



Auckland **Regional** Council

Vodafone House
21 Pitt Street
Private Bag 92 012
Auckland
New Zealand

DX CP 28 008 Pitt St
tel 64 9 379 4420
fax 64 9 366 2155

11 June 1999

Brian Morrison
C/- Colin Ashby Consulting Ltd
PO Box 124
Warkworth

File Ref: C512-10-
7835/22315

Attention: Colin Ashby

Dear Sir

RESOURCE CONSENT - DECISION ON APPLICATION

APPLICATION:

Applicant: Brian Morrison Family Trust & Vanessa Morrison Family Trust
(operating as Sandspit Motor Camp)
Application Number: 7835/22315
Details of Application: To discharge up to 25 cubic metres per day of contaminants to land for the purpose of disposing of treated wastewater to ground soakage in accordance with Section 15(1)(b) of the Resource Management Act 1991.
Site Location: Sandspit Motor Camp, Sandspit

DECISION ON APPLICATION:

It has been resolved that the above Resource Consent application be granted. A copy of the report which gives details of the decision made is enclosed.

RIGHT OF OBJECTION:

The applicant has the right to object to the Council in respect of the decision on an application (with the exception of applications which have been declined by a meeting of the Environmental Management Committee of the Council) if -

- (a) the application was not notified; or
- (b) the application was notified, but any submissions received have subsequently been withdrawn.

Any such objection, under Section 357 of the Resource Management Act, should be made in writing to the Group Manager, Environmental Management, Auckland Regional Council, setting out the reasons for the objection, within 15 working days of receiving this letter. The objection will be considered by the Council, and if it is necessary to hold a meeting to hear

the objection you will be contacted regarding the arrangements for this. Where the applicant is dissatisfied with the decision on the objection, an appeal can be made to the Environment Court, under Section 358 of the Resource Management Act.

RIGHT OF APPEAL:

The Council's decision can be appealed under Sections 120 and 121, or Section 358, of the Resource Management Act, as follows:

- The applicant, and any person who made a submission, can appeal the decision to the Environment Court within 15 working days of receiving this letter, or where an objection to the decision is made, within 15 working days of the applicant receiving notice of the Council's decision on the objection.
- An appeal must be lodged with the Registrar of the Environment Court, Department of Justice, Tribunals Division, P O Box 5027, Lambton Quay, Wellington, together with a filing fee of \$55.00 (including GST). A copy of the appeal must also be served on the Auckland Regional Council within the 15 working day period.
- An appeal must be in the format provided by Regulation 10 of the Resource Management (Forms) Regulation 1991 - a copy of this format is available from the Council office.
- All other parties (ie. the applicant and any person who made a submission) must be served with a copy of the notice of appeal within 5 working days of the appeal being lodged with the Environment Court.

If you are in any doubt about the appeal procedures you may wish to contact this office, or consult a lawyer, for further information.

The last date for an objection or appeal is 6/07/1999. This has been calculated using 2 working days for postage plus the statutory 15 working day period.

COMMENCEMENT OF CONSENT:

A consent that has been granted will commence in accordance with the provisions of Section 116 of the Resource Management Act. These provisions are summarised below:

Objections Against Decision to Grant Consent

If an objection against the decision is made by the applicant the consent will commence once the objection is resolved, unless a later commencement date is stated in the consent. If an appeal is subsequently made by the applicant or a submitter the consent will commence as described below.

Non-Notified Application - Decision Not Appealed:

If no appeals are made by the applicant the resource consent will commence on the date the decision on the application is notified, unless a later commencement date is stated in the consent.

Non-Notified Application - Decision Appealed:

If an appeal is made by the applicant the resource consent will commence on the date the Environment Court determines the appeal or the appeal is withdrawn, unless a later commencement date is stated in the consent or the Environment Court determines otherwise.

LAPSING OF CONSENT:

Unless otherwise stated in the consent, Section 125 of the Resource Management Act provides that, this consent shall lapse two years after the consent commencement date if it is not given effect to within that period. Where the consent is not given effect to within two years of commencement, the consent holder may make an application to the Council for an extension of the consent.

Please note that you will be advised of the Council's decision on the total application costs shortly.

Yours faithfully

Tristine Le Guern
Manager
Consents Services

Per: 

encl

cc: Rodney District Council

AUCKLAND REGIONAL COUNCIL

SUBJECT: Resource consent application to discharge up to 25m³ of treated waste water to ground soakage.

