Watercare Services Limited

QUEEN STREET WASTEWATER UPGRADE PROGRAMME – PART 3 – PART 6 LINK

ASSESSMENT OF ENVIRONMENTAL EFFECTS

26 FEBRUARY 2025

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Watercare Services Limited

WSP
Auckland
Level 3 The Westhaven
100 Beaumont St
Auckland 1010, New Zealand
+64 9 355 9500
wsp.com/nz

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	NAME	DATE
Prepared by:	Emily Ireland; Harrison Fernandes-Burnard	25 February 2025
Reviewed by:	Alisdair Simpson; Sri Hall	25 February 2025
Approved by:	Phil McFarlane	26 February 2025

WSP
Auckland
Level 3 The Westhaven
100 Beaumont St
Auckland 1010, New Zealand
+64 9 355 9500
wsp.com/nz

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ABBREVIATIONS AND DEFINITIONS

AC	Auckland Council
AEE	Assessment of Environmental Effects
AT	Auckland Transport
AUP	Auckland Unitary Plan (Operative in Part)
CIA	Cultural Impact Assessment
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
NES-CS	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
PSI	Preliminary Site Investigation
The Project	The Part 3 – Part 6 Link Project, being the construction of a wastewater pipeline from the Part 3 Mayoral Shaft to a new construction shaft at the intersection of Queen Street and Marmion Street.
RMA	Resource Management Act
RPS	Regional Policy Statement
SMP	Site Management Plan
TIA	Traffic Impact Assessment
Watercare	Watercare Services Limited
WSP	WSP New Zealand Limited

EXECUTIVE SUMMARY

Watercare Services Limited ('Watercare') are undertaking an extensive programme of development and upgrades to improve Auckland's wastewater collection network, enable increased development capacity in the City Centre and reduce wastewater overflows to the environment, known as the Queen Street Wastewater Diversion Programme.

This Assessment of Environmental Effects ('AEE') has been prepared to support the resource consent application for the construction of a wastewater pipeline from the Mayoral Shaft (consented under Part 3 of the Queen Street Programme) to a new construction shaft at the intersection of Queen Street and Marmion Street, known as the Part 3 – Part 6 Link Project. This project forms a key connection in the Queen Street Programme, enabling an additional connection into the Mayoral Shaft to be constructed prior to the completion of the Part 3 works.

The construction works for the Part 3 – Part 6 Link Project involve the following:

- Excavation of a temporary construction shaft to a depth of up to 17m opposite the intersection of Queen Street and Marmion Street ('Marmion Shaft');
- Construction of a new 60m long[1], 700mm diameter wastewater pipeline from the existing Mayoral Shaft to Marmion Shaft, using a trenchless pilot-bore tunnel;
- Construction of two new manholes (MH-01 and MH-06) at Marmion Shaft and road reinstatement; and
- The relocation of existing network utilities.

This resource consent application follows the previously approved consents BUN60422974, BUN60422974-A and BUN60425924, which enable the construction of new wastewater pipelines and construction shafts for the Part 3 and Part 3 – Part 4 Connector Tunnel projects of the Queen Street Programme. The Part 3 - Part 6 Link will connect to both projects at the Mayoral Shaft.

Resource Consent is required under the Auckland Unitary Plan (operative in Part) (AUP) for the following activities:

- Rule E7.4.1 (A20) Take and use of groundwater for dewatering as a restricted discretionary 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.

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:

- Predicted noise and vibration levels have been assessed against the relevant AUP standards, with construction able to be undertaken as a permitted activity, noting that all construction works will occur within the road corridor;

[1] The final length of the pipeline is dependent on the location of the Marmion Shaft

- Groundwater drawdown effects from dewatering of the Marmion Shaft have been assessed as negligible on neighbouring bores, nearby environmental features (streams and other surface water bodies) and saline intrusion. Settlement effects on any buildings in proximity to the shaft from groundwater drawdown have been assessed as unlikely however monitoring will be implemented on-site to ensure no unexpected effects occur;
- The western frontage of Queen Street contains three protected trees impacted by the Marmion Shaft footprint. All works within the protected root zone, and any possible pruning, can be undertaken as a permitted activity;
- The findings of the PSI concluded that none of the identified HAIL activities are more likely than not to have occurred;
- The Marmion Shaft will be constructed outside of any identified flooding hazards; and
- Marmion Shaft will not encounter any known archaeological remains

The project works have been designed to avoid, where practicable, resultant adverse environmental effects. As such, this AEE recommends particular construction techniques and mitigation measures to ensure potential effects of the works are contained. These measures include:

- Construction hours will generally be limited to between 7am to 6pm Monday to Saturday.
- Construction methods have been thoughtfully created to reduce effects on adjacent property owners and occupants. These measures include acoustic site hoardings, trenchless tunnelling and regular onsite monitoring of equipment.
- Management plans have been completed and are submitted alongside this application to control effects from construction noise and vibration (CNVMP), erosion and sediment runoff (ESCP) and a groundwater settlement monitoring and contingency plan (GSMCP).

The overall 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 AUP, including the Regional Policy Statement;
- An overall positive contribution to the locality, as it will support additional capacity and resilience to the wastewater network in Auckland City Centre; and
- Aligned to 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 necessary infrastructure.

1 INTRODUCTION

1.1 OVERVIEW

Watercare Services Limited (Watercare) is a lifeline utility providing water and wastewater treatment services to a population of 1.7 million people in Auckland and Northern Waikato. Its services are vital for life, keeping people safe and helping communities to flourish. More specifically, Watercare is the council-controlled organisation of Auckland Council (Council) responsible for municipal water supply and wastewater treatment within Auckland, and the provider of bulk water and wastewater services to Pokeno and Tuakau in the Waikato District.

Watercare are 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.

