



**PROPOSED MARLBOROUGH SOUNDS
RESOURCE MANAGEMENT PLAN**

**Variation 3 - Shipping Activity in the Marlborough Sounds
As amended by decisions on submissions and further submissions**

16 December 2004

Variation 3 to the Marlborough Sounds Resource Management Plan

VOLUME ONE: OBJECTIVES, POLICIES AND METHODS

9.0 Coastal Marine

1. **Delete** Policy 9.2.1.1.8. **Renumber** subsequent policies accordingly.

Policy 1.8	Identify and enable the use of water transport corridors which form a significant part of the transport network.
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2. **Delete** Policy 9.2.1.1.11. **Renumber** subsequent policies accordingly.

Policy 1.14	Provide for surface water activities which do not have a significant adverse effect on the coastal environment.
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3. **Delete** 9.2.2 Methods of Implementation - Area Identification.

Area Identification	The Plan identifies areas for use by certain types of water transportation activity and consequently limits them in other areas of the Sounds. Refer to Chapter 19: Water Transportation.
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4. **Insert** the following new section after 9.4.2 and before the current 9.5 Anticipated Environmental Results:

9.5 Issue

Ships capable of travelling at speed or generating significant wake in enclosed waters have the potential to conflict with a range of other coastal users and values and generate adverse environmental effects.

9.5.1 Discussion

The amount of energy contained in the wake generated by ships adds substantially to the natural energy levels in the environment and these increased energy levels are responsible for generating adverse effects on the environment including changes to shoreline morphology, sub-tidal and inter-tidal zone habitats, impacts on public safety, public access and enjoyment of the coastal environment

and the amenity values of the area. The speed at which some ships travel also has implications for the safety of those using the coastal marine area.

The tikanga Maori (customary values and practices) of Te Atiawa have been adversely affected by the operation of ships, particularly the fast ferries, with a decline in kaimoana and associated mana. The need for iwi to practice kaitiakitanga and ensure that Queen Charlotte Sound and Tory Channel are available for future generations is paramount. (This issue is partially covered in Chapter 6.) [Other iwi, besides Te Atiawa, who establish manawhenua through the courts, or other processes, may in time also be appropriately recognised in managing the ship wake issue.](#)

~~However, it also~~ needs to be recognised that shipping activity contributes to the social and economic wellbeing of people and communities by providing an important link between the North and South Islands and also by providing a means of transport for goods within the Sounds ~~such as timber and livestock~~. (This issue is also covered in Chapter 19 Water Transport.) Tory Channel and inner Queen Charlotte Sound in particular comprise a transportation route of national significance for shipping activity and, as such, it is important to recognise this route as a resource that needs to be sustainably managed in the Plan.

[In managing the effects of the wake generated by conventional ships in Tory Channel and Queen Charlotte Sound, it is accepted that there are certain operating parameters linked to ship speed that need to be accounted for. More particularly the operators of conventional inter-island shipping services, are reliant on an ability to operate such ships up to 20 knots in Tory Channel and inner Queen Charlotte Sound. This is necessary in order to ensure that a sufficient number of daily crossings of Cook Strait are achieved to maintain a generally accepted level of service, and for these services to remain socially and economically viable, from the perspective of the wider community.](#)

[The operation of the fast ferries has been controlled within Tory Channel and Queen Charlotte Sound by a Navigation Bylaw since 15 December 2000. This bylaw resulted in fast ferry operators being required to slow the speed of their ships from up to 40 knots to 18 knots within the confines of Tory Channel and Queen Charlotte Sound. Whilst the bylaw was primarily intended to manage navigation safety issues within the waters of the Sounds, evidence obtained from monitoring carried out by the Council indicated that the ship speed reduction had resulted in environmental benefits as well. Prior to the fast ferry speed restrictions being put in place there was wide community concern about the adverse effects being created by the wake of these ships operating in the Sounds. Whilst some residual concerns remain, the emergent evidence obtained from monitoring and from community feedback since the introduction of the fast ferry speed restrictions is that there has been improvement and recovery in the condition of the environment, particularly around the coastal margin of the Sounds.](#)

Ship wake arising from shipping activity on the route needs to be managed in a manner that provides for the continued economic, social and cultural wellbeing of all people and communities, while sustaining the coastal environment. This is particularly so for the future as it is likely that shipping activity within Tory Channel and Queen Charlotte Sound will increase. Industry trends towards the

use of larger, faster ships means that there is potential to generate greater effects in future than those experienced presently.

