BEFORE THE INDEPENDENT HEARINGS PANEL
OF AUCKLAND COUNCIL

I MUA NGĀ KAIKŌMIHANA MOTUHAKA
I TE TĀMAKI MAKAURAU ROHE

UNDER	the Resource Management Act 1991 ("**RMA**")
AND	
IN THE MATTER	of an application to Auckland Council by Watercare Services Limited ("**Watercare**") for a resource consent to construct, commission, operate and maintain a wastewater tunnel and associated activities in Herne Bay, Auckland ("**Project**")

STATEMENT OF EVIDENCE OF MAREE JOCELYN DRURY ON BEHALF OF WATERCARE SERVICES LIMITED

(PLANNING)

2 FEBRUARY 2024

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1. EXECUTIVE SUMMARY

1.1 My full name is Maree Jocelyn Drury and I am the Technical Director of Planning at WSP. I was the planning lead, responsible for the overall co-ordination and development of the resource consent application for the Project. I was the reviewer of the assessment of environmental effects ("**AEE**") for the Project.

1.2 In my view, the Project provides important positive outcomes for Auckland, including providing the necessary infrastructure to reduce the frequency and volume of wastewater overflows in the Herne Bay area. Once operational, this Project will improve coastal water quality by reducing the frequency of overflow events to the Waitematā Harbour as well as increasing the capacity and resilience of the wastewater network.

1.3 In my opinion, any actual or potential adverse effects from the construction of the Project have been comprehensively assessed in the application documentation by the technical experts and subsequently through the application process. I am satisfied that any potential adverse effects arising from the construction of the Project can be avoided, remedied or mitigated through the proposed consent conditions which are appended to my evidence at Attachment 1 ("**Proposed Conditions**") and implementation of the various management plans.

1.4 As set out in the AEE, I am of the view that the Project is consistent with the applicable planning framework. The Project will provide for critical new wastewater infrastructure, improving the resilience of the existing network, while reducing overflows to the Waitematā Harbour. These outcomes are consistent with the objectives and policies of the Auckland Unitary Plan (Operative in Part) ("**AUP**").[1] The Project is also consistent with the relevant national direction, including the National Policy Statement on Urban Development 2020 ("**NPS-UD**") and the New Zealand Coastal Policy Statement 2010 ("**NZCPS**").

[1] In particular the Regional Policy Statement and Chapters E1 - Water Quality and Integrated Management and E26 - Infrastructure.

2. INTRODUCTION

Qualifications and Experience

2.1 My full name is Maree Jocelyn Drury. I am Technical Director Planning at WSP New Zealand and have held this position since 2021. Prior to this I was Technical Principal Planning and Work Group Manager Planning at WSP and its predecessor Opus from 2016.

2.2 I have the qualifications of Bachelor of Science and Masters of Regional and Resource Planning (with Distinction) from Otago University. I am also a full member of the New Zealand Planning Institute ("**NZPI**").

2.3 I have 30 years of experience in the planning and environmental assessment and monitoring industry. I have led a wide range of projects including City Rail Link, Mt Eden, Northern Corridor Improvements and most recently Watercare Services projects. I have prepared resource consent applications and AEEs for three waters, mining, rail, road and industry developments along with other statutory approvals such as notices of requirement, feasibility projects, and business cases.

2.4 I have been involved in the following relevant Watercare and other infrastructure projects:

(a) Discharges from Waiwera and Army Bay Wastewater Treatment Plants ("**WWTP**");

(b) Rosedale WWTP upgrades;

(c) Archboyd wastewater network and pump station upgrades;

(d) Ardmore Water Treatment Plant ("**WTP**") and network upgrades; and

(e) Reviewer of WSL Watercare projects including the Queen Street wastewater diversion programme, Drury West Water reticulation, Waiwera network and pump station reconfiguration.

Involvement in the Herne Bay Tunnel Project

2.5 My involvement in the Project has included the following:

(a) I am a lead for WSP on Watercare Services Enterprise Model DPP responsible for the review and delivery of planning and

environmental investigation for Watercare resource consent applications;

(b) I was the reviewer of the planning assessment for the Project;

(c) I was the reviewer of the AEE for the resource consent application and responses to requests for further information; and

(d) I have provided planning advice to Watercare throughout the duration of the Project to date.

2.6 I am familiar with the locality of the Project and have visited all sites where above ground activities are proposed, most recently on 24 January 2024. I have read the Auckland Council ("**Council**") Officer's Section 42A Report ("**Section 42A Report**") and all the submissions received on the Project (including the two late submissions).

Code of conduct

2.7 I confirm that I have read the Code of Conduct for Expert Witnesses contained in the latest Environment Court Practice Note 2023 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.

3. SCOPE OF EVIDENCE

3.1 This statement of evidence will:

(a) Describe the background of the Project, as relevant to the planning assessment;

(b) Describe the existing environment;

(c) Set out resource consents sought for the Project;

(a) Provide an assessment of the Project in accordance with section 104 of the RMA, including in relation to the Project's actual and potential environmental effects and against the relevant planning framework set out in the relevant national direction documents and the AUP;

(b) Respond to the submissions received where relevant to my planning assessment and identify how these matters are proposed to be addressed;

(c) Respond to matters raised in the Section 42A Report where relevant to my planning assessment; and

(d) Comment on the recommended consent conditions.

4. PROJECT BACKGROUND

4.1 The background to the Project is described in Section 1 of the AEE.

4.2 Watercare is New Zealand's largest water and wastewater utility provider, responsible for the planning, maintenance, and operation of water and wastewater services to communities throughout Auckland and the northern Waikato regions. Watercare's key services are:

(a) the collection, treatment, and distribution of drinking water from various dams, rivers and groundwater sources;

(b) the collection, treatment, and disposal of wastewater at various WWTPs;

(c) the transfer, treatment, and disposal of trade wastes; and

(d) the provision of commercial laboratory services.

4.3 Watercare is continually identifying maintenance, replacement, upgrading and new infrastructure projects to ensure it meets customer's needs, business objectives and statutory requirements. New infrastructure is frequently required across the region to cater for Auckland's growing population, to upgrade its assets, and to improve the security of its services.

4.4 As described in the evidence of Mr Deutschle, the Project forms part of the 'Western Isthmus Water Quality Improvement Programme' ("**WIWQIP**") which aims to significantly reduce wastewater overflows into the Waitematā Harbour.[2]

4.5 The aim of the Project is to significantly reduce the frequency and volume of overflows in Herne Bay by building a new Herne Bay wastewater pipeline to collect combined wastewater and stormwater flows and convey these to the

2 Evidence of Mr Deutschle dated 2 February 2024 at section 5.

Central Interceptor at Point Erin Park, where they can be safely conveyed to the Māngere WWTP.

5. DESCRIPTION OF THE PROJECT

5.1 The AEE at Section 4 contains a detailed description of the proposed activities. In summary, the Project comprises:

(a) The installation of approximately 1.5km of 2.1m diameter trunk sewer line, constructed via a tunnel boring machine ("**TBM**");

(b) The installation of 3x interception pipes, ranging in size from 300mm to 450mm diameter, in order to collect wastewater from existing branch lines, constructed via a combination of open cut trenching and trenchless methods;

(c) The installation of 8x primary tunnel shafts, along with 4x interception shafts and 8x connections to existing engineered overflow points ("**EOPs**"); and

(d) The installation and subsequent remediation at the completion of works of two temporary Construction Support Areas ("**CSAs**") at Salisbury Reserve and 94a – 94b Shelly Beach Road.

Project Overview: Design and Construction

5.2 The proposed Herne Bay Tunnel will commence with a connection to the Central Interceptor drop shaft chamber at Shaft One, opposite Point Erin Park and will continue in a western direction within the road reserves of Sarsfield Street, Wallace Street, Argyle Street, Herne Bay Road, Upton Street and Marine Parade.[3] The tunnel will be 2.1m in diameter and constructed using a TBM.

5.3 Shafts are required where the tunnel needs to change direction to provide entry for the TBM (thrust shafts) and to retrieve the TBM (receiving shafts) and will be constructed as the project progresses, ensuring there is a receiving shaft as the TBM commences a drive towards it. The thrust shafts will be constructed with a diameter of 13m, while the receiving shafts will have a diameter of 9m. Shaft Eight is not required to launch or receive the TBM, as this section of the pipeline will be constructed via open-trenching and will therefore be constructed to a diameter of 3.5m. The maximum depths of the

3 L007.001, Issue 2, date 20-06-23. Project Overview – Plan.

shafts will range from 2.4m (Shaft Eight) to 25.1m (Shaft Five) below ground level.[4]

5.4 Three interception pipelines are also proposed to connect the main sewer pipeline to the EOPs in the Project area.[5] These pipelines will be located within the road reserves of Hamilton Road, Sentinel Road, and Herne Bay Road. The interception pipelines will be constructed using a combination of open cut and trenchless construction methods and will be connected to the primary pipeline through 3.5m diameter interception shafts.

5.5 A fourth interception pipeline within the road reserves of Wairangi Street, Stack Street and River Terrace was initially included within the lodged resource consent application to divert overflows away from EOP1019, located within 15 Cremorne Street. This pipeline was subsequently removed after the application was publicly notified due to an error in the application material (which showed EOP1019 on 6 River Terrace rather than on 15 Cremorne Street). A separate resource consent will be sought for this second stage of works at a later point.

5.6 A more detailed overview of the construction methodology is outlined in the evidence of Mr Bishop.[6]

Project Overview: Construction Support Areas

5.7 As is set out by Mr Webster and Mr Deutschle, Watercare has sought resource consent to construct the Herne Bay Tunnel in the road corridor to avoid the need for construction activities within, and beneath private property.[7]

5.8 To reduce the construction footprints within the road corridor (and therefore the duration of partial and full closures required during construction, as well as impacts to residents' access to their properties), two CSAs are required to support the proposed construction works. As is explained by Mr Bishop, two CSAs are ultimately required to ensure that the Project can be delivered efficiently.[8] The CSAs will act as central hubs, enabling short term storage of materials, plant, worker welfare facilities/offices and vehicle storage, and reducing the size of vehicles and truck movements on the local road network.

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4 Drawing W-SL007.002, Issue 3, date 17-10-23. Option One long-section. Note that two potential tunnel depths have been shown in the drawings.

5 Drawings W-SL007.003, WSL007.005 and WSL007.006, Issue 2, date 20-06-23 and WSL007.004, Issue 3, date 17-10-23.

6 Evidence of Mr Bishop dated 2 February 2024 at section 4.

7 Evidence of Mr Deutschle dated 2 February 2024 at [7.1]; Evidence of Mr Webster dated 2 February 2024 at [6.3].

8 Evidence of Mr Bishop dated 2 February 2024 at [4.17] and [4.18].

Maintaining CSAs close to the main work sites allows staff to readily access the site and efficiently manage logistics for delivery and handling of materials.

5.9 Each of the CSA sites will be hard filled with gravel to provide an all-weather surface and environmental controls such as erosion and sediment control, containment of materials, security fencing, gate controls and semi-permanent traffic management. The CSAs will be utilised for the duration of the Project, but for no more than two years.

Primary construction support area

5.10 Approximately 25% of Salisbury Reserve is proposed to be used as the central and primary CSA for the Project (predominantly the disused bowling green area), providing immediate support to the shaft construction sites and surface work. This site is referred to as 'CSA1'.

5.11 Since lodgement of the application, Watercare and its experts have worked hard to reduce and refine the extent of land required in Salisbury Reserve and have proposed a revised land requirement plan (which is included as **Attachment 1** to Mr Bishop's evidence and included below as Figure 1).

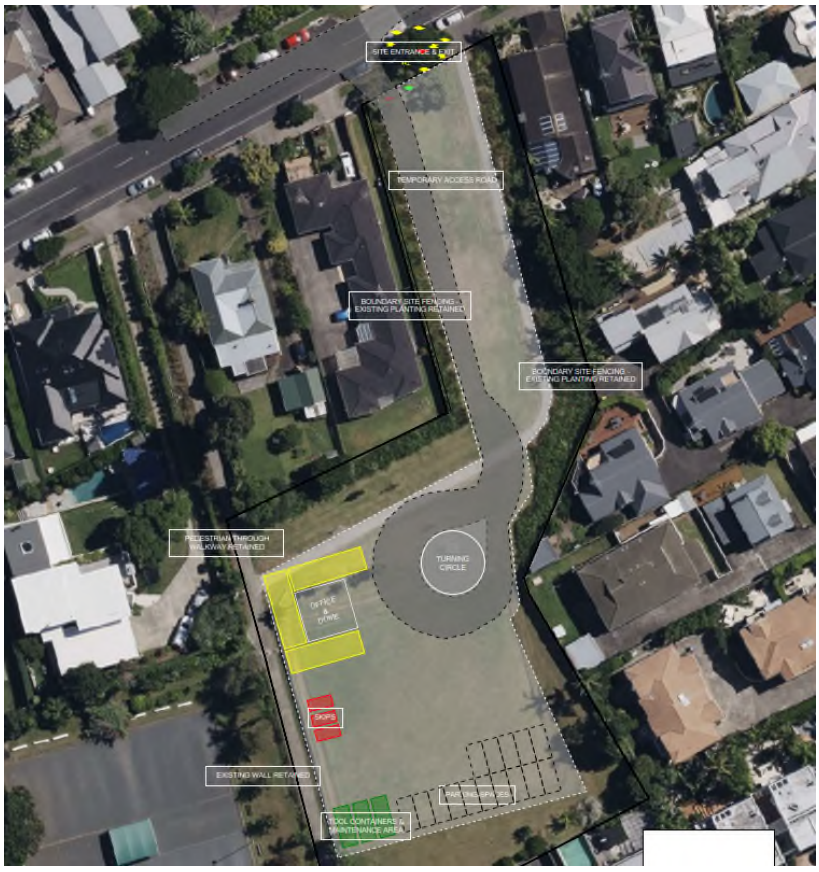

Figure 1: Indicative site plan for CSA1 at Salisbury Reserve (as at 19 Jan 23)

5.12 The site will contain the main site offices and worker welfare facilities, along with the storage for tools, aggregate, small materials, diesel and plant stabling. Staff parking will also be accommodated within the site to reduce demand for on-street parking. This site also allows staff and labour to easily access the working sites on foot reducing the need for parking at the various sites within the road reserve.

5.13 As explained by Mr Bishop, it is important to note that Salisbury Reserve will not be an active construction site and will therefore not generate effects that are typical of a construction site.[9]

Secondary construction support area

5.14 A secondary CSA is proposed at 94a-b Shelly Beach Road ('CSA2'). The purpose of this site is to provide access for larger trucks and to allow for the delivery and stockpiling of materials, including aggregate and spoil. This site will also contain worker welfare facilities, a secondary site office and some staff parking. All temporary facilities within this site will be kept clear of the existing Healthy Waters pump station.

6. EXISTING ENVIRONMENT

6.1 The existing environment for the Project is described in Section 3 of the AEE and in Section 8 of the Section 42A Report. In summary, land use within the Project area is primarily residential, with some associated educational facilities located around the periphery of the Project area, such as the Ponsonby Primary School on Curran Street, Bayfield School on Clifton Road and several early childhood centres. The two CSAs are located on public open space. This existing environment is set out in more detail below.

Project Environment

6.2 The Project is located within Herne Bay, a predominantly residential suburb on the western fringe of the Auckland City Centre. The Project area is bound by Point Erin Park in the east, the edge of the Waitematā Harbour to the north and west, and Jervois Road to the south.

6.3 The Herne Bay suburb was first settled in the 1850s and contains a range of residential typologies and architectural styles. Large areas of older dwellings are present, which generally correlate to the 'Single House' zoning and 'Special Character' overlay in the AUP. The oldest of these special character

9 Evidence of Mr Bishop dated 2 February 2024 at [4.20].

overlay areas are generally present in the blocks to the south of Sarsfield Street and Argyle Street and contain dwellings mostly constructed between 1900 and 1920. The more recent special character areas are located around Marine Parade and to the north of Argyle Street and contain dwellings mostly constructed in the 1920s.

6.4 Two dwellings adjacent to the alignment of the Project at 58 Wallace Street and 85 Sarsfield Street are scheduled within the Historic Heritage overlay under the AUP. Both dwellings are also included on the Heritage New Zealand List / Rārangi Kōrero as Category 2 places.

6.5 More modern residential areas are present to the north of Sarsfield Street and within the blocks surrounding Lawrence and Wallace Streets, signified by the 'Mixed Housing Suburban' and 'Mixed Housing Urban' zoning. These areas contain a combination of larger standalone dwellings, low-rise apartment buildings and flats.

