STAFF REPORT

TO: Environment & Planning Committee

FROM: Leif Pigott – Co-ordinator, Natural Resource Consents

REFERENCE: RM090131- Discharge of Stormwater to Land

SUBJECT: **COMBINED RURAL TRADERS SOCIETY LIMITED - REPORT EP09/07/20 -** Report prepared for hearing of 27 July 2009

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1. DESCRIPTION OF THE PROPOSED ACTIVITY

As part of its application to operate a commercial operation at 20 Main Road Hope, CRT Society has also applied for a discharge permit to discharge stormwater to land via on-site soakage.

2. TASMAN RESOURCE MANAGEMENT PLAN (TRMP) ZONING, AREAS AND RULES AFFECTED

The application site is zoned Rural 1 and the proposed discharge of stormwater to land does not meet all the criteria of Permitted Activity Rule 36.4.2 or the Controlled Activity Rule 36.4.3A, of the TRMP and is deemed to be a Discretionary Activity in accordance with Rule 36.4.4 of the TRMP.

3. SITE DISCRIPTION

The site is located at 20 Main Road, Hope and has an area of 3069 square metres. The land is very flat in contour with very little fall in any one particular direction. The land is currently occupied by a residential dwelling.

There is a stormwater network along the state highway and a drainage channel but this does not have any capacity to take the additional flows generated by this activity.

4. PROPOSED ACTIVITY

The application notes that connecting to the existing Council piped stormwater network is not practical due to the low lying ground levels versus Q50 (one in 50 year return flood event) hydraulic grades with existing surrounding pipe systems shown to be at or over maximum capacity. Therefore it is the intention of the applicant to discharge stormwater to land via soakage on site.

The applicant is proposing to use a new Stormwater modular system called Stormtech Subsurface Stormwater Management System. This system allows one to discharge water back into the ground whilst at the same time allowing the storage of water underground during peak storm events.

The secondary flow path is out of the entrance way and then the water would flow to the North West down the road to the turning circle then over farm land.

5. ASSESSMENT OF ALTERNATIVES

The application comments that ideally all stormwater would be discharged into the Tasman District Council reticulated system. However due to the low lying ground levels and hydraulic grades this is not practical and the system is already at capacity.

6. ASSESSMENT

Pursuant to Section 104(1)(a) of the Resource Management Act, the following effects assessment has been set out:

6.1 Actual and Potential Environmental Effects

6.1.1 Proposal Summary

Currently the property has one residential dwelling, therefore the development of the site to establish and operate a retail and office facility will increase the hard surface area of the site and significantly alter the drainage characteristics. Typical such developments cause an increase in both the volume and peak flow rate of stormwater discharges that occur during and following rainstorm events. Unattenuated stormwater discharges can cause flooding and damage to the environment and property downstream, and therefore the expectation within the objectives and policies of the Tasman Resource Management Plan is that such impacts are avoided, remedied or mitigated wherever possible.

Risks associated with the transfer of hazardous materials and potential for spill is managed by the covered yard area sloping towards an outlet to an isolated storage tank that is completely separate from the stormwater system.

6.1.2 Stormwater Diversion, Damming and Discharge Assessment

Stormwater Attenuation Assessment

The system has been sized for a 5% AEP (20 year storm) using a Run-off Co-Efficient of 0.9, Rainfall Intensity of 108 mm (5%AEP) and using a soakage rate of 1000 mm/hr (as per the earlier soakage report prepared by Envirolink), giving 89.7 square metres of soakage and 124 cubic metres of underground storage.

The applicant has proposed a Stormtech system that combines storage with soakage. This system is maintained by cleaning out the first isolator row from which all stormwater enters. This is achieved by a simple procedure of back jetting the row with high pressure water. It is recommended the system be checked every 3-6 years and cleaned if required. This helps the system to work as efficiently as possible, whereas conventional systems cannot be cleaned and can become less efficient over time.

The stormwater will enter the Stormtech System via a standard TDC Soakage Manhole. This will help catch any solids/sediments prior to entering the system as well as gaining access to the system for cleaning.

