



STAFF REPORT

TO: Environment & Planning Subcommittee

FROM: Michael Durand - Co-Ordinator Natural Resources Consents

REFERENCES: RM080187

SUBJECT: **JD ADVENTURES LTD - REPORT EP08/10/07** - Report prepared for hearing of 13 October 2008

1. INTRODUCTION

This application seeks to authorise the discharge to land of up to 5 m³ of treated wastewater from the Anatoki Salmon Farm operation and a three-bedroom dwelling. The wastewater is proposed to be treated by an advanced secondary treatment system and discharged to a land application area by pressure-compensating dripper irrigation lines. The treatment system offers the best practicable option for the site and is a significant improvement on the system currently operating.

However, the design details for the wastewater system and land application area had not been provided by the applicant at the time of writing of this report; this information was requested by Council staff on 20 March 2008 and provided by the applicant, in part, on 1 May. Final design details have been requested of the applicant's agent by the writer, and these are expected to be provided at the hearing or before.

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

The site is zoned Rural 1 and does not lie within any of the Special Domestic Wastewater Disposal Areas nor the Wastewater Management Area. The relevant permitted activity is Rule 36.1.4, of which clause (b) is broken by the proposed activity, the application being to discharge more than 2,000 litres of wastewater per day. The status of the proposed activity is therefore Discretionary under Rule 36.1.16.

3. SUBMISSIONS

Matters relating to wastewater treatment and disposal were not raised in submissions.

4. ASSESSMENT

4.1 Background to the Proposed Activity

Overview

The application seeks to authorise the discharge to land of up to 5 m³ per day of treated wastewater generated by salmon processing activities, toilets, the proposed café operation and a dwelling.

As indicated above, complete design information on the wastewater system has not been provided by the applicant. Known details of the activity are summarised below; necessary details are that yet to be provided by the applicant are listed following this. A subsequent discussion is provided, detailing issues to be resolved, their significance to the consent process, and possible solutions.

Known Details

- The application seeks to authorise the discharge of up to 5 m³ of treated wastewater per day to land.
- The discharge of 5 m³ corresponds with the volume of water proposed to be taken from Benge Creek under resource consent application RM080186.
- A soil assessment to was undertaken by the applicant's wastewater engineer during the design process, and the method used was consistent with that described in AS/NZS 1547:2000
- The soil in the proposed land application area was found to be Category 3, according to AS/NZS 1547:2000, allowing a design irrigation rate (DIR) of 28 mm per week (4 mm per day; or 4 litres per square metre per day).

Unresolved Details

- The land application area currently comprises, according to the applicant, "three pressure compensating drip irrigation lines, each approximately 120 m long with 1.5 metre spacing between each line. This gives an effective working area of around 500 m²." It should be noted that the application is seeking to authorise the discharge of 5 m³ of wastewater per day; at the design irrigation rate of 4 mm per day, the discharge of 5 m³ per day would require a land application area of 1,250 m², as opposed to the area of "around 500 m²" allocated by the applicant. This apparent problem is compounded because no site plan has been provided (although requested by the Council under S92 of the Act) showing details of neither the existing land application area nor any proposed modifications.
- The wastewater treatment system proposed to be installed is unclear. Further information provided by the applicant on 1 May stated that: "At this juncture the 'lifestyle advanced' aerated wastewater treatment system unit from Hynes [sic] will most likely be the unit installed. An alternative could be used an inner flow [sic] 'Advantex 20' unit. It is stated further than both systems may treat wastewater to 5 mg/l BOD5 and 5 mg/l TSS. This is the case for the Innoflow Advantex AX20, but not so for the Hynds Lifestyle Advanced. In the latter case it is assumed that the applicant meant the Hynds Lifestyle MRB system which can achieve this relatively high level of wastewater treatment.
- Notwithstanding this, the Hynds system is capable of treating only 2,400 litres per day, so according to the volume of wastewater proposed to be discharged, there would need to be treatment by multiple systems installed in parallel. The Innoflow system utilizes a 'pod' design that can be customised to suit a wide range of volumes of wastewater loadings.