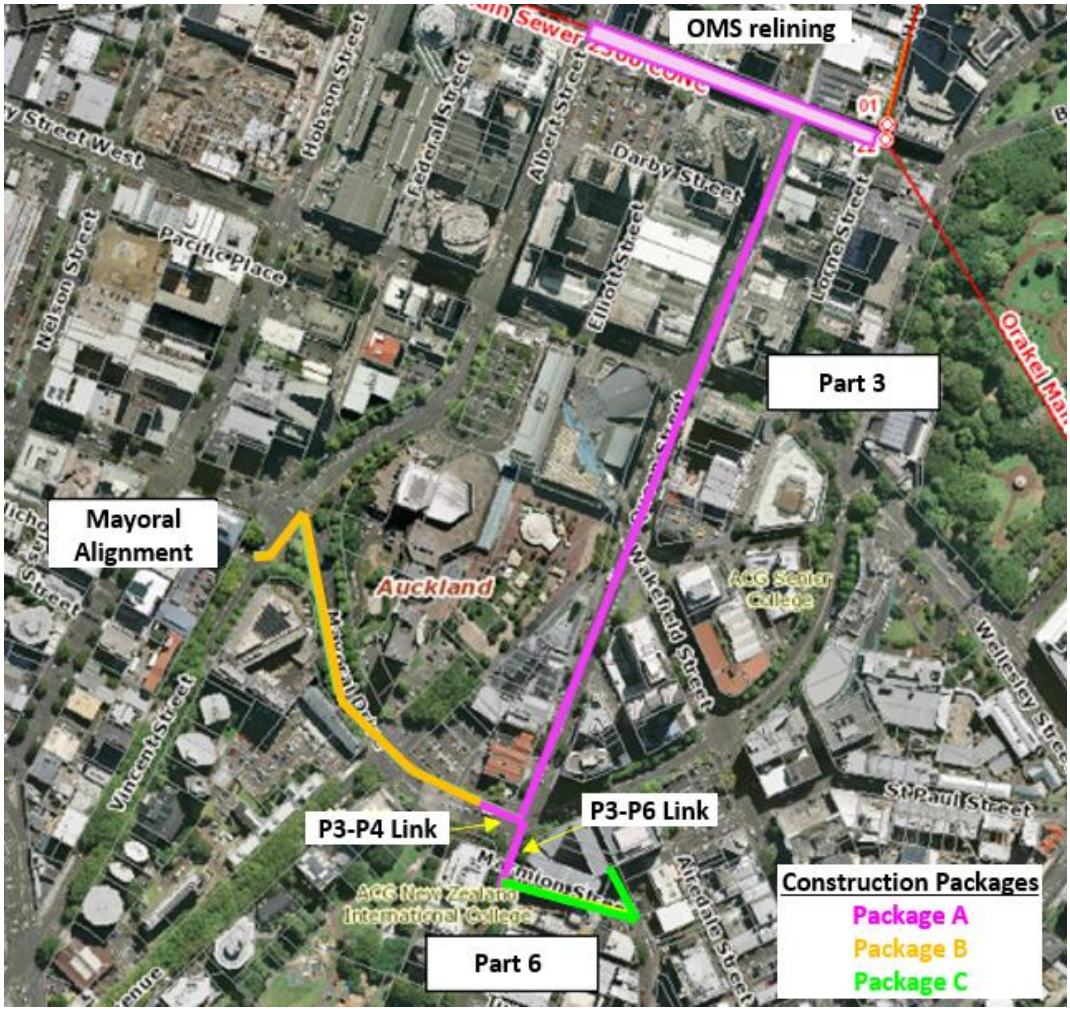

Figure 1-1: Queen Street Wastewater Diversion Programme

The Part 3 – Part 6 Link Project involves the construction of a 450-700mm diameter wastewater pipeline from the Part 3 Mayoral Shaft to a new shaft at the intersection of Queen Street and

Marmion Street (known as the 'Marmion Shaft'). The General Arrangement Plans are attached as **Appendix B**, while the Construction Methodology is attached as **Appendix C**.

1.2 CONSENTING BACKGROUND

Resource consent for two sections of the wider Queen Street Programme have already been approved by Council, being:

1) **Part 3 Alignment/Resource Consent No. BUN60422974**

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.

2) **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 sewer once Part 3 construction has been completed. This consent was approved on the 9th of July 2024.

The resource consent application for the following project is currently being prepared and is expected to be lodged with Council in April 2025:

3) **Mayoral Drive Alignment (Yet to be lodged)**

The Mayoral Drive alignment involves the construction of a new wastewater pipe within or adjacent to the road reserve of Mayoral Drive, between the intersection of Queen Street and Vincent Street. The works include a 375 - 700mm diameter wastewater pipeline between the Part 3-Part 4 Connector Tunnel and a new manhole within Vincent Street.

An additional resource will be required for the remainder of the Part 6 Alignment within Marmion Street and White Street, however, this project is yet to commence.

1.3 THIS APPLICATION

This report is the Assessment of Effects on the Environment ('AEE') to accompany the application for the construction of a wastewater pipeline from the Mayoral Shaft (consented under Part 3 of the Queen Street Programme) to a new construction shaft at the intersection of Queen Street and Marmion Street, known as the Part 3 – Part 6 Link Project. This project forms a key connection in the Queen Street Programme, enabling an additional connection into the Mayoral Shaft to be constructed prior to the completion of the Part 3 works. This application and AEE have been prepared in accordance with s88 and Schedule 4 of the RMA.

The construction works for the Part 3 – Part 6 Link Project involve the following:

- Excavation of a temporary construction shaft to a depth of up to 17m opposite the intersection of Queen Street and Marmion Street ('Marmion Shaft');

- Construction of a new 60m long[2], 700mm diameter wastewater pipeline from the existing Mayoral Shaft to Marmion Shaft, using trenchless pilot-bore tunnel;
- Construction of a new manhole at Marmion Shaft and road reinstatement; and
- The relocation of existing network utilities.

Watercare wishes to apply for resource consent under the Resource Management Act 1991 (RMA) and for a Restricted Discretionary Activity pursuant to the (AUP) for the following activities:

- Rule E7.4.1 (A20) Take and use of groundwater for dewatering.
- Rule E7.4.1 (A28) Diversion of groundwater caused by any excavation (including trench) or tunnel that does not meet the permitted activity standard.

A duration of 15 years is sought together with a specified lapse period of 10 years to provide flexibility in the delivery of this key infrastructure upgrade for Queen Street, Auckland.

A pre-application meeting was held on 14 January 2025 between WSP New Zealand Ltd (WSP), Watercare and Council to discuss the dewatering assessment. Subsequently, amendments to the dewatering assessment including the attachment of an addendum have been underaken to address the queries raised and which have further been discussed with Council.

1.4 SUPPORTING TECHNICAL INFORMATION

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

Table 1-1 List of Appendices

Appendix	Name of Document	Corresponding Management Plan
Appendix A	Records of Title	N/A
Appendix B	General Arrangement Plans	N/A
Appendix C	Construction Methodology	N/A
Appendix D.1	Dewatering Assessment	Groundwater Settlement and Monitoring Contingency Plan (GSMCP)
Appendix D.2	Dewatering and Settlement Assessment – Addendum Detailing Site Investigations	N/A
Appendix E	Preliminary Site Investigation (PSI)	
Appendix F	Archaeological Assessment	Archaeological Management Plan
Appendix G	-	Erosion and Sediment Control Plan (ESCP)
Appendix H	Arboricultural Assessment	Tree Protection Methodology

[2] The final length of the pipeline is dependent on the location of the Marmion Shaft

Appendix I	Construction Noise and Vibration Assessment (CNVA)	Construction Noise and Vibration Management Plan (CNVMP)
Appendix J	AUP / Planning Maps	N/A
Appendix K	Statutory Assessment	N/A

2 APPLICANT AND PROPERTY DETAILS

Table 2-1: Applicant and Property Details

Applicant	Watercare Services Limited
Site address	Construction Works: Road Reserve – Queen Street, Auckland City Centre Construction Support Area: 329 Queen Street, 34 – 38 Greys Avenue, Auckland City Centre
Legal description	Lot 1 DP 84867, Pt Lot 2 DP 81645, Lot 1 DP 81645, Pt Allot 55 Sec 29 Auckland City, PT ALLT 6 SECT 29 CITY Auckland, PT ALLT 7 SECT 29 CITY Auckland (Construction Support Area only) 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

The following provides a description of the existing environment applicable to the application within which the tunnel will be constructed.

3.1 LOCATION AND PHYSICAL ENVIRONMENT

The Project is located within Auckland City Centre, to the immediate north and south of the intersection of Queen Street and Mayoral Drive. The project alignment extends from the 'Mayoral Shaft', established under the Part 3 consent, to a new shaft opposite the intersection of Queen Street and Marmion Street, as shown below in Figure 3-1.

