

2.34 - Sewage discharge – boats - section 32 evaluation for the Proposed Auckland Unitary Plan

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1 Overview and Purpose

1.1 Subject Matter of this Section

The purpose of this report is to evaluate the approach taken by the Proposed Auckland Unitary Plan (the Unitary Plan) to the discharge of sewage from vessels in the coastal marine area (CMA). This includes a review of the relevant objectives at the regional plan level and the alternative approaches considered to meet these objectives.

1.2 Resource Management Issue to be Addressed

Auckland has a large and increasing recreational boating community, with high concentrations of vessels anchored in areas with poor tidal circulation and limited ability to flush contaminants. Discharges of untreated human waste from these vessels have the potential to adversely affect the amenity, recreational, cultural, economic, and environmental values of the CMA. The number of vessels in Auckland is estimated to increase from 132,000 in 2011 to 222,000 by 2031 (Beca 2012), posing a significant risk to the use and enjoyment of Auckland's coastal and marine environments.

It is now becoming less socially acceptable to directly discharge human sewage to coastal waters. This is evident in the New Zealand Coastal Policy Statement 2010, which as the overarching national framework for coastal resource management, gives clear direction to decision makers to *"not allow . . . discharge of human sewage directly to water in the coastal environment without treatment"*. The pressure on Auckland's bays, beaches and harbours for recreational and economic activities has grown to the point at which the direct discharge of sewage from vessels is publicly unacceptable from amenity and public health viewpoints. This resonates with a 2006 ARC survey which found that 83% of respondents agree that "boats should have a holding tank for sewage and should not discharge untreated sewage into the water".

The primary issue associated with untreated discharges from vessels is the adverse effect on amenity for recreational users of the CMA. The direct impact of human sewage in coastal waters is localised and temporary as human sewage tends to break down and disperse rapidly. However, low tidal energy environments such as sheltered bays are often shared between recreational vessels and the general public and have less capacity to disperse sewage. Here, the presence of sewage in coastal waters severely detracts from common marine and coastal edge-based recreational activities.

The discharge of sewage from vessels is also cultural offensive to Māori, who value the coastal marine area as taonga. The degradation of water quality adversely affects the Mauri or life force of the water, and restricts the use of the CMA for traditional activities such as shellfish gathering (Coast & Catchment 2012)

Recreational activities that rely on high water quality are also at risk from sewage discharge from vessels. In particular, swimmers and other people in contact with sewage risk skin infections, respiratory problems and infections by disease causing bacteria, viruses and parasites (Coast & Catchment 2012). These effects also apply to those using the CMA for kayaking, diving, surfing and windsurfing. This leads to the closure of beaches or beaches unsafe for bathing, which may occur more frequently as the vessel population in Auckland rises. Those who suffer health complications as a result of sewage discharges are likely to incur financial costs, both to themselves and public health facilities.

Auckland's Hauraki Gulf has significant tourism value that could be degraded through the direct discharge of sewage to the CMA. Tourism industry associated with the Hauraki Gulf includes sailing, dolphin watching, kayaking, diving and fishing, and is estimated to be worth \$1.67 billion to the regional economy. Sewage discharge from vessels has the potential to

adversely affect tourist's perceptions of Auckland and New Zealand as a eco or pristine experience (Coast & Catchment 2012).

Sewage discharge from vessels may also affect the operation, productivity and reputation of marine farms in Auckland's CMA. Aquaculture in the Hauraki Gulf generates \$99 million for Auckland's economy (Coast & Catchment 2012). There have been reported cases of contaminated seafood arising from the presence of human waste in the CMA, and this is expected to grow with increased vessel use in Auckland's waters. Contamination of marine farms puts the local and international market at risk of contracting diseases, and could degrade New Zealand aquaculture's reputation.

It is worth noting that commercial vessels are subject to the regulations of MARPOL 73/78 (International Convention for the Prevention of Pollution for Ships, 1973 as modified by the Protocol of 1978). New Zealand is one of few countries that have not ratified Annex IV – Sewage, which prohibits discharge of untreated sewage within 12 nautical miles (22.2km) of the nearest land. However the high standard of restriction reflects the ability of commercial ships using international channels to discharge in open waters.

1.3 Significance of this Subject

Recreational boating communities in Auckland's CMA tend to congregate in anchorage areas with poor tidal circulation and limited capacity to flush contaminants. Some critical anchorage areas fall outside near-shore limits established by the Resource Management (Marine Pollution) Regulations 1998, enabling the lawful discharge of untreated sewage from vessels in sensitive environments. These tend to be areas of high recreation use and include Waitemata and Mahurangi Harbour, Port Fitzroy, and Tamaki Estuary. As a result there have been adverse effects on amenity, cultural values, human health, coastal ecology and marine-based economic sectors. These are expected to be exacerbated by the projected increase in vessels in Auckland from 132,000 in 2011 to 222,000 by 2013.

The New Zealand Coastal Policy Statement 2010 (NZCPS) directs decision makers to “*not allow . . . discharge of human sewage directly to water in the coastal environment without treatment*”. As the Unitary Plan must give effect to the NZCPS by virtue of s 67(3)(b) of the RMA, there is an obligation that the plan prohibits direct human sewage discharges in the anomaly areas identified.

1.4 Auckland Plan

The Auckland Plan presents a broad directive related to the protection of identified coastal areas:

DIRECTIVE 7.12

Protect coastal areas, particularly those with high values – including special natural character, significant marine habitats and recreational importance – from the impacts of use and development, and enhance degraded areas

The directive to protect coastal areas that hold recreational importance is a driver to ensure sewage discharge from vessels does not degrade the safety, amenity and natural coastal character of popular coastal recreation areas.

The highly-used anchorage areas where adverse effects have been observed tend to be areas of high recreational use for fishing, swimming, kayaking, windsurfing and other marine pursuits. These include the Waitemata and Mahurangi Harbours, Port Fitzroy, and Tamaki Estuary.

1.5 Current Objectives, Policies, Rules and Methods

This issue has in the last 15 years been controlled by the Resource Management (Marine Pollution) Regulations 1998 (RMPR), which prohibit discharges:

- in water depths of 5m or less
- within 500m of MHWS
- within 500m of a marine farm
- within 200m of a marine reserve
- within 500m from a Minister of Fisheries declared mataitai reserve.

