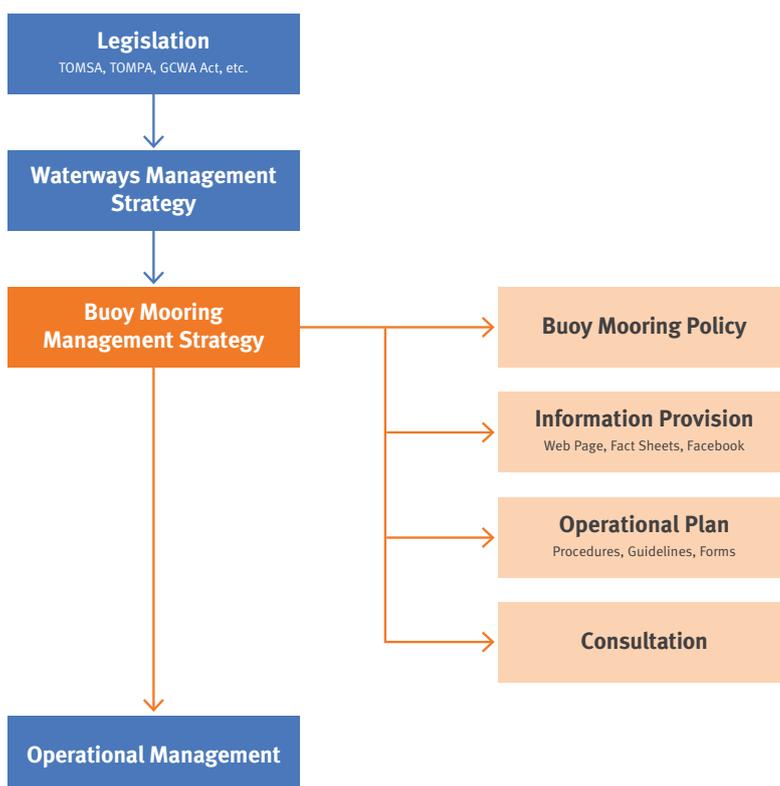
- A moratorium be placed on granting any further approvals for new buoy mooring authorities (using traditional swing mooring technology) and new buoy mooring areas.
- GCWA trials a Category 1 buoy mooring area(s) to provide a better mooring management model that maximises mooring opportunities and supports an appropriate and ongoing mooring maintenance program.
- GCWA implements the use of better mooring technologies that effectively and sustainably support greater mooring densities (e.g. environmentally friendly moorings).
- GCWA works with ‘Fisheries’ and ‘Parks’ to address mooring issues in Fish Habitat Areas (FHAs) and the ‘Marine Park’.
- GCWA develops an implementation plan and a change management strategy that includes an information/education campaign and consultation with the boating community.

In 2015, GCWA conducted an *Independent Review of the Labrador Channel*, which focused on access and safe navigation in the Southern Broadwater. Extensive feedback received through these consultations, as well as discussions with impacted user groups, has contributed to the development of this draft strategy.

As shown in Figure 1 below, the strategy is informed by legislation and supports GCWA’s 10-year *Waterways Management Strategy* which establishes a clear direction for the sustainable use, management and development of the Gold Coast waterways in a way that is beneficial to all users. It also aligns to the Queensland Government’s objectives for the community; in particular, protecting the environment.

The final *Buoy Mooring Management Strategy* will guide GCWA’s approach to policy, information provision, operations and consultation.

Figure 1: GCWA Buoy Mooring Management Strategy overview



Purpose

The purpose of this management strategy is to deliver the best possible management of the Gold Coast waterways at reasonable cost to the community and government, by strategically planning for, facilitating and managing the development and use of the Gold Coast waterways sustainably for marine industries, tourism and recreation.

Principles

Underpinning this *Buoy Mooring Management Strategy* are principles that will form the basis for future decision making, both with respect to the priority actions proposed below and in reference to buoy mooring issues that may arise now and into the future:

- Principle 1:** Balance safety impacts to all waterways users and stakeholders
- Principle 2:** Deliver the best possible management of the Gold Coast waterways
- Principle 3:** Achieve at a reasonable cost to the community and government
- Principle 4:** Simple and consistent with a minimum of decision-making regulation
- Principle 5:** Sustainable actions protecting environmental values
- Principle 6:** Infrastructure must be practical, fit-for-purpose and aligned to users' needs
- Principle 7:** Promote responsibility and accountability in users and stakeholders
- Principle 8:** Consult with the community before making significant changes

Priorities for action

The following priority actions will drive the *Buoy Mooring Management Strategy*, as well as GCWA's overarching vision to *Sustain, Enhance and Promote* Gold Coast waterways:

1. Develop a strategy that is aligned to the requirements of legislation and practical management outcomes
2. Increase access to buoy moorings in Gold Coast waterways in suitable locations
3. Manage the environmental impacts of buoy moorings
4. Improve the safety aspects associated with buoy moorings
5. Engage the community about GCWA's future plans for the management of buoy moorings.

This approach is designed to achieve a balance between legislative, environmental, social and economic considerations. Priorities will be implemented subject to the availability of funding and resources.

Each priority is explained in more detail in the following pages.

Priority 1: Develop a strategy that is aligned to the requirements of legislation and practical management outcomes

The GCWA Buoy Mooring Management Strategy will be aligned to the requirements of the various Acts and regulations that are applicable to buoy moorings within Gold Coast waters.

Priority 1: Develop a strategy that is aligned to the requirements of legislation and practical management outcomes

- 1.1 Identify legislation that is relevant to the management of buoy moorings
- 1.2 Develop a strategy that incorporates requirements of legislation
- 1.3 Monitor legislative changes and amend the strategy when required
- 1.4 Develop policy and operational procedures

Legal responsibility

GCWA is responsible for managing buoy moorings within Gold Coast waterways in accordance with the requirements of legislation, including ensuring that authority holders are complying with the conditions of their buoy mooring authorities.

Information about the relevant laws that apply to buoy moorings and the related functions of the legislation has been provided at the rear of this document for reference in Appendix B.

Monitor and manage

GCWA will regularly monitor the legislation that applies to buoy moorings. When amendments are made that affect GCWA's role, GCWA will amend its internal documents and management procedures to incorporate the changes.

Auditing for compliance

GCWA will audit buoy mooring areas and ensure that authority holders are complying with the conditions of their authorities.

Policy and operation procedures

GCWA will develop policy and operational procedures to help guide major decisions, actions and activities associated with the management of buoy moorings and ensure consistency and transparency.

Category 1 mooring areas

No additional Category 1 areas will be created unless:

- it can be demonstrated that there is a suitably qualified and experienced external third party mooring manager with the required landward facilities to take on the management of the moorings.
- existing authority holders in the Category 3 areas agree to transition to a Category 1 area.
- the community, government agencies and waterways users support creating the Category 1 area.

