Carrington Road Improvements Project – Assessment of Effects on the Environment

Prepared for Auckland Transport
Prepared by Beca Limited

21 February 2025

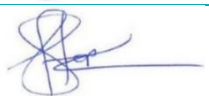
Contents

Appendices

Revision History

Revision Nº	Prepared By	Description	Date
1.0	Liam Winter	Final	21/02/2025

Document Acceptance

Action	Name	Signed	Date
Prepared by	Liam Winter		21/02/2025
Reviewed by	Lesley Hopkins		
Approved by	Cherie Dunn		
on behalf of	Beca Limited		

1 Introduction

1.1 Purpose

This Assessment of Effects on the Environment (AEE) has been prepared by Beca Limited (Beca) on behalf of Auckland Transport (AT) (the Applicant) to support an application for resource consent for the Carrington Road Improvements Project (CRIP). The scope of this AEE also includes the resource consents required for the Point Chevalier Watermain No. 2 Project, which is proposed by Watercare Services Limited (Watercare). Unless otherwise noted, the two projects are referred to collectively in this report as 'the Project'.

The Project requires resource consent for the reasons set out in Section 4 of this document, which are summarised at 1.3 below. It is noted that while the Project comprises works proposed by both AT and Watercare, AT is the sole applicant for the resource consents.

Resource Consent is sought as a Non-Complying Activity overall under the Auckland Unitary Plan: Operative in Part (AUP:OP) and the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES:CS). This AEE has been prepared pursuant to Section 88 of the Resource Management Act 1991 (RMA), and in accordance with the Fourth Schedule of the RMA.

1.2 Project Context

Carrington Road is a 1.6km-long arterial road on the Auckland isthmus which connects New North Road at the Mt Albert Town Centre in the south; and Great North Road at the Point Chevalier Town Centre in the north (see Figure 1-1). It is a busy multi-modal corridor which provides access to several high trip generating facilities including the Unitec Institute of Technology (Unitec), Gladstone Primary School, and the Mason Clinic; as well as residential development along its length.

The main impetus for the CRIP is to support the Carrington Residential Development located on the western side of Carrington Road, where approximately 4,000 dwellings are planned in the next 10-15+ years (see Section 2.2.3 for further detail). The CRIP is also intended to serve growth and intensification in the broader surrounding area; and achieve AT's long-term strategic network outcomes for the corridor, in particular a higher level of service for active modes and public transport.

The CRIP proposes the upgrade of Carrington Road into a high-quality multi-modal arterial, including the following key features (see Section 3 for a full Project Description):

- Bus/special vehicle lanes for the majority of the corridor length in both directions, and new/relocated bus stops;
- Improved walking and cycling facilities along the full corridor length in both directions, new midblock crossings, and a new pedestrian bridge to supplement the existing Mt Albert Rail Bridge;
- Upgraded intersections, including four new/upgraded signalised intersections;
- New stormwater management infrastructure, including stormwater treatment and conveyance swales within the berm on Segar Avenue (a side road perpendicular to the east of Carrington Road); and
- Public realm landscaping, and new street trees.

Funding for the CRIP has been secured through Kāinga Ora's Infrastructure Acceleration Fund (IAF). This funding is contingent upon construction commencing in the first quarter of 2026 with practical completion by May 2028 to align with the Carrington Residential Development programme.

The Point Chevalier Watermain No. 2 Project (the Watermain) on Carrington Road is similarly needed to support the growth and intensification of the area, and forms part of a wider scheme (the Khyber and Konini Watermain Project) to improve supply, maintain levels of service, and provide resilience to both the Point Chevalier and Khyber water supply zones.

Figure 1-1 – Project extents for the Carrington Road Improvements Project and the Point Chevalier Watermain No. 2 Project

The design and planning for Carrington Road section of the watermain has been expedited by approximately three years ahead of the remainder of the scheme to enable concurrent construction with the CRIP.

The Watermain extent is shown in Figure 1-1, and comprises a Ø750mm concrete-lined steel (CLS) pipeline, approximately 1km in length between Seaview Terrace and Sutherland Road. Within Carrington Road, the proposed alignment is largely within the existing road reserve on the western side of the road within existing berm space; which will be the new left-hand northbound lane in future post-road widening. A full Project Description is contained in Section 3.

1.3 Summary of consents sought

Resource Consent is sought as a Non-Complying Activity overall under the AUP:OP and the NES:CS pursuant to sections 9, 14, and 15 of the RMA for the following activities:

- A Non-Complying Activity under the AUP:OP pursuant to rule D17.4.1(A1) for the demolition of the Airing Court Wall, a pre-1905 feature within the Oakley Hospital historic heritage extent of place;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule D17.4.1(A9) for modifications to the fabric of the Oakley Hospital historic heritage extent of place;
- A Discretionary Activity under the AUP:OP pursuant to rule D17.4.1(10) for new buildings or structures within the Oakley Hospital historic heritage extent of place;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E7.4.1(A20) for dewatering associated with a groundwater diversion authorised as a restricted discretionary activity or not meeting permitted activity standards;

- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E7.4.1(A28) for diversion of groundwater caused by excavation that does not meet the permitted activity standards;
- A Controlled Activity under the AUP:OP pursuant to rule E9.4.1(A7) for development of a new or redevelopment of an existing high-use road of >5,000m^2;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E25.4.1(A2) for construction noise and vibration which does not comply with the permitted activity standards;
- A Discretionary Activity under the AUP:OP pursuant to rule E26.2.3.1(A16) to enable road widening on land within the Business – Mixed Use and Special Purpose – Tertiary Education zones;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rules E26.4.3.1(A84), (A88), and (A92) for tree trimming, alteration, removal, and works within root zones;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rules E26.5.3.1(A97)-(A97A) for district plan earthworks exceeding 2,500m^2/2,500m^3;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E26.6.3.1(A115) for district plan earthworks within 20m of a scheduled historic heritage place;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E26.6.3.1(A130) for network utilities within a historic heritage overlay that do not comply with permitted activity standards;
- A Discretionary Activity under the AUP:OP pursuant to rule E26.8.3.1(A131) for network utilities within a historic heritage overlay not otherwise provided for;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E27.4.1(A5) for a reconfigured vehicle crossing at 155 Carrington Road where a Vehicle Access Restriction applies;
- A Restricted Discretionary Activity under the AUP:OP pursuant to rule E40.4.1(A24) for temporary activities associated with construction exceeding a duration of 24 months;
- A Discretionary Activity under the NES:CS pursuant to regulation 11 for the contaminated soil disturbance where permitted, controlled, or restricted discretionary activity standards are not met.

These consent triggers are discussed in more detail in Section 4 of this AEE.

1.4 Structure of this report and appendices

This AEE has been prepared in accordance with the requirements of Section 88 and the Fourth Schedule of the RMA, and contains the following information:

- A description of the existing environment (Section 2);
- A description of the proposed activities (Section 3), and the resource consents and other authorisations required for the proposed activities (Section 4);
- An assessment of the actual and potential effects on the environment of the activities and the proposed mitigation measures (Section 5);
- Consultation undertaken (Section 6);
- The statutory framework relevant to the assessment of effects (Section 7); and
- A notification assessment (Section 8).

This AEE is supported by the following appendices:

- Appendix A – Records of Title;
- Appendix B – Preliminary Design Drawings and Urban Design Strategy;
- Appendix C – Technical Specialist Assessments;
- Appendix D – Proposed Conditions;
- Appendix E – Affected Party Approvals; and
- Appendix F – Summary of responses to pre-lodgement comments.

2 Description of the Existing Environment

2.1 Site Description and Location

The CRIP extent comprises the full 1.6km length of Carrington Road between New North Road at the Mt Albert Town Centre in the south; and Great North Road at the Point Chevalier Town Centre in the north (see Figure 1-1). The Watermain extent comprises 1km along Carrington Road between Seaview Road in the south and Sutherland Road in the north (see Figure 1-1). Carrington Road is generally located on an undulating ridge between the Te Auaunga/Oakley Creek catchment to the west, and the Waitītiko/Meola Creek catchment to the east.

The majority of the CRIP and Watermain works are within the existing road reserve. Road widening is proposed on the western side of the road between Woodward Road and State Highway 16 (SH16) as provided for by the Wairaka Precinct boundary setback in the AUP:OP (see Section 2.2.3). The relevant properties are listed in Table 2-1, and the Records of Title are included in Appendix A.

Carrington Road also includes bridges over the North Auckland Line (NAL) at Mt Albert (within a KiwiRail designation); and SH16 to the east of the Waterview Interchange (within NZ Transport Agency Waka Kotahi (NZTA) designations).

Table 2-1 – Property Information

Address	Legal Description	Description
1 Carrington Road, Mount Albert, Auckland 1025	SECT 3 SO 520006	Crown-owned property under development as part of the Carrington Residential Development. Part of Precinct boundary setback intended to enable widening of Carrington Road (see Section 2.2.3).
99 Carrington Road, Mount Albert, Auckland 1025	LOT 6 DP 515012	
131 Carrington Road, Mount Albert, Auckland 1025	SECT 2 SO 573867, SECT 3 SO 573867, SECT 4 SO 573867, SECT 5 SO 573867	
139 Carrington Road, Mount Albert, Auckland 1025	SECT 1 SO 573867	Unitec-owned property for remaining area of the Unitec Mt Albert Campus. Part of Precinct boundary setback intended to enable widening of Carrington Road (see Section 2.2.3).
Carrington Road	-	Road reserve.
North Auckland Line, Auckland Region	Railway Network	Rail corridor crossed by existing road bridge.
North-Western Motorway, Point Chevalier	-	State highway corridor crossed by existing road bridge.

2.2 Land Use Context and Planning Provisions

2.2.1 Land Use Context

The eastern side of Carrington Road is largely abutted by residential development, as well as several community facilities – a Te Whatu Ora/Health New Zealand (Te Whatu Ora) rehabilitation facility, the Gladstone Primary School, and two Early Childhood Education (ECE) centres.

The western side of the road is also abutted by residential development to the south of Woodward Road while land to the north of Woodward Road falls within the AUP:OP Wairaka Precinct (see Section 0). The Precinct includes 39.7 hectares of land purchased from Unitec by the Crown and earmarked for the

Carrington Residential Development, and also contains the remaining part of the Unitec Mt Albert campus, the Taylors Laundry facility, and Te Whatu Ora's Mason Clinic. Earthworks and construction activities for the early stages of the Carrington Residential Development to transition the former Unitec land to high-density residential development are currently underway.

2.2.2 Planning Provisions

The relevant provisions of the AUP:OP applying to the physical extent of the proposed works are listed in Table 2-2, and are shown in Figure 2-1.

Table 2-2 – Carrington Road planning context

Carrington Road – applicable AUP:OP provisions	
Zoning	Road (i.e. unzoned) Business – Mixed Use Zone Special Purpose – Tertiary Education Zone Strategic Transport Corridor Zone
Precincts	Wairaka Precinct (see 2.2.3 below).
Controls	Arterial Road Control Macroinvertebrate Community Index
Overlays	Historic Heritage Overlay Extent of Place (ID 01618 – Oakley Hospital Main Building) Quality-Sensitive Aquifer Management Areas Overlay
Designations	Designations – 6300 – North Auckland Railway Line, KiwiRail Holdings Limited Designations – 6718 – Motorway – State Highway 16 Newton to Avondale, NZ Transport Agency Designations – 6723 – State Highway 16 – Waterview Connection to Western Springs, NZ Transport Agency
Other Notations	Overland Flow Paths 1% AEP Floodplain

In addition to these directly applicable provisions, the following provisions of the AUP:OP applying to the immediate surroundings of the Project outside the physical extent of the proposed works are also noted for context:

- Zoning – Much of the corridor is surrounded by Residential – Mixed Housing Urban (MHU) and Residential – Terrace Housing and Apartment Buildings (THAB) zoned land. The corridor also adjoins areas of Business – Town Centre and Business – Mixed Use zoned land at the Mt Albert and Point Chevalier ends, as well as two small sites zoned for Open Space – Informal Recreation. The two Te Whatu Ora sites – the rehabilitation facility on the eastern side of Carrington Road and the Mason Clinic within the Wairaka Precinct – are both zoned Special Purpose – Healthcare Facility and Hospital;
- Controls – The Mt Albert and Point Chevalier Town Centres each have Height Variation and Building Frontage controls, while the Te Whatu Ora rehabilitation facility has a parking variation control in effect;
- Designations – The following designations are immediately adjacent to the Carrington Road corridor:
  - Designations – 4722 – Educational purposes (Gladstone School), Minister of Education;
  - Designations – 1609 – Road Widening, Auckland Transport;
  - Designations – 1623 – Council carpark, Auckland Transport; and
  - Designations – 8815 – Electricity works – substation, Vector Limited.

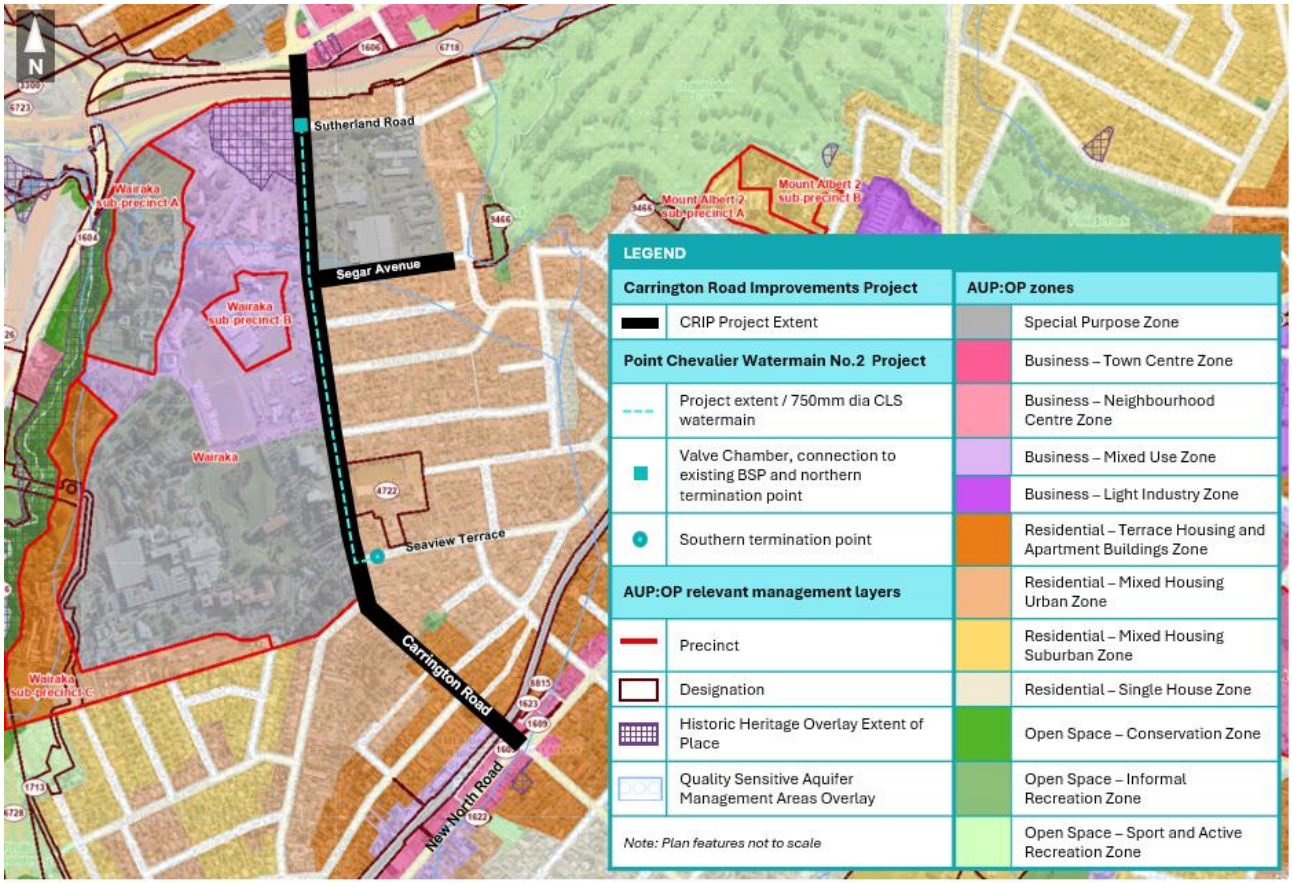


Figure 2-1 – Carrington Road planning context

2.2.3 Wairaka Precinct and the Carrington Residential Development

The Wairaka Precinct (the Precinct) is a 64.5ha site on the western side of Carrington Road, of which 39.7ha was purchased by the Crown from Unitec between 2018-2022 for the Carrington Residential Development. The development is being led by the Rōpū of Marutūāhu, Waiohua-Tāmaki, and Ngāti Whātua under collective Treaty of Waitangi redress arrangements; and is being facilitated by the Crown via Te Tūāpapa Kura Kāinga – Ministry of Housing and Urban Development (MHUD). The development is ultimately intended to yield approximately 4,000 dwellings in the next 10-15+ years. The remainder of the Precinct comprises the Mason Clinic (6ha), the remaining part of the Unitec Mt Albert campus (13.7ha), and Ngāti Whātua Ōrakei land (4.4ha). Current land ownership is shown in Figure 2-2.

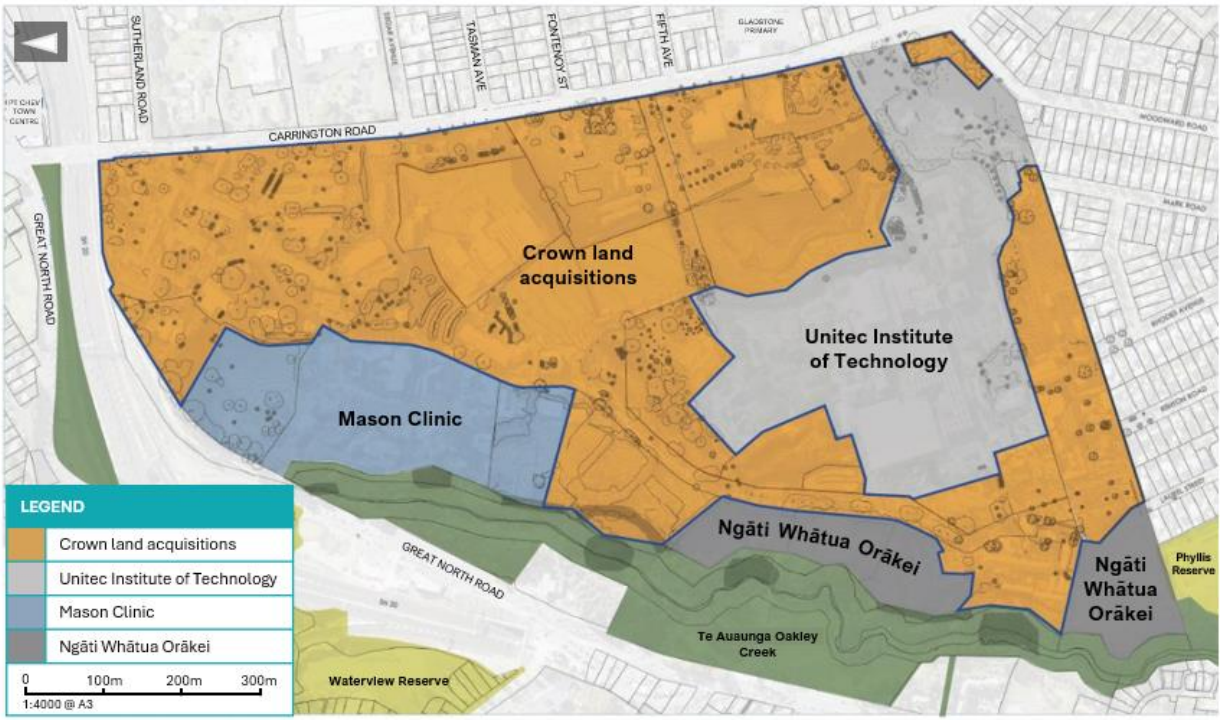


Figure 2-2 – Land ownership in the Wairaka Precinct – Crown-purchased land for the Carrington Residential Development (yellow), Mason Clinic owned by Te Whatu Ora (blue), the remaining Unitec campus (light grey), and Ngāti Whātua Ōrākei land (dark grey).

Consented development in the Precinct for the Carrington Residential Development to date is summarised in Table 2-3. At the time of writing, almost 1,500 dwellings have been consented within the Precinct. The Project team has liaised with the Marutūāhu Rōpū and Waiohua-Tāmaki Rōpū in particular to use common coordinate systems and height datums across projects, share design information to maximise design coordination, and match design levels where required.

Table 2-3 – Carrington Residential Development consents granted to date

Proposal		Lead Applicant	Pathway	Notes
Precinct-wide enabling	Carrington Backbone Works	Marutūāhu Rōpū and Waiohua-Tāmaki Rōpū	Council	Internal bulk infrastructure – road network, three waters, utilities.
	Contamination Remediation Works	Marutūāhu Rōpū and Waiohua-Tāmaki Rōpū	Council	Global contamination remediation (earthworks, discharge, soil disturbance).
	LP07 Megalot Subdivision	MHUD	Fast-Track	Subdivision of land acquired by Crown.
Residential development	Maungārongo RC1	Marutūāhu Rōpū	Fast-Track	381 dwellings + retail and office space.
	Maungārongo RC2	Marutūāhu Rōpū	Fast-Track	266 dwellings + retail space.
	Maungārongo RC3	Marutūāhu Rōpū	Fast-Track	274 dwellings + retail and office space.
	Te Whenua Haa Ora (E1)	Waiohua-Tāmaki Rōpū	Fast-Track	509 dwellings.
	Wairaka Stage 1	Ngāti Whātua Rōpū	Fast-Track	50 dwellings + subdivision, earthworks, bulk infrastructure.

The Wairaka Precinct provisions (contained at Chapter I334 of the AUP:OP) contain a number of bespoke standards relevant to the Project. These include:

- **Precinct boundary setback** – The Precinct boundary setback provision (standard I334.6.6(3)) requires buildings within the Precinct to be set back a minimum width of 28.2m measured from the eastern edge of Carrington Road, and in doing to is intended to allow for road widening on the western side of the road. The standard provides that "*the setback area may be used for walkways, cycleways, public transport facilities, site access, street furniture, outdoor dining, and cafes*" and states that "*other areas within the 28.2m not used for these activities must be landscaped".* The resultant area is intended to ultimately be acquired by AT and vested/legalised as road. The CRIP is therefore premised on utilising the extent of road widening provided for by the Precinct boundary setback;
- **Tree protection** – The Wairaka Precinct contains bespoke tree protections applying to 47 specific trees within the Precinct. Under standard I334.6.7, in the Precinct, listed protected trees must not be altered, removed, or have works undertaken within the dripline except as set out in the D13 Notable Tree Overlay provisions; unless they are within the Precinct boundary setback (see above) set aside for road widening in which case the control does not apply. The Arboricultural Assessment prepared for the Project has identified that three of the trees affected by the Project are within the Precinct boundary setback, and are therefore not subject to the control;
- **Stormwater Management Plan** – The Wairaka Precinct requires all development within the Precinct to be consistent with an approved Stormwater Management Plan (SMP) (standard I334.6.3). An SMP was adopted for the Precinct in 2022 in accordance with Schedule 8 of Auckland Council Healthy Waters' (Healthy Waters) Network Discharge Consent (NDC). The road widening is partially located within the Precinct, and stormwater assets consented as part of the Carrington Backbone Works (see Table 2-3) are future-proofed to allow for the road widening. Accordingly, while the stormwater assessment for the Project focuses primarily on demonstrating compliance with the Schedule 4 performance criteria to authorise new stormwater assets and discharges under the NDC and the relevant standards from E9.6.2.2 of the AUP:OP; it also demonstrates compliance with the requirements of the Wairaka Precinct SMP; and
- **Integrated Transport Assessment** – An Integrated Transport Assessment (ITA) was prepared for MHUD in accordance with the Precinct requirements to assess the effects of the residential development (i.e. not part of this application). The ITA demonstrated that the Precinct can support the approximately 4,000 dwellings with assumed transport upgrades (including the Carrington Road Improvements Project) and lower trip generation by 2031, and identifies that at least one of the new signalised intersections (Gates 1 and/or 3) needs to be provided between the completion of 600-1,000 dwellings on the site. Accordingly, timely completion of the Project is critical to realising the assumptions underpinning the ITA.

