**2.32 – Mangroves - section 32 evaluation for the Proposed Auckland Unitary Plan**

## 1 Overview and Purpose

In addition to the matters in Part 1, this evaluation specifically addresses the approach taken to the management of mangroves adopted in the Proposed Auckland Unitary Plan (the Unitary Plan).

### 1.1 Subject Matter of this Section

The purpose of this report is to evaluate the approach taken by the proposed Auckland Unitary Plan to the removal of mangroves from the coastal marine area (CMA). This includes a review of the relevant objectives and policies and rules relating to mangrove protection and mangrove removal.

### 1.2 Resource Management Issue to be Addressed

Mangroves are naturally occurring indigenous vegetation with important ecological values. Some areas Significant Ecological Areas in the Unitary Plan (i.e. SEA Marine 1 and SEA Marine 2) contain stands of mature mangroves which contribute to their ecological and habitat values.

Some of Auckland's harbours and estuaries have experienced a progressive expansion of mangroves over the past 50 years, principally in response to increased sedimentation and nitrification resulting from deforestation, rural practices and urban land development. This has resulted in previous areas of intertidal open water being colonised by mangroves. Areas remembered by Aucklanders as being open beaches, recreation areas for small boats, or providing easy vessel access are now a mix of soft mud and mangroves.

The issue of mangrove protection versus mangrove removal has been topical in Auckland since the enactment of the Resource Management Act (RMA) in 1991 and the approval of the first Auckland Regional Plan Coastal in 2004. Auckland Council has received repeated requests and some applications for resource consent from individuals and local community groups to remove mangroves to improve local amenity values. It has also processed resource consents from landowners and infrastructure providers to remove mangroves to facilitate vessel access and drainage system maintenance.

Public requests for mangrove clearance have also identified the costs of and the process associated with obtaining resource consent for mangrove clearance and in the case of community groups, who should assume financial responsibility for this work.

### 1.3 Significance of this Subject

With qualifications, the approach adopted in the proposed Auckland Unitary Plan enables the removal of mangroves prior to a benchmark date (1996) without a resource consent. This is a substantial shift from previous approaches which have generally required a resource consent for mangrove removal other than for the purpose of some maintenance-type activities in the vicinity of community and network infrastructure.

The rules proposed in the Unitary Plan forms part of a two stage approach to mangrove management:

- **Step 1** (proposed Unitary Plan) – adopt qualified benchmark date (1996) permitted activity approach.
- **Step 2** - work with local boards to undertake further work in areas of strong community interest with a view to identification of specific areas for removal or retention which would inform an update rule framework in time.

Step 1 is the subject of this analysis.

### 1.4 Auckland Plan

The Auckland Plan does not specifically discuss mangrove management. However, it does discuss the importance of Auckland's coastal environments as one of its defining features, its recreational, amenity, cultural, economic and ecological values.

In particular, the Auckland Plan acknowledges the recreational opportunities water provides are of immense importance to Auckland's economy and liveability.

*Many people enjoy beaches, coastlines, lakes, wetlands and streams for swimming, boating, diving, surfing, fishing and other activities. Our water features have significant natural and cultural values, and contribute to our sense of place. However, clean, accessible water is a finite resource….* (Auckland Plan p 187*)*

*The recreational marine industry is another major contributor to our economy, with 60% of New Zealand's marine companies based in Auckland and contributing $149 million to Auckland's GDP. Recreational boating, including kayaking, sailing and power boating, is expected to continue as a contributor to the Auckland economy.*(Auckland plan p147)

Directive 7.13 of the Auckland Plan also provides for a Marine Spatial Planning exercise to ensure the integrated and sustainable management of marine areas in Auckland's Harbours and the west coast. This is particularly relevant as the approach to mangrove management may be revised in light of this work to better reflect environmental and cultural values and interests.

### 1.5 Current Objectives, Policies, Rules and Methods

The legacy regional coastal plan provisions for the protection and removal of mangroves were established by change 4 to the Auckland Regional Plan: Coastal which became operative in March 2011. It introduced a more permissive and targeted approach to mangrove removal to replace the previous conservative approach, where mangrove clearance generally required a resource consent and was prohibited in certain marine SEA areas.

The legacy coastal plan approach provides for appropriate activities, including vegetation removal, and the management of adverse environmental effects. The policies identify what constitutes appropriate activities, which include mangrove removal for:

a. restoration of areas with significant geological, ecological or habitat values
b. maintenance or restoration of the open nature of wading bird feeding and roosting areas
c. maintenance of identified cultural heritage sites or areas
d. enhancement or restoration of public access to areas used for recreation, water access and navigation in the CMA
e. the operation, maintenance and use of lawful structures, infrastructure and functioning of drainage systems
f. managing adverse effects caused by natural processes.

Rules to give effect to the objective and policies are:

a. Permitted activity for removal of mangroves between 30-200m$^2$ in area, for activities d and e above, except in Coastal Protection Area 1
b. Permitted activity for removal of mangrove seedlings without limitations on area, including specified Coastal Protection Area 1, such as landforms, geological sites and bird roosting and feeding areas, where the values are not derived from the presence of mangroves
c. Controlled activity for 30m2 of mangrove clearance in Coastal Protection Area 1
d. Controlled activity for mangrove clearance to maintain open nature of significant wading bird habitats over an area of up to 10ha

e. Discretionary activity for mangrove clearances that are not specifically recognised by the policies
f. There are also several controlled, restricted discretionary and discretionary activity rules that regulate mangrove removal beyond permitted activity conditions, or clearances that are proposed in specific zones or for various beneficial purposes such as restoration of public access, or maintenance of structures, infrastructure and drainage systems.