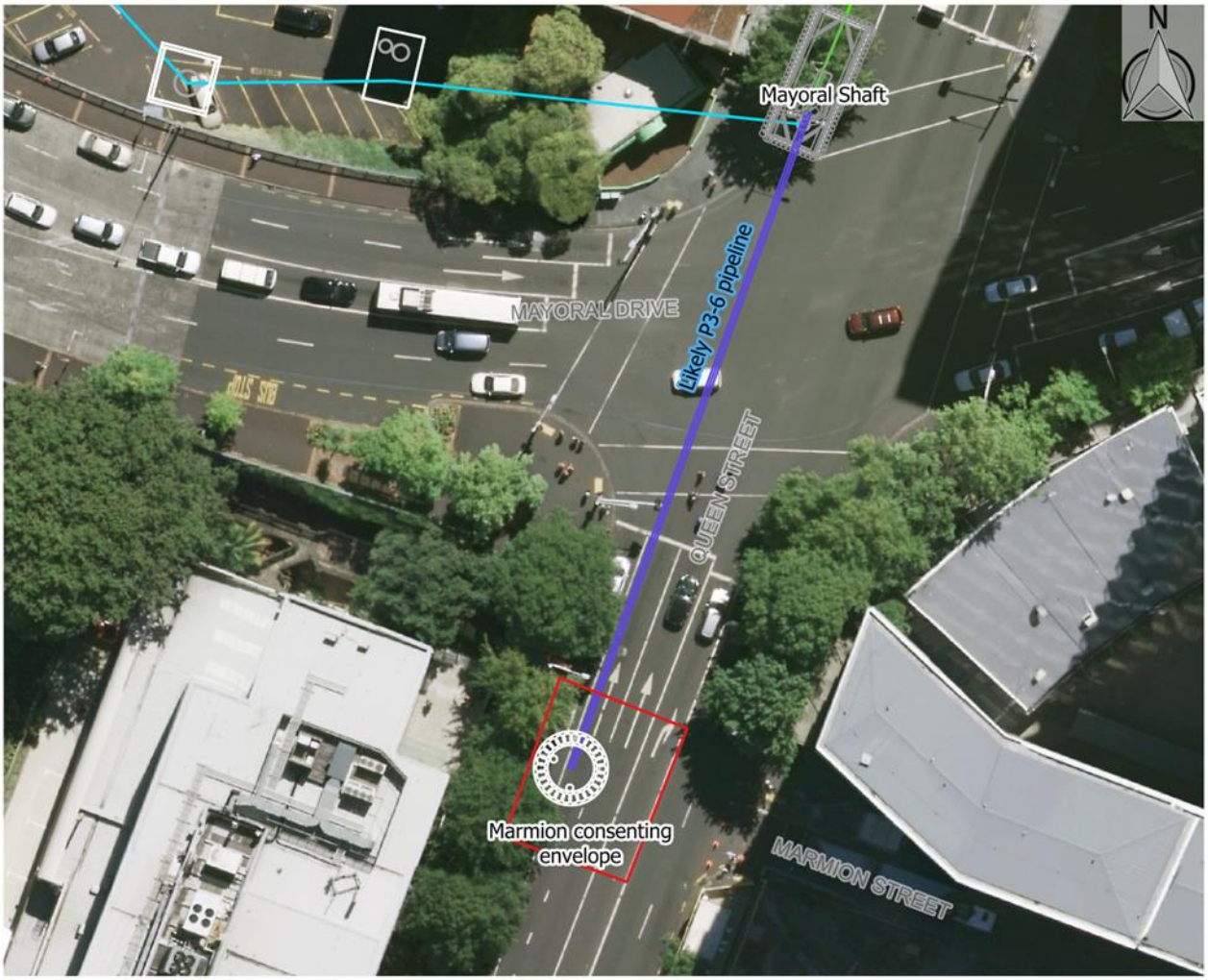

Figure 3-1: Project area

To the north of Mayoral Drive, Queen Street is generally two lanes in width (following the pedestrian/streetscape upgrades undertaken in 2021), with some vehicle access restrictions between Wakefield and Wellesley Street to enable priority for bus movements, while to the south it is generally four lanes in width. 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. Marmion Street is a one-way laneway-style street that primarily provides access to adjacent residential apartment buildings.

The land use surrounding the project area is typified by medium and high-density development containing apartments, offices, accommodation, education facilities and entertainment, with retail predominantly occupying the ground level of most buildings. The area contains a combination of heritage and special character buildings (such as the Auckland Sunday School Union Building at 323-327 Queen Street) and modern buildings. The Auckland Civic Precinct is located a short distance to the north-west 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.

3.2 GROUND CONDITIONS

3.2.1 GEOTECHNICAL AND GROUNDWATER

The geotechnical conditions of the site are described in the Dewatering Assessment (**Appendix D.1**) and Addendum (**Appendix D.2**). The Dewatering Assessment utilises a groundwater and settlement model derived from existing site information, GNS Webmaps, a desktop study, recent borehole data for the Queen Street Part 3 project and several geotechnical studies conducted for various other construction projects including the City Rail Link Limited project. Site investigations were also conducted December 2024 and January 2025 with results reflected in the Addendum.

The Institute of Geological and Nuclear Sciences (GNS) Geological Map 'New Zealand Geology webmap' at 1:250,000 scale (Edbrooke, 2001) indicates that the site is underlain by sandstone and mudstone of the East Coast Bays Formation (ECBF) of the Warkworth Subgroup. This comprises alternating sandstone and mudstone with variable volcanic content and interbedded volcaniclastic grits. The lithology at the shaft location will be confirmed with site-specific investigations.

In terms of hydrogeology, a dual groundwater system occurs in the City Centre, which is made up of a shallow aquifer system in the fill, alluvium soils, and a deeper, regional groundwater system within the basement of the ECBF.

The groundwater levels are spatially variable across the site and WSP have thus assumed groundwater levels in close proximity to the Marmion Shaft location are approximately 6.6 m below ground level, although these may vary seasonally and could rise notably during wet weather conditions.

3.2.2 CONTAMINATION

A Preliminary Site Investigation (PSI) has been prepared to assess the likelihood of contaminants being present within the site, see **Appendix E**. The PSI determined that no activities on the Hazardous Substances and Industries List ('HAIL') have occurred on site, and therefore the site is not expected to contain elevated levels of contaminants.

Soil sampling is being undertaken in conjunction with geotechnical investigations to verify the initial PSI findings.

3.2.3 ARCHAEOLOGY

An Archaeological Assessment of the entire 'Part 6' Alignment (i.e. the Part 3 – Part 6 Link and the Part 6 Marmion Street Projects) has been prepared and is attached as **Appendix F**.

The assessment found that there are no recorded archaeological sites within the Project area, although five sites related to the early European settlement of Auckland have been recorded within 100m of the alignment. While the Project area also has a long history of Māori settlement, investigations within the City Centre have rarely encountered archaeological remains of this period of history.

The proposed works are located entirely within the road corridor, which has been extensively modified by previous road construction and maintenance, along with the installation of network utility services, thereby reducing the potential for the presence of archaeological remains. Marmion Shaft is located towards the western side of Queen Street, and will not encounter any known archaeological remains, while the tunnel to Mayoral Shaft is unlikely to encounter any remains due to its depth below ground level.

3.3 FLOODING

As shown below in Figure 3-2, no flooding hazards are present at the proposed Marmion Shaft, however, an overland flowpath and floodplain travels through the Greys Avenue CSA from Myers Park, essentially following the former alignment of the Horotiu Stream.

Figure 3-2: Flooding hazards within the Project area (Source: Auckland Council Geomaps)

3.4 PROTECTED TREES

An Arboricultural Assessment has been prepared to assess the potential effects on protected trees within the road corridor of Queen Street, see **Appendix H.**

Figure 3-3: View of the three mature Sweet Gum trees within the Queen Street corridor

The western frontage of Queen Street contains a row of mature *Liquidambar styraciflua* (Sweet Gum) trees, with three specimens impacted by the Marmion Shaft footprint. The canopy of these trees has been lifted to at least 4.5m and as such, no pruning is currently required to provide adequate overhead clearance for the proposed works. Based on a review of aerial imagery, it appears that these trees were planted after 1959, and they contribute significantly to the amenity of the streetscape.

Note that while a street tree is shown in proximity to the Mayoral Shaft on Council's aerial imagery, this tree was removed around 2020 – 2021 to accommodate an extended footpath.

4 PLANNING PROVISIONS

Table 4-1 notes the planning provisions of the Auckland Unitary Plan (AUP) that apply to this resource consent application.