3 Project Description and Construction Methodology

3.1 CRIP Project Description

The CRIP proposes the upgrade of Carrington Road into a high-quality multi-modal arterial to support planned growth in the area; and to achieve AT's long-term strategic network outcomes for the corridor, in particular a higher level of service for active modes and public transport. The proposed works are shown in full in the Preliminary Design drawings which are provided as Appendix B.

The following project description outlines the proposed corridor form and function, and then describes the proposed stormwater design and landscaping and planting. Where required, the description references the following corridor sections (see Figure 3-1):

- Mt Albert Rail Bridge (Chainage 0-115m);
- Mt Albert Rail Bridge to Woodward Road (CH. 116-400m);
- Woodward Road to SH16 Bridge (CH. 401-1500m), including the Segar Avenue stormwater works; and
- SH16 Bridge (CH. 1501-1600m).

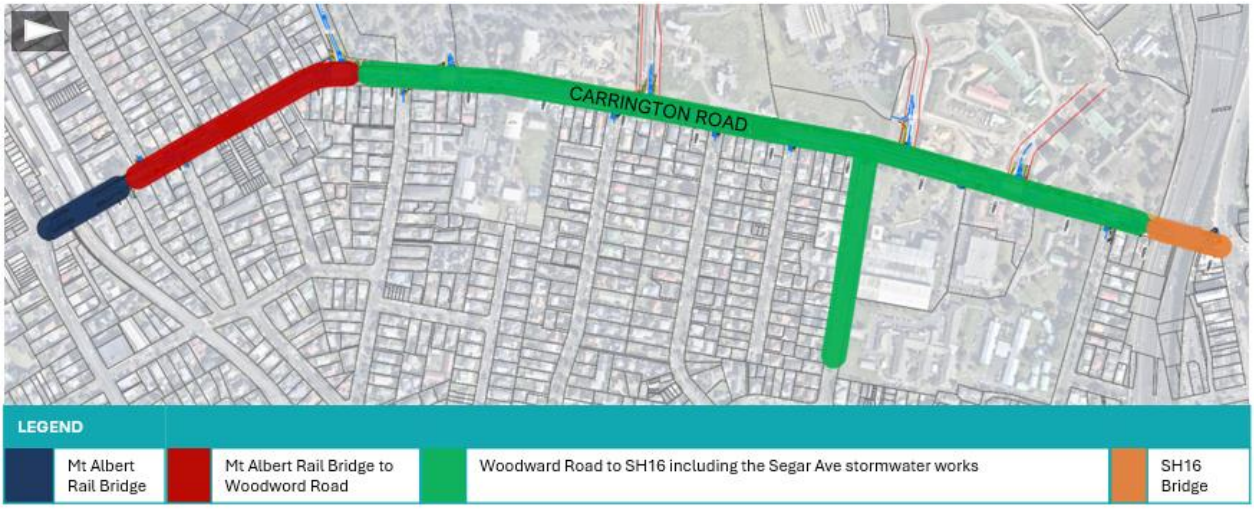


Figure 3-1 – Carrington Road corridor sections

3.1.1 Proposed Corridor Form and Function

Mt Albert Rail Bridge

The existing Mt Albert Rail Bridge on Carrington Road is approximately 16.2m wide, and comprises three general traffic lanes (one northbound, two southbound) with constrained walking and cycling facilities. The southbound cycle lane has recently been raised to be flush with the footpath, while the northbound cycle lane remains at grade with minimal physical separation.

The main features of the proposed works in this section comprise the following:

- **New pedestrian bridge** – A new pedestrian bridge is proposed to the east of the existing Mt Albert Rail Bridge to provide additional space for pedestrians. The new bridge spans and approach structures to the south and north are proposed to match the span arrangements, horizontal, and vertical alignment of the existing Mt Albert Rail Bridge and approaches between New North Road and Prospero Terrace. The bridge foundation has been indicatively sized as Ø1050mm concrete piles, while the bridge structure has a typical structural width of 2290mm over the primary structural beams (see Figure 3-2); and
- **Reconfiguration of the existing bridge** – The proposed new pedestrian bridge to the east frees up space on the existing 16.2m-wide Mt Albert Rail Bridge, enabling the following reconfiguration:

- Widened general traffic lanes in the same general lane configuration as existing;
- Widened cycle lanes on both sides of the road, and raising of the northbound cycle lane to match the existing raised cycle lane on the eastern side; and
- New kerb-and-channel on both sides of the road to enable the reconfigured cross-section.

A typical cross-section is shown in Figure 3-2 and also contained in the Preliminary Design drawings.

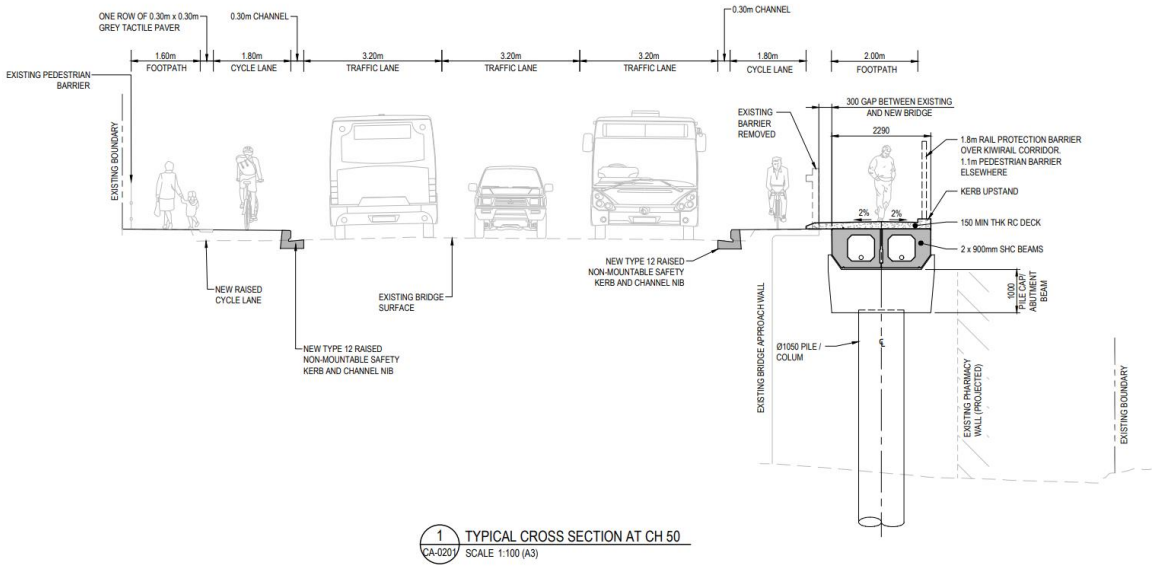


Figure 3-2 – Typical cross-section at CH. 50m.

Mt Albert Rail Bridge to Woodward Road

The existing midblock corridor width between the Mt Albert Rail Bridge and Woodward Road is approximately 20.1m. It currently accommodates two general traffic lanes (one per direction), painted at grade unidirectional cycle lanes, on-street parking on the western side of the road, and footpaths with berms of variable width and location. A flush median begins on the southern approach of the Woodward Road intersection, which continues into the next section between Woodward Road and the SH16 Bridge.

The main features of the proposed works remain within the existing road reserve in this section, and will comprise:

- Addition of a southbound bus/special vehicle lane, and retention of the two existing general traffic lanes (one per direction);
- Improved active mode facilities including introduction of physical separators for the at-grade southbound cycle lane, raising of the northbound cycle lane, and widening and regrading of footpaths;
- Upgraded bus stops to separate bus and active mode users;
- Removal of parking (28 spaces) from the western side of the road;
- Localised new sections of kerb-and-channel and localised driveway re-gradings to enable the reconfigured cross-section;
- Signalisation of the Carrington Road / Woodward Road intersection with additional approach lanes on all legs and upgraded active mode provision;
- Reconfiguration of existing vehicle crossing at 155 Carrington Road; and
- Addition of raised safety platforms (RSP) at side road intersections.

A typical cross-section is shown at Figure 3-3.

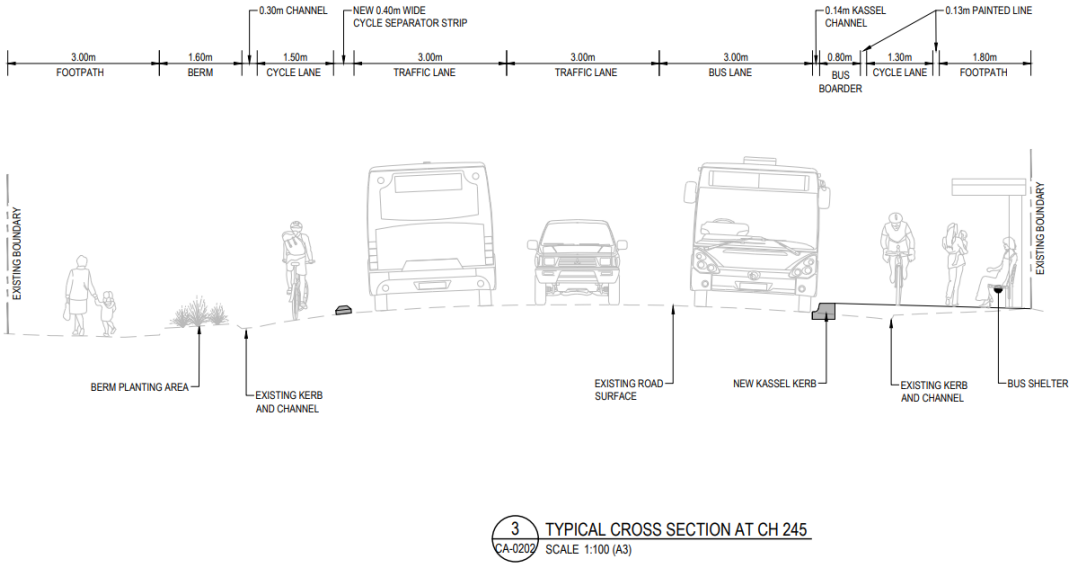


Figure 3-3 – Typical cross-section at CH. 245m.

Woodward Road to SH16 Bridge

The existing midblock corridor width between Woodward Road and the SH16 Bridge is approximately 20.5m. It currently accommodates two general traffic lanes (one per direction), painted at-grade unidirectional cycle lanes, on-street parking on the eastern side of the road outside Gladstone Primary School, a flush median, and footpaths with berms of variable width and location.

The Project in this section adjoins the Wairaka Precinct to the west, and accordingly will utilise the space created by the Precinct boundary setback (see Section 2.2.3) to widen the corridor on the western side to a width of 28.2m. At approximately CH. 1300-1400m, this width is narrowed to approximately 24.9m with a slight localised eastward realignment to avoid impacts on the Oakley Hospital Main Building. Further detail on the design approach in this location, and mitigation measures for historic heritage effects are set out at 3.1.5 below.

The main features of the proposed works in this section are as follows:

- Addition of bus lanes in both directions, and retention of the two existing general traffic lanes (one per direction);
- Improved active mode facilities including widened and raised northbound cycle lane, widening and addition of physical separators to the southbound cycle lane, widened footpaths;
- Upgraded bus stops to separate bus and active mode users;
- New green space within the cross-section, including space for stormwater management devices (i.e. raingardens) and planting (see Sections 3.1.2 and 3.1.3 below);
- New kerb-and-channel on both sides of the road and localised driveway re-gradings to enable the reconfigured cross-section;
- Signalisation of new intersections at Unitec Gate 1 and Gate 3, and upgraded un-signalised left-in/left-out intersection at Gate 2, to integrate with the Carrington Residential Development internal road network (consented as part of the Carrington Backbone Works, see Section 2.2.3), including additional approach lanes and upgraded active mode provision;
- Addition of new street trees and plants (see Section 3.1.3 below);
- Addition of a new midblock active mode crossing point; and
- Addition of RSPs at side road intersections.

A typical cross-section is shown at Figure 3-4.

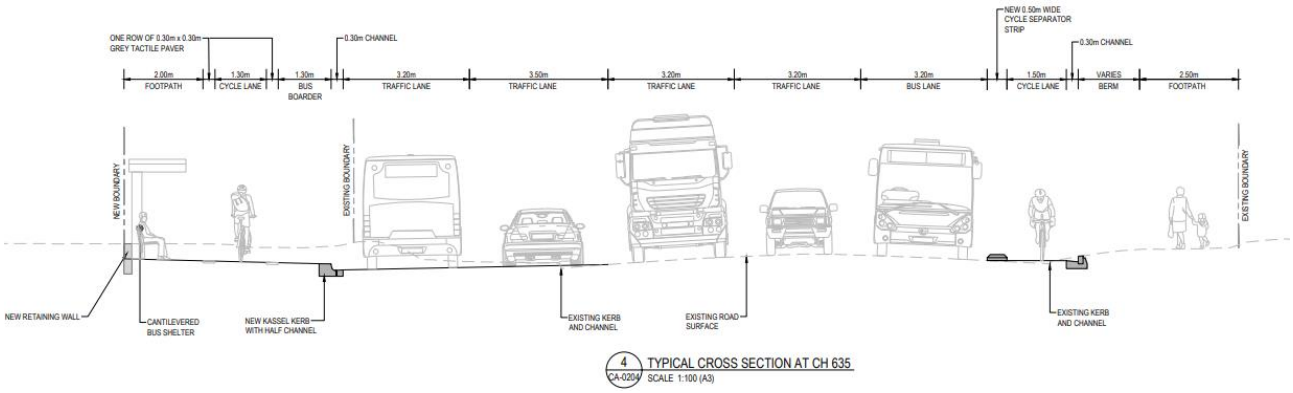


Figure 3-4 – Typical cross-section at CH. 635m.

SH16 Bridge

The existing SH16 Bridge is approximately 21m wide, and comprises four general traffic lanes (three northbound and one southbound), a shared use path on the western side, and a footpath with a separated cycleway on the eastern side.

No structural changes to the existing bridge are proposed, and accordingly the current width will remain. The proposed works are limited to:

- Reconfigured lane layout – three general traffic lanes (two northbound, one southbound), and maintenance of the existing left-turn slip lane for northbound traffic turning into Great North Road;
- Upgraded active mode facilities including separated/protected walking and cycling facilities on both sides of the road.

A typical cross-section is shown at Figure 3-5.

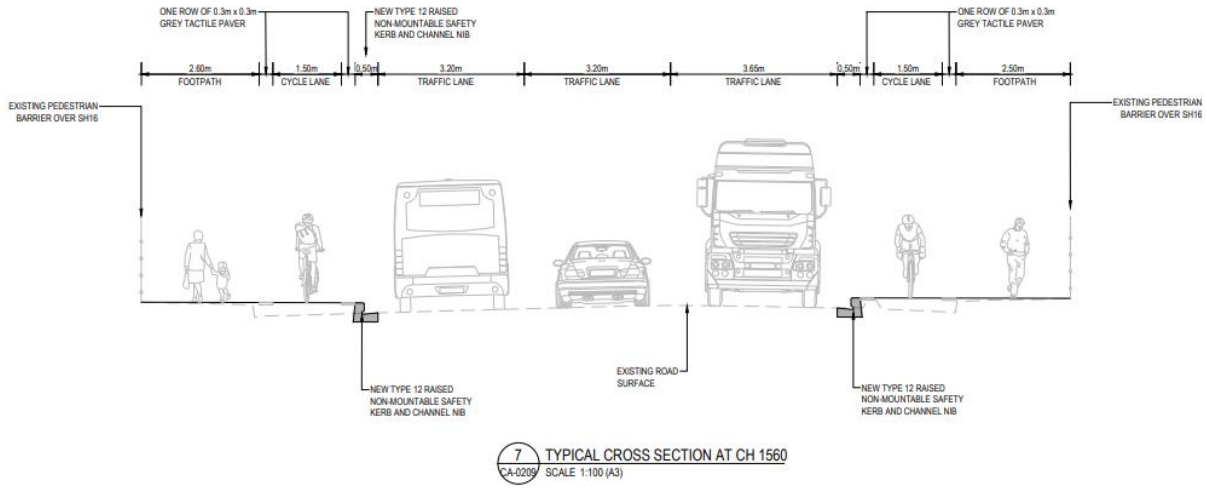


Figure 3-5 – Typical cross-section at CH. 1560m.

3.1.2 Proposed Stormwater Design

The proposed stormwater design is shown in the Preliminary Design (see Appendix B), and is described in full in the Assessment of Stormwater Effects (see Appendix C). The Project has been designed to comply with the Wairaka Precinct SMP, the discharge and diversion requirements of the Regional NDC, and controlled activity standard E9.6.2.2 of the AUP:OP. The design follows the overall philosophy of utilising existing networks where possible.

The adopted stormwater design criteria are summarised in Table 3-1 below.

Table 3-1 – Stormwater design criteria

Item	Criteria	Detail
Design Event Allowances		
Hydrological method	Auckland Regional Council 1998, Technical Publication 108 'Guidelines for stormwater runoff modelling in the Auckland Region'. Auckland Council Code of Practice v4 (March 2024) for climate change adjustments to hyetograph and rainfall depths.	
Rainfall (24-hour depth)	1% AEP 10% AEP 50% AEP 95th percentile	190mm + Climate Change adjustment 130mm + Climate Change adjustment 80mm + Climate Change adjustment 35mm + Climate Change adjustment
Upstream development	Road reserve Residential sites Commercial sites	100% impervious 70% impervious 90% impervious
Design Criteria		
Retention	Not applicable	
Detention	Not applicable	
Quality	All road carriageway	Treatment of runoff to achieve 75% total suspended solids (TSS) removal for the corridor overall (including offsetting sections of road which have received >75% treatment with other sections with lower TSS removal percentage), in line with the requirements of GD01 and TP10[1]. Preference for vegetated treatment systems.
Conveyance	Primary	10% AEP with 300mm freeboard to ground
	Secondary	1% AEP less primary network capacity
Flood Risk	Offsite properties	No increase to nuisance flooding properties in up to the 10% AEP event.
	Offsite buildings	0.3m freeboard from habitable floors to 1% AEP overland flow.

The works have been considered as six separate subcatchments for design purposes, each with two potential receiving environments – Te Auaunga/Oakley Creek to the west, and Waitītiko/Meola Creek to the east (see Figure 3-6). The key features of the Preliminary Design in terms of primary flow conveyance and treatment are summarised in Table 3-2 by subcatchment.

[1] *Stormwater Management Devices in the Auckland Region* (GD01); and *Stormwater Management Devices: Design Guidelines Manual* (TP10).

Figure 3-6 – Carrington Road stormwater subcatchments

Table 3-2 – Key stormwater design features

Subcatchment (see Figure 3-6)	Primary Flow Conveyance	Treatment Devices
1 (CH. 1420-1550m)	Connection to primary network at Sutherland Road; flows conveyed eastwards.	Treatment proposed via raingardens, sized based on GD01 requirements.
2 (CH. 1250-1420m)	Connection to primary network at Gate 1 (consented as part of the Carrington Backbone Works (see Section 2.2.3), which was future-proofed to accommodate primary network flows from the Project); flows conveyed westwards.	
3 (CH. 900-1250m)	Flows treated and conveyed via proposed new treatment and conveyance swales within existing berm on Segar Avenue; flows conveyed eastwards.	
4 (CH. 600-900m)	Connection to primary network at Gate 3 (consented as part of the Carrington Backbone Works (see Section 2.2.3), which was future-proofed to accommodate primary network flows from the Project); flows conveyed westwards.	Treatment proposed via diversion to Unitec treatment wetland, which is due to be rehabilitated and upgraded as part of the Carrington Residential Development prior to the completion of the CRIP[2].

[2] Approach agreed with Auckland Council Healthy Waters (see Appendix E), and reflected in the proposed conditions (see Appendix D).

Subcatchment (see Figure 3-6)	Primary Flow Conveyance	Treatment Devices
5 (CH. 250-600m)		Treatment proposed via raingardens, sized based on GD01 requirements.
6 (CH. 0-250m)	Design focused on utilising existing network. Where kerblines adjusted, catchpits and associated catchment leads to be adjusted or replaced to tie into new kerb inverts.	No treatment proposed as there is insufficient space for raingardens. Offsetting in other subcatchments will result in 75% TSS removal target being met for the corridor as a whole.

In terms of secondary flows, the overland flow paths within the road corridor are from the road itself without large upstream catchments given that the corridor is located on a ridgeline. The main design principle for the secondary flow is to ensure no increased flood risk to any residential or vulnerable buildings.

3.1.3 Proposed Vegetation and Landscaping

As outlined in the Assessment of Arboricultural Effects (see Appendix C), the Preliminary Design requires the removal of a total of 61 trees (34 in the existing road reserve on Carrington Road, 12 on Segar Avenue, and the remainder within the area earmarked for road widening in the Wairaka Precinct). Works within the protected root zone and/or trimming of a further 41 retained trees and vegetation groups are also required generally to provide necessary clearances over footpaths.

The Project proposes the planting of approximately 190 new specimen trees as part of the Project which equates to 1624m^2 of new canopy (see Preliminary Design drawings and Urban Design Strategy in Appendix B). On this basis, the Project proposes 60 more trees than required to meet the Auckland Council Urban Ngahere Strategy recommendations for replacement canopy cover. The feasibility, locations, sizes, numbers, and species of trees shown in the Preliminary Design will be confirmed at the Detailed Design stage.

The Preliminary Design also proposes new planted berms at key points along the corridor, particularly in areas where people are likely to pause such as midblock crossings, bus stops, and side streets. As noted in Section 3.1.2, raingardens and swales are also proposed in some locations.

Placemaking and public realm opportunities have also been identified in the Preliminary Design, and take into account adjacent land uses, environmental, historical, and cultural aspects.

3.1.4 Utilities

The Project requires the relocation of existing utilities, particularly where road widening is proposed, ground levels are changing (i.e. being made lower than existing), or where there are maintenance access issues. The utility requirements are summarised on the utilities notes drawing included in Appendix B (drawing no. 3230635-CA-0005). While the exact locations for utility relocations are to be confirmed at the Detailed Design stage, relocation principles are being developed in consultation with relevant Network Utility Operators (NUOs).

3.1.5 Design approach adjoining Oakley Hospital heritage site

The Project adjoins the former Oakley Hospital site which lies to the west of Carrington Road and south of SH16. This site is a scheduled as a Category A heritage place in the AUP:OP, and is listed as a Category 1 historic place by Heritage New Zealand Pouhere Taonga (HNZPT). The Primary Feature on the site as described in Schedule 14.3 of the AUP:OP is the Main Building on the site, which has a large extent of place associated with it. The localised narrowing of the design and slight eastward realignment between CH. 1300-1400m as described at 3.1.1 ensures the Primary Feature on the site is avoided by the Project.