While this approach was seen to be an improvement in balancing the ecological and community values associated with use and access to the coast, significant community concern has remained about impediments to appropriate mangrove removal generally perceived to relate to the cost and time involved in the resource consent process.

While council does provide some assistance to communities for mangrove removal through coordination of the resource consent process and Local Board funding these non-regulatory methods are currently limited.

### 1.6 Information and Analysis

There is a significant body of scientific and previous policy work done on the matter of mangrove management which have been relied upon. While much of this was synthesised in a State of Knowledge report commissioned by the Council in 2007 (The New Zealand Mangrove : review of the current state of knowledge; Auckland Regional Council, Technical Publication No. TP325, May 2007) specific studies on coastal erosion, sediment monitoring and degraded receiving environments were also relied upon.
Desktop analysis was undertaken to examine the potential extent of mangrove removal which may be enabled under a date-based benchmark approach to permitted mangrove removal.

### 1.7 Consultation Undertaken

To inform the development of the Auckland Unitary Plan discussion draft consultation was undertaken with key environmental stakeholders, local boards and community groups.

Subsequent to the release of the draft Auckland Unitary Plan, consultation was undertaken with the wider community, and again with Local Boards, environmental and other stakeholders.

### 1.8 Decision-Making

A number of options were presented to the Unitary Plan Political Working Party prior to release of the draft Unitary Plan, including retention of the status quo (Operative Regional Plan Coastal approach). In response to a strong desire for a level of permitted removal an approach based around a benchmark-date (1996) was developed. This was approved for inclusion in the Draft Auckland Unitary Plan.

Following receiving public feedback on the Draft Auckland Unitary Plan, options seeking to address those matters arising were put forward including retention of the 1996 benchmark date approach or generally requiring site-by-site assessment through the resource consent process.

The Committee decided to pursue the 1996 benchmark date approach.

### 1.9 Proposed Provisions

The provisions of the operative Auckland Regional Plan: Coastal to enable seedling removal and removal to maintain lawful structures and infrastructure without resource consent are continued.

The significant change is that the Unitary Plan approach permits removal in many areas where a consent would have previously been required. Those being, from areas that were free of mangroves in 1996 from:

1. the General Coastal Marine zone; and
2. Significant Ecological Areas where the values are not from mangroves.

In addition the rules permit the removal of any mangroves from Significant Ecological Areas that are wading bird habitats.

Permitted mangrove removal under the above rule is subject to a number of standards, many of which applied previously to the seedling removal rule. Those being:

a. Removed vegetation is disposed of outside the CMA.
b. The removal does not involve any discharge of chemical herbicides in the CMA other than as provided for in an approved pest management plan prepared in accordance with the Biosecurity Act 1993
c. Any visible disturbance to the substrate of the CMA must be remedied or restored within 48 hours of the completion of the works in ONC, ONF and SEA-M1 overlay areas and within seven days in other areas of the CMA.
d. Removal is done by hand or by hand-held tools.
e. Removal is not in areas where mangroves are serving to mitigate coastal erosion from wave action.
f. Removal will not damage or disturb areas of salt marsh or seagrass.
g. Written advice is given to the council at least 10 working days prior to removal, other than for the removal of $30m^2$ or less of seedlings. The advice will include the location and extent of the mangroves to be removed, the timing and methods of removal, and sufficient evidence to demonstrate that the area was free of mangroves in 1996.
h. In a significant wading bird area, removal is timed to avoid bird roosting and nesting seasons.

**1.10 Reference to other Evaluations**

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

- 2.11 - Biodiversity
- 2.31 - Earthworks

## 2 Objectives, Policies and Rules

**Objectives – Part 2, Chapter D, Section 5**
Objective 5.1.6.1
The ecological value of mangroves is recognised and mangroves are retained in areas where they have been identified as having significant ecological value.

Objective 5.1.6.2
Mangroves are retained in areas that are subject to active coastal erosion and where they perform an important role in mitigating coastal hazards.

These objectives promote the retention of mangroves in areas where they have particular value. Namely ecological values, and values in mitigating coastal hazards.

In achieving the purpose of the RMA, sections 6 (d) and (e) require council to provide for the following as matters of national importance:

> *(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna: and*

Further, sections 7 (d) and (f) which require to have particular regard to:
*(d) intrinsic values of ecosystems:*
*(f) maintenance and enhancement of the quality of the environment:*
*(i) the effects of climate change:*

*Under Section 30,* in respect of any coastal marine area in the region, the Council, in conjunction with the Minister of Conservation has the ability to achieve the objectives through placing controls on (ii) … the extraction of … other natural material from, the coastal marine area, to the extent that it is within the common marine and coastal area.

Objective 5.1.6.4
*The removal of mangroves is enabled from areas where they have spread since 1996, with only minor adverse effects on the environment*

This objectives provides a framework for a benchmark date based approach to enabling qualified mangrove removal where they have grown since 1996.