Discussion

The matter of the land application area details was raised by the writer with the applicant's agent, Nigel McFadden, on 30 September and his response is provided here in Appendix 1.

His response indicates that the applicant intends to provide the necessary information at the hearing or before.

Subsequent text in this report is written on the assumptions that (a) a design for the land application area is provided at or before the hearing, (b) that there will be sufficient detail in this plan for staff to determine exact details of the proposal, and (c) that the design will be, in the view of staff, suitable for the site and the proposed discharge, and therefore provide for the discharge of wastewater to land whilst avoiding adverse environmental effects.

4.2 Assessment: Discussion of Key Potential Environmental Effects

The key potential environmental effects associated with domestic wastewater discharges 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 exact make and model of the wastewater system itself, 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 is intended or desirable.

The applicant's site and soil assessment suggested that there is enough unsaturated soil depth available between the land application system and groundwater for the renovation of wastewater to be achieved.

Adverse impacts on surface water quality should be avoided because the proposed wastewater system (either the Hynds or the Innoflow systems) are able to treat wastewater to high standards (better than 20 mg/l BOD₅ and 20 mg/l TSS). Consent conditions proposed here will (if incorporated into any consent granted) ensure that maintenance and monitoring schedules are enforced; these measures ensure that the Consent Holder and the Council are alerted to poor performance of the system,

and thus any adverse environmental effects associated with poor performance should be avoidable.

It is not expected that there be any adverse effect on the soils, surface water nor groundwater that could be considered more than minor. In the writer's assessment, provided that adequate provision can be made on the site for the discharge of the treated wastewater to land, and with adequate set-backs from waterbodies, adverse environmental impact of the proposed discharge should be no more than minor.

4.3 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.

The proposed discharge is equivalent in volume to that from a number of dwellings. In most the Tasman District zoned Rural 1 (as is the subject site) discharges of domestic wastewater to land are typically permitted activities under rule 36.1.4. In contrast to the proposed wastewater system servicing this development, discharges from dwellings in the Rural 1 zone would likely be from conventional septic tanks. In such cases the Council has little control over the ongoing management of these discharges and their effects. Maintenance contracts etc. are not normally kept by homeowners with septic tanks. In this regard, the proposed discharge has a lesser environmental effect per litre of water discharged than that which might occur in other environmentally sensitive rural locations where dwellings are constructed. It is also worth noting that many of the dwellings in Anatoki catchment are serviced by conventional septic tanks, the discharge from which is undoubtedly of a relatively poor quality compared to that proposed in this case.

5. STATUTORY PROVISIONS

The status of the discharge proposed in the application is discretionary. 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 rivers and their margins, and the protection of them from inappropriate 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

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 Regional 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.

5.4 Relevant Objectives and Policies of the PTRMP

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

Objectives and Policies
33.4.0 Objective
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.
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.

Objectives and Policies

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.

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.

It is the writer's view that the proposed discharge is broadly consistent with the Policies and Objectives of the Tasman Resource Management Plan.

6. SUMMARY

6.1 Principal Issues

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

6.2 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.

7. RECOMMENDATION

The recommendation to grant or decline this application for a discharge permit is dependent upon the Committee's decision whether or not to grant consent for the proposed landuse activity.

Having considered the application in detail, and drawing on experience of current wastewater discharges in Tasman District, 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.

It should be noted that the discharge of wastewater to land is a consequential activity, and therefore, this recommendation is subject to the granting of other resource consents for the proposed landuse activities.

This recommendation is conditional upon the provision at the hearing, or before, of final design details for the wastewater treatment and disposal system, as indicated in the text above. The applicant's agent has given an undertaking in writing for this information to be provided.

