



## STAFF REPORT

**TO:** Environment & Planning Subcommittee

**FROM:** Michael Durand – Co-ordinator Natural Resources Consents

**REFERENCES:** RM071257 to RM071263 – Discharge of Domestic Wastewater to Land

**SUBJECT:** **ROBERT WESTENBROEK – REPORT EP08/07/13** - Report prepared for hearing of 21 July 2008

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### 1. DESCRIPTION OF THE PROPOSED ACTIVITY

Robert Westenbroek has lodged a number of resource consent applications relating to a subdivision, residential development, works in watercourses and associated wastewater and stormwater discharges in the Rural 3 Zone.

This report relates to the discharge of domestic wastewater to land on the proposed Lots 1–7 of the development. The applicant's agent 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 Rural 3 Zone. The wastewater systems are proposed to be 'secondary treatment' systems which produce 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 typical of many in the Rural 3 Zone that have already been granted resource consents both by Committee and (more often) under delegated authority.

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.

### 2. PROPOSED TASMAN RESOURCE MANAGEMENT PLAN (PTRMP) ZONING, AREAS AND RULES AFFECTED

The application site is within the Wastewater Management Area (WMA). The relevant rules for new discharges in the WMA are 36.1.13A and 36.1.14A. The area of the allotment is the key trigger in determining which rule applies and in determining the status of each application. The threshold for the activity to be controlled is 2 hectares for the area of the allotment. In this case the sizes of the proposed allotments vary between 2.88 hectares and 1.11 hectares and therefore some of the proposed discharges are controlled activities and others restricted discretionary in status. All of the allotments are sized considerably larger than the minimum needed for on-site wastewater disposal.

**Table 1: Status of applications under the TRMP**

<b>Proposed Lot</b>	<b>Area (ha)</b>	<b>Status</b>
1	1.67	Restricted Discretionary
2	2.14	Controlled
3	1.38	Restricted Discretionary
4	1.98	Restricted Discretionary
5	2.14	Controlled
6	1.11	Restricted Discretionary
7	2.88	Controlled

### **3.2 Submissions**

None of the submitters made any comments on wastewater disposal at the proposed development.

## **4. PRINCIPAL ISSUES**

The principal issue associated with the applications is:

- a) Can the subdivision be adequately serviced in terms of domestic wastewater disposal, such that the effects on groundwater and surface water quality will be no more than minor?

## **5. STATUTORY PROVISIONS**

The various discharges proposed in the application are controlled and restricted discretionary in status and are in the Wastewater Management Area. The Council must consider the application pursuant to Section 104 of the Resource Management Act 1991.

The matters for the 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));
- the 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)).

### **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.
- 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(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). I understand that the applicant has consulted with 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 should be 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.

Because the Proposed Tasman Resource Management Plan was developed to be consistent with the Regional Policy Statement, it is considered that an assessment under the Proposed Plan 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:

Objectives and Policies
33.4.0 Objective
<b>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.</b>
Policies
33.4.1 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.
33.4.2 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:
(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) low or very low permeability clay soils;
(ii) rapidly draining coastal soils;
(iii) areas of high groundwater tables;
(v) steeply sloping sites, especially on south facing slopes;
(v) unstable terrain;
(vii) proximity to surface water bodies;
(vi) high density of existing and new on-site systems and the cumulative impact of such discharges in terrain that has 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;

Objectives and Policies
(c) enable Council to develop effective and cost efficient systems for monitoring on-site wastewater systems.
33.4.2 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.
33.4.4 To avoid, remedy or mitigate the adverse effects of discharges of domestic wastewater, including cumulative effects, particularly those in the Special Domestic Wastewater Disposal Areas.

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

### 6.1 Background to the Proposed Activity

The applicant's proposals for the collection, treatment and discharge of domestic wastewater to land are described in detail in two reports by Tasman Consulting Engineers (dated 3 December 2007). The proposals and site assessment are summarised below.

#### *Overview*

The seven residential allotments have been proposed to be serviced by individual on-site wastewater treatment and disposal systems. These types of wastewater systems treat 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 each allotment. The discharge will occur to a land application area through a network of pressure-compensating drip irrigation lines lying on the surface and buried with mulch or bark, or 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.

#### *Design brief and site assessment*

The assessment and design brief was to provide a recommendation for wastewater treatment and disposal for a four bedroom house (occupancy 6 persons) with roof water supply on each residential allotment. Particular regard was to be given to soils and site constraints for each allotment.