The operative Auckland Regional Plan: Coastal (ARPC) complements these regulations by prohibiting direct sewage discharge to Tangata Whenua Management Areas, of which two discrete areas exist. Aside from this and the RMPR, there are no controls in the ARPC regulating sewage discharge from vessels.

1.6 Information and Analysis

In response to the direction provided by the NZCPS 2010, Council requested a piece of work to review and analyse existing information regarding sewage discharge from vessels and provide a preferred option. In response the report *Unitary Plan Controls on Sewage Discharge from Vessels* was prepared by Coast & Catchment in July 2012.

Additional work was undertaken by the planning officers to identify the anomaly areas in which adverse effects of sewage discharges from vessels had been observed.

1.7 Consultation Undertaken

Engagement with key stakeholders and the general public was undertaken through the following processes:

- Workshops were held with members of the recreational boating sector on the 26th March and 29th October 2012.
- Non-statutory public feedback process undertaken following the release of the draft Unitary Plan in March 2013.

1.8 Decision-Making

Sewage discharge from vessels was presented to the Political Working Party for political support and sign off for the draft Unitary Plan on 12th December 2012. The suggested approach was supported by the PWP.

1.9 Proposed Provisions

Objectives

- 1. The values of the CMA, and activities that rely on high water quality, are protected from the adverse effects from the discharge of sewage from vessels.*
- 2. The high recreation and amenity values of the inner Hauraki Gulf are maintained.*

Policies

- 1. Avoid the discharge of sewage from vessels within areas that have been identified as inappropriate due to the proximity to shore, marine farms, marine reserves, or shallow water depth.*
- 2. Require provision of sewage collection and disposal facilities for vessels at new ports, marinas and other appropriate facilities, or at the time of significant upgrading of these facilities.*
- 3. Promote the installation of public toilet facilities at high use boat ramps and boating destinations, at construction, or during significant upgrades of these facilities.*

4. Promote public awareness and education campaigns around the discharge of sewage from vessels, and use of vessel holding tanks and pump-out facilities.

Rules

Sewage discharge from a vessel or offshore installation is a permitted activity only where it complies with the following:

- a. The discharge is in water depths greater than 5m.
- b. The discharge is more than 2km from MHWS (other than as specified below in (f)).
- c. The discharge is more than 500m from an aquaculture activity.
- d. The discharge is more than 500m from a mataitai reserve.
- e. The discharge is more than 200m from a marine reserve.
- f. In harbours during extreme weather conditions as necessary for health and safety reasons, the discharge is more than 500m from MHWS and
 - i. wind conditions at the mouth of the harbour exceed 25 knots and sea swells exceed 3 metres
 - ii. discharge may take place during the first 3 hours of an outgoing tide.

1.10 Reference to other Evaluations

This section 32 report should be read in conjunction with the following evaluations:

- 2.11 - Biodiversity
- 2.18 - Māori and natural resources
- 2.19 - Landscapes
- 2.33 - Moorings

2 Objectives, Policies and Rules

2.1 Objectives

The following objectives are proposed:-

Objective 1

The values of the CMA, and activities that rely on high water quality, are protected from the adverse effects from the discharge of sewage from vessels

Appropriateness of the Objective

Relevance

This objective gives effect to s 5(2) of the Act by providing for the 'economic, social and cultural well-being and . . . health and safety' of people and communities by protecting water quality on which a wide range of activities rely. This objective also enables the safeguarding of the life-supporting capacity of water in the CMA. This objective also provides for s 6(a) of the Act - the preservation of the natural character of the coastal environment -and Policy 23(2)(a) of the NZCPS which directs decision-makers to avoid the direct discharge of human sewage to the coastal environment.

Consequently this objective is considered to be highly relevant to the purposes of the Act.

Usefulness

This objective seeks to safeguard any activities in coastal waters from the effects of untreated sewage discharge from vessels. This encompasses the protection of a wide range of economic, recreational and cultural activities in the CMA. By protecting the values of the CMA, this objective recognises social and cultural values, including the importance of water quality in kaitiātanga, amenity values of the coastal environment and natural coastal character. In doing so it provides the framework for methods that mitigate the effects of

sewage discharge from vessels on these activities and values. It also provides for wider benefits to the health of coastal and marine ecology arising from increased water quality.

Achievability

The RMA establishes that all activities in the CMA can only be undertaken if provided for by rules in a regional coastal plan or a resource consent. This provides the council with the necessary functions and powers to directly implement the objective through mandatory rules, including the use of permitted activity rules.

Enforcement of this object will require the following services of the Auckland Council in collaboration with the Harbourmaster:

- education, public awareness raising
- follow-up on cases of non-compliance reported by the public.

Though it will be difficult to identify instances of non-compliance, it is expected that strong regulations and promotion of discharge facilities can be used to induce behavioural change among boating communities. The ability of members of the public to report cases of non-compliance will assist monitoring programmes.

As the primary effects relate to amenity and social and cultural values, it is anticipated that measures of success will be largely observation based. However there are some methods which can be employed to determine the success of this objective:

- A public opinion survey similar to that conducted by the former ARC in 2006 to determine perceived impact of the Unitary Plan's approach on the activities and values identified in objective 1
- Comparison of data collected from the Safeswim monitoring programme with recent historical results.
- The incidence of complaints made to the Harbourmaster's office.

As the focus of this objective is to minimise risk associated with projected long term vessel increases in Auckland, the timeframe is considered to be indefinite.

Reasonableness

This objective involves restricting the right of vessel owners to discharge untreated sewage in the CMA. This will increase the need for holding tanks or pump-out mechanisms in vessels, at a cost to vessel owners. However, this objective has wider benefits related to the economic, recreational and social use of CMA by the general public. The CMA is public commons and holds high significance in New Zealand.

Objective 2

The high recreation and amenity values of the inner Hauraki Gulf are maintained.

Legacy issues

There are no objectives in the ARP:C targeted to protecting the inner Hauraki Gulf from discharges. With a growing vessel population, there is a need to ensure that the recreation and amenity values associated with this area are not diminished.

Relevance

This objective gives effect to s. 5(2) of the Act by providing for the social and cultural well-being of people and communities by protecting water quality that recreation and amenity values are contingent on. This objective also provides for s. 6(a) of the Act *the preservation of the natural character of the coastal environment* and Policy 23(2)(a) of the New Zealand

Coastal Policy Statement 2010 which directs decision makers to avoid the direct discharge of human sewage to the coastal environment.

As a result Objective 2 is considered to be highly relevant to the purposes of the Act.