FROM: Julian Roberts

FILE: 7835

PERMIT: Discharge 22315
to ground

TO: The Manager
Land & Water Quality Section

DATE: 12 May 1999

(This report is confidential until it has been considered and is not to be construed as Council policy until adopted).

1. APPLICATION

1.1 Applicant

B & V Morrison.

1.2 Proposal

To discharge up to 25m³/day of contaminants to land for the purpose of disposing of treated wastewater to ground soakage in accordance with Section 15(1) of the Resource Management Act 1991.

1.3 Location

NZMS 260 R09 655327 – Sandspit Motor Camp, Sandspit.



2. STATUTORY MATTERS

The proposed discharge of contaminants is an exception to the Transitional Regional Plan. Section 369(1)(b) RMA deems an exception under a Transitional Regional Plan to be a discretionary activity in terms of the RMA.

Accordingly a discharge permit is required pursuant to Section 15(1) of the Resource Management Act 1991.

3. NOTIFICATION

In accordance with Section 94(3) of the Resource Management Act 1991 this application was not notified as:

- a. There is no relevant plan or proposed plan;
- b. The adverse effects on the environment of the activity were considered to be minor; and
- c. Written approval has been obtained from every party who may be adversely affected by the granting of the application.

4. CONSULTATION

The applicant has consulted with, and obtained written approval from, owners of six neighbouring properties to the camp ground.

5. PROPOSAL

5.1 Background

The Sandspit Motor Camp has operated at the site for approximately 34 years. The existing domestic wastewater treatment system has operated for most of that time. Previously the treated effluent was discharged, via gravel filters, to the Matakana Estuary. However, due to changes in public attitudes, and the recognition of the cultural issues associated with this disposal method, discharge to water is now viewed unfavourably unless no other disposal options are available. Furthermore, the treatment and disposal system has failed to achieve performance standards for effluent quality, due mainly to problems with the UV sterilisation plant.

The Motor Camp changed hands in 1995 and the new operators were made aware of the previous discharge permit and the associated conditions. The expiry date for the current consent is 31 December 1999. The Consent Holder was made aware that the consent was unlikely to be renewed unless an alternative disposal option was sought.

Accordingly the Consent Holder has installed a RAAM dripper irrigation system on private land above the motor camp. This required a variation to be made to the consent. Therefore the

Consent Holder is applying for new consent to authorise the discharge of contaminants to ground.

5.2 Description of the site

The Sandspit Motor Camp is located off Sandspit Road within Sandpit township at a point where the road turns sharply towards the parking, boat launching and wharf facilities on the Spit known as Kawau Landing. The camp occupies an area of relatively low lying land sheltered by mature trees and bordered on the western, northern and eastern sides by the Matakana River estuary. At low tide a sandy beach is exposed to the northeast

5.3 Wastewater Flow Rates

According to the applicant's consultant maximum occupancy at the campsite is reached during the Christmas period and may reach 400 people. During the winter occupancy rates may drop below 10.

Based on design flows of TP58, this would equate to a maximum design volume of 20m³.

Water meter readings taken from the site indicate that the volume of wastewater discharged is highly variable throughout the year. Peak flows occur during peak occupancy periods over Christmas and New Year, and Public Holiday weekends. The average maximum discharge volume was measured at 18m³ over the January period. The daily average flows over the period June-August were measured at only 2.7m³. Overall, the annual average daily wastewater flow volume is calculated as 6.2m³.

These figures are based on meter reading taken from the water bore, and it is accepted that they are conservative estimates of the wastewater volumes, as a proportion of water taken is used for such activities as watering gardens, washing boats etc. The demand for water for these purposes is also likely to significantly increased during peak occupancy periods.

The applicant proposes to install a water meter on the discharge line in order to obtain an accurate measurement of actual daily discharge volumes. Initially this will require daily meter readings during peak use periods. However, once the actual discharge volumes have been established it is anticipated that this will be relaxed to a weekly meter reading requirement.

5.4 Existing System

5.4.1 Treatment Plant

The existing system comprises a septic tank of approximately 26m³ fitted with an 'Orenco' solids filter, and an aeration plant of 41m³ capacity. The aeration plant comprises a 5.1m³ "Contact Tank", two 5.1m³ "Re-aeration Tanks" and a 6.8m³ "Settling Tank". Following treatment by the aeration plant, wastewater passes through a UV treatment plant to reduce the pathogen load. This was initially installed due to concerns over the quality of effluent discharged to the estuary. However, it has been retained even though the effluent is now discharged to ground some distance from any watercourse. A "Biotube" solids filter has also recently been installed in line after the treatment system. However, no monitoring results have yet been obtained to verify its effectiveness within the system.

