

# DRURY ACCESS RAMP PROJECT

# ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

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New Zealand Government

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# **Document Control**

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# Abbreviations

Abbreviation	Term
AEE	Assessment of Environmental Effects
AUP	Auckland Unitary Plan (Operative in Part 2016)
CNVMP	Construction Noise and Vibration Management Plan
СТМР	Construction Traffic Management Plan
DSI	Detailed Site Investigation
ESCP	Erosion Sediment Control Plan
GD05	Guideline Document 2016/005
HNZPT	Heritage New Zealand Pouhere Taonga
LVA	Landscape and Visual Assessment
NES-CS	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011
NES-F	National Environmental Standards for Freshwater 2020
NIMT	North Island Main Trunk
NoR	Notice of Requirement to alter the existing boundary of Designation 6706
NPSFM	National Policy Statement for Freshwater Management 2020
NPSUD	National Policy Statement for Urban Development 2020
NUMP	Network Utilities Management Plan
NUO	Network Utility Operator
NZAA	New Zealand Archaeological Association
P2DS	SH1 Upgrades Project between Papakura to Drury South
RMA	Resource Management Act 1991
SH1	State Highway 1 Motorway, the Southern Motorway
SH22	State Highway 22, Great South Road
SMAF-1	Stormwater Management Areas – Flow 1
SUP	Shared Use Path

the Project

Proposed Access Ramp at Drury Interchange

Waka Kotahi

Waka Kotahi NZ Transport Agency

# **1** INTRODUCTION

# **1.1 Introduction to the Project**

Waka Kotahi NZ Transport Agency (Waka Kotahi) are seeking resource consents and issuing a Notice of Requirement (NoR) to alter the existing Southern Motorway (State Highway 1 or "SH1") corridor and to support the proposed construction of an off-ramp at Drury Interchange (herein this report referred to as "the Project").

The Project proposes the construction of an additional off-ramp from the southbound lane of SH1 at the Drury Interchange to provide a direct connection to future planned development at the Drury Centre Precinct. The proposed off-ramp will be located at the eastern extent of Drury Interchange, starting from the existing southbound off-ramp to Great South Road (State Highway 22 or "SH22") and terminating within the Drury Centre Precinct.

This Assessment of Effects on the Environment (AEE) has been prepared to support the Project. Waka Kotahi is the Requiring Authority for the existing designation covering the SH1 corridor (Designation 6706 or "the Designation") and is the applicant. A summary of the Project background is contained in Section 2 (below).

In accordance with the Resource Management Act 1991 (RMA or "the Act"), a NoR application is required for the alteration of the existing designation boundary, and resource consents are required for regional works within the approved designation to support the Project construction. Consent is required under the National Environmental Standard on Contaminated Soils (NES-CS), and regional plan matters under the Auckland Unitary Plan Operative in Part 2016 (AUP).



Figure 1-1 Drury Centre Access Ramp indicative location plan

# 1.2 Background

The Project, led by Waka Kotahi, will improve the functionality of the Drury Interchange and support future urban development within the Drury Centre Precinct. The following section outlines the Project objectives and alignment with adjacent Waka Kotahi projects within the south of Auckland.

# 1.2.1 Waka Kotahi's Papakura to Drury South Project (P2DS)

The Project can be assessed in the context of the Papakura to Drury South Project (P2DS), part of a wider project known as Papakura to Bombay Project (P2B). P2DS is a Waka Kotahi project set to improve the safety and functionality of State Highway 1 (SH1) and provide for long term growth in the south of Auckland. P2DS is included in the South Auckland package of the New Zealand Upgrade Programme.

Waka Kotahi structured P2B into five stages, as illustrated in Figure 1-2 (below). The most pertinent of these is Stage 1B1, which pertains to the approved upgrades of Drury Interchange which include reconstruction of the interchange east of it current location, and alteration of the Designation 6706 boundary. Stage 1B1 was approved under the

COVID-19 Recovery (Fast Track Consenting) Act 2020 ("FTA") on 12 November 2021. The Environmental Protection Authority (EPA) through an expert consenting panel granted resource consents, subject to conditions, and confirmed two designations subject to conditions to Waka Kotahi for Stage 1B1 P2D. Several of the assessments from the P2DS Stage 1B1 FTA application are consistent with the those provided in this application. A further application under the FTA for Stage 1B2 of P2DS was approved by the EPA and expert consent panel on 4 July 2023, altering Designation 6706 and its conditions with respect to the Stage 1B2 area.

It is noted that this application<sup>1</sup> is not part of the New Zealand Upgrade Programme works.



Figure 1-2 Approximate extents of the P2B project – Red line indicating Stage 1B1 (Drury Interchange)

# 1.2.2 Future Development at Drury Centre

# 1.2.2.1 Plan Change 48

Provision for the Drury Centre was made when 95 hectares of land in the area generally bounded by SH22, Waihoehoe Road, Fitzgerald Road and the Hingaia Stream, was rezoned from Future Urban Zone (FUZ) through Private Plan Change 48 (PC48) to the AUP. Section 4 of this AEE discusses the now operative AUP provisions relevant to the Drury Centre under the Drury Precinct I450.

The purpose of the Drury Centre Precinct I450 is to create a high-density, transit-oriented centre that prioritises public and active transportation, integrating rail, bus, pedestrian, and cycle networks. The precinct will be anchored by a future train station (i.e., Maketuu/Drury Railway Station) and provide a unique sense of place by integrating existing natural and built site features with development. The precinct comprises a core centre, surrounded by high-density residential and large format retail activities. The precinct will provide safe and convenient access to the train station, and a network of streams throughout the area will be maintained and enhanced.

The provision of a direct access ramp from SH1 was first considered under the Drury-Opāheke Structure Plan, shown in Figure 1-3 (below). The connection was further assessed and was key aspect of PC 48, being highlighted in the Drury Centre Masterplan 2048 and incorporated into the provisions of the of the Drury Centre Precinct Plan 2, illustrated in Figure 1-4 (below). Standard I450.6.2 of Drury Centre Precinct outlines the staging requirements for

<sup>&</sup>lt;sup>1</sup> For this document, "consenting", "approvals", and "applications" are used as a generic reference for statutory approvals i.e. designations, resource consents, archaeological authorities, and discharge permits. Where discussion relates to a specific type of approval, this is clarified in the text.

subdivision and development in accordance with investment in transport infrastructure. Development capacity within the Drury Centre Precinct is contingent of the construction of the access ramp (as outlined in Table I450.6.2.1, AUP:OP).



Figure 1-3 Drury-Opāheke Structure Plan – Land Use Map 2019 (Auckland Council, 2019)



Figure 1-4 Drury Centre: Precinct Plan 2 Structuring Elements: Illustrating indicative location of the direct future connection to SH1 (AUP)

# 1.2.2.2 Drury Centre Precinct – Covid-19 Fast Track Application (FTA)

On 17 July 2023 an Expert Consenting Panel granted resource consents, subject to conditions, for Drury Centre Precinct to Kiwi Property Holdings No. 2 Limited ("Kiwi Property"), to subdivide land at Fitzgerald, Flanagan and Brookfield Roads in Drury, Auckland, and develop these sites for a commercial retail centre.

The Drury Centre Precinct proposal is relevant to this proposal as it provides for the following key infrastructure that will interface with the Project. The key infrastructure tie-ins are summarised below:

- A 3m shared user path (SUP) with a 0.50m verge on either side carriageway, providing walking/cycling connection between Drury Centre Precinct and Maketuu/Drury Railway Station which the Project will in part construct where the alignment of the SUP meets the proposed carriageway.
- The proposed roading network at Drury Centre Precinct, which the Project will tie into. Indicative intersection at Creek Road South, where a finalised intersection will not be decided on until the detailed design stage.

In addition to establishing a direct connection to Drury Centre Precinct, the Project will facilitate vehicle access to the neighbouring developments in the Drury Area, namely the Waihoehoe Road Precinct and Drury East Precinct. Currently, these areas have access to SH1 only via SH22. Further information on the adjacent developments and the associated Plan Changes can be found in Section 4 of this report.

# 1.2.3 Project Objectives

Based on the above the following requiring authority objectives have been adopted for the Project, consistent with those applied to previous P2DS projects:

- Improve the safety and resilience of the state highway network between Papakura and Bombay.
- Increase transport choice and accessibility to support growth in the south of Auckland.
- Support national and regional economic growth and productivity.
- Support the inter and intra-regional movement of people and freight.

# 1.2.4 Waka Kotahi

Waka Kotahi is a Crown entity with its objective, functions, powers and responsibilities set out in the Land Transport Management Act 2003 (LTMA) and the Government Roading Powers Act 1989 (GRPA).

The Waka Kotahi's core value is to create great journeys to keep New Zealand moving. An integrated approach to transport planning, funding and delivery is taken by Waka Kotahi. This includes investment in public transport, walking and cycling, local roads and the construction and operation of State Highways. In addition to the LTMA, Waka Kotahi must have regard to the Government Policy Statement on Land Transport 2021/22-2030/31 which came into force on 1 July 2021. The GPS outlines the Government's strategic and policy goals for land transport as well as the funding direction necessary to achieve them. It is considered that this Project aligns with the GPS as its primary driver is to improve access and efficiency of transport connections to Drury Centre.

# 1.2.5 Kiwi Property

Kiwi Property has an interest in the proposal being a private landowner of the properties over which the Project will be constructed are highlighted in Figure 1-5 and can be summarised as:

- 114 Flanagan Road, Drury;
- 120 Flanagan Road, Drury; and
- 132 Flanagan Road, Drury.



Figure 1-5 Kiwi Property land holdings in Drury (yellow highlights)

The Project aims to improve accessibility and connectivity, providing easier and more convenient transportation options for users accessing future development at Drury Centre Precinct.

For a wider background context to the Project subject to this application, Kiwi Property submitted an application under the FTA that aim to facilitate urban development within the abovementioned Drury Centre Precinct area. The increased accessibility provided by the access ramp proposed by the Project will integrate with the planned development within Drury Centre Precinct area and lead to improved opportunities for economic growth, development, and investment in the Drury Centre Precinct. Figure 1-6 (below) provides a wider context beyond the Project's area showing Kiwi Property's masterplan for Drury Centre Precinct submitted in the FTA application, which indicates the SH1 access ramp (which forms part of the Project) as an integral connection for the planned development.



Figure 1-6 Drury Centre Masterplan: Illustrating the indicative alignment of the direct connection between SH1 and Drury Centre Precinct (FTA Application for Drury Centre Precinct)<sup>2</sup>.

<sup>2</sup> This figure is for contextual purposes only and does not form part of this application.

# 2 THE PROPOSAL

The Project works involve the construction of a new southbound off-ramp, which will in part be bridged, and the installation of stormwater management devices. The following sections provide a summary of the proposed design of the Project.

For clarity, the Project works provide for modifications to the Drury Interchange in its relocated position authorised by the P2DS Stage 1B1 application.

Further detail is contained in Section 3 of the Design and Construction Report at **Appendix C** and the Drawing Set at **Appendix B**.

# 2.1 The Project Works Description

# 2.1.1 Proposed Access Ramp

The proposed works for the Project will begin at Ch. 15160 (approx.) on the existing southbound Drury Interchange off-ramp (drawing ref: 523844-W00001-DRG-RO-0101) and continues to Ch. 16221 (drawing ref: 523844-W00001-DRG-RO-0103) at the end of the proposed off-ramp.

The following are key features of the proposed road geometry:

- A diverge from the existing southbound off ramp at the Drury Interchange.
- The vertical geometry has been set to pass over Great South Road, the NIMT and Flanagan Road. The Great South Road crossing presents the greatest constraint with a 6m clearance required to match the P2DS SH1 crossing of Great South Road in order to accommodate over dimensional vehicles.
- The ramp will consist of a single 3.5m wide lane, a left-hand shoulder (2m) and a right-hand shoulder (1m). A second lane is proposed at the southern end on the approach to the Pitt Road intersection (Figure 2-1).
- The ramp will terminate within the Drury Precinct I450 and connect to the future road network in the general proximity of Creek Road South as identified in Kiwi Property's FTA application for Drury Centre Precinct.



Figure 2-1 Indicative Ramp Cross Section

# 2.1.2 Shared User Path

The Project will in part accommodate the construction of a 3.0 m wide SUP. The active mode link was planned as part Kiwi Property's Drury Centre Precinct application submitted under FTA (detailed in Section 1.2 above), and was stipulated by the requirements of the Drury Centre Precinct Plan (see Figure 1-4). The path in its entirety will provide a connection between Drury Centre Precinct area and Maketuu/Drury Railway Station. It is noted that the Project only proposes to accommodate the portion of the SUP that sits within the proposed alteration of Designation 6706

boundary. The proposed SUP will be located immediately east of the proposed road of the Project and will be supported by the retaining walls which are required for the construction of the road. Details of the 'extent of works' pertaining to the SUP are illustrated in the drawing set at **Appendix B**.

No walking and cycling facilities are proposed on the raised viaduct or motorway off ramp.

# 2.1.3 Stormwater

In context of stormwater drainage and hydrology, the Project proposes the following:

- Riprap erosion protection for all proposed stormwater discharge outlets to the receiving environment;
- Cut-off drains to convey external flow to the upstream inlets of the proposed drainage system; and
- Installation of stormwater collection and reticulation infrastructure (piped and surface) and water quality treatment devices to treat all runoff from the proposed access ramp prior to discharge to the receiving environment.

Refer to the Stormwater and Hydrology Assessment report at **Appendix D** and the Stormwater Drainage design drawings at **Appendix B** of the AEE for more detailed information on the proposed stormwater drainage works.

# 2.1.4 Groundwater

The following are key locations where the Project excavations are likely to intersect groundwater:

Proposed pier located at AU22-BH003.

Further details are in the Groundwater Assessment contained at Appendix F.

# 2.1.5 Earthworks

Earthworks required for the Project relate to:

- The construction of the new southbound ramp, general cut to fill and cut and cover earthworks.
- Retaining wall construction and associated excavation of footings.
- Services installation, general trenching activities and the installation of stormwater treatment devices, and;
- Excavations for the new bridge structures.

The Project requires earthworks across an approximate area of 2.37ha, located within the existing and proposed altered SH1 designation 6706. The works will occur on land that is typically undulating, with low but steep embankments around the Hingaia Stream.

Some land disturbing activities will be required within the riparian margin of the Hingaia Stream, to install the new bridge piles and scour protection. Areas where earthworks are required will be undertaken in a staged "cut and cover" approach and will be implemented in addition to the erosion and sediment control measures detailed in the Construction Water Erosion Sediment Control Assessment (CWESC) contained at **Appendix F**, and the Erosion and Sediment Control Plans (ESCP) within the Drawing Set at **Appendix B**.

The erosion and sediment control measures will be implemented prior to earthworks commencing in each area in order to avoid, remedy or mitigate effects of soil erosion, sediment run-off and sediment deposition. All ESCs implemented on site will be designed and maintained in accordance with the Auckland Council Guideline Document 2016/005 (GD05). Prior to earthworks commencing in each works area, Site Specific Erosion and Sediment Control Plans (SSESCP) will be developed for those works. The estimated earthwork volumes and areas for the construction of the Project are described in Table 2-2 below.

#### Table 2-1 Estimated earthworks area

	Bridged Area	Non-Bridged Area	Total
Earthworks Area (m <sup>2</sup> )	1,190	21,876	23,792

#### Table 2-2 Estimated earthworks volume

	Cut Material	Fill Material
Earthworks Volume (m <sup>3</sup> )	17,395	40,184

# 2.2 Construction Methodology

The construction methodology details are contained in Section 3.6 of the Design and Construction Report contained in **Appendix C**. All construction works will follow the relevant standard guidelines and practices for construction and preparation of the works. Construction of the Project will be managed by various management plans contained in the appendices of this report as follow:

- Construction Water and Erosion Sediment Control Plan (CWESCP) attached Appendix F; and,
- Contaminated Soil Management Plan (CSMP) attached with (Attachment 2) Appendix O.

The management procedures and construction methods to be undertaken in order to avoid, remedy or mitigate potential adverse effects arising from construction activities will be detailed by a Construction Environmental Management Plan (CEMP).

This section provides a description of the anticipated construction methodology and programme for the Project. It is intended to be indicative and does not represent a definitive methodology, which will be developed by the contractor once appointed at a later stage of design development.

Once the Project has been awarded and a contractor (or contractors) are in place, the methodology will be further refined and developed as part of the detailed design process.

# 2.2.1 Programme

The Project works will be undertaken over an approximately 2-year programme. Actual dates will be confirmed once detailed design is completed.

# 2.2.2 Traffic Management

The Project requires works on and around the live transport corridors of the existing SH1 ramps, and SH22. As a result, there will be a temporary disruption to the existing transport network operations running along the corridor.

All construction works for the Project will be under temporary traffic management in accordance with the Council's requirements for CTMPs and Waka Kotahi's most recent guidelines for temporary traffic management.

# 2.2.3 Bridge Construction

The Project will require the construction of a 245m long, seven-span structure bridge from the southbound lane of SH1 to an area off Flanagan Road.

There will be a total of six piers constructed to support the raised viaduct. The majority of piles will be installed by a drill rig where the rig can be stationed close to the pile. Access staging is necessary for Pier 5 due to the limitations

of the Hingaia Stream and the NIMT Rail Line blocking access on both sides (Figure 2-2). Greater detail including a step-by-step explanation of the construction sequencing is provided in Section 3 of the DCR at **Appendix C**.



Figure 2-2 Indicative temporary staging across the Hingaia to construct Pier 5

The anticipated founding level and diameter of the piles is anticipated to require large plant to achieve; a founding depth in excess of 60m and diameters of approximately 2m. These will be drilled using a support fluid (bentonite or similar).

The superstructure phase includes the installation of concrete super tee beams, pouring the deck, and fitting barriers and ancillary items. Tandem lifts with two cranes are used to install the super tee beams, with one crane positioned at the end of the temporary staging to lift the beams over the Hingaia Stream or the NIMT rail line.

# **3 PLANNING APPROVALS SUMMARY**

A summary of the resource consents and designations required is presented in this section. An assessment against the relevant rules and the reasons for consent are detailed in Section 3 (below), and a detailed assessment of the permitted activities against the relevant rules is contained at **Appendix I**.

# 3.1 Notice of Requirement to Alter Designation 6706 (NoR)

The Project requires an alteration of the SH1 Designation 6706 at Drury Interchange. Drawings 523844-W00001-DRG-LC-0101 to 523844-W00001-DRG-LC-0104 at **Appendix B** shows the location of the proposed works, and the extent of the proposed alteration to the Designation which forms the NoR (Figure 3-1).



Figure 3-1 Indicative location plan of the NoR for the proposed alteration to the Designation 6706 (Green), in relation to the Operative Designation 6706 (Blue)

The proposed changes to the Designation include:

- Design changes to the Drury Interchange for an additional south-bound off ramp.
- Altering the Designation boundary to provide for the new southbound off-ramp and stormwater mitigation installations adjacent the existing SH1 corridor, and;
- Alteration of the SH1 Designation 6706 conditions.

As a Requiring Authority, Waka Kotahi can seek to alter any of its designations and give notice to the territorial authority under section 181(1) of the RMA to protect land identified as being required for future works that meet the purpose of the existing designation. The territorial authority, which is Auckland Council for this application, may then alter the subject designation in its district plan (the AUP) subject to the requirements set out in section 181of the RMA.

# 3.1.1.1 Written approvals required works within a designation

The Project interfaces with a number of designations<sup>3</sup> owned by other Requiring Authorities. The designations are discussed in further detail in Section 4 of this Report. The relevant designations are shown in Figure 3-2, and can be summarised as:

- Designation 9566, Drury Pump Station Watercare; and
- Designation 6302, North Island Main Trunk Railway Line KiwiRail



Figure 3-2 Proposed NoR in relation to operative designations within the Project alignment (AUP)

Once the NoR application is confirmed, a written consent from the above Requiring Authorities is required prior to commencement of works which prevent or hinder the existing work or project within the designation, under section 177 of the RMA which states that:

- (1) Subject to <u>sections 9(2)</u> and <u>11 to 15</u>, where a designation is included in a district plan, and the land that is the subject of the designation is already the subject of an earlier designation or heritage order,—
  - (a) the requiring authority responsible for the later designation may do anything that is <u>in accordance with</u> that designation only if that authority has first obtained the written consent of the authority responsible for the earlier designation or order; and
  - (b) the authority responsible for the earlier designation or order may, notwithstanding <u>section 176(1)(b)</u> and without obtaining the prior written consent of the later requiring authority, do anything that is in accordance with the earlier designation or order.
- (2) The authority responsible for the earlier designation or order may withhold its consent under subsection (1) only if that authority is satisfied—

<sup>&</sup>lt;sup>3</sup> Operative as of June 2023

- (a) that, in the case of an earlier designation, the thing to be done would prevent or hinder the public work or project or work to which the designation relates; or
- (b) that in the case of an earlier heritage order, the thing to be done would wholly or partly nullify the effect of the order.

The Project necessitates consultation with Watercare and KiwiRail to obtain their written consent for proposed works within the boundaries of their respective designations. Temporary access and construction activities over the NIMT will be required, and discussions with KiwiRail have already commenced. Written consent for works within an existing designation under Section 177(1)(a) has been included as part of this application.

# 3.2 Resource Consents

Waka Kotahi is seeking the necessary resource consents pursuant to sections 9(1), 9(2), and 15 of the RMA required for the construction and operation of works associated with the Project, within Designation 6706 pursuant to the following documents:

- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES-CS); and,
- The Auckland Unitary Plan Operative in Part (16 November 2016) (AUP).

District plan land use consents pursuant to Section 9(3) of the RMA are not required for works within the Designation.

The permitted activities applicable to the Project are detailed in Appendix I.

# 3.2.1 Section 9 (1) Land Use Consents

Section 9(1) of the RMA restricts the use of land that contravenes a national environmental standard. The NES-CS applies as disturbing soil is covered by Regulation 5(4) of the NES-CS. The PSI **(Attachment 1) Appendix O** identified a number of HAIL activities that are likely to have occurred adjacent to the Project, as detailed in section 7.3.2.

The activities requiring resource consent under Section 9(1) of the RMA and the NES-CS are set out in Table 3-1.

 Table 3-1 Resource Consents required pursuant to the National Environmental Standards

Reference	Rule	Status
Regulation 11	(1) This regulation applies to an activity described in any of regulation 5(2) to (6) on a piece of land described in regulation 5(7) or (8) that is not a permitted activity, controlled activity, or restricted discretionary activity.	Discretionary
	(2) The activity is a discretionary activity.	
	Comment:	
	The PSI ( <b>Appendix O</b> ) concludes that there are no HAIL sites within the Project area, however, contaminants may have migrated over from the HAIL activities occurring on sites adjacent to the Project (as detailed in section 4.4.3).	
	These regulations are only applicable to the identified HAIL sites, in accordance with Regulation 5(7). Therefore, as a precautionary measure, consent is required for earthworks adjacent to potential HAIL sites, and if foundation piles are to intercept HAIL G5 and the NIMT.	

# 3.2.2 Section 9 (2) Land Use Consents

Section 9(2) of the RMA restricts the use of land that contravenes a regional rule. The activities requiring resource consent under Section 9(2) are set out below.

### E7 Taking, using, damming and diversion of water and drilling

Chapter E8 of the AUP provides for regional land use rules pertaining to the taking, using, damming and diversion of surface and groundwater. The activities requiring resource consent under Chapter E7 are set out in Table 3-2 below.

