Notice is given that an ordinary meeting of a Resource Consent Hearing will be held on:

Date:	**Monday 12 and Tuesday 13 October 2015**
Time:	**9.30**
Meeting Room:	**Tasman Council Chamber**
Venue:	**189 Queen Street**
	Richmond

Commissioner (Resource Consent) Hearing
Tasman District Council
Global Rivers Consent

AGENDA

MEMBERSHIP Jeff Jones (Chair) Sharon McGarry

(Quorum members)

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Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted.

AGENDA

1 OPENING, WELCOME

2 REPORTS

The applicant seeks the following:

Land Use Consent - Works in a watercourse - RM100851

To undertake river management activities on land zoned Open Space, Recreation, Conservation, Rural Industrial and Papakainga under the Tasman Resource Management Plan (TRMP).

To relocate river bed material within the beds of rivers, including within active flowing channels.

To disturb river bed material within the beds of rivers outside the active flowing channels of rivers.

To remove non-gravel material (logs, woody debris, vegetation, sand, and silt) from the bed of rivers, including within the flowing active channel.

To shape (battering and slump reinstatement) the banks of rivers.

To plant trees, excluding crack and grey willow, on the beds of rivers.

To place and use culverts on the beds of rivers to provide temporary crossings for vehicles and/or machinery.

To construct, reconstruct, repair, maintain, extend and remove river control structures including the associated disturbance of the beds of rivers.

To construct, reconstruct, repair, or maintain flood control structures, including the associated disturbance of the beds of rivers and deposition of material, where those structures are within the bed of a river.

To place vegetation (layering and trenching) for erosion control purpose, including within beds of rivers.

To remove vegetation, including within beds of rivers.

To enter and pass across the beds of rivers, including through flowing water, by vehicles and/or machinery.

(Excludes the removal of gravel from riverbeds)

Land Use Consent - Land Disturbance - RM100852

To undertake earthworks outside the beds of rivers to create access tracks for the purposes of gaining access to waterways.

To graze stopbanks by stock that is not sheep or goats.

To remove vegetation.

To plant woody vegetation with a mature height of greater than 0.5 metres more than 10 metres from the banks of rivers.

Water Permit - RM100853

To divert water into newly created channels within the beds of rivers.

To temporarily divert water required for the repair, maintenance, extension, or removal of structures.

Discharge Consent - RM100854

To discharge contaminants into water from activities carried out in the beds of rivers (arising from the works described here).

Coastal Permit - Occupation/Structure - RM100855

To authorise existing unauthorised river control structures within the coastal marine area (CMA).

Coastal Permit - Discharge - RM100856

To discharge contaminants into water from activities carried out in the CMA.

Coastal Permit - Disturbance - RM100857

To extend or add to existing river control structures which are located within the CMA.

2 REPORTS

2.1 GLOBAL RIVER MANAGEMENT ACTIVITIES

Decision Required

Report To:	Commissioner (Resource Consent) Hearing
Meeting Date:	12 October 2015
Report Author:	Leif Pigott, Co-ordinator Natural Resources Consents; Ros Squire, Consent Planner, Coastal/Reserves
Report Number:	REP15-10-01
Attachments:	1. 63 Attachment 1: River Management Structures in the CMA 2. 65 Attachment 2: Buller Water Conservation Order 3. 71 Attachment 3: Motueka Water Conservation Order 4. 77 Attachment 4: Proposed Conditions from T James

1. Summary of Proposal

1.1. These applications seek to replace a single river works consent held by the Tasman District Council's Engineering Services Department (the Council) - NN010109. That consent authorises specified river bank protection and channel stabilisation works and maintenance for all rivers within Tasman District and is often referred to as "the global rivers consent".

1.2. Consent NN010109 expired in June 2011. However, the Council applied for replacement consents in November 2010 (more than six months prior the expiry date) and has therefore been able to operate under that consent until a decision is made on the replacement consents. A copy of consent NN010109 is appended in Attachment 1.

1.3. The consent authority reviewed the applications lodged in November 2010 and issued a request for further information under section 92(1) of the Resource Management Act 1991 (RMA) on 17 May 2011. The application has remained "on hold" since that time, in part because of the further information request but also because many of the activities for which resource consents are needed are subject to the provisions of Part IV of the Tasman Resource Management Plan (TRMP), and Part IV was not yet operative. A decision was made to wait until Part IV was beyond challenge before continuing with the processing of the application.

1.4. The Council has the responsibilities of a Catchment Board under the Soil Conservation & River Control Act 1941 (SCRCA). These applications seek consent to be able to undertake works to fulfill those responsibilities. The activities which the Council undertakes can be divided into the following broad types:

- River management - Activities that take place within river channels to enhance channel stability and reduce the risk of flooding and erosion. These activities include:

- River bank shaping, including bank battering and slump reinstatement;
- Beach raking/ripping;
- Non-extractive gravel management, including channel realignment, diversions, and gravel relocation; and
- Channel/drain clearance, including vegetation clearance on river banks, beds, berms and removal of obstructions.

- Erosion control - Construction and maintenance or erosion protection works to protect adjoining property and infrastructure from damage. These include gabion walls, rock riprap, groynes, and various vegetative protection methods such as tree layering, and tree planting;

- Flood protection - Minor improvements to, and maintenance of stopbanks to protect property from flooding and safeguard communities; and

- Maintenance of coastal structures - The majority of river works occur landward of the boundary of the coastal marine area (CMA). However, there are a number of existing unauthorised structures that are located in the CMA. The applications seek retrospective authorisation for these existing structures and for authorisation to extend these structures if required.

1.5. For the avoidance of doubt, the application does not seek authorisation to construct new river control structures within the CMA nor does it cover any other existing coastal protection structures, only those existing identified structures that are specifically for river management purposes.

1.6. There are ancillary activities that are common to all these areas of work such as vehicles or plant crossing flowing water and earthworks (including vegetation removal) to construct access tracks.

1.7. This application includes the relocation of gravel within beds of rivers, but it excludes gravel extraction. Gravel extraction is the subject of a separate resource consent application.

1.8. It is noted that the Council holds separate resource consents for bridge maintenance works and for the application of herbicides for vegetation control.

2 Site Description

2.1 The locations of the proposed activities are all within and adjacent to rivers and other water bodies and the coastal marine area upstream of river mouths within the jurisdictional boundary of Tasman District. The applications exclude the following:

- Waikoropupu Springs;
- All rivers within Abel Tasman National Park;
- All 24 Significant Natural Areas listed in Schedule 18.1A of the Tasman Resource Management Plan;
- All waters listed in Schedule 1 (Waters to be retained in Natural State) of the Buller River Water Conservation Order 2001; and

- All waters listed in Schedule 1 (Waters to be retained in Natural State) of the Motueka River Water Conservation Order 2004.

2.2 The application included the following waters outside the Tasman District, these have been removed from the recommended conditions:

- Maruia River and all tributaries upstream of Alfred River confluence;
- Lake Daniells;
- Deepdale River;
- Te Wharau River (Stony River);
- Blackwater River and Ohikaiti River; and
- Ohikanui River and all its tributaries.

3 Status of Applications

3.1 TRMP Zoning: All zones

TRMP Land Disturbance Areas 1 and 2, Landscape Priority Areas, Cultural Heritage Areas

Coastal Marine Area

3.2 The status of the activities in each zone and the status of the consents applied for are outlined in Table 3.2 and 3.3 of the application. The information provided in these two tables is adopted for the purpose of this report and is appended in Attachment 2.

3.3 When bundled, overall the activity status of the applications is **Discretionary.**

4 Notifications and Submissions

Written Approvals

4.1 No written approvals were received.

Notification

4.2 The application was publicly notified on 11 October 2014. Submissions closed on 10 November 2014. The notice was placed in Newsline, the Council's newsletter which is sent to all ratepayers to ensure a wide coverage across the District.

Submissions

4.3 The following submissions were received to the application:

Submitter	Support/oppose	Want to be heard
Federated Farmers of New Zealand	Support	Yes
Department of Conservation	Partly Oppose	Yes
Royal Forest and Bird Protection Society	Not stated	Yes
Friends of Nelson Haven and Tasman Bay inc	Support and Oppose with Conditions	Yes
Fish and Game New Zealand	Oppose	Yes

Summary of submissions

Federated Farmers of New Zealand

4.4 Federated Farmers supports the application and submits that river management is a significant issue for Councils and there is need to utilise tools in an efficient, timely and effective manner to manage gravel build up to reduce the risk of flooding. They note that gravel extraction is not part of these applications.

4.5 They submit that the wording in the volunteered conditions is too subjective and the words "where possible" should be replaced with "where practical".

4.6 They also submit that the proposed use and certification of an Environmental Management Plan (EMP) and Site Specific Environmental Management Plans (SSEMPs) is inappropriate because the condition is contingent upon the granting of another permission. They state that the consent conditions should be sufficient to manage the environmental effects.

4.7 They request that the requirement that a further permission be sought through certification of an EMP be removed and replaced with a requirement that the Plan be prepared within an appropriate timeframe.

Department of Conservation

4.8 The Department partly opposes the application as currently proposed. They agree with the need for river management activities to occur and acknowledge the value of holding a "global" consent for such activities. Their concern is that the global nature of the applications poses challenges as the exact nature of works, the effects of those works and the measures taken to avoid, remedy or mitigate the effects cannot be specified in detail.

4.9 They accept the process whereby an EMP is prepared and are satisfied that the activities, plan provisions, values, issues and best practice mitigation measures have been identified comprehensively in the application. However, they submit that current approaches and volunteered conditions do not give adequate surety of environmental performance and outcomes. They submit that because draft EMPs have not been provided it is unclear whether they will address their concerns. They also note that a collaborative approach with all stakeholders and clear lines of communication will be needed in order for the Plans to work well.

4.10 They request a range of amendments to the volunteered conditions.

Royal Forest and Bird Protection Society

4.11 The Society requests that stopbanks be setback a sufficient distance from the streams so that extreme measures are not needed to control flood waters. They note that smaller streams are considered to be just as important habitats as larger bodies of water and that native fish survive in smaller water bodies provided these are shaded. They submit that the flood control methods listed are considered to be devastating to freshwater life and request that a much less intrusive way be found to control water in smaller streams.

Friends of Nelson Haven and Tasman Bay

4.12 The Friends submit that the proposal does not meet Part 2 of the Act and that the term of the consents should be limited to five years. They note that the exclusions are incomplete with respect to rivers included in the amended Buller Water Conservation Order.

4.13 They submit that smaller streams cannot be adequately assessed within a "global" consent and that esplanade reserves or strips adjoin many rivers and streams.

4.14 In summary they submit that the application is a "one size fits all application" that does not demonstrate the purpose of the act and it does not deal adequately with the matters of national importance in Section 6 or the objectives and policies of the New Zealand Coastal Policy Statement 2010 (NZCPS). They submit that it is difficult to assess the actual and potential effects of the activities and that the adverse effects on natural character, natural features and biodiversity cannot be avoided in areas that may be outstanding. They also submit that the measures to avoid, remedy or mitigate the effects are inadequate.

Fish and Game New Zealand

4.15 Fish and Game New Zealand recognises that the Council has responsibilities both to manage river works under the SCRCA and to consent such works under the RMA. However, they are disappointed that detailed discussion has not been undertaken prior to lodging these consents. They continue to have a number of concerns regarding the application and its duration.

4.16 They submit that there is insufficient detail in the application to assess the effects and no overall management objective for each river to ensure that they are managed in a way that avoids major interventions as much as possible and provides for instream habitat diversity and recreational access - particularly for water conservation order areas.

4.17 They submit that the EMP approach does not provide them with a guarantee that their concerns will be met and they strongly disagree with the assessment that there will only be minor ecological effects on aquatic ecosystems.

4.18 They have concerns about the water quality standards in the volunteered conditions, specifically that they are twice as permissive as the standards imposed on all other consents currently issued.

4.19 They submit that it would make sense to incorporate the principles of the unsigned Memorandum of Understanding between Fish and Game New Zealand and Federated Farmers of New Zealand into the EMP.

4.20 They do not support the prohibition on the use of Grey or Crack Willow for river control activities because they consider it to be a useful soft engineering alternative to rock protection.

4.21 They are concerned that there has been no cost benefit analysis of the various options for river works and submit that softer options can work effectively, cost less and can reduce downstream effects.

4.22 They submit that the proposed 35 year duration is untenable given their concerns and they seek that either:

- the application be declined if it remains in its current form; or
- put on hold until an Environmental Management Plan is produced that addresses their concerns; or
- granted for a 5 year period subject to a number of specific activities requiring their own Site Specific Management Plans; or
- the activities that concern them (rock protection greater than 20m, gravel relocation within flowing water, willow removal and activities that are likely to cause a > 20% change in clarity after mixing) are removed from the application and a separate consent with a shorter duration be applied for these activities.

Comments on Submissions

Inadequate assessment of environmental effects

4.23 The submitters have all expressed concern over the lack of detail with respect to the scale of activities and the assessment of effects. They submit that there is a risk of some significant adverse effects arising from the activities, particularly in water conservation and coastal areas.

4.24 They are concerned that a one size fits all application does not adequately address the effects nor demonstrate that the activities are is consistent with the Part II the Act or with the New Zealand Coastal Policy Statement.

Potential effects on aquatic ecology

4.25 The submitters are concerned about the adverse effects of the proposed activities on aquatic ecology generally and on some of the proposed management methods including the construction of rock protection and clearance of willows.

4.26 There is concern about the scale of the proposed activities and their effects on smaller streams in the District which are particularly sensitive to disturbance.

Uncertainty over details of Environmental Management Plans and the process

4.27 Submitters have expressed concern over the proposal to prepare and Environmental Management Plan (EMP) after the consents are issued and the process for stakeholder engagement. All submitters are concerned about the lack of certainty with the outcomes of that process.

4.28 There appears to be a general consensus that some bottom lines, particularly with respect to water quality, need to be included in the EMP and that both the EMP and SSEMPs should be clear about management objectives for the rivers.

Providing for different uses

4.29 The submissions emphasize the need for all values, uses and interests to be adequately provided for and protected including instream values, the use of the adjoining land and riverbeds by landowners and recreational users.

Consent Term

4.30 There is concern over the duration of consents applied for, particularly if it proceeds in its current format. This concern results primarily from the level of detail provided in the application and uncertainties regarding the content of, and process for approving the EMP and SSEMPs.

Wording of volunteered Conditions

4.31 There is a level of discomfort with respect to the wording of a number of the volunteered conditions, particularly the use of “where possible” and “where practicable”, the objectives and content of the EMP and SSEMPs, water quality standards and lack of control of the extent of some works.

Other issues

4.32 The submissions note errors in the application, including the exclusion of some rivers that are within water conservation areas and the inclusion of rivers outside the District. These have been addressed by amendments to the volunteered conditions.

Location of work

4.33 All 24 Significant Natural Areas listed in Schedule 18.1A of the Tasman Resource Management Plan are excluded by the applicant. Of those, most are small forest remnants and not in or close to water ways. If the applicant wishes to undertake works at those locations they will need to be addressed by a separate consent process.

5 Statutory Considerations

Section 104 RMA

5.1 A decision on these applications must be made under Section 104 of the Act. The matters for the Council to address are:

- Part 2 (Sections 5, 6, 7 and 8) of the Resource Management Act 1991;
- Effects on the environment (positive and negative);
- Objectives and Policies of the Tasman Resource Management Plan (TRMP);
- New Zealand Coastal Policy Statement (NZCPS); and
- The National Policy Statement Freshwater.

Section 105 RMA

5.2 If the activity is a DISCHARGE OR COASTAL PERMIT then the consent authority must also have regard to-

(a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(b) the applicant's reasons for the proposed choice; and

(c) any possible alternative methods of discharge, including discharge into any other receiving environment.

Section 107 RMA

5.3 If the activity is a DISCHARGE PERMIT then the consent authority shall not grant consent -

if, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with the same, similar, or other contaminants or water), is likely to give rise to all or any of the following effects in the receiving waters:

(c) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials:

(d) any conspicuous change in the colour or visual clarity:

(e) any emission of objectionable odour:

(f) the rendering of fresh water unsuitable for consumption by farm animals:

(g) any significant adverse effects on aquatic life

6 Sections 6, 7, and 8 RMA

6.1 The following matters are relevant to these applications:

Matters of National Importance

S.6(a) - the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.

S.6(b) - the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.

S.6(c) - the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.

S.6(d) - the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers.

S.6(e) - the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

S.6(g) - the protection of recognised customary activities.

Other Matters

S.7(a) - kaitiakitanga.

S.7(aa) - the ethic of stewardship.

S.7(b) - the efficient use and development of natural and physical resources.

S.7(c) - the maintenance and enhancement of amenity values.

S.7(d) - intrinsic values of ecosystems.

S.7(f) - maintenance and enhancement of the quality of the environment.

S.7(g) - any finite characteristics of natural and physical resources.

S.7(h) - the protection of the habitat of trout and salmon.

S.7(i) - the effects of climate change.

Treaty of Waitangi

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

7 Other Statutory Provisions

7.1 The following are also considered to be relevant to these applications:
Soil Conservation and Rivers Control Act 1941

7.2 The Council has duties and functions under the Soil Conservation and Rivers Control Act 1941 (SCRCA). The activities carried out under the Soil Conservation and Rivers Control Act are subject to the Act and the regulatory framework.

7.3 Pursuant to the Local Government Reorganisation Order 1989 and Part 2 of the Local Government Amendment Act 1992, Tasman District Council became a Unitary Authority with

the functions and powers of a Catchment Board. The function of a Catchment Board under s126 SCRCA is to minimise and prevent damage within its District by floods and erosion.

7.4 Section 10 of the SCRCA provides the objects of the Act which are:

(a) The promotion of soil conservation;
(b) The prevention and mitigation of soil erosion;
(c) The prevention of damage by floods;
(d) Utilisation of land in such a manner as will tend towards the attainment of the said object.

7.5 The powers and duties of former Catchment Boards are prescribed in Part VII of the SCRCA. Section 126 prescribes the general functions and powers as follows:

Section 126 (2) - Each Board shall have all such powers, rights and privileges as may reasonably be necessary or expedient to enable it to carry out its functions, and in particular each Board shall have power to construct, reconstruct, alter, repair and maintain all such works and do and execute all such other acts and deeds [including the breaching of any stock bank] as may in the opinion of the board be necessary or expedient for:

(a) Controlling or regulating the flow of water towards and into water courses;
(b) Controlling or regulating the flow of water in and from water courses;
(c) Preventing or lessening any likelihood of the overflow or breaking of the banks of any water courses;
(d) Preventing or lessening any damage which may be occasioned by any such overflow or breaking of the banks;
(e) Preventing or lessening erosion or the likelihood of erosion; promoting soil conservation; and
(f) Promoting soil conservation.

7.6 In addition to the general functions and powers, particular powers are conferred by:

- Section 131 which provides that all of the powers and authority conferred on local authorities by the Public Works Act 1981 (PWA) can be utilised in executing any works under the SCRCA;

- Section 132 which imports the provisions of ss110, 111 and 112 of the PWA relating to the right to enter property and survey for investigation; and

- Section 133 which confers rights of cleansing, repairing, deepening, widening water courses or making new water courses, diverting, impounding or taking away water from a water course. S133(2) provides that except in the case of urgent work to meet an emergency, these powers are required to be exercised on notice to relevant drainage board, river board, local authority or other public bodies.

7.7 There is no specific procedure prescribed for urgent work to meet an emergency, or definition of emergency. Section 133(1)(c) empowers the Council to carry out any work it thinks necessary or desirable for the purpose of controlling or preventing damage by flood waters.

7.8 Section 135 confers incidental powers including the right of entry over any land for the purpose of constructing, reconstructing, altering, repairing and maintaining any works or the laying or depositing of materials and all other such matters and things as are deemed expedient, necessary or proper for making, cleansing, repairing, maintaining and improving any water course.

7.9 The SCRCA is the statutory instrument which imposes general responsibility on the Council to minimise and prevent damage within its District by floods and erosion. The responsibility is not absolute. Liability in common law with respect to damage could arise only if it could be established that the Council had been negligent in not taking reasonable preventative or remedial steps or taking inadequate or inappropriate preventative or remedial steps to address a known problem. The seriousness of the likely consequences of non-action, the extent of other, possibly more urgent work requiring action, and the resources available to the Council will be amongst the factors relevant in determining whether it has met its statutory responsibilities.

Water Conservation Orders

7.10 The District has two Water Conservation Orders, they are for the Buller and the Motueka River systems. They refer to specific reaches of river for specific values. Copies of these two water conservation orders are attached to this document as Attachments 2 and 3.

7.11 A Water Conservation Order (WCO) is the highest level of protection that can be afforded to any water body, preserving its outstanding natural values for all freshwater fish, wildlife, outdoor recreation and generations to enjoy. They are practical documents accepting that river works will need to be undertaken. The following indicate that the two WCOs allow these consents to be granted.

