Watercare Services Limited

QUEEN STREET WASTEWATER DIVERSION PROGRAMME - MAYORAL DRIVE ALIGNMENT

ASSESSMENT OF ENVIRONMENTAL EFFECTS

W-SL001.04

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Watercare Services Limited

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REV	DATE	DETAILS
V0	19 January 2024	First Draft
V1	12 February 2025	Second Draft
V2	18 June 2025	Third Draft – Updated to reflect April 4 Alignment
V3	27 June 2025	Post Client Review

	NAME	DATE
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Approved by:	Phil McFarlane	27 June 2025

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GLOSSARY AND ABBREVIATIONS

Council	Auckland Council
AEE	Assessment of Environmental Effects
AT	Auckland Transport
AUP	Auckland Unitary Plan (Operative in Part)
CRL	City Rail Link
CNVA	Construction Noise and Vibration Assessment
CNVMP	Construction Noise and Vibration Management Plan
DSI	Detailed Site Investigation
ESCP	Erosion and Sediment Control Plan
HAIL	Hazardous Activities and Industries List
HDD	Horizontal Directional Drilling
NES-CS	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
NPS-UD	National Environmental Policy on Urban Development (2020)
The Project	The new wastewater sewer line between manholes P4MH3 within 329 Queen Street and P1MH1 within Vincent Street
mTMB	Micro-Tunnel Boring Machine
PSI	Preliminary Site Investigation
RMA	Resource Management Act
RPS	Regional Policy Statement
Watercare	Watercare Services Limited
WSP	WSP New Zealand Limited

EXECUTIVE SUMMARY

Watercare Services Limited ('Watercare') is undertaking an extensive programme of development and upgrades to improve the Auckland wastewater collection network and reduce wastewater overflows to the environment. These works are collectively referred to as the Queen Street Wastewater Diversion programme.

This assessment of environmental effects ('AEE') has been prepared to support an application for resource consent to Auckland Council ("Council") for Watercare to install a new wastewater line within or adjacent to the road reserve of Mayoral Drive, between the intersections with Queen Street and Vincent Street. This application relates to the following proposed works:

- Construction of six shafts, with maximum internal dimensions ranging from 5.5 m x 12 m and a maximum depth of 9 m.
- Five runs of underground pilot-guided auger-bore tunnelling between the construction shafts.
- Open-cut pipe laying to connect the new alignment to the existing network.
- Continued use of the Construction Support Area (CSA) at 329 Queen Street and 34 – 38 Greys Avenue that was established under Part 3 of the Queen Street Wastewater Diversion. programme (consent number BUN60422974 / BUN60422974-A), along with three smaller secondary construction compounds within Mayoral Drive and Vincent Street, to enable the construction of shafts.

The land use within the project area is typified by multi-storey commercial buildings used as offices and visitor accommodation, while the Auckland Civic Precinct is located to the north of Mayoral Drive and contains a range of landmark buildings.

The statutory assessment (Section 12 of this AEE) considers the requirements for the installation and operation of the Project, including all enabling and accessory works. Relevant provisions of the Resource Management Act 1991 (RMA), National Environmental Standards, National Policy Statements and the Auckland Unitary Plan (AUP) have been considered.

Consent is required for the following land use activities (s9 RMA) under the provisions of the AUP:

- Rule E25.4.1 (A2) Construction noise and vibration activities that do not comply with all the relevant permitted activity standards (RD)
- Rule E26.4.3.1 (A88) Works within the protected root zone not otherwise provided for (RD)

Consent is required for the following regional activities (s14 RMA) under the provisions of the AUP:

- Rule E30.4.1 (A6) Discharges of contaminants into air, or into water, or onto or into land not meeting permitted activity Standard E30.6.1.2 (C)
- Rule E7.4.1 (A20) Take and use of groundwater for dewatering (RD)
- Rule E7.4.1 (A28) Diversion of groundwater caused by any excavation (including trench) or tunnel that does not meet the permitted activity standards (RD)

Consent is required under Regulation 5 (7) of the National Environmental Standard for assessing and managing contaminants in soil to protect human health (NES-CS) for disturbing soil as a Restricted Discretionary activity.

The overall bundled activity status for these consents is Restricted Discretionary.

The proposal is reliant on a number of permitted activities of the AUP. An assessment against the relevant permitted standards is included in Appendix D.

Engagement has been carried out with the nearby residents, property owners, stakeholders and Mana Whenua throughout the project's planning and design. The local community has been kept updated with flyer drops and newsletter content, while key stakeholders like the Grand Millennium Hotel and Auckland Transport have been involved in face-to-face discussions.

Technical assessments have been prepared to understand the extent of any actual or potential effects and are attached as appendices to this application.

Key findings from the technical assessments are:

- Although the works are to take place in a highly modified urban area, there is the potential to disturb a recorded archaeological site within the Greys Avenue carpark, and to expose unrecorded archaeological features within the road reserve. An Archaeological Authority will be applied for.
- Elevated concentrations of mercury, lead, zinc, and copper were detected at five soil sampling sites along the proposed alignment, exceeding NES-CS background levels. Additionally, asbestos was found at three locations, exceeding NES-CS commercial/industrial land use criteria.
- Three soil samples reported exceedances above AUP Permitted Activity Criteria for nickel, lead and zinc.
- AUP noise limits are predicted to be exceeded for construction noise outside of the road corridor during the day for three Noise and Vibration Sensitive Receptors (NSR). However, by implementing mitigation and adopting the Construction Noise and Vibration Management Plan (CNVMP), the noise effects are predicted to be reasonable, and therefore less than minor.
- Excavation to install two shafts along Mayoral Drive will be within the protected root zone (PRZ) of five 'Notable' Tulip trees.
- The buildings/structures that are classified as having 'Negligible' to 'Very Slight' damage criteria concerning settlement effects from dewatering are: the Grand Millennium underpass, 100 Mayoral Drive, 48 Greys Avenue, 22 Greys Avenue and the Myers Park overbridge.

The overall environmental effect of the Project, with the proposed mitigation strategies in place, is expected to be less than minor.

Overall, this assessment finds that the Project is:

- Consistent with the relevant objectives and policies of the Auckland Unitary Plan, including the Regional Policy Statement;
- Will have positive effects (benefits) at a local level, as it will provide additional capacity and resilience to the capacity of the wastewater network in Auckland City Centre; and
- Achieves the purpose of the RMA as it will safeguard the life-supporting capacity of surrounding waterbodies, while providing for the social, economic and cultural wellbeing of the community through the provision of significant new infrastructure.

1 INTRODUCTION

Watercare Services Limited ('Watercare') is proposing to upgrade the existing wastewater network of the upper (southern) catchment of Auckland City Centre. The current network has insufficient capacity to meet the future needs based on increased development in the area. The wider programme of works has been split into separate parts for the purpose of design, consenting and construction; the consenting and construction packages of the Queen Street programme are shown below in Figure 1-1.

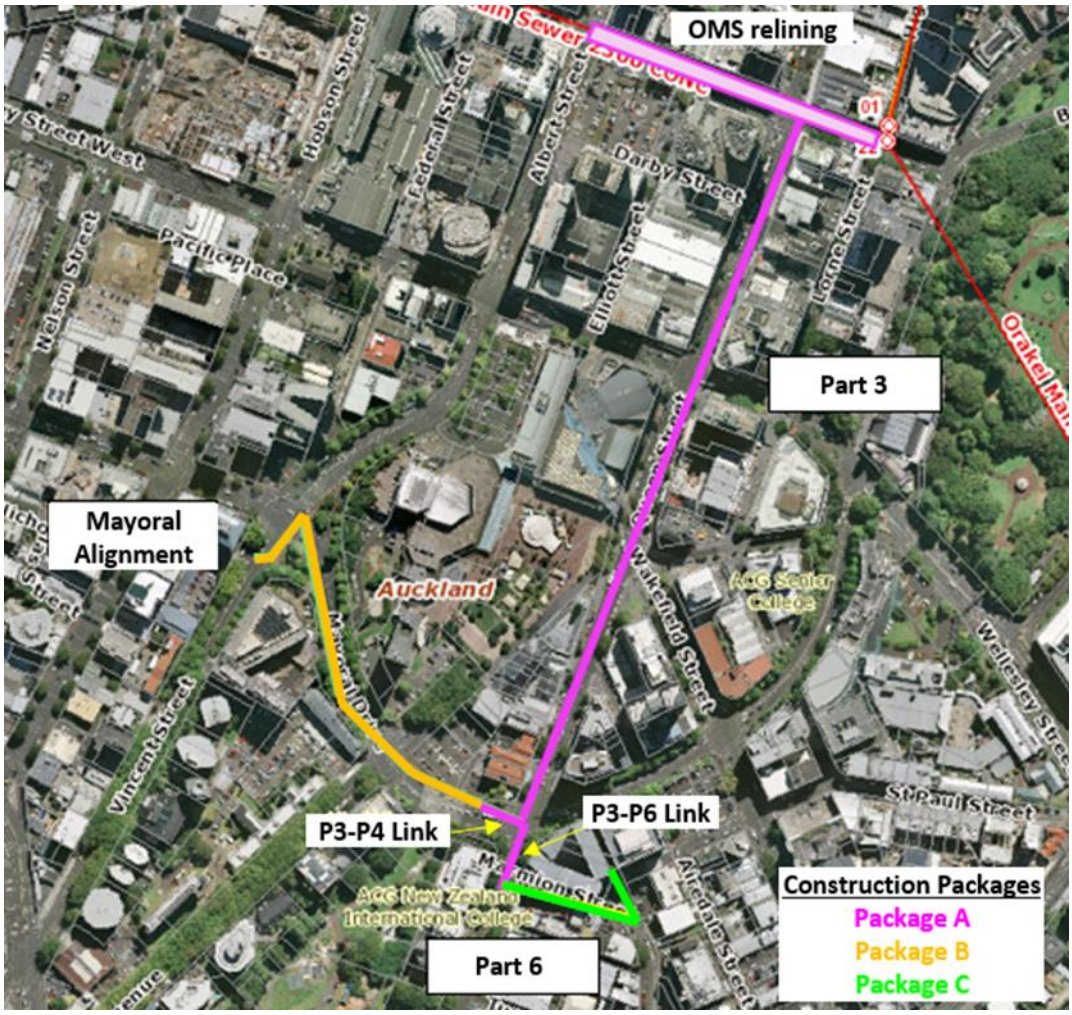


Figure 1-1 Queen Street Programme works

The Mayoral Drive Alignment involves a new wastewater pipe within or adjacent to the road reserve of Mayoral Drive. The works proposed under this consent ('the Project') include a 375mm – 700mm diameter wastewater pipeline between the P4MH3 shaft within 329 Queen Street and the P1MH1 shaft within Vincent Street, along with connections to 'engineered overflow points' ('EOPs') and manholes.

1.1 CONSENTING BACKGROUND

Resource consent for two sections of the wider Queen Street Programme has already been approved by the Council, with a third currently being processed.

Table 1 Resource consents - approved and being processed

Part 3 Alignment/Resource Consent No. BUN60422974/4-A:	A 650m-long, 1200mm diameter wastewater pipeline within Queen Street between the intersections of Mayoral Drive and Victoria Street, with connections to the local network at Wellesley Street and the Orakei Main Sewer at Victoria Street. This consent was approved on the 4th of July 2024, and was amended via s127 of the RMA by BUN60422974-A on the 5th of September 2024.
Part 3 – Part 4 Connector Tunnel/Resource Consent No. BUN60425924:	A 43m-long, 700mm diameter tunnel between the Mayoral Drive shaft established under Part 3 and a new shaft within the Construction Support Area ('CSA') within 329 Queen Street. The tunnel will initially be utilised to provide services to the micro-TBM for Part 3 construction and will be utilised as a permanent wastewater pipeline once Part 3 construction has been completed. This consent was approved on the 9th of July 2024.
Part 3 – Part 6 Link (*currently being processed by Council*)	The Part 3 – Part 6 Link Project involves the construction of a wastewater pipeline from the Part 3 Mayoral Shaft to a new shaft at the intersection of Queen Street and Marmion Street. This consent was lodged with Council on the 28th of February 2025. This consent has not yet been approved.

1.2 THIS APPLICATION

This document is the AEE to accompany the application for the construction and operation of the proposed Mayoral Drive Alignment pipeline (the Project). Where adverse effects are likely to be generated, suitable mitigation methods are proposed to avoid adverse effects upon the receiving environment.

The Mayoral Drive Alignment forms a key connection to the Queen Street Programme, enabling linkage to the consented Part 3 wastewater network. This application and AEE have been prepared in accordance with s88 and Schedule 4 of the RMA.

The construction works for the Mayoral Drive Alignment involve the following:

- The installation of a 375mm – 700mm diameter wastewater pipeline between the P4MH3 shaft within 329 Queen Street and the P1MH1 shaft within Vincent Street, along with connections to 'engineered overflow points' ('EOPs') and manholes.
- A combination of trenchless pilot bore and open-cut trenching excavation methods.
- The excavation of six temporary construction shafts (two within the Greys Ave carpark, and four within the road reserve) to launch and receive the pilot boring machine.
- The relocation of existing network utilities

1.3 RESOURCE CONSENTS SOUGHT

Based on the proposed works, the following reason(s) for consent have been identified from the Auckland Unitary Plan ('AUP') as being triggered:

- Activity Rule E26.4.3.1 (A88) Works within the protected root zone not otherwise provided for as a **Restricted Discretionary Activity**
- Activity Rule E7.4.1 (A20): Take and use of groundwater for dewatering as a **Restricted Discretionary Activity.**

- Activity Rule E7.4.1 (A28): Diversion of groundwater caused by any excavation, (including trench) or tunnel that does not meet the permitted activity standard as a **Restricted Discretionary Activity.**
- Activity Rule E30.4.1 (A6): Discharges of contaminants into air, or into water, or onto or into land not meeting permitted activity standards as a **Controlled Activity**.
- Activity Rule E25.4.1 (A2): Construction noise and vibration activities that do not comply with all the relevant permitted activity standards as a **Restricted Discretionary Activity.**

Overall, the activity status under the AUP is a **Restricted Discretionary Activity**.

Consent is also required under the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS) for the disturbance of contaminated soil at five testing sites where the presence of contaminants exceeds background levels and is above permitted soil disturbance volumes (Controlled Activity). Three testing sites exceed asbestos concentrations for NES-CS commercial/industrial land use criteria **(Restricted Discretionary Activity).**

Overall, the activity status under the NES-CS is a **Restricted Discretionary Activity**.