#### Table 3-2 Resource Consents required pursuant to Chapter E7

Reference	Rule	Status
Rule E7.4.1(A28)	The diversion of groundwater caused by any excavation, (including trench) or tunnel that does not meet the permitted activity standards or not otherwise listed [in Table E7.4.1, AUP].	Restricted Discretionary
	Comment:	
	The proposed footings on the pier foundations will have an external diameter of approximately 2m and will be penetrate the ground to depths of up to 60m. The permitted standards (E7.6.1.10) exempt pile footings of up to 1.5m where groundwater levels are intercepted.	
	Groundwater data from AU22-BH003 which is our nearest data point shows the groundwater at levels of between 2.28m and 2.55m BGL or between RL +7.13mRL and +7.65mRL.	
	Given the depth of the piles it is expected that the proposal will result in groundwater diversion and resource consent will be sought under the rule.	
	Note: The piles will be drilled using a support fluid (bentonite or similar).	

# E9 Stormwater Quality – High Use Road

Chapter E9 of the AUP provides regional land use rules for managing stormwater runoff quality from high use roads. The activities requiring resource consent under Chapter E9 are set out in Table 3-3 below.

#### Table 3-3 Resource Consents required pursuant to Chapter E9

Reference	Rule	Status
Rule E9.4.1 (A9)	Development of a new or redevelopment of an existing, high use road that does not comply with the relevant permitted or controlled standards. <b>Comment:</b>	Restricted Discretionary
	The Project involves the development of an additional off-ramp lane adjacent to SH1, across a total area of 6,957m <sup>2</sup> exceeding the permitted area (5,000m <sup>2</sup> ) by 1,957m <sup>2</sup> .	
	The proposal is for water quality treatment for all new impervious areas in the 90 <sup>th</sup> percentile of 24-hour storm event (approx. 25 mm) or 10mm/h rainfall intensity will be utilised in accordance with standards E9.6.1.1 and E9.6.2.2, as detailed in the Stormwater Assessment ( <b>Appendix D</b> ). The design may not be fully compliant with the standards in the temporary works area and therefore consent is sought under this rule.	

# E26 Infrastructure

Chapter E26 of the AUP provides regional land use rules for development, operation, use, maintenance, repair, upgrading and removal of infrastructure.

Section 9(2) regional level activities are included in the following sections of Chapter E26:

 E26.5. Earthworks all zones and roads (note that these provisions override those contained in Chapter E11 – Regional Land Disturbance).

The activities requiring resource consent under Chapter E26 are set out in Table 3-4.

Table 3-4 Resource Consent required for pursuant to Chapter E26 (Section 9(2))

Reference	Rule	Status
Rule E26.3.3.1(A77)	Vegetation alteration or removal that does not comply with Standard E26.3.5.1 to E26.3.5.4.	Restricted Discretionary
	Comment:	
	Construction of Pier 5 will require clearance of (approximately) 300m <sup>2</sup> of vegetation within the riparian margin of the Hingaia Stream. Under Standard E26.3.5.2(3) only 50m <sup>2</sup> of vegetation can be removed within a coastal area or riparian area not identified as a significant ecological area.	
	<u>Note:</u> The proposal is for removal of trees (Crack Willows) within the road reserve of Flanagan Road, which are greater than 6m in height, or 600m in girth. The applicant is required to obtain Tree Owner Approval (TOA) prior to removal, which is a separate process to this resource consent application.	
Rule E26.5.3.2(A101)	Up to 10,000m <sup>2</sup> where land has a slope less than 10 degrees outside the Sediment Control Protection Area other than for maintenance, repair, renewal, minor infrastructure upgrading. Comment:	Restricted Discretionary
	The proposal is for a total cut volume of 17,395m <sup>3</sup> and fill volume of 40,184m <sup>3</sup> across an area of 23,792m <sup>2</sup> . The majority of the works will be outside of the Sediment Control Protection Area.	
	Earthworks will comply with Accidental discovery rule E26.5.5.1. An ESCP <b>(Attachment 1) Appendix F</b> will be implemented at all times during construction in order to ensure compliance with general standards E26.5.5.2 (1-8).	

# E36 Natural Hazards and flooding

Chapter E36 of the AUP provides regional and district land use rules for development in areas affected by natural hazards which occur frequently such as flooding, coastal erosion and land subject to instability.

Section 9(2) regional level activities are included in the following sections of Chapter E36 are specified in Table 3-5.

#### Table 3-5 Resource Consent required pursuant to Chapter E36

Reference	Rule	Status
Rule E36.4.1(A56)	Infrastructure in areas subject to overland flow paths and/or 1 per cent annual exceedance probability (AEP) floodplains.	Restricted Discretionary

Comment:
The proposal is for the construction of infrastructure within an area susceptible to a 1 per cent AEP floodplain and overland flow paths associated with the Hingaia Stream that triggers a consent requirement under this rule.

### 3.2.3 Section 15 Resource Consents

Section 15 of the RMA places restrictions on the discharge of contaminants. A number of chapters within the AUP contain provisions relating to discharges.

- Chapter E4 Other discharges of contaminants, and Chapter E30 Contaminated land are relevant to the construction phase of the Project and are addressed below; and
- Chapter E8 Stormwater Discharge and diversion, are relevant to the operational phase of the Project and are addressed below.

The construction phase of the Project is able to comply with the relevant rules under Chapter E14 Air quality, as identified in **Appendix I**.

### 3.2.3.1 Construction Phase Discharge

The construction phase activities requiring resource consent under Chapter E30 are set out in Table 3-6.

#### Table 3-6 Resource Consents required pursuant to Chapter E4 and E8

Reference	Rule	Status
Rule E30.4.1 (A7)	Discharges of contaminants into air, or into water, or onto or into land not meeting controlled activity Standard E30.6.2.1	Discretionary
	Comment:	
	Earthworks in areas identified as potentially subject to HAIL activities are likely to exceed 200m <sup>3</sup> and may contain elevated levels of contaminants which does not meet standard E30.6.1.2.	
	A DSI is not provided at this stage, which does not meet standard E30.6.2.1.	

#### 3.2.3.2 Operational Phase Discharge

Chapter E8 of the AUP provides regional land use rules for managing discharge of stormwater from impervious surfaces to a stormwater network, land, water or coastal marine area.

As explained in section 2.1.3 above, the proposed works will result in permanent stormwater discharge to the surrounding environment. The operational phase activities requiring resource consent under Chapter E8 are set out in Table 3-7.

#### Table 3-7 Resource Consents required pursuant to Chapter E8

Reference	Rule	Status
Rule E8.4.1 (A5)	Diversion and discharge of stormwater runoff from additional impervious areas greater than 5,000m <sup>2</sup> of road (which include road ancillary areas that are part of a road, motorway or state highway operated by a road controlling authority) or rail corridor that complies with Standard E8.6.1 and Standard E8.6.4.1	Restricted Discretionary

Comment	<b>:</b>
The propo	used stormwater management devices will discharge stormwater runoff
from addit	ional impervious areas of 6,957m <sup>2</sup> exceeding the permitted area
(5,000m <sup>2</sup> )	by 1,957m <sup>2</sup> , which triggers consent requirement under this rule.
The storm	water drainage design has been designed to prevent erosion and
flooding. T	The various treatment devices will ensure the quality of water is
maintaine	d downstream, in accordance with Standard E8.6.1. Where discharges
are into ex	kisting road drainage, these areas will be managed and maintained, as
detailed in	the Stormwater Assessment ( <b>Appendix C</b> ).
Stormwate	er runoff from new impervious areas will be managed by the proposed
stormwate	or management devices prior to discharging to the Hingaia Stream,
which will	meet the relevant hydrology requirements as set out in Standard
E8.6.4.1(3	3)
Operation a duration	al stormwater discharges will require a long-term resource consent for of 35 years.

# 3.2.4 Summary

The resource consents required to authorise the construction, operation and maintenance of the Project are listed below.

# Section 9(1) land use consents:

 Disturbing potentially contaminated land is a **Discretionary Activity** under Regulation 11 of the NES Contaminated Soil;

# Section 9(2) land use consents:

- Excavations for piles with an external diameter of 2m where the excavations may result in the diversion of groundwater is a **Restricted Discretionary Activity** under Rule E7.4.1(A28).
- Development of a new and redevelopment of an existing high use road of a total impervious area of 6,957m<sup>2</sup> exceeding the permitted area (5,000m<sup>2</sup>) by 1,957m<sup>2</sup>, that does not comply with standards E9.6.1 and E9.6.2.2 is a is a **Restricted Discretionary Activity** under rule E9.4.1 (A9);
- Vegetation alteration or removal that does not comply with Standards E26.3.5.1 to E26.3.5.4 as a Restricted Discretionary Activity under rule E26.3.3.1(A77).
- Earthworks across an area of 23,792m<sup>2</sup> where land has a slope less than 10 degrees outside the Sediment Control Protection Area other than for maintenance, repair, renewal, minor infrastructure upgrading is a Restricted Discretionary Activity under rule E26.5.3.2 (A101);
- Proposal for infrastructure within a 1 per cent AEP floodplain and overland flow path associated with the Hingaia Stream is a **Restricted Discretionary Activity** under Rule E36.4.1(A56).
- Section 15 resource consents:
  - Discharges of contaminants into air, or into water, or onto or into land not meeting controlled activity Standard E30.6.2.1 is a **Discretionary Activity** under rule E30.4.1 (A7); and
  - Diversion and discharge of stormwater runoff from additional impervious areas of 6,957m<sup>2</sup> exceeding the permitted area (5,000m<sup>2</sup>) by 1,957m<sup>2</sup>, for state highway that complies with Standards E8.6.1 and E8.6.4.1 is a **Restricted Discretionary Activity** under rule E8.4.1 (A5).

The overall activity status for the resource consent application is **Discretionary**.

The operational stormwater discharge under Section 15 of the RMA will require a long-term resource consent for a duration of 35 years.

# 3.3 Other Approvals

An Outline Plan of Works will be required for the altered designation of NoR under section 176 of the RMA and will be prepared at a later stage of the Project prior to the commencement of works on site.

There are no sites identified within the alignment which meet the definition of an 'archaeological site' under the Act. In the event works are required within the extents of an identified archaeological site an Archaeological Authority under the Heritage New Zealand Pouhere Taonga (HNZPT) Act 2014 will be sought separately and obtained in advance of any earthworks commencing, to minimise delays should any archaeological material be exposed once works are under way.

Tree Asset Owner Approval (TOA) for street tree removal is being sought from Auckland Council concurrently to the resource consents. Approvals from Auckland Transport will be obtained at a later stage for all works within the local road network.

The above-listed approvals are sought separately for the Project and do not affect the confirmation of this NoR or approval of the resource consent application.

# 4 EXISTING ENVIRONMENT

A summary of the site description and the planning, natural and physical environments is presented in the following sections. Further detail is contained in corresponding existing environment maps at **Appendix J** and the drawing set at **Appendix B**.

# 4.1 Site Description

The Project is located to the south-east of Drury Interchange (North of Quarry Road, Ch. 15160), and within the area as illustrated in Figure 4-1 (below).



Figure 4-1 Location map of Drury Interchange and proposed access ramp alignment (Auckland Council GeoMaps, 2017)

The Project is primarily located within and adjacent to the existing Southern Motorway section of the SH1 corridor, Designation 6706, which is owned by the Crown and operated by Waka Kotahi. The Project is also partially located within the following areas and shown on drawings 523844-W00001-DRG-LC-0101 to 523844-W00001-DRG-LC-0104 in the Drawing Set at **Appendix B**.

The Project alignment overlays the following properties:

- Great South Road (SH22), which is owned by the Crown and operated by Waka Kotahi.
- NIMT rail corridor, which is owned by the Crown and operated by KiwiRail.
- Flanagan Road, which is a local road corridor owned by Auckland Council and operated by Auckland Transport.
- 103 Flanagan Road, which is owned by Auckland Council and operated by Watercare.
- Private properties owned by Kiwi Property (detailed in Section 1.2.5).

# 4.2 Planning Environment

# 4.2.1 Auckland Unitary Plan (Operative in Part) 2016

The Project is subject to the following zones, controls, overlays, and precincts under the AUP. Further detail and corresponding existing environment maps are contained in **Appendix J.** 

# 4.2.2 Zones

The Project is primarily located within the existing SH1 corridor and partially located within SH22 and the NIMT rail corridor, which are all within the Strategic Transport Corridor zone under the AUP, as illustrated at Figure 4-2 (below).



#### Figure 4-2 Operative zoning of the Project area (AUP)

It is proposed to extend the Project beyond the existing SH1 corridor, Designation 6706, onto local roads and adjacent properties. Local roads are not zoned. The adjacent properties are located within the following zones:

- Business Metropolitan Centre Zone
- Open Space Informal Recreation Zone

# 4.2.2.1 Overlays

The Project area is subject to overlays within the AUP, the overlay controls are illustrated in Figure 4-3 and are summarised as follows:

- High-Use Aquifer Management Areas (Drury Sand Aquifer)
- Quality-Sensitive Aquifer Management Areas.
- National Grid Corridor Overlay Subdivision and Substation Corridors, Yard Compromised and Uncompromised.



High-Use Aquifer Management Areas Overlay [rp]

High-Use Aquifer Management Areas Overlay [rp]

Quality-Sensitive Aquifer Management Areas Overlay [rp]

C Quality-Sensitive Aquifer Management Areas Overlay [rp]

Figure 4-3 Operative overlays within the Project area (AUP)

# 4.2.2.2 Controls

The following controls apply to various sections of the Project:

- Arterial Road.
- SMAF-1
- Macroinvertebrate Community Index Urban, Rural and Native.
- Vehicle Access Restriction Motorway Interchange Control.

#### 4.2.2.3 Precincts

The Project is primarily located within the **Drury Centre Sub-Precinct A**. Further detail of the extent of the precinct boundary is provided at **Appendix J**.

### 4.2.2.4 Designations

The primary designation which covers the majority of the Project corridor is SH1 Designation 6706, which is described in **Table 4-1** and illustrated in **Figure 4-4** below. The corresponding planning environment maps are contained in **Appendix J**.

### Table 4-1 The Designation in the Project area

Reference No.	Requiring Authority	Designation and Purpose	Location	Conditions
Designation 6706	Waka Kotahi	Motorway purposes between Auckland and Hamilton	SH1, North of Takanini interchange to the south of Quarry Road, Drury	Specific area conditions relating to Stage 1B1 and 1B2 areas of P2DS Project.

There are a number of designations that will be overlapped by the proposed NoR, which are described in **Table 4-2** below. The corresponding existing environment maps are contained in **Appendix J**.

#### Table 4-2 Overlapping designations in the Project area

Reference No.	Requiring Authority	Designation and Purpose	Location
Designation 6302	KiwiRail	NIMT Railway Line	South of the Drury Interchange.
Designation 9566	Watercare Services Limited	Drury Pump Station	103 Flanagan Road



Figure 4-4 Designations located within the Project alignment (AUP)

# 4.2.2.5 Strategic Context

The Project aligns with Waka Kotahi's overarching strategic goals by targeting investment to optimise efficiency in the transport network. The Project actively supports economic growth and development by improving connectivity within South Auckland, facilitating efficient freight movement, and fostering trade and business activities. The development constraints within the Drury Centre Precinct are define by the AUP, which necessitates the establishment of a single slip lane from SH1 to the Drury Centre Precinct, making the Drury Access Ramp essential to unlock future development potential and align with the Precinct's objectives.

# 4.2.2.6 Plan Changes and Notices of Requirements

The AUP has undergone multiple plan changes<sup>4</sup> since becoming operative in part in 2016. Several of these plan changes are relevant to the Project as they affect the AUP provisions, schedules and the surrounding planning features, such as zoning and overlays.

The minor changes to the consistency of provisions and schedules in the AUP are reflected in the rules assessment below or within the permitted actives assessment at **Appendix I** and the objectives and policies assessment in Section 9.6.6 of this AEE.

Rezoned land within and adjacent to the Project makes up part of the surrounding environment, providing an updated version of what the land will be used for in the future which are reflected in the planning environment maps in **Appendix J**. The relevant plan changes to the Project are summarised in **Table 4-3** below.

<sup>&</sup>lt;sup>4</sup> The AUP has undergone 95 plan changes in total, 25 of which are proposed and 60 of which are operative as of 3 July 2023.

# Table 4-3 Plan Changes

Plan Change	Purpose	Location	Stage
48	Seeks to rezone land (from Future Urban to Open Space Informal Recreation, Business Metropolitan Centre, and Mixed Use).	Drury Centre Precinct, land adjacent Great South Road, Waihoehoe Road, Fitzgerald Road and the Hingaia Stream.	<b>Operative</b> Change fully operative as of 16 December 2022. The rezoning of land within and adjacent to the Project for development purposes. Including the provision for an access ramp to Drury Town centre.
49	Private plan change to rezone 184 hectares of land in the area from Future Urban to 2 hectares of Business: Mixed Use zone, 22 hectares of Residential: Terrace Housing and Apartment Buildings zoning; 65 hectares of Residential: Mixed Housing Urban zoning and 95 hectares of Residential: Mixed Housing Suburban zoned land.	Drury East Precinct, area generally bounded by Waihoehoe Road, Drury Hills Road and Fitzgerald Road.	<b>Operative</b> Plan change fully operative on 16 December 2022. The rezoning of land within and adjacent to the Project for development purposes.
50	This private plan change to rezone 48.9 hectares of land from Future Urban to Residential: Terrace Housing and Apartment Buildings zone.	Waihoehoe Road Precinct, land north of Waihoehoe Road and east of the NIMT.	<b>Operative</b> Plan change became fully operative on 16 December 2022. The rezoning of land within and adjacent to the Project for development purposes
78	Response to the requirements of the NPS-UD and RMA, implementation of the Intensification Planning Instrument (IPI). This includes a future plan change on coastal hazards.	Existing urban areas within the Auckland Region.	<b>Proposed</b> Further Submissions closed on 20 January 2023. The rezoning of land within and adjacent to the Project for development purposes.
80	Amendments to the RPS Well- Functioning Urban Environment, Resilience to the Effects of Climate Change and Qualifying Matters.	Auckland Region	Proposed Further Submissions closed on 20 January 2023. Immediate effect given to the amended objectives and policies of the RPS.

# 4.2.3 Existing Approvals

# 4.2.3.1 Existing Resource Consents and Designations

The following existing resource consents and designations relate to the Project, the wider P2DS area and surrounding areas:

- Alteration to the existing boundary of Designation 6706, which includes the extent of Drury Interchange, through Notice of Requirement (NoR) application which was granted to Waka Kotahi.
- Establish a new designation (Designation 6778) for the purpose of a SUP along the western side of SH1 through Notice of Requirement (NoR) application, which was granted to Waka Kotahi.
- Regional and district resource consents granted to Waka Kotahi for the construction and operation of the project. Granted for Stage 1B1 on 12 November 2021 in accordance with the FTA:
  - Land use consents LUC60391712;
  - Groundwater consent WAT60391714;
  - Stream works consent LUS60391713;
  - Coastal works consent CST60391716 and
  - Discharge consents DIS60391717 and DIS60391718.
- Regional resource consents BUN60415513 granted to Waka Kotahi for the construction and operation for the Stage 1B2 of the P2DS project were granted on the 4 July 2023 in accordance with the FTA:
  - Land use consents LUC60415514;
  - Groundwater consent WAT60415551;
  - Stream works consent LUS60415517;
  - Coastal works consent CST60415515 and
  - Discharge consents DIS60415518 and DIS60415519
- Decision on compliance for the State Highway 1 Papakura to Drury South State Highway 1 improvements (Listed Project LP15) – Transmission Line works under clause 3 of Schedule 6 of the FTA.
- Kiwi Property's FTA application for the Drury Centre Precinct, was approved by an Expert consenting Panel on 17 July 2023. The approvals was sought in relation to the urban development and associated infrastructure required to support the development of Drury Centre.
- Bulk earthworks consent (BUN6039022) to Kiwi Property to undertake the site preparation at Drury Centre Precinct area was approved by Auckland Council April 2022.

# 4.3 Natural Environment

# 4.3.1 Topography

Drury Centre is located within the Manukau Lowlands, an area of relatively flat land situated south-eastern corner of the Manukau Harbour. The Project area is within the Hingaia Catchment, which feeds into the Hingaia Stream and empties into the Manukau Harbour. The wider area of Drury consists of rolling hills, retaining the original gentle slopes typical of the Manukau Lowlands.

The existing landscape is dominated by undulating rural land, with the Drury Hills rising to the east. The elevation ranges from approximately 20m above sea level (ASL) to the top east of the study area to 10m ASL at the motorway. The Ngaakooroa Stream and Hingaia Stream intersect near the low point to the Northwest, forming the Pahurehure Inlet. The Project alignment is surrounded by embankments and land at the Drury Interchange.

# 4.3.2 Geology

Drury is located within the Manukau Lowlands, an area of relatively flat land situated in the south-eastern corner of the Manukau Harbour.

The geology of the general area is dominated by late Pliocene and early Pleistocene non-marine sediments belonging to the Puketoka formation of the Tauranga group. The soils in the area are generally well draining to poor clays. This provides opportunities for horticulture at higher elevations where drainage is better, and the exploitation of wetlands where drainage is poor.

Three main lithological units have been identified within the Project area, two of which are basin-filling sediments and the third is the South Auckland Volcanic Field. The Project is predominantly underlain by a mixture of volcanic derived and alluvial materials comprising of Kaawa Formation and Tauranga Group alluvial sediments (undifferentiated). The third lithological unit is identified as the South Auckland Volcanic Field (SAVF), these materials comprise basaltic lava flows, ash, lapilli and tuff deposits. Lithofacies of the SAVF are highly variable due to age, erosion, and weathering.

# 4.3.3 Groundwater

The project is within the High-use Aquifer Management Areas Overlay, specifically within the Drury Sand Aquifer, which includes the Tauranga Group and South Auckland volcanic field but does not include underlying Waitematā Group. Groundwater regimes within the Manukau Lowlands are generally recharged from the south-east, sourced from the Bombay Hills and Hunua Ranges and flow in a North-west direction discharging into tributaries of the Manukau Harbour. Depth of the near surface groundwater regimes typically follow local topography, controlled by surficial confining units. Groundwater adjacent to tidally influenced watercourses such as Otūwairoa and Hingaia Streams present cyclic tidal patterns. Further detail is in the Groundwater Assessment contained in **Appendix E**.

# 4.3.4 Freshwater Ecology

The Project is within the Hingaia Stream stormwater catchments, the Project alignment crosses the Hingaia Stream North of the NIMT and Flanagan Road.

There are two natural wetlands located within the immediate vicinity of the proposed alignment. The first is located at the western extent of Karaka Reserve, in the current works area, the edge of which is approximately 50m from the alignment. The other identified natural wetland in an area adjacent the Hingaia stream, located approximately 50m west of the proposed road alignment.

No natural inland wetlands were located within the proposed alignment, and none were expected considering the steep banks and incised channel of Hingaia stream, and highly worked areas to either side of the stream.

# 4.3.5 Flora and Fauna

The site of the proposed Hingaia Stream crossing was pasture grass, dominated by kikuyu (*Cenchrus clandestinus*) with occasional patches of exotic weed species, crack willow (*Salix fragilis*), woolly nightshade (*Solanum mauritianum*), tree privet (*Ligustrum lucidum*), and rarely ponga (*Cyathea dealbata*) on the top of the bank. On the steeply sloping true left bank (western bank) and low stature weed species, including pampas (*Cortaderia selloana*) and wandering willie (*Tradescantia fluminensis*) dominated to the to the railway corridor on the steeply sloping true right bank. Either side of the riparian yard were hard stand areas.

# 4.3.5.1 Trees

The trees and vegetation growing within the project area typical of an urban and semi-rural setting, with the majority of vegetation within and adjacent to the works footprint being planted exotic or indigenous vegetation. The remaining vegetation is identified as weed species or naturally occurring shrub species such as Harakeke (*Phormium tenax*).