7.12 The scope of the Buller and Motueka Water Conservation Orders includes the following:

(3) This order does not restrict or prevent the grant of resource consents for the purpose of:

(a) research into, and enhancement of, fisheries and wildlife habitats; or

(b) hydrological or water quality investigations; or

(c) the construction, maintenance, or protection of any road or bridge, or the maintenance or protection of any other network utility operation (as defined in section 166 of the Act); or

(d) the construction or maintenance of soil conservation and river protection works undertaken in accordance with the Soil Conservation and Rivers Control Act 1941.

7.13 Both orders allow works to be undertaken if there is a temporary discharge and each order includes the following exemptions:

Buller Water Conservation Order

7.14 Nothing in this order prevents the grant of a resource consent that would otherwise contravene the conditions set out in clauses 7 to 12 of the order if:

(a) a consent authority is satisfied that -

(i) there are exceptional circumstances to justify the grant of the resource consent; or

(ii) any discharge is of a temporary nature; or

(iii) any discharge is associated with necessary construction and maintenance work for works and structures not otherwise prohibited by this order; and

(b) a consent authority is satisfied that the exercise of any such resource consent would not compromise the preservation and protection of the outstanding characteristics and features identified for the waters specified in the schedules.

Motueka Water Conservation Order

7.15 Nothing in this order prevents the grant of a resource consent that would otherwise contravene the conditions set out in clauses 8 to 11 of the order if:

(a) a consent authority is satisfied that

(i) there are exceptional circumstances to justify the grant of the resource consent; or

(ii) the permit is for a discharge that is of a temporary nature; or

(iii) the permit is for a discharge that is associated with necessary construction and maintenance work for works and structures not otherwise prohibited by this order; and

(b) the exercise of the resource consent would not compromise the preservation and protection of the outstanding characteristics and features identified for the waters identified in Schedules 1, 2, and 3.

7.16 In summary the WCOs do not explicitly exclude the issuing of these consents.

National Policy Statement - Freshwater

7.17 The applications were lodged in 2010, this was prior to the National Policy Statement (NPS) for Freshwater Management 2011 taking effect on 1 July 2011. The NPS deals with water quality and quantity neither are likely to be significant adverse effects from short term works proposed by these applications. While it has no legal status for these applications the NPS is a useful reference.

7.18 Section A - Water Quality provides some useful direction if read as a non statutory document. It mirrors the general tenor of the TRMP as follows:

1. When considering any application for a discharge the consent authority must have regard to the following matters:

(a) the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and

(b) the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

2. When considering any application for a discharge the consent authority must have regard to the following matters:

(a) the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their secondary contact with fresh water; and

(b) the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their secondary contact with fresh water resulting from the discharge would be avoided.

7.19 Section C - Integrated Management includes the following objectives and policies:

Objective C1 - To improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment;

Policy C1 - By every regional council managing fresh water and land use and development in catchments in an integrated and sustainable way, so as to avoid, remedy or mitigate adverse effects, including cumulative effects.

Policy C2 - By every regional council making or changing regional policy statements to the extent needed to provide for the integrated management of the effects of the use and development of:

(a) land on fresh water, including encouraging the co-ordination and sequencing of regional and/or urban growth, land use and development and the provision of infrastructure; and

(b) land and fresh water on coastal water.

7.20 The objectives and policies of the NPS aim to achieve integrated management of the resource which is an important part of these applications and it is an issue that has been brought up by the submissions.

Te Tau Ihu Statutory Acknowledgements

7.21 All of the Te Tau Ihu coastal marine area, and most of the river catchments within Tasman District are recognised as Statutory Acknowledgement Areas by the Ngāti Apa ki te Rā Tō, Ngāti Kuia and Rangitāne o Wairau Claims Settlenment Act 2014, the Ngāti Koata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu and Te Ātiawa o Te Waka-a-Māui Claims Settlement Act 2014, and the Ngāti Toa Rangatira Claims Settlement Act 2014. These statutory acknowledgements recognise the special associations or particular relationships that these eight iwi have with the coastal marine area and various river catchments. They came into effect from 1 February 2015.

7.22 Descriptions of the Statutory Acknowledgement Areas can be found in the formal document: Te Tau Ihu Statutory Acknowledgements 2014. A copy of that document and maps showing the Statutory Acknowledgement Areas can be accessed on the Tasman District Council website on the following link:
http://www.tasman.govt.nz/policy/plans/statutory-acknowledgements/

7.23 By way of summary only, a Statutory Acknowledgement is a type of cultural redress frequently included in Treaty settlements between the Crown and a Maori claimant group. A Statutory Acknowledgement recognises the particular cultural, spiritual, historical and traditional association of an iwi with the identified site/area. The functions of a Statutory Acknowledgement are—

(a) to require relevant consent authorities, the Environment Court, and Heritage New Zealand to have regard to the Statutory Acknowledgement; and

(b) to require relevant consent authorities to provide summaries of resource consent applications, or copies of notices of resource consent applications, to the relevant trustees; and

(c) to enable the relevant trustees and members of the relevant iwi to cite the Statutory Acknowledgement as evidence of the iwi's association with the ‘statutory area’.

7.24 A relevant consent authority must have regard to the Statutory Acknowledgement relating to the ‘statutory area’ in deciding, under section 95E of the Resource Management Act 1991, whether the relevant trustees are affected persons in relation to an activity within, adjacent to, or directly affecting the ‘statutory area’ and for which an application for a resource consent has been made. In this case, notices of the application was served on all of the

eight Te Tau Ihu iwi (as well as on Te Runaka o Kati Waewae recognising their rohe in the southern part of the District), when the public notification occurred in October 2014.

7.25 The relevant trustees and any member of the relevant iwi may, as evidence of the iwi's association with the 'statutory area', cite the Statutory Acknowledgement that relates to that area in submissions to, and in proceedings before, a relevant consent authority, the Environmental Protection Authority or a board of inquiry under Part 6AA of the Resource Management Act 1991, the Environment Court, or Heritage New Zealand concerning activities within, adjacent to, or directly affecting the 'statutory area'.

7.26 The content of a statement of association or statement of coastal values is not, by virtue of the Statutory Acknowledgement, binding as fact on—

(a) relevant consent authorities:

(b) the Environmental Protection Authority or a board of inquiry under Part 6AA of the Resource Management Act 1991:

(c) the Environment Court:

(d) Heritage New Zealand:

(e) parties to proceedings before those bodies:

(f) any other person who is entitled to participate in those proceedings.

However, the decision maker may take the Statutory Acknowledgement into account.

7.27 If any part of the Statutory Acknowledgement applies to a river or stream (including a tributary), that part of the acknowledgement—

(a) applies only to—

(i) the continuously or intermittently flowing body of fresh water, including a modified watercourse, that comprises the river or stream; and

(ii) the bed of the river or stream, meaning the land that the waters of the river or stream cover at its fullest flow without flowing over its banks; but

(b) does not apply to—

(i) a part of the bed of the river or stream that is not owned by the Crown; or

(ii) an artificial watercourse.

Summary

7.28 The various statutory provisions relating to river systems management and the control of flooding and erosion, overlap in some areas, but do not always provide a single consistent framework to assist in responding to a situation which is required to be addressed under the SCRCA. The RMA is the predominant statute and its provisions prevail in the event of any conflict. It requires the preparation of planning instruments to achieve integrated management of the region's natural and physical resources. The purpose of the RMA is achieved via those planning instruments which form the basis on which resource consent applications are considered and any enforcement steps are taken.

7.29 The SCRCA imposes specific obligations and functions on the Council with respect to flooding and erosion. Those duties are relevant for both the planning instruments that Council is required to prepare and administer, and for works which Council undertakes or requires others to undertake. Section 181 of the Local Government Act 2002 confers

specific powers in respect of land drainage and rivers clearance. The WCOs provide detail on the two largest river systems and the Freshwater NPS provides general direction.

7.30 This somewhat confusing mosaic of different functions and powers are all required to be considered in the context of the RMA and its single purpose.

8 Key Issues

8.1 The key issues that we consider relate to these applications are:

- Providing for different values and uses;
- Effects on Aquatic and Terrestrial Ecosystems;
- Effects on Water Quality;
- Adequacy of Assessment;
- Authorisation of and Extension to Existing Coastal Structures; and
- Consent Conditions.

Providing for different values and uses

8.2 Granting new consents will enable river management activities to occur. Consents to undertake river management activities should only be granted if there is a balance achieved between the maintenance or enhancement of the key characteristics of each section of river whist minimizing the adverse effects of the management activities on other values.

8.3 The ecosystem of a river includes biotic (living) interactions amongst and between plants, animals and micro-organisms, as well as abiotic (nonliving) physical and chemical interactions. The following unifying characteristics make the ecology of running waters unique from that of other aquatic habitats:

- Flow is unidirectional;
- There is a state of continuous physical change;
- There is a high degree of spatial and temporal heterogeneity (diversity) at all scales;
- Variability between lotic systems (living in flowing water) is quite high; and
- The biota is adapted and specialized to live with flow conditions.

8.4 Flooding is a natural part of a river's cycle. The majority of the erosion of river channels and the erosion and deposition on the adjoining floodplains occurs during flood events. In many locations, past human activities have significantly changed river channel thereby altering different magnitudes and frequencies of flooding.

8.5 Rivers are many different things to different people. The District's freshwater resources have a wide range of uses and values including the use of water for production, recreation, harvesting of fish and aquatic plants, values for public health, and aesthetic, ecological, cultural, spiritual, intrinsic and natural values. The use of the District's rivers for recreation is highly valued by the community. Swimming, kayaking and fishing are key activities undertaken in the Districts waterways.

8.6 These are beneficial uses of water and the benefits are realised by individuals, communities, the District and the nation to varying degrees. Benefits of water use provide for the economic and social well-being of the District through provision of wealth and jobs such as

through horticultural or industrial uses of water. In addition to these benefits, hydro-electric power generation provides renewable energy. In some cases, water use activities, such as damming, can result in benefit by augmenting the water resource and thus increase the range of values the water body may have. Health benefits arise from community water supply, and individuals also gain benefit from private use of water for swimming pools and amenity garden irrigation. The Council recognises the benefits of water use to community health and its social, economic, and cultural wellbeing through the allocation of water, establishment of allocation limits, and on the priority order for restrictions on water takes during times of low flow.

8.7 Water is central to Māori life. It is a taonga left by the ancestors to provide and sustain life, akin to the blood of Papatuanuuku (Earth mother) who supports all people, plants and wildlife. Māori assert their tribal identity in relation to rivers and particular waterways have a role in tribal creation stories. Rivers are valued as a source of mahinga kai, hāngi stones and cultural materials, as access routes and a means of travel, and for their proximity to important wāhi tapu, settlements or other historic sites. Indicators of the health of a river system (such as uncontaminated water and species gathered for food, continuity of flow from mountain source to the sea) can provide a tangible representation of its mauri.

8.8 A Cultural Impact Assessment has been provided as part of the application – refer to the document titled “A cultural impact assessment: managing waterways in the Tasman District”, Tiakina te Taiao (April2011). The applicant has discussed potential adverse effects on Cultural values in Section 5.3.5 of their application. This provides a useful summary of the issues and provides actions that are proposed outside of the Consent process. No submissions were received from iwi with respect to the applications. An accidental discovery condition has been recommended.

8.9 Control of river channels and management of floodplains is necessary if channel stability and efficiency in carrying floodwaters and sediment is to be maintained and flooding of riparian lands is to be mitigated. Communities living near rivers expect that river channels remain in the same place, that margins are protected from erosion, and that effects of flooding on riparian and flood plain land are mitigated.

8.10 Activities that are undertaken to protect and manage the floodway capacity and stability of river channels also have adverse effects on aquatic habitat and other river values, including cultural values. These activities must be managed appropriately to avoid, remedy or mitigate adverse effects.

8.11 The Royal Forest and Bird Protection Society request that adequate setback be provided for for stopbanks so extreme measures are not needed to control flood waters. They do not want the consents to be used to channelize rivers and allow people to encroach onto the berm land.

8.12 The Friends of Nelson Haven and Tasman Bay note there are esplanade reserves and marginal and esplanade strips adjoining many of the rivers and that the purposes of section 229 of the RMA need to be provided for. This is acknowledged, it is noted that the protection of conservation values (as a purpose under section 229) includes hazard mitigation. Although lateral rock protection and rock groynes compromise the natural functioning and natural character of the river or coastal margin, they do provide for hazard mitigation and can facilitate access adjoining rivers in some locations.

Effects on Aquatic and Terrestrial Ecosystems

8.13 The most significant long term adverse effects arising from river works generally result from the changes to natural habitats. Riparian zones are significant for ecological values, environmental management and river engineering due to their role in soil conservation, their habitat biodiversity and the influence they have on flora, fauna and aquatic ecosystems.

8.14 The meandering curves of a river, combined with vegetation and root systems, dissipate stream energy, which results in less soil erosion and a reduction in flood damage. Sediment is trapped thereby reducing suspended solids to create less turbid water, replenishing soils and building stream banks.

8.15 Pollutants are filtered from surface runoff which enhances water quality via bio-filtration. The riparian zones also provide wildlife habitat, increased biodiversity, and provide wildlife corridors, enabling aquatic and riparian organisms to move along river systems avoiding isolation of communities.

8.16 Nutrients from terrestrial vegetation (from plant litter and insect drop for instance) is transferred to aquatic food webs. The vegetation surrounding the river or stream helps to shade the water, mitigating water temperature variations, it also contributes wood debris to streams which is important for maintaining habitat.

Habitat

8.17 Habitat is not simple to define, the key criteria for a in-stream and riparian habitat include the following items:

- Width and depth (Thalweg profile etc);
- Meander;
- Bank shape (variety);
- Bed substrate, includes woody debris;
- Connection with the flood plain, has flooding areas backwaters, oxbows etc; and
- Riparian cover, e.g., trees overhanging or grasses overhanging etc.

8.18 Riparian habitat has following effects:

- Temperature control;
- Light control;
- Feeds stream;
- Woody debris in and out of stream for cover (hide for predators, housing.etc...); and
- Control of pollutants.

8.19 Conditions have been recommended which aim to maintain the key habitat features of rivers and to manage riparian areas to avoid, remedy or mitigate the potential effects of the river works. Most of the proposed works are within or adjoining rivers that have been highly modified for a significant period of time. These modifications have had positive and negative effects on aquatic and riparian habitats.

8.20 There is some concern in submissions over the clearance of willows and use of willows and the type of willow used for river control works. Submitters also highlight that the effects of the proposed activities will be felt in all rivers and that smaller rivers are as important as

larger ones and that native fish do survive in smaller shaded water bodies. The Royal Forest and Bird Society submits that in their opinion the flood control methods are devastating to freshwater life.

8.21 Small coastal streams (Streams less than 7 metres in width within 10km of the coast) are some of the most important aquatic habitats in the District. By their nature they are not well adapted to significant upheaval (compared to mountain streams). These streams show significant diversity, ranging from spring fed streams with very stable flows to ephemeral streams that are dry for several months of the year.

8.22 Good practice management in small coastal lowland streams needs to be different to management undertaken in larger rivers. They tend to be very sensitive with recovery often taking several years. However, there are exceptions and each stream needs to be examined on a case by case basis.

Morphological Characteristics

8.23 Maintaining the morphological characteristics of a river is critical to maintaining in-stream ecosystems. Horizons Regional Council undertakes best practice in this area. The process they use is potentially onerous. However, we have been unable to identify any other process that provides a way of measuring the key physical characteristics of a river, analyses the results and uses them to adaptively manage river management activities.

8.24 The "Generic Standards for Good Practice Environmental Code of Practice for River Works 28 June 2010" from Horizons provides a very good process for maintaining the morphological characteristics of key gravel based rivers.

8.25 The number of pools and riffles, average active channel widths and average channel sinuosities to be maintained, are established by counts and measurements of each key river. The counts, and measurements using the same method, are repeated on each river every three-five years.

8.26 The results are then reported to an appropriate reporting standard. When comparing pool counts, channel widths and sinuosities from different surveys, account is taken of non-river management activities, such as other consented activities and floods.

8.27 Where a decrease in pool count is attributable to river management activities, an immediate informal review of river management practices for the affected reach is undertaken, in consultation with Fish & Game NZ and the Department of Conservation. The objective of this is to identify and implement changes that will redress the loss of pools and/or riffles and any reduction in active channel width and sinuosity. The implications of future river management practices are also considered.

8.28 Any significant shortage of pools and riffles, or significant decrease in channel width and sinuosity identified in the surveys described above, is specifically addressed in the subsequent review process. "Significance" in this context is where all three indicators of morphological change show a decreasing trend in their respective parameters.

8.29 Where a "significant shortage" is identified, then that is included as a specific issue to be addressed in the next scheduled engineering review. Where the shortage or decrease in the morphological characteristics is deemed to be serious, a formal engineering review is considered where these cannot be rectified under the "immediate informal review".

8.30 The engineering review considers alternative management practices with the express objective of redressing the shortage or decrease and reinstating pools and/or riffles, and active channel width and channel sinuosity.

8.31 Fish & Game NZ and the Department of Conservation are identified as key stakeholders in the review consultation process.

8.32 It is recommended that a similar system be implemented by the consent holder in association with Fish & Game NZ and the Department of Conservation on key river sections in the District. A series of conditions setting up this process are recommended by staff. See conditions 26L to 27.

Bed Disturbance

8.33 The physical disturbance associated with river management activities is likely to have a greater adverse effect on the ecosystem than the relatively short term water quality effects. Depending on the type of waterway, works generally cause adverse effects on fish populations for 3-5 years (mountain-fed waterways recover fastest as fish populations are better adapted to disturbance as opposed to spring or lowland-fed waterways). This provides justification for minimizing the frequency of disturbance.

8.34 One way to minimise disturbance for smaller streams (<3m wide) is by shading the waterway with trees so aquatic plants do not dominate the waterway, cause the trapping and build-up of sediment and depleting dissolved oxygen.

8.35 Discharges of sediment from river management activities can also cause adverse effects as the discharges are generally during low flows when a lot of the sediment will settle on and in the stream bed. Effective techniques to mitigate adverse effects include working outside the wetted bed, using over-pumping where necessary and fish recovery and transfer.

8.36 If significant straightening occurs the loss of some habitats, including loss of pools and backwater habitat may be permanent. This is why specific conditions have been recommended for small lowland and spring fed streams and for works in the wetted bed of rivers and streams.

8.37 Additional conditions have been recommended to ensure that rivers and streams are managed appropriately. These include site by site management to ensure that they are maintained or enhanced during works and the following:

- Assessment from an appropriately qualified ecologist;
- Avoiding discharges of sediment;
- Maintaining aquatic habitat;
- Providing for fish salvage; and
- Ensuring a healthy riparian zone.

Water Quality

8.38 Chapter 33 (Discharges to Land and Fresh Water) of the TRMP includes objectives and policies that relate to discharges to land and freshwater. Objective 33.1.2.1 aims to achieve the following:

The discharge of contaminants in such a way that avoids, remedies or mitigates adverse effects while:

(a) maintaining existing water quality; and

(b) enhancing water quality where existing quality is degraded for natural and human uses or values.

8.39 The related policies which support this objective are included in the Appendix D of the Application.

8.40 The following assessment refers to the Water Conservation Orders and the specified limits for discharges in Clause 11. The key indicators are sediment, temperature, pH, nutrients, human consumption and contact and dissolved oxygen. The risks are similar in most environments. The key indicators are discussed below in turn.

Sediment

8.41 The release of sediment is the greatest risk of the river works to the water quality of rivers, streams and the coastal marine area. The presence and movement of sediment is a natural part of a stream, river or the coast and the type and amount found is influenced by the geology of the surrounding area. While sediment movement is a natural part of a functioning ecosystem, human activities in and adjacent to a waterway can greatly increase the amount of sediment that enters the system. This can have considerable effects on water quality and ecology.

8.42 Sediments in suspension can decrease water clarity, which reduces visibility. Water clarity is usually measured as turbidity. Turbid waters prevent the growth of aquatic plants and algae (because plants need light for photosynthesis) and decrease the ability of fish to find food or to detect predators and prey, thereby increasing stress. Sediments may smother stream invertebrates which are an important food source for fish.

8.43 Excessive sediment deposits on the river or stream bed or coastal marine area can significantly alter and degrade habitat. Some animals are dependent on the rocky bottoms of rivers and streams, while others live in deep sandy pools or around woody debris. Sediments fill the spaces between stones that invertebrates live in, and in extreme cases can bury woody debris, stony substrates (gravels and cobbles), and root mats, and fill pools and channels. This reduces the amount of invertebrate habitat and cover and spawning grounds (a place to lay eggs) for fish. An increase in the amount of sediment deposited on the river or stream bed can also significantly change the flow and depth over time and infill estuaries. Natural cleaning processes, where the water flows through the gravel bed of a stream and interacts with the microbes living on stone surfaces, removing nutrients and some pollutants, can also be compromised by excessive sediment deposits.