Table 4-1 AUP Provisions

Zone	Construction works: N/A Construction Support Area: Business – City Centre
Precinct	Arts, Civic and Entertainment
Overlay	Natural Heritage: Regionally Significant Volcanic Viewshafts and Height Sensitive Areas Overlay - E10, Mount Eden
Controls	Arterial roads Macroinvertebrate Community Index - Urban
Designations	Designation 8831, Penrose to Hobson Street Tunnel and Penrose Portal, Vector Ltd
Hydrology and flooding	Floodplain Overland Flowpath
Treaty Settlement – Statutory Acknowledgement	N/A
AUP Modifications	Plan Change 78

A copy of the relevant AUP planning maps is provided in **Appendix J**, with excerpts of the key provisions below.

Figure 4-1: AUP Zoning Map of the project area, with the Vector designation (8831) also shown

Figure 4-2: Aerial image of the site, with the Historic Heritage overlays near the Project Area shown

5 PROPOSAL AND ACTIVITIES

5.1 OVERVIEW

Watercare are proposing a programme of works to upgrade the wastewater network in the upper section of Auckland City Centre to accommodate the substantial and sustained urban growth from residential, municipal and commercial development. This Project relates to the construction of a new wastewater sewer line from the existing Mayoral Shaft to a new shaft opposite the intersection of Queen Street and Marmion Street.

The Project will be constructed using a combination of trenchless pilot bore to construct the wastewater pipeline tunnel, and secant piling to construct the temporary shaft. An overview of the proposed construction activities is shown below as Figure 5-1.

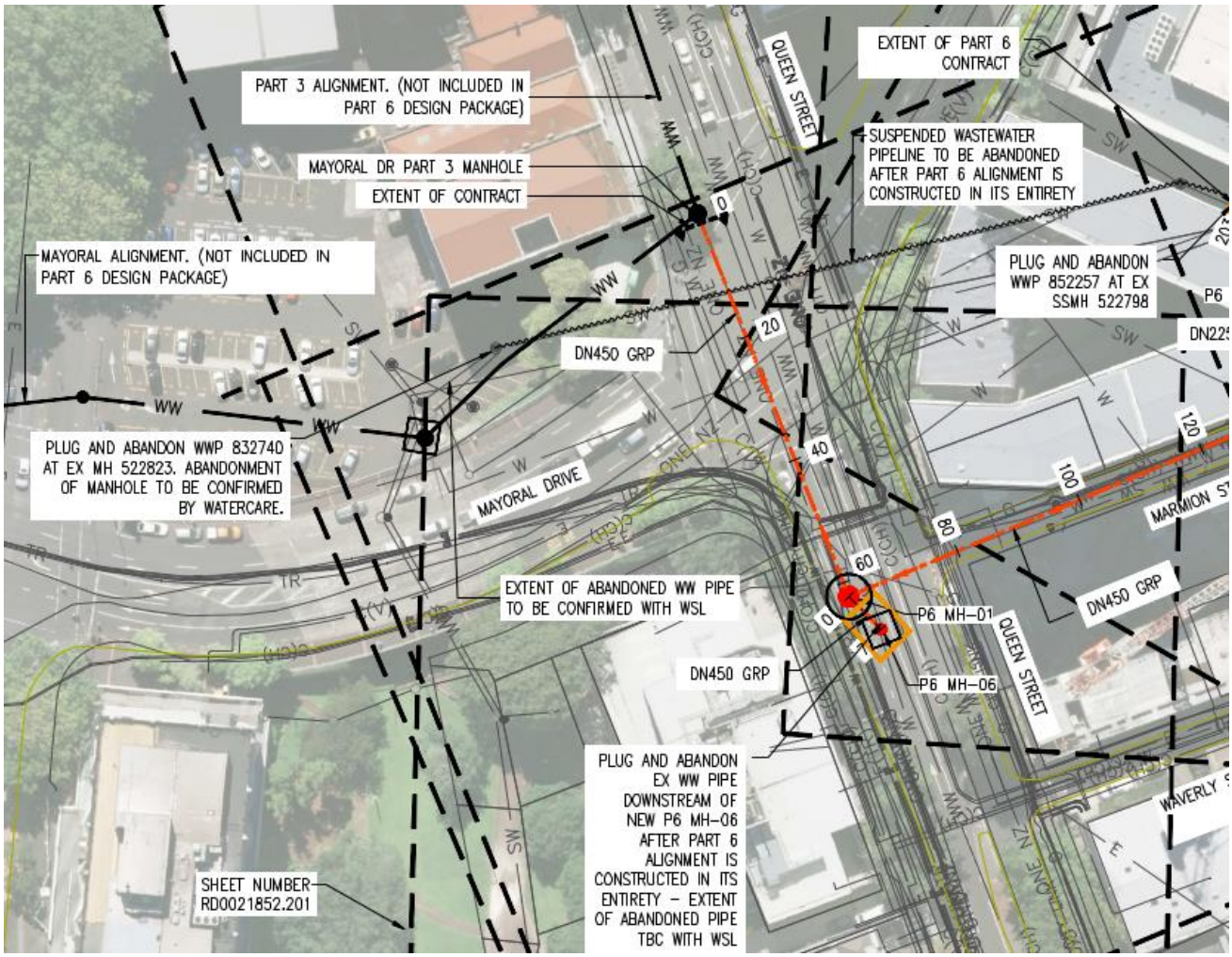

Figure 5-1: Overview of construction works in red

5.2 CONSTRUCTION HOURS AND DURATION

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

Table 5-1: Construction hours

Shaft Construction	Monday to Saturday – 0700hrs to 1800hrs *Sunday and night work will only be caried out if required by traffic management restrictions or Watercare operational requirements for tie ins/ connections to existing network*
Tunnelling works	Monday to Saturday – 0700hrs to 1900hrs

5.3 TEMPORARY CONSTRUCTION SHAFT

The temporary shaft opposite Marmion Street will be used as a reception pit for the Pilot Guided Boring Machine. The shaft's outside diameter will be 6.4m constructed using 600 - 900mm piles, 200mm in-situ shotcrete lining, 4m internal diameter and will be up to 17m deep.

The shaft will be constructed as follows:

1. A concrete guide wall is excavated and formed at ground level to guide the drill rig
2. Soft piles are drilled in a hit and miss fashion to avoid damaging the adjacent pile while they are curing.
3. The missed soft piles are then constructed.
4. Hard piles are then drilled through the soft piles creating a continuous retaining wall
5. Steps 2 to 4 are repeated until all piles are constructed and there is a continuous retaining wall.

Once the shaft has been excavated to approximately 1m below the invert, a 300-500mm thick concrete plug will be poured to form the base. This plug creates a level working platform while also retaining the groundwater from below. Once the plug has been constructed the dewatering requirements will significantly reduce or stop.

The shaft will be lined using shotcrete in 2m lifts to the depth of the shaft. The shaft lining and secant piles will remain in place and form part of the permanent works.

As detailed design and site investigations are still in progress, a 'consenting envelope' is sought to enable some flexibility in the final location of the shaft. All technical assessments have been undertaken in a conservative manner to account for this consenting envelope.

