

STAFF REPORT

TO: Environment & Planning Subcommittee

FROM: Daryl Henehan, Consent Planner- Natural Resources

REFERENCES: RM090802 - Discharge of stormwater from Lots 1, 2, 3 and 5 of proposed the subdivision
RM100208 - Discharge of stormwater from Lot 4 of the proposed subdivision

SUBJECT: **JOHN AND RIA WILMS - REPORT REP10-05-03** - Report prepared for hearing of 3 May 2010

1. DESCRIPTION OF THE PROPOSED ACTIVITY

John and Ria Wilms have lodged a number of resource consent applications relating to a subdivision and associated wastewater and stormwater discharges, earthworks and works in a watercourse in the Rural 3 Zone.

The following report assesses applications **RM090802** and **RM100208**, relating to the discharge of stormwater at the development as described in Table 1. This report should be read in conjunction with other staff reports discussing the proposed subdivision.

Should consent be granted the Consent Holder will, at that stage, be the applicant John and Ria Wilms, but it is envisaged that the resource consent will need to be transferred to the subsequent owners of the lots.

The site of the proposed subdivision has been described in detail in the report by Wayne Horner, to which the reader is directed for further information on general site matters.

Table 1: descriptions of consent applications

Application Number	Description	Detention Pond Location
RM090802	Discharge stormwater generated from building and other hardstand areas on Lots 1, 2, 3 and 5 of the proposed subdivision.	Lot 5 (DP1)
RM100208	Discharge stormwater generated from building and other hardstand areas on Lot 4 of the proposed subdivision.	Lot 4 (DP2)

1.1 Site Location and Description

The 8.43 hectare property is located in a Rural 3 Zone at 167 Dominion Road, Mahana, approximately 1.5 kilometres west of The Coastal Highway.

Two ridges pass through the site, one trending northeast to southwest, the other north to south. The site drains to three gullies, located to the sides of these ridges. An ephemeral stream is located in the gully on the western boundary of the site.

The application site contains an irrigation dam on proposed Lot 4 and one bore.

The property was previously an orchard, but currently has no significant vegetation.

Soils on the site are Moutere Hills gravel, a soil described as poorly to moderately well sorted clay-bound gravel dominated by predominantly quartzofeldsparic sandstone clasts. Test logs undertaken by Tasman Consulting Engineers indicate varying depths of greyish black silty clay topsoil overlying well-weathered Moutere Hills gravel that has developed into a light to medium clay with moderate plasticity. At greater depths the degree of weathering decreases and the original weathered cobbles can still be identified. Moutere Hills gravel derived soil does not possess sufficient infiltration rates to allow for stormwater disposal via soakage.

1.2 Legal Description

Address of property: 159 and 167 Dominion Road, Mahana;
Legal description: Lot 1 DP 9848 and Lot 2 DP 9848
Certificate of title: NL5B/654 and NL5B/655
Valuation number: 1938061700 and 1938061800

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

The proposed activity does not comply with Permitted Activity Rule 36.4.2 of the TRMP and is deemed a Discretionary Activity in accordance with Rule 36.4.4 of the TRMP.

3. CONSULTATION, APPROVALS AND SUBMISSIONS

3.1 Consultation

The application was fully notified.

3.2 Submissions

3.2.1 Summary of Submissions Regarding Stormwater:

No submissions were received regarding stormwater, although the New Zealand Fire Service Commission did submit requesting the provision of sufficient water supply for fire fighting purposes be installed in all new dwellings. This will be dealt with under the subdivision consent RM090798.

4. PRINCIPAL ISSUES

The principal issue associated with the application is whether the stormwater discharge associated with the proposed subdivision will result in any adverse environmental effects on watercourses and adjacent land.

5. STATUTORY PROVISIONS

The stormwater discharge proposed in this application is deemed a Discretionary Activity. The Council must consider the application pursuant to Sections 104 and 107 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)).

The matters for Council to consider in Section 107 are:

- the Council shall not grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 or section 15A.