8.44 Increased sediment loading into a river, stream or coastal marine area will decrease water clarity and reduce visibility for fish seeking food and places to live, it can damage fish gills and filter feeding apparatus of invertebrates and change the benthic structure of the stream or river bed when coarse substrates such as gravels and boulders are replaced/smothered by sand and silt. Smothering of habitat can decrease numbers of invertebrate species, invertebrates are a food source to some mahinga kai (e.g, kōura and fish) and diverse invertebrate communities are also an indicator of healthy stream systems. Sediments can scour algae from rocks, make algae unpalatable, or reduce light to levels where algae cannot grow, because plants need light to photosynthesis.

8.45 The WCOs recognise the potential adverse effects of increased sediment loading. Both orders have the same thresholds. After allowing for reasonable mixing of the discharge with the receiving waters, no consent may be granted if the discharge:

(a) alters the concentration of suspended solids or turbidity in the receiving waters by more than 1 milligram per litre or 1 NTU where the ambient concentration of suspended solids or turbidity is less than or equal to 10 milligrams per litre or 10 NTU respectively; or

(b) alters the ambient concentration of suspended solids or turbidity in the receiving waters by more than 10 milligrams per litre or 10 NTU where the concentration of suspended solids or turbidity is more than 10 milligrams per litre or 10 NTU respectively; or

(c) alters the visual clarity of the waters by more than 20%.

8.46 The applicant has recommended a draft condition that is less stringent than that specified in the WCOs. Bearing in mind that the discharges are temporary in nature, staff have proposed to amend this condition with a sliding scale allowing a greater short term discharge. The adverse effects on aquatic organisms depends on concentration and time, and the recommended condition recognizes this relationship.

8.47 Additionally a new condition is recommended to limit the deposited sediment left at the completion of any works and the length of time works can be undertaken in the wetted bed on any one day. Both these conditions aim to provide better protection for aquatic organisms and provide some protection to the amenity of the waterway.

Temperature

8.48 Temperature determines the number and type of animals and plants that live in a waterway. Temperatures vary naturally with the seasons and water is usually colder at the bottom of a river or stream (due to groundwater input) and warmer on the surface (due to higher air temperature). Other changes are primarily influenced by the depth of the water and the amount of solar radiation received at the site. Due to the greater surface to volume ratio, during the day shallow waters are heated to a greater extent than deeper waters but will cool more quickly during the night. So daily changes in water temperature and maximum water temperature are likely to be greater at low flows than high flows.

8.49 Most animals and plants that live in our waterways prefer a certain temperature range for optimum growth and reproduction, when temperatures change outside a preferred range they can be significantly impacted. River works have the potential to increase the temperature of a river. This can occur by reducing shading with the removal of riparian vegetation, increasing solar gain with a wider / shallower channel and increasing the thermal mass of rockwork.

8.50 Several sections of the river network are close to or at temperatures that have the potential to adversely affect the aquatic ecology during summer low flows. The most sensitive group is likely to be trout. They are known to migrate around the Districts rivers often looking for cool water.

8.51 Section 11 of the WCO specifies that no resource consent may be granted if, after reasonable mixing, the discharge would alter the natural temperature of the receiving waters:

(i) by more than 3 degrees Celsius; or

(ii) by increasing the water temperature to more than 20 degrees Celsius.

8.52 There is the potential that water temperature fluctuations resulting from river work activities will have a direct adverse effect on the trout. Either during the works via discharge of warm water or changing the habitat so the water temperature increases due to lack of shading or

shallower wider flows. The existence of a high temperature section of the river can act as a barrier to trout during certain times of the year or cause the trout to migrate away from this area during low flows (highest risk period).

8.53 Consent conditions are recommended to ensure that only the minimum amount of vegetation is cleared to achieve the required river works and limits are proposed on the length of works, limiting the works to relatively short sections of river.

Dissolved oxygen

8.54 The amount of dissolved oxygen in river water depends on interaction of several processes: Oxygen production by photosynthesising aquatic plants during the day time, oxygen uptake by all aquatic organisms and the exchange of oxygen through the surface of the river. The dissolved oxygen concentrations vary widely over a 24 hour period as a result of biological activity.

8.55 The works are unlikely to significantly reduce the dissolved oxygen directly as most of sediment is biologically inert and does not use up the oxygen. There is a very low risk (after allowing for reasonable mixing) that the activities would reduce the concentration of dissolved oxygen below 80% of saturation as specified in the WCOs. It is also noted that this standard is conservative. NIWA have recently suggested a limit 5g/m3 as a bottom line (daily minimum), this relates to a lower DO limit of about 60%.

8.56 About 30% of the Districts small lowland creeks have issues with the amount of DO during the summer months. While there are lots of aquatic plants, they use up most of DO at night resulting in low minimum DO levels. The best way to control this issue is via shading, adequate riparian vegetation will reduce the volume of plants in the water and thereby the amount of uptake of DO.

Acidity or Alkalinity

8.57 The WCOs specify that no resource consent may be granted that permits a discharge, after allowing for reasonable mixing of the discharge with the receiving waters:

(a) any change in the acidity or alkalinity in the receiving waters, as measured by the pH and attributable to that discharge, would either

(i) maintain the pH within the range of 6 to 9 units; or

(ii not allow a change by more than 0.5 units when the natural pH lies outside the range of 6 to 9 units.

8.58 The proposed river works are unlikely to change the pH of the water, unless there is a release of wet concrete in association with the works and this is definitely not considered best practice.

Human consumption and contact

5.59 The discharges anticipated from the proposed river works are unlikely to result in making any aquatic organisms unsuitable for human consumption through the accumulation of excessive concentrations of contaminants, increase the presence of contaminants or the median bacterial level exceeding 126 E coli per 100 millilitres.

Nutrients

8.60 The WCOs specify there shall be no undesirable biological growths attributable to the discharge, including:

(i) bacterial or fungal slime growths that are visible to the naked eye; or

(ii) seasonal maximum covers of streams or river beds by—

(a) periphyton as filamentous growth or mats (larger than 3 millimetres thick) exceeding 40%; or

(b) biomass exceeding 100 milligrams of chlorophyll-a per square metre; or

(c) 40 grams ash-free dry weight per square metre of exposed surface area;

8.61 The works proposed have a low risk of adding nutrients to the system. There is the potential to increase the fine sediment and increase the risk from toxic algae (cyanobacteria), this is discussed below.

Toxic Algae (Cyanobacteria)

8.62 Although this is not identified in the WCOs, this is an existing issue that Council is managing. Cyanobacteria in the genus Phormidium are the main toxin-producing algae that grow on river beds in New Zealand. The toxins produced by cyanobacteria (such as anatoxins) are some of the most toxic in the natural world. In New Zealand, cyanobacteria have been implicated in numerous dog deaths.

8.63 Phormidium autumnale is native to Tasman District and is even found in many of our pristine rivers in the conservation estate. Phormidium is known to proliferate during periods of stable flow (about three weeks without flushing flows) during October-April. During the rest of the year it is found at very low coverage and its growth is thought to be light limited. So far in Tasman District we have not had coverage above 20% (the current guideline limit) outside of the period of November to March. Its growth is greater in waterways with slightly elevated soluble nitrogen (mostly nitrate) and very low soluble phosphorus. It appears to have a competitive advantage over other algae in these conditions. In addition, elevated fine sediment levels in the waterway greatly promote its growth.

8.64 There are relatively few sections of rivers in the District that regularly have Phormidium coverage over guidelines. Sections where coverage is high (regularly over 20% and sometimes up to 70-80%) include: Waimea, Wai-iti, Lower Motupiko, and Sherry Rivers. Some other rivers very occasionally get over 10% coverage (Takaka, Motueka and Riwaka Rivers) and most of these were associated with fine sediment discharges from known sources such as willow removal upstream on the Riwaka and earthworks in the Dove affecting the Motueka at Woodstock. Consistently very low coverage (<2% of wetted bed) has been found to date in all other rivers in the District. This includes the Roding, Lee and Wairoa Rivers that are monitored weekly during each bathing season.

Summary

8.65 Habitat damage and modification are likely to be the most significant ongoing adverse effect resulting from the river work activities, it is important that they are minimised to the greatest extent practicable.

8.66 Controlling temperature fluctuations during the summer and the management of sediment discharge in order to maintain water quality are also required.

8.67 The adverse effects can be mitigated by complying with the best practice outlined in the application, the recommended conditions of the consents and the details and methodologies in the certified EMPs and SSEMPs.

Standards of Good Practice for Activities

8.68 The applicant provides some useful information with respect to best practice in sections 5.5 to 6 of the application. However, some Good Practice Standards have been developed by other Councils. A good example is included in Part Two of the Horizons Regional Council "Environmental Code of Practice for River Works June 2010". These Good Practice Standards provide a sound basis for recommending conditions.

8.69 The Code is based on extensive practical experience in river engineering activities in a variety of rivers throughout New Zealand. The standards recognise the issues and concerns that have traditionally been raised by stakeholders who have a particular interest in maintaining and enhancing the river environment. Key to this discussion is that it is reflected in conditions attached to the many consents currently held by the Operations Group of Horizons Regional Council.

8.70 The standards facilitate the execution of necessary river works, while at the same time mitigating, remedying and where possible, avoiding adverse environmental effects. The following principles were used to establish the standards for good practice.

8.71 The standards shall identify practices that will avoid, remedy or mitigate the adverse environmental effects of undertaking river works by:

(a) considering habitat and morphological diversity;

(b) minimising in-stream works;

(c) avoiding discharges of sediment into water;

(d) avoiding or mitigating effects of activities on fish passage;

(e) isolating the works site to avoid adverse off-site effects;

(f) avoiding the discharge of contaminants;

(g) critically assessing operational methodology;

(h) planning riparian planting carefully;

(i) avoiding archaeological or historic sites;

(j) maintaining ecological values;

(k) maintaining works to an appropriate standard;

(l) considering emergency contingencies; and

(m) avoiding the transfer of aquatic pests.

8.72 The standards take into account the location, timing, duration and the scale of the works by minimising the extent, frequency and duration of the activities, are practicable and affordable while achieving a sustainable and effective river protection and environmental outcome, based on established good engineering practice and Generally reflect the requirements of recently awarded consent conditions.

8.73 There are a number of Good Practice Standards that apply to all essential river and drainage works activities. The planning and standards ensure that the timing of the activities minimises the frequency and duration of habitat disturbance and the environmental impacts of the works. The objective of planning is to ensure that all activities that can be practicably completed in a particular construction season, within a given reach of the river, are undertaken concurrently.

8.74 All river and drainage works activities are required to be planned and scheduled to take account of:

(a) The likelihood of suitable weather and river flow conditions;

(b) The spawning and migration seasons and locations of native and introduced fish;

(c) The nesting season and location of native birds;

(d) Recreational interests and amenity (including contact recreation);

(e) The need to minimise duration and frequency of activities;

(f) Farming and other activities on adjoining properties;

(g) The availability of suitable plant to undertake the works;

(h) Access into the work site;

(i) Safety on and around the work site;

(j) The impact of traffic, dust and noise on the environment; and

(k) Consented Discharges that require a specified river flow to allow reasonable mixing.

8.75 River and drainage designs are required to take into account:

(a) The need to maintain flood carrying capacity of the river or drain;

(b) The durability and robustness of works to minimise river intervention;

(c) The balance between effectiveness and affordability;

(d) Opportunities to enhance channel stability;

(e) The avoidance of navigation hazards;

(f) The maintenance of aesthetic values; and

(g) Existing assets.

8.76 Additional work is need by the applicant to better define good practice. It is accepted that the Applicant does not have the same resources that Horizons Regional Council has. However, we can learn from their and other Councils good practice. The following table taken from Otago Regional Council is proposed as a starting point. It is suggested that a table similar to this could assist in the definition of good practice.

Activities	Best Practice	Environmental Mitigation
Rip-Rap	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work • Use experienced operators • Disturb only the area where the work is to be undertaken	• Ensure machinery is well maintained and free from oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Do not work in river during fish spawning • Use only clean Rock and or Stone • Do not use concrete or organic materials
Channel shaping	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work	• Ensure machinery is well maintained and free from oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Do not work in river during fish spawning

Activities	Best Practice	Environmental Mitigation
	• Use experienced operators • Disturb only the area where the work is to be undertaken • Form the new channel shape by pushing gravel around within the dry bed • Do not allow water to enter the channel until work is completed	• Use a coffer dam or fabric fence to control sediment • Control the water from entering the new works to stop scoring and excessive sediment release • Avoid bird breeding/roosting • No refuelling of plant on river bed
Vegetation Control	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work • Use experienced operators • Disturb only the area where the work is to be undertaken • Place all unwanted vegetation outside the flood line	• Ensure machinery is well maintained and free from oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Do not work in river during fish spawning • Use a coffer dam or fabric fence to control sediment and debris • No refuelling of plant on river bed
Low impact mechanical Cleaning	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work • Use experienced operators • Disturb only the area where the work is to be undertaken • Use a digger with a weed-rake or stream cleaning bucket to allow	• Ensure machinery is well maintained and free from oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Do not work in river during fish spawning • Use a digger with a weed-rake or stream cleaning bucket to allow water and stream life to escape back into the river/stream • Leave a buffer of weed at the lower end to catch sediments and weed, this area to be clear last • No refuelling of plant on river bed
Debris dam removal	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work • Use experienced operators	• Ensure machinery is well maintained and free from oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Avoid work in river during fish spawning • Use a coffer dam or fabric fence to control sediment and debris • No refuelling of plant on river bed
Remove hazards, rubbish and other obstacles	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work • Use experienced operators • Disturb only the area where the work is to be undertaken • Dispose off rubbish in an approved manner	• Ensure machinery is well maintained and free from oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Do not work in river during fish spawning • Use a coffer dam or fabric fence to control sediment • Control the water to entering the site to stop scouring and excessive sediment release
Willow clearing	• Plan and Consult with parties (landowners, Fish and Game New Zealand, DOC, iwi and TDC Engineers Section) • Identify the values that apply to that particular section of waterway • Use the most appropriate machinery for the work • Use experienced operators • Disturb only the area where the work is to be undertaken • Remove all felled trees and branches from the water	• Ensure machinery is well maintained, and free oil and fuel leaks before entering the waterway • Minimise sediment by working from banks or dry beds • Do not work in river during fish spawning • Where willows provide habitat and bank stabilisation consider replanting.

8.77 The applicant has provided an assessment of the activity against the relevant objectives and policies in the TRMP. Staff agree that Part IV, Chapter 27 contains the key objectives and policies and with the assessment of the activity against these that has been provided in the application. The objectives and policies generally support what the Applicant is proposing.

8.78 An assessment of the activity against the objectives and policies in the NZCPS and Operative Coastal Plan is included in sections 8.87 - 8.105 of this report.

8.79 There are also some additional parts of Part II that are relevant to this application. This is a far reaching application and these additional objectives and policies have been included to ensure all the key parts of Part II have been assessed. These additional objectives and policies are as follows:

Chapter of the TRMP	**Objective**	**Key policies**
Chapter 5, Site Amenity effects	**5.1.2 -** Avoidance, remedying or mitigation of adverse effects from the use of land on the use and enjoyment of other land and on the qualities of natural and physical resources.	**5.1.3.2** - To protect the quality of groundwater and surface water from the adverse effects of urban development and rural activities.
	5.2.3 - Maintenance and enhancement of the special visual and aesthetic character of localities.	**5.3.3.5** - To maintain and enhance features which contribute to the identity and visual and aesthetic character of localities, including: (a) heritage sites and buildings; (b) vegetation; (c) significant landmarks and views.
	5.5.2 - Reduction of risks to public health and safety, property and the environment, arising from fire and hazardous substances.	**5.5.3.4 -** To avoid any escape or discharge to surface water or groundwater, or drift to other property, of any hazardous substance, from within the site where it is used.
Chapter 10 Significant Natural Values and Historic Heritage	**10.1.2 -** Protection and enhancement of indigenous biological diversity and integrity of terrestrial, freshwater and coastal ecosystems, communities and species.	**10.1.3.4 -** To encourage the long term protection of indigenous ecosystems by assisting in the provision of information to the community, landowners and managers on the location and appropriateness of land management practices.
	10.2.2 - Appropriate protection, management and enhancement of historic heritage, including cultural heritage sites, heritage buildings and structures, and protected trees, for their contribution to the character, identity, wairua, and visual amenity of the District.	**10.2.3.9 -** To work with manawhenua iwi in the sharing and management of information about cultural heritage sites that are of Maori origin, including wāhi tapu. **10.2.3.19 -** To ensure that highly significant cultural heritage sites are maintained, protected or enhanced.
Chapter 12 Land Disturbance Effects	**12.1.2 -** The avoidance, remedying, or mitigation of adverse effects of land disturbance, including: (a) damage to soil; (b) acceleration of the loss of soil; (c) sediment contamination of water and deposition of debris into rivers, streams, lakes, wetlands, karst systems, and the coast; (d) damage to river beds, karst features, land, fisheries or wildlife habitats, or structures through deposition, erosion or inundation; (e) adverse visual effects; (f) damage or destruction of indigenous animal, plant, and trout and salmon habitats, including cave habitats, or of sites or areas of cultural heritage significance;	**12.1.3.1 -** To promote land use practices that avoid, remedy, or mitigate the adverse effects of land disturbance on the environment, including avoidance of sediment movement through sinkholes into karst systems **12.1.3.2** - To avoid, remedy, or mitigate the actual or potential soil erosion or damage, sedimentation, and other adverse effects of land disturbance activities consistent with their risks on different terrains in the District, including consideration of: (a) natural erosion risk, and erosion risk upon disturbance; (b) scale, type, and likelihood of land disturbance; (c) sensitivity and significance of water bodies and other natural features in relation to sedimentation or movement of debris;

Chapter of the TRMP	Objective	Key policies
	(g)adverse effects on indigenous biodiversity or other intrinsic values of ecosystems.	**12.1.3.3 -** To investigate and monitor the actual or potential adverse effects of soil erosion, other soil damage, sedimentation and damage to river beds, subsurface water bodies and caves in karst, aquatic and other natural habitats, arising from land disturbances.
Chapter 13 Natural Hazards	**13.1.2 -** Management of areas subject to natural hazard, particularly flooding, instability, coastal and river erosion, inundation and earthquake hazard, to ensure that development is avoided or mitigated, depending on the degree of risk.	**13.1.3.1** - To avoid the effects of natural hazards on land use activities in areas or on sites that have a significant risk of instability, earthquake shaking, fault rupture, flooding, erosion or inundation, or in areas with high groundwater levels. **13.1.3.4 -** To avoid or mitigate adverse effects of the interactions between natural hazards and the subdivision, use and development of land. **13.1.3.8 -** To avoid, unless there is effective mitigation, the expansion of flood-prone settlements onto those parts of the surrounding flood plains where they might be subject to flood hazard. **13.1.3.9** - To prevent damage or interference with the functioning of the major overland flood flow paths of rivers in the District, except as provided for in Policy 13.1.3.10. **13.1.3.10 -** To maintain or consider the need for protection works to mitigate natural hazard risk where: (a) there are substantial capital works or infrastructure at risk; or (b) it is impracticable to relocate assets; or (c) it is an inefficient use of resources to allow natural processes to take their course; or (d) protection works will be effective and economic; or (e) protection works will not generate further adverse effects on the environment, or transfer effects to another location. **13.1.3.14 -** To avoid damage by land use activities to flood control structures or works for flood or erosion control.

8.80 The Application is considered to be consistent with these additional objectives and policies. Some of these polices (i.e, 13.1.3.9 and 13.1.3.10) are specific to flood flows paths and the protection works. We also generally agree with the Natural Character, Landscape Value and Amenity Assessment in Appendix C of the application and the mitigation measures proposed on page 22 of that report.

Adequacy of Assessment

8.81 If granted, the suite of consents will enable the Council to undertake significant works in and around the District's rivers. Several submitters have expressed concerns that the consent holder will not place adequate weight on the values that they are concerned about when the consents are exercised.

8.82 Submitters are also concerned about the lack of clarity with respect to the scale of the proposed works in the application and as a result, the difficulty in assessing the scale of effects. They are particularly concerned about this with respect to the rivers covered by the

WCOs. They are concerned about the risk of significant adverse effects from the management of the rivers and that the application that does not demonstrate the purpose of the act or deal adequately with Section 6 or the NZCPS.

8.83 While the application outlines at a high level some of the best practice methods proposed to mitigate the submitters concerns, it does not adequately address the long term habitat changes. The conditions of consent need to ensure that these values are provided for as much as possible in the context of the obligations that the Council has under the SCRCA. Ongoing compliance with the conditions will also be critical in order to avoid, remedy or mitigate the adverse effects of the various works.