### 2.1 Objective 5.1.6.1 – Ecological values of mangroves

**Relevance**
This objective gives effect to the protection component of sustainable management set out in s. 5 (1). It also gives effect to s. 6 (c) *The protection of significant areas of indigenous vegetation and the significant habitats of indigenous fauna* and Objectives 1 and 2 of the New Zealand Coastal Policy Statement (NZCPS) and their associated policies 11 and 13 which relate to indigenous biological diversity and preservation of natural character.

**Usefulness**
The objective focuses on areas of mangroves that have significant ecological values, rather than encompassing all areas of mangroves, without consideration of their relative ecological value. It supports the achievement of other environmental outcomes relating to coastal and marine biodiversity.

**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.

As implementation will be through a resource consent process, including the notification of council for permitted activity actions, the timeframe for achievement will be determined by number and timing of resource consent applications that affect SEAs Marine 1 and 2.

**Reasonableness**
This objective addresses the management of indigenous vegetation in the CMA, which is predominantly public rather than private land. Retaining significant areas of mangroves does not constrain individual property rights or prevent the use and development of other areas of Auckland's CMA for economic, social or cultural purposes. Plan rules enable some limited mangrove removal in significant mangrove areas for specific purposes.

### 2.1.2 Policies

*Policy 1 – Avoid the removal of mangroves including seedlings from areas:*

*a identified as having significant ecological or natural character values, or where mangroves provide important ecological values;*

This policy provides the direction for the rules that restrict the removal of mangroves and seedlings from specific marine SEAs that are identified for their vegetation values or from areas identified for their outstanding or high natural character values. It also acknowledges that in some areas outside the specified marine SEAs, mangroves may have significant ecological values. This policy supports other assessment-based policies that require consideration of a number of factors as part of any resource consent application. This policy directs that actions be focussed on the retention of mangroves in specified areas.

This policy is achievable as council has specifically identified in the Unitary Plan significant ecological areas where their values are derived from mangroves. In general, this will enable efficient and effective implementation of the policy.

### 2.1.3 Rules and other methods

The proposed provisions are summarised in 1.8 above.

The primary rule which give effect to this policy is the requirement for a resource consent to remove mangroves from significant ecological areas where the values are derived from the mangroves.

The rules are achievable, as the areas where mangroves contribute to the significant ecological values of an area have been specifically identified by the Unitary Plan.

This is generally consistent with previous approaches, which have required a case-by-case assessment of the values of the mangroves, appropriate methods of removal etc, in light of the ecological values that they provide.

### 2.1.4 Costs and Benefits of Proposed Policies and Rules

The primary monetary costs associated with these objectives polices and rules are those associated with the requirement for a resource consent and associated technical assessments. However, by specifically identifying the areas where this consideration is required, the potential cost has been significant reduced relative to the legacy approach which does not identify specific areas, rather requires a resource consent generally.

It should however be noted, that there are ecological values outside of the specified areas which may be impacted upon by mangrove removal. This cost is not able to be quantified due to the degree of uncertainty about the rate and location of uptake of the proposed benchmark-date permitted activity, proposed to apply outside of the specified areas.

The proposed approach will not affect economic growth and employment.

The cost of consents for the removal of mangroves is highly variable with costs varying between $38,000 and $2,000 and between 5% and 30% of the total cost of mangrove removal depending on the nature of the proposal.

### 2.1.5 Adequacy of Information and Risk of Not Acting

It is considered that there is sufficient information on which to base the proposed policies and methods.

## 2.2 Objective 5.1.6.2 – Coastal hazard management

**Relevance**

This objective identifies the role of mangroves in the management of coastal erosion and coastal hazard mitigation. It provides a clear statement of where mangroves should be retained and clearance avoided. It gives effect to policy 26 of the NZCPS which requires that plans use natural defence systems such as coastal vegetation to protect coastal land uses against natural hazards.

**Usefulness**

Mangroves are recognised as an important natural defence system for hazard management in the Auckland CMA. As such it forms part of the Unitary Plan's wider policy and rule approach to hazard management.

**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, relating to mangrove retention or removal.

Extensive mangrove removal will be through a resource consent process, including the notification of council for permitted activity actions. This provides the opportunity to ensure mangroves are not removed from areas of active coastal erosion.

**Reasonableness**

This objective is considered to be reasonable in that it recognises the usefulness of mangroves as a natural hazard mitigation technique, rather than having to construct erosion and hazard mitigation structures. It requires minimum direct expenditure and makes efficient use of existing naturally occurring materials.

### 2.2.1 Policies

Policy 1: Avoid the removal of mangroves, including seedlings from areas:

(b) of active coastal erosion where mangroves provide a buffer against coastal processes causing erosion

This policy implements the objective by stating a protectionist approach to mangroves that act to buffer coastal erosion processes. This provides a basis for the assessment of proposals for mangrove clearance or for matters to be addressed as part of any coastal development projects.

### 2.2.2 Rules

The proposed provisions are summarised in 1.8 above.

The primary rule which give effect to this policy is the permitted activity standard which means that the benchmark-date (1996) permitted activity rule does not apply in areas where there is active coastal erosion.