Priority 2: Increase access to buoy moorings in Gold Coast waterways in suitable locations

GCWA will investigate opportunities to increase access to buoy moorings and implement changes where it can be demonstrated that an overall benefit will be achieved balancing safety, social, environmental and economic impacts.

Priority 2: Increase access to buoy moorings in Gold Coast waterways in suitable locations

- 2.1 Create opportunities within existing mooring fields
- 2.2 Consolidate and rearrange moorings to make space for new moorings
- 2.3 Reduce waiting lists

Broadwater Category 3 moorings

Existing traditional block and tackle buoy moorings

Traditional block and tackle buoy moorings have been used to secure vessels in Gold Coast waters since moorings were first established within the waterways. However, while this type of mooring is a relatively cheap system for storing vessels, it often results in harm to marine plants (i.e. seagrass) and the benthic layer (seabed and the organisms that live within it). Additionally, in adverse conditions these types of moorings are prone to dragging, which creates a risk to other vessels, infrastructure and waterways users.

It is GCWA's intention to phase out traditional block and tackle buoy moorings in the future and have authority holders fund their replacement with Environmentally Friendly Moorings (EFMs) that have a screw helix anchor system. This will remove potential impacts to marine plants (where they exist) and significantly reduce the impact to the benthic layer. Additionally, the helix screw anchor will provide a secure fixing to the seabed that should not pull free in adverse conditions. This system will remove the risk of collisions from vessels dragging and improve safety in the waterway for all users.

The risk of equipment failure (for example, perished or broken mooring tackle) will always remain regardless of the mooring system used and regular maintenance will always be required to prevent this from occurring. However, the benefits of replacing traditional block and tackle buoy moorings with EFMs as outlined above will provide noticeable improvements for the environment and waterways users.

GCWA will consult with authority holders on what timings they would support for the phasing out of their traditional block and tackle moorings and replacing them, at authority holders' expense, with EFMs with screw helix anchors.

If authority holders do not support this approach, GCWA will seek an indication from them of the timeframe that would be supported for the transition. The outcome of the survey results on this matter will form the basis for the future timing on the phase out of existing traditional block and tackle moorings within Gold Coast waters.

New moorings

All new moorings in Category 3 areas will continue to be funded by authority holders. All moorings in the Moreton Bay Marine Park must be EFMs in accordance with Marine Park legislative requirements. Options for mooring apparatus types in areas outside the Moreton Bay Marine Park will be determined through consultation and could be either swing EFMs or fore-and-aft EFMs; however, these options will not include traditional block and tackle swing moorings that do not meet environmental performance requirements and are prone to dragging in adverse conditions.

EFM fore-and-aft moorings can achieve higher densities comparative to swings moorings; however, they come at a greater cost to the buoy mooring holder to establish (approximately \$6,600-\$8,000 subject to vessel size) and will incur higher ongoing maintenance costs and de-establishment costs due to the extra infrastructure that is required. They are also considered to be more difficult to use in adverse conditions and exposed locations, and may require additional deck hands when securing to the mooring compared to an EFM swing mooring. Due to their fixed position, they are known to cause greater shading to marine plants and therefore are considered to have a reduced environmental benefit.

EFM swing moorings can achieve marginally less densities than EFM fore-and-aft moorings due to the swing radius required for them to function safely. They come at a lower price to the buoy mooring holder to establish (approximately \$3,300-\$4,000 subject to vessel size) and will have lower maintenance costs and de-establishment costs due to the reduced extent of the apparatus that is required. This type of mooring is generally considered to be easier for mooring of vessels. The combination of the EFM anchor system (which does not drag chain on the seabed) and the continual swinging of the vessel reduces constant shading to marine plants and therefore provides the optimum environmental benefit.

Maintenance costs will vary subject to the extent of the repair and replacement of parts that is required and the rates charged by marine contractors. However, annual maintenance costs for an EFM swing mooring may be in the vicinity of \$300 whereas the annual maintenance costs for an EFM fore-and-aft mooring could be in the vicinity of \$600. The substantial difference in maintenance costs is due to the EFM fore-and-aft mooring having two anchor points (they are unable to share anchor points) and almost double the quantity of mooring apparatus (shackles, swivels, ropes, chains, etc.).

Removal cost is mostly based on the number of anchors that need to be removed and may be in the vicinity of \$500 for an EFM swing mooring and up to \$1,000 for an EFM fore-and-aft mooring.

The use of an EFM screw helix anchor system may provide opportunities for a reduction in insurance premiums due to greater anchoring strength and the significant reduction in the risk of dragging.

Consolidation of existing moorings

GCWA will negotiate with authority holders to relocate their existing mooring apparatus to provide the most efficient layout in the existing Category 3 mooring areas to make space for the establishment of new apparatus (EFMs or fore-and-aft EFMs) to accommodate additional moorings. These new moorings would be funded by authority holders.

GCWA will only co-ordinate and fund the relocation of existing moorings when required to enable ongoing consolidation of the moorings. Additionally, GCWA will make administrative changes to buoy mooring authorities and reissue them to capture the new GPS location, once the relocation has been completed. This work may be described as upgrading the buoy mooring area.

Over time, as buoy mooring authorities in the area are renewed or surrendered, moorings will continue to be consolidated and new spaces made available, in a location that will result in the greatest density outcome for the mooring area.

In mooring areas that are very shallow or have a history of shoaling or are prone to other safety issues that can lead to moorings needing to be relocated from time to time, GCWA will ensure the areas are not entirely filled, so that some space remains to accommodate mooring relocations if required.

The consolidation process will help improve the efficiency of the mooring layouts and create additional mooring spaces.

Priority areas for upgrade

GCWA has identified the following order of priority for upgrading the mooring areas:

- | | | |
|------------------------------|-------------------------------------|-------------------|
| 1. Beattie Road | 6. Jacobs Well | 11. Steiglitz |
| 2. Jabiru Island | 7. Boykambil | 12. Currigee |
| 3. Labrador | 8. Southern Broadwater – Category 1 | 13. Turana Street |
| 4. Carbrook | 9. Hollywell Harbour | |
| 5. Paradise Point Main River | 10. Paradise Point Boat Harbour | |

Maps of the mooring areas can be viewed on the GCWA website at www.gcwa.qld.gov.au/resources_and_forms/

GCWA reserves the right to change the priority order for the upgrades as influencing factors change regularly and can make one mooring area either more or less viable as a result. The quantity of new moorings that may potentially be able to be provided by GCWA in the mooring areas above is subject to many factors, some of which, GCWA does not control and includes:

- safety considerations
- outcomes of consultation to identify whether the community would like to use EFM swing or fore-and-aft moorings as different densities are achievable for each option
- shoaling and natural waterways environmental changes
- weather and other conditions such as wind, tide, current, wash and waves.
- operational requirements and resourcing.

New mooring areas

Mooring areas lock up vast areas of the waterway, whereas the same space could be used by numerous different user groups for many different activities on different days and at different times. In this regard, moorings are inefficient in terms of usage of available waterways space and investment return.