The extent of narrowing and realignment indicated in the Preliminary Design is not however sufficient to avoid the need to remove a 2m high, 65m long brick boundary wall constructed in 1887 which is within the extent of place (known as the Airing Court Wall, see Section 5.4). While not identified as part of the Primary Feature on the site, the wall is afforded an equivalent level of protection as it was constructed prior to 1905 (only post-1905 buildings and alterations, and all vegetation, are excluded from the AUP:OP Schedule 14.1 listing).

The Airing Court Wall needs to be removed for the following reasons:

- The assessment of options originally took place as part of a preceding Detailed Business Case (DBC) process. The three options assessed adopted different configurations for cycling (bidirectional or unidirectional) and bus lanes (northbound only or both directions) on Carrington Road. All options assessed required removal of the Airing Court Wall to achieve the desired form and function, even when factoring in localised narrowing of the design and slight eastward realignment;
- Further realignment of the corridor to the east and/or narrowing of the corridor to avoid the Airing Court Wall is not favoured for the following reasons:
  - Further realignment would require designation and partial acquisition of property to the east, including the Te Whatu Ora site located directly opposite. This would include removal of several large mature native Pohutukawa trees;
  - The case to designate further land to the east may be difficult to justify given that the Wairaka Precinct boundary setback provision otherwise already provides for widening of up to 7-8m on the western side of the road;
  - Given the above, it is unlikely that a further eastward option would perform well in a consideration of alternatives (which would be required to designate the land); and the property requirements would present programme risks (which are material in terms of the conditions of the IAF which is the funding source for the Project); and
  - Narrowing the corridor beyond the localised narrowing already incorporated into the Preliminary Design between CH. 1300-1400m without widening on the eastern side would result in the road remaining at its current width, and would not sufficiently accommodate the transport outcomes sought. A number of important features central to the purpose of the Project would need to be removed from the Project, including bus lane(s), an island bus stop, and the southbound right-turn lane at the Gate 1 intersection.

A range of measures have been recommended in the Heritage Assessment (see 5.4.3 below) to mitigate the effects of removing the Airing Court Wall. These measures include salvage of bricks from the Airing Court Wall for reuse. The following potential uses for the bricks have been identified as feasible:

- Brick paving retracing the original position of the wall in the active mode pavement – some of the bricks could be retained, cleaned, and re-laid in this location;
- Reuse of bricks as part of a new boundary fence – reuse of bricks is one option that has been identified for new boundary fencing. Alternatively, timber post and rail boundary fences could be provided to recreate the site's original boundary fencing;
- Reuse of bricks in the mounting of interpretive panels – interpretive panels detailing the history of the site and the demolished wall could be mounted on a plinth constructed from reused bricks; and
- Reuse of bricks as part of the proposed new bus stop.

The above heritage design and mitigation concepts are to be further developed and finalised through the Detailed Design process, and this is provided for in the proposed conditions of consent. In particular:

- The Urban Design and Landscape Plan (ULDP) condition, which requires urban design and landscape design details for works within the Oakley Hospital Main Building extent of place (ID01618) to be provided, including the interface between the proposed works and the Main Building; and measures to

mitigate the demolition of the Airing Court Wall including reuse of bricks as described above. The conditions further require AT to consult HNZPT in the preparation of the ULDP; and

- The Heritage Construction Management Plan (HCMP) condition, which requires management processes to be developed for the deconstruction and construction works within the extent of place to ensure damage to the Main Building is avoided, and require that measures to mitigate the demolition of the Airing Court Wall (including reuse of bricks as described above) are provided for. An appropriate level of archival recording of the Airing Court Wall is also required. The conditions further require AT to consult HNZPT in the preparation of the HCMP.

The heritage effects of the Project are addressed more comprehensively at Section 5.4. The policy assessment on heritage matters is set out at Section 7.2.

3.2 Point Chevalier Watermain No. 2 Project Description

The Point Chevalier Watermain No. 2 Project (the Watermain) is similarly needed to support the growth and intensification of the area, and forms part of a wider scheme (the Khyber and Konini Watermain Project) to improve supply, maintain levels of service, and provide resilience to both the Point Chevalier and Khyber water supply zones. The Carrington Road section of the Watermain between Seaview Terrace and Sutherland Road has been expedited by approximately three years in advance of the remainder of the scheme to realise efficiencies with the CRIP, and to enable the projects to be constructed concurrently.

The Watermain extent is shown in Figure 1-1, and the proposed works are shown in full in the Preliminary Design drawings which are provided at Appendix B. The key features of the Watermain are as follows:

- A Ø750mm concrete-lined steel (CLS) pipeline, approximately 1km in length between Seaview Terrace and Sutherland Road;
- Air valves and scour valves as required, generally outside of the future road carriageway but within the future road reserve;
- The southern end of the Watermain will terminate 20m into Seaview Terrace and have an end cap; while the northern end of the Watermain will terminate at a valve chamber south of the existing bulk supply point (BSP) at Sutherland Road;
- The proposed alignment is within the existing road reserve on the western side of the road. The alignment is largely within existing berm space, which will be the new left-hand northbound lane in future when the road widening is completed;
- A short section (<20m) of the Watermain (including a proposed isolation valve chamber and air valve) is proposed within the Oakley Hospital historic heritage extent of place to enable the planned connections to existing infrastructure at the northern end, to realise the construction efficiencies associated with constructing within the existing western berm; and to avoid impacts on existing mature Pohutukawa on the eastern side of the road; and
- All structures associated with the Watermain will be underground. During construction minimal depths will be observed (approximately 2m below ground level (bgl) to provide the 1.2m cover required by Watercare for a transmission watermain), except where deeper trenched sections may be required to adjacent and perpendicular utilities (<3m bgl approximately).

It is proposed that the Watermain will be constructed concurrently with the road upgrade to maximise programme efficiencies and reduce costs and disruption. The construction methodology is discussed at Section 3.3.4.

3.3 Indicative Construction Methodology

3.3.1 General approach

An indicative construction methodology has been developed based on the level of design undertaken to date. The methodology has been developed to inform the effects assessment and the likely construction programme, and will be further developed at the Detailed Design stage. Construction will be undertaken within a Management Plan framework as set out in the proposed conditions of consent (see Appendix D). The Management Plans will set out in detail how specific construction effects will be managed. The Management Plans will be submitted to Auckland Council as appropriate to confirm the relevant matters.

The indicative construction methodology is summarised in the following sections.

3.3.2 Indicative programme and staging

The estimated duration of the construction programme is approximately 24-32 months depending on the extent of staging overlap. The main works are proposed to commence in early 2026 (with early works to commence as early as October 2025), with practical completion by no later than May 2028 (see Table 3-3).

Table 3-3 – Indicative construction programme

Year	2025				2026				2027				2028			
Task	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Early works																
Stage 1																
Stage 2																
Stage 3																
Stage 4																

The proposed activities as part of each indicative construction stage are summarised in Table 3-4. The indicative worksites are shown in Figure 3-7.

Table 3-4 – Proposed construction staging

Stage	Total duration	Indicative Construction Activities
Early Works	~3-5 months	Scope is to be confirmed – potential works include: • Setting up site yard(s) and on-site laydown areas. • Pre-construction vegetation management. • RSPs where there are no adjacent works. • Utilities relocations required to enable installation of Watermain. • Undergrounding of overhead power lines on eastern side of road. • Relocation of Chorus underground chambers and Vector transformers. • Retaining wall construction (dependent on coordination with Carrington Residential Development). • Mt Albert Bridge service relocations. • Proof boring at pile locations to confirm design assumptions. • Other pre-construction investigations.
1 – Western Construction	~14-16 months	Stage 1a: • Site 1 – Utilities relocations for Mt Albert Bridge (if not done as early works). • Site 2 – Kerb realignment, cycle lane, 155 Carrington access.

Stage	Total duration	Indicative Construction Activities
		• Site 3 – Watermain and road widening (kerblines, footpaths, landscaping, cycle lane).
		Stage 1b: • Site 1 – Preparation for piling at Mt Albert Bridge. • Site 2 – Watermain and road widening (kerblines, footpaths, landscaping, cycle lane). • Site 3 – SH16 cycle lane lifting, western side. • Site 4 – Segar Avenue stormwater works.
2 – Eastern Construction	~8-10 months	Stage 2a: • Site 1 – Bridge abutments and road tie-ins. • Site 2 – Kerb realignment, RSPs, cycle lane, and Gate 3 intersection works.
		Stage 2b: • Site 1 – Kerb realignment, RSPs, cycle lane, and Woodward Road and Gate 4 intersection works. • Site 2 – Kerb realignment, RSPs, cycle lane, and Gates 1 and 2 intersection works.
3 – Mt Albert Bridge Works	~12-14 months (concurrent with Stages 1 and 2)	• Stage 3a – Piling works • Stage 3b – Abutment construction continues, pile caps formed. • Stage 3c – Blocks of Line and traffic management plans approved, all materials pre-fabricated off-site. • Stage 3d – Bridge lifted into place. • Stage 3e – Bridge finishing works.
4 – Resurfacing and Finishing	~3-6 months	• Complete full resurfacing, line-marking, and commission once all works are complete. • Tree planting, landscaping, and other finishing works.

Figure 3-7 – Indicative construction staging by location – note dark green denotes Stage 1, light green denotes Stage 2, blue denotes Stage 3, and red denotes Stage 4.

The Project is likely to be constructed in stages to balance programme efficiency with managing disruption. The proposed sequencing allows for construction to begin on one side of the road, creating necessary workspace while maintaining two vehicle lanes on the eastern half of the carriageway. As construction progresses, focus will move to the eastern side of the road. Sections where corridor widening is not proposed are more constrained, and may need to temporarily operate under restricted flow and/or detour arrangements. Traffic management measures will be developed in further detail in a Construction Traffic

Management Plan (CTMP) as required by the proposed conditions (see Appendix D), and will be subject to stakeholder engagement as relevant. See Section 5.2 for further detail.

The Mt Albert Bridge works will proceed largely offline to minimise traffic impacts, with bridge components prefabricated offsite. Piling works and bridge placement will take place during Blocks of Line, which may include night-time and weekend works. Bridge construction is discussed further at Section 3.3.4.

3.3.3 Proposed hours of work

General working hours are proposed to be 7:30am-6:00pm Monday-to-Saturday, with shoulder periods 6:30am-7:30am and 6:00pm-8:00pm. Works beyond these hours (i.e. night works) are to be limited to bridge placement works (as noted above); and pavement resurfacing which is proposed to be undertaken for the full length and width of the road at night.

3.3.4 Areas requiring special consideration

Point Chevalier Watermain No. 2 Project

The Watermain is proposed to be constructed concurrently with the road upgrade to maximise programme efficiencies and reduce costs and disruption.

Open trenching methods are proposed for construction. The watermain alignment is within the existing berm, which in future will be in line with the left-hand northbound lane post the road widening. Assuming the watermain trenching and installation is completed early in the construction sequence as proposed above at 3.3.2, this will limit the impact of watermain construction activities on traffic operation; and avoid clashes with utilities being located within the future berm to the west.

Prior to the watermain being installed, existing utilities will need to be relocated. The Project team is working with NUOs to establish the scope and extent of the relocation works (identified as a potential early work item). Once the early works are completed, and affected services relocated, the main programme to install the watermain can commence.

The watermain pipe is a long lead item due to its size. As the watermain will be an early task, this item will need to be procured early by Watercare to ensure it is available to meet the construction programme, noting that only Watercare approved contractors can install the watermain.

Carrington Residential Development

The Carrington Residential Development encompasses multiple worksites along Carrington Road, necessitating close collaboration to align construction activities with development staging. Coordination will be critical to ensure that the connection of essential services, facilities, and access requirements are considered and integrated into the planning process.

Truck movements generated by the works in conjunction with the Carrington Residential Development are anticipated to create cumulative impacts on the surrounding road network. A detailed review of the impacts will be essential, with a focus on incorporating external influences and mitigating disruptions. The analysis should account for peak traffic times, the volume of construction-related vehicles, and the transport network's capacity to handle increased demand. Proactive measures, such as traffic flow adjustments or scheduling restrictions, may be required. These matters will be covered in a Construction Traffic Management Plan (CTMP) as required by the proposed conditions of consent (see Appendix D).

Mt Albert Rail Bridge – New Pedestrian Bridge

Due to the requirements of the heavy plant, and the likelihood of drilling through rock for foundation formations associated with the new pedestrian bridge, the impact of this work will be greater than other areas of the Project.

From a noise and vibration perspective, the construction methodology for the pedestrian bridge will need to be developed so that vibration building criteria can be complied with as far as practicable given the proximity of piling activities to existing buildings in this location. This means that bored piling is preferred over any other piling types, and smaller equipment or non-vibratory compaction may be chosen within a certain distance from buildings.

The use of offsite prefabrication / modular bridge structure (steel frame or precast concrete) has been identified as an option to reduce the level of disruption. Steel structures would allow a more complete structure being prefabricated and delivered to site, limiting the works over the NAL and at height. Precast concrete provides greater loading capacity options, but will require more works onsite to complete the installation and connection to the existing structure.

It is anticipated due to space constraints, that there will be greater impacts on the road network during construction in this location. The piling solutions being explored involve mobilisation of a suitably scaled rig that can drill to the required depths into the rock bed. This will likely mean that the road will need to be temporarily narrowed to one lane/closed to accommodate piling operations, and works would also need access to the rail corridor. This section of works would need to be aligned with two 3-4 week Block of Line periods where access requirements can be accommodated, likely two Christmas periods to reduce rail disruption.

Construction of the bridge will require relocation of existing utilities, and potentially accommodating new utilities.

4 Reasons for the Application

This section sets out the resource consents sought for the Project, and the aspects of the Project that can be undertaken as a permitted activity, under the AUP:OP and the NES:CS.

4.1 Auckland Unitary Plan: Operative in Part (AUP:OP)

4.1.1 Resource consents sought

Resource consent is sought for a Non-Complying Activity overall under the AUP:OP for the matters set out in Table 4-1. The table denotes whether the rules in the table are triggered by the CRIP works, the Watermain works, or both.

Table 4-1 – List of proposed activities requiring resource consent under the AUP:OP

Rule	Activity Status	Project Activity	Comment
D17.4.1(A1) Demolition or destruction of >70% of a feature within a scheduled historic heritage extent of place.	NC	CRIP	Rule is triggered by the proposed removal of the Airing Court Wall on the Oakley Hospital site to accommodate road widening. The wall was constructed pre-1905 and is therefore not excluded as a feature within the historic heritage extent of place subject to this consent trigger as per Schedule 14.1 of the AUP:OP.
D17.4.1(A9) Modifications to the fabric of a scheduled historic heritage extent of place.	RD	Both	The Project works will be partially located within the Oakley Hospital site, and so will result in modifications to the fabric of the historic heritage extent of place.
D17.4.1(A10) New buildings or structures within a scheduled historic heritage extent of place	D	CRIP	The proposed new bus shelter is located within the extent of place. As the shelter is within an area that has not yet been legalised as road, it is considered a new building for the purposes of this rule.
E7.4.1(A20) Dewatering associated with groundwater diversion authorised as a restricted discretionary activity	RD	Watermain	As excavation for the Watermain isolation valve chamber is authorised as a restricted discretionary activity (see below), associated dewatering is also authorised as a restricted discretionary activity under E7.4.1(A20). Additionally, the excavation for the isolation valve infringes one permitted activity criterion under E7.6.1.6 due to the potential duration of works.
E7.4.1(A28) Groundwater diversion that does not meet permitted activity standards	RD	Watermain	Excavation for the Watermain isolation valve will likely exceed 10 days in duration, meaning the activity is not exempt from permitted activity criteria E7.6.1.10(2)-(6). Criteria (3) and (4) are infringed by the isolation valve excavation only (the remainder of the Project is compliant with all criteria).

Rule	Activity Status	Project Activity	Comment
E9.4.1(A7) Development of a new or redevelopment of an existing high use road >5,000m^2	C	CRIP	The road upgrade includes widening and redevelopment of an existing high use road by 6,377m^2 (from 18,748m^2 to 25,125m^2), and so requires resource consent under this rule. Note that stormwater discharge and diversion elements of the Project are to be consented under the Regional NDC.
E25.4.1(A2) Activities that do not comply with noise and vibration permitted activity standards.	RD	Both	Project construction works within the road may infringe E26.6.29(2) as night works (limited to bridge placement and road resurfacing) will likely exceed three nights. The works are otherwise compliant with the remainder of the permitted activity standards: • A Construction Noise and Vibration Management Plan (CNVMP) prepared in accordance with E25.6.29(5) is a requirement of the proposed conditions. This ensures compliance with E25.6.29(3) and (4A); and that the construction method will comply with E25.6.29(1A) and E25.6.30(1)(a). • E25.6.29(4) is not applicable as road rehabilitation works are not proposed. • E25.6.27(1) is only applicable to construction works outside the road which are likely compliant (and in any case would be included in the CNVMP for works in the road). • E25.6.30(1)(b) will be complied with as assessed exceedances in the amenity criterion will be of limited duration. • E25.6.33 will be complied with for operational transport noise – NZS 6806 was used in the Acoustic Assessment.
E26.2.3.1(A16) Network utilities and electricity generation facilities not listed in Table E26.2.3.1.	D	CRIP	Consent is required to enable road widening activities outside the road reserve as provided for by the Wairaka Precinct[3].
E26.4.3.1(A84) Tree trimming or alteration that does not comply with relevant permitted activity standards	RD	CRIP	Rule is triggered by proposed pruning of Tree 77 (see Arboricultural Assessment).

[3] N.B. Activities not provided for are also covered by standard I334.4.1(A31) in the Wairaka Precinct which provides for development not listed in the Precinct activity table as a restricted discretionary activity where it is consistent with the Precinct Plan. The road widening is in general accordance with the setback shown in the Precinct Plan, but the more conservative Auckland-wide rule (E26.2.3.1(A16)) has been adopted here.

Rule	Activity Status	Project Activity	Comment
E26.4.3.1(A88) Works within the protected root zone not otherwise provided for.	RD	CRIP	Rule is triggered by proposed works within protected root zone of Tree 77 (see Arboricultural Assessment).
E26.4.3.1(A92) Alteration or removal of any tree >4m height and/or 400mm girth within road reserve.	RD	Both	The Project proposes to remove a total of 61 trees, of which 32 trees require consent under this rule.
E26.5.3.1(A97)-(A97A) Earthworks >2,500m^2/2,500m^3 other than for maintenance, repair, renewal, minor infrastructure upgrading.	RD	Both	The District Plan earthworks thresholds are exceeded for the total planned works – Preliminary Design assumes a total of 9,000m^3 cut and 250m^3 fill in total. Note that this consent is included on a conservative basis as the final construction staging and method is to be confirmed. The total area and volume will not occur simultaneously, and works being undertaken at any one time would remain within the thresholds.
E26.6.3.1(A115) Earthworks for network utilities within 20m of a scheduled historic heritage place	RD	Both	The Project requires earthworks within 20m of the Oakley Hospital Main Building, the primary feature within its extent of place (ID 01618).
E26.8.3.1(A130) Network utilities within a scheduled historic heritage extent of place that do not comply with permitted activity standards in E26.8.5.1	RD	CRIP	The Project does not comply with permitted activity standard E26.8.5.1(9), and therefore requires consent for road network signage under this rule.
E26.8.3.1(A131) Network utilities within a scheduled historic heritage extent of place not otherwise provided for	D	Both	The Watermain, in particular its isolation valve chamber; and several road network activities comprising the CRIP within the extent of place are not otherwise provided for in Table E26.8.3.1, and require consent under (A131).
E27.4.1(A5) Construction or use of a vehicle crossing where a Vehicle Access Restriction applies.	RD	CRIP	Rule is triggered by the need to reconfigure the existing driveway access at 155 Carrington Road.
E40.4.1(A24) Specific temporary activity rules not provided for as a permitted activity.	RD	CRIP	Required for temporary activities associated with construction that will exceed a duration of 24 months (noting that construction yard and laydown area is to be confirmed).

4.1.2 Permitted activities

A number of activities associated with the Project can be undertaken as a permitted activity under the AUP:OP as follows. The table denotes whether the rules in the table are triggered by the CRIP works, the Watermain works, or both.

Table 4-2 – Permitted activities under the AUP:OP

Activity	Project Activity	Comment
D17.4.1(A1) Demolition or destruction of >30% of a free-standing feature identified as an exclusion within scheduled historic heritage extent of place.	Both	Removal of Low Boundary Wall is a permitted activity as this is a non-primary feature, constructed post-1905, and therefore is considered an exclusion as per Schedule 14.1. Note the demolition of other excluded buildings within the extent of place impeding the works are assumed to have already occurred as part of the Carrington Residential Development.
D17.4.1(A11) Temporary buildings and structures within the historic heritage extent of place	Both	Any temporary buildings and structures within the extent of place will be compliant with the permitted activity standards under D17.6.6.
E4.4.1(A1) Discharge of water and/or contaminants onto or into land and/or water from road construction activities and construction of network utility infrastructure that does not extend over any water body	Both	The Project will meet all relevant permitted activity standards under E4.6. Erosion and sediment control measures to be confirmed by the contractor are required to be GD05-compliant under the proposed conditions.
E7.4.1(A17) Dewatering or ground level control associated with a permitted groundwater diversion	Both	Groundwater assessment has confirmed that permitted activity standard E7.6.1.6 can be complied with for all Project activities other than the Watermain isolation valve chamber (as noted in Table 4-1).
E7.4.1(A27) Diversion of groundwater caused by any excavation or tunnel which meet permitted activity standards	Both	Groundwater assessment has confirmed that permitted activity standard E7.6.1.10 can be complied with for all Project activities other than the Watermain isolation valve chamber (as noted in Table 4-1).
E11.4.2(A13) Temporary diversion and damming of surface water and discharge of treated sediment laden water from any land disturbance that complies with all relevant permitted activity standards.	Both	The Project will meet the general standards under E11.6.2. Erosion and sediment control measures to be confirmed by the contractor are required to be GD05-compliant under the proposed conditions.
E26.2.3.1(A2) Minor infrastructure upgrading of network utilities	CRIP	Proposed utilities relocation works (where relocation is <5m) are defined as minor infrastructure upgrading of network utilities, and are a permitted activity under this rule (note that all utilities relocations are permitted activities noted where relevant in this table, but not all are defined as minor infrastructure upgrading).
E26.2.3.1(A6) Removal of network utilities	CRIP	Decommissioning existing overhead powerlines as proposed is a permitted activity.