Usefulness

This objective, interpreted alongside Objective 1 lends greater significance to the inner Hauraki Gulf than other areas in the CMA. This recognises the important function this area holds for recreation activities and amenity. Objective 2 provides guidance for policies and rules to be targeted to protecting water quality in these areas.

Achievability

The RMA establishes that all activities in the CMA can only be undertaken if provided for by rules in a regional coastal plan or a resource consent. This provides the council with the necessary functions and powers to directly implement the objective through mandatory rules, including the use of permitted activity rules.

This objective is considered to be realistic and achievable as it recognises the projected increased use of Auckland's coastal waters by vessels and other recreational users alike. Implicit in this objective is the desire to maintain rather than enhance recreation and amenity values. This recognises that these values are already present in the Auckland's harbours, bays and beaches and attempts to enhance such areas may be unreasonable considering projected population growth and vessel ownership.

As with Objective 1, enforcement of this approach is likely to be difficult due to the scale of Auckland's CMA. However, this objective aids in targeting the direction of enforcement to the areas of the Hauraki Gulf where there are significant amenity and recreational values.

As with Objective 1, the primary effects are largely social and cultural and success will be measured by:

- A public opinion survey similar to that conducted by the former ARC in 2006 to determine perceived impact of the Unitary Plan's approach on the activities and values identified in objective 1
- Comparison of data collected from the Safeswim monitoring programme with recent historical results.

This objective is similar to Objective 1 in that it seeks to control risk to highly valued coastal areas associated with projected increased vessel use. In this regard the timeframe is considered ongoing.

Reasonableness

To maintain recreation and amenity values in the inner gulf harbour while vessel numbers are increasing, it is expected that strong regulations controlling near-shore discharges are introduced. This would likely require some vessel owners to install holding tanks or pump-out mechanisms at a cost, whilst other vessels would be required to travel farther in order to lawfully discharge sewage. However, considering the public benefit arising from increased amenity values and recreation opportunities, this objective is considered to be reasonable

2.1.1 Policies

Policy 1: *Avoid the discharge of sewage from vessels within areas that have been identified as inappropriate due to the proximity to shore, marine farms, marine reserves, or shallow water depth.*

This policy clarifies both objectives by determining particular areas within the CMA where sewage discharge from vessels is inappropriate. These reflect the coastal marine areas

identified by s 11(2) of the RMPRs. This also provides the framework for the inclusion of the RMPRs in the Unitary Plan. In doing so, it provides for the protection of coastal and marine areas that hold significant recreation, commercial or amenity value.

Policy 2: *Require provision of sewage collection and disposal facilities for vessels at new ports, marinas and other appropriate facilities, or at the time of significant upgrading of these facilities.*

Policy 3: *Promote the installation of public toilet facilities at high use boat ramps and boating destinations, at construction, or during significant upgrades of these facilities.*

These policies give effect to both objectives by encouraging the provision of facilities that reduce the need for vessel owners to discharge sewage to the marine environment. These facilities include public toilets, pump-out mechanisms and receptacles for emptying holding tanks. Policy 2 provides the framework to inform standards and criteria for new marinas and ports and the redevelopment of existing marinas and ports. Policy 3 provides for the inclusion of standards and assessment requiring public toilet facilities at boat ramps and similar facilities

Policy 4: *Promote public awareness and education campaigns around the discharge of sewage from vessels, and use of vessel holding tanks and pump-out facilities.*

This policy accompanies Policies 1 – 3 by encouraging a behavioural change among vessel owners. By promoting vessel holding tanks and pump-out facilities, this policy seeks to reduce the risk of sewage from vessels being discharged in near-shore areas. This policy supports information or education campaigns that would be required to support a significant change in the rules framework. By reducing the risk of non-compliant discharges this policy assists in protecting water quality in Auckland's CMA.

2.1.2 Rules and other methods

The proposed provisions are summarised in 1.9 above.

An extension of the RMPRs limit no-discharge area to 2km from MHWS is considered a reasonable balance between giving effect to the direction of the NZCPS, addressing adverse effects and the risk of amplified effects, and the practical impacts on the recreational boating sector.

The proposed approach provides coverage of the anomaly areas identified in Waitemata and Mahurangi Harbour, Tamaki Estuary and Port Fitzroy where lawful discharges are inappropriate. This is expected to mitigate the risk associated with increased vessel use and recreational demand for coastal areas. In particular this will enable the retention of amenity, coastal character, water quality and economic productivity in Auckland's coastal waters.

The proposed approach also directly delivers on the strategic direction of the NZCPS. By prohibiting discharges in most of Auckland's near-shore areas, the proposed approach directly gives effect to Policy 23(2)(a) of the NZCPS.

In comparison to more onerous approaches, the proposed approach provides reasonable opportunities for sewage to be discharge to the CMA. In particular, vessel owners have opportunities to discharge within the 2km limit provided that particular tidal conditions are present. Furthermore, this approach is considered more appropriate and commensurate to the issues raised regarding the amenity and water quality in identified near-shore environments. Harbour-specific and broad closures have been considered but found too prohibitive for vessel owners considering the scale of restriction.

2.1.3 Costs and Benefits of Proposed Policies and Rules

The costs and benefits of the proposed approach are described below.

Approach: Prohibit discharges within 2km of MHWS (except where certain tidal conditions are present), and retain all other limits set by the RMPRs

Costs:

- Primary costs fall to recreational boating sector:
 - Economic costs to vessel owners arising from additional distance required to comply with discharge limits
 - Economic costs to vessel owners as a result of retrofitting vessels with holding tank systems. These are estimated to be \$6.27 million based on the analysis undertaken in Appendix 3.32.1
 - Social costs to vessel owners required to travel farther to discharge sewage
- Increased cost of non-compliance as compared to the status quo option

Benefits

- Increased amenity of near shore coastal waters
- Reduced disruption to recreational users of coastal waters, particularly swimmers who may otherwise be exposed to heightened health risks
- Māori of the water is protected and effects of traditional shellfish gathering by Mana Whenua in near-shore areas are reduced
- Reduced disruption to aquaculture activities, particularly marine farms in the Mahurangi Harbour and Port Fitzroy.
- Reasonable opportunities for discharge of untreated sewage within the Hauraki Gulf remain
- Administration costs are expected to be similar to those under the status quo approach

2.1.4 Adequacy of Information and Risk of Not Acting

The primary effects of retaining the status quo approach are anticipated to be largely social and cultural and consequentially are difficult to measure. In particular, the position adopted by the NZCPS and increasingly the general public relating to the unacceptability of untreated sewage discharges in coastal waters is difficult to quantify.