No new mooring areas will be created until the consolidation of existing mooring areas is finalised and a plan identifying the best current and potential future waterways uses has been completed.

Additionally, if and before any new mooring areas are created, GCWA would complete comprehensive community consultation to ensure the change to the waterways was supported.

On-land storage

GCWA recognises the waterways has finite capacity. Therefore, part of our strategy is to encourage other vessel berthing and storage opportunities such as in marinas, on land (dry docks), private pontoons and trailerable storage, where suitable.

Maximum and minimum future vessel lengths

For all new buoy mooring authorities that are issued following the implementation of this Buoy Mooring Management Strategy, GCWA will restrict vessel lengths to a minimum of six (6) metres and a maximum of fifteen (15) metres.

Destination moorings

GCWA recognises the attractiveness of the Gold Coast as a recreational boating destination. Destination moorings are an opportunity to provide for short-term stays by visiting boat owners, which has been identified as a potential need. However, due to the high demand for moorings by the local community and a lack of legislative flexibility to issue short-term authorities with a resourced framework under which this system may operate, this is not viable at this time.

Notwithstanding this, visiting vessels, or those wanting a short-term stay, are able to easily anchor in the waterway at no cost, providing they comply with anchoring restrictions and prohibitions.

Priority 3: Manage the environmental impacts of buoy moorings

GCWA will prioritise the transition to mooring apparatus that provides improved environmental performance. Traditional block and tackle moorings will be phased out over time and only moorings that use an environmentally friendly anchoring system will be approved.

GCWA will only approve EFMs (a device that disturbs less than 1m² of the substrate when in use for the mooring activity that is attached to, or sits on, the substrate) for the Moreton Bay Marine Park (consistent with legislation), with authority holders to fund these moorings.

Moorings in locations outside of the Moreton Bay Marine Park will be either EFM swing moorings or fore-and-aft moorings (subject to community feedback through consultation) using an environmentally friendly anchoring system.

Priority 3: Manage the environmental impacts of buoy moorings

- 3.1 Transition to environmentally friendly moorings in the Moreton Bay Marine Park
- 3.2 Investigate environmental impacts and identify offset opportunities
- 3.3 Monitor and assess improvements to environmental performance of moorings

Moreton Bay Marine Park environmentally friendly moorings

While existing buoy moorings in the Moreton Bay Marine Park are mostly traditional swing moorings, Marine Park legislation (Section 55 Marine Parks Moreton Bay Zoning Plan 2008) requires that all future moorings must be EFMs in order to reduce impact on this unique and biodiverse area, which includes islands, significant wetlands, seagrass meadows and sandy beaches. The new EFMs will be funded by authority holders.

When the existing traditional block and tackle swing moorings in the Moreton Bay Marine Park reach the end of their useful life, authority holders will be legally obliged to replace them with EFMs. The EFM will provide improved environmental performance by keeping the vessel and all mooring tackle off the sea floor at all times. However, it is important to note that the establishment of additional buoy moorings at any site throughout the Gold Coast will be subject to a range of factors; for example, vessel character, safety considerations, natural occurrences such as ongoing shoaling, and marine development.

Achieving marine offset obligations through EFMs

An environmental offset is an activity that compensates for an impact resulting from development works.

For example, if approved works are being carried out that results in the removal, damage or destruction of marine plants such as seagrass (which at times is unavoidable) then an offset could be used to compensate in another area of the waterways. One way this could occur is by replacing a traditional block and tackle mooring, which is negatively impacting the seagrass, with an environmentally friendly mooring, which has no impact on marine plants.

GCWA is developing partnerships with other organisations such as SEQ Catchments that may be able to provide limited quantities of EFM moorings free of charge to authority holders through their Direct Benefit Management Plan. This plan is a mechanism for allowing EFMs to be used as offsets for developments that have impacted on marine plants.

Achieving marine offset obligations in this way could allow an entity to meet its financial offset requirements whilst providing ecosystem benefits through the demonstrated use of EFMs to reduce negative impacts to marine plants.

Some mooring areas have limited or no seagrass coverage, therefore upgrading apparatus to EFMs in those areas would not qualify for the marine offset credits. However, if those areas are located in close proximity to RAMSAR or Fish Habitat Areas, they may potentially still be used as a marine plant offset.

This process and the moorings that are available through it, is an external opportunity that GCWA does not control and plays no part in the distribution of the moorings; however, GCWA is actively pursuing this opportunity on the behalf of authority holders to provide them with benefit where it may support the achievement of this strategy.

Any new EFMs that are secured through this process will replace traditional block and tackle moorings; however, where, when and if this occurs will be decided by the external parties managing the process. Initial contact will be through GCWA to protect the privacy of authority holders.

Priority 4: Improve the safety aspects associated with buoy moorings

The GCWA strategy will include changes that improve the safety aspects associated with buoy moorings within Gold Coast waters.

Priority 4: Improve the safety aspects associated with buoy moorings

- 4.1 Identify potential risks and hazards associated with buoy moorings
- 4.2 Improve buoy mooring infrastructure through better engineering and anchoring systems
- 4.3 Continually monitor the performance of buoy moorings within the waterway

Identify risks and hazards

The mostly shallow, well developed and highly used waterways of the Gold Coast include various risks and hazards that need to be considered when planning for the management of buoy moorings, including the issuing of buoy mooring authorities. These risks and hazards include, but are not limited to, shoaling, weather events, tidal works development, navigational access, environmental factors, dragging, waterway activities, currents, tides, wash and waves.

Improving buoy mooring infrastructure

Traditional block and tackle moorings have potential to drag in adverse weather creating a risk of collision with other vessels and infrastructure. The use of a screw helix anchoring system, instead of a concrete block or similar heavy anchoring system typically used on the traditional block and tackle moorings will significantly reduce or eliminate the risk of drag (assuming the infrastructure is maintained annually as required). In addition, a screw helix system can be designed for the specific engineering loads of the vessel being moored on it and may provide opportunities for reduced insurance premiums.

Continual performance monitoring

Authority holders should regularly monitor the performance of their apparatus to ensure it is appropriate for the site conditions and associated risks and hazards. Additionally, authority holders must inspect their buoy mooring annually for defects and repair any damaged or worn parts so that it remains suitable for mooring their vessel and addressing the risks and hazards that are applicable to their specific site. This includes holding the vessel secure during severe weather events.

GCWA will consider changes to conditions for buoy mooring authorities that support the achievement of this priority.

Priority 5: Engage the community about GCWA’s future plans for the management of buoy moorings

GCWA will continue to consult with key stakeholders to ensure that this strategy remains relevant and is successfully delivered to the benefit of authority holders and other stakeholders.

Priority 5: Engage the community about GCWA’s future plans for the management of buoy moorings

- 5.1 Inform the community about the *Buoy Mooring Management Strategy*
- 5.2 Consult with the community about the buoy mooring policy
- 5.3 Engage the community in future plans

Community consultation

GCWA is focused on achieving a sustainable Buoy Mooring Management Strategy that maintains a balance between the community’s recreational, tourism, environmental and commercial aspirations for Gold Coast’s waterways and its safe management. Consequently, GCWA is committed to working with stakeholders to deliver the strategy’s current priorities, as well as GCWA’s future direction for buoy moorings.