Activity	Project Activity	Comment
E26.2.3.1(A22), (A29), (A40), (A49), (A57)* Underground electricity lines, gas distribution pipelines, telecommunication lines, pipelines and ancillary structures for conveyance of water, wastewater; and stormwater, and ventilation facilities, drop shafts and manholes.	Both	All utilities requiring relocation not captured by rule (A2) above are permitted activities under these rules. Note that the Watermain works specifically are captured by (A49) (underground pipeline for the conveyance of water) and (A57) (ventilation facilities, drop shafts, and manholes).
E26.2.3.2(A67) Construction, operation, use, maintenance, and repair of road network activities.	CRIP	Permitted activity status applies to road network activities in the road reserve – applies to virtually all Project works within road reserve. This includes activities associated with Mt Albert Rail Bridge, and removal/reconfiguration of parking.
E26.4.3.1(A82) Pest Plant Removal	CRIP	Removal of trees 83 and 84 (see Arboricultural Assessment) is a permitted activity.
E26.4.3.1(A83) Tree trimming or alteration	CRIP	Pruning of tree 73 (see Arboricultural Assessment) is a permitted activity.
E26.4.3.1(A87) Works within protected root zone that comply with E26.4.5.2.	CRIP	Works in the protected root zone of tree 54 (see Arboricultural Assessment) is a permitted activity under this rule.
E26.4.3.1(A91) Tree alteration or removal of any tree less than 4m in height/400mm girth within road reserve	CRIP	Removal of 12 trees to be removed that are less than 4m in height/400mm in girth within the road reserve is a permitted activity under this rule.
E26.5.3.1(A94) and (A100) (district and regional earthworks respectively) Earthworks for maintenance, repair, renewal, minor infrastructure upgrading and service connections	CRIP	Earthworks for minor infrastructure upgrading (which includes some proposed utilities relocation works) is a permitted activity under both the district and regional earthworks rules.
E26.5.3.2(A101) Earthworks up to 10,000m^2 where land has a slope less than 10 degrees outside the Sediment Control Protection Area other than for maintenance, repair, renewal, minor infrastructure upgrading.	Both	The proposed volume of earthworks is a permitted activity under the regional earthworks provisions.
E26.5.3.2(A109) Activities ancillary to erosion and sediment control.	Both	Consent trigger cross-references to regional earthworks chapter (see E11.4.2(A13) above).
E30.4.1(A2) Discharges of contaminants into air, or into water, or onto land from disturbing soil on land containing elevated levels of contaminants.	Both	The Contaminated Land Assessment has concluded that the volume of soil disturbance on potential HAIL sites will not exceed the 200m^3 permitted activity standard.
E36.4.1(A32) Construction of stormwater management devices that are to be vested in the Council in the 1% AEP floodplain	CRIP	The part of the Segar Avenue stormwater works that fall within the 1% AEP floodplain is a permitted activity under this rule.
E36.4.1(A53)	CRIP	

Activity	Project Activity	Comment
Construction, operation, maintenance, renewal, and repair of road network activities within the legal road in the 1% AEP floodplain and within overland flow paths		The part of the Segar Avenue stormwater works that fall within the 1% AEP floodplain and overland flow path is a permitted activity under these rules (noting that no consent for diversion, piping, or reducing capacity of an overland flow path is triggered under E36.4.1(A41).
E36.4.1(A54) Infrastructure within roads in the 1% AEP floodplain and within overland flow paths	CRIP	

4.2 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES:CS)

The NES:CS applies to certain activities taking place on land identified in the Hazardous Activities and Industries List (HAIL), including soil disturbance, change of land use, and subdivision which will occur either directly or indirectly as a result of the Project (noting that legalisation/vesting of the widened section of road, and by extension subdivision, is proposed to be undertaken in future). A Detailed Site Investigation (DSI) has not yet been completed, and assessment to date has concluded it is unlikely that permitted activity criteria under the NES:CS can be met. A **discretionary activity** consent for soil disturbance under Regulation 11 is therefore sought.

4.3 Other approvals required

In addition to the above listed resource consent requirements, the following additional approval requirements have been identified. Progress to obtain these approvals is noted below, and each will be completed prior to the commencement of construction:

- **Requiring Authority Approvals** – Under Section 176 of the RMA, works within land subject to an existing designation require the written consent of the relevant Requiring Authority where the works will prevent or hinder the designation. The CRIP includes works within the KiwiRail NAL designation (AUP:OP reference 6300); and NZ Transport Agency Waka Kotahi's SH16 designation (AUP:OP reference 6718). Engagement with each of these Requiring Authorities is underway to confirm approval requirements;
- **Archaeological Authority** – Given the potential for archaeological sites to be present in the Project area as identified in the Archaeological Assessment, and the need to remove the Airing Court Wall, an Archaeological Authority will be sought in parallel to this application under the Heritage New Zealand Pouhere Taonga Act 2014 from HNZPT. AT has engaged productively with HNZPT in the preparation of this consent application. While HNZPT has not yet provided written approval for the works, a record of email correspondence confirming support in principle is included at Appendix E;
- **Landowner Approvals** – The Wairaka Precinct boundary setback provision (standard I334.6.6(3)) requires new buildings within the Precinct to be set back to enable road widening, and the area to which the setback applies is intended to be acquired by AT and legalised as road. The property acquisition process is ongoing and property agreements will be in place prior to construction commencing within private land.
- **Asset Owner Approvals** – The approval of Auckland Council Healthy Waters was sought regarding the upgrade and use of the Unitec stormwater treatment wetland to treat road runoff, and written confirmation endorsing the proposed approach is attached at Appendix E. The proposed conditions (see Appendix D) further require the upgraded wetland to be operational prior to the diversion of road runoff, and that Healthy Waters approval is confirmed at that time;
- **Affected Party Approvals** – AT is finalising communications for owners and occupiers identified as potentially affected by construction noise and vibration activities (see Sections 5.5 and 6.2.2); and

- **Tree Owner Approval** – AT is progressing a Tree Owner Approval application in parallel to this resource consent application.

5 Assessment of Effects on the Environment

This section sets out the assessment of effects on the environment for the Project. To this end, it summarises the technical specialist assessments which are included in full at Appendix C. The positive effects of the Project identified in these assessments are set out at Section 5.1. The adverse construction and operational effects of the Project are then summarised as relevant for each discipline at Section 5.2-5.10.

5.1 Positive Effects

5.1.1 Transport

The Transport Effects Assessment (see Appendix C) notes that the CRIP delivers on a range of investment objectives developed through the preceding DBC process. These investment objectives seek to rectify a number of existing deficiencies on the Carrington Road corridor, in particular safety, user experience, and mode choice and access deficiencies. These deficiencies are particularly acute for active mode and public transport users on Carrington Road, and without the CRIP, will be exacerbated by planned growth and intensification in the area.

In addressing these deficiencies, the CRIP results in a wide range of positive effects. In general terms, the Project achieves a higher level of service for active mode and public transport users which rectifies much of the existing safety, user experience, and mode choice and access deficiencies. In doing so, the Project better serves existing high trip generating facilities along the corridor, existing town centres and residential development, as well as the planned growth and intensification in the area. The CRIP also provides high-quality connections to perpendicular regional corridors – e.g. the Northwestern Cycleway and Western Line rail services on the NAL at Mt Albert Station.

The positive transport effects of the CRIP are described in Table 5-1. These benefits are calculated for 2031 as the assessment year, relative to a 'do minimum' scenario which assumes the same receiving environment without the Project.

Table 5-1 – Positive effects of the CRIP Project

Category	Metric	Positive effects
Safety	Deaths and Serious Injuries (DSI) – five-year period	The Project results in an 18% reduction in deaths and serious injuries over a five-year period relative to the do-minimum. The proposed safety improvements results in reduced deaths and serious injuries for active mode users. New traffic signals may result in an increase in rear-end type crashes. Overall, the outcome represents improved alignment with safe system principles.
Mode shift	Private vehicle mode share	The Project results in a reduction of private vehicle mode share to 63% compared with 66% under the do-minimum scenario.
	Bus patronage – AM + PM peaks	The Project results in a minor modelled increase in bus patronage relative to the do-minimum scenario due to improved journey times (see below).
	Cycling commuter trips – AM + PM peaks, two-way	The Project results in an increase in cycling trips during the AM and PM peaks to 500 with the Project, compared with 300 under the do -minimum scenario.
	Walking commuter trips – AM + PM peaks, two-way	The Project results in an increase in walking trips during the AM and PM peaks to 1,500 with the Project, compared with 1,000 under the do-minimum scenario. It should be noted that the increase of pedestrians along different sections along the corridor will vary.

Category	Metric	Positive effects
Journey times	Bus journey time – average AM and PM peak, one-way	The Project results in a reduced bus journey time to an average of 7 minutes compared with an average of 11.4 minutes under the do-minimum scenario (the Transport Assessment breaks this down further by AM and PM peaks). This reflects the introduction of bus priority measures along much of the corridor, with bus lanes proposed in both directions between Woodward Road and the SH16 Bridge, and in the southbound direction between the Mt Albert Rail Bridge and Woodward Road. It is still predicted that delays will be experienced at the Carrington Road / New North Road / Mt Albert Road intersection.
	Vehicle journey time – average AM and PM (one-way)	The Project results in a reduced vehicle journey time to an average of 7.2 minutes compared with an average of 8.5 minutes under the do-minimum scenario (the Transport Assessment breaks this down further by AM and PM peaks). This is a result of the additional capacity provided along the corridor, and mode shift. It is still predicted that delays will be experienced at the Carrington Road / New North Road / Mt Albert Road intersection.
Corridor productivity – AM and PM peak, two-way		The Project results in 36% higher corridor productivity than the do-minimum scenario – 133,000 person kilometres/hour compared with 98,000 person kilometres/hour.

5.1.2 Landscape and Visual Effects and Urban Integration

The Landscape and Visual Assessment (see Appendix C) identifies the following positive effects resulting from the Project:

- The provision of high-quality walking and cycling facilities on the corridor, which will improve the connectivity of active transport routes in the area;
- The Mana Whenua AT Forum have agreed to use cultural narratives formed as part of Carrington Residential Development, taking place within the Wairaka Precinct. This provides opportunities to enhance the character and identity of the neighbourhood including the potential introduction of mahi toi elements to reinforce local identity;
- Once new street trees are mature (assumed to be after five years of growth), they will contribute positively to the vegetated cover of the road and landscape characteristics; and
- With integration of the Project to urban development and land use, and as the Project is considered to provide connectivity and modernisation of the road corridor, effects are anticipated to be beneficial.

The Urban Design Strategy (see Appendix B) further outlines urban integration opportunities including linkages to other active mode connections, public realm and mahi toi opportunities, and an indicative planting strategy.

5.1.3 Arboricultural

The Arboricultural Assessment (see Appendix C) identifies that the Project proposes planting approximately 190 new specimen trees along the length of the corridor to mitigate for the loss of trees as part of the Project. Indicative locations and sizes of the proposed trees are shown in the Preliminary Design plans (see Appendix B). The feasibility, locations, sizes, numbers, and species of trees shown in the Preliminary Design will be confirmed at the Detailed Design stage. The Urban Design Strategy (see Appendix B) provides further indicative detail on the planting strategy.

As set out in the Urban Design Strategy, the proposed new trees have been calculated as equating to 1,624m^2 of new canopy cover (based on 10 years' mature canopy). The Auckland Council Urban Ngahere Strategy recommends 1x45L tree to replace every 10m^2 of removed canopy cover, and it has been calculated that 120 trees are required to achieve this recommendation – the Preliminary Design exceeds this by 70 trees. On this basis, the project arborist considers that significant betterment is achieved.

5.1.4 Stormwater

The Stormwater Assessment (see Appendix C) outlines how the Preliminary Design meets Schedule 4 of the Regional NDC, which sets out the discharge and diversion requirements for transport projects involving new or redeveloped impervious area on existing high use roads; and the requirements for the redevelopment of high use roads under chapter E9 of the AUP:OP. The assessment confirms that the Preliminary Design will meet the relevant requirements in terms of water quality, stream hydrology, and flooding outcomes. The design criteria adopted for stormwater complies with the relevant NDC requirements and controlled activity standard E9.6.2.2 under the AUP:OP, and are summarised in Table 3-1.

Water quality effects of the Project will be positive as formal stormwater treatment from Carrington Road is currently minimal. In complying with the relevant NDC requirements, the Project will treat road runoff in accordance with GD01/TP10 which provide sizing and design criteria for stormwater treatment devices. The proposed stormwater treatment devices are described at Section 3.1.2. The key measurable objective under these guidelines is to achieve 75% TSS removal on a long-term annual average basis. The assessment notes that this is achieved with the Project, with 72,500kg/year reduced to 18,100kg/year as a result of additional stormwater treatment. Total impervious carriageway area will increase from 18,748m^2 to 25,125m^2 (+6,377m^2); while the treated area will increase from 2,342m^2 to 20,711m^2 (+18,369m^2). The modelling assessment has therefore concluded that the proposed works provide NDC-compliant treatment of all new impervious areas, and provide a significant improvement in treatment compared with the existing situation. This conclusion is valid for the Project as a whole, and for the Te Auaunga/Oakley and Waitītiko/Meola catchments individually.

The Project also results in localised positive effects for flooding. Analysis of the proposed Segar Avenue stormwater swales was undertaken to calculate the change in flood frequency as a result of those proposed works, and this concluded that flood risk and frequency to existing flood-prone properties on Segar Avenue would reduce as a result of the proposed works. For the remainder of the Project, inferences from previous studies were sufficient to conclude that flood risk effects would be less than minor elsewhere (see Section 5.7).

5.1.5 Historic Heritage

The Historic Heritage Assessment (see Appendix C) addresses the effects of the proposed removal of the Airing Court Wall, a brick wall located within the Oakley Hospital historic heritage extent of place. While the wall is not part of the Category A-listed primary feature as described in Schedule 14.3 of the AUP:OP (i.e. the Main Building), it was constructed prior to 1905 and is therefore afforded the same level of protection as the Main Building (only post-1905 buildings and alterations, and all vegetation, are excluded from the AUP:OP Schedule 14.1 listing).

Notwithstanding the loss of heritage fabric associated with the removal of the wall (see Section 5.4), the assessment notes that the removal of the wall will have some positive effects. In particular, the removal of the wall will provide opportunities for additional green space to be developed on the western side of Carrington Road adjacent to the Oakley Hospital site; and will create opportunities for the heritage values of the Main Building to be more readily appreciated by being more visible from Carrington Road. Further positive effects may result from the potential mitigation measures outlined in the assessment – for example reuse of bricks from the wall, inclusion of interpretive panels, and replacement fencing.

5.1.6 Benefits of the Watermain, and of integrating the CRIP and Watermain works

The Point Chevalier Watermain No. 2 Project along Carrington Road is part of a wider scheme (the Khyber and Konini Watermain Project) to improve supply, maintain levels of service, and improve network resilience and increase capacity for future growth for both the Point Chevalier and Khyber water supply zones whilst serving known water network operational issues. The key objectives are:

- Provide capacity and resilience for the Point Chevalier and Khyber water supply zones with a 50-year horizon;
- Accommodate the Hunua 4 integration plan in the proposed solutions; and
- Provide capacity to serve the Carrington Residential Development.

As previously noted, the Point Chevalier Watermain No. 2 Project has been expedited by approximately three years ahead of the remainder of the wider scheme to align with the CRIP works. The integration of design and consenting activities between the projects will enable construction to occur concurrently. This will enable significant programme and cost efficiencies between the two projects to be realised, and will ensure the local community does not experience a second period of disruption to install the watermain after the completion of the AT works. In short, this approach ensures that multiple infrastructure projects necessary to support growth in the area from both a water supply and transport perspective can be implemented with the least possible disruption to the local community.

5.2 Transport

A Transport Effects Assessment has been prepared by Beca, and is attached at Appendix C.

5.2.1 Adverse construction effects

Based on the indicative construction methodology set out at Section 3.3, the Transport Effects Assessment identified the following high level adverse construction effects resulting from the proposed works:

- Temporary traffic management of general traffic and buses, including speed restrictions;
- Temporary closure and/or diversion of cycle lanes and facilities;
- Temporary closure and/or diversion of pedestrian facilities;
- Temporary management of property access;
- Temporary diversion of access to side roads; and
- Additional construction traffic using Carrington Road and the adjacent road network.

The assessment notes that if not mitigated, these effects will affect the safe and efficient operation of the transport network during construction.

5.2.2 Adverse operational effects

As noted at Section 5.1.1, the operational transport effects of the CRIP are largely positive. Adverse operational transport effects identified in the Transport Effects Assessment are limited to:

- Removal of a total of 37 car parks (28 unrestricted on-street parking spaces on the western kerbside between Wilcott Street and Woodward Road; and nine parking spaces on the eastern kerbside between Seaview Terrace and Gladstone Primary School). Left unmitigated, the removal of these parking spaces may result in undesirable parking behaviour disrupting the safe and efficient operation of the transport network; and
- Reconfiguration of the existing vehicle access for 155 Carrington Road and associated parking and manoeuvring space within the adjacent road reserve. While the existing vehicle crossing is proposed to be reinstated in situ, the adjacent parking and manoeuvring space is proposed to be reconfigured into an access lane.

5.2.3 Recommended measures to avoid, remedy, or mitigate adverse effects

Measures are proposed in the Transport Effects Assessment to avoid, remedy, or mitigate adverse transport effects as follows.

5.2.3.1 Construction

To appropriately manage the identified adverse construction effects, the assessment recommends the preparation of a Construction Traffic Management Plan(s) (CTMP). The CTMP would be prepared in accordance with the New Zealand Guide to Temporary Traffic Management (NZGTTM) for each stage of construction, and submitted to AT and approved as part of the Corridor Access Request (CAR) process. The objectives of the CTMP would be to:

- Balance the level of disruption to the transport network at each construction stage with the overall duration of disruption;
- Limit and manage the number of construction traffic movements on the transport network;
- Provide for the safety of all users at all times;
- Maintain pedestrian and vehicle access to properties at all times;
- Maintain access to the Northwestern Cycleway crossing;
- Minimise disruption from construction traffic for road users;
- Manage integration with other projects;
- Manage the condition of roading assets to ensure user safety and accessibility;
- Provide for engagement with relevant stakeholders, including when access (particularly to properties) will be affected; and
- Provide a mechanism for addressing queries and responding to complaints.

The proposed conditions of consent (see Appendix D) require the CTMP to include details of the following to achieve the above objectives:

- Details of the traffic management measures that will be required to be implemented for every stage;
- For each stage, confirmation of typical numbers of heavy vehicle movements throughout the day for heavy vehicle access routes; and liaison with developers, Unitec, adjacent businesses, and adjacent projects to manage construction vehicle movement;
- Details of alternative routes to enable closure of side roads, enabling faster construction of raised safety platforms and utilities across road crossings;
- Coordination with Auckland Transport regarding other construction sites and road works;
- Active monitoring of traffic performance to manage transport effects on a day-to-day basis;
- Provision of prioritised parking for workers on construction sites, with parking prioritised for those needing to bring tools / equipment for specialist activities, car / van pooling, staff working outside standard hours and mobility impaired staff / visitors;
- Provision of temporary on-street parking management measures on adjacent streets to accommodate nearby activities, in particular for the Gladstone Primary School;
- Measures to maintain safe and continuous pedestrian access to bus stops and footpaths (with bus stop and footpath relocations, where necessary to achieve this), while minimising detours and additional crossing points for pedestrians;
- Monitoring of and cleaning of spillage from construction trucks onto roads and footpaths; and
- Processes for monitoring, review and amendments to the CTMP, in particular in response to changes in the roading network including any change in the condition of roading assets.

Assuming that construction activities are undertaken in accordance with a CTMP as outlined above and required by the proposed conditions of consent, the transport effects of construction activities will be no more than minor and temporary in duration.

5.2.3.2 Operational

The Transport Effects Assessment notes that the loss of 37 car parks on Carrington Road can be adequately mitigated through utilising spare parking capacity on side roads based on current parking utilisation and operation. Additionally, parking spaces are between Woodward Road and Sutherland Road near Gladstone Primary School will be available during off-peak periods, including during the afternoon school pick-up period. Given this, the adverse effect is considered to be less than minor. It is further noted that changes to on-street parking management are contemplated as road network activities, which are permitted activities under rule E26.2.3.2(A67).

In respect of the reconfiguration of access at 155 Carrington Road, the assessment notes that the configuration proposed in the Preliminary Design maintains access to the property while avoiding conflict between reversing vehicles and northbound cyclists and vehicles, provides appropriate sightlines for traffic and pedestrian movements; and includes raised safety platforms and visual cues to manage approach speeds, dissuade use of the access lane for left-turn movements at the Woodward Road intersection, and support pedestrian movements. The potential effects of the access reconfiguration are therefore mitigated inherently by the design to the point that the effect is neutral or a positive. The assessment further concludes that the Preliminary Design has responded to the matters to which Council discretion is restricted under the relevant consent which are set out at E27.8.1(12) of the AUP:OP.

5.3 Landscape and Visual

A Landscape Effects Assessment has been prepared by Boffa Miskell, and is attached at Appendix C.

5.3.1 Adverse construction effects

The Landscape Effects Assessment has identified that potential adverse landscape effects of the Project during construction result from physical changes to the surrounding environment, which may alter its characteristics and values. The Project will be undertaken within a modified environment, and thus no significant landform features will be impacted. Without mitigation, adverse effects on landform are anticipated to be low-moderate. Without mitigation, adverse effects on vegetation patterns and open space from vegetation alteration and removal are anticipated to be moderate-high. Construction will affect the outer edges of land uses and urban development of the Wairaka Precinct creating a new interface, which are anticipated to have moderate-high adverse effects.

Construction effects on visual amenity have been assessed in the assessment across five viewing audience groups. For travelling viewing audiences, construction activities within the road corridor are common. Without mitigation, temporary visual amenity effects on this audience will be low-moderate. Viewing audiences from Mount Albert Town Centre will be limited in duration, and due to low sensitivity to visual change, construction visual amenity effects will be low-moderate prior to mitigation. The construction changes to the visual landscape for existing and future viewing audiences from the Wairaka Precinct will be constrained to areas associated with road infrastructure upgrades, and will be only visible from one direction. It is anticipated that without mitigation, effects will be moderate during construction. Visual amenity effects on visitors to the surrounding area and Braemar Reserve will be low adverse, as they will only experience effects for a short time when entering and leaving the park.

5.3.2 Adverse operational effects

The Landscape Effects Assessment has identified permanent effects to landscape values due to permanent physical changes to the environment. Permanent changes to landform will not differ from construction effects, and thus will result in low-moderate effects without mitigation. As noted in section 5.3.1 above, without mitigation the removal and alteration of vegetation patterns and open space values will have moderate-high adverse effects. Without mitigation, effects on urban development and land uses from the Project are anticipated to be moderate-high.

Permanent effects on visual amenity were assessed across the five viewing audience groups. Effects on travelling viewing audiences are anticipated to be low without mitigation, as the changes will occur across the established road corridor and are consistent with the expectations of a major arterial route. Permanent visual amenity changes on the Mount Albert Town Centre viewing audience will be similar to what is currently existing, and without mitigation is anticipated to result in low adverse effects. Viewing audiences from Wairaka Precinct will have low-moderate permanent adverse effects if mitigation is not enacted. Viewing audiences from businesses and other locations will have low adverse effects without mitigation. Further, adverse visual effects on viewing audiences from people visiting Braemar Reserve will be very low prior to mitigation.

5.3.3 Recommended measures to avoid, remedy, or mitigate adverse effects

Measures are proposed in the Landscape Effects Assessment to mitigate adverse landscape and visual amenity effects as follows.

5.3.3.1 Construction

Mitigation measures recommended for construction landscape and visual amenity effects include the following, which are provided for in the proposed conditions (see Appendix D) through the requirement for a Construction and Environmental Management Plan (CEMP) to be prepared prior to the commencement of construction:

- Site compounds and construction yards: reinstate construction and site compound areas by removing any leftover fill and shaping ground to integrate with surrounding landform. Reinstate with grass at the completion of works through coordination with adjoining landowners where practicable (e.g. Wairaka Precinct);
- Screening: Provision for hoarding around the boundaries of site compounds that face on to adjacent residential properties;
- Interpretation: where practicable, during construction, install construction hoardings with interpretive panels in selected areas which are in close proximity and visible to the public (e.g. open space and commercial areas with multiple shops), to provide information about the Project and its progress;
- Vegetation clearance: wherever possible, limit the removal of trees and indigenous vegetation; and
- Where possible, mitigate effects related to lighting during night-time works through the use of directional lighting.

