Memo

Infrastructure and Assets – Strategic Waters

To:	Ministry for the Environment
Subject:	Application for fast tracking – Metro Wastewater Treatment Plant Service Package – General assessment of effects and national planning documents
Date:	3 May 2024

This document has been prepared to accompany the Hamilton City Council (Council) application to be included within Schedule 2 (Listed Projects) of the Fast Track Approvals Bill (the Bill). The project which is being put forward is the Metro Wastewater Treatment Plant Service Package, which includes:

- Southern Metro Wastewater Treatment Plant (Southern WWTP); and
- Pukete Wastewater Treatment Plant (Pukete WWTP) Reconsenting and Expansion

The purpose of this document is to satisfy several matters that are listed in Section 14(3) of the Bill. Specifically, this document will provide:

1) A description of the anticipated and known adverse effects of the project on the environment; and
2) A general assessment of the project in relation to the relevant national policy statements in national environmental standards.

Section 14(2) of the Bill requires that an applicant needs "only provide a general level of detail about the different approvals required for the project, sufficient to inform the joint Ministers' decision on the application."

Description of anticipated and known adverse effects

Table 1 below provides a description of the anticipated and known adverse effects of the Southern WWTP and Pukete WWTP projects. This has been kept to a general assessment of the effects in accordance with s14(2) of the Bill. Council is committed to avoiding, remedying and mitigating these effects. Details on how Council propose to do this will be provided in the subsequent substantive application for approval(s).

Table 1: Description of anticipated and known adverse effects.

Anticipated or known adverse effect	Description as it relates to the project
Ground Water quality	Ground water quality effects refers to the changes or impacts on the chemical, physical or biological properties of ground water. Ground water effects can generally be attributed to the discharge of contaminants to land at an unsustainable level. Additionally, the leaching of contaminants into surface water can occur via pathways to the groundwater table. The contamination of ground water can have a magnitude of flow-on effects for ground water users,

	including impacts on human health. Ground water contamination will result in higher levels of treatment being required for other users. The proposed Southern WWTP and Pukete WWTP expansion will operate with surface water discharges, however the option of providing for a small volume of land treatment could be explored if it is deemed that this is appropriate and best practicable option. There could also be surface water infiltration into groundwater (including nutrient loading) and leaching of untreated wastewater into groundwater as a result of inappropriate wastewater storage.
Air Quality, including odour and dust	Air quality effects relate to the changes or impacts on the physical or chemical properties of air quality. For wastewater treatment, this is usually caused by the discharges of gases or particulate matter through treatment processes. The noticeable effect of this is generally unpleasant odours, however other gases can be generated which may result in human health effects. For the Southern WWTP and Pukete WWTP expansion, dust generated by construction, earthworks and traffic movements can be reasonably expected. Without mitigation, these activities can result in the displacement of particulate matter and cause nuisance effects on neighbouring properties, and over a long period of exposure, effects on human health.
Surface Water quality	Surface water quality effects refers to the changes or impacts on the chemical, physical or biological properties of Surface Water. Effects on surface water quality are generally attributed to discharges (point source and diffuse) which can result in the discharge of contaminants (metals, organic compounds), sedimentation, nutrient loading, and temperature changes. Habitat degradation (such as the clearance of riparian margins) can also have an adverse impact on surface water quality. The proposed Southern WWTP and Pukete WWTP expansion will operate with surface water discharges which have potential to effect surface water quality if not managed. A high level of treatment is currently provided by Pukete WWTP, and future upgrades will raise the discharge quality standard further. As a reflection of discharge quality expectations to restore and protect the Waikato River (e.g. Te Ture Whaimana) the design and operation of the Southern WWTP will be to a high standard. Surface water discharges resulting from construction activities can also be attributed to the Southern WWTP and Pukete WWTP. Construction activities will also require appropriate environmental management practices to be in place.
Effects related to water quantity.	The abstraction of surface water (both individually and cumulatively) can result in adverse environmental effects. When water is abstracted at an unsustainable rate, it can significantly reduce the volume of water available in that source. This can lead to reduced flow rates which impacts other users. Reduced river flows can disrupt or destroy aquatic ecosystems, affecting the life cycles of various species that depend on these water bodies. Taking into account the link between surface water and ground water, a significant reduction of surface water can also have an effect on groundwater quantity.
Ecological (aquatic and terrestrial biodiversity)	Ecological effects refer to the reduction of ecology resulting from human activities. For the project, this is broken down into impacts on terrestrial biodiversity, and aquatic biodiversity.