GCWA will consult with authority holders and the broader community to make sure that proposed changes are discussed and understood.

Communication

GCWA will continue to seek community feedback through facilitating opportunities for direct, face-to-face communication. This will include stakeholder briefings, provision of information, as well as large-scale community consultation.

Since it was established, GCWA has achieved an excellent response rate for online surveys and we will continue to use this successful communication tool to ensure that stakeholder feedback informs future strategy and direction.

GCWA will produce a buoy mooring web page to communicate information to the community such as this strategy and its progress, policy developments, details of new infrastructure technology, maps, forms, costs and waiting list status.

New educational materials are being developed to inform stakeholders of current buoy mooring limitations, as well as GCWA’s strategy to improve buoy management. Fact sheets, maps and strategy updates will be used to support communication and be included in applications and waiting list forms for prospective authority holders.

Other important considerations



Buoy Mooring Waiting List

The management of buoy moorings is regulated by an Act with state wide application.

When GCWA was established in late 2012, it was given the responsibility for managing buoy moorings throughout all Gold Coast waters that have unique issues caused by the sheer density of population and waterway users. To deal with a substantial growth in demand, the former management regime for buoy moorings included a buoy mooring waiting list that, when given to GCWA, held more than 400 entries. GCWA found that some people had been on the waiting list for many years, and that the current system for managing buoy moorings in Gold Coast waters needed a complete review.

As part of the new Buoy Mooring Management Strategy, GCWA is now looking to develop a fairer, more practical future operational policy to manage buoy moorings, work that has not been done for more than 10 years.

GCWA understands the challenges ahead. The many different natural and man-made features of Gold Coast waterways significantly limits the opportunities for safe new buoy mooring areas where a vessel owner may establish a buoy mooring. Further, the growth of the Gold Coast brings increasing pressure and competition for space for on-water activities. GCWA must carefully manage the waterways for all users, considering and balancing their different interests. The reality is that the existing buoy mooring areas are already at or near their full capacity and new areas are not easily available, if at all.

GCWA has found that people who have a buoy mooring tend to hold onto it for a very long time, renewing their buoy mooring authority annually. The fees for buoy mooring authorities are set by transport legislation administered by the Department of Transport and Main Roads and offer an alternative to higher marina fees (albeit with fewer services). Buoy moorings are seen by many people as an economical option for storage of a larger vessel on the waterway. GCWA has also found that buoy mooring authorities are rarely surrendered, except where the authority holder sells the vessel, becomes physically incapacitated, or passes away.

The reality is that the demand for buoy moorings will always exceed the capacity available in the buoy mooring areas. The number of vessel registrations continues to increase, the population on the Gold Coast is expected to double over the coming decades, and other on-water activities need space. Anyone thinking of purchasing a vessel needs to put thought into where it will be safely stored. Vessel owners need to understand that applications for buoy mooring authorities are decided on safety grounds, and that for Gold Coast waters, an application made now is likely to be refused.

GCWA proposes to act on the buoy mooring waiting list and is currently exploring its options for how to best manage new expressions of interest, consistent with the relevant legislation.

Finally, GCWA reminds those existing buoy mooring authority holders that they must comply with the *Transport Operations (Marine Safety) Act 1994* and all conditions of their authority. GCWA has recently employed a senior waterways officer whose role includes the regulation of buoy moorings. A contravention of the Act or a condition of the authority may result in action to suspend or cancel the authority. All buoy mooring authorities contain a condition about use and occupancy.



Marine plants

It is a requirement under the *Sustainable Planning Act 2009 (SPA)* and the *Fisheries Act 1994* to obtain authorisation for any impacts to marine plants (i.e. removal, damage or destruction) caused as a result of the installation, relocation or operation of buoy moorings within Gold Coast waters.

Within the SPA, works (including buoy moorings) involving the removal, destruction or damage of marine plants are classed as development and are defined as operational work or building work. This work may be undertaken only if a development permit has been issued or if they can be progressed using the self-assessable code.

GCWA has completed preliminary investigations to understand the extent of marine plant populations within its buoy mooring areas and understands that seagrass is the only marine plant of concern at this point in time.

GCWA overlaid the 2015 survey of Gold Coast seagrass on its buoy mooring areas and has identified that seagrass is present at the Boykanbil, Currigee, Jacobs Well, Labrador and Southern Broadwater mooring areas. The seagrass that has been identified within these mooring areas is located on the outer edges of the mooring areas and is not expected to be negatively impacted by either the consolidation of existing block and tackle moorings or by the future installation or operation of new moorings.

However, it is important to recognise that waterways are dynamic and features within them regularly change to either positively or negatively impact growth of marine plants, including seagrass. This could potentially lead to seagrass or other marine plants colonising areas within the waterway not currently populated. It is important that before any existing moorings are moved or new moorings are established, an inspection is completed to confirm the extent of marine plants and whether an impact is likely to occur.

GCWA may undertake further underwater visual inspections of all mooring areas to understand if there have been any changes to marine plant growth and colonisation prior to consolidating the existing traditional block and tackle moorings. However compliance with this legislation is an ongoing obligation on all persons, including buoy mooring authority holders, at all times.

Future buoy mooring authorities will be conditioned to include a requirement for the authority holder to carry out an inspection at the site for marine plants and to obtain the required statutory approval (from Fisheries Queensland, a service of the Department of Agriculture and Fisheries (DAF)) should marine plants be identified and if they will be removed, damaged or destroyed as a result of the installation, removal or operation of the buoy mooring infrastructure.

The authority holder will need to provide evidence to DAF that an appropriate inspection for marine plants was completed to their satisfaction.

If marine plants are going to be impacted by the establishment, removal or operation of the buoy mooring, and the self-assessable code MPO6 is being used, then the authority holder will need to provide evidence to DAF that they have met the requirements of the code, including completion of the pre and post works notification advice sheets.

If marine plants are going to be impacted by the establishment, removal or operation of the buoy mooring and the authority holder is unable to use the self-assessable code MPO6, then the authority holder will need to obtain the required development approval under the *Sustainable Planning Act 2009* (SPA) and the *Fisheries Act 1994* from DAF.

Failure to comply with the statutory approvals requirements by authority holders could result in the issue of an enforcement notice requesting the removal of the buoy mooring apparatus and may result in a fine or other action for breaching marine plants legislation.



Fish habitat

It is a requirement under the *Sustainable Planning Act 2009* (SPA) and the *Fisheries Act 1994* to obtain authorisation for any development works within a declared fish habitat area that relates to the establishment of buoy moorings within Gold Coast waterways.

Within the SPA, any works (including buoy moorings) within a declared fish habitat area are classed as development and are defined as operational work or building work. This work may be undertaken only if a development permit has been issued for the works or if the works are self-assessable.