Impacts on landform will be low adverse following implementation of mitigation measures including removal of leftover fill and integrating the project with the surrounding landform. Following implementation of mitigation measures, adverse effects on vegetation patterns and open space are anticipated to be low-moderate. Through integration of the project with surrounding land uses, effects on urban development and land use are anticipated to be low adverse.

Visual amenity effects on travelling viewing audiences and Mt Albert Town Centre are anticipated to be low with implementation of hoarding and interpretation panels as mitigation. With mitigation applied, visual amenity effects on residents of the Wairaka Precinct will be low-moderate. Implementation of mitigation such as hoardings is anticipated to result in very low adverse effects on visitors to Braemar Reserve.

5.3.3.2 Operational

Mitigation measures recommended for operational landscape and visual amenity effects include the following, which are provided for in the proposed conditions (see Appendix D) through the requirement for an Urban and Landscape Design Plan (ULDP) to be prepared prior to the commencement of construction:

- Design features and methods for cultural expression and in order to reflect outcomes agreed through Mana Whenua engagement;

- Design features associated with the landscape integration and management of stormwater, including both hard and soft landscaping;
- A maintenance plan and establishment requirements over a three-year period for landscaping and five years for specimen trees following planting;
- Consideration given around the form, function, and exterior appearance of the Mount Albert pedestrian bridge.

Effects on landform are anticipated to be low adverse if regrading and integration of disturbed area are undertaken as mitigation. Due to the timescale required for replacement trees to mature as mitigation of effects of vegetation pattern and open space effects, immediately after construction adverse effects are anticipated to be low. Once replacement vegetation becomes fully mature, the trees are anticipated to contribute positively to the vegetated cover of the road corridor and thus will have beneficial effects. With integration of the Project to urban development and land use, and as the Project is considered to provide connectivity and modernisation of the road corridor, effects are anticipated to be beneficial.

Visual amenity effects on traveling viewing audiences will be beneficial with mitigation, as improvements to streetscape amenities are anticipated as part of the Project. While the Mount Albert pedestrian bridge will add additional bulk, with mitigation, this will be very low in adverse effects with overall beneficial effects to the wider corridor. With mitigation through integration with the existing road corridor, the views from Wairaka Precinct will be dominated by the arterial corridor, with prominent views of cycleway and pedestrian footpath. Once landscaping is established, visual amenity effects are expected to be neutral. With implementation of mitigation measures and the similarities between the Project and existing environment, visual amenity effects on visitors to business and other features along the corridor will be neutral. The brief exposure to the upgraded corridor with mitigation for visitors to Braemar Reserve will result in beneficial visual amenity effects.

5.4 Historic Heritage and Archaeology

A Historic Heritage Effects Assessment and Archaeological Effects Assessment have been prepared by DPA Architects and CFG Heritage respectively, and are attached at Appendix C.

5.4.1 Adverse construction effects

5.4.1.1 Historic Heritage

The Historic Heritage Effects Assessment notes that the former Oakley Hospital site is the only historic heritage site affected by the Project that is protected by way of it being scheduled in the AUP:OP. The Oakley Hospital Main Building listed as a Category A Place in AUP:OP Schedule 14.1 (list number 01618), and has a large extent of place associated with it. Excluded from the listing are buildings and alterations constructed post-1905 (which include the Occupational Therapy Training School), and all vegetation within the extent of place.

The primary feature of the site is the Oakley Hospital Main Building (extent defined in Schedule 14.3 of the AUP:OP). As a result of localised narrowing and realignment described at Section 3.1.5, the building is unaffected by the proposed works. Rather, the effect of the Project is limited to the removal of a 2m high, 65m long brick boundary wall originally built in 1887 to contain an outdoor space for patients – hence the wall is referred to as the Airing Court Wall. While the Airing Court Wall is not part of the Primary Feature, it was constructed prior to 1905 and is therefore afforded the same level of protection as the Main Building according to the Schedule 14.1 listing.

The rationale for the need to remove the Airing Court Wall is covered in the Project Description at Section 3.1.5. The Historic Heritage Assessment makes the following conclusions on the level of effect associated with removing the wall:

- The wall was constructed in 1887, and accordingly its removal will result in the loss of heritage fabric;
- The wall has been disassociated from the Main Building over time as a result of alterations and additions to the Main Building, and partial removal of sections of the wall that originally returned at right angles westwards to connect with the Main Building;
- The wall is currently obscured by vegetation, but nonetheless is part of the story of the development of the hospital building and treatment of mental health conditions in the 19th Century;
- With the wall comprising only a small part of the former hospital site, any adverse effect on the heritage values of the place as a whole as a result of its removal will be minor. Moreover, the level of effect could be reduced to less than minor in the event that mitigation is implemented (see below).

Other construction activities within the extent of place are considered to have no impact on its heritage values. The demolition of the low boundary wall and the Occupational Therapy Training School building will not affect heritage values as they are not heritage buildings (and the latter will be demolished prior to the Project works as part of the Carrington Residential Development in any case). Any temporary construction activities and structures are also anticipated to be compliant with the permitted activity standards under D17.6.6 of the AUP:OP.

5.4.1.2 Archaeology

The Archaeological Assessment notes that the Oakley Hospital site is also listed as a Category 1 Historic Place by HNZPT, and is an archaeological site (R11/3365). The assessment notes that the Oakley Hospital site and the associated former Hospital Farm to the south make up an extensive archaeological landscape with sites relating to both pre-European Māori and 19th Century European settlement.

Two further recorded archaeological sites were also identified in the southern part of the corridor, but neither are affected by the works – a shell midden (R11/526) within 130m of the works, and the Mt Albert Railway Station (R11/3319). Several other Cultural Heritage Inventory (CHI) listed sites were also identified in the area, but none are affected by the proposed works.

While no previously recorded archaeological sites will be impacted by the proposed works in this area beyond the Oakley Hospital site, ongoing works in the area indicate a high probability of unrecorded archaeological deposits to be present where soils are unmodified, or where ground has been built up.

5.4.2 Adverse operational effects

The Historic Heritage Assessment notes that the Project will result in new permanent infrastructure being located within the Extent of Place including a bus stop, footpath and cycleway pavement, new berms, streetlights, trees, underground services; and the Watermain and associated valve chamber below ground. The assessment notes that much of the infrastructure is at or below ground level, and accordingly that the impact on heritage values will be minor. The proposed new bus stop is considered to have a minor impact, assuming it is of similar design to the existing similarly located bus stop.

The Archaeological Assessments did not identify operational effects (although any construction effects on archaeology will be permanent).

5.4.3 Recommended measures to avoid, remedy, or mitigate adverse effects

5.4.3.1 Historic Heritage

The Heritage Assessment makes a range of recommendations to mitigate the effects of the Project, and in particular the removal of the Airing Court Wall. The Project heritage specialist considers that implementation of these mitigation measures would reduce the level of effect from minor to less than minor. The potential measures include salvage of bricks from the Airing Court Wall for reuse. The following potential uses for the bricks have been identified as feasible:

- Brick paving retracing the original position of the wall in the active mode pavement – some of the bricks could be retained, cleaned, and re-laid in this location;
- Reuse of bricks as part of a new boundary fence – reuse of bricks is one option that has been identified for new boundary fencing. Alternatively, timber post and rail boundary fences could be provided to recreate the site's original boundary fencing;
- Reuse of bricks in the mounting of interpretive panels – interpretive panels detailing history of the site and the demolished wall could be mounted on a plinth constructed from reused bricks;
- Reuse of bricks as part of the proposed new bus stop.

The above heritage design and mitigation concepts are to be further developed and finalised through the Detailed Design process, and this is provided for in the proposed conditions of consent. In particular:

- The Urban Design and Landscape Plan (ULDP) condition, which requires urban design and landscape design details for works within the Oakley Hospital Main Building extent of place (ID01618) to be provided, including the interface between the proposed works and the Main Building; and measures to mitigate the demolition of the Airing Court Wall including reuse of bricks as described above. The conditions further require AT to consult HNZPT in the preparation of the ULDP; and
- The Heritage Construction Management Plan (HCMP) condition, which requires management processes to be developed for the deconstruction and construction works within the extent of place to ensure damage to the Main Building is avoided, and require that measures to mitigate the demolition of the Airing Court Wall (including reuse of bricks as described above) are provided for. An appropriate level of archival recording of the Airing Court Wall is also required. The conditions further require AT to consult HNZPT in the preparation of the HCMP.

5.4.3.2 Archaeology

The Archaeological Assessment makes the following recommendations:

- Authority to destroy, damage, or modify R11/3365, as well as any previously unrecorded pre-European Māori and 19th Century archaeological deposits that may be discovered during earthworks be applied for from HNZPT under section 45 of the HNZPT Act 2014. The Archaeological Authority should be accompanied by an Archaeological Management Plan (AMP). The Archaeological Authority should not be applied for without the consultation of appropriate tangata whenua authorities;
- In the event of kōiwi (human remains) being uncovered, work should cease immediately, and Mana Whenua should be contacted so that appropriate arrangements can be made;
- As archaeological survey cannot always detect sites of traditional significance to Māori or waahi tapu, appropriate Mana Whenua authorities should be consulted further regarding the possible existence of such sites and the recommendations of the Archaeological Assessment; and
- Archival recording of the Airing Court Wall was also recommended. As noted above, this is provided for as a requirement of the HCMP condition.

5.5 Noise and Vibration

An Acoustic Effects Assessment addressing noise and vibration has been prepared by Marshall Day Acoustics, and is attached at Appendix C.

5.5.1 Adverse construction effects

The Acoustic Effects Assessment applied the relevant standards set out in AUP:OP E25.6.27 and E25.6.29, and NZS6803:1999 Acoustics – Construction Noise; in assessing the noise effects of the construction works. While the proposed working hours are generally aligned with those provided for in the relevant AUP:OP E25 provisions, the proximity of buildings to the works is such that there will be exceedances in construction noise criteria.

The assessment noted that the closest dwellings will be between 2-10m of the closest construction works (footpath works), and that traffic lanes will be 5-15m from the closest dwellings. The assessment also notes that night works will be required for pedestrian bridge placement activities at the Mt Albert Rail Bridge, which will have localised effects on the nearest dwellings. Accordingly, the assessment predicts that:

- Most dwellings fronting Carrington Road are predicted to receive noise levels that at times infringe the daytime noise criterion of 70dBL_{Aeq}. Given that a staged construction approach is proposed, it is likely that these noise standard infringements will be intermittent and of limited duration for individual receivers relative to the overall duration of construction;
- Daytime noise levels will peak at up to 85dBL_{Aeq} for the closest buildings (i.e. where works are within 2m). For most buildings fronting the works, noise levels of around 75dBL_{Aeq} are predicted. Once works move along and are no longer immediately adjacent to the building in question, noise levels will reduce to be compliant with the daytime noise criterion of 70dBL_{Aeq}; and
- Night works for pedestrian bridge placement at the Mt Albert Rail Bridge will include the use of low loaders and a crane, and are predicted to result in noise levels of around 60dBL_{Aeq} for upstairs residential uses at 887-901 New North Road; and up to 75dBL_{Aeq} for the apartment buildings at 224 Carrington Road. It is assumed these works would be completed in a single night.

In assessing construction vibration effects, the Acoustic Effects Assessment applied the relevant standards set out in AUP:OP E25.6.30(1)(a) and German Standard DIN 4150-3:2016 for building criteria, and AUP:OP E25.6.30(1)(b) for amenity criteria. The assessment concluded that:

- The closest vibration-generating activity to dwellings are likely to be the use of vibratory rollers. Without mitigation, the building criteria would be infringed at approximately 56 buildings. With the use of smaller equipment or non-vibratory compaction, the 5mm/s PPV criterion can be complied with at all times. The assessment recommends that the detailed construction methodology should be prepared to ensure no vibratory compaction, and therefore that the building criteria can be achieved at all times; and
- Up to 112 buildings may at times experience vibration above the daytime amenity criterion of 2mm/s peak particle velocity (PPV). Any infringements of the amenity criterion will be of limited duration (i.e. when machinery passes a building) rather than for a continuous and extended period; and
- The heritage-listed Oakley Hospital Main Building is within 20m of the Project works. Its vibration sensitivity has been assessed as equivalent to commercial or residential criteria in DIN 4150. The easternmost wing of the building, outside the extent identified as the primary feature in AUP:OP Schedule 14.3, is partially within the risk zone setbacks for both the building and amenity criteria for vibratory compaction. As noted above, vibratory compaction is recommended to be excluded from the construction methodology to ensure the building crtieria can be complied with at all times.

5.5.2 Adverse operational effects

The Acoustic Effects Assessment has applied the relevant standards set out in AUP:OP E25.6.33 and NZ6806:2010 – Acoustics – Road Traffic Noise for New and Altered Roads. Relative to the existing environment and the future design year (2031) scenario without the Project in place, the Project would not result in significant changes in traffic volumes. Accordingly:

- The Project does not meet the trigger level to be considered an altered road under NZS6806, as the predicted noise level increase as a result of the Project is <1dB for Protected Premises and Facilities (PPFs) with current noise levels of 68dB$L_{Aeq(24h)}$, and less than 3dB at all over PPFs;
- The changes for most PPFs generally range from a 2dB reduction to a 2dB increase. In some cases, this means that PPFs receive noise levels in the next higher noise category. However the changes are marginal and would not be noticeable given that the character of the noise (road traffic) would not change; and

- Therefore, the assessment concludes that the Project will have no noticeable or appreciable effect on the overall noise environment during operation, and does not require traffic noise mitigation. However, the assessment did note that existing noise levels are high, and accordingly provides a range of structural and building modification mitigation measures for consideration. These are set out below.

5.5.3 Recommended measures to avoid, remedy, or mitigate adverse effects

Measures are proposed in the Acoustic Effects Assessment to avoid, remedy, or mitigate adverse noise and vibration effects as follows.

5.5.3.1 Construction

The assessment recommends that all appropriate mitigation and management measures are set out in a Construction Noise and Vibration Management Plan (CNVMP) in accordance with E25.6.29(5) of the AUP:OP, which would be used to manage works on site and set out how the construction contractor interacts with neighbouring affected parties. Given that the detailed construction methodology is not yet finalised, the CNVMP should be prepared when more detail is available. Accordingly the proposed conditions of consent (see Appendix D) require the preparation of a CNVMP prior to the commencement of construction. The condition includes requirements to provide the information required under E25.6.29(5), and in NZS6803 Section 8 and Annexure E2.

Additionally, Site-Specific Noise and/or Vibration Schedules (Schedules) are a useful tool in determining how the noise and vibration effects from specific activities or in specific areas will be managed and how potentially affected parties are to be communicated with. Schedules would generally be prepared where there is a high risk of infringing the noise and/or vibration standards, and would be attached to the CNVMP. The requirements for Schedules are included in the proposed conditions of consent.

5.5.3.2 Operational

As noted above, the Project will have no noticeable or appreciable effect on the overall noise environment during operation, and therefore does not require traffic noise mitigation. However the assessment recommends that the current road surface material (asphaltic concrete AC14), which is a low noise road surface, is used again when the road is resurfaced as part of the proposed works. A requirement to use this road surface material is included as a proposed condition of consent.

The assessment also noted that building modification on a case-by-case basis may be appropriate in the future, and that future dwellings should be designed to deal with traffic noise to ensure residential use is not adversely affected.

5.6 Arboricultural

An Arboricultural Effects Assessment has been prepared by Arbor Connect, and is attached at Appendix C.

5.6.1 Adverse Construction and Operational Effects

As detailed in the Arboricultural Effects Assessment, the Project works require the removal of a total of 61 trees (34 in the existing road reserve on Carrington Road, 12 on Segar Avenue, and the remainder on private land within the area earmarked for road widening in the Wairaka Precinct). Works within the protected root zone and/or trimming of a further 41 retained trees and vegetation groups are also required generally to provide necessary clearances over footpaths.

Of these totals, 32 trees proposed for removal are protected under the AUP:OP and require resource consent to remove under E26.4.3.1(A92); and proposed works within the root zone and trimming of one tree (Tree 77) require resource consent under E26.4.3.1(A84) and (A88).

While permitted by the plan, works within the protected root zone and/or the pruning and trimming of other 40 retained trees may impact on their long-term health and stability.

The effects identified in this section, while realised through construction, will likely have a permanent impact through operation.

5.6.2 Recommended measures to avoid, remedy, or mitigate adverse effects

The Arboricultural Assessment has proposed a number of recommendations as a Tree Protection Methodology. These measures are as follows, and are reflected in the proposed conditions of consent (see Appendix D):

- A suitably experienced arborist shall monitor, supervise, and direct all works in the vicinity of protected trees to be retained during the works;
- A pre-commencement meeting will be undertaken to explain tree protection measures to all contractors. The Auckland Council Urban Forest Specialist shall be invited to the meeting;
- Qualified arborists shall carry out tree pruning and removal using accepted arboricultural standards and practice;
- Any demolition, including of hard surfaces or excavation works within the root zone of trees to be retained, shall be undertaken under the supervision of the arborist;
- All roots encountered that require severance shall be cleanly cut back to the excavation face using a handsaw or secateurs by the arborist. Roots are permitted to be severed if the arborist considers that it will not adversely impact the long-term health or stability of the tree;
- All exposed roots and root ends shall be covered with hessian (or acceptable alternative) to prevent them drying out until the excavated area can be backfilled;
- Temporary fencing to protect the retained trees shall be installed prior to commencement of works on the site; and
- The arborist shall undertake any remedial pruning works necessary in accordance with the documented arboricultural standards.

As noted at Sections 3.1.3 and 5.1.3, the Preliminary Design proposes the planting of 190 new specimen grade trees as part of the Project. The Arboricultural Assessment notes that this is suitable mitigation for the loss of trees noted above, and concludes that this is a significant betterment which exceeds the recommended replacement planting set out in Auckland Council's Urban Ngāhere Strategy.

Overall, it has been assessed that the adverse effects on remaining trees are considered to be minimal and short-term in nature provided that the Tree Protection Methodology is implemented to mitigate effects of works occurring within proximity to the retained trees.

5.7 Stormwater

A Stormwater Effects Assessment has been prepared by Beca, and is attached at Appendix C.

5.7.1 Adverse construction effects

The assessment assumes that construction effects will be managed through erosion and sediment control measures as set out in an Erosion and Sediment Control Plan(s) (ESCP) to be prepared by the Contractor to suit the final staging and construction methodology. The erosion and sediment control measures will be developed in accordance with GD05.

On the assumption that construction activities are carried out in accordance with GD05-compliant ESCPs, it is anticipated that construction phase stormwater effects will be considered as permitted activities under the relevant provisions of the AUP:OP (i.e. E4.4.1(A1) and E11.4.2(A13) – see Table 4-2). Application of GD05 to projects of this nature is an accepted method in the Auckland region to manage stormwater effects of

construction works. On this basis, no further assessment of construction phase stormwater effects has been prepared at this stage in lieu of a detailed construction methodology.

5.7.2 Adverse operational effects

As noted at Sections 3.1.2 and 5.1.4, the Preliminary Design achieves compliance with Schedule 4 of the Regional NDC and controlled activity standard E9.6.2.2 in the AUP:OP. In this regard, the operational effects are largely positive.

The assessment notes that several elements of the proposed works affect stormwater, including change in the proportion of impervious area, widening of the road corridor, installation of new stormwater treatment devices to capture and remove contaminants from the road, installation of new drainage infrastructure (catchpits, pipes, manholes, gutters), and changes to overland flow paths to suit new road arrangements. These changes will result in:

- Positive water quality effects (see Section 5.1.4);
- Minor stream hydrology effects which can be managed in line with NDC standards;
- Less than minor flood effects in most subcatchments which can be managed in line with NDC standards, and positive effects at Segar Avenue (see 5.1.4) where flood risk to residential properties is reduced.

5.7.3 Recommended measures to avoid, remedy, or mitigate adverse effects

Measures are proposed in the Stormwater Effects Assessment to avoid, remedy, or mitigate adverse stormwater effects as follows.

5.7.3.1 Construction

As noted above, the assessment has assumed that construction effects will be managed through implementation of ESCP(s) that will set out how compliance with GD05 will be achieved. To this end, the proposed conditions of consent (see Appendix D) include typical erosion and sediment control conditions requiring the preparation of GD05-compliant ESCPs; and that these are provided to Council for approval prior to the commencement of construction. On this basis, construction activities are anticipated to have minor effects on stormwater discharges.

5.7.3.2 Operation

While the Preliminary Design achieves compliance with Schedule 4 of the NDC and controlled activity standard E9.6.2.2 of the AUP:OP, the Project utilises the stormwater treatment wetland on the Unitec site for treatment of subcatchment 4 on the assumption it is to be rehabilitated and upgraded as part of the Carrington Residential Development prior to the Project works. Auckland Council Healthy Waters has agreed on this approach as documented at Appendix E. The draft conditions also include a requirement for AT to obtain Healthy Waters' confirmation that the planned upgrades to the wetland have been completed prior to the diversion of road runoff to the wetland.

Assuming compliance with this condition and the requirements of the NDC, it is anticipated that the level of operational stormwater effects outlined above will be achieved.

5.8 Contaminated Land

A Contaminated Land Assessment has been prepared by Beca, and is attached at Appendix C.

5.8.1 Adverse construction and operational effects

Based on assessment undertaken as part of the preceding DBC, the Contaminated Land Assessment identified that a HAIL activity potentially applies in areas where soil disturbance, change of land use, and potentially future subdivision (see Section 4.2) is proposed. Specifically, HAIL E1 (asbestos products

manufacture or disposal, including sites with buildings containing asbestos products known to be in a deteriorated condition) potentially applies to two buildings near the Oakley Hospital Main Building on the western side of Carrington Road (at approximately CH. 1350 and 1450m – see drawings at Appendix B). The demolition of these buildings is understood to be planned and consented as part of the Carrington Residential Development works prior to the construction of the Project.

Additionally, a review of previous site investigations carried out as part of the Carrington Residential Development was also carried out. This included soil samples in 31 locations within and adjacent to the proposed works areas. One location identified lead concentrations exceeding the AUP:OP permitted activity soil acceptance criteria, and asbestos was detected in two locations.

A Conceptual Site Model (CSM) was developed to describe the relationship between potential sources of contamination on site, the human and environmental receptors that may be exposed to those contaminants, and the pathways by which those receptors may be exposed. The CSM identified several potential exposure pathways without mitigation, including:

- Potential exposure of construction workers to contaminants in soils and groundwater during earthworks – dermal contact, ingestion, or inhalation of dust/vapours;
- Potential exposure of the general public and future site users to contaminants in soils – dermal contact, ingestion, or inhalation of dust/vapours; and
- Potential for contaminated sediment to enter stormwater drains and discharge to surface water receptors.

5.8.2 Recommended measures to avoid, remedy, or mitigate adverse effects

As a DSI has not yet been completed, a discretionary activity resource consent is sought under NES:CS regulation 11.

Soil sampling is recommended within the HAIL area building footprints to inform the level of risk to human and environmental receptors from potentially contaminated soils, and to inform soil handling and disposal requirements. This recommendation is reflected in the proposed conditions of consent (see Appendix D), and will be undertaken once the buildings have been removed.