This achievable, as 10 days prior to removal proponents are required to notify council of their intentions which enables council to verify whether the location in which the removal is proposed is subject to active coastal erosion. Should this be the case, the activity will require a resource consent.

This is significant departure from previous approaches which have placed the burden to demonstrate that their proposal will not exacerbate coastal erosion on the proponent through the resource consent process. However the proposed rules shift a significant proportion of this burden onto Council.

### 2.2.3 Costs and Benefits of Proposed Policies and Rules

The monetary costs on proponents are significantly reduced relative to the status quo as a resource consent is no longer required. However council may request of the proponent demonstrate that the removal will not exacerbate coastal erosion which may require the engagement of a specialist, as such some costs are likely to remain. The variation in costs of specialist involvement will vary from no cost to potentially tens of thousands of dollars depending on the location and scale of a proposed removal, and the rate and location of uptake of the benchmark-date based permitted activity is uncertain, these costs are unable to be estimated at this stage.

It is noted, however that while the cost of evaluating a resource consent application is recoverable by council, the cost of assessing the information provided to council as a requirement of a permitted activity is not. There is therefore a cost to Council of the proposed approach. As above as the rate and location of uptake of the benchmark-date based permitted activity is uncertain, these costs are unable to be estimated at this stage.

The proposed approach will not affect economic growth and employment.

There has been no analysis to monetarises the costs and benefits.

### 2.2.4 Adequacy of Information and Risk of Not Acting

It is considered that there is sufficient information on which to base the proposed policies and methods.

## 2.3 Objective – Mangrove removal back to 1996 extent

The following objectives are proposed:
Objective (5.1.6.4)
The removal of mangroves is enabled from areas where they have spread since 1996, with only minor adverse effects on the environment

In achieving the purpose of the RMA, sections 6 (d) and (e) require council to provide for the following as matters of national importance:

> *(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna: and*

Further, sections 7 (d) and (f) which require to have particular regard to:

*(d) intrinsic values of ecosystems:*
*(f) maintenance and enhancement of the quality of the environment:*
*(i) the effects of climate change:*

**Relevance**
This is a new objective that provides a more flexible approach to general mangrove removal, based on an established geographic baseline, rather than focussing on the purpose of the mangrove clearance. It promotes sustainable management of natural and physical resources by providing more opportunities to restore open areas of water in the CMA and to enable greater options for the use and enjoyment of these restored areas.

**Usefulness**
This objective establishes the framework for the operation of a permitted activity rule that enables mangrove clearance to be carried out, while setting operational standards that mean adverse environmental effects are minor. It assists in enabling people and communities to provide for their social and cultural well-being through improved amenity and recreational opportunities associated with open areas of water.

**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.

A baseline year of 1996 was chosen because it is a reasonably recent date and the anticipated environmental risks associated with the removal of mangroves established since then are likely to be low.

Actions to remove mangroves back to their 1996 extent are expected to be initiated by individuals and community groups, who may approach Auckland Council local boards to undertake this work on behalf of their local community.

**Reasonableness**
The establishment of a 1996 baseline through this objective is considered reasonable. It provides for a new permitted activity rule enabling individuals and groups to clear mangroves, but still sets environmental limits in terms of maximum areas of mangroves that can be cleared. This concentrates removal activity on areas of recent mangrove colonisation. It also sets limitations on the size and density of mangroves that are to be removed thereby limiting adverse environmental effects from their removal.

### 2.3.1 Policies

Policy 4: *Enable mangrove removal back to the extent that existed at 1996 to reinstate navigation, access and amenity values, subject to the methods of removal and disposal having only minor adverse effects on the CMA.*

This policy implements the objective by clarifying the reasons why mangrove removal is provided for and the requirement to have only minor adverse effects on the CMA, by the use of appropriate removal techniques. These matters are detailed in the conditions for the permitted activity rule.

### 2.3.2 Rules

The proposed provisions are summarised in 1.9 above.

The primary rule which gives effect to this policy is the permitted activity rule which enables the removal of mangroves back to a benchmark-date of 1996 except from Significant Ecological Areas where the ecological values are related to the presence of mangroves.

This is further qualified by a number of standards which set parameters about the method and timing of removal, disposal of mangroves once removed, and of specific sites (such as those where there is a risk of exacerbating coastal erosion) where the permitted activity rule does not apply.

This is significant departure from previous approaches which have generally required a resource consent for the removal of mangroves other than for some maintenance of infrastructure and other community assets within prescribed thresholds.

While this places an increased burden on Council with respect to compliance activities and validation of information to ensure that the parameters set by the permitted activity standards are complied with, in general implementation of the rules is achievable.

### 2.3.3 Costs and Benefits of Proposed Policies and Rules

The monetary costs and benefits of the proposed approach are consistent with 2.1.9 above.

The proposed approach is likely to incur a level of environmental cost associated with the potential loss of habitats of certain bird species, the disturbance of the foreshore and seabed and incidental impacts on other habitats. However as the 1996 benchmark date is relatively recent, the risks of significant environmental costs are considered to be low.

The ad-hoc removal of mangroves adjacent to individual sites may have impacts on natural character and coastal amenity. However as the 1996 benchmark date is relatively recent, the risks of significant environmental costs are considered to be low.