A declared fish habitat area (FHA) is an area protected against physical disturbance from coastal development, while still allowing legal fishing. Queensland's FHA network ensures fishing for the future by protecting all inshore and estuarine fish habitats (e.g. vegetation, sand bars and rocky headlands) contained within declared FHAs, which play the key role of sustaining local and regional fisheries.

Declared FHAs are assigned a management level, either 'A' for very strict management or 'B' where existing or planned use requires a more flexible management approach. Legislation is such that buoy moorings are unable to be established in any fish habitat management area A. However, buoy moorings may be established in a fish habitat management area B if a development permit has been obtained or if the works are self-assessable.

The 2014 Buoy Mooring Review by GCWA identified that several of the mooring areas had conflicts with fish habitat areas. GCWA has been working closely with Department of National Parks, Sport and Racing (DNPSR) to secure amendments to the Moreton Bay Marine Park legislation to address conflicts between the Fish Habitat Areas and the Designated Mooring Areas (DMAs) in the Marine Park. These amendments are progressing and include realigning the boundaries of the fish habitat areas so they no longer conflict with the designated mooring areas.

The following buoy mooring areas currently conflict with a fish habitat area:

- The entire Currigee mooring area conflicts with the Jumpinpin/Broadwater fish habitat area A.
- Part of the Jacobs Well and Steiglitz mooring areas conflict with the Jumpinpin/Broadwater fish habitat area A.
- DNPRS is progressing legislative amendments to remove this conflict through boundary changes. Until these changes are made, GCWA is unable to issue any buoy mooring authorities to establish or relocate buoy moorings at these locations where a conflict currently exists.
- The entire Turana Street, Coombabah mooring area conflicts within Coombabah fish habitat area B and is not yet formally recognised as a Designated Mooring Area (DMA) within the Moreton Bay Marine Park. Buoy moorings are unable to be established at this location until the Designated Mooring Area (DMA) is approved.

GCWA’s strategy for future management of the above four mooring areas is to assign them the lowest priority for both the consolidation of existing moorings and the issue of new mooring authorities until such time that amendments to the Moreton Bay Marine Park legislation are completed and the conflicts with the fish habitat areas have been removed.



Buoy Mooring Floats and Pin Kits

To ensure that the types of buoy mooring floats and pin kits used to secure vessels within Gold Coast waterways are of a suitable size, colour, quality and uniformity, authority holders will be required to purchase these from GCWA.

Buoy mooring floats have historically been coloured differently to help clearly distinguish the buoy mooring areas and the intention is to retain this colour coding system. The buoy mooring float will be marked by GCWA before issue with the authority holders number.

The fee charged for the supply of the buoy mooring floats and pin kits will be based on recovery of the costs associated with the manufacture, delivery and administration and will be adjusted as required.

The current charge (as of January 2017) by GCWA for this equipment is as follows

Buoy Mooring Float	\$308.10 (includes GST)
Buoy Mooring Pin Kit	\$90.50 (includes GST)



Examples of coloured buoy mooring floats

Example of a buoy mooring pin kit

Looking to the future

To deliver an effective and consistent approach to managing buoy moorings for the next decade and beyond, GCWA will develop and implement a Buoy Mooring Policy. It will draw from the *Buoy Mooring Management Strategy* and will incorporate feedback from stakeholders via GCWA's community consultation program.

The Buoy Mooring Policy will help GCWA to better manage moorings on the Gold Coast by providing a framework designed to consistently guide major decisions, actions and activities so that GCWA can reach long-term goals aimed at benefiting all stakeholders. The policy would include guidance on the management of those who live aboard their vessels.

Have your say

We invite members of the community – both on and off the water – to provide feedback on this *Buoy Mooring Management Strategy (Draft)* by completing a short survey available at www.gcwa.qld.gov.au

Responses will be collated and published with GCWA's final *Buoy Mooring Management Strategy*.



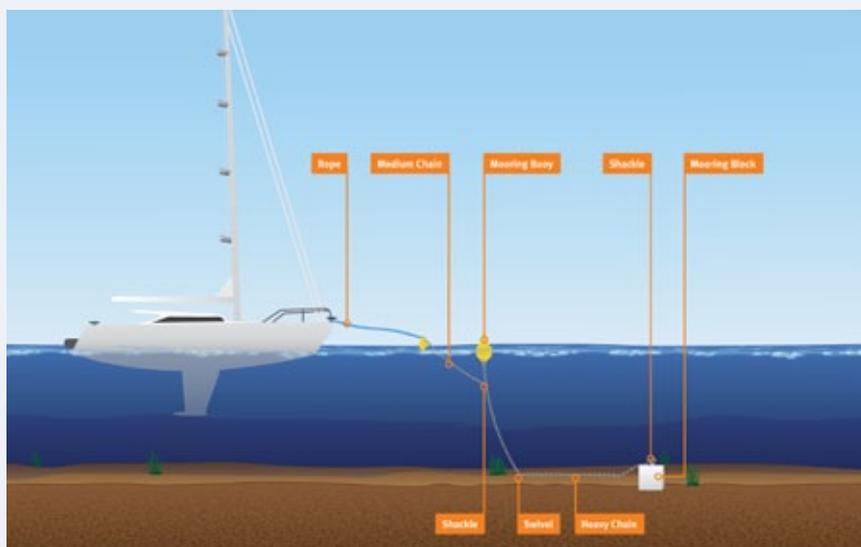
THE FACTS about buoy moorings

What are buoy moorings?

There are various types of buoy moorings used around the world, however, almost all of the moorings currently being used in Gold Coast waters are traditional block and tackle moorings. In the future, GCWA only intends to allow environmentally friendly swing moorings (EFMs) and, subject to feedback from the community through consultation, possibly fore-and-aft moorings (with an environmentally friendly anchoring system).

Traditional block and tackle swing moorings

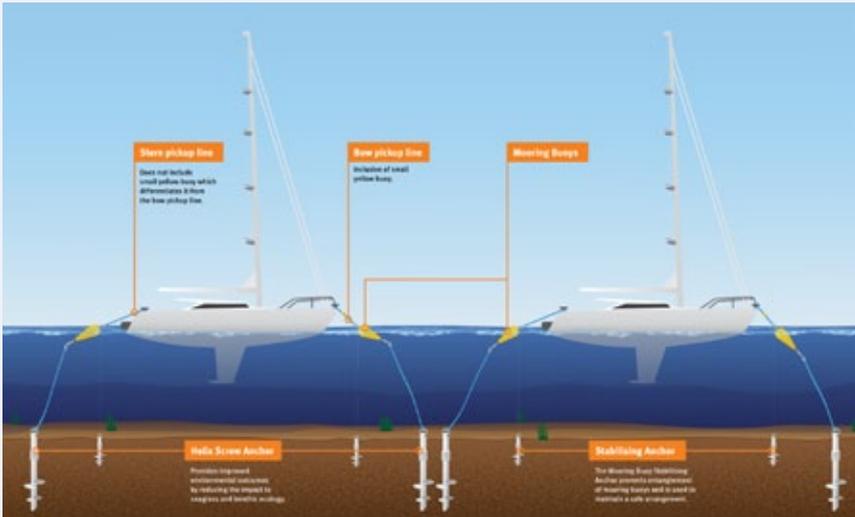
A traditional swing mooring consists of a heavy (generally concrete) 'block' that sits on the seabed, 'tackle' in the form of a heavy ground chain attached to a length of riser chain and/or rope, and a mooring buoy. The bow (front) of the vessel is attached to the buoy by a rope. As the wind changes, the vessel swings around the block, dragging the chain around with it (the ground chain acts as a heavy 'shock absorber' to reduce strain on the boat and mooring block).