Authorisation of and Extension to Existing Coastal Structures

8.84 In addition to authorising ongoing river work activities, Council has applied for a coastal permit to retrospectively authorise the occupation of the coastal marine area by 32 existing structures, and to disturb the coastal marine area and discharge sediment in association with a riparian planting programme near the mouth of the Takaka River.

8.85 The application also seeks a coastal permit to enable the extension of all retrospectively authorised structures, but does not specify the size of extensions sought.

Note: The application states that the tidal floodgate structure in the stopbank adjoining the Waimea Estuary (listed as Asset ID00207475) is not authorized. However, a coastal permit (RM120563) was issued for this structure in August 2012, the permit expires in August 2031 so this should be excluded from consideration or authorization as part of these applications).

8.86 The existing structures include rock protection work, rock groynes and pipes (culverts) and floodgates. Details of the structures are provided in Table 2-2 of the application and their locations are shown in Appendix B. The majority of the structures are rock protection works of various lengths, the remainder are culverts associated with the roading network or stopbanks. Many of the rock protection structures were constructed in the last 15 years under a misunderstanding that they were within rivers and not within the coastal marine area and were provided for by the pre-existing riverworks consent. The pipes (culverts) and floodgates have generally been in place for a longer period of time.

8.87 If Council grants consents to these applications, this would enable their replacement or repair, and any discharge associated with that, to be a permitted activity by virtue of the rules in the existing coastal plan.

8.88 All the existing structures are located in areas of the coastal marine area that have Nationally Significant Natural Ecosystem values.

8.89 The New Zealand Coastal Policy Statement 2010 (NZCPS) identifies a number of objectives associated with the management of the occupation and disturbance of the coastal marine area. Objective 1 aims to safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems by maintaining or enhancing natural biological and physical processes and coastal water quality.

8.90 Objectives 2 and 4 aim to preserve the natural character of the coastal environment and public access and recreational use of the coastal marine area. Objective 3 promotes management of the coastal environment that takes into account the principles of the Treaty of Waitangi and recognises the role of tangata whenua as kaitiaki.

8.91 Objective 6 enables people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, but recognises that the protection of the

values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits and that functionally some uses and developments can only be located on the coast or in the coastal marine area.

8.92 There are a number of policies that directly support these objectives including Policy 3 (Precautionary approach), Policy 5 (Land or waters managed or held under other Acts - this includes the Reserves Act), Policy 6 (Activities in the coastal environment), Policy 14 and (Restoration of natural character and natural features and natural landscapes), Policy 18 and 19 (Public open space and walking access), Policy 21 and 22 (Enhancement of water quality and sedimentation), Policy 26 (Natural defences against coastal hazards).

8.93 The Tasman Resource Management Plan identifies a number of **issues, objectives and policies** associated with the occupation and disturbance of the coastal marine area, the following are considered to be most relevant to these applications:

Issues	**Objectives**	**Policies**
21.1.1 - *Use or development in the coastal marine area, including structures, occupation and disturbance may adversely affect the natural character of the coastal environment. The appropriate form, scale or location of such use or development that preserves natural character is to be determined;*	**21.1.2 -** *Preservation of the natural character of the coastal marine area, particularly its margins, and including the maintenance of all values that contribute to natural character, and its protection from the adverse effects of use or development;*	**21.1.3.1** *- To avoid, remedy or mitigate adverse effects on the natural character of the coastal marine area from activities, including:* *(a) physical modification to foreshore or seabed, including reclamation, dredging, removal or deposition of material, or other disturbance;* *(b) disturbance of plants, animals, or their habitats;* *(c) structures, including impediments to natural coastal processes; ....* *(f) the discharge of any contaminant or waste*; **21.1.3.3 -** *To restrict the placement of structures in or along the coastal marine area to those for which a coastal location is necessary and whose presence does not detract from the natural character of the locality, including the natural character of adjoining land.*
21.2.1 - *The protection of coastal marine habitats and ecosystems from the damaging effects of disturbances, discharges, structures, or the introduction of animals or plants, or passage of vessels, vehicles, people or animals;*	**21.2.2 -** *Avoidance, remediation, or mitigation of adverse effects on marine habitats and ecosystems caused by:* *(c) disturbance of the foreshore or seabed;* *(d) the placement and use of structures for port, berthage, aquaculture, network utilities, roads, mineral extraction or any other purpose; with priority for avoidance in those areas having nationally or internationally important natural ecosystem values;*	**21.2.3.1 -** *To assess existing unauthorised structures or works in the coastal marine area and either require their authorisation or removal after considering the significance of the effects of such structures or works on:* *(a) natural character;* *(b) natural coastal processes and patterns;* *(c) coastal habitats and ecosystems, particularly those supporting rare or endangered indigenous or migratory species, or nationally or internationally significant natural ecosystems;* *(d) public access to coastal marine space;* *(e) visual amenity and landscapes or seascapes;* *(f) navigational safety;* *(g) historic and cultural values.* **21.2.3.3 -** *To avoid, remedy or mitigate adverse effects of structures or works in the coastal marine area, for any purpose, on:* *(a) natural character;* *(b) natural coastal processes and patterns;* *(c) coastal habitats and ecosystems, particularly those supporting rare or endangered indigenous or migratory species, or nationally or internationally significant natural ecosystems;* *(d) public access to coastal marine space;* *(e) visual amenity and landscapes or seascapes;* *(f) navigational safety;* *(g) historic and cultural values.*

Issues	Objectives	Policies
		21.2.3.17 - *To promote measures to re-establish natural coastal conditions or processes.* **21.3.3.1 -** *To allow structures or physical modifications in the coastal marine area only where the effect on the natural components of landscape and seascape values of the area, including any contribution to any likely cumulative effect, is limited in extent and is consistent with the existing degree of landscape and seascape modification.*
21.4.1 *Modification or interference with natural coastal processes by disturbance or structures; and*	**21.4.2** *Maintenance of natural coastal processes free from disturbance or impediments; and*	**21.4.3.1 -** *To avoid impediments to natural coastal processes except where a community need (such as the need to protect a physical resource of significance to the community) outweighs adverse effects on the natural environment.* **21.4.3.3 -** *To require the likely effects of disturbance, including excavation, deposition or removal of material, or structures, on natural coastal processes, to be avoided or mitigated.*
21.5.1 *Allowing for appropriate use and development in the coastal marine area while protecting the cultural heritage values of the coastal marine area, including tangata whenua interests in areas or taonga.*	**21.5.2** *Maintenance of the cultural heritage values of items, sites or areas in the coastal marine area, including taonga of the tangata whenua.*	

8.94 We generally agree with the assessment of positive and negative effects of these structures and best practice mitigation measures outlined in section 5 of the application. We also generally agree with the Natural Character, Landscape Value and Amenity Assessment in Appendix C of the application and the mitigation measures proposed in the report (page 22).

8.95 Policy 21.1.3.3 aims to restrict the placement of structures in or along the coastal marine area to those for which a coastal location is necessary and whose presence does not detract from the natural character of the locality, including the natural character of adjoining land. Policy 21.2.3.1 requires Council to assess existing unauthorised structures or works and either require their authorisation or removal after considering the significance of the effects of the structures or works on, natural character, natural coastal processes and patterns, coastal habitats and ecosystems, public access, visual amenity and historic and cultural values. Policy 21.4.3.1 seeks to avoid impediments to natural coastal processes except where a community need (such as the need to protect a physical resource of significance to the community) outweighs adverse effects on the natural environment and Policy 21.4.3.3 requires that the likely effects of disturbance are avoided or mitigated.

8.96 The most significant positive effect of the structures is the protection they provide against erosion and inundation of adjacent land, property, and infrastructure. They can also assist in minimising discharges arising from erosion, play a role in maintaining or reinstating stable channel alignments and the establishment of riparian vegetation can provide a number of positive effects including shading and habitat restoration. We agree with the applicant that some structures provide enhanced habitat and interstices between the large imported stones can provide cover for fish.

8.97 The most significant adverse effects of the structures are their impact on the natural functioning of the coastal marine area margin, the natural character of the coastal

environment and the effects of their replacement, repair and any extensions on the immediate aquatic and riparian environment.

8.98 Rock protection structures generally hinder the natural process of erosion and accretion from occurring and can give rise to adverse end effects upstream and downstream of the site. They often compromise the natural character of the immediate area because natural processes of erosion, accretion and regeneration of riparian and estuarine vegetation are prevented from occurring.

8.99 The effects of the repair, replacement and extension of structures on the immediate and downstream environments have the potential to be adverse unless the work is undertaken in accordance with best practice.

8.100 The effects of the structures on public access can be neutral, positive or negative depending on the type of structure, location and circumstances. In some reaches, such as the Lower Motueka River, it could be argued that the placement of rock protection has enhanced public access to the river margin because an unstable erosion scarp has been replaced by graded rock placed at an angle that provides for access and recreational use.

8.101 The assessment of the effects of the proposed river works in the application and in this report and the recommended conditions apply equally to structures and activities in the coastal marine area and are not repeated here.

8.102 Although the use of **rock protection** (including rock groynes) is generally not supported by the objectives and policies in the NZCPS or TRMP, and is generally considered as being "a last resort" for managing erosion and/or inundation adjoining the coastal marine area (particularly if the land is public land), these structures are a little different as they were originally constructed for river management purposes in order to fulfill Council's obligations under the SCRCA and they continue to provide for that purpose.

8.103 Although all the structures are within or adjoin coastal marine areas with Nationally Important Natural Ecosystem Values, the majority of the structures are located in already modified or highly modified environments that retain little of their original terrestrial natural character. The adverse effects of their ongoing presence on the natural character, natural functioning of the coastal marine area, public access and amenity and aquatic and terrestrial ecosystems will remain unchanged. The adverse effects on these values resulting from their repair and/or reconstruction are outlined earlier in this report. It is considered that they can be can be avoided, remedied or mitigated by the proposed methodologies and best practice measures in the application, the EMP and SSEMPs and the recommended conditions of consents.

8.104 Considering Council's obligations under the SCRCA, the fact that the structures are already in place and are generally located in already modified environments, they do not significantly hinder public access and the effects of their replacement or repair can be largely avoided by conditions, we can see no compelling reason not to retrospectively authorize them. We acknowledge that in doing so, their replacement and ongoing maintenance would be a permitted activity - subject to the conditions of these consents.

8.105 If the Consent Authority chooses not to retrospectively authorise these structures, they should be removed. Although this would have a number of positive effects including restoring the natural functioning and a more natural character of the river, their removal would come at a considerable cost to Council and would expose the river/coastal margins to erosion and the adjoining land to inundation during flood events.

8.106 We also see no reason not to recommend retrospective authorization of the **five existing pipes (culverts) and floodgates** - subject to the proposed methodologies and best practice measures in the application, the EMP and SSEMPs and the recommended conditions of consents. They have been constructed to enable flood water to be efficiently and effectively drained from the land, while continuing to enable some natural tidal flushing to occur.

8.107 The existing rock protection structures in stretches of rivers within the coastal marine area are generally in ecologically and culturally sensitive areas which provide important habitat for native fish species and particular vegetation sequences. They are also often in areas that experience a moderate level of recreational use. The objectives and policies in the NZCPS and TRMP do not support new hard engineering solutions to erosion protection unless alternative softer engineering approaches have been assessed as untenable in the circumstances. Taking the above into account we do not support the application for open ended extensions to these existing structures. However, Council may want to provide for limited extensions over the duration of the consent to mitigate end effects where they are having a significant adverse effect on the adjoining land or infrastructure. A new condition has been recommended to this effect - See 41A.

Volunteered Consent Conditions

8.108 Submitters have expressed concern over a number of the proposed conditions and their wording. These include the use of the words “where possible/Practicable”, the development of environmental management plans post decision (and the consequent uncertainty over outcomes and the level of stakeholder engagement) and the certification or approval of plans, environmental bottom lines, noise, review conditions and the duration of the consents if they are granted.

8.109 These matters are discussed below and we recommend a number of changes to the proposed conditions. These are shown using track changes (cross-outs when deleting proposed wording and underlining for the inclusion of new words) in the recommended conditions.

8.110 The Department of Conservation have asked for several amendments to the volunteered conditions:

Decision sought by DOC	**Staff comment**
Rewrite condition 16 to “The Consent Holder shall advise the Council’s Coordinator, Compliance Monitoring and the Duty Health Protection Officer, Nelson/Marlborough Area Health Board immediately of any spill of hazardous substances which may affect water. The Consent Holder shall report to Council in writing and within 20 working days describing the manner and cause of the escape and the steps taken to control it and prevent any recurrence.”	Revision has been included in the conditions of consent.
Add specific objectives for the Environmental Management Plan and the Site Specific Environmental Management Plans. (SSEMPs) in condition 27 and 30. For example, for an Environmental Management plan: “To sustainably manage the ability of Tasman District’s river and drainage systems and their coastal and riparian margins to prevent erosion and property damage by applying river engineering methods to enable the: • Passage of defined water and sediment flows, and • Protection of river channels from erosion, and • Mitigation of the adverse effects of flooding;	We agree with the intent of this submission. Using good/best practice is recommended in several conditions rather than just embedding the proposed wording. There is some reservation about the use of the words “prevent erosion” as a certain level of erosion is needed in a river to maintain aquatic habitat. The need to protect property and assets is accepted. The under lying issue is that the rivers needs enough space to allow natural erosion and accretion to occur and confining rivers into a narrow corridor is unlikely

Decision sought by DOC	Staff comment
While utilising best practise mitigation measures to sustain and enhance in-stream and out-of-stream values." (or to like effect) b) Site Specific Environmental Management plans need to identify the site's values such as whitebait habitat or braided bird habitat and seek to protect or sustain them as appropriate.	have good habitat (aquatic and terrestrial) outcomes. This is a key consideration for any proposed management of a reach.
Add a monitoring methodology to specify the frequency, timing, location, and method of monitoring to demonstrate the achievement of the objective in condition 27 and 30 and associated performance standards in the conditions.	Monitoring should be part of any works program proposed. Additional wording has been included in condition 27(e). (e) Pre-works, during works, and post-works monitoring that will be undertaken to show consent compliance;
Add additional matter to conditions 27 and 30 requiring management plans to include a summary of the consultation undertaken, and how the views of those consulted have been taken into account.	This could be provided for but must not equate to a third party approval.
Amend condition 28 as follows: "...The Consent Holder shall consult with all relevant stakeholders, including the Department of Conservation, the Nelson/Marlborough Fish and Game New Zealand Council, iwi and TDC's River Scientist, when reviewing and updating the EMP.	Condition 27 has been amended: The Consent Holder shall consult with the Department of Conservation, Fish and Game New Zealand, iwi and TDC's Resource Scientist (Rivers) when preparing the EMP.
Add a new condition *29A.* "The Consent Holder shall comply with the Environmental Management Plan (EMP) and any relevant Site Specific Environmental Management Plan (SSEMP) at all times".	This is accepted and has been included.
Add a new condition 29B to address the issue of what is to occur if the Consent Authority refuses to certify the Environmental Management Plan.	Staff would like to see what is proposed with respect to the wording of this condition. Significant work has been undertaken on the proposed conditions so the bottom lines are more specific and reduce the risk of the Consent Authority refusing to certify the EMP.
Add new condition 30A specifying minimum time periods for stakeholder consultation required by conditions 27, 28 and 30, e.g. stakeholders to be given not less than 20 working days to review and comment on draft plans.	New condition has been added See condition 36A - Stakeholders to be given not less than 20 working days to review and comment on draft plans. If no reply is provided by the stakeholders within 20 working days this may be taken as their approval.
That condition 40 be altered by deleting "on request" and adding at the end of the sentence "within 20 working days of the remedying action being undertaken".	Accept this to ensure that remedying action has been undertaken by the Consent Holder.
That condition 41 be modified so that the extent of extension of any river control structures authorised is only 10% of the length of structures existing as at 14 September 2014, so unlimited extensions are not permitted under these consents.	Accept that there is the potential to increase structures outside of the norm. Staff have recommended a more onerous condition for the coastal marine area.
That condition 89 discharge of sediment be amended to provide a clear appropriate instantaneous sediment discharge standard as well as a 24 hour ex post standard.	Accept that additional standards required and these have been included with consutation TDC's Resource Scientist (Rivers).

Environmental Management Plans

8.111 Some concern has been expressed by submitters that the approval of Environmental Management Plans (EMPs) post decision does not provide stakeholders with any certainty that their concerns are being met or that they will be able to be meaningfully involved in the

content or approval of the EMPs. This is acknowledged, rivers are dynamic physical and ecological systems and the effects of works on these systems can lead to unforeseen consequences. However, EMPs are an important tool to ensure that a consent holder undertakes work in manner that minimises adverse effects.

8.112 EMPs that incorporate adaptive management have been used elsewhere (NZTA Transmission Gully Project for example) for larger projects where the nature and extent of effects is uncertain and the outcome of methods to avoid, remedy or mitigate them is similarly uncertain. Adaptive management regimes are commonly established through conditions of consent incorporating management plans which seek to manage the effects of any given activity in a flexible and responsive manner.

8.113 Having said that there are some issues that need to be avoided including:

(a) Vague or ambiguous wording;

(b) Failure to specify objectives where details of compliance have been left to implementation through the development of management plans; and

(c) Delegation of further detailed decision making over the subject matter of the consent, as opposed to a requirement for certification of compliance by suitably identified and qualified person.

8.114 A condition of consent can require the preparation of a management plan that provides detailed information on how the consent holder will comply with other conditions of consent. They are used to clarify how compliance will be achieved but they should not be relied upon as the sole mechanism to provide reassurance that a critical performance or environmental standard will be achieved.

8.115 Conditions requiring the preparation of a management plan cannot guarantee that such a management plan will contain the effective measures wanted. It simply requires that there has to be a management plan with specific procedures and measures. In addition, such a condition is based on an assumption that methods are readily available to enable compliance with the condition. If it is not clear that such methods are available, then such a condition without other complementary certification conditions would not be appropriate.

8.116 The recommended conditions of consents include greater certainty to allow the applicant to tailor or their works to meet environmental bottom lines, including more stringent water quality outcomes.

Noise

8.117 The applicant has applied to exceed the following permitted activity threshold for noise in the rural zones:

8.118 Noise generated by the activities, when measured at or within the notional boundary of any dwelling in a Rural zone, Rural Residential, Papakainga or Tourist Services zone, or at or within any site within a Residential Zone, does not exceed

	Day	Night
Leq	55 dBA	40 dBA
Lmax		70 dBA

8.119 The works by their nature are close to rivers and generally a sufficient distance away so the permitted standard can be met at the notional boundary of rural dwellings.

8.120 The works are generally of short duration and are undertaken during normal working hours. On occasion there may be a tradeoff between noise generated and speed of works in order to reduce the risk of other environmental effects such as sediment discharge or the risk of rain/ flooding of the worksite.

8.121 Council's Co-ordinator Environmental Health has indicated to us that people are relatively tolerant of short term construction noises, rivers are generally relatively noisy places and in most cases dwellings are set back from the river. The greatest risk of complaints is likely to arise from the running of pumps etc overnight. These activities are best controlled via best practice.

8.122 A few amendments to the proposed condition are recommended to provide a more specific and enforceable condition.

River works around Hydrological monitoring sites

8.123 In the past river works have caused some issues for hydrological monitoring sites. The Council works hard to maintain these records over extended periods of time (decades). River works can cause the river to change in the vicinity of the site. These sites rely on a stable river cross section to maintain their ratings and therefore the accuracy of the information they provide. The 500m restriction recommended in condition 22A has been made in consultation with the Councils Hydrologist (See conditions 22 and 22A).

Review condition

8.124 A review condition is generally considered to be an effective and efficient way of providing the Consent Authority with the ability to address specific significant adverse effects that might arise during the exercise of these consents. A review condition has been recommended as may be some potential for cumulative adverse effects over time.

Rock protection

8.125 There is a level of acceptance that some river margins need to be protected with rock work where roads, houses or other infrastructure is at immediate risk. However, conditions are needed to mitigate adverse effects including heat sink effects. In larger rivers such as Buller, Maruia, Motueka, Takaka below Uruwhenua Reserve, Aorere this includes allowing willow growth. Larger Rivers usually retain enough depth to provide adult trout habitat. Enabling willow growth enables the applicant to meet its erosion control objective, whilst providing some trout cover and heat sink mitigation.

8.126 Rock protection can cause issues in smaller rivers such as Upper Motueka, Motupiko, Anatoki and Waingaro. Softer engineering options for inter-planted stub spurs, or tree groynes using adjacent willow are likely to be more effective at maintaining habitat. A number of new conditions (56A -57) have been recommended to mitigate the adverse effects of the rock protection on habitats.

Consent Term

8.127 Submitters have expressed some concern over the duration of consent, particularly if the Council approves the application without amendment. There is general consensus that, given the uncertainties with respect to the cumulative effects of some of the activities, the 35 year term applied for is too long.