Through the feedback on the draft Auckland Unitary Plan the feedback from Mana Whenua in particular raised concerns about the impact on the ability to perform their role of Kaitiaki within a permitted activity rule framework. Adopting a date-based permitted activity in effect, precluding the involvement of Mana Whenua as affected parties which would be possible within a resource consent process. The extent and location of removal is unlikely to have a substantial effect on the cultural cost incurred. Rather the cost is incurred through the inability to perform their role of Kaitiaki within a permitted activity framework.

The proposed approach will not affect economic growth and employment.

There has been no analysis to monetarise the costs and benefits.

### 2.3.4 Adequacy of Information and Risk of Not Acting

The benchmark date of 1996 was selected because at this date Council holds consistent and autho-corrected high quality aerial photography for the greatest extent of Auckland available prior to 2011. These pare publically available through Councils online GIS system in a form where comparison of 1996 and 2011 extent is easily achieved.

While Auckland-wide coverage is not provided, this will enable council and proponents, in a significant proportion of cases to rely on the same information in determining whether the area was free of mangroves prior to 1996 or not. In other cases, proponents will be able to present their own information demonstrating the presence or absence of mangroves prior to 1996 which may be evaluated by council on a case-by-case basis.

The risk of adopting the benchmark date of 1996 is that disputes may arise in areas where the 1996 aerial photography is not held by council.

However, it is considered that there is sufficient information on which to base the proposed policies and methods.

## 3 Alternatives

The proposed preferred alternative is discussed in 2.0 above. The status quo alternative is outlined in 1.4 above.
Alternatives are :
1. Preferred
2. Status quo
3. Permissive mangrove clearance – providing for permitted mangrove removal without a benchmark-date to qualify the extent of removal.

| | **Status Quo Alternative**<br><br>Description – Retain the operative Auckland Regional Plan coastal provisions as determined by Plan Change 4<br><br>This option involves a carryover of the operative regional coastal plan provisions relating to the disturbance of the foreshore and seabed, as determined by Change 4, into the Unitary Plan with little or no change. The main components of this approach are outlined in section 1.4 of this report on the mangrove provisions. | **Alternative 1 - Preferred option**<br><br>Description - Greater permitted activity clearance in marine SEAs Use of the 1996 baseline for permitted activity removal<br><br>This option involves the separation of mangrove protection and removal from other general provisions relating to the disturbance of the foreshore and seabed. It enables larger areas of mangrove removal for specific purposes in the SEA – Marine 1 and 2 and provides for a general mangrove clearance provision based on a baseline date of 1996. The focus of this assessment is on the two permitted activity rules. | **Alternative 2 – Permissive mangrove clearance**<br><br>Description<br>More permissive mangrove clearance provisions<br><br>An alternative approach is to have a more permissive regime for mangrove clearance. This could include permitting larger areas of mangroves to be cleared for a wider range of purposes and being more flexible on clearance methods. Areas of mangroves included in SEA - Marine 1 and 2 would be significantly smaller. |
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| Appropriateness | This approach, which generally requires a resource consent for mangrove removal, except for minor removal for the purpose of infrastructure maintenance is consistent with Part 2 of the RMA and the New Zealand Coastal Policy Statement.<br><br>The approach has a greater level of control over the removal of mangroves from the CMA and provised a greater degree of certainty as to its environmental outcomes, which is generally consistent with the precautionary principal. | The objectives, policies and rules focus on particular components of mangrove management and there is a clear nexus between the outcome sought by the objective, policies that clarify how this objective will be achieved, and the rules. Rules reflect the value of the mangroves to be protected or removed and the environmental, social and cultural risks of undertaking mangrove removal.<br>Some elements of the permitted activity standards may require technical expertise to determine compliance. This is not consistent with the generally accepted approach for permitted activities where compliance should be able to be easily and objectively determined. | The development of more permissive mangrove clearance provisions would implement an objective that provides for this outcome. |
| Effectiveness | The current policy and rule regime is effective in maintaining regulatory control on mangrove clearance and targeting clearance options to specified purposes. It minimises risk by retaining higher levels of control over clearance in areas of mangroves with known environmental values.<br><br>However, it does not address risks associated with local community discontent about the level of control remaining over clearance for general amenity purposes. | The permitted activity mangrove clearance rules are effective in that they enable mangrove clearance up to specified maximum areas and state how the work should be done. The limitations on the amount of mangroves to be cleared take account of the physical characteristics of the area and the risk of adverse environmental effects occurring as a result of the clearance process. The area of mangrove clearance and the purpose for which this clearance is undertaken is most strictly controlled in SEA – Marine 1 areas where mangroves are significant contributors to natural ecological values. In more physical robust areas, such as intertidal mudflats, larger clearance areas are permitted, as the risk of adverse effects is less.<br><br>The use of hand held machinery rather than large vehicular machinery limits the degree of bed disturbance while still enabling mangroves to be cut off at the base. The requirement for suitable disposal of cut mangroves prevents floating debris being left in the removal area. These controls are readily achievable and reduce the risk of adverse environmental, social and cultural effects. | The effectiveness of objectives, policies and rules that are highly permissive (permitted activities with only limited controls) are not considered to be more effective than a tighter rule regime. This is because the consenting regime does not address the issue of funding the work. Unlike private land development, where funding is not an issue for council, work be undertaken in the CMA may require council funding. Allocation of funds is a separate issue not addressed through the resource consent process. |
| Efficiency | This approach is moderately efficient in that it enables mangrove clearance for a wider range of purposes than was previously provided for. However, it retains the economic and social costs associated with communities obtaining resource consents for local amenity clearance purposes. | The vegetation management-mangrove provisions are efficient in that they provide flexibility for mangrove protection and removal that reflects different expectations and uses of Auckland's CMA. Greater use of permitted activities with associated development controls means that a reasonable balance can be struck between the use, development and protection components of sustainable management. Costs and timeframes associated with low- impact mangrove removal are reduced. Opportunities are available for individual or group actions to control mangroves in local areas to improve amenity values. | A highly permissive mangrove clearance policy and rule regime is not considered as effective or efficient as having a more targeted clearance approach. The risks of adverse environmental impacts, negative community reaction and potential mitigation and remediation costs falling to council are potential costs that outweigh the benefits. |
| Costs | The principal cost associated with the operative legacy approach is the requirement for a controlled activity resource consent to | The direct environmental costs of a more permissive approach to mangrove removal are expected to be localised, and have | It is anticipated that there would be greater environmental and social costs associated with this permissive option. |