8. RECOMMENDED CONDITIONS

Discharge Restrictions

1. The maximum rate of discharge shall not exceed 5,000 litres per day (5 cubic metres per day), except when any part of the land application area is subject to flooding or surface water ponding, in which case there shall be no discharge until the flooding and or surface water ponding in the land application area has been absent for at least 24 hours. During such events, there shall be no discharge of wastewater and the storage tanks referred to in Condition 15 shall be utilised.
2. The discharge shall contain only treated wastewater which is of a domestic nature. For the purposes of this condition, wastewater which is of a "domestic nature" includes wastewater from toilets, urinals, kitchen facilities, washbasins, fish processing and a dwelling. No industrial or tradewaste shall be included.
3. The treated wastewater entering the land application areas, based on the results of any single sample collected from the sampling point required to be installed in accordance with Condition 25, shall comply at all times with the following limits:

Determinand	Maximum allowable concentration
5 day carbonaceous biochemical oxygen demand (cBOD ₅)	20 grams per cubic metre
Total suspended solids	20 grams per cubic metre

Land Application System

4. The maximum loading rate at which the wastewater is applied to land shall not exceed 4 millimetres per day (4 litres per square metre per day).
5. All wastewater shall be discharged to land by way of pressure compensating dripper line(s) laid generally parallel to the contours of the land. The Consent Holder shall, at all times, ensure that the dripper lines used for the disposal of wastewater are located within a planted area and have no less than a 50 millimetre cover of soil, bark, or an appropriate alternative.
6. The pressure compensating drippers used to discharge the treated wastewater to land shall be spaced at intervals not exceeding 600 millimetres along the irrigation line and the maximum spacing between adjacent irrigation lines shall be 1 metre. The instantaneous flow rate for each dripper shall not exceed 1.6 litres per hour.
7. The primary land application area shall total at least 1,250 square metres and shall be located within the area marked "Subsurface dripper land application area" or similar on the site plan attached to this consent.
8. A suitable reserve land application area equivalent to not less than 100% of the land application area and shall be kept available for future use for 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 7 of this consent. For the purposes of this condition "undeveloped" means that no permanent buildings or structures shall be constructed on the areas set aside as reserve land

application areas, however the reserve areas may be planted with trees and other vegetation.

9. Notwithstanding Conditions 7 and 8, in the event that the total area required to adequately dispose of the wastewater is shown to be greater than 1,250 square metres, the Consent Holder shall make additional land available for such disposal.
10. The land application area (including reserve area) shall not be located on slopes averaging greater than 15 degrees over a 10 metre length and shall not be located within:
 - (a) 20 metres of any surface water body;
 - (b) 20 metres of any bore for domestic water supply;
 - (c) 5 metres of any adjoining property or road; or
 - (d) 600 millimetres, measured vertically, separation from dripper line to average winter groundwater table.
11. The land application areas shall not be used for:
 - (a) roading, whether sealed or unsealed;
 - (b) hardstand areas;
 - (c) erection of buildings or any non-wastewater systems structures; or
 - (d) stock grazing.
12. Any trees planted within the land application area shall remain in place for the duration of this consent except for the purposes of removal and replacement of trees that have reached maturity or require removal for some other reason. In that situation the Consent Holder shall replace the removed trees with trees that are equally suitable, or trees that are of the same species, and will not remove and replace more than 20% of the trees in any one year.
13. The Consent Holder shall mark each land application area by any means that ensures the extent of them is identifiable on the ground surface.
14. There shall be no surface ponding or surface run-off of any contaminants from any of the land application areas as a result of the exercise of this consent.

Collection, Treatment and Disposal Systems

15. Except where inconsistent with the conditions of this consent, the construction and installation of the wastewater collection system, treatment plant and land application system shall be carried out in accordance with information submitted with the application for resource consent RM080187 and under the supervision of a person who is suitably qualified and experienced in wastewater treatment and disposal systems.
16. The person supervising the construction and installation of the wastewater collection system, treatment plant and land application system 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 statement shall include sufficient information to enable the Council to determine compliance with

Conditions 4–8 (inclusive), 10, 13, and 25. In addition, the certificate or statement shall also confirm the following:

