



APPENDIX L - Statutory Assessment

Queen Street Wastewater Diversion Project – Part 3 Part 4 Connector

Project number:	W-SL001.00
Document Title:	Appendix L – Statutory Assessment, Queen Street Wastewater Diversion Project – Part 3 Part 4 Connector Tunnel
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The following provides an assessment of the project works in relation to the following matters from the Auckland Unitary Plan:

- Objectives and Policies of the Regional Policy Statement
- Non-RPS Objectives and Policies
- Standards
- Assessment Criteria

A summary of the assessment is provided within Section 12 of the AEE.

Regional Policy Statement

The following is an assessment of the project works against the relevant provisions of the Regional Policy Statement.

Regional Policy Statement - Auckland Unitary Plan Chapter B		
Provision		Response/ comment
B2.2 Urban Growth and Form		
B2.2.1 Objectives		
(1)	A quality compact urban form that enables all of the following: a) higher-quality urban environment; b) greater productivity and economic growth; c) better use of existing infrastructure and efficient provision of new infrastructure; d) improved and more effective public transport; e) greater social and cultural vitality; f) better maintenance of rural character and rural productivity; and g) reduced adverse environmental effects.	The installation of a new wastewater pipeline in the city centre will reduce adverse effects on the stormwater system, which is currently impacted by overflows of the wastewater network. At present, these wastewater overflows can disturb the City Centre with odour and exposure to contaminants. These works will resolve these overflows and create a higher-quality urban environment.
(5)	The development of land within the Rural Urban Boundary, towns, and rural and coastal towns and villages is integrated with the provision of appropriate infrastructure.	
B2.2.2 Policies		
(5)	Quality compact urban form Enable higher residential intensification: (a) in and around centres; (b) close to public transport, social facilities and employment opportunities	Increasing wastewater capacity will provide the necessary infrastructure to support urban population growth. Located in the heart of Auckland's City Centre, this project will enable a greater population of people to live and work around Queen Street and adjacent areas.
B3.2 Infrastructure		

B3.2.1 Objectives		
(1)	Infrastructure is resilient, efficient and effective.	The purpose of this project is to construct a new wastewater alignment to improve the resilience of the wastewater network. In achieving this result, a carefully developed construction methodology has been selected to minimise adverse effects to the environment.
(3)	Development, operation, maintenance, and upgrading of infrastructure is enabled, while managing adverse effects on: a. the quality of the environment and, in particular, natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character; b. the health and safety of communities and amenity values.	
(4)	The functional and operational needs of infrastructure are recognised.	
(8)	The adverse effects of infrastructure are avoided, remedied or mitigated.	
B3.2.2 Policies		
(1)	Provision of infrastructure Enable the efficient development, operation, maintenance and upgrading of infrastructure.	A trenchless construction methodology has been specifically chosen for its lesser impact on the streetscape and adjacent properties compared to trenching methods.
(3)	Provide for the locational requirements of infrastructure by recognising that it can have a functional or operational need to be located in areas with natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character.	
(7)	Managing adverse effects Encourage the co-location of infrastructure and the shared use of existing infrastructure corridors where this is safe and satisfies operational and technical requirements.	
(8)	Avoid, remedy or mitigate the adverse effects from the construction, operation, maintenance or repair of infrastructure.	

AUP Objectives and Policies (non-RPS)

The following provides an assessment of the project works against the relevant objectives and policies of the AUP. The relevant objectives and policies of the following chapters of the AUP have been considered

- E7 Taking, using, damming and diversion of water and drilling
- E14 Air Quality
- E25 Noise and Vibration
- E30 Contaminated Land
- E36 Natural Hazards and Flooding

AUP Objectives and Policies	
Provision	Response
E1 Water quality and Integrated management	
<i>Note: Activities listed in Chapter E7 relate to the objectives and policies listed in Chapters E1 and E2. The objectives and policies relating to wastewater management have been included below.</i>	
E1.2 Objectives	

(3)	Stormwater and wastewater networks are managed to protect public health and safety and to prevent or minimise adverse effects of contaminants on freshwater and coastal water quality.	Installation of this wastewater pipeline will protect public health and safety by reducing the current occurrence of overflows into the stormwater network. Without this upgrade, current overflows may potentially harm freshwater and coastal water eco-systems.
E1.3 Policies		
(19)	<p>Wastewater network overflow discharges</p> <p>Ensure wastewater networks are designed and operated to minimise wet weather overflows by:</p> <ul style="list-style-type: none">a) requiring wastewater networks to be designed and constructed in accordance with recognised industry standards, including being sized to cater for the maximum probable development level of the area to be serviced;b) requiring the management of connections to the wastewater network;c) requiring wastewater networks to be managed in accordance with a network operations plan including an overflow mitigation plan with clear requirements and timeframes; andd) designing and locating overflow points to minimise nuisance, damage, public health risk and adverse ecological effects.	In upgrading the capacity of Auckland City Centre's wastewater network, the Project's purpose is to minimise wastewater overflows into the stormwater network in wet weather events. As such, the existing nuisance, public health risk and ecological effects will be reduced.
E2 Water Allocation and Use (Activities in Chapter E7 refer to the policies of E2)		
E2.2 Objectives		
(1)	Water in surface rivers and groundwater aquifers is available for use provided the natural values of water are maintained and established limits are not exceeded.	<p>The P3-P4 Connector Tunnel will support the wider Queen Street Wastewater Diversion programme of works to increase the capacity of the City Centre's wastewater network. Hence this proposal is not contrary to the objectives and Policies of Chapter E2 relating to water allocation and use.</p> <p>As described in the AEE, dewatering will be required as part of shaft construction works. The method for construction is trenchless tunnelling via pipejacking. This is a water efficient method of pipe laying as it requires less excavation and reduces the amount of water take from dewatering.</p>
(2)	Water resources are managed within limits to meet current and future water needs for social, cultural and economic purposes.	
(3)	N/A	
(4)	Water resources are managed to maximise the efficient allocation and efficient use of available water.	
(5)	Mana Whenua values including the mauri of water, are acknowledged in the allocation and use of water.	
E2.3 Policies		
(7)	<p>Require all proposals to take and use groundwater from any aquifer to demonstrate that:</p> <ul style="list-style-type: none">a) the taking is within the water availabilities and levels for the aquifer in Table 1 Aquifer water availabilities and Table 2 Interim aquifer groundwater levels in Appendix 3 Aquifer water availabilities and levels, except in accordance with Policy E2.3(11), and meeting all of the following:<ul style="list-style-type: none">i. recharge to other aquifers is maintained; andii. aquifer consolidation and surface subsidence is avoided.b) the taking will avoid, remedy or mitigate adverse effects on surface water flows, including the following:	An assessment of groundwater drawdown effects has been undertaken, which considers effects on surface water flows, freshwater ecosystems, saltwater intrusion and neighbouring bores. Overall, it is considered that the proposed take of groundwater during construction will have a negligible effects on these matters. Settlement effects on neighbouring buildings and structures are also assessed as negligible, and monitoring during construction is proposed to ensure no unexpected effects occur.

	<p>base flow of rivers, streams and springs; and</p> <p>iii. any river or stream flow requirements and in particular the minimum stream flow and availability in Appendix 2 River and stream minimum flow and availability.</p> <p>c) the taking will avoid, remedy or mitigate adverse effects on terrestrial and freshwater ecosystem habitat;</p> <p>d) the taking will not cause saltwater intrusion or any other contamination;</p> <p>e) the taking will not cause adverse interference effects on neighbouring bores to the extent their owners are prevented from exercising their lawfully established water takes;</p> <p>f) Policy E2.3(7)(e) above will not apply in the following circumstances:</p> <p>i. where it is practicably possible to locate the pump intake at a greater depth within the affected bore; or</p> <p>ii. where it can be demonstrated that the affected bore accesses, or could access, groundwater at a deeper level within the same aquifer, if drilled or cased to a greater depth.</p> <p>g) the proposed bore is capable of extracting the quantity of groundwater applied for; and</p> <p>h) the proposal avoids, remedies or mitigates any ground settlement that may cause distress, including reducing the ability of an existing building or structure to meet the relevant requirements of the Building Act 2004 or the New Zealand Building Code, to any existing:</p>	
(23)	<p>Diversion of Groundwater</p> <p>Require proposals to divert groundwater, in addition to the matters addressed in Policy E2.3 (6) and (7) above, to ensure that:</p> <p>(c) the proposal avoids, remedies or mitigates any adverse effects on:</p> <p>i. scheduled historic heritage places and scheduled sites and places of significance to Mana Whenua; and</p> <p>ii. people and communities.</p> <p>(d) the groundwater diversion does not cause or exacerbate any flooding;</p> <p>(e) monitoring has been incorporated where appropriate, including:</p> <p>i. measurement and recording of water levels and pressures; and</p> <p>ii. measurement and recording of the movement of ground, buildings and other structures.</p> <p>(f) mitigation has been incorporated where appropriate including:</p>	<p>Once constructed, the new wastewater pipeline will not interfere with existing floodplains as the installation will be entirely underground.</p> <p>During construction, flooding effects from a significant rainfall event may be increased if unmitigated at the CSA sites, as assessed in in Appendix G.</p> <p>Diversion of groundwater on site will have minimal effects on the adjacent heritage buildings as assessed in Appendix K.</p> <p>As outline in the ESCP (Appendix H), hot mix bunds will be configured to divert flood flows through or around the CSA site. This mitigation will prevent diverted wet weather flows from entering nearby buildings.</p>

	<ul style="list-style-type: none">i. minimising the period where the excavation is open/unsealed;ii. use of low permeability perimeter walls and floors;iii. use of temporary and permanent systems to retain the excavation; oriv. re-injection of water to maintain groundwater pressures.	
E14 Air Quality		
E14.2 Objectives		
(1)	Air quality is maintained in those parts of Auckland that have high air quality, and air quality is improved in those parts of Auckland that have low to medium air quality.	A diesel generator will be employed at the Greys Avenue CSA site to support construction works if a connection to electrical mains power is not feasible.
(2)	Human health, property and the environment are protected from significant adverse effects from the discharge of contaminants to air.	Temporary emissions resulting from the combustion of the diesel generator is not anticipated to alter air quality in any way that would jeopardise human health, property or the environment.
(3)	Incompatible uses and development are separated to manage adverse effects on air quality from discharges of contaminants into air and avoid or mitigate reverse sensitivity effects.	
(4)	The operational requirements of light and heavy industry, other location-specific industry, infrastructure, rural activities and mineral extraction activities are recognised and provided for.	
E14.3 Policies		
(1)	Manage the discharge of contaminants to air, including by having regard to the Auckland Ambient Air Quality Targets in Table E14.3.1, so that significant adverse effects on human health, including cumulative adverse effects, are avoided, and all other adverse effects are remedied or mitigated.	Use of a diesel generator is commonplace for a construction project of this nature and will result in a temporary discharge only. The generator will be located away from the boundary of any neighbouring properties to reduce potential effects on the air quality of neighbouring properties.
(2)	In the coastal marine area and in urban and rural zones, except for those zones and precincts subject to policies E14.3(3) to (5): <ul style="list-style-type: none">(g) avoid offensive or objectionable effects from dust and odour discharges and remedy or mitigate all other adverse effects of dust and odour discharges; or(h) require adequate separation distance between use and development which discharges dust and odour to air and activities that are sensitive to adverse effects of dust and odour discharges, or both of the above.	The generator will be subject to a prestart check before it is commissioned on site, and will be serviced by the contractors as per the supplier's recommendations. Any malfunctions will be repaired within 24 hours of detection. Emissions from the generator will be visually monitored for particulate matter to ensure the fuel is combusting efficiently. If unexpected odour is detected during construction works then operation of the generator will cease and measures to address the odour will be investigated and implemented.
(3-7)	N/A	
(8)	Avoid, remedy or mitigate the adverse effects on air quality from discharges of contaminants into air by: <ul style="list-style-type: none">(a) using the best practicable option for emission control and management practices that are appropriate to the scale of the discharge and potential adverse effects; and(b) adopting a precautionary approach, where there is uncertainty and a risk of significant adverse effects or irreversible	

	harm to the environment from air discharges.	
(9)	Avoid, remedy or mitigate the adverse effects on air quality beyond the boundary of the premises where the discharge of contaminants to air is occurring, in relation to: (a) noxious or dangerous effects on human health, property or the environment from hazardous air pollutants; or (b) overspray effects on human health, property or the environment.	
(10)	N/A	
(11)	Enable the use of air quality offsets in achieving compliance with relevant standards and other provisions in the plan.	
E25 Noise and vibration		
E25.2 Objectives		
(1)	People are protected from unreasonable levels of noise and vibration.	A comprehensive management plan for construction noise and vibration is included within Appendix I2 of the application. This plan details physical and managerial mitigation measures to be implemented in order to protect people from unreasonable levels of noise, including: <ul style="list-style-type: none">• equipment selection prioritising quieter technologies.• Early consultation with properties who may receive a noise exceedance• adoption of physical barriers and noise enclosures.• shutting off equipment when not in use.• periodic assessment of machinery.
(3)	Existing and authorised activities and infrastructure, which by their nature produce high levels of noise, are appropriately protected from reverse sensitivity effects where it is reasonable to do so.	
(4)	Construction activities that cannot meet noise and vibration standards are enabled while controlling duration, frequency, and timing to manage adverse effects.	
E25.3 Policies		
(1)	Set appropriate noise and vibration standards to reflect each zone's function and permitted activities, while ensuring that the potential adverse effects of noise and vibration are avoided, remedied or mitigated.	Noise will be kept to the minimum possible level using the best practicable option for construction to take place. As this upgrade of wastewater infrastructure is needed to serve the growing population in the City Centre, it is essential for construction activities to occur in this location. Hence, the project is not inconsistent these policies.
(2)	Minimise, where practicable, noise and vibration at its source or on the site from which it is generated to mitigate adverse effects on adjacent sites.	
(10)	Construction, demolition and maintenance activities Avoid, remedy or mitigate the adverse effects of noise and vibration from construction, maintenance and demolition activities while having regard to: <ul style="list-style-type: none">(a) the sensitivity of the receiving environment; and(b) the proposed duration and hours of operation of the activity; and(c) the practicability of complying with permitted noise and vibration standards.	
E30 Contaminated Land		
E30.2 Objectives		

(1)	The discharge of contaminants from contaminated land into air, or into water, or onto or into land are managed to protect the environment and human health and to enable land to be used for suitable activities now and in the future.	Extensive investigation has been carried out to ensure no unexpected discharge of contaminants harms human or environmental health as part of these works. A DSI has been completed to establish locations where soil containing contaminants may exist and to identify where the application of NES CS and AUP requirements is necessary.
E30.3 Policies		
(1)	Identify and record the details of land containing elevated levels of contaminants in a public register.	Further to the above, an SMP has been developed and is submitted with this application. The SMP outlines the procedures and processes to be undertaken to manage soil disturbance and disposal near BH23/01 and BH23/02, and any manage any unexpected soil contamination.
(2)	Require any use or development of land containing elevated levels of contaminants resulting in discharges to air, land or water to manage or remediate the contamination to a level that: <ul style="list-style-type: none">a) allows contaminants to remain in the ground/groundwater, where it can be demonstrated that the level of residual contamination is not reasonably likely to pose a significant adverse effect on human health or the environment; andb) avoids adverse effects on potable water supplies; andc) avoids, remedies or mitigates significant adverse effects on ecological values, water quality, human health and amenity values; whiled) taking into account all of the following:e) the physical constraints of the site and operational practicalities;f) the financial implications of the investigation, remediation, management and monitoring options;g) the use of best practice contaminated land management, including the preparation and consideration of preliminary and detailed site investigations, remedial action plans, site validation reports and site management plans for the identification, monitoring and remediation of contaminated land; andh) whether adequate measures are in place for the transport, disposal and tracking of contaminated soil and other contaminated material removed from a site to prevent adverse effects on the environment.	
E36 Natural Hazards and Flooding		
E36.2 Objectives		
(1)	N/A	
(2)	Subdivision, use and development, including redevelopment in urban areas, only occurs where the risks of adverse effects from natural hazards to people, buildings, infrastructure and the environment are not increased overall and where	The infrastructure works within the floodplain at the Greys Avenue Carpark are temporary in nature and will have no permanent impact on stormwater flows. Any flooding risks associated with the works locating in this

	practicable are reduced, taking into account the likely long term effects of climate change.	area will be mitigated through the measures outline in the ESCP.
(3)	N/A	
(4)	Where infrastructure has a functional or operational need to locate in a natural hazard area, the risk of adverse effects to other people, property, and the environment shall be assessed and significant adverse effects are sought first to be avoided or, if avoidance is not able to be totally achieved, the residual effects are otherwise mitigated to the extent practicable.	The P4MH4 shaft is located outside of the main overflow channel. The site of the P3-P4 Connector tunnel and shaft is the most appropriate location for this infrastructure to be located on the wastewater diversion alignment. As such, locating these works within a floodplain is unavoidable and any adverse effects have been appropriately mitigated through the establishment of clean and dirty water corridors on site to maintain the conveyance of the floodplain and OFP.
(5)	Subdivision, use and development including redevelopment, is managed to safely maintain the conveyance function of floodplains and overland flow paths.	
(6)	Where appropriate, natural features and buffers are used in preference to hard protection structures to manage natural hazards.	As the works are taking place in a carpark in a heavily urbanised environment, hot mix asphalt bunds are appropriate for the situational environment.
E36.3 Policies		
(1-14)	N/A	
(15-20)	1. Ensure all development in the 1 per cent annual exceedance probability (AEP) floodplain does not increase adverse effects from flood hazards or increased flood depths and velocities, to other properties upstream or downstream of the site.	<p>Once installed, the P3P4 Connector tunnel will be completely underground and therefore have no permanent consequence on the flow of stormwater and existing flooding hazard.</p> <p>Any hazardous substances required at the Greys Avenue CSA site will be stored outside of the floodplain.</p> <p>Comprehensive mitigation of flooding effects has been provided in the ESCP in Appendix H. In addition to clean and dirty water corridors, these measures include additional freeboard at the downslope of bunds, catchpit protection devices and stabilisation of access points.</p> <p>The controls listed above will be maintained and monitored at regularly scheduled intervals to ensure any damage is immediately remediated.</p> <p>Clean water diversions will maintain the function if the overland flow path by creating a 5 metre wide corridor. Once installation is complete, the connector will have no lasting effect on the flow of the OFP as it will be underground. Stormwater will be able to flow safely without interruption.</p>
(21)	Require the storage and containment of hazardous substances in floodplains so that the integrity of the storage method will not be compromised in a flood event. Ensure all development in the 1 per cent annual exceedance probability (AEP) floodplain does not increase adverse effects from flood hazards or increased flood depths and velocities, to other properties upstream or downstream of the site.	
(22)	Provide for flood mitigation measures which reduce flood-related effects and provide for the reconstruction of culverts and bridges where those measures do not create or exacerbate flooding upstream or downstream or otherwise increase flood hazards. Require the storage and containment of hazardous substances in floodplains so that the integrity of the storage method will not be compromised in a flood event.	
(23)	N/A Provide for flood mitigation measures which reduce flood-related effects and provide for the reconstruction of culverts and bridges where those measures do not create or exacerbate flooding upstream or downstream or otherwise increase flood hazards.	
(24-26)	Enable the construction and maintenance of flood mitigation works to reduce flood risks to people, property, infrastructure and the environment.	
(27)	N/A Enable the construction and maintenance of flood mitigation works to reduce flood risks to people, property, infrastructure and the environment.	

(28)	Maintain the function of overland flow paths to convey stormwater runoff safely from a site to the receiving environment.N/A	
(29)	Require changes to overland flow paths to retain their capacity to pass stormwater flows safely without causing damage to property or the environment.Maintain the function of overland flow paths to convey stormwater runoff safely from a site to the receiving environment.	
(30)	Require changes to overland flow paths to retain their capacity to pass stormwater flows safely without causing damage to property or the environment.	

AUP Standards

The following table provides an assessment of the proposed works against the relevant standards of the AUP. For the avoidance of confusion, standards relating to the permitted activities have been detailed in Appendix E. Please note that not all activity rules have applicable standards for consideration against.

AUP Activity Standards		
Standards		Response
Note: No standards apply for earthworks relating to network utilities under Chapter E12 or E26.		
Activity Rule E7.4.1 (A28): Restricted discretionary		
Diversion of groundwater caused by any excavation, (including trench) or tunnel that does not meet the permitted activity standard		
E7.6.3 Restricted Discretionary Standards		
E7.6.3.3. Take and use of groundwater		
(1)	The water take must not be geothermal water.	The proposed works do not involve geothermal water nor the replacement of an existing consent.
(2)	The replacement of an existing resource consent to take and use groundwater for municipal water supply purposes: (a) at the time of the application, the take is an authorised take; (b) a water management plan has been prepared; (c) the take will not result in the water availabilities and levels in Table 1 Aquifer water availabilities and Table 2 Aquifer groundwater levels, in Appendix 3 Aquifer water availabilities and levels being exceeded, except in accordance with E2 Water quantity, allocation and use Policy E2.3(11); and (d) the take must not be from an area in the Wetland Management Areas Overlay.	
Rule E14.4.1 (A52) Controlled Activity		
Medium combustion sources established from 1 May 2014 fuelled by diesel in an internal combustion engine/generator, with a total gross heat release of more than 500kW and not exceeding 10MW.		
(1)	There must be no visible emissions resulting from the combustion process other than heat haze and clean steam.	The diesel generator employed on site to power dewatering equipment will be managed to produce no visible emissions other than heat haze. The emission of diesel will not be impeding by a rain excluder.
(2)	N/A	
(3)	Rain excluders must not impede the upward discharge of combustion gases.	
(4-6)	N/A	
Activity Rule E25.4.1 (A2): Restricted discretionary		
Activities that do not comply with the permitted standards for noise and vibration		
E25.6.1. General standards		

(1)	Noise levels arising from activities must be measured and assessed in accordance with the New Zealand Standard NZS 6801:2008 Measurement of environmental sound and the New Zealand Standard NZS 6802:2008 Acoustics - Environmental noise except where more specific requirements apply.	N/A																																										
(2)	The application of an adjustment for noise containing special audible characteristics in terms of Appendix B4 Special Audible Characteristics in New Zealand Standard NZS 6802:2008 Acoustics – Environmental noise may apply to the A weighted level for any measurement but an adjustment must not be applied to any level measured in the 63Hz and 125Hz octave bands.	N/A																																										
(3)	The noise from any construction work activity must be measured and assessed in accordance with the requirements of New Zealand Standard NZS6803:1999 Acoustics – Construction noise. Construction work is defined in New Zealand Standard NZS6803:1999 Acoustics – Construction noise.	As per Appendix G1, construction noise levels have been measured in accordance with NZS6803:1999.																																										
(4)	The noise limits of the Plan do not apply to emergency service sirens and callout sirens during emergency situations.	N/A																																										
(5)	Where more than one standard applies that requires insulation of a noise sensitive space from an external noise source, the standards must be applied cumulatively.																																											
(6)	Where standards are provided for specific activities, the zone interface standards and the zone standards do not apply to that activity.																																											
E25.6.28 Construction noise levels in the Business – City Centre Zone and the Business – Metropolitan Centre Zone																																												
(1)	<p>Construction activities in the Business – City Centre Zone and the Business – Metropolitan Centre Zone must comply with Standard E25.6.27(1) above for any receiver not in a Business – City Centre Zone or a Business – Metropolitan Centre Zone and must not exceed the levels in Table E25.6.28.1 Construction noise levels for construction less than 15 consecutive calendar days duration in the Business – City Centre Zone and the Business – Metropolitan Centre Zone and Table E25.6.28.2 Construction noise levels for construction of 15 consecutive calendar days or more duration in the Business – City Centre Zone and the Business – Metropolitan Centre Zone when measured for any 30 minute period 1m from the façade of any building in the Business – City Centre Zone or the Business – Metropolitan Centre Zone that is occupied during the work.</p> <p>Table E25.6.28.1 Construction noise levels for construction less than 15 consecutive calendar days duration in the Business – City Centre Zone and the Business – Metropolitan Centre Zone</p> <table><tr><th colspan="3">Construction of less than 15 consecutive calendar days duration (total duration of works)</th></tr><tr><th>Time</th><th>L_{Aeq}(30 min)</th><th>L_{Afmax}</th></tr><tr><td>Monday to Friday 6.30am - 10.30pm</td><td>80 dB</td><td>90 dB</td></tr><tr><td>Saturday 7am - 11pm</td><td>85 dB</td><td>90 dB</td></tr><tr><td>Sunday 9am - 7pm</td><td>80 dB</td><td>90 dB</td></tr><tr><td>All other times (night time)</td><td>60 dB</td><td>75 dB</td></tr><tr><td>All other times in the City Centre Residential Precinct and the Learning Precinct</td><td>55 dB</td><td>75 dB</td></tr></table> <p>Table E25.6.28.2 Construction noise levels for construction of 15 consecutive calendar days or more duration in the Business – City Centre Zone and the Business – Metropolitan Centre Zone</p> <table><tr><th colspan="3">Construction of 15 consecutive calendar days or more (total duration of works)</th></tr><tr><th>Time</th><th>L_{Aeq}(30 min)</th><th>L_{Afmax}</th></tr><tr><td>Monday to Friday 6.30am-10.30pm</td><td>75 dB</td><td>90 dB</td></tr><tr><td>Saturday 7am-11pm</td><td>80 dB</td><td>90 dB</td></tr><tr><td>Sunday 9am-7pm</td><td>65 dB</td><td>85 dB</td></tr><tr><td>All other times (night time)</td><td>60 dB</td><td>75 dB</td></tr><tr><td>All other times in the City Centre Residential Precinct and the Learning Precinct</td><td>55 dB</td><td>75dB</td></tr></table> <p>Where external measurement of construction noise is impractical or inappropriate, the upper limits for the noise measured inside the building will be 20dB less than the relevant levels in Table E25.6.28.1 Construction noise levels for construction less than 15 consecutive calendar days duration in the Business – City Centre Zone and the Business –</p>	Construction of less than 15 consecutive calendar days duration (total duration of works)			Time	L _{Aeq} (30 min)	L _{Afmax}	Monday to Friday 6.30am - 10.30pm	80 dB	90 dB	Saturday 7am - 11pm	85 dB	90 dB	Sunday 9am - 7pm	80 dB	90 dB	All other times (night time)	60 dB	75 dB	All other times in the City Centre Residential Precinct and the Learning Precinct	55 dB	75 dB	Construction of 15 consecutive calendar days or more (total duration of works)			Time	L _{Aeq} (30 min)	L _{Afmax}	Monday to Friday 6.30am-10.30pm	75 dB	90 dB	Saturday 7am-11pm	80 dB	90 dB	Sunday 9am-7pm	65 dB	85 dB	All other times (night time)	60 dB	75 dB	All other times in the City Centre Residential Precinct and the Learning Precinct	55 dB	75dB	As per the CNVA in Appendix I, 1 property at 323 Queen Street, n the Business – City Centre Zone receive a level of noise exceeding the AUP limits in Table E25.6.28.1. Although a noise exceedance is recorded at this property, these will be reasonable and are not deemed to determine the property be an affected party under the RMA.
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	Metropolitan Centre Zone and Table E25.6.28.2 Construction noise levels for construction of 15 consecutive calendar days or more duration in the Business – City Centre Zone and the Business – Metropolitan Centre Zone above.	
Activity Rule E30.4.1 (A6): Controlled standards Discharge of contaminants into the air, water or land that does not meet the permitted activity standard		
E30.6.2.1. Discharges of contaminants into air, or into water, or onto or into land not meeting permitted activity standards E30.6.1.1; E30.6.1.2; E30.6.1.3; E30.6.1.4; or E30.6.1.5		
(1)	A detailed site investigation (contaminated land) must be prepared and submitted to Council for consideration.	A DSI and SMP have been carried out at site and summarised within the AEE. All applicable AUP standards have been met within this reporting.
(2)	A site management plan (contaminated land) must be prepared and submitted to Council for consideration.	
(3)	A remedial action plan (contaminated land), relevant to the site and the proposed disturbance or remediation must be prepared and submitted to Council for consideration.	
(4)	The report on the detailed site investigation (contaminated land) must state either that: <ul style="list-style-type: none"> a) the concentrations of soluble contaminants in any of the following: <ul style="list-style-type: none"> i. overland stormwater at the site boundary, ii. surface water within the site, or iii. groundwater at the site boundary must not exceed the guideline values specified in Table 3.4.1 Trigger values for toxicants at alternative levels of protection in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000 Guidelines) for marine or freshwater, where relevant, at the level of protection for 80 per cent of species, except for benzene where 95 per cent of species shall apply; or b) discharges from the land are highly unlikely to cause significant adverse effects on the environment; or c) the contamination associated with the land must be contained beneath a continuous impervious layer and must be located above the highest seasonal groundwater level beneath the site. 	

AUP Assessment Criteria

The following is an assessment of the applicable activities against the assessment criteria provided within the AUP.

AUP Restricted Discretionary Activity Assessment Criteria		
Rule E7.4.1 (A20): Restricted Discretionary Dewatering or groundwater level control associated with a groundwater diversion authorised as a restricted discretionary activity under the Unitary Plan, not meeting permitted activity standards or is not otherwise listed. & Rule E7.4.1 (A28): Restricted Discretionary Diversion of groundwater caused by any excavation, (including trench) or tunnel that does not meet the permitted activity standards.		
(1)	all restricted discretionary activities: <ul style="list-style-type: none"> (a) the extent to which any effects on Mana Whenua values are avoided, remedied or mitigated; (b) the extent to which the proposal will be consistent with the management of allocation of freshwater within the guidelines provided by Appendix 2 River and stream minimum flow and 	<p>The proposed works do not involve the use of fresh or geothermal water from a lake, river, spring, stream or wetland.</p> <p>An assessment of dewatering effects is contained in the groundwater drawdown assessment in Appendix K and considers that adverse effects will be negligible.</p>

	<p>availability and Appendix 3 Aquifer water availabilities and levels, and give priority to making fresh water available for the following uses (in descending order of priority):</p> <ul style="list-style-type: none"> i. <i>existing and reasonably foreseeable domestic and municipal water supply and animal drinking water requirements;</i> ii. <i>existing lawfully established water users;</i> iii. <i>uses of water for which alternative water sources are unavailable or unsuitable;</i> iv. <i>all other uses</i> 	<p>Monitoring of groundwater drawdown and settlement effects during construction is proposed to ensure that no unexpected effects occur.</p>
(2)	<p>Whether the proposal promotes the efficient use of freshwater and geothermal water by:</p> <ul style="list-style-type: none"> (a) ensuring the amount of water taken and used is reasonable and justifiable with regard to the intended use, and where appropriate: <ul style="list-style-type: none"> i. <i>municipal water supplies are supported by a water management plan</i> ii. <i>an industrial and irrigation supply implements best practice in respect of the efficient use of water for that particular activity or industry</i> iii. <i>all takes (other than for municipal water supply from dams) are limited to a maximum annual allocation based on estimated water requirements</i> (b) considers water conservation and thermal efficiency methods (c) encourages the shared use and management of water within a water user groups or other arrangement where it will result in an increased efficiency in the use and allocation of water. 	
(4)	<p>Whether the proposal to take and use groundwater from any aquifer demonstrates that:</p> <ul style="list-style-type: none"> (a) the take is within the water availabilities and levels for the aquifer in Table 1 Aquifer water availabilities and Table 2 Aquifer groundwater levels, in Appendix 3 Aquifer water availabilities and levels and: <ul style="list-style-type: none"> i. <i>recharge to other aquifers is maintained;</i> ii. <i>aquifer consolidation and surface subsidence is avoided;</i> (b) the taking will avoid, remedy or mitigate adverse effects on surface water flows, including: <ul style="list-style-type: none"> i. <i>base flow of rivers, streams and springs;</i> 	<p>The dewatering assessment in Appendix K details how the necessary extraction of water from the construction site will be appropriately managed.</p> <p>This assessment considers effects on surface water flows, freshwater ecosystems, saltwater intrusion and neighbouring bores.</p> <p>Overall, it is considered that the proposed take of groundwater during construction will have a negligible effects on the matters. Settlement effects on neighbouring buildings and structures is also assessed as negligible, and monitoring during construction is proposed to ensure no unexpected effects occur.</p>

	<p>ii. <i>any river or stream flow requirements;</i></p> <p>(c) the taking will avoid, remedy or mitigate adverse effects on terrestrial and freshwater ecosystem habitat;</p> <p>(d) the taking will not cause saltwater intrusion or any other contamination;</p> <p>(e) the taking will not cause adverse interference effects on neighbouring bores to the extent their owners are prevented from exercising their lawfully established water takes;</p> <p>(f) (f) E7.8.2(5)(e) above will not apply in the following circumstances:</p> <p>i. <i>where it is practicably possible to locate the pump intake at a greater depth within the affected bore;</i></p> <p>ii. <i>where it can be demonstrated that the affected bore accesses, or could access, groundwater at a deeper level within the same aquifer, if drilled or cased to a greater depth;</i></p> <p>(g) the proposed bore is capable of extracting the quantity of groundwater applied for;</p> <p>(h) the proposal avoids, remedies or mitigates any ground settlement that may cause distress, including reducing the ability of an existing building or structure to meet the relevant requirements of the Building Act 2004 or the New Zealand Building Code, to existing:</p> <p>i. <i>buildings;</i></p> <p>ii. <i>structures; and</i></p> <p>iii. <i>services including roads, pavements, power, gas, electricity, water supply and wastewater networks and fibre optic cables.</i></p>	<p>The groundwater take will only occur during construction works, ensuring there will be no long term effects on the aquifer.</p>
(5)	<p>Whether the proposal provides mitigation options where there are significant adverse effects on the matters identified in E7.8.2(3) and (4) above, including the following:</p> <p>(a) consideration of alternative locations, rates and timing of takes for both surface water and groundwater;</p> <p>(b) use of alternative water supplies;</p> <p>(c) use of water conservation methods when water shortage conditions apply;</p> <p>(d) provision for fish passage in rivers and streams;</p> <p>(e) wetland creation or enhancement of existing wetlands;</p> <p>(f) riparian planting; and</p> <p>(g) consideration of alternative designs for groundwater dewatering proposals.</p>	
(6)	<p>Whether the proposal to take and use surface water and groundwater will monitor the effects of</p>	

	<p>the take on the quality and quantity of the freshwater resource to:</p> <ul style="list-style-type: none"> (a) measure and record water use and rate of take; (b) measure and record water flows and levels; (c) sample and assess water quality and freshwater ecology; and (d) measure and record the movement of ground, buildings and other structures. 	
(7-9)	(a) N/A	
(10)	<p>Whether the proposal to divert groundwater will ensure that:</p> <ul style="list-style-type: none"> (a) the proposal avoids, remedies or mitigates any adverse effects on: <ul style="list-style-type: none"> i. <i>scheduled historic heritage places and scheduled sites; and</i> ii. <i>people and communities;</i> (b) the groundwater diversion does not cause or exacerbate any flooding; (c) monitoring has been incorporated where appropriate, including: <ul style="list-style-type: none"> i. <i>measurement and recording of water levels and pressures; and</i> ii. <i>measurement and recording of the movement of ground, buildings and other structures;</i> (d) mitigation has been incorporated where appropriate including: <ul style="list-style-type: none"> i. <i>minimising the period where the excavation is open/unsealed;</i> ii. <i>use of low permeability perimeter walls and floors;</i> iii. <i>use of temporary and permanent systems to retain the excavation; and</i> iv. <i>re-injection of water to maintain groundwater pressures;</i> 	<p>The diversion of groundwater has been assessed to have negligible settlement effects on the scheduled heritage place at 325 Queen Street and is not anticipated to cause or exacerbate flooding. Monitoring during construction works is proposed to ensure that no unexpected effects arise.</p>
<p>Rule E14.4.1 (A52) Controlled Activity</p> <p>Medium combustion sources established from 1 May 2014 fuelled by diesel in an internal combustion engine/generator, with a total gross heat release of more than 500kW and not exceeding 10MW.</p>		
(1)	<p>The extent to which the discharge of contaminants into air are minimised as far as practicable, and where appropriate through:</p> <ul style="list-style-type: none"> (a) use of clean burning fuels; (b) efficient use of energy; (c) use of best practicable option emissions control; and (d) minimisation of fugitive emissions. 	<p>The diesel generator employed on site to power dewatering equipment will be managed to produce no visible emissions. Location of the generator is in the most practicable location for the operation of dewatering equipment at the Greys Avenue CSA.</p> <p>The generator will operate for a temporary period while construction is underway.</p>
(2)	<p>The extent to which adverse effects on health, amenity, property and the environment are avoided, remedied or mitigated including appropriate emissions control technology and management practices.</p>	
(3)	<p>Whether there are practicable location, method and options that cause less adverse effects on health, amenity, property and the environment and can still achieve the applicant's objectives.</p>	
(4)	<p>Whether the duration of the consent should be limited to address:</p>	

	<p>(a) limitations in the existing technology and emission management systems; and</p> <p>(b) future changes in the use and amenity of the neighbourhood.</p>	
Rule E30.4.1: Controlled Discharge of contaminants into the air, water or land that does not meet the permitted activity standards		
(1)	whether the reports and information provided adequately address the effects of discharges into air, or into water, or onto or into water from contaminated land.	The DSI (Appendix H) addressed the effects of the contaminant discharge.
Rule E36.4.1 (A56): Restricted Discretionary All other infrastructure in areas listed in the heading above (1 per cent AEP floodplain) not otherwise provided for		
(17)	<p>for operation, maintenance, renewal, repair and minor infrastructure upgrading of infrastructure in the coastal erosion hazard area; or in the coastal storm inundation 1 per cent annual exceedance probability (AEP) area; or in the coastal storm inundation 1 per cent annual exceedance probability (AEP) plus 1m sea level rise area; or in the 1 per cent annual exceedance probability (AEP) floodplain; or in overland flow paths; or on land which may be subject to land instability:</p> <p>(a) the long-term management, maintenance and monitoring of any mechanisms associated with managing the risk of adverse effects resulting from the placement of infrastructure within a hazard area to other people, property and the environment including the management of hazardous substances;</p> <p>(b) the extent to which residual risks to people, property and the environment resulting from any mitigation measures implemented to manage the hazard</p> <p>(c) the extent to which an existing hazard is exacerbated or a new hazard is created as a result of the structure</p> <p>(d) the extent to which the proposal includes non-structural solutions to protect infrastructure from the hazard and resulting adverse effects; and</p> <p>(e) the extent to which landscape values and/ or public access are affected by the proposed structure or structures associated with the mitigation of the hazard</p>	<p>Provided the existing ground levels are maintained and the manhole construction does not alter the surface contours, there should be no adverse effects resulting in the hazards spreading to more people, property and environments.</p> <p>Proposed diversion bunds and the constructed flow corridor are not expected to divert flows anywhere which will cause residual risks for people, property or the environment. as a result of the works.</p> <p>The existing flood hazards relating to the flood plain and overland flow path will not be exacerbated by the works, as the temporary shaft is not within the constructed flow corridor and the permanent manhole following the works will exist entirely underground.</p> <p>The proposal does not include implementation of non-structural solutions to protect surrounding infrastructure.</p> <p>All permanent infrastructure proposed in the works is expected to be underground. The proposed infrastructure does not permanently affect access or landscape aspects provided that the original ground levels are restored.</p>