Shipping activity in other areas of the Marlborough Sounds such as Pelorus and Kenepuru Sounds is different to that of Queen Charlotte Sound and Tory Channel. The majority of shipping within Pelorus and Kenepuru Sounds is coastal or local in nature and relates to the transport of tourists, logs, livestock as well as fishing and marine farming fleets. These vessels are generally smaller and travel at speeds that are slower than ships such as the fast ferries and conventional ferries. It is considered unlikely that other areas of the Sounds will develop the type or extent of shipping experienced in Tory Channel or Queen Charlotte Sound given the lack of, or potential to, develop a deep water port within these other areas. At this stage therefore, there is currently little justification for the regulation of shipping activity in these areas.

In addition there is an increasing number of larger recreational vessels using the Sounds waters, some of which travel at speeds similar to the fast ferries. Although it is not proposed to control these vessels at this stage, the potential for adverse effects from their wake may need to be assessed in the future in light of their growing numbers.

9.5.2 Objective and Policies

Objective 1	To ensure that the environmental effects of ship wake and speed are managed so that potential conflict with other coastal users and values is avoided, remedied or mitigated.
Policy 1.1	Enable as a permitted activity the continuing use of inner Queen Charlotte Sound and Tory Channel for existing inter-island shipping services up to speeds that reflect the operating regime that was current at 14 November 2002.
Policy 1.42	Apply controls to shipping activity in Queen Charlotte Sound and Tory Channel, which may cause adverse environmental effects.
Policy 1.23	Work with the community and the shipping industry Use an adaptive management regime to continually assess the appropriateness of the overall framework for existing shipping activities and apply adaptive management methods for future shipping activities, managing the issue as well as specific provisions, in light of environmental and technological changes or the occurrence of unforeseen effects from shipping activity.
Policy 1.34	Monitor individual and cumulative effects of ship wake and speed in Queen Charlotte Sound and Tory Channel.
Policy 1.45	Work in partnership with Te Atiawa in managing the effects of ship wake in Queen Charlotte Sound and Tory Channel.

Policy 1.56	Recognise and provide for Te Atiawa's continued access to, and use of, traditional coastal resources in Tory Channel and Queen Charlotte Sound and in particular, recognise the value of Tory Channel for Te Atiawa, in terms of the concepts of mauri, mana and manaakitanga that this area brings to this iwi.
Policy 1.67	Maintain the life supporting capacity of coastal ecosystems by avoiding, remedying or mitigating the adverse effects of ship wake and speed.
Policy 1.78	Ship wake and speed should not affect people's ability to safely use the foreshore and the coastal marine area for recreation activities.
Policy 1.89	Maintain people's ability to effectively use any lawfully established structure for that structure's intended purpose.
Policy 1.9	Use financial contributions to offset the adverse effects from shipping activity after all means of avoiding, mitigating or remedying adverse effects have been addressed (including situations where effects are considered appropriate due to the benefits of shipping activity). Where contributions are required, these will be assessed on a case-by-case basis.
Policy 1.10	Encourage existing inter-island shipping operators, and require consent holders for new shipping activities, Require, on a case-by-case basis, financial contributions to support and conduct research associated with the actual and potential effects of shipping activity, and to contribute to the establishment of appropriate methods for the future ongoing management of inter-island shipping activity. the operating costs of an advisory group as part of the adaptive management regime.

The policies set out a framework that provides certainty for all existing users of the Sounds as to an accepted or tolerated level of effect within a defined area of the Sounds where the adverse effects of ship wake and speed have been apparent. The policies seek to, achieve an acceptable balance between the positive benefits that flow from inter-island shipping activity and the need to where possible, appropriately manage avoid the adverse effects of inter island shipping activity in these areas. ~~and where this is not possible, to mitigate these by, amongst other things, the imposition of regulations. In so doing, the life supporting capacity, particularly of coastal ecosystems is safeguarded and the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations is sustained. The framework enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety but also ensures that inter-island ferry services are able to continue, which recognises the significance of the route between the North and South Islands. The policies enable certain inter-island ships to continue to operate at speeds through the National Transportation Route, consistent with the operating parameters that existed as at 14 November 2002, being the date variation 3 to the Plan was notified, to include the issue of ship wake and speed. A more cautious approach has been applied to managing the effects of new or replacement ships on the basis that no certainty can be ascribed to their potential wake characteristics~~

and the effects. It is envisaged that the current methods adopted for addressing ship wake issues will be used until such time as more can be learned about the type and nature of ships that are likely to ply the waters of the Sounds in future, and the attendant effects. Controls are likely to be adapted in future to reflect a collective increased understanding about such issues.