	The potential of adverse effects on terrestrial biodiversity can be expected from habitat destruction resulting from the construction of the project, primarily through undertaking earth working and associated vegetation clearance. Adverse effects on freshwater ecology ties closely with effects on surface water. The discharge of organic compounds and the smothering of freshwater ecology resulting from suspended solids can significantly reduce oxygen and consequently deplete aquatic biodiversity. Toxicity effects can potentially be expected through nutrient loading and temperature changes.
Transportation	Transportation effects refers to the impact of changes of traffic movement resulting from a particular activity. This can have impacts on the transport network itself (if not designed to accommodate the increased traffic volume). Transportation effects can also be closely attributed to impacts on amenity values, depending on the primary land use within a project area. The construction activities associated with the new Southern WWTP and upgrades to Pukete WWTP will likely see an increase of truck movements to and from the site over the duration of construction. The traffic movements will be attributed to the movement of plant and resources to and from the sites. The Southern WWTP will require additional traffic movements to ensure the smooth operation of the site. This will include the movement of staff to and from the site, plant required to undertake site maintenance as and when required, as well as the supply of resources necessary to operate the WWTP. There will also be truck movements arising from the delivery of waste to the facility for processing. It is expected that operational traffic movements upon completion of Pukete WWTP upgrades will be similar to that of current operational traffic movements.
Stormwater effects	Stormwater effects relate to the displacement or concentration of stormwater as a result of land use changes. An example of this is the creation or increase of impervious areas which as potential to increase the rate and volume of stormwater runoff. The effects of constructing within overland flow paths may displace and/or divert stormwater. The impact of stormwater quantity effects is usually attributed to offsite flooding and erosion. If not managed appropriately there is also the potential for adverse effects on the quality of the receiving environment from stormwater runoff contaminants (e.g. increased sedimentation). The processing and storage of biosolids and treatment chemical have the potential to impact stormwater runoff quality. Council will have to consider stormwater effects as part of creating building platforms and impervious surfaces for both Southern WWTP and Pukete WWTP. The risk of off-site flooding and accelerated erosion will need to be accounted for and considered as part of the detailed design of the project and addressed through the subsequent substantive application for approval(s).
Public health effects	Public health effects in the context of wastewater treatment encompasses the risks posed by inadequately treated wastewater, and its exposure to a community through the environment. This can include exposure to pathogens, contamination of drinking water and a discharges contribution to harmful algal blooms. Both treatment plants will be required to ensure wastewater is received and treated to a standard that protects human health. This includes both receiving

	wastewater from individual properties, and ensuring the discharge does not result in water quality that may have consequential effects on public health.
Noise and Vibration	Noise and vibration effects are strongly attributed to wider impacts on amenity effects and public health effects. Long-term exposure to excessive noise and vibration can have adverse health impacts. The amenity values of an area can also be undermined as a result of noise and vibration. Noise and vibration will be relevant to both the Southern WWTP and Pukete WWTP but are effects that are readily manageable through normal practice in design, operations and the siting of noise and vibration generating aspects of the project
Landscape / Visual and Amenity effects	Adverse effects on landscape and visual amenity can occur due to a number of different factors. These generally include the proposed land use (including the purpose of the land use, design, architecture, and the emissions including noise, odour, etc), and its locality and siting.
Loss of Highly Productive Land	Highly productive land (HPL) is New Zealand's most fertile and versatile land, and has been set aside for primary production purposes. As HPL is finite, any loss of HPL as a result of development needs to be considered. The site of the Southern WWTP is classified as LUC1, and therefore falls within the definition of HPL. Consequently, effects associated with the loss of HPL is expected. The loss of HPL is only relevant for the Southern WWTP as the area subject to expansion for Pukete WWTP is classified as LUC3, but has been identified as being an area subject to future growth.
Natural Hazards	Effects associated with Natural Hazards include damage or destruction of property, and consequential disruption to services delivered by infrastructure. This is especially relevant as both WWTP's are considered 'lifeline utilities' and therefore resilience of its operation is critical.