A traditional buoy mooring has three main components: a device attached to the sea bed of the waterway; connected to it is a system of cables, chains or ropes; these lead to a buoy or float on the water's surface which marks the location of the device. The minimum depth required for a buoy mooring is 1 metre.

Fore-and-aft moorings

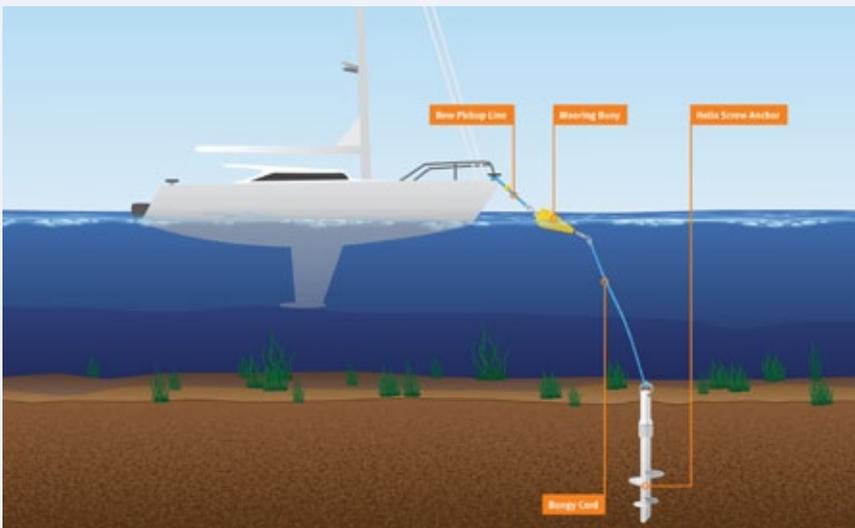
The fore-and-aft mooring is an alternative mooring option that involves attaching both the vessel's bow and stern to a mooring device, allowing considerably less vessel movement than a traditional swing mooring. These moorings typically consist of two anchor points on the seabed fixed with tackle often in the form of a riser chain or cord to a mooring buoy on the surface. They are considered to be more difficult to use than other moorings (particularly by sole boat operators at exposed locations or in inclement weather) and can cause shading to seagrass due to their continual fixed position; however, fore-and-aft moorings require a considerably smaller water footprint than swing moorings.



Fore-and-aft moorings are generally used in areas that are protected from adverse conditions and where greater densities are required. In this case, the vessel is attached to the mooring apparatus at its bow and stern, allowing less vessel movement than a swing mooring and requiring less waterways space as a result. These moorings consist of two anchor points on the seabed.

Environmentally friendly moorings (EFMs)

In 2009, SEQ Catchments commissioned a trial to assess the effectiveness of three different types of environmentally friendly mooring (EFM) designs in several locations throughout Moreton Bay. The two-year trial also raised awareness about the positive benefits of these types of moorings compared to traditional block and tackle moorings, which tend to drag the heavy ground chain on the seabed causing damage to seagrass and the marine environment from the scouring caused by the chain.



In addition to having a smaller footprint than traditional block and tackle swing moorings, environmentally friendly moorings (EFMs) cause significantly less damage to seagrass by not scouring the seabed.

The mooring found to be most suitable for Moreton Bay conditions was the seagrass-friendly mooring. This EFM uses a screwed-in mooring post as the anchor point. Load spreaders attached to the mooring post just below the bed stabilise the post. Above the bed are a swivel head and shock absorber, which are connected to a cable rope and surface buoy.

Other EFM mooring types may be used in the Moreton Bay Marine Park, as long as they meet the criteria under the Marine Parks (Moreton Bay) Zoning Plan 2008.

What are the categories for buoy moorings?

The Queensland Government's *Transport Operations (Marine Safety) Act 1994* (the Act) and the *Transport Operations (Marine Safety) Regulation 2016* (the Regulation) identify the statutory requirements for establishing and managing buoy moorings. As a Department of Transport and Main Roads agency, Maritime Safety Queensland is responsible for this legislation.

Buoy mooring areas are described in the Regulation. Section 184 of the Regulation allows GCWA to classify mooring areas as either Category 1 or 2. All other areas are, by default, to be Category 3.

Category 1 buoy mooring areas are intended to be managed and controlled by third parties, known as mooring managers, through contractual agreements (Mooring Management Agreements). All mooring fees and conditions are set by the mooring manager.

GCWA has established one Category 1 area that is located in the Southern Broadwater. This mooring area is managed by the Southport Yacht Club from its Main Beach operations base, under an agreement with GCWA. The Southport Yacht Club currently charges an annual fee of \$4,065 per buoy mooring (with those living aboard paying an additional \$150 per month), which covers the mooring and land-based services (toilets, club house, waste, tender storage, etc.). New members are charged a once-off joining fee of \$500.

Category 2 buoy mooring areas are considered to be of higher risk to marine safety and navigation control. These areas are managed through issue of buoy mooring authorities, which enables individuals to establish a mooring within a mooring area at an agreed GPS location. Fees for Category 2 areas are described in the Regulation (adjusted annually) and are currently set at \$81.40 for a restricted mooring and \$163.15 for an unrestricted mooring.

GCWA does not have any Category 2 areas within Gold Coast waterways and does not see any demand for this type of mooring area in the future.

Category 3 buoy mooring areas are managed and controlled by GCWA through issue of Buoy Mooring Authorities to individual members of the community and commercial business operators. The authority allows individuals or corporate entities to establish and occupy a buoy mooring within a waterway at a nominated GPS location. Fees for Category 3 areas are set out in the Regulation (adjusted annually) and are currently set at \$50.60 for a restricted mooring and \$84.25 for an unrestricted mooring.

Where are buoy mooring areas on the Gold Coast?

GCWA is responsible for managing 13 buoy mooring areas in Gold Coast waterways containing approximately 382 buoy moorings. (Detailed maps with current and potential mooring capacities can be viewed at www.gcwa.qld.gov.au/resources_and_forms/)

The mooring areas are located throughout Gold Coast waterways mainly in the Moreton Bay Marine Park and the Broadwater, both shallow estuaries with high environmental values. Additionally, the Broadwater is well developed and its limited space is shared with many different user groups.