The applicant also proposes to install an "Arkal Disc Filter" if there is a requirement to further improve the quality of the discharged effluent. However, this will not be determined until the next monitoring period.

5.4.2 Disposal Field

The applicant ceased discharging to the estuary approximately 2 years ago, and has been discharging to a dripper irrigation field laid around an olive tree plantation on land above the campsite.

Waste water from the treatment plant is pumped to an 1800 litre storage tank, and then to a 2700 litre storage tank above the campsite.

Wastewater from the 2700 litre storage tank is then distributed via RAAM dripper irrigators to the surface of the field. Dripper lines will be laid downslope running between the rows of olive trees. Approximately 714 linear metres of dripper have been established at 5 metre centres. Notwithstanding this spacing, the length of dripper line equates to a disposal area of 714 m².

6. EVALUATION

6.1 Wastewater Treatment

Monitoring results of samples taken throughout the operation of the system indicate that the effluent quality is highly variable in respect of BOD and suspended solids. A number of problems have also been encountered with consistently high faecal coliform counts. Following a number of improvements of the system, a Consultant Engineer was finally contracted to investigate the problem. It was found that the plumbing arrangement of the treatment tanks was inadequate, allowing untreated effluent to pass through to the UV plant. Obviously this situation gave rise to high readings. This matter has now been addressed and monitoring results from samples taken over Easter 1999 demonstrate an improvement in this regard. Notwithstanding this improvement, the quality of effluent is still relatively poor. The applicant has therefore installed a "Biosolids" filter to further improve the effluent quality. Subsequent discussions with Ian Gunn have also indicated that the addition of a disc filter after the treatment systems is likely to address this matter. Accordingly the applicant proposes to install this equipment at a later stage should the effluent quality not improve as a result of the upgrades discussed above.

The suspended solids levels have been cause for concern in view of the chosen disposal option of RAAM line. Typically this equipment performs well with suspended solids levels less than 10mg/l. Comprehensive monitoring of the disposal system will therefore be required to avoid problems with this equipment. Conditions will also be imposed on the consent requiring the consent holder to undertake remedial work to the system in the event that high suspended solids levels affect the performance of the irrigation lines.

6.2 Wastewater Disposal

The proposed disposal method is appropriate for this application as it utilises a northerly facing slope with good topsoil coverage, and is used to irrigate an olive orchard. Monitoring of the performance of the system over the past 2 years has identified no operational problems with the system.

However, the system has not been constructed in accordance with established design criteria for such systems. The following issues have been raised as being of concern to the ARC:

6.2.1 Loading Rate

The maximum proposed loading rate for the disposal bed is approximately 5 times higher than that recommended in TP58. Based on the maximum daily discharge volume of 25m^3 , the area of disposal field provided requires a loading rate of 25mm/day (compared with 5mm/day TP58). The applicant's consultant has been repeatedly requested to justify such a high loading rate.

The applicant's consultant provides support for the proposal on the following basis:

1. The system has been operating normally for 2 years with no signs of breakout or excessive moisture in the disposal field.

While this argument may provide some justification for allowing the system to continue, it does not take into account the long term effects of loading the soil at such a high rate with relatively poor quality effluent. Accordingly it is not an acceptable reason for operating the system as it is. One option would be to grant the consent for a short duration (say 3-4 years) on the basis that the consent holder would have to demonstrate no adverse effects before its renewal.

2. The site lies on a gently sloping northerly facing slope with high evapotranspiration potential. The greatest ET potential exists during the greatest use of the camp. To some extent this does mitigate higher loading rates for short durations, but again it is not an acceptable practice over time. Again, the application could be granted for a short duration in order to review the system prior to its renewal.
3. The peak volumes applied for are only generated during the summer peak season (3-4 weeks) and during public holiday weekends (3-4 days). Occupancy levels and water meter readings clearly show that water usage outside of these times is significantly lower than the peak applied for (in some cases by as much as 10 times).

The average daily discharge rate based on annual discharge volume is approximately $6\text{m}^3/\text{day}$ while the average winter discharge volume is less than $2.5\text{m}^3/\text{day}$. The disposal field is adequately sized to accommodate the average daily discharge rate, and is only likely to fail during peak occupancy periods.