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| | clear mangroves in Coastal Protection Areas 1 (now SEA Marine 1) and mature mangroves in significant wading bird habitats.<br><br>Permitted activity clearance rules elsewhere in the CMA are restricted to specified activities, such as infrastructure maintenance and public access, and/or are limited in area to 30m$^2$ or 200m$^2$ depending on the zone. There is no general permitted activity clearance rule for mature mangroves, although the removal of mangrove seedlings is permitted.<br><br>This approach retains a relatively high level of regulatory control on the clearance of mangroves, with a particular focus on protecting SEA Marine 1 against significant mangrove disturbance.<br><br>The provisions also distinguish between mangrove seedlings and mature mangroves. Although both are defined in the legacy plan, there have been difficulties in distinguishing between the two when making decisions in the field. An unnecessary distinction has also been created between seedlings and mature mangroves which does not provide an effective approach to the management of mangrove expansion.<br><br>The legacy provisions are overly complex, do not fully reflect the different role and contribution of mangroves to different areas of Auckland's CMA and do not satisfy community expectations of having mangrove-free areas. | temporary and minor levels of direct seabed disturbance and adverse effects on water quality. This conclusion is based on the experience obtained in the administration of past mangrove clearance rules.<br><br>No significant impacts on the regional economy are anticipated as mangrove clearance is likely to occur in areas not used by other productive marine activities or significant recreational activities.<br><br>Economic costs are expected to fall to the Auckland Council as the public request financial support for local mangrove clearance operations. This cost occurs across all mangrove clearance options. However, a more permissive removal regime may increase public expectation of council actions and the use of local board funds to undertake area specific clearance projects.<br><br>Financial costs associated with obtaining resource consents will be reduced by the use of the permitted activity rules. The permitted activity clearance maximums of 30m$^2$ in SEA Marine 1 areas and 200m$^2$ in SEA Marine 2 areas have been increased from the legacy levels of controls. Experience in the operation of these clearance maximums suggests that they are reasonable and effective for their purpose. They enable sufficient clearance to provide vessel access through mangroves to open channels or enable the removal of mangroves from in front of stormwater outfalls and other similar structures for maintenance and repair purposes.<br><br>Proposals for the clearance of larger areas of mangroves are often associated with larger development proposals that require multiple consents because of the scale of their impacts.<br><br>Establishing a 1996 baseline for the permitted activity removal of mangroves throughout the CMA, (except for specified areas) will provide for limited removal of mangroves in different areas. In some areas, significant clearance of recent mangrove expansion will be possible without resource consents. In other areas, little if any clearance will be possible. The use of the 1996 baseline will have economic and social costs.<br><br>The first cost is that associated with obtaining resource consent approval to remove mangroves that do not meet the baseline date.<br><br>Social and cultural costs will accrue to local communities with expectations of being able to clear greater areas of mangroves than the plan permits.<br><br>The potential for conflict between different community expectations is also a social cost. This can arise when one part of the community wants to clear mangroves and another part wishes to retain them. The permitted activity rule enables clearance to be undertaken without council intervention.<br><br>Alternative baseline dates were considered, which align with local aerial photographs or which reflect the extent of mangroves at various times in Auckland's urban development history. Significant environment effects are identified with the removal of more extensive areas of mature mangroves, including physical disturbance of the foreshore and seabed, impacts on the ecology | Environmental costs are those associated with the removal of areas of mangroves that have significant ecological values and which support other aquatic and coastal habitats. This extent of permitted activity removal may contravene policies in the NZCPS.<br><br>Social costs associated with individual and community opposition to mangrove clearance are anticipated. The CMA is public rather than private estate where opposing community views are equally valid. There is both community support and opposition to the presence of mangroves. Having a more permissive removal regime may disenfranchise parts of the community who have an expectation of mangroves remaining in the public CMA.<br><br>Economic costs to the council are also anticipated if mangrove clearance is more permissive. These costs can arise from council being expected to repair damage to the foreshore and seabed from poorly implemented mangrove clearance.<br><br>Economic costs to the wider regional community are likely to those associated with reduced natural character and amenity values arising from the presence of cleared areas of mangroves. This can adversely affect tourism and activities associated with the use and enjoyment of the sheltered harbour areas. Clearance usually involves removal of the mangrove at its base, while leaving stumps behind. These can be visually unattractive at low tide. |