6.6 Public open space in the Project area is present at Point Erin Park and Salisbury Reserve, with Coxs Bay Reserve located a short distance to the south-west. Several esplanade reserves also provide connections between the road reserve and the coastal edge through the Project area.

6.7 Ponsonby Primary School is located at 50 Curran Street, approximately 65m to the south of the proposed trunk sewer line, while Bayfield School and the attached Herne Bay Playcentre are located on a combined site at 2-12 Clifton Road,[10] approximately 400m to the south of the proposed line.

6.8 Further details of the Project environment in relation to specialist assessments are provided within the evidence of Mr Thomas, Ms Yung, Mr Shields, Ms Wick and Mr McBride.

7. RESOURCE CONSENTS SOUGHT

Resource consents applied for

7.1 All necessary resource consents are sought for the construction, operation and maintenance of the Project under the AUP and the Resource Management (National Environmental Standard for Assessment and Managing Contaminants in Soil to Protect Human Health) Regulations ("**NES-Contaminated Land**").

10 Also referred to as 211 Jervois Road.

7.2 More specifically, the Project requires land use consent pursuant to Section 9 of the RMA for the following activities:

(a) Rule C1.9 (2) for an infringement to the permitted earthworks standards of Chapter E26 **(RD)** for earthworks within overland flowpath[11] / floodplain;

(b) Rule E25.4.1 (A2) Construction noise exceeding permitted activity standards in the Open Space – Informal Recreation Zone **(RD)**;

(c) Rule E26.4.3.1 (A84) Tree trimming or alteration that does not comply with permitted standards **(RD)**;

(d) Rule E26.4.3.1 (A88) Works within the protected root zone of trees in public open space / road reserves **(RD)**;

(e) Rule E26.4.3.1 (A92) Tree alteration or removal of any tree greater than 4m in height and / or 400mm in girth in public open space / road reserves[12] **(RD)**;

(f) Rule E26.5.3.1 (A97) Earthworks greater than 2500m^2 other than for maintenance, repair, renewal or minor infrastructure upgrading **(RD)**;

(g) Rule E26.5.3.1 (A97A) Earthworks greater than 2500m^3 other than for maintenance, repair, renewal or minor infrastructure upgrading **(RD)**;

(h) Rule E31.4.3 (A101) Storage of hazardous substances within the Open Space – Informal Recreation zone, relating to the storage of diesel fuel within CSA1 at Salisbury Reserve **(D)**.

7.3 The Project also requires consent under Section 14 of the RMA for the following regional activities:

(a) Rule E7.4.1 (A20) Take and use of groundwater for dewatering **(RD)**;

(b) Rule E7.4.1 (A28) Temporary diversion of groundwater for dewatering **(RD)**;

11 Overland flow catchments greater than 4000m^2.

12 A full list of the trees subject to removal or alteration is contained within Section 4.6 of the AEE.

(c) Rule E30.4.1 (A7) Discharge of contaminants not meeting the controlled activity standards in Salisbury Reserve and 94a – b Shelly Beach Road **(D)**.

7.4 Consent is also required under Regulation 11 of the NES-Contaminated Land for the proposed works in Salisbury Reserve and 94a – b Shelly Beach Road as a discretionary activity.

7.5 The majority of the above activities requiring consent are restricted discretionary under the AUP. However, overall, consent for the Project is sought as a discretionary activity and my statement of evidence and the evidence of others has considered all the potential effects of the Project on this basis.

Additional consents identified by the Section 42A report

7.6 The following reasons for consent were identified in the Section 42A Report that were not initially sought by Watercare:

(a) Rule E26.5.3.2 (A106) Earthworks greater than 2,500m^2 where the land has a slope equal to or greater than 10 degrees **(RD)**;

(b) Rule E26.5.3.2 (A107) Earthworks greater than 2,500m^2 within the Sediment Control Protection Area **(RD)**;

(c) Rule E33.4.2 (A12) Discharge of contaminants from an existing or new industrial or trade activity area not listed in Table E33.4.3 where the permitted discharge standards are not met **(C)**.

Regional Earthworks

7.7 Council's technical specialist considers that additional regional consents are required for earthworks **that exceed 2,500m^2 in area and are located on land that has a slope equal to or greater than 10 degrees,** as a restricted discretionary activity under Rule E26.5.3.2(A106) and earthworks **that exceed 2,500m^2 in area and are located within a sediment control protection area,** as a restricted discretionary activity under Rule E26.5.3.2(A107).[13]

7.8 In both of these cases, there is only a very small area of earthworks (far less than 2500m^2) that occur within land on a slope of greater than 10 degrees or within a sediment protection area (CSA2 at Shelly Beach Road and Shaft

13 Section 42A Report at page 154-155.

One). The triggers for district earthworks consents at CSA1 and CSA2 occur on essentially flat land, while the trigger for earthworks at Shaft Three does not exceed 2,500m^2.

7.9 Council's interpretation is that if any part of the Project is within the 10 degree slope or sediment protection area then any exceedances of the 2,500m^2 will trigger consent, regardless of whether they are located in these areas or not.

7.10 My interpretation of these rules is that they apply to the area of works being undertaken at any one time within a slope greater than 10 degrees, or a sediment control area location as outlined in the explanation for Table E26.5.3.2, as below:

> Table E26.5.3.2 Activity table specifies the activity status of land use and development activities pursuant to section 9(2) of the Resource Management Act 1991.
>
> • for network utilities the **thresholds apply to the area and volume of work being undertaken at any one time at a particular location** such that, where practicable, progressive closure and stabilisation of works could be adopted to maintain the activity within the thresholds;

7.11 Regardless, I have considered the matters over which Council has restricted its discretion for regional earthworks, which include erosion and sediment controls, sediment discharge to water bodies, effects on sensitive areas and stockpiling of material. I confirm that the application has considered and proposed mitigation measures through proposed conditions of consent[14] to manage such potential adverse effects, including the preparation of an Erosion and Sediment Control Plan ("**ESCP**").

Industrial Trade Activity

7.12 The Council Officer considers that the discharge of contaminants from an industrial or trade activity area not listed in Table E33.4.3, being the proposed construction yards, where the permitted discharge standards are not met, is a controlled activity under Rule E33.4.2(A12). The Council specialist advising on this matter, is of the opinion that the particular discharge standard allegedly not complied with is that relating to discharge of contaminants from an industrial or trade area having less than minor effects as outlined in Standard E33.6.1.2(1) below:

> (1) The discharges of contaminants from an industrial or trade activity area must result in less than minor adverse

14 Section 7.9 of the AEE (Earthworks).

environmental effects on the receiving environment without the need for stormwater treatment (with the exception of on-site vehicle refuelling areas requiring stormwater treatment and spill contaminant devices under the permitted activity Standard E33.6.1.1(12).

7.13 As outlined in our s92 response on this matter, I am of the view that consent is not required under E33.4.2 (A12) as the use of Salisbury Reserve as a CSA is not an Industrial or Trade Activity ("**ITA**") (as that term is defined in the AUP). In particular:

(a) ITAs are defined in the AUP as having the same meaning as "industrial or trade process" in Section 2 of the RMA.[15] The RMA defines "industrial or trade process" as "every part of a process from the receipt of raw material to the dispatch or use in another process or disposal of any product or waste material, and any intervening storage of the raw material, partly processed matter, or product".

(b) In my opinion, this definition points to a "process" and the manufacture of goods from raw materials. This opinion is supported by the industrial and trade activities that are referenced within Table E33.4.3 Activity Table - Industrial and Trade activity risk criteria, which includes chemical product manufacturing, machinery manufacturing, and product storage and handling centres for bulk chemicals and hydrocarbons (greater than 1000m^2).

(c) Although up to 2000L of diesel will be stored on the site, this does not constitute bulk storage nor does it come close to occupying 1000m^2, rather it is a mobile tank. Hence the proposed construction of a wastewater pipeline and supporting use of Salisbury Reserve as a CSA does not fulfil this definition.

(d) Furthermore, Council defines an ITA in more plain terms on their own website as "any commercial business that produces, uses or stores hazardous substances".[16] This definition provides clear guidance that ITAs do not relate to temporary construction and construction support activities. This is also consistent with my previous experience with Council, as an ITA consent requirement has not been imposed for construction support facilities of this nature.

15 Chapter J1 of the AUP, page 61.

16 https://www.aucklandcouncil.govt.nz/environment/looking-after-aucklands-water/Pages/industrial-trade-activity-business-stormwater.aspx.

7.14 Regardless, Watercare has addressed the need to manage any discharge of contaminants from the site, by way of the proposed ESCP and construction management plan ("**CMP**") which are required by the Proposed Conditions, and further agrees to accept additional conditions (refer Proposed Conditions 110 – 113 in my Attachment 1) specifying a standalone Environmental Management Plan for the CSAs as part of their environmental best practice approach.

7.15 I raise this issue so that the Panel may assist by providing direction on the interpretation of the ITA provisions in the AUP for the benefit of future projects.

Additional consent alleged by submitters

7.16 The submission by Gary Lane raises a concern that further consents are required for the Project and as such, the assessment of consent triggers in the AEE was incomplete. Mr Lane's concern is particularly in relation to the consents required for use of Salisbury Reserve as a CSA. It is alleged that consent is required under the following rules in the Open Space – Informal Recreation Zone:

(a) Rule H7.9.1(A25) Parks depot, storage and maintenance as a restricted discretionary activity; or

(b) If consent was not considered to be required under Rule H7.9.1(A25), then consent is required under rule H7.9.1(A1) - activities not provided for as a non-complying activity.

7.17 I am of the view that consent is not required under either of the above rules, for the following reasons:

(a) The above Open Space zone rules are not relevant as the use of Salisbury Reserve specified under H7.9.1 (A25) is in relation to a permanent Parks depot, such as those within Regional Council Parks, which the CSA is not;

(b) Further, a CSA is provided for as a temporary activity under Chapter E40 of AUP, which apply Auckland Wide. Specifically, Rule E40.4.1 (A20) provides that "Temporary activities associated with building or construction, (including structures and buildings that are accessory activities), for the duration of the project, or up to 24 months, whichever is the lesser" is a Permitted Activity. The Section 42A

Report confirms that this activity applies to the use of Salisbury Reserve for a CSA[17];

(c) This rule has been relied upon for other CSAs in open space zones utilised for Watercare projects within Auckland recently where the construction is for a temporary period is less than 24 months. On another Watercare project I was involved with, the CSA occupation within Boggust Park, Māngere was expected to be greater than 24 months.[18] In that instance consent was sort and granted under E40.4.1 (A24). Consent was also sought and granted under this rule for the Central Interceptor extension project.[19] In both these examples there was no dispute as to whether or not consent was being sought under the appropriate rule. This further confirms that Permitted Activity rule E40.4.1 (A20) is the appropriate rule applying to an activity of this nature; and

(d) However, it is recognised that the construction activities within Salisbury Reserve trigger the need for certain consents and these have been applied for as outlined in paragraphs [7.2], [7.3] and [7.4] above.[20]

7.18 Mr Lane's submission also considers that a resource consent is required under Chapter E33.4.2(A12) for the "discharge of contaminants from an existing or new industrial or trade activity area not listed in Table E33.4.3 where the permitted discharge standards are not met" as a controlled activity. Subsequent to Mr Lane's submission being provided, Auckland Council's Stormwater and Industrial / Trade Activities Specialist also considered that this activity is relevant to the application and have included activity Rule E33.4.2 (A12) as a reason for consent.

7.19 As explained above, I do not agree that the ITA provisions apply in this case as the activity does not meet the definition of an industrial or trade activity as stated in the AUP, and that being the same meaning as "industrial or trade process" in Section 2 of the RMA. Further to the analysis provided above, it is my experience that Council has only interpreted an activity as an ITA where there is manufacturing on site, such as the manufacturing from cement of concrete side barriers for roading projects within the CSA.

17 Section 42A Report, pages 17 – 18.

18 Resource consent reference BUN60415837, approved 3rd October 2023.

19 Resource consent reference BUN60415108, approved 21st September 2023.

20 Rules E30.4.1 (A7) and E31.4.3 (A101) of the AUP and Regulation 11 of the NES-Contaminated Land.

7.20 Overall, I consider that all required consents for the application have been sought.

8. SECTION 104 OF THE RMA

8.1 Section 104 of the RMA sets out the matters that a consent authority must, subject to Part 2, have regard to in relation to resource consent applications. These include:

(a) the actual and potential effects on the environment of allowing the activity (Section 104(1)(a));

(b) any relevant provisions of policy statements and plans (Section 104(1)(b)); and

(c) any other matters the consent authority considers relevant and reasonably necessary to determine the application (Section 104(1)(c)).

8.2 I refer to the provisions as identified in Sections 104(1)(b) and (c) of the RMA as the **Policy Framework**.

8.3 I also note that Section 104(2D) RMA states that when considering a resource consent application that relates to a wastewater network, a consent authority:

(a) must not grant the consent contrary to a wastewater environmental performance standard made under s138 of the Water Services Act 2021; and

(b) must, include, as a condition of granting the consent, requirements that are no less restrictive that is necessary to give effect to the wastewater environmental performance standard.

8.4 There are currently no wastewater environmental performance standards under Section 138 that need to be considered for the purposes of this Project under Section 104(2D) RMA.

8.5 I have structured the following paragraphs of my evidence as follows:

(a) I provide an assessment of effects by type, having regard to the AEE and accompanying technical reports, the expert statements of evidence, matters raised in submissions, the Council Officer's

Section 42A Report, and the recommendations for the management of effects contained in paragraphs [8.6] to [8.65];

(b) I provide an assessment against the relevant policy statements and plans in paragraphs [8.66] to [8.99]; and

(c) I provide an assessment against others relevant matters in paragraph [8.103] – [8.104].

Assessment of Effects – s104(1)(a)

Overview of effects

8.6 The actual and potential effects on the environment that may arise from the Project have, in my view, been thoroughly considered throughout the AEE, information provided in the Section 92 responses, subsequent correspondence with Council's processing planner and the expert evidence prepared. I have reviewed the Section 42A Report and note that this report generally concurs with the findings of these assessments. My opinion has not changed generally from the position expressed in the AEE, however further assessment has been provided as to the landscape and visual effects and loss of public recreation space from the use of Salisbury Reserve to address concerns from submitters. In this instance the assessment of Ms Wick has identified temporary more than minor landscape and visual effects, which are described further in paragraphs [8.50] – [8.54] of my evidence below.

8.7 I rely on the expert assessment and evidence (where given) of the technical specialists who have evaluated the Project effects for Watercare and provide a summary below of their conclusions, together with the measures that are proposed to avoid, remedy or mitigate any adverse effects.

8.8 In respect to adverse effects, in my view, these relate to temporary construction activities, rather than operational effects, for the following reasons:

(a) Operational requirements are limited, and would only involve maintenance inspection of manholes, or emergency cleanup if there was a blockage at an EOP.

(b) The wastewater from the Project will be discharged to the Central Interceptor pipeline at Point Erin Park and treated at the Māngere

Wastewater Treatment Plant pursuant to Watercare's existing resource consents for these activities.[21]

(c) Any operational noise of the wastewater pipeline will be negligible, due to the depth of the pipeline beneath ground level.

(d) No above-ground structures (such as pump stations or retaining walls) are required.

(e) The proposed primary and interception shafts within identified flood plains will be constructed beneath ground level. No permanent changes to ground levels will occur within these flood plains.

(f) The public reserves utilised as CSAs will be restored to their pre-construction state (and enhanced where appropriate) in consultation with the Waitematā Local Board.

8.9 The exception to the above applies where removal of protected trees is proposed, and before growth of the replacement trees to the same scale as that lost. The short to medium term visual / amenity / streetscape character effects of the tree removal are discussed by Ms Wick in her evidence and summarised below.

8.10 I have therefore largely focused my evidence on the effects associated with the construction of the Project.

8.11 Overall, in my experience the construction effects of the Project that have been identified are typical of large infrastructure projects in urban Auckland. They predominantly relate to noise and vibration and traffic and transport effects on the locality. Lesser construction related effects such as sediment control and temporary amenity loss are also recognised in the AEE. In my view, and as I explain below, these temporary effects can be avoided, remedied or mitigated by implementation of management plans and the proposed standard-based and adaptive management conditions (subject to the amendments I have proposed to those conditions) which are included with my evidence as **Attachment 1**.

21 This excludes overflows from existing EOPs during adverse wet weather events.

Positive effects

8.12 The Project has a number of positive effects which include:

(a) Reducing overflows from wet weather events to the coastal environment (the Waitematā Harbour) in the Herne Bay catchment;

(b) Increasing network resilience through providing redundancy to the existing Herne Bay Branch 5 Sewer, which was constructed in 1912 and can no longer manage the scale of wastewater generated during wet weather events; and

(c) Providing network capacity for existing development and future growth.