Site inspection methods involved a walkover inspection and visual assessment, and the excavation of test pits in each of the proposed land application areas. Soils were assessed by a Civil Engineer using methods described in the standard on-site wastewater system design guides and manuals, being The Auckland Regional

Council publication TP58<sup>1</sup> and the Australian / New Zealand Standard AS/NZS1547:2000<sup>2</sup>.

The soils on the property are derived from the underlying Moutere Gravels. Soils were found to have a most limiting horizon of category 6 at 150–400 mm depth. These soils can be described as being imperfectly drained to poorly drained. Groundwater was not encountered in any of the test pits.

#### *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 six people × 180 litres = 1,080 litres per day.

#### *On-site wastewater treatment*

The systems proposed are of a type that is expected by the TRMP in the Wastewater Management Area, being capable of treating wastewater to at least 'secondary standard'. Two main types of system are mentioned in the report, being (a) septic tanks including an wastewater filter and sand or textile filter (known as 'advanced secondary treatment' systems), and (b) aeration treatment systems (a type of secondary treatment system).

Secondary treatment systems generally are 'aerated systems' which operate 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 systems, such as vermiculture systems, are also available and produce wastewater of a similar standard.

Water quality from aerated systems is typically variable relative to that from advanced systems (see below): ~20 mg/L BOD<sub>5</sub>; ~30 mg/L TSS; 25–60 mg/L N; and  $3 \times 10^3$  per 100 ml faecal coliforms.

Advanced secondary treatment systems comprise a septic tank for the anaerobic treatment of the wastewater and removal of solids and grease, followed by a large chamber containing a sand filter or textile filter, over which a timer-controlled pump doses wastewater in controlled volumes and at pre-determined intervals. Conditions are aerobic in this chamber. Such systems are very effective at removing nutrients, pathogens, total suspended solids (TSS) and at reducing the 5-day biochemical oxygen demand (BOD<sub>5</sub>) of the discharged wastewater. Typical wastewater quality from advanced secondary systems is stated as being <15 mg/L BOD<sub>5</sub>; <15 mg/L TSS; ~30 mg/L N; and >99% reduction in faecal coliforms.

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

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1. Ormiston, A.W. & Floyd, R.E. (2004). On-site Wastewater Systems: Design and Management Manual. Auckland Regional Council Technical Publication No. 58 (TP58). Third Edition.

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

Secondary treatment systems are recommended to have a 120 micron disk filter installed prior to the irrigation lines to prevent clogging and prolong the life of the irrigation lines. Such filters are advantageous though not necessarily required for advanced secondary treatment systems.

Maintenance contracts are recommended 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.

A site plan indicating areas suitable for on-site disposal was provided.

The TRMP expects a maximum loading rate of 2 mm per day (2 litres per square metre per day), and in light of the soil characteristics found during site investigations, the report supports this view. Therefore the land application areas are designed for the discharge of 1,080 litres per day at a rate of 2 litres per square metre per day, and are therefore 600 square metres in area.

The TRMP requires 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 an extension to the dwelling in question and subsequent need for the discharge of larger volumes of wastewater.

#### *General*

There are no outstanding matters that would mean a proper assessment of the activity's adverse effects cannot be made.

### **6.3 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 Wastewater Management Area 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 mm per day. These expectations have been satisfied by the applicant.

The design brief given to the applicant's consultants was realistic with regard to providing an assessment for a 4 bedroom home for each allotment. The design flow

volume was conservative given that water for each dwelling will be provided by roof supply (which tends to invoke a more conservative attitude towards water use).

The reader should note that larger houses may feasibly be built but the Consent Holder will need to apply for a variation to the resource consent.

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 types that are proposed for the subdivision are suitable for the intended use and are 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. The installation of disk filters to prolong the life of the irrigation lines is also sensible and supported.

Reserve land application areas are expected to be available under Rules 36.1.13A and 36.1.14A and were discussed in the applicant's report. The purpose of the reserve area is two-fold. First, to allow for the dripper irrigation lines to be re-laid in uncontaminated 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 the wastewater system, it is unlikely that the reserve land application area would need to be used. Notwithstanding this, it should be stressed that the reserve area should always be made 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 never 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 an extension 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 all of the proposed lots.

#### *Key Potential Environmental Effects*

The key potential environmental effects associated with domestic wastewater discharges on the proposed allotments 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 at length already, one of the most important aspects of wastewater design to be considered in detail 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 is too high 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 are intended or 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 each wastewater system will have been properly designed and maintenance schedules will be enforced, should consent be granted. None of the land application areas are proposed to be located closer than 20 metres from any waterbody, and all are, at this stage, deemed to be appropriately sized for the proposed dwellings. Should consent be granted, any changes to wastewater volumes and disposal field locations away from this basic design (1,080 litres per day) will need to be approved by the Council through a variation to the resource consent. At that stage, the suitability of the site and revised land application area design would be examined in detail.

