



Drainage Bylaw 2018

South Taranaki District Council



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Drainage Bylaw 2018

South Taranaki District Council

1.0 Title

1.1 This Bylaw is made under section 146 of the Local Government Act 2002 and section 64(g) of the Health Act 1956; and shall be known as the South Taranaki District Council Drainage Bylaw 2018.

2.0 Commencement

2.1 This Bylaw shall come into force on 1 November 2013.

3.0 Purpose

3.1 This Bylaw is for wastewater drainage from primarily domestic premises to the Council's public drainage systems and includes, by reference, the reticulated sewerage systems and urban storm water drains.

3.2 For trade premises, the Trade Waste Bylaw 2017 will normally apply; however, this Bylaw covers the conditions for physical connection of a premises (including for trade premises) to the sewer.

4.0 Interpretation

4.1 In this Bylaw, unless the context otherwise requires:

Authorised Officer means any person appointed by the Chief Executive of the Council for purposes of acting as an Authorised Officer under this Bylaw.

Acceptable discharge means wastewater with physical and chemical characteristics which comply with the requirements of Appendix 3 to this Bylaw.

Buried services means all public sewers, rising mains, trunk sewers and other underground utilities under the responsibility of the Council.

Characteristic means any of the physical or chemical properties of wastewater, including trade wastes.

Council means the South Taranaki District Council.

Domestic wastewater means either that wastewater which is discharged from premises used solely for residential activities, or wastes of the same

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character discharged from other premises, provided that the characteristics of the wastewater are an acceptable discharge. Such activities shall include the draining of domestic swimming and spa pools subject to clause 9.2 of this part.

Drainage district means that area described within the Council's Assessment of Water and Sanitary Services as required under section 125 of the Local Government Act 2002.

Infiltration means water entering a public sewer or private drain from groundwater through defects such as poor joints and cracks in pipes or manholes. It does not include inflow.

Inflow means water discharged into a private drain from non-complying connections or other drain-laying faults. It includes stormwater entering through illegal downpipe connections or from low gully traps.

Lateral means the sewer connection from the customers' point of discharge to its connection with the sewer main.

Level of service means the measurable performance standards on which the Council undertakes to receive wastewater from its customers.

Permitted trade waste means a trade waste derived from a trade activity and/or process where the customer is permitted to discharge trade wastes without holding a controlled trade waste consent or a conditional trade waste consent or having a separate trade waste agreement.

Private drain is the sewer drain belonging to the property owner and not in the ownership, maintenance or control of the Council. Sections 459 - 462 inclusive of the Local Government Act 1974 apply to private drains. Private drains shall be constructed according to the relevant provisions of the Building Act 2004 and codes.

Prohibited characteristics means wastewater which shall not be discharged into the Council's system, as defined in Appendix 4 of this Bylaw.

Reticulation means the drains and piped sewer network forming the public sewerage system.

Rising main means a sewer through which wastewater is pumped.

Service opening means a manhole, or similar means for gaining access for inspection, cleaning or maintenance of a public sewer.

Sewer main means a sewer, generally of 150 mm or greater in diameter, which forms a part of the principal drainage network of the Council's wastewater drainage system.

Tanker waste means any waste which will be transported to and disposed of into the sewerage system, including trade waste matter in solution or suspension, which is conveyed by vehicle for disposal.

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Trade waste means wastewater discharged from an industrial or commercial trade premises having characteristics which significantly distinguish it from domestic wastewaters.

5.0 Acceptance of Discharge

- 5.1 Every domestic premises shall be entitled to have its wastewater accepted by the Council subject to:
- a) The premises lying within a serviced urban drainage area;
 - b) Payment of the appropriate rates and charges in respect of that premises in general and wastewater services in particular;
 - c) Fulfilment of the requirements of this part;
 - d) Availability in the capacity of the public sewer network, and
 - e) That to accept such wastewater will not significantly compromise Council's compliance with any resource consent condition.
- 5.2 No domestic water shall:
- a) Exceed the substance limits scheduled in Appendix 3; or
 - b) Contain the substances prohibited in Appendix 4.
- 5.3 Where part of a domestic premises is used as an office or other trade related activity from which no trade waste could be produced, and which no other persons apart from those living at those premises use, then it shall be treated as domestic premises. Any trade activity which produces or has the potential to produce a wastewater shall be treated as being from trade premises.
- 5.4 The acceptance of trade wastes is at the discretion of the Authorised Officer and in accordance with the Council's Trade Waste Bylaw.
- 5.5 Tanker waste shall only be accepted at Council approved facilities subject to the prior approval of an Authorised Officer. The tanker driver or company responsible for transporting the waste shall on demand present a complete manifest detailing the waste contents and characteristics of the particular waste intended for discharge to the Council's sewerage system, and in addition shall log all wastes disposal into the "Waste Track" software system at such time as the system is operative.
- 5.6 Charges may apply to Trade and Tanker wastes as per the schedule of fees and charges that may be prescribed from time to time through the Annual Plan, if not covered by a discrete Trade Waste Consent with the Council.

6.0 Application to Connect

- 6.1 No person other than the authorised agents of the Council may, without approval from an Authorised Officer, make any connection to, or otherwise interfere with, any part of the Council's wastewater drainage system.
- 6.2 Every application for a wastewater service connection shall be made in writing on the form provided by the Council and accompanied by the prescribed charges. The applicant shall provide all the details required by the

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Council. An application shall be made irrespective of whether or not a public sewer has already been laid up to the point of discharge.

- 6.3 Where an application has been accepted by the Council which requires a new public sewer connection to be constructed from the existing public sewer to the point of discharge, the customer shall pay such charges as fixed by the Council for this work. The Council shall normally supply and install the public sewer up to the point of discharge except as provided for under a subdivision approval or consent.
- 6.4 Charges applicable at the time of connection may include:
- a) Payment to the Council for the cost of the physical works required to provide the connection, and/or
 - b) A financial contribution charge determined in accordance with the Resource Management Act 1991.
- 6.5 A Council Officer may approve an application for a new wastewater discharge point provided that the following conditions are met:
- a) the premise is located within in a Council Drainage District;
 - b) the premises is located within an area which is served by a sewer;
 - c) adequate capacity is available in the sewer network to service the premises;
 - d) all applicable fees, charges, rates and/or contributions payable to or levied by the Council have been paid in full; and
 - e) the applicant is able to prove to the satisfaction of the Council that no appropriate wastewater discharge points exists or was provided for those particular premises.
- 6.6 Where a new public sewer is required as part of a sub-divisional development, the developer shall normally provide and pay for all the drainage works and these shall be subject to approval of the design and construction of the works by an Authorised Officer.
- 6.7 In the event of illegal connection the Council will apply the provisions of section 467 of the Local Government Act 1974.