8.128 Decisions on the term of any consent need to be carefully considered and the reasons for deciding on a shorter term than requested in the application or set in legislation need to be included in the decision report.

8.129 Schedule 28A of the TRMP provides some guidance on the matters to be considered when making a decision on the length of a consent term:

1. The nature and sensitivity of the affected environment, including:

   (a) the risk of unforeseen adverse effects arising from the consented activities; and

   (b) the level of knowledge about the affected environment.

8.130 The global application of the consents mean that there may be some risks that are currently not adequately understood (such as, changes to river morphology removing habitat) and the conditions of consents may not adequately avoid, remedy or mitigate some unforeseen adverse effects.

2. The nature of the activities, including:

   (a) the degree to which the methods used to control, avoid, remedy, or mitigate the adverse effects of the consented activities are of a temporary nature or inconsistent with the requirements of the Act and the time that is practicable for the consent holder to implement other options;

   (b) the level of compliance monitoring, environmental impact monitoring, reporting and action required by the conditions on the resource consents;

   (c) the significance of the activities relative to the existing situation and the capacity of the affected environment;

   (d) the duration of consents sought by the applicant;

   (e) the rate of change in technology that may mitigate adverse effects resulting from the activities;

   (f) the permanence and economic life of the activities;

   (g) the costs and benefits of the activities to the community;

   (h) the consent holder's capital investment in a pre-existing activities;

   (i) any documented and proven history of non-compliance with the requirements of the Act, and the response to that non-compliance by the consent authority and those undertaking the activities;

   (j) guidance from resource management case law;

   (k) any resource management work committed to by the consent holder which will have positive or beneficial environmental effects and is dependent on consent duration.

8.131 The applicant has sought a 35 year term for all the consents. Monitoring of past global river work activities has indicated that the adverse effects of the activities are greater than that suggested by the applicant.

8.132 The management of freshwater and rivers is changing relatively rapidly with new direction provided by the Ministry for the Environment. There is also likely to be significant change in technology and the understanding of river engineering during the 35 year term applied for.

8.133 The applicant has been unable to define best practice yet proposes it in their draft conditions of consents. It is recommended that this be defined as part of the conditions of consent.

8.134 Other similar consents from Otago, Wellington, and Bay of Plenty have been issued for much shorter terms (Otago- 10 years issued in 2011, Wellington - 15 years issued 1998, Bay of Plenty- issued for 9 years in 2009). For the abovementioned reasons it is recommended that the terms of each of the consents shall be no more than 20 years.

Other matters

8.135 Advice has been provided by the Council's Resource Scientist (Rivers). He has recommended conditions to ensure that good practice is achieved. These have been included where possible in the recommended conditions and are appended in Attachment 4.

9 Summary of Key Issues

9.1 The nature of a global consent is challenging, rivers are not simple systems, they often react in ways that were not anticipated. There is often a tradeoff between managing a river and providing for all habitat values on an ongoing basis. It is accepted that the scale of each proposed work is likely to be different, and any one work is unlikely to cause a significant change, but the effects of these works have the potential to be cumulative and there is the potential to cause significant adverse effects if the resource is not managed in a way that provides for its values. There will always be competing interests and compromise from all parties is needed. If rivers are increasingly confined, the cost of control and the risks to some assets increases.

9.2 The application is predicated on ensuring that good practice is followed by the Applicant. Stakeholders need to be involved in the works planning process and ensuring that good practice is achieved and the management plan and the specific plans are supported. There are potential positive synergic effects when different disciplines work together for a common goal.

9.3 The most significant long term risk to the natural environment from the river control works is the physical changes to the river, the resulting changes in habitat and potential adverse effects on the ecosystems. Adverse effects on water quality within the District's river systems is also a risk, it is moderately simple to monitor and control, but significant discharges can have immediate or cumulative adverse effect on the downstream ecosystems. It is acknowledged that many of the changes to water quality resulting from the works are likely to be temporary.

9.4 With respect to the authorization of the structures in the coastal marine area, although the use of rock protection is generally not supported by the objectives and policies in the NZCPS or TRMP, and is generally considered a "last resort" for managing erosion in the coastal marine area, these structures were originally constructed for river management purposes and they continue to provide for that purpose. Considering Council's obligations under the SCRCA, the fact that the structures are already in place and are generally located in already modified environments, there does not appear to be a compelling reason not to retrospectively authorize them. However, the structures are in ecologically and culturally sensitive areas. The provisions of the NZCPS and TRMP do not support new hard engineering solutions to erosion protection, unless alternative softer engineering approaches have been assessed as untenable. As such the application for open ended extensions to the existing structures is not supported. The Consent Authority may want to provide for limited extensions over the duration of the consent to mitigate end effects where they are having a significant adverse effect on the adjoining land or significant infrastructure.

9.5 Significant work has been undertaken on the recommended conditions. Management plans are only as good as the environmental bottom lines that support them. The conditions proposed by the applicant have been modified to provide a stronger foundation for the management plans. It is anticipated that the submitters will have additional input through the exchange of evidence and hearing process.

10 Section 5 and Recommendation

10.1 We accept that a global consent is an appropriate mechanism for the Council to undertake its statutory responsibilities under the SCRCA. We also accept that this means that some of the detail of works at specific sites is not able to be provided in the application. However, we consider that the conditions of consent, including the requirement to consult with stakeholders, the EMPs, SSEMPs, Rivers AMP and Work Programmes all provide a robust framework to enable the Council to undertake its responsibilities in a manner that will avoid, remedy or mitigate the more significant adverse effects of the works.

10.2 As planners weighing up all of the relevant considerations in terms of Section 5 of the Act, we consider that granting the consents would promote the sustainable management of natural and physical resources and, on balance, we recommend that the application for

Land Use Consent - Works in a watercourse - RM100851

Water Permit - RM100853

Discharge Consent - RM100854

Coastal Permit - Occupation/Structure - RM100855

Coastal Permit - Discharge - RM100856

Coastal Permit - Disturbance - RM100857

be **granted**, subject to the following conditions.

Recommended Conditions:

RIVERS COVERED BY THESE CONSENTS

1. These resource consents apply to all rivers, and their margins, within the jurisdictional boundary of Tasman District excluding the following:

   (a) All 24 Significant Natural Areas listed in Schedule 18.1A of the Tasman Resource Management Plan;

   (b) Waikoropupu Springs; and

   (c) All streams within Abel Tasman National Park.

   All waters listed in Schedule 1 (Waters to be retained in Natural State) of the Buller River Water Conservation Order 2001, being:

   (d) Travers River;

   (e) Lake Rotoiti;

   (f) Sabine River;

   (g) Lake Constance;

   (h) D'Urville River;

(i) Lake Rotoroa;

(j) Owen River and all tributaries upstream of, and including, Halfway Creek;

(k) Fyfe River upstream of the boundary of the public conservation estate and private land (map reference M28 698 550);

(l) Matiri River upstream of map reference M28 550 517;

(m) Matakitaki River upstream of boundary between conservation estate and private land (map reference M30 700 070);

(n) Nardoo Creek;

(o) Glenroy River upstream of Granity Creek (map reference M30 546 004); and

~~(p) Maruia River and all tributaries upstream of Alfred River confluence~~

~~(q) Lake Daniells~~

(r) Deepdale River.

~~(s) Te Wharau River (Stony River)~~

(t) Blackwater River ~~and Ohikaiti River~~

~~(u) Ohikanui River and all its tributaries~~

All waters listed in Schedule 1 (Waters to be retained in Natural State) of the Motueka River Water Conservation Order 2004, being:

(v) North and South branches of the Wangapeka River above their confluence (M28 665 708);

(w) Rolling River upstream of its confluence with the Wangapeka River (M28 749 736);

(x) Skeet River upstream of M27 822 873;

(y) Upper Motueka River above upper Gorge (N28 052 517);

(z) Rainy River upstream of the Conservation Land boundary (N29 946 440);

(aa) Upper Dart River upstream of M28 807 686;

(bb) Baton River upstream of M27 839 889;

(cc) Pearse River upstream of M27 898 985;

(dd) Graham River upstream of N27 903 017;

(ee) Pokororo River upstream of N27 968 058;

(ff) Rocky River upstream of N27 004 079 within Kahurangi National Park; and

(gg) Streams emerging from Mt Arthur marble and northern Arthur Range being the Pearse (from M27 882 995), Ellis (from M27 833 951), North Branch of Graham (from N27 921 034), and streams draining northern part of the Mt Owen being Granity, Blue, and Nuggety Creeks upstream of M28 737 709.

Advice Note

This condition has been included as there is potential for some of the waterways in the TRMP or Water Conservation orders to change over the term of the consents.

General Conditions That Apply To All Activities

2. All works authorised by these consents shall be undertaken ~~carried out under these consents shall be~~ in general accordance with the application. If there are any inconsistencies with the application ~~n the event that there are any conflicts between the application documents~~ and any condition(s) of these resource consents the conditions of consent shall prevail.

3. These consents only authorise works being carried out by the Consent Holder carrying out its functions under the Soil Conservation and Rivers Control Act 1941 for the express purpose of:

   (a) Protecting the channel from erosion or instability;

   (b) Maintaining efficient movement of water and sediment down the channel; or

   (c) Preventing or mitigating the adverse effects of flooding.

Review condition

3A Pursuant to Section 128 of the Resource Management Act 1991, the Consent Authority may review the conditions of these consents by serving notice on the Consent Holder at any time for any of the following purposes:

   (a) to deal with any adverse effect on the environment that may arise from the exercise of these consents, and which is appropriate to deal with at a later stage - for example, if in the future the flood mitigation works are found under normal rainfall and run-off events to exacerbate flooding and ponding on the upstream property; and /or

   (b) to require the Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment; and/or

   (c) to assess the appropriateness of imposed compliance standards, monitoring regimes and monitoring frequencies and to alter these accordingly; and/or

   (d) to change the compliance standards imposed by conditions of these consents to standards that are consistent with any relevant Regional Plan, District Plan, or Act of Parliament.

Expiry

3B These consents shall expire on … October 2035 (20 years following the grant of consent).

Emergency Works

3C For the avoidance of doubt these consents do not apply to works undertaken by the Consent Holder under Section 330 of the Resource Management Act 1991 (Emergency Works). However, these consents do apply to any remedial works that are required to be undertaken once the emergency has passed.

Advice note:

The Consent Holder shall advise the Environment and Planning Manager of the need to carry out emergency works before, or as soon as reasonably possible after, the event.

General

3D All works shall be undertaken in general accordance with best practice.

3E The Consent Holder shall prepare a document that defines best practice for river works in the Tasman District. Preparation of this document shall be undertaken in consultation with stakeholders and consistent with national best practice for similar activities and shall be

submitted to the Co-ordinator, Compliance Monitoring for approval within three months following the grant of these consents.

4. All works shall be planned and scheduled, ~~where possible and practicable~~, to take account the following ~~of~~:

   (a) Suitable weather and river flow conditions;

   (b) Spawning and fish migration seasons and locations of native and introduced fish;

   (c) Nesting season and location of native birds;

   (d) The need to minimise the duration and frequency of the works;

   (e) Access requirements to the site;

   (f) Safety; and

   (g) Impacts of traffic, dust, and noise.

5. All works shall be designed~~, where possible and practicable~~, to take into account the following:

   (a) The need to maintain flood carrying capacity of the river;

   (b) The durability and robustness of works to minimise river intervention;

   (c) The balance between effectiveness and affordability;

   (d) Opportunities to enhance channel stability;

   (e) The avoidance of navigational hazards;

   (f) The maintenance of aesthetic values;

   (g) Minimising river shortening where channel realignment is needed; and

   (h) The need to maintain critical low flows.

6. All works shall be supervised by a suitably qualified or experienced river/drainage engineering practitioner.

7. The chosen methodology, including machinery to be used, shall be designed and undertaken in order to minimise ~~as far as practicable~~ any potential adverse effects on the environment.

8. ~~Where necessary,~~ Sediment control measures shall be used where required to minimise sediment discharged to ~~adjacent~~ water.

8A Works undertaken in small coastal streams shall use over-pumping of the flow where works are proposed on the wetted bed.

Advice Note:

Small coastal streams are streams less that 7 metres in width within 10km from the coast.

Width is defined as the distance between the top each bank.

8B Work shall be planned and undertaken in a manner that minimises works in the wetted bed of the river or foreshore.

8C The Consent Holder shall ensure that erosion and sediment control works and associated devices are maintained in an effective capacity at all times during the works and until the

site is stabilised.

Advice note

The site is considered stabilised is when the risk of erosion and sediment generation has returned to the pre works state.

8D The Consent Holder shall inspect works at appropriate intervals and directly after any significant rainfall or flooding event until the site is stabilised.

Advice note

This is to ensure that the methods that have been employed to stabilise the site are operational until the site is stabilized. The appropriate interval will be dependent on the method used to stabilise the site.

9. Water carts and/or other dust control methods shall be used to minimise ~~mitigate potential~~ the spread of dust off site. ~~effects. where dust from works may otherwise reach residential dwellings or other populated areas~~.

Advice note:

The use of oil for dust control is not authorised by these consents

10. The Consent Holder shall ensure that~~, as a result of carrying out any river works authorised by these consents~~:

(a) Any land clearing is limited to the smallest area practicable to enable the authorized works to be undertaken. ~~No more area shall be cleared that needed and duration of land clearing activities shall be minimised to the greatest extent possible~~;

(a1) The ~~area and~~ duration of land clearing activities is minimised to the shortest period within which to undertake the authorized works. ~~shall be minimised to the greatest extent possible;~~

(b) The natural drainage of the site is ~~shall be~~ maintained to the greatest extent possible; The intent of this condition is not clear, clarification is sought as to whether this is referring to drainage via soakage, drainage to the water course or diversion of overland flows.

(c) Where necessary, ~~cleared~~ worked areas shall be contained with bunds to minimise sediment runoff into adjacent water;

(d) ~~Where necessary, e~~Exposed soil is ~~shall be~~ seeded or re-vegetated as appropriate as soon as reasonably possible following vegetation removal, to achieve at least 60% strike within 8 months of work being completed; and

(e) Damage to any non-target riparian vegetation is minimized.

11. ~~Machinery shall be kept out of flowing water to the greatest extent possible. Where this is impossible measures shall be taken to minimise bed disturbance and release of sediment (e.g. using only one crossing point).~~ Machinery shall be kept out of flowing or coastal water whenever and wherever possible. Where this is not possible, work shall be undertaken within the minimum time required in the wetted bed of the watercourse or foreshore and with the minimum necessary disturbance.

12. If vehicles and machinery need to enter and pass across a river or the coastal marine

area they shall do so by the shortest practicable route.

12A Any existing available access tracks to the watercourse or coastal marine area should be used where practical.

12B Any work that needs to be undertaken within flowing water and/or coastal marine area shall where possible be bunded off from the stream flow and/or coastal marine area to minimise sediment discharge.

Advice Note

It is accepted the works would not be in the flowing water once bunded off. However the initial works to bund of the area will need to be in the flowing water and there are potential risk with the removal of the bunding.

13. To prevent the spread of Didymo or any other aquatic pest, the Consent Holder shall ensure that activities authorised by these consents are undertaken in accordance with the Biosecurity New Zealand's hygiene procedures.

Advice Note

The most current version of these procedures from the Biosecurity New Zealand website http://www.biosecurity.govt.nz.

14. Refuelling and fuel storage shall take place~~, wherever possible,~~ outside the bed of the river or coastal marine area. Where this is not possible this activity shall occur where no fuel can enter water in the event of an accidental spill occurring.

15. All spills shall immediately be contained, controlled by an approved product, and shall be removed from the site and disposed of at a site authorised to accept such waste material.

16. The Consent Holder shall advise the Council's Coordinator, Compliance Monitoring and the Duty Health Protection Officer, Nelson/Marlborough Area Health Board immediately of any spill of hazardous substances which may affect water. The Consent Holder shall report to Council in writing and within 20 working days describing the manner and cause of the escape and the steps taken to control it and prevent any recurrence.

17. Burning of vegetation shall be supervised at all times and fire control equipment shall be available at all~~the~~ sites. Fire restrictions shall be adhered to at all times.

Advice note

No objectionable of offensive smoke shall be emitted beyond the boundary of the work. This is specified in the permitted activity of the discharge to air rules of the TRMP.

18. At the completion of the works all excess construction materials shall be removed from the site.

18A The Consent Holder shall avoid the transport and potential introduction of pest species.

18b~~49~~. All machinery shall be cleaned of weed and silts before leaving the works site to minimise the risk of spreading undesirable plant species.

19. ~~Debris that has the potential to increase the risk of flooding or erosion shall be cleared as soon as conditions allow and if possible shall be part of the programmed works~~

Clarification is sought with respect to this condition, as it is drafted it is very wide reaching and onerous - suggested new condition below.

Or

19A Woody material should be managed within the riparian and wetted bed for ecological purposes. The Consent Holder shall ensure that excess slash and debris associated with works under these consents are removed from all watercourses immediately following completion of works.

Advice note:

Typically the wood size increases with river order but frequency of occurrence reduces. Thus smaller streams have a greater volume of smaller material.

19B Slash and debris removed from the work site and shall be placed where that slash and/or debris cannot enter the watercourse or coastal marine area.

Advice note:

This excludes material referred to in condition19A.

19C The dragging of excavated material from the opposite bank from where a digger is operating through the river, stream or coastal marine area shall be avoided if possible.

19D The Consent Holder shall ensure that excavated or disturbed soil does not slump into or get eroded into the bed of any river, stream or coastal marine area.

19E The Consent Holder shall ensure that works in watercourses and the coastal marine area that are carried out under these consents are timed to avoid the main spawning and migration periods of indigenous fish and trout.

Advice note:

Specific times have been avoided in this condition as it may be practical to undertake work in a watercourse well away from fish spawning. For example works in the lower section of a river are unlikely to be effected by trout spawning in the upper reaches.

20. Fish passage shall be maintained or enhanced in rivers at all flows during in-channel works.Works and structures authorised by these consents shall not cause the stranding of fish.

20A The Consent Holder shall ensure that once completed:

(a) the area of beach disturbed shall be contoured to a natural bed form, consistent with the adjacent beach areas.

Advice Note:

This is less important with high gradient or mountain fed water bodies.

(b) all plant, equipment, chemicals, fencing, signage, debris, rubbish and any other material brought on site is removed from the site. The site shall be tidied to a degree at least equivalent to that prior to the works commencing; and

(c) the works do not cause any additional flooding, erosion, scouring, land instability or property damage. If any of these do occur, the Consent Holder shall take all actions that are reasonably necessary to remedy any damage.

21. Where the activities pose~~s~~ a risk to the public, ~~then~~ signs shall be erected in prominent public location(s) near the works warning the public of the risk(s). The signs shall be removed following the works. The sign shall include the contact details of the person

supervising the works.

22. The Consent Holder shall consult with the relevant roading authority or individual landowner before undertaking any river works within 30 metres of a road accessing a river or 50 metres of any bridge or weir or affected assets. Works shall not have an adverse effect on legally authorized structures.

22A No works shall be undertaken within 500 metres of a hydrological monitoring site without consulting in writing the owner of the monitoring site prior to any activity occurring.

23. Where a structure is removed or demolished, no part of the structure shall remain in the bed, foreshore or on the bank of the river, stream or coastal marine area and the bed or foreshore shall be reinstated as far as practicable to its pre-disturbed state and consistent with the state of the adjacent area.

24. The Consent Holder shall ensure that, as a result of carrying out any river works authorised by these consents, public access to rivers, streams and the coastal marine area shall not be restricted, other than in situations where there is a demonstrable and necessary risk to public safety, and only to the area immediately affected by the works.

25. The Consent Holder shall ensure that any contractors undertaking the works are provided with a copy of the resource consents and conditions and shall ensure compliance with all conditions.

26. In the event of accidental discovery of archaeological items, all work within 20 metres shall immediately cease, and the relevant iwi and the Heritage New Zealand ~~Historic Places Trust~~ shall be contacted. Work shall not begin again until Heritage New Zealand ~~Historic Places Trust~~ has confirmed that the Heritage New Zealand Pouhere Taonga Act 2014 ~~Historic Places Act 1993 does~~ not apply, or an archaeological authority has been granted.

Discharge Of Sediment - Receiving Water Standards

26A ~~89~~.The release of sediment directly associated with any river bed disturbance activities shall not cause the visual clarity of the receiving water to change by more than:

(a) 40% for more than 30 minutes;

(b) 30% for more than 2 hours;

(c) 20% for more than 24 hours.

~~40 percent~~ as measured by a black disc at any point more than:

(a) 50 metres downstream where the wetted width of the river is less than 5 metres; or

(b) 100 metres downstream where the wetted width of the river is between 5 and 20 metres; or

(c) 200 metres downstream where the wetted width of the river is greater than 20 metres; or

(d) 100 metres from the point of discharge within the coastal marine area

Measured from the furthest downstream point of the works ~~and 24 hours after works have ceased and compared with upstream of the discharge.~~

26B The suspendable benthic sediment volume, as measured by Sediment Assessment Method 4 in the Sediment Assessment Methods: Protocols and Guidelines for Assessing the Effects of Deposited Fine Sediment on In-stream Values (Ministry for the Environment

2011), shall not be increased downstream of the operations compared to upstream of the operation by more than 30%.