GCWA's Category 1 mooring area in the Southern Broadwater is being reduced in accordance with community feedback obtained through the 2015 Independent Review of the Labrador Channel Extension and associated online survey. These moorings are currently managed by the Southport Yacht Club.

The 12 Category 3 mooring areas throughout the rest of the waterway contain approximately 347 moorings. All moorings in these areas are owned, established and maintained by individual authority holders (the infrastructure does not belong to GCWA).

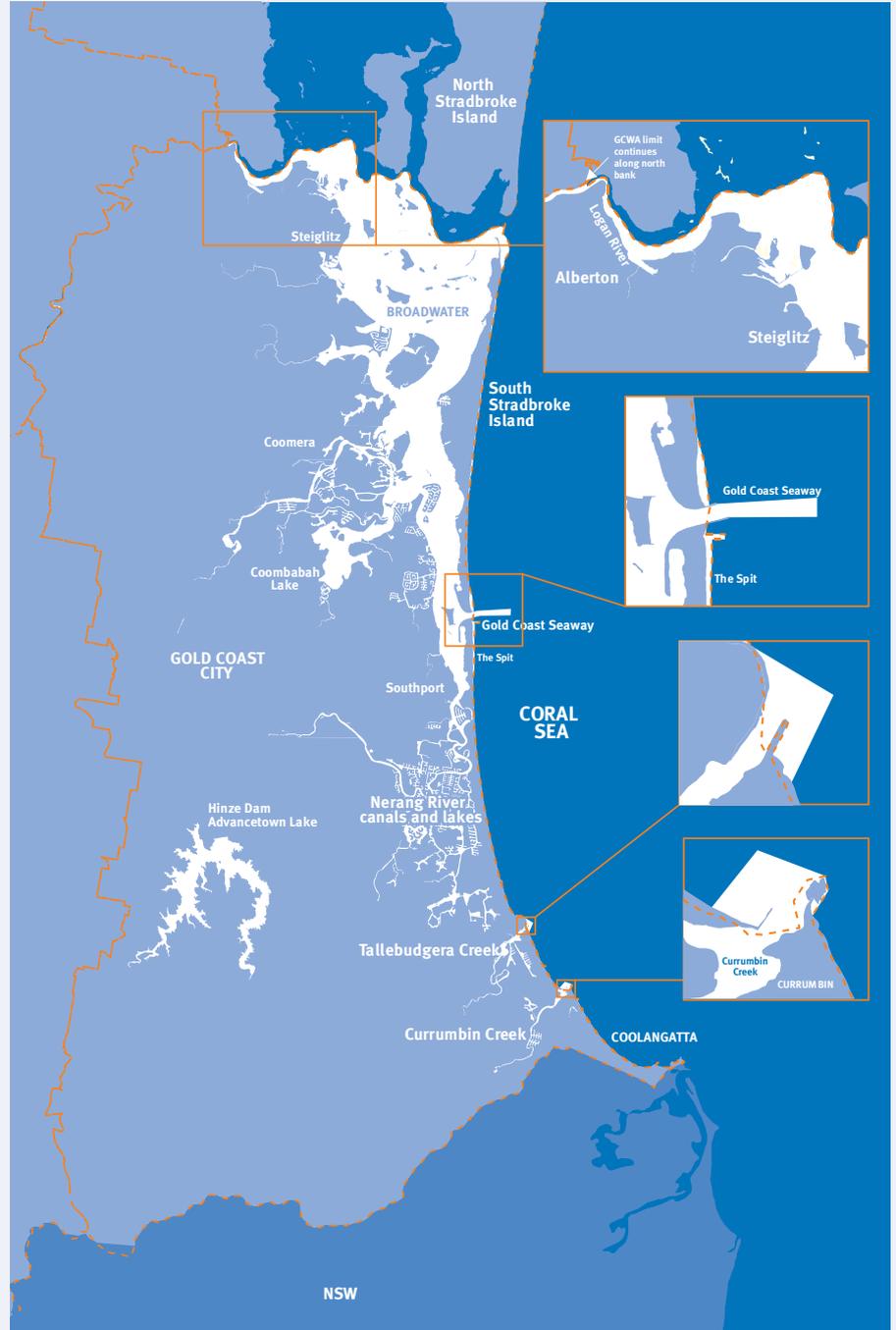
Moreton Bay Marine Park

The Moreton Bay Marine Park extends north from the Gold Coast Seaway and encompasses most of the waterway to the northern boundary of GCWA's jurisdictional area of responsibility. (Refer to Figure 2: Locality map of Moreton Bay Marine Park) It excludes a section of the Broadwater on the western side of Wave Break Island, Ephraim Island and Sovereign Island, and some of the far reaches of the Coomera River, Salt Water Creek, Hope Island Floodway Canal, Calypso Bay, Horizon Shores Marina and the Logan River (see Figure 3).

Figure 2:
Locality map of Moreton Bay Marine Park



Figure 3:
Gold Coast Waterways Authority area of jurisdiction map



Managed by the Department of National Parks, Sport and Racing (DNPSR), the Moreton Bay Marine Park was first declared a national park in 1993 to protect its unique values and high biodiversity, while still allowing people to use it.

The establishment of buoy moorings within the marine park is strictly monitored and controlled. All moorings must be established within the DNPSR-approved Designated Mooring Areas (DMAs) under the Marine Park Zoning Plan. Any moorings established outside the approved areas are considered unlawful.

Additionally, legislation requires all new buoy moorings in the marine park to be EFMs. Existing traditional block and tackle moorings are permitted to remain until they are either replaced or surrendered.

GCWA manages the following six Category 3 mooring areas within the Moreton Bay Marine Park, all of which contain traditional block and tackle swing moorings:

1. Currigee (29)
2. Jabiru Island (14)
3. Boykambil (21)
4. Jacobs Well (46)
5. Steiglitz (94)
6. Turana Street (8).

The *2014 Buoy Mooring Review* identified certain instances where GCWA buoy mooring areas do not align with DMAs within the Moreton Bay Marine Park and/or with the current management of declared Fish Habitat Areas. GCWA and DNPSR are working together to resolve these issues, which involves a legislative review process by DNPSR. In the interim, GCWA is unable to grant new buoy mooring authorities at Currigee and Turana Street at Coombabah Creek. Limited opportunities are available at Jacobs Well, Boykambil and Steiglitz, subject to alignment with the approved DMA.

Broadwater

The Broadwater is a large, shallow estuary that extends from the Nerang River at Southport in the south, to the southern section of the Moreton Bay Marine Park in the north (see Figure 3). There is a clear separation between the Moreton Bay Marine Park and Broadwater mooring areas.

The region has important biodiversity values that have led to areas of the Broadwater being listed as international RAMSAR sites with identified migratory bird populations.

There are many different stakeholders and user groups that operate in and around the Broadwater. These groups have different and sometimes competing needs for space on the waterway.