7.0 Point of Discharge

- 7.1 The point of discharge from a customer shall be the point on the public sewer which marks the boundary of responsibility between the customer and the Council, irrespective of property boundaries.
- 7.2 Unless otherwise approved there shall be one point of discharge only for each premises, and any private drain shall not extend by pipe or any other means to serve another premises unless it is a common private drain.
- 7.3 For single dwelling units the point of discharge shall be located at the junction of the private drain and the public sewer main shown in Appendix 1 and 2 of this Bylaw, or as close as is practicable to the main where fences, walls or other permanent structures make it difficult to locate it at the required position.

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The approval of other positions may be granted by the Council and any such positions shall be recorded on the property file.

- 7.4 Where a private drain discharges into a public sewer on that same private property, the point of discharge shall be the upstream end of the pipe fitting which forms the junction with the public sewer.
- 7.5 The typical layout at a point of discharge is shown in Appendix 2.
- 7.6 The point of discharge for the different forms of multiple ownership of premises and/or land shall be as follows:
 - a) For company share/block scheme (body corporate), as for single ownership.
 - b) For leasehold/tenancy in common scheme (cross lease), strata title, and unit title (body corporate) where practicable, each owner shall have an individual drain with the point of discharge determined by agreement with the Council. If not practicable there shall be a common private drain which shall be incorporated as an additional provision in the lease agreement. In specific cases other arrangements will be acceptable subject to individual approval.
- 7.7 Each property owner's point of discharge is subject to the approval of the Council and will be recorded on the drainage plan. Other arrangements shall be considered by the Council, at its discretion.
- 7.8 Common private drains shall serve a maximum of seven single dwelling units, and shall have one point of discharge only (in common).

8.0 Acceptance and Duration

- 8.1 The Council will continue to accept wastewater from domestic premises once an approved connection to the public sewer has been made.
Note: *Disconnection of the sewer is not an option available in the event of non-compliance with the law and/or bylaws.*
- 8.2 In the event of domestic premises changing ownership, the new owner shall automatically become the new customer of that premises.
- 8.3 For trade waste acceptance, a separate trade waste consent is required under the applicable terms of the Trade Waste Bylaw.
- 8.4 The Council will endeavour to provide wastewater services in accordance with the level of service contained in the Council's Long-Term Plan. For those periods where the level of service allows non-compliance with the specified value(s), the Council will make every reasonable attempt to achieve the specified value(s).
- 8.5 The Council shall endeavour to meet the level of service but it shall not be liable for any loss, damage or inconvenience which the customer (or any

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person within the premises) may sustain as a result of deficiencies in the wastewater collection system.

- 8.6 Natural hazards (such as floods or earthquakes) or accidents beyond the control of the Council which result in disruptions to the ability of the Council to receive wastewater, will be deemed an emergency and exempted from the levels of service requirements above.
- 8.7 During an emergency the Council may restrict or prohibit the discharge of wastewater for any specified purpose, for any specified period, and for any or all of its customers. Such restrictions will be publicly notified. The decision to make and lift restrictions and to enact additional penalties shall be made by the authorised officer of the Council. Where immediate action is required, the authorised officer may enact emergency provisions as deemed necessary without public notification.

9.0 Customer Obligations

- 9.1 The maximum instantaneous flow rate discharged from a domestic premises shall not exceed 2.0 litres/sec. The Council may also set a lesser daily flow rate discharged from a domestic premises.
- 9.2 Customers with swimming or spa pools shall be required to demonstrate that the pool drain has been fitted with a flow limiting device to ensure the discharge does not exceed the maximum instantaneous flow requirement of 2.0 litres/sec.
- 9.3 No wastewater with prohibited characteristics shall be discharged into the Council waste system.
- 9.4 The customer shall allow the Council, or its agents, access to and about the point of discharge for the purposes of monitoring, testing, and maintenance work at any time. The Council shall give notice of entry in accordance with the sections 171 - 173 of the Local Government Act 2002.
- 9.5 Under emergency conditions, or for the purpose of ascertaining whether the drains are being misused, the customer shall allow the Council free access to and about the point of discharge at any hour.
- 9.6 Where it is not practical to notify the customer of a maintenance interruption to the point of discharge before work commences, the Council may shut down the point of discharge without notice, and the customer shall be advised as soon as possible.
- 9.7 The customer shall allow the Council, with any necessary equipment, access to any area of the premises for the purposes of ascertaining whether non-complying connections have been made.
- 9.8 The customer serviced by the public sewer network shall not store raw material, products or wastes containing corrosive, toxic, biocidal, radioactive, flammable, or explosive materials, or any material which, when mixed with the wastewater stream, is likely to generate toxic, flammable, explosive or

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corrosive materials in quantities likely to be hazardous, or any other material likely to be deleterious to the Council wastewater system or the health and safety of the Council staff and public, without taking all reasonable steps to prevent entry into the council sewer from leakage, spillage or other mishap.

- 9.9 The customer shall take practicable steps to prevent any stormwater or groundwater entering the wastewater drainage system. This includes roof downpipes, surface water run-off, overland flow, and sub-surface drainage.
- 9.10 The customer shall ensure that stormwater is excluded by ensuring that:
- a) There is no direct connection of any stormwater pipe or drain to the wastewater system;
 - b) Gully trap surrounds are set above stormwater ponding levels (refer New Zealand Building Code G13), and secondary overland flow path flood levels; and
 - c) Inspection covers are in place and are appropriately sealed.
- 9.11 Where non-compliance with the above terms is identified, the Council shall issue written advice to the customer via a notice to rectify under clauses 9.9 and 9.10 a) – c) inclusive. For continual or repeated non-compliance by a customer and/or at a single premises, then the provisions of the Council's Water and Wastewater Connections Policy 2016 may be applied by the Council.
- 9.12 Stormwater which is contaminated may be accepted as a trade waste discharge subject to application and to the satisfaction of, and at the discretion of an Authorised Officer of the Council.
- 9.13 For large impervious areas (e.g. transfer stations or truck washing facilities), specific provision shall be made by the customer for a permanent barrier preventing water from outside the confines of the facility from entering the wastewater system. This could be by way of a nib wall or appropriately graded surrounds.
- 9.14 Where it is impractical to cover a large impervious area, consideration shall be given to a system which detains run-off from the first foul flush for ultimate disposal to the wastewater system, with subsequent run-off disposal as stormwater.
- 9.15 Private drains shall be kept and maintained in a state which is free from cracks and other defects which may allow infiltration.