26C Works in the wetted bed shall be undertaken for no more than 10 hours each day.

Visual Impacts

26D ~~90~~.No native trees shall be removed unless absolutely necessary to ~~for~~ undertake ~~ing~~ the works covered by these consents.

26E ~~91~~.In areas which are highly visible to the public including from roads, reserves, river and coastal access points and popular fishing areas and from private dwellings ~~of high public visibility~~, all materials used on site shall be chosen and constructed so that they integrate with surrounding landscape and shall be to a high standard of finish and be able to withstand public usage.

26F ~~92~~When undertaking any river management works straight, uniform edges and gradients shall be avoided to prevent the river from appearing channelised or modified to a significant degree. The design shall provide for future movement (meandering) of the river channel within a permitted corridor rather than constraining the channel to a single fixed alignment.

Advice note:

A natural pattern should be achieved for the relevant river or stream type either by reference to Channel Restoration Design for Meandering Rivers ERDC/CHL CR-01-1 published by US Army Corps of Engineers or similar document or by reference to the natural pattern up and downstream of the site.

26H ~~93~~.Minor modifications to drainage channels (with a low level of existing naturalness in terms of topography) shall be undertaken in a manner that does not make the river channel or banks unsafe, providing exit points where possible should people/objects fall into the channel. Exit/entry points can be combined with maintenance access requirements.

26I~~94~~. All railway irons, steel or wooden piles and wire rope, tyres and other artificial river control materials which are no longer performing any useful river control function and whether or not they are of recent origin, shall be removed as soon as practicable after they have become evident and shall be removed from the site of any works and disposed at a facility approved to receive them.

26J The Consent Holder shall ensure that any reduction in the river cross section is minimised during and after any work in order to minimise the risk of the river no longer being contained in its channel.

River Morphology

26K The Consent Holder shall develop a morphological characteristics program based on the Horizon's Regional Council "*Generic Standards for Good Practice Environmental Code of Practice for River Works 28 June 2010*". This shall be submitted to the Co-ordinator, Compliance Monitoring for approval within 3 months following the grant of these consents.

26L The works shall retain a natural diversity of substrate (boulders, cobbles, woody debris and gravels), channel cross section (leave undercut banks wherever possible), fish cover, meander pattern as much as possible.

26M The meander pattern shall have a variety of stream bend radii, in keeping with stream styles

of natural creeks in the area. All work should be undertaken according to the annotated aerial photo prepared in accordance with condition 26K.

26N Woody material (50-400mm diameter logs with branches e.g. *Macrocarpa* branches and roots) shall be established within about 10% of the length of the low-flow channel. These shall be placed over the water and in the top of the water column in the deeper sections of the waterway.

Advice Note:

The purpose of this condition is to provide fish cover.

26O Installing large lengths (>100m) of rock rip-rap on smaller waterways (<5m average width) shall be avoided.

26P The natural thalweg profile (longitudinal transect showing depth diversity) and width character shall be recreated as close as possible to the original condition in order to retain diversity of depth (deeper pools as well as riffles).

26Q Disturbance of residual pools (pools that permanently contain water once river flows have ceased) should be avoided. There shall be no removal of water from residual pools in the stream by infilling, draining or other means.

Advice Note:

Residual pools are an important refuge for fish and invertebrates when other parts of the creek dry up. Such pools contain high abundance of many species during dry spells and are mainly found in Moutere Hill Country.

26R In larger mobile braided rivers that may be habitat for river-nesting birds, the finished channel shall provide for islands suitable for the nesting habitats of these birds.

26S Where the Consent Holder is diverting a waterway to a completely new channel as part of the river control works:

a. Where practical cobble/gravels from the old channel to a depth of 300mm shall be transferred to the new channel unless there is a high proportion of fine sediment or the fine sediment is contaminated. In these latter situation cobble/gravel with <5% fine sediment content shall be brought in to cover the new invert to a depth of 300mm.

b. Riparian trees shall be planted along the waterway to mitigate the affects of the bed disturbance. The planted trees shall cover at least 70% of the length of each bank in a manner that will result in maximising the overhang of vegetation over the stream.

Management Plans

27. The Consent Holder shall, within six months of the date of commencement of these consents, submit the Council's Coordinator, Compliance Monitoring for certification, an Environmental Management Plan (EMP) for all the activities authorised by these consents. The Consent Holder shall consult with the Department of Conservation, Fish and Game NZ, iwi and both Tasman District Council's Resource Scientists Rivers and Freshwater Ecologist when preparing the EMP. The EMP shall be submitted to the Council's Coordinator, Compliance Monitoring for certification. The EMP shall include, but not necessarily be limited to, the following:

(a) The process that will be followed when deciding the appropriate river management solution;

(b) A description of the various river management activities that the Consent Holder may use;

(c) The best practice ~~mitigation measures~~ that will be employed in accordance with Condition 3D and 3E.

(d) A description of how hazardous substances will be stored and managed;

(e) Pre-works, during works, and post-works monitoring that will be undertaken to confirm consent compliance;

(f) Notification and consultation procedures that will be followed, including where the works are likely to generate sediment that may affect downstream water users, including community water supplies; and

(g) A description on how relevant conditions of these consents will be complied with.

28. The EMP may be reviewed and updated on an as need be basis but not less than once every two years. In particular, the results of monitoring undertaken shall be used to inform whether any changes to the EMP are required in order ~~so as~~ to minimise adverse effects. The Consent Holder shall consult with all relevant stakeholders when reviewing and updating the EMP. Any updates shall be provided to the Council's Coordinator, Compliance Monitoring for certification.

29. All works shall be undertaken in accordance with the most recent~~ly latest~~ certified version of the EMP.

30. Notwithstanding Condition 29, prior to any works being undertaken that fall into any of the criteria set out in (i) to (vii) below, the Consent Holder shall prepare and submit to the Council's Coordinator, Compliance Monitoring for certification a Site Specific Environmental Management Plan (SSEMP). The Consent Holder shall consult with the parties stated for each criteria below when preparing the SSEMPs:

(a) Any activities involving removal or disturbance of whitebait spawning habitat within 1 kilometre of any river mouth between 15 February and 31 May. Parties to be consulted shall include iwi and the Department of Conservation.

(b) Any activities involving disturbance of any part of the bed covered by water from 1 May to 30 September in any year in those rivers listed in Schedule 30A of the Tasman Resource Management Plan as having trout spawning values. Parties to be consulted shall include the ~~New Zealand~~ Fish and Game NZ ~~Council~~.

(c) Any activities involving the use of motorised machinery from October to February (inclusive) in any river bed location listed in Schedule 30A of the Tasman Resource Management Plan as having a black-fronted tern nesting site. Parties to be consulted shall include iwi and the Department of Conservation.

(d) Any activities involving the use of motorised machinery from October to December (inclusive) in any river bed location listed in Schedule 30A of the Tasman Resource Management Plan as having a black-billed gull nesting sites or the presence of dotterels, black fronted terns, oyster catches and, blue ducks. Parties to be consulted shall include iwi and the Department of Conservation.

(e) Any activities in the coastal marine area (CMA). Parties to be consulted shall include iwi and the Department of Conservation.

30C Each SSEMP shall include the following:

(i) the works proposed, including methodology and timing;

(ii) details and outcomes of the consultation undertaken;

(iii) an assessment of the relevant ecological values present at the site;

(iv) reasons why the works are needing to be undertaken during the specified timeframe;

(v) how potential adverse effects are proposed to be mitigated (if any); ~~and~~

(vi) the monitoring that will be undertaken; and

(vii) demonstrate how the disturbance of the beds and margins of waterways will be limited to the extent necessary to undertake construction works, and in an manner that avoids or mitigates adverse effects on the quality and passage of surface water and aquatic habitat.

No works shall be undertaken until certification of the SSEMP is obtained from the Council's Coordinator, Compliance Monitoring.

Advice Note:

The Consent Holder will try to schedule works that fit into (i) to (vii) to avoid having to work during the specified periods of time stated, however for some rivers works may need to occur during the stated period. This condition recognises that that there are special values that are at risk when works occur during these periods of time and requires a site specific works plan to be developed. Schedule 30A of the Tasman Resource Management Plan has been attached to these consents for ease of reference.

30B The SSEMP may be amended at any time by the Consent Holder provided that any amendments made maintain or enhance the degree and / or extent to which adverse environmental effects attributable to the construction, maintenance are avoided or mitigated; and those amendments do not result in non-compliance with any resource consent condition.

30C The Consent Holder shall comply with the Environmental Management Plan (EMP) and any relevant Site Specific Environmental Management Plan (SSEMP) at all times.

30D In the event of any conflict between resource consent conditions and certified EMP or SSEMP, the resource consent conditions shall prevail.

Forward Work Programme

31. The Consent Holder shall prepare a programme of works for consultation with stakeholders. The programme ~~of works~~ shall outline river management works, and their respective priorities, that are proposed to be undertaken within a specified future period of time.

Advice Note:

The programme of works provides a guide as to the likely works that may be undertaken each year under these resource consents. However, the activities authorised by these consents are not restricted to those specified in the programme of works. Works that are not listed in the current programme of works may be undertaken under these consents.

32. In preparing programme of works the Consent Holder shall consult with the Department

of Conservation, the ~~New Zealand~~ Fish and Game New Zealand ~~Council~~, iwi and the Council's relevant Resources Scientists (Rivers). Those parties shall be advised of the draft programme of works as it affects their interests.

33. Once finalised, copies of the programme of works shall be forwarded to the Department of Conservation, ~~New Zealand~~ Fish and Game New Zealand ~~Council~~, iwi and the Council's Coordinator, Compliance Monitoring.

34. Two monthly works programmes, including variations or amendments to the programme of works shall be provided in written form to the Council's Coordinator, Compliance Monitoring at least three days prior to the first day of the month to which the works apply.

35. A summary of the Consent Holder's forthcoming programme of works shall be made available to the general public through listings in the Council's Newsline (or as printed in the Nelson daily newspaper or in relevant community newspapers).

36. The Consent Holder shall provide details of all completed works to the Council's Coordinator, Compliance Monitoring upon written request.

Time for consultation

36A Stakeholders shall be given not less than 20 working days to review and comment on draft plans including the EMP, SSEMPs and Forward Work Programme. If no reply is provided by the stakeholders within 20 working days this may be taken as their approval for the proposed works.

Construction Noise

37. Noise generated by the activities, measured at or within the notional boundary of a dwelling, shall not exceed:

	Day	Night
Leq (15 minute)	55 dBA	40 dBA
Lmax		70 dBA

37A All noise from activities authorized by these consents shall meet the requirements of the long duration noise limits in Table 2 of New Zealand Standard NZS6803:1999 (Acoustics-Construction Noise).The Consent Holder shall adopt best practicable option to ensure the emission of noise does not exceed a reasonable level

Hours of Operation

38. Works shall not occur outside the hours of 0600 to 1900 Monday to Friday, and 0700 to 1800 on Saturdays. Works shall not occur on Sundays or Public Holidays or between 24 December and the 4 January in any given year. Emergency works are exempt from this condition.

Restricted Activities

39. The rules and standards set out in the New Zealand Code of Practice for Electrical Safety Distances, NZECP34: 1993 shall be complied with at all times.

39A No lawful take of water shall be adversely affected as a result of any work authorized by these consents.

Complaint Register

40. The Consent Holder shall maintain a complaints register detailing ~~which details~~ the content of all complaints received and of actions taken where necessary to remedy any issue. Copies or details of the Complaint Register shall be made available to Council's ~~Compliance~~ Co-ordinator, Compliance Monitoring on request. All complaints shall be forwarded to Coordinator, Compliance Monitoring within one working day and again within 20 working days detailing the remedial action undertaken.

Specific Conditions For Works On River Management Structures In The Coastal Marine Area

41. These consents authorise the maintenance, repair, replacement, removal and/or extension of the river control structures located within the Coastal Marine Area (CMA) and listed in Attachment 1~~(~~attached~~)~~ to these consents.

41A Any extension of river control structures in the coastal marine area shall be limited to those needed to mitigate significant end effects arising from the presence of the existing structures.

41B The Consent Holder may add additional river control structures to Attachment 1 of this consent by advising the Council's Environment and Planning Manager in writing. Structures that may be added to Attachment 1 may only be those that are either:

(a) Pre-e~~E~~xisting (at the date of the commencement of these consents) river control structures in the coastal marine area that have been located and identified since the date of commencement of these resource consents; or

(b) New river control structures in the coastal marine area for which separate resource consents have been obtained for their occupation and use.

Advice Note:

Attachment 1 lists all the river control structures that the Consent Holder has records of. However additional structures may exist and this condition allows them to be added to Attachment 1 without undue formality so that their ongoing maintenance, repair, replacement, removal or extension is covered by these resource consents. This condition also allows new structures to be added to Attachment 1 where such structures are authorised by way of new permits.

Small Coastal Streams

42. In all small coastal streams all in-stream works, including work on channels, diversions, removal of structures, etc shall be undertaken under the supervision and on-site direction of a suitably qualified and experienced Ecologist. The Ecologist shall direct the works to achieve the following priorities and outcomes:

(a) to provide for the significant enhancement of aquatic habitat, this specifically includes the detailed location of meander pattern of the low-flow channel and the primary over-flow channels (where wetlands will be established), bank shape, bed substrate, riparian "boat-shaped islands" (that will be planted in shrubs/trees) and variety of depth and width (run-riffle-pool sequencing);

(b) the effects on aquatic life are minimised as a result of the diversion of any watercourse, the timing, sequencing and final completion of the diversion shall be carried out in a manner that maximises fish recovery and minimises sediment discharges;

(c) the amount of sediment discharged to any water body is minimised as far as practicable;

(d) materials (boulders, logs, clean cobble/gravel etc) used in the in-stream works are appropriate for the site and will provide for long-term positive outcomes without causing flood management problems;

(e) works that are achievable are achieved in a reasonable level of time and expense given the context of the application and conditions of consent; and

(f) where and when the Ecologist considers it necessary he/she shall undertake the necessary fish salvage and relocation functions. Fish will be recovered and transferred prior to earthworks in or drying of the existing stream channel.

Gravel Beach Raking/Ripping

43. The Consent Holder shall ensure that any raking/ ripping of gravel beaches or the fairway complies with the following:

(a) Machinery shall not enter the active flowing channel except to acces the site;

(b) The activities shall only take place in the dry bed (i.e. outside the wetted part of the bed); and

(c) All surplus vegetative material shall either be removed from the site (and immediate flood plain) or disposed of by burying or burning.

Advice Note:

This does not apply to the removal of vegetation planted as part of re-vegetation undertaken at the completion of the works.

Gravel Relocation

44. No gravel shall be extracted or removed from any river bed when giving effect to ~~as part of~~ these resource consents.

Advice Note:

For the purposes of this condition "extracted or removed" means removal of gravel from the river bed or river system. For the avoidance of doubt, these resource consents do authorise the extraction and re-deposition of ~~movement of~~ gravel within the bed of the river where the particular river works are occurring, ~~which can include extraction of gravel and re-deposition of it within the same river bed~~ provided it is not moved further than 1,000 metres from where it was extracted.

45. Gravel beaches shall be left well shaped and shall where possible taper uniformly to the water's edge and/or ~~to the~~ river bank. Any gravel moved shall be placed in a manner that minimizes siltation (e.g lenses of silt shall be removed from the waterway).

46. All blind channels shall be constructed from the downstream end working upstream, leaving a separation bund at each end until breaching occurs. No more than 300m of blind channel shall be constructed in any one year at any site.

46B The Consent Holder shall take all practical measures to reduce the standing of fish and to maintain the pre-existing state of fish passage.

46C Diversion of water into a new channel shall only occur once the diversion channel has been fully excavated and may be left for flood to form the new path way.

46D The Consent Holder shall ensure that there is no reduction of water in the watercourse as a result of any diversion.

46E The Consent Holder shall ensure that river work do not significantly reduce other river bed levels.

Advice note:

The purpose of this condition is to protect groundwater, to ensure that existing bores are not adversely affected and to control secondary flows to other watercourses. These other systems rely on periodic flushing of water to ensure their habitat is maintained and their water quality does not reduce over time.

47. Where possible machinery shall work from outside the flowing channel.

Removal Of Debris And Drain Clearing

48. Removal of in-stream woody debris shall only be undertaken where it is needed to reduce the risk of flooding or erosion, or to remove a hazard to recreational users or lifelines (e.g., bridges)

~~49. All machinery shall be cleaned of weed and silts before leaving the works site to minimise the risk of spreading undesirable plant species.~~

50. In tidal areas special care shall be taken to maintain or enhance the grassed banks that flood during spring tides. Works over the spawning season shall be avoided wherever possible.

River Bank Battering

51. If banks need to be ~~shall be~~ battered back this shall be to a grade appropriate to the soil/rock conditions in order to minimise risk of slope failure and to ensure vegetation is able to be planted.

52. Geotextile layers shall be used where necessary to hold soil in place and minimise erosion.

53. Bank battering shall be appropriately transitioned into upstream and downstream bank alignments and slopes.

54. All exposed areas that have the potential to release sediment shall be revegetated as soon as possible after shaping.

Advice note:

Vegetation on banks can provide shading to control water temperature and the growth of aquatic plants, food for aquatic ecosystems and terrestrial habitat.

55. Machinery shall, wherever possible and practicable, operate from the top of the bank.

55A Transverse (cross) blading using bulldozers should be avoided, unless working in the dry bed (at least 300mm above the river water level).

Advice note:

The purpose of this condition is to minimise the scale of effects and longer term habitat changes.

55B The Consent Holder shall ensure that where at all possible one bank is left intact.

Advice note:

The purpose of this condition is to ensure that a reasonable amount of fish cover remains following the work.

55C Material recovered from the wetted bed or edge of bank that may contain fish should be spread out on the river bank and in a position where fish can move down slope back into the stream.

Rock And Other Walls And Groynes

56. Riprap walls shall only be used where investigations confirm that alternative "softer" measures will not provide adequate protection or where immediate protection is required.

56A In the smaller gravel river systems no more than 10% extensions to existing rock rip rap may be made within in any 4 year period.

This shall apply to the following river reaches - to be determined with Fish and Game NZ and DOC

56B If the length of rock riprap exceeds that allowed in 56A the Consent Holder shall provide a report from an appropriately qualified and experienced ecologist demonstrating how the aquatic habitat diversity will be enhanced by the works.

Advice note:

There will be instances were groynes are useful. They can be used to create pools and generate a range of bed profiles that improve habitat. Unfortunately rock riprap does often not provide the habitat.

57. All ~~riprap walls~~ structures shall be designed by a suitably qualified ~~or~~ and experienced engineer. For river reaches defined in 56A this shall be in consultation with an appropriately qualified ecologist.

57A The design of all structures shall take particular account of upstream and downstream transitional effects.

57B Where ~~possible~~ practical ~~the~~ structures shall be designed in a manner that is sympathetic to the curvature of the meander of the river (see conditions 26L to 26S).

57C Where practical, structures should be planted to provide water shading and cover.

58. The height of ~~the~~ structures shall be no greater than is necessary to ensure structural integrity.

59.. Where possible, softer upper bank treatments shall be incorporated that includes vegetation which can ~~cascade over~~ shade and or cover ~~the~~ parts of the structure and watercourse.

~~60. Machinery shall work from outside the flowing channel where possible~~

~~61. Where possible, any works needed to be undertaken within flowing water shall be bunded off from the stream flow to minimise sediment discharge~~

62. Lateral walls shall only be used where specific site conditions or constraints preclude the use of "soft" measures or where close proximity to building or infrastructure dictates a high degree of protection.

~~63. The structure shall be designed by a suitably qualified or experienced engineer~~

~~64. The design of the structure shall take particular account of upstream and downstream~~

~~transitional effects.~~

~~?? The height of the structure shall be no greater than is necessary to ensure structural integrity~~

~~??. Where possible, softer upper bank treatments shall be incorporated that includes vegetation which can cascade over the parts of the structure.~~

~~??. Where possible, any works needed to be undertaken within flowing water shall be bunded off from the stream flow to minimise sediment discharge~~ Moved to general conditions

~~65. Where possible the structure shall be designed sympathetic to the curvature of the meander of the river.~~

~~Groynes~~

~~66. Groyne structures shall be designed by a suitably qualified or experienced engineer.~~

62~~67~~. Concrete rubble shall not be used in the construction of groynes.