5.1 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(b) the efficient use and development of natural and physical resources;
- 7(d) intrinsic values of ecosystems
- 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). Iwi have been informed of the consent applications via the weekly list sent to Iwi. I do not anticipate that there are any relevant issues for this application in respect of Section 8.

If consent is granted, the proposed activity must be deemed to represent the sustainable use and development of a physical resource and any adverse effects of the activity on the environment are avoided, remedied or mitigated. The critical issue of this consent is whether the proposal represents sustainable use of the rural land resource, whereby servicing and cumulative adverse effects are no more than minor.

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

5.2 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.

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

5.3 Tasman Resource Management Plan

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

- Chapters 30 and 33

These chapters articulate Council's key objectives. The most relevant Rules which follow from these imperatives are contained in Chapter 36. 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.

Policies

30.1.17

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.

30.1.20

To encourage, promote and support:

- (a) the protection and maintenance or enhancement of naturally occurring wetlands;
- (b) the construction of further wetlands; and
- (c) the enhancement of wetland values in wetland areas that are not naturally occurring, including farm drainage systems, irrigation, stock water and amenity ponds and dams; including the creation of wetlands following gravel extraction

33.3.0 Objective

Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse effects of downstream stormwater inundation, erosion, water contamination.

Policies

33.3.1 To 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.

33.3.2 To advocate works to restore and protect stream or coastal habitats and improve and protect water quality affected by stormwater and drainage water discharges.

33.3.3 To manage the adverse effects of stormwater flow, including primary and secondary flow management, and the potential for flooding and inundation.

33.3.4 To avoid, remedy or mitigate the potential for erosion and sedimentation arising from

Objectives and Policies

stormwater run off.

33.3.5 To avoid, remedy or mitigate the adverse effects of stormwater on water quality and the potential for contamination.

33.3.6 To maintain or enhance stormwater infiltration to enhance groundwater recharge.

33.3.7 To require all owners of all or part of any stormwater drainage network to avoid, remedy, or mitigate the adverse effects of stormwater discharges.

33.3.8 To encourage an integrated whole-catchment approach to the management and discharge of stormwater.

33.3.9 To 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.

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

The development of rural catchments with houses, roads and other impermeable surfaces inevitably alters their drainage characteristics. Typically, such developments cause an increase in both the volume and peak flow rate of stormwater discharges that occur out of the catchment during and following rainstorm events. Stormwater discharges from such catchments that are not attenuated can cause flooding and damage to the environment and property downstream. Thus, there is an expectation within the TRMP's policies and objectives that such impacts are avoided, remedied or mitigated wherever possible.

Stormwater management was discussed in the report prepared by Tasman Consulting Engineers Ltd., submitted with the applications for resource consent.

Stormwater from the developed areas on Lots 1,2, 3 and 5 will be directed to a proposed detention pond (DP1) to be constructed adjacent to Dominion Road on Lot 5 (right-of-way). House connections for Lots 1, 2 and 3 will drain water to the roadside drain of the access lot, and then to DP1. Runoff from parts of the undeveloped areas of these Lots will also flow to DP1, with the rest draining to another catchment as occurred pre development. Stormwater from the developed and undeveloped areas on Lot 4 will be directed into an existing irrigation pond (DP2), located on Lot 4.

Discharge from these two retention structures will be restricted by a controlled release pipe of sufficient diameter to ensure that flows post development from events up to Q_{50} in magnitude do not exceed pre development flows.

Water discharged from DP1 will travel through an existing 600 mm culvert below Dominion Road onto a wetland on M V Neumann's property. This culvert currently drains an ephemeral stream.

Tom Kroos Fish and Wildlife Services Ltd. has provided recommendations for a wetland design below the dam outlet that would enhance habitat values. From these recommendations the applicant proposes to:

- incorporate a shallow pond and flat margins at the ends;
- achieve a depth of at least 1m in places; and
- if the adjoining properties agree, it may also be possible to supplement the flow from to this wetland.

The applicant has noted that there will not be enough room to incorporated and island in the final design of the wetland.