However it is considered that there is a significant level of risk attached to not acting. The primary issues associated with this risk are:

- The projected increase in recreational in Auckland between now and 2031. Effects on amenity, recreational use of coastal waters, cultural well-being of Mana Whenua, and economic effects on aquaculture and tourism sectors are expected to be exacerbated by an additional 90,000 recreational vessels in Auckland's coastal waters.
- By not giving effect to the NZCPS, the Unitary Plan will fail to meet its statutory obligations under s 67(3)(b) of the RMA. The NZCPS expressly directs regional coastal plans to not allow the direct discharge of untreated sewage to coastal waters.

3 Alternatives

The proposed alternative is discussed in 2.0 above. The status quo alternative is outlined in 1.5 above.

Alternatives are:

1. Status Quo: Retain limits set out in the RMPR
2. (Proposed Alternative) 2km exclusion distance: Prohibit discharges within 2km of MHWS (except where certain tidal conditions are present), and retain all other limits set by the RMPRs (refer to Map 1, pp.14)

3. Harbour Specific Closures: Prohibit discharges in the Waitemata, Manukau and Kaipara harbours or where they are within 2km of MWHS
4. Broad Closure: Generally prohibit discharges in Auckland's harbours and near to Auckland's coastline (in addition to the RMPR. Refer to Map 2 pp.14)

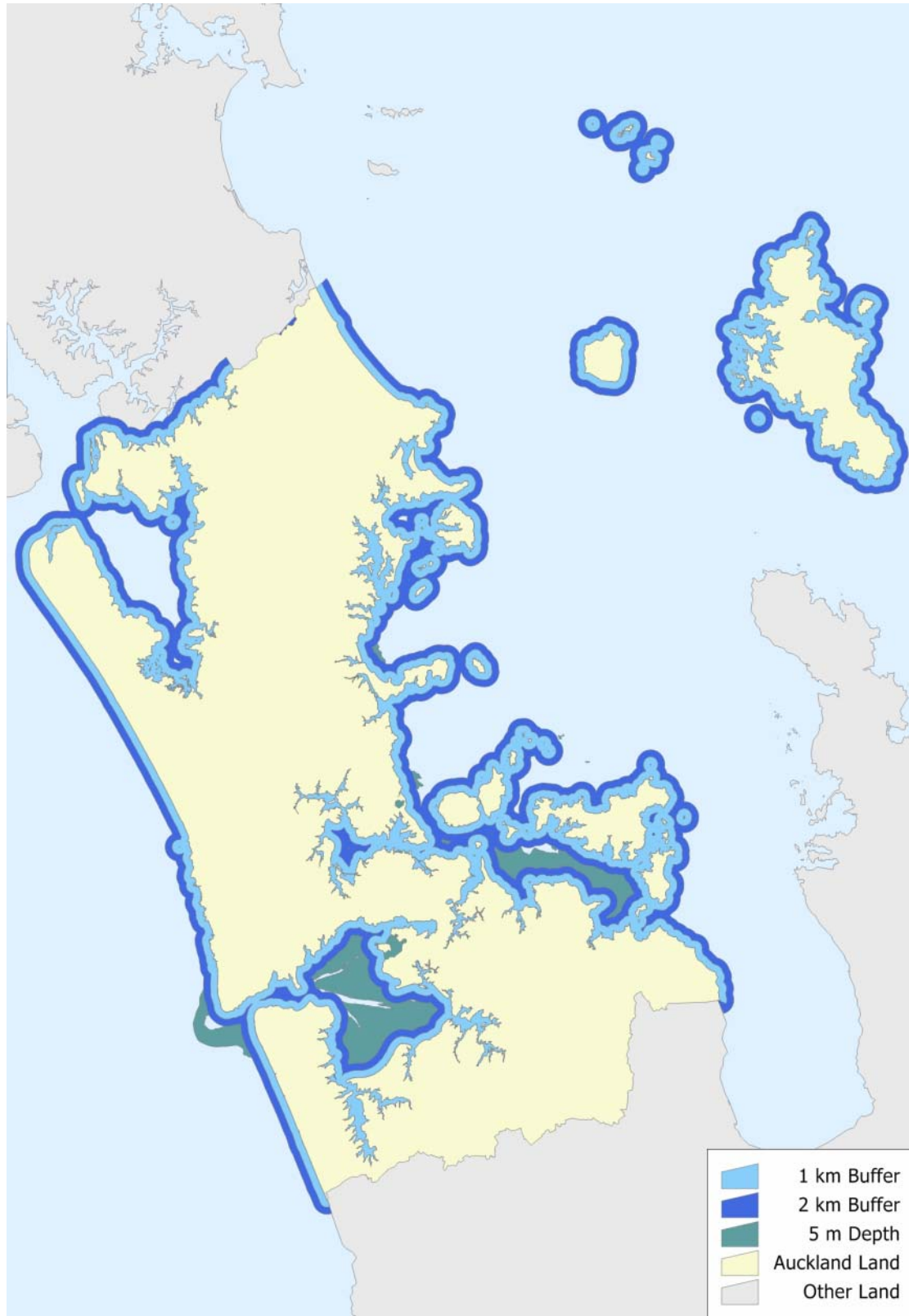
The table below discusses each alternative compared to the Proposed Alternative