8.13 The Project will reduce EOP spill frequencies from wet weather events into the Waitematā Harbour and will assist with ensuring Watercare's ongoing compliance with its existing Network Discharge Consent. This will lead to improvements in water quality at the beaches in the Herne Bay catchment and will reduce health risks to the public, along with a reduction of odour from stormwater catchpits and improved overall amenity.

8.14 The proposed wastewater upgrades will enable people and communities to provide for their social, economic and cultural well-being and for their health and safety, consistent with the principles and purpose of the RMA. Overall, the Project will generate positive effects by reducing wet weather flows from the existing combined wastewater network, reducing overflows to the coastal environment and improving the resilience of existing infrastructure to provide for future population growth in the Herne Bay catchment.

Noise and vibration effects

8.15 The evidence of Ms Yung sets out the construction activities that she considers have the ability to generate noise and vibration effects.[22] With respect to section 104(1)(a) of the RMA the technical assessments predict that construction noise and vibration effects will be received by owners and occupiers of dwellings adjacent to all surface construction activities, including shafts and open-trenching excavations.

8.16 Despite standard E25.6.29 (2) and (4) in the AUP providing that the noise and amenity vibration standards do not apply to planned construction works within

22 Evidence of Ms Yung dated 2 February 2024 at [6.3].

the road reserve (and as such these works are permitted activities), the effects of works within the road reserve have been assessed in the context of the Project more broadly as a discretionary activity. Watercare also has a duty to avoid unreasonable noise effects as per Section 16 of the RMA.

8.17 The effects of construction noise and vibration are addressed in detail within the evidence of Ms Yung.[23] However, in summary, the temporary noise and vibration effects to most receivers are considered less than minor with the implementation of mitigation measures and conditions of consent described below.[24] During construction, activities will be able to occur within reasonable noise and vibration levels, and effects can be managed through on-site management procedures and communication with sensitive receivers prior to activities occurring.[25] This mitigates construction noise and vibration effects to a standard whereby they are considered acceptable for a construction activity of this scale.[26]

8.18 The technical assessments do however predict some localised effects (which are expected to be intermittent) to the following properties:

(a) Noise effects from primary and interception shaft construction above 80dB (approximately 30 - 100 days): (46 Argyle Street, 45 Argyle Street, 91 Sarsfield Street, 96 Sarsfield Street, 98 Sarsfield Street and 34 Herne Bay Road;[27]

(b) Noise effects from open trenching above 85dB (typically around three to four days): 22 Marine Parade, 49 Marine Parade, 32 Sentinel Road and 34 Sentinel Road;[28]

(c) Vibration effects above 3mm/s threshold for heritage dwellings due to the construction of primary shafts (around 60 – 100 days): 72 Argyle Street and 34 Herne Bay Road;[29] and

(d) Vibration effects above 5mm/s cosmetic damage threshold from short-term surface works (typically three to four days): 1 Marine Parade.[30]

23 Evidence of Ms Yung dated 2 February 2024 at section 7.
24 Evidence of Ms Yung dated 2 February 2024 at section 7.
25 Evidence of Ms Yung dated 2 February 2024 at [8.1] and [8.4].
26 Evidence of Ms Yung dated 2 February 2024 at [1.11].
27 Evidence of Ms Yung dated 2 February 2023 at [7.6].
28 Evidence of Ms Yung dated 2 February 2024 at [7.10].
29 Evidence of Ms Yung dated 2 February 2024 at [7.19].
30 Evidence of Ms Yung dated 2 February 2024 at [7.19].

8.19 The application initially also identified minor noise and vibration effects to the occupants of 8 Wairangi Street and minor noise effects to the occupants of 6 River Terrace due to the construction of the interception pipeline to EOP1019. However, this pipeline and EOP connection is no longer proposed under this resource consent and as such, those effects can be disregarded.

8.20 To manage and mitigate potential construction noise and vibration effects, the implementation of a Construction Noise and Vibration Management Plan ("**CNVMP**") has been proposed (refer Proposed Condition 37). The CNVMP contains the following mitigation strategies:

(a) Proactive consultation and engagement with affected parties, particularly where works likely to exceed permitted standards are required, or when works are required to occur outside of standard hours;

(b) Vibration monitoring of properties identified to be subject to infringements, alongside pre and post construction building condition surveys;

(c) Inclusion of localised noise barriers, including around the perimeter of CSA1 in Salisbury Reserve;

(d) General mitigation measures to reduce unnecessary noise, such as orienting machinery away from sensitive receivers, utilising noise enclosures (where practical) and selecting less noisy construction equipment and methodology; and

(e) Establishment of a community liaison officer to assist with communication between affected parties and the constructors.

8.21 Subject to implementation of the CNVMP, Ms Yung concludes that construction noise and vibration can be practically controlled to reasonable levels.[31] I rely on the expertise of Ms Yung to conclude that with the implementation of the measures outlined in the CNVMP, and the Proposed Conditions 37 - 44, that the actual and potential noise and vibration effects generated during construction can be appropriately managed.

Traffic / Transport effects

8.22 The Project will generate additional vehicle movements on the local road network and the proposed construction works within the road corridor will

31 Evidence of Ms Yung dated 2 February 2024 at [11.1].

generate temporary disruption to traffic, properties access and street parking in the area. A series of road or lane closures are required to enable the construction of primary construction shafts, interception shafts and open-cut excavations, requiring temporary traffic diversions. Construction traffic and transport effects are described in the evidence of Mr Shields.

8.23 With reference to Mr Shields' evidence, the critical effects on the transport network from closures are summarised below:

(a) The construction of Shaft One will require the full closure of Sarsfield Street for up to 100 days, which will divert up to 4,000 vehicles a day onto Emmett Street and Curran Street. This will generate significant albeit temporary adverse effects on the network and to occupants of properties on Emmett Street and will represent a 900% increase in movements. For Curran Street, this will represent a 50% increase in vehicle movements, and is likely to exacerbate existing congestion during peak hours. As noted above, Ponsonby Primary School is also located on Curran Street, and the increase in vehicle movements may impact on students walking to and from the school without suitable mitigation.[32]

(b) The construction of Shaft One will also subsequently require the partial closure (one lane open westbound only) of Sarsfield Street for up to 147 days, with eastbound traffic continuing to be diverted onto Emmett Street (estimated 542 movements per day). This will result in a 100% increase in movements and generate more than minor temporary adverse effects to the occupants of properties on Emmett Street.[33]

(c) The construction of Shaft Two will require the full and partial closure of sections of Sarsfield Street, Wallace Street and Stack Street for up to 251 days. These closures are expected to divert traffic movements to Cremorne Street, Argyle Street, Wallace Street, Lawrence Street. This will generate more than minor temporary adverse effects due to a combination of duration of works and the quieter nature of these streets. As is set out by Mr Shields, discussions held with the owner of 51 Wallace Street has confirmed that the existing vehicle crossing and garage door to the rear of their property is not used for vehicle access since the rear area is used

32 Evidence of Mr Shields dated 2 February 2024 at [7.18].

33 Evidence of Mr Shields dated 2 February 2024 at [7.20].

as a patio. As such Mr Shields has updated his assessment from a more than minor impact to a less than minor impact.[34]

(d) The construction of Shaft Three will require the full closure of sections of Wallace Street and Argyle Street for up to 340 days. These closures are expected to divert traffic movements to Cremorne Street, Stack Street, Clifton Road, Lawrence Street. This will generate more than minor temporary adverse effects due to a combination of duration of works and the quieter nature of these streets.[35]

(e) The construction of Shaft Four will require the full closure of sections of Herne Bay Road and Argyle Street for up to 201 days. These closures are expected to divert traffic movements to Bella Vista Road, Masons Avenue and Clifton Road. This will generate more than minor temporary adverse effects due to a combination of duration of works and the quieter nature of these streets.[36]

(f) Open-cut trenching within Marine Parade is required between Shafts Seven and Eight. These works will require the closure of Marine Parade and the restriction of general traffic movements, and temporary short-term restrictions to property during work hours; estimated to be up to five days per property, or a total of 60 days for the trenching works and construction of Shaft Eight. This will generate minor temporary adverse effects[37] on the affected properties within Marine Parade.

8.24 In addition, construction traffic (including worker vehicles, delivery trucks, concrete trucks etc) will be generated by the Project. These additional trips will contribute an increase of up to 1% of total movements on the Northern Motorway and on arterials, and between 2% and 16% on residential streets. As such, the effects of construction vehicle movements will be less than minor.

8.25 While the Project will require road closures and traffic diversions to accommodate construction works, pedestrian access has been maintained. Footpaths will need to be temporarily closed on one side of the road to accommodate some construction works, but the footpath on the other side of the road will remain open to allow for pedestrian movements. Other

34 Evidence of Mr Shields dated 2 February 2024 at [7.35].
35 Evidence of Mr Shields dated 2 February 2024 at [7.44].
36 Evidence of Mr Shields dated 2 February 2024 at [7.54].
37 Evidence of Mr Shields dated 2 February 2024 at [7.73].

infrastructure such as crossings and raised platforms will need to be temporarily removed during construction but will be reinstated upon completion of the works. Cyclist movements will be impacted where road closures are required; cyclists will therefore need to follow diversion routes as cars do.

8.26 Mr Shields has described Project wide and site-specific mitigation and management measures to minimise effects on other transport users and occupants in the vicinity of the Project site so that construction can be undertaken in a safe manner.[38] These include minimising full road closures, traffic marshals, prescribed truck routes, temporary reduction in speed limit near Ponsonby School, and for the greatest impacted streets, removal of street parking and constant communication with residents along with the development of a Construction Traffic Management Plan ("**CTMP**"). A draft CTMP has been prepared and is outlined in the evidence of Mr Shields.[39] The CTMP considers feedback provided to Watercare from Auckland Council, Waka Kotahi and the Ministry of Education (on behalf of Ponsonby Primary School).

8.27 I rely on the expertise of Mr Shields to inform my assessment of transport effects. Overall, the effects of construction traffic and construction activities on the transport network will range from less than minor to significant adverse. However, in my view (taking into account Mr Shields conclusions), subject to the implementation of a CTMP and the Proposed Conditions, any actual and potential effects arising from construction traffic will be appropriately managed.

Earthworks – Erosion, sedimentation and dust

8.28 Earthworks are required along the alignment of the Project, including bored tunnelling, trenching and piling of the shafts. The earthworks for the Project generally fall within permitted thresholds,[40] apart from at Shafts Three and Five, where a volume of 3,010m^3 and 3,349m^3 respectively is required, and for the site preparation works (topsoil scrape) within CSA2 at 94a – 94b Shelly Beach Road, where an estimated area of up to 3,100m^2 is required.

8.29 To ensure that adverse effects on surrounding properties and downstream receivers from these earthworks are avoided, a draft ESCP has been

38 Evidence of Mr Shields dated 2 February 2024 at Section 8.

39 Evidence of Mr Shields dated 2 February 2024 at [8.2] – [8.7].

40 Note that as per E26.5.3. of the AUP, earthworks thresholds for infrastructure apply to the area and volume of work being undertaken at any one time at a particular location.

prepared to support the application. The ESCP is consistent with the requirements of the Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (known as GD05) and includes both general project controls and site-specific controls at the shaft, open cut and CSA site.

8.30 The ESCP proposes a range of measures to reduce sediment runoff, including:

(a) Silt / super silt fencing and hot-mix asphalt diversion channels / bunds around the perimeter of work sites;

(b) Stabilised construction entrances;

(c) Compost filled filter socks and catchpit filters; and

(d) Soils from the proposed works will be removed from the shafts and loaded onto trucks to avoid stockpiling at the shaft sites and at CSA1. This will minimise the risk of sediment runoff during wet weather events.

8.31 The proposed ESCP measures will be continuously monitored during construction to ensure their effectiveness is maintained, particularly after wet weather events. In my opinion, subject to the implementation of the Proposed Conditions, including the ESCP, any actual and potential temporary effects arising from earthworks will be appropriately managed.

Works within contaminated land

8.32 The potential for contaminated soil to be present has been identified within the two CSA sites, which will be disturbed during the topsoil scrape works. Potential contaminants within CSA1 relate to metals and pesticides from the use of the site as a bowling pavilion, while within CSA2 they relate to historic reclamation and filling activities.

8.33 To mitigate the potential effects to human health and the environment as a result of any contamination encountered, Mr Jin has recommended a Site Management Plan ("**SMP**") be prepared to detail the procedures and controls required during and following the works to minimise potential effects. The controls to be included in the SMP include the following:

(a) Measures for the excavation, disposal and transport of excavated soils;

(b) Water management;

(c) Protocols for imported materials;

(d) Measures for handling unexpected contamination;

(e) Emergency responses;

(f) Complaints protocols; and

(g) Health and Safety procedures for encountering unexpected contamination.

8.34 In my opinion, and taking into account the conclusions by Mr Jin, subject to the Proposed Conditions and implementation of a SMP, I consider that the potential effects associated with the disturbance of contaminated land during construction can be appropriately managed.

Groundwater diversion, dewatering and settlement effects

8.35 During construction, groundwater diversion and dewatering will be required at the shaft and open-trench locations to construct the new trunk sewer line. As set out in the evidence of Mr Thomas, this has the potential to generate settlement on the surrounding land if not controlled appropriately.[41] To reduce groundwater diversion and dewatering, and subsequent settlement effects, a conservative secant pile methodology has been selected to construct the primary construction shafts, along with the operation of the TBM in 'closed' mode[42]. The modelled settlement profiles for the construction activities are included in the Geotechnical and Groundwater Assessment provided with the application. These profiles show the extent of potential groundwater drawdown and consider the likelihood for damage to properties and public utilities.

8.36 The assessment of Mr Thomas concludes that potential adverse effects from groundwater diversion, dewatering and settlement can be avoided.[43] The technical assessments predict:

(a) No settlement effects greater than 10mm are anticipated to occur below any neighbouring structures along the alignment of the Project; Less than 10mm of ground surface settlement is likely to occur adjacent to Shafts One to Eight. Settlements will reduce with distance from the shafts. This calculation is likely to be conservative,

41 Evidence of Mr Thomas dated 2 February at [4.2].

42 Evidence of Mr Thomas dated 2 February at [8.2].

43 Evidence of Mr Thomas dated 2 February at [7.9].

as it is based on the high groundwater levels measured during 2023. It is more likely that settlements will be less than 2mm, based on analyses which assume that groundwater has historically been at least 0.5m lower than recorded during 2023.[44]

(b) Ground settlement and dewatering effects arising from the tunnelling and shaft excavation can generally be managed to within acceptable levels, provided that robust construction methods are adopted, and tunnel boring activities take into consideration compressible materials where inverts are shallow.[45]

(c) Effects of settlement on existing underground utilities are expected to be negligible.[46]

(d) Effects from dewatering on regional groundwater availability or neighbouring groundwater users will be negligible.[47]

(e) No saltwater intrusion or stream depletion from shaft excavation or tunnelling activities is anticipated.[48]

8.37 To mitigate the actual and potential effects relating to groundwater diversion and dewatering, Mr Westgate recommends a Groundwater and Settlement Monitoring and Contingency Plan ("**GSMCP**") be prepared to inform groundwater and settlement monitoring requirements during each of the relevant Project stages, and to ensure potential adverse effects on surrounding properties are identified and rectified.[49] A draft GSMCP has been provided with the application that establishes a set of Project controls to measure groundwater drawdown and ground settlement, including contingency and mitigation measures, should monitoring results indicate ground settlement and groundwater drawdown and established alert and alarm limits.

8.38 Additionally, pre and post building condition surveys are recommended in the GSMCP for those properties closest to the shafts.[50]

8.39 To address concerns from submitters on the effects of groundwater settlement and vibration from the construction of Shaft Two on townhouses at 92 – 98

44 Evidence of Mr Thomas dated 2 February at [7.7].
45 Evidence of Mr Thomas dated 2 February at [8.9].
46 Evidence of Mr Thomas dated 2 February at [13.1].
47 Evidence of Mr Thomas dated 2 February at [14.1] – [14.2].
48 Evidence of Mr Thomas dated 2 February at [14.3].
49 Evidence of Mr Thomas dated 2 February at [16.1].
50 Evidence of Mr Thomas dated 2 February at Section 7.

Sarsfield Street / 51 Wallace Street, a structural review has been prepared. This review is presented in the statement of evidence (structural engineering) provided by Mr Clarke, which has assessed the potential impact on the structural integrity of these townhouses.