It should be acknowledged that the final shape and layout of the wetland will be determined during the final design phase, when there will be a more thorough examination of how the environmental benefits can be maximised. Importantly, the applicant has volunteered to manage the volume of stormwater runoff in the manner identified to ensure adverse effects are less than minor and maximise the positive benefits as far as practicable.

No consent is required for the damming of water by either Detention Pond 1 or 2, as they are deemed Permitted Activities in accordance with Rule 31.2.1 of the TRMP, because the areas of the contributing catchments (8 hectares) are less than 20 hectares.

6.1.2 Stormwater Diversion and Discharge Assessment

Stormwater Attenuation Assessment

The increase in hardstand areas resulting from the subdivision proposal will reduce the potential for rainfall to soak into the ground, thereby increasing the amount of overland flow discharged from the site. Within the catchment contributing to DP1, the total hardstand areas post development will represent approximately 12% of the area (Table 2). Within the catchment contributing to DP2, the hardstand areas will represent approximately 13% (Table 2).

Table 2: hardstand areas as percentages of total catchments contributing to the detention ponds

DP1 Hardstand Areas	Area (m ²)	Percentage of total 70,500 m ² catchment
House and driveway Lot 1	1,160	1.6
House and driveway Lot 2	1,430	2.0
House and driveway Lot 3	2,030	2.9
Access road	3,860	5.5
<i>Total</i>	<i>8,480</i>	<i>12.0</i>

DP2 Hardstand Areas	Area (m²)	Percentage of total 22,100 m² catchment
House and driveway Lot 4	2,870	13.0

The detention ponds will serve to detain this increase in flow and also attenuate the flood flows from the site in events of a magnitude up to a 1 in 50 year return period. Both detention ponds will be designed with restrictor pipes that will limit post development stormwater flows to not more than pre-development levels. A discussion and analysis to this effect is provided in detail in the report submitted by Tasman Consulting Engineers Limited.

In addition, it is stated that various low impact design measures will be considered during the engineering design including rain gardens, weirs and planting along the flatter areas to act as filtration before connection to a detention pond.

Maintenance

Both detention ponds will require regular maintenance to ensure outlets remain clear of debris and that silt is not allowed to build up at the bottom of either pond. It is recommended that the Consent Holder incorporate a mechanism to catch debris before it reaches the restrictor pipe. This will be required at the Engineering Plan stage.

If granted, RM090802 will be held by the owners of Lots 1, 2 and 3, therefore it is recommended that they be required to maintain Detention Pond 1. Similarly, if granted, RM100208 will be held by the owner of Lot 4, therefore it is recommended that they be required to maintain Detention Pond 2.

Increase in Baseflow from Detention Pond 1

As discussed above, Detention Pond 1 will be constructed adjacent to Dominion Road and will discharge through a 600 mm culvert to M V Neumann's property (160 Dominion Road). While the detention pond will serve to attenuate flood flows, it will result in an increase in the amount of time water is flowing to the Neumann property. It is considered that this effect is less than minor and will be outweighed by the positive impact of the attenuation of flood flows.

Runoff Quality Assessment

The applicant's report did not discuss in detail the effects of the proposed development on the quality of stormwater discharged from the subject site. Expected contaminants in runoff include suspended solids, increased biochemical oxygen demand (BOD₅), pathogens, metals, hydrocarbons, toxic trace organics, nutrients and litter. These will be in low concentrations.

The detention of stormwater in the ponds is expected to allow sediment held in the water to settle out of suspension. Most of the loading of the metals and hydrocarbons is adsorbed to the suspended sediment and will therefore be removed when the sediment settles out of the water. The water discharged from both detention ponds will receive further filtration as it flows through grassed areas before reaching receiving water.

Overall, it is considered that the stormwater discharges resulting from the proposed development will not adversely affect water quality to a more than a minor degree.

6.1.3 Summary of Assessment of Effects

In summary, potential adverse effects on the environment, in terms of the diversion and discharge of stormwater by the proposed subdivision, are considered to be minor and the proposal is generally consistent with the objectives and policies in the Tasman Resource Management Plan.