	Alternative 1 - Status Quo Description - Retain limits set out in the RMPR	Alternative 2 – Preferred option 2km exclusion distance. Description: Prohibit discharges within 2km of MHWS (except where certain tidal conditions are present), and retain all other limits set by the RMPR (refer to Map 1, pp.14)	Alternative 3 - Harbour Specific Closures Description: Prohibit discharges in the Waitemata, Manukau and Kaipara harbours or where they are within 2km of MWHS	Alternative 4 - Broad Closure Description: Generally prohibit discharges in Auckland's harbours and near to Auckland's coastline (in addition to the RMPR. Refer to Map 2 pp.14)
Appropriateness	The legacy objective is written generally and focuses on generic discharges of contaminants, reflecting the structure of the operative coastal plan. Sewage discharge from vessels is addressed as one type of discharge.	This approach gives effect to both objectives by protecting amenity and cultural values, and recreational and economic activities to a higher extent than the operative approach. In particular the 2km limit provides greater protection of the amenity and cultural values that are contingent on high water quality in coastal waters. It also provides for marine farm and tourism activities located in near-shore areas. By increasing the level of protection to Auckland's harbours and bays, this approach supports Objective 2, which places greater weighting on recreation and amenity in the inner Hauraki Gulf.	This approach gives effect to both objectives by protecting amenity, cultural and recreational values to a higher extent than the operative approach. By prohibiting discharges within the identified harbours, this approach provides for recreation, aquaculture, tourism and cultural activities that rely on high water quality.	The risk of non-compliance associated with this approach could lead to discharges that affect amenity, cultural values, and recreational activities.
Effectiveness	This approach is considered to be of low effectiveness. Currently, economic, recreational and cultural pursuits can be undertaken in most coastal and marine environments without significant disruption. However, this approach does not give effect to NZCPS or take into account the risk arising from projected increases in vessels in Auckland. Retaining the status quo does not provide coverage of anomaly areas - low energy tidal environments with limited ability to flush contaminants. This fails to achieve Policy 23(2)(a) of the NZCPS by enabling discharges to coastal environments. While these areas are discrete they tend to be popular for recreational pursuits. Under the current approach this risk will be amplified if vessel numbers increase at the rate projected by Beca (2012).	This approach is of moderate - high effectiveness as it provides strong protection to near-shore coastal and marine environments whilst allowing reasonable opportunities for vessel owners to discharge sewage in the CMA. By enabling greater use of the CMA for economic, recreational and amenity purposes, the expected increase in water quality from extended limits has a wider public benefit. This will particularly benefit marine farms, tourism ventures, recreational users and amenity by reducing the risk of near-shore marine areas being degraded. This approach is better suited to giving effect to Part 2 of the RMA, the NZCPS and proposed objective 3.2.5.1.11.2 of the draft Unitary Plan. By providing greater coverage of near shore areas, it: <ul style="list-style-type: none"> • provides for the social and cultural well-being of people through the increased use and enjoyment of Auckland's coastal areas (s. 5(2) RMA) • avoids the discharge of untreated sewage in coastal areas (policy 23(2)(a) NZCPS) • provides for increased water quality to support recreational and amenity values in the inner Hauraki Gulf (objective 2). It is considered that enabling discharges within 2km where particular tidal conditions are present will provide additional opportunities for lawful discharges within near-shore areas. This is considered to be a mitigating factor with regard to potential non-compliance by vessel owners.	This approach is anticipated to be moderately effective. As this approach communicates to vessel owners the inappropriateness of near-shore discharges, a long-term increase in amenity, mauri and recreational value is expected in Auckland's harbours and anchorage areas. However, in the short-term this would be balanced by incidences of non-compliance by vessels unaware or defiant of these limits. This approach carries with it a moderately high risk of public opposition from vessel owners. In particular, vessel owners in the Kaipara are likely to oppose this as there is little evidence to suggest sewage discharges are a significant issue in this harbour. In addition the idea of complete harbour closures may be perceived as being heavy handed and unspecific by vessel owners.	This approach is expected to be of limited effectiveness due to the high risk of non-compliance and public opposition in the short-term. It is probable that public acceptance of broad closures would increase in the long-term. However, it is likely that the risks involved with progressing this option in the face of public opposition (and in particular the appeal process) are too great.
Efficiency	This approach is not efficient as the wider economic, social and cultural costs outweigh the	This approach is anticipated to be of moderate to high efficiency as it is anticipated to provide a	This approach is of low - moderate efficiency as the limits are expected to be more prohibitive to	This approach is not efficient as it introduces significantly greater costs to vessel owners than