1.4 CONSENT LAPSE DATE AND DURATION

While consent is only required for construction-related activities, flexibility is required to accommodate any potential unforeseen delays during construction. On this basis, Watercare seeks:

- A specified lapse period of 10 years for these consents; and
- A duration of 15 years

1.5 SUPPORTING TECHNICAL INFORMATION

To support this application for resource consent, the following technical assessments and documents have been prepared:

Table 1-2: List of Appendices

Appendix	Name of Document	Corresponding Management Plan
Appendix A	Record of Title	N/A
Appendix B	General Arrangement Drawings	N/A
Appendix C	Construction Statement	N/A
Appendix D	Statutory Assessment	N/A
Appendix E	AUP Planning Maps	N/A
Appendix F	PSI / DSI	Site Management Plan (SMP)
Appendix G	Construction Noise and Vibration Assessment (CNVA)	Construction Noise and Vibration Management Plan (CNVMP)
Appendix H	Archaeological Assessment	N/A
Appendix I	Arboricultural Assessment	N/A

Appendix J	Dewatering Assessment	Groundwater and Settlement Monitoring and Contingency Plan (GSMCP)
Appendix K	Flooding Assessment	N/A
Appendix L	Erosion and Sediment Control (ESC) Report	Erosion Sediment Control Plan (ESCP)

2 APPLICANT AND PROPERTY DETAILS

Table 2-1: Applicant and Property Details

Applicant	Watercare Services Limited
Site address	34 -38 Greys Avenue, 329 Queen Street, Auckland; part of Queen Street; part of Mayoral Drive; part of Vincent Street;
Legal description	Lot 1 DP 84867, Lot 1 DP 81645, Part Allot 55 Sec 29 Auckland City, road reserve. See **Appendix A** for the Records of Title
Address for service	c/o Xenia Meier Environmental Manager – Central Interceptor Programme Delivery Watercare Services Ltd Postal Address: Private Bag 92 521 Victoria Street West, Auckland 1142 Phone: +64 21 574 585 Email: xenia.meier@water.co.nz

3 EXISTING ENVIRONMENT

3.1 LOCATION AND PHYSICAL ENVIRONMENT

The project is located within Auckland City Centre, on a section of Mayoral Drive between Queen Street and Vincent Street / Cook Street, along with a short extension within Vincent Street (see Figure 3-1 for approximate project area). In addition, the project works will also occur within a surface carpark at 36-38 Greys Avenue and 329 Queen Street. The carpark will contain a section of the proposed wastewater pipeline and be utilised as a construction support area (CSA). A CSA has already been established as part of the approved Part 3 Alignment works. The CSA may be reconfigured to respond to the latest works.

Mayoral Drive is an arterial road linking Wellesley Street, Cook Street and Queen Street and is generally five lanes in width with a painted central median. The land use surrounding Mayoral Drive generally consists of multi-storey commercial buildings used as offices and visitor accommodation, including the Grand Millennium Hotel on the corner of Mayoral Drive and Vincent Street. The Auckland Civic Precinct is located to the north of Mayoral Drive and contains a range of landmarks including Auckland Town Hall, Aotea Square, Aotea Centre and the former Civic Administration building, which has been recently renovated and converted into apartments. The former police headquarters building is located at the project terminus on Vincent Street, opposite manhole P1MH1. This building is currently vacant

Figure 3-1 below shows the project area in orange.

Figure 3-1: Mayoral Drive Alignment project area in orange

3.2 ARCHAEOLOGY AND BUILT HERITAGE

As a major urban centre, the Mayoral Drive and Queen Street area has a history of both Māori and European settlement. Development in this area was well advanced by the 1860s. As such, multiple

archaeological sites lie within the project area. An assessment of effects on archaeology is included in **Appendix H**.

Three sites of archaeological significance exist in proximity to the project area, being:

- R11/2017: European midden associated with Waihorotiu stream in Myers Park
- R11/1936: Multiple 19th century businesses at 36-38 Greys Avenue
- R11/2669: Myers Park Historic Landscape covering the whole of Myers Park

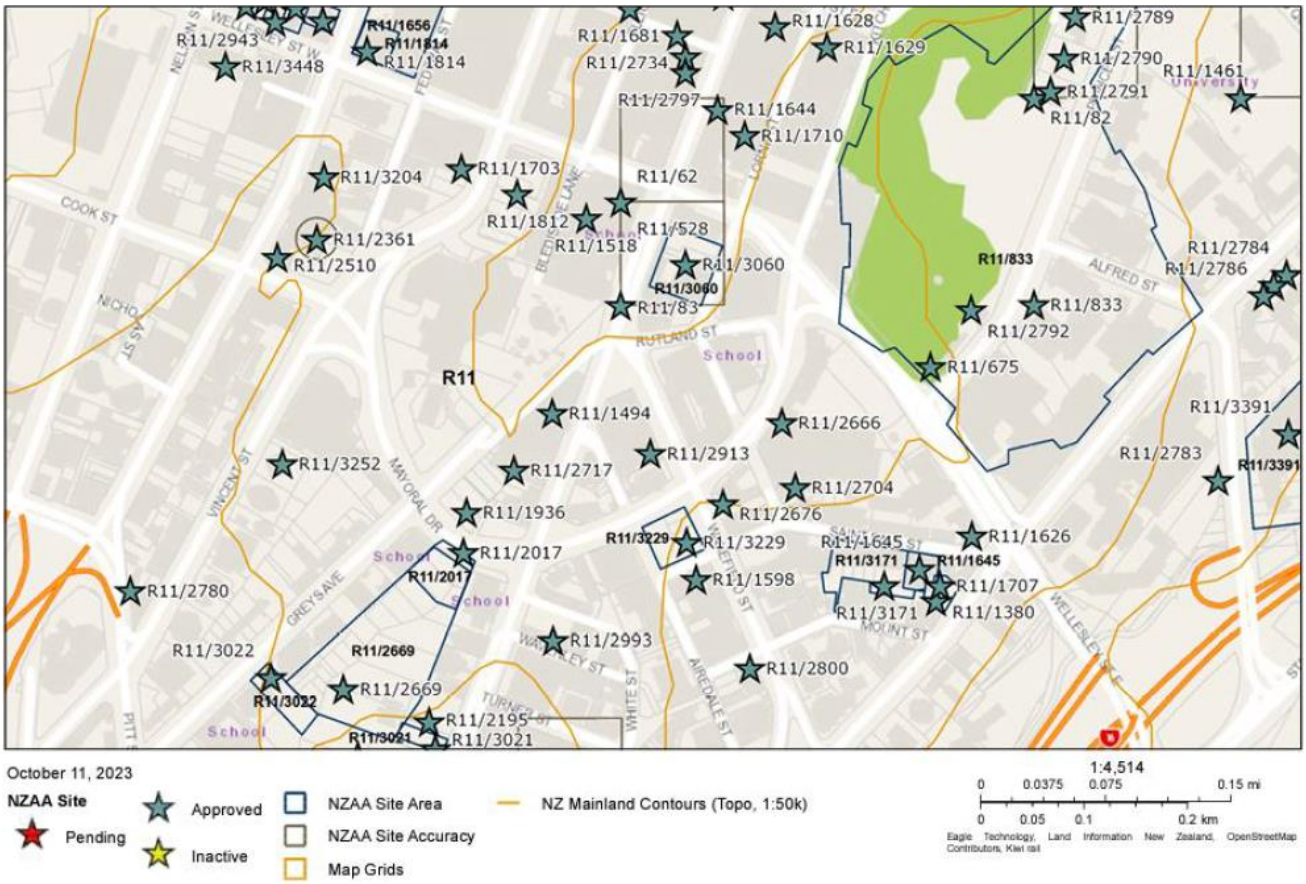


Figure 3-2: Recorded archaeological sites in proximity to the Project area (source: NZAA ArchSite 2023)

In addition to the archaeology sites listed above, two scheduled heritage buildings lie immediately adjacent to the project area. This includes the Auckland Sunday School Union Building at 323-327 Queen Street and the former Civic Administration Building at 1 Greys Avenue.

An archaeological authority will be sought for the works from Heritage New Zealand Pouhere Taonga. It is expected that the authority will outline measures to be implemented during construction to protect archaeological sites in the project's vicinity.

3.3 PROTECTED TREES

As detailed in the Arboricultural Assessment (**Appendix I**), several protected trees are within the project footprint, all located in the road reserve. Schedule 10 of the AUP lists groups of trees considered among the most significant in Auckland. Notable Tulip trees (AUP ID 13) are found along Mayoral Drive. Additionally, the Project alignment includes two Queensland Box trees at the Mayoral Drive/Cook St intersection and one London Plane tree at the Vincent St/Cook St intersection.

While the Queensland Box trees and the London Plane tree are not listed within Schedule 10, there are still provisions within the AUP that protect them.

3.4 HYDROLOGY AND STORMWATER ENVIRONMENT

The Project area lies within the upper Waitemata Harbour catchment of the City Centre. The City Centre is heavily built-up and virtually fully impervious, with extremely limited capacity for absorption of rainwater. No natural watercourses exist within or downstream of the project area.

Sourced from Auckland Council's GeoMaps, Figure 3-3 below shows the relevant flooding hazards in relation to the project site.

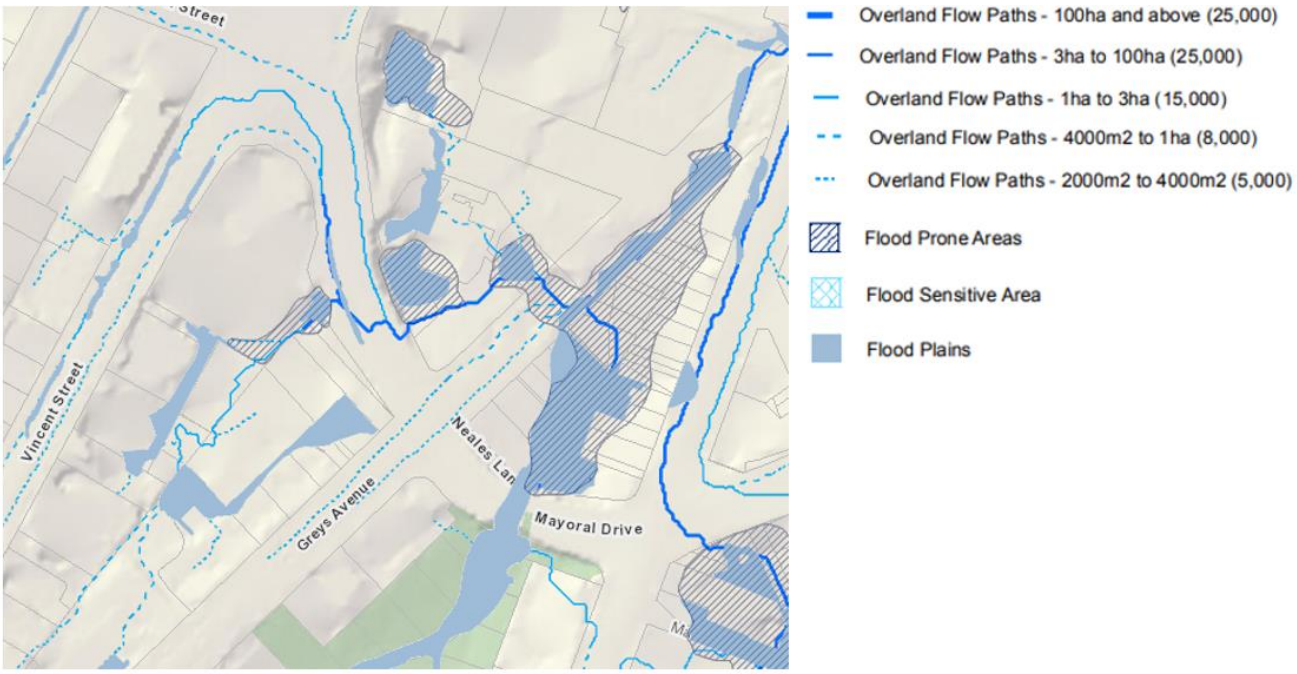


Figure 3-3: Flooding and Hydrology Hazard Maps

An assessment of the Project's effects on natural hazards is included in **Appendix K**.

3.5 GEOTECHNICAL CONDITIONS

The geotechnical environment is described in **Appendix J** – Assessment of Dewatering Effects and summarised below.

3.5.1 SITE GEOLOGY

The project site is generally underlain by East Coast Bays Formation (ECBF) of the Waitemata Group, comprising of interbedded sandstone and mudstone[1]. The rock is overlain by the ECBF residual soils.

Ground investigations undertaken between the 14th of July and the 18th of September 2023 sought to understand the sub-surface ground information to inform the planning and design of the alignment. During these investigations, man-made fill materials and alluvium were uncovered as well as sandstone and mudstone.

[1] Geological Map of the Auckland Area 1:250 000 Geological Map 3.

3.5.2 HYDROGEOLOGY (GROUNDWATER)

A dual groundwater system occurs in the City Centre, with a shallow perched system in the residual soils and a deeper, regional groundwater system within the basement ECBF. This has been noted in several of the geotechnical studies conducted for various construction projects, including the CRL project.

3.6 EXISTING UTILITY SERVICES

Table 3-1 below provides a summary of the underground utilities which currently exist within the project area.

Table 3-1: Existing utility services in the project area

Utility	Operator	Comments
Water	Watercare Services Limited (Watercare)	The watermains run from the Mayoral Drive/Cook/Vincent Street intersection, down Mayoral Street, where they meet watermains running across Greys Avenue and continue down Mayoral Drive, connecting to Mayoral Drive/Queen Street intersection.
Wastewater	Watercare Services Limited (WSL)	A gravity wastewater main, DN150 AC pipe, runs from Vincent Street to Mayoral Drive. A DN225 concrete wastewater pipe runs across Mayoral Drive near the Mayoral Drive/Cook Street/Vincent Street intersection. A DN 150 PE & DN 300 PE run across Mayoral Drive near Greys Avenue. Towards the bottom of Mayoral Drive, a DN300 AC pipe runs across Mayoral Drive and connects to a DN675 concrete wastewater main that joins the wastewater pipeline on Queen Street.
Stormwater	Auckland Council – Healthy Waters	The stormwater gravity main runs along Mayoral Drive/Queen Street intersection through the Greys Avenue carpark to Queen Street. The are several different sizes and materials of pipe starting with DN750 concrete and connecting to DN1050 concrete.
Electricity - HV, LV and F(V)	Vector	There are HV Vector power cables which are encased in 2x DN200mm (22kV), 2x DN50mm (11kV) and 4x DN80mm (110kV) ducts running through the tunnel of HV Vector power cables from Mayoral Drive/Cook Street intersection to Queen Street. There are LV Vector power cables running along Mayoral Drive heading towards the Queen Street. 2X F(V) Vector Pilot/Fiber Optic cables are also running along from Mayoral Drive/Cook Street intersection to 100 Mayoral Drive, connecting to Mayoral Drive/Queen Street intersection through the Greys Avenue carpark then leading to Queen Street.
Communication, C(V)	Vector	The Vector Communication cables run from 100 Mayoral Drive to the Mayoral Drive/Queen Street intersection, through the Greys Avenue open carpark, connecting to Queen Street.
Gas, G	Vector	The MP4 Vector Gas line runs along 100 Mayoral Drive to Queen Street.
City Rail Link, CRL	KiwiRail and Auckland Transport	The City Rail Link runs parallel with Vincent Street to Mayoral Drive/Cook Street intersection.

Communication, C(VF)	Vodafone	Vodafone Communication cables run from Mayoral Drive/Cook Street intersection to 100 Mayoral Drive, connecting to Mayoral Drive/Queen St intersection through the Greys Avenue carpark.
Electricity, TR	Transpower	Transpower Underground Power cables run from Vincent St to Mayoral Drive/Cook Street intersection to 100 Mayoral Drive, connecting to Mayoral Drive/Queen St intersection through the Greys Avenue carpark then heading to Queen Street.
Fibre Optic, F (TR)	Transpower	Transpower Fibre Optic cable from Vincent St to Mayoral Drive/Cook Street intersection to 100 Mayoral Drive, connecting to Mayoral Drive/Queen St intersection through the Greys Avenue carpark then heading to Queen Street.

4 PLANNING PROVISIONS

The section below details the district and regional planning provisions relevant to the Project works. A full set of AUP maps is included in **Appendix E**.