7. SUMMARY

7.1 Principal Issues

The principal issue in this application is whether the proposed subdivision can be adequately serviced in terms of stormwater attenuation (diversion and discharge), so that the effects on the environment will be no more than minor.

7.2 Statutory Provisions

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

7.3 Overall Conclusion

Overall, it is considered that the actual adverse effects on the environment are less than minor and the proposal is generally consistent with the objectives and policies, and matters of discretion in the Tasman Resource Management Plan.

8. RECOMMENDATION

The recommendation to grant or decline these applications for the diversion and discharge of stormwater is dependent upon the Committee's decision whether or not to grant the subdivision consent.

Having considered the application in detail, having 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 less than minor, and there is no reason why resource consent for stormwater should not be granted subject to the following recommended conditions.

9. RECOMMENDED CONDITIONS

9.1 Diversion and Discharge of Stormwater (RM090802 and RM100208)

1. The discharge of stormwater shall be carried out in accordance with the application submitted by Landmark Lile Ltd. and Newton Survey, dated 20 November 2009 and details contained in the report prepared by Tasman Consulting Engineers Ltd., dated 27 October 2009 (ref. 09193), submitted with resource consent application.

Where there are any apparent conflicts or inconsistencies between the information provided and the conditions of this consent, the conditions shall prevail.

2. Engineering specification plans shall be provided to the Manager, Engineering and approved prior to the commencement of works on the stormwater system at the proposed development. The specifications shall be in general accordance with the requirements of Condition 1.
3. Notwithstanding Condition 1, the stormwater disposal systems shall 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, written approval from Council for that design must first be obtained.
4. The Consent Holder shall submit to the Council's Coordinator Compliance Monitoring a Stormwater Management Plan (SMP) before any land excavation or construction works begin. The SMP shall, as a minimum, include:
 - a) Design plans for the components of the stormwater system.
 - b) A maintenance plan which describes the long-term maintenance of the stormwater system, ensuring on-going effectiveness of stormwater treatment structures, weed management, erosion protection, pest fish monitoring and pest fish eradication.

The stormwater system shall be managed in accordance with the SMP.

5. An Earthworks Management Plan in accordance with Condition 26 of RM090804 shall be submitted to Council's Co-ordinator, Compliance Monitoring for approval prior to any works taking place.
6. A certificate signed by the person responsible for designing the stormwater management system or a similarly qualified or experienced person shall be submitted to the Council annually for the duration of the construction phase on the subdivided site. This shall certify that the system components present are constructed and installed in accordance with the details of the application and the conditions of this consent.
7. The discharge or diversion shall not cause or contribute to erosion of land, including the bed of any stream or drain. Bare ground shall be revegetated as soon as practical, but within six months of the completion of works to minimise the generation of sediment.
8. The discharge or diversion shall not cause the production of conspicuous oil or grease films, scums or foams, or floatable or suspended material in any receiving water.
9. At the time of sale the Consent Holder shall transfer consent RM090802 to the purchased of Lots 1, 2 and 3.

10. At the time of sale the Consent Holder shall transfer consent RM100208 to the purchaser of Lot 4.

Dwellings

11. Any dwelling built on the site shall have a water tank(s) with a minimum volume of 23,000 litres to collect rainwater from roofs. The overflow from the tanks shall discharge to a primary stormwater management system (grass swale, watertable, etc) and all structures associated with this shall be constructed to avoid flooding and erosion.

Advice Note:

Low impact design for stormwater management on each of these properties is encouraged. The soils found in this area have poor drainage, thus soakage methods of disposal are unlikely to be effective.

Maintenance

12. All systems associated with the discharge (such as the interceptors, connecting drains, swales, water tables, tanks and dams) shall be maintained in effective, operational order at all times.
13. All systems shall be checked on a regular basis as required, but not less than once every year, to prevent carryover of contaminants into the receiving environment.