Two separate stormwater systems are proposed- One for the roof water and one for the yard area. Therefore in the event of a yard spill, the applicant propose to have a push/pull valve system housed within the yard area that can be manually activated to cut off all water/spill from the yard and divert it to a 2000 Ltr concrete spill containment tank also located within the yard. This would then need to be pumped out by the appropriate people after the spill has been cleaned up, however in this event the clean roof water will still be able to enter the Stormtech System without interruption.

The main yard entrance also doubles as the secondary stormwater overflow out to the upgraded access road, where it would be picked up via another stormwater system. The applicant proposes to set the finished yard seal levels around the perimeter to approx RL=16.75 plus an additional 100mm high concrete nib support, with the proposed building FFL of RL=16.95, the lowest sump lid level of RL=16.15 and a secondary sump lid level of RL=16.30. Working on the proposed upgrade access road levels, the main entrance level to the yard would be approx RL=16.45, therefore an extra 4500Ltr above-ground storage is available within the yard area for spills/stormwater before it would begin to flow out the main yard entrance.

Runoff Quality Assessment

Expected contaminants in runoff include suspended solids, increased biochemical oxygen demand (BOD_5), pathogens, metals, hydrocarbons, toxic trace organics, nutrients and litter.

Most of the loadings of metals and hydrocarbons, and toxic trace organics are generated on hard surface area. The stormwater will enter the Stormtech System via a standard TDC Soakage Manhole. This will help catch any solids/sediments (99% of total suspended solids) prior to entering the system as well as gaining access to the system for cleaning.

The consent application RM090163 for the storage of hazardous substances contains more information about how the applicant proposes to deal with the hazardous substances on site.

6.1.3 Summary of Assessment of Effects

In summary the applicant proposes to use a soakage system to dispose of stormwater on site and it will include a divert tank in case of spillage of hazardous substances. The secondary flow path is out the entrance and on to the road.

Given the design constraints of the site this system should control the volume of stormwater and the design allows the maintenance of the soakage field into the future.

7. SUBMISSIONS

None of the five submissions received during the notification process, related to the stormwater discharge being proposed at the site.

8. PRINCIPAL ISSUES

The principal issues associated with the applications are:

a) Surface flooding
b) Potential contamination of groundwater

9. STATUTORY PROVISIONS

The application is a Discretionary Activity in the Rural 1 Zone. The Council must consider the application pursuant to Section 104 of the Resource Management Act 1991.

The matters for the Council to address in Section 104 are:

- Part II matters;
- the actual and potential effects on the environment of allowing the activity (Section 104 (1)(a));
- relevant objectives and policies in the Tasman Regional Policy Statement, and the Proposed Tasman Resource Management Plan (Section 104 (1) (b));
- any other matter the Council considers relevant and reasonably necessary to determine the application (Section 104 (1)(c)).

9.1 Resource Management Act Part II Matters

In considering an application for resource consent, Council must ensure that if granted, the proposal is consistent with the purpose and principles set out in Part II of the Act.

Section 5 sets out the **purpose** of the Act which is to promote the sustainable management of natural and physical resources. "Sustainable management" means:

"Managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while -

- *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- *avoiding, remedying, or mitigating any adverse effects of activities on the environment*

Sections 6, 7 and 8 set out the **principles** of the Act:

Section 6 of the Act refers to matters of national importance that the Council shall recognise and provide for in achieving the purpose of the Act. The matters relevant to this application are:

- 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.

- The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna

Section 7 of the Act identifies other matters that the Council shall have particular regard to in achieving the purpose of the Act. Relevant matters to this application are:

- 7(a) kaitiakitanga;
- 7(b) the efficient use and development of natural and physical resources;
- 7(c) the maintenance and enhancement of amenity values;
- 7(d) intrinsic values of ecosystems
- 7(e) repealed
- 7(f) maintenance and enhancement of the quality of the environment, and
- 7(g) any finite characteristics of natural and physical resources

Section 8 of the Act shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). I understand that the applicant has consulted with local iwi. I do not anticipate that there are any relevant issues for this application in respect of Section 8.

These principles underpin all relevant Plans and Policy Statements, which provide more specific guidance for assessing this application.

Section 105

Section 105 of the RMA also applies to this application and required the Council to have regard to:

- The nature of the discharge and the sensitivity of the receiving environment to adverse effects and the Applicant's reasons for making the proposed choice; and
- Any alternative methods of discharge, including discharge into any other receiving environment.