The provision of accurate and up to date information on the environmental effects of wake generated by shipping activity is the foundation of an adaptive management regime that continually assesses the overall framework established to manage the issue. The direction established by the above policies is based on the assumption that the effects of ships can be effectively and efficiently managed. Information will need to continue to be collected, analysed and an assessment made with regard to the effectiveness and efficiency of the regulatory framework. This process is fundamental to an adaptive management regime, which recognises the uncertainty of understanding the effects of change in the coastal environment. It is envisaged that the existing operators of inter-island ships will be a key contributor to this process, so that future endeavours to manage the issue will be based on the best available information and will best represent the interests of stakeholders. This is strongly preferred over an approach where the Council is required to act on its own in regulating shipping activity in the Sounds.

This is consistent with the adoption of an ~~The~~ adaptive management approach that is ~~in this case is one that will be~~ responsive to new information and better understanding. This is based on a collaborative approach, which ~~that~~ becomes available through the monitoring and ~~shared~~ analyses of existing and future shipping activities, ~~specific consents~~, state of the environment monitoring and future technological advances in ship design.

The Sounds' community, and those who use the Sounds for recreational use, have ~~the~~ Tory Channel and Queen Charlotte Sound specifically managed in respect of ship wake. This also includes protecting their health and safety. In terms of cultural matters, the proposed framework also recognises the significance of the National Transportation Route and its surrounding area to Te Atiawa and ensures that their involvement in this matter is ongoing.

~~*In terms of section 108 of the Act, financial contributions in the form of money or land can be imposed as conditions on consents in accordance with the purposes specified in the Plan (including the purpose of ensuring positive effects on the environment to offset any adverse effect), with the level of contribution being determined in the manner described in the Plan. The New Zealand Coastal Policy Statement directs that plans should specify purposes for which financial contributions should be sought in cases where there will be unavoidable adverse effects from any use or development in the coastal environment.*~~

In providing for a National Transportation Route for shipping activity, it is recognised that there will inevitably be unavoidable adverse effects on the environment of Queen Charlotte Sound and Tory Channel. Ongoing research and monitoring will be required so that appropriate action can be taken in a timely way. The shipping industry will be encouraged to contribute ~~Financial contributions will be~~

~~applied to this the~~ research and monitoring work and to assist in devising ways of managing the effects of shipping activity into the future. ~~and the operating costs of an advisory group as part of the adaptive management regime. All reasonable efforts will be made to avoid, remedy or mitigate the adverse effects of ship wake, but it is expected in some circumstances that there may be residual unavoidable adverse effects. In order to generally maintain or enhance the Marlborough Sounds' environment, financial contributions will be applied to measures ensuring positive effects in Queen Charlotte Sound and Tory Channel to offset these unavoidable adverse effects of shipping activity.~~

It is not possible to completely avoid present and future adverse environmental effects generated by ships using Tory Channel and Queen Charlotte Sound without imposing very restrictive controls. Such controls are not regarded as being a realistic or justifiable option given the important regional and national economic benefits derived from the operation of ships using this transportation route.

There are other policies in the Plan that further address the environmental effects of shipping activity and, which need to be considered in conjunction with those above. Refer particularly to Chapter 6: Tangata Whenua and Heritage; Chapter 8: Public Access and Chapter 19: Water Transportation.

9.5.3 Methods of Implementation

<p>Area Identification</p>	<p>Tory Channel and part of Queen Charlotte Sound have been identified as a National Transportation Route – see Map 107 in Volume Three. The National Transportation Route is located in Tory Channel and extends into inner Queen Charlotte Sound (between West Head, Ruakaka Bay, and a point southwest of Kaitapeha Bay) to the Port of Picton (excluding Grove Arm).</p> <p>Queen Charlotte Sound (excluding the National Transportation Route) has also been defined as being part of an established shipping route.</p>
<p>Rules</p>	<p>Rules permitting the operation of the existing inter island ships are subject to “grandfathering” controls that match the operating parameters that existed at 14 November 2002 relating to the use of surface waters by ships apply to Queen Charlotte Sound and Tory Channel. These rules are coupled with more cautious provisions for new or replacement ships that might enter service in the future. Such The use of surface water by ships will be in these areas is permitted subject to speed limits and must meet in certain cases meeting a wave height standard.</p> <p>The areas to which speed limits apply are defined in Volume Three Maps – see Map 107.</p>