~~68. Where possible, any works needed to be undertaken within flowing water shall be bunded off from the stream flow to minimise sediment discharge.~~

69. Vegetation shall be progressively established within embayments between groynes as sedimentation occurs.

Tree Lopping, Trenching And Vegetation Management For Erosion Control (Planting And Removal)

70. <u>The Consent Holder shall ensure that any poplar and willow species used shall be</u> specifically bred ~~poplar and willow species shall be used~~ <u>so that they</u> will not spread by seed<u>ing</u>.

71. <u>A</u> multi-tier canopy consisting of ground cover, shrubs, and trees shall ~~attempt to~~ be established <u>where and whenever practicable</u>.

72. Batter preparation shall be undertaken from the top of the bank wherever possible.

~~73. Where possible, any works needed to be undertaken within flowing water shall be bunded off from the stream flow to minimise sediment discharge.~~

74. The extent of bank shaping shall be the minimum required to undertake the works.

75. Alignment <u>of any work</u> shall be <u>undertaken in a manner that is</u> sympathetic to the curvature of the natural meander of the river.

76. Removal of native trees shall be avoided wherever possible.

76A <u>Structures should be planted whenever and wherever practical in order to provide water shading, habitat and cover.</u>

76B Avoid navigation safety effects e.g., trees pointing up into the current and potentially trapping boats and people.

76C <u>Any willow clearance shall not exceed a continuous 2.5 kilometre reach within any 5km reach in any 12 month period.</u>

<u>Advice note:</u>

<u>This is starting point for a conversation with DOC/Fish and Game New Zealand etc. Note intermittent sections vs continuous blocks.</u>

Stopbanks

77. Works shall only be undertaken to the extent necessary to maintain or reconstruct any ~~the~~ stopbank to the original design level.

78. Works shall be designed by an appropriately qualified or experienced engineer.

Permanent Culverts And Floodgates

79. Where possible water shall be diverted around the works area so that the works are undertaken outside flowing water.

80. Where works are undertaken in positions where sediment may enter water then sediment control methods shall be used, where practicable, to minimise the amount of sediment discharged. These measures can include silt fences, hay bales, and portable sediment treatment devices.

Earthworks To Construct Access Tracks

81. Where possible a vegetative filter strip shall be maintained between the works area and the river, stream or coastal marine area.

82. The extent of the works shall be the minimum necessary to create a suitable access.

83. All disturbed areas shall either be re-vegetated or stabilised/surfaced to minimise sediment generation.

84. The Consent Holder shall ensure that:

    (a) Crossing waterways shall be avoided where reasonably possible;

    (b) A vegetated buffer of at least 2 metres width shall be retained, if it exists before the works commence, between access tracks and waterways, other than where access to the waterway is needed;

    (c) Erosion-prone areas shall be avoided where reasonably possible;

    (d) The minimum number of tracks reasonably possible shall be constructed. The Consent Holder shall maintain a record of tracks developed to ensure they are reused wherever possible;

    (e) Permanent track surfaces shall be maintained and protected against erosion and temporary tracks shall be rehabilitated upon completion of river works; and

    (f) Where required, water shall be diverted away from tracks to minimise flow concentration and run-off into adjacent water.

Temporary Crossings (Including Temporary Culverts)

85. Crossings and culverts shall be designed by suitably qualified or experienced engineers.

    Advice note:

    Structures used in temporary crossings shall remain in place for no greater than 2 weeks.

86. ~~The c~~ All crossings shall be designed so that water is able to flow over them ~~it~~ during higher flows without eroding the structure.

88. ~~The c~~ All crossings shall be removed as soon as they are ~~it is~~ no longer needed.

~~**Discharge Of Sediment - Receiving Water Standards**~~

~~89. The release of sediment directly associated with any river bed disturbance activity shall~~

not cause the visual clarity of the receiving water to change by more than 40 percent as measured by a black disc at any point more than:

(a) 50 metres downstream where the wetted width of the river is less than 5 metres; or

(b) 100 metres downstream where the wetted width of the river is between 5 and 20 metres; or

(c) 200 metres downstream where the wetted width of the river is greater than 20 metres; or

(d) 100 metres from the point of discharge within the coastal marine area

Measured from the furthest downstream point of the works and 24 hours after works have ceased and compared with upstream of the discharge.

Visual Impacts

90. No native trees shall be removed unless necessary for undertaking the works covered by these consents.

91. In areas of high public visibility, materials shall be chosen that integrate with surrounding landscape and shall be to a high standard of finish and be able to withstand public usage.

92. Straight, uniform edges and gradients shall be avoided to prevent the river appearing channelised or modified to a significant degree. The design shall allow for future movement (meandering) of the river channel within a permitted corridor rather than constraining the channel to a single fixed alignment.

93. Minor modification to drainage channels (with a low level of existing naturalness in terms of topography) shall be undertaken in a manner that does not make the river channel or banks unsafe, providing exit points where possible should people/objects fall into the channel. Exit/entry points can be combined with maintenance access requirements.

94. All railway irons, steel or wooden piles and wire rope, tyres and other artificial river control materials within river channels which are no longer performing any useful river control function and whether or not they are of recent origin, shall be removed as soon as practical after they have become evident.

Emergency Works

95. These consents do not apply to works undertaken by the Consent Holder under the emergency works provisions under section 330 of the Resource Management Act 1991. However, these consents do apply to any remedial works that are required to be undertaken once the emergency situation has passed.

96. The Environment and Planning Manager shall be advised of the need to carry out emergency works before, or as soon as reasonably possible after, the event.

Appendix 1 - River Management Structures in the CMA

River	Council Asset ID	Type of Structure	Length (m)	Construction Date	Location / Comments
Aorere	None	Rock protection	140	Unknown	Left bank. Brian Gilbert's rock protection just below Ferntown bridge.
Aorere	00166184	Rock protection	10	2/01/2000	Right bank.
Aorere	00195374	Rock protection	350	11/03/2010	Right bank.
Aorere	00166183, 00190892	Rock protection	120	2/01/1983	Right bank of main channel. Referred to as 'Ferntown Groyne'.
Aorere	00192683	Rock protection	30	1970	Right bank on estuary edge.
Aorere	00192684	Rock protection	20	1970	Right bank on estuary edge.
Aorere	00192685	Rock protection	160	Unknown	
Aorere	00192686	Rock protection	65	1980-1990	Right bank on estuary edge.
Aorere	00192687 - 00192693	Rock protection	240	1980-1991	Right bank on estuary edge and coast.
Lower Motueka	00197413	Rock protection and spur groynes	330	25/12/2006	Left bank.
Lower Motueka	00195397	Rock protection	40	5/08/2009	Left bank.
Lower Motueka	00197638	Rock protection	540	1/07/2008	Right bank.
Lower Motueka	00197631	Rock protection	425	1/07/2008	Right bank.
Atua Stream	00195457	Outfall	-	25/12/1975	
Little Sydney Stream	00195413	Outfall	-	25/12/1975	
Hamilton's Drain	00195381	Outfall	-	Unknown	
Riwaka	00212212	Rock protection	220	Unknown	Right bank
Takaka	00197670	Rock protection	20	1/07/2008	Left bank.
Takaka	00195493	Rock protection	10	7/04/2010	Right bank.
Takaka	00195492	Rock protection	10	8/04/2010	Right bank.
Takaka	00195483	Tree planting	85	23/08/2010	Left bank.
Takaka	00195500	Rock protection	50	25/03/2011	Right bank.
Takaka	00195499	Rock protection	20	29/03/2010	Right bank.
Takaka	00195498	Rock protection	10	24/03/2011	Right bank.
Takaka	00195497	Rock protection	10	23/03/2010	Right bank.
Takaka	00195496	Rock protection	30	26/03/2010	Right bank.
Takaka	00195495	Rock protection	60	28/03/2011	Right bank.
Takaka	00195494	Rock protection	130	26/03/2010	Right bank.
Pearl Creek	00195591	Outfalls	-	2/01/1975	Left bank.
Waimea	00207475	Outfalls	-	Unknown	Left bank east of Redwood Road on stopbank.
Waimea	00212213	Rock protection (13 groynes)	>150	Unknown	Right bank
Waimea	00186464	Rock protection	180	Unknown	Right bank Private rip rap on Best Island along Greenacres Golf Club boundary.

Appendix 2

Water Conservation (Buller River) Order 2001
(SR 2001/139)

1 Title
This order is the Water Conservation (Buller River) Order 2001.

2 Commencement
This order comes into force on the 28th day after the date of its notification in the *Gazette*.

3 Interpretation
In this order, unless the context otherwise requires,—
Act means the Resource Management Act 1991
NTU means Nephelometric Turbidity Unit
reasonable mixing means the mixing that occurs—
(a) within a maximum radius of 200 metres from a discharge into a still water body; or
(b) within a maximum distance of 200 metres downstream from a discharge into a river
river means the main stem of the waters specified in Schedule 1, 2, or 3; and includes any unnamed naturally occurring still water bodies that lie along the main stem
tributaries means all the tributaries of the rivers or sections of rivers identified in Schedule 1, 2, or 3.

4 Outstanding characteristics and features
The waters specified in any of Schedule 1, 2, or 3 include, to the extent identified in Schedule 1, 2, or 3, the following outstanding characteristics, features, and values:
(a) outstanding recreational characteristics:
(b) outstanding wild and scenic characteristics:
(c) outstanding fisheries or wildlife habitat features:
(d) outstanding scientific values.

5 Waters to be retained in natural state
Because of the outstanding characteristics, features, and values identified in clause 4, the quality, quantity, level, and rate of flow of the waters specified in Schedule 1 are to be retained in their natural state.

6 Waters to be protected
Because of the outstanding characteristics, features, and values identified in clause 4,—
(a) the waters specified in Schedule 2 are to be protected in accordance with the restrictions and prohibitions in clauses 7 to 11, as specified in Schedule 2:
(b) the waters specified in Schedule 3 are to be protected in accordance with the restrictions and prohibitions in clauses 11 and 12, as specified in Schedule 3.
Clause 6(b): amended, on 2 October 2008, by clause 4 of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

7 Restrictions on damming of waters
(1) For the purposes of this clause, **damming** does not include any intake or deflection structure that does not—
(a) harm any fish spawning or prevent the passage of any fish; or
(b) prevent the use of the waters for rafting or canoeing; or
(c) reduce the wildlife habitat; or

(d) intrude visually to the extent that it reduces wild and scenic values.

(2) No resource consent may be granted or rule included in a regional plan permitting the damming of the waters specified in Schedule 2 whenever any of the characteristics in subclause (1) are listed as outstanding in Schedule 2 and that schedule refers to this clause.

Clause 7(1)(a): amended, on 2 October 2008, by clause 5 of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

8 Restrictions on alterations of river flows and form

(1) No resource consent may be granted or rule included in a regional plan—

(a) if the effect of the resource consent or rule would not generally maintain the channel cross-section, meandering pattern, and braided river channel characteristics of the form of any river specified in Schedule 2:

(b) if the effect of the resource consent or rule would alter the naturally occurring instantaneous flow of the water in any river specified in Schedule 2 by more than 5%.

(2) The restriction in subclause (1)(a) does not apply in respect of dams, weirs, roads, fords, bridges, access ways, or fish passes lawfully existing on the date this order comes into force.

(3) Despite anything in subclause (1),—

(a) any change in flow permitted in that part of the Buller River specified in item 2 of Schedule 2 must not be greater than 10% of the naturally occurring instantaneous flow:

(b) any change in flow permitted in that part of the Buller River specified in item 3 of Schedule 2 must not be greater than 15% of the naturally occurring instantaneous flow:

(c) any change in flow permitted in the Gowan River, item 10 of Schedule 2, must not be:

(i) greater than 15% of the naturally occurring instantaneous flow whenever that flow is 16 cumecs or more but less than 27 cumecs; or

(ii) greater than 25% of the naturally occurring instantaneous flow whenever that flow is 27 cumecs or more; or

(iii) greater than 5% of the naturally occurring instantaneous flow whenever that flow is less than 16 cumecs.

Clause 8(3)(c): substituted, on 2 October 2008, by clause 6 of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

9 Restrictions on alteration of lake levels

No resource consent may be granted or rule included in a regional plan for the waters of Lake Rahui, item 20 of Schedule 2, if the effect of that resource consent or rule would alter the mean natural level of the lake or allow a daily fluctuation that exceeds—

(a) 10% of the natural annual fluctuation; or

(b) the natural limits of fluctuation.

Clause 9: amended, on 2 October 2008, by clause 7 of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

10 Requirement to maintain fish passage

No resource consent may be granted or rule included in a regional plan for the waters specified in Schedule 1 or Schedule 2 unless that resource consent or rule maintains:

(a) adequate natural or artificial passage for trout through those waters where Schedule 1 or Schedule 2 identifies trout as an outstanding characteristic or identifies those waters as contributing to outstanding trout fisheries; and

(b) adequate natural or artificial passage through those waters for those native fish that require such passage where Schedule 1 or Schedule 2 identifies native fish as an outstanding characteristic or identifies those waters as contributing to outstanding native fisheries. To avoid doubt, reference to native fisheries includes eel fisheries.

Clause 10: substituted, on 2 October 2008, by clause 8 of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

11 Restrictions on alteration of water quality

(1) No resource consent may be granted or rule included in a regional plan permitting a discharge into any of the waters specified in Schedule 2 if, after allowing for reasonable mixing of the discharge with the receiving waters, the discharge would—

(a) alter the concentration of suspended solids or turbidity in the receiving waters by more than 1 milligram per litre or 1 NTU where the ambient concentration of suspended solids or turbidity is less than or equal to 10 milligrams per litre or 10 NTU respectively; or

(b) alter the ambient concentration of suspended solids or turbidity in the receiving waters by more than 10 milligrams per litre or 10 NTU where the concentration of suspended solids or turbidity is more than 10 milligrams per litre or 10 NTU respectively; or

(c) alter the visual clarity of the waters by more than 20%; or

(d) alter the natural temperature of the receiving waters—

(i) by more than 3 degrees Celsius; or

(ii) by increasing the water temperature to more than 20 degrees Celsius; or

(iii) so as to adversely affect, during their spawning season, the spawning of—

(A) rainbow and brown trout:

(B) inanga:

(C) kōaro:

(D) giant, banded, and short-jawed kōkopu:

(E) alpine, long-jawed, dwarf, and common galaxias.

(2) No resource consent may be granted or rule included in a regional plan permitting the discharge into any of the waters specified in Schedule 2 or Schedule 3 unless, after allowing for reasonable mixing of the discharge with the receiving waters,—

(a) any change in the acidity or alkalinity in the receiving waters, as measured by the pH and attributable to that discharge, would either—

(i) maintain the pH within the range of 6 to 9 units; or

(ii) not allow a change by more than 0.5 units when the natural pH lies outside the range of 6 to 9 units; and

(b) there would be no undesirable biological growths attributable to the discharge, including—

(i) bacterial or fungal slime growths that are visible to the naked eye; or

(ii) seasonal maximum covers of streams or river beds by—

(A) periphyton as filamentous growth or mats (larger than 3 millimetres thick) exceeding 40%; or

(B) biomass exceeding 100 milligrams of chlorophyll-a per square metre; or

(C) 40 grams ash-free dry weight per square metre of exposed surface area; and

(c) aquatic organisms are not made unsuitable for human consumption through the accumulation of excessive concentrations of contaminants; and

(d) the water is not made unsuitable for recreation by the presence of contaminants, or the median bacterial level of 5 samples or more taken over a period of 30 days would not exceed 126 E coli per 100 millilitres.

(3) No resource consent may be granted or rule included in a regional plan permitting a discharge into any of the waters specified in Schedule 2 if, after allowing for reasonable mixing of the discharge with the receiving waters, the discharge would reduce the concentration of dissolved oxygen below 80% of saturation.

(4) For the purposes of subclause (3), if the natural concentration is less than 80% of saturation, the natural level must be maintained or increased.

12 Conditions applying to Lake Matiri and Matiri River

(1) No resource consent may be granted or rule included in a regional plan for the waters of Lake Matiri, item 1 of Schedule 3, if the effect of the resource consent or rule would—

(a) allow the level of Lake Matiri to exceed the natural range; or

(b) allow the mean level of Lake Matiri to exceed 0.5 metres above the naturally occurring mean level.

(2) A resource consent may be granted or a rule included in a regional plan that has the effect of allowing the level of the waters in Lake Matiri to be controlled within its natural range if—

(a) the maximum daily lake level fluctuation, caused by artificial control, would not exceed 50% of the existing natural range; and

(b) fluctuations in lake level, caused by artificial control, would not significantly affect riparian vegetation.

(3) No resource consent may be granted or rule included in a regional plan for a structure in any of the waters specified in item 1 of Schedule 3 unless the structure allows for the passage of eels and kōaro in both directions.

(4) No resource consent may be granted or rule included in a regional plan for a structure in any of the waters specified as item 2 in Schedule 3 unless the structure allows for the passage of eels in both directions.

Clause 12(3): amended, on 2 October 2008, by clause 9(1) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

Clause 12(4): added, on 2 October 2008, by clause 9(2) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

13 Scope of order

(1) This order does not limit section 14(3)(b) and (e) of the Act, which relates to the use of water for domestic needs, for the needs of animals, and for, or in connection with, fire-fighting purposes.

(2) This order does not restrict or prevent the grant of resource consents to the Department of Conservation or rules being included in a regional plan that would permit minor water uses if those minor uses are necessary for the management of land administered by the Department.

(3) This order does not restrict or prevent the grant of resource consents for the purpose of—

(a) research into, and enhancement of, fisheries and wildlife habitats; or

(b) hydrological or water quality investigations; or

(c) the construction, maintenance, or protection of any road or bridge, or the maintenance or protection of any other network utility operation (as defined in section 166 of the Act); or

(d) the construction or maintenance of soil conservation and river protection works undertaken in accordance with the Soil Conservation and Rivers Control Act 1941.

(4) This order does not prevent the granting of further resource consents for the Maruia Springs Thermal Resort on similar terms and conditions to those imposed on the resource consents held on the date this order comes into force.

14 Exemptions

Nothing in this order prevents the grant of a resource consent that would otherwise contravene the conditions set out in clauses 7 to 12 if—

(a) a consent authority is satisfied that—

(i) there are exceptional circumstances to justify the grant of the resource consent; or

(ii) any discharge is of a temporary nature; or

(iii) any discharge is associated with necessary construction and maintenance work for works and structures not otherwise prohibited by this order; and

(b) a consent authority is satisfied that the exercise of any such resource consent would not compromise the preservation and protection of the outstanding characteristics and features identified for the waters specified in the schedules.