4. The existing dripper lines have been regularly monitored for decrease in performance due to higher than recommended suspended solids levels. No effects have been noticeable and

no significant build-up of solids has been observed within the dripper lines. The addition of a biosolids filter will improve the quality of the effluent further and this is considered appropriate.

6.2.2 Effluent Quality

The quality of the effluent has been consistently poor for some time with high suspended solids levels and extremely high faecal coliform levels. Although improvements to the treatment system have improved the effluent quality, it has remained above the usual minimum standards for dripper irrigation. In particular, the elevated suspended solid levels have the potential to affect the efficiency of the dripper lines through blockage. In order to address this the applicant has recently installed a biosolids filter. The results of this improvement are yet to be seen in monitoring results. However, the applicant has further agreed that if the suspended solid levels remain high an additional "Arkal" disc filter will be installed in-line.

The ARC is satisfied that the applicant has taken all reasonable steps to treat the effluent to an appropriate level.

The high levels of pathogens within the effluent have also been a cause for concern. The applicant has recently installed a new UV sterilisation plant to address this matter. Unfortunately the results have not been as significant as had been hoped. The most likely cause for this is that the high suspended solid levels present in the effluent have affected the performance of the unit. By installing the additional filters and installing the UV unit after the filters is anticipated that the faecal coliform levels will be significantly reduced from the present.

6.3 Assessment of Actual and Potential Environmental Effects

Following discussions with Ian Gunn and the applicant's consultant, the ARC retains a number of reservations about the proposed disposal method and its long term suitability. However, a number of mitigating factors need to be taken into account when considering this application.

1. The previous discharge was to the estuary and was of worse quality than the current effluent. The positive environmental benefits of redirecting the discharge are considerable and must be weighed against the possible adverse effects of the disposal bed failing.
2. The disposal bed is situated a significant distance from any adjoining properties, or any public areas of the holiday park. The irrigation field lies below the owners dwelling on a large area of orchard. No public access is available to the property.
3. The disposal bed is situated over 500 metres from the foreshore or other surface water. Groundwater levels in the area are not close to the surface. Accordingly it is considered that the risk of contamination of ground or surface waters is minor.
4. The applicant has a large amount of land available as a reserve area, adjacent to the disposal field.

5. The applicant has accepted specific review conditions that would require the system to be upgraded immediately any signs of disposal bed failure become apparent. Furthermore, extensive monitoring conditions have been imposed on this consent to address the concerns of the ARC.

7. CONCLUSION

This application is to discharge 25m³/day of contaminants to land for the purpose of disposing of treated domestic wastewater to ground soakage in accordance with Section 15(1)(b) of the Resource Management Act 1991.

On the basis of the information submitted to Council by the applicant, and having assessed the proposal against the relevant criteria, Council has a number of concerns with the proposed disposal area, as it is not consistent with the guidelines set out in TP58.

However, the applicant has made significant improvements to the previous system, and it is acknowledged that the change from discharging to the estuary to land disposal is a significant improvement. Furthermore, the applicant has accepted the conditions proposed by the Council to address its concerns.

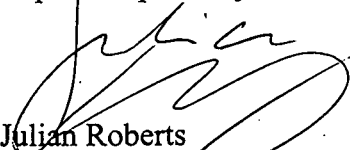
Accordingly it is recommended that the consent be granted with a 2 year review clause to allow the system to be reviewed and modified accordingly should it be found to be operating unsatisfactorily.

8. RECOMMENDATION

Based on the information available, it is recommended that:

- a) The consent be granted subject to the special conditions appended to this report.
- b) The consent expires on which corresponds to a term of 15 years.

Report Prepared by:



Julian Roberts
Land and Water Quality

DECISION ON APPLICATION FOR RESOURCE CONSENT

APPLICANT: B & V Morrison CONSENT NO: 22315
PROJECT/RELATED CONSENTS: FILE REF: 7835



NOTIFIED



NON-NOTIFIED

It is RECOMMENDED that this application be GRANTED/DECLINED, as detailed in the attached report and/or consent document, (i.s. document reference number C/RA/MA/GS51PWA).

LAST DATE FOR NOTICE OF DECISION TO BE SERVED

8/6/99

Processing Officer/Team Leader:

Date:

4/6/99

This APPLICATION is GRANTED and the CONSENT CONDITIONS stated in the report and/or document are APPROVED

Section Manager:

Date:

9/6/99

OR

This APPLICATION is DECLINED

Group Manager:

Date:

Once the decision is recorded please forward the file to Consents Liaison.