<p>Other Legislation</p>	<p>Navigation and public safety within the harbour limits are also the responsibility of the Council as a harbour authority. The Council's Harbourmaster, under Harbour Bylaws, the Navigation Bylaw 2000, the Maritime Transport Act and associated Maritime Rules and General Harbour Regulations, (or any successor to the above bylaws or regulations) carries out these functions. Harbour bylaws may impose additional constraints on speed eg; the 5 knot harbour speed limit (5 knots).</p>
<p>Compliance and Enforcement</p>	<p>The Council will monitor the activity of ships in Queen Charlotte Sound and Tory Channel for compliance purposes to ensure that ships do not exceed permitted speed levels and also to monitor for compliance with individual consent conditions.</p>
<p>Monitoring</p>	<p>Shipping operators Consent holders will be encouragedrequired to prepare and implement have monitoring plans that will include stages, locations and methods of monitoring, timing of reporting monitoring results, and details regarding the availability of monitoring information to the Council. Costs associated with this monitoring will be borne by the consent holder.</p> <p>"State of the Environment" monitoring will also be carried out by the Council to monitor the effects of all activities, including shipping activity, in the Marlborough Sounds.</p> <p>In addition, the Council will support Te Atiawa initiatives to monitor cultural, and ecological effects on kaimoana, from the wake of ships eg; the effects on access to waahi tapu and other sites of significance, the passing of tikanga Maori to future generations and the effects on the gathering of kaimoana.</p>
<p>Advisory Group</p>	<p>An advisory group will be established by the Council whose functions shall be to:</p> <ul style="list-style-type: none"> • Review available monitoring information from shipping operators consent holders and the Council and any other expert reports lodged with the Council with respect to the effects of shipping (including research carried out as part of the Council's state of the environment reporting). • As a matter of priority assist the Council in determining the optimal course of action for the future management of shipping in the Sounds. • Be available to the Council for consultation purposes on any determination by the Council on whether to: <ul style="list-style-type: none"> -attach specific conditions to resource consents; and

	<ul style="list-style-type: none"> - activate any review conditions of consents. • Facilitate voluntary action to avoid, remedy or mitigate any unforeseen wake effects of consented shipping activity. • Should the group consider it necessary, it may wish to seek Seek input from another person (or persons), should the group consider it necessary, to provide advice relating to the above issues. Prior to seeking advice from such a person, the group must obtain approval from the Council if funding is needed. • Provide a manawhenua iwi perspective, in particular that of Te Atiawa, in-to managing the effects of shipping activity. <p>Members will be appointed by the Council and will be drawn from those groups with an interest in the shipping activity issue.</p>
<p>Te Atiawa Partnership</p>	<p>The Council will work in partnership with Te Atiawa on matters relating to:</p> <ul style="list-style-type: none"> • Emerging issues; • Environmental enhancement and protection projects; and • Monitoring <p>with regard to the operation of ships in Queen Charlotte Sound and Tory Channel.</p>
<p>Financial Contributions</p>	<p>Financial contributions will be required to offset adverse environmental effects where all reasonable means of avoiding, mitigating or remedying adverse effects have been addressed, and significant unavoidable adverse effects remain. They will also be required to fund research into the effects generated by shipping activity in the Sounds and to fund the activities of the advisory group.</p> <p>(i) — Circumstances when a financial contribution may be imposed</p> <p>As a condition of a resource consent, where the Council has identified that further research is required with respect to a specific matter that relates to the subject consent, including, but not limited to:</p> <ul style="list-style-type: none"> • Wave dynamics; • Marine life; • Shoreline and seabed morphology; • The relationship of Maori with the resources of the coastal environment;

- Cultural values;
- The social and economic assets of other users and occupiers;
- Amenity values.

As a condition of a resource consent to assist in funding the activities of the advisory group.

As a condition of a resource consent where the Council is satisfied that unavoidable actual or potential effects will be generated on a specific matter listed above and it is appropriate to offset these effects through the imposition of a financial contribution.

(ii) — The manner in which the level of the contribution that may be imposed will be determined

The amount of the financial contribution will be determined at the time of the consent being issued, with the option of reviewing that amount by way of a review condition being imposed on the resource consent.

The amount of contribution will be determined for each of the following aspects that are relevant, having regard to the purposes set out in (iii) below:

- research required into the effects of shipping activity in the Sounds;
- to offset specific effects in relation to matters as described in (i) above; and
- to fund the activities of the advisory group.

The amount levied will reflect the anticipated actual and reasonable cost to: carry out the research required; to offset unavoidable adverse environmental effects; and an appropriate proportion of the annual administrative and operating costs of the advisory group.

(iii) — The general purposes for which the contribution may be used

To fund research into the potential for and nature of any effects of consented shipping activity on the Queen Charlotte Sound and Tory Channel coastal environment.

To assist in funding the establishment and operation of the advisory group.