A Contaminated Soil Management Plan (CSMP) will be required to support the discretionary consent under the NES:CS. The CSMP will contain controls relating to the potential asbestos or heavy metal contamination associated with the HAIL activities identified. The CSMP will be submitted as a draft version and should be updated to reflect actual soil conditions once the buildings have been removed and the soil sampling is completed. This recommendation is reflected in the proposed conditions of consent (see Appendix D).

Recommendations in respect of erosion and sediment control measures are set out at Section 5.7.3 and are not repeated here.

5.9 Hydrogeology

An assessment of the activity status for construction works affecting groundwater has been prepared by Beca, and is attached at Appendix C.

5.9.1 Adverse construction effects

The current groundwater levels on site were assessed initially using previous site investigation data (obtained from the New Zealand Geotechnical Database (NZGD)), which indicated groundwater levels of between 1-4m below ground level (bgl) across the alignment. More recent site investigations undertaken for the Watermain in December 2024 indicate groundwater levels of approximately 1.2m bgl in the northern part of the alignment; and 3.3-3.5m bgl in the southern part of the alignment. The assessment considered proposed excavations (based on Preliminary Design) in the context of these groundwater levels, with a view to

confirming the activity status, and identify potential effects and mitigation requirements. The assessment focused on the following key excavation activities:

- Foundation piles for the new pedestrian bridge adjacent to the Mt Albert Rail Bridge;
- Service diversions and relocations;
- Potential retaining walls;
- Watermain pipeline;
- Watermain air valve and scour valve chambers; and
- Watermain cross connection/isolation valve chamber.

Of the above excavation activities, it is noted that:

- Foundation piles for the new pedestrian bridge adjacent to the Mt Albert Rail Bridge will meet the permitted activity standard exemptions under E7.6.1.10(1) as the piles are proposed to be <1.5m in diameter, and accordingly are a permitted activity;
- Service diversions and relocations are likely to meet the permitted activity standard exemptions under E7.6.1.10(1) if trenching activities are progressively opened, closed, and stabilised where the part of the trench that is open at any given time is <10 days; and accordingly is considered likely to be a permitted activity. If a trench is open for >10 days, it is likely that standard E7.6.1.10(6)(b) would be infringed for the short extent that is within <10m of the Oakley Hospital historic heritage extent of place. It would also need to be retested against E7.6.1.10(5) once excavation depths are finalised;
- Retaining walls are at the concept design stage but are expected to meet the permitted activity standard exemptions under E7.6.1.10(1) as piles will be <1.5m in diameter and are unlikely to permanently drain or impede groundwater. Accordingly, the retaining walls are likely to be a permitted activity;
- The Watermain pipeline will be progressively trenched and each section will be opened and closed within <10 days. Accordingly, the pipeline will likely meet the permitted activity standard exemptions under E7.6.1.10(1) and is expected to be a permitted activity. If a trench is open for >10 days, it is likely that standard E7.6.1.10(6)(b) would be infringed for the short extent that is within <10m of the Oakley Hospital historic heritage extent of place;
- The installation of the air valve chamber, and a scour valve chamber likely do not meet the permitted activity standard exemptions under E7.6.1.10 (1) as the excavations are likely to be open for >10 days. The scour valve chamber meets the standards under E7.6.10(2)-(6) and accordingly will be a permitted activity. However the air valve chamber is unlikely to meet standard E7.6.1.10(6)(b) as it is within <0m of the Oakley Hospital historic heritage extent of place; and
- The cross connection and isolation valve chamber at the northern end of the alignment are expected to require dewatering for >30 days, and accordingly the permitted activity standard exemptions under E7.6.1.10(1) are not met. In addition, the permitted activity standards E7.6.1.10 (1, 3, and 6) will not be fully met due to parts of the excavation being open for more than 10 days, the groundwater level being lowered by more than 2.0 m below the natural groundwater level, and due to encroachment into the Oakley Hospital Historic Heritage extent of place (albeit while being located at least 17m from the primary feature (the former Oakley Hospital Main Building)).

Based on the above, it is considered that the majority of the excavation activities proposed as part of the Project are anticipated to be permitted activities – either by meeting the E7.6.1.10(1) permitted activity standards exemptions; or by meeting the relevant standards under E7.6.1.10(2)-(6). The exception to this is the cross connection and isolation valve chamber, which is likely to:

- Exceed 30 days in duration (noting that diversion and dewatering will only occur during construction);
- Will exceed permitted drawdown depths (2.5m drawdown > 2m permitted drawdown); and
- Will encroach/not achieve a 10m separation from the Oakley Hospital Historic Heritage extent of place (noting that the excavation will be located at least 17m from the nearest point of the primary feature (the former Oakley Hospital Main Building)).

On this basis, resource consent for groundwater diversion and dewatering is sought under E7.4.1(20) and (28) for this localised part of the Project.

5.9.2 Adverse operational effects

There are no permanent groundwater diversion or dewatering activities proposed as part of the Project.

5.9.3 Recommended measures to avoid, remedy, or mitigate adverse effects

Considering the localised and temporary nature of the activities requiring resource consent, the key matters of relevance to the Project under the matters of discretion set out at E7.8.1(6) are how excavations for the cross connection and isolation valve chamber will avoid, remedy, and mitigate adverse effects from ground settlement; and on the Oakley Hospital scheduled historic heritage place. To this end, it is recommended that the conditions of consent include a requirement for a Groundwater and Settlement Monitoring and Contingency Plan.

Given that the remainder of the excavation activities are permitted activities, no further specific measures to manage hydrogeological effects have been recommended.

5.10 Cultural

As outlined at 6.2, AT has engaged with Mana Whenua as a project partner since the commencement of the DBC in September 2022. Mana Whenua have been invited to provide Cultural Values Assessments for the Project, both during the DBC phase and to inform the resource consent application. One CVA was provided by Ngaati Whanaunga during the preparation of the DBC in August 2023.

The CVA described Ngaati Whanaunga's history, cultural values, interests, and associations within the Project area; and provided a summary of cultural values Ngaati Whanaunga associates with the Project area based on Policy B6.5.2(2) of the AUP:OP which lists considerations for the identification and evaluation of Mana Whenua cultural and historic heritage sites, places, and areas. A summary of the cultural values identified in this assessment are tabulated below. The CVA also documented Ngaati Whanaunga's inputs to the optioneering undertaken during the DBC, which has since informed the Preliminary Design.

Table 5-2 – Ngaati Whanaunga Cultural Values

Factor	Ngaati Whanaunga Cultural Values	
Mauri – The mauri (life force and life supporting capacity) and mana (integrity) of the place holds special significance to Mana Whenua.	High/medium	Natural and physical resources providing mauri and mana at the Project site and in the surrounding area relate to climate, wind, topography, geology, soils, groundwater, streams, vegetation, and associated fauna. Anthropogenic land use change and introduction of exotic species have degraded mauri at the Project site.
Waahi tapu – The place is a waahi tapu of special cultural, historic, metaphysical, and/or spiritual importance to Mana Whenua.	Medium/low	No waahi tapu are known at the immediate Project site. Burial sites are known to occur within Western Springs to the northeast.
Koorero Tuuturu – The place has special historical and cultural significance to Mana Whenua.	High	The Project area is important to Ngaati Whanaunga. The environmental features that give the site meaning relate to its locality including connections with Tāmaki Makaurau, the Waitematā Harbour, and the volcanic field.

Factor	Ngaati Whanaunga Cultural Values	
Rawa Tuuturu – The place provides important customary resources for Mana Whenua.	Low/very low	Relates to remnant vegetation at or near the Project site for their resource provisioning services, cultural values, and regulating services. Anthropogenic land use change has eroded these values, but there is potential to reintroduce native species to the site via new planting/restoration.
Hiahiatanga Tuuturu – The place is a repository for Mana Whenua cultural practices and spiritual values.	Medium	Species in the wider Project area have special cultural significance often relayed via oral traditions including myths, legends, whakatauki, and Waiata. Examples relate to tui, kingfisher, grey warbler, and tuna (eel).
Whakaaronui o te Wa – The place has special amenity, architectural, or educational significance to Mana Whenua.	High	The Project is anticipated to yield benefits including enhancing safety, user experience, mode choice, access, liveability, and environmental betterment. The Project also provides opportunities for site interpretation and wayfinding. Ngaati Whanaunga value these improvements.

The CVA was intended to be updated by Ngaati Whanaunga to more specifically address effects of the Project based on the design to inform the consenting phase of the Project. Auckland Transport invited Ngaati Whanaunga to update the CVA prior to lodgement of the consent application. This has not occurred/was not available at the time of writing this AEE.

No further CVAs have been provided at the time of writing. AT reiterates its commitment to ongoing partnership with Mana Whenua as the Project continues, as evidenced by the proposed conditions (see Appendix D). In particular, AT has proposed that Mana Whenua are invited to actively participate in the development of the Urban and Landscape Design Plan (ULDP) which is required to be completed to inform detailed design prior to the start of construction. Moreover, AT proposes to invite Mana Whenua to perform site blessings, karakia, and cultural inductions prior to the start of construction.

A summary of Mana Whenua engagement to date is presented at 6.2.

6 Consultation and Engagement

6.1 Overview

AT's consultation and engagement on the CRIP has been ongoing since the inception of the DBC in late 2022. This section of the AEE provides a list of the stakeholders consulted over the history of the Project, and the engagement programme and methods used over the course of the Project. Consultation and engagement activities are ongoing, including sharing of the Preliminary Design with a number of stakeholders at the time of writing.

Watercare's consultation and engagement on the Point Chevalier No. 2 Watermain is relatively less advanced given that the design and planning of the ~1km Carrington Road section of the project has been expedited approximately three years ahead of the remainder of the scheme (the Khyber and Konini Watermain Project) to realise efficiencies with the CRIP. Engagement to date has been limited to project partners on feasibility and early concept design work to date, and is described below where relevant. Planning for further engagement on the wider scheme is underway.

6.1.1 Stakeholders

Table 6-1 lists the stakeholders that have been consulted over the history of the CRIP. The substantive feedback received from the stakeholders on their respective areas of interest and involvement are covered at 6.2 below. Watercare's engagement on the Watermain to date has been limited to Project Partner level engagement.

Table 6-1 – Summary of stakeholder groups

Grouping	Stakeholder(s)
Project Partners	Ngā Mana Whenua
	Auckland Council elected members (primarily the Albert-Eden Local Board)
	Carrington Residential Development parties – Marutūāhu Rōpū, Waiohua-Tāmaki Rōpū, Ngāti Whātua Rōpū; and MHUD
	Kāinga Ora
	KiwiRail
	NZ Transport Agency Waka Kotahi (NZTA)
	Watercare
Key Local Stakeholders	Carrington Road residents (including parties identified as directly affected by the proposed works)
	Businesses on the route, including the Mt Albert and Point Chevalier town centres
	Gladstone Primary School (largely via the Board of Trustees)
	Mt Albert Residents Association
	Unitec
	Taylors Laundry
	Te Whatu Ora
	Early Childhood Education centres (ECE)
Network Utility Operators (NUOs), not otherwise covered	2Degrees
	Auckland Council Healthy Waters
	AT Business Technology / AT Operations Centre

Grouping	Stakeholder(s)
already as Project Partners or Key Local Stakeholders above	Chorus
	EON Fibre
	Land Information New Zealand
	Vector
Regulatory Stakeholders	Auckland Council
	Heritage New Zealand Pouhere Taonga (HNZPT)
Wider Public and User Interest Groups	Wider Public
	Community Liaison Group
	Bike Auckland, Bike Point Chevalier, Bike Ōwairaka, Bike Kingsland

6.1.2 Engagement Programme and Methods

A summary of the engagement programme and methods used over the course of the Project to date is provided at Table 6-2 below. Further detail on the two periods of public engagement held to date is provided below the table. Note that the table does not include planned engagement activities for 2025 which were being planned at the time of writing.

Table 6-2 – Summary of engagement programme and methods

Project Stage	Engagement Forum / Method	Relevant Stakeholder(s) (see Table 6-1)
DBC phase (mid-2022-mid-2024)	Mana Whenua Hui	Ngā Mana Whenua
	Local Board Workshops, Memos, Reports	Albert-Eden Local Board, other Auckland Council elected members as needed
	Developer Hui	Carrington Residential Development parties (Ngā Rōpū and MHUD)
	Participation in Project Design and Optioneering Workshops	Ngā Mana Whenua, Carrington Residential Development parties (Ngā Rōpū and MHUD), Albert-Eden Local Board, NZTA, KiwiRail, Watercare, Bike Auckland, Bike Point Chevalier, Bike Ōwairaka
	Project Partner / Key Stakeholder Communications and Regular Meetings	Carrington Residential Development parties (Ngā Rōpū and MHUD), Kāinga Ora, Albert-Eden Local Board, NZTA, KiwiRail, Watercare, Kāinga Ora, Network Utility Operators
	Community Liaison Group meetings	Carrington Road Improvements Community Liaison Group
	IAF Reporting	Kāinga Ora
	Presentations by Project Team	Gladstone Primary School Board of Trustees, Mt Albert Residents Association, Albert-Eden Local Board, Bike Auckland, Bike Point Chevalier, Bike Ōwairaka
	Brochure, posters, flyers, drop-in sessions, online surveys as part of the two public engagement periods (see below)	Carrington Road and side street owners and occupiers; and the wider public

Project Stage	Engagement Forum / Method	Relevant Stakeholder(s) (see Table 6-1)
	Door knocking	Mt Albert and Point Chevalier town centre businesses
Design and Consenting phase (late 2024-ongoing)	AT Mana Whenua Central Hui	Ngā Mana Whenua
	Developer Hui	Carrington Residential Development parties (Ngā Rōpū and MHUD)
	IAF Reporting	Kāinga Ora
	Project Partner / Key Stakeholder Communications and Regular Meetings	Carrington Residential Development parties (Ngā Rōpū and MHUD), Kāinga Ora, Albert-Eden Local Board, NZTA, KiwiRail, Watercare, Kāinga Ora, Network Utility Operators
	Pre-Application Engagement (consenting)	Regulatory Stakeholders (i.e. Auckland Council, HNZPT)
	Letters and 1:1 Landowner Engagement	Residents and businesses on Carrington Road

Two periods of public engagement have been held on the CRIP to date – the first occurred between 25 August-29 September 2023, and the second between 27 May-23 June 2024. Further public engagement is planned throughout 2025.

The August-September 2023 period of public engagement sought to gather feedback regarding potential options for the road layout and road crossing options. During that period, the following engagement methods were used to raise awareness and encourage feedback via an online survey form:

- Brochures were delivered to properties along and around Carrington Road (7,364 as unaddressed mail, and 277 as addressed mail), and provided to Project partners, key local stakeholders, and subscribers;
- Posters advertising the consultation were affixed to street furniture in the Project area (approximately 30);
- Development of a Project webpage linked to the online survey;
- Two drop-in information sessions at Gladstone Primary School;
- Door knocking of approximately 115 businesses in the Mt Albert and Point Chevalier town centres;
- Presentation to the Mt Albert Residents Association; and
- Workshop with the Albert-Eden Local Board.

The May-June 2024 period of public engagement sought to gather more specific feedback on the then-emerging preferred design option being developed through the DBC. During that period, the following engagement methods were used to raise awareness and encourage feedback via direct comments on an interactive online plan:

- Flyers were delivered to properties along and around Carrington Road (7,591 as unaddressed mail, and 90 as addressed mail), and provided to Project partners, key local stakeholders, and subscribers;
- Posters advertising the consultation were affixed to street furniture in the Project area (approximately 30);
- Update of the Project webpage linked to the interactive online plan (provided through a Social Pinpoint webpage);
- One drop-in information session at Gladstone Primary School;
- Presentation to the Mt Albert Residents Association;
- Workshop with the Albert-Eden Local Board;
- Presentation to the Gladstone Primary School Board of Trustees;
- Workshop with cycling advocacy groups; and

- Door-knocking businesses in the Mt Albert and Point Chevalier town centres.

The feedback received as a result of these public engagement processes is summarised at 6.2.5.

6.2 Summary of feedback by stakeholder group

6.2.1 Project Partners

6.2.1.1 Mana Whenua

AT recognises and respects Te Tiriti o Waitangi as Te Tūāpapa (foundation). This underpins the way AT partners with Mana Whenua, to build strong, meaningful, and enduring relationships. Partnership in the context of this Project is a commitment to ongoing and regular engagement with Mana Whenua in a manner that is open and transparent to ensure they have the space and resources to influence decision making.

Engagement with Mana Whenua has taken place primarily through AT's Central Projects Mana Whenua Hui, as well as invitation to participate in DBC design and optioneering workshops. Beginning in September 2022, AT has presented in the Hui regarding the Project on eight occasions to date[4]. The following Iwi groups have been invited to and/or represented in these Hui:

- Ngāi Tai ki Tāmaki;
- Ngāti Maru;
- Ngāti Pāoa;
- Ngāti Tamaterā;
- Ngāti Whātua Ōrākei;
- Te Ākitai Waiohua;
- Ngaati Whanaunga;
- Ngāti Whātua o Kaipara;
- Te Kawerau ā Maki;
- Ngāti Tamaoho;
- Ngāti Te Ata Waiohua;
- Te Ahiwaru;
- Waikato – Tainui; and
- Te Patukirikiri.

The early Hui in the period between September 2022 and April 2023 focused largely on the context for the Project/DBC; and provided progressive updates on the development of the DBC including high-level design options, the successful bid for IAF funding, and other engagement activity. Mana Whenua were invited to participate in design/optioneering workshops. Mana Whenua indicated that their key areas of interest for the Project would be erosion and sediment control during construction, stormwater design (in particular treatment), and tree management; and set an expectation of regular engagement through the Hui.

Hui through the period of mid-2023 to mid-2024 focused on updates regarding the various public engagement activities outlined at Section 6.1.2 above, and on the continued design optioneering through the DBC. Following completion of the DBC, engagement through the Hui recommenced in late 2024 with the commencement of the design and consenting stage. The most recent Hui have provided updates on the Preliminary Design, with a particular focus on the areas Mana Whenua have previously indicated strong interest – namely stormwater design and tree management (as discussed at 3.1.2-3.1.3). Mana Whenua were generally supportive of the Preliminary Design, noting the following:

[4] September and December 2022; April, June, September, and December 2023; and July and December 2024.

- An expectation that Auckland Council Healthy Waters is engaged regarding the stormwater design, and in particular the use of raingardens in the road;
- Clarification was sought regarding the stormwater treatment target. The Project team clarified that 75% TSS removal was the overall target, with five of six subcatchments exceeding this target to offset the one subcatchment where there is not sufficient space to accommodate treatment (as noted at Section 3.1.2);
- Maintenance of the stormwater network will be critical, particularly given that scruffy domes can be a source of rubbish into the stormwater network; and
- Continued engagement through the Detailed Design and construction phases is expected, to be facilitated where appropriate through the conditions of consent.

AT has invited Mana Whenua to provide CVAs for the Project at both the DBC phase, and during the design and consenting phase. Ngaati Whanaunga provided a CVA initially at the DBC phase, which was updated during the design and consenting phase. It is summarised above at Section 5.10.

In respect of the Watermain, Watercare engaged Mana Whenua through its Kaitiaki Managers Forum at the commencement of the feasibility study.

6.2.1.2 Auckland Council Elected Members

AT's engagement with Auckland Council elected members has primarily taken place through the Albert-Eden Local Board, though Councillors have also engaged on the Project. Engagement has included:

- Two Local Board members sat on the Community Liaison Group (CLG) which ran throughout the DBC phase;
- Local Board member inputs during early 2023 in DBC workshops for the Investment Logic Mapping process and early design optioneering;
- Local Board member and Councillor attendance at an AT meeting with the Mt Albert Residents Association in March 2023, during which concerns were raised regarding the sufficiency of design options to deal with the quantum of planned development, and existing traffic constraints; and
- Local Board workshops in March 2023, and during the August-September 2023 and May-June 2024 engagement periods. Updates regarding progress on the DBC design optioneering, and on the engagement process were provided in these workshops.

The Local Board endorsed the then-emerging preferred option identified in the DBC in August 2024 prior to the commencement of the design and consenting phase. The endorsement included requests of AT that the views of the Local Board and the public are taken into account; and that the Local Board has a further opportunity to give formal detailed feedback during the forthcoming Detailed Design phase. Further engagement with the Local Board is planned in 2025 to meet this request.

In respect of the Watermain, Watercare has provided monthly updates with the Local Board as needed. No queries have been received to date.

6.2.1.3 Carrington Residential Development parties

As noted at Section 2.2.3, the Carrington Residential Development is taking place on the western side of Carrington Road on land purchased by the Crown from Unitec. The development is being led by the Rōpū of Marutūāhu, Waiohua-Tāmaki, and Ngāti Whātua under collective Treaty redress arrangements; and is being facilitated by the Crown via MHUD. The Project is designed in large part to meet the transport needs of the development. AT will ultimately acquire the Crown land identified within the Wairaka Precinct boundary setback to widen the road, and legalise as road reserve. This acquisition process is ongoing in parallel with design and consenting.

Accordingly, AT has engaged regularly with the Rōpū and MHUD over the course of the Project using the methods outlined at Table 6-2. This engagement has aimed to ensure that the proposed road improvements are designed and programmed to be integrated with the Carrington Residential Development, and in

particular the Carrington Backbone Works roading, three waters, and utilities infrastructure (see Section 2.2.3). To this end, engagement has resulted in the adoption of common coordinate systems and height datums, sharing of design information, and matching of design levels where required.

The Rōpū and MHUD are broadly supportive of the Project, and continue to be engaged regularly through the methods outlined at Table 6-2. MHUD has reviewed Project collateral before publication.

6.2.1.4 Kāinga Ora

Kāinga Ora administers the IAF on behalf of the Crown, which is the funding source for the Project. As noted at 1.2, IAF funding is contingent upon construction commencing in the first quarter of 2026 with practical completion by May 2028 to align with the Carrington Residential Development programme. Kāinga Ora's interest is therefore in ensuring these preconditions for the funding are being met. To this end, AT reports to Kāinga Ora on a quarterly basis providing progress updates, in addition to other engagement as outlined at Table 6-2. Kāinga Ora has reviewed Project collateral before publication.

6.2.1.5 KiwiRail, NZTA, and Watercare

KiwiRail, NZTA, and Watercare have been engaged primarily in a design review capacity due to the direct interest each has in the Project regarding existing and planned infrastructure.

In the cases of KiwiRail and NZTA, the key areas of interest are the bridge crossings of their respective perpendicular infrastructure for which they hold designations – i.e. the Mt Albert Rail Bridge and proposed pedestrian bridge over the NAL at Mt Albert, and the SH16 bridge at Point Chevalier. As noted at Section 4.3, AT is in the process of engaging the Requiring Authorities to confirm the need for any Section 176 approvals from KiwiRail and NZTA for the proposed works. NZTA also has a longer-term interest in integrating with the future North-West Rapid Transit Project. Both agencies are broadly supportive of the Project, and continue to be engaged regularly through the methods outlined at Table 6-2.

In the case of Watercare, the key area of interest is the Watermain. As noted throughout this AEE, design and planning for the Watermain has been expedited to realise efficiencies with the proposed road upgrade, and enable the projects to be constructed concurrently. Accordingly, the two projects have been designed in conjunction, and the scope of this AEE includes the resource consents required for the watermain. Watercare is therefore supportive of the Project, and continues to be engaged regularly through the methods outlined at Table 6-2.

6.2.2 Key Local Stakeholders

6.2.2.1 Carrington Road residents

A number of Carrington Road residents have provided input through the public engagement processes in August-September 2023 and May-June 2024. Approximately 89% of the responses received during the initial public engagement period were made by local Mt Albert or Point Chevalier residents. The feedback received through these engagement processes is summarised at 6.2.5.

AT is also seeking to engage specific property owners and occupiers on a 1:1 basis regarding specific effects of the Project identified as part of this AEE. In particular, communications are being finalised at the time of writing for the owners and occupiers of properties around the Mt Albert Rail Bridge who have been identified as the receivers most affected by construction noise and vibration activities associated with the Project (see Section 5.5). This engagement is ongoing.

6.2.2.2 Mt Albert and Point Chevalier town centre businesses

As noted at Section 6.1.2, AT distributed collateral and door-knocked to engage businesses in the Mt Albert and Point Chevalier town centres about the Project during the two periods of public engagement. Three formal responses were received from Mt Albert businesses, all citing congestion (particularly at the Carrington Road / New North Road / Mt Albert Road intersection) as a concern.

6.2.2.3 Gladstone Primary School

During the first public engagement period in August-September 2023, a number of submitters supported the active mode facilities and proposed crossing points on the basis that it would allow children to safely walk, cycle, or take the bus to Gladstone Primary School. Numerous suggestions for safety and accessibility improvements for the school were made, many of which have been actioned in the Preliminary Design.

AT presented to the Gladstone Primary School Board of Trustees during the second public engagement period in June 2024 on the then-emerging preferred option from the DBC. The Board's feedback was as follows:

- Concerns regarding space constraints south of Woodward Road (sections 1 and 2 of the corridor) meaning reduced mode separation and safety;
- Active mode design should be safety-focused and designed for the youngest and most inexperienced walkers and riders, that cycle lanes should be physically separated from traffic, and that cycle lanes should be at the same grade as the footpath;
- Support for dual use of bus/transit lanes and parking during morning and afternoon pick-up and drop-off times;
- Traffic flow around the school is important, and congestion on side roads is a safety issue for the school;
- The Project should integrate with other planned road upgrades in the area to minimise disruption; and
- The Board would like to discuss detailed designs when available, and asked that AT continue to liaise with the school around the timing of construction.

AT plans to continue engaging the school community on the Project moving forward, and will present a parking plan to the Board of Trustees for their feedback.

6.2.2.4 Mt Albert Residents Association

AT representatives attended a meeting with the Mt Albert Residents Association in March 2023, which was also attended by Local Board members and Councillors. In this meeting, concerns were raised regarding the sufficiency of design options to deal with the quantum of planned development, and existing traffic constraints.

In August 2023, AT representatives attended a Residents Association meeting in advance of public consultation. This was also attended by Local Board members and Councillors. Key discussion topics included:

- The Carrington Road/New North Road intersection is a major problem for the area that needs to be fixed;
- The Mt Albert Rail Bridge should be widened for vehicles;
- AT should consider further road widening south of Woodward Road;
- Support for bus priority;
- Use of on-street parking as park-and-ride (hide and ride); and
- Importance of street lighting.

In June 2024 during the second period of public engagement, the Project team presented to the Residents Association on the then-emerging preferred option in the DBC. Key discussion topics included:

- Current cycling numbers at the southern end of Carrington Road;
- Methodology questions regarding traffic modelling and the measurement of safety improvements;
- Travel time along Carrington Road;
- Yield estimates for the Carrington Residential Development;
- Woodward Road congestion; and
- Mt Albert Rail Bridge lane configuration (in particular a request for an additional traffic lane) and traffic light phasing to alleviate congestion at the Carrington Road / New North Road / Mt Albert Road intersection.

6.2.2.5 Unitec

Engagement with Unitec during the DBC focused on design integration where the intersection at its existing main access at Gate 4 is proposed to be upgraded as part of the Project. In particular, discussions have focused on gate treatment, signage requirements, level requirements, and active mode integration. The Preliminary Design addresses these matters, in particular signage relocation and protection of the majority of the Gate 4 stone wall. These matters will be the subject of ongoing engagement with Unitec through the Detailed Design process.

AT will ultimately acquire the Crown land identified within the Wairaka Precinct boundary setback to widen the road, and legalise as road reserve. This acquisition process is ongoing in parallel with design and consenting.

6.2.2.6 Taylors Laundry

AT presented to Taylors Laundry representatives in June 2024, and last provided a Project update in October 2024.

6.2.2.7 Te Whatu Ora

AT presented to Te Whatu Ora on the Project during the September 2023 engagement period, and potential effects on the operation of the Mason Clinic were discussed. Feedback during this meeting included:

- Changes to the layouts of Gates 1 and 2 (as a result of the Project and the Carrington Residential Development) would change the primary access/egress to/from the Mason Clinic;
- General support for the Project objectives, noting that Mason Clinic staff access the site by a range of transport modes; and
- Stormwater constraints in terms of discharge from Carrington Road were discussed. It was noted that the Carrington Backbone Works provide future-proofed capacity for the proposed road upgrade, but that alternatives to the existing stormwater pipe running under the Mason Clinic need to be considered.

Subsequent communication with Te Whatu Ora representatives in May 2024 provided a general update, and also noted that a range of stormwater options for the Project had been identified through the DBC. Te Whatu Ora noted its opposition to a new pipe on Te Whatu Ora property. The Preliminary Design has taken this feedback on board, and has not progressed this option further. AT last provided a Project update in October 2024.

6.2.3 Network Utility Operators

As noted at Section 3.1.4, the Project requires the relocation of existing utilities and installation of new utilities. The utility requirements are summarised on the utilities notes drawing included in Appendix B (drawing no. 3230635-CA-0005). While the exact locations for utility relocations are not yet known and are to be confirmed at the Detailed Design stage, the key functional requirements and relocation principles are being defined in consultation with the relevant NUOs. To this end, the Project team continues to engage regularly (generally at least monthly) with the NUOs listed in Table 6-1, and will continue to do so throughout the Detailed Design process. This includes ongoing engagement with Auckland Council Healthy Waters, who have been consulted regarding the stormwater design outlined at Section 3.1.2 and assessed at Sections 5.1 and 5.7.

6.2.4 Regulatory Stakeholders

6.2.4.1 Auckland Council

AT provided Auckland Council with draft technical specialist assessments as part of its pre-application engagement. Comments provided by Council specialists were distributed to relevant Project team specialists who updated their assessments as needed. These finalised versions of the assessments are included in the

lodged documentation, and informed this AEE. The specific actions taken to address comments raised in pre-application engagement are summarised at Appendix F.

6.2.4.2 HNZPT

AT commenced pre-application engagement with HNZPT and representatives from Auckland Council's Heritage team in two meetings during November 2024. The Project team provided an overview of the likely historic heritage and archaeological effects of the proposed works, with a focus on the proposed removal of the Airing Court Wall. A range of potential mitigation options were discussed, including those noted at Section 5.4.3 above. The Project team also noted the intent to apply for an Archaeological Authority in due course.

HNZPT representatives also sought clarity on the reasons for needing to remove the Airing Court Wall, and in particular whether narrowing and/or realignment had been considered to avoid impacting the wall. This query was made in the context of the policy test set out in AUP:OP H17.3(14)(b) which requires the demolition of non-primary features to be avoided "*unless the demolition or destruction is required to allow for a significant public benefit that could not otherwise be achieved*". The Project team explained the rationale contained at 3.1.5, which in AT's view satisfies this policy test. This is discussed further in the statutory assessment in section 7 of this AEE.

HNZPT was provided with draft heritage and archaeological assessments for review as part of pre-application engagement. Comments were received on 29 January 2025. The specific actions taken to address comments raised in pre-application engagement are summarised at Appendix F.

6.2.5 Wider Public and User Interest Groups

6.2.5.1 Wider Public

The August-September 2023 public engagement period attracted a total of 367 responses. Of the conceptual road layout options provided in the online survey, 76% favoured the option which has since informed the Preliminary Design in Sections 1 and 2 of the corridor; while 62% favoured the option which has since informed the Preliminary Design in Sections 3 and 4 of the corridor. Moreover, there was a high level of support for new and relocated active mode crossing points, which also were ultimately incorporated into the Preliminary Design.

The May-June 2024 public engagement period attracted a total of 512 comments on the interactive online map from 169 participants. A large majority of comments received during this engagement period were detailed, location-specific comments regarding the design of active mode components of the Project – for example over 85% of participants commented on the Northwestern Cycleway crossing. The majority of feedback during this period supported raised safety platforms, active mode crossings, further safety improvements, and additional planting.

6.2.5.2 User Interest Groups

During both public engagement phases, the Project attracted significant interest among people who cycle Carrington Road or are interested in the improvement of cycling facilities in Auckland. User interest groups (including Bike Auckland, Bike Point Chevalier, Bike Ōwairaka, and Bike Kingsland) provided feedback during both engagement periods, and as noted above a large majority of feedback during the second engagement period focused on detailed active mode design matters. In general, this feedback supported the Project albeit with detailed suggestions for improvement. These suggestions will continue to be considered as the Project enters the Detailed Design stage.

6.2.5.3 Community Liaison Group

Since February 2023 and throughout the DBC phase, AT has periodically sought feedback from a CLG set up for the CRIP which comprises a cross-section of the local community. At the fourth meeting in June 2024,

the Project Team presented the then-emerging preferred option from the DBC. Feedback from the CLG included:

- Consider sufficiency of demand for midblock pedestrian crossings;
- Plant traffic and pedestrian islands;
- Prevent access lane at Woodward Road intersection (reconfigured access for 155 Carrington Road) from being used as a shortcut;
- Raise the Northwestern Cycleway crossing;
- Review sightlines on the approach to Northwestern Cycleway crossing;
- Consider use of ‘smart studs’ that light up crossing when it is in use;
- Consider realignment of the Northwestern Cycleway within the Carrington Residential Development site;
- Congestion at Mt Albert is significant, consider an additional lane across the NAL; and
- Support for bus lanes.

A number of these suggestions have been actioned in the Preliminary Design, and will continue to be considered as the Project enters the Detailed Design stage.

7 Statutory Assessment

This section of the AEE provides an analysis of the Project against the relevant legislative framework under the RMA. Section 104 of the RMA sets out the matters which a consent authority must have regard to, subject to Part 2 of the RMA, when considering an application for resource consent. These are as follows:

- Any actual or potential effects on the environment of allowing the activity (s104(1)(a));
- 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 (s104(1)(ab));
- Any relevant provisions of a national environmental standard, national policy statement, regional policy statements, and plans (s104(1)(b)); and
- Any other matter the consent authority considers relevant and reasonably necessary to determine the application (s104(1)(c)).

Given that this application is for a non-complying activity, Section 104D of the RMA is also relevant. This section sets particular restrictions for non-complying activities, and provides that a consent authority may only grant resource consent for a non-complying activity only if it is satisfied that either:

- The adverse effects of the activity on the environment will be minor (s104D(a)); or
- The application is for an activity that will not be contrary to the objectives and policies of the relevant plan (s104D(b)(i)).

The relevant parts of the above legislative framework is addressed in the following subsections of the report:

- S104(1)(a) and s104D(a) matters are analysed at Section 7.1;
- S104(1)(ab) matters are analysed at 7.2;
- S104(1)(b) and s104D(b)(i) matters are analysed at Section 7.3;
- S104(1)(c) matters are analysed at Section **Error! Reference source not found.** and
- Part 2 matters are analysed at Section 7.5.

7.1 S104(1)(a) and s104D(a) – Effects of the activity on the environment

7.1.1 S104(1)(a) – Actual and potential effects

In respect of s104(1)(a), the potential effects on the environment of allowing the activity are set out in Section 5 of this AEE. In summary, the effects of the Project include a range of positive transport, landscape and visual, arboricultural, stormwater, and water supply/resilience effects (as summarised at 5.1); while potential adverse effects are covered in Sections 5.2-5.9. The proposed measures to manage adverse effects as described throughout Section 5 of this AEE are such that effects will be avoided, remedied, or mitigated as appropriate.

7.1.2 S104D(a) – Adverse effects of non-complying activities

In respect of s104D(a), the non-complying activity status is triggered by the proposed removal of the Airing Court Wall within the former Oakley Hospital site which infringes rule D17.4.1(A1). As noted in the Historic Heritage Effects Assessment, the removal of the wall and associated loss of heritage fabric was assessed as minor in the context of the extent of place as a whole; with the potential for effects to reduce to less than minor with the implementation of suggested mitigation measures. Accordingly, s104D(a) does not preclude non-complying activity resource consent from being granted under rule D17.4.1(A1).

Similarly, it is considered s104D(a) does not preclude resource consent from being granted under the remaining consent triggers outlined at Section 4 of this AEE in the event that the Project is considered as a

non-complying activity as a whole. As noted above, the proposed measures to manage adverse effects as described throughout Section 5 of this AEE are such that they will be avoided, remedied, or mitigated as appropriate to the extent that they are minor.

Given that the effects of the non-complying activity are assessed as being minor, the s104D(a) gateway test is considered to be met. Accordingly, it is not necessary to consider the second gateway test (s104D(b)).

7.2 S104(1)(ab) – Measures for ensuring positive effects as offset or compensation

As noted at Section 5.1, there are a number of inherent positive effects associated with the Project. Of particular note in terms of ensuring positive effects as offset or compensation for an adverse effect are:

- Proposed planting of approximately 190 new specimen trees which constitutes a positive effect offsetting the loss of 61 trees as a result of the Project; and
- Proposed stormwater treatment devices as outlined at Section 3.1.2 which result in a positive effect offsetting the effects of the changes in impervious area as a result of road widening.

7.3 S104(1)(b) and Section 104D(b)(i) – Relevant statutory provisions

Table 7-1 summarises the relevant statutory provisions that the Project has been assessed against for the purposes of the s104(1)(b). As noted above, it is not necessary to consider the s104D(b)(i) gateway test for non-complying activities because the s104D(a) test has already been satisfied.

The following sections summarise the relevant objectives and policies from each set of provisions, and provides an assessment of the Project against the objectives and policies cited.

Table 7-1 – Statutory provisions assessed

Type of statutory document	Relevance / Relevant Plans and Provisions
National Policy Statement	The National Policy Statement on Urban Development (NPS-UD) is relevant to this application.
Regional Policy Statement	The Auckland Regional Policy Statement (RPS), contained in Chapter B of the AUP:OP, is relevant to this application. In particular: • B3 – Infrastructure, transport, and energy; • B5 – Historic Heritage and Special Character; • B7 – Natural resources; and • B10 – Environmental Risk.
Plans or Proposed Plan	The following regional and district plan provisions in the AUP:OP are considered relevant to this application: • D17 – Historic Heritage Overlay; • E1 – Water quality and integrated management; • E2 – Water quantity, allocation, and use; • E17 – Trees in roads; • E25 – Noise and Vibration; • E26 – Infrastructure; • E27 – Transport; • E36 – Natural Hazards; and • I334 – Wairaka Precinct.

7.3.1 National Policy Statement on Urban Development

Relevant Objectives and Policies: Objectives 1 and 6; and Policies 1, 6, and 8.

The above cited objectives and policies of the NPS-UD relevantly seek to provide for well-functioning urban environments, which includes the need to provide for sufficient housing supply to meet demand; and to

provide for good multi-modal accessibility. They also require decision making on urban development to be integrated with infrastructure planning and funding decisions, and responsive to proposals that would supply significant development capacity.

Comment:

The Project is entirely consistent with the aim of a well-functioning urban environment as defined in the NPS-UD. As noted at the outset of this AEE, the main impetus for the Project is to respond to and serve the transport demands associated with the adjacent Carrington Residential Development; as well as growth and intensification provided for in the wider surrounding area. To this end, the Project provides for improved multi-modal accessibility in the area with particular emphasis on improving the level of service for active modes and public transport. The Project has been designed and planned to integrate with the Carrington Residential Development, and has been funded and programmed to respond in time to the transport demands of the development. Moreover, the planned concurrent construction of the Watermain will ensure that multiple infrastructure projects necessary to support growth in the area can be implemented with the least possible disruption to the local community.

In short, the Project will help realise a well-functioning urban environment in the Mt Albert/Point Chevalier area; and is an integral part of the infrastructure response to the demands associated with planned development in the area.

7.3.2 Auckland Regional Policy Statement

B3 – Infrastructure, transport, and energy

Relevant Objectives and Policies: Objectives B3.2.1(1), (2), (3), (4), (5), (8), B3.3.1(1); and Policies B3.2.2(1), (2), (3), (6); and B3.3.2(1), (4), (5), and (7).

The objectives and policies under Chapter B3 of the RPS are relevant to the Project insofar as they seek to:

- Promote and enable the benefits of well-functioning infrastructure (Objectives B3.2.1(1)-(2); Policies B3.2.2(1)-(2);
- Appropriately manage the adverse effects of infrastructure (Objectives B3.2.1(3) and (8); Policies B3.2.2(8) and B3.3.2(7); and
- Provide for the functional needs and locational requirements of infrastructure (Objective B3.2.1(4); Policies B3.2.2(3) and (6));
- Promote a well-functioning transport system that is integrated with land use (Objectives B3.2.1(5), B3.3.1(1); Policies B3.3.2(1), B3.3.2(4), and B3.3.2(5).

Comment:

The positive effects of the Project (as set out at Section 5.1) are such that it will clearly result in a more well-functioning infrastructure network (both transport and water supply) in the Mt Albert/Point Chevalier area that contributes to clear public goods and to social, economic, environmental, and cultural well-being. The proposed measures to manage adverse effects as described at Section 5.2-5.9 are such that effects will be avoided, remedied, or mitigated as appropriate. Accordingly, the balance between enabling beneficial infrastructure while managing its adverse effects as required by the above cited objectives and policies is achieved.

In respect of the functional needs and locational requirements of infrastructure, the objectives and policies enable the development, operation, maintenance, and upgrading of infrastructure in areas with scheduled natural and physical resources while ensuring that adverse effects on the values of such areas are appropriately managed. The proposed remove of the Airing Court Wall constitutes an adverse effect on a scheduled historic heritage place which is required to accommodate the functional needs of the Project (see 3.1.5 above). As noted in the Historic Heritage Effects Assessment, the removal of the wall and associated

loss of heritage fabric was assessed as minor in the context of the extent of place as a whole; with the potential for effects to reduce to less than minor with the implementation of suggested mitigation measures. Accordingly, the balance between enabling the functional and locational requirements of infrastructure and the management of effects on scheduled physical resources as required by the objectives and policies is met. Note that this subject is addressed further below in the assessment of the RPS B5 and AUP:OP D17 provisions.

Finally, the Project is entirely consistent with the objectives and policies which promote a well-functioning transport system that is integrated with land use. As noted in the NPS-UD assessment above, the main impetus for the Project is to respond to and serve the transport demands associated with the adjacent Carrington Residential Development; as well as growth and intensification provided for in the wider surrounding area. The Project provides for improved multi-modal accessibility in the area with particular emphasis on improving the level of service for active modes and public transport. The Project has been designed and planned to integrate with the Carrington Residential Development, and has been funded and programmed to respond in time to the transport demands of the development. In short, the Project is an exemplar of transport planning responding directly to and integrating with land use planning.

B5 – Historic Heritage and Special Character

Relevant Objectives and Policies: Objectives B5.2.1(1); Policies B5.2.2(6)-(7).

The objectives under Chapter B5 of the RPS relevantly require that significant historic heritage places are protected from inappropriate subdivision, use, and development. The policies of relevance to the Project require the avoidance of adverse effects on the primary features of significant historic heritage places, and avoidance where practicable of significant adverse effects on significant historic heritage places more broadly.

Comment:

As noted at 5.4, the former Oakley Hospital site is the only historic heritage site affected by the Project that is protected by way of it being scheduled in the AUP:OP. The Oakley Hospital Main Building listed as a Category A Place in AUP:OP Schedule 14.1 (list number 01618), and has a large extent of place associated with it. Excluded from the listing are buildings and alterations constructed post-1905, and all vegetation within the extent of place.

The primary feature of the site is the Oakley Hospital Main Building (extent defined in Schedule 14.3 of the AUP:OP). As a result of localised narrowing and realignment described at Section 3.1.5, the building is unaffected by the proposed works. Accordingly, the Project meets the specific policy requirement under B5.2.2(6) to avoid significant effects on the primary features of significant historic heritage places. This in turn is consistent with the aim of objective B5.2.1(1).

The removal of the Airing Court Wall is required to accommodate the functional needs of the Project (see Section 3.1.5 above). As noted in the Historic Heritage Effects Assessment, the removal of the wall and associated loss of heritage fabric was assessed as minor in the context of the extent of place as a whole; with the potential for effects to reduce to less than minor with the implementation of suggested mitigation measures. Additionally, the operational effects of the permanent works (bus stop, footpath and cycleway pavement, new berms, streetlights, trees, underground services, and the Watermain) within the extent of place were assessed as minor (in the case of the proposed bus stop within the extent of place, and less than minor for the remainder on the basis that the new infrastructure is largely at or below ground level.

Accordingly, the Project meets the specific policy requirement under B5.2.2(7) to avoid where practicable significant adverse effects on significant historic heritage places. This in turn is consistent with the aim of objective B5.2.1(1).

Note that this subject is addressed further in the assessment of the AUP:OP D17 provisions at 7.3.3.

B7 – Natural Resources

Relevant Objectives and Policies: Objective B7.4.1(4); Policy B7.4.2(9)

The above cited objective and policy relevantly require the adverse effects of stormwater discharges to be minimised and progressively reduced; and that stormwater is managed to minimise adverse effects on freshwater and the capacity of the stormwater network, improve climate change resilience, and adopt the best practicable option for every stormwater diversion and discharge.

Comment:

The Stormwater Assessment confirms that the Project complies with the relevant diversion and discharge requirements for transport projects set out in Schedule 4 of the Regional NDC; and with the requirements for the redevelopment of high-use roads in chapter E9 of the AUP:OP. As noted at Section 5.1, the Project has positive effects in terms of both water quality and treatment for the corridor as a whole; and for flood risk/frequency on a localised basis at Segar Avenue. Minor stream hydrology effects and less than minor flood effects can be managed in line with NDC standards. Accordingly, the Project is consistent with the above cited objectives and policies.

B10 – Environmental Risk

Relevant Objectives and Policies: Objective B10.4.1(1); Policies B10.4.2(1) and (2).

The contaminated land objectives and policies under B10.4 relevantly require that human and environmental health is protected by the identification and management of contaminated land.

Comment:

The Contaminated Land Assessment has noted that potential exposure of human and environmental receptors to localised contamination is to be mitigated by requirements to undertake soil sampling to better understand risk; and to undertake works in accordance with a CSMP. The proposed management approach is therefore consistent with the objective and policies of B10.4.

7.3.3 Auckland Unitary Plan: Operative in Part

D17 – Historic Heritage Overlay

Relevant Objectives and Policies: Objectives D17.2(1), (2), and (3); Policies D17.3(12), D17.3(14), and D17.3(25) and (26)

The objectives of D17 relevantly state that the protection of scheduled historic heritage places is supported and enabled, that scheduled historic heritage places are protected from inappropriate subdivision, use, and development (including inappropriate demolition or destruction), and that appropriate subdivision, use, and development is enabled.