General assessment of relevant National Policy Statements and National Environmental Standards

Table 2 below provides a general assessment of the relevant National Policy Statements (NPS) and National Environmental Standards (NES) that relate to the Southern WWTP and Pukete WWTP projects. For the avoidance of doubt, those NPS's and NES's that have been omitted from this assessment are not considered to be relevant to the project.

Table 2: General assessment of relevant NPS's and NES's.

NPS or NES	General Assessment
National Policy Statements	
National Policy Statement for Freshwater Management 2020	The National Policy Statement for Freshwater Management 2020 (NPS-FM) is a framework for managing freshwater in New Zealand that guides local authorities on how to do so under the Resource Management Act 1991. The NPS-FM's core concept is Te Mana o te Wai, which emphasizes the importance of water and the need to protect the health of freshwater ecosystems. Te Mana o Te Wai also sets out a hierarchy of obligations as it relate to the use of freshwater. Council consider that the projects will deliver on the fundamental concept of Te Mana O Te Wai, and will not be in conflict with the NPS-FM. Council are proposing to improve the level of treatment at Pukete WWTP, and to deliver a high level of treatment at Southern WWTP.

	Tangata Whenua and mana whenua have been closely involved in the project. Engagement is ongoing.
National Policy Statement for Highly Productive Land 2022	The purpose of the National Policy Statement for Highly Productive Land is to recognise the importance of protecting and managing land with high primary production values, specifically, Land Use Class 1 – 3. The NPS-HPL contains strong policy settings which seek to avoid the inappropriate use or development of HPL. Both the site of the Pukete WWTP expansion (LUC class 3), and the site of the Southern WWTP (LUC class 1) are classified as HPL. Irrespective of this, Council consider that the project will be consistent with the NPS-HPL. The existing wastewater network (of which the two WWTP's are part of) is classified as 'specified infrastructure'. The NPS-HPL provides for the upgrade and expansion of specified infrastructure, even at the expense of highly productive land.
National Policy Statement for Indigenous Biodiversity	The purpose of the National Policy Statement for Indigenous Biodiversity (NPS-IB) is to provide a framework for managing and protecting native fauna and flora. The scope of impacts of areas of indigenous biodiversity (including significant natural areas) are yet to be fully determined. However Council intends to give effect to the effects management hierarchy set out in the NPS-IB for any significant biodiversity loss. In addition, both Southern WWTP and Pukete WWTP are considered to be 'specified infrastructure' under the NPS-IB. As a result of this classification, a consenting pathway through the NPS-IB is enabled.
National Policy Statement for Urban Development	The purpose of the National Policy Statement for Urban Development 2020 (revised 2022) (NPS-UD) is to provide guidance and direction on how urban areas should be planned, managed and developed. Under the NPS-UD, Hamilton City is a Tier 1 Council, and is required to provide high quantities of development capacity. One of the key themes of the NPS UD is around the provision of 'development infrastructure', which includes three-waters services. Providing development infrastructure is a key enabler for housing capacity. Both projects will fall within the definition of 'development infrastructure', and will contribute to Council providing appropriate levels of development capacity.
National Environmental Standards	
National Environmental Standards for Sources of Drinking Water 2007	The purpose of the National Environmental Standards for Sources of Drinking Water (NES-DW) is to protect sources of human drinking water from contamination. Both the proposed discharge from Southern WWTP and the existing discharge at Pukete WWTP are not located close enough to a point of abstraction to trigger the regulation under the NES-DW.
National Environmental Standards for Freshwater 2020	The purpose of the National Environmental Standards for Freshwater 2020 (NES-FW) is to provide country-wide regulation around activities that poses risks to freshwater. No approvals under the NES-FW have been identified as being required, specifically, approvals around instream structures, reclamation of rivers or wetlands.

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011	The purpose of the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES-CL) is to provide country-wide regulation around the management (including remediation or disposal) of contaminated land. The management of contaminated land are readily addressed through standard practice that has arisen over time through implementation of the NES-CL. Investigations into whether approvals under the NES-CL are ongoing. With a confirmed designation in place this will be one of the few consents required from the territorial authority.