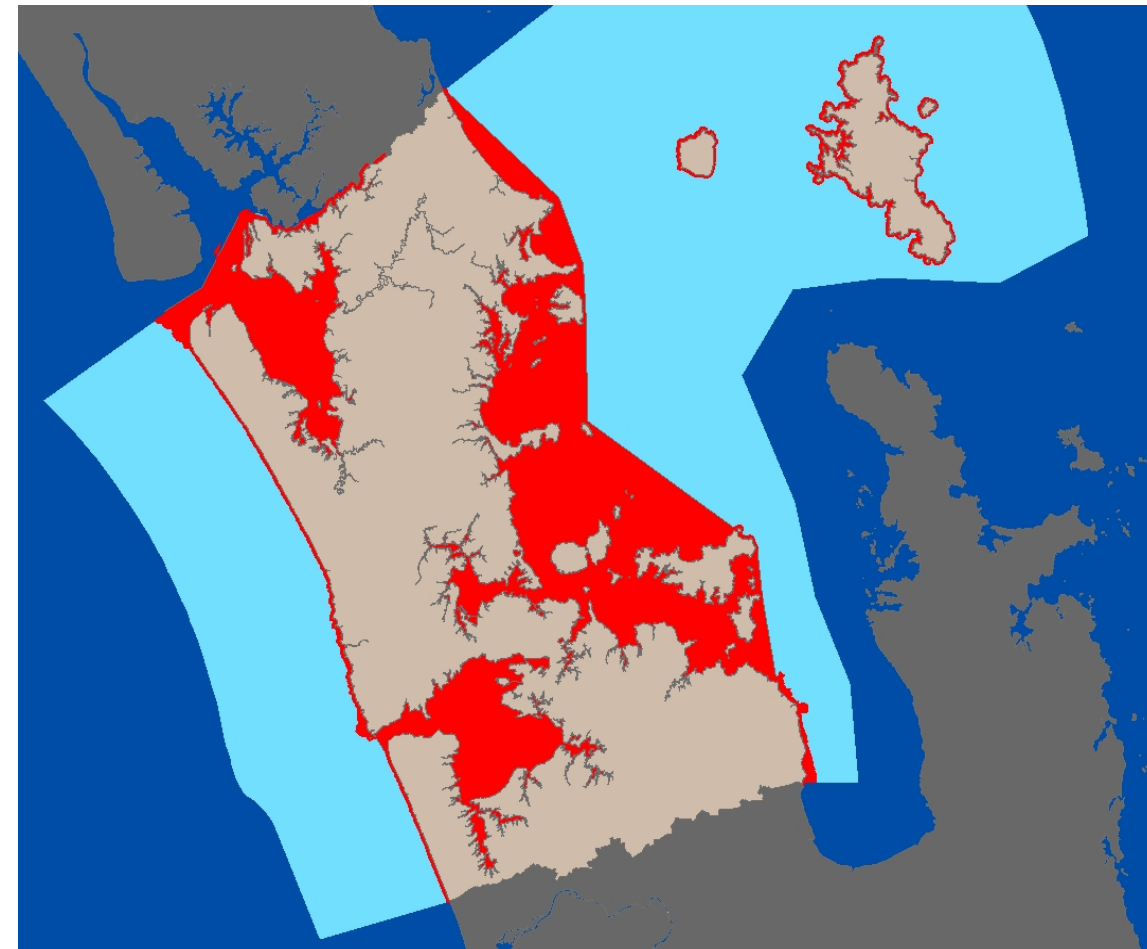
	<p>financial benefits for vessel owners. The CMA represents the public commons and holds significance for a wide range of stakeholders. The social and cultural effects on near shore areas that cannot reasonably disperse human sewage are anticipated to be significant in light of projected increases in vessel populations.</p> <p>These benefits are moderate in magnitude (concerning the economic cost of a holding tank fit-out) but low in terms of scale as they apply only to vessel owners in Auckland.</p>	<p>similar level of social, cultural and environmental benefit to Alternatives 3-4, whilst mitigating costs to vessel owners.</p> <p>A 2km limit (including exceptions where tidal conditions are present) is considered the most efficient option as it comprehensively addresses issues associated with near shore discharges. However by enabling some discharges in the Kaipara and Manukau harbours (compared to Alternative 3) it enables the reasonable discharge of sewage, which reduces the economic impact on this sector (through reduced need to install holding tanks) without affecting low-energy near shore coastal waters.</p>	<p>vessel owners than Alternative 2 without a proportionate increase in the protection of highly used coastal waters.</p> <p>The primary benefit of this option over Alternative 2 is that it presents a clear public message relating to the unacceptability of near shore discharges in Auckland's bays and harbours. This approach also involves less risk of non-compliance as a harbour-wide rule is simpler to determine than a distance based limit. This approach is more equitable than Alternative 4 as it enables some opportunities for vessels to discharge on popular cruising routes outside of harbours and bays.</p> <p>However, the economic costs and risk to the safety of vessels in the Kaipara and Manukau harbours are considered to be significant. This is especially evident when compared to Alternative 2, which is anticipated to produce similar benefits to the wider public and address identified anomaly areas whilst generating less cost to the boating community.</p>	<p>Alternatives 2 and 3 without providing a proportionate level of benefit to highly-used coastal waters used by the general public.</p> <p>It is expected that the wider benefits to water quality in the CMA will be compromised by non-compliance by vessel owners who cannot afford or choose not to install a holding tank.</p>
Costs	<p>The principal costs associated with this approach are the social and cultural effects borne by the wider community.</p> <p>The 500m limit from MHWS employed in the RMPRs enables the lawful discharge of untreated sewage in some areas of Auckland's harbours and bays. By providing for such discharges, the RMPRs imply that some forms of near shore discharge within high-use recreational areas are appropriate. Considering the difficulty in enforcing such a limit, this may be encouraging boat-owners to discharge within 500m of MHWS on the basis that meeting the statutory requirement is immaterial given that discharges are legal at some point in the harbour or bay.</p> <p>The primary social and cultural effects of retaining the status quo fall to the wider community and are anticipated to be:</p> <ul style="list-style-type: none"> • Adverse effects on amenity for recreational users of the coastal marine are in sheltered tidal bays and harbours. • Effects on Mana Whenua values and in particular the loss of mauri in Auckland's near shore coastal waters, and potential effects on traditional shellfish gathering in these areas. • Heightened risk of human health effects to swimmers in anomaly area coastal waters where there are numerous anchorages or moorings. • Heightened risk of human health effects related to consumption of seafood gathered from sheltered tidal bays and harbours. 	<p>The principal costs associated with this approach are economic costs anticipated to fall to vessel owners.</p> <p>The primary economic cost is expected to be borne by vessel owners moored in or launching to the Waitemata Harbour. These costs are either:</p> <ul style="list-style-type: none"> • Costs associated with increased likelihood of vessels requiring a holding tank fit out. • Costs associated with the increased fuel and maintenance costs required to exit the harbour and comply with a 2km limit; or <p>There have been no studies to determine the proportion of vessels in Auckland's CMA possessing holding tanks. As such, it is difficult to quantify the overall cost of holding tank fit-outs to vessel owners.</p> <p>An estimated economic cost to recreational vessel owners resulting from holding tank fit outs in a 30 year period is expected to be \$6,267,000 based on the analysis outlined in Appendix 3.34.1.</p> <p>The primary social costs are considered low and comprise the localised effects on time and freedom of vessel owners. These include the time involved in cruising to an area of the CMA where sewage can be disposed and the associated loss of freedom as perceived by vessel owners. These costs are less than Alternative 3 and significantly less than Alternative 4.</p> <p>Social and environmental costs to the wider community may arise from the increased risk of</p>	<p>The primary cost of this approach is expected to be economic costs anticipated to fall to vessel owners.</p> <p>The primary cost involved is the economic cost of compliance to vessel owners in the Manukau and Kaipara Harbours. These involve either:</p> <ul style="list-style-type: none"> • The additional cost and time associated with exiting the Kaipara or Manukau Harbour to discharge sewage; or • The additional cost of installing a holding tank and gaining access to pump out facilities. <p>A mitigating factor may be the lack of vessels operating in the Manukau and Kaipara harbours. Based on a 2011 estimate there 52 and 4 moorings respectively in these harbours (Beca 2012)</p> <p>An estimated economic cost to recreational vessel owners resulting from holding tank fit outs in a 30 year period is expected to be \$7,312,700 based on the analysis outlined in Appendix 3.34.1.</p> <p>The social costs are anticipated to be the same as those identified in Alternative Two, but involve increased effects on vessel owners in the Manukau and Kaipara. These effects are:</p> <ul style="list-style-type: none"> • Significant added time for vessel owners to exit a large harbour • Significant risk to the safety of vessels and in particular smaller pleasure craft as a result of exiting a more sheltered tidal area to discharge sewage. 	<p>The primary costs for this approach involve economic and social costs to vessel owners. It option would require a large proportion of vessel owners to either:</p> <ul style="list-style-type: none"> • retrofit their watercraft with a holding tank, generating costs arising from parts and installation, or • install a chemical treatment system for wastewater, at a significant cost, or • upgrade their vessel if it does not have the size or capacity to support a holding tank. <p>An estimated economic cost to recreational vessel owners resulting from holding tank fit outs in a 30 year period is expected to be \$10,445,000 based on the analysis outlined in Appendix 3.34.1.</p> <p>Social costs for vessel owners involve the perceived lack of freedom arising from broad closures. Vessel owners without holding tanks installed will be heavily restricted in terms of the distance they can travel with their vessel and subsequently their range of activities.</p> <p>Social costs also include public opposition to what many vessel owners will perceive to be a heavy handed and overly restrictive approach.</p> <p>The primary environmental costs arise from the likelihood of unlawful discharges. It is expected that this approach would lead to significant non-compliance by vessel owners, leading to degraded water quality and mauri of the CMA. Without reasonable opportunities to discharge</p>

	<p>In addition, economic and environmental costs are expected to fall to the wider community. These are considered lesser in magnitude, though there is a moderate element of risk related to the reputation of aquaculture and marine tourism industries.</p> <ul style="list-style-type: none"> • Disruption of marine farms and consequentially the loss of productivity, particularly in relation to oyster farms in Mahurangi harbour and mussel farms in Port Fitzroy • Potential effects on the reputation of New Zealand's aquaculture sector arising from contaminated exports, including cross-sector effects on other industries that ply New Zealand's green or eco image. • Disruption and reduced value of marine tourism, particularly in the Waitemata Harbour and Port Fitzroy, arising from the presence of untreated sewage. • Environmental costs concern the impact on water quality, particularly in low tidal energy coastal environments. <p>The administration costs to Council are expected to be similar to Alternatives 2-3:</p> <ul style="list-style-type: none"> • Costs to the Harbourmaster's office related to enforcement. As this office monitors a range of activities in Auckland's coastal waters it is expected these costs will be similar across all Alternatives. • There are no resource consent costs associated with this approach <p>This approach also presents some costs to vessel owners, which are related to the requirement to comply with the RMPRs. These are not considered as the regional coastal plan function of the Unitary Plan does not have the legal capacity to reduce these discharge limits.</p>	<p>non-compliance. Vessel owners unaware or defiant of the extended exclusion limits may discharge unlawfully to coastal waters. These costs are considered marginal compared to existing likelihood of non-compliance with Alternative 1. Furthermore, this approach is likely to be more acceptable to recreational boaties than Alternatives 3-4, which may be a mitigating factor in relation to non-compliance.</p> <p>Risk associated with non-compliance is expected to decrease over time due to gradual acceptance of stronger protection of near shore waters.</p> <p>The administration costs to Council are expected to be similar to Alternatives 1 and 3:</p> <ul style="list-style-type: none"> • Costs to the Harbourmaster's office related to enforcement. As this office monitors a range of activities in Auckland's coastal waters it is expected these costs will be similar across all Alternatives. • There are no resource consent costs associated with this approach 	<p>The primary environmental cost is the increased likelihood of non-compliance by vessel owners with watercraft stored in Auckland's harbours. In particular, this approach may pose a significant risk of non-compliance in the Manukau and Kaipara harbours, due to the size of the harbour and difficulties associated with enforcement.</p>	<p>sewage in the CMA, vessel owners would not be incentivised to discharge away from near-shore areas. This could significantly affect the recreation, amenity and cultural values of Auckland's beaches, bays and other coastal areas.</p> <p>The additional exclusion area proposed by this approach would require significant additional administration costs associated with monitoring and enforcement. In particular, the Harbourmaster's office would incur significant costs in operating additional patrol vessels to cover the broad geographic area.</p> <p>While this option sends out a very clear public message about the inappropriateness of discharging untreated sewage in coastal waters, may boaties will not be able to comply practicably. It is inappropriate to create management frameworks that are likely to make practical operation of vessels unlawful.</p>
Benefits	<p>The primary benefit associated with this approach is that it is currently known and understood by vessel owners/operators. The operative limits provide more opportunities for discharges within Auckland's harbours, which produce two primary benefits:</p> <ul style="list-style-type: none"> • the economic benefit associated with not having to install holding tanks in vessels, and use pump-out facilities or alternative mechanisms at marinas, ports or boat ramps • the social benefit arising from the freedom of navigation, enhancing the boating experience for vessel owners. However, as compared to a 2km limit this is expected to be minor considering that there are many popular cruising routes outside of this limit. 	<p>This is restated below. The primary benefits involve mitigating adverse social and cultural effects on near-shore environments:</p> <ul style="list-style-type: none"> • Increased levels of amenity and greater natural coastal character in near shore areas, particularly the Waitemata Harbour, Mahurangi Harbour, Tamaki Estuary and Port Fitzroy. • Increased water quality and reduced risk of human health relating to marine recreational users. • Reduced impact on the mauri of the marine environment. <p>Additional effects also arise when compared to more prohibitive alternatives:</p>	<p>It is expected that this approach will generate similar benefits to Alternative Two. The primary difference concerns the environmental benefit to the Kaipara Harbour by restricting all discharges in this area. However, these benefits are expected to be minor as sewage discharge from vessels has not been recognised as a significant threat to water quality in the Kaipara.</p> <p>There is however a potential long term benefit arising from public acceptance of a more prohibitive rule. This could assist in inducing more retrofits and new vessels with holding tanks.</p>	<p>The principal benefit of this approach is that it communicates a strong message to vessel owners regarding the inappropriateness of sewage discharges from vessels in the CMA. The long-term benefit of this approach is the likelihood of a behavioural shift in vessel owners, resulting in:</p> <ul style="list-style-type: none"> • higher proportion of vessels with holding tanks • fewer cases of sewage discharge from vessels, both actual and compared to vessel population.