5.4 TRENCHLESS TUNNELLING WORKS

The proposed 450-700mm diameter wastewater pipeline will be installed using a Pilot Guided Boring Machine. This method drills a smaller diameter pilot bore from the launch pit to the reception pit; a reamer is then connected in reception pit and guided back to the launch pit. A soft pile window will be constructed on the pipe alignment at each shaft to allow the boring machine to breakthrough. A summary of the key steps of the boring machine is as follows:

5.4.1 PILOT BORE

1. Set up the Guidance System in the Launch Pit
2. Place drill rig in launching pit and align rack
3. Place Drill Head on Drill Rack

4. Connect all supporting items including vacuum to carry the slurry
5. Commence pilot bore

5.4.2 REAMER AND PIPE INSTALLATION

1. Install pusher unit at reception pit
2. Attach the reamer to the pilot
3. Place pipe on pusher and install vacuum system through the pipe
4. Start the reamer and push pipe into bore
5. Place next pipe disconnect vacuum system and install through second pipe
6. Repeat steps 3-5 until all the pipes have reached the launch pit

5.5 CONSTRUCTION EQUIPMENT

The following equipment is required to construct the Project:

Table 5-2: Construction equipment required for the Project

Secant shaft construction	Trenchless construction
CFA piling - SR-45 or SR-65	35-90T All Terrain / mobile crane
3-35T excavators	HIAB truck
6-8-wheeler trucks	Power pack container
400kg plate compactor	Tool truck
Concrete pump	Vacuum truck
Concrete trucks	Axis / Pilot bore micro-tunnelling machine
Silenced generator	Bentonite mixing system (if required)
7T vibrating drum construction roller	
90T Crane	

5.6 MANHOLE CONSTRUCTION & ROAD REINSTATEMENT

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

5.7 NETWORK UTILITY RELOCATIONS

The existing network utilities within the carriageway of Queen Street will need to be relocated to enable construction of the Marmion Shaft. As a flexible 'consenting envelope' is being sought, the exact utilities to be diverted are yet to be confirmed but may include potable water, electricity, wastewater, stormwater and communications. Network utilities will be diverted via Manhole MH-06.

Open-cut progressive trenching will be utilised to relocate any utilities that are required to be relocated. The trenches are expected to typically be between 0.4 m and 2 m in width and between 0.3m and 3.7m deep, depending on the location of the utility, and will be constructed in 3 to 10m-long sections per day (depending on depth of trench). Once the new ducts and pipes are installed, the trenches shall be backfilled with the footpath and/or road reinstated to the same ground level.

The area and volume required to excavate the trenches for network utility relocations are expected to be well below 2,500 m^2 and 2,500 m^3 (refer Table 5-5 below). No more than 120m of continuous trench will be exposed at any one time (the maximum length of a trench is expected to be approximately 23 m). Each trench required to relocate the network utilities may be open for up to 4-6 weeks.

Where trench works are required within the road corridor, this will involve a combination of reduced traffic lanes and full closure of traffic lanes to enable utility relocation works to be completed.

The following high-level methodology will apply to network utility relocations:

Table 5-3: High-level network utility relocation methodology

Stage	Construction Activities	Equipment and Materials
Site set out	Set up traffic management and fencing. Identify and mark-out position of trenches along the affected roadway and footpath areas.	Truck, handheld service locator, spray paint
Pavement removal	Saw cut and remove existing pavement.	Concrete saw, handheld concrete breaker (only where necessary), 8T excavator, truck.
Trench construction	Expose, identify, and support existing utilities up to a 1.5m – 3m depth. Trenches will be constructed to a width of approximately 1m. All spoil will be loaded onto trucks and disposed of off-site.	Hydro vac, normal excavator, truck, trench shields, air actuated compaction equipment, compressor and mobile generator.
Utilities installation	Once trench is at required depth, bedding will be placed in the trench, with the new utility assets installed.	Trench shield, 4 -8 wheeled truck, excavators, plate compactor, concrete trucks, asphalt paver, double drum roller, small water cart or water blaster
Reinstatement	Once installed, the trench will be backfilled and compacted in layers as specified. Surface is then reinstated with asphalt. Backfill material will be imported. Fill will be a mixture of cut to fill aggregate from site and imported fill. Backfill may be stockpiled on site for a short period.	

The network utilities within the Marmion Shaft's consenting envelope which may need to be relocated or protected are outlined in Table 5-4 below. Due to the proximity of these services to each other, a wider trench may be necessary to divert the services in a common service trench which would be either benched or shored.

Table 5-4: Summary of affected network utilities

Asset ID	Type	Owner	Action

N/A	Electricity – 11 kV	Vector	Relocate
N/A	Electricity - HV	Vector	Avoid
Cable ID HOB-PEN-A-CBL	Electricity – LV	Transpower	Relocate
Manholes – IDs 2000465764, 2000308548, 2000017189	Stormwater	Healthy Waters	Protect
Pipes – IDs 2000110404, 2000937040, 2000486432	Stormwater	Healthy Waters	Protect
Pipes – IDs 2000277930, 2000679895	Stormwater	Healthy Waters	Relocate
Pipe ID 852334	Wastewater	Watercare	Relocate
Manhole ID 522814	Wastewater	Watercare	Protect
Pipe ID 1650257	Potable Water	Watercare	Relocate
N/A	Communications	Vector	Relocate
N/A	Communications	One NZ	Relocate
N/A	Communications	City Link	Relocate

5.8 EARTHWORKS

The following table provides an estimate of the earthworks requirements for the Project:

Table 5-5: Earthworks summary for the Project

Activity	Area	Volume
Network utility relocations	260m^2	507.5m^3
Crane & piling platform	216m^2	152m^3
Shaft construction	32m^2	544m^3
Trenchless (pilot bore)	46m^2	25m^3
Total	554m^2	1,228.5m^3

The spoil material will be drilled out using an SR-45 or SR-65 and loaded using a 20T excavator into 6-8-wheeler trucks to be carted offsite over a period of 1-2 weeks.

5.9 CONSTRUCTION PROGRAMME

Construction works are anticipated to commence in September 2025 and take approximately 8 – 11 months. The estimated construction timeframe for each key activity is detailed below in Table 5-6.

Table 5-6: Estimated construction activity durations

Activity	Timeframe
Compound / traffic management set up	13 days
Network utility relocations	4-6 weeks per trench
Shaft construction	70 days, of which dewatering is required for 50 days
Tunnel construction	15 days
Manhole construction[3]	30 days
Road reinstatement	10 days

5.10 CONSTRUCTION SUPPORT AREA AND COMPOUND

To support the proposed construction activities, a construction support area (CSA) within the public carpark at 34-38 Greys Avenue and 329 Queen Street will be required. This CSA has been initially established to support the Part 3 Alignment and Part 3 – Part 4 Connector Tunnel projects.

The CSA contains site offices and welfare facilities, along with some limited site laydown and materials storage areas. Note however that most excavated materials will be immediately removed from site, while construction materials (such as pipes and aggregates) will be delivered to site on a 'just in time' basis.

The site layout for the Greys Avenue CSA (as approved in the Part 3 consent) is shown below in Figure 5-2. As the activities occurring within the CSA have been previously assessed in the Part 3 consent, they have not been assessed further.