Contributions may be required with respect to:

	<p>Seabed and foreshore — to fund the costs of planting or maintaining vegetation, sediment replenishment, kaimoana enhancement, erosion protection works, foreshore development or reinstatement, litter control and other activities that will protect, maintain and enhance the foreshore and seabed.</p> <p>Sites of historic or cultural interest — to fund the costs of works to protect or restore the site or offset such effects by contribution to the costs of the protection, maintenance or restoration of some alternative historic or cultural site within the coastal environment in or adjacent to Queen Charlotte Sound or Tory Channel.</p> <p>Location — Council will attempt to offset effects in the general locality in which they occur.</p> <p>Affected people and communities — Council will endeavour to identify people and communities most directly affected by adverse effects and will try to ensure that they benefit from the positive environmental effects that result from financial contributions.</p>
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The methods enable *existing conventional ships, operating at the time the changes were first included within the Plan – 14 November 2002, to travel in Tory Channel and inner Queen Charlotte Sound up to a 20 knot maximum speed.* ~~subject to controls on the speed at which ships operate.~~ (The methods do not restrict the use of surface water by ships elsewhere in the Sounds or smaller boats.) *Fast ferries are restricted to 18 knots and must comply with a defined wave height formula. Any other ships entering the inter-island service are subject to speed controls and must comply with the wave height standard. Operators of these ships are able to exceed the defined speed limits provided a resource consent is obtained and a standard regarding wave height is met. This effectively “grandfathers” the existing shipping operations and adopts a more cautious approach for ships not operating as at 14 November 2002. The Plan encourages all of the key stakeholders to assist in ultimately determining an appropriate approach to managing the effects of shipping in the future.*

~~The Plan recognises that advances in ship building technology may lead to the development of ships that are able to travel at high speeds but have limited impact in terms of wake generation.~~

From a safety perspective, it is also considered important to ensure that there is a case-by-case assessment process for *new or replacement ships that exceed certain speed levels in order to take into account concerns that may arise in relation to the operation of a particular ship.*

~~Even when ships exceeding the defined speed threshold comply with standards or assessment criteria, it is reasonable to expect that there will be some adverse environmental effects, and that the consent holder will contribute to offsetting these effects.~~

9.6 Anticipated Environmental Results

Renumber 9.5 Anticipated Environmental Results to 9.6 to take into account the change in numbering.

19.0 Water Transportation

Insert between paragraphs 9 and 10 of 19.2 the following:

In addition, there have been a range of adverse environmental effects experienced from ship wake and speed, through the operation of fast and large ships within Tory Channel and Queen Charlotte Sound, in particular. While some aspects of their operation are dealt with in this chapter, a more comprehensive policy framework addresses the issues surrounding ship wake and speed at 9.5 of the Coastal Marine chapter.

19.3 Objectives and Policies

1. **Delete** Policy 19.3.1.4 as follows:

Policy 1.4	Avoid conflicts between water transportation and other users of the coastal marine area by providing routes for navigation purposes through the Northern Entrance of Queen Charlotte Sound and Tory Channel.
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2. **Insert** the following new policy as 19.3.1.2:

Policy 1.4	Achieve an appropriate balance void conflicts between water transportation and other users of the coastal marine area.
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19.4 Methods of Implementation

3. **Delete** the following from 19.4 Methods of Implementation:

Vessel Routes	The following water transport corridors are identified on the planning maps: <ul style="list-style-type: none"> • Northern Entrance, Queen Charlotte Sound. • Tory Channel, Queen Charlotte Sound.
Rules	Water transportation for which the corridors have been established, is permitted as of right in these areas and consequently some restrictions are placed on the use of other areas in the Sounds. In the Northern entrance corridor, large freight ships are permitted. The Tory Channel corridor is designed to accommodate the Picton - Wellington

	<p>ferry route, including the operation of this by high-speed ferries.</p> <p>Other forms of water transportation are provided for as of right.</p> <p>Performance standards relating to foreshore and seabed disturbance arising from water transportation activities are included.</p>
Other Legislation	<p>Council will use its powers and functions under the Harbours Act 1950 and the General Harbour Regulations to control navigational conflicts between water transportation and other coastal activities.</p>

4. Insert the following new Methods of Implementation at 19.4:

Area Identification	<p>Tory Channel and part of Queen Charlotte Sound have been identified as a National Transportation Route - see Map 107 in Volume Three. The National Route is located in Tory Channel (between East and West Head) and extends into inner Queen Charlotte Sound (between West Head, Ruakaka Bay, and a point southwest of Kaitapeha Bay) to the Port of Picton (excluding Grove Arm).</p> <p>Queen Charlotte Sound (excluding the National Transportation Route) has also been defined as being part of an established shipping route.</p>
Rules	<p>Existing conventional shipping and the existing fast ferry operations are “grandfathered” such that they are permitted to operate up to the speeds at which they operated as at 14 November 2002. New or replacement ships Shipping activity in Queen Charlotte Sound and Tory Channel is permitted subject to a speed limit. Ship operators are able to exceed this speed limit provided resource consent is obtained.</p> <p>Other forms of water transportation and shipping in other areas of the Sounds are provided for as of right.</p>
Other Legislation	<p>Navigation and public safety within the harbour limits is also the responsibility of the Council as a harbour authority. The Council’s Harbourmaster, under Harbour Bylaws, the Navigation Bylaw 2000, the Maritime Transport Act and associated Maritime Rules and General Harbour Regulations, (or any successor to the above bylaws or regulations) carries out these functions. Harbour bylaws may impose additional constraints on speed e.g. the 5 knot harbour speed limit (5 knots).</p>