- (a) that the wastewater system, including the collection system, treatment plant and the land application areas, is capable of treating the design flows and that it has been designed generally in accordance with standard engineering practice;
 - (b) that all components of the wastewater system, including the collection system, treatment plant and the land application areas, have been inspected and installed in accordance with the manufacturer's specifications and standard engineering practice;
 - (c) that the components used in the wastewater system, including the collection system, treatment plant and the land application areas, are in sound condition for continued use for the term of this resource consent, or are listed in the Operations and Management Plan (required by Condition 18) for periodic replacement;
17. Prior to the exercise of this consent, the Consent Holder shall submit a set of final "as-built" plans to the Council's Co-ordinator Compliance Monitoring that shows the location of all components of the wastewater collection, 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 officer to locate all structures identified on the plans.

Wastewater System Operation and Maintenance

18. A chartered professional engineer or suitably qualified person experienced in wastewater engineering shall prepare an "Operations and Management Plan" for the wastewater treatment and disposal system. This plan shall be prepared in accordance with the conditions of this resource consent and shall contain, but not be limited to, the following:
- (a) an inspection programme to verify the correct functioning of the wastewater treatment and land application systems including not less than monthly inspections of the wastewater treatment plant and disposal areas;
 - (b) a schedule for the daily, weekly, monthly and annual operational requirements including requirements of compliance monitoring of consent conditions;
 - (c) a schedule of maintenance requirements for the pumps, tanks, recirculation tanks, treated wastewater holding tank, flow meters and drains;
 - (d) a schedule of maintenance requirements for the management of vegetation on the land application area(s);
 - (e) a contingency plan specifying the actions to be taken in the event of failure of any component of the system, in the event of flooding of the land application area and subsequent use of the emergency storage tanks, and any non-compliance with the conditions of this resource consent;
 - (f) details of how the wastewater disposal system will be managed;

- (g) emergency contact details (24 hour availability) for the Service Provider and Consent Holder; and
 - (h) monitoring of the land application areas shall include visual ground inspections to identify above ground and surface flows of wastewater and methods to remedy such flows should any be identified.
19. A copy of the “Operations and Management plan” required by Condition 18 shall be submitted to the Council’s Co-ordinator Compliance Monitoring for approval prior to exercising this consent. Any changes to this plan shall be in accordance with the conditions of this consent and submitted to the Council’s Co-ordinator Compliance Monitoring prior to them taking effect.
20. The Consent Holder shall enter into, and maintain in force, a written maintenance contract with a suitably qualified and experienced wastewater treatment plant operator suitably trained in wastewater treatment plant operation by the system designer, and approved by the Council’s Co-ordinator Compliance Monitoring for the ongoing maintenance of the pumps and tanks, and the treatment and land application systems. The maintenance contract shall require the operator to perform maintenance functions and duties specified in the “Operations and Management Plan” required to be prepared by Condition 18. A signed copy of this contract, including full contact details for the Service Provider, shall be forwarded to the Council’s Co-ordinator Compliance Monitoring, prior to exercising this consent. Any changes to this maintenance contract must be in accordance with the conditions of this consent and submitted in writing to Council’s Co-ordinator Compliance Monitoring prior to them taking effect.

In addition, the Consent Holder shall, every six months from the date of first exercising this consent, provide the Council’s Co-ordinator Compliance Monitoring with a copy of a written report that details the maintenance that has been undertaken on the wastewater treatment and disposal system during the previous six month period in accordance with the requirements of the Operations and Management Plan.

Advice Note:

For compliance purposes, a suitably qualified and experienced person would be either a person employed and trained by the manufacturer of the treatment and disposal system, or someone who can provide evidence of satisfactory qualifications and experience in maintaining such wastewater treatment and disposal systems.

21. The collection and treatment tanks that form part of the wastewater treatment plant shall be inspected at least every three months. Where appropriate, all tanks shall as a minimum be cleaned out once the combined depth of the sludge and scum in any tank occupies half of the tank’s volume. Material collected from the desludging of tanks shall be removed from site for disposal at a facility authorised to receive such material.

