STAFF REPORT

TO: Environment & Planning Committee

FROM: Jim Trembath, Compliance Officer

REFERENCE: C653

SUBJECT: **COMPLIANCE MONITORING ON-SITE WASTEWATER SYSTEMS - REPORT EP08/11/18 -** Report prepared for meeting of 20 November 2008

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1. INTRODUCTION

The purpose of this report is to present to Council an overview of on-site domestic wastewater treatment and disposal within the Tasman District. The report covers the issues that currently affect compliance and enforcement including internal and external processes, historical practices and the recent changes to improve how we manage this sector.

2. TASMAN DISTRICT COUNCIL WASTEWATER AREAS

The Tasman District has four wastewater areas in which a particular wastewater management standard is set:

Reticulated

Domestic wastewater is discharged through a reticulated system to a municipal treatment plant. There are eight municipal systems within the Tasman District.

- Bells Island
- Motueka
- Tapawera
- St Arnard
- Murchison
- Upper Takaka
- Takaka
- Collingwood

These systems receive both domestic and industrial wastewater. Discharge consents are held by Council's Engineering Department who are responsible for ensuring compliance with consent conditions. No domestic wastewater standard is set for individual discharges into a reticulated system however wastewater quality parameters are set for the subsequent discharge of treated wastewater from the treatment plants into the receiving environment. Council contractors monitor these and report on a set programme to Engineering Department. Compliance department subsequently audits these reports against conditions of consent.

On-site Wastewater Permitted Activity; Tasman Resource Management Plan (TRMP) Section 36.1.4:

Any on-site wastewater treatment system that is in any area throughout the Tasman District other than any of the Domestic Wastewater Special Areas or the Wastewater Management Area, must meet each of the conditions of Section 36.1.4 of the TRMP to be considered a 'permitted activity'.

If the on-site wastewater system cannot meet any of the conditions of 36.1.4 a resource consent is required or the discharge is otherwise prohibited by way of section 15 of the Resource Management Act.

Simple primary treatment systems common to older dwellings outside the reticulated urban areas are subject to these standards. It is unknown how many properties within the Tasman District meet the required standards as they are generally only encountered as a result of complaints.

Domestic Wastewater (Special Areas) TRMP Section 36.1.5:

Due to the nature of the soils, the density of dwellings, risks to water supplies etc different areas have been identified that require care in mitigating the adverse affects of receiving discharged wastewater.

On-site wastewater systems in these areas must meet a specific set of conditions to be considered a 'permitted activity'.

The result of these conditions is that a higher standard of treatment is required from an on-site wastewater system than in the general district and includes some form of secondary treatment in order to achieve the required standard of treatment.

If the on-site wastewater system fails to meet any of the conditions the on-site system requires resource consent or the discharge is prohibited by way of Section 15 of the RMA.

As at August 2008 there are approximately 1600 properties within these zones.

Wastewater Management Area TRMP 36.1.13A:

Any discharge in this area that lawfully existed prior to 3 December 2005 must meet the permitted standard set out in Section 36.1.4 of the TRMP however any discharge of domestic wastewater after 3 December 2005 in this zone is a 'controlled activity' providing it satisfies the conditions of 36.1.13A. This means that resource consent will be issued, but Council has reserved control over some aspects of the treatment process and sets conditions accordingly.

Secondary treatment and at times some form of tertiary treatment may be required for systems to meet the set standard.

As at August 2008 there are approximately 850 properties within this zone. Most discharges are pre December 2005 and operate as permitted activities however large areas of recently subdivided land have consented systems coming on line.

Other Relevant Wastewater Controls:

- The discharge of greywater is a permitted activity under section 36.1.6 of the TRMP.
- Long-drop toilets are addressed separately in section 36.1.7 of the TRMP
- There is no TRMP standard set for composting toilets. RMA section 15 provisions control non complying discharges.

Non complying 'Home made' composting toilet in Moutere area . Bowl sits above the wheely-bin in the cubicle. Urine passes through the black pipe into a dry swale.

3. LEGISLATIVE CONTROLS AND AREAS OF RESPONSIBILITY

3.1 Controlling Regulations in Wastewater

The physical installation of wastewater systems is governed by the Building Act and the Plumbers Gasfitters and Drainlayers Act 2006. The environmental effect of the discharge is governed by the Health Act and the Resource Management Act 1991.

Wastewater design standards are based around the Australian New Zealand standard AS/NZS 1547:2000 and the Auckland Regional Council Technical Publication TP58

3.2 Who Monitors What

Council Building Inspectors monitor and enforce compliance with the provisions of the Building Act and the Plumbers Gasfitters and Drainlayers Act 2006. (Standard of construction)

Council Compliance officers administer the TRMP and RMA regulations including monitoring compliance of both permitted activities and resource consents.

Council Environmental Health Officers monitor environmental effects on public health and there is some cross over when dealing with contaminants discharged to the environment.