VOLUME TWO: RULES

25. Definitions

Insert the following:

AUTOMATIC LOCATION DEVICE	means equipment installed on and supported by a ship for the purpose of recording instantaneous speed at a set interval , average ship speed and location of the ship, and which delivers the recorded information to the Council for its purposes.
AVERAGE SHIP SPEED	means the arithmetic mean of all speed values calculated by an automatic location device for the set interval.
HIGH SPEED SHIP	means a ship which has a registered length exceeding 30 metres and is capable of a maximum speed, in metres per second (m/s), equal to or exceeding: $3.7 \nabla^{0.1667}$ where ∇ = displacement corresponding to the design waterline (m ³).
IAHR (1989)	means the paper entitled "List of Sea-state Parameters" written by the International Association of Hydraulic Research (IAHR) Working Group in Wave Generation and Analysis and published in the Journal of Waterway, Port, Coastal and Ocean Engineering, American Society of Civil Engineers, Volume 115, Number 8, November 1989, pp 793–808.
MAXIMUM WAVE HEIGHT	<p>means the maximum wave height a wave can reach while still in compliance with the formula:</p> $H \leq 0.5 \times \sqrt{\frac{4.5}{T}}$ <p>in which H = the wave height (measured in metres) and T = the corresponding wave period (measured in seconds).</p> <p>Matters relating to the determination of wave height and compliance with maximum wave height are detailed in Appendix K.</p>
MEAN WATER LEVEL	means the average vertical displacement in the wave record.
NATIONAL TRANSPORTATION ROUTE	means that area of Queen Charlotte Sound and Tory Channel as shown on Map 107 in Volume Three.
SET INTERVAL	means the time span for an automatic location device to make successive recordings of speed, average ship speed and location.
SHIP SPEED	means speed of a ship from point to point over ground.

SIGNIFICANT WAVE HEIGHT	means the average of the highest one-third of the wave heights in a surface elevation record.
SURFACE ELEVATION RECORD	means the wave record relative to the mean water level.
WAVE HEIGHT	means the wave height, H (measured in metres), determined from the surface elevation record between any two successive zero down-crossings as defined in <i>IAHR (1989)</i> .
WAVE PERIOD	means the time period T (measured in seconds) between two successive zero down-crossings in the surface elevation record as defined in <i>IAHR (1989)</i> .
WAVE RECORD	means any record of vertical displacement of the seawater surface as a function of time derived at any location within the National Transportation Route under calm conditions at a standard water depth of 3 metres.

35. Coastal Marine Zones 1 and 2

35.1 Permitted Activities

1. **Delete** the following bullet point from 35.1:
 - ~~Use of surface water by non-exclusive users~~
2. **Insert** the following new bullet point in 35.1:
 - **Use of surface water by ships.**
3. **Delete** the word "Minor" from the bullet point in 35.1 that reads **Minor disturbance of foreshore and seabed.**

Conditions for Permitted Activities

35.1.2 Specific Conditions

4. **Delete** Rule 35.1.2.10 as follows:

~~35.1.2.10 Use of Surface Water by Non-Exclusive Users~~

~~35.1.2.10.1 Defined Navigation Route and Beyond Pelorus Sound and Queen Charlotte Sound.~~

~~Beyond the enclosed waters of the Sounds, being beyond straight lines drawn between:~~

- ~~• Te Akaroa (west entry point) and Kitira (east entry point);~~
- ~~• Cape Jackson and Cape Koumaru; and~~
- ~~• East Head and West Head~~

~~and in any national route defined by notation on the Planning Maps for navigational purposes the use of surface water by shipping, ferries or other ships shall be a Permitted Activity provided the ships are operated:~~

- a) ~~In accordance with the safety requirements of the Maritime's Safety Authority; and~~
- b) ~~As hydrodynamically efficiently as possible so as to avoid any unnecessary wake effects.~~

~~35.1.2.10.2 Undefined Enclosed Surface Waters~~

~~The use of any stretch of enclosed water within Pelorus Sound and Queen Charlotte Sound (including Tory Channel) being within straight lines drawn from:~~