The policies in turn relevantly require:

- Avoidance of total demolition or destruction of the primary features of Category A scheduled historic heritage places (D17.3(12));
- Avoidance of total demolition or destruction of the non-primary features of Category A scheduled historic heritage places unless the demolition or destruction is required to allow for significant public benefit, and the significant public benefit outweighs the retention of the feature or place (D17.3(14));
- Enabling of network utilities within scheduled historic heritage places where there is a functional need or operational constraint that necessitates their location within a scheduled historic heritage place, significant adverse effects on heritage values are avoided where practicable, and other adverse effects are avoided, remedied, or mitigated; and

- Avoidance of total or substantial demolition or destruction of features within a scheduled historic heritage place to provide for infrastructure unless a functional need or operational constraint limits available alternatives, there is no reasonable practicable alternative, the infrastructure will achieve significant public benefit that could not otherwise be achieved, and the adverse effects on the heritage values of the place are minimised to the extent practical (D17.3(26)).

Comment:

As noted at Section 5.4, the former Oakley Hospital site is the only historic heritage site affected by the Project that is protected by way of it being scheduled in the AUP:OP. The Oakley Hospital Main Building listed as a Category A Place in AUP:OP Schedule 14.1 (list number 0618), and has a large extent of place associated with it. Excluded from the listing are buildings and alterations constructed post-1905, and all vegetation within the extent of place.

The primary feature of the site is the Oakley Hospital Main Building (extent defined in Schedule 14.3 of the AUP:OP). As a result of localised narrowing and realignment described at 3.1.5, the building is unaffected by the proposed works. Accordingly, the Project meets the specific policy requirement under D17.3(12) to avoid total demolition or destruction of the primary features of Category A scheduled historic heritage places. This in turn is consistent with objectives D17.2.1(1) and (2).

The Project requires removal of the Airing Court Wall to accommodate the proposed works; which in turn will result in new infrastructure being located within the extent of place. While not identified as a primary feature on the site, the wall is afforded an equivalent level of protection as it was constructed prior to 1905 as per the Schedule 14.1 listing exclusions.

In assessing the proposed removal of the wall against policy D17.3(14), the following points are noted:

- As noted at 5.1, the Project achieves significant public benefit. Specifically in the location of the Airing Court Wall, the proposed demolition enables significant public benefits by accommodating the extent of road widening required for bus lanes, an island bus stop designed to safely separate bus users from active mode users, separated walking and cycling facilities, and a right-turn lane to provide access to the Carrington Residential Development at Unitec Gate 1;
- These significant public benefits outweigh the retention of the wall given that the Historic Heritage Assessment assessed the removal of the wall and associated loss of heritage as being minor in the context of the extent of place as a whole; and noted that there was potential for effects to reduce to less than minor with the implementation of the mitigation measures suggested at Section 5.4.3. Moreover, the Historic Heritage Assessment noted that the removal of the wall could result in positive historic heritage effects insofar as the heritage values of the Oakley Hospital Main Building (the primary feature) being made more readily visible and appreciated from Carrington Road; and
- Accordingly, the Project meets the policy requirement of D17.3(14), and is consistent with objective D17.2(2).

In assessing the proposed removal of the Airing Court Wall against policy D17.3(25) and (26), it is noted that the removal of the wall to accommodate new infrastructure is required by a functional need and operational constraints which limit available alternatives. In particular, the following points are noted:

- Optioneering took place as part of a preceding DBC process. In the vicinity of the wall, three corridor options were assessed which adopted different configurations for cycle lanes (bidirectional or unidirectional) and bus lanes (both directions or northbound only). All alternatives required removal of the Airing Court Wall to achieve the desired form and function, even when factoring in localised corridor narrowing and slight eastward realignment as described at 3.1.1 and 3.1.5;
- Further realignment of the corridor to the east was not found to be viable alternatives because this would require designation and partial acquisition of property to the east including the Te Whatu Ora site directly opposite which would require the removal of several large mature native Pohutukawa tree. It was

considered that the case to designate further land to the east would be tenuous given that the Wairaka Precinct boundary setback provision otherwise already provides for widening of up to 7-8m on the western side of the road. Given the above it is unlikely a further eastward option would perform well in an alternatives assessment (which would be required to designate the land); and the property requirements would present programme risks (which are material in terms of the conditions of the IAF which is the funding source for the Project);

- Further narrowing of the corridor beyond the localised narrowing already incorporated into the Preliminary Design between CH. 1300-1400m without widening on the eastern wide would result in the road remaining at its current width, and would not sufficiently accommodate the transport outcomes sought. A number of important features central to the purpose of the Project would need to be deleted, including bus lane(s), an island bus stop, and the southbound right-turn lane at the Gate 1 intersection. In short, the significant public benefit of the infrastructure would be precluded and cannot be achieved without removal of the wall; and
- As noted above, the Historic Heritage Assessment assessed the removal of the wall and associated loss of heritage as being minor in the context of the extent of place as a whole; and noted that there was potential for effects to reduce to less than minor with the implementation of the mitigation measures suggested at Section 5.4.3. Moreover, the Historic Heritage Assessment noted that the removal of the wall could result in positive historic heritage effects insofar as the heritage values of the Oakley Hospital Main Building (the primary feature) being made more readily visible and appreciated from Carrington Road;
- Furthermore, the assessment noted that the effect of the new infrastructure (bus stop, footpath and cycleway pavement, new berms, streetlights, trees, underground services, and the Watermain) on heritage values within the extent of place would be minor (in the case of the proposed bus stop), and less than minor for the remainder of permanent works within the extent of place on the basis that they are largely at or below ground level; and
- Given the above, the Project meets the relevant policy tests in D17.3(25) and (26). Accordingly, the Project constitutes appropriate use and development in the context of objective D17.2(3).

E1 – Water quality and integrated management

Relevant Objectives and Policies: Objective E1.2(3); Policies E1.3(9), (11), (12), and (14)

The above cited objective relevantly seeks to manage stormwater networks to protect public health and safety, and to prevent or minimise adverse effects of contaminants on freshwater and coastal water quality. More specifically, the relevant policies require measures to minimise or mitigate the adverse effects of stormwater runoff, avoid as far as practicable or otherwise mitigate adverse effects of stormwater diversions and discharges, manage contaminants from high use roads to minimise adverse water quality effects, and adopt the best practicable option to minimise adverse effects of stormwater discharges.

Comment:

The Stormwater Assessment confirms that the Project complies with the relevant diversion and discharge requirements for transport projects set out in Schedule 4 of the Regional NDC; and with the requirements for the redevelopment of high-use roads in chapter E9 of the AUP:OP. As noted at Section 5.1, the Project has positive effects in terms of both water quality and treatment for the corridor as a whole; and for flood risk/frequency on a localised basis at Segar Avenue. Minor stream hydrology effects and less than minor flood effects can be managed in line with NDC standards. Accordingly, the Project is consistent with the above cited objectives and policies.

E2 – Water quantity, allocation, and use

Relevant Objectives and Policies: Policy E2.3(23)

Policy E2.3(23) relevantly requires proposals to divert groundwater to avoid, remedy, and mitigate adverse effects on scheduled historic heritage places; and people and communities. It also requires groundwater diversion proposals to incorporate appropriate monitoring and mitigation.

Comment:

As noted at 5.9, the Project requires resource consent for groundwater diversion and dewatering activities associated with excavations for the Watermain cross-connection and isolation valve chamber. The excavations will exceed 30 days in duration, will exceed permitted drawdown depths by approximately 0.5m, and will encroach the Oakley Hospital historic heritage extent of place.

These excavations are highly localised, and diversion and dewatering will occur during construction only. Moreover, while the excavations will encroach the Oakley Hospital extent of place, they will be at least 17m from the nearest point of the Oakley Hospital Main Building (the primary feature within the extent of place). It is recommended that the conditions of consent include a requirement to prepare a Groundwater and Settlement Monitoring and Contingency Plan (GSMCP) to ensure any effects are appropriately managed.

E17 – Trees in roads

Relevant Objectives and Policies: Objectives E17.2(1), (2), and (3); Policies E17.3(1) and (4)

The above cited objectives relevantly seek to protect trees in roads that contribute to cultural, amenity, landscape, and ecological values, increase the extent of tree cover in roads particularly in areas identified for intensified living; and enable the development and upgrading of the transport system and utilities whilst ensuring the values provided by trees in roads are maintained. The policies in turn relevantly seek to balance the development of road infrastructure with tree protection, and encourage the use of indigenous trees and vegetation for planting in roads to contribute to cultural, amenity, landscape, and ecological values.

Comment:

The Project works require the removal of a total of 61 trees. The Arboricultural Assessment identifies that the Project proposes planting approximately 190 new specimen trees along the length of the corridor to mitigate for the loss of trees as part of the Project. The feasibility, locations, sizes, numbers, and species of trees shown in the Preliminary Design will be confirmed at the Detailed Design stage, and will include native trees. As noted at 5.1, the extent of new canopy cover (based on 10 years' mature canopy) exceeds Auckland Council Urban Ngahere Strategy recommendations, and on this basis the project arborist considers that significant betterment is achieved. In this regard, objective E17.2(2) and policy E17.3(4) are clearly met by the Project which is located in an area identified for intensified living.

Additionally, works within the protected root zone and/or trimming of a further 41 retained trees and vegetation groups are also required generally to provide necessary clearances over footpaths. The project arborist has proposed appropriate management measures in the form of a Tree Protection Methodology which will ensure that Objectives E17.2(1) and (3), and Policy E17.3(1) are met.

E25 – Noise and Vibration

Relevant Objectives and Policies: Objective E25.2(1), (2), and (4); Policy E25.3(10)

The above cited objectives relevantly seek to protect people from unreasonable levels of noise and vibration, protect the amenity values of residential zones from unreasonable noise and vibration, and that construction activities that cannot meet noise and vibration standards are enabled while managing adverse effects. The relevant policy for the Project is E25.3(1) which requires the avoidance, remediation, or mitigation of adverse construction noise and vibration effects while having regard to the sensitivity of the receiving environment, the proposed duration, and hours of operation of the activity; and the practicability of complying with permitted noise and vibration standards.

Comment:

The Acoustic Effects Assessment noted that there will be construction noise and vibration effects exceeding the permitted activity standards for construction noise and vibration amenity, and that these works cannot practically comply. These effects were considered likely to be of limited duration for individual receivers relative to the overall duration of construction, and are proposed to be managed through a CNVMP and CNVMP Schedules (as required by AUP:OP E25.6.29(5)). Moreover, the Project is proposing hours of operation commensurate with those provided for by the AUP:OP (see 3.3.3), with night works limited to bridge placement and road resurfacing works only. The Project is therefore considered to be consistent with Objective E25.2(4) and Policy E25.3(1), which to provide for the enablement of construction activities which infringe permitted activity standards providing that the effects are appropriately managed (noting that the proposed CNVMP is consistent with the requirements of AUP:OP E25.6.29(5). This in turn is consistent with the broader objectives E25.2(1) and (2).

E26 – Infrastructure

Relevant Objectives and Policies: Objectives E26.2.1(1), (2), (3), (4), (9); Policies E26.2.2(1), (2), (4), (5), (6), (14), and (15)

The objectives and policies under Chapter E26 are relevant to the Project insofar as they:

- Promote and enable the benefits of well-functioning infrastructure (Objectives E26.2.1(1)-(4); Policies E26.2.2(1)-(2);
- Appropriately manage the adverse effects of infrastructure (Objective E26.2.1(9) and Policies E26.2.2(4)-(5);
- Provide for the functional needs and locational requirements of infrastructure (Policy E26.2.2(6)); and
- Require road network activities to avoid, remedy, or mitigate adverse effects; and for roads to be designed and constructed to provide for the needs of all road users (Policies E26.2.2(14)-(15)).

Comment:

Much of the assessment for Chapter B3 of the RPS (see 7.3.2) is also relevant to Chapter E26. In particular:

- The benefits of the Project are such that it will result in a more well-functioning infrastructure network, and the proposed measures to manage adverse effects as described at 5.2-5.9 are such that effects will be avoided, remedied, or mitigated as appropriate. Accordingly, the balance between enabling beneficial infrastructure while managing its adverse effects as required by the above cited objectives and policies is achieved;
- In respect of Policy E26.2.2(6), the policy relevantly requires consideration of the merits of locating new infrastructure in areas scheduled in relation to historic heritage. In light of the analysis set out above in the assessments for Chapters B3, B5, and D17, it is considered that the Project is consistent with this policy; and
- The Project is considered to be consistent with policy directive for roads to be designed and constructed to provide for the needs of all road users, as it provides for improved multi-modal accessibility in the area with particular emphasis on improving the level of service for active modes and public transport.

E27 – Transport

Relevant Objectives and Policies: Objectives E27.2(1), (2), (4), and (5); and Policies E27.3(20)-(22)

The above cited objectives relevantly seek the integration of land use with all modes of transport, an integrated multi-modal transport network, safe and efficient parking, loading, and access; and prioritisation of pedestrian safety and amenity along public footpaths. The relevant policies are concerned with the design of safe and efficient vehicle crossings, in particular on sites subject to Vehicle Access Restrictions.

Comment:

The Project is entirely consistent with the broad objectives concerning land use and transport integration and a multi-modal transport network. As noted in the assessment against the NPS-UD and Chapter B3 of the RPS, the main impetus for the Project is to respond to and serve the transport demands associated with the adjacent Carrington Residential Development; as well as growth and intensification provided for in the wider surrounding area. The Project provides for improved multi-modal accessibility in the area with particular emphasis on improving the level of service for active modes and public transport. The Project has been designed and planned to integrate with the Carrington Residential Development, and has been funded and programmed to respond in time to the transport demands of the development. In short, the Project is an exemplar of transport planning responding directly to and integrating with land use planning.

In respect of the objective and policies pertaining to the design of safe and efficient vehicle crossings, the Transport Assessment notes that a proposed reconfiguration of access at 155 Carrington Road requires resource consent against E27.4.1(A5). The assessment notes that the configuration proposed in the Preliminary Design maintains access to the property while avoiding conflict between reversing vehicles and northbound cyclists and vehicles, provides appropriate sightlines for traffic and pedestrian movements; and includes raised safety platforms and visual cues to manage approach speeds, dissuade use of the access lane for left-turn movements at the Woodward Road intersection, and support pedestrian movements. The potential effects of the access reconfiguration are therefore mitigated inherently by the design to the point that the effect is neutral or a positive. Accordingly, the Project is consistent with the objective and policies in question.

E36 – Natural Hazards

Relevant Objectives and Policies: Objective E36.2(4); Policy E26.3(35)

The above cited objectives and policies relevantly require that where infrastructure has a functional and operational need to locate in natural hazard areas, significant adverse effects are to be avoided or mitigated to the extent practicable.

Comment:

The Segar Avenue stormwater works are located within the 1% AEP floodplain. These works have a functional and operational need to locate in Segar Avenue given that they comprise treatment and conveyance swales connecting a fixed subcatchment on Carrington Road to a discharge point to the east. The Stormwater Assessment confirms that the works will have a positive effect for flood risk/frequency on a localised basis at Segar Avenue as a result of the proposed works. Accordingly the Project is consistent with the relevant objective and policy; and the Segar Avenue works are a permitted activity under E36.4.1(A32).

7.3.4 I334 – Wairaka Precinct

Relevant Objectives and Policies: Objective I334.2(8); Policies I334.3(4) and (20)

Objective 8 of the Wairaka Precinct provisions requires development within the Precinct to facilitate an integrated, multi-modal transport network both within the Precinct and in the area surrounding the Precinct. Policy 4 in turn promotes comprehensive planning and integrated development, including providing for infrastructure integrated with existing infrastructure; and for integrated transport and land use planning. Finally, Policy 20 requires subdivision and development within the Precinct to be integrated with transport planning and infrastructure which (relevantly) integrates with public transport and active modes, and implements the transport elements in the Precinct Plan.

Comment:

Each of the above-cited objectives and policies emphasises the need for development in the Precinct to integrate with surrounding transport infrastructure, which includes Carrington Road. As noted at 2.2.3, one of the main ways the Precinct provisions seek to implement the policy directives is through the Precinct boundary setback provision (standard I334.6.6(3)) which requires buildings within the Precinct to be set back a minimum width of 28.2m from the eastern edge of Carrington Road. In doing so, the setback provides for road widening to serve multi-modal trips generated by development within the Precinct; and specifically provides for *"walkways, cycleways, public transport facilities, site access, street furniture, outdoor dining, and cafes… [and landscaping]"*. Development within the Precinct to date has provided for the setback.

The Project is premised on utilising the extent of road widening provided for by the Precinct boundary setback, and accordingly is entirely consistent with the above-cited objectives and policies. In this context, it is clear that the Project is integral to achieving the aim of an integrated, multi-modal transport network for the Precinct; and in realising a well-functioning urban environment generally.

The Precinct boundary setback area used for the Project is ultimately intended to be acquired by AT and legalised as road reserve, and this process is being undertaken in parallel to design and consenting.

7.3.5 Conclusion

For the purposes of s104(1)(b), the above analysis confirms that the Project is consistent with all relevant statutory provisions.

For the purposes of s104D(b)(i), the above analysis confirms that the Project will not be contrary to the objectives and policies of the relevant plan that are relevant to the non-complying activity – in particular, the provisions of Chapter B5 of the RPS, and Chapters D17 and E26 of the AUP:OP. Accordingly, s104D(b)(i) does not preclude non-complying activity resource consent from being granted under rule D17.4.1(A1).

Similarly, it is considered that s104D(b)(i) does not preclude resource consent under the remaining consent triggers outlined at Section 4 of this AEE as the Project is not contrary to any of the relevant statutory provisions.

7.4 S104(1)(c) – Other Matters

In addition to the effects assessment and statutory assessment set out above, it is considered that the Auckland Plan 2050 and Ngāti Whātua Ōrākei Iwi Management Plan are other matters relevant and reasonably necessary to consider in determining the application. Table 7-2 provides a summary of the relevant provisions of each document, and concludes that the Project is consistent with each.

Table 7-2 – Summary of identified other matters relevant under S104(1)(c)

Other Matter	Comments
Auckland Plan 2050	Prior to its recent repeal, s79 of the Local Government (Auckland Council) Act 2009 required Auckland Council to prepare a spatial plan setting out a long-term strategy for Auckland's growth and development. The Project is considered entirely consistent with the relevant outcomes of the Auckland Plan 2050, in particular the transport and access outcome and the Future Development Strategy: • The transport and access outcome promotes multi-modal transport choices and road space reallocation with a focus on bus lanes, cycle lanes, safety, accessibility to public transport, and intra-network connections. The Project is entirely consistent with all of these priorities. • The Carrington Residential Development area is identified as a short-to-medium term priority development area, and as an infrastructure deficit area where investment is to be prioritised (for both transport and water supply).

Other Matter	Comments
	The CRIP and the Watermain each have a critical role in realising the development, and in addressing the infrastructure deficit.

Iwi Management Plans	The Ngāti Whātua Ōrākei Iwi Management Plan (Te Pou o Kāhu Pōkere) was reviewed as the only publicly available Iwi Management Plan directly relevant to the application. It is considered that the Project is consistent with the relevant parts of the plan, in particular:
	• The plan provides guidelines for when the iwi should be engaged with, including a number of circumstances directly relevant to the Project. Accordingly, engagement has occurred as outlined at 6.2.
	• The plan identifies a number of strategic priorities for Ngāti Whātua Ōrākei. The Project is consistent with these priorities, including:
	  • Encouraging and facilitating a shift towards low carbon, mass transit transport systems (paragraph 4.18). As noted at 5.1, the Project enables mode shift by increasing the level of service for public transport and active modes;
	  • Encouraging planting of urban trees, and maximising the use of native species (paragraphs 4.24-4.26). As noted at 5.6, and in the Urban Design Strategy (see Appendix B), approximately 190 new specimen-grade street trees are proposed as part of the Project;
	  • Reducing construction and demolition waste (paragraphs 4.43-4.46). The Urban Design Strategy (see Appendix B) identifies a number of opportunities to reduce waste; and
	  • Improving water quality, and in particular stormwater treatment measures to improve stormwater quality (paragraphs 4.52-4.57). As noted at 5.1, the Project achieves a significant improvement in stormwater quality.

7.5 Part 2 – Purpose and Principles

Taking guidance from the Supreme Court decision in R J Davidson Family Trust v Marlborough District Council [2018] NZCA 316, decisions on resource consents must have regard to the provisions of Part 2 of the RMA, but only where it is appropriate to do so. In this instance, the AUP:OP has been prepared with regard to Part 2 of the RMA, and is considered to give full effect to the purpose and principles in sections 5-8 of the Act. There are no matters of uncertainty within the AUP:OP, and it is considered to be robust in the context of the activities assessed in this application. Accordingly, no further assessment against Part 2 of the RMA is considered necessary in the determination of this application.

8 Notification Assessment

Sections 95A-95F of the RMA set out a stepped process for determining whether an application for resource consent should be publicly or limited notified. While it is noted that the decision on notification sits solely with Council, the relevant elements of these steps are summarised below and are intended to assist Council in its notification assessment.

8.1 Concerning public notification as set out in S95A

The application does not meet the criteria in s95A(3) that would otherwise mandate public notification. Specifically:

- The applicant does not request this application be publicly notified (s95A(3)(a));
- The provisions of Section 95C are not relevant at this stage (95A(3)(b)); and
- This application does not relate to exchange of recreation reserve land(95A(3)(c)).

In relation to Section 95A(4) the application as a whole is not precluded from public notification in accordance with the matters identified in Section 95A(5). In relation to Section 95A(7) there are no relevant rules that require the application to be publicly notified in accordance with the criteria identified in Section 95A(8)(a).

Given the above, public notification could only be triggered under either Section 95A(8)(b) (more than minor effects under Section 95D); or Section 95A(9) (special circumstances). Regarding these tests, the following points are noted:

- The AEE concludes that the proposed works are likely to have adverse effects that are no more than minor as described through Section 5 of this AEE. The proposed measures to manage adverse effects are such that effects will be avoided, remedied, or mitigated as appropriate; and
- In relation to Section 95A(9) there are not considered to be any special circumstances existing that warrant the application being publicly notified.

8.2 Concerning limited notification as set out in Section 95B

- There are no protected customary rights or customary marine title groups affected by the work (Section 95B(2));
- The proposed activity is not on or adjacent to, or may affect, land that is the subject of a statutory acknowledgment (section 95B(3));
- Limited notification is not precluded pursuant to the criteria set out in section 95B(6);
- The application does not involve a boundary activity or prescribed activity in respect of section 95B(7);
- The adverse effects of the proposal, including on any potentially affected persons and adjoining properties, have been assessed in the AEE and accompanying technical reports, and are no more than minor, as described through Section 5 of this AEE.
- There are not considered to be any special circumstances in relation to the application that warrant notification of the application to any other persons (section 95B(10)).

9 Conclusion

This AEE has been prepared on behalf of AT to support an application for resource consents for the Carrington Road Improvements and Point Chevalier Watermain No. 2 Project.

An assessment of effects on the environment has been undertaken for the Project. This has concluded that the Project will have significant positive effects, and has proposed measures such that the adverse of the Project can be avoided, remedied, or mitigated as appropriate. A statutory assessment has been undertaken which demonstrates that the proposal is entirely consistent with the relevant statutory provisions under the RMA.

A

Appendix A – Records of Title

B

Appendix B – Preliminary Design Drawings and Urban Design Strategy

C

Appendix C – Technical Specialist Assessments

D

Appendix D – Proposed Conditions

E

Appendix E – Affected Party Approvals and Correspondence

F

Appendix F – Summary of responses to pre-lodgement comments