	<p>This approach produces wider environmental benefits through the limits established by the RMPR. This provides minimum level of protection to:</p> <ul style="list-style-type: none"> • near-shore coastal environments important for recreational, cultural and amenity values, as well as tourism businesses • marine farms and maataitai reserves and the economic and cultural values they hold • marine reserves and the ecological value they hold • shallow areas of the CMA with limited capacity to disperse sewage and flush contaminants. 	<ul style="list-style-type: none"> • Economic and social benefits to vessel owners relative to implementing Alternative 3 or 4 • Benefits associated with the reduced likelihood of non-compliance relative to Alternatives 3-4 		
Risks	<p>The principal risk associated with retaining the status quo is the degradation of the economic, social and cultural values of Auckland's CMA. Auckland's vessel population is projected to rise significantly in the next 20 years (222,000 vessels by 2031). Consequently, the adverse effects identified in costs could be exacerbated as vessel use in Auckland increases. These risks are likely to be targeted to identified anomaly areas where limited ability to flush contaminants may lead to significant adverse effects human health and amenity for recreational users.</p>	<p>The principal risks associated with this approach are:</p> <ul style="list-style-type: none"> • Lack of comprehensive information related to sewage inputs to the CMA. It is very difficult to quantify what proportion of sewage discharge to the CMA arises from vessels compared to wastewater outfalls. • Increased likelihood of non-compliance by vessel owners who are unaware or defiant of the extension to exclusion limits. This risk is variable; in the short term it could result in greater incidence of unlawful discharges, including within 500m of MHWS. 	<p>There is a significant risk that the boating community would disagree with this approach. There is little information to suggest that discharges outside of 2km but within the identified harbours would have a significant impact on water quality. There is also significant risk of public opposition to this option as it may be perceived to be unsophisticated and heavy handed.</p>	<p>This approach carries with it significant risk of a opposition from vessel owners and the general public. There is little information to suggest that a broad prohibition of vessel discharges in the CMA would provide significant benefits compared to alternatives two and three. This risk could take the form of non-compliance with vessel owners purposely discharging sewage within the exclusion zone.</p>



Map 1: Alternative Two exclusion areas (refer to 2km Buffer)



Map 2: Alternative Four exclusion areas (broad closures)

4 Conclusion

By retaining the operative approach to sewage discharge from vessels, it is anticipated that the amenity, cultural, recreational and economic values held in coastal waters will continue to degrade. This will be exacerbated by the expected increase in recreational vessels in the CMA. Moreover this approach will be in direct contravention of Policy 23(2)(a) of the NZCPS, which provides a clear position on preventing untreated sewage discharge to coastal waters. For these reasons, a departure from the operative plan approach is required.

An extension of discharge limits to 2km from MHWS with exclusions where certain tidal conditions are present is considered to be a reasonable balance between managing the risk associated with projected recreational vessel increase, giving effect to the NZCPS, and providing reasonable opportunities for vessels to lawfully discharge sewage. This approach has been preferred over more prohibitive options largely because it is more proportionate to the scale of actual and potential effects on near-shore environments, whilst mitigating economic and social costs for vessel owners.

In conclusion from the preceding discussion, the objectives and policies outlined in part 2 and the rules in Part 3.0 of this report should be adopted.

5 Record of Development of Provisions

5.1 Information and Analysis

A report entitled *Unitary Plan Controls on Sewage Discharge from Vessels* recommended:

- build on the PMRP, extending the limit in which discharges are prohibited from 500m to 2km
- use non-regulatory methods to promote awareness and education to increase compliance with rules
- provide for waste disposal facilities at boat ramps on public land (outside the scope of Unitary Plan).

The primary reasons for extending the limit to 2km were:

- to provide coverage of anomaly areas within certain harbours, embayments or estuaries where it is currently legal to discharge untreated sewage from boats
- a 2km limit sends a strong message that near-shore sewage discharge from vessels is not acceptable.

The Unitary Plan officers endorsed this position.

Appendices

Appendix 3.34.1 Method of cost-analysis related to holding tank installation

Appendix 3.34.2 Unitary Plan Controls on Sewage Discharge from Vessels

Appendix 3.34.3 Auckland Recreational Boat Study for Auckland Council by BECA 2012

5.2 Consultation Undertaken

Workshops were held with members of the recreational boating sector on the 26th March and 29th October 2012. These were attended by key stakeholders, including the Auckland Yachting & Boating Association and Royal New Zealand Yacht Squadron, and included discussion of sewage discharge from vessels and moorings rules.

Meeting	Attendees
Recreational Boating Sector Met 6.15pm – 8pm Monday 26 th March 2012	Royal New Zealand Yacht Squadron Cruising and Navigation Association of New Zealand

	Auckland Yachting and Boating Association Gulf Anchorage Protection Society Outdoor Boating Club Waiheke Boating Club Yachting NZ
<u>Recreational Boating Sector</u> <u>Met 6.00pm – 9.00pm Monday 29th October 2012</u>	<u>Met 6.00pm – 9.00pm Monday 29th October 2012</u> Royal New Zealand Yacht Squadron Auckland Yachting and Boating Association Waiheke Boating Club Auckland Council Harbourmasters Office

The general feedback was:

- Costs of compliance to vessel owners are significant
- Holding tank installation is expensive
- Proposed 2km limit difficult to monitor and may lead to non-compliance

An informal consultation process was undertaken following the release of the draft Auckland Unitary Plan in March 2013. The general feedback was:

- 14 pieces of feedback received relating to sewage discharge from vessels
- 50% generally supportive or asking that it goes further
- 43% oppose extension to discharge limits, citing:
 - Risk to vessel owners related to discharging outside harbours in storm events
 - Further research required
 - Compliance amongst vessel owners would be low
- 29% supported stronger provisions requiring holding tanks
- Support for a rule prohibiting discharges within 100m of a stationary boat (rather than proposed rules)
- Support for relaxing the 2km limit during storm events where compliance with the limit may pose risks to vessel safety

5.3 Decision-Making

Political Working Party November 2011

The PWP endorsed this topic as part of the work programme for coastal matters. The Unitary Plan officers recognised the following issues with the operative approach to this topic:

- The PMPR sets buffer areas in which sewage discharge from vessels is prohibited. However, there are some anomaly areas where these discharges are legal.
- There are significant issues with enforcing these regulations. Providing evidence for non-compliance is difficult.
- Any new regulations would also be difficult to enforce. Therefore public awareness would play a significant role in controlling this issue.

The PWP recognised these issues and recommended this topic be included in the Unitary Plan.

Political Working Party December 2012

The Unitary Plan officers presented options to the PWP in light of the proposed rules for the August draft and feedback from the recreational boating sector workshop in October. The proposed alternatives presented to the PWP were those identified in 3.0 of this report.

The PWP endorsed the preferred option of adopting the 2km buffer from MHWS without broad or harbour-specific closures.

References

Auckland Recreational Boating Study (2012) Beca Infrastructure Ltd (Beca) attached

Unitary plan controls on sewage discharge from vessels: Review of implementation methods and evaluation of options (2012) Coast & Catchment Ltd attached

Resource Management (Marine Pollution) Regulations, New Zealand Government 1998, Wellington, N.Z