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| | | of harbours and estuaries, and adverse visual and landscape impacts. This scale of mangrove removal is not easily addressed through permitted activity development controls. | |
| Benefits | The principal benefit of the legacy plan approach is that it balances public views in support of and in opposition to mangrove clearance, reached through Plan Change 4 to the Auckland Regional Plan: Coastal. The most restrictive controls apply to SEA Marine 1 where mangroves are significant contributors to their identified ecological values, which give a high level of protection to these areas. | More permissive mangrove clearance provisions in marine SEAs and across the whole of the CMA based on reference to the 1996 baseline has the principal benefit of providing more flexibility and lower transaction costs to people wanting to undertake mangrove clearance than other options where a resource consent is required. Benefits accruing will be social and cultural, rather than economic or environmental. These benefits relate to improved amenity values associated with open water replacing mangroves, improved views from land out to sea and improved use of the coastline for walking, swimming and boating activities.<br><br>Using the permitted activity clearance rules will result in economic savings and operational efficiencies for infrastructure operators and private land owners who wish to maintain and repair of stormwater and land drainage systems discharging into areas of mangroves.<br><br>Impacts on economic growth and employment at a regional level are likely to be neutral as there is little connection between mangrove removal at the scale enabled by the permitted activity rule and economic productivity.<br><br>Based on past examples, it is anticipated clearance activities will be done either on a voluntary basis by local community and iwi groups, or by on a paid basis by contractors where Auckland Council or another agency assumes financial responsibility for the work. In some circumstances, council financial support may be given to local community groups to undertake the work. However, this support is aimed at covering operational costs, rather than generating economic growth.<br><br>The main environmental benefit of the permitted activity rules relating to clearance in SEAs will be habitat restoration or enhancement. This is particularly the case for bird roosting and feeding areas. In many cases, coastal wading birds require a clear line of sight across intertidal banks before they will roost or feed there. Permitting the removal of both mangrove seedlings and mature mangroves will enable these roosting and feeding areas to be used by wading birds, many of which are international or nationally significant migratory species. Controls on how this work is undertaken will limit the level of physical disturbance.<br><br>Using 1996 as the base line date for permitted activity mangrove clearance provides a consistent CMA-wide measurement point. | Economic benefits accrue to individuals, community groups and infrastructure operators who do not require resource consents for mangrove removal.<br><br>The level of social and cultural benefit to the wider community is related to whether mangrove removal is supported or opposed.<br><br>In all cases the benefits of permitting mangrove removal are linked to the outcomes sought by those seeking to undertake the removal. If removal of vegetation is a desired outcome then more permissive provisions will support this outcome.<br><br>If, however, a reduction in the depth and extent of sediment build-up is sought, then provisions permitting only the removal of the plants, but preventing significant disturbance of the foreshore and seabed itself will have little practical benefit. Proposals involving significant removal of deposited sediment are likely to be subject to resource consents, because of their environmental and cost implications. |
| Risks | Sufficient information is available about the areas of high ecological significance and about the methods to minimise environmental disturbance from mangrove removal to support the provisions.<br><br>While environmental risks are low, the costs of obtaining resource consents for much of the mangrove removal desired by the community can be high, creating a risk of community dissatisfaction and increased likelihood of illegal clearances in response. | Experience from legacy regional coastal plan resource consents suggests there is a reasonable level of information available on the environmental effects of mangrove removal to provide a more permissive approach in the Unitary Plan. Controls on the method of mangrove removal and disposal are sufficient to limit significant adverse effects.<br><br>There are no anticipated risks of acting or not acting due to uncertain or insufficient information. | There is insufficient information on the role of mangroves as natural erosion protection measures in the Auckland CMA. A more permissive clearance approach may enable unintended clearance of mangroves that should remain to fulfil a coastal hazard management function.<br><br>There is a greater possibility of adverse environmental effects from the removal of large areas of mangroves, including sediment re-suspension and contaminant release, as well as unsightly visual effects and smells. |

## 4 Conclusion

The Unitary Plan is required by the RMA to have rules relating to the management of mangroves in the CMA. The decision is therefore one based on the permissiveness or otherwise of the rules and the objectives and policies that set their framework. Section 6(a) and (c) and the NZCPS require the identification and protection of some areas of mangroves as significant indigenous flora and habitats of indigenous fauna. This requirement does not support a single permissive rule framework, but requires a targeted rule approach. The approach is based on the extent of mangroves to be cleared and how this work is done. Areas of mangroves with significant values continue to be protected and clearance is provided for where it has beneficial public good or environmental outcomes.

The introduction of a new permitted activity rule providing for the clearance of mangroves back to 1996 levels enables clearance of limited areas of mangroves, which are not identified by the Unitary Plan as being of high ecological value. Permitted activity conditions address methods of clearance. The rule also provides opportunities for local community initiated clearance programmes.

