

STAFF REPORT

TO: Environment & Planning Subcommittee - Commissioner Hearing

FROM: Mike Mackiggan, Consent Planner - Natural Resources

REFERENCES: RM100239

SUBJECT: **P STOWE and B DUNN - REPORT REP10-11-02-** Report prepared for hearing of 8 November 2010

1. DESCRIPTION OF THE PROPOSED ACTIVITY

The applicants P Stowe and B Dunn have lodged resource consent applications to:

- retain existing green cottage (workers' accommodation) as a fourth dwelling on site and extend brown cottage with addition (RM100443);
- retrospective consent for cottage extensions (RM100238); and,
- associated domestic wastewater discharge in the Rural 3 Zone, Coastal Environment Area, and Wastewater Management Area (WMA).

This report relates to the discharge of domestic wastewater to land from the proposed current levels of development on the site.

The applicant's agent Mark Rounce, Consulting Chartered Professional Engineer of Rounce Project Solutions Ltd, has proposed on-site treatment and discharge methods for the domestic wastewater that are anticipated by the TRMP, and are typical of many wastewater systems already installed and operating in the WMA Zone.

The wastewater system is proposed to be a "secondary treatment" system that produces a relatively high quality effluent and the wastewater is proposed to be discharged to a land application area comprising a network of pressure compensating drip irrigation lines.

The proposed discharges are also typical of many in the WMA that have already been granted resource consents both by Committee and (more often) under delegated authority.

The sites of the proposed residential components have been described in detail in the report by Godwell Mahowa, to which the reader is directed for further information on general site matters.

1.2 Site Location and Description

The 10.9 hectare property is located in the Rural 3 Zone at 710 The Coastal Highway (SH60), Appleby-Motueka, adjacent to the new Ruby Bay Bypass 400 metres south of the new apple Valley Road intersection.

The property is roughly triangular with an approximately 360 metre western boundary frontage to SH60, a 540 metre southern boundary, and a 540 metre northern boundary which adjoins the estuary. It has an existing older farming house, garage /workshop/barn, a new retirement dwelling approved (under RM050664), and two older workers cottages both of which have recently been extended (without consent approval).

The balance of the site is in generally level / gently rolling pasture and amenity plantings.

Underlying geology of the area is classified as Mapua Sandy Loam. Test logs undertaken by Rounce Project Solutions Limited have identified as per AS/NZS 1547:2000 the overall soil category in the proposed effluent land application area as Category 6 - Medium to Heavy Clays.

1.3 Legal Description

Address of property: 710 The Coastal Highway
Legal description: Pt. Lot 14 DP 639 BLK II Moutere SD
Certificate of title: NL6B/693
Valuation number: 1938069400

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

The application site is within the Wastewater Management Area (WMA). The relevant TRMP Rule for a new discharge in the WMA is Controlled Activity Rule 36.1.13A as the proposed discharge does not meet the Permitted Activity Standards in Rule 36.1.4 (due to the discharge being a new discharge commencing after 20 December 2003 in the WMA).

This consent is bundled with the land use application (RM100443), which is deemed to be a Discretionary Activity; therefore this application is also assessed as a **Discretionary Activity**.

3. CONSULTATION, APPROVALS AND SUBMISSIONS

3.1 Consultation

The application was publicly notified on 7 August 2010.

3.2 Submissions

Four submissions in opposition to the overall proposals were subsequently received. One submission was received in support of the overall proposals

Two of the submissions in opposition included specific comments amongst others on the wastewater disposal aspects of the proposed development.

The submitters are opposed to the location of the effluent disposal field and the proximity to Coastal Environment Area / Waimea Inlet, an estuary of national importance.

The submitter in support of the proposals notes that the existing effluent disposal system is to be upgraded as well as improve the grey water system currently in place.

4. PRINCIPAL ISSUES

The principal issue associated with the wastewater discharge application is:

- a) Can the level of residential activity sought be adequately serviced in terms of domestic wastewater disposal, such that the effects on groundwater be no more than minor and ensure that there are no cross boundary effects?

5. STATUTORY PROVISIONS

The wastewater discharge proposed in the application is a Controlled Activity (if viewed in isolation) as it is in the Wastewater Management Area (WMA) (however as it is bundled with the suite of consents it is viewed as a Discretionary Activity).

The Council must consider the application pursuant to Section 104 and Section 107 of the Resource Management Act 1991.