Contingency Measures

22. An audible and visual alarm system shall be installed and operated that is capable of warning of any failure within the treatment or disposal systems (ie, pump failure, mechanical blockage, and/or high wastewater levels).

This warning system shall be configured to activate an audible and visual alarm system located adjacent to the treatment plant or other prominent place on the site for the treatment plant. The details of the alarm shall be included in the "Operations and Management Plan" required by Condition 18 and shall achieve as a minimum the following:

- (a) effective notification of the operators of any alarm;
- (b) in the event of any alarm activating, the alarm shall continue to operate and until the condition has been remedied and cleared by the operator. The audible and visual alarm system shall be installed and operated on all grinder pumps and tanks and, as a minimum, this alarm shall be activated by a high level switch.

The Consent Holder shall maintain clearly visible signage adjacent to all external alarm panels at the plant to provide a 24 hour contact number in the event of an alarm being activated.

- 23. The Consent Holder shall ensure that the treatment plant (excluding the emergency storage tanks) is designed and maintained so that wastewater can be retained within the treatment system above the alarm level without overflow for a period of at least 12 hours. All pumps in the treatment and land application system that are essential for the continuous processing, treatment, and disposal of the wastewater shall include duty and standby units.
- 24. Should power disruption result in the emergency storage capacity required to be provided at the treatment plant by Condition 23 being utilised to 80% capacity, the Consent Holder shall ensure that the wastewater is removed from the storage tank at that time for the purpose of maintaining capacity. Wastewater shall be disposed of to a facility that is authorised to accept such wastes. The relevant details of how this will be achieved shall be incorporated in the "Operations and Management Plan" required to be prepared in accordance with Condition 18.

Monitoring and Reporting

- 25. A sampling point to allow collection of a sample of the treated wastewater shall be provided at a point located directly after the final pump-out chamber and before the point where the wastewater discharges to the land application area. Details of the location of this sampling point shall be forwarded to the Council's Co-ordinator Compliance Monitoring prior to the exercise of this consent.
- 26. A sample of the treated wastewater shall be collected from the sampling point required to be installed in accordance with Condition 25. Samples shall be analysed for five day carbonaceous biochemical oxygen demand (cBOD5), total suspended solids, total faecal coliforms, pH, and temperature. The frequency of sampling shall be as follows:
 - (a) for the first 12 months following treatment plant start up, two samples shall be collected at approximately six monthly intervals when the plant is discharging to the land application area;

- (b) samples shall be collected at least weekly over the period 20 December to 10 January during the period described in (a) above;
 - (c) following the first 12 months, samples shall be collected at least annually, with the samples being collected between 20 December and 10 January provided the contaminant limits specified in Condition 3 are always met. Should any of these limits not be met, the sampling frequency shall be increased to monthly sampling, including the frequency specified in (b) above, until full compliance with the contaminant limits of Condition 3 has been achieved over a four month period.
27. All sampling referred to in this consent shall be carried out by a suitably qualified person approved by the Council's Co-ordinator Compliance Monitoring, using standard sampling methodologies and equipment and shall be transported to the laboratory under chain of custody. Where temperature and pH are required, these shall be measured in the field using standard methods and calibrated meters. The detection limits specified in Appendix 2 (Applicable Detection Limits, attached) shall apply to analyses that are undertaken by the laboratory. The samples shall be analysed using standard methodology by an IANZ accredited laboratory. The analytical results shall be forwarded to the Council's Co-ordinator Compliance Monitoring within 10 working days of the results being received from the laboratory.
28. The Consent Holder shall install and maintain at all times a calibrated flow meter, with an accuracy of $\pm 5\%$, on the outlet of the wastewater treatment system to measure the quantities of wastewater discharged to the land application areas.
29. The flow meter required to be installed in accordance with Condition 28 shall be read manually or electronically at the same time daily. Copies of these records shall be forwarded to the Council's Co-ordinator Compliance Monitoring quarterly and also upon written request.
30. Any exceedance of the authorised discharge volume (refer Condition 1) shall be reported to the Council's Co-ordinator Compliance Monitoring in writing within three days of the reading. This report must include any explanation for the non-compliance and an assessment of the likely effects of the functioning of the system and the receiving environment.
31. The Consent Holder or its authorised agent shall notify Council's Co-ordinator Compliance Monitoring of any wastewater discharge to land or water from the treatment plant that is not authorised by this consent in writing as soon as practicable (but no more than 24 hours) after the discharge commenced.