These matters have been discussed earlier in the report.

9.2 Tasman Regional Policy Statement

The Regional Policy Statement seeks to achieve the sustainable management of land, water and coastal environment resources. Objectives and policies of the Policy Statement clearly articulate the importance of protecting land resources from inappropriate land use and development.

Because the Tasman Resource Management Plan was developed to be consistent with the Regional Policy Statement, it is considered that an assessment under the TRMP will satisfy an assessment against Policy Statement principles.

9.3 Tasman Resource Management Plan

The most relevant Objectives and Policies to this application are contained in:

- Chapters 30 and 33

This chapter articulates Council's key objectives:

The most relevant Rules which follow from these imperatives are contained in Chapters 31 and 36.

Details of the assessment of the proposed activity in terms of these matters are addressed through the assessment of actual and potential effects in section 6.1.

9.4 Relevant Objectives and Policies of the TRMP

The following Policies and Objectives have been considered relevant for this proposal:

Objectives and Policies
Objectives and policies related to stormwater diversion, damming and discharge 30.1.0 Objective 1. The maintenance, restoration and enhancement, where necessary, of water flows and levels in water bodies that are sufficient to: (a) preserve their life-supporting capacity (the mauri of the water); (b) protect their natural, intrinsic, cultural and spiritual values, including aquatic ecosystems, natural character, and fishery values including eel, trout and salmon habitat, and recreational and wildlife values; and (c) maintain their ability to assimilate contaminants. 2. The maintenance, restoration and enhancement where possible, of the quality and extent of wetlands in the District. 30.1.17 Policies To avoid, remedy or mitigate the adverse effects of water damming either by itself or cumulatively with other dams, including adverse effects on: (a) the flow regime or water levels in rivers, lakes and wetlands; (b) passage of fish and eels; (c) other water users; (d) aquatic ecosystems and riparian habitat; (e) water quality; (f) groundwater recharge; and (g) adverse effects of dam failure on (a) to (f) above. 33.3.0Objective Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse environmental effects of downstream stormwater inundation, erosion, water contamination, and on aquatic ecosystems. Policies 33.3.1To require all owners, particularly the Council as stormwater asset manager, of all or part of any stormwater network to avoid, remedy, or mitigate adverse effects of stormwater discharges. 33.3.2To advocate works to restore and protect stream or coastal habitats and improve and protect water quality affected by stormwater and drainage water discharges.

Objectives and Policies
33.3.3To manage the adverse effects of stormwater flow, including primary and secondary flow management, and the potential for flooding and inundation. 33.3.4To avoid, remedy or mitigate the potential for erosion and sedimentation arising from stormwater run off. 33.3.5To avoid, remedy or mitigate the adverse effects of stormwater on water quality and the potential for contamination. 33.3.6To maintain or enhance stormwater infiltration to enhance groundwater recharge. 33.3.7To require all owners of all or part of any stormwater drainage network to avoid, remedy, or mitigate the adverse effects of stormwater discharges. 33.3.8To encourage an integrated whole-catchment approach to the management and discharge of stormwater. 33.3.9To require the use of low impact design in the management of stormwater discharges in any new development where practicable. 33.3.10 To encourage the restoration and rehabilitation of stormwater drainage networks where natural drainage networks have been significantly modified. 33.3.11 To take into account the long-term management of stormwater drainage in consideration of land development, including subdivision and land-use changes.

The application proposes to dispose of the stormwater on site to soakage thus maintaining the groundwater recharge while putting measures in place to limit the risk of contaminating the groundwater. The proposal is consistent with the polices and objectives above.

10. SUMMARY

10.1 Principal Issues

The principal issue is whether the proposed development can be adequately serviced in terms of stormwater so the effects on the environment will be no more than minor.

10.2 Statutory Provisions

The application is a Discretionary Activity under the provisions of Chapters 31 and 36 of the TRMP at the time the application was lodged.

- Part II matters
- Objectives and Policies of the Tasman Resource Management Plan
- Actual and Potential Environmental Effects
- Other Matters

10.3 Overall Conclusion

Overall the writer's assessment is that the actual adverse effects on the environment are minor and the proposal is generally consistent with the objectives and policies, and matters of discretion in the Tasman Resource Management Plan.

11. RECOMMENDATION

The recommendation to grant or decline this application for the discharge of stormwater is dependent upon the Committee's decision whether or not to grant the land use consent.

Having considered the application in detail, visited the site, and drawing on the Council's staff experiences of stormwater issues, it is the writer's view that the adverse environmental effects of the proposed activity will be no more than minor, and that there is no reason why resource consent for the diversion, damming and discharge of stormwater should not be granted subject to the following recommended conditions.

12. RECOMMENDED CONDITIONS

1. The Consent Holder shall ensure that all works are carried out in general accordance with the application and plans submitted with the application, unless inconsistent with the conditions of this consent, in which case these conditions shall prevail.

   Advice note:
   Refer to consent RM090163 for details on the storage of hazardous substances.

2. The primary stormwater disposal system shall not cause any damming or diversion of floodwaters that may affect adjoining properties or the Council road. To achieve this, the Consent Holder shall ensure adequate on-site disposal of roof and surface waters is provided through an appropriate stormwater drainage system.

3. The stormwater disposal system will be designed in accordance with Tasman District Council's Engineering Standards 2008. If the Consent Holder chooses to install a system that does not comply with Tasman District Council's Engineering Standards 2008 then written approval for an alternative design must be obtained from the Council's Engineering Manager.

4. Detailed engineering design of the stormwater shall be supplied with the building consent to the Council's Engineering Manager and Coordinator Compliance Monitoring for approval.

5. The installation of the stormwater soakage field shall be supervised by an experienced and appropriately qualified installer.

6. All primary stormwater flow shall be to land via soakage.

7. The discharge or diversion shall not cause or contribute to erosion of land, including the bed of any stream or drain.

8. The discharge shall not cause or contribute to any damage caused by flooding.

9. The quality of treated stormwater discharge authorised by this consent shall not exceed the following quality standards:

   a) Total petroleum hydrocarbons 15 milligrams per litre
   b) Total suspended solids 100 milligrams per litre

10. All systems associated with the discharge (such as the interceptors, connecting drains and soak pits) shall be maintained in effective, operational order at all times.

Review of Consent Conditions

11. The Council may, during the month of July each year, review any or all of the conditions of the consent pursuant to Section 128 of the Resource Management Act 1991 for all or any of the following purposes:

    a) to deal with any adverse effect on the environment which may arise from the exercise of the consent that was not foreseen at the time of granting of the consent, and which is therefore more appropriate to deal with at a later stage; and/or

    b) to require the Consent Holder to adopt the best practical option to remove or reduce any adverse effects on the environment resulting from the discharge; and/or

    c) to review the contaminant limits, loading rates and/or discharge volumes and flow rates of this consent if it is appropriate to do so; and/or

    d) to review the frequency of sampling and/or number of determinands analysed if the results indicate that this is required and/or appropriate.

    e) to require consistency with any relevant Regional Plan, District Plan, National Environmental Standard or Act of Parliament.

Expiry

12. This resource consent expires on 27 July 2029.

GENERAL ADVICE NOTES

1. Officers of the Council may also carry out site visits to monitor compliance with resource consent conditions.

2. The Consent Holder should meet the requirements of the Council with regard to all Building and Health Bylaws, Regulations and Acts. Building consent will be required for these works.

3. Access by the Council or its officers or agents to the property is reserved pursuant to Section 332 of the Resource Management Act.

4. All reporting required by this consent should be made in the first instance to the Council's Co-ordinator Compliance Monitoring.

5. Council draws your attention to the provisions of the Historic Places Act 1993 that require you in the event of discovering an archaeological find (eg, shell, midden, hangi or ovens, garden soils, pit, depressions, occupation evidence, burials, taonga) to cease works immediately, and tangata whenua, the Tasman District Council and the New Zealand Historic Places Trust should be notified within 24 hours. Works

may recommence with the written approval of the Council's Environment & Planning Manager, and the New Zealand Historic Places Trust.

6. This resource consent only authorises the activity described above. Any matters or activities not referred to in this consent or covered by the conditions must either:

   a) comply with all the criteria of a relevant permitted activity rule in the Tasman Resource Management Plan (TRMP);

   b) be allowed by the Resource Management Act; or

   c) be authorised by a separate resource consent.

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