The trees immediately within the Project area are separated into two main areas, are summarised as follows:
- Vegetation growing adjacent to Hingaia Stream (Group 3, Trees 2, 4 and 5); and,
- Vegetation growing within 108 Flanagan Road (Group 6).

The vegetation highlighted adjacent the Hingaia Stream will be removed to accommodate the ramp alignment Figure 4-5 (below). The trees identified within the riparian margin of the Hingaia Stream are Crack Willow (*Salix Fragilis*) an exotic pest species.

Group 1 and 6 will be retained containing a mix of native and exotic species.



Figure 4-5 Trees located within the Project alignment

# 4.4 Physical Environment

# 4.4.1 Road Network and Traffic

Within the Project, SH1 is classified as a high volume, nationally significant route in Waka Kotahi's National State Highway Strategy document<sup>5</sup>. The Southern Motorway section of SH1 is the main route between Auckland and Tauranga, and Hamilton. SH1 is used for motorway purposes and allows for the integration of various network utilities. Daily traffic volumes along SH1 (two-way) are summarised below and show an increase in traffic from south to North, as detailed in the Traffic Assessment contained in **Appendix M**:

The existing daily traffic volumes along SH1 (two-way) are summarised below (for the year 2018):

- 65,500 vpd between the Papakura and Drury Interchanges.
- 52,100 vpd between the Drury and Ramarama Interchanges.

The section of SH1 within the Project area consists of two southbound lanes and two Northbound lanes, with shoulders and a central median. The speed limit within the Project area along SH1 is 100km/h. Light poles are located on both sides of SH1 approximately every 80m. This area of SH1 does not currently have any noise walls.

The following are the main motorway features within the southern area of the Project section of the SH1 corridor, from North to south:

Drury Interchange:

This interchange has on and off ramps in both directions, which are designed in a diamond formation to link onto SH22 and are controlled by two sets of traffic lights on SH22.

<sup>&</sup>lt;sup>5</sup> Transit New Zealand (2007), "National State Highway Strategy", page 26.

 SH1 forms four-lane bridges over SH22 and over the NIMT rail corridor (plus a one-lane off ramp bridge over the NIMT rail corridor).

The following are the other road corridors included in the Project:

SH22:

- SH22 is classified as a high volume, nationally significant route in Waka Kotahi's National State Highway Strategy document<sup>6</sup> and is the historic route between Auckland and Waikato.
- At Drury Interchange, SH22 has two 3.5m traffic lanes in both the eastbound and westbound directions under SH1, which connects the wider Drury area to Drury township.
- Additional turning lanes are located at two sets of traffic lights along SH22 at Drury Interchange. The traffic lights control the on and off ramps at Drury Interchange.
- The speed limit along SH22 decreases from 100km/h to 70km/h at Drury Interchange, and again to 50km/h at the Drury township.

Flanagan Road:

This a local road is located on the south-eastern side of Drury Interchange, which in parts is a single lane and has no road markings.

# 4.4.2 Archaeology and heritage

The Project alignment intersects with Drury Railyards, identified as an archaeological site in the NZAA and Auckland Council's CHI (Table 4.4). However, the site does not meet the criteria of an archaeological site as defined by HNZPTA or the scheduling requirements of the AUP Regional Policy Statement. Nonetheless, the Project offers an opportunity to update the CHI with any information acquired during the works.

#### Table 4-4 Archaeological Sites

Name	Location	NZAA	СНІ
Drury Railyards	103 Flanagan Road, Drury Auckland	R12/742	11388

While no evidence of pre-European Māori archaeology was discovered during the assessment, there is reasonable cause to suspect the presence of sub-surface evidence of Māori land use, particularly near the Hingaia Stream.

Although any archaeological sites encountered within the proposed works area, whether known or unknown, are likely to be destroyed, subsequent archaeological investigations would provide valuable information about these sites. Additionally, the findings could be shared with the public through interpretive panels or displays, offering educational opportunities to understand the past environment surrounding the station.

Further detail is contained in the Historic Heritage Assessment contained in Appendix N.

# 4.4.3 Contaminated Land

The Preliminary Site Investigation (PSI) prepared identifies the following HAIL and potential sources of contamination with the potential to impact underlying soil and/or groundwater at the site. These sites are illustrated in **Figure 4-6** (below), and can be summarised as follows:

- HAIL E1, HAIL F4, HAIL A17, HAIL D5 and HAIL A4 associated with commercial properties within the Drury Industrial Estate, immediately adjacent to the Great South Road offramp.
- HAIL E1 (asbestos associated with dwellings/buildings) which is part to the Drury Centre Precinct FTA.

<sup>&</sup>lt;sup>6</sup> Transit New Zealand (2007), "National State Highway Strategy", page 26.

- Market gardening activities HAIL A10 and HAIL D5 at 190 Flanagan Road, located immediately beyond the Hingaia Stream which borders the site.
- HAIL G5 (waste to land) within the Karaka Reserve and identified landfill at 108 Flanagan Road, should placement of foundation piling intercept these areas.



Figure 4-6 Contaminated Land Site Features and HAIL Map (CSMP)

#### 4.4.4 Noise

The existing receiving environment contains a combination of residential and business uses in addition to areas of undeveloped residential, informal recreation and business zones.

An industrial area is located Northeast of the works. Most of the buildings are commercial, with a small number consisting of more sensitive activities, such as the *Keith Hay Homes* office, *Benchtop Direct* factory and *Horticentre* offices. The *Drury Presbyterian Church* is located approximately 200m North of the Project.

A large portion of land south of the works is undeveloped land which will consist of future residential and commercial developments in accordance with the Drury Centre Precinct Development. Any dwellings existing in the Kiwi Property land holdings will be removed prior to the development of the future town centre and the proposed access ramp. Therefore, the existing dwellings located on Kiwi Property's land holding are not considered to be potential noise receivers as part of this proposal.

Burberry Road located to the southwest, beyond SH1, while zoned residential, is currently rural in character. There is a childcare and riding facility to the west of SH1 at Mercer Street. Via Bremner Road, the area to the west of SH1 is predominantly part of the *Auranga* a new residential subdivision currently under development.

Dwellings are located at significant distance from the Project, with the closest dwelling at 320 metres from the edge of the proposed ramp.

#### 4.4.5 Stormwater Network

Resource consent has been obtained for the P2DS Stage 1B1, granting approval for SW infrastructure to be constructed at Drury Interchange, which forms part of the existing environment for the Project.

Urban development within Drury Centre Sub-Precinct-A is not anticipated to occur for several years. However, this area will come to form part of the upper catchment of the access ramp. Discharge from these future developments as well as the Project's proposed access ramp to the Hingaia Stream has been taken into account in the design of the proposed outfall of this Project. It is noted that stormwater networks connecting to Healthy Waters network or future development areas must comply with the conditions of the Auckland Regional Network Discharge Consent (NDC).

#### 4.4.6 Utilities

There are a number of utility operators with utilities located within the Designation. The relevant providers are identified below in Table 4-5. These providers have been consulted by Waka Kotahi to discuss both the effects on existing utilities, and the opportunity for potential utilities to be incorporated into the Project. Any approvals required under the relevant codes or guidelines will be sought prior to construction.

Table 4-5 Affected Network Utilities Operators (NUO) within the proposed works

Organisation	Utility Type
Watercare	Watermains, Wastewater Pipelines
Transpower	Pylons and Overhead Transmission Lines
Counties Power	Electricity lines
Chorus	Communication cables including Fibre Optic

# **5 CONSIDERATION OF ALTERNATIVES**

The following section provides a brief overview of the analysis of alternatives that has occurred in the development of the NoR. Taking account of design drivers, construction methodologies, sequencing and potential environmental effects, alternatives analysis has been undertaken for the Project.

Waka Kotahi as the requiring authority does not have an interest in the land sufficient for undertaking the Project's works. A portion of the land of the Project's works is owned by Kiwi Property, who have been engaged extensively throughout the design process. Notwithstanding this, Waka Kotahi has taken a considered approach in assessing the potential for alternative design alignment through a process of engagement in accordance with section 168A(3)(b) of the RMA.

# 5.1 Notice of Requirement

The proposal for a south-bound access ramp at Drury Interchange was first anticipated by the Drury – Opāheke Structure Plan published in August 2019. The structure plan provided for an indicative new collector road linking SH1 at Drury Interchange to an area south of Creek Road via SH22, as illustrated in Figure 1-3 (above).

The state highway link was the subject of Plan Change 48 (discussed in detail in Section 1.2), which resulted in Drury Centre Precinct I450 (discussed in detail in Section 1.2.2.1). Overall, the indicative location of the Drury Access Ramp features consistently across the Drury – Opāheke Structure Plan, Drury Centre Masterplan 2048, and Drury Centre Sub Precinct Plan. The Drury Centre Masterplan 2048 which was assessed under the PC48 process indicates a road connection across the Hingaia Stream and NIMT to link into the future Drury Centre roading network, seen in Figure 5-1 (below). Notably with a boulevard constructed parallel to the Hingaia Stream with urban development on either side of the carriageway.



Figure 5-1 Drury Centre 2048 Master Plan (PC48, 2020), highlighting indicative location of the direct connection to SH1

The provision of Drury Centre Sub Precinct 2 anticipates the necessity to construct Drury Access Ramp to support the future development capacity within Drury Centre, as specified in the development standards of the precinct. The Drury Centre Precinct I450 standards anticipate the construction of a direct connection from State Highway 1 to the Drury Centre via a single lane off ramp. This requirement enables the development of up to 1,800 dwellings and/or 24,000m<sup>2</sup> of retail ground floor area within the Drury Centre.

Therefore, the construction of the Project is crucial for the development and growth of the Drury Centre Precinct. It provides a direct connection from State Highway 1 to the precinct, unlocking its development potential. The ramp improves accessibility, connectivity, and transportation efficiency in the region. It also addresses the need for safer road infrastructure and supports economic activities.

# 5.2 Proposed Alignment

At the beginning of the design stage Waka Kotahi ran a high-level optioneering process, in conjunction with Mana Whenua representatives and Kiwi Property to determine the location of the proposed access ramp. The alignment is constrained by the proposed motorway off ramp at the northern extent and the Drury Centre road network at the southern extent. Between these two points, limited alignment options are available. Three alignment options were available as indicatively shown in Figure 5-2 (below).



Figure 5-2 Early option assessments for the location of the Drury Access Ramp<sup>7</sup>

The review of these options indicated that the two southernmost alignments cross a remnant stream and the Hingaia flood plain. Based on these factors and, in consultation with mana whenua, the only option that avoided intercepting a remnant stream was selected (northernmost alignment).

The proposed alignment bridges Great South Road, it then extends eastward, avoiding the remnant stream and aligning with a natural embankment south of Flanagan Road and east of the Hingaia Stream. Overall, the natural embankment reduces the need for major land disturbance to form the proposed ramp. The ramp is offset from the Hingaia Stream, providing adequate space in future to create a re-planted reserved beside the stream, and earthworks required for the ramp are outside of the flood zone. The road is arranged along the edge of the Drury Centre Precinct to create a boulevard and provide for connections to the planned roading network within Drury Centre, primarily Creek Road. An area of land to the west of the proposed alignment is zoned as Business – Mixed Use Zone to ensure development can occur on both sides of the road alignment, which is consistent with the anticipation of the Drury Centre 2048 Masterplan prepared for PC48, which is illustrated in Figure 5-1 (below). The link to Creek Road/Pitt Road was decided on to ensure that the area of Creek Road north of Homestead Mews could

<sup>&</sup>lt;sup>7</sup> Note: Red dotted line indicates the remnant stream highlighted through engagement with Mana Whenua

become more pedestrian-friendly environment, directing vehicle traffic towards the southern portion of the Drury Centre Precinct.

# 5.3 Stormwater Outfall

The Project prioritises the provision of stormwater treatment for all proposed impervious surfaces, ensuring comprehensive management of stormwater runoff. While in part the stormwater flows from the Project will be directed to devices within Stage 1B1 P2DS, discharging stormwater back to the natural catchment of the Hingaia Stream is the most practical option for the remaining areas of the Project. Ensuring that best practice treatment is achieved for stormwater entering the Hingaia Stream.

The stormwater outfall design was developed in collaboration with the Drury Access Ramp Mana Whenua Forum, focusing on minimising land disturbance during construction and optimising the performance of the treatment devices.

Further detailed assessment of the proposed design is provided in the Stormwater and Hydrology Assessment at **Appendix D**.

# 5.4 Conclusion

Considering the requirements outlined in the Drury Centre Precinct standards, the proposed access ramp is essential to meet the functional needs of the existing road corridors. The project is constrained by the site parameters and existing infrastructure, making the proposed location the most suitable option to accommodate future development and enhance the area's functionality.

# 6 CONSULTATION AND ENGAGEMENT

# 6.1 Introduction

Consultation has been undertaken with Mana Whenua, the Council and relevant utility operators, as summarised in the following sections. An overview of the Project was provided in the consultation, including indicative programme of construction.

# 6.1.1 Mana Whenua

Engagement for the Project design and consenting phase began in early 2023 with the Project team meeting with Mana Whenua through the forum of relevant representatives, which is referred to as Drury Access Ramp Mana Whenua Forum (hereinafter referred to as "the Forum").

The Forum has been arranged primarily by Kiwi Property, who have formed a working group of Mana Whenua representatives, who have been consistently engaged across their developments in the Drury area, beginning first with the PC48 process and most recently with the Drury Centre Precinct FTA.

As a part of the Project, Waka Kotahi has engaged with the following iwi groups located in the southern area of Auckland:

- Ngāti Tamaoho
- Te Ākitai Waiohua
- Ngāti te Ata Waiohua
- Ngāi Tai ki Tāmaki
- Ngāti Whanaunga

The Project has been discussed with above iwi groups at hui on the following noted days:

- 28<sup>th</sup> April 2023
- 3<sup>rd</sup> May 2023 (Site Visit)
- 18<sup>th</sup> May 2023
- 14<sup>th</sup> June 2023 (Site visit)
- 30<sup>th</sup> June 2023

Since then, the project team has maintained regular engagement with the relevant representatives through monthly hui, supplemented by additional workshops or briefings as needed. This section provides further details on the feedback received from the representatives to date, obtained through the monthly hui, workshops, and any provided written communications.

The design elements, stormwater management, construction staging, methodology and overall outcomes of the Project were discussed.

# 6.1.1.1 Southern Iwi Integration Group

The Southern IIG was established in mid-2014 to provide for consistent engagement between Waka Kotahi and Mana Whenua in Southern Auckland. It provides a forum for discussion and information sharing at Kaitiaki level, to be shared to the leadership/governance level. Mana Whenua have been engaged consistently throughout the P2DS Project through Waka Kotahi's Southern Iwi Integration Group (SIIG).

It is important to note that engagement with Mana Whenua has not been managed through the SIIG for the Project. Mana whenua were consulted on how they wished to be engaged on the Project and they decided that engagement should be through Kiwi Property's forum. The intention of this decision was to maintain consistency in the working relationships that Kiwi Property has developed with Mana Whenua representatives through the PC48 process and more recently the Drury Centre Precinct FTA. The decision to manage engagement with Mana Whenua through Kiwi Property's Forum has been discussed in Waka Kotahi's SIIG Forum. Particular instance includes a not from SIIG Monthly P2B Design Hui held July 2023 in which the members of the SIIG Forum affirmed their support to see the Drury Access Ramp Project managed through Kiwi Property's forum (**Appendix Q**). As the Project is intended to be a link between the SH1 corridor and Drury Centre, there has been consideration of how this infrastructure can link into the cultural narrative that is being developed by Mana Whenua representatives in their engagement with Kiwi Property on the Drury Centre Projects.

While the lwi Authorities who are represented on Waka Kotahi's SIIG are the same as those engaged for the Project, it is acknowledged that the representative(s) may differ. As such the Waka Kotahi's SIIG have regularly been updated on the Project at regular P2B Design Hui.

# 6.1.1.2 Stormwater Management

Mana Whenua expect the Project to follow and meet the National Policy Statement for Freshwater Management 2020 (NPSF). There is an expectation that Waka Kotahi should lead the way using best practice stormwater management for all projects including the Project, and not just meet minimum requirements. In particular, noted:

- Management of stormwater flows from upstream developments, flowing through Waka Kotahi culverts, to treat these flows before eventual discharge to the downstream environment, and;
- Minimisation the potential for scouring effects of the stormwater outfall and landscaping.

The stormwater design was presented at the design hui held in May 2023, where the Aurecon Stormwater Specialist outlined the findings of the Stormwater Assessment (**Appendix D**) and illustrated the rationale for the Stormwater design methodology. Mana Whenua requested further detail on the outfall design.

Mana Whenua requested changes to the initially proposed stormwater outfall design, as it was presented at the onsite hui 14 June 2023. The The request was for the pipe outfall to be moved further away from the Hingaia Stream. Following a review of feasibility, the pipe outfall moved closer to the road, allowing stormwater to flow through an open channel before it enters the Hingaia. The water will flow down the formed over land flow path through rock riprap and planting. This amended design was accepted in principle in an update at the following design hui.

Discussion regarding use of kōwhatu and other rock for scour protection. The design team indicated that angular rocks were preferred within base of outfalls to minimise scour between rocks. Larger circular kōwhatu could be better used to provide a transition into the planted landscape adjacent.

## 6.1.1.3 Cultural design opportunities

A key aspect of discussion with Mana Whenua representatives centred around the opportunities for ongoing opportunities for cultural expression in the detail of the access ramp. Kiwi Property has worked with Mana Whenua to develop a comprehensive Cultural Opportunities Plan attached in this application at **Appendix V**.

The cultural opportunity associated with the SH1 offramp bridge is considered a top priority, given the need to confirm its design in the near future. It will be the responsibility of Kiwi Property to support the design of the bridge at the point where the offramp rises above Great South Road on the SH1 side.

Considering the high-speed nature of the offramp, it was recommended to incorporate cultural elements on the outside sides of the bridge for safety reasons. The idea of embossing or pre-casting a design on the bridge sides, visible from Great South Road and the railway, received support. This opportunity could potentially be connected to an entrance of Drury Centre, possibly through an embossed design integrated into a retaining wall.

## 6.1.1.4 Ongoing lwi Engagement and Feedback

Monthly engagement and targeted workshops with the relevant Mana Whenua representative(s) has enabled Waka Kotahi to collaborate with Mana Whenua and incorporate korero into the design and construction of Project. In addition to the substantive matters discussed below, how Mana Whenua prefer to be engaged with over the Project,

timeframes for application lodgement and construction and progress updates have been discussed regularly to ensure that all involved in the Project are clear on how and when actions are progressed. The following section summarises the key matters discussed at hui and how the Project has responded to Mana Whenua requests.

# 6.1.2 Auckland Council

The Project team has engaged with the Premium Team at Auckland Council through the pre-lodgement process. This included meeting with representatives of Auckland Council's Premium Team held on 20<sup>th</sup> June 2023. Following the meeting the drafts of the key specialist's assessments were provided to Auckland Council's specialists for review. Auckland Council's feedback was incorporated into the AEE, drawings, proposed conditions and technical reports.

Parks and Places were invited to attend the pre-application meeting. Consultation has not been undertaken with any specific departments of the Council as there are no relevant Council owned properties or assets within the alignment.

The meeting with the Council were held on 20<sup>th</sup> June 2023, where the following was discussed:

- Proposed application.
- Summary of specialists and findings; and
- Mana Whenua engagement.

Meetings were held with Healthy Waters between March and June 2023 to discuss the following:

- Proposed stormwater network, and;
- Hingaia Stream Outfall.

# 6.1.3 Network Utility Operators

Networks utility operators (NUOs) who will be affected by the Project are identified in Table 4-5 in Section 4.4.6. These utility providers have been consulted by the Waka Kotahi to discuss the following:

- The effects of the Project on existing utilities and the services they provide;
- The opportunity for potential utilities to be incorporated into the Project; and
- Existing utilities and the Project planned in Drury vicinity.

The following utility providers were consulted since January 2023:

- Transpower.
- Counties Power.
- Healthy Waters, and;
- Chorus.

The feedback from this consultation has led to the proposed methodology for relocation or replacement of existing utilities, which is discussed in Section 3.6.

KiwiRail and Watercare are Requiring Authorities of two designations within the Project area as detailed in Table 4-5 in Section 4.4.6 of this AEE. The relevant approvals from the Requiring Authorities have been sought and are contained within **Appendix S**.

## 6.1.4 Private landowners

Kiwi Property is the only private landowner within the Project alignment.

Engagement with Kiwi Property has been maintained throughout the entirety of the design and consenting stage. Representatives of Kiwi Property have been present at all key engagement and design meetings, including a scheduled fortnightly meeting since March 2023 to discuss updates on the Project. Furthermore, Kiwi Property has led engagement with local Mana Whenua representatives in conjunction with Waka Kotahi to maintain the consistency across the application for PC48 and Drury Centre Precinct FTA. As discussed in Section 6.1.1. above.

# 6.1.5 Key Stakeholders

Key stakeholders of the Project, including local boards, which have been engaged with on the Project. Further details of this engagement are contained in the Engagement Records at **Appendix Q**.

## 6.1.6 Public Engagement

The general community and road users have been informed of the Project through open day held at Drury Town Hall in June 2023 as described in the Engagement Records at **Appendix Q**.

It is also noted that direct vehicle access from SH1 to Drury Centre was a key aspect of the PC48 process (discussed in Section 4 above). The plan change process involved extensive public participation through public notification. Similarly, although it was not a key part of the structure plan, that document went through an extensive public engagement process.

# 7 ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

# 7.1 Introduction

The following sections summarise the actual and potential positive and adverse environmental effects in relation to the Project, as well as mitigation measures to prevent or reduce the adverse effects. The positive effects and potential effects related to Mana Whenua values are relevant to the entirety of the Project. The specific effects and relevant mitigation measures are separated by those relevant to the resource consents, and then those relevant to the NOR. Despite the application for the Project having been prepared as one integrated application package, this distinction of the separate assessment of effects sections is based on the different aspects of the Project requiring resource consents pursuant to the:

- NES-CS, and ;
- AUP<sup>8</sup>.

# 7.2 Positive Effects

The Project will have a number of positive effects, including increasing travel choice, the reliability of travel times and improving the safety of Drury Interchange. The following positive effects are associated with the implementation of the Project specifically:

- Improvements to transport connection and traffic management:
  - Provide direct vehicle access to Drury Centre Precinct to increase urban development capacity within Drury Centre, and opportunities for business and economic growth.
  - Reduce traffic volumes on the local roading network accessing Drury Centre and Drury East which has associated benefits for safer active mode of transport and improved reliability on public transport operation for passengers.
- Improved safety for vehicle users:
  - The additional access ramp provides direct and separated access for users accessing the future urban centre at Drury Centre Precinct.
  - Reduce traffic volumes accessing SH22
- Replacement planting in the terrestrial, freshwater and estuarine environments results in a range of positive effects, including:
  - Removal of pest plant vegetation.
  - Improvements in the indigenous biodiversity of the Project area through replacement planting within the riparian margin, which would allow the opportunity to introduce native tree species through specimen selection and to determine suitable planting locations. The anticipated outcome of the replacement planting would be beneficial as the proposed cleared areas are currently largely dominated by exotic species.
- Opportunity for cultural opportunities through the design of the access ramp to tie into mana whenua cultural narratives interfacing between the wider P2DS and Drury Centre Precinct Projects.
- Providing opportunities for recording of little known or unknown historic heritage discovered through the course of the Project's construction.

<sup>&</sup>lt;sup>8</sup> Last updated June 2023

# 7.3 Resource Consent

Pursuant to Section 88 and Schedule 4 of the RMA, this application must include an assessment of any actual or potential effects that the activity may have on the environment and an outline of the proposed measures to avoid, remedy or mitigate any actual or potential adverse effects on the environment.

The actual and potential environmental effects of the Project and suggested methods for avoiding, remedying or mitigating these effects are addressed in detail in the Technical Assessments contained in the Appendices. These effects and methods are summarised below along with any additional methods for avoiding, remedying or mitigating any identified adverse effects.

When considering an application for resource consent, the RMA under section 104(1)(a) requires a consent authority (in this case Auckland Council) to have regard to any actual and potential effects on the environment of allowing the activity.

# 7.3.1 Earthworks

Earthworks during the construction of the Project will occur adjacent to the Hingaia Stream. Earthworks have the potential to create erosion and sedimentation issues, which would result in adverse effects on water quality, freshwater and marine biodiversity, ecological and Mana Whenua values. The potential adverse effects are detailed in this section and in the CWESCP Assessment contained in **Appendix F**.

Various erosion and sediment controls are proposed to be implemented via site specific management plans, which are detailed in this section and in the CWESCP Assessment and the ESCP contained at **Appendix F**. The relevant management plans will be prepared and submitted to Auckland Council for certification prior to works commencing and detailed in the proposed resource consent conditions contained in **Appendix R**.

With the adoption of the proposed erosion and sediment control methodology, any potential effects from earthworks and associated construction water will be appropriately mitigated, and any impacts on the freshwater or coastal receiving environments will be temporary and less than minor.

The earthworks for the Project will largely be undertaken for the purposes of constructing roading and stormwater upgrades, as detailed in Section 2.1. It is considered that the potential risk of an elevated sediment yield is low. This is primarily due to the gentle to rolling slopes of the Project area, the relatively small area (approximately 2.3ha) of earthworks proposed and the staged nature of the works incorporating progressive stabilisation.

Despite the low-risk construction methodology, the potentially higher risk areas and activities within the Project are identified as:

- Those works required immediately adjacent to the Hingaia Stream which are in part within in the Sediment Control Protection Area (SCPA)<sup>9</sup>.
- Pumping of any sediment laden water from excavations.
- Minor batter earthworks activities on any steeper slopes (greater than 10 degrees) that may eventuate over the course of the Project works.
- Managing site risk is a combination of:
  - The competency and performance of the successful contractor (currently unknown).
  - Timing and duration of works.
  - The quality construction, operation and maintenance of the ESCs implemented.

The Project does not require particularly complex or high-risk earthworks. The cut and cover methodology for Northern works areas and progressive stabilisation of all areas will minimise erosion risk. Traditional erosion and

<sup>&</sup>lt;sup>9</sup> Sediment Control Protection Area, within 100m of the CMA or within 50m of a watercourse or wetland.

sediment control will be used for the southern works area. Sediment control measures will retain a high proportion of eroded sediment and minimise discharges to an acceptable level.

The following key elements will form part of the Project mitigation measures for the proposed construction works:

- All earthworks and land disturbance activities should be undertaken in general accordance with the ESCP Assessment contained in Appendix F, including the proposed erosion and sediment control methodology and SSESCPs for specific activities within the Project area.
- The approach to managing construction water discharges will be confirmed by the contractor prior to works commencing through the preparation (and certification by Council) of SSESCPs for specific activities within the Project area.
- SSESCPs will include the following information:
  - Contour information.
  - ESC measures for the works being undertaken within a particular construction area.
  - Chemical treatment design and details.
  - Catchment boundaries of works and devices installed.
  - Location of the work.
  - Details of construction methods.
  - Design criteria, typical and site-specific details of ESC.
  - Pumping procedures and management.
  - The identification of staff who will monitor compliance with conditions.
- A Chemical Treatment Management Plan (ChemTMP) should be prepared for the Project and submitted to Council (for certification) prior to be commencement of works to confirm the chemical treatment set up and including all relevant batch dosing information.
- Any SRPs or DEBs constructed should be chemically treated in accordance with the Project's ChemTMP.
- Any exposed areas should be subject to a 14-day stabilisation period. If areas are stripped and exposed to erosion, and works are not to occur within a 14-day period, then temporary stabilisation will need to occur. Stabilisation methodologies will need to be based on proven options and will include mulch, geotextile and hard fill.

Through the implementation of the recommended key mitigation measures above, any potential effects from the Project works will be appropriately managed and mitigated.

There are no unusual or specifically high-risk elements of the Project that would prevent a GD05 complaint ESCP methodology being successfully implemented. As discussed in the CWESCP Assessment Report attached as **Appendix F**, it is anticipated that the potential adverse sediment-related effects can be minimised to an acceptable level that will not result in significant impacts on the freshwater receiving environments of the Project area.

With the adoption of the proposed ESCP methodology, the potential adverse effects of treated sediment laden runoff on the water quality and ecological values of the receiving environments are anticipated to be temporary and less than minor.

## 7.3.2 Contaminated Land

This section assesses the effects associated with disturbance of contaminated land in accordance with provisions of the NES-CS.

Earthworks during the construction of the Project may occur on contaminated potential HAIL sites and/or are considered to be contaminated. Contaminated soil disturbance has the potential to result in adverse effects on

human health, water quality, amenity and ecological values. The potential adverse effects are detailed in this section and the Contaminated Land Assessment contained in **Appendix O**.

A suite of disturbance and storage controls and mitigation measures are proposed to be implemented via a Contaminated Site Management Plan (CSMP). The CSMP will be informed by a Detailed Site Investigation (DSI) and submitted to Auckland Council for certification prior to works commencing and detailed in the proposed resource consent conditions contained in **Appendix R**.

Provided the mitigation measures are implemented during construction as detailed in the CSMP, any potential for adverse contamination effects on human health and the environment will be less than minor.

Based on the desktop review for the Project area, various sites within and adjacent to (within 50m of) the Project alignment are considered to be potential HAIL sites and/or are considered to be contaminated under the NES-CS as discussed in the PSI report appended to the Contaminated Land Assessment contained in (Attachment 1) **Appendix O**. These sites are detailed in Section 4.4.3 of the AEE (above). Several potentially contaminating source areas have been identified associated with agriculture, industrial development, and historic landfill.

Whilst the NIMT and the SH1 corridor (including the Great South offramp) are not technically considered as HAIL sites, unsealed areas associated with motorway corridors (for example swales and berms) and railway laydown areas and tracks (including ballast) have the potential to accumulate particulate contaminants such as heavy metals, asbestos and hydrocarbons. As such these areas have been included as part to the risk assessment should foundation pilings intercept these two designations.

The following potential adverse effects associated with construction and maintenance activities involving soil disturbance of potentially contaminated soil may include:

- Human or environmental exposure to the identified contaminants of concern during excavation activities.
- Stormwater runoff carrying contaminated sediment or stormwater to off-site areas.
- Workers and members of the public being exposed to contaminants carried in airborne dust / gas and odour.
- Discharge to stormwater of impacted material and the passive discharge to groundwater or air, from unauthorised soil management and uncontrolled waste disposal.
- Accumulation of impacted sediment from unauthorised soil management and uncontrolled waste disposal; and
- Amenity values and ecology or vegetation impacts from unauthorised soil management and uncontrolled waste disposal.

Based on the assessment undertaken for the Project, the proposed construction works may cause temporary effects, as a result of temporary discharges to Hingaia Stream during fill disturbance. Proposed mitigation activities and management of stormwater, sediment and waste (i.e., implementation of CSMP measures and ESCP measures) will likely enable the health and wellbeing of freshwater bodies to be maintained. Further detail is provided in the Contaminated Land Assessment contained in **Appendix O**.

The draft Contaminated Site Management Plan (CSMP) attached in the Contaminated Land Assessment (**Appendix O**) includes a suite of controls and mitigation measures required to be implemented during construction activities to protect human health and the environment from the potential effects identified. The CSMP will manage the disturbance and storage of potentially contaminated soil and/or groundwater and the disposal of any contaminated materials, if encountered. The final CSMP will be prepared with more specific guidance pending results of any further investigations and on confirmation of layout, design and contractor methodology by the suitably qualified and experienced person.

The potential effects of the proposed construction works of the Project can be managed or mitigated through the following:

Implementation of a Contaminated Site Management Plan (CSMP); and

If foundation piling intercepts the NIMT and HAIL G5 (within Karaka Reserve), it is recommended to undertake a limited DSI to understand the risk profile and to inform reuse / disposal of soil surplus to requirement for the construction.

Provided the above mitigation measures are implemented, any potential for adverse contamination effect will be less than minor.

## 7.3.3 Stormwater

This section assesses the effects associated with stormwater in accordance with NES-F (Part 3) and relevant policies and standards of Chapter E8 Stormwater – Discharge and Diversion, Chapter E9 Stormwater Quality. Chapter E36 Natural Hazards and Flooding is assessed in the NoR effects assessment in Section 7.4 (below).

The Project will ensure that all stormwater runoff from the proposed impervious surfaces are treated before being discharged to the Hingaia Stream. A portion of the runoff will be treated by the new stormwater treatment quality devices proposed as part of the Project, and the remaining of the runoff will be treated by the existing stormwater management devices approved as part of Stage 1B1 of P2DS Project. Stormwater runoff from the Project north of the bridge high point will discharge to existing stormwater devices within Stage 1B1, the designers of Stage 1B1 have accommodated for the additional flows from this area in their design.

Based on the proposed stormwater management system for the Project, the potential for adverse effects in relation to stormwater quality and quantity being discharged into the Hingaia Stream will be less than minor.

The Project will ensure that all stormwater runoff from the impervious area within the Project's area be treated by stormwater quality treatment devices prior to discharging into the Hingaia Stream. A portion of the runoff will be treated by the consented stormwater management devices as part of Stage 1B1 of the P2DS Project, which have been designed to accommodate for the additional flows from this area in their consented design. The remaining portion of the stormwater runoff will be treated by the proposed new stormwater quality treatment devices as part of this Project. These are further discussed below.

The stormwater capacity of the Project is assessed in two parts. The split is taken at the high point on the access ramp bridge section (as shown in Figure 7-1). With Area B discharging to the proposed Hingaia Stream outfall. Runoff from Area A (which is approximately 0.2ha in area) north of the bridge high point will discharge to Stage 1B1 of P2DS. The design of Stage 1B1 has taken particular regard to accommodate for these additional flows from Area A within the existing (granted) stormwater devices.



Figure 7-1 Stormwater assessment points split (Stormwater Report, Appendix F)

The proposed stormwater treatment devices within the Project extent will treat the runoff from Area B. The devices are designed in accordance with GD01 and best practise treatment principles. This includes vegetated swales designed to achieve a hydraulic residence time in excess of the GD01 design requirement minimum of nine minutes, and biofiltration raingardens that are each sized at least 2% of their impervious catchment as required by GD01. The Project area lacks formal stormwater treatment, except for the existing infrastructure approved under Stage 1B1 P2DS (existing SH1 corridor). The proposed stormwater treatment devices as part of this Project, combined with the consented stormwater quality treatment devices as part of Stage 1B1 of P2DS Project, will ensure that all stormwater runoff from the proposed impervious surfaces will be treated prior to entering the Hingaia Stream, which will maintain the water quality entering the receiving environment in Hingaia Stream.

For the installation of the proposed new stormwater quality treatment devices as part of the Project, a setback outfall is proposed for the Project with a short section of designed channel to tie in to Hingaia Stream. This is due to the banks of Hingaia Stream being steep, and that the existing riparian vegetation is sparse and exotic. Due to the context, an energy dissipation/erosion mitigation measure is proposed to minimise erosion of the natural ground from the proposed outfall and will be designed to provide flow expansion at the outlet to dissipate energy.

In summary, the following key elements of the stormwater management devices will form part of the Project mitigation and management measures of any adverse effects:

- Energy dissipation features as outlined below are proposed in accordance with Auckland Council TR 2018/13 (Hydraulic Energy Management) and HEC-14 design processes, as further detailed in the Stormwater and Hydrology Assessment contained in **Appendix D**, that will be installed to minimise potential erosion of stream banks and habitat degradation and increased sediment load in runoff. There are two levels of feature proposed:
  - 1) Outlet structures to Hingaia Stream have been designed to cater for a 1% AEP design event to provide energy management for secondary flow; and
  - 2) Outfalls from pipes or kerb and channels into swales have been designed to match the capacity of the discharging network and are easily accessible for maintenance after larger events.

- Stormwater management devices as summarised above and detailed in the Stormwater and Hydrology Assessment contained in Appendix D will be installed, to provide stormwater quality treatment for runoff from the Project area; and
- The hydrological connection to the seepage wetland (Wetland 2) will be maintained through groundwater charging, and overflows from the Hingaia Stream; and
- Cut slopes for the installation of the proposed new stormwater treatment devices of the Project will be stabilised using soft engineering including planting, which will provide beneficial riparian filtration to runoff from pasture land surrounding the outfall.

With the above mitigation measures being in place, the potential adverse effects arising from the construction and operational phase of the proposed new stormwater quality treatment devices for the Project is expected to be sufficiently mitigated and the effects are less than minor.

# 7.3.4 Ecology

This section assesses ecological effects in accordance with consideration of the statutory requirements of the AUP and NES-F in this report in respect of the impact on freshwater ecology. The potential effects are detailed in this section and the Freshwater Ecology Assessment contained in **Appendix L**.

The existing ecological values in the existing SH1 corridor assessed under the Stage 1B1 application were assessed to be negligible to moderate value across terrestrial, estuarine and freshwater ecosystems. The Project area is not subject to the Significant Ecological Area (SEA) overlay.

Terrestrial ecology values are negligible, being almost entirely planted areas of narrow hedgerows, mowed grass strips or small clusters of exotic trees. Estuarine ecological values are moderate, mainly for connectivity reasons. Freshwater values range from negligible to low.

The Project assessment finds there are no direct impacts on streams or natural inland wetlands. The works for the proposed ramp will result in a minor infringement of the riparian yard of the Hingaia Stream, during construction of the piles for the ramp bridge.

The Project does not involved stream works.

Based on the implementation of the management and mitigation measures identified above, the potential for adverse ecological effects in relation to the terrestrial, freshwater and estuarine environments will be less than minor.

The Project will not involve permanent stream works within the Hingaia Stream. Temporary staging will be required across the stream to provide access while constructing the piers adjacent to the Hingaia Stream. Both the permanent piles and temporary staging have been designed to avoid works with the stream bed.

During construction, the potential for increased erosion and sedimentation from the works into the freshwater environment (Hingaia Stream) can be avoided and/or minimised by utilising strict sediment control procedures and will be addressed in the SSESCP, working to best practice guidance as required by Auckland Council.

Any adverse effects of vegetation removal in the riparian yards will be short term and will be mitigated through native riparian planting implemented through a planting plan. The following recommendations are made in conjunction with the assessment:

- Replacement planting with native riparian planting of any works areas cleared in the riparian yard; and
- Site Specific Erosion and Sediment Control Plan (SSESCP) to ensure sedimentation to the Hingaia Stream is minimised.

Subject to the proposed recommendations as outlined above, it is considered that the potential for adverse effects of the ecological value of the Project area will be less than minor, and the cumulative effects are not significant, and are negligible over and above the existing situation.

## 7.3.5 Groundwater Effects

This section assesses earthworks effects associated with groundwater in accordance with Chapter E7 of the AUP.

Groundwater depths vary across the alignment, with no identified cut locations to intersect near-surface groundwater.

Potential for groundwater diversion effects arise from the proposed pier foundations, which require a proposed 2m diameter pile to be drilled to depths of up to 60m to support the raised viaduct.

The potential effects on groundwater are detailed in this section and in the Groundwater Assessment contained in **Appendix E**.

Appropriate mitigation and management measures will be implemented during construction to ensure the potential adverse effects in relation to settlement, to ensure the potential for adverse effects to will be less than minor

Within the Groundwater Assessment contained in **Appendix E**, it is noted that most of the Project will be constructed above existing groundwater levels and will not intersect groundwater. Drawdown and subsequent settlement is not anticipated. If settlement were to occur from the construction of the off ramp, there are no structures within 100 metres of the proposed cut locations.

The proposed pier excavations are predicted to intersect groundwater levels and temporary groundwater drawdown may occur. However, significant and long-term groundwater drawdown that could cause significant settlement is unlikely, provided that the appropriate construction methodology is adopted. In the case minor settlement were to occur during the temporary drawing down of groundwater within the vicinity of the pier foundations, damage to structures is not considered likely as there are no structures within 60m of the proposed overpass alignment.

Trenching for the provision of horizontal infrastructure has not been fully assessed for the initial design. Trenching is expected to be required for stormwater, water and wastewater mains as well as utility services. The Project trenching requirements will vary to accommodate clearance and design requirements. Groundwater drawdown in trenches will be mitigated in design through installation of water-stops as required.

Based on the detailed assessment in the Groundwater Assessment contained in **Appendix E**, the following mitigation and management measures will form part of the Project's construction methodology:

- Although no settlement related effects are predicted for the Project, it is good practice to continue groundwater monitoring, and the Groundwater Assessment will be updated as more groundwater data becomes available;
- In a best practise scenario monitoring should be undertaken before construction commences, during construction and following completion, paying close attention to peaks and troughs in the groundwater levels near the alignment;
- Pile foundation excavations should be undertaken in a timely manner, with the piles being constructed as soon as possible after excavation to minimise any effects on groundwater, and resultant drawdown related settlement; and
- Specific construction methodology should be adopted and provided in the Construction Management plans, considering the presence of a designated aquifer nearby, and should contain contingency plans for the event that artesian water pressure is encountered.

Considering that there are no anticipated effects related to settlement, the enforcement of a consent condition requiring groundwater monitoring is not deemed to be necessary for this proposal. With the implementation of the above-listed appropriate mitigation and management measures during construction, the potential adverse effects in relation to groundwater will be less than minor.

# 7.4 Notice of Requirement to Alter Designation 6706

This section contains the assessment of actual and potential effects on the environment in relation to the Project NoR works which will be authorised by the alteration to SH1 Designation 6706. It is important to note that this AEE does not traverse effects which have previously been considered as part of the P2DS projects (Stages 1B1 and 1B2), as those effects form part of the existing environment, forming the 'baseline'.

Waka Kotahi proposes alterations to existing designation conditions to avoid, remedy or mitigate the potential adverse effects of the works associated with the Project NoR works as appropriate. The proposed conditions for the NoR attached in this application at **Appendix R**.

# 7.4.1 Overview

In accordance with Schedule 4 of the Resource Management Act 1991, this section considers the actual and potential effects on the environment as a result of this NoR. These have been identified and include:

- Transport effects,
- Noise and vibration effects,
- Landscape and visual effects,
- Archaeological and heritage effects,
- Arboricultural effects; and
- Flooding effects.

## 7.4.2 Transport Effects

This section assesses the transport effects associated with both the temporary construction effects and permanent operational effects for the additional south-bound off-ramp at Drury Interchange as part of the Project.

A Transport Impact Assessment of the Project is attached to the application at **Appendix M**.

The Project will result in more efficient vehicle trips to Drury Centre and is expected to result in a minor reduction of vehicle traffic accessing Drury Centre via the local road network thereby creating safer active mode of transport and improved reliability on public transport operation for passengers along these local road network. Overall, contributing to the safe and efficient use of Drury Interchange.

The potential for adverse transport effects as a result of the construction for the Project works associated with NoR will be temporary in nature and will be less than minor. The operation of NoR will result in net positive effects.

NoR will reassign traffic away from the local road network, improvements in the operation of the local road networks due to proposed reassignment, and reduce total kilometres travelled ramp (relative to the fairly indirect access for traffic heading to the future development area, for the scenario without the Project). The direct off ramp from SH1 will facilitate development within the Drury Centre, which form part of the Plan Change 48.

A Transport Impact Assessment has been undertaken by Flow Transportation Specialists (Flow) and is attached in **Appendix M**, the key findings are summarised as follows.

## 7.4.2.1 Construction

There are three aspects of temporary traffic effects during construction works identified:

- Temporary works on the southbound off ramp and on Great South Road (which may include narrowing of lanes, or reduction in the number of lanes depending on construction methodology);
- Temporary closure of the existing Drury southbound on ramp; and

#### Construction related traffic.

The potential for adverse temporary effects on traffic at Drury Interchange during the construction of alterations to existing southbound access ramp have been accounted for under the Stage 1B1 P2DS project. Therefore, the effects arising from the Project will be no more than what has been accounted for.

Notwithstanding that the works will need to be managed through the development of a Construction Traffic Management Plan (CTMP) that will be implemented to manage effects of the Project during construction. The Design and Construction Report, attached as **Appendix C** of the AEE, provides some information on some of the mitigation measures to be implemented during construction, however this current construction methodology is indicative only at this stage and will be further developed in detail by the contractor once appointed at a later stage of the Project design development.

The CTMP will be prepared in general accordance with the Waka Kotahi Code of Practice for Temporary Traffic, and will be submitted to Auckland Council for information purposes prior to the commencement of construction works on site.

Based on the implementation of the traffic management measures identified above, the potential for adverse transport effects as a result of the construction of the Project will align with the activities assessed under Stage 1B1 P2DS.

## 7.4.2.2 Operational

The operational effects of the Project have been assessed by using the 2028 SATURN models as detailed in the Traffic Impact Assessment attached as **Appendix M**. The transport modelling expects that the direct southbound off ramp to Drury Centre will attract about 350 and 460 vehicles/hour in the weekday morning and evening peaks, respectively. With Threshold land uses, these flows will increase to 470 and 570 vehicles/hour. These morning and evening peak forecasts lead to estimates of 5,250 and 6,775 vehicles/day.

The Project will result in reductions of traffic along Great South Road, primarily east of the motorway interchange, and also leading to reductions on the traffic accessing Waihoehoe Road. The direct ramp will also lead to a minor reduction in traffic southbound on the motorway, as without the ramp some vehicles will approach Drury Centre/Drury South by using the Ramarama interchange. The traffic modelling indicates that the proposed signalised layout along Waihoehoe Road (a change from an existing roundabout) will be operating at or over capacity if the direct off ramp to Drury Centre is not provided by the Project.

There is no alteration to the existing public transport network proposed under this Project, and will there be capacity for public transport on the off ramp. Therefore, it is not expected significant effects on public transport due to the provision of the direct off ramp to Drury.

The Project is not considered to generate effects on active mode users. There is a nominal effect reducing traffic accessing Great South Road, offering some modest benefit for active mode users, who may be heading to/from the Shared Use Path planned along Great South Road and SH1.

The Project will offer some safety benefits by reducing traffic at the Drury Interchange and at the Great South Road/Waihoehoe Road where the signalised layout intersection will be at or over capacity without the access ramp to Drury Centre. The reduction in total kilometres travelled also may imply some safety benefits.

Overall, the operational effects of the Project will be positive.

## 7.4.3 Noise and Vibration Effects

This section details the potential construction and operational effects as a result of the NoR.

A detailed Noise and Vibration Assessment prepared by Marshall Day Consultants Ltd is attached within the application **Appendix P**.

The potential for adverse noise and vibration effects generated by the NoR during construction and operation, will have minimal impact on neighbouring residential and commercial buildings. A CNVMP and Schedules are recommended to mitigate these effects within best practise standards.

Traffic noise levels are not materially impacted by the Project due to the large distance of the closest sensitive receivers and larger traffic volume on SH1. The proposed access ramp can be constructed and operated within reasonable noise levels.

The ambient noise environment within the Project area is significantly affected by existing traffic using the SH1 corridor, as detailed in the Noise and Vibration Assessment attached at **Appendix P**.

# 7.4.3.1 Construction

In terms of noise, the proposed works for the Project are located within an undeveloped future urban area, which is largely dominated by pasture. In this case, the closest buildings being unoccupied show homes and occupied commercial buildings approximately 70m away, on the adjacent side of Great South Road. The nearest dwelling is located at 74 Mercer Street, which is a Childcare, and is outside of the existing designation. Dwellings located on Kiwi Property's land holdings are expected to be removed before works begin on the Drury Access Ramp. The proposed works of the Project uses to determine noise levels at the closest receivers include earthworks, construction of MSE retaining walls, bridge construction works (including piling works), construction of access staging over Hingaia Stream (including vibro piling) and construction of structures and pavements. The majority of these works are expected to occur during the day, with noise levels predicted to comply with the relevant daytime limits, and at times below the existing ambient noise levels from traffic on SH1. Buildings in the Drury industrial area Northeast of the works are of varying construction and appear to generally contain non-noise sensitive uses, with limited number of buildings which may contain offices. It is unlikely that construction will cause any adverse effects on those working at the Drury industrial area. Compliance with the noise limits can be achieved at all receivers.

Night-time works may be required for piles located close to Great South Road and the NIMT, which may result in noise levels of up to 54 dB L<sub>Aeq</sub> at the closest dwellings, if vibro piling is required a night-time. With windows closed however, internal noise levels will be typically acceptable, as detailed in Noise and Vibration Assessment contained in **Appendix P**.

Vibratory rolling and vibro piling pose the greatest risk during construction to exceedances of vibration criteria set out in Waka Kotahi guidelines. Other construction activities, while also generating vibration, would do so at a much lower level and are predicted to comply with the relevant criteria. The closest dwelling to the Project works is 320m away, therefore all dwellings will receive vibration levels readily compliant with both Category A and Category B criteria set out in the guidelines. This also applies to the Drury Presbyterian Church located approximately 180m North from the closest works. The closest buildings at the industrial area to the Northeast of the works consist of unoccupied show homes at about 30m. Compliance with Category A and B criteria will be achieved at the unoccupied show homes. The closest occupied commercial buildings are at least 70m away from the works. Therefore, compliance with Category A and B criteria will be achieved at all occupied receivers in the industrial area.

The vibration standards are significantly more stringent at dwellings during the night and have the potential to be exceeded at distances greater than 200m from the night-time works. There are no dwellings within 320m of the works. On this basis, vibration intensive activities of the Project adjacent to the existing motorway off ramp should be generally scheduled for the daytime wherever practicable.

Vibration effects of the Project construction works on the existing utilities such as Watercare 1200 watermain (a concrete pipe in good condition), Watercare Double Rising Wastewater and Veolia 450 Watermain (which are both plastic pipes in good condition). Based on the measurements carried out for the preparation of the Noise and Vibration Assessment contained in **Appendix P**, compliance with the vibration limits for bored piling can be achieved at distances of 1 metre. Vibro piling shall not be used within 3 metres of plastic pipes. The closest piling location is at least 7m from the watermains and wastewater pipes, therefore compliance with the vibration limits will be achieved

provided piling locations are not moved. Vibratory rollers used for construction of the MSE walls are located at least 7m from the closest watermains. At this distance, compliance with the vibration limits will be achieved.

The following mitigation and management measures will be implemented for the Project's construction works to manage noise and vibration effects:

- A Construction Noise and Vibration Management Plan (CNVMP) will be prepared and to include information set out in NZS6803:1999 such as:
  - Summary of the Project noise standards contained within this assessment.
  - Summary of assessments/predictions contained within this assessment.
  - General construction practices, management and mitigation that will be used for the Project.
  - Noise management and mitigation measures specific to activities and/or receiving environments, particularly for high noise and/or vibration activities, and all night-time works.
  - Monitoring and reporting requirements.
  - Procedures for handling complaints.
  - Procedures for review of the CNVMP throughout the period of Project works.
- Schedules are to be prepared for the Project only if night-time piling is necessary. The Schedules would contain communication, management, and mitigation specific to a certain task or area and to be attached to the CNVMP;
- Vibration intensive activities adjacent to residential areas should be generally scheduled for the daytime wherever practicable; and
- Vibro piling is avoided at distances within 3 metres of plastic pipes, or within 1 metre of concrete pipes.

Overall, it is considered that given the measures outlined by the CNVMP and appropriate management and mitigation, the effects from construction noise and vibration will be less than minor.

## 7.4.3.2 Operational

There are no Protected Premises and Facilities (PPFs) within 100m of the edge of the proposed access ramp, and the ramp traffic will have no material impact on the overall noise level from SH1. The Project is expected to have little overall effect on receivers further from the access ramp, as the main noise source is SH1 with its significantly higher traffic volume.

No adverse effects are identified and therefore no mitigation measures are recommended in the Noise and Vibration Assessment contained in **Appendix P**.

#### 7.4.4 Landscape and Visual Effects

This section assesses the potential for adverse landscape and visual effects associated with the NoR.

The potential landscape and visual effects as a result of Project works associated with the NoR are detailed in this section and the LVA contained in **Appendix H**.

It is considered that in the context of the existing SH1 corridor, changes occurring in the surrounding landscape and the positive outcomes that will be provided through the proposed planting, the overall landscape and visual effects of the Project in relation to the designation alteration will be less than minor.

A LVA has been undertaken for the Project, which is contained in **Appendix H**, assessing the potential landscape and visual effects during construction, operation and the resulting residual impacts. The works associated with the

NoR provide for the construction of a new southbound access ramp from SH1, road widening, bridge and associated structures, which will result in potential effects relating to landscape and visual amenity.

# 7.4.4.1 Landscape Effects

The existing landscape as described in Section 4.3 (above) and in the LVA is predominantly rural in character with a number of converging land uses, which include but not limited to: existing industrial area to the North of the Project area, adjacent SH1 corridor and NIMT, and residential area to the far Northwest. The Project area is largely dominated by the adjacent SH1 corridor, together with a bridge over the NIMT, signage, barrier, streetlights and moving vehicles along the corridor. Furthermore, the National Grid Corridor runs adjacent the Project area accommodating a number of large pylon structures. This has already resulted in modification in the natural landform and introduction of structures within the Hingaia Stream. Furthermore, urban intensification and development of the immediate surrounding area of the Project are underway as approved by Plan Change 48 lead by Kiwi Property, which enables the 51-hectare land developed with a new town centre with retail and commercial businesses, residential dwellings; connections to parklands along the Hingaia Stream and a SUP. The new Maketuu/Drury Railway Station forms part of the existing environment to the North of the Project area by KiwiRail. The proposed built form is a contrast to the existing site conditions, which comprises residential large lots and land subject to rural production.

The LVA has identified five Landscape Character Types (LCT) within the Project area which identified unifying aspects of the landscape and distinguish why one landscape is visually distinct from another, and these are: Urban Centre, Industrial, Riparian Corridor, Transport Corridor and Residential. The potential landscape impacts of the Project are assessed as very low, low or negligible towards the five LCT's, with the exception of the Riparian Corridor. Minor landscape effects are assessed for the Riparian Corridor due to the proposed access ramp traversing over the Hingaia Stream near the Drury Interchange. The magnitude of change is however considered to be low due of the following:

- The Project traverses over the stream in an area where the stream is already influenced by rail, road and electrical infrastructure relatively small portion of what is a widely distributed and expansive LCT; and
- The elevated road provides a physical barrier between the town centre and proposed recreational space along the riparian corridor.

Therefore, the proposed works for the Project will involve a relatively small change to the existing motorway corridor which would not result in any notable change to the overall landscape character once the Project is operational. As such, the landscape effects of the Project works associated with NoR will be less than minor.

## 7.4.4.2 Visual Effects

Visual receptors within the Project area are predominantly users of the transport corridors (road and train). The assessment of the visual impact contained in the LVA has been based on the sensitivity of the view and the degree of modification or changes to the view as part of the Project during construction, operation (at year 1 of operation) and the resulting residual impacts (at year 10 of operation). Seven viewpoints were identified for the Project based on the design, viewing distance, aspect and sensitivity of receptors. The visual impacts towards the seven viewpoints during construction, operation and the resulting residual impacts, with the exception of the operation impacts towards Viewpoint 05 (VP5), are assessed as negligible, low or very low given the Project is located within an existing transport corridor and is of a scale and appearance commensurate with the Drury Interchange, elevated road and highway (Figure 7-2).



Figure 7-2 View points of the Project area as assessed in the LVA (LVA at Appendix H)

VP05 is the viewpoint for users of the future town centre looking west towards the Project which is assessed to be moderate at the operational phase of the Project due to the elevated road contributing to a highly modified view, in conjunction with the rail corridor, multi-storey buildings and road upgrades (Flanagan Road). Landscape planting is proposed to the embankments beneath the ramp, either side of SH22 and to the south side of Flanagan Road to mitigate the impacts. With the completion of town centre development and maturing of the proposed landscape restoration to the Hingaia Stream reserve, the residual impact of the Project will reduce to low.

Based on the above assessment, the visual effects of NoR will be less than minor.

# 7.4.4.3 Temporary Effects

Temporary visual effects generated during construction process are considered unavoidable to the local area of the Project. These effects will include earthworks, use of cranes and construction vehicles, installation of the elevated ramp, road and pavement works, and construction of retaining walls. The selection of the plant and machinery used is expected to be appropriately managed through the construction management plan process.

## 7.4.4.4 Summary of Landscape and Visual Effects

The potential adverse effects on the landscape and visual receptors in the Project area are limited to temporary construction effects such as earthworks and installation of the elevated ramp, and at operational phase for visual

effects from Drury Town Centre / Drury Railway Station. The Project's influence on landscape character areas such as Urban Centre, Industrial and Residential is low to very low due to their proximity to existing transport infrastructure. However, the potential landscape effects towards Riparian Corridor is considered to be minor.

The following mitigation and management measures will be implemented for the Project to manage landscape and visual effects:

- Limiting the removal of existing vegetation within the Project area, as recommended in the arboricultural conditions and managed via the CTMP;
- Increased landscape amenity/intervening vegetation between sensitive receptors and the Project, by considering the visual amenity mitigation measures proposed in Section 6 of the LVA; and
- Consideration to the design finishes of the access ramp to reduce its visual prominence, which will be explored at the detail design stage.

With the implementation of the above mitigation measures, the potential landscape and visual effects of the Project will be less than minor.

# 7.4.5 Archaeological Effects

This section assesses the historic heritage effects associated with the NoR. A comprehensive assessment of the potential for adverse effects on archaeology and historic heritage arising the construction of a new access ramp, are attached to this application within **Appendix N**.

The NoR includes earthworks adjacent to one identified heritage site. To mitigate the potential and actual effects on heritage sites, various mitigation measures and archaeological practices in accordance with the requirements of the HNZPT authority, which will be implemented by a Historic Heritage Management Plan (HHMP), prepared as part of an Outline Plan.

Overall, it is considered that the potential adverse effects on archaeological and historic heritage will be less than minor. Potential adverse effects arising from the possibility of encountering sub-surface archaeological features will be offset through archaeological investigation, recording and reporting of findings.

One heritage site has been identified within the NoR in Section 4 of this AEE and detailed in the Historic Heritage Assessment contained within **Appendix N**. The site is assessed in this section. As detailed in Section 3.2 of the AEE, an Archaeological Authority under the HNZPT Act will be sought and obtained in advance of any earthworks commencing within the extents of the identified sites, to minimise delays should archaeological remains be exposed once works are under way.

## 7.4.5.1 Drury Railyards (R12/742)

The Drury Railyards, which is located at 103 Flanagan Road and recorded as site R12/742 in the NZAA SRS and as Item 11338 in the Auckland Council CHI, have a historical background dating back to the late 19th or early 20th century. However, extensive disturbance has occurred, and most of the original railyard elements were dismantled and removed when it ceased operations in 1972. The remaining features consist of a basalt and concrete loading ramp, a steel truck stop, and a basalt retaining wall. Previous assessments<sup>11</sup> have concluded that the railyards have limited archaeological value and do not meet the criteria for scheduling under the AUP Schedule of Historic Heritage NoR does it meet the criteria of an archaeological site as defined in section 43(1)(b) of the HNZPTA. This site does however provide the opportunity to update the CHI with any information gained during works.

<sup>&</sup>lt;sup>11</sup> Arboricultural Assessment prepared by Peers Brown Miller for Private Plan Change 48, dated August 2020

## 7.4.5.2 Mitigation

Although no evidence of pre-European Māori archaeology was identified during the assessment of the Project, there is reasonable cause to suspect that there may be some in situ sub-surface evidence of Māori land use, especially in the vicinity of the Hingaia Stream and that subsequent archaeological investigations undertaken would help provide information about the sites and would provide an opportunity for that information to be presented to the public through the use of interpretive panels or displays. This would provide education through an understanding of the past environment around the Project area.

Following the above assessments, a set of mitigation measures are recommended below for the Project:

- Preparation and implementation of a HHMP, which will guide works during construction including induction requirements for contractors (and sub-contractors) and procedures for archaeological monitoring, inspection, and investigation;
- Any earthworks within 50 m of the identified extents of archaeological sites or waterways (as shown in Figure 7 in the Heritage Assessment Report contained in **Appendix N**) will be monitored by an archaeologist, at least four weeks in advance of the general construction works to ensure adequate time is allowed for archaeological investigation if required;
- A General Archaeological Authority to modify or destroy potential archaeological sites that may be encountered within the Project corridor is to be applied for from Heritage New Zealand under Section 44 of the HNZPT Act. The Authority will be obtained in advance of any earthworks commencing to minimise delays, should archaeological remains be exposed once works are under way; and
- Ensuring that the recording of any archaeological or historic heritage features encountered during works will be undertaken by a suitably qualified archaeologist consistent with accepted archaeological practice and in accordance with the requirements of the Heritage New Zealand authority.

In summary, with the adoption of the above measures, the potential effects on archaeology and historic heritage of the Project are considered to be less than minor.

#### 7.4.6 Arboricultural Effects

As detailed in the Arboricultural Assessment attached in **Appendix G** and Section 4.3.5.1 of this report, the construction of the Project will require removal of a number of trees located within road reserve and riparian yards. The works are required given the need to provide for the construction and safe operation of the access ramp.

The construction of the Project requires the removal of some vegetation. Removing the pest weed species will be a positive effect for the wider environment. The vegetation to be removed is a mixture of harakeke, indigenous and pest plant species. Replacement planting will be implemented.

Appropriate protection measures will also be implemented around the root zone of the retained trees during the works due to the close proximity of construction. Based on the implementation of the replacement planting and mitigation measures, the potential for adverse effects in relation to the vegetation will be less than minor in the short term, and positive in the medium to long term due to improved natural biodiversity and opportunities for better tree species, specimen selection and planting locations.

The trees and vegetation growing within the Project area are typical of an urban and semi-rural setting, with the majority of vegetation within and adjacent to the works footprint being planted exotic or indigenous vegetation. The remaining vegetation is identified as weed species or naturally occurring shrub species such as Harakeke (*Phormium tenax*). The trees within the Project area are separated into two main areas in the Arboricultural Assessment contained in **Appendix G**, which are vegetation growing adjacent to the Hingaia Stream and vegetation growing within 108 Flanagan Road. Approval is sought for the potential of construction works to occur within the dripline of

the trees which will be retained. A summary of the vegetation in these areas and those impacted by the Project are discussed in the subsections below.

## 7.4.6.1 Vegetation growing adjacent to the Hingaia Stream

It is anticipated that the three Crack Willows directly to the west of the Project within 10R Karaka Road would be removed (referred to as Tree 2 and Group 3 in the Arboricultural Assessment contained in **Appendix G**) to enable construction and eliminate the potential risk to the future structure posed by failing limbs or structural sections, a typical trait of the species when changes occur nearby in terms of 'unaccustomed wind forces' or changes in group dynamics.

The Crack Willow trees are to be typically subject to protection under the tree rules pertaining to trees growing within the road reserve. While the Crack Willow trees are weed species, these trees exceed the 4.0m in height or 400mm in girth threshold for protection and as such would normally be protected under Rule E26.4.3.1 (A92). However, 10R Karaka Road is subject to Designation 6706. As such, this vegetation is not subject to protection. However, Tree Owner Approval (TOA) is still required for the removal of these trees due to their Council ownership.

Trees within riparian yard of the Hingaia Stream (referred to as Trees 4 and 5 in the Arboricultural Assessment contained in **Appendix G**) and the remaining pest plant species would be required to be removed to enable construction of the proposed bridge piers of the Project. All vegetation in this location is identified as a pest plant and as such is not subject to protection under the AUP (E26.3.3.1 (A74)). Furthermore, no protection is afforded to trees within riparian yards.

# 7.4.6.2 Vegetation growing within 108 Flanagan Road

While no vegetation within 108 Flanagan Road is subject to protection, the Project avoids a cluster of mixed plantings located directly to the west of the new ramp alignment that includes a mixture of semi-mature indigenous species such as Kanuka (*Kunzea ericoides*), Totara (*Podocarpus totara*) and Kauri (*Agathus australis*) as well as a number of exotic plantings including Crack Willow and Magnolia (*Magnolia grandiflora*). The trees located within the area classified as Group 6 in the Arboricultural Assessment contained in **Appendix G** will be retained and protected as part of the Project. As such, a tree protection methodology is recommended to be adopted for the Project as set out in the Arboricultural Assessment. It is recommended that all works near this grouping, and any additional tree or group to be retained, be undertaken in accordance with this methodology.

## 7.4.6.3 Summary

As detailed in the Arboricultural Assessment contained at **Appendix G** and summarised above, works will be required within the root zones of retained trees, which has the potential to damage the roots and overall health of the trees. Appropriate protection measures are recommended in the Arboricultural Assessment contained at **Appendix G**, such as temporary protective fencing, implemented around the root zone of the retained trees during the works due to the close proximity of construction. A Suitably Qualified and Experienced Arborist will supervise all works within the protected root zone. The potential and actual adverse effects of works within the root zone will be less than minor as they will be undertaken at the edge of the root zone and appropriately protected during construction.

Based on the implementation of the mitigation measures identified above, the potential for adverse effects in relation to the vegetation will be less than minor.

## 7.4.7 Flooding Effects

The NoR proposes the construction of a new access ramp from the southbound lane of the SH1 that includes bridge pier/s within floodplain. The Project also proposes catchment land use change and increased impervious area discharging to Hingaia Stream. The potential flood effect is detailed in this section and the Stormwater and Hydrology Assessment contained in **Appendix D**.

The Project will manage stormwater at a watershed level through the approach of passing forward peak flow and volumes from some lower parts of catchments, thereby allowing catchments low in the watershed to pass peak flows through before the wider watershed peak hits. This enables post development peak flow rates from the Project area to move downstream prior to the watershed peak, is understood to ultimately protect properties along the Hingaia Stream flood plains from the potential adverse effects of all development projects effectively combining peak into a smaller time step.

Stormwater will be predominantly conveyed using piped networks and open channels (swales) where practicable. Open channels were provided wherever possible to provide resilience, minimise buried drainage infrastructure, reduce carbon footprint and on-going maintenance requirements.

Overall, it is considered that the potential adverse effects due to flooding will be less than minor.

The Project intersects with the flood plain at the location of the proposed bridge piers and the stormwater outfall. Th bridge pier footings encroach the existing flood plain by 11.1 m<sup>2</sup>, displacing approximately 12.2 m<sup>3</sup> of flood storage. Given the minimal area and volume of flood plain impacted by this Project and the overarching assumption to pass forward peak flows, a detailed flood assessment is not considered necessary.

It is considered a pass flows forward approach was proposed by the Drury Site Management Plan (SMP) in collaboration with Healthy Waters for the Drury Centre Precinct area. This was proposed during PC48 which was supported by a flood risk assessment which is included as an attachment to **Appendix D** (*Appendix C1: Flooding of the Drury SMP*). This approach is understood to manage stormwater at a watershed level, allowing catchments low in the watershed to pass peaks through before the wider watershed peak hits. Therefore, peak flow rates are unmitigated in this Project. Any increase in runoff volume as a result of the ramp construction has been minimised by inclusion of pervious berms and planting wherever possible.

It is considered that potential for adverse effects arising as a result of stormwater displacement will be adequately mitigated by not hindering peak flows to move downstream before peak watershed peak occurs. The proposal for mitigation approaches for the management of stormwater pertain erosion (particularly around the proposed stormwater outfall into Hingaia Stream) and stormwater quality in terms of managing any additional sediment at the proposed outfall where high velocity flows are expected.

The following mitigation measures, which are similar to those related to the stormwater-related adverse effects discussed in section 8.4.3 of this AEE, will be implemented to manage any adverse flooding impacts from the Project:

- Energy dissipation structure consisting of a rock weir that controls spill into a short section of designed stream channel tying in to Hingaia Stream to be installed to minimise potential erosion of stream banks from high velocity flows and increased sediment load in runoff. This structure will be designed in general accordance with HEC 14 as discussed in the Stormwater and Hydrology Assessment contained in Appendix D; and
- Stormwater management devices as detailed in the Stormwater and Hydrology Assessment contained in Appendix D and which are to be designed in general accordance with GD01 will be installed, to provide stormwater quality treatment for runoff from the Project area.

In summary, with the installation of the proposed stormwater management features identified above, the potential adverse effects of the Project on flooding are expected to be adequately mitigated, and be less than minor.

# 7.5 Summary of Effects

In accordance with Sections 104 and 105 of the Act, the above sections identified a range of positive and adverse effects as a result of the Project. Any effects can be effectively mitigated and managed with the various management plans as outlined above and through the implementation of appropriate conditions contained in **Appendix R**. As a result of appropriate mitigation and management, all potential and actual effects from the construction and operation of the Project will be less than minor.

# 8 NOTIFICATION ASSESSMENT

# 8.1 Introduction

With regards to section 95E, the following persons have been identified as potentially affected by the Project:

- Landowners adjacent to the works
- Occupiers of the land:
- Auckland Council
- Auckland Transport (as landowner)
- Heritage New Zealand

Consultation undertaken to date is discussed in Section 6 of this report.

# 8.2 Public Notification

# 8.2.1 Section 181 Alteration of Designation

Section 181 of the RMA provides for the alteration of existing designations, requested by the Requiring Authority responsible for the designation. Subsection (2) states that subject to subsection (3), sections 168 to 179 and 198AA and 198AD shall, with all necessary modifications, apply to a requirement for an alteration under subsection (1) as if the requirement were for a new designation.

# 8.2.2 Section 168 Notice of Requirement to Territorial Authority

Section 168(2) of the RMA states:

"A requiring authority for the purposes approved under section 167 may at any time give notice in the prescribed form to a territorial authority of its requirement for a designation—

(a) for a project or work; or ... "

# 8.2.3 Section 169 Further information, notification, submissions, and hearing for notice of requirement to territorial authority

In accordance with section 169 the territorial authority must decide whether to notify the NoR under sections 169(1A) or sections 149ZCB(1) to (4), 149ZCC(1) to (4), 149ZCE, and 149ZCF, which apply as per Section 169(1)(b)(iii) with all necessary modifications and as if a reference to the Minister or the EPA were a reference to the territorial authority.

# 8.2.4 Section 149 notification assessment

Section 149ZCB states:

(1) The Minister may, in his or her discretion, decide whether to require the EPA to publicly notify an application or a notice.

(2) Despite subsection (1), the EPA must publicly notify an application or a notice if—

(a) the Minister decides (under section 149ZCE) that the activity that is the subject of the application or notice will have, or is likely to have, adverse effects on the environment that are more than minor; or

(b) the applicant requests public notification of the application or notice; or

(c) a rule or national environmental standard requires public notification of the application or notice.

(3) Despite subsections (1) and (2)(a), the EPA must not publicly notify the application or notice if—

- (a) a rule or national environmental standard precludes public notification of the application or notice; and
- (b) subsection (2)(b) does not apply.

(4) Despite subsection (3), the EPA may publicly notify an application or a notice if the Minister decides that special circumstances exist in relation to the application or notice.

(5) ...