The matters for Council to consider in Section 104 are:

- Part II matters;
- the actual and potential effects on the environment of allowing the activity (Section 104 (1)(a));
- any relevant provisions of a national environmental standard, other regulations, a national policy statement, the New Zealand coastal policy statement, the Tasman Regional Policy Statement and the 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, the 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.

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(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 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 should be avoided, remedied or mitigated.

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.

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.

5.3 Tasman Resource Management Plan

The most relevant Objectives and Policies to this application are contained in Chapter 33. The following Policies and Objectives have been considered relevant for this proposal:

| <i>Objectives and Policies</i> | |
|--------------------------------|--|
| <i>33.4.0</i> | <i>Objective</i> <i>On-site disposal of domestic waste-water, which avoids, remedies or mitigates adverse effects on groundwater or surface water quality, habitats, human health and amenity values.</i> |
| <i>Policies</i> | |
| <i>33.4.1</i> | <i>To ensure householders are aware of the potential adverse effects that may be created by discharges from on-site wastewater disposal systems, and of methods of avoiding, remedying or mitigating them.</i> |
| <i>33.4.2</i> | <i>To ensure that the adverse effects, particularly the cumulative adverse effects, of on-site disposal of domestic wastewater on water quality and aquatic habitats, including coastal water, and on human health or amenity in the Wastewater Management Area are avoided, remedied or mitigated by:</i> <i>(a) controlling the use of on-site systems in areas where there are significant limitations to sustainable on-site disposal of domestic wastewater including:</i> <i>(i) low or very low permeability clay soils;</i> <i>(ii) rapidly draining coastal soils;</i> <i>(iii) areas of high groundwater tables;</i> <i>(v) steeply sloping sites, especially on south facing slopes;</i> <i>(v) unstable terrain;</i> <i>(vii) proximity to surface water bodies;</i> <i>(vi) high density of existing and new on-site systems and the cumulative impact of such discharges in terrain that has</i> |

Objectives and Policies

significant limitations to on-site disposal;

- (b) requiring comprehensive site and soil assessments to identify any site limitations;*
- (c) requiring a high level of performance for design, construction, installation, operation and maintenance for new on-site disposal systems;*
- (d) ensuring adequate buffers between disposal fields, water bodies, and the coast, especially Waimea and Mapua Inlets;*
- (e) reducing the risk to human health arising from pathogens in the wastewater entering into water;*
- (f) ensuring the net Nitrogen losses from land in the Wastewater Management Area to be subdivided do not result in adverse effects on aquatic habitats as a result of discharges of domestic wastewater;*
- (g) ensuring stormwater management accounts for potential effects on on-site disposal fields;*
- (h) ensuring that the potential adverse effects, especially cumulative effects of further residential development, are taken into account in considering any application to subdivide land in the Wastewater Management Area.*

33.4.2A To require regular programmed maintenance of on-site wastewater treatment and disposal systems to minimise risk of system failure and reduce risk of adverse environmental effects.

33.4.2B To encourage consideration of wastewater treatment systems that service a cluster of households (subject to any site limitations) to:

- (a) take advantage of opportunities for high technology advanced wastewater treatment solutions at cluster scales;*
- (b) reduce risks of system failure and cumulative adverse effects of single on-site systems;*
- (c) enable Council to develop effective and cost efficient systems for monitoring on-site wastewater systems.*

33.4.2C To ensure that legal, practical, financial and enforceable responsibility is established for the operation and maintenance of any on-site wastewater treatment and disposal system, especially where such systems service a cluster of dwellings, taking into account both day-to-day operation and maintenance of such systems as well as provision for depreciation and replacement of equipment and of systems.

Details of the assessment of the proposed activity in terms of these matters are addressed through the assessment of actual and potential effects in paragraphs 6.1-6.4 below and analysis and discussion on the relevant policies and objectives in paragraph 6.5 of this report.

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 applicant's proposals for the collection, treatment and discharge of domestic wastewater to land are described in detail in the report by Mark Rounce of Rounce Project Solutions Ltd (dated 24 March 2010). The proposals and site assessment are summarised below.

It is proposed that the extended cottage be serviced by an on-site secondary wastewater treatment and disposal system. This types of wastewater system treats both blackwater (i.e. toilet waste) and greywater (i.e. all other wastewater) in a combined wastewater stream, and the treated wastewater is discharged to a dedicated land application area within the boundaries of the site. The discharge will occur to a land application area through a network of pressure-compensating drip irrigation lines buried at up to 100 mm depth in the top soil. The size of the land application area is typically dependent upon the volume of wastewater to be discharged and the hydraulic capacity of the soil (i.e. the rate at which soil can absorb the discharged wastewater). The former is determined by the maximum possible occupancy of the dwelling, and the latter is dependent upon the soil type and sometimes other physical features of the site.