Review of Consent Conditions

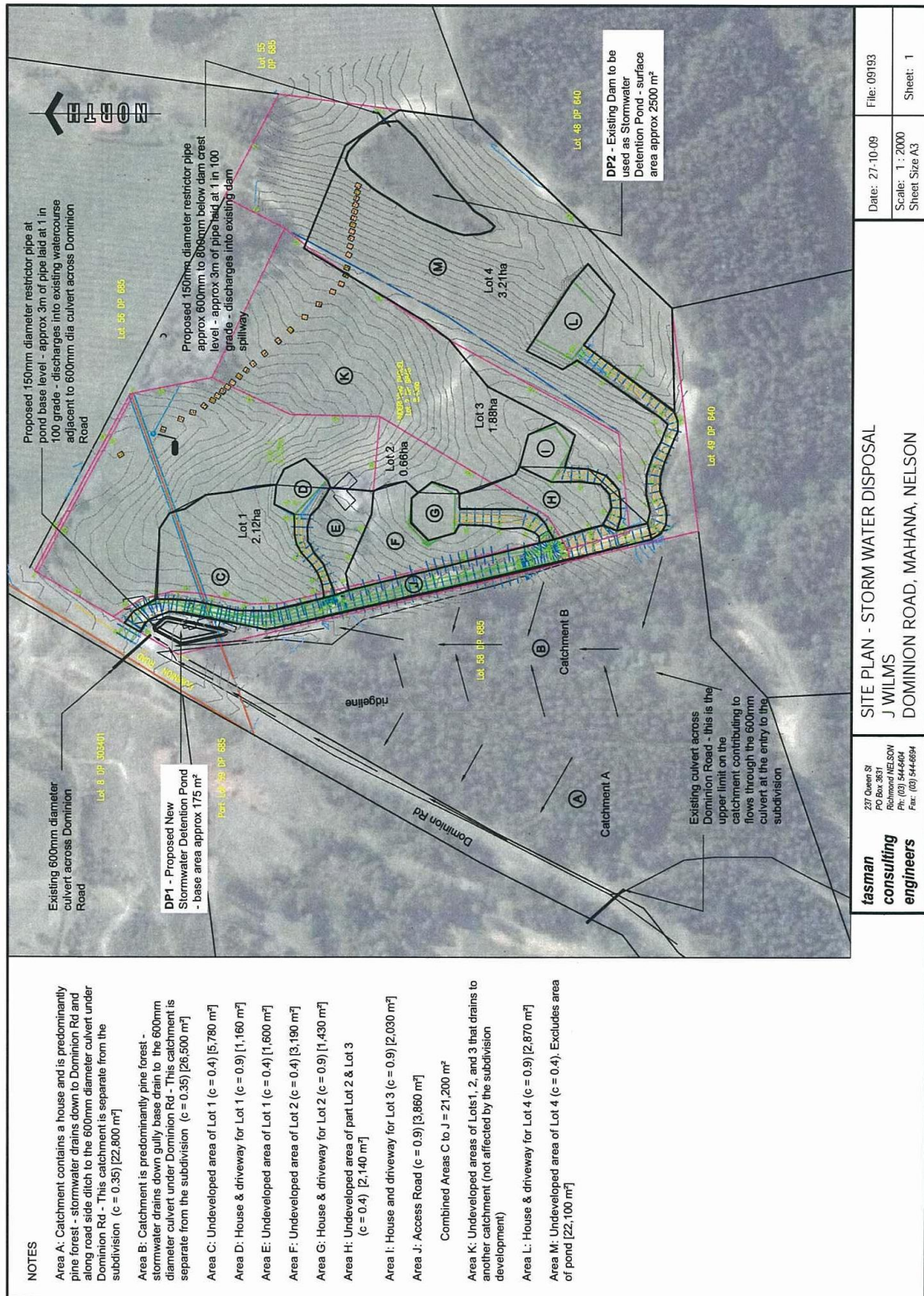
14. Pursuant to Section 128 of the Resource Management Act 1991, the Consent Authority may review the conditions of these consents by serving notice during the month of April each year, and for any of the following purposes:
 - a) to deal with any adverse effect on the environment which may arise from the exercise of this consent, and which it is appropriate to deal with at a later stage;
 - b) to require the Consent Holder to adopt the best practicable option to remove or reduce any adverse effect on the environment;
 - c) to allow, in the event of concerns about the quality or quantity of stormwater discharged, the imposition of compliance standards, monitoring regimes and monitoring frequencies and to alter these accordingly; or
 - d) to change the compliance standards imposed by conditions of this consent to standards that are consistent with any relevant Regional Plan, District Plan, National Environmental Standard, or Act of Parliament.
15. This consent shall expire 35 years from the date of issue.