10.0 Disconnection

- 10.1 A customer shall give a minimum of five working days notice in writing of his or her intention to demolish or remove a building connected to the sewer. The demolition or removal shall not commence until the property has been disconnected from the sewer by the Council. An application for disconnection shall be made on the standard Council application forms.



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- 10.2 A customer shall give a minimum of twenty working days notice in writing to the Council of his or her requirement for disconnection of the discharge connections if re-laying of the private drain is required.

11.0 Public Drainage Systems

- 11.1 With respect to building or loading over buried services, or excavation near public drains, the restrictions described in clauses 11.2 to 11.6 of this Bylaw shall apply. Other restrictions may be applied by the Council for the protection of the wastewater drainage system after consideration of proposed work methods, depth of excavation, soil physical properties and other site specific factors. The same provisions shall apply to piped stormwater drains, and to any public drain installed by trenchless means, such that the installed location of the sewer or drain shall not contravene the minimum separation distances specified below.
- 11.2 No building shall be built over a public rising main or trunk sewer, or closer than the greater of:
- a) 1.5 metres from the centre of any main or sewer; or
 - b) The depth of the centre line of the sewer, plus the diameter of the sewer, plus 0.2 metres from the centre of that sewer, subject to compliance with 3.1 of NZS 3604 (or subsequent amendments).
- 11.3 Where clauses 11.2 a) and b) above are found to be impractical and the building cannot be sited elsewhere on the property or modified to conform with the above conditions, and it is essential for the proposed building to be built on that part of the property, approval may be granted by the Council subject to the building developer meeting the cost of any specific requirements and the following conditions shall apply:
- a) Sufficient investigations must be carried out to accurately determine the sewer's location and depth, and to prove that the sewer is in a condition where it has a remaining life of at least 50 years;
 - b) If a) cannot be satisfied, remedial works must be carried out or the sewer relayed to meet the requirements of c) and d);
 - c) The building must be bore piled 1.0 metre clear distance either side of the sewer to below the sewer invert to ensure that no building loads are transferred to the sewer and that it is possible to excavate down to the sewer without threat to the building;
 - d) Two additional manholes must be provided into the sewer between 2.0 and 3.0 metres from the edge of the building at the points it enters and leaves the building (unless there is an existing manhole within 10 metres), provided that the sewer lies in a straight line and that there are no other connections between these two manholes;
 - e) All work on and around the sewer must be carried out in accordance with Council engineering standards;
 - f) The public sewer must be registered by a Memorandum of Encumbrance and Deed of Covenant against the Certificate of Title.

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- 11.4 No person shall:
- a) Cause the crushing load imposed on a public sewer to exceed that which would arise from the soil overburden plus any reasonable expected surcharge (such as traffic loading for example); or
 - b) Place any additional material over or near a public sewer without approval.
- 11.5 Service openings shall not be covered in any way unless approved by the Council. Removal of any covering material or adjustment of the opening shall be at the customer's expense.
- 11.6 No person shall without the approval of an Authorised Officer excavate, or carry out piling or similar work closer than:
- a) Five metres from the centre line of any rising main or trunk sewer; or
 - b) Two metres from the line of any public sewer.
- 11.7 Any person proposing to carry out excavation work shall view the as-built information to establish whether or not the Council or other utility services are located in the vicinity. At least five days notice in writing shall be given to the Council of an intention to excavate in the vicinity of its services. Where appropriate the Council will mark out to within ± 1.0 m on the ground the location of its services, and may nominate in writing any reasonable restrictions on the work it considers necessary to protect its services.
- 11.8 When excavating and working around buried services due care shall be taken to ensure the services are not damaged, and that bedding and backfill is reinstated in accordance with the appropriate council specification. Excavation within roadways is also subject to the permit process of the appropriate roading authority.
- 11.9 Any damage which occurs to a Council service shall be reported to the Council immediately
- 11.10 The customer shall reimburse the Council for any repair costs incurred.
- 11.11 No person other than Council staff or the Council's approved agents shall attempt to access, operate or reconfigure any part of the public sewerage system, including public pump stations and wastewater treatment facilities. This shall include wastewater ponds and pump stations which are deemed restricted areas.
- 11.12 Newly built public sewers in private property shall normally be required to be protected by an easement in favour of the Council for future access, excavation, repair and replacement. For new subdivisions the legal costs in creating the easement shall be borne by the landowner or developer. In other situations, the Council may contribute to the cost of the easement or bear full cost, subject to agreement with the respective landowner.



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12.0 Customer's Drainage System

The customer's drainage system is governed by the Building Act 2004 from inside the building to the point of discharge.

- 12.1 The customer's drainage system shall be designed, installed and maintained, both in its component parts and in its entirety, to ensure that it complies with the Building Act and the relevant provisions of the New Zealand Building Code.
- 12.2 A customer whose gully trap is overflowing or has other reasons to suspect a blockage in their private drain, shall first call a drain layer to clear and remove any blockage in the private drain or lateral.
- 12.3 Blockages originating from within the customer's property shall be removed by the customer's drain layer and the drain and lateral cleared as far as the sewer main at the customer's cost, including reinstatement. Where the cause of the blockage is subsequently proved to be due to a structural failure of the lateral (e.g. a displaced joint, broken pipe, or sewer root intrusion) then the Council shall reimburse the customer for actual and reasonable drainage costs.
- 12.4 If the drain layer finds that the blockage is within the public sewer main, then the drain layer or customer shall contact the Council to clear and remove the blockage and clean up all affected areas. Provided that the blockage has not been forced downstream into the public sewer in the act of clearing it from the private drain or lateral, or that the customer has not been negligent in discharging a non-acceptable wastewater, then the Council shall reimburse the customer for actual and reasonable drainage costs. If otherwise, the Council shall recover the costs of the unblocking work from the customer.
- 12.5 In the event of the roots of any tree on a customer's premises causing or being likely to cause damage, interference to the flow, or blockage to a public sewer, the Council will follow the procedure set out in section 468 of the Local Government Act 1974.

Note: *the law does not differentiate between a public sewer on private or public land, i.e. the occupier or owner cuts down or removes the tree at their expense with no compensation payable.*

- 12.6 Likewise, for any defect within the customer's private drainage system or premises that is found to be, or could reasonably be expected to, contribute to Inflow or Infiltration into the sewer system, is to be rectified upon receipt of a notice to rectify from the Council.

13.0 Pump Stations

- 13.1 Private wastewater pump stations will be approved only where there are no practical alternatives for a gravity flow discharge to the public sewer.
- 13.2 A private wastewater pump station for a single dwelling unit represents an alternative solution in terms of the Building Act 2004. As such, the customer

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will be required to demonstrate that the pump station complies with the provisions of the New Zealand Building Code when seeking a consent.

- 13.3 A private wastewater pump station must have a compliance schedule and an annual building warrant of fitness if that pump station:
- a) Has one or more of the specified systems listed in Schedule 1 Specified Systems of the Building (Specified Systems, Change the Use and Earthquake-prone Buildings) Regulations 2005 (SR 2005/32); and
 - b) Serves more than one residential dwelling unit.
- 13.4 A Common Pump Station Agreement shall be required between the parties, including appropriate maintenance of rising mains. It shall be registered against the Certificate of Title of each party.
- 13.5 The combined rate of discharge to the public sewer shall not exceed the rate specified by the Council.
- 13.6 Public pump stations are those wastewater pumping facilities owned and operated by the Council as part of the sewerage system, and typically serving multiple properties in low lying sewer catchments. No person other than Council staff or approved agents shall attempt to access, operate or reconfigure any part of a public sewage pump station. Public pump stations where required as part of a development shall be designed and constructed to the NZS44.4 Land Development and Subdivision Infrastructure Local Amendment 1.

14.0 Alternative on-site treatment systems

- 14.1 Properties, businesses and dwellings which do not have access to the Council sewerage network or are not within a Drainage District, or both, shall provide on-site sewerage systems in accordance with the respective Building Code provisions and sanitary regulations, not covered in this Bylaw. Properties which are within the Council's Drainage Districts may be required to connect to the sewerage network, and may therefore be subject to the provisions of this Bylaw.
- 14.2 The further provisions of this Bylaw relate only to the Council's sewerage networks and treatment systems, and properties connected to them, or capable of being connected under clause 14.1 above.

15.0 Fees

- 15.1 For fees and charges required under any section in this Bylaw, the applicant must pay to the Council a fee that Council may by resolution from time to time prescribe in its current fees and charges schedule.



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16.0 Notifications and actions

16.1 Any person who does not comply with this Bylaw or a decision made under it may (without limitation) be subject to the following action being taken against them:

- a) Non-compliance notification including a time period to rectify the issue. If compliance is not reached within the specified time period of the notification, then Council may rectify or organise for the issue to be rectified, and recover all costs from that person in doing so;
- b) Requirement to apply for a Trade Waste consent, if waste from a premises is deemed to constitute a trade waste;
- c) Enforcement for a breach of this Bylaw, as provided for in the Local Government Act 2002 and including the unrepealed sections of the Local Government Act 1974;
- d) Enforcement of any offence that may have been committed under the Building Act 2004 as a result of the non-compliance;
- e) An enforcement order or abatement notice under the Resource Management Act 1991; and
- f) Any other steps that may be taken by the Council at law.

17.0 Penalties and Offences

17.1 Every person commits a breach of this Bylaw who:

- a) Does, or causes anything that is contrary to this Bylaw;
- b) Omits or neglects to do anything which ought to be done by them at the time and in the manner provided in this Bylaw;
- c) Does not refrain from doing anything which under this Bylaw they are required to abstain from doing;
- d) Knowingly permits any condition or thing to exist contrary to any provision contained in this Bylaw;
- e) Refuses or neglects to comply with any notice or direction given to them under this Bylaw;
- f) Obstructs or hinders any Authorised Officer in the exercise of any power conferred upon them by this Bylaw; or
- g) Fails to divulge their full name, address and date of birth or other relevant information when requested to do so by an Authorised Officer.

17.2 Every person who is convicted of an offence against this Bylaw is liable on summary conviction to a fine not exceeding \$20,000.



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This Bylaw was adopted by resolution of the South Taranaki District Council on 30 September 2013. All amendments to this Bylaw are listed in Attachment I.

The **Common Seal** of)
The South Taranaki District Council)
was affixed in the presence of:)

Ross Dunlop - Mayor

Waid Crockett – Chief Executive



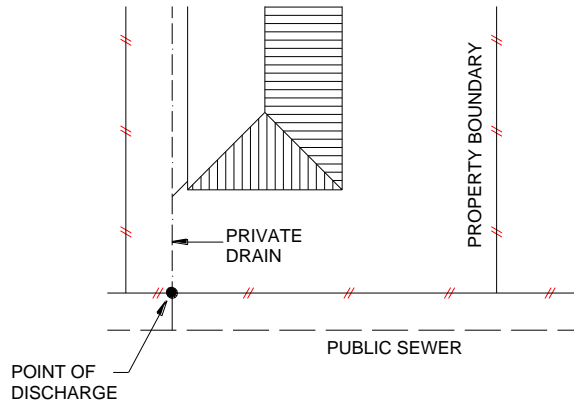
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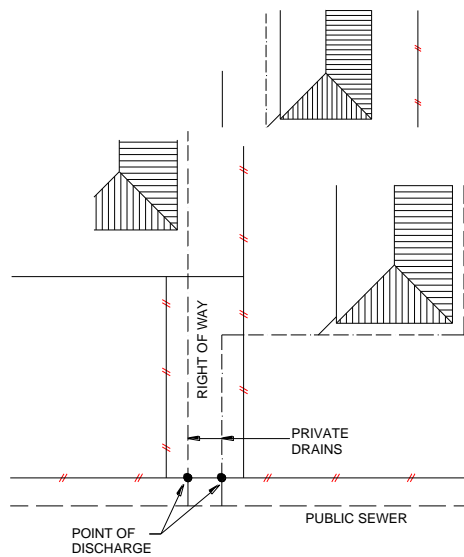
Appendix One **Point of Discharge Locations**

This appendix is for information purposes only.

FIGURE 1(a) Point of Discharge Location - Single Dwelling Units



WITH STREET FRONTAGE



REAR LOTS ON RIGHT OF WAY (UP TO 2 CUSTOMERS)

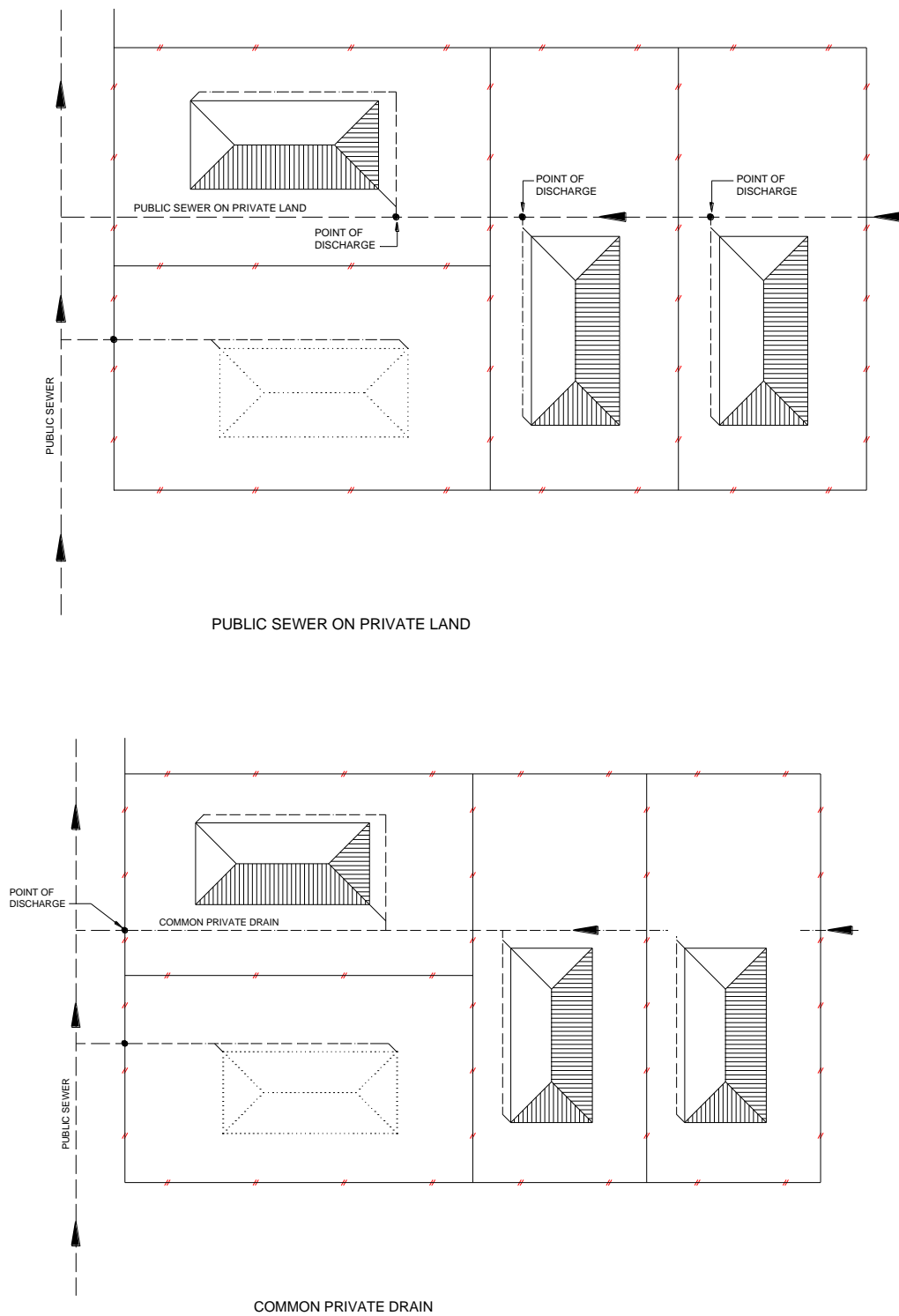


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FIGURE 1(b) Point of Discharge Location - Sewers on Private Land

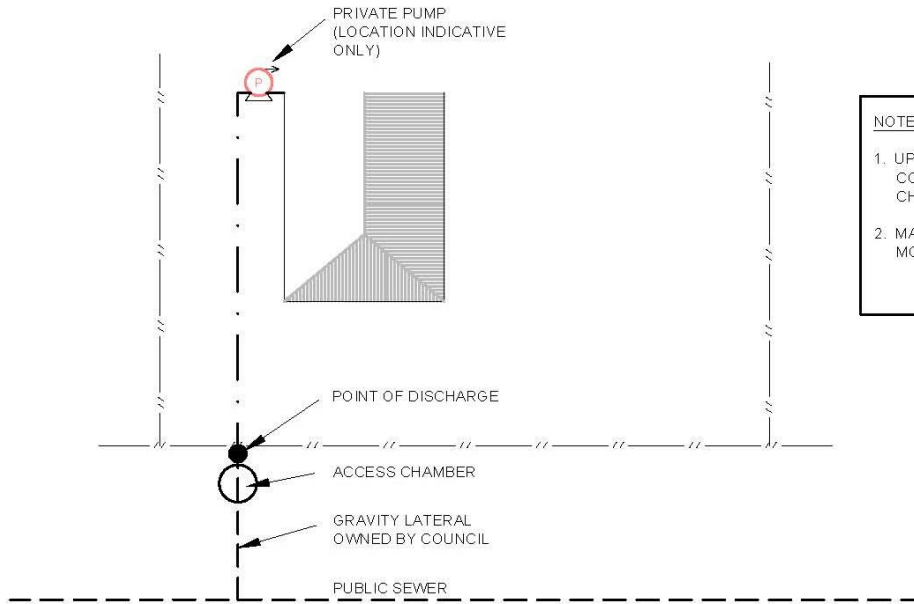


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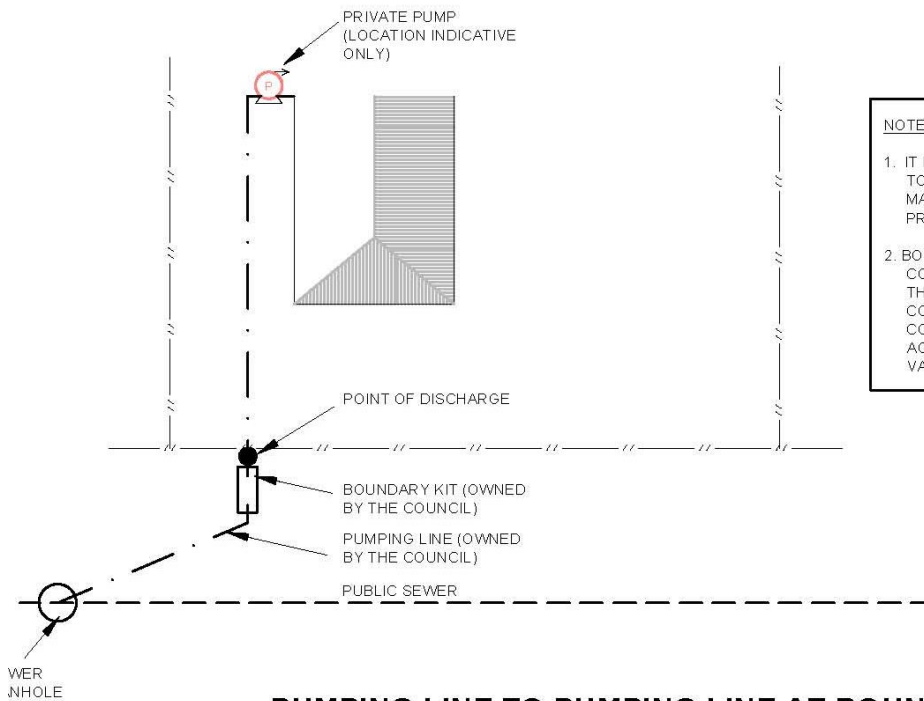
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FIGURE 1(c) Point of Discharge Location – Private Pump Stations



- NOTES:**
1. UP TO TWO PROPERTIES MAY CONNECT TO THE SAME ACCESS CHAMBER.
 2. MANHOLE REQUIRED FOR THREE OR MORE PROPERTIES.

PUMPING LINE TO GRAVITY LATERAL AT BOUNDARY



- NOTES:**
1. IT IS PREFERABLE THAT CONNECTION TO THE SEWER MAIN BE MADE AT A MANHOLE IF THERE IS A MANHOLE IN PROXIMITY.
 2. BOUNDARY KIT MEANS THE CONNECTION APPARATUS BETWEEN THE PRIVATE DRAINAGE AND THE COUNCIL'S SEWER NETWORK. THIS CONTAINS A NON-RETURN VALVE, AN ACCESS TEE, AND AN ISOLATION VALVE.

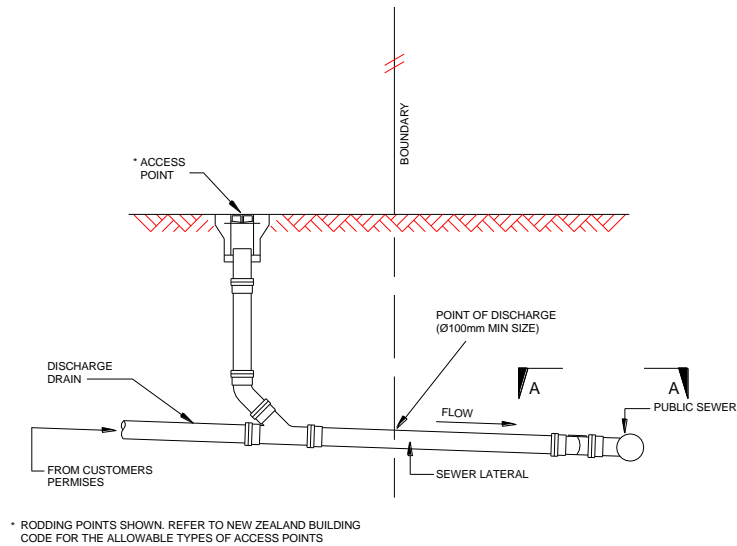
PUMPING LINE TO PUMPING LINE AT BOUNDARY



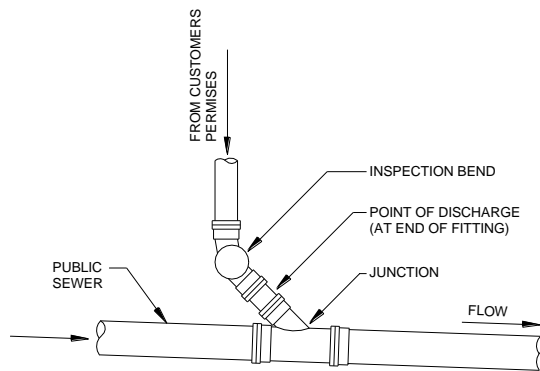
Appendix Two Typical layouts for point of discharge

This appendix is for information purposes only.

FIGURE 2: Typical Layout at Point of Discharge



DOMESTIC DISCHARGE
ELEVATION VIEW



DOMESTIC DISCHARGE PLAN VIEW



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Appendix Three Acceptable Discharge Characteristics

Introduction

The nature and levels of the characteristics of any wastewater discharged to the Council's sewerage system shall comply at all times with the following requirements, except where the nature and levels of such characteristics are varied by an Authorised Officer as part of an approval to discharge a wastewater.

The Authorised Officer shall take into consideration the combined effects of wastewater discharges and may make any modifications to the following acceptable characteristics for individual discharges the Authorised Officer believes are appropriate.

The nature and levels of any characteristic may be varied to meet any new resource consents or other legal requirements imposed on the Council.

Physical characteristics Explanation

Flow

- a) The 24 hour flow volume shall be less than 5m³.
- b) The maximum instantaneous flow rate shall be less than 2.0 L/s. Flows larger than 5m³ shall be a "controlled" or "conditional" trade waste consent.

Temperature

The temperature shall not exceed 50°C.

Higher temperatures:

- Cause increased damage to sewer structures.
- Increase the potential for anaerobic conditions to form in the wastewater.
- Promote the release of gases such as H₂S and NH₃.
- Can adversely affect the safety of operations and maintenance personnel.

A lower maximum temperature may be required for large volume discharges.

Solids

- a) Non-faecal gross solids shall have a maximum dimension which shall not exceed 15mm and gross solids shall have acquiescent settling velocity which shall not exceed 50mm/minute. Gross solids can cause sewer blockages.
- b) The suspended solids content of any wastewater shall have a maximum concentration which shall not exceed 2000g/m³. For significant industry this



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may be reduced to 600g/m³. High suspended solids contents can cause sewer blockages and overload the treatment processes.

- c) The settleable solids content of any wastewater shall not exceed 50mL/L.
- d) The total dissolved solids concentration in any wastewater shall be subject to the approval of the Authorised Officer having regard to the volume of the waste to be discharged, and the suitability of the drainage system and the treatment plant to accept such waste. In general any discharge with a total dissolved solids concentration of 10,000g/m³ will not be accepted. High total dissolved solids reduce effluent disposal options and may contribute to soil salinity.
- e) Fibrous, woven, or sheet film or any other materials which may adversely interfere with the free flow of wastewater in the drainage system or treatment plant shall not be present.

Oil and grease

- a) There shall be no free or floating layer.
- b) A trade waste with mineral oil, fat or grease unavoidably emulsified, which in the opinion of the Authorised Officer is not biodegradable must not exceed 200g/m³ as petroleum ether extractable matter when the emulsion is stable at a temperature of 15°C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage, throughout the range pH 6.0 to pH 10.0.
- c) A trade waste with oil, fat or grease unavoidably emulsified, which in the opinion of the Authorised Officer is biodegradable must not exceed 500g/m³ when the emulsion is stable at a temperature of 15°C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage throughout the range pH 6.0 to pH 10.0.
- d) Emulsified oil, fat or grease must not exceed 100g/m³ as petroleum ether extractable matter when the emulsion is unstable at a temperature of 15°C and when the emulsion is in contact with and diluted by a factor of 10 by raw sewage throughout the range pH 6.0 to pH 10.0.

Oils and greases can cause sewer blockages, may adversely affect the treatment process, and may impair the aesthetics of the receiving water. In terms of oil and greases, biodegradable refers to the bio-availability of the oil and greases and the biochemicals thereby produced, and means the oil and grease content of the waste decreases by 90% or more when the wastewater is subjected to a simulated wastewater treatment process which matches the Council's treatment system.



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If quick break detergents are being used, it will be a requirement that proper separation systems are being used by the occupier. If not, oil will reappear in drainage systems as a free layer.

Solvents and other organic liquids

There must be no free layer (whether floating or settled) of solvents or organic liquids. Refer Table 1 of this part for information on dissolved solvents and other organic liquids. Some organic liquids are denser than water and will settle in sewers and traps.

Emulsions of paint, latex, adhesive, rubber, plastic

For the purposes of this sub-clause:

'Emulsion' means an emulsion containing paint, adhesive, rubber, plastic, or similar material.

- a) Where such emulsions are not treatable these may be discharged into the sewer subject to the total suspended solids not exceeding 1000g/m³ or the concentration agreed by the Authorised Officer.
- b) The Council may require pre-treatment of such emulsions if the emulsion wastewater unreasonably interferes with the operation of the Council's treatment plant.
- c) Such emulsions, of both treatable and non-treatable types, shall be discharged to the sewer only at a concentration and pH range that prevents coagulation and blockage at the mixing zone in the public sewer.

'Treatable' in relation to emulsion wastewater, means the total organic carbon content of the waste decreases by 90% or more when the wastewater is subjected to a simulated wastewater treatment process which matches the Council's treatment system.

Emulsions vary considerably in their properties and local treatment works may need additional restrictions depending on the experience of the specific treatment plant and the quantity of latex to be treated.

Emulsions will coagulate when unstable and can sometimes cause sewer blockage. Latex emulsions are stable when dilute or in the correct pH range.

Radioactivity

Radioactivity levels shall not exceed National Radiation Laboratory guidelines. Refer National Radiation Laboratory Code of safe practice for the use of unsealed radioactive materials NRL. C1.



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Colour

No waste shall have colour or colouring substance that causes the discharge to be coloured to the extent that it impairs wastewater treatment processes or compromises the final effluent discharge consent.

Colour may cause aesthetic impairment of receiving waters and adverse effects on the treatment processes.

Chemical characteristics

In the setting of restrictions for chemical characteristics the Council is mindful of the production of harmful or noxious waste streams from some tests, such as chemical oxygen demand and total Kjeldahl nitrogen (TKN). The need to set such restrictions and therefore the requirement to undertake the associated testing will be determined by the Authorised Officer.

pH value

The pH shall be between 6.0 and 10.0 at all times.

Extremes of pH:

- Can adversely affect biological treatment processes.
- Can adversely affect the safety of operations and/or maintenance personnel.
- Cause corrosion of sewer structures.
- Increase the potential for the release of toxic gases such as H₂S and HCN.

Organic strength

The Biochemical Oxygen Demand (BOD) of any waste may need to be restricted where the capacity for receiving and treating BOD is limited. A BOD₅ (the test used) restriction may be related to mass limits.

The loading on a treatment plant is affected by Biochemical Oxygen Demand (BOD) rather than Chemical Oxygen Demand (COD). For any particular waste type there is a fixed ratio between COD and BOD. For domestic wastewater it is about 2.5:1 (COD : BOD), but can range from 1:1 to 100:1 for trade waste.

Therefore BOD is important for the treatment process and charging, but because of the time taken for testing, it is often preferable to use COD for monitoring. However, the use of COD testing must be balanced by the possible environmental effects of undertaking such tests due to the production of chromium and mercury wastes. Where a consistent relationship between BOD and COD can be established the discharge may be monitored using the COD test with the approval of the Council.

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If the treatment plant BOD₅ capacity is not limited and sulphides are unlikely to cause problems, there may be no need to limit BOD₅.

Maximum concentrations

The maximum concentrations permissible for the chemical characteristics of an acceptable discharge are set out in Table 1 (General Chemical Characteristics), and Table 2 (Toxic Pollutants).



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Table 1: General Chemical Characteristics

Characteristic	Maximum concentration	
MBAS (Methylene blue active substances)	500 g/m ³	MBAS is a measure of anionic surfactants. High MBAS can: - Adversely affect the efficiency of activated sludge plants. - Impair the aesthetics of receiving waters.
Ammonia (measured as N) - free ammonia - ammonium salts	50 g/m ³ 200 g/m ³	High ammonia: - May adversely effect the safety of operations and maintenance personnel. - May significantly contribute to the nutrient load to the receiving environment.
Kjeldahl nitrogen	150 g/m ³	High Kjeldahl nitrogen may significantly contribute to the nutrient load of the receiving environment.
Total phosphorus (as P) 150 g/m ³	50 g/m ³	High phosphorus may significantly contribute to the nutrient loading of the receiving environment.
Sulphate (measured as SO ₄)	500 g/m ³	Sulphate: - May adversely affect sewer structures. - May increase the potential for the generation of sulfide in the wastewater if the sewer is prone to become anaerobic.
Sulphite (measured as SO ₂)	15 g/m ³	Sulphite has potential to release SO ₂ gas and thus adversely affect the safety of operations and maintenance personnel. It is a strong reducing agent and removes dissolved oxygen thereby increasing the potential for anaerobic conditions to form in the wastewater.
Sulphide - as H ₂ S on acidification	5 g/m ³	Sulphide in wastewater may: - Cause corrosion of sewer structures, particularly the top nonwetted part of a sewer. - Generate odours in sewers which could cause public nuisance. - Release the toxic H ₂ S gas which could adversely affect the safety of operations and maintenance personnel.
Chlorine (measured as Cl ₂) - free chlorine - hypochlorite	3 g/m ³ 30 g/m ³	Chlorine: - Can adversely affect the safety of operations and maintenance personnel. - Can cause corrosion of sewer structures.
Dissolved aluminium	100 g/m ³	Aluminium compounds, particularly in the presence of calcium salts, have the potential to precipitate as a scale which may cause a sewer blockage.
Dissolved iron	100 g/m ³	Iron salts may precipitate and cause a sewer blockage. High concentrations of ferric iron may also present colour problems depending on local conditions.
Boron (as B)	25 g/m ³	Boron is not removed by conventional treatment.
Bromine (as Br ₂)	5 g/m ³	High concentrations of bromine may adversely affect the safety of operations and maintenance personnel.
Fluoride (as F)	30 g/m ³	Fluoride is not removed by conventional wastewater treatment, however pre-treatment can easily and economically reduce concentrations to below 20 g/m ³ .
Cyanide - weak acid dissociable (as CN)	5 g/m ³	Cyanide may produce toxic atmospheres in the sewer and adversely affect the safety of operations and maintenance personnel.



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Table 2: Toxic Pollutants

Inhibitory chemicals

At the choice of the Council no waste being diluted at a fixed ratio to wastewater, nominated by the Council, shall inhibit the performance of the wastewater treatment process such that the Council is significantly at risk or prevented from achieving its environmental statutory requirements.

Toxic Pollutant	Maximum Concentration (g/m³)
Antimony as Sb	10
Arsenic as As	5
Barium as Ba	10
Beryllium as Be	0.005
Cadmium as Cd	0.05
Chromium as Cr	5
Cobalt as Co	10
Copper as Cu	10
Lead as Pb	10
Manganese as Mn	20
Mercury as Hg	0.05
Molybdenum as Mo	10
Silver as Ag	2
Nickel as Ni	10
Selenium as Se	10
Thallium as Th	10
Tin as Sn	20
Zinc Zn	10
Formaldehyde (as HCHO)	50
Phenolic compounds (as phenol)	50
Petroleum hydrocarbons	30
Monocyclic aromatic hydrocarbons	5
Polycyclic aromatic hydrocarbons	0.05
Halogenated aliphatic compounds	1
Chlorinated phenols	0.02
Halogenated aromatic hydrocarbons (HAHs)	0.002
Polychlorinated biphenyls (PCBs)	0.002
Polybrominated biphenyls (PBBs)	0.002
Pesticides, general (includes insecticides, herbicides, fungicides and excludes organophosphate, organochlorine and any pesticide not registered for use in New Zealand)	0.2 in total
Organophosphate pesticides	0.1



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Appendix Four Prohibited Characteristics

Introduction

Prohibited characteristics are present if their concentration exceeds background levels. The background level in relation to any substance means the extent to which that substance is present (if at all) in the municipal water supply used on the trade premises, or in any other water supply that is approved by the Council for the purpose of discharging waste.

Prohibited characteristics

Any discharge has prohibited characteristics if it has any solid liquid or gaseous matters or any combination or mixture of such matters which by themselves or in combination with any other matters will immediately or in the course of time:

- a) Interfere with the free flow of sewage in the wastewater system; or
- b) Damage any part of the wastewater system; or
- c) In any way, directly or indirectly, cause the quality of the effluent or residual biosolids and other solids from any wastewater treatment plant in the catchments to which the waste was discharged to breach the conditions of a consent issued under the Resource Management Act 1991, or water right, permit or other governing legislation; or
- d) Prejudice the occupational health and safety risks faced by sewerage workers; or
- e) After treatment be toxic to fish, animals or plant life in the receiving waters; or
- f) Cause malodorous gases or substances to form which are of a nature or sufficient quantity to create a public nuisance; or
- g) Have a colour or colouring substance that causes the discharge of any wastewater treatment plant to receiving waters to be coloured.

A discharge has prohibited characteristics if it has any characteristic which exceeds the concentration or other limits specified in Appendix 3 unless specifically approved for that particular consent.

A discharge has a prohibited characteristic if it has any amount of:

- a) Harmful solids, including dry solid wastes and materials which combine with water to form a cemented mass;
- b) Liquid, solid or gas which could be flammable or explosive in the wastes, including oil, fuel, solvents (except as allowed for in Appendix 3 of this part),



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- calcium carbide, and any other material which is capable of giving rise to fire or explosion hazards either spontaneously or in combination with sewage;
- c) Asbestos;
 - d) The following organo-metallic compounds:
 - Mercury (as organic compounds)
 - Cadmium (as organic compounds)
 - Tin (as tributyl and other organotin compounds)
 - Chromium (as organic compounds)
 - e) Any organochlorine pesticides;
 - f) Genetic wastes, as follows:
 - All wastes that contain or are likely to contain genetically altered material from a genetically modified organism that is not in accordance with an approval under the Hazardous Substances and New Organisms Act 1996. The material concerned may be from Premises where the genetic modification of any organism is conducted or where a genetically modified organism is processed;
 - g) Any health care waste prohibited for discharge to a sewerage system by NZS 4304:2002 (Management of Healthcare Waste) or any pathological or histological wastes; or
 - h) Radioactivity levels in excess of national radiation laboratory guidelines.



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History of Bylaw

Action	Description	Decision date	Decision number	Commencement
New	Adoption of new Wastewater Bylaw 2013	30/09/2013	151/13	01/11/2013
Amendment	Rename bylaw to Drainage Bylaw 2018 and review	12/11/2018	330/18	13/11/2018



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