Schedule 1

cl 5

Waters to be retained in natural state

Item	Waters	Outstanding characteristics or features
1	Travers River	Headwater trout fishery Wild and scenic

Item	Waters	Outstanding characteristics or features
2	Lake Rotoiti	Trout fishery Wild and scenic Canoeing Eel fishery
3	Sabine River	Headwater trout fishery Wild and scenic
4	Lake Constance	Wild and scenic
5	D'Urville River	Headwater trout fishery Wild and scenic
6	Lake Rotoroa	Trout fishery Eel fishery Wild and scenic
7	Owen River and all tributaries upstream of and including Halfway Creek and Fyfe River upstream of the boundary of the public conservation estate and private land (map reference M28 698 550)	Headwater trout fishery Karst features (scientific values)
8	Matiri River upstream of map reference M28 550 517	Wild and scenic Native fishery
9	Matakitaki River upstream of the boundary between conservation estate and private land (map reference M30 700 070)	Headwater trout fishery Wild and scenic
10	Nardoo Creek	Trout spawning habitat Wild and scenic
11	Glenroy River upstream of Granity Creek (map reference M30 546 004)	Wild and scenic
12	Maruia River and all tributaries upstream of Alfred River confluence	Blue duck Wild and scenic
13	Lake Daniells	Rainbow trout fishery Wild and scenic Native fishery
14	Deepdale River	Headwater trout fishery
15	Te Wharau Creek (Stony River)	Headwater trout fishery
16	Blackwater River and Ohikaiti River	Wild and scenic Blue duck Native fishery
17	Ohikanui River and all its tributaries	Headwater trout fishery Wild and scenic Native fishery Blue duck

Schedule 2
Protected waters

cl 6

Item	Waters	Outstanding characteristics or features	Restrictions and prohibitions
1	Buller River from Lake Rotoiti to Gowan confluence	Trout fishery Canoeing (Lake Rotoiti to Teetotal Creek map reference N29 916 383)	cls 7, 8(1), 8(2), 10, and 11
2	Buller River from Gowan confluence to map reference M29 537 350	Trout fishery Canoeing Rafting	cls 7, 8(1)(a), 8(2), 8(3), 10, and 11
3	Buller River from map reference M29 537 350 to Maruia confluence	Trout fishery Canoeing Rafting Wild and scenic	cls 7, 8(1)(a), 8(2), 8(4), 10, and 11
4	Buller River from Maruia confluence to Iron Bridge	Canoeing Rafting Wild and scenic	cls 7, 8(1), 8(2), 10, and 11
5	Buller River from Iron Bridge to Te Kuha	Rafting Wild and scenic	cls 7, 8(1), 8(2), 10, and 11
5A	Black Valley Stream (downstream of GR N29 985345)	Trout spawning habitat	cls 7, 8(1), 8(2), 10, and 11
6	Speargrass Creek	Trout spawning habitat	cls 7, 8(1), 8(2), 10,

Item	Waters	Outstanding characteristics or features	Restrictions and prohibitions
			and 11
7	Maggie Creek	Trout spawning habitat	cls 7, 8(1), 8(2), 10, and 11
8	Maud Creek	Trout spawning habitat	cls 7, 8(1), 8(2), 10, and 11
9	Station Creek	Trout spawning habitat	cls 7, 8(1), 8(2), 10, and 11
10	Gowan River	Rafting, trout fishery, contribution to outstanding trout fisheries, contribution to outstanding eel fishery	cls 7, 8(1)(a), 8(2), 8(3)(c), 10, and 11
11	Mangles River	Headwater trout fishery Wild and scenic	cls 7, 8(1), 8(2), 10, and 11
12	Tutaki River and its tributary, the Tiraumea River	Headwater trout fishery	cls 7, 8(1), 8(2), 10, and 11
13	Owen River downstream from the confluence of Halfway Creek	Headwater trout fishery	cls 7, 8(1), 8(2), 10, and 11
14	Fyfe River downstream of map reference M28 698 550, Sandstone Creek, Johnstons Creek, Brewery Creek, and their tributaries	Trout spawning habitat Blue duck	cls 7, 8(1), 8(2), 10, and 11
15	Mole Stream	Trout spawning habitat Wild and scenic	cls 7, 8(1), 8(2), 10, and 11
16	Maruia River downstream of Alfred River confluence and including the Alfred River to the upper end of the Mainstem Gorge at the Jones Creek confluence (map reference L30 434 017)	Headwater trout fishery Wild and scenic	cls 7, 8(1), 8(2), 10, and 11
17	Maruia River Mainstem Gorge from the Jones Creek confluence (map reference L30 434 017) to the Aerial Ropeway (map reference L30 429 120)	Headwater trout fishery Canoeing Rafting	cls 7, 8(1), 8(2), 10, and 11
18	Maruia River from Aerial Ropeway (map reference L30 429 120) to the confluence of the Buller River	Headwater trout fishery Canoeing	cls 7, 8(1), 8(2), 10, and 11
19	Flat Creek, Warwick Creek, Rappahannock River, Station Creek, Woolley River, and Rahu River	Headwater trout fishery Trout spawning habitat Native fishery	cls 7, 8(1), 8(2), 10, and 11
20	Lake Rahui	Wildlife habitat	cls 9, 10, and 11

- Schedule 2 item 5A: inserted, on 2 October 2008, by clause 10(a) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).
- Schedule 2 item 10: amended, on 2 October 2008, by clause 10(b) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

Schedule 3
Protected waters (Lake Matiri and Matiri River)

cl 6

- Schedule 3 heading: substituted, on 2 October 2008, by clause 11(a) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

Item	Waters	Outstanding characteristics or features	Restrictions and prohibitions
1	Lake Matiri and Matiri River downstream from map reference M28 550 517 to Lake Matiri outlet	Wild and scenic Wildlife habitat Native fishery	cls 11 and 12
2	Matiri River from the outlets of Lake Matiri to the confluence with the Buller River	Contribution to outstanding native fishery	cls 11 and 12

Schedule 3: amended, on 2 October 2008, by clause 11(b) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620).

Schedule 3 item 2: added, on 2 October 2008, by clause 11(c) of the Water Conservation (Buller River) Amendment Order 2008 (*Gazette* 2008, p 3620). Marie Shroff,

Clerk of the Executive Council.

Appendix 3

Water Conservation (Motueka River) Order 2004

(SR 2004/258)

1 Title

This order is the Water Conservation (Motueka River) Order 2004.

2 Commencement

This order comes into force on the 28th day after the date of its notification in the *Gazette*.

3 Interpretation

In this order, unless the context otherwise requires,—

Act means the Resource Management Act 1991

flow means the running average flow measured over the 7 preceding days

Nephelometric Turbidity Unit means a measure of cloudiness (turbidity) based on the scattering of light by suspended particles

NTU means Nephelometric Turbidity Unit

reasonable mixing means the mixing that occurs within—

(a) a maximum radius of 200 m from a discharge into a still water body; or

(b) a maximum distance of 200 m downstream from a discharge into a river

river means the main stem of those waters that are—

(a) identified in Schedule 1, Schedule 2, or Schedule 3; and

(b) referred to as the main stem on the Infomap 260 series topographical maps between specified lower and upper limits as defined by map references in Schedule 1, Schedule 2, or Schedule 3.

4 Outstanding characteristics, features, and values

The waters identified in either Schedule 1, Schedule 2, or Schedule 3 include or contribute to, to the extent specified in Schedule 1 or Schedule 2, all or any of the following outstanding characteristics, features, and values:

(a) outstanding recreational characteristics:

(b) outstanding fisheries and wildlife habitat features:

(c) outstanding scientific values:

(d) outstanding wild and scenic characteristics.

5 Waters to be retained in natural state

Because of their outstanding characteristics and features, the quality, quantity, level, and rate of flow of the waters identified in Schedule 1 are to be retained in their natural state.

6 Waters to be protected

Because of their outstanding characteristics and features, the waters identified in Schedule 2 are to be protected in accordance with the relevant conditions in clauses 8 to 11, as specified in Schedule 2.

7 Waters to be protected as contributing to outstanding features

Because of their contribution to outstanding characteristics and features, the waters identified in Schedule 3 are to be protected in accordance with the relevant conditions in clauses 8 to 11, as specified in Schedule 3.

8 Restrictions on damming of waters

(1) No resource consent may be granted or rule included in a regional plan permitting the damming of the waters identified in Schedules 2 and 3.(2) For the purposes of subclause (1), **damming** includes the taking or deflecting of water via an intake or deflection structure that—

(a) prevents the passage of brown trout; or

(b) adversely affects the spawning of brown trout.

9 Restrictions on alterations of river flows and form

No resource consent may be granted or rule included in a regional plan that—

(a) will cause the material alteration of the channel cross-section, meandering pattern, and braided river channel characteristics of the form of any river specified in Schedule 2; or

(b) will cause, for those rivers specified in Schedule 2 at any time of year, or for those rivers as specified in Schedule 3 that drain Separation Point granites during the months of May to October inclusive, either by itself or in combination with other existing consents or rules, a 50% or greater increase in the deposition of fine sediment (less than 2 mm diameter) on the bed of the river after reasonable mixing from the point immediately upstream to which the resource consent or rule relates; or

(c) will cause, either by itself or in combination with any other existing consents or rules, alteration of the flow of that part of the Motueka River specified in Schedule 2 by more than 12% as measured by the residual flow at Woodstock; or

(d) will cause, either by itself or in combination with any other existing consents or rules, alteration of the flow of water in any part of the Wangapeka River by more than 6% as measured by the residual flow at Walter's Peak; or

(e) will cause, either by itself or in combination with any other existing consents or rules, including existing surface and groundwater takes, reduction of the naturally occurring instantaneous flow of that part of the rivers specified in Schedule 3 below the following threshold minimum flows during the months of May to October inclusive:

(i) 1 000 l/second in the Motueka River immediately above its confluence with the Motupiko River (at N28: 961 731):

(ii) 500 l/second in the Motupiko River immediately above its confluence with the Motueka River (at N28: 961 731):

(iii) 250 l/second in the Tadmor River at the Mud-stone Recorder.

10 Requirement to maintain fish passage

No resource consent may be granted or rule included in a regional plan relating to the waters identified in Schedules 2 and 3, unless that resource consent or rule ensures adequate natural or artificial passage for trout through those waters, where Schedule 2 or Schedule 3 identifies trout habitat or trout spawning as an outstanding characteristic or as contributing to an outstanding characteristic.

11 Restrictions on alteration of water quality

(1) No resource consent may be granted or rule included in a regional plan permitting a discharge into any of the waters identified in Schedule 2 at any time, or into any of the waters identified in Schedule 3 during the months of May to October inclusive, if, after allowing for reasonable mixing of the discharge with the receiving waters, the discharge would—

(a) alter the concentration of suspended solids or turbidity in the receiving waters by more than 1 mg/1 or 1 NTU where the ambient concentration of suspended solids or turbidity is less than or equal to 10 mg/1 or 10 NTU respectively; or

(b) alter the ambient concentration of suspended solids or turbidity in the receiving waters by more than 10 mg/l or 10 NTU where the concentration of suspended solids or turbidity is more than 10 mg/1 or 10 NTU respectively; or

(c) alter the visual clarity of the waters by more than 20%; or

(d) alter the natural temperature of the receiving waters—

(i) by more than 3°C; or

(ii) by increasing the water temperature to more than 20°C.

(2) No resource consent may be granted or rule included in a regional plan permitting the discharge into any of the waters identified in Schedule 2 at any time, or into any of the waters identified in Schedule 3 during the months of May to October inclusive, unless, after allowing for reasonable mixing of the discharge with the receiving waters,—

(a) any change in the acidity or alkalinity in the receiving waters, as measured by the pH and attributable to that discharge, either—

(i) maintains the pH within the range of 6 to 9 units; or

(ii) allows the pH to change by no more than 0.5 units when the natural pH lies outside the range of 6 to 9 units; and

(b) there would be no undesirable biological growths attributable to the discharge including (but not limited to)—

(i) bacterial or fungal slime growths that are visible to the naked eye; or

(ii) seasonal maximum covers of streams or river beds by—

(A) periphyton as filamentous growth or mats (longer than 20 mm) exceeding 30%; or

(B) biomass exceeding 120 mg of chlorophylla per square metre; or

(C) 35 g ash-free dry weight per square metre of exposed surface area; and

(c) aquatic organisms are not rendered unsuitable for human consumption through the accumulation of excessive concentrations of contaminants; and

(d) the water is not made unsuitable for recreation by the presence of contaminants, or the median bacterial level of 5 samples or more taken over a period of 30 days does not exceed 126 E coli per 100 ml.

(3) No resource consent may be granted or rule included in a regional plan permitting a discharge into any of the waters identified in Schedule 2 or Schedule 3 if, after allowing for reasonable mixing of the discharge with the receiving waters, the discharge would reduce the concentration of dissolved oxygen below 80% of saturation.

(4) For the purposes of subclause (3), if the natural concentration is less than 80% of saturation, the natural level must be maintained or increased.

Clause 11(2)(d): amended, on 27 April 2006, by clause 3 of the Water Conservation (Motueka River) Amendment Order 2006 (SR 2006/72).

12 Scope of order

(1) This order does not limit section 14(3)(b) and (e) of the Act, which relates to the taking or use of water for domestic needs, for the needs of animals, and for fire-fighting purposes.

(2) This order does not restrict or prevent the grant of resource consents to the Department of Conservation or rules being included in a regional plan that would permit minor water uses if those minor uses are necessary for the management of land administered by the Department of Conservation.

(3) This order does not restrict or prevent the grant of resource consents for the purpose of—

(a) research into, and enhancement of, fisheries and wildlife habitats; or

(b) hydrological or water quality investigations; or

(c) the construction, removal, maintenance, or protection of any road, ford, or bridge, or the maintenance or protection of any other network utility operation (as defined in section 166 of the Act); or

(d) the construction or maintenance of soil conservation and river protection works undertaken in accordance with the Soil Conservation and Rivers Control Act 1941.

(4) Despite clause 9(c), this order does not prevent the exercise of current resource consents or the granting of resource consents for any activity where more than the amount of water being taken is released from a water augmentation scheme from—

(a) water permitted to be stored within the Motueka River catchment; or

(b) water outside the Motueka River catchment.

13 Exemptions

Nothing in this order prevents the grant of a resource consent that would otherwise contravene the conditions set out in clauses 8 to 11 if—

(a) a consent authority is satisfied that—

(i) there are exceptional circumstances to justify the grant of the resource consent; or

(ii) the permit is for a discharge that is of a temporary nature; or

(iii) the permit is for a discharge that is associated with necessary construction and maintenance work for works and structures not otherwise prohibited by this order; and

(b) the exercise of the resource consent would not compromise the preservation and protection of the outstanding characteristics and features identified for the waters identified in Schedules 1, 2, and 3.

Schedule 1
Waters to be retained in natural state

cls 3-5 and 13(b)

Waters	Outstanding feature	Conditions
North and South branches of the Wangapeka River above their confluence (M28: 665 708), Rolling River upstream of its confluence with the Wangapeka River (M28: 749 736), Skeet River upstream of M27: 822 873	Blue duck habitat	Natural state
Upper Motueka River above upper Gorge (N28: 052 517), Rainy River upstream of the Conservation Land boundary (N29: 946 440), upper Dart River upstream of M28: 807 686, Baton River upstream of M27: 839 889, Pearse River upstream of M27: 898 985, Graham River upstream of N27: 903 017, Pokororo River upstream of N27: 968 058, and Rocky River upstream of N27: 004 079 within Kahurangi National Park	Wild and scenic	Natural state
Streams emerging from Mt Arthur marble and northern Arthur Range being the Pearse (from M27: 882 995), Ellis (from M27: 833 951), north branch of the Graham (from N27: 921 034), and streams draining the northern part of the Mt Owen massif being the Granity, Blue, and Nuggetty Creeks upstream of M28: 737 709	Karst (scientific and recreational values)	Natural state

Schedule 2
Protected waters

3, 4, 6, (a)-(c), (1)-(3), d 13(b)

Waters	Outstanding feature	Conditions
Motueka River from Shaggery River confluence (N26: 068 111) to Wangapeka River confluence (N27: 922 864)	Brown trout fishery	cls 6, 8, 9(a)-(c), 10, and 11
Wangapeka River from its source to the Motueka River confluence (N27: 922 864)	Brown trout fishery	cls 6, 8, 9(a) and (b), 10, and 11

Schedule 3
Waters to be protected for contribution to outstanding features

cls 3, 4, 7, 8(1), 9(b) and (e), 10, 11(1)-(3), and 13(b)

Waters	Contribution to outstanding features in Schedules 1 and 2	Conditions
Flows in the Motueka River between the Wangapeka River confluence (N27: 922 864) and the Blue Glen Creek confluence, including the upper Motueka, Motupiko, and Tadmor Rivers; trout spawning and rearing: Blue Glen Creek, Rainy River, Motupiko River, Tadmor River, Stanley Brook downstream of Sunday Creek Road Bridge (N27: 950 871), Dove River downstream of Thorpe Bridge (N27: 997 919), Pearse River downstream of M27: 898 985, Graham River below the North and South branch confluence at N27: 943 008, Pokororo River downstream of N27: 968 058, and Little Pokororo River	Adequate water of sufficient quality for the outstanding adult brown trout habitat in the Motueka River below the Wangapeka River confluence; fish passage and trout spawning in spawning tributaries during the months of May to October inclusive	cls 7, 8, 9(b) and (e), 10, and 11

Diane Morcom, Clerk of the Executive Council.

Appendix 4

The following are additional proposed conditions for Trevor James, Council's freshwater Scientist.

Conditions for works in river beds

Timing:

1. Trout: No work to be done in the river from 1st May to 30 September. Whitebait: 1st Feb to May 30.

Avoiding sediment discharges

2. Works should occur in the dry bed except in cases where the landowner wishes the river to be diverted into a new channel or kept from spilling into a new channel. *There is much less life in the dry bed.*
3. Transverse (cross) blading using bulldozers should be avoided, unless working in the dry bed (at least 300mm above the river water level). *This is due to the scale of effects and longer term habitat changes.*
4. Works shall not result in water clarity reduction of greater than
   i) 40% for more than 30 minutes,
   ii) 30% for more than 2 hours
   iii) 20% for more than 24 hours
5. The suspendable benthic sediment volume, as measured by Sediment Assessment Method 4 in the Sediment Assessment Methods: Protocols and Guidelines for Assessing the Effects of Deposited Fine Sediment on In-stream Values (Ministry for the Environment 2011), shall not be increased downstream of the operations compared to upstream of the operation by more than 30%.
6. Dragging excavated material from the opposite bank from where a digger is operating through the stream should be avoided. *This produces excessive amounts of sediment.*
7. Ensure that excavated or disturbed soil does not slump into or get eroded into the bed of any stream.
8. All disturbed riparian areas shall be stabilised and/or revegetated as soon as practicable following the completion of active works in the riparian margin. Sowing in grass shall be completed within three weeks of completion of earthworks in each completed area, unless weather or seasonal conditions are likely to prevent successful germination.

Fish recovery

9. If there are fewer than ten fish per $2m^2$ of stream bed, including the bank edge, or entrained in any 2.4m wide digger bucket scoop, then over-pumping is not required. Electric fishing will be needed to determine this requiring a suitably qualified aquatic ecologist.
10. Material recovered from the wetted bed or edge of bank that may contain fish should be spread out on the river bank and in a position where fish can wriggle downslope to the stream.
11. Fish in the old, drying, channel must be recovered immediately after any diversion is activated.

Stream Habitat

12. The works will retain a natural diversity of substrate (boulders, cobbles, woody debris and gravels), channel cross section (leave undercut banks wherever possible), fish cover, meander pattern as much as possible.

13. The meander pattern shall have a variety of stream bend radii, in keeping with stream styles of natural creeks in the area. All work should be undertaken according to the annotated aerial photo (this will be attached).
14. Any riparian vegetation destroyed as part of the works, shall be replaced.
15. Woody material (50-400mm diameter logs with branches eg macrocarpa branches and roots) shall be established on about 10% of the length of the low-flow channel. These shall be placed over the water and in the top of the water column in the deeper sections of the waterway. *This acts as fish 'cover'.*
16. Installing large lengths (>100m) of rock rip-rap on smaller waterways (<5m average width) should be avoided.
17. If at all possible one bank shall be left intact. *This ensures that a reasonable amount of fish cover remains following the work.*
18. The natural thalweg profile (longitudinal transect showing depth diversity) and width character shall be recreated as close as possible to the original condition. Try to retain diversity of depth (deeper pools as well as riffles).
19. Disturbance of residual pools (pools that permanently contain water once river flows have ceased) should be avoided. There shall be no removal of water from residual pools in the stream by infilling, draining or other means. *Residual pools are an important refuge for fish and invertebrates when other parts of the creek dry up. Such pools contain high abundance of many species during dry spells and are mainly found in Moutere Hill Country.*
20. For larger mobile braided rivers that may be habitat for river-nesting birds, the finished channel shall provide for islands as suitable nesting habitat for these birds.
21. For diversions of a waterway to a completely new channel,
    a. Cobble/gravels from the old channel to a depth of 300mm shall be transferred to the new channel unless there is a high proportion of fine sediment or the fine sediment is contaminated. In these latter situation cobble/gravel with <5% fine sediment content shall be brought in to cover the new invert to a depth of 300mm.
    b. Riparian trees shall be planted along the waterway to mitigate the affects of the bed disturbance. The planted trees shall cover at least 70% of the length of each bank in a way that will result in maximising the overhang of vegetation over the stream.

Supervision of works for moderate-high value waterways by an aquatic ecologist

22. All in-stream works, including work on channels, diversions, removal of structures, etc shall be under the supervision and on-site direction of the Ecologist.

    The Ecologist shall direct the works to achieve the following priorities and outcomes:

    (a) such works so as to provide for the significant enhancement of aquatic habitat. This specifically includes the detailed location of meander pattern of the low-flow channel and the primary over-flow channels (where wetlands will be established), bank shape, bed substrate, riparian "boat-shaped islands" (that will be planted in shrubs/trees) and variety of depth and width (run-riffle-pool sequencing).

    (b) the diversion of the watercourse minimises effects on aquatic life. The timing, sequencing and final completion of the diversion is carried out to maximise fish recovery and minimise sediment discharges.

    (c) minimise as far as practicable the amount of sediment discharged to the water body;

(d) ensure that materials (boulders, logs, clean cobble/gravel etc) used in the in-stream works are appropriate and will provide for long-term positive outcomes without causing flood management problems; and

(e) direct works that are achievable at a reasonable level of time and expense given the context of the application and conditions of consent.

Where and when the Ecologist considers it necessary he/she shall undertake the necessary fish salvage and relocation functions. Fish will be recovered and transferred prior to earthworks in or drying of the existing stream channel.

Fish passage shall be reinstated for each weekend and on completion of the job.

Notes:
Requiring riparian planting can be justified on the basis that there will be an adverse ecological effect in most streams. Adverse effects will be for 3-5 years on for fish in the case of works in the wetted zone for most streams, up to 10 years for lowland streams and possibly decades for spring-fed streams. However, mountain-fed streams may recover in a shorter period than 3 years.

Exemptions to these conditions can be sought in the following situations:

- Mountain-fed streams that are highly mobile
- Streams that dry for long periods of time (eg > 6 months/year)