4. COMPLIANCE

4.1 Industry Issues

Council compliance staff continually encounter problems with the installers and agents understanding of the regulations and standards, where most may be familiar with the Building Act and the Plumbers Gasfitters and Drainlayers Act many are not as familiar with the relevant provisions of the Health Act and the Resource Management Act. Staff also note that there are some members within the local industry who do not appear to be at all familiar with the national design standard AS/NZS 1547:2000 and TP58. Again there are some active members within the local industry who are not familiar at all with the provisions of the TRMP discharge regulations. For example the installation of sample points has been a permitted activity requirement since 1998; however sample points are still not installed as a matter of course.

Dye discharge: piped from domestic tank to roadside drain; discharge through culvert onto a Golden Bay beach

Again it is apparent that throughout the local industry, knowledge of the legal responsibility toward compliance with resource consent requirements is poor particularly with the consent holders themselves. This is a problem as each wastewater discharge consent whilst similar in form and content, can contain conditions unique to a property. Therefore installing agents and owners are required to be familiar with the conditions of the individual resource consent under which they are authorised to undertake a specific activity. As a result there is a high degree on non-compliance with wastewater discharge consents. Whilst systems may be installed and structurally compliant with the Building Act it is rare for sample points, maintenance contracts and sample results required by resource consent to be supplied. This requires repeated follow up by compliance.

Co-incidentally, if a system is designed by a wastewater engineer and subject to the engineer's producer statement or certificate it is generally installed in a manner that is compliant with resource consent conditions.

In conjunction with Building Act standards, the RMA resource consent process may set additional standards on construction to ensure mitigation of the resulting environmental effect of the activity, for instance, the position, size and construction method of a disposal field. This may be to ensure location is a suitable distance from a waterway to reduce the possibility of contamination or to ensure flow is spread over a suitable area to reduce saturation of the soil. The method of construction may be directed to ensure a system suitable to the constraints of the receiving environment i.e. dripper lines rather than trench.

Any construction or work upgrading or altering an on-site wastewater system including disposal fields that is beyond replacing like for like requires building consent. Many systems have found to have undergone upgrades or changes outside the Building Act process.

4.2 Internal Issues

Council historically employed building or plumbing and drainlaying tradesmen as Council inspectors. Inspectors who were qualified builders would monitor compliance with building standards. Inspectors who were qualified plumber drainlayers would monitor compliance with plumbing and drainlaying standards.

In the past this has lead to a number of problems as Building Inspectors assessed compliance with the building consent but not the TRMP permitted activity regulations; If the system was subsequently discovered to be non-compliant with the TRMP regulations; the house owner would be approached and required to undertake the work necessary to comply. This has understandably caused some annoyance.

Allied to this is that until recently monitoring of domestic wastewater tended to be restricted to larger systems or in response to complaints. Recent moves have been designed to better align the Resource Management Act and Building Act procedures in relation to wastewater.

Another internal issue is that older Council property records can be incomplete or lack detail, especially detail concerning wastewater systems. Incomplete or non existent records hinder investigation and satisfactory outcomes for all parties. It is not uncommon for Compliance staff to encounter wastewater systems (usually as a result of failure) with non compliance dating back to installation and sign off. Wastewater disposal fields are discovered to be in neighbouring properties, as a result of subdivision without owner knowledge or legal easement.

4.3 External Issues

There are many properties throughout the Tasman District that have dated wastewater systems which are now recognised to be substandard in their treatment and have a potential long term adverse effect on the receiving environment. These include direct discharges or over flow discharges to nearby waterways, or ground surface soak pits and long drops. As these older systems fail and/or are directed to undertake significant upgrade, or when the subsequent development of small sections occurs property owners are forced to invest in expensive on-site wastewater treatment to achieve the standard suitable. Older systems were often designed for wastewater overflow to discharge into roadside drains; paddocks; small open drains; and streams and reinstating appropriate disposal fields can prove difficult. It is believed that a significant amount of work repairing or upgrading wastewater systems is undertaken throughout the district undetected by Council.

Rented accommodation: This septic tank has failed; note the surface expression of sewage at the point of the blue arrow flowing across the rear of the section in the direction of the red arrows. This system had been failing for some time, neighbours complained of the smell

Tasman District includes many holiday properties, including camp grounds with intermittent use, this intermittent use results in periods of high flow and shock loadings over holiday periods. Most on-site wastewater treatment systems that service campgrounds fail to cope with high flow from intensive holiday period use; this includes camp grounds within local national parks.

Areas that include many holiday properties such as beach front properties are often on or close to fragile receiving environments. These properties are often well utilised during the holiday periods resulting in high discharge flows. Similarly workers accommodation blocks throughout the district which were traditionally only tenanted during seasonal work are now being permanently tenanted as rental properties. Failed systems around these properties are becoming common place in and around the old horticultural lands.