- ~~• Te Akaroa (West Entry Point) to Kaitira (East Entry Point);~~

- ~~Cape Jackson to Cape Koumaru; and~~
- ~~East Head to West Head, and~~

~~not defined as a national route for navigational purposes by any ship, ferry or other ship shall be a Permitted Activity provided that this rule shall not apply to ships greater than 500 gross registered tons travelling in excess of 18 knots.~~

5. **Insert** a new Rule 35.1.2.10 as follows:

35.1.2.10 Use of Surface Water by Ships

35.1.2.10.1 The use of surface water by ships in the National Transportation Route and Queen Charlotte Sound shall be a permitted activity, provided that ships which:

- a) Are high speed ships; or
- b) Exceed 500 UMS gross registered tonnes;

shall not exceed a ship speed of 15 knots.

35.1.2.10.2 The use of surface water by the following nominated ships in the National Transportation Route shall be a permitted activity and shall be exempt from the conditions inherent in rule 35.1.2.10.1 above. These nominated ships shall not exceed a ship speed limitation of 20 knots at any time whilst travelling within the National Transportation Route:

- M.V. Aratere
- M.V. Arahura
- M. V. Kent, and

35.1.2.10.3 The use of surface water by the following nominated ship in the National Transportation Route shall be a permitted activity and shall be exempt from the conditions inherent in rule 35.1.2.10.1 above. This nominated ship shall not exceed a ship speed limitation of 18 knots at any time whilst travelling within the National Transportation Route and shall not propagate waves that exceed the maximum wave height:

- M.V Incat 146

6. **Delete** the word 'Minor' from **35.1.2.11 Minor Disturbance of Foreshore and Seabed.**

7. **Delete** the following text from **35.1.2.11 Minor Disturbance of Foreshore and Seabed:**

- b) ~~The activity shall not lead to any adverse effect on any foreshore or wetland area;~~
- d) ~~The activity shall not significantly adversely affect the flora and fauna of the coastal marine area;~~

8. Add the following text to **35.1.2.11 Minor Disturbance of Foreshore and Seabed**:

35.1.2.11.1 Disturbance of Foreshore and Seabed Associated with the Use of Surface Water by Ships

Any foreshore or seabed disturbance associated with the use of surface water by ships shall be a Permitted Activity provided that disturbance associated with any ship subject to Rule 35.1.2.10.1 to 3, shall only be a Permitted Activity where the ship ~~speed~~ does not exceed ~~15-knots~~ the speed specified in those rules.

35.2 Controlled Activities

9. Insert the following new bullet point:

- **Except as provided for in Rule 35.1.2.10.2 and 10.3, Use of surface water within the National Transportation Route by high speed ships, or ships that exceed 500 UMS gross registered tonnes, which are travelling at a ship speed exceeding 15 knots and not more than 18 knots, including any associated disturbance of the foreshore and seabed.**

10. Insert the following new section as 35.2.6:

35.2.6 Except as provided for in Rule 35.1.2.10.2 and 10.3, Use of surface water within the National Transportation Route by high speed ships, or ships that exceed 500 UMS gross registered tonnes, which are travelling at a ship speed exceeding 15 knots and not more than 18 knots, including any associated disturbance of the foreshore and seabed.

35.2.6.1 Standard

- a) The ship shall not propagate waves that exceed the maximum wave height.

35.2.6.2 Terms

- a) The duration period of any consent shall not exceed 10 years.
- b) A resource consent will apply only to the ship for which consent has been obtained and will be distinguished by the International Maritime Organisation number and name;
- c) The Council will undertake a regular review of the conditions of consent, reserving the right to review conditions annually;
- d) The ship shall carry and support operationally at all times an automatic location device that will record the following information at 30 second intervals (or other time interval if set as a condition of consent):
- A unique ship identifier;
 - Date and time;

- Spatial location;
- Instantaneous ship speed; and
- Average ship speed for the preceding interval.

35.2.6.3 Matters Over Which Control is Reserved

The matters over which the Council will exercise its control are:

- a) The duration of the consent;
- b) Monitoring requirements;
- c) The timing of and criteria for the review of resource consent conditions;
- d) The administrative charges payable;
- e) ~~The level and type of financial contributions as set out in 9.5.3 Methods of Implementation, Financial Contributions.~~

35.4 Discretionary and where applicable Restricted Coastal Activities

11. Insert the following new bullet point in 35.4:

- **Except as provided for in Rule 35.1.2.10.2 and 10.3, Use of surface water within the National Transportation Route by high speed ships, or ships that exceed 500 UMS gross registered tonnes, and are travelling at a ship speed greater than 18 knots, including any associated disturbance of the foreshore and seabed**

12. Insert the following new section as 35.4.2.13.

35.4.2.13 Except as provided for in Rule 35.1.2.10.2 and 10.3, Use of surface water within the National Transportation Route by high speed ships, or ships that exceed 500 UMS gross registered tonnes, and are travelling at a ship speed greater than 18 knots, including any associated disturbance of the foreshore and seabed

35.4.2.13.1 Any ship in the National Transportation Route travelling at a ship speed greater than 18 knots that:

- a) Is a high speed ship or exceeds 500 UMS gross registered tonnes; and
 - b) Propagates waves that do not exceed the maximum wave height
- is a discretionary activity.