As has been discussed above, the writer's view is that the proposed wastewater systems are appropriate for the site, the design flow volumes are suitable for typical dwellings 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.

#### **6.4 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.

There is no permitted activity status for new discharges in the Wastewater Management Area.

#### **6.5 Relevant Objectives and Policies of the PTRMP**

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 is whether the proposed subdivision 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**

The applications collectively are controlled and restricted discretionary in status as activities in the Wastewater Management Area. The Council must consider the application pursuant to Section 104 of the Resource Management Act 1991.

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

### **7.3 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.

## **8. RECOMMENDATION**

The recommendation to grant or decline these applications for discharge permits 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 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 following recommended conditions.

## **9. RECOMMENDED CONDITIONS**

1. The design, construction and operation of the domestic wastewater treatment and land application system shall be in general accordance with the design report "*On-site wastewater management report – R Westenbroek – 4 Lot Subdivision of Lot 11, DP 335758 – Harley Road, Tasman, Nelson*" or "*On-site wastewater management report – R Westenbroek – 3 Lot Subdivision of Lot 20, DP 335758 – Harley Road, Tasman, Nelson*" that were supplied in support of the application for resource consent, unless inconsistent with the conditions of this consent, in which case these conditions shall prevail.

Notwithstanding the above, prior to the construction of the collection, treatment and land application system, the Consent Holder shall submit a "Wastewater Collection, Treatment, and Disposal Design Report", prepared by a person who is suitably experienced in designing wastewater treatment and land application systems, to the Council's Co-ordinator Compliance Monitoring. This report shall provide evidence of how design requirements imposed by this consent on the treatment and land application systems shall be met and shall include, but not be limited to, the following information:

- a) the location and dimensions of land application area (including reserve area), including setbacks from neighbouring properties, watercourses and domestic bores, depth of unsaturated soils beneath dripper lines and avoidance of slopes greater than 15 degrees;
  - b) full design details of the land application area, including the locations of cut-off valves and flushing ports;
  - c) certification that the selected land application areas are of suitable topography and soil type and are suitable for the loading rates proposed and sufficiently stable for wastewater land application;
  - d) details regarding management of vegetation at the land application area for the duration of consent;
  - e) the measures proposed to minimise stormwater infiltration and inflow into the land application field;
  - f) manufacturer and model of the wastewater treatment plant with details of the treatment plant layout, including storage capacities of all tanks and layout of pumps; and
2. The maximum rate of discharge shall not exceed 1,080 litres per day and shall occur in the location shown on Plans A or B attached to this consent.

### **Treatment and Land Application System**

3. The maximum loading rate at which the wastewater is applied to land shall not exceed 2 millimetres per day (2 litres per square metre per day). The land application area shall be no less than 540 square metres in area and incorporate at least 580 lineal metres of pressure-compensating drip irrigation line. 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 1.6 litres per hour. Adjacent lateral drip irrigation lines shall be laid no more than 1 metre apart.
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 (BOD<sub>5</sub>) in any single sample shall not exceed 30 grams per cubic metre; and

- b) the concentration of total suspended solids (TSS) in any single sample shall not exceed 45 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 540 square metres shall be kept available for future use of wastewater disposal. This reserve area shall remain undeveloped and shall be located within the areas marked "land application reserve area" on the plan referred to in Condition 2 of this consent. 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 BOD<sub>5</sub> 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 April 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**

16. This resource consent expires on 1 August 2028.

## **ADVICE NOTES**

1. Officers of the Council may also carry out site visits to monitor compliance with resource consent conditions.
2. It is strongly recommended that household water reduction fixtures be included in the house design in order to ensure that the discharge volume limit is met. The measures and fixtures should be in accordance with AS/NZS 1547:2000 and Auckland Regional Council's Technical Publication 58.
3. 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.
4. Access by the Council or its officers or agents to the property is reserved pursuant to Section 332 of the Resource Management Act.
5. All reporting required by this consent should be made in the first instance to the Council's Co-ordinator Compliance Monitoring.

6. 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.
7. 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 Proposed Tasman Resource Management Plan (PTRMP);
  - b) be allowed by the Resource Management Act; or
  - c) be authorised by a separate resource consent.
8. 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.



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**Co-ordinator Natural Resources Consents**