[3] Manhole construction may be completed at a later date

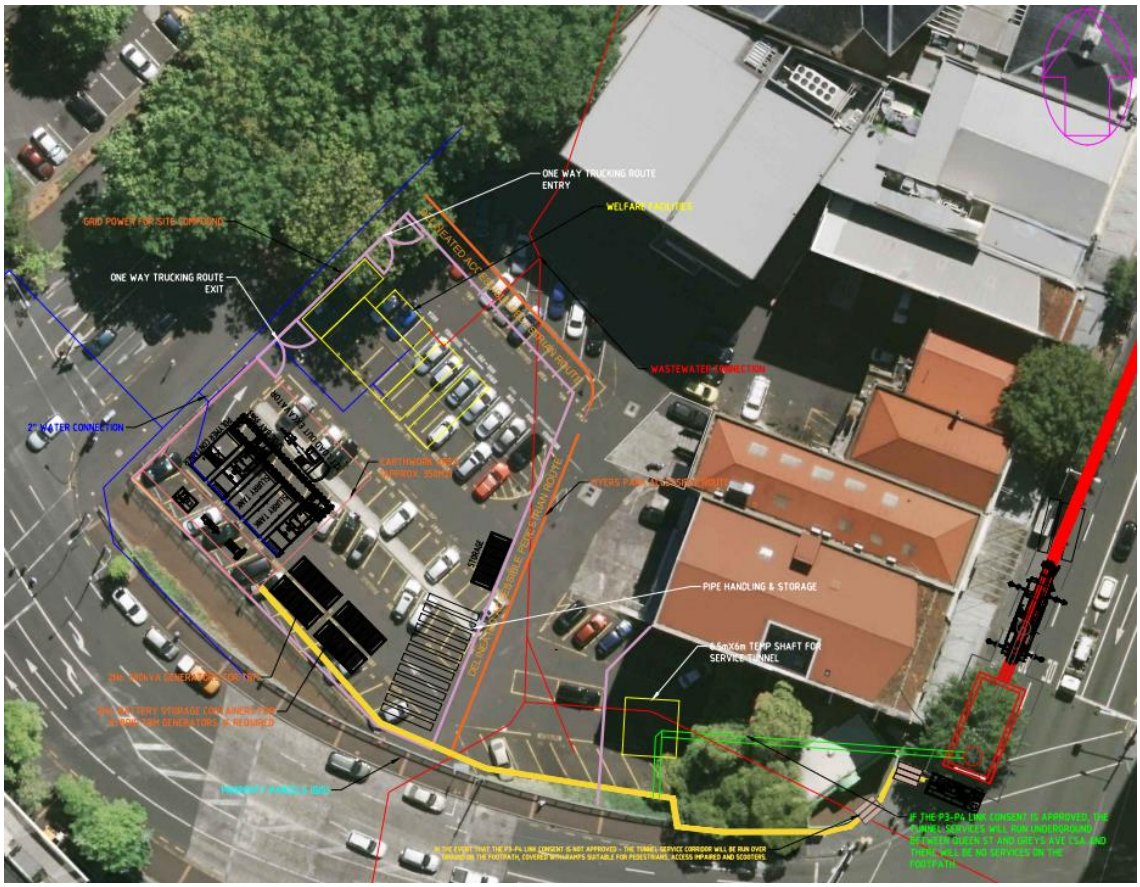

Figure 5-2: Greys Avenue CSA Layout

A 45m long by 11m wide compound will be set up around the Marmion Shaft to allow for the construction of the shaft and the tunnelling operations. The compound will make use of temporary concrete or steel barriers with hoardings around the perimeter of each, with access gates one or both ends.

Figure 5-3 below shows the consenting envelope for the proposed Marmion Shaft (red box). The construction compound for the shaft, defined by the pink lines for the hoarding and traffic barrier, will move with the shaft as drawn below, and will be finalised in the Construction Management Plan to be prepared by FH.

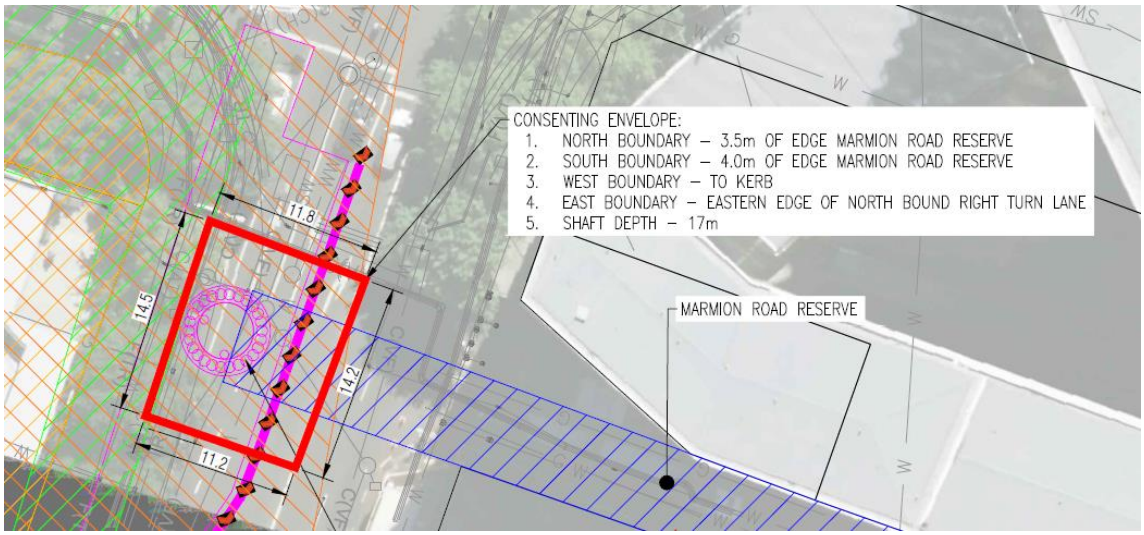

Figure 5-3: Shaft footprint and indicative compound

5.11 WORKS TO PROTECTED STREET TREES

As noted above, the western frontage of Queen Street contains a row of mature *Liquidambar styraciflua* (Sweet Gum) trees, with three specimens within the footprint of the Marmion Shaft.

The proposed works to construct the tunnel shaft are limited to the footprint of the Queen Street carriageway and as such, only minor roots are anticipated in this location. The Arboricultural Assessment (Appendix H) concludes that the works would affect less than 20% of each tree's respective root zone and therefore the works will comply with permitted standard E25.4.5.2 of the AUP for works within the Protected Root Zone. As an added precaution, the Arboricultural Assessment advises that the three trees be fenced off and excluded from the works area by way of protective fencing.

In terms of tree pruning, at present, the canopy of the Sweet Gum trees does not extend significantly over the carriageway, and therefore no pruning is currently anticipated to enable overhead clearance for the works. However, as the timeline for project construction and delivery is unknown, some pruning may be required in the future to provide adequate overhead clearance. Any required pruning will be minor and would not require branches larger than 80mm in diameter to be pruned, within the permitted standard thresholds outlined in Standard E26.4.5.1. All pruning works (if required) will be undertaken by a suitably qualified arborist.

6 CONSULTATION AND APPOVALS

The following outlines the engagement carried out by Watercare in relation to the project works.

6.1 MANA WHENUA

Watercare has a long-standing relationship with tangata whenua of Tāmaki Makarau. All iwi entities are advised of projects via a Kaitiaki Project List 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.

Draft reports have been circulated to these mana whenua partners.

6.2 AUCKLAND TRANSPORT

Auckland Transport (AT) have been regularly engaged by the Project team throughout the Queen Street Programme, and prior to the lodgement of the Part 3 and Mayoral Drive Alignment consents. Feedback on mitigation strategies for lane closures to accommodate compounds has been considered and included in all projects for the Queen Street Programme.

6.3 LOCAL COMMUNITY

In recognition of the highly populated area in which works will occur, engagement has been carried out with the wider community to keep them informed of the ongoing works in their neighbourhood.

7 REASONS FOR CONSENT

7.1 AUCKLAND UNITARY PLAN (OPERATIVE IN PART)

Resource consents required for the proposed works under the AUP are identified in Table 7-1 below. Overall, the activity status under the AUP is **Restricted Discretionary**.

Table 7-1: Reasons for Consent – AUP

Activity Rule	Status	Relevance to Application
Chapter 7 – Taking, using, damming and diversion of water and drilling		
Rule E7.4.1 (A20) Dewatering or groundwater level control associated with a groundwater diversion authorised as a restricted discretionary activity under the Unitary Plan, not meeting permitted activity standards or is not otherwise listed	Restricted Discretionary	Permitted Standard E7.6.1.6 (2) is infringed as the dewatering associated with the construction of Marmion Shaft and the relocation of the network utilities will occur for greater than 30 days (up to 50 days proposed).
Rule E7.4.1 (A28) The diversion of groundwater caused by any excavation, (including trench) or tunnel that does not meet the permitted activity standards or not otherwise listed	Restricted Discretionary	Permitted Standards E7.6.1.10 (2b)(3)(4b)(5a)(6b) are infringed. See Table 6-3 of the Dewatering Assessment (**Appendix D.1**) for details.

Where an activity has been identified as restricted discretionary, an assessment against the relevant assessment criteria is provided in **Appendix K**.

7.2 PERMITTED ACTIVITIES

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

- **Rule E7.4.1 (A17)** Dewatering or groundwater level control associated with a groundwater diversion permitted under the Unitary Plan (trenchless tunnelling only)
- **Rule E7.4.1 (A27)** Diversion of groundwater caused by any excavation (including trench) or tunnel (trenchless tunnelling only)
- **Rule E25.4.1 (A1)** Construction noise and vibration for planned works within the road reserve.
- **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 E26.4.3.1. (A83):** Tree trimming or alteration in road and public open spaces that comply with Standard E26.4.5.1.
- **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.
- **Rules E26.5.3.1 (A95)** and **(A96)** Earthworks up to 2,500m^2 / 2,500m^3 other than for maintenance, repair, renewal, minor infrastructure upgrading (includes earthworks for network utility relocations).
- **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 K**.

8 STATUTORY CONSIDERATIONS

The Resource Management Act (RMA) sets out the statutory framework within which natural and physical resources are managed.

8.1 SECTION 104

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 s.104:

- Any actual and potential effects on the environment for allow the activity.
- Any relevant provisions of a national environmental standard, other regulations, national policy statements, the coastal policy statements, regional policy statements 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.

8.2 SECTION 104C

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 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.

It is considered that the information and assessment provided in this report address the requirements of s104 and s104C of the 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 s.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 relevant standards. A table detailing these provisions, including an assessment against the permitted standards, has been included in Appendix K of this application. In summary, these permitted activities include:

- Dewatering and the diversion of groundwater (trenchless tunnelling only);
- Construction noise and vibration for planned works within road;
- Service connections and underground wastewater pipelines;
- Earthworks;
- Temporary activities associated with building or construction; and
- Works within the protected root zone of protected street trees.

In relation to noise and vibration effects, the project is entirely within the road corridor and therefore the AUP noise and vibration limits for construction works do not apply, provided that a Construction Noise and Vibration Management Plan (CNVMP) is developed and followed. Despite this, the noise and vibration effects from the works occurring within the road corridor were still assessed within the CNVA (Appendix I) to meet the general obligations to manage noise under Section 16 of the RMA, and a range of mitigation measures have been provided.

In relation to protected street trees, an Arboricultural Assessment has been carried out to assess the impact of the proposed works on trees (Appendix H). Three Sweet Gum trees are located on the western frontage of Queen Street, and these were assessed for potential impacts. Due to the location of the construction works, the works would affect less than 20% of each tree's respective root zone thus meeting permitted standard E25.4.5.2.

At present, the canopy of the Sweet Gum trees does not require pruning however, if any future pruning of the canopy is necessary, the assessment confirms that this could be undertake within permitted thresholds (with less than 20% of the canopy to be pruned) and branches no larger than 80mm to be removed; Standard E26.4.5.1). All pruning works will be undertaken by a suitably qualified arborist under the direction of a works arborist.

As such, the works are deemed a permitted activity under Rules E26 (A83) and (A87), and form part of the permitted baseline.

In effect, the list of activities described above constitute the permitted baseline for this project. Any resultant 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 this permitted baseline which are to be assessed

9.2 POSITIVE EFFECTS

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

The primary purpose of the Project is to enable the construction of the first portion of the 'Part 6' Alignment between Queen Street and Marmion Street during Part 3 construction works. The construction of the Project, while the Mayoral Shaft is open, will ensure that additional construction and traffic management to re-open the shaft at a later point is avoided.

As a crucial connection component within the larger Queen Street Wastewater Diversion programme of works, the link tunnel will assist in increasing the capacity of the wastewater network and reducing the occurrence of wet weather overflows into the stormwater network. As such, the works will help to reduce contaminants flowing into coastal waters during overflow events, thus improving the quality of receiving water bodies.

By constructing a portion of the Part 6 wastewater alignment, this project will generate positive effects by providing for future population growth in the Auckland City Centre.

9.3 ASSESSMENT OF DEWATERING EFFECTS

The abstraction of groundwater for dewatering causes a depression cone in the groundwater table. Groundwater levels generally decrease around the excavation and the area of the groundwater depression cone will extend outwards over time until dewatering ceases. Therefore, groundwater drawdowns may propagate outwards over time.

The Marmion Shaft will be constructed using an in-situ 300-500mm thick concrete lining and secant piling. This method will retain the groundwater from below and the concrete lining will act like a 'plug' significantly reducing or even ceasing the requirement for dewatering once the lining is constructed. As a consequence, dewatering will most likely only be necessary during the excavation of the shaft and before the base is lined. Any mounding of water around secant pile shafts is likely to be within the limits of the natural seasonal groundwater level variation.

The Dewatering Assessment (Appendix D.1) addresses the key matters of discretion outlined provided in in Chapter E7 of the AUP, with the key matters being:

- Effects on nearby water takes;
- Effects on groundwater pressures, levels and flow paths, and saline intrusion;
- Settlement effects (on buildings, services and other infrastructure assets);
- Surface flooding effects; and
- Effects on terrestrial ecosystems.

As the dewatering effects from the construction of the pipeline tunnel are excluded under Chapter E7 (being a diameter of less than 1.2m), these effects have not been assessed.

Subsequent to the preparation of this report, site-specific investigations undertaken in December 2024 and in January 2025 showed that the measured groundwater level was significantly deeper than the groundwater level used in the modelling for the technical assessment attached. As the dewatering assessment determined, based on modelling, that the adverse effects would be negligible, no further assessment has been undertaken given the deeper groundwater levels found, meaning that dewatering, and subsequently, adverse effects, is less likely to occur compared to the modelled result.

9.3.1 EFFECTS ON NEARBY WATER TAKES

There are no active water take consents within the 0.5m drawdown threshold. Further, dewatering will not occur concurrently with other sites on the Queen Street Programme in combination with the Marmion Shaft. As such, effects on nearby water takes will be negligible.

9.3.2 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 Marmion Shaft.

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

- The groundwater level will not be reduced below sea level near the coast, as the site is 1330m from the coast.
- The dewatering period at the Marmion Shaft is 50 days, which is considered a very short time in terms of groundwater migration.
- The maximum lateral extent of the drawdown is 90 m from the Marmion shaft.

The likelihood of saline intrusion occurring is therefore negligible.

9.3.3 SETTLEMENT EFFECTS (ON BUILDINGS, SERVICES AND OTHER INFRASTRUCTURE ASSETS)

The potential for settlement effects on buildings, network utility services and roading infrastructure (such as footpaths, kerbs and asphalt) have been considered in the dewatering assessment.

Settlement effects on buildings have been considered using the Burland methodology, and include combined settlement (from mechanical settlement and consolidation settlement), as well as differential settlement. Effects have been considered on the buildings closest to the Marmion Shaft, being those at 345-361 Queen Street, 430 Queen Street and 438 Queen Street; it is noted that these buildings are not listed within the historic heritage overlay, and are therefore not considered sensitive to settlement.

The assessment shows that the worst-case effects are to the building at 345-361, which may experience up to 9mm of settlement and a maximum differential settlement of 1:1,000, both of which are considered 'negligible'. Therefore, settlement effects to buildings will be less than minor.

The assessment of settlement effects to services has been based on the 'Buried Pipeline Response to Tunnelling Ground Movements' by T. D. O'Rourke and C.H. Trautmann. This methodology considers that no damage to services is expected for differential settlement of approximately 1:200

to 1:300 or lower. In this instance differential settlement has been assessed as 1:500, which is much less than the threshold considered in this publication. As such, settlement effects on services will be less than minor.