This system services a cluster of 4 old workers accommodation units. Recently refurbished and tenanted full time, the old septic tank system failed to cope with the increased flows.
Note: the lush green grass growing where the sewage overflows from the tanks. In this case the flow runs down through the tenant vegetable garden and into an open drain discharging into the Mariri estuary

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Building redevelopment also has potential to impact on wastewater systems. Wastewater systems are designed to accommodate specific flow rates based on occupancy and receiving environment. A two bedroom house does not require the same size system a four bedroom house requires as it is reasoned that physical space dictates occupancy; occupancy dictates flow rate therefore the greater the number of occupants the greater the flow of wastewater. Historically, additions to dwellings with no changes to the wastewater system have also lead to situations where systems have failed to cope with the increased flows.

5. CURRENT COMPLIANCE MONITORING

At present strategic changes in internal processes within the Environment and Planning department are leading to significant improvements in wastewater management and monitoring. Greater effort is now directed to monitoring all on-site wastewater discharge consents, investigation of all domestic wastewater complaints, monitoring compliance of TRMP wastewater discharge permitted activity regulations and enforcement of relevant legislation.

Further, greater attention at the "front end" of the Building Act assessing/vetting design and compliance of proposed on-site wastewater treatment systems is now in place. As a result, at the time of building consent application compliance with Building Act and TRMP provisions is assessed in an integrated way. Council compliance section is notified of all new wastewater discharge consents and now liaises closely with the Building Control section.

Specific monitoring programmes are now in place for schools, campgrounds and large community systems. Compliance has recently implemented a Wastewater Management Area monitoring programme which will progress councils monitoring and reporting of performance in this particular zone.

Dye discharging into a river from a failed wastewater disposal field

6. ENFORCEMENT

Education is utilised in the first instance if deemed appropriate in terms of actual or potential environmental effects of the non-compliance. This may include formal letters advising owners of their obligations or providing guides and good practice publications.

Abatement notices are issued if the adverse environmental effects are such that action is required to cease the discharge or action is required to avoid remedy or mitigate any actual or potential adverse effects. This process is also used if the owner does not accept liability or is reluctant to undertake work voluntarily.

Note the black pipe running alongside the school playground in an area where children play:
This is a wastewater disposal pipe cut in places by a lawn mower and discharging secondary treated sewage from the school on-site wastewater treatment plant directly onto the playing field.

7. DEVELOPMENTS

Cluster Systems

Council policy includes the encouragement of large privately owned and operated onsite wastewater systems (Cluster systems) that service a collection of dwellings.

Cluster systems are constructed as part of a subdivision and designed so that all dwellings within the subdivision must connect. Although common overseas this is a reasonably new development in Tasman District with some large systems designed to service 20 to 30 lots, due to be commissioned late 2008.

Ensuring compliance of the operation and management of these systems within consent conditions will fall to Council compliance section.

It should be noted that corporate financial responsibility for the maintenance and operation of these systems is untested and in its infancy within the Tasman District.

Privately owned cluster system installed to service a new subdivision

8. FUTURE DEVELOPEMENTS

A Council wastewater database has been constructed and it is starting to be populated with data gathered from the monitoring programme. This should significantly improve ability to report on performance in this sector along with trends and patterns of wastewater management in this district.

Compliance is currently developing a programme of education and liason with the local industry and will co-ordinate regular meetings. It is hoped that most will sign up to this and participation should provide positive outcomes in understanding and obligations.

The Ministry for Environment (MFE) is currently conducting a nationwide road show and receiving submissions concerning a National Environmental Standard (NES) for wastewater (which Council has submitted on).

Indications are the NES may include the identification of fragile or difficult receiving environments. This has already been done to some degree within the Tasman District with the creation of the Special Wastewater Disposal Area and the Wastewater Management Area. There is also an indication the NES may require some form of certification or warrant of fitness for on-site wastewater treatment systems. The NES impact on Council is yet to be assessed.

9. SUMMARY

The Tasman District Council is empowered by a number of pieces of legislation to manage the effects of wastewater throughout the district. This is managed by several sections of the Environment & Planning Department in an increasing integrated way.

The domestic wastewater industry has undergone great changes over the past eight years in both technological ability and understanding of how to treat and manage domestic wastewater. This has resulted in a local industry that is grappling with change and still includes a wide range of ability and understanding within the industry.

The Tasman District Council has also grappled with the rapid growth of on site wastewater systems and the subsequent pressure on infrastructure together with the rapid development of technology and understanding of wastewater management.

Historically Council has managed its regulatory role in this sector in a disjointed manner which has resulted in problems with consistent compliance across both the RMA and Building Act. This has improved markedly with changes in procedure and dedicated resourcing.

Compliance continues to pursue non compliance through a combination of education and formal enforcement actions.

10. RECOMMENDATION

That Council receives this report and notes that staff are continuing to work on this issue to ensure better management of on-site wastewater systems in the District.

Jim Trembath
Compliance Officer