ADVICE NOTES

1. Access by the Council or its officers or agents to the property is reserved pursuant to Section 332 of the Resource Management Act.
2. The Consent Holder's attention is drawn to Permitted Activity Rule 36.2.4 which permits the discharge of sediment or debris to water. No consent to breach the conditions of this rule has been applied for and therefore the Consent Holder must meet the conditions of this consent during land disturbance activities or else separate resource consent must be obtained.
3. 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 shall be notified within 24 hours. Works may recommence with the written approval of the Council's Co-ordinator - Compliance Monitoring, and the New Zealand Historic Places Trust.
4. This resource consent only authorises the activities described above. Any matters or activities not referred to in these consents 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.
5. Monitoring of this resource consent may be required under Section 35 and 36 of the Resource Management Act 1991, and a deposit fee is payable at this time. Should monitoring costs exceed this initial fee, the Council will recover the additional amount from the Consent Holder. Monitoring costs are able to be minimised by consistently complying with the resource consent conditions.
6. Pursuant to Section 127 of the Resource Management Act 1991, the Consent Holder may apply to the Consent Authority for the change or cancellation of any condition of this consent.
7. Plans attached to this consent are (reduced) copies and therefore will not be to scale and may be difficult to read. Originals of the plans referred to are available for viewing at the Richmond office of the Council. Copies of the Council Standards and documents referred to in this consent are available for viewing at the Richmond office of the Council.

Daryl Henehan
Consent Planner - Natural Resources

Plan A - RM090802 and RM100208, John and Ria Wilms



- NOTES**
- Area A: Catchment contains a house and is predominantly pine forest - stormwater drains down to Dominion Rd and along road side ditch to the 600mm diameter culvert under Dominion Rd - This catchment is separate from the subdivision (c = 0.35) [22,800 m²]
 - Area B: Catchment is predominantly pine forest - stormwater drains down gully base drain to the 600mm diameter culvert under Dominion Rd - This catchment is separate from the subdivision (c = 0.35) [26,500 m²]
 - Area C: Undeveloped area of Lot 1 (c = 0.4) [5,780 m²]
 - Area D: House & driveway for Lot 1 (c = 0.9) [1,160 m²]
 - Area E: Undeveloped area of Lot 1 (c = 0.4) [1,600 m²]
 - Area F: Undeveloped area of Lot 2 (c = 0.4) [3,190 m²]
 - Area G: House & driveway for Lot 2 (c = 0.9) [1,430 m²]
 - Area H: Undeveloped area of part Lot 2 & Lot 3 (c = 0.4) [2,140 m²]
 - Area I: House and driveway for Lot 3 (c = 0.9) [2,030 m²]
 - Area J: Access Road (c = 0.9) [3,860 m²]
 - Combined Areas C to J = 21,200 m²
 - Area K: Undeveloped areas of Lots 1, 2, and 3 that drains to another catchment (not affected by the subdivision development)
 - Area L: House & driveway for Lot 4 (c = 0.9) [2,870 m²]
 - Area M: Undeveloped area of Lot 4 (c = 0.4). Excludes area of pond [22,100 m²]

tasman consulting engineers 287 Okeana St PO Box 3831 Richmond NELSON Ph: (03) 544-6404 Fax: (03) 544-6894	SITE PLAN - STORM WATER DISPOSAL J WILMS DOMINION ROAD, MAHANA, NELSON		Date: 27-10-09	File: 09193
			Scale: 1 : 2000 Sheet Size A3	Sheet: 1