8.40 In preparation of his evidence, Mr Clarke has undertaken a site inspection of these townhouses and considered how the predicted ground settlement / vibration effects and the proposed methodology of construction works could affect the structure and existing alterations. The evidence of Mr Clarke relies on the modelling undertaken by Tonkin and Taylor[51] for the Project and concludes that the predicted vibration and settlement effects on these townhouses will not affect their structural stability.[52]

8.41 Notwithstanding the above, the evidence of Mr Clarke acknowledges the potential for cosmetic damage (such as surface plaster cracks) to occur during construction.[53] However, in his view, any such damage can be easily repaired, and Watercare has offered pre and post condition surveys in the Proposed Conditions of consent to the owners of these townhouses (and other similar properties) to identify any damage that may occur and undertake repairs (see Proposed Conditions 76, 83 and 88).

8.42 I rely on the expertise of Mr Thomas and Mr Clarke to conclude that the effects of groundwater diversion, dewatering and settlement are less than minor. In my opinion, subject to the implementation of the Proposed Conditions and implementation of the management plans, ground surface settlement and drawdown effects will be appropriately managed.

Arboricultural effects

8.43 Within and adjacent to the Project area are a number of trees, including several scheduled 'notable trees' and many large street trees or trees within public open space with general protection under the AUP. Mr McBride has considered the arboricultural effects on trees and has reviewed the Proposed Conditions.

8.44 The approach throughout the alignment of the Project has been to minimise the removal and alteration of trees wherever possible. In some instances, this has resulted in the removal of smaller, less healthy or less arboriculturally significant trees to ensure larger trees are retained. The removal of some

51 Presented in the evidence of Mr Thomas and Ms Yung.

52 Evidence of Mr Clarke dated 2 February 2024 at [1.5].

53 Evidence of Mr Clarke dated 2 February 2024 at [1.3].

trees is necessary however to construct shafts, provide safe access to the CSA sites, and ensure there is sufficient room for machinery.

8.45 I rely on the expertise of Mr McBride in part to assess the effects of the Project on protected trees. The evidence of Mr McBride informs all arboricultural aspects of this assessment, whereas any effects relating to visual effects, amenity and streetscape character of the Project have been assessed by Ms Wick.

Landscape and visual effects – Street Tree Removal

8.46 To enable the construction of the proposed shafts, a total of 14 trees are to be removed, of which 11 are to be removed from the road reserve. The trees identified for removal are generally established specimens that contribute to the urban landscape. This will lead to a temporary reduction in tree cover in a small number of locations distributed across the suburb. This extent of tree removal will generate temporary low -moderate adverse landscape and visual effects at Upton Street, where three Queen Palm and four Magnolia trees are to be removed.[54] The removal of the remaining four street trees will generate temporary low adverse landscape and visual effects.[55]

8.47 To mitigate the effects of the proposed tree removal a total of 46 exotic or 51 native trees are proposed to be planted[56] within the streets of Herne Bay and in Salisbury Reserve (refer Proposed Condition 125). The proposed mitigation planting will result in a positive landscape outcome over time.[57] It will increase the total number of overall street trees, contribute positively to streetscape in location of tree removals and wider Herne Bay area and align with the long-term Auckland Council city wide 'Urban Ngahere' goals.[58]

8.48 Details of the proposed mitigation planting were supplied by the Watercare Project team in response to a Section 92 request, showing 50 potential locations and species designated for tree replacement within the road reserve, along with a draft reserve reinstatement plan for Salisbury Reserve. The proposed tree species selected aim to reflect and enhance the local unique character of each streetscape, contributing collectively to the range of species in the area, however the final species and location of planting is at the discretion of Council.

54 Evidence of Ms Wick dated 2 February 2024 at [4.14].
55 Evidence of Ms Wick dated 2 February 2024 at section 4.
56 This figure includes the mitigation planting for the removal of two Cabbage trees within Salisbury Reserve.
57 Evidence of Ms Wick dated 2 February 2024 at [4.27].
58 Evidence of Ms Wick dated 2 February 2024 at [4.27].

8.49 Overall, I rely on the expertise of Ms Wick to determine that the effects of removing 11 street trees during construction will have temporary less than minor effects, except at Upton Street, where effects will be minor. Notwithstanding this, over time the planting will further enhance the streetscape, align with Auckland Council's goal of increasing urban tree canopy (urban ngahere) cover and will increase local biodiversity.

Landscape and visual effects – Use of Salisbury Reserve as a CSA

8.50 The use of Salisbury Reserve as a CSA will occupy approximately 25% of the park, and result in the temporary reduction of open space for the residents of Herne Bay.

8.51 As assessed in the evidence of Ms Wick, the impact of the proposed CSA on the existing landscape character and amenity is expected to be moderate to high during construction.[59] The CSA will result in a temporary change to the visual outlook of adjacent properties from a grassed reserve to a construction yard, with associated fencing, lighting, small scale buildings and the storage of material and equipment.[60]

8.52 In terms of mitigation, the proposed 2m high fence will provide some visual mitigation. However, given the proximity of the CSA to the boundary of the reserve, lack of vegetation screening, elevated nature and two storey nature of some of the houses, for the eight properties immediately adjoining to the immediate east and south of the reserve there will be moderate - high adverse visual amenity effects,[61] corresponding to more than minor effects.

8.53 The other properties adjoining the proposed CSA are largely single storey, with fencing or vegetation providing some visual screening (14 and 16 Argyle Street), or are two storeys, but orientated away from the reserve with established vegetation (26 Argyle and 44 Wallace Street). Views from these properties to the CSA will therefore not be as direct or elevated, however it is still anticipated that there will be adverse effects that of up to moderate for these four properties,[62] also corresponding to more than minor effects.

8.54 In the long term however, the post-construction remediation of Salisbury Reserve will contribute to positive landscape and visual effects, as the proposed revegetation planting will contribute to the overall amenity and

59 Evidence of Ms Wick dated 2 February 2024 at [5.19].
60 Evidence of Ms Wick dated 2 February 2024 at [5.23].
61 Evidence of Ms Wick dated 2 February 2024 at [5.23].
62 Evidence of Ms Wick dated 2 February 2024 at [5.24].

biodiversity of the area.[63] As such, no long-term adverse landscape or visual effects within Salisbury Reserve are anticipated.

Cultural effects

8.55 I note that I have not been involved in direct engagement with mana whenua for this Project and have relied on information supplied to me by Watercare in respect to their engagement with Mana Whenua on this project, as outlined in the evidence of Mr Elley-Brown and Mr Hung.[64] I have summarised this engagement in the AEE in Section 10.1.

8.56 It is my understanding that Te Ākitai Waiohua were the only mana whenua group to register an interest to be engaged with in relation to the Project. After a site visit Te Ākitai Waiohua provided a formal response on 6 September 2023, confirming the adverse cultural effects generated by the Project can be appropriately managed through conditions of cultural induction and cultural monitoring over the construction period. Watercare accepted the proposed cultural mitigation measures and these have been incorporated into the Proposed Conditions (refer Proposed Conditions 57- 60).

Temporary Loss of Public Open Space

8.57 The temporary loss of public open space resulting from the use of approximately 25% of Salisbury Reserve as a CSA has been raised as a concern by a number of submitters. In particular, several submitters (including the Herne Bay Residents Association and the late submission from the Salisbury Reserve Residents' Group) object to the use of Salisbury Reserve. As a result, and given 94a – b Shelly Beach Road is not currently used for recreational purposes, Salisbury Reserve is the focus of this assessment.

8.58 As assessed in paragraph [7.17] above, the use of public open space for temporary construction activities for up to 24 months is provided for as a Permitted Activity in the AUP under Rule E40.4.1(A20). Furthermore, the use of open space to support the construction of large-scale public infrastructure is commonplace and has been used for projects such as Central Interceptor and City Rail Link.

63 Evidence of Ms Wick dated 2 February 2024 at [5.20].

64 Evidence of Mr Elley-Brown and Mr Hung dated 2 February 2024 at [5.30] – [5.34].

8.59 As is explained by Mr Bishop,[65] use of Salisbury Reserve is essential for a number of reasons:

(a) The central location of Salisbury Reserve will reduce the amount of light vehicle movements required to the shaft sites, since technical staff will be able to walk from site offices at Salisbury Reserve to these sites. It also provides a single central location for the provision of site facilities for workers for pre-start briefings and training, as well as break areas.

(b) The large flat area of the disused bowling green can be utilised without significant earthworks to prepare the area. Some drainage will be required to the bowling green that floods due to the enclosed nature of the green. On completion the area can be easily reinstated.

(c) There is natural screening of properties to the southeast of the site.

8.60 The area is flat and allows for informal recreation activities, such as dog walking and ball kicking. Apart from schools, the closest formal playing fields are at Coxs Bay Reserve, about 1.3km from Salisbury Reserve (via roads). Overall, while there will be a small loss of public recreational area during construction, I consider there are facilities nearby for both informal and organisation recreational activities both within Salisbury Reserve and the wider area. As such, I consider that the effects of the temporary loss of recreational facilities will be less than minor.

8.61 The use of Salisbury Reserve will generate some temporary visual amenity effects to the adjacent properties during construction. The use of a 2m-tall noise barrier around the perimeter of the CSA will obstruct residents' outlook towards the park. However, I consider that the benefits of utilising noise barriers outweigh any negative effects, as it will ensure that the privacy of occupants is protected, machinery and plant within the CSA is screened, and noise effects reduced. In addition, the barrier will be the same height as permitted side and rear yard fencing in the adjacent Mixed Housing Suburban Zone,[66] and therefore will not generate any shading or dominance effects that are not already anticipated in the zone. Overall, the temporary visual / amenity effects of the proposed noise barriers around the CSA in Salisbury Reserve will be less than minor on adjacent occupants.

65 Evidence of Mr Bishop dated 2 February 2024 at [8.12].

66 Standard H4.5.14. Front, side and rear fences and walls.

8.62 Further discussion on the potential noise and traffic effects of the use of Salisbury Reserve as a CSA is contained within the evidence of Ms Yung and Mr Shields respectively.[67]

8.63 In terms of longer-term mitigation, Watercare has submitted a draft reserve reinstatement plan for Salisbury Reserve to support the application. This plan proposes a range of new planting, including native restoration planting to support existing vegetation along the western and southern boundaries of the site and amenity / specimen tree planting along the northern pedestrian accessway. Other new amenities include informal trails and a doggy litter bin, and the reinstatement of park benches and a picnic table.

8.64 It is intended that the reserve reinstatement plan for Salisbury Reserve is developed as an iterative process, with input from Auckland Council's Community Facilities team and the Waitematā Local Board. It is assumed that any further consultation with the community to further refine these plans will be facilitated by the local board.

8.65 Overall, there will be temporary more than minor visual amenity effects to adjacent residents from the use of noise barriers and less than minor effects to the wider community from the loss of recreational space. The effects of utilising Salisbury Reserve as a CSA are considered acceptable in the context of the scale of the Project and given the long-term benefits of the Project to the community. In addition, after works are completed Salisbury Reserve will be reinstated and enhanced (with input from Auckland Council and community), which will generate positive effects.

Policy Framework Assessment – s104(1)(b)

8.66 The Policy Framework relevant to the Project is summarised in Section 9 of the AEE. A more detailed analysis against the Policy Framework is also included within Appendix M of the application package. That analysis concludes that overall, the Project is consistent with the Policy Framework. I have also considered the implication of the additional consent triggers identified in the Section 42A Report and confirm there is nothing that has come to my attention through the submissions and the preparation of Watercare's primary evidence that has caused me to change my initial assessments in the AEE.

67 Evidence of Mr Shields dated 2 February 2024 at [7.10]; Evidence of Ms Yung dated 2 February 2024 at [7.13] – [7.14].

8.67 The Section 42A Report also includes an assessment against the Policy Framework. I have read the statutory assessment set out in the Section 42A Report and agree with the conclusion that the Project is generally consistent with the relevant statutory documents.

8.68 On this basis, in the following sections of my evidence I summarise my assessment of the Project against the Policy Framework and comment on the National Policy Statement for Indigenous Biodiversity which has come into effect since the application was lodged with Council.

New Zealand Coastal Policy Statement

8.69 The New Zealand Coastal Policy Statement ("**NZCPS**") provides objectives and policies to achieve the purposes of the RMA in relation to the coastal environment of New Zealand. While the Project is located within the wider coastal environment, no part of the activity will occur directly within the coastal marine area.

8.70 Objective 1 and Policy 21 seek to safeguard the integrity, form, functioning and resilience of the coastal environment, while maintaining and enhancing coastal water quality. Erosion and sediment controls will be implemented during construction to ensure no discharge of sediment laden water occurs to the coast, while the new wastewater line will divert existing overflows away from the harbour, ensuring coastal water quality is improved.

8.71 Objective 6 and Policy 6 seek to enable development and infrastructure in the coastal environment that will contribute to the social, economic and cultural wellbeing of communities. In this case, the Project provides new wastewater infrastructure that will improve the amenity of the Herne Bay catchment through a reduction of odour and increase the capacity of the wastewater system for future growth.

8.72 Objective 2 and Policy 13 seek to preserve the natural character of the coastal environment from inappropriate development. In this case, while the works will have temporary visual effects in Point Erin Park from earthworks during construction, the site will be reinstated after all works are completed. As such, any effects on the natural character of the coastal environment will be temporary and remedied.

8.73 Overall, the Project will provide an improvement in coastal water quality from a reduction in wastewater overflows, while avoiding adverse effects to the coastal environment during construction. As such, the Project is consistent with the objectives and policies of the NZCPS.

National Policy Statement on Urban Development

8.74 The National Policy Statement on Urban Development 2020 ("**NPS-UD**") sets out the objectives and policies for improve planning processes and enabling more development to contribute to well-functioning urban environments. The NPS-UD is focused on providing sufficient development capacity to meet the different needs of people and communities and integrating land use planning and infrastructure planning.

8.75 The key provisions of the NPS-UD in regard to the Project include Objective 1, Objective 4, Policy 2, and Policy 6. The Project is consistent with these provisions as once complete, it will enable future network capacity across Herne Bay and directly contribute to the resilience of the wastewater network in the Herne Bay Area. The Project is therefore consistent with the direction established through the NPS-UD.

National Policy Statement for Indigenous Biodiversity

8.76 Since lodging the resource consent application for the Project with Council, the National Policy Statement for Indigenous Biodiversity ("**NPS-IB**") has come into effect. The NPS-IB applies to indigenous biodiversity in the terrestrial environment. The overall objective of the NPS-IB is to maintain indigenous biodiversity (flora, fauna, fungi and their habitats) so that there is at least no overall loss in indigenous biodiversity. This includes by protecting and restoring indigenous biodiversity as necessary to achieve the overall maintenance of indigenous biodiversity, whilst providing for the social, economic and cultural wellbeing of people and communities now and in the future.

8.77 The NPS-IB is of limited relevance to the application, as there will be little or no impact on indigenous vegetation or the habitat of indigenous fauna within the Project area, nor will there be any impact on identified 'significant ecological areas',[68] nor any other contiguous areas of indigenous vegetation. Tree removal is limited to standalone specimen trees within the road reserve and Salisbury Reserve, which contributes little to the indigenous biodiversity of the Herne Bay area. All trees removed for the Project will be replaced at an approximately 2:1 ratio.

8.78 Overall, I consider that the Project is not inconsistent with the objectives and policies of the NPS-IB.

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68 Significant ecological areas are the existing equivalent in the AUP to significant natural areas described in the NPS-IB.

Auckland Unitary Plan – Regional Policy Statement

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

8.80 The RPS recognises the importance of natural resources, in particular the importance of integrated management between development (including infrastructure) and freshwater as well as manging adverse effects from wastewater discharges to coastal water (B7 Toitū te whenua, toitū te taiao – Natural resources). The Project has been designed to reduce the frequency and volume of wastewater overflow events into the Waitematā Harbour.

8.81 In terms of managing and providing for Auckland's growing population, the RPS recognises the importance in providing for supporting infrastructure (i.e. water, wastewater and stormwater infrastructure). This is recognised through B2 Tāhuhu whakaruruhau ā-taone - Urban growth and form.

8.82 Overall, I find the Project to be consistent with the relevant objectives and policies of the RPS.

Auckland Unitary Plan

<u>Infrastructure – Chapter E26</u>

8.83 The infrastructure benefits of the Project will be significant, as it will reduce existing wet weather overflows into the adjacent Waitematā Harbour, improving water quality and reducing existing odour emissions from overflow events.

8.84 The new pipeline will also increase both the resilience and capacity of the existing network, ensuring it can accommodate growth from residential intensification enabled under the AUP. The sewer will reduce pressure on the ageing 'Branch 5' sewer, which does not sufficiently serve the needs of the Herne Bay area.