Rounce Project Solutions Ltd were commissioned by the applicant to investigate and report on the disposal of wastewater from the proposed development. They assessed the soil categories, as per the AS/NZS 1547:2000 standard as Category 6 soils - "Very Poorly Drained".

The Rounce Project Solutions Ltd report assumed that the overall occupancy of the extended cottage will house five people and will generate 900 litres of wastewater per day, as per the AS/NZS 1547:2000 standard. Information about the proposed wastewater system is presented in Table 1.

Table 1: Basic information regarding the wastewater system

| | |
|---|--------------------------|
| Design Occupancy | 5 |
| Wastewater generated per day | 900 L (180 l/person/day) |
| Design irrigation rate per day | 2.14 mm |
| Required land application area | 420 m ² |
| Length of irrigation line | 420 m |
| Reserve land application area available | 420 m ² |
| Dripper irrigation rate per hour | 2.3 L |

| | |
|---|-----------|
| Distance between centres of drippers | 0.6 m |
| Standard of treatment required | Secondary |
| Minimum distance from EAA boundary to Inlet or any other watercourse. | 25 m |

Rounce Project Solutions Ltd report recommends specific measures to ensure that effluent can be disposed of to land in an environmentally sustainable manner.

Discharge to Land

Design Brief and Site Assessment

The wastewater system for the extended cottage was designed based on the precautionary assumption that overall maximum occupancy would be five people.

Site inspection methods involved a walkover inspection and visual assessment and the digging of two soil investigation pits. Soils were assessed using methods described in the standard on-site wastewater system design guide and the Australian / New Zealand Standard AS/NZS1547:2000¹.

The soils on the property are described as Mapua Sandy Loam. Soils were found to have a most limiting horizon of Category 6 at 250 - 1100 mm below ground level. These soils can be described as being “poorly drained”. The test holes were all dug to a depth greater than 0.6 metres in March 2010 and no groundwater was encountered.

Wastewater Flows

A design flow volume of 180 litres per person per day was assumed. This is a normal design volume for dwellings with standard water producing fixtures. As such, the total daily wastewater flow has been assumed as a maximum five people x 180 litres = 900 litres per day.

On-site Wastewater Treatment

The system proposed is of a type that is expected by the TRMP in the Wastewater Management Area (WMA), being capable of treating wastewater to at least ‘secondary standard’.

The secondary treatment system proposed is an “aerated system” which operates using a septic tank followed by a second chamber, in which air is injected through the wastewater by a blower system. This aeration chamber oxygenates the wastewater and provides conditions for the growth of aerobic bacteria that treat the wastewater. (Other types of secondary treatment, such as vermiculture systems, gravel beds and mounds are also available and produce wastewater of a similar standard.)

Pump chambers are recommended to have no less than 24 hours emergency storage and a high water level alarm.

1. AS/NZS1547:2000 On-site domestic-wastewater management. Standards New Zealand

Rounce Project Solutions Ltd are recommending an Oasis Clearwater 2000 System to ensure compliance with AS/NZS1547:2000 and which will be capable of producing secondary treated effluent meet the TDC standard requirements as follows:

| | |
|------------------------|--------------------------|
| BOD ₅ | 20 grams per cubic metre |
| Total Suspended Solids | 30 grams per cubic metre |

Maintenance contracts are required to be taken and retained with the system supplier.

On site Wastewater Land Application

The following possible site constraints need to be taken into account at the final design stage prior to building consent application: soil type, slope angle, groundwater separation, proximity of bores, proximity of surface water, surface water overland flow paths, slope stability, boundaries and proximity of buildings, reserve areas and proposed land use of the primary land application area.

The TRMP expects a maximum loading rate of 2.14 mm per day (2.14 litres per square metre per day), a rate based on the AS/NZS 1547:2000 standard for irrigation systems in Category 6 soil. The land application area is designed for the discharge of 900 litres per day at a rate of 2.14 litres per square metre per day, and are therefore 420 square metres in area.

The TRMP requires in the WMA that a reserve area equivalent to 100% of the primary land application area be available for wastewater disposal if needed in the event of system failure and clogging of soils. Part of this reserve area may also be used in the event of future extensions to the dwelling in question and subsequent need for the discharge of larger volumes of wastewater.

The Rounce Project Solutions Ltd report states however that there is enough useable area (420 square metres) for the land application area and a 100% reserve area available of 420 square metres. Suggested locations of the land application and reserve fields have been provided.

6.2 Assessment: Discussion of Key Potential Environmental Effects

Before providing an explicit assessment of the key potential environmental effects associated with the proposed domestic wastewater discharges, some general comments on the application should be made as follows:

Comments on Applicant's Wastewater Report

The Council's expectations of new domestic wastewater discharges in the WMA are that treatment will be at least to secondary standards, and that the discharge occurs to a dedicated land application area via a dose loading system to pressure-compensating dripper irrigation lines, at a rate not exceeding 2 cubic metres per day. These expectations have been satisfied by the applicant.

The system proposed and the recommended conditions require that the Consent Holder design the system in accordance with the AS/NZS 1547:2000 standard and submit the design to Council's Coordinator, Compliance Monitoring.

The site inspection methods and soil assessment methods used are considered to be appropriate and the soil types identified were consistent with the Council's understanding of soils in this area.

The wastewater system type that is proposed for the site is suitable for the intended use and is widely available. Maintenance contracts and other mitigation factors recommended in the report are also widely available and will help to minimise any adverse environmental effect of wastewater discharge to land. The details provided on the typical quality of wastewater produced by these systems were also realistic.

A Reserve land application areas is required to be available under the WMA Rule 36.1.13A and one of 420 square metres is identified in the applicant's consultant engineers report. The purpose of the reserve area is two-fold. First, to allow for the dripper irrigation lines to be re-laid in fresh soil should the soils in the primary land application area become clogged. The main circumstance under which this would happen is the development of anaerobic conditions in the soil, leading to the excessive growth of slimes. Industry experience suggests that the occurrence of this is both rare, and usually able to be remedied. Clogging, if it occurs, is usually concentrated around the dripper lines themselves; their removal followed by rotary hoeing of the soils leaves the primary land application area ready for the installation of new dripper lines. Therefore, following the failure of a wastewater system, it is unlikely that the reserve land application area would need to be used. Notwithstanding this, it is prudent that a reserve area should be available and the land should not be used for permanent structures that would prevent its future use, as the possible future need for a reserve can not be ruled out.

The second reason for the provision of a reserve area is to allow for the expansion of the primary land application area. This might be necessary for a variety of reasons including future possible extensions to the dwelling and subsequent increase in the volume of wastewater to be discharged. Another possible reason is that the hydraulic capacity of the soil was overestimated at the time of system design, and it is discovered that a lower rate of wastewater discharge needs to be applied.

The provision for a 100% reserve area has been provided for the proposed development.

Key Potential Environmental Effects

The key potential environmental effects associated with domestic wastewater discharges from the proposals are as follows:

- Impact on surface water quality
- Impact on groundwater quality
- Impact on soils
- Impact on amenity values

Adverse impacts on surface water, groundwater and soils themselves can be avoided through appropriate design and site assessment. Aside from the type of wastewater system itself, which has been discussed above, one of the most important aspects of wastewater design is the soil into which wastewater is to be discharged. Wastewater receives "treatment" by bacteria in the soil following its discharge from the

wastewater system. The discharge should occur at a rate within the hydraulic capacity of the soil (i.e. at a rate at which the soil can physically absorb and transmit the water). If the discharge is maintained below this rate, then typically the soils remain aerobic (air spaces are present within the soil), and so the water is treated by aerobic bacteria. If the rate of discharge above this rate, then these air spaces may be lost (the soil becomes saturated). Under these conditions the anaerobic bacteria multiply in the soil and these typically emit an offensive odour. Furthermore, some of the discharged wastewater may reach the surface. Neither of these outcomes is intended nor desirable.

This situation is best avoided by the installation of a wastewater system that is suitable for the site, and in particular, discharges the treated wastewater at an appropriate rate for the soil type. These key design parameters have been met in the applicant's wastewater design report.

Adverse impacts on surface water quality should be avoided because the wastewater system will be properly designed and a maintenance schedule will be enforced, should consent be granted. The land application area proposed is located more than 20 metres from any waterbody. Should consent be granted, the disposal field should be designed as per the recommended conditions, which reference the AS/NZS 1547:2000 standard and require approval by Council's Co-ordinator Compliance Monitoring.

The discharge of wastewater is the subject of an Engineering Report by Rounce Project Solutions Ltd (Mark Rounce) which concludes that wastewater can be adequately dealt with on site.

Council's Wastewater Building Inspector Robert Cox has considered the generic design report submitted by Rounce Project Solutions Ltd and advises that the design proposed so far is to his satisfaction and that AS/NZS 1547 is likely to be achieved, and the requirements of the TRMP met.

As has been discussed above, it is considered that the proposed wastewater system is appropriate for the site, the design flow volume is suitable for the proposed dwelling and the irrigation rates are suitable for the proposed volumes of water and the soil types present. Therefore, it is not expected that there be any adverse effect on the soils, surface water nor groundwater that could be considered more than minor.

6.3 Permitted Baseline

Under Section 104 (2) of the Resource Management Act the Council may use the "permitted baseline" test to assess the proposal. Under this principle the proposal is compared with what could be done as permitted activities under the relevant Plan.

Rule 36.1.4 provides the permitted activity status for new discharges in the WMA. The proposal meets the permitted activity standards in all aspects apart from being a new discharge in the Wastewater Management Area first commencing after 20 December 2003, hence making the discharge a Controlled Activity under 36.1.13A.

The discharge of wastewater is the subject of an Engineering Report by Rounce Project Solutions Ltd (Mark Rounce) which concludes that wastewater can be adequately dealt with on site.

Council's Wastewater Building Inspector Robert Cox has considered the generic design report submitted by Rounce Project Solutions Ltd and advises that the design proposed so far is to his satisfaction and that AS/NZS 1547 is likely to be achieved, and the requirements of the TRMP met in so far as any adverse effects can be avoided remedied or mitigated by the imposition of appropriate conditions on any consent that may be granted.

6.4 Relevant Objectives and Policies of the TRMP

The relevant objectives and policies of the TRMP are listed the paragraph 5.3 of this report. All the relevant objectives and policies can be met by the proposed development.

7. SUMMARY

7.1 Principal Issues

The principal issue for this consent application is whether the proposed development can be adequately serviced in terms of domestic wastewater disposal so the effects on the environment will be no more than minor.

7.2 Statutory Provisions

This bundled application is Discretionary in status as an activity in the Wastewater Management Area. The Council must consider the application pursuant to Section 104 of the Resource Management Act 1991.

7.3 Overall Conclusion

Overall the writer's assessment is 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 this bundled application for discharge permit is dependent upon the Commissioner's decision whether or not to grant the overall land use consents RM100443 and RM100238.

Having considered the application in detail, having visited the site, and drawing on experience of current wastewater discharges in the Wastewater Management Area, 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 discharge of wastewater to land should not be granted subject to the recommended conditions below, (should the Hearing Commissioner decide to approve the overall development proposed by RM100443 and RM100238):

9. RECOMMENDED CONDITIONS

9.1 Discharge of Domestic Wastewater to Land (RM100239)

1. The design and the construction and operation of the approved wastewater treatment and disposal system shall be in general accordance with the design report prepared by Rounce Project Solutions Ltd, (reference Stowe/Dunne and dated March 10) with the application for resource consent, unless inconsistent with the conditions of this consent, in which case these conditions shall prevail.

Advice Note:

The wastewater system designer should be involved from an early stage with other parties responsible for the design. Design flow volumes, design and sizing of the land application area and reserve land application area needs to be undertaken concurrently with, for example, landscaping designs and planning.

(While the application refers to aerated systems, any form of secondary treatment capable of treating wastewater to comply with Condition 4 is considered suitable.)

2. The maximum rate of discharge shall not exceed 900 litres per day and shall occur in the location shown on Plan A (attached) with a minimum setback from the boundary of at least 25m. Should the applicant wish to move the field further from the boundary or alter the field shape, the applicant must first obtain the written approval of the Council's Co-ordinator Compliance Monitoring
3. The maximum loading rate at which the wastewater is applied to land shall not exceed 2.14 millimetres per day (2.14 litres per square metre per day). The land application areas shall be no less than 420 square metres in area and incorporate at least 420 lineal metres of pressure-compensating drip irrigation line. The land application areas shall incorporate at least 1 lineal metre of pressure-compensating drip irrigation line for each square metre of land application area. The emitters in the drip irrigation line shall be spaced no more than 0.6 metres apart along the line and each shall emit wastewater at a rate of no more than 2.3 litres per hour. Adjacent lateral drip irrigation lines shall be laid 1 metre apart or more.
4. The treated wastewater entering the land application area, as measured at the sampling point required to be installed in accordance with Condition 11, shall comply at all times with the following limits:
 - a) the five day biochemical oxygen demand (BOD₅) in any single sample shall not exceed 20 grams per cubic metre; and
 - b) the concentration of total suspended solids (TSS) in any single sample shall not exceed 30 grams per cubic metre.
5. The wastewater treatment system shall be fitted with an audible and visual alarm.
6. There shall be no ponding of wastewater on the ground surface, or any direct discharge or run-off of wastewater to surface water.

7. The construction and installation of the wastewater treatment plant and land application system shall be carried out under the supervision of a person who is suitably qualified and experienced.

That person shall provide a written certificate or producer statement to the Council's Co-ordinator Compliance Monitoring prior to the exercise of this resource consent. This certificate or producer statement shall include sufficient information to enable the Council to determine compliance with Conditions 1, 3, and 11 and shall also confirm the following:

- a) that all components of the wastewater system (including the treatment plant and the land application area) have been inspected and installed in accordance with standard engineering practice and the manufacturer's specifications;
 - b) that all components of the wastewater system are in sound condition for continued use for the term of this resource consent.
8. The Consent Holder shall submit a set of final "as-built" plans to the approval of the Council's Co-ordinator Compliance Monitoring, showing the location of all components of the wastewater treatment and land application system. For the purpose of this condition, the Consent Holder shall ensure that the "as-built" plans are drawn to scale and provide sufficient detail for a Council monitoring officer to locate all structures identified on the plans, including the sampling point required to be installed in accordance with Condition 11.
 9. No grazing stock shall be allowed access to the land application area at any time. In the event that such stock are held elsewhere on the property, suitable fences shall be installed around the land application area to prevent access by such animals.
 10. A suitable reserve land application area equivalent to not less than 100% of the land application area (see Condition 3) shall be kept available for future use of wastewater disposal. This reserve area shall remain undeveloped. For the purpose of this condition, "undeveloped" means that no buildings or structures shall be constructed on the area set aside as reserve land application areas, however the reserve areas may be planted with trees or other vegetation.
 11. A sampling point to allow collection of a sample of the treated wastewater shall be provided at a point located after the final pump-out chamber and before the point where the wastewater discharges to the land application area.

Maintenance and Monitoring

12. Samples of the treated wastewater shall be collected 6, 12 and 24 months following the first exercise of this consent from the sampling point referred to in Condition 11. The samples shall be tested for BOD₅ and TSS by an accredited environmental testing laboratory. Results of these tests shall be forwarded to Council's Co-ordinator Compliance Monitoring within 10 working days of the results of each test being received by the Consent Holder.

The samples required by this condition shall be taken at times where the dwelling is being used in a typical fashion. "Typical fashion" means that the occupancy, at the time of sampling and during the preceding 48 hours, varies by no more than one person from the number of people who normally reside in the dwelling. The samples shall be taken using laboratory supplied containers and according to the procedures directed by the accredited environmental testing laboratory and shall be transported to the laboratory under chain of custody.

13. The Consent Holder shall enter into, and maintain in force at all times, a written maintenance and monitoring contract with an experienced wastewater treatment plant operator, or a person trained in the wastewater treatment operation by the system designer, for the ongoing maintenance of the treatment and land application systems.

The contract shall specify the frequency of treatment plant inspections and maintenance during the term of this resource consent and shall include an inspection and maintenance schedule that is in accordance with the conditions of this consent.

A signed copy of this contract shall be forwarded to the Council's Co-ordinator Compliance Monitoring prior to the exercise of this consent.

14. Notwithstanding Condition 13, the wastewater treatment and land application system shall be inspected and serviced at least every six months and a copy of the service provider's maintenance report shall be forwarded to the Council's Co-ordinator Compliance Monitoring within two weeks of each inspection. The inspection report shall include, but not be limited to, the following information:
 - a) the date the inspection was undertaken and the name of the service provider;
 - b) a list of all components of the treatment and land application systems that were inspected and the state of those components;
 - c) any maintenance undertaken during the visit or still required, and a timetable for the expected completion of this work;
 - d) a description of the appearance of the filter/s and tanks;
 - e) the location and source of any odour detected from the system; and
 - f) a description of the appearance of the land application area (ponding, vegetation growth, etc).

Review of Consent Conditions

15. The Council may, during the month of September 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 determinants 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.

Lapse Date

- 16. Pursuant to Section 125 of the Act this consent shall lapse 5 years after the date of this consent unless either the consent is given effect to, or the Council has granted an extension pursuant to Section 125(1)(b) of the Act.

Expiry

- 17. This resource consent expires on XXXXXX (15 year duration)

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.

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.

Mike Mackiggan
Consent Planner - Natural Resources