Localised damage to footpaths, kerbs and asphalt close to the shafts is likely, however this is most likely to occur from construction plant operations and traffic. This damage is expected to be primarily aesthetic and not cause major disruption in the use of the assets by the public. Any repairs required to roading infrastructure upon the completion of dewatering will be undertaken by the constructors as required. As such, any settlement effects will be negligible.

The Addendum for the Dewatering Assessment reflects the results of the site-specific investigations. A shallow perched groundwater level (2.45 m bgl) was measured during drilling but is likely influenced by the drilling fluid, this only being water. Based on the logging information, this water level is considered to only be within the fill. The perched aquifer is likely to experience very limited drawdown and therefore, limited settlement is expected. The building foundations for the building at 345-361 Queen Street (the building closest to the Marmion shaft) is likely founded in competent rock and therefore, unlikely to be subject to damage from settlement of shallow unconsolidated sediments. The Addendum therefore, concludes, that the risk for any local effects on non-suspended basement slabs is very low and the effects are likely to be negligible.

9.3.4 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 (less than 2.4m^3 per day maximum), any effects on surface flooding will be negligible.

9.3.5 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.

9.3.6 MITIGATION MEASURES

While effects from dewatering have been assessed as negligible (i.e. less than minor), 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.

9.3.7 SUMMARY

Overall, the effects resulting from dewatering and groundwater diversion will be less than minor.

9.4 SUMMARY OF ACTUAL AND POTENTIAL EFFECTS

Overall, the potential adverse effects of the proposed Part 3 – Part 6 Link project are assessed as 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 on the receiving environment. Table 10-1 below provides a high-level overview of the key recommended environmental mitigation measures.

Table 10-1 Recommended environmental mitigation and management measures

Topic	Proposed Measures
Dewatering	• Implementation of a GSMCP, which will include alert and alarm levels and response procedures. • Groundwater level monitoring. • Ground surface deformation monitoring.
Protected Trees	• All heavy machinery and equipment should be stored away from the root zone of all trees. • Installation of protective fencing. • All pruning works will be undertaken by a suitably qualified arborist under the direction of a works arborist.
Stormwater / Earthworks	• Implementation of an ESCP during construction works.
Noise and Vibration	• Implementation of a CNVMP during construction works • Acoustic hoardings around the construction compound on Marmion Street. • Where practicable, localised movable acoustic barriers around high noise-generating equipment during operation. • Appropriate selection and placement of equipment. • Scheduling work outside construction hours and concrete breaking activities to minimise the impact on sensitive receptors.

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: • a controlled activity • 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 of this application. • The application is not for a controlled activity or boundary activity. PROCEED TO STEP 3
STEP 3	If not precluded by step 2, public notification is required in certain circumstances.	There are no rules or provisions under the NES-CS which require public notification.

	Description of Process	Assessment
	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.	The assessment of effects at Section 9 found that the adverse effects of the Project on the environment are avoided, remedied or mitigated to an acceptable level. A summary of the key findings above notes: • Groundwater drawdown and settlement effects on adjacent buildings are assessed to be negligible. Groundwater and settlement monitoring will occur during construction to ensure unexpected effects do not occur; • Mitigation measures for potential noise and vibration effects are outlined in the CNVMP; • Engagement with the public has occurred, as outlined in Section 6 Due to these mitigation measures, for the purposes of s95D, the actual and potential effects of the Project are not considered to be more 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 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).	There are no special circumstances which are relevant to this application. The application proposes a new wastewater pipeline, which is provided for in the AUP as a 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: • 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	• 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
	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, and no damage to buildings is anticipated. 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 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).	As discussed above, there are no special circumstances which are relevant to this application. LIMITED NOTIFICATION IS NOT REQUIRED

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
- Any measures 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
- Any relevant provisions of:
  - A national environmental standard
  - Other regulations
  - A national policy statement
  - A New Zealand Coastal Policy Statement
  - 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 POLICY STATEMENT

12.1.1 NATIONAL POLICY STATEMENT ON URBAN DEVELOPMENT

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

Noting that 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, 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 Auckland's city centre, particularly for future growth encouraged by the opening of the City Rail Link in 2026.

12.2 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). The Queen Street Programme of works has been designed to minimise its impact on both the natural and built environment while enabling growth in the upper City Centre catchment.

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

12.3 RELEVANT AUP OBJECTIVES AND POLICIES

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

- E1 Water quality and integrated management
- E2 Water quantity, allocation and use[4]
- E26 Infrastructure

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

- The Project will protect public health and safety and reduce adverse ecological effects by reducing potential wastewater overflows from the wastewater network.
- 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.

12.4 RELEVANT AUP STANDARDS AND ASSESSMENT CRITERIA

Based on the identified reasons for consent, the AUP provides standards and assessment criteria that are relevant to the project works. Within **Appendix K** is an assessment of these standards which demonstrates the project's ability to meet the requirements of the AUP.

Overall, the assessment supports the project's alignment with the applicable AUP standards and assessment criteria:

- An assessment of dewatering effects is contained in **Appendix D.1** which concludes that the effects on neighbouring bores, nearby environmental features (streams and other surface water bodies) and saline intrusion will be negligible and therefore less than minor.

[4] The objectives and policies of Chapter E7 reference back to Chapters E1 and E2

- Settlement effects on neighbouring buildings and structures are assessed as being less than minor, however monitoring during construction is proposed to ensure no unexpected effects occur.

12.5 OTHER MATTERS

12.5.1 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.*

The proposed works as described in Section 5 of this report are required to facilitate the construction of a new wastewater pipeline and form a critical component of the wider Queen Street Programme. 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 urban 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 proposed where they have been unable to be avoided. Given this, the proposal is 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 Māori 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

(h) the management of significant risks from natural hazards

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

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.

There are no flooding hazards present within the site, however, an overland flow path and floodplain does travels through the Greys Avenue CSA from Myers Park. An ESCP has been developed to divert flood flows and mitigate flood risk.

It is noted in terms of the relationship of Māori and their culture and tradition with waters, that the overall project alleviates existing capacity constraints within the wastewater network, thereby reducing the frequency and volume of overflow discharges to Waitematā Harbour and aligning with cultural values.

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

13.3 SECTION 7

Section 7 of the RMA 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 flooding 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 natural resources. 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 mana whenua throughout the Queen Street Programme. No effects on cultural values or heritage from the Project have been identified by mana whenua.

14 CONCLUSION

The proposed works are part of Watercare's programme of works to upgrade the existing wastewater network of the upper catchment of the Auckland City Centre. The purpose of this Project is to increase the capacity of the network to enable future development in the area by installing a new wastewater main in the road reserve of Queen Street. This project is for the Part 3-Part 6 Link situated to the immediate north and south of the intersection of Queen Street and Mayoral Drive.

Consent is required under Chapter 7 of the AUP for the proposed dewatering during the installation of the Marmion Shaft. The overall activity status of the application is Restricted Discretionary.

Potential adverse effects resulting from the proposal relate to the diversion and take of groundwater. However, this AEE has concluded that any adverse effects associated with the diversion and take of groundwater are temporary and will be less than minor as the effects on neighbouring bores, nearby environmental features (streams and other surface water bodies) and saline intrusion will be negligible. While it is unlikely that the dewatering activity will cause settlement effects on buildings in proximity to the shaft, mitigation measures in the form of groundwater level and ground surface deformation settlement monitoring will be undertaken to ensure no unexpected effects occur.

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 their health and safety. The proposal is also consistent overall 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 exclusively for Watercare ('Client') in relation to the Part 3 – Part 6 Link consent of the Queen Street Wastewater Diversion Programme ('Purpose') and in accordance with the TO-WSP-65, signed 3 December 2024. 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 reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose or any use or reliance on the Report by any third party.