8.85 The proposed pipeline is located within the road reserve to reduce potential effects on surrounding occupants, and to avoid works within the Notable Tree and Historic Heritage overlays. While the construction of the pipeline will generate temporary significant adverse effects on the function of the road network, these cannot be avoided, and the positive benefits of the infrastructure on the environment and Herne Bay community in the long term are recognised by Chapter E26.

8.86 The Project is consistent with policy direction of Chapter E26, which provides for new and upgraded network utilities, while ensuring that the adverse effects on the values of the area are avoided through use of the road corridor and the road reserve.

Water Quality / Water Quantity – Chapters E1 / E2 of the AUP

8.87 The main purpose of the proposed trunk sewer is to reduce wet weather overflows from existing EOPs, which will improve the water quality of the Waitematā Harbour and improve public health by minimising contaminant discharge to coastal waters quality.

8.88 Groundwater diversion is only expected during construction, given the depth of the proposed shafts and diameter of the sewer line, with no ongoing need to abstract freshwater. A conservative construction methodology, which utilises secant piling and the TBM on 'closed mode', has been selected to ensure that adverse effects on heritage places, sensitive buildings and other residential dwellings are avoided.

8.89 Groundwater diversion and settlement will be monitored to ensure that construction effects are consistent with the assessed methodology. A draft Groundwater and Settlement Monitoring and Contingency Plan ("**GSCMP**") has been prepared with the application to identify monitoring requirements and specify alert levels.

Trees in Open Space Zones / Trees in Roads – Chapters E16 and E17 of the AUP

8.90 Two trees are proposed to be removed from Salisbury Reserve (CSA1), while 12 street trees are proposed for removal. These tree removals are necessary to enable construction at shaft sites and utilise the CSA and are necessary for the safe and efficient upgrade of the surrounding wastewater network.

8.91 The trees to be removed from Salisbury Reserve are not arboriculturally significant, and are not likely to compromise the amenity, landscape and ecological values of the reserve. Mitigation planting within the reserve is proposed, which will provide a greater number of trees, increasing the canopy cover of the park in the long term.

8.92 Within the road reserve, the location of the surface construction works and individual construction sites has been selected to reduce or avoid tree removals. No trees in the notable tree or historic heritage overlays are to be removed.

8.93 There will be a short to medium term loss of amenity values from the removal of seven early-mature to mature trees within the road reserve of Upton Street. Larger 160L-grade trees are proposed to be planted in this location to reduce the length of effects. However, as assessed in the evidence of Ms Wick, the proposed mitigation planting within the streets surrounding the Project, and within Salisbury Reserve, will result in a positive landscape and amenity outcome over time.[69]

Noise and Vibration – Chapter E25 of the AUP

8.94 The Construction Noise and Vibration Technical Assessment Report by Tonkin and Taylor identifies a number of noise and vibration infringements, including noise and vibrations effects for the primary shaft, interception shaft and open cut construction activities. The effects are however typical of those associated with the construction of large-scale infrastructure. Adverse noise and vibration effects will be avoided where possible and will predominantly occur intermittently and during daylight hours.

8.95 Detailed mitigation measures have been outlined in the CNVMP and include measures such as noise barriers, restricted hours of operation, extensive community consultation and building surveys where required, employing the mitigation hierarchy.

Contaminated Land – Chapter E30 of the AUP

8.96 The Preliminary Site Investigation has identified sites of potential contamination along the alignment, being the two CSA sites at Salisbury Reserve and 94a – b Shelly Beach Road. Excavations at these sites will be shallow, and are only required for the provision of hard-filled surfaces for construction traffic and storage, minimising the potential for mobilisation of contaminants.

8.97 The supporting SMP provides several measures to be undertaken during construction to ensure effects on the environment and human health are avoided, including those relating to site management, excavation, disposal and transport of excavated soils, water management, imported materials, handling unexpected contamination, and emergency response.

69 Evidence of Ms Wick dated 2 February 2024 at section 8.

Hazardous Substances – Chapter E31 of the AUP

8.98 Small amounts of diesel (up to 2,000L) will be stored at the CSA1 site in Salisbury Reserve. This is required at this site to refuel the machinery, and to reduce heavy vehicle trips through the residential area to refuel machinery at the CSA2 site.

8.99 The diesel will be stored in a double skinned sealed container on the site, with bunding surrounding the tank to ensure that spills are contained and not discharged to the environment. Flammable materials will be appropriately setback from the storage container to reduce risk. Spill containment procedures will be provided within the final Construction Management Plan.

Assessment of Alternatives

8.100 Schedule 4, Clause 6(1)(a) of the RMA requires a description of possible alternative locations where it is likely that the activity will result in any significant adverse effect on the environment. In this instance a description of alternatives is required as temporary significant adverse effects were identified on the transport network during the construction of Shaft One. Section 8 of the AEE addressed the potential alternative locations.

8.101 Consideration of potential alternative locations included the selection of the trunk sewer route, the location of Shaft One and Two, the construction methodology and traffic management approach. The assessment concluded that alternative approaches were either not feasible, or would generate unintended effects, including on private property, that are equally or more significant than those already identified.

8.102 As such, it is concluded that while temporary significant adverse traffic effects will be generated, the Project is still appropriate, as it is consistent with the purpose of Part 2 of the RMA, the objectives and policies of the AUP and national policy direction.

Other relevant matters – s104(1)(c)

8.103 The AEE noted that there are no other relevant matters to consider for this application.

8.104 However, since the resource consent application was lodged, a peer review report prepared by Dr Ian Wallis on behalf of the Herne Bay Residents' Association has been published. This report assesses the future performance of the Central Interceptor extension and Herne Bay Trunk Sewer projects,

particularly in relation to overflows during flooding events. As is set out in the evidence of Mr Deutschle, Dr Wallis's report supports the approach taken by Watercare to date with this current Project.[70]

8.105 The report estimates that with these projects constructed, the overflows in the Herne Bay catchment to the Waitematā Harbour will decrease to occur approximately 10 to 20 days a year. The number of overflows to the Harbour is expected to further decrease when the capacity of Branch 5 is augmented (potentially using the Central Interceptor) and separated sewage is provided.

Part 2

8.106 In my view there is no need for recourse to Part 2 of the RMA in determining this application, as the objectives and policies of the relevant statutory documents were prepared having regard to Part 2 of the RMA and they have captured all relevant planning considerations. They also contain a coherent set of policies designed to achieve clear environmental outcomes and provide a clear framework for assessing all relevant actual and potential effects.

8.107 However, for completeness, an assessment of the proposal against the relevant Part 2 matters of Sections 5 to 8 of the RMA has been provided in Section 9.11 of the AEE, which concludes that the Project is consistent with Part 2 of the RMA. I have re-considered that assessment in light of the various matters that have been further identified and considered during the application process (which I have addressed in my evidence) and confirm that I continue to consider that the Project remains consistent with Part 2.

9. RESPONSE TO COUNCIL OFFICER'S REPORT

9.1 I have reviewed the Section 42A Report and note that the Council Officer has recommended that consent be granted, subject to conditions. Apart from the additional reasons for consent included in this report (discussed in paragraphs [7.6] – [7.15] above), I have not identified any further matters raised in the Section 42A Report that are required to be addressed in my evidence.

10. RESPONSE TO SUBMISSIONS

10.1 Twenty-four submissions were received in relation to the Project. This includes two late submissions. I have reviewed all of the submissions in preparing my evidence.

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70 Evidence of Mr Deutschle dated 2 February 2024 at [8.13].

10.2 Several submitters raised concerns in respect of specific potential effects, being construction noise and vibration, effects traffic and transport, dust, effects on street trees and groundwater / settlement effects. These matters have been addressed by technical experts in their evidence. I have read that evidence and agree with it, and as such I do not repeat the conclusions of the technical experts or otherwise address these particular submission points further in my evidence.

10.3 In addition to the above, submitters have raised concerns regarding: the use of Salisbury Reserve as a CSA; issues as to consultation; consistency with the applicable planning framework; and potential impacts on amenity during construction. I respond to these below by topic.

10.4 I have already addressed the completeness of the identification of reasons for consent in paragraphs [7.6] – [7.20], and the landscape and visual effects and loss of recreational space from the use of Salisbury Reserve respectively in Paragraphs [8.50] – [8.54] and [8.57] – [8.64] above. I do not consider that any changes to the proposed mitigation or consent conditions are required to address these submissions.

Condition amendments proposed by the Ministry of Education

10.5 As is set out in the ITA at page 48, the increase in traffic on Curran Street is considered to result in a temporary significant adverse transport impact on Curran Street. This traffic passes Ponsonby Primary School. However, to mitigate potential effects from this additional traffic on Ponsonby Primary School, the ITA recommended that provisions for restricting movements of the construction traffic during peak school drop-off and pick-up times should be included within the CTMP. This is reflected in the Proposed Conditions, in particular in Proposed Condition 45 (CTMP).

10.6 The Ministry of Education ("**Ministry**") has submitted on the Application and has expressly acknowledged the effort Watercare has made to engage with the Ministry and the school to address and actively manage the Ministry's concerns relating to construction traffic from the Project. The Ministry is neutral on the Application, provided minor amendments are made to:

(a) Proposed Condition 46 to reflect the school's peak before and after school travel times to between 8.05am – 8.50am and 3.00pm – 3.30pm, which are slightly different to what was included in the Proposed Conditions; and

(b) Proposed Condition 7 to include as an objective of the Communications Plan how Ponsonby Primary School and the Ministry will be engaged with, prior to and throughout construction, with regard to traffic management to maintain student safety near the school while works are underway.

10.7 I reviewed those proposed minor amendments and consider they are appropriate from a planning perspective. As such, the amendments requested by the Ministry have been incorporated into the updated Proposed Conditions 7 and 46 attached to my evidence.

Damage to trees and property

10.8 The owner of 92 Sarsfield Street (Alistair McLaren) expresses a concern regarding the potential for damage to trees and property from dust, dirt and wastewater overflows in particular).

10.9 In relation to potential damage to trees, a 'Tree Protection Methodology' has been included within the Arboricultural Assessment, as detailed in paragraph [8.43] – [8.45] above. Further details on the proposed tree protection measures are contained within the evidence of Mr McBride.

10.10 Should there be any accidental damage to trees, an assessment will be made by the supervisory arborist and mitigation measures recommended in consultation with Council's urban forest specialist.

10.11 Controls to manage the discharge of dust, dirt and other construction related activities are outlined in the ESCP, as detailed in paragraph [8.30] above, and in the evidence of Mr Bishop.[71]

10.12 I do not consider that any changes are required to the Proposed Conditions to address this submission.

Liaison person and community input

Liaison Person

10.13 The Herne Bay Residents Association's ("**HBRA**") submission has raised a concern in relation to Proposed Condition 5 (Community Liaison and Communications condition). Proposed Condition 5 requires a liaison person be appointed by the Consent Holder (Watercare) for the duration of the construction phase of the Project. In accordance with that condition, the

71 Evidence of Mr Bishop dated 2 February 2024.

liaison person is to be the main and readily accessible point of contact for persons affected by the construction work and must (amongst other things) be "reasonably available". The HBRA submission seeks that the liaison person be available at all times.

10.14 As noted in the application, construction activities are not proposed to occur at all times (ie 24/7), and are instead sought during the typical construction hours from Monday to Saturday provided for in the AUP.[72] During these hours the community liaison officer will be available. Should out of hours works be required the community liaison officer will be made available to address any complaints or concerns.

10.15 Notwithstanding the above, Condition 5 requires that an alternative point of contact be available 24/7 when the Community Liaison Officer is not available. Watercare has a 24/7 customer service line, which meets the requirement of this condition and can respond to emergency events, should they occur.

10.16 As such, I do not recommend any amendments to the Proposed Conditions to address this submission.

Community input on road closures and street parking

10.17 The HBRA submission seeks that there be ongoing community input on road closures and street parking to ensure road use and disruption is minimised. The HBRA recommends in its submission that this matter be considered by a community liaison group.

10.18 In response to this submission, I note that Proposed Conditions 5 – 7 provide a framework for ongoing community engagement and communications throughout the duration of the Project. In particular, Condition 5 requires that a community liaison officer be reasonably available for on-going consultation, while Proposed Conditions 6 and 7 outline the requirements for a Communications Plan, which outline the consultation requirements with key stakeholders and owners / occupiers of affected properties to mitigate any adverse effects that may arise from construction.

10.19 I consider that the above conditions sufficiently address the concerns of the HBRA.

72 Monday – Friday 7am – 6pm, Saturday 8am – 6pm.

Community input in the restoration of Point Erin Park, Salisbury Reserve

10.20 The HBRA submission seeks that there be community input in the restoration of Point Erin Park, Salisbury Reserve and street tree planting / restoration after the Project is completed.

10.21 As discussed above, Watercare has submitted a draft reserve reinstatement plan for Salisbury Reserve, alongside a draft street planting plan. Both plans are intended to be 'concept' only, and subject to feedback from Auckland Council and the wider community. It is assumed that the Waitematā Local Board will facilitate any community consultation, alongside Council's community facilities department.

10.22 The requirements for mitigation planting and the restoration of Salisbury Reserve are outlined in the Proposed Conditions (Proposed Conditions 127 – 130). I consider that these conditions sufficiently address the matters raised in the submission by HBRA, and no further amendments are required.

10.23 No surface works within Point Erin Park are proposed under this application.[73] As such, the restoration of this park is not addressed in my evidence.

Non-operational vehicles

10.24 The HBRA submission seeks a condition of consent requiring non-operational vehicles to be parked Point Erin Park, or Salisbury Reserve (if used).

10.25 As shown in the draft CSA site plans, worker parking is to be provided within each site. Currently it is proposed that a minimum of 15 spaces will be provided within CSA1 at Salisbury Reserve for light vehicles, while a minimum of 4 spaces will be provided within CSA2 at 94a – b Shelly Beach Road.

10.26 In my opinion it is not reasonable that all workers be required to park within the CSAs, as this will be both impractical for Auckland Council to enforce, and there may be short periods of time where more workers are required on site. In addition, requiring more parking within the CSA1 will require a larger occupation of Salisbury Reserve, which is not considered a good outcome for the community.

10.27 I have however recommended that Proposed Condition 9 (relating to the requirement for a CMP) be expanded to require a minimum of 15 parking spaces for workers within CSA1 and 4 parking spaces within CSA2. My

73 All works within Point Erin Park will be limited to an underground connection to the CI extension control chamber, which is sought under a separate consent.

recommended amendments are included in the Proposed Conditions attached to my evidence.

Connection to EOP1019

10.28 The owners of 15 Cremorne Street, 3 and 6 River Terrace oppose the proposed connection through private property to EOP1019.

10.29 Following matters raised by these submitters which identified an error in the application material, Watercare has subsequently decided to remove the connection to EOP1019 and corresponding interception pipeline from the application. This was confirmed by way of a letter to Auckland Council dated 13 October 2023. Watercare will require connection to the EOP1019 in the future, but will progress the necessary authorisation of those works separately. For the avoidance of doubt, diversions of overflows away from EOP1019 are still required for Watercare to meet its existing Network Discharge Consent conditions and to ensure the Project objectives are met.

Objectives of the open space zone

10.30 The late submission from the Salisbury Reserve Residents' Group considers that the proposal is wholly inconsistent with the objectives of the Open Space zones.

10.31 In my opinion, the assessment provided in the AEE is complete, as no reasons for consent are sought under the Open Space zone chapter; as noted above, the use of Salisbury Reserve for a CSA is controlled by the provisions of Chapter E40 (Temporary Activities), rather than Chapter H7 (Open Space Zones).

10.32 Further, in my opinion the objectives and policies of the Open Space zone seek to control development (such as new buildings) and ongoing land uses in these areas. I refer to Objective H7.5.2 (1), which describes the intended character and amenity values of Open Space – Informal Recreation zone, Objective H7.5.2 (2), which describes the intended land uses of the zone, and Objective H7.5.2 (3), which describes the need for buildings and activities to be maintained for public use. The focus of each of these objectives is to direct the ongoing use and development of these spaces, rather than govern temporary uses within the park.

10.33 Instead, I consider it more appropriate to assess the Project against the objectives and policies of Chapter E40 (Temporary Activities), even though the use of a Salisbury Reserve as a CSA is a permitted activity within this

chapter. The objectives and policies of Chapter E40 seeks to enable temporary activities and associated structures, provided that adverse effects (such as noise, waste / litter and public access) are avoided, remedied or mitigated.

10.34 The effects of the use of Salisbury Reserve are discussed above; in summary while there will be temporary noise and visual effects to surrounding properties, these will be suitably mitigated to an acceptable level including through management of potential contaminants and sediment during use.

10.35 The permanent reinstatement after construction has completed will generate positive effects, and will enhance the natural character of Salisbury Reserve, which is consistent with the objectives and policies of Chapter H7.

11. CONDITIONS

11.1 **Attachment 1** to my evidence contains my update to the Officers Recommended Conditions that were included in the Section 42A Report. These are what are referred to throughout this evidence as the Proposed Conditions. I detail the amendments made to the Section 42A version of those conditions below.

11.2 Construction Management Condition 9(e) specifies that a minimum of 15 parking spaces should be provided within CSA1 while a minimum of 4 parking spaces shall be provided within CSA2 to alleviate stress to on street parking.

11.3 Changes to conditions throughout the document to corrects typos by referencing Salisbury Reserve, rather Salsbury Reserve.

11.4 CNVMP Condition 38 includes moving point (e) up to (c), which requires the CNVMP to include the identification of activities (piling, open trenching, HDD), associated predicted exceedances and locations that will require specific noise mitigation measures (including scheduling of works, location and orientation of works and/or the use of temporary acoustic barriers), consultation undertaken with affected properties to develop the proposed noise management measures, any feedback received from those stakeholders along with the noise management measures that will be adopted based on this consultation. Point (f) has also been deleted as works are no longer proposed within private property.

11.5 Construction Noise and Vibration Condition 44 includes a table with specified vibration limits for 3 properties, and the removal of 8 Wairangi Street, as works are no longer required outside of this property to connect to EOP1019.

11.6 Construction Traffic Conditions 45 corrects two typos one to specifying reference to traffic effects within the CTMP (rather than noise and vibration), and one 45(a) makes reference to Salisbury Reserve by name. Construction Traffic Management Plan Condition 46 (r) is amended to reference how active mode safety will be maintained rather the amenity, as this is a more understandable and measurable outcome.

11.7 I have proposed deletion of former recommended Condition 75 as the application has an Archaeological Authority to undertake the works, and that is the mechanism by which any Accidental Discovery can be managed.

11.8 I have proposed deletion of recommended Condition 77 requiring protection of the historic heritage fabric of 58 Wallace Street, 85 Sarsfield Street and properties within the Heren Bay Road Historical Heritage Area. I consider Condition 77 is not necessary, as the assessments undertaken have not found any evidence that additional protection for those specified buildings is needed, beyond the controls already recommended in the recommended conditions and management plans. Further the condition is not specific on what is to be protected and what the protection may entail, and requires a third-party (landowner) approval.

11.9 Settlement and Deflection Monitoring Condition 103 is amended to reference use of Auckland Council INSAR data for the proposed survey monitoring, if available, as this provided the same data as that required by this condition.

11.10 All other recommended conditions are accepted.

12. CONCLUSION

12.1 I consider that the resource consents being sought by Watercare for the Project should be approved, subject to the minor amendments and additions to conditions that I have proposed.

Maree Jocelyn Drury

2 February 2024

Attachment 1 – Proposed Conditions

BUN60420393 - Recommended Conditions

A. General Conditions

All Consents (Conditions 1 to 3)	
1	Except as modified by the Conditions below and subject to final design, the works must be undertaken in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Council as consent numbers LUC60420246, WAT60420394, DIS60422394, and DIS604XXXXX of BUN60420393: • Application form and Assessment of Environmental Effects, prepared by WSP, Project Number W-SL007.01, Revision 03, dated 7 August 2023, including Permitted Activity Assessment (Appendix A), Proposed Conditions (Appendix B), Records of Title (Appendix C), and Objectives and Policies Assessment (Appendix M). • Minor Methodology and AEE Update Letter, prepared by Watercare Services Limited, dated 8 August 2023. **Reports Lodged with AEE** • Preliminary Site Investigation, prepared by Tonkin & Taylor Limited, Job Number 1090120.2000 v5, Version 5, dated June 2023. • Ground Contamination Site Management Plan, prepared by Tonkin & Taylor Limited, Job Number 1090120 v2, Version 2, dated June 2023. • Integrated Transport Assessment, prepared by Tonkin & Taylor Limited, Job Number 1090120.0000 v6, Version 6.0, dated 30 June 2023. • Arboricultural Assessment of Effects, prepared by The Tree Consultancy Company, Job Ref: 2590, dated 9 June 2023. • Archaeological Assessment, prepared by Clough & Associates Limited, dated March 2023. • Construction Methodology Memorandum, prepared by WSP, dated 8 August 2023. • Options Assessment Memorandum, prepared by WSP, dated 20 June 2023. **Further Information Response Documents** • Section 92 further information response letter, prepared by Harrison Fernandes-Burnard, WSP, dated 25 August 2023. • Section 92 further information response letter, prepared by William Hung, Watercare Services Limited, dated 5 October 2023. • Groundwater and Settlement Assessment Report, prepared by Tonkin & Taylor Limited, Job Number 1090120.0000 v4, Version 4.0, dated 27 September 2023. • Groundwater and Settlement Monitoring & Contingency Plan (Draft), prepared by Tonkin & Taylor Limited, Job Number 1090120 v2, Version 2.0, dated 23 October 2023. • Draft Erosion and Sediment Control Plan, prepared by WSP, Project Number W-SL007.01, Revision 2, dated 22 September 2023. • Construction Noise and Vibration Technical Assessment, prepared by Tonkin & Taylor Limited, Job Number 1090120.3000 v1, Version 1, dated 3 August 2023. • Construction Noise and Vibration Management Plan, prepared by Tonkin & Taylor Limited, Job Number 1090120.3000 v1.0, Version 1.1, dated 8 September 2023. • Draft Construction Traffic Management Plan, prepared by Tonkin & Taylor Limited, Job Number 1090120.7000P v1, Version 1, dated 24 October 2023. • Mitigation Planting Plan Memorandum, prepared by The Tree Consultancy Company, dated 7 September 2023. • Salisbury Reserve Concept Layout Plan, no author, reference, or date. • Proposed Salisbury Reserve Reinstatement Concept Sketch (Draft), prepared by WSP, reference W-SL007.00, dated 7 September 2023.

- (94B) Shelly Beach Road Concept Layout Plan (Draft), no author, reference, or date.
- St Marys Bay and Masefield Beach Water Quality Improvement Project Pt Erin Park, St Marys Road Park and Curran Street Planting Landscape Architecture Detail Design Plans, prepared by WSP, Project No: 3-AL343.00, dated 23 March 2021.
- Amendments to Application letter, prepared by William Hung, Watercare Services Limited, dated 13 October 2023.
- Section 92 further information response letter, prepared by William Hung, Watercare Services Limited, dated 6 November 2023, including Permitted Activity Assessment (Appendix A).
- Section 92 further information response email on temporary activity matters from William Hung, Watercare Services Limited, dated 17 November 2023.
- Section 92 further information response email on industrial and trade activity matters from William Hung, Watercare Services Limited, dated 30 November 2023.
- Section 92 further information response email on outstanding traffic and groundwater matters from William Hung, Watercare Services Limited, dated 15 December 2023.
- Section 92 further information response email on outstanding traffic matters from William Hung, Watercare Services Limited, dated 19 December 2023, including attached comments and imagery.

Drawing title and reference	Issue	Date
Prepared by Watercare Services Limited		
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Project Overview – Plan W-SL007001	3	17 October 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Longitudinal Section – Trunk Sewer W-SL007002	3	17 October 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Longitudinal Sections – Local Network Sheet 1 W-SL007003	3	17 October 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Longitudinal Sections – Local Network Sheet 2 W-SL007004	3	17 October 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Longitudinal Sections – Local Network Sheet 3 W-SL007005	2	20 June 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Longitudinal Sections – Local Network Sheet 4 W-SL007006	2	20 June 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Construction Plan – Tunnel Shaft Locations W-SL007007	3	17 October 2023
Herne Bay Trunk Sewer Upgrade Marine Parade to Pt Erin Construction Plan – Interception Shaft Locations W-SL007008	2	20 June 2023
Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Site Plan 2014132.700	2	September 2023
Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Sheet 1 2014132.701	2	September 2023
Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Sheet 2 2014132.702	2	September 2023
Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Sheet 3 2014132.703	2	September 2023
Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Sheet 4 2014132.704	2	September 2023
Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Sheet 5 2014132.705	2	September 2023

	Herne Bay Trunk Sewer Upgrade Hamilton Road, Herne Bay Erosion Sediment Control Plan – Sheet 6 2014132.706	2 September 2023
2	Consents LUC60420246, WAT60420394, and DIS60422394 lapse 10 years after the date on which the last of any appeals on the consent are determined or withdrawn, or if no appeals are lodged, the date on which the consents are granted in accordance with Section 104 of the RMA. *Advice Note:* *An extension to the lapse date specified above is subject to the provisions of Section 125 (1A) of the RMA.*	
3	The Consent Holder must pay the Council an initial consent compliance monitoring charge of $1,116 (inclusive of GST), plus any further monitoring charge or charges to recover the actual and reasonable costs that have been incurred to ensure compliance with the Conditions attached to this consent. *Advice Note:* *The initial monitoring deposit is to cover the cost of inspecting the site, carrying out tests, reviewing Conditions, updating files etc., all being work to ensure compliance with the resource consent. In order to recover actual and reasonable costs, monitoring of Conditions, in excess of those covered by the deposit, must be charged at the relevant hourly rate applicable at the time. The Consent Holder will be advised of the further monitoring charge. Only after all Conditions of the resource consent have been met, will the council issue a letter confirming compliance on request of the Consent Holder.*	

B. Construction and post-construction phase consent Conditions

Land Use Consent Conditions – LUC60420246 (Conditions 4 to 78)	
4	At least 20 working days prior to commencement of works, the Consent Holder must submit detailed engineering design plans for the Project, or for that stage of the Project works, to Council.
Community Liaison and Communications	
5	A liaison person must be appointed by the Consent Holder for the duration of the construction phase of the Project to be the main and readily accessible point of contact for persons affected by the construction work. The liaison person's name and contact details must be advised to affected parties by the Consent Holder. This person must be reasonably available for on-going consultation on all matters of concern to affected persons arising from the Project. If a liaison person will not be available for any reason, an alternative contact person must be nominated to ensure that a Project contact person is available by telephone 24 hours per day seven days per week during the construction phase.
6	The Consent Holder must prepare a Communications Plan (**CP**) for the construction phase of the Project or for each Project stage. The CP must be submitted to the Council no less than 20 working days prior to works commencing for certification that the CP complies with the requirements of Condition 7. *Advice Note:* *"Project stage" means a separable part of the Project by activity, programme or location/geographic extent (e.g., tunnelling, shaft construction, trenching, TBM removal).*
7	The objective of the CP is to set out a framework to ensure appropriate communication is undertaken with key stakeholders during the construction phase of the Project. The CP must set out: a. the methods of consultation and liaison with key stakeholders and the owners/occupiers of neighbouring properties regarding the likely timing, duration and effects of works. This must include the methods to ensure affected properties are notified of noisy activities prior to works commencing;

	b. how Ponsonby Primary School and the Ministry of Education will be engaged with, prior to and throughout construction, with regard to traffic management to maintain student safety near the school while works are underway;~~,~~ c. details of prior consultation or community liaison undertaken with the parties referred to in a. and b. above, including outlining any measures developed with such persons or groups to manage or to mitigate any adverse effects or inconvenience that may arise from any construction; and d. full contact details for the liaison person appointed in accordance with Condition 5 to manage the public information system and be the point of contact for related enquiries.
Construction Management	
8	The Consent Holder must prepare a Construction Management Plan (**CMP**) for the Project or for each stage of the Project (e.g., tunnelling, shaft construction, trenching, TBM removal). The purpose of the CMP is to set out the detailed management procedures and construction methods to be undertaken in order to avoid, remedy or mitigate potential adverse effects arising from construction activities and to achieve compliance with the specific Conditions of this consent that relate to the matters referred to in Condition 9. a. to m. below. The CMP must be submitted to Council no less than 20 working days prior to works commencing on the Project or stage of the Project (as relevant) for certification that the CMP complies with the requirements of Condition 9.
9	The CMP required by Condition 8 ~~7~~ above must include specific details relating to the management of all construction activities associated with the relevant Project stage, including: a. details of the site or Project manager and the construction liaison person identified in Condition 5, including their contact details (phone, postal address, email address); b. an outline construction programme; c. the proposed hours of work; d. measures to be adopted to maintain the land affected by the works in a tidy Condition in terms of disposal / storage of rubbish, storage and unloading of construction materials and similar construction activities; e. location of site infrastructure including site offices, site amenities, contractor's yards site access, equipment unloading and storage areas, contractor car parking, and security. A minimum of 15 parking spaces shall be provided within CSA-1, while a minimum of 4 parking spaces shall be provided within CSA-2; f. procedures for controlling sediment run-off, dust and the removal of soil, debris, demolition and construction materials (if any) from public roads and / or other places adjacent to the work site; g. procedures for ensuring that residents, road users and Salisbury Reserve users in the immediate vicinity of construction areas are given prior notice of the commencement of construction activities and are informed about the expected duration and effects of the works; h. means of providing for the health and safety of the general public and for pedestrian management as required by Conditions 45, 46 and 50; i. Procedures for the management of works which directly affect or are located in close proximity to existing network utility services (note: this requirement does not apply to the Consent Holder's infrastructure or where written approval has been obtained from the relevant network utility operator); j. A mechanism and nominated stakeholder manager responsible for receiving, addressing and monitoring queries and responding to complaints in relation to the construction works; k. Procedures for the refuelling of plant and equipment; l. Measures for the protection and management of trees as identified in Conditions 61 to 73; and m. Spill management procedures for the storage of hazardous substances.

10	The CMP must be implemented and maintained by the Consent Holder throughout the entire construction period for the Project or relevant Project stage to manage potential adverse effects arising from construction activities. The CMP or any specific component of the CMP must be updated as necessary and provided to Council for certification prior to being implemented.
11	The Consent Holder must review the Ground Contamination Site Management Plan, prepared by Tonkin & Taylor Limited, Job Number 1090120 v2, Version 2, dated June 2023 **(CLSMP)** ~~(herein referred to as the CLSMP)~~ and submit a revised or final CLSMP prior to commencement of the Project. The CLSMP will include mitigation measures to ensure that discharges from the contaminated portions of the works area to land or water are minimised, and to ensure that health of workers on the site and nearby sites is provided for. Where minor enabling works or isolated works are to be undertaken prior to commencement of the main works, a site specific CLSMP may be prepared, commensurate with the scale and effects of the proposed works. The CLSMP or plans must be submitted to Council no less than 20 working days prior to works commencing on the Project or stage of the Project (as relevant) for certification that the CP complies with the requirements of this Condition. The CLSMP must include, but not be limited to: a. Measures to be undertaken in the handling, storage and disposal of contaminated surficial soils excavated during the construction works. b. Soil validation testing and groundwater testing. c. A process for confirming potential for contamination and soil testing at the identified potentially contaminated sites to determine the nature of the excavated soil and potential reuse or disposal options. d. Measures to be undertaken in the event of unexpected contamination being identified during construction activities. e. Measures to be undertaken for the handling of asbestos containing material.
12	The Consent Holder must engage a suitably qualified and experienced practitioner (**SQEP**) as defined in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 to carry out any soil and water sampling work and observe the excavation and removal of contaminated soils from the Project.
13	Confirmatory soil sampling and testing must be undertaken at the construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road as well as at roads where soil disturbance is proposed prior to works commencing at these sites as described in the CLSMP and the Section 92 further information response letter, prepared by William Hung, Watercare Services Limited, dated 5 October 2023.
14	Following the further soil testing required by Condition 13, at least 10 working days prior to the commencement of any earthworks within these areas, an updated CLSMP must be provided to the Council for certification. The updated CLSMP must include details on the additional soil sampling and testing undertaken, interpretations of the results in the context of the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 and Chapter E30 of the Auckland Unitary Plan (Operative in Part), and any proposed additional mitigation / management controls based on the test results.
Construction hours	
15	Construction hours must be as follows, except where work is necessary outside the specified days or hours for the purposes specified in Condition 16 below: a. 7 am to 6pm, Monday to Friday b. 8am to 6pm ,Saturday.
16	Work may occur outside of the specified days or hours set out in Condition 15 for the following purposes:

	a. Where, due to unforeseen circumstances, it is necessary to complete an activity that has commenced. b. Where work is specifically required to be planned to be carried out at certain times (e.g., to tie into the existing network during period of low flow or for commissioning sewer connections). c. For delivery of large equipment or special deliveries required outside of normal hours due to traffic management requirements. d. In cases of emergency. e. For the securing of the site or the removal of a traffic hazard. f. For or any other reason specified in the CMP or CTMP. g. For site mobilisation and pack down, which may occur up to 30 minutes before and after the hours described in Condition 15. Where any work is undertaken pursuant to a. to g. above, the Consent Holder must, within five working days of the commencement of such work, provide a report to Council detailing how the work was authorised under those provisions. Activities such as dewatering during excavation and concrete pours may be undertaken outside of the specified days or hours subject to meeting the noise limits specific in Condition 31 (or as otherwise provided for through an ASCNVMP required by Condition 41).
Earthworks	
17	Regional earthworks consent LUC60420246 expires 10 years from the granting of the consent unless it has lapsed, been surrendered, or been cancelled at an earlier date pursuant to the RMA.
18	No earthworks can be undertaken between 01 May and 30 September in any year, without the submission of a 'Request for winter works' for approval by Council. All requests must be renewed prior to the approval expiring and no works must occur until written approval has been received from Council. All winter works will be re-assessed monthly or as required to ensure that adverse effects are not occurring in the receiving environment and approval may be revoked by Council upon written notice to the Consent Holder.
19	Prior to the commencement of any earthworks, the Consent Holder must hold a pre-start meeting that: a. is located on the subject site; b. is scheduled not less than five days before the anticipated commencement of earthworks; c. includes the Council's Compliance Monitoring Officer; d. includes representation from the contractors who will undertake the works. The meeting must discuss the erosion and sediment control measures, the earthworks methodology and must ensure all relevant parties are aware of and familiar with the necessary conditions of this consent. All additional information required by the Council should be provided two days prior to the meeting. The following information must be made available at the pre-start meeting: e. Timeframes for key stages of the works authorised under this consent. f. Contact details for contractors and key personnel. g. Resource consent conditions. h. The Finalised Erosion and Sediment Control Plan required by Condition 20. *Advice Note:*