Public notification of the NoR is not required for the following reasons:

- Based on the assessment in Section 7 (above) the potential for adverse effects are considered to be less than minor.
- The applicant does not request public notification.
- No rule or national environmental standard requires public notification of the NoR.
- No special circumstances requiring notification exist.

# 8.2.5 Public notification of consent applications

When considering whether public notification is required resource consents under Section 95A, Section 95D of the RMA provides guidance to the consent authority in deciding if adverse effects are likely to be "more than minor" and states that a consent authority:

- (b) must disregard any effects on persons who own or occupy-
  - (i) the land in, on, or over which the activity will occur; or
  - (ii) any land adjacent to that land; and
- (c) may disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect;

In considering whether public notification is required, the effects on persons who own or occupy the road (such as the road controlling authorities) and persons on land adjacent to that land (e.g. owners of commercial property adjacent to the works area) must be disregarded. Written approval from the landowner of the following properties over which the Project will be constructed, which is shown on Figure 1-5 and discussed in Section 1.2.5 of this report, has been received for the Project:

- 114 Flanagan Road, Drury;
- 120 Flanagan Road, Drury; and
- 132 Flanagan Road, Drury.

The effects of the Project on the above listed properties are therefore disregarded.

In reaching a decision about notification in relation to the Project works, the consent authority should only take into account actual and potential effects from the change in effects when compared to the already consented SH1 Designation 6706.

SH1 Designation 6706 now forms part of the existing environment. As such, the construction, operation and maintenance of the wider P2DS project, including the Stage 1B1 and Stage 1B2 area, will be underway within the city and the consequential effects anticipated. The P2DS project works is required to construct, operate and maintain the Southern Motorway Auckland – Hamilton.

Given the changes in designation extent and locational changes of some components of Drury Interchange infrastructure (as described in Section 2 of this AEE), there are considered to be limited parties affected by the differences between the proposed works of the Project with that provided for under the existing SH1 Designation 6706.

Summarythe change in effects (being transportation, landscape and visual amenity, archaeology, noise and vibration and trees) of the Project works, beyond the adjacent sites, are not considered to be more than minor and generally accord with activities anticipated by the existing SH1 Designation 6706. Based on the assessment above, the proposed works and NoR application should be processed without public notification under section 95A of the RMA.

# 8.3 Limited Notification

# 8.3.1 Section 95B Assessment

Section 95B of the Act requires that if a consent authority does not publicly notify an application for a resource consent, it must follow the four steps set to determine whether to give limited notification of an application for resource consent. These steps and their applicability to the proposal are set out below.

Step 1: Certain affected groups and affected persons must be notified.

(2) Determine whether there are any-

(a) Affected protected customary rights groups; or

(b) Affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity)

(3) Determine-

(a) whether the proposed activity is on or adjacent to, or may affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11; and

(b) whether the person to whom the statutory acknowledgement is made is an affected person under section 95E.

(4) Notify the application to each affected group identified under subsection (2) and each affected person identified under subsection (3).

**Comment:** There are no protected Customary Rights Groups or Customary Marine Title Groups that are affected by the Project The Project is not on or adjacent to, or may affect any land that is subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11.

Step 2: If not required by Step 1, limited notification precluded in certain circumstances.

(5) Determine whether the application meets either of the criteria set out in subsection (6) and,-

(a) if the answer is yes, go to step 4 (step 3 does not apply); and

(b) if the answer is no, go to step 3.

(6) The criteria for step 2 are as follows:

(a) the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification:

(b) the application is for a controlled activity (but no other activities) that requires a resource consent under a district plan (other than a subdivision of land).

**Comment:** The application is for resource consents for one or more activities, however there are no rules within the AUP or a National Environmental Standards that preclude the limited notification of this application. Resource consents are being sought for the Project as a discretionary activity.

Step 3: If not precluded by step 2, certain other affected persons must be notified.

(7) In the case of a boundary activity, determine in accordance with section 95E whether an owner of an allotment with an infringed boundary is an affected person.

(8) In the case of any other activity, determine whether a person is an affected person in accordance with section 95E.

(9) Notify each affected person identified under subsections (7) and (8) of the application.

#### Comment:

This application is not for the purposes of a boundary activity or a prescribed activity.

Overall, the assessment of environmental effects in Section 7 of this report has evaluated the actual and potential effects of the Project to be **less than minor** on the environment and on any potentially affected person(s).

Kiwi Property is the primary land holder in the area works will be undertaken, and have been key party engaged throughout the design and consenting process as detailed in Section 6 (above). Written approval has been provided by Kiwi Property is support of the Project attached at **Appendix S**.

## Step 4: further notification in special circumstances

(10) Determine whether special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons), and,—

(a) If the answer is yes, notify those persons; and

(b) If the answer is no, do not notify anyone else

#### 8.3.2 Section 149ZCC Assessment

In terms of assessing limited notification for the NoR, S149ZCC states that:

(1) If the Minister decides not to require the EPA to publicly notify an application or a notice, the Minister must, in relation to the activity,—

(a) decide if there is any affected person (under section 149ZCF); and

(b) identify any affected protected customary rights group or affected customary marine title group.

(2) The EPA must give limited notification of the application or notice to any affected person unless a rule or national environmental standard precludes limited notification of the application or notice.

(3) The EPA must give limited notification of the application or notice to an affected protected customary rights group or affected customary marine title group even if a rule or national environmental standard precludes public or limited notification of the application or notice.

(4) In subsections (1) and (3), the requirements relating to an affected customary marine title group apply only in the case of applications for accommodated activities.

## (5) ...

Section 149ZCF states a person is an affected person, in relation to an activity, if the adverse effects of the activity on the person are minor or more than minor (but are not less than minor). Based on the assessment undertaken at Section 7 (above) the potential adverse effects of the NoR are considered to be less than minor.

Limited notification of the NoR is not required for the following reasons:

- Based on the assessment in section 5 previous the potential adverse effects are considered to be less than minor. As such, in accordance with section 149ZCF there are no adversely affected parties.
- There are no affected protected customary rights groups or affected customary marine title groups.

The only private landowner within the Project alignment is Kiwi Property whom have provided written approval in Appendix S.

# 8.4 Notification Conclusion

Based on the assessment above, it is considered that the application for NoR and Resource Consents should be processed without public or limited notification.

## Comment:

There are no special circumstances in relation to limited notification that are considered to apply to the application based on the conclusions already reached within this notification assessment.

# 8.5 Notification Conclusion

In summary, the proposed activities described in Section 4 of this application will have actual and potential effects on the environment that will be appropriately avoided, remedied or mitigated such that the effects of the Project are less than minor in nature. Given the above assessment of notification, it is concluded that the Project will not trigger the public or limited notification requirements under the Act and can proceed on a <u>non-notified basis</u>.

# 9 STATUTORY ASSESSMENT

# 9.1 Introduction

This section of the AEE assesses the Project against the key provisions of the RMA and comments on other relevant legislation.

# 9.2 Resource Management Act 1991

# 9.2.1 Part 2 Purpose and Principles (Section 5 to 8)

Part 2 of the RMA outlines the purpose and principles of the RMA. The purpose of the RMA, as set out in Section 5 of the RMA, is to promote the sustainable management of natural and physical resources. While the provisions in the AUP have already given effect to Part 2 as set out above and those provisions appropriately give effect to Part 2, it is also noted for completeness that the Project is consistent with Part 2.

In accordance with Section 5(2) of the RMA, the Project provides for people's social and economic wellbeing by providing increased capacity, efficiency travelling on SH1 and accessing Drury Centre. SH1 currently experiences congestion, particularly during peak times of the day given that the road is the major route to and from Auckland, south of the City. The Project will also sustain the potential of natural and physical resources in part utilising an existing infrastructure corridor to meet the reasonably foreseeable needs of future generations whilst not materially affecting the life-supporting capacity of air, water soils and ecosystems.

The actual and potential effects of the Project, both positive and adverse, on the environment are set out in Section 7 of this report. The assessment concludes that the adverse effects of the Project will be less than minor. The potential adverse effects associated with construction will be temporary in nature and can be managed via the measures outlined in Section 7 of this report and with the implementation of appropriate conditions.

In regard to operational effects of the Project on the environment, the proposed stormwater design will provide a positive effect as it will treat runoff that is not currently treated. This will have benefits to the receiving environments into which the stormwater is discharged including freshwater. Consequently, the ecological and biodiversity values of this area will increase.

## 9.2.2 Section 6, 7 and 8

Section 6 of the RMA identifies matters of national importance which will be 'recognised and provided for'. Section 7 of the RMA identifies other matters which 'will be had regard to' under the RMA. With regard to the Project, the following Section 6, 7 and 8 matters are considered to be of relevance:

"6(a) the preservation of the natural character of the rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

6(d) the maintenance and enhancement of public access to and along the rivers:

6(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:

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

7(a) kaitiakitanga:

7(aa) the ethic of stewardship

7(b) the efficient use and development of natural and physical resources:

7(c) the maintenance and enhancement of amenity values:

7(d) intrinsic values of ecosystems:
7(f) maintenance and enhancement of the quality of the environment:"

In addition, Section 8 of the RMA requires "all persons exercising functions and powers" under the Act to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

In terms of Section 6(a) matters, the changes proposed by the Project will also lead to new stormwater treatment being installed which will result in higher quality discharges to improve the localised environment.

As per the conclusions of the Archaeological Assessment there is no impact on any historic heritage in accordance with Section 6(f).

The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, has been recognised and provided for in accordance with Section 6(e) through appropriate consultation during the design development of the Project. Section 6 (above) outlines the proposed design amendments undertaken as a part of consultation process, including amendments to the stormwater outfall design, and channelling of a overland flow path.

The Project seeks to construct an additional access ramp from the southbound lane of the SH1 motorway to provide a direct connection to future planned development at Drury Centre Precinct which is considered to be an efficient use of resources in accordance with 7(b). Particular regard to the intrinsic values of ecosystems and enhancement of the quality of the environment has occurred, in accordance with Section 7 (d) and 7(f).

The potential ongoing effects from the operation of the Project, such as the discharge of stormwater will be managed in a way that will enhance the quality of the environment and have regard to the intrinsic values of ecosystems, particularly the Hingaia Stream, in accordance with sections 7(d) and (f). The Project is also proposed to have positive effects with regard to the value of the ecosystem adjacent to Hingaia Stream and along the new road corridor with the replacement planting proposed.

A Contamination Land Assessment and CSMP have been prepared (**Appendix O**) and conclude that any actual and potential effects on human health and the environment associated with contaminated land will be less than minor with the implementation of the CSMP. Therefore, the maintenance and enhancement of the quality of the environment in accordance with Section 7(f) of the RMA have been appropriately considered.

With respect to Section 8 of the RMA, a core principle of the Treaty is partnership. Waka Kotahi has established a collaborative working relationship with Mana Whenua throughout the stages of the adjacent P2DS project and more recently with respect to the Project, as outlined in Section 6 above, therefore the Project is considered to be consistent with Section 8 of the RMA.

#### 9.2.3 Section 9 to 16

Section 9(1) of the RMA restricts the use of land that contravenes a national environmental standard. A resource consent under the NES:CS for the disturbance of potentially contaminated land is sought for the Project. Sections 10, 10A and 20A of the RMA are not applicable.

Section 9(2) of the RMA restricts the use of land that contravenes a regional rule. The Project seeks resource consent under Chapters E9, E10, E26 and E36 of the AUP:OP. The permitted activities for the Project under Chapters H22, D26, E9 and E26 are contained in **Appendix I**.

Section 13 of the RMA places restrictions on the use of the beds of lakes and rivers. Resource consent is not sought under Chapter E3 of the AUP for the Project. No activities under Section 13 contravene a National Environmental Standard in accordance with Section 13(2).

Section 14 of the RMA places restrictions on water. No land use consents are required pursuant to Section 14. The permitted activities for the Project under Chapters E7 and E36 are contained in **Appendix I**.

Section 15 of the RMA places restrictions on the discharge of contaminants. A construction and operational resource consent under Chapters E8 and E30 of the AUP is sought for the Project. The permitted activities for the Project under Chapters E4, E8 and E14 are contained in **Appendix I**.

### 9.3 Section 104 and 107

Section 104 of the RMA states that, in considering an application for resource consent, the consent authority must, subject to Part 2, have regard to:

- The actual and potential effects on the environment of allowing the activity (Section 104(1)(a));
- Any measure proposed or agreed 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;
- The relevant provisions of any national standard, other regulation, national policy statement, coastal policy statement, regional policy statement or proposed regional policy statement, plan or proposed plan (Section 104(1)(b)); and
- Any other matters considered relevant or necessary to consider (Section 104(1)(c).

Relevant Part 2 matters in relation to the Project are discussed in Section 9.2.1. As noted in that section, Part 2 has been given effect to through the relevant provisions in the AUP so recourse to Part 2 is not strictly necessary. However, for completeness it is also noted that the application is consistent with the principles encapsulated in Part 2.

The actual and potential effects associated with the Project have been assessed in Section 7 of this document. It is considered that the actual and potential adverse effects of the Project are able to be appropriately avoided and mitigated and are, overall, less than minor. Consent conditions will incorporate the recommendations of technical specialist reports appended to this application. Through the implementation of these conditions, it is considered that any potential adverse effects can be appropriately managed.

Given the requirements of section 104(1)(b), relevant statutory documents need to be assessed in relation to the activities for which resource consents are being sought. On this basis, the statutory documents of relevance to this application, which are assessed in Section 9, are:

- NES-CS, and;
- AUP.

Section 9 concluded that the Project is consistent with the relevant provisions of the statutory documents above.

Section 104(1)(c) enables the consent authority to consider "other matters". It is to be noted that the Project is being driven by Waka Kotahi's project objectives to improve the efficiency and resilience of Drury Interchange whilst increasing the transport choice and accessibility. The Project will support economic growth and the movement of people and freight at a regionally significant level, particularly within the Drury Centre Precinct area.

The overall activity status for the activities requiring resource consent is a Discretionary Activity.

### 9.4 Section 108

In accordance with Section 108 of the RMA, resource consent conditions will be provided to Council. The conditions will be based on the recommendations set out in the technical assessments.

### 9.5 Notice of Requirement Matters

#### 9.5.1.1 Recommendation on Notice of Requirement by a Territorial Authority (Section 171)

Section 171(1) of the RMA specifies those matters a territorial authority must have particular regard to, subject to Part 2, when considering the effects on the environment of the requirement. The relevant assessment matters of section 171 are outlined below:

#### Section 171(1)(a) - The relevant provisions of any policy statement or plans

The relevant policy statements and plans are discussed further at **Appendix K** of this AEE.

# <u>Section 171(1)(b)</u> - Whether adequate consideration has been given to alternative sites, routes, or methods of <u>undertaking the works</u>

A summary of the alternatives considered is contained in Section 5 of this AEE. It is considered that adequate and robust consideration has been given to the reasonable alternatives.

<u>Section 171(1)(c)</u> - Whether the work and designation are reasonably necessary to achieve the objectives of the requiring authority (stated in Section 1 of this AEE)

The NoR will confirm Waka Kotahi's ability to construct a key component of the Drury Interchange which forms an adjacent part of an enhanced wider Southern Motorway Corridor Upgrades (P2DS). The NoR is in accordance with the Project's objectives stated in Section 1.2.3 and Waka Kotahi's objectives as described in Section 1.2.4.

The NoR is reasonably necessary to achieve the following in respect of the Project Objectives:

- Improve safety and reliance of the state highway network at Drury Interchange.
- Enable urban development and economic growth within South Auckland.
- Increase accessibility and transport choice to Drury Centre Precinct and in the immediate area.
- Reduce traffic on the local road network, namely SH22, to enable traffic to access destinations further south while bypassing Drury Centre.

As detailed in Section 5 (above), the Project has been anticipated under several high-level statutory documents. The specific design of the alignment has been determined via a comprehensive design process, which has included engagement with Mana Whenua. The dimensions of the proposed NoR have been tailored to facilitate the construction of the new road, while affording a degree of flexibility to accommodate potential amendments during the detailed design phase. The inclusion of an extrusion to the designation boundary accommodates for a stormwater outfall, which connects to the Hingaia Stream. This allows the Project to adequately mitigate the generated runoff from the Project. Overall, it is considered that the proposed NoR is reasonably necessary to achieve the purpose an function of the SH1 corridor.

# <u>Section 171(1)(d)</u> - Relevant "other matters" that the territorial authority consider reasonably necessary in order to make a recommendation on the requirement

These include the Auckland Plan and other statutory and non-statutory planning policy documents which are discussed in Section 9 of this AEE.

#### 9.5.1.2 Summary of Planning Documents and Statutory Assessment

The NoR works have been assessed against the key provisions of the RMA, other relevant legislation and against the relevant statutory policy statements and plans.

Other relevant legislation and documents considered are as follows:

- Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA)
- Local Government (Auckland Council) Act 2009 (LGACA)
- Land Transport Management Act 2003 (LTMA)
- Auckland Plan
- Auckland Long-Term Plan 2015-2025 (LTP)
- Auckland Transport Alignment Project 2021-2031 (ATAP)

In regard to the Auckland Regional Policy Statement (ARPS), this section of the AUP:OP are subject to a plan change and as such consideration has been given to both the operative and proposed documents.

The NoR must have particular regard to National Policy Statements and must not contravene National Environmental Standards unless resource consent is obtained.

Based on the above the following statutory policy statements and plans have been assessed with regard to this NoR:

- Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS), and;
- AUP: OP

Overall, the assessment of the NoR against the relevant provisions of the RMA, including Part 2, policy statements and plans, relevant statutory and non-statutory documents has concluded that the NoR is generally consistent with the purpose and principles of the RMA, and key policy documents. Various non-RMA statutory documents identify the Project, of which the NoR is a key component, as a priority project with significant benefits for transport connections to Drury Centre Precinct.

The proposed alteration to Designation 6706 and associated work is necessary to achieve the Project objectives. Adequate consideration has been given to alternative sites, routes and methods, confirming the necessity for the NoR, as discussed in Section 5 of this AEE. The potential adverse effects of the Project are generally associated with construction and are temporary in duration, or can be managed and mitigated such that overall, the NoR meets the purpose and principles of the RMA.

The main conclusions of the statutory planning assessment are:

- The NoR is generally consistent with (where required) the relevant objectives and policies of the RMA and non-RMA planning documents.
- Any potential adverse effects on the environment resulting from the NoR can be adequately avoided, remedied, or mitigated.
- The NoR provides for, and will respond to the matters in sections 6, 7 and 8 of the RMA.

Finally, the works associated with the NoR are an essential component of the Drury Interchange Upgrade and is consistent with and seeks to further implement the objectives of the overall confirmed Designation 6706.

### 9.6 Relevant Planning Documents

#### 9.6.1 Introduction

This section of the AEE assesses the Project against the relevant provisions of the following statutory policy statements and plans:

- NPS-FM;
- NES-CS; and,
- AUP:OP

The following assessment demonstrates that the Project is consistent with the relevant planning documents in accordance with sections 104(1)(b) and 104B of the RMA. A comprehensive assessment the objective and polices under the AUP is included in this application at **Appendix K**.

#### 9.6.2 National Policy Statement for Freshwater Management 2020

The NPSFM is a part of the management of freshwater, promoting the concept of Te Mana o te Wai and is relevant to all freshwater management.

The stormwater management system and mitigation measures align with the objectives of the NPS-FM. By implementing measures such as native riparian planting and erosion control, the Project ensures the protection and enhancement of freshwater ecosystems and water quality. Overall, the Project is consistent with the NPS-FM.

This section assesses the Project against the objectives and policies of the NPS-FM. The Project will establish new stormwater treatment devices to improve the quality and manage the quantity of stormwater within the Project.

The NPS-FM is a part of the management of freshwater, promoting the concept of Te Mana o te Wai and is relevant to all freshwater management. The concept of Te Mana o te Wai refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community. The Project is "specified infrastructure", as defined under clause 3.21 of the NPSFM, as it is a component of infrastructure that delivers a service operated by a lifeline utility, as defined in the Civil Defence Emergency Management Act 2002.

Objectives and policies of the NPS-FM that are relevant to the Project are:

- Objective 1: Ensure that natural and physical resources are managed in a way that prioritises: health and wellbeing of water bodies and freshwater ecosystems, the health needs of people and the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.
- Policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai
- Policy 2: Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.
- Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.

The Project is consistent with Objective 1, Policy 1 and Policy 3 as it will manage natural and physical resources in a way that prioritises the health and well-being of freshwater bodies and ecosystems and the ability of people and communities to provide for their social, economic and cultural well-being now and in the future:

- During construction, the potential risk of sediment disturbances leading to runoff, causing elevated turbidity downstream, can be largely mitigated at source through implementation of erosion and sediment control measures set out in a Site Specific Erosion and Sediment Control Plan (SSESCP) to minimise sedimentation and protect water quality in the Hingaia Stream. Replacement planting with appropriate native vegetation in the cleared riparian areas will provide additional ecological benefits of enhancement of indigenous biodiversity and ecological functioning of area.
- The proposed re-planting will result in a positive improvement to the biodiversity within the riparian yard of the Hingaia Stream. This will contribute to the maintenance of freshwater environments over time.

Engagement with Mana Whenua for the Project design and consenting phase is regular and ongoing as detailed in Section 6.1.1 of this report. The design elements, stormwater management and overall outcomes of the Project were discussed in hui. This is consistent with Policy 2 of the NPS-FM.

Based on the assessment above, the Project is consistent with the NPSFM.

#### 9.6.3 National Policy Statement on Urban Development 2020

This section assesses the Project against the relevant objectives and policies of the NPSUD.

The Project will provide for an enhanced transport network through providing a direct vehicle connection to Drury Centre, and integration with other projects in the area such as the Drury / Maketuu Railway Station and the wider P2DS Project that includes upgrades to the Drury Interchange. The Project provides infrastructure that is resilient to the effects of climate change, increases community connectivity and enhances accessibility, and has been designed in partnership with Mana Whenua through the Drury Access Ramp Mana Whenua Forum.

The Project is consistent with the NPSUD.

The NPSUD was gazetted on 23 July 2020, came into force on 20 August 2020, replacing the National Policy Statement on Urban Development Capacity 2016. The NPSUD requires councils to plan for growth and ensure a well-functioning urban environment for all people, communities and future generations. The NPSUD provides direction to make sure capacity is provided in accessible places, helping New Zealanders build homes in the places they want, such as being close to jobs, community services, public transport, and other amenities our communities enjoy.

There are a range of objectives and policies within the NPSUD that are relevant to the Project. Part of the purpose of the NPSUD relates to ensuring development capacity is enabled in locations that meet the diverse needs of communities and encourages well-functioning, liveable environments. Drury Centre Precinct is an area of future growth and development in which the Project will support multi-modal transport infrastructure which allows for people and communities to provide for their social, economic and cultural wellbeing. As detailed in this Report, the Project is anticipated under the Drury Centre Precinct Plan, which requires a direct SH1 connection to be constructed to allow for later stages of urban development capacity within Drury Centre. The Project will provide for this enhanced transport network through direct connection to Drury Centre via SH1 that will result in safer local road networks, increased choice in active transport modes through supporting the construction of a portion of the planned SUP that will connect Drury Centre Precinct and Maketuu/Drury Railway Station, and integration with the planned town centre for which people can meet their social, economic and cultural well-being.

In order to meet the diverse needs of communities, the Project has been designed in consultation with the local iwi groups in the southern area of Auckland and developers in the immediate area. The regular hui with Mana Whenua through the Drury Access Ramp Mana Whenua Forum ensure that local iwi groups are active participants in the design of the Project and fully involved in the preparation of the Project.

Based on the assessment above, the Project is consistent with the NPSUD.

#### 9.6.4 National Policy Statement on Indigenous Biodiversity 2023

This section assesses the Project against the relevant objectives and policies of the NPSIB.

The Project will maintain indigenous biodiversity across the Project area through native replacement planting, mitigation measures during land disturbance of the construction phase, and treatment of stormwater runoff prior to discharging into Hingaia that will maintain biodiversity and ecological function of the area. The Project provides for tangata whenua to exercise kaitiakitanga for indigenous biodiversity in their rohe through the development of the Drury Access Ramp Mana Whenua Forum that enable active participation in the Project's design and decision-making about indigenous biodiversity.

The Project is consistent with the NPSIB.

The NPSIB was gazetted on 7 July 2023 and came into force on 4 August 2023. The NPSIB prioritises the mauri and intrinsic value of indigenous biodiversity and recognises people's connections and relationships with indigenous biodiversity. The NPSIB requires the set decision-making principles be taken into account for its implementation which include: prioritise the mauri, intrinsic value and wellbeing of indigenous biodiversity, take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), recognise the role of people and communities (including landowners) as stewards of indigenous biodiversity and form strong and effective partnerships with tangata whenua.

There are a range of objectives and policies within the NPSIB that are relevant to the Project. In areas where indigenous species are to be removed for the development of the Project, replacement planting will be implemented to maintain indigenous biodiversity in the environment so that there is at least no overall loss in indigenous biodiversity after the commencement date of the Project. Potential risk of sediment disturbances during construction phase of land disturbance leading to runoff to Hingaia Stream will be mitigated at source through implementation of erosion

and sediment control measures set out in a Site Specific Erosion and Sediment Control Plan (SSESCP), which will protect indigenous biodiversity and ecological functioning of Hingaia Stream while providing for the social, economic and cultural wellbeing of people and communities now and in the future within Drury Centre Precinct area. Once operational, the proposed new stormwater quality treatment devices will also achieve the same objectives and policies of the NPSIB.

In order to ensure tangata whenua as kaitiaki able to exercise kaitiakitanga for indigenous biodiversity in their rohe, the Project has been designed in consultation with the local iwi groups in the southern area of Auckland through the development of the Drury Access Ramp Mana Whenua Forum. The design elements, stormwater management and overall outcomes of the Project were discussed with the Forum that ensures active participation of tangata whenua in decision-making of the Project in relation to indigenous biodiversity.

The Project is therefore consistent with the NPSIB.

#### 9.6.5 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011

The NES-CS establish planning controls and guidelines for activities on land affected by soil contaminants. The NES-CS ensures the identification, assessment, and remediation of contaminated land to safeguard human health and the environment. The Project has undergone a Preliminary Site Investigation (PSI) at **Appendix R** and will undertake further sampling in specific areas to understand the risk profile. Consent is required for earthworks as a precautionary measure until the Detailed Site Investigation (DSI) is completed, ensuring proper management of potential risks. This section assesses the Project against the purpose of the NES-CS. Earthworks will be required for the Project within potential HAIL sites, which will be managed by appropriate mitigation measures and management plans implemented during construction.

The NES-CS came into effect on 10 October 2011. The NES-CS identifies permitted activities and resource consent requirements for certain activities on land affected or potentially affected by contaminants in soil. The purpose of the NES-CS is to:

- Provides a nationally consistent set of planning controls and soil contaminant values; and
- Ensures that land affected by contaminants in soil is appropriately identified and assessed before it is developed and if necessary the land is remediated, or the contaminants contained to make the land safe for human use.

The NES-CS identifies permitted activities and resource consent requirements for certain activities on land affected or potentially affected by contaminants in soil. Regulation 5(7) of the NES-CS states that these regulations apply to land where an activity or industry scheduled in the HAIL is being, or has been, undertaken on that land.

A PSI has been undertaken in accordance with Regulation 6(3) which has informed the Site Contamination Assessment and the CSMP (Appendix F). The PSI has identified a number of locations adjacent the Project area where there has been an activity or industry listed in the HAIL undertaken either currently or historically. Further sampling of one particular site (the NIMT and HAIL G5 area within Karaka Reserve) will be undertaken in accordance with Regulation 8(2) as part of the preparation of a DSI during the detailed design phase, if foundation piling intercepts these two areas to understand the risk profile and to inform reuse / disposal of soil surplus to requirement for the construction.

Land use consent is required under Regulation 11 of the NES-CS as a precautionary measure to allow earthworks to continue due to the possibility that contaminants may have migrated into the Project works area from the potential HAIL sites adjacent. Consent is required as a discretionary activity due to the absence of the DSI at the time of writing. The CSMP is proposed to be updated following receipt of the results of the DSI (if required) to accurately reflect the soil management protocols that will be implemented to ensure that all potential risks (to human health and the environment) will be appropriately managed.

#### 9.6.6 Auckland Unitary Plan (Operative in Part) 2016

#### 9.6.6.1 Chapter B – Regional Policy Statement

The Auckland Regional Policy Statement (RPS) is contained in Chapter B of the AUP and contains nine issues of regional significance for resource management in Auckland. An assessment of the relevant objectives and policies of Chapter B3, B6, B7 and B10 is summarised in the section below.

#### 9.6.6.1.1 Chapter B2 Tāhuhu whakatutuhau ā-taone – Urban growth and form

Chapter B2 Tāhuhu whakatutuhau ā-taone – Urban growth and form focusses on managing growth to meet Auckland's growing population that increases demand for housing, employment, business, infrastructure, social facilities and services. The following relevant objectives and policies under Chapter B2 have been identified:

- Objectives B2.2.1(1), B2.2.1(5), B2.3.1(1) and B2.5.1(2)
- Policy B2.3.2(1) and B2.3.2(2)

The Proposal is consistent with Objective B2.2.1(1), B2.2.1(5) and B2.5.1(2) by providing efficient new infrastructure that is well-integrated with the development of Drury Centre Precinct area where commercial growth and activities are planned thereby supporting a compact urban growth. Objective B2.3.1(1) is met through the connection that the Project enables between Drury Centre and people from the wider Auckland region via SH1 to the diverse mix of choice and opportunities available within the planned town centre.

The Proposal supports the planned future environment and contributes to the safety of the neighbourhood in Drury Centre Precinct area by providing direct vehicle access from SH1 which will reduce traffic volumes on local road networks therefore creating safer environment for walking, cycling and use of public transport in accordance with Policy B2.3.2(1) and B2.3.2(2). The proposed new stormwater quality treatment devices will ensure that adverse effects of discharges of contaminants from the Proposal are minimised, which meets Policy B2.3.2(2).

# 9.6.6.1.2 Chapter B3 Ngā pūnaha hanganga, kawekawe me ngā pūngao - Infrastructure, transport and energy

Chapter B3 Ngā pūnaha hanganga, kawekawe me ngā pūngao - Infrastructure, transport and energy focusses on the management and investment of infrastructure, considering the impact on the environment, well-being of people, and the region's crucial role in New Zealand's economy. The following relevant objectives and policies under Chapter B3 have been identified:

- Objectives B3.2.1(1), B3.2.1(2), B3.2.1(3), B3.2.1(4) and B3.2.1(8)
- Policy B3.2.2(1)

The Proposal is consistent with Objective B3.2.1(1), B3.2.1(2) and B3.2.1(8) by integrating with the approved P2DS (Stages 1B1 and 1B2) Project, ensuring infrastructure is robust and manages potential adverse effects. This includes the vegetation removal necessary for the construction of stormwater management devices and ripraps to ensure runoff from parts of SH1 is adequately treated prior to discharge into the Hingaia Stream.

Objective B3.2.1(4) is addressed through the Proposal's recognition of the functional and operational needs of infrastructure. The Project aims to improve transport connectivity by providing direct access between strategic transport corridors and urban growth areas. The motorway off-ramp will enhance accessibility to the Drury Centre Precinct, facilitating efficient transportation and supporting the planned urban development in the area. It will contribute to achieving the objective of improved transport connectivity outlined in the AUP.

#### 9.6.6.1.3 Chapter B6 – Issues of significance to Mana Whenua

The objectives and policies of Chapter B6 recognise the role of Mana Whenua as kaitiaki and provides for integration of mātauranga Māori and tikanga into resource management processes. Of particular importance to the Project is Objective (1) and (2) and Policy (1) which recognise the principles of the Treaty of Waitangi and seek Mana Whenua

participation and engagement in resource management processes and the sustainable management of natural and physical resources. Mana Whenua consultation undertaken has been outlined in Section of this application.

Policy B6.3.2(3) seeks to ensure that any assessment of environmental effects for an activity that may affect Mana Whenua values includes an appropriate assessment of adverse effects on those values. With respect to the Project, works are consistent with the objectives and associated policies of Chapter B6.

#### 9.6.6.1.4 Chapter B10 – Environmental risk

Section B10.4 contains objectives and policies in relation to contaminated land which seek to identify, assess, manage contaminated land, and where necessary, remediated to minimise risks to public health and the environment. As outlined in Section 7, a DSI will be required to identify the potential contaminated land identified within the Project area, and a CSMP has been undertaken outlining the soil management protocols that will be implemented and will ensure that all potential risks associated with contaminated land will be appropriately managed.

#### 9.6.6.2 Chapter E – Auckland-Wide

Provisions within Chapter E of the AUP provides Auckland-wide provisions that apply to the use and development of natural and physical resources across Auckland regardless of the zone in which they occur. An assessment of the objectives and policies within Chapter E which are most relevant to the Project are summarised below, a comprehensive assessment the objective and policies under the AUP is included at **Appendix K**.

#### 9.6.6.2.1 Chapter E10 – Stormwater Management Area – Flow 1

Chapter E10 contains a single Objective E10.2.1 which seeks to enable development of impervious areas whilst protecting and, where possible enhancing, Auckland's rivers, streams and aquatic biodiversity in urban areas from the changes in hydrology as a result of the development.

The stormwater management proposed for the Project seeks to minimise any adverse effects of run off from impervious areas. Stormwater hydrology mitigation is proposed for the new and redeveloped impervious surface areas in accordance with the outcomes sought for the Stormwater Management Area Control Flow 1 overlay and the High Use Road requirements in conjunction with the relevant Council guideline documents in accordance with Policy E10.3(2). SH1 stormwater runoff currently does not have any formal treatment prior to discharge, and therefore the proposed works will provide a net benefit to the quality of the water being discharged in accordance with Policy E10.3(1). On this basis, it is considered that the proposed stormwater management is consistent with the objectives and policies of Chapter E10.

#### 9.6.6.2.2 Chapter E15 – Vegetation management and biodiversity

Chapter E26.3 provides for vegetation management in respect of network utilities. The following relevant objectives and policies have been identified:

- Objectives E15.2(1) and E15.2(2)
- Policies 15.3(1), E15.3(2), E15.3(5), E15.3(6) and E15.3(7)

Objective E15.2(1) ensures the maintenance or enhancement of ecosystem services and indigenous biological diversity values. This is supported by Policies 15.3(2) and Policy 15.3(5). Once The Proposal is operational, the new stormwater streatment devices and ripraps will have positive ecological benefits by reducing the risk of erosion and scour in the Hingaia Stream, and providing treatment of stormwater runoff. Additionally, the design of the riprap chutes has been aligned so that the structure and discharge generally matches the direction of the flow in the Hingaia Stream.

Objective E15.2(2) and Policy 15.3(6) seeks to restore and enhance areas where ecological values are degraded, or where development is occurring. The proposed replacement plantings will enable opportunities for new tree species, specimen selection, and planting locations. The improved tree locations and replacement of weed species with native trees will result in positive arboricultural effects.

Policy E15.3(1) protects areas of contiguous indigenous vegetation cover and vegetation in sensitive environments. The Proposal will not result in loss of contiguous indigenous vegetation cover. The Project have been specifically designed to not result in loss of contiguous indigenous vegetation cover.

Policy 15.3(7) manages the potential adverse effects of development while recognising that it is not always practicable to locate or design infrastructure to avoid areas with indigenous biodiversity value. The Proposal has been designed to minimise potential adverse effects on the Hingaia Stream and native vegetation, and to integrate with the approved Stage 1B1 approvals.

#### 9.6.6.2.3 Chapter E26 – Infrastructure

Chapter E26 recognises that infrastructure is critical for the social, economic and cultural wellbeing of people and communities but that it can also result in a range of adverse effects on the environment, visual amenity of an area and public health and safety. E26.3 (Vegetation management) and E26.5 (Earthworks) are of relevance to the Project.

Objectives and policies in E26.3 refer back to those set out in Chapter E15 Vegetation management and biodiversity in the AUP. Objective E15.2 and Policy E15.3 require to manage adverse effects from development of infrastructure, recognising that it is not always practicable to locate or design infrastructure to avoid areas with indigenous biodiversity values. The Project proposes to remove pest plant species which will have a positive effect for the wider environment. In areas where indigenous species are to be removed for the development of the proposed infrastructure, replacement planting will be implemented to restore and maintain indigenous biodiversity in the environment.

Objectives and policies in E26.5 refer back to those set out in Chapter E11 Land disturbance – Regional. All effects from the proposed earthworks, as discussed in Section 7.3.1 of this report, have been assessed to be temporary and less than minor. Mitigation measures are proposed to ensure that land disturbance is undertaken in a manner that protects the safety of people and any adverse effects are minimised, in accordance with Objective E11.2. Land disturbance is necessary for the development of the proposed infrastructure that will provide for people and communities social, economic and cultural well-being, and their health and safety in accordance with Policy 11.3(4) as the proposed ramp will improve the safety of Drury Interchange and enable better connection for people to Drury Centre where opportunities for business and economic growth are located.

#### 9.6.6.2.4 Chapter E30 – Contaminated Land

Objective E30.2(1) and Policy E30.3(2) require that discharge of contaminants into air, or into water, or onto or into land are managed to protect the environment and human health to enable land to be used for suitable activities now and into the future. These objectives and policies are also relevant to the NES-CS. As outlined in Section 8, as a CSMP (Appendix F) has been prepared outlining the soil management protocols that will be implemented and will ensure that all potential risks associated with contaminated land will be appropriately managed. The CSMP will be updated if required following a DSI on the potentially contaminated sites if the Project disturbs those sites, which will provide further detail and will further refine those protocols. On this basis, it is considered that the Project is consistent with the objectives and policies of Chapter E30.

### 9.7 Matters of Discretion

The overall activity status for the resource consent application is **Discretionary**. Activities with a Discretionary Activity status in Chapters E30 of the AUP do not have any special information requirements.

### 9.8 Summary

Based on the assessment in this report the Project is consistent with the policy direction of the relevant planning documents, being the NES-CS and AUP.

An assessment of the effects of the Project on the environment detailed at Section 8 concluded that, with the proposed mitigation, these effects will be less than minor. This has been achieved through the design of the Project in order to avoid (in the first instance), remedy or mitigate any actual and potential adverse effects that affect freshwater ecology, stormwater, transport, amenity and existing infrastructure.

Any discharges into freshwater receiving environments from the construction and operation of the proposed stormwater outfall will be subject to treatment prior to stormwater discharge (which results in better outcomes than what is provided by the current situation). Effects, such as those relating to earthworks, contaminated land, and construction water will be mitigated and managed through the implementation of appropriate conditions.

Overall, the Project will provide for community benefits including improved health, social cohesion and economic prosperity through the investment in strategic infrastructure, providing travel choice while also enabling development within Drury Centre Precinct. For the reasons above, it is considered that Drury Access Ramp is consistent with the identified objectives and policies of the relevant planning documents and that the applications for resource consent should be granted, subject to appropriate conditions.

# **10 CONCLUSION**

Waka Kotahi NZ Transport Agency seek resource consents and confirmation of the NoR (for the alteration of SH1 Designation 6706), to authorise the construction, operation and maintenance of the Project.

The proposed permanent work upgrades include the addition of an additional southbound off-ramp located at Drury Interchange to accommodate a direct traffic connection to Drury Centre, construction of a bridged viaduct, and stormwater upgrades within the Project area.

There are positive effects associated with Project works such as, improved transport connections by providing direct access to Drury Centre, thus enabling urban development potential, and reducing traffic on the local roading network. Additionally, adding to the overall efficiency of the state highway network at Drury Interchange.

The proposed mitigation measures described in detail within the application will ensure that potential adverse effects on the environment are appropriately avoided, remedied and mitigated to the extent they are less than minor. Any potential effects as a result of the Project works are considered appropriate in the context of the designation and are an efficient use and upgrade of an existing resource.

Overall, the Project will result in benefits to communities including improving travel time reliability, reducing traffic demand on SH22 Great South Road, and supporting economic growth in Drury Centre Precinct.

The proposed works of the Project are consistent with the purpose of the underlying designation and are also consistent with the policy direction of the relevant planning documents being the NES-CS and AUP. The Project is aligned with the purpose of the RMA as it enables people to provide for their social wellbeing, while avoiding and mitigating any adverse effects through a comprehensive range of design and mitigation measures proposed.

The application requires resource consent as a **Discretionary Activity**. All resource consents sought in this application can therefore be considered for determination by the decision maker pursuant to sections 104B and s104, and subject to appropriate consent conditions. The proposed conditions contain a suite of management plans and monitoring schemes which will appropriately mitigate and manage the potential and actual effects during construction and operation of the Project.

# APPENDICES

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# **APPENDIX A – PROJECT OBJECTIVES**

### **Government Policy Statement on Land Transport**

The GPS (2020) contains four strategic priorities, each containing individual objectives:

- Safety:
  - Objective: Developing a transport system where no-one is killed or seriously injured.
- Better Travel Options:
  - Objective: Providing people with better transport options to access social and economic opportunities.
- Climate Change:
  - Objective: Developing a low carbon transport system that supports emissions reductions, while improving safety and inclusive access.
- Improving Freight Connections:
  - Objective: Improving freight connections for economic development.

## Waka Kotahi Project Outcomes

Waka Kotahi's desired outcomes for the Project are:

- To provide greater accessibility to future urban development at Drury Centre.
- To ensure greater transport capacity for the southern motorway and reduce dependence on local roading network.
- The prompt lodgement of robust NoR documentation able to withstand challenge.
- The key outcomes are consistent with the strategic direction of the GPS which are safety, access, environment and value for money.

**APPENDIX B – WORKING DRAWING SET** 

**APPENDIX C – DESIGN AND CONSTRUCTION REPORT** 

**APPENDIX D – STORMWATER AND HYDROLOGY REPORT** 

**APPENDIX E – GROUNDWATER ASSESSMENT REPORT** 

# APPENDIX F – CONSTRUCTION WATER EROSION AND SEDIMENT CONTROL ASSESSMENT REPORT

**APPENDIX G – ARBORICULTURAL ASSESSMENT REPORT** 

# APPENDIX H – LANDSCAPE AND VISUAL EFFECTS ASSESSMENT REPORT

# APPENDIX I – PERMITTED ACTIVITIES AND GENERAL STANDARDS

# Section 9(1) Land Use

Section 9(1) of the RMA restricts the use of land that contravenes a national standard. The land use consents required are detailed in **Section 3** of this AEE. The permitted activities under Section 9(1) of the RMA are detailed in Table 10-1 below.

#### Table 10-1 Permitted Activities pursuant to NES-F

Reference	Rule	Status
National Environmen	tal Standards for Freshwater (NES-F)	
Regulation 45	Construction of specified infrastructure	Permitted
	Comment	
With regards to Regulation 45 the proposal is for:		
	<ul> <li>Vegetation clearance and earthwork activity is greater than 10m of both the Karaka Reserve wetland and the Kiwi Properties Group Wetland 2;</li> </ul>	
	<ul> <li>The earthworks or land disturbance within 100m of the wetland will not result in drainage of the wetland;</li> </ul>	
	There is not a direct hydrological connection between the wetland and the proposed Drury access ramp works; and the diversion of water during the construction phase or operation of the ramp and road will not result in a change in the water level range or hydrological functioning of the wetlands; and	
	• No discharges are proposed from the works areas to the natural inland wetlands.	
	Therefore, under Regulation 45 of the NES-F, provided that standards for a permitted activity are met, the works are assessed as not triggering the requirement for a consent with regard to proximity to natural inland wetlands	

### Section 9(2) Land Use

The land use consents required are detailed in **Section 3** of this AEE. The permitted activities under Section 9(2) of the RMA are detailed in Table 10-2, below.

Table 10-2 Permitted Activities pursuant to Chapters H22, D26, E9 and E26

Reference	Rule	Status
H22 Strategic Transport Corridor Zone		
H22.4.1(A1)	Construction, maintenance, upgrade and use of cycleways and walkways	Permitted
	Comment:	
	The proposed SUP will be located outside the zone.	

H22.4.1(A6) H22.4.1 (A12)	Temporary activities associated with transport activities including temporary materials and machinery storage, temporary ablution facilities and temporary buildings Comment: Construction materials, machinery and buildings will need to be stored within the Designation temporarily during the construction period. Noise attenuation walls or fences Comment: Noise attenuation walls or fences have not been proposed for the access ramp.	Permitted
D26 National Gri	d Corridor Overlay	
D26.4.1 (A3)	Network utilities (excluding buildings and structures for irrigation) and electricity generation that connect to the national grid <b>Comment:</b> Roads and road network activities are included in the definition of ' <i>network</i> <i>utilities</i> ' under infrastructure.	Permitted
D26.4.1(A10)	Fences	Permitted
	Comment:	
	Temporary boundary fences during construction may be required.	
D26.4.1(A13A)	<ul> <li>Within the National Grid Yard (Uncompromised), any structures that do not meet the definition of Building in Chapter J</li> <li>Comment:</li> <li>The definition of a building includes retaining walls (over 1.5m high or located within 1.5m of the boundary of a road), free-standing signs (over 1.5m high) and above ground bridges, therefore these features are not covered by this rule. The rest of the Project is covered by this rule. Only certain sections of the Project area will be subject to this rule, therefore, all features not covered by this rule will not be located within this overlay.</li> </ul>	Permitted
D26.4.1 (A19)	Land disturbance that complies with Standards D26.6.1.1(1)(a), D26.6.1.1(1)(b), D26.6.1.1(1)(c) and D26.6.1.1(1)(d) <b>Comment:</b> Roads and road network activities are included in the definition of network utilities under infrastructure and are therefore excluded from this rule under standard D26.6.1.1 (2)(c). Regardless, if any earthworks are required within 6 – 12m of any national grid tower support structure, the depth of the works will be less than 3m in accordance with standard D26.6.1.1 (1).	Permitted

D26.4.2 (A28)	Roading activities, and network utilities or electricity generation that connects to the National Grid that are above ground or comply with Standard D26.6.1.2(1), and electricity transmission infrastructure in a road carriageway	at connects <b>Permitted</b> Standard arriageway	
	Comment:		
	Roads and road network activities are included in the definition of network utilities under infrastructure. The re-established utilities within the road carriageways are able to comply with the standards in D26.6.1.2.		
E9 Stormwater q	uality - High contaminant generating car parks and high use roads		
E9.4.1(A1)	Development of new or redevelopment of existing impervious areas within Stormwater management area control – Flow 1 that are not directed to a stream or are discharged below RL 1.7m (RL in terms of NZVD2016).	Permitted	
	Comment:		
	As explained in Section 4 (above), the temporary works area of the Project corridor lies within the Stormwater Management Area Control Flow 1 (SMAF-1). It is noted the Project area is subject to two stormwater control areas:		
	<ul> <li>Controls: Stormwater Management Area Control – Hingaia Stream, Flow 1; and</li> </ul>		
	Controls: Stormwater Management Area Control – Drury Centre, Flow 1.		
	The proposal is located within the SMAF-1 overlay area, stormwater runoff from the development of the new road will be discharged below RL 1.7m, which is supported by the results of a bathymetric survey on the Hingaia Stream.		
E26 Infrastructur	e		
E26.2.3.1(A2)	Minor infrastructure upgrading of network utilities	Permitted	
	Comment:		
	Roads and road network activities are included in the definition of network utilities under infrastructure.		
	All existing utility services will be protected or relocated. Stormwater service connections will be upgraded to fit the purpose of the proposed stormwater design, as detailed in the Stormwater Assessment (contained in Appendix D).		
E26.2.3.1(A6)	Removal of network utilities and electricity generation facilities	Permitted	
	Comment:		
	Roads and road network activities are included in the definition of network utilities under infrastructure.		
	All existing utility services will be protected or relocated.		

E26.2.3.1(A12)	Temporary signage during the construction of network utilities and electricity generation facilities, which is in place for no longer than 12 months Comment: Roads and road network activities are included in the definition of network utilities under infrastructure.	Permitted
	Signage during construction will be required, which will be frequently exchanged for new signs as works progress.	
E26.4.3.1(A83)	Tree trimming or alteration	Permitted
	Comment:	
	Some trees may require trimming or alterations. The recommendations in the Arboricultural Assessment (contained at Appendix G) will be implemented to ensure compliance with standard E26.4.5.1	
E26.2.3.1(A58)	Stormwater treatment devices; erosion protection; culverts; measuring devices (flows structures)	Permitted
	Comment:	
	Culverts, and attenuation swales are proposed as part of the stormwater drainage design, as detailed in the Stormwater Assessment (contained at Appendix D). The culverts will be provided with erosion protection (ripraps) downstream.	
E26.5.3.2(A100)	Earthworks for maintenance, repair, renewal, minor infrastructure upgrading, service connections	Permitted
	Comment:	
	No upgrades of existing stormwater infrastructure is proposed.	
Rule E26.5.3.2 (A106)	Earthworks greater than 2,500m <sup>2</sup> in area where the land has a slope equal to or greater than 10 degrees other than for maintenance, repair, renewal, minor infrastructure upgrading.	Permitted
	Comment:	
	Earthworks are required on either side of the Hingaia Stream, which is within 50m of the stream and therefore within the Sediment Control Protection Area.	
	The earthworks will be limited to the preparation of the pier footings, with the abutments located over 100m from the stream. Earthworks will comply with Accidental discovery rule E26.5.5.1. An ESCP (Attachment 1 of the CSMP – <b>Appendix F</b> ) will be implemented at all times during construction in order to ensure compliance with general standards E26.5.5.2 (1-8).	

### **Section 13 Resource Consents**

The resource consents require are detailed in **Section 3** of this report. The permitted activities under the AUP are set in the **Table 10-3**.

#### Table 10-3 Permitted activities pursuant to Chapter E3

Reference Rule Status	Reference	Rule	Status

E3.4.1(A27)	Temporary structures complying with standards in E3.6.1.15	Permitted
	Comment	
	The proposal will not involve stream works within the stream bed of the Hingaia Stream. Temporary staging is required for construction of the bridge across the stream, the staging piles are located 9m apart, where the Hingaia is 8m in width at the relevant crossing point.	

### **Section 14 Resource Consents**

Section 14 of the RMA imposes restrictions in relation to water.

Chapter E7 of the AUP contains provisions relating to the taking, using, damming and diversion of surface water and groundwater. The permitted activities under Chapter E7 are set out in **Table 10-4**.

#### Table 10-4 Permitted Activities Pursuant to Chapter E7

Reference	Rule	Status
E7.4.1 (A11)	Diversion into an artificial watercourse	Permitted
	Comment:	
	The Project requires the construction of an artificial overland flow path to direct stormwater from the upper catchment to the Hingaia Stream and Wetland 2. The design of the culverts and associated erosion protection structures and stormwater treatment devices will ensure the diversion does not reduce the quality of water, create erosion or increase flooding effects in accordance with standard E7.6.1.2. Further details are included in the Stormwater Assessment (Appendix D).	

## **Section 15 Resource Consents**

The land use consents required are detailed in **Section 3** of this report. The permitted activities under the AUP are detailed in **Table 10-5** below.

Table 10-5 Permitted Activities pursuant to Chapters E4, E8 and E14

Reference	Rule	Status	
E4 Other discharges of contaminants			
E4.4.1 (A1)	Discharge of water and/or contaminants (including washwater) onto or into land and/or into water from any of the following activities:	into Permitted	
	(a) concrete/asphalt laying or reworking;		
	(b) drilling (excluding bore development and testing);		
	(d) washing vehicles, plant or machinery;		
	(f) road construction activities;		
	(g) construction, repair, maintenance, upgrade or removal of any component of the stormwater or wastewater network that does not border, span or otherwise extend over any water body;		
	(h) construction, repair, maintenance, upgrade or removal of network utility infrastructure that does not border, span or otherwise extend over any water body;		
	(j) dust suppression;		
	Comment:		
	The construction activities include those listed in rule E4.4.1 (A1) above. The discharges will be adequately managed by the ESCP ( <b>Appendix F</b> ) in order to comply with standards E4.6.1.		
E4.4.1(A5)	Discharge onto or into land and/or into water for the purpose of dewatering trenches or other excavations	Permitted	
	Comment:		
	The discharge of stormwater into stormwater swales for the purpose of dewatering trenches during construction is proposed, where necessary. The discharges will be adequately managed by the ESCP ( <b>Appendix A</b> of the CWMP (contained at Appendix F)) in order to comply with standards E4.6.1 and E4.6.2.5		
E8 Stormwater – Discharge and diversion			

E8.4.1(A1)	Diversion of stormwater runoff from lawfully established impervious areas directed into an authorised stormwater network or a combined sewer network that complies with Standard E8.6.2.1. <b>Comment:</b> The stormwater runoff will be from lawfully established road and has approval	Permitted
	from Healthy Waters to discharge into the stormwater network where applicable, in accordance with standard E8.6.2.1.	
E14 Air quality		
E14.4.1 (A77)	Bulk cement storage, handling, redistribution, or packaging	Permitted
	Comment:	
	Temporary cement storage and handling will be required during construction. Cement will be managed on site to minimise discharges to air and ensure there are no discharges that pose a risk to human health or beyond the site boundaries in accordance with standard E14.6.1.1. Cement will be delivered via a fully enclosed system and there will be no visible discharges of dust in accordance with standard E14.6.1.12.	
	<i>Note:</i> The Strategic Transport Corridor Zone and roads, will assume the most stringent air quality requirements of the adjacent zones. The adjacent zones are residential, business and open space, therefore the air quality is considered medium (industry) to high. Therefore, the high air quality rules are applicable.	

# **APPENDIX J – EXISTING ENVIRONMENT MAPS**

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# APPENDIX K – AUCKLAND UNITARY PLAN (OPERATIVE IN PART) OBJECTIVES AND POLICIES ASSESSMENT

# Table 10-6 Assessment of the Project against the relevant objectives and polices of the Regional Policy Statement under the AUP

Objective/Policy	Comment		
Chapter B3 – Ngā pūnaha hanganga, kawekawe me ngā pūngao – Infrastructure, transport and energy			
<i>Objective B3.2.1(1)</i> Infrastructure is resilient, efficient and effective.	The Project is consistent with the objective by enhancing transport connectivity and accessibility within Drury. The access ramp will improve transportation options and support the efficient movement of people and goods, contributing to the overall accessibility and functionality of the Drury Centre precinct.		
<ul> <li>Objective B3.2.1(2)</li> <li>The benefits of infrastructure are recognised, including:</li> <li>(a) providing essential services for the functioning of communities, businesses and industries withinAuckland;</li> <li>(b) enabling economic growth;</li> <li>(e) protecting the quality of the natural</li> </ul>	<ul> <li>(a) The Project is necessitated under the provisions of the AUP as an essential investment in transport infrastructure, to permit urban development within Drury Centre;</li> <li>(b) Unlocking of future development capacity within the Drury Centre precinct, will facilitate economic growth and support the local economy.; and,</li> <li>(e) By managing stormwater runoff prior to discharge into the Hingaia Stream, thereby minimising the impact on the ecological values of the waterway once the Project is operational, protecting the quality of the</li> </ul>		
environment; and	current freshwater environment.		
<ul> <li>Development, operation, maintenance, and upgrading of infrastructure is enabled, while managing adverse effects on:</li> <li>(a) the quality of the environment and, in particular, natural and physical resources that have been scheduled in the Unitary Plan in relation to natural heritage, Mana Whenua, natural resources, coastal environment, historic heritage and special character;</li> <li>(b) the health and safety of communities and amenity values.</li> </ul>	adverse effects on the environment and the health and safety of communities. Adequate measures are proposed to mitigate any potential adverse effects, ensuring that the motorway can function efficiently while minimising negative impacts on the environment and surrounding areas The project incorporates stormwater treatment measures that will protect the quality of the Hingaia Stream. Mana Whenua have been engaged with and will continue throughout the entire lifetime of the Project, which is consistent with approaches taken in the P2DS.		
<i>Objective B3.2.1(4)</i> The functional and operational needs of infrastructure are recognised.	The Project acknowledges and addresses the functional and operational needs of the State Highway Network. The proposed access is designed to provide efficient connectivity, and accommodate future development at Drury Centre, aligning with the objectives of enhancing the functionality and operation of the area's infrastructure.		
<i>Objective B3.2.1(8)</i> The adverse effects of infrastructure are avoided, remedied or mitigated.	The Project ensures that the potential for adverse effects of the infrastructure are avoided, remedied, or mitigated. Through careful planning and design, potential adverse effects associated with the construction and operation of the new access ramp at Drury Centre have been identified and appropriate mitigation measures have been implemented. These measures aim to minimise impacts on the surrounding environment, including the management of stormwater runoff, impacts of riparian vegetation, erosion and sediment control measures,		

	consideration of noise and visual effects. Overall, the Project has been found to adequately mitigate any potential adverse effects, promoting sustainable development and less than minor effect on the existing environment.
<i>Policy B3.2.2(1)</i> Enable the efficient development, operation, maintenance and upgrading of infrastructure.	The Project enhances the connectivity and efficiency of the transport network, improving the movement of vehicles and facilitating a direct vehicle connection to Drury Centre. It addresses the growing infrastructure demands in the Drury area, supporting economic growth, and ensuring that the infrastructure can effectively meet the needs of the community and future development.
Chapter B6 – Mana Whenua	
<i>Objective B6.2.1(1)</i> The principles of the Treaty of Waitangi/Te Tiriti o Waitangi are recognised and provided for in the	Through extensive engagement and consultation with Mana Whenua, the design and implementation of the Project takes into account the principles of the Treaty of Waitangi/Te Tiriti o Waitangi.
sustainable management of natural and physical resources including ancestral lands, water, air, coastal sites, wāhi tapu and other taonga.	The alignment of the ramp has been adjusted to address concerns raised by Mana Whenua regarding the interception of the remnant stream of the Hingaia, ensuring the protection of any significant cultural and heritage values.
	The Project respects and values the relationship between Mana Whenua and the natural and cultural resources within the project area, promoting collaboration and the incorporation of cultural values in its planning and implementation as well as enshrining future opportunities through the detailed design.
Policy B6.2.1(1) Provide opportunities for Mana Whenua to actively participate in the sustainable management of natural and physical resources including ancestral lands, water, sites, wāhi tapu and other taonga in a way that does all of the following:	As above, Mana Whenua have been adequately engaged with regarding the Project to minimise potential adverse effects on Mana Whenua values. There are no sites of significant cultural significance under the AUP affected by the Project. Furthermore, archaeological monitoring is proposed within the proximity of the Hingaia Stream as to mitigate the potential of sites of significance.
(a) recognises the role of Mana Whenua as kaitiaki and provides for the practical expression of kaitiakitanga;	
(b) builds and maintains partnerships and relationships with iwi authorities;	
(c) provides for timely, effective and meaningful engagement with Mana Whenua at appropriate stages in the resource management process, including development of resource management policies and plans;	
(d) recognises the role of kaumātua and pūkenga;	
(e) recognises Mana Whenua as specialists in the tikanga of their hapū or iwi and as being best placed to convey their relationship with their ancestral lands, water, sites, wāhi tapu and other taonga;	
(f) acknowledges historical circumstances and impacts on resource needs;	

(g) recognises and provides for mātauranga and tikanga; and	
(h) recognises the role and rights of whānau and hapū to speak and act on matters that affect them.	
Objective B6.3.1(2)	The Project recognises the relationship of Mana Whenua with natural and
The mauri of, and the relationship of Mana Whenua with, natural and physical resources including freshwater, geothermal resources, land, air and coastal resources are enhanced overall.	physical resources, including the Hingaia Stream. Accordingly, sufficient weight has been allocated to Mana Whenua values, mātauranga, and tikanga. Additionally, the Project will provide ecological and environmental sustainability, which aligns with the traditional Māori value of kaitiakitanga.
Policy B6.3.2(1)	As part of the engagement process, Mana Whenua values have been
Enable Mana Whenua to identify their values associated with all of the following:	identified in relation to the Project. The project team worked with Mana Whenua to identify and mitigate potential impacts on cultural values, through various hui. Particular regard has been made to the Hingaia Stream and the potential for adverse effects on the natural freshwater environment as presented by the Project.
(a) ancestral lands, water, air, sites, wāhi tapu, and other taonga;	
(b) freshwater, including rivers, streams, aquifers, lakes, wetlands, and associated values;	
(c) biodiversity;	
(d) historic heritage places and areas; and	
(e) air, geothermal and coastal resources.	
Policy B6.3.2(2)	Mana Whenua values, mātauranga and tikanga have been integrated into
Integrate Mana Whenua values, mātauranga and tikanga:	the design of the Project during the engagement process. Further cultural opportunities will be presented through the detailed design process.
(a) in the management of natural and physical resources within the ancestral rohe of Mana Whenua, including:	
(i) ancestral lands, water, sites, wāhi tapu and other taonga;	
(ii) biodiversity; and	
(iii) historic heritage places and areas.	
(b) in the management of freshwater and coastal resources, such as the use of rāhui to enhance ecosystem health;	
(c) in the development of innovative solutions to remedy the longterm adverse effects on historical, cultural and spiritual values from discharges to freshwater and coastal water; and	
(d) in resource management processes and decisions relating to freshwater, geothermal, land, air and coastal resources.	
Policy B6.3.2(3)	The Project, including design updates have been communicated to Mana
Ensure that any assessment of environmental effects for an activity that may affect Mana Whenua values includes an appropriate assessment of adverse effects on those values.	whenua during regular design. Through this engagement process, Mana Whenua values have been identified and adverse effects have been appropriately avoided or mitigated.

Policy B6.3.2 (4)	The Project will adequately manage the quality of stormwater discharges	
Provide opportunities for Mana Whenua to be involved in the integrated management of natural and physical resources in ways that do all of the following:	to the Hingaia Stream during the construction and operational phases. Replacement planting is proposed where vegetation is removed within the riparian margins on the Hingaia Stream. Overall, contributing to enhancing the mauri of the freshwater ecosystem.	
(a) recognise the holistic nature of the Mana Whenua world view;		
(c) restore or enhance the mauri of freshwater and coastal ecosystems.		
Policy B6.3.2 (5)	During construction, potential adverse effects of land disturbing activities	
Integrate Mana Whenua values, mātauranga and tikanga when giving effect to the National Policy Statement on Freshwater Management 2014 in establishing all of the following:	will be mitigated by the implementation of the Site-Specific Erosion and Sediment Control Plan as part of the proposed conditions of this resource consent application. Once operational, stormwater treatment swales and outfall design will mitigate the generated stormwater runoff from the proposed access ramp to the Hingaia Stream.	
(a) water quality limits for freshwater, including groundwater;		
(c) integrated management of the effects of the use and development of land and freshwater on coastal water and the coastal environment.		
B7 Toitū te whenua, toitū te taiao - Natural resources		
Objective B7.3.1(2)	Stormwater runoff from the Project will be collected and treated before	
Degraded freshwater systems are enhanced.	being discharged into the Hingaia Stream, helping to improve the water guality and protect the natural environment. Areas of native replating are	
	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area.	
Objective B7.4.1(6)	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area. Waka Kotahi have considered the values, mātauranga and tikanga	
<i>Objective B7.4.1(6)</i> Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values.	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area. Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui.	
<i>Objective B7.4.1(6)</i> Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values. <i>Policy B7.3.2(4)</i>	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area. Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui.	
Objective B7.4.1(6)Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values.Policy B7.3.2(4)Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply:	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area. Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui. The proposal is consistent with the standards outlined in the NES-F. There will be no loss or significant modification or diversion of lakes, rivers, streams, and wetlands and their margins as a result of the Proposal.	
Objective B7.4.1(6)         Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values.         Policy B7.3.2(4)         Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply:         (a) it is necessary to provide for:	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area. Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui. The proposal is consistent with the standards outlined in the NES-F. There will be no loss or significant modification or diversion of lakes, rivers, streams, and wetlands and their margins as a result of the Proposal.	
Objective B7.4.1(6)         Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values.         Policy B7.3.2(4)         Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply: <ul> <li>(a) it is necessary to provide for:</li> <li>(i) the health and safety of communities; or</li> </ul>	<ul> <li>proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area.</li> <li>Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui.</li> <li>The proposal is consistent with the standards outlined in the NES-F. There will be no loss or significant modification or diversion of lakes, rivers, streams, and wetlands and their margins as a result of the Proposal.</li> </ul>	
Objective B7.4.1(6)         Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values.         Policy B7.3.2(4)         Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply: <ul> <li>(a) it is necessary to provide for:</li> <li>(i) the health and safety of communities; or</li> <li>(ii) the enhancement and restoration of freshwater systems and values; or</li> </ul>	proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area. Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui.	
Objective B7.4.1(6)         Mana Whenua values, mātauranga and tikanga associated with coastal water, freshwater and geothermal water are recognised and provided for, including their traditional and cultural uses and values.         Policy B7.3.2(4)         Avoid the permanent loss and significant modification or diversion of lakes, rivers, streams (excluding ephemeral streams), and wetlands and their margins, unless all of the following apply: <ul> <li>(a) it is necessary to provide for:</li> <li>(i) the health and safety of communities; or</li> <li>(ii) the enhancement and restoration of freshwater systems and values; or</li> <li>(iii) the sustainable use of land and resources to provide for growth and development; or</li> </ul>	<ul> <li>proposed where planting must be removed within the riparian yard, which is currently dominated by exotic pest species, enhancing the ecological value of these environments. This will benefit the local ecosystems and the overall health of the freshwater systems in the area.</li> <li>Waka Kotahi have considered the values, mātauranga and tikanga associated with Hingaia Stream by engaging with Mana Whenua during various design hui.</li> <li>The proposal is consistent with the standards outlined in the NES-F. There will be no loss or significant modification or diversion of lakes, rivers, streams, and wetlands and their margins as a result of the Proposal.</li> </ul>	

(b) no practicable alternative exists;	
(c) mitigation measures are implemented to address the adverse effects arising from the loss in freshwater system functions and values; and	
(d) where adverse effects cannot be adequately mitigated, environmental benefits including on- site or off-site works are provided.	
Policy B7.3.2(5)	The Project does not propose works within the Hingaia Stream bed.
Manage subdivision, use, development, including discharges and activities in the beds of lakes, rivers, streams, and in wetlands, to do all of the following:	
(a) protect identified Natural Lake Management Areas, Natural Stream Management Areas, and Wetland Management Areas;	
(b) minimise erosion and modification of beds and banks of lakes, rivers, streams and wetlands;	
(c) limit the establishment of structures within the beds of lakes, rivers and streams and in wetlands to those that have a functional need or operational requirement to be located there; and	
(d) maintain or where appropriate enhance:	
(i) freshwater systems not protected under Policy B7.3.2(5)(a);	
(ii) navigation along rivers and public access to and along lakes, rivers and streams;	
(iii) existing riparian vegetation located on the margins of lakes, rivers, streams and wetlands; and	
(iv) areas of significant indigenous biodiversity.	
(6) Restore and enhance freshwater systems where practicable when development, change of land use, and subdivision occur.	
Policy B7.4.2(1)	The Project will provide stormwater treatment of runoff from access ramp
(1) Integrate the management of subdivision, use, development and coastal water and freshwater, by:	through the proposed stormwater swales and outfall device. The Project therefore minimises the adverse effects of runoff on water and adequately provide stormwater treatment for the extent of the Project.
(a) ensuring water supply, stormwater and wastewater infrastructure is adequately provided for in areas of growth; and	
(b) requiring catchment management planning as part of structure planning;	
(c) controlling the use of land and discharges to minimise the adverse effects of runoff on water and progressively reduce existing adverse effects where those water are degraded; and	
(d) avoiding development where it will significantly increase adverse effects on water,	

unless these adverse effects can be adequately mitigated.	
<ul> <li>Policy B7.4.2(5)</li> <li>Engage with Mana Whenua to:</li> <li>(a) identify areas of degraded coastal water where they have a particular interest; and</li> <li>(b) remedy or, where remediation is not practicable, mitigate adverse effects on these degraded areas and values.</li> </ul>	Mana Whenua have been engaged with throughout the lifetime of the Project. Design updates have been communicated to Mana Whenua during regular design hui. Through this engagement process, Mana Whenua values have been identified and adverse effects have been appropriately avoided or mitigated.
Policy B7.4.2(6) Progressively improve water quality in areas identified as having degraded water quality through managing subdivision, use, development and discharges	The stormwater treatment system will treat stormwater runoff before discharging into the Hingaia Stream by minimising sedimentation and enhancing the natural biodiversity in riparian areas through re-planting. The Project alignment runs through previously an undeveloped area outside of the existing SH1 Coridoor, where stormwater runoff to the Hingaia Stream has not been formally treated in the past.
Policy B7.4.2(7) Manage the discharges of contaminants into water from subdivision, use and development to avoid where practicable, and otherwise minimise, all of the following:	The proposed stormwater treatment devices include the installation of ripraps which will slow down the velocity of the stormwater runoff into the stream. This helps to avoid scouring and discharge of sedimentation and contaminants onto the Hingaia Stream.
(a) significant bacterial contamination of freshwater and coastal water;	
(b) adverse effects on the quality of freshwater and coastal water;	
(c) adverse effects from contaminants, including nutrients generated on or applied to land, and the potential for these to enter freshwater and coastal water from both point and non-point sources;	
(d) adverse effects on Mana Whenua values associated with coastal water, freshwater and geothermal water, including wāhi tapu, wāhi taonga and mahinga kai; and	
(e) adverse effects on the water quality of catchments and aquifers that provide water for domestic and municipal supply.	
Policy B7.4.2(8)	The Project, which aims to manage the effects of discharges od stormwater quality through the implementation of appropriate erosion and sediment control measures, such as the recommended Site-Specific Erosion and Sediment Control Plan, seeks to minimise the potential adverse impacts on water quality. These measures contribute to the overall goal of protecting and enhancing water resources within the Project area.
(8) Minimise the loss of sediment from subdivision, use and development, and manage the discharge of sediment into freshwater and coastal water, by:	
(a) promoting the use of soil conservation and management measures to retain soil and sediment on land; and	
(b) requiring land disturbing activities to use industry best practice and standards appropriate to the nature and scale of the land disturbing activity and the sensitivity of the receiving environment.	
### **APPENDIX L – ECOLOGY ASSESSMENT REPORT**

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# APPENDIX M – TRANSPORT IMPACT ASSESSMENT REPORT

**APPENDIX N – ARCHAELOGICAL ASSESSMENT REPORT** 

# APPENDIX O – CONTAMINATED LAND ASSESSMENT OF EFFECTS REPORT

APPENDIX P – NOISE AND VIBRATION ASSESSMENT REPORT **APPENDIX Q – ENGAGEMENT RECORDS** 

#### **APPENDIX R – PROPOSED DRAFT CONDITIONS**

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**APPENDIX S – WRITTEN APPROVALS** 



#### **Drury Centre Access Ramp Project**

Aurecon Group Limited Te Tihi, 3/110 Carlton Gore Road Newmarket, Auckland 1023