35.4.2.13.2 Assessment Criteria

- a) The effects on coastal and marine ecology;
- b) The effects on physical coastal processes;

- c) The effect the activity has on the relationship with Maori, and in particular Te Atiawa, and their culture and traditions with resources, in particular the effects on:
- Kaimoana
 - ~~Areas of historical and traditional importance~~ Waahi tapu
 - ~~Urupa~~
- d) The effects on people and communities including:
- Navigational safety
 - Property
 - Recreation
 - Public access
 - Amenity values
 - Other users of the marine environment
- e) Assessment of monitoring requirements.

35.6 Prohibited Activities - being activities for which no resource consent shall be granted

13. Insert the following new bullet point:

- **Except as provided for in Rule 35.1.2.10.2 and 10.3, Use of surface water within the National Transportation Route and Queen Charlotte Sound by high speed ships, or ships that exceed 500 UMS gross registered tonnes, which are travelling at ship speeds greater than 15 knots, and are not provided for as Controlled or Discretionary Activities**

Appendices

14. Insert the following new Appendix after new **Appendix J** in Volume Two:

Appendix K: Determination of Wave Height

1. Technical Information to be provided with applications for consent

1.1 To demonstrate that a ship will comply with the requirements of the maximum wave height, resource consent applicants shall submit technical information based on either:

1.1.1 Accepted and properly calibrated computational or analytical analysis allowing for the specific characteristics of the ship concerned and the conditions within the National Transportation Route taking account of shoaling, refraction and diffraction effects; or

1.1.2 Direct measurements of wave height and wave period specific to the ship concerned; or

1.1.3 Combinations of the approaches outlined above.

2. Requirements for Direct Measurement of Wave Height

Measurements shall be based on surface elevation records derived under calm conditions with a water depth in the range 1 to 5 metres. Such measurements shall be made by, or under the supervision of, a competent expert experienced in the measurement of waves. Any site at which direct measurements of wave height are carried out shall, in the opinion of the competent professional, not be significantly influenced by the effects of diffraction.

Calm conditions at any measurement point shall be deemed to exist where, immediately prior to and during the time of measurement, the ambient waves caused by wind and other vessels (other than the vessel under evaluation) do not exceed a significant wave height of 0.5m assessed over a 5 minute duration or more.

Any wave height assessed at the measurement site shall be adjusted to determine the wave height applicable in the maximum wave height equation at a standard depth of 3 metres by applying shoaling and refraction analysis. This analysis shall be based on the following methods and assumptions:

(a) Shoaling analysis shall be based on linear wave theory (also known as Airy wave theory).

(b) Refraction analysis shall be based on Snell's law assuming that the seabed contours are parallel with the direction of travel of the vessel and that the angle between the wave crest and the seabed contours in very deep water is 55°.

- (c) In order to allow for non-linear effects, an effective water depth of $D + \frac{1}{2}H$, where D is the average water depth and H is the wave height, shall be adopted in the shoaling and refraction analysis where appropriate.
- (d) The effects of bottom friction, viscous effects and turbulence shall be ignored in any shoaling and refraction analysis.
- (e) No adjustments shall be made to the wave periods assessed at the measurement site.

3. Compliance Monitoring

The compliance of ships with the maximum wave height shall be assessed by direct measurement of wave height and may be carried out at any location within the National Transportation Route in terms of the requirements of 2 above.

4. Physical Parameters of Factors Affecting Measurement

For the purposes of any calculation to assess wave characteristics under this Plan the following are to apply:

- (a) The density of seawater shall be taken as 1025 kg/m^3 ;
- (b) The kinematic viscosity of seawater shall be taken as $1.15 \times 10^{-6} \text{ m}^2/\text{s}$;
- (c) The acceleration due to gravity shall be taken as 9.806 m/s^2 ; and
- (d) Other physical parameter values shall be those applicable at a temperature of 15°C .

VOLUME THREE: MAPS

- 15. Remove reference to the “National Route for Navigation Purposes” from the Legend on Volume Three - Maps.
- 16. Remove the notation “National Route for Navigation Purposes” from all Maps in Volume Three.
- 17. Insert a new map (107) showing the location to which speed rules apply.