## 5 Record of Development of Provisions

### 5.1 Information and Analysis

Mangrove Management Options for the Auckland Region, Auckland Council 2011 (Appendix 3.32.1).

The New Zealand Mangrove: review of the current state of knowledge. Technical Publication 325, Auckland Regional Council, May 2007. (Appendix 3.32.2)

Marine Sediment Monitoring Programme - 2007 Results, Auckland Regional Council, Technical Publication No. TR 2009/098 (Appendix 3.32.3)

Regional Assessment of Areas Susceptible to Coastal Erosion, Vol 1, May 2006, Auckland Regional Council, Technical Publication No. TR 2009/009 (Appendix 3.32.4)

Identification of degraded marine receiving environment – draft report, Auckland Council, August 2012 (Appendix 3.32.5)

1996 Vs present spatial exent of mangroves desktop analysis of aerial photography (Appendix 3.32.6)

Cost estimates for mangrove removal Akld & Tauranga Nov 2011 (Appendix 3.32.7)

New Zealand Coastal Policy Statement, 2010, New Zealand Government (Appendix 3.32.15)

Potential future changes in mangrove habitat in Auckland's East-Coast Estuaries, TR2009/079, Auckland Council, June 2009 (Appendix 3.32.17)

Changes in Abundance and Distribution of coastal and estuarine vegetation in the Auckland region Report 1998-1999. Morrisey, D.J; Hill, A.F; Kemp. C.L; Smith R.K; NIWA Hamilton 1999 (Appendix 3.32.16)

Auckland Regional Plan: Coastal - Plan Change 4, Operative March 2011 (Appendix 3.32.18).

Mangrove Management – a review of the provisions of the ARCP and assessment of plan options for mangrove management – Hill Young-Cooper, Nov 2005 (Appendix 3.32.19)

Auckland Council Regional Coastal Plan – revised 2011 (Appendix 3.32.20)

**Relevant legislation**
Resource Management Act 1991 (Appendix 3.32.21)

### 5.2 Consultation Undertaken
A summary of feedback received on the draft Auckland Unitary Plan is included below.

General feedback
- ~140 received on mangrove management
- ~30% generally supportive or asking that it goes further (an earlier date than 1996)
- ~35% generally of the view that approach is too enabling of removal
- ~15% views unclear
- ~10% seeking a proactive approach by council
- The cost of consents, experts and monitoring is too high
- Allowing removal without adjacent land owner or Mana Whenua approval is inappropriate
- The approach does not give effect to NZCPS
- The date is too conservative and should be pushed back
- The approach strikes a good balance
- Identifying areas where mangroves are mitigating coastal erosion will be difficult without expertise
- Identifying areas with salt marsh or sea grass will be difficult without expertise
- Disputes may arise where 1996 aerial photography isn't held by Council

Mana Whenua Feedback
- Disagree with permitted activity status
- Mana Whenua need to be involved because of the risk of environmental damage or disturbing taonga
- Support removal to enable access to marae or areas of traditional use
- Mangroves are a result of sedimentation, and need to be addressed holistically

In addition to the consultation undertaken for the Unitary Plan as a whole on 13 July 2013 a specific consultation event was arranged. The biodiversity reference group a diverse range of stakeholders with contrasting views were invited to an independently facilitated meeting to seek views on mangrove management and terrestrial Significant Ecological Areas (Appendix 3.32.14 – workshop materials and notes).

The general views from the forum were:
- Recognition that mangrove management a complex issue in a dynamic environment
- Considerable support for 'stage 2'[ that being an analysis of areas where mangrove removal is more or less desirable with community input, likely through Marine Spatial Planning] of the proposed approach but limited support from 'stage 1'[that being the benchmark date permitted activity]
- 1996 date seen to be arbitrary and depending on local conditions too enabling, or too constraining
- case-by-case approach generally appropriate as an interim measure
- community mangrove management initiatives should receive active supported by Council and Local Boards

- Local Boards are an appropriate vehicle for progressing/coordinating community mangrove management initiatives

### 5.3 Decision-Making

**PWP /political decisions**

| Meeting | Documents | Decision/direction |
|---|---|---|
| Unitary Plan Political direction setting - 4 December 2012 | Political Working Party Direction Setting December 2012, Summary of decisions (Appendix 3.32.8)<br><br>Presentations on mangrove management options. (Appendix 3.32.9 & 3.32.10) | Agreed to consider mangrove management further at a later date with more information provided. |
| Unitary Plan Political Working Party- 12 December 2012 | Discussion paper from Office of Chief Planning Officer to PWP, 12 December 2012. (Appendix 3.32.11)<br><br>Political Working Party workshop noted (Appendix 3.32.12) | Confirmed the proposed staged approach to mangrove management for inclusion in the draft Unitary Plan including 1996 benchmark date permitted activity. |
| Auckland Plan Committee Unitary Plan Workshop – 24 July 2013 | APC presentation on feedback – annotated (Appendix 3.32.13) | Discussed whether to abandon or retain draft UP approach including benchmark date permitted activity rule. No consensus of views. |
| Auckland Plan Committee Meeting – 28-30 August 2013 | TBC | TBC |