GCWA manages seven mooring areas within the Broadwater and all of these contain traditional block and tackle swing moorings:

1. Southern Broadwater – Category 1 (35)
2. Labrador (35)
3. Hollywell Harbour (6)
4. Paradise Point Main River (17)
5. Paradise Point Boat Harbour (44)
6. Beattie Road (16)
7. Carbrook (17).

What is a buoy mooring authority?

A buoy mooring authority allows individuals or a corporate entity to establish and occupy a mooring within a Category 2 or 3 mooring area at an approved GPS location. An authority is issued for a one-year period and is a right to exercise the power given by the State to establish a buoy mooring in the waterway at the approved location; it is not property. A buoy mooring authority cannot be given as a gift or reward, sold (either with the approved vessel or as a mooring only), transferred, bequeathed, rented, sub-leased or used for financial gain.

All buoy mooring areas within Gold Coast waterways, other than the Southern Broadwater Category 1 area, are Category 3 areas that contain moorings established by individuals through the issue of buoy mooring authorities by GCWA.

When someone is granted a buoy mooring authority, it is their responsibility to purchase the required mooring infrastructure and to make arrangements for it to be established at the approved GPS location.

The authority holder must arrange for a suitably qualified engineer to ensure that the infrastructure is 'fit for purpose' and capable of holding their approved vessel in all prevailing conditions. Failure to ensure the mooring infrastructure is fit for purpose can result in the vessel coming free from the mooring or dragging which may create a safety hazard or a marine incident in the waterway (insurance implications may arise as a result of mooring equipment failure).

Additionally, the authority holder must arrange for annual inspection of the mooring infrastructure by a competent person to declare it 'fit for purpose' and to confirm it is installed at the approved GPS location.

GCWA can issue two types of buoy mooring authorities for Category 2 and 3 areas:

Restricted buoy mooring authorities are generally issued for recreational purposes to one nominated and approved vessel (the stated ship). Only the stated vessel that is registered/owned by the authority holder can moor at the approved buoy mooring.

Unrestricted buoy mooring authorities are issued to support the business activities of established marine service providers and legitimate businesses. Buoy moorings approved for this purpose must be used solely to support the businesses activities. More than one stated vessel may be permitted to the rotate use of the approved buoy mooring.

How long can it take to secure a buoy mooring?

Currently, there are more than 220 names on the GCWA buoy mooring waiting list, however, as applicants can apply for multiple mooring areas, there are more than 450 entries on the register (many applicants have applied for more than one area).

Some of these people have been on the list for more than a decade, waiting for a buoy mooring position to become available, due to the fact there are only 382 moorings available, limited opportunities to provide new moorings, and a tendency for those who have been granted a mooring to retain it for a long time. Couple this with a growing population and trend for new vessels to be larger and untrailerable, and it is clear that a buoy management strategy for Gold Coast waterways is much needed.

KEY LEGISLATION applicable to buoy moorings

1. *The Gold Coast Waterways Authority Act 2012*

Establishes GCWA with the main purpose to manage Gold Coast Waterways, including:

- Having a waterways management strategy, for the:
 - » Clear direction for the long term sustainable use, management and development of Gold Coast Waterways; and
 - » Identification of needs and priorities for that use, management and development of the Gold Coast Waterways having regard to the benefits for and impacts on the community, environment and economy of the Gold Coast local government area.
- Functions conferred under the Transport Operations (Marine Safety) Act 1994 including approving the establishment of buoy moorings
- Powers to improve and maintain navigable channels
- Identification of where fees received from buoy moorings are to be paid by GCWA (i.e. into consolidated revenue).

2. *The Transport Operations (Marine Safety) Act 1994*

The primary objective of this Act is to provide a system that achieves an appropriate balance between:

- Regulating the maritime industry to ensure marine safety
- Enabling the effectiveness and efficiency of the Queensland maritime industry to be further developed.

Its main functions related to buoy moorings are:

- Defining a buoy mooring
- Approving the establishment, registration and control of buoy moorings
- Clarifies that GCWA is not, and never have been, responsible for approving the structural integrity of the buoy mooring or for other matters in relation to the buoy mooring's establishment or maintenance
- Clarifies that GCWA is not, and never have been, liable in relation to a buoy mooring's establishment or maintenance other than in relation to the approval of the location of the buoy mooring
- Confirms that GCWA may define areas of Queensland waters as category areas for buoy moorings
- Authorise the gazettal of regulations to deal with matters under the Act, including buoy moorings.

3. *The Transport Operations (Marine Safety) Regulation 2016*

Subordinate legislation to the *Transport Operations (Marine Safety) Act 1994*, that regulates the power of GCWA to:

- Establish buoy mooring areas in Gold Coast waters (including Category 1 areas)
- Appoint a mooring manager to manage a Category 1 area
- Issue an authority to establish a buoy mooring in Gold Coast waters, on conditions
- Set limitations on buoy mooring approvals
- Prevent and enforce unlawful use of buoy moorings
- Direct or remove a buoy mooring on expiry, cancellation or surrender of approval
- Issue Gazette notices and written agreements about buoy moorings
- Charge fees for the use of buoy moorings, including designating the fees applicable.

4. **The Marine Parks Act 2004**

Manages the protection of Marine Parks throughout the State, including:

- Regulating or prohibiting the use of buoy moorings within the Marine Park
- Approving Designated Mooring Areas within the Marine Park (including Category 1 Mooring Areas)
- Approving Marine Park permits for development works within the Marine Park.

OTHER LEGISLATION APPLICABLE TO ESTABLISHING BUOY MOORINGS

5. **The Sustainable Planning Act 2009.**

This Act integrates planning and development assessment so that development and its effects are managed in a way that is ecologically sustainable for all development, including works associated with buoy moorings (i.e. establishment, operation and removal). This Integrated Development Assessment System (IDAS) process is used to obtain development permits for actions:

- a. Under the Fisheries Act 1994, for development in or impacts on**
 - » Marine Plants
 - » Fish Habitat Areas.
- b. Under the Coastal Protection and Management Act 1995; for**
 - » Right to occupy and use land on which particular tidal works were, or are to be, carried out (including moorings)
 - » Identifies that tidal works does not include the construction of a buoy mooring
 - » Provides for self assessable codes for some development.

LEGISLATION APPLICABLE TO OPERATION OF BUOY MOORINGS BY HOLDERS

6. **The Transport Infrastructure Act 1994**

Examples of the impact on operation of vessels on buoy moorings and authority holders are:

- Powers to Issue port notices in relation to the movement or mooring of, or activities on or by, a ship
- Powers to issue penalties in relation to a contravention of a direction about the movement or mooring of, or activities on or by, a ship.

7. **The Transport Infrastructure (Waterways Management) Regulation 2012**

This Act provides restrictions for authority holders and guests living on board watercraft whilst occupying a mooring for waterways management.

8. **The Transport Operations (Marine Pollution) Act 1995**

This Act identifies requirements for waste discharge and pollution reception facilities that may be required to be undertaken by vessels occupying buoy moorings.

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