Table 4-1: AUP provisions within the Project area

Zone	• Road • Business – City Centre Zone
Precinct	• Arts, Civic and Entertainment Precinct
Overlay	• Natural Heritage: Regionally Significant Volcanic Viewshafts and Height Sensitive Areas Overlay – E10 Mount Eden • Notable Trees & Notable Groups of Trees
Controls	• Macroinvertebrate Community Index – Urban • Arterial Road
Designations	• Designation 8831 – Penrose to Hobson Street Tunnel and Penrose Portal, Vector Ltd • Designation 1567 – Road Widening (Neales Lane), Auckland Transport • Designation 2500-2 – City Rail Link-substrata, Mayoral Drive to New North Road, City Rail Link • Designation 2500-3 – City Rail Link-strata Mayoral Drive to New North Road, City Rail Link
Hydrology and Flooding	• Overland Flow Paths • Flood Prone Areas • Flood Plains
Treaty Settlement – Statutory Acknowledgement	• None
AUP Modifications	• Plan Change 78 – intensification – proposed (18/08/2022)

4.1 AUP ZONING

The majority of the project works will take place within the road reserve on Vincent Street and Mayoral Drive. Parts of the project area, which extend beyond the road reserve, such as the Greys Avenue CSA, are zoned Business – City Centre. The Project works do not extend into the Open Space – Informal Recreation Zone in Figure 4-1: AUP Zoning Maps.

Figure 4-1: AUP Zoning Maps

4.2 AUP PRECINCTS

Figure 4-2 below shows the relevant AUP Precinct provisions in proximity to the Project works. The works on Vincent Street and down Mayoral Drive are excluded from any precinct. A portion of the works nearer to Greys Avenue and Queen Street lie within the Arts, Civic and Entertainment Precinct. Based on the nature of the proposed works, the provisions of the precincts are not applicable to the Project.

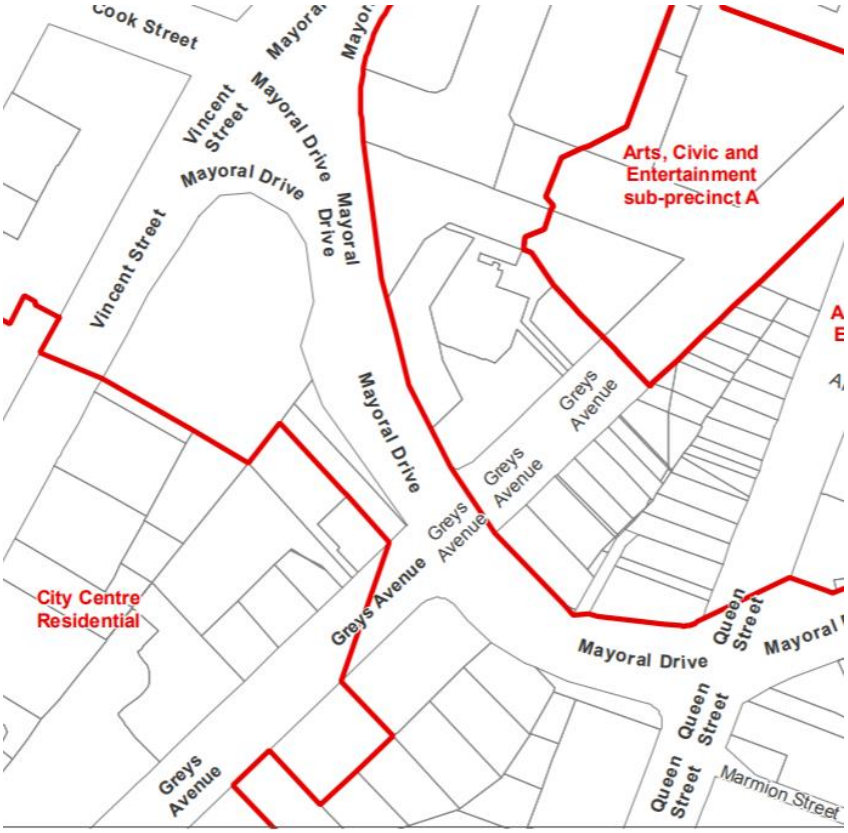


Figure 4-2: AUP Precinct Maps

4.3 AUP OVERLAYS

Summarised below, a number of AUP overlays apply to the Project Area.

4.3.1 NATURAL HERITAGE

Figure 4-3 below shows the natural heritage overlays relevant to the project area.

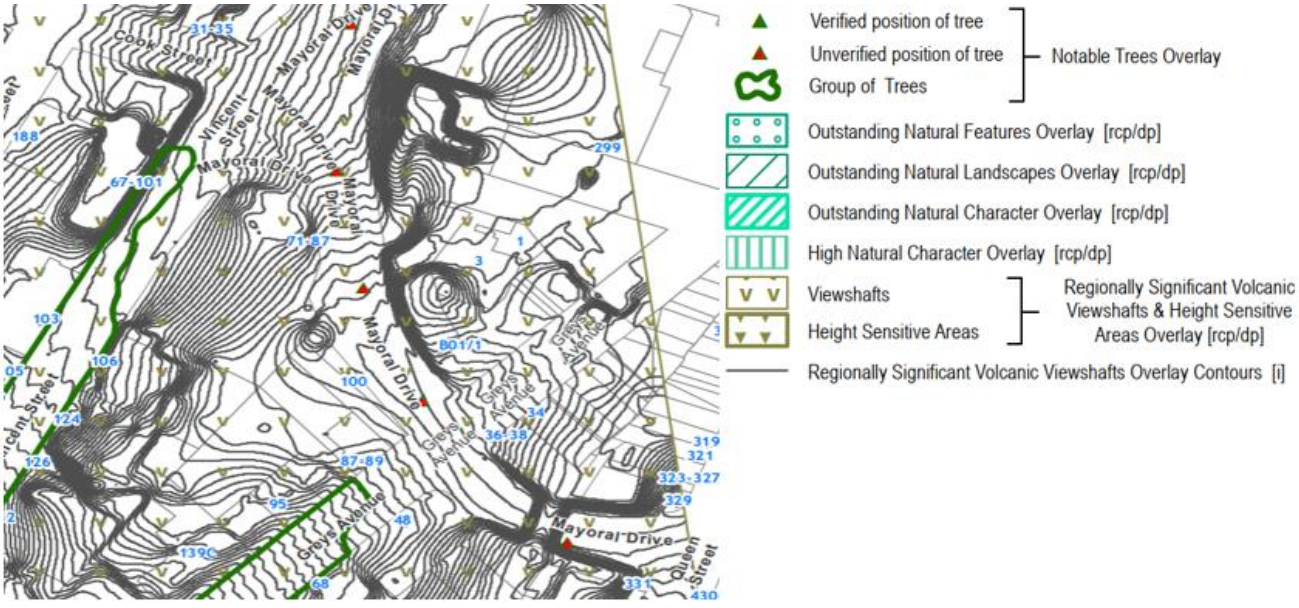


Figure 4-3: Natural Heritage Overlays

4.3.1.1 REGIONALLY SIGNIFICANT VOLCANIC VIEWSHAFT

The purpose of this overlay is to protect views of Auckland's volcanic cones from development. As the project works are to take place below ground, this overlay is not applicable.

4.3.2 HISTORIC HERITAGE

As in Figure 4-4, the AUP Historic Heritage Extent of Place Overlay applies to the following buildings in the vicinity of the Project works:

- AUP ID 2723: Civic Administration Building
- AUP ID 2045: Auckland Sunday School Union Building

As the works will not infringe the mapped extent of place for these historic buildings, this overlay is not applicable to the Project.

It is also noted that while the former Civic Administration Building is scheduled as a heritage building, it has recently been rebuilt and converted to apartments and is a steel-frame structure. As such, it is not considered to be a structure sensitive to vibration, as other heritage buildings typically are.

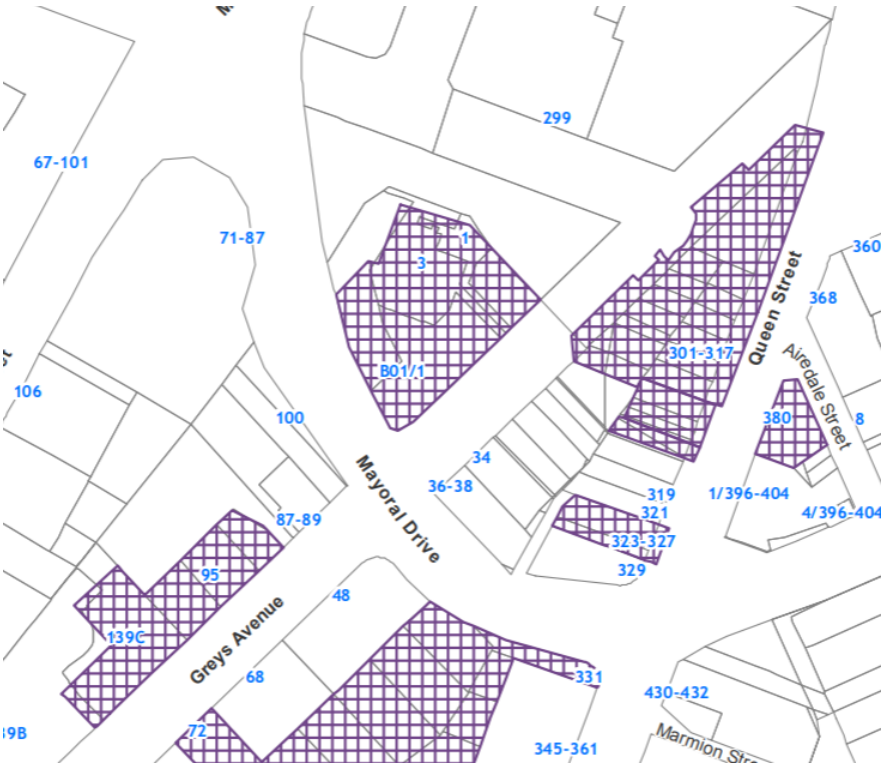


Figure 4-4: Historic Heritage Overlay

4.4 AUP CONTROLS

As in Figure 4-5, three AUP controls apply to the Project area:

- Macroinvertebrate Community Index – Urban
- Arterial Roads
- Vehicle Access Restriction Control - General

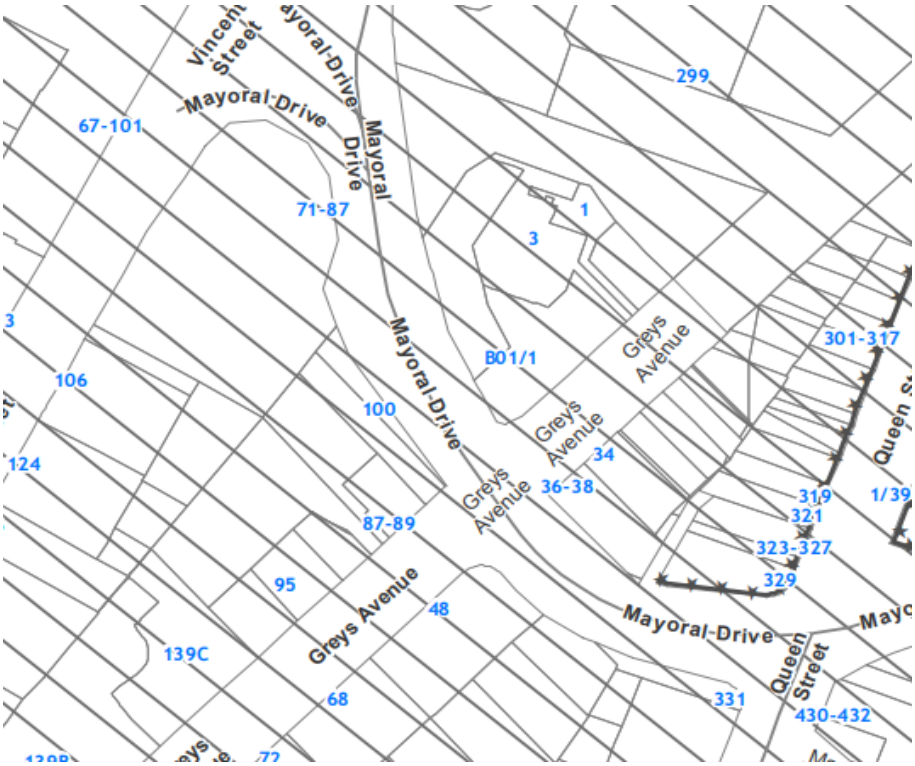


Figure 4-5: AUP Controls

Due to the nature of the proposed works, none of these controls apply to the Project.

4.5 AUP DESIGNATIONS

As shown in Figure 4-6 and detailed below, three designations apply to the Project area. Under Section 176 of the RMA, approval will be sought from designation holders before works begin.

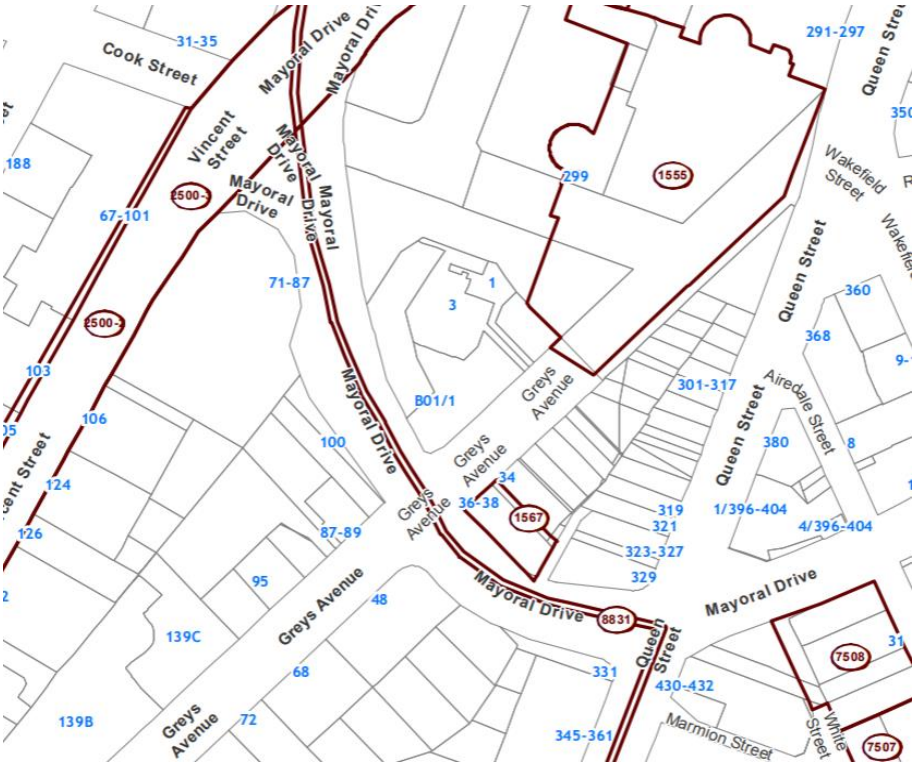


Figure 4-6: AUP Designations

4.5.1 AUP ID 1567

Designation ID 1567 applies to road widening of Neales Lane and lies within the Greys Avenue carpark / CSA. As discussed in Section 6, s176 approval has been sought from Auckland Transport for works within their designation.

4.5.2 AUP ID 8831

Designation ID 8831 is held by Vector Limited for a 110kV electricity line which runs from Hobson Street through the centre of Mayoral Drive to Queen Street. While the Project works will not reach depths near Vector's infrastructure which begins at 40 metres below ground, s176 approval has been sought for works within their designation.

Refer to Section 6.4.1 of this application for details on s176 approvals.

4.5.3 AUP ID 2500-2 & AUP ID 2500-3

These designations are held by City Rail link (CRL) and account for the sub-strata (2500-2) and strata (2500-3) protection of underground land for construction and maintenance of the CRL tunnels. These designations extend from Mayoral Drive to New North Road and are therefore relevant to the project works and s176 approval has been sought for works within their designation.

Refer to Section 6.4.3 of this application for details on s176 approvals.