General Conditions

32. The wastewater treatment system shall be located, and the surrounding area maintained, so that vehicular access for maintenance is readily available at all times.
33. The Council may, in the period 1 November to 1 March 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) reviewing 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) reviewing the frequency of sampling, flow monitoring and/or number of determinands analysed if the results indicate that this is required and/or appropriate.

Duration of Consent (RMA Section 123)

34. This consent expires on 1 November December 2018.

ADVICE NOTES

1. 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: 1) comply with all the criteria of a relevant permitted activity rule in the Proposed Tasman Resource Management Plan (PTRMP); 2) be allowed by the Resource Management Act; or 3) be authorised by a separate resource consent.
2. The Consent Holder shall meet the requirements of Council with regard to all Building and Health Bylaws, Regulations and Acts.
3. All reporting required by Council shall be made in the first instance to the Council's Co-ordinator Compliance Monitoring.
4. The Consent Holder is advised that compliance with operating guidelines provided by the wastewater system manufacturer and system designer is recommended to reduce the likelihood of malfunction of the treatment or disposal system and a possible breach of consent conditions.
5. If the site becomes part of an urban drainage area identified by Council when future reticulation is available, the Consent Holder will be required to provide connection from the treatment system to the sewer line.
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 shall 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. It is strongly recommended that water reduction fixtures be included in the design of the buildings of the development 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.



Michael Durand
Co-ordinator Natural Resources Consents

APPENDIX 1
E-mail From Nigel Mcfadden

JD Adventures - Discharge of treated wastewater to land - RM080187 From: Tara Winter [Tara@mmp.co.nz]
Sent: Wednesday, 1 October 2008 9:14 a.m.
To: Michael Durand
Subject: FW: JD Adventures - Discharge of treated wastewater to land - RM080187

Hi Michael, please see Nigel's reply below.

Julie Jar
Legal Secretary

From: Nigel McFadden
Sent: Wednesday, 1 October 2008 9:10 a.m.
To: Tara Winter
Subject: RE: JD Adventures - Discharge of treated wastewater to land - RM080187

we sure will

From: Tara Winter
Sent: Wednesday, 1 October 2008 8:44 a.m.
To: Nigel McFadden; Victoria Chisnall
Subject: FW: JD Adventures - Discharge of treated wastewater to land - RM080187

From: Michael Durand [mailto:Michael.Durand@tdc.govt.nz]
Sent: Tuesday, 30 September 2008 2:10 p.m.
To: Tara Winter
Subject: JD Adventures - Discharge of treated wastewater to land - RM080187

Hi Nigel -

Further to our telephone discussion, can you confirm by reply to this email that your client intends to provide (at the hearing or before) a detailed site plan of the wastewater land application area for the above application?

This site plan should be in accordance with:

- the volume of wastewater proposed to be discharged to land, and
- the soil type and other relevant information obtained during the site and soil assessment

And should show:

- design details of any modifications proposed to be made to the existing land application area, including details of line spacing, dripper spacing, flush ports, cut off valves, stormwater cutoff drains etc.

Cheers,
Mike

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APPENDIX 2
Applicable Detection Limits

Parameter	Detection Limits ¹	Units
Carbonaceous biochemical oxygen demand	2	g/m ³
Total Suspended Solids	3	g/m ³
Total faecal coliforms	10	MPN or cfu/100 mL

Notes:

1. These detection limits apply unless other limits are approved in writing by the Co-ordinator Compliance Monitoring.