	To arrange the pre-start meeting required by Condition 19, please contact the Council's Compliance Monitoring Officer on monitoring@aucklandcouncilgovt.nz, or 09 301 01 01. The conditions of consent should be discussed at this meeting.
20	At least 10 working days prior to the commencement of earthworks for the Project or for each stage of the Project, the Consent Holder must submit a final Erosion and Sediment Control Plan (**ESCP**) for certification by Council. No earthworks activities can commence until the ESCP has been certified. The final ESCP must be prepared in accordance with Auckland Council's 'Guideline Document 2016/005 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Incorporating Amendment 2' (**GD05**) and must contain sufficient detail to address the following matters: a. Specific erosion and sediment control works (location, dimensions, capacity). b. Supporting calculations and design drawings. c. Catchment boundaries and contour information. d. Details of construction methods. e. Timing and duration of construction and operation of control works (in relation to the staging and sequencing of works). f. Details relating to the management of exposed areas (e.g., grassing, mulching). g. Monitoring and maintenance requirements. *Advice Note:* *In the event that minor amendments to the final ESCP are required, any such amendments should be limited to the scope of this consent. Any amendments which affect the performance of the ESCP may require an application to be made in accordance with section 127 of the RMA. Any minor amendments should be provided to Council prior to implementation to confirm that they are within the scope of this consent.*
21	Prior to the commencement of any earthworks, all required erosion and sediment control measures on the subject site must be constructed and carried out in accordance with the final ESCP certified by Condition 20.
22	Within ten days following the implementation and completion of the specific erosion and sediment control measures required by the final ESCP and prior to the commencement of the earthworks activities at the construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road, a suitably qualified and experienced person must provide written certification to the Council that the erosion and sediment control measures have been constructed in accordance with the approved plans and GD05. Written certification must be in the form of a report or any other form acceptable to Council.
23	All water discharged from the site and associated sediment control devices during the earthworks operation must achieve a minimum 100mm depth of clarity prior to discharge in accordance with GD05.
24	The operational effectiveness and efficiency of all erosion and sediment control measures must be maintained in accordance with GD05 throughout the duration of earthworks activity, or until the site is permanently stabilised against erosion.
25	Erosion and sediment control measures must be constructed and maintained in general accordance with GD05 and any amendments to this document, except where a higher standard is detailed in the documents referred to in Conditions above, in which case the higher standard will apply.
26	There must be no deposition of earth, mud, dirt or other debris on any road or footpath resulting from earthworks activity on the subject site. In the event that such deposition does occur, it must immediately be removed. In no instance may roads or footpaths be washed down with water without appropriate erosion and sediment control measures in place to prevent contamination of the stormwater drainage system, watercourses

	or receiving waters. *Advice Note:* *In order to prevent sediment laden water entering waterways from the road, the following methods may be adopted to prevent or address discharges should they occur:* • *Provision of a stabilised entry and exit(s) point for vehicles.* • *Provision of wheel wash facilities.* • *Ceasing of vehicle movement until materials are removed.* • *Cleaning of road surfaces using street-sweepers.* • *Silt and sediment traps.* • *Catchpits or enviropods.* *In no circumstances should the washing of deposited materials into drains be advised or otherwise condoned.* *It is recommended that any potential measures are discussed with Council who may be able to provide further guidance on the most appropriate approach to take. Please contact the Council's Compliance Monitoring Officer on monitoring@aucklandcouncil.govt.nz for more details. Alternatively, please refer to GD05*
27	Beyond the boundary of the site, there must be no dust caused by discharges from the site, which in the opinion of Council, is noxious, offensive, or objectionable.
28	The earthworked areas must be progressively stabilised against erosion throughout the earthworks phase of the Project and must be sequenced to minimise the discharge of contaminants to surface water in accordance with the final ESCP. *Advice Note:* *Stabilisation measures may include:* • *The use of waterproof covers, geotextiles, or mulching;* • *Top-soiling and grassing of otherwise bare areas of earth; and* • *Aggregate or vegetative cover that has obtained a density of more than 80% of a normal pasture sward.* *It is recommended that any potential measures are discussed with Council who may be able to provide further guidance on the most appropriate approach to take. Please contact Council on monitoring@aucklandcouncil.govt.nz for more details. Alternatively, please refer to GD05*
29	Immediately upon completion or abandonment of earthworks on the subject site, all areas of bare earth must be permanently stabilised against erosion to the satisfaction of the Council.
Contamination	
30	The procedures in the CLSMP, including as amended by Condition 11, must be implemented during earthworks on actual or potentially contaminated soil (i.e., excludes work associated with natural uncontaminated ground for works including underground tunnelling and shaft construction.
31	In the event of accidental discovery of contamination during earthworks which has not been previously identified, including asbestos material, the Consent Holder must implement the first response procedures in the CLSMP.
32	Any contaminated soils identified for off-site disposal must be managed in accordance with the CLSMP and disposed at a facility which holds a consent to accept the relevant level of contamination.

33	The Consent Holder must ensure that the contamination status of any soil/fill imported to the site complies with the definition of 'Cleanfill material', as set out in the Auckland Unitary Plan (Operative in Part).
34	Any perched groundwater, or surface water encountered within an excavation area, where contaminants are recorded over the health or the environmental discharge criteria, requiring removal, for the protection of the human health and the environment, the impacted water must either be: a. disposed of by a licenced liquid waste contractor; or b. pumped to sewer, providing the relevant permits are obtained; or c. discharged to the site's stormwater system or surface waters provided that testing demonstrates compliance with the Australian and New Zealand Environment Conservation Council *(ANZECC) Guidelines for Fresh and Marine Water Quality (2000)* for protection of 95 percent of freshwater species and the water is free from petroleum hydrocarbons. All testing and analysis must be undertaken in a laboratory with suitable experience and ability to carry out the analysis. For more details on how to confirm the suitability of the laboratory, please refer to Part 4: Laboratory Analysis, of *Contaminated Land Management Guidelines No.5 (MfE,* 2011).
35	Within three months of the completion of earthworks within the contaminated portions of the works area, a Site Validation Report (**SVR**) must be submitted to Council. The SVR must be prepared by a SQEP in accordance with the Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand (Ministry for the Environment, revised 2021) and contain sufficient detail to address the following matters: a. Summary of all earthworks undertaken including the removal and relocation of the excavated material. b. Site pans showing the extent of land disturbance works. c. Site plans showing the location of any remaining soil contamination. d. Details and results of all testing undertaken and interpretation of the results in the context of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contamination rules of the Auckland Unitary Plan (Operative in Part). e. Confirmation as to whether there is any contamination remaining onsite requiring ongoing management. f. Sufficient validation of soils (as required) and demonstration that they are suitable for the proposed land use. g. Evidence that all imported fill material complies with the definition of 'Cleanfill material', as per Chapter J1 of the Auckland Unitary Plan (Operative in Part). h. Records of any unexpected contamination encountered during the works, if applicable. i. The volume/weight of soil excavated and removed from site with copies of disposal documentation for all soil taken off site. j. Reports of any complaints, health and safety incidents related to contamination, and/or contingency events during the earthworks.
Construction Lighting	
36	Construction lighting must be minimised to the extent practicable and must meet the relevant permitted standards in Chapter E24 of the Auckland Unitary Plan (Operative in Part).
Construction Noise and Vibration	
37	The Consent Holder must prepare a Construction Noise and Vibration Management Plan (**CNVMP**) for the Project, or each stage of the Project, that addresses the management of construction noise and vibration from

	the works. The CNVMP must be consistent with the draft Construction Noise and Vibration Management Plan, prepared by Tonkin & Taylor Limited, Job Number 1090120.3000 v1.0, Version 1.1, dated 8 September 2023, as referenced in Condition 1. The CNVMP must be submitted to the Council no less than 20 working days prior to works on that stage of the Project commencing for certification that the CNVMP complies with the requirements of Conditions 3~~7~~8 to 44, as applicable. The objectives of the CNVMP are to: a. identify the Best Practicable Option (**BPO**) for the management and mitigation of construction noise and vibration effects; b. identify how Project noise and vibration limits will be met and set out the methods for scheduling and undertaking works to manage disruption; and c. ensure engagement with affected receivers and timely management of complaints.
38	The CNVMP must be prepared by a suitably qualified and experienced practitioner and must include, as a minimum: a. The relevant construction noise and vibration criteria / limits set out in these conditions. b. A description of the works, the duration of the works, predicted construction noise and vibration levels, anticipated equipment and hours of operation (including specific times and days when construction activities causing noise/vibration would occur). c. The identification of activities (piling, open trenching, HDD), associated predicted exceedances and locations that will require specific noise mitigation measures (including scheduling of works, location and orientation of works and/or the use of temporary acoustic barriers), consultation undertaken with affected properties to develop the proposed noise management measures, any feedback received from those stakeholders along with the noise management measures that will be adopted based on this consultation; ~~b.~~d. The processes to be undertaken, including the general acoustic management and mitigation measures proposed to be implemented throughout the course of the Project and confirmation that they will be consistent with best practice and the triggers or thresholds for implementing them (if relevant). ~~c.~~e. Physical noise mitigation measures, including prohibiting the use of tonal reverse alarms, maintenance of access roads (to ensure they are smooth), plant selection and maintenance procedures, orientation of plant and machinery, and site layout. Physical noise mitigation measures must also include the following, as required to ensure a BPO approach to the management of noise: setting minimum setback distances from sensitive receivers (dwellings); and acoustic screening of the construction yards, shaft site construction areas, and areas of open trenching; ~~d. The identification of activities (piling, open trenching, HDD) and locations that will require specific noise mitigation measures (including scheduling of works, location and orientation of works and/or the use of temporary acoustic barriers), consultation undertaken with affected properties to develop the proposed noise management measures, any feedback received from those stakeholders along with the noise management measures that will be adopted based on this consultation;~~ ~~e. Identification of any activities particularly sensitive to vibration and noise in the vicinity of the proposed works along with the details of consultation with the landowner(s) of the sites where the sensitive activities are located and any management measures that will be adopted, where required, based on this consultation;~~ f. The need for building condition surveys for affected sites predicted to exceed guideline limits in DIN 4150-3 (1999) and mitigation measures to address any resulting adverse effects. g. Details of noise and vibration monitoring to be undertaken and reporting requirements. h. Communication requirements with stakeholders including notice to owners and occupiers of adjacent

	buildings prior to construction activities commencing on the site. i. A complaint management system with contact numbers for key construction staff responsible for the implementation of the CNVMP and complaint investigation. j. The process for changing, updating, and certifying any changes to the CNVMP. k. Training procedures for construction personnel. The CNVMP must be implemented and maintained by the Consent Holder throughout the construction period for the Project or relevant Project stage to manage potential adverse noise and vibration effects arising from construction activities. The CNVMP or any specific component of the CNVMP must be updated as necessary and provided to the Council for certification prior to being implemented.
39	Construction noise must be measured and assessed in accordance with NZS6803:1999 *Acoustics – Construction Noise*.
40	Subject to the application of a 5 dB decrease in accordance with Standard E25.6.27(4) of the Auckland Unitary Plan (Operative in Part), construction noise in the construction yard sites at Salisbury Reserve and 94A and 94B Shelly Beach Road must comply with the following noise limits, except where authorised by an Activity Specific Construction Noise and Vibration Management Plan (**ASCNVMP**). *Advice Note:* *Project construction hours are subject to Condition 15.*
41	An Activity Specific Construction Noise and Vibration Management Plan (**ASCNVMP**) must be prepared for works predicted to exceed the Project construction noise or vibration limits. For the avoidance of doubt, an ASCNVMP may be a separate management plan or may be included as a section in the CNVMP or otherwise appended to the CNVMP.
42	In preparing an ASCNVMP, the Consent Holder must consult with those parties likely to be exposed to noise levels exceeding the relevant noise limit(s) and must submit the results of this consultation to Council, including any response by the Consent Holder to a matter raised in consultation. The ASCNVMP must be submitted to Council for review and approval at least seven working days prior to the proposed works commencing. Works subject to an ASCNVMP must not commence until approval is received from the Council. If monitoring shows that levels specified in an ASCNVMP are being exceeded, work generating the exceedance must stop and not recommence until further mitigation is implemented in accordance with an amended ASCNVMP approved by Council.

Time of week	Time Period	Maximum noise level (dBA)	
		L_{eq}	L_{max}
Weekdays	6:30am - 7:30am	60	75
	7:30am - 6:00pm	75	90
	6:00pm - 8:00pm	70	85
	8:00pm - 6:30am	45	75
Saturdays	6:30am - 7:30am	45	75
	7:30am - 6:00pm	75	90
	6:00pm - 8:00pm	45	75
	8:00pm - 6:30am	45	75
Sundays and public holidays	6:30am - 7:30am	45	75
	7:30am - 6:00pm	55	85
	6:00pm - 8:00pm	45	75
	8:00pm - 6:30am	45	75

	An ASCNVMP must: a. describe the activity (including duration), plant and machinery that is expected not to comply with the noise limits in Condition 40; b. describe the mitigation measures proposed to reduce the noise levels as far as practicable, including any options that have been discounted due to cost or any other reason; c. provide predicted noise levels for all receivers where the noise levels will not be compliant with the limits in Condition 40, including the effect of mitigation specified in b. above; d. provide a set of noise limits that are activity-specific; e. describe the noise monitoring that will be undertaken to determine compliance with the activity-specific noise limits; and f. describe any additional noise mitigation measures that may be implemented to maintain compliance with activity-specific noise limits. *Advice Note:* *It is accepted that the noise limits in Condition 40 will not be met at all times but that the Consent Holder will adopt the BPO to achieve compliance*.
43	An ASCNVMP must be submitted to Auckland Council no less than 7 working days prior to works on that stage commencing for certification that the ASCNVMP complies with the requirements of Conditions 41 and 42, as applicable.
44	Construction activities including tunnelling works must comply with the guideline vibration limits set out in the German Industrial Standard DIN 4150-3 (1999) Structural Vibration – Part 3 Effects of Vibration on Structures (DIN 4150) (included below), except for sites identified below where exceedances are predicted, unless written approval has been obtained from the affected property owner.

Address	Building Classification	Predicted vibration level, PPV
1 Marine Parade	Residential	> 10 mm/s
~~8 Wairangi Street~~	~~Residential~~	~~5 - 6 mm/s~~
34 Herne Bay Road	Historical / Sensitive	4 - 5 mm/s
72 Argyle Street	Historical / Sensitive	3 - 4 mm/s

Construction Traffic

45	The Consent Holder must submit a Construction Traffic Management Plan (**CTMP**) for the Project, or each stage of the Project, that addresses the management of construction ~~noise and vibration~~traffic effects from the works. The ~~CNVMP~~ CTMP must be consistent with the Draft Construction Traffic Management Plan, prepared by Tonkin & Taylor Limited, Job Number 1090120.7000P v1, Version 1, dated 24 October 2023, as referenced in Condition 1. Construction activity cannot commence until certification is provided from Council that the CTMP

	satisfactorily gives effect to the objectives set out below, and complies with the requirements set out in Condition 46. The objectives of the CTMP are to: a. ensure construction traffic movements on the transport network, including construction vehicles travelling to and from the construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road, are appropriately managed; b. provide for the safety of everyone at all times; c. minimise disruption and maintain pedestrian and vehicle access to / from surrounding residential properties and Salisbury Reserve; d. minimise disruption from construction traffic on the travelling public and road users along the identified sections of the construction routes; e. seek to avoid full road closures and minimise any partial or managed closures; and f. manage integration with other construction Projects and Auckland Transport Projects.
46	The CTMP must be prepared by a suitably qualified and experienced traffic expert in accordance with the requirements of Condition 45 and the Council's requirements for traffic management plans or CTMPs (as applicable) and New Zealand Transport Authority's Code of Practice for Temporary Traffic Management (COPTTM) and must set out, as a minimum, the following: a. The traffic management measures to be implemented. b. A finalised construction programme and details of any cumulative traffic volume effects along with appropriate mitigation, if required. c. Any road closures that will be required and the nature and duration of any traffic management measures that will result, including any temporary restrictions, detours or diversions for general traffic and the corresponding signage requirements. d. Construction traffic routing. e. The design of the access roads and vehicle crossings. f. Methods to manage the effects of the delivery of construction material, plant and machinery. This must include, but not be limited to: • Ensuring heavy vehicles access the construction yard at Salisbury Reserve and 94A and 94B Shelly Beach Road via Argyle Street and Curran Street respectively; • traffic management measures, including a site Traffic Management Supervisor: – to ensure safe ingress and egress to and from Argyle Street to the construction yard at Salisbury Reserve; – to ensure construction vehicles can negotiate access and egress to avoid any additional queueing on the adjacent road network during congested peak periods and to ensure a suitable truck layover area is provided if required. g. Measures to maintain existing vehicle access to property where practicable, or to provide alternative access arrangements. h. Measures to maintain pedestrian and cyclist movements adjacent to and through Salisbury Reserve and measures to reduce the impact on mobility impaired users on roads and footpaths adjacent to the construction works. Where the works impact on existing pedestrian or cycle ways, alternative temporary accessways must be provided where practicable in accordance with Condition 45. Such access must be safe, clearly identifiable and seek to minimise significant detours. i. Provision for construction staff and visitor parking on site as far as practicable. j. Proposed traffic volumes and movements associated with works outside the usual construction hours

	specified in Condition 15 and associated management and mitigation measures to be implemented. k. Measures to communicate traffic management measures throughout construction activities (note: these measures may form part of the CP required by Condition 6), particularly to residents on Emmett Street during the closure of Sarsfield Street. l. All construction vehicles departing the construction yard at 94A and 94B Shelley Beach Road must travel north from the Curran Street on ramp, turning around at the Onewa Road interchange if they need to travel south. m. Reduction in the ramp metering cycle time on the Curran Street northbound motorway on-ramp and other measures, as necessary, so as to maintain current flow rates on the on-ramp. n. Details of how it is proposed that site access, egress and operation on Curran Street does not reduce the traffic capacity of the Curran Street motorway on-ramp during peak traffic periods. o. Establishment of a congestion monitoring programme on Curran Street northbound, including the Curran Street motorway onramp, and a process to identify and require the implementation of additional mitigation measures, should they be required. p. Implementation of a temporary 30 Km/h speed limit on Emmett Street during the duration of Shaft One construction works. q. Provisions for restricting movements of construction traffic on Curran Street during peak school drop-off and pick-up times (between 8.05 - 8.50am and 3.00 and 3.30pm) during the closure of Sarsfield Street. This restriction does not apply on Saturdays and during school holiday periods. r. Details on how active mode ~~amenity~~ safety will be maintained with a minimum of one footpath or temporary footpath open at any road at any time for pedestrian or cycling use. For sections of footpath where cycling is inappropriate, it must be communicated that cycles are to be wheeled only or alternative cycling routes must be indicated. The required cycling wheeling or alternative routes must be indicated through the use of appropriate signage. s. Any further proposed monitoring to measure the impact of the works on traffic and the impact of the traffic management measures. If safety or operational issues are evident, measures to be implemented to address these issues. *Advice Notes:* *It will be the responsibility of the Consent Holder to determine the presence of any underground services that may be affected by the applicants work in the road reserve. Should any services exist, the applicant must contact the owners of those and agree on the service owners' future access for maintenance and upgrades. Services information may be obtained from https://www.beforeudig.co.nz/.* *All work in the road reserve must be carried out in accordance with the general requirements of The National Code of Practice for Utility Operators' Access to Transport Corridors http://nzuag.org.nz/national-code/ApprovedNationalCodeFeb13.pdf and Auckland Transport Design Manual https://at.govt.nz/about-us/manuals-guidelines/transport-design-manual/* *Prior to carrying out any work in the road corridor, the Consent Holder is advised that they need to submit to Auckland Transport a Corridor Access Request (CAR) and temporary traffic management plan (TMP), the latter prepared by an NZ Transport Agency qualified person and work must not commence until such time as the applicant has approval in the form of a Works Access Permit (WAP). The application may be made at https://at.govt.nz/about-us/working-on-the-road/corridor-access-requests/apply-for-a-car/ and 15 working days should be allowed for approval.* *In addition to the above advice, the Corridor Access Request application must also be prepared in general accordance with the required CTMP.*
47	Access for all vehicles to the construction yard at 94A and 94B Shelly Beach Road must be via a one-way system entering and exiting from the Curran Street access. The design of the access and vehicle crossings on Curran Street must ensure it does not affect the effective, efficient and safe operation of the Curran Street SH1 onramp.

	Construction vehicles must not egress onto Curran Street between 7am and 9am, and between 4pm and 6pm on weekdays.
48	The temporary and permanent vehicle crossings from the construction yard at 94A and 94B Shelly Beach Road onto Curran Street must be designed to meet minimum sight distance requirements of the Safe Intersection Sight Distance (SISD) requirements set out in 'Austroad (2009) Guide to Road Design Part 4A: Unsignalised and Signalised Intersections. Sydney'. In this respect, a 90m minimum sight distance is required, which could be achieved through tree trimming or managed through temporary traffic management measures.
49	The Consent Holder must ensure the construction yards at Salisbury Reserve and 94A and 94B Shelly Beach Road are cordoned off / fenced to ensure public safety.
50	The Consent Holder must install construction site fencing to prevent pedestrians using the section of footpath on Argyle Street adjacent to the construction yard at Salisbury Reserve. Furthermore, prior to the temporary closure of the existing footpath on Argyle Street, the Consent Holder must undertake temporary improvements on the southern side of Argyle Street for pedestrians to cross the street. This must include the provision of a dropped kerb and tactile paving and a temporary parking restriction in the immediate area. These measures must be maintained for the duration of the construction works. Once construction works are completed, the closed footpath on Argyle Street must be reinstated. *Advice Note:* *These requirements are subject to landowner and asset manager approvals.*
51	Vehicle tracking of the construction vehicles will need to be carried out and any temporary physical works improvements at the Emmett Street intersections with Shelly Beach Road and Curran Street will need to be identified and implemented prior to the temporary closure taking effect. This could include temporary removal of on street parking on Curran Street and Shelly Beach Road to assist vehicles turning at the intersections and to provide improved sight lines.
52	All pedestrians footpaths and shared paths must be kept clear from access chambers and manholes to mitigate safety risks.
53	Raised intersections must be re-instated adjacent to shafts SE01 and SE02 within three months of their completion, unless otherwise agreed by the Council's Monitoring Officer in consultation with Auckland Transport.
54	All construction traffic must be managed at all times in accordance with the certified CTMP.
55	Unless specifically provided for by this consent approval, there must be no damage to public roads, footpaths, berms, kerbs, drains, reserves or other public asset as a result of the earthworks and construction activity. In the event that such damage does occur, the Council will be notified within one working day of its discovery. The costs of rectifying such damage and restoring the asset to its original Condition must be met by the Consent Holder.
56	All vehicle crossings affected by the works must be reinstated and designed to Auckland Transport's Standard (VX0203 Rev A for commercial crossings and VX0103 Rev D for residential crossings where applicable). This must be undertaken at the Consent Holder's expense and to the satisfaction of the Council, this must be undertaken in a timely manner after completion of the consented works.
Cultural	
57	Prior to the commencement of earthworks, the Consent Holder must invite representatives of Te Āakitai

	Waiohua to provide cultural inductions to the workers involved in earthworks associated with this application, including the workers involved in the establishment of earthworks controls. A register of the cultural inductions undertaken must be collated by the Consent Holder and provided to the Council and Te Āakitai Waiohua upon request.
58	The Consent Holder must provide a minimum of 10 days notice to representatives of Te Āakitai Waiohua of the dates for any cultural inductions as required by Condition 57. *Advice Note:* *"Earthworks" includes both topsoil stripping and/or bulk earthworks*
59	Provision must be made by the Consent Holder for Te Āakitai Waiohua representatives to undertake cultural monitoring associated with the following milestones if they wish: a. Pre-start meeting. b. Prior to construction of earthworks control measures. c. Prior to commencement of earthworks. d. Immediately prior to completion of earthworks across the Project area. e. At other times as agreed between the Consent Holder and Te Āakitai Waiohua representatives.
60	The Consent Holder must provide a minimum of 10 working days notice to representatives of Te Āakitai Waiohua of the anticipated dates for the above milestones.
Tree Management	
61	The Consent Holder must engage the services of a suitably qualified and experienced on-site supervisory arborist (the 'supervising arborist'), who must supervise and coordinate all pruning and works and activities within the root zone of protected trees. All works must be undertaken in accordance with the Arboricultural Assessment of Effects, prepared by The Tree Consultancy Company, Job Ref: 2590, dated 9 June 2023, as referenced in Condition 1.
62	Prior to any works commencing on site, the Consent Holder must arrange a site meeting with the supervising arborist, Council's monitoring officer, Council's urban forest specialist, and the contractor who has overall responsibility for the works. The purpose of this meeting is to discuss Conditions of consent. At the meeting, the responsible contractor must confirm the following to the satisfaction of the supervising arborist and the Council: a. Programming of works. b. Site access and transportation of materials. c. Temporary storage areas for materials. d. Silt and sediment controls. e. Excavations in the root zones of trees. f. When the supervising arborist is required to be present.
63	Tree protection must form a part of any site-specific hazard management and is to be included in daily toolbox meetings and all site inductions.
64	No work can take place within the root zone of protected trees without prior approval from the supervising arborist. Any amendments to the tree protection methodology will require prior written approval from the supervising arborist.

65	No material can be stored, emptied, or disposed of in or around the root zone of any of the trees unless otherwise authorized by the supervising arborist. Any material that is to be stored or temporarily placed in or around the root zone of any of the trees must be stored carefully on an existing or temporary hard surface such as asphalt or plywood sheets, respectively.
66	If machinery or vehicle access/manoeuvring is required in or around the permeable/exposed root zone of any trees, those areas must be covered with a protective overlay sufficient to prevent ground disturbance. This may include 'Track Mats,' a layer of mulch, or sand/SAP7 overlaid with wired planks, plywood, or similar (refer to detail TP-04 of the Arboricultural Assessment of Effects referenced in Condition 61).
67	If machinery/vehicles are to be operated or stored within the root zone area on an existing or temporary load-bearing surface, then the machinery/vehicle must not cause any detrimental effect to the tree(s) through compaction, physical damage, spillage of lubricants and fuels, or discharge of waste emissions.
68	All excavations that are to take place in or around the root zone of any of the trees must be done in conjunction with the supervising arborist, through a careful combination of hand digging and machine excavation. Where the supervising arborist deems it likely that roots will be encountered in the areas, then these areas must first be explored using hand tools only to check for the presence of such roots.
69	Where concrete is to be poured into excavations containing exposed roots, then all exposed roots must first be covered in a layer of polythene to prevent the concrete from contacting the exposed root (refer to detail TP-06 of the Arboricultural Assessment of Effects referenced in Condition 61).
70	All tree pruning must be confirmed to the satisfaction of the works arborist after liaison with the contractors represented around the extent of clearance required and practical options that may be available to retain large limbs. All pruning must be undertaken by a suitably experienced arboricultural contractor, with the work conforming to best industry practice, such as Arb Australia and NZ Arb Minimum Industry Standard MIS308.
71	Every effort must be made to avoid root severance from all trees by exploring on-site alternatives to construction/engineering, i.e., adjusting finished levels and basecourse depths, etc. Where root severance is unavoidable, the severance of any root must be carried out by the supervising arborist, who must select the most appropriate implement for the task. Roots must be cut cleanly to ensure that the traumatic cambium is able to initiate new root growth as effectively as possible, and the exposed cut faces should be covered over immediately with moist soil.
72	Where roots to be retained are encountered, and there is a need for these roots to remain exposed in order that works are not impeded, then those roots must be covered with a suitable protective material (such as moist Hessian or a wool mulch) to protect them from desiccation and/or mechanical damage until such a time as the area around the root can be backfilled with the original material.
73	At the completion of works, the supervising arborist, at their discretion, must 'sign off' the work of the contractor and, if requested, provide a brief account of the Project to Council (with photos, if necessary). The account of works must include, but not be limited to: a. The effects of the works on the subject trees. b. Any remedial work that may be necessary. *Advice Note:* *Notwithstanding any Conditions to the contrary, all works pertaining to any street and/or reserve tree within the work site area, covered by this consent, must be executed in accordance with the TAOA (Tree Asset Owner Approval form) which must be obtained prior to works commencing. Should you require, pleased email the following address for a copy treemanager@aucklandcouncil.govt.nz*
Archaeology	

74	An early 20th century historic public works drainage system may be present at the intersections of Sarsfield Street and Hamilton Road, Sarsfield Street and Sentinel Road, Sarsfield Street and Lawrence Street, Argyle Street and Clifton Road, along Argyle Street, along Marine Parade, and at the intersection of Bella Vista Road and Marine Parade. Initial earthworks for shaft sites and any areas of open trenching where this early 20th century historic public works drainage system may be present subsurface must be monitored by a suitably qualified and experienced archaeologist (the 'Project archaeologist'). The name and qualifications of this Project archaeologist must be provided to the Council prior to earthworks commencing. Any evidence of the historic public works drainage system must be recorded in accordance with "Level III" as outlined in the Heritage New Zealand Pouhere Taonga guideline for the Investigation and Recording of Buildings and Standing Structures. A report on any features exposed must be provided by the Project archaeologist to Auckland Council's Heritage Unit for inclusion in the Auckland Council Cultural Heritage Inventory. *Advice Notes:* *The Heritage New Zealand Pouhere Taonga Act 2014 (hereafter referred to as the Act) provides for the identification, protection, preservation and conservation of the historic and cultural heritage of New Zealand. All archaeological sites are protected by the provisions of the Act (section 42). It is unlawful to modify, damage or destroy an archaeological site without prior authority from Heritage New Zealand Pouhere Taonga. An Authority is required whether or not the land on which an archaeological site may be present is designated, a resource or building consent has been granted, or the activity is permitted under Unitary, District or Regional Plans.* *According to the Act (section 6) archaeological site means, subject to section 42(3) –* *any place in New Zealand, including any building or structure (or part of a building or structure), that:* a. *was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900;* b. *provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and* c. *includes a site for which a declaration is made under section 43(1).* *It is the responsibility of the Consent Holder to consult with Heritage New Zealand Pouhere Taonga about the requirements of the Act and to obtain the necessary authorities under the Act should these become necessary, as a result of any activity associated with the consented proposals. For information please contact the Heritage New Zealand Pouhere Taonga Archaeologist - 09 307 0413 / archaeologistMN@historic.org.nz.*
~~75~~	~~Should the consented works result in the identification of any previously unknown sensitive materials (i.e., archaeological sites) other than the early 20th century historic public works drainage system referred to in Condition 74, the requirements of land disturbance – Regional and District Accidental Discovery rules set out in the Auckland Unitary Plan (Operative in Part) must be complied with.~~
Built Heritage	
~~76~~75	All sections of blue stone kerbing that are removed during the works period must be carefully uplifted and stored off-site by the Consent Holder for reinstatement. The stone kerbs must be reinstated in their current locations to maintain the historical context of the place. Reinstatement of bluestone kerbing must occur within three months of the completion of the Project, unless otherwise agreed by the Council's Monitoring Officer.
~~77~~	~~Protection of historic heritage fabric of the properties at 58 Wallