

Research Report

Review of Wastewater Drainage Bylaw (2018)

1 Purpose

To describe and discuss the review of the Wastewater Drainage Bylaw (2018).

2 Context

Council currently manages and maintains reticulated sewerage schemes for 17 communities in the District, servicing around 13,000 properties.

The Wastewater Drainage Bylaw (the Bylaw) was made on 24 May 2018. The Bylaw only covers domestic wastewater discharges, not trade waste discharged into the wastewater system.

Under section 158 of the Local Government Act 2002, the Bylaw is due for review by 24 May 2023, 5 years after it was made.

Council is required under section 155 of the Local Government Act 2002 to consider whether the Bylaw:

- is still the most appropriate way of addressing the perceived problem/s with respect to wastewater drainage
- is still the most appropriate form of bylaw
- gives rise to any implications under the New Zealand Bill of Rights Act 1990.

3 Problem definition

3.1 Problems addressed by the Bylaw

The Bylaw was made to address the following problems:

- Needing a clear legal framework to manage, operate and maintain Council's wastewater networks
- Defining the dividing line between private drainage and the public system:
- Protecting the health and safety of wastewater authority personnel and the public by:
 - preventing unacceptable contaminants and stormwater entering the wastewater drainage system
 - preventing contamination of wastewater by hazardous substances
 - ensuring connections to and disconnections from the public wastewater network are made correctly
 - limiting excessive discharge flow rates into the wastewater network
 - providing the ability to restrict or prohibit the discharge of wastewater from premises if an accident or natural hazard disrupts sewer lines.
- Protecting investment in the existing and any future wastewater infrastructure by:
 - protecting infrastructure from damage:
 - caused by construction, excavation, and/or other work near public sewers
 - due to hazardous substances and contaminants such as wet wipes or nappies
 - protecting public sewers from misuse and interference by the public.

3.2 Purpose of the Bylaw

The purpose of the Bylaw is stated as:

- a) controlling wastewater discharges into the public sewer
- b) protecting the public sewer from damage, misuse and interference
- c) protecting the environment and the health of people in the District.

3.3 Other problems relating to domestic wastewater drainage not fully controlled or addressed by the Bylaw

Over 750 properties in five areas of the District (Kerikeri, Paihia, Kaikohe, Kaitaia and Awanui) have Low Pressure Sewer (LPS) systems that connect to public sewers.

Operational staff have identified two main issues with LPS systems:

- Compared with traditional gravity sewers, LPS system have relatively short life expectancies and LPS pumps are susceptible to pump failures. Staff would like gravity systems to be installed wherever technically possible.
- LPS systems that are on private property are owned by the Council and this is shown in Figure 9 in the Bylaw. However, this is not stated clearly in the Bylaw.

Staff identified no further problems relating to wastewater drainage.

3.4 Scope

In scope

- Problems relating to the public sewer which are a function of the Far North District Council to control or address. The public sewer is defined in the Bylaw as "the main public sewer pipe, lateral connections, and associated structures that carry wastewater away from the point of discharge".
- Domestic wastewater discharged into the public wastewater system. Domestic wastewater is defined in the Bylaw as wastewater that is discharged from premises used solely for residential activities, or similar wastes discharged from other premises.

Out of scope

- Private wastewater schemes, not owned by Council as these are not a function of council to control or address.
- On-site wastewater systems such as septic tank systems which do not discharge into the public sewer. These systems are regulated by the On-site Wastewater Disposal Systems Bylaw 2022
- Trade waste as specific provisions regarding trade waste are / will be provided for under the Three Waters Reform Programme.
- Technical specifications for wastewater drainage connections as these are regulated via Council's *Engineering Standards*.
- The requirement for properties to connect to the public wastewater network. This is regulated by:
 - clause G13.3.3 of the New Zealand Building Code 2020
 - section 459 of the Local Government Act 1974
 - section 5.1.1 of the Engineering Standards April 2022
 - the District Plan (Proposed District Plan - Part 2 District-wide matters, Subdivision, SUB S-5 Wastewater Disposal, Operative District Plan section 13.7.3.5).
- Authorising connecting a private drain to a public drain as this is regulated by the Building Act 2004.
- Directing the public to fix problems with their wastewater system as this is regulated by section 133BX the Building Act 2004.
- Preventing excavation work near public sewers that is likely to cause subsidence as this is regulated by section 237 of the Public Works Act 1981
- Power to prosecute people who damage or interfere with the public wastewater system as this is regulated by section 175 of the Local Government Act 2002.

4 Council's role relating to domestic wastewater drainage

4.1 Local Government Act 2002

Sections 145 and 146 of the Local Government Act 2002 empower Council to make bylaws to:

- Promote and maintain public health and safety
- Protect the public from nuisance
- Manage, regulate against or protect from, damage, misuse or loss, structures or infrastructure and land associated with wastewater.

These bylaw-making powers allow Council to address the problems associated with wastewater drainage.

5 Review of the Bylaw

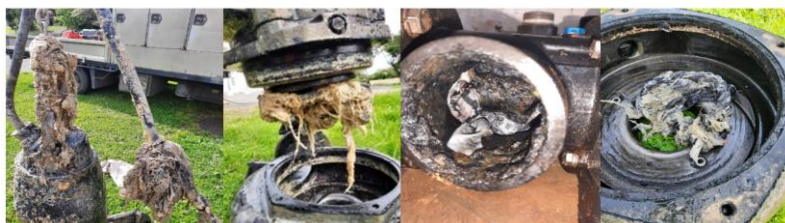
5.1 Protecting the health and safety of wastewater authority personnel and the general public

Wastewater contains pathogens from human waste, which can cause disease if people or animals are exposed to it. Therefore, to protect the health and safety of the public and wastewater workers, Council can set rules to avoid sewage spills.

Preventing unacceptable contaminants and stormwater entering the wastewater drainage system

Unacceptable contaminants of domestic wastewater such as wet wipes, dental floss, feminine hygiene products, and nappies are a key cause of blockages to wastewater pipes and damage to LPS pumps, resulting in sewage spills. In addition, stormwater or groundwater entering sewage pipes can cause wastewater to overflow.

Wet wipes are a particular problem, with some members of the public mistakenly assuming that because these wipes are labelled as 'biodegradable' they can be safely flushed down the toilet. Council's website addresses this issue in a webpage [Wipes in pipes - Why not flush wipes?](#) with graphic pictures of blockages caused by contaminants such as wet wipes and nappies:



In the 21 months from 2 March 2021 to 26 October 2022, 62 blockages of the wastewater system were recorded due to contaminants in wastewater with 58 of these cases resulting in sewage spills. Blockages described as 'rag balls' with over a cubic metre of material have been recorded.

Some of the blockages are very serious. For example, two major blockages recorded in 2023 (at Haruru and Waitangi) threatened the complete closure of wastewater treatment plants, which would have posed very significant health and safety risks to these communities.

Continued public education is required to encourage people to follow the "three Ps – to flush only PEE, POO, PAPER" down the toilet.

However, blockages of public sewers due to contaminants can be very difficult to trace to particular household/s. Therefore, public education is the best way to help prevent these types of blockages.

Sections 3.3 and 3.4 of the Bylaw prohibit unacceptable discharges and stormwater entering the public sewer. Given the public health issues that can arise from sewage spills, it is appropriate to continue with these rules in a bylaw as well as continuing public education to help address these issues.

Preventing contamination of the wastewater drainage system by hazardous substances

The Bylaw requires the public to take all reasonable steps to store hazardous substances, so they are prevented from entering the wastewater system. Examples include corrosive, flammable, radioactive and explosive

substances. It is appropriate to continue with these rules in a bylaw to avoid the health and safety risks from hazardous substances contaminating wastewater.

Ensuring connections to and disconnections from the public wastewater network are made correctly

Incorrect connections to or disconnections from the wastewater network can lead to spills and leakage of sewage and associated public health risks. The Bylaw addresses this problem by requiring connections to be made by licenced drainlayers or authorised agents of the Council and disconnections to be notified to the Council so these disconnections can occur in accordance with the requirements of the Building Act 2004.

Technical standards for wastewater connections and disconnections are included in section 5.2.8 of Council's *Engineering Standards April 2022*. These standards cover:

- how developers should apply to Council to make connections and disconnections
- where lateral connections should be placed in relation to the public sewer
- design requirements for connections (with associated tables).

Regulating wastewater connections and disconnections is appropriate in a bylaw, given the health and safety risks of wastewater leakage. The Bylaw currently does not refer to the *Engineering Standards* but should do so.

Limiting excessive discharge flow rates into the wastewater network

The Bylaw specifies maximum instantaneous and daily flow rates for discharges from domestic premises, with approval of Council required to exceed the maximum daily flow rate. These provisions are intended to avoid spillage from wastewater connections and thus protect public health and safety and are therefore appropriate to include in a bylaw.

Restricting or prohibiting the discharge of wastewater from premises if an accident or natural hazard such as a flood or earthquake has disrupted sewer lines

The Bylaw allows Council to restrict or prohibit the discharge of wastewater from households in emergency situations. Addressing this problem via a bylaw is appropriate to avoid health and safety risks to the community.

5.2 Protecting investment in existing and any future wastewater infrastructure

Protection from damage due to construction, excavation, and/or other work near public sewers

The Bylaw includes several provisions to protect public sewers from damage from work near these sewers:

- any building over a public sewer must have written permission from Council who will stipulate conditions for this building
- any building must not be within a 'zone of influence' around the sewer, unless written approval is received from the Council. A diagram illustrating the 'zone of influence' is included in a schedule to the Bylaw
- rules for excavating and placing material around the sewer must be followed.

A bylaw is an appropriate regulatory tool for preventing public sewers from damage.

Rules to prevent damage to sewer pipes are also included in section 5.2.9 of the *Engineering Standards (Building Over or Adjacent to Pipelines)* and therefore these rules should be referenced in the Bylaw.

Protecting infrastructure from damage caused by contaminants such as wet wipes or nappies

Contaminants such as wet wipes can damage infrastructure e.g. causing the failure of LPS pumps. Addressing this problem via a bylaw is appropriate to avoid damage to this infrastructure.

Protecting the wastewater system from damage caused by hazardous substances

Not only can hazardous substances entering the wastewater system pose health and safety risks, but these substances can also cause damage to the wastewater system. Examples include corrosive, flammable, and explosive substances. A bylaw is an appropriate mechanism to protect the wastewater system from damage caused by these hazardous substances.

Protecting public sewers from misuse and interference by the public

Two provisions in the Bylaw relate to protecting public sewers from misuse and interference:

- the public must not cover service openings for public sewers in any way

- the public must not place additional material over or near a public sewer.

As these rules deal with public behaviour that could cause damage to the network, a bylaw is an appropriate way to protect public sewers from misuse and interference.

There is no need to extend these rules as Section 175 of the Local Government Act 2002 says that someone who destroys, damages, stops, obstructs, or otherwise interferes with the public wastewater system commits an offence.

5.3 Protecting the general public from nuisance

The Bylaw could be strengthened by adding rules to protect the public from nuisance. Relevant types of nuisance are listed in section 29 of the Health Act, namely where the drainage system or a spill of sewage is "offensive or likely to be injurious to health". For example, a sewage spill can be extremely offensive due to odour problems and RFS records include complaints from the public about odour from these spills.

Section 145 of the Local Government Act 2002 authorises local authorities to make bylaws to protect the public from nuisance. Therefore, protecting the public from nuisance is appropriate in a bylaw.

5.4 Protecting the environment

Council does not have the power to make a bylaw protecting the environment under the Local Government Act 2002. Therefore, a bylaw is not the most appropriate regulatory tool for protecting the environment.

The purpose of the Bylaw should be amended to remove reference to the Bylaw protecting the environment.

5.5 Addressing issues with LPS (Low Pressure Sewer) systems

Section 5.2.4 of the Engineering Standards April 2022 states that specific approval by the Wastewater Manager is required to install wastewater systems with a design life expectancy of less than 100 years (such as LPS systems). As this is covered in the Engineering Standards, there is no need to amend the Bylaw to state that gravity sewers are generally preferred over LPS systems.

It could be stated more clearly in the Bylaw that LPS systems on private property are owned by the Council.

5.6 Enforcing the Bylaw

The Bylaw is enforceable with penalties listed for breaching its provisions. In some areas it can be administered efficiently, for example:

- building inspectors check and sign off connections to the wastewater system
- in a subdivision, Council's engineers specify conditions for building and excavating around sewers. Once a developer conducts this work it is usually signed off by an independent Chartered Professional Engineer
- where LPS pumps break down due to contaminants such as wet wipes, clear evidence is available regarding the contaminants that caused the problem and the household that discharged the contaminant.

5.7 Alignment with relevant laws and legislation and other Council policy instruments

The Bylaw aligns with relevant legislation including the Local Government Act 2002, the Local Government Act 1974, the Building Act 2004 and associated Building Code, the Health Act 1956, and the Public Works Act 1981.

Section 23 of the Health Act 1956 says that it is the duty of every local authority to improve, promote, and protect public health within its District. This is reflected in the Bylaw provisions that address the health and safety of the general public and wastewater authority personnel.

The Bylaw should align with other Council policy instruments dealing with wastewater drainage:

- *The District Plan* – both the Operative District Plan and the Proposed District Plan include brief high-level rules for wastewater drainage connections e.g. the Proposed District Plan says that wastewater disposal must be in accordance with Council's *Engineering Standards*
- Council's *Engineering Standards April 2022* – the Bylaw does not mention the Engineering Standards documents which set out technical specifications for connections, disconnections and avoiding damage to public sewers etc. However, the Engineering Standards do reference the Bylaw.

In several places the Bylaw refers to Council's *Trade Waste Bylaw* which no longer exists. These references should be removed.

6 Discussion

6.1 Is a bylaw the most appropriate way to address the regulation of wastewater drainage in the Far North District?

The review has identified that a bylaw is still the most appropriate way to address the following problems relating to wastewater drainage:

- Providing a clear legal framework to manage, operate and maintain Council's wastewater networks
- Defining the dividing line between private drainage and the public system
- Protecting the health and safety of wastewater authority personnel and the general public including:
 - preventing unacceptable contaminants and stormwater entering the wastewater drainage system
 - preventing contamination of the wastewater drainage system by hazardous substances
 - ensuring connections to and disconnections from the public wastewater network meet correct technical standards
 - limiting excessive discharge flow rates into the wastewater network
 - restricting or prohibiting the discharge of wastewater in emergency situations.
- Protecting public wastewater infrastructure from damage and interference including protection:
 - from damage due to construction, excavation, and/or other work near public sewers
 - from damage caused by hazardous substances
 - from misuse and interference by the public

A bylaw is an appropriate way to regulate wastewater drainage as it states the rules the public should follow. These rules have several benefits:

- providing clarity regarding what is expected of the public and the Council
- helping avoid ad hoc decisions
- helping resolve any issues or disputes
- being applicable to all users of the public wastewater system District-wide
- the rules are legally binding
- enforcement provisions help ensure compliance.

A bylaw is not the most appropriate way to address problems relating to protecting the environment.

6.2 Is the Bylaw the most appropriate form of bylaw?

The form of a bylaw is about its content and how it is drafted. The form of a bylaw will be appropriate if it:

- deals with the identified problems and meets the objectives it is intended to achieve
- is certain, e.g. it uses clear wording so people will understand what they are required to do
- is enforceable and able to be implemented and administered effectively and efficiently
- considers the relationship of Māori to land, water, sites, wāhi tapu, valued flora and fauna and other taonga
- complies with all relevant laws and legislation.

The costs and benefits of a bylaw also need to be considered and the form of a bylaw will be appropriate if the benefits outweigh the costs.

In general, the Bylaw has provisions which deal with the identified problems and meets its objectives. However, Council staff have identified some shortcomings in the content of the Bylaw which should be addressed:

- the purpose and provisions of the Bylaw should be amended to include protection from nuisance as defined in section 29 of the Health Act 1956
- the Bylaw purpose should not include protecting the environment
- there is no reference to the *Engineering Standards* in the Bylaw

Some provisions in the Bylaw are not certain. For example:

- the Bylaw includes some definitions for terms that are not included in the body of the Bylaw
- the wording does not follow a modern legislative drafting style
- Council's ownership of LPS systems on private property should be stated more explicitly
- the Bylaw refers to a revoked *Trade Waste Bylaw*.
- the Bylaw uses the outdated term "shall" throughout, whereas a clearer and more certain modern term is "must"
- in some places the Bylaw does not use plain English; for example, the word "deleterious" is used, where "harmful" would be simpler to understand etc.

The Bylaw should be amended to ensure ease of understanding and clarity.

The Bylaw is consistent with relevant laws and legislation as well as the *District Plan* and the *Engineering Standards April 2022*.

The benefits of the Bylaw (having a clear legal framework to manage, operate and maintain Council's wastewater networks; defining the dividing line between private drainage and the public system; protecting the health and safety of wastewater authority personnel and the public; protecting infrastructure from damage; and protecting the public from nuisance) outweigh current costs such as the costs of building inspectors checking connections and disconnections and the cost of ensuring that work near public sewers does not damage the sewers.

The bylaw should be amended to ensure that it is in the most appropriate form.

6.3 Does the Bylaw give rise to any implications under the New Zealand Bill of Rights Act 1990?

A full assessment of Bill of Rights implications under the New Zealand Bill of Rights Act 1990 is not possible, because if Council decides that an amended Bylaw should be developed, the Bylaw is not in its final amended form.

However, based on the Bylaw's current content, the amended Bylaw may give rise to implications for the right to be secure against unreasonable search or seizure (section 21 of the New Zealand Bill of Rights Act 1990). This is because the Bylaw gives the Council powers to enter private land to inspect and potentially work on parts of the wastewater system owned by the Council but situated on private property. However, the Bylaw provisions are fully within the scope of powers the Council has under sections 171 to 174 of the Local Government Act 2002 and section 332 of the Resource Management Act 1991. Therefore, the Bylaw provisions are reasonable limits on the rights in the New Zealand Bill of Rights Act 1990.

7 Conclusion

Under section 155 of the Local Government Act 2002 Council is required to consider whether the Bylaw:

- is still the most appropriate way of addressing the perceived problem/s with respect to wastewater drainage
- is still the most appropriate form of bylaw
- gives rise to any implications under the New Zealand Bill of Rights Act 1990.

A bylaw is the most appropriate way to regulate wastewater drainage by:

- providing a clear legal framework to manage, operate and maintain Council's wastewater networks
- defining the dividing line between private drainage and the public system
- protecting the health and safety of wastewater authority personnel and the public
- protecting Council infrastructure from damage and interference; and
- protecting the public from nuisance.

The form of the Bylaw is not appropriate, with a small number of potential amendments identified.

As the Bylaw is currently worded, the Bylaw provisions are reasonable limits on the rights in the New Zealand Bill of Rights Act 1990. If Council decides that the Bylaw should be amended, further analysis of Bill of Rights implications will be conducted.