5 PROPOSAL AND ACTIVITIES

5.1 PROJECT OVERVIEW

The Project proposes the construction of a 375mm – 700mm diameter wastewater sewer line within / adjacent to the road corridor of Mayoral Drive, including connections to the existing wastewater network.

The Project will be constructed using a combination of trenchless pilot bore and open-cut trenching excavation, with shafts utilised along the alignment to launch and receive the pilot boring machine. An overview of the proposed pipeline alignment and shaft/manhole locations is shown in Figure 5-1.

To ensure flexibility in the consenting process, a consenting envelope approach has been adopted for all shaft dimensions and the construction compounds. The dimensions specified within the consent allow for changes through the detailed design phase while ensuring there is no impact on environmental performance, including hydrogeological effects.

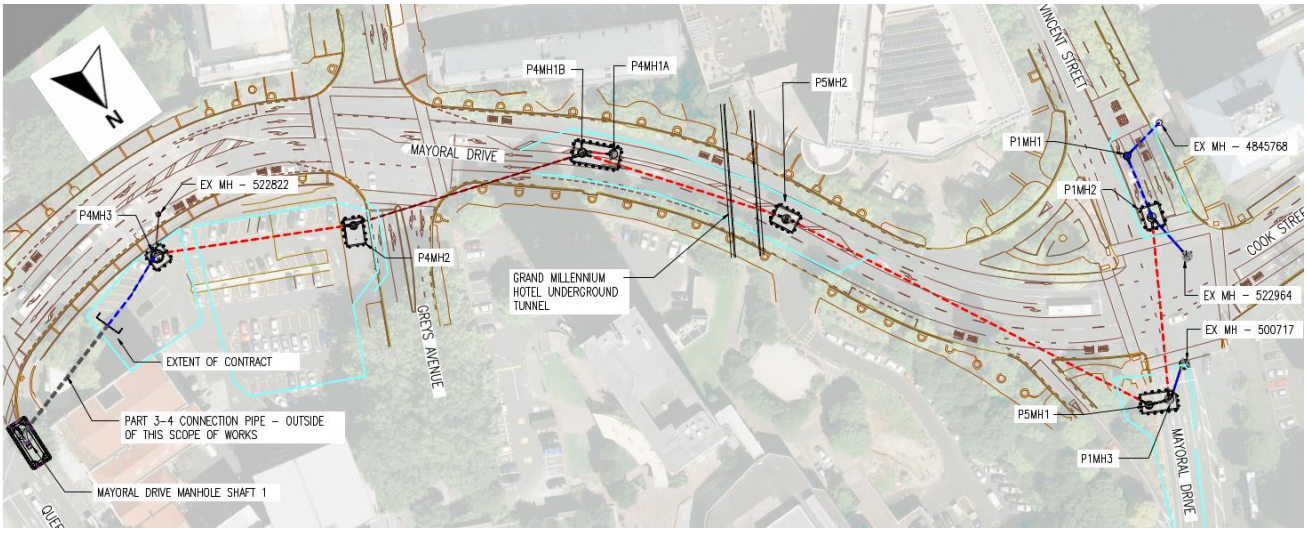


Figure 5-1: Alignment of the proposed pipeline (sections in red to be constructed via pilot boring, sections in cyan to be constructed via open cut) and shafts.

5.2 CONSTRUCTION HOURS AND DURATION

The anticipated construction hours are noted in Table 5-1 below.

Table 5-1: Proposed Construction Hours

Shaft Construction	Monday to Saturday – 0700hrs to 1800hrs Sunday and night work will be carried out on an "as required basis".
Tunnelling works	Monday to Saturday – 0700hrs to 1900hrs

In some circumstances, works may be required outside the hours noted above due to operational requirements including large plant deliveries and traffic management installations as well as

dewatering (operating 24-hours a day) and longer concrete pours. All works cutting and diversion of live assets are to be undertaken at times of low water usage (such as early morning).

An indicative construction programme is provided as **Appendix C** of this resource consent application.

5.3 CONSTRUCTION SUPPORT AREA (CSA) AND COMPOUNDS

To support the proposed construction activities, a primary CSA will be used within the public carpark at 38 Greys Avenue and 329 Queen Street. This CSA is established as part of the approved Part 3 Alignment works. The CSA currently contains site offices and welfare facilities, and some limited site laydown and materials storage areas. The existing site layout for the Greys Avenue CSA is shown below in Figure 5-2. The CSA may be reconfigured to respond to the works proposed for this Project.

Three secondary construction compounds (compounds) will be established within the road corridor of Mayoral Drive and Vincent Street to allow for the construction of shafts and to undertake tunnelling works. In addition, the Greys Avenue CSA will be extended into the footpath at Greys Avenue to accommodate the construction of P4MH2. These compounds are expected to be in place for 6 to 8 months.

Temporary concrete or steel barriers with hoardings will be constructed around the perimeter of each, with access gates one or both ends.

The indicative compound boundaries around the possible shaft envelopes are shown below in Figure 5-3 with the indicative boundaries shown in cyan.

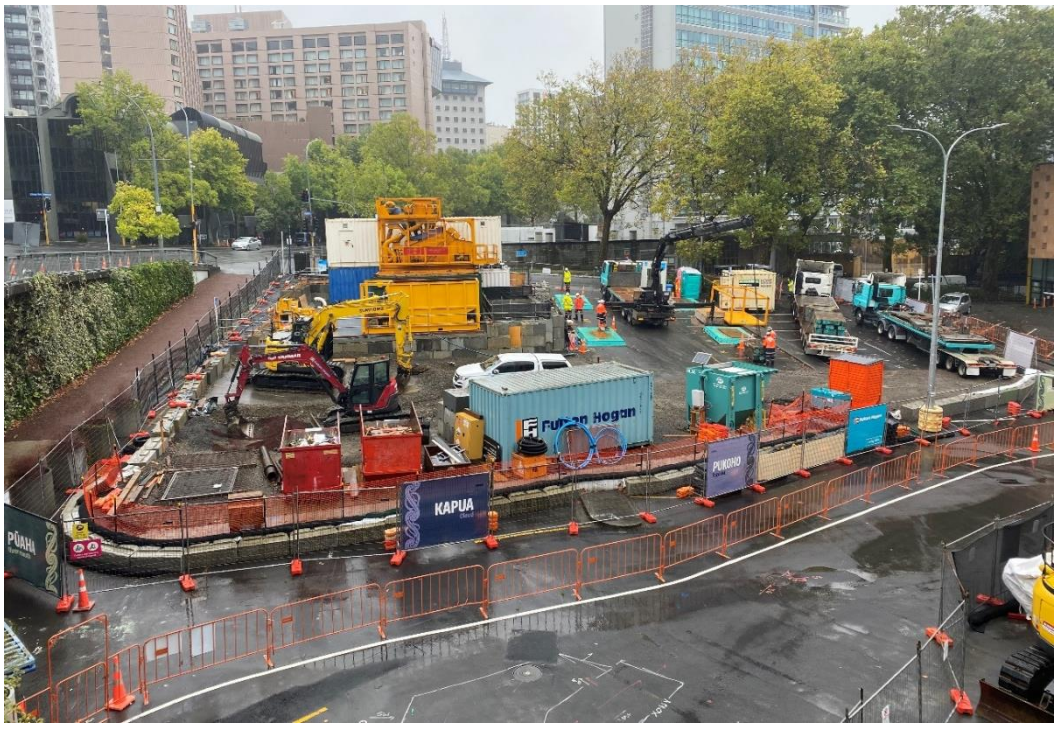
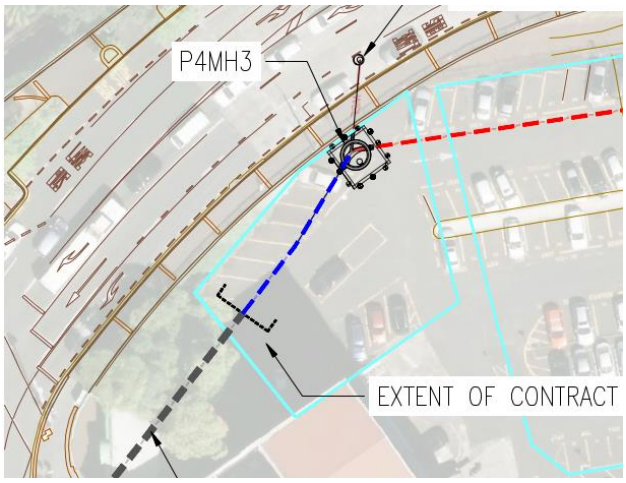
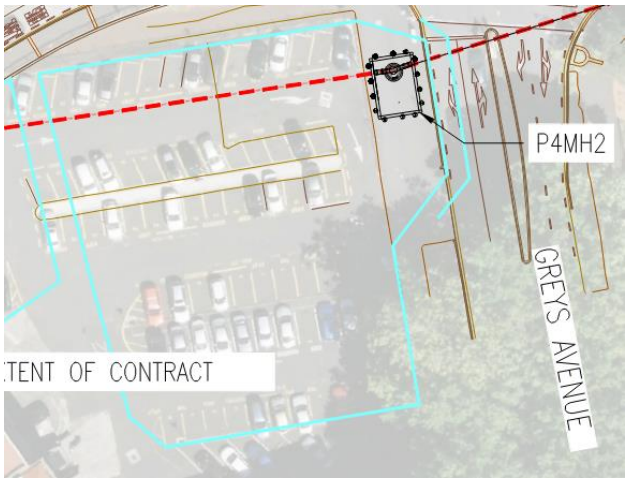


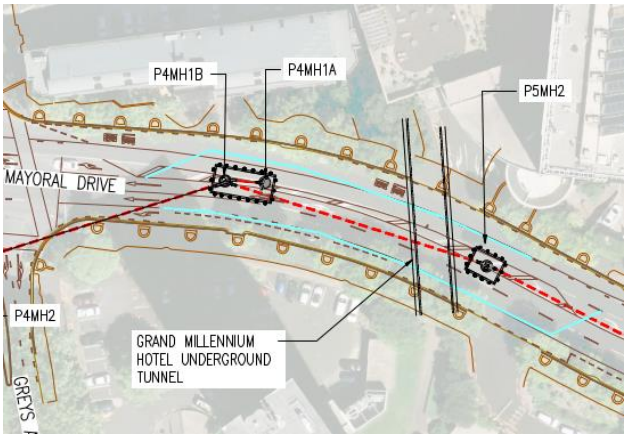
Figure 5-2: Current Greys Avenue CSA Layout



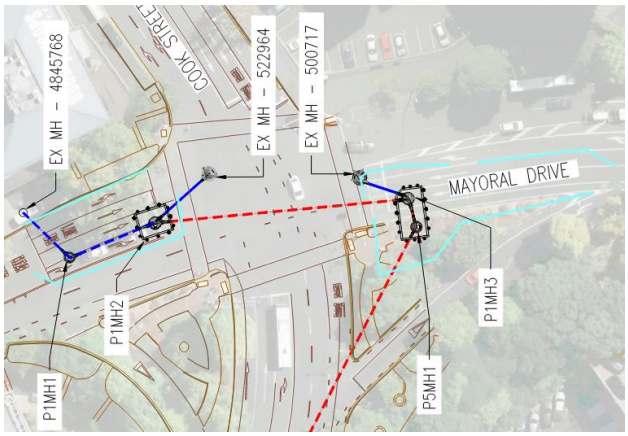
Indicative compound around P4MH3 within Greys Ave Carpark



Indicative compound on Greys Ave outside the CSA in the Greys Ave carpark



Indicative compound on Mayoral Drive outside 299 Queen Street, G05/1 Greys Ave



Two compounds at Cook St/Mayoral Drive/Vincent St intersection

Figure 5-3: Indicative compound locations used as part of the Project (extent shown in light blue)

5.4 SHAFT CONSTRUCTION

Most manhole locations will serve as launch/reception pits for trenchless construction (axis/pilot bore). Six construction shafts, each with maximum internal dimensions of 5.5m x 12m, are proposed along the Mayoral Drive Alignment. All shafts are proposed to be supported with post and panel walls; although, other construction methods may also be used such as sheet piling and/or secant bored piles.

For post and panel, the steps to construct the temporary shafts are:

1. Drill 600mm diameter holes using an auger attachment on a 10-35t excavator or small piling rig, and set steel H-columns with sand or concrete backfill.
2. Excavate the shaft top-down to about 1m below pipe invert, removing spoil with six-wheeled trucks.
3. Install steel road plates or timber lagging between H-columns as excavation progresses.
4. Use forced air ventilation during work hours if needed.
5. Line the shaft base with 300-500mm of aggregate and/or 100mm of blinding concrete for a solid, level platform.

6. Dewater using a submersible pump, with water pumped into a clarifying tank before discharge to the stormwater network. Pumps will run continuously for 6-8 months, powered by a silenced 50 kVA diesel generator.
7. After tunnelling, construct a manhole and reinstate the road.

Refer to **Appendix C** for a list of proposed equipment required for shaft construction.

The construction details for each shaft are noted in Table 5-2 below:

Table 5-2: Summary of shaft earthworks and construction details

Manhole ID	Width (m)	Length (m)	Depth (m)	Earthworks Volume (m^3)	Duration Shaft Open
P4MH3	5	5	6.5	162.5	6 to 8 months
P4MH2	5	7.5	9	337.5	6 to 8 months
P4MH1A and B	5.5	12	9	594	6 to 8 months
P5MH2	5	6.5	8.5	276	6 to 8 months
P5MH1 and P1MH3	5	9.5	7	332.5	6 to 8 months
P1MH2	5	6	6.5	195	6 to 8 months

The total earthworks volume for shaft excavations is estimated to be approximately 1,898 m^3 with an additional 170m^3 associated with the piles that extend deeper than the base of the shaft. The cumulative total earthworks volume for the Project is therefore approximately **2,068 m^3**.

Shaft excavations are expected to occur over 1 – 2 weeks, depending on the size and depth of the shafts.

5.5 TUNNELLING WORKS – TRENCHLESS

It is proposed to construct the tunnelled sections between manholes P4MH3 (within Greys Avenue Carpark) and P1MH2 (within Vincent Street, opposite the intersection with Mayoral Drive) of the wastewater pipeline using a trenchless pilot-guided boring methodology. Five pipe runs will be required.

The steps for this methodology are as follows:

- Plant setup
- Lift pilot bore rig into launch shaft and survey into position
- Drill pilot hole to reception shaft using laser guided steering head
- Install cutting reamer and pull back to launch shaft
- An auger (or vacuum) with sucker truck will be used to remove spoil from drive, which will be disposed offsite using 6-wheelers or sucker trucks.
- Simultaneously jack pipes between shafts.
- Clean up and flush drill slurry out of pipe by jetting and vacuum truck.

Refer to **Appendix C** for a list of proposed equipment required for trenchless works.

5.6 OPEN CUT CONSTRUCTION

Open-cut construction is proposed for the following sections of the proposed pipeline:

- For the installation of a 20 m section of pipeline between the P3-P4 Connector Tunnel and P4MH3,
- For the installation of pipework for tie-in works at P1MH1,
- For the main pipe installation between P1MH1 and P1MH2,
- Construction of manhole P1MH1,
- The installation of pipework for tie-in works at P1MH3,
- And the installation of a short section of pipeline between P4MH1A and P4MH1B

For shallow or short pipe runs, an open-cut pipe laying method will be used. The steps are:

- Set up short-term traffic management for pipeline sections outside temporary compounds.
- Use trench shields and manhole boxes for trenching over 1.5m depth, with 10-25m of trench open at a time for up to 4 weeks. Change to driven steel H-pile support for existing services.
- Expected trench volumes: 90m^3 (P1MH2 to EX MH 522964), 62m^3 (P5MH1 to EX MH500717), 71m^3 (P1MH2 – P1MH1), 38m^3 (P1MH1 – EX MH4845867). Total earthworks volume: 261m^3.
- Deliver pipe lengths and precast manholes on flatbed trucks, unload with HIAB trucks or excavators.
- Use an excavator to trench to required depths and install trench shields, with wider trench boxes at manhole locations.
- Cut excavated materials to waste as clean, managed, or contaminated fill.
- If dewatering is needed, use a submersible pump to remove water, treat it in a clarifying tank, and discharge to stormwater. Pumps run continuously, powered by a silenced diesel generator, with noise mitigation if required.
- Cart pipe bedding material to the site, spread and compact it in specified layers using excavators and plate compactors.
- Use excavators to lift pipe lengths into the trench.

Construct side haunching, overlay bedding, and hard fill to pavement level as per pipe bedding material.

Refer to **Appendix C** for a list of proposed equipment required for open-cut construction works.

5.7 MANHOLE CONSTRUCTION AND ROAD REINSTATEMENT

Manholes will be installed in the shafts and the road surface reinstated upon completion of the shaft and tunnelling construction works.

Refer to **Appendix C** for the basic construction steps and a list of proposed equipment required for manhole construction works.

5.8 NETWORK UTILITY RELOCATIONS

Network utilities (NUs) within both the road carriageway and within the Greys Ave CSA are required to be diverted to enable the construction of the shafts. The utilities to be diverted include potable water, electricity, wastewater, stormwater and communications.

To relocate the NUs, trenching will be required. Dewatering may be required within the trenches.

EROSION AND SEDIMENT CONTROLS

A range of controls are to be installed on site during construction works to manage erosion and the discharge of sediment. As the Greys Avenue CSA site lies within a floodplain and Overland Flow Path (OLFP) as identified by Council, specific controls apply to this area to avoid discharge of sediment to the stormwater network. The Erosion and Sediment Control Plan (ESCP) has been prepared in accordance with Auckland Council guideline GD05 – Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region.

These controls are detailed in the ESCP in **Appendix L** and summarised below:

- Clean and Dirty water corridors are to be established at the Greys Ave CSA to ensure the overland flow of stormwater is kept clean and separate from the land disturbance of the works
- For the rest of the alignment, plywood bund, vehicle traversable bunds, and silt socks are to be installed around the compounds to divert clean water away from the site, while retaining any dirty water generated within the site.
- As shown in **Appendix L,** catchpit protection devices are to be installed on catchpits within the compounds for protection against any unintentional release of sediment from the compound sites.

5.9 TEMPORARY STORAGE OF HAZARDOUS SUBSTANCES

During construction, temporary storage of some hazardous substances is required for the continual operation of machinery.

Diesel and petrol will be stored at all compounds along the project site for fuelling of machinery during tunnelling and shaft construction works. Resins, pipe grease, cement and epoxies will also be held at the secondary support compounds for the construction of the manholes.

No hazardous substances will be stored within the 1% AEP floodplain present within the Greys Ave carpark.

5.10 WORKS TO PROTECTED TREES

As detailed within the Aboricultural Assessment (**Appendix I**), there are a number of protected trees within the project footprint. All are within the road reserve. These trees consist of five Tulip trees within the carriageway of Mayoral Drive, two Queensland Box trees within the island to the northeast of Vincent St/Mayoral Drive intersection, and one London Plane tree adjacent to 67-101 Vincent Street.

The following discussion is derived from the findings within the Aboricultural Assessment.

The installation of the pipeline beneath the two Queensland Box trees and the excavation of shaft P5MH1/P1MH3 adjacent to these trees will be undertaken in accordance with Standard E25.4.5.2 of the AUP. Pruning is only required for one of the Queensland box trees and this pruning will be undertaken in accordance with Standard E26.4.5.1 of the AUP.

The proposed works to construct shaft P1MH2 on Vincent Street near the London Plane tree will be undertaken in accordance with Standard E25.4.5.2. Similarly, pruning of this tree will be undertaken in accordance with Standard E26.4.5.1.

As resource consent is not required for the works in the vicinity of the above street trees, no further assessment of the proposed works on these trees is provided within this application (Refer Appendix I for a detailed assessment of permitted standards).

However, resource consent is required for excavation works within the Protected Root Zones of the five Notable Tulip trees. The potential effects on these trees are discussed within Section 9.5.

Tree Owner Approval (TOA) is required for works to all street and Notable trees growing in the road reserve. A TOA from the Community Facilities Senior Urban Forest Specialist will be sought.

6 CONSULTATION AND APPROVALS

Watercare has undertaken consultation and engagement in relation to the project works.

6.1 AUCKLAND TRANSPORT

Consultation with Auckland Transport (AT) has occurred throughout the entirety of the Queen Street Wastewater Diversion programme. This engagement includes the early sharing of findings from the specialist investigations, along with face-to-face workshops to discuss effects and mitigation strategies.

Ongoing weekly meetings with the City Centre Network Operations team (CCNO) to discuss project updates, any upcoming works requiring TMP amendments and any future TMP submissions have been taken place.

6.2 MANA WHENUA

Watercare has a long-standing relationship with mana whenua of Tāmaki Makarau. All iwi entities are advised of projects via a Kaitiaki Project List, which is updated and circulated monthly. The following iwi entities have registered their interest in the wider Queen Street project: Ngāti Whātua Ōrākei, Ngāti Maru, Te Aakitai Waiohua, Ngaati Whanaunga, Te Rūnanga o Ngāti Whatua, and Te Patukirikiri.

Periodic updates regarding this Project are provided to mana whenua partners, and application documents are available for their review and comment at https://www.watercare.co.nz/home/projects-and-updates/projects-around-auckland/midtown-wastewater-diversion.

6.3 WIDER COMMUNITY ENGAGEMENT

In recognition of the highly populated area in which works will occur, engagement has been carried out with the wider community:

- An information flyer has been created and given to local residents and business owners in the project vicinity. This flyer details the reason for improvements to the wastewater network in the City Centre and provides details on construction methodology and approximate timelines for consent approvals and construction.
- Details on the mid-town construction programme (including the Queen Street Project) were also published in the July 2023 City Centre Ratepayers Association newsletter.
- Regular content has also been provided in the Midtown Regeneration e-newsletter since July 2023.
- Local resident and business associations have been kept informed of the works progress through e-mail updates. This contact will continue throughout construction.

Additional engagement activities include:

- Nearby hotels have been engaged to discuss the potential effects on hotel operations, such as bus access and visibility of hotel signage. These hotels contacted are the Grand Millennium, Airedale Hotel, and the Four Points Sheraton.

- Door knocks completed in advance of construction along the project alignment.
- Public information events held prior to the beginning of construction.
- Bespoke group meetings to discuss potential construction impacts and mitigation measures prior to construction commencement.
- Advanced notification to Greys Ave carpark users that the carpark was to temporarily close from October 2024 to approximately December 2026.
- Business open signs and specific business signage for directly impacted businesses.
- Pre-condition photos taken prior to construction for specific Heritage buildings, with monthly drone photos for other specific Heritage buildings.
- Specific work notices to directly affected residents and businesses, ahead of changes in construction activities.
- Ongoing construction vibration monitoring at specific Heritage buildings.
- Regular noise monitoring undertaken.
- Regular informal catch-ups with directly impacted businesses.
- Dedicated contractor Stakeholder Manager who liaises with businesses and residents, answering any queries and taking feedback.

6.4 S176 RMA APPROVALS

As required by Section 176 of the RMA, approval must be sought from a requiring authority prior to any works taking place within their designation. Detailed below, the project works fall within the boundaries of three separate designations belonging to Vector, Auckland Transport and City Rail Link.

6.4.1 VECTOR

As mentioned, Designation ID 8831 is held by Vector Limited for a 110kV electricity line which runs from Hobson Street through the centre of Mayoral Drive to Queen Street. While the Project works will not reach depths near Vector's infrastructure which begins at 40 metres below ground, s176 approval has been sought for works within their designation.

On 28 January 2025, written approval was received from Vector to undertake the service diversions within this designation.

In relation to the permanent works within the designation, ongoing consultation is being undertaken with Vector regarding the infrastructure proposed within their tunnel designation.

6.4.2 AUCKLAND TRANSPORT

Designation ID 1567 applies to the road widening of Neales Lane and lies within the Greys Avenue carpark / CSA.

Auckland Transport formally issued its written consent on 1 September 2023 for Watercare's proposed temporary works. The application sought approval for the establishment of a temporary construction support area within 34 and 36–38 Avenue Car Park, Auckland Central, which is located within the extent of Auckland Transport Designation 1567 for the construction of the Queen Street Wastewater Project.

In relation to the permanent works within the designation, ongoing consultation is being undertaken with Auckland Transport to confirm the proposed alignment since 2023. This collaborative process is intended to ensure that all potential effects are appropriately identified, assessed, and mitigated. Upon reaching agreement on the alignment and associated matters, a formal application for Section 176 approval will be submitted to Auckland Transport in respect of the permanent works.

6.4.3 CITY RAIL LINK

As mentioned, City Rail link (CRL) holds designations for the sub-strata (2500-2) and strata (2500-3) protection of underground land for construction and maintenance of the CRL tunnels. These designations extend from Mayoral Drive to New North Road and are therefore relevant to the project works, and Section 176 approval has been sought for works within their designation.

On 21 January 2025, written approval was received from CRL to undertake the service diversions within this designation.

In relation to the permanent works within the designation, ongoing consultation is being undertaken with CRL in relation to P1MH1, P1MH2, P1MH3, P5MH1 and the connecting pipe.

7 REASONS FOR CONSENT

7.1 AUCKLAND UNITARY PLAN

Resource consent requirements for the proposed works under the AUP (district and regional) are identified in Table 7-1 below. Overall, the activity status under the AUP is a **Restricted Discretionary Activity**.

Table 7-1: Reasons for Consent - District

Reasons for Consent – Auckland Unitary Plan – District		
Activity Rule	Status	Relevance to application
Rule E26.4.3.1 (A88) Works within the protected root zone not otherwise provided for.	Restricted Discretionary	Excavation of two Mayoral Drive shafts and the storage of machinery within the PRZs of five Notable Tulip trees.
Rule E25.4.1 (A2) Construction noise and vibration activities that do not comply with all the relevant permitted activity standards.	Restricted Discretionary	For construction noise outside the road corridor during the day (for construction of shafts & both trenchless and open-cut works). This is because predictions are estimated above the relevant permitted levels in the AUP.

Table 7-2 Reasons for Consent- Regional

Reasons for Consent – Auckland Unitary Plan – Regional		
Activity Rule	Status	Relevance to application
Rule E7.4.1 (A20) Take and use of groundwater for dewatering	Restricted Discretionary	Consent is required for the take and discharge of groundwater during the construction of the shafts along the proposed alignment.
Rule E7.4.1 (A28) Diversion of groundwater caused by any excavation, (including trench) or tunnel that does not meet the permitted activity standard	Restricted Discretionary	Permitted Standards E7.6.1.10 (2b, 3, 4b, and 5a) are infringed. See Table 6-3 of the Dewatering Assessment (Appendix J) for details.
Rule E30.4.1 (A6) Discharges of contaminants into air, or into water, or onto or into land not meeting permitted activity Standard E30.6.1.1; E30.6.1.2; E30.6.1.3; E30.6.1.4; or E30.6.1.5	Controlled	Consent is required for the disturbance of soil with background concentrations of nickel, lead and zinc above permitted activity criteria.

7.2 NES FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL

Soil investigations in the PSI/DSI **(Appendix F)** recorded an exceedance of background concentrations for lead, zinc, mercury and copper as well as the presence of asbestos. Consequently, the NES-CS is considered to apply to land at and adjacent to these locations under regulation 5(7). The proposed soil disturbance for the Project at testing sites BH23/03, BH23/05 and BH23/07 exceeds asbestos soil guidelines values for commercial/industrial land use criteria and therefore requires a restricted discretionary consent under the NES-CS. The remaining soil disturbance exceeds permitted soil disturbance volumes under regulation 8(3) of the NES-CS and therefore, a controlled consent is required for the remaining soil disturbance.

Refer Figure 9-1 for testing site locations.

Overall, resource consent is required under the NES-CS as a **restricted discretionary** activity.

Table 7-3 below outlines the resource consent requirements for the Project under the NES-CS, as identified in **Appendix F** and further detailed in Section 9.3 Land Contamination Effects.

Table 7-3: Assessment against the NES-CS

Proposed activity	Activity Status	Relevance to Activity
Regulation 5 (7) – Disturbance of soil on a HAIL listed site.	Restricted discretionary	Consent is required for the disturbance of contaminated soil at five testing sites where the presence of contaminants exceeds background levels and is above permitted soil disturbance volumes. Three testing sites also exceed asbestos concentrations for commercial/industrial land use criteria.

7.3 PERMITTED ACTIVITIES

In addition to the above-identified reasons for consent, a number of permitted activity provisions are relied upon to undertake the works as identified below:

- **Rule E4.4.1 (A5)** Discharge onto or into land and/or into water for the purpose of dewatering trenches or other excavations;
- **Rule E25.4.1 (A1)** Construction noise and vibration for planned works within road;
- **Rule E26.4.3.1 (A83)** Tree trimming or alteration in road and public open spaces that comply with Standard E26.4.5.1 (non-notable trees)
- **Rule E26.4.3.1. (A87)** Works within the protected root zone in road and public open spaces that comply with Standard E26.4.5.2 (non-notable trees)
- **Rule E7.4.1 (A27)** Dewatering and the diversion of groundwater (trenchless tunnelling only).
- **Rule E36.4.1 (A28)** Storage of goods and materials in the 1 per cent annual exceedance probability (AEP) floodplain.
- **Rule E26.2.3.1 (A3)** Service connections;
- **Rule E26.2.3.1 (A8)** Pipes and cables for the conveyance of water, wastewater, stormwater, electricity, gas and telecommunications.

- Rule E26.2.3.1 (A49) Underground pipelines and ancillary structures for the conveyance of water, wastewater and stormwater (including above ground ancillary structures associated with underground pipelines);
- Rule E26.5.3.1 (A95) Earthworks up to 2500 m2 other than for maintenance, repair, renewal, minor infrastructure upgrading
- E26.5.3.1 (A96) Earthworks up to 2500m3 other than for maintenance, repair, renewal, minor infrastructure upgrading
- Rule E40.4.1 (A20) Temporary activities associated with building or construction, (including structures and buildings that are accessory activities), for the duration of the project, or up to 24 months, whichever is the lesser.

An assessment against the relevant standards is provided in Appendix D.

8 STATUTORY CONSIDERATIONS

The RMA sets out the statutory framework within which natural and physical resources are managed. Section 104 of the RMA sets out the matters for consideration when assessing a resource consent application.

A consent authority must, subject to Part 2 of the RMA, have regard to the following matters as per Section 104:

- Any actual and potential effects on the environment of allowing the activity;
- Any relevant provisions of a national environmental standard, other regulations, national policy statements, the coastal policy statement, regional policy statement and plans, and the district plan including any proposed plans or regional policy statements; and
- Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

8.1 SECTION 104(2D) APPLICATIONS RELATED TO A WASTEWATER NETWORK

In accordance with Section 104(2D), when considering an application that relates to a wastewater network, a consent authority –

- Must not grant the consent contrary to a wastewater environmental performance standard made under section 138 of the Water Services Act 2021
- Must include, as a condition of granting the consent, requirements that are no less restrictive than is necessary to give effect to the wastewater environmental standard.

In this instance, there are no wastewater performance standards applicable to the application. In this instance, there are no wastewater network environmental performance standards currently in place under Section 138 of the Water Services Act 2021, and as such subsection (2D) of section 104 of the RMA is not applicable.

8.2 SECTION 104C DETERMINTATION OF APPLICATIONS FOR RESTRICTED DISCRETIONARY ACTIVITIES

Section 104C of the RMA states the following in relation to Restricted Discretionary Activities:

1. *When considering an application for a resource consent for a restricted discretionary activity, a consent authority must consider only those matters over which –*
    a. *A discretion is restricted in national environmental standards or other regulations*
    b. *it has restricted the exercise of its discretion in its plan or proposed plan.*
2. *The consent authority may grant or refuse the application*
3. *However, if it grants the application, the consent authority may impose conditions under section 108 only for those matters which –*
    a. *A discretion is restricted in national environmental standards or other regulations*
    b. *It has restricted the exercise of its discretion in its plan or proposed plan*

The information and assessment provided in this report address the requirements of Section 104 and Section 104C RMA.

9 ASSESSMENT OF ENVIRONMENTAL EFFECTS

The following is an assessment of the actual and potential effects on the environment from the proposed activities. The assessment has been prepared to meet the requirements of Schedule 4 of the RMA.

9.1 PERMITTED BASELINE

As prescribed by section 104(2) of the RMA, when determining the extent of adverse effects of an activity, the consent authority '*may disregard an adverse effect if a rule or national environmental standard permits an activity with that effect*'. Accordingly, the permitted baseline is described as those activities which could be legally established as a permitted activity.

A number of activities associated with the Project are recognised as permitted activities under the AUP, subject to compliance with the appropriate standards. A table detailing these provisions and standards has been included in Appendix D of this assessment. As in Section 7.2, these permitted activities include:

- Tree trimming or alteration in road and public open spaces (non-notable trees).
- Works within the root zone of protected trees (non-notable trees).
- Dewatering and the diversion of groundwater (trenchless tunnelling only).
- Discharge of groundwater from dewatering.
- Construction noise and vibration for planned works within the road.
- Service connections and underground wastewater pipelines.
- Installation of infrastructure and associated earthworks.

In relation to noise and vibration effects, noise from construction works within the roading corridor is exempt from the construction noise limits, provided that a work access permit issued by Auckland Transport is provided to Council five days prior to works commencing or a Construction Noise and Vibration Management Plan (CNVMP) is developed and the measures implemented. Despite this, the noise and vibration effects from the works occurring within the road corridor were still assessed within the CNVA (Appendix G) to meet the general obligations to manage noise under Section 16 of the RMA, and a range of mitigation measures have been provided.

In effect, the list of activities and standards described above constitutes the permitted baseline for this project. These adverse effects may be discounted as the level of effect arising from these activities is provided for by the AUP. It is only any other or further adverse effects arising from the proposal over and above the permitted baseline which are to be assessed.

9.2 POSITIVE EFFECTS

The proposed works enable Watercare to provide for the safe and efficient collection and conveyance of wastewater, which is key to supporting the existing and future well-being of the residents of Auckland.

The Project will increase the capacity and resilience of the wastewater system in the upper City Centre catchment and allow for increased development capacity in the area, as enabled by Plan

Change 78 of the AUP. The proposed wastewater upgrades will enable people and communities to provide for their social, economic and cultural well-being and for their health and safety, consistent with the principles and purpose of the RMA.

By increasing the capacity of the wastewater network in the City Centre, the occurrence of wet weather overflows into the stormwater network will decrease. The works will reduce the contaminants flowing into coastal waters during overflow events, thus improving the quality of receiving water bodies.

Overall, the Project will generate positive effects by improving the existing wastewater network and providing for future population growth in the Auckland City Centre.

9.3 LAND CONTAMINATION EFFECTS

9.3.1 DESCRIPTION

Land contamination relates to the disturbance and removal of potentially hazardous soil that may have an adverse effect on human health and the receiving environment. As the proposed works will involve earthworks during shaft construction, tunnelling and trenching, an assessment of land contamination effects has been carried out.

9.3.2 ASSESSMENT METHODOLOGY

In order to assess the risk to human health and the receiving environment from the disturbance of soil, a combined Preliminary and Detailed Site Investigation has been prepared and is provided in **Appendix F.** This combined assessment is herein referred to as the 'PSI/DSI'. The PSI/DSI has been prepared in accordance with several applicable guidelines for both human health and background concentrations.[2]

Following a desktop review of the Council records, historical photos and previously published WSP reports, a potential HAIL (G3; Landfill Sites) was identified at the southern end of the alignment in the Greys Avenue CSA carpark site. As a result, the need was triggered for intrusive investigations to be carried out on-site.

A total of 35 soil samples were collected from nine exploratory borehole locations across the project area. Soil samples were submitted to Watercare Laboratory Services for analysis and determination of the contaminants of concern, including heavy metals, PAH, TPH and asbestos. Samples that produced an asbestos-detected result were sent to Hill Laboratories (Hills) for analysis. Figure 9-1 shows the sample locations for the project.

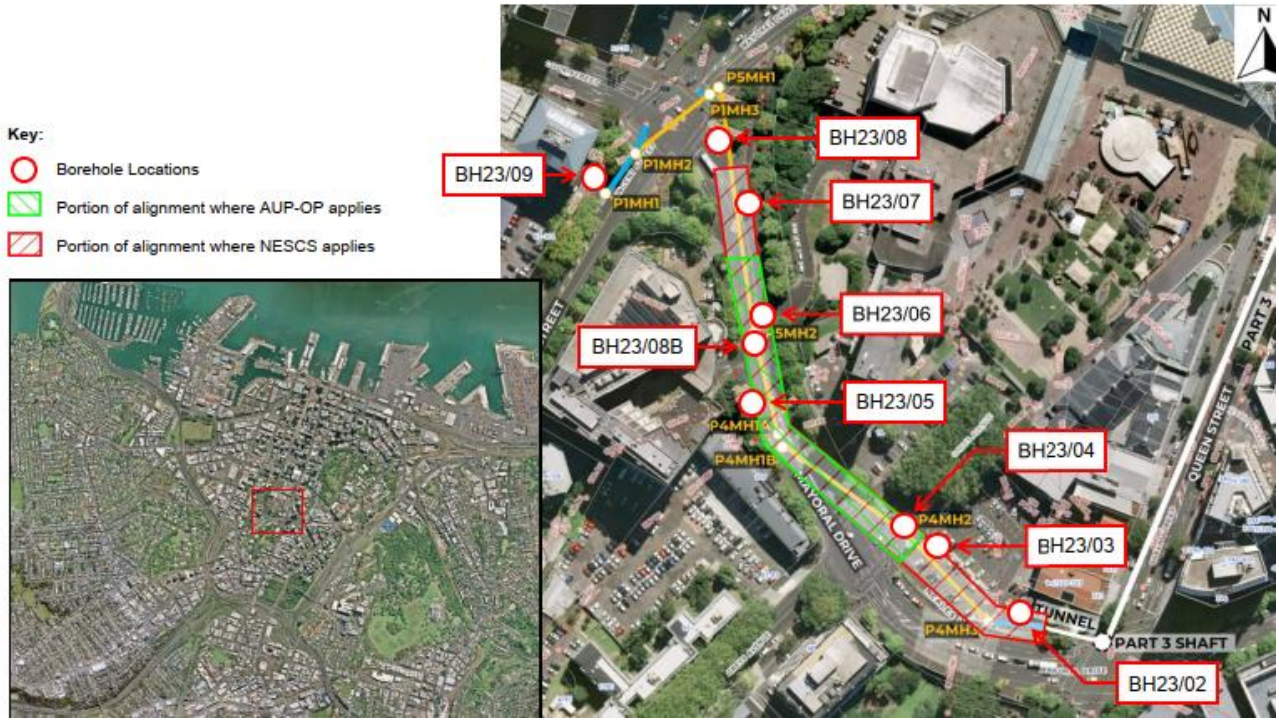


Figure 9-1: Borehole sample locations

Once retrieved, soil samples were then assessed against a range of criteria relating to human health and background concentrations.

Full details of soil sample results are provided in the DSI in Appendix F.

In addition to the soil samples collected in 2023 by WSP above, GWE Consulting Engineers (GWE) completed a Site Management Plan (SMP) (GWE, 2024) specifically for a temporary shaft at the eastern end of the Greys Avenue Carpark associated with the P3-P4 Connector, and a platform for a separation plant in the central area of the Greys Avenue Carpark. GWE subsequently produced a Site Validation Report (SVR) (GWE, 2025) for the excavation works associated with the separation plant platform construction. The results from the GWE reports have informed the mitigation measures in Section 9.3.4.

9.3.3 *ACTUAL AND POTENTIAL EFFECTS*

Earthworks can result in contaminated land being disturbed, with the potential for adverse effects on human health and the receiving environment. The summary below details the results of the intrusive investigations at the project site.

9.3.3.1 HUMAN HEALTH CRITERIA

As a result of the borehole investigations, asbestos was detected in 12 samples across the sites of BH23/03, BH23/05, BH23/06 and BH23/07. Four of the samples showed an exceedance of the NZGAMAS commercial/industrial criteria of 0.001% w/w. An asbestos concrete sheet was also reported at BH23/03_0.7.

9.3.3.2 BACKGROUND CRITERIA

The below provides a summary of heavy metals recorded above Auckland region background concentrations at the tested sites. For TPH and PAH, no exceedances of Auckland region background concentrations or AUP-permitted activity criteria were recorded.

Auckland region background concentrations for heavy metals were exceeded at:

- BH23/02_0.5 and BH23/06_1.5 for lead and mercury
- BH23/06_0.5 for lead and zinc
- BH23/06_2.0 for lead and copper

BH23/05_0.45, BH23/05_1.0, BH23/05_1.5, BH23/05_2.5, BH23/05_3.0 and BH23/06_1.0 for lead

The following samples recorded concentrations above the AUP permitted activity criteria:

- BH23/04 for nickel
- BH23/05 for lead
- BH23/06 for zinc

9.3.4 PROPOSED MITIGATION

Based on the findings of this assessment, the PSI/DSI recommends that:

- NESCS Applicable Areas: Soils are unlikely to be considered cleanfill material. If off-site soil disposal is required, seek confirmation from the landfill operator prior to earthworks.
- NESCS Non-Applicable Areas: Soil may be considered for removal as cleanfill. If off-site soil disposal is required, seek confirmation from the receiving facility prior to earthworks.
- Asbestos Removal Controls:
    - P4MH3: Supervise soil disturbance by an asbestos competent person. Implement trace asbestos contamination controls if C&D material and/or ACM is observed, escalating controls if necessary.
    - P4MH2: Supervise soil disturbance by an asbestos competent person with trace asbestos contamination controls, escalating if necessary.
    - P4MH1B/P4MH1A: Implement trace asbestos controls from surface to 0.5 m bgl, low-level asbestos controls from 0.5 to 3 m bgl, with no controls required beyond 3 m bgl.
    - P5MH2: Implement trace asbestos controls from surface to 3 m bgl.

These recommendations are provided within the SMP for the Mayoral Alignment, which includes the Greys Ave carpark area where P4MH3 and P4MH2 are proposed (Appendix F.2).

9.3.5 SUMMARY OF EFFECTS

The results of the PSI/DSI in Appendix F have found land contamination above AUP-permitted activity standards at three soil sampling sites in the project area. As such, consent is required as a controlled activity under Chapter 30 of the AUP. Consent is also required as a restricted discretionary activity under Regulation 10 of the NES-CS. An SMP has been developed for the works to provide guidance on the framework of Health, Safety and Environmental risk control measures that should be enacted at the site during the works.

Based on the findings summarised above, adverse effects generated from the disturbance of contaminated land are considered to be less than minor, subject to the implementation of mitigation measures in the SMP.

9.4 NOISE AND VIBRATION EFFECTS

9.4.1 DESCRIPTION

Due to the nature of the works, temporary construction noise and vibration effects will be generated. To understand the actual and potential effects, a CNVA has been prepared and provided in Appendix G. In addition to the CNVA, a Construction Noise and Vibration Management Plan (CNVMP), and is included within Appendix G.

9.4.2 ASSESSMENT METHODOLOGY

The CNVA has been based on the proposed works, equipment, methodology, and timing within the Construction Statement prepared by Watercare's selected contractor (Appendix C).

The construction methodology has been separated into the three most noise-generating phases to assess noise and vibration. The three stages are:

1. Utility relocation and protection.
2. Shaft construction and trenchless tunnelling, and reinstatement.
3. Open trenching, manhole installation, and reinstatement.

How these developed construction stages have been utilised to predict noise is discussed in the following section.

Noise Prediction Methodology

SoundPLAN Version 8.2 3D computational noise modelling software has been used to develop a noise prediction model. The developed construction stages and phases have been analysed with the model and presented to support the acoustic assessment. The model prediction considers attenuation due to distance, terrain, absorption by the atmosphere and ground, and reflections from building facades (including the receiver façade). The assessment assumes worst-case theoretical downwind conditions in all directions from all sources, which provides a conservative approach for this assessment.

Some key assumptions and limitations

It is important to note the assumptions and limitations that apply to the acoustic assessment. Some of these are provided below:

- It is conservatively assumed that all equipment will operate within a worst-case 30-minute period for each construction stage
- It is assumed that dewatering would be required 24 hours a day, and as such, we have assessed dewatering works at night.
- It is assumed that no night works (apart from dewatering) are required, or if night works are required, they are due to AT requirements.

See Section 5.6 of the CNVA for the full list of assumptions and limitations.

9.4.3 ACTUAL AND POTENTIAL EFFECTS

The proposed works will be undertaken in multiple locations and different phases within the project area. The majority of the works are to be undertaken within the road corridor; however, some construction activity will be located within the Business – City Centre Zone (The Greys Avenue CSA).

As mentioned, many of the construction activities that lead to a predicted exceedance of the AUP E25.6.28 construction noise criteria occur within the road corridor. However, these are *exempt* from the noise limits if a CNVMP is adopted. While the CNVA predicted noise generated by construction activities regardless of where the works occur, no consent is required for works within the road corridor during the day and is therefore not discussed in the section below.

The following section details the noise and vibration effects for night works and daytime works outside of the road corridor.

The CNVA identified that vibration produced from the works is predicted to be below the vibration criteria outlined in Section E25.6.30(1)(a) and E25.6.30(1)(b) of the AUP for works outside of the road corridor. Therefore, construction vibrations produced during construction are a permitted activity and are not discussed further.

The assessment below accounts for the proposed mitigation measures being applied.

Night works

The only nightworks required for the Project will be dewatering, as it is assumed that this will be required for 24 hours a day.

The CNVA identified that no properties are predicted to exceed the 60 dB LAeq,30min criteria during dewatering works, as all equipment outside of the road zone can operate away from receptors.

To ensure that the noise produced by the generator (used for dewatering) does not exceed permitted criteria on nearby properties, the generator for dewatering activities in the Greys Ave CSA (P4MH3, P4MH2, and open cut works) is to be located in the area highlighted in red area.

Figure 9-2: Location of dewatering generator to achieve 60 dB LAeq,30min nighttime noise limit

Daytime works

Part of the construction works, including shaft construction (P4MH3), trenchless pipe installation, and open-cut works will occur outside of the road corridor.

The following Noise Sensitive Receivers (NSRs) predicted to exceed the 75 dB LAeq,30min daytime construction noise criteria from these works are below:

- 321 Queen Street (7 dB exceedance)
- 323-327 Queen St (11 dB exceedance)
- 329 Queen St (4 dB exceedance)

These NSRs/properties are indicated in red in Figure 9-3.

Figure 9-3: NSRs which are predicted to exceed the noise criteria from works within the road zone (pink) and outside of the road zone (red) at any stage/phase.

While the CNVA has identified noise exceedances on the above properties, the CNVA provides the following commentary:

- Short Duration: Noise infringements are temporary, lasting days or weeks rather than months.
- Localised Impact: Worst-case noise levels affect only the most exposed parts of buildings.
- Occupancy Considerations: There are no noise effects if the buildings are unoccupied.
- Assessment Accuracy: Noise assessments are more relevant from inside sealed buildings, which for this assessment, was not practicable to undertake.

With the adoption of all practicable physical mitigation measures (provided in Section 9.4.4), the assessment of noise described above, and the implementation of a CNVMP, noise effects from construction outside the road corridor are predicted to be reasonable and overall, less than minor.

9.4.4 PROPOSED MITIGATION

A number of mitigation measures have been proposed to reduce the noise impacts on NSRs/properties. As set out in Section 9.4.3, mitigation measures were included as part assessment of effects of noise on the three properties on Queen Street.

Generally, these mitigation measures include adopting a CNVMP, advising any relevant neighbouring properties prior to construction commencing, and implementing both physical mitigation and managerial mitigation measures. Further details on these physical and managerial measures are provided below.

- Physical mitigation measures: Installing acoustic site hoardings around construction sites, selection of equipment, setback distance for dewatering pump from buildings, etc.
- Managerial mitigation measures: Site-specific training, operating high-noise generating equipment between certain times, acoustic testing/monitoring of on-site machinery, etc.

9.4.5 SUMMARY OF EFFECTS

With the assessment of noise described in Section 9.4.3, the adoption of the CNVMP and practicable mitigation measures, noise effects from construction are predicted to be reasonable., and therefore less than minor.

As a result of the above, the noise effects associated with the construction of the shafts and installation of the wastewater pipe are predicted to be less than minor. As such, no parties have been identified as adversely affected by noise and vibration to an extent that would require notification as an affected party under the RMA.

9.5 ARBORICULTURAL EFFECTS

9.5.1 DESCRIPTION

As mentioned in Section 3.3, several protected trees are within the project footprint, all located in the road reserve. To understand the actual and potential effects, an Arboricultural Assessment (**Appendix I**) has been undertaken.

9.5.2 ASSESSMENT METHODOLOGY

To understand the potential effects on the trees along the Project alignment, the Arboricultural Assessment used site visits, results from previous ground investigations, and calculations of the excavations against the measured Structural Root Zone (SRZ), Tree Protection Zone (TPZ) and Protected Root Zones (PRZs) of the relevant trees.

9.5.3 EFFECTS ON STREET TREES (TREES 6-8)

Pruning of the protected street trees (Queensland Box and London Plane) at the intersections of Mayoral Drive/Cook Street and Vincent Street has been assessed as a permitted activity and will be carried out in accordance with Standard E26.5.4.1. Similarly, earthworks within the PRZ of these trees have been assessed as a permitted activity and will follow Standard E26.5.4.2. Therefore, the effects on these trees are not considered further (refer to the Arboricultural Assessment for more details).

9.5.4 EFFECTS ON NOTABLE TULIP TREES (TREES 1-5) WITHIN MAYORAL DRIVE

The proposed shafts P4MH1A/ P4MH1B and P5MH2 will be constructed in the central median/right-hand turn lane within the road carriageway of Mayoral Drive. Excavation works within the carriageway are also anticipated within the technical TPZ and the PRZ of Notable Tulip

trees (Trees 1-5)(refer Appendix B of Arboricultural Assessment). Additionally, the storage of materials or machinery operation may be required within the PRZ and TPZ of Trees 1-5.

Considering the existing clearances of the Notable trees due to regular pruning for double-decker bus clearance over the carriageway, it is not anticipated that additional pruning will be required to allow for the construction of the shafts.

9.5.5 PROPOSED MITIGATION

Several mitigation measures have been proposed within the Arboricultural Assessment to reduce the effects of the Project on the five Tulip trees. A summary of these is provided below:

- Excavation within the PRZ of trees is carried out with arboricultural supervision.
- When machinery is to be used beneath the root zone of any tree, track movement must be kept to a minimum and undertaken on track mats or plywood where the ground is not to be excavated.
- Protective fencing should be installed wherever practicable at the protected root zone (dripline) edge of trees.
- Any required pruning works are to be undertaken by a suitably qualified arborist

9.5.6 SUMMARY OF EFFECTS

While excavation, the storage of materials, and the operation of machinery are likely to be undertaken within the PRZ of the Notable Tulip trees along Mayoral Drive, the effects on these trees are considered less than minor, provided the works are carried out with arboricultural supervision and the measures provided in Section 9.5.5 and Section 5 of the Arboricultural Assessment are implemented.

9.6 GROUNDWATER DRAWDOWN AND SETTLEMENT EFFECTS

9.6.1 DESCRIPTION

The abstraction of groundwater for dewatering will cause a temporary cone of depression in the groundwater table. If dewatering is required, groundwater levels will generally drop around the excavation, and the depression cone will extend outwards over time until dewatering ceases. Therefore, it needs to be considered that drawdowns may propagate outwards over time.

The Mayoral shafts may comprise of post and panel construction, although, other construction methods may also be used such as sheet piling and/or secant bored piles. The shafts will require some dewatering because of water ingress expected through the base of the excavation as the excavation advances to the target depth. Any groundwater is expected to be managed using a sump pump arrangement.

The Dewatering Assessment (Appendix J) addresses the key matters of discretion outlined provided in in Chapter E7 of the AUP, with the key matters being:

- Effects on neighbouring bores
- Stream depletion effects
- Saltwater intrusion effects

- Land settlement effects on neighbouring properties and utilities due to dewatering
- Surface flooding and water quality effects that may arise from the abstracted groundwater being diverted
- Effects on terrestrial ecosystems

9.6.2 ASSESSMENT METHODOLOGY

To assess potential effects associated with dewatering and groundwater drawdown, the Dewatering Assessment developed several ground models.

The groundwater and settlement modelling are based on investigations near the shaft locations, with five ground models prepared for critical cross-sections near structures. Shaft P5MH1 does not require dewatering due to the groundwater depth and was therefore not assessed further in the assessment. The models, developed from site information, GNS Webmaps, and the NZGD database, include data from boreholes and geotechnical reports for Mayoral Drive Overbridge and Myers Park.

Moreover, dewatering-induced settlement modelling was undertaken in Geostudio version 23.1.0.520 using SIGMA/W which was coupled with SEEP/W that simulates the groundwater drawdown from dewatering. Importantly, temporary works designers (ENGEO) evaluated the mechanical displacements independently, and those results where superimposed on the dewatering settlements in the coupled modelling mentioned above to estimate the total settlement.

The analyses indicated settlements throughout the full length of the cross-section following 50 days of dewatering.

For further detail regarding the assessment methodology, refer to Section 4 of the Dewatering Assessment.

9.6.3 EFFECTS ON NEARBY WATER TAKES

The lateral extent of the drawdown cone for the Mayoral shafts is approximately a maximum of 100 m based on the modelled drawdown. There are no active groundwater takes for consumption within 100 m of any of the Mayoral shafts. The closest groundwater take consent (WAT60351066) appears to be approximately 460 m to the south of shaft P4MH3, which is outside of where the 0.5 m drawdown extends.

As such, effects on nearby water takes will be negligible.

9.6.4 EFFECTS ON GROUNDWATER PRESSURES, LEVELS AND FLOW PATHS, AND SALINE INTRUSION

There are no surface water bodies or streams in proximity to the Project alignment, hence the groundwater drawdown will have no stream depletion effects on surface water bodies. No other freshwater ecosystems are present near the Mayoral Shafts.

The likelihood of saltwater intrusion is considered negligible based on the following reasons:

- Distance from the coast: The site is 1300 m from the coast, preventing groundwater levels from reducing below sea level near the coast.
- Dewatering duration: The dewatering period at the Mayoral shafts is 240 days, which is insufficient for significant groundwater migration.

- Drawdown extent: The maximum lateral extent of the drawdown is 100 m, and the drawdown level at the shaft locations remains above sea level, ensuring groundwater flow direction is not reversed.

9.6.5 SETTLEMENT EFFECTS (ON BUILDINGS/STRUCTURES, ROADING INFRASTRUCTURE AND SERVICES)

9.6.5.1 OVERVIEW

The potential for settlement effects on buildings, roading infrastructure (such as footpaths, kerbs and asphalt), and network utility services has been considered in the Dewatering Assessment and is summarised below.

9.6.5.2 SETTLEMENT EFFECTS

A settlement less than 10 mm with a differential settlement less than 1:500 poses a negligible risk of any damage to buildings (Mair et al., 1996) and therefore, buildings that are anticipated to experience less than 10 mm of settlement are not discussed further. Buildings/structures near shafts or that fall above the settlement criteria have been assessed within the Dewatering Assessment and categorised as having a damage criterion of 'Negligible' to 'Very Slight'.

Table 7-1 within the Dewatering Assessment provides a description of these damage categories and what they mean for the potential effects on buildings and structures.

Overall, the buildings/structures that are classified as having negligible to slight damage criterion are:

- The Grand Millenium Underpass
- 100 Mayoral Drive
- 48 Greys Avenue
- 22 Greys Avenue
- Myers Park Overbridge

In summary, for settlement effects on buildings/structures, services and roading infrastructure, the Dewatering Assessment identifies the following:

- The maximum total settlement at the closest edge of the Grand Millennium Underpass exceeds 10 mm, with a differential settlement of less than 1/500. This level of settlement is generally classified as 'slight' building damage. However, the underpass, being a robust structure with likely tilt slab concrete panels, would not be affected by this settlement. The associated damage classification is considered negligible to very slight. Any damage within the slight category would be aesthetic and would not impact the functionality or appearance of the underpass, thus, the effect is minimal and therefore, less than minor.
- The maximum total settlement for the buildings at 100 Mayoral Drive, 48 Greys Avenue, and 22 Greys Avenue is estimated to exceed 10 mm, with a differential settlement significantly less than 1/500. This settlement falls within the 'very slight' building damage category, and therefore, the effects are considered to be less than minor. However, due to the very low differential settlement, it is unlikely that any damage will occur due to the dewatering.

- The Myers Park overbridge is not expected to be affected as it is founded on piles, despite an estimated maximum total settlement of over 10 mm and a differential settlement of approximately 1/400, which is higher than the 1/500 slight damage classification. The approach abutments, supported by flexible crib retaining walls, are likely to settle but will accommodate the anticipated settlement with possible localised deformations. These deformations are unlikely to reach the surface. Any cracking or minor dips on the footpath or road surface will not significantly affect service levels and will be easily repairable. The damage classification for the Myers Park overbridge is considered 'negligible' to 'very slight', and therefore, the effects are considered to be less than minor.
- Underground services are largely expected to remain unaffected. P4MH3 showed potential impacts on shallow gravity pipelines outside Watercare's jurisdiction and within 5 m of the shaft. Associated risks will be managed through the provisions in the GSMCP to be submitted at a later date.

9.6.6 SURFACE FLOODING EFFECTS

Water abstracted as a result of dewatering will be treated in clarification tanks prior to discharge to the local wastewater network. As the abstraction rates are anticipated to be low (ranging between 63 m^3/day and 4 m^3/day), any effects on surface flooding will be negligible.

9.6.7 EFFECTS ON TERRESTRIAL ECOSYSTEMS

No terrestrial ecosystems are present within the 0.5m drawdown threshold of the Marmion Shaft, and therefore adverse effects on these ecosystems are considered unlikely.

9.6.8 PROPOSED MITIGATION

Mitigation measures are proposed on a precautionary basis to ensure the findings of the Dewatering Assessment are substantiated, and to ensure accidental damage to buildings and property is avoided.

The following mitigation measures are proposed:

- A draft Groundwater Settlement Monitoring and Contingency Plan (GSMCP) is provided with this application and will be certified by Council prior to construction works commencing. The GSMCP will contain mitigation measures includes monitoring and response actions;
- Groundwater level monitoring will be undertaken in a location where drawdown effects can potentially affect buildings and infrastructure;
- Ground surface deformation monitoring will be undertaken where there is a risk to buildings and infrastructure;
- Building condition surveys shall be considered by the applicant (if deemed to be required);
- Alert and alarm levels, and response procedures, will be contained within the GSMCP.

9.6.9 SUMMARY OF EFFECTS

The effects on neighbouring bores, stream depletion, saltwater intrusion, surface flooding, water quality, and terrestrial ecosystems due to diverted groundwater and dewatering are considered less than minor. Settlement effects on assessed buildings and structures within the project alignment, including The Grand Millennium Underpass, 100 Mayoral Drive, 48 Greys Avenue, 22

Greys Avenue, and the Myers Park Overbridge, are categorised as 'Negligible' to 'Very Slight' and are overall considered minimal to negligible in the Dewatering Assessment. Consequently, the settlement effects for these buildings and structures are deemed less than minor.

10 ENVIRONMENTAL MITIGATION MEASURES

Based on the assessment of environmental effects, mitigation and management measures have been identified and recommended to avoid or reduce adverse effects upon the receiving environment. Table 10-1 below provides a high-level overview of the key recommended environmental mitigation measures for the Project.

Table 10-1 Recommended environmental mitigation and management measures

Mitigation and management measures	
Topic	Proposed measures
Land Contamination	Provide an SMP to outline contaminated land disturbance procedures and risks.
	If off-site soil disposal is required, confirm acceptance of the soil type from the landfill operator prior to disposal.
	Implement low-level or trace asbestos removal controls where necessary by a RAP/SQEP.
Noise and Vibration	General mitigation measures: adopting the CNVMP, communicating with any relevant neighbouring properties.
	Physical mitigation measures: installing acoustic site hoardings around the construction sites, selection of equipment, setback distance for the dewatering pump from buildings.
	Managerial mitigation measures: site-specific training, operating high noise generating equipment between certain times, acoustic testing/monitoring of on-site machinery, etc.
Arboriculture	Excavation within the PRZ of trees is carried out with arboricultural supervision.
	When machinery is to be used beneath the root zone of any tree, track movement must be kept to a minimum and undertaken on track mats or plywood where the ground is not to be excavated.
	Protective fencing should be installed wherever practicable at the protected root zone (dripline) edge of trees.
	Any required pruning works are to be undertaken by a suitably qualified arborist
Groundwater and Settlement	A draft Groundwater Settlement Monitoring and Contingency Plan (GSMCP) is provided with this application and will be certified by Council prior to construction works commencing. The GSMCP will contain mitigation measures includes monitoring and response actions;
	Groundwater level monitoring will be undertaken in a location where drawdown effects can potentially affect buildings and infrastructure;
	Ground surface deformation monitoring will be undertaken where there is a risk to buildings and infrastructure;
	Building condition surveys shall be considered by the applicant (if deemed to be required);

	Alert and alarm levels, and response procedures, will be contained within the GSMCP.

11 AFFECTED PARTIES AND NOTIFICATION ASSESSMENT

11.1 SECTION 95A – DETERMINING PUBLIC NOTIFICATION

The process set out in section 95A of the RMA for determining public notification is summarised in Table 11-1, together with an assessment of the current application against each step.

Table 11-1: Step by Step Process for Public Notification

	Description of Process	Assessment
STEP 1	Mandatory public notification in certain circumstances. An application must be publicly notified if: • the applicant requests public notification • public notification is required under section 95C (which relates to notification after a request for further information or report) • the application is made jointly with an application to exchange recreation reserve land.	The applicant does not request notification Section 95C is not relevant as no further information has been requested at the time of lodgement. No reserve land is involved or being exchanged PROCEED TO STEP 2
STEP 2	If not required by step 1, public notification is precluded in certain circumstances. An application cannot be publicly notified if: • a rule or national environmental standard (NES) precludes notification • the application is for one or more of the following, but no other, activities: 1. a controlled activity 2. a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity If the application is for multiple activities, public notification is only precluded for the application as a whole if each individual activity is precluded from public notification. If public notification is precluded under this step, then step 3 doesn't apply but consideration under step 4 is required (special circumstances).	There are no rules or national environmental standard that precludes notification. The application is not for a controlled activity or boundary activity. PROCEED TO STEP 3

	Description of Process	Assessment
STEP 3	If not precluded by step 2, public notification is required in certain circumstances. Other than for those activities in step 2, public notification is required if: • a rule or NES requires public notification • the assessment under section 95D determines that the activity will have, or is likely to have, adverse effects on the environment that are more than minor. If the application is for multiple activities, and any part of that application meets either of the above criteria, the application must be publicly notified in its entirety.	There are no rules or provisions under the NES-CS which require public notification of this application. The assessment of effects in Section 9 found that the adverse effects of the Project on the environment can be avoided, remedied or mitigated to an acceptable level. A summary of the key findings above notes: • Engagement with the wider community has occurred, as outlined in Section 6. • Groundwater drawdown and settlement effects on adjacent buildings and structures are assessed to be negligible. • Groundwater and settlement monitoring will occur during construction to ensure unexpected effects do not occur. • Construction management plans are proposed to manage construction effects, including a CNVMP, SMP and a GSMCP. Due to these mitigation measures, for the purposes of s95D, the actual and potential effects of the Project are considered to be less than minor. PROCEED TO STEP 4
STEP 4	Public notification in special circumstances. If notification is precluded under step 2, or isn't required under step 3, consideration must be given to whether special circumstances exist that warrant public notification of the application. The presumption for special	There are no special circumstances which are relevant to this application. The application proposes a new wastewater main sewer, which is provided for in the AUP as a

	Description of Process	Assessment
	circumstances has changed so that, if the consent authority determines special circumstances exist, the council must notify the application (i.e. it is not discretionary).	critical piece of public infrastructure. As such, there is nothing unusual or exceptional about the proposal. PUBLIC NOTIFICATION NOT REQUIRED.

11.2 SECTION 95B – DETERMINING LIMITED NOTIFICATION

The process set out in section 95B of the RMA for determining limited notification and potentially affected persons is summarised in Table 11-2, together with an assessment of the current application against each step.

Table 11-2: Step by Step Process for Limited Notification

	Description of Process	Assessment
STEP 1	Certain affected groups and affected persons must be notified. If the consent authority determines that certain people or groups are affected, these persons/groups must be given limited notification: • affected protected customary rights groups • affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity) • whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement and whether the person to whom the statutory acknowledgement is made is an affected person under section 95E	There are no customary rights groups or customary marine title groups affected by the Project. The location of the Project area is not affected by a statutory acknowledgement as identified in Appendix 21 of the AUP. PROCEED TO STEP 2
STEP 2	If not required by step 1, limited notification is precluded in certain circumstances. An application cannot be limited notified if:	There are no rules or NES provisions which preclude limited notification. The application is not for a controlled activity under a district plan. PROCEED TO STEP 3

	Description of Process	Assessment
	• a rule or NES precludes limited notification of the application • the application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land) If the application is for multiple activities, limited notification is only precluded for the application as a whole if each individual activity is precluded from limited notification. If limited notification is precluded under this step, then step 3 doesn't apply but consideration under step 4 is required.	
STEP 3	If not precluded by step 2, certain other affected persons must be notified. Except for boundary activities and any activities prescribed under the regulations relating to notification of consent applications (section 360G(1)(b)), the consent authority must notify any other person they determine to be affected under section 95E. For boundary activities, only those persons whose written approval would have been required under new section 87BA are eligible to be notified. These eligible persons must be notified if they are determined to be affected persons under section 95E.	The application is not for a boundary activity or any other prescribed activities. The assessment in Section 9 demonstrates that the overall effects of the Project are assessed as less than minor. No person/s has been identified as an affected party. PROCEED TO STEP 4
STEP 4	Further notification in special circumstances. The determination of special circumstances is new to limited notification. If the consent authority determines special circumstances exist that warrant limited notification of the application to any other persons not already determined to be	As discussed above, there are no special circumstances which are relevant to this application. LIMITED NOTIFICATION IS NOT REQUIRED

	Description of Process	Assessment
	eligible for limited notification (excluding persons assessed under Section 95E as not being affected persons), the council must give limited notification to those persons (i.e. it is not discretionary).	

11.3 SUMMARY OF NOTIFICATION

As assessed above, the application can proceed without public or limited notification.

12 STATUTORY ASSESSMENT

Section 104 of the RMA sets out the matters to which a consent authority must have regard to, subject to Part 2 of the RMA, when considering an application for resource consent. These are:

- *Any actual and potential effects on the environment of allowing the activity (refer Section 9 above); and*
- *Any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and*
- *Any relevant provisions of:*
    - *a national environmental standard;*
    - *other regulations;*
    - *a national policy statement;*
    - *a New Zealand coastal policy statement (not applicable);*
    - *a regional policy statement or proposed regional policy statement;*
    - *a plan or proposed plan; and*
- *Any other matter the consent authority considers relevant and reasonably necessary to determine the application.*

12.1 NATIONAL ENVIRONMENTAL STANDARDS (NES)

12.1.1 NES FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL TO PROTECT HUMAN HEALTH (NES-CS)

The NES-CS provides national environmental controls which establish requirements for consent for activities on contaminated or potentially contaminated land. All local authorities are required to enforce the provisions of the NES-CS. As discussed in the PSI/DSI in Appendix F, part of the project site has confirmed soil contamination and is subject to Regulation 5 (7) of the NES-CS. The effects of this land disturbance have been assessed in Section 9.3 of this application.

12.2 NATIONAL POLICY STATEMENTS

12.2.1 NPS ON URBAN DEVELOPMENT 2020

The National Policy Statement on Urban Development (NPS-UD) came into force in 2020 to allow for intensified urban development in areas with growth capacity.

As the project area is located within the City Centre Zone, Policy 3 of the NPS-UD seeks to enable 'as much development capacity as possible' in this 'tier 1' environment. In the NPS-UD, the definition of development capacity directly relates to the 'provision of adequate development infrastructure'. As such, this project is aligned with the NPS-UD as it will provide the necessary wastewater capacity to service an increasing residential population in the city centre.

12.3 AUCKLAND REGIONAL POLICY STATEMENT

The AUP Regional Policy Statement (RPS) recognises the importance of the management of and investment in infrastructure (B3 Ngā pūnaha hanganga, kawekawe me ngā pūngao - Infrastructure, transport and energy).

The RPS recognises the importance of natural resources, in particular the value of indigenous biodiversity and the importance of integrated management between development (including infrastructure) and freshwater as well as managing adverse effects from wastewater discharges to freshwater (B7 Toitū te whenua, toitū te taiao – Natural resources). As discussed in this report, the wider Queen Street programme of works has been designed to minimise its impact on the natural environment while providing a vital service to the upper City Centre catchment.

In light of the above and the detailed assessment provided in Appendix D, the proposed works are considered to be consistent with the relevant provisions of the RPS.

12.4 RELEVANT AUP OBJECTIVES AND POLICIES

The proposed works have been assessed against the relevant objectives and policies of the AUP, from the following chapters:

- E7 Taking, using, damming and diversion of water and drilling
- E25 Noise and Vibration
- E26 Infrastructure
- E30 Contaminated Land

A detailed assessment of the project works against the relevant objectives and policies is provided in Appendix D. In summary, the proposed works are considered to be in accordance with AUP for the following reasons:

- The purpose of the project is to serve the community by minimising wastewater overflows into the stormwater network. An increase in the capacity of the wastewater network will lead to improved ecological health of the harbour and reduce human health risk.
- Predicted noise exceedances will be managed to have less than minor effects on sensitive noise receivers as detailed in the CNVA. These management measures include physical hoardings, selection of quiet equipment and monitoring on-site.
- The proposed take of groundwater for construction will have negligible effects on aquifer recharge, ground settlement, surface water flows, or neighbouring bores.
- The Project will enable Watercare to provide for the safe and efficient collection, and conveyance of wastewater which is key to supporting the existing and future well-being of the residents of Auckland.
- The Project will increase the capacity and resilience of the wastewater system in the upper City Centre catchment and allow for increased development capacity in the area, as enabled by Plan Change 78. The proposed wastewater upgrades will enable people and communities to provide for their social, economic and cultural well-being and for their health and safety.

12.5 RELEVANT AUP STANDARDS AND ASSESSMENT CRITERIA

Based on the identified reasons for consent, the AUP provides assessment criteria that are relevant to the project works. An assessment of these criteria is provided within Appendix D and demonstrates the project's ability to meet the requirements of the AUP.

12.6 OTHER MATTERS

12.6.1 SECTION 104(2D)

Section 104 (2D) of the RMA states the following:

When considering a resource consent application that relates to a wastewater network, as defined in section 5 of the Water Services Act 2021, a consent authority—

> *(a) must not grant the consent contrary to a wastewater environmental performance standard made under section 138 of that Act; and*
>
> *(b) must include, as a condition of granting the consent, requirements that are no less restrictive than is necessary to give effect to the wastewater environmental performance standard.*

In this instance, there are no wastewater network environmental performance standards currently in place under Section 138 of the Water Services Act 2021, and as such subsection (2D) of section 104 of the RMA is not applicable.

13 PART 2 CONSIDERATIONS

Part 2 of the RMA sets out the purpose and principles of the Act. The purpose of the RMA is to promote the sustainable management of natural and physical resources.

The Court of Appeal decision in *RJ Davidson Family Trust v Marlborough District Council* has clarified that if a plan "has been competently prepared" then a decision maker may well "feel assured" in taking the view that there is no need to refer to Part 2 because "doing so would not add anything to the evaluative exercise". While the decision maker in relation to this resource consent application may determine that the AUP has been competently prepared, and therefore deem reference to Part 2 unnecessary. However, for completeness, the matters set out in Part 2 have been assessed in this resource consent application.

13.1 SECTION 5

The purpose of the RMA is to promote the sustainable management of natural and physical resources. Section 5 goes on to elaborate on the definition of sustainable management, noting:

(2) In this Act, "sustainable management" means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while -

> *(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
>
> *(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
>
> *(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

Considering the above, the proposed works as described in Section 5 of this report are required to facilitate the construction of the new wastewater trunk line within (and adjacent to) the road reserve of Mayoral Drive in Auckland's City Centre. The proposed works will take pressure off the existing wastewater system by providing additional capacity and reducing the volume and frequency of overflows by diverting combined flows during adverse weather events, thereby safeguarding the life-supporting capacity of the coastal environment.

Overall, by avoiding overflows and increasing the capacity of the network for intensification, the works will enable people and communities to provide for their social, economic and cultural well-being for their health and safety consistent with the purpose of the RMA.

The assessment of effects in Section 9 of this report has demonstrated that long-term adverse effects on the environment can be avoided, remedied or mitigated. Short-term construction impacts have been avoided where possible and management and mitigation measures are suggested where they have been unable to be avoided. Given this, the proposal is broadly consistent with the purpose of the RMA.

13.2 SECTION 6

The matters of national importance which are relevant to this Project are:

> *(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*

(e) the relationship of Maori and their culture and traditions with their ancestral lands, waters, waahi tapu and other taonga.

(f) the protection of historic heritage from inappropriate subdivision, use and development

These matters are addressed in Section 9 of this report and are summarised below.

As noted above, the Project will reduce the frequency and volume of overflow events to the Waitematā Harbour, which will improve the existing character of the coastal environment and reduce odour.

Watercare has a long-standing relationship with the tangata whenua of Tāmaki Makaurau, prioritising continuous engagement with iwi entities regarding the Project. Upon completion, the Project will alleviate existing capacity constraints within the wastewater network, reducing the frequency and volume of overflow discharges to Waitematā Harbour and aligning with cultural values.

While a scheduled heritage building lies immediately adjacent to the project area (the Auckland Sunday School Union Building), both the CNVA and the Dewatering Assessment concluded that effects on this building will be less than minor, provided the mitigation measures are followed.

The works are considered to be consistent with Section 6 of the RMA.

13.3 SECTION 7

Section 7 sets out other matters to be considered. Of particular relevance to this Project are:

(a) kaitiakitanga:

(b) The efficient use and development of natural and physical resources

(f) the maintenance and enhancement of the quality of the environment:

The objective of the proposed works is to enable upgrades to the existing wastewater network in Auckland's City Centre, which will provide additional capacity to the existing system and reduce the risk of potential overflows during rain events. This will in turn, support the maintenance and enhancement of the quality of the environment, particularly within Waitematā Harbour, while providing for future development within the City Centre. The works will be installed below ground, and so is considered an efficient use of a natural resource. Considering this, the works are consistent with Section 7 of the RMA.

13.4 SECTION 8

Section 8 states: *"In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi)".*

The wording "*shall take into account*" requires decision makers to consider the principles of the Treaty with all other matters.

The proposed works will not occur within land subject to a Treaty settlement, however, Watercare has engaged with their Kaitiaki Managers Projects List. No effects on cultural values or heritage from the Project have been identified by Mana Whenua

14 CONCLUSION

The Mayoral Drive Alignment project forms part of Watercare's Queen Street Wastewater Diversion programme of works to upgrade the existing wastewater network of the upper catchment of the Auckland City Centre. The purpose of the Project is to increase the capacity of the network to enable future development in the area by installing a new wastewater main within/adjacent to the road corridor of Mayoral Drive to Vincent Street.

Consent is required under Chapters E7, E25, E26 and E30 of the AUP along with the NES-CS. The overall activity status of the application is Restricted Discretionary.

The key potential adverse effects of the proposal relate to the disturbance of contaminated land, exceedance of noise standards for works outside of the road during the day, works within the PRZs of Notable trees, and the diversion of groundwater from dewatering. It is assessed that any adverse effects associated with the works are temporary and will be avoided, remedied or mitigated through the implementation of mitigation measures such as the SMP, CNVMP and the GSMCP.

As assessed in Sections 9 and 11 of this AEE, the effects of the Project are less than minor, and no adversely affected parties have been identified. As such, this application can be processed on a non-notified basis.

The proposed works are considered consistent with the purpose of Part 2 of the RMA in that it allows for the management of natural and physical resources in a way that enables people and communities to provide for their social, economic and cultural well-being and for their health and safety. The Project is also consistent with the objectives and policies of the relevant statutory documents, as it is public infrastructure and can be constructed, operated and maintained in a manner which avoids, remedies or mitigates adverse effects on the environment.

15 LIMITATIONS

This report ('Report') has been prepared by WSP New Zealand Limited ('WSP') exclusively for Watercare Services Limited ('Client') in relation to the Resource Consent application for the Mayoral Drive Alignment of the Queen Street Wastewater Diversion ('Purpose') and in accordance with the task order number TO-WSP-65 task name Queen Street Wastewater Diversions – Rescoping, dated 03.12.2025. The findings in this Report are based on and are subject to the assumptions specified in the Report. WSP accepts no liability whatsoever for any use or reliance on this Report, in whole or in part, for any purpose other than the Purpose or for any use or reliance on this Report by any third party.

In preparing this Report, WSP has relied upon data, surveys, analyses, designs, plans and other information ('Client Data') provided by or on behalf of the Client. Except as otherwise stated in this Report, WSP has not verified the accuracy or completeness of the Client Data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in this Report are based in whole or part on the Client Data, those conclusions are contingent upon the accuracy and completeness of the Client Data. WSP will not be liable for any incorrect conclusions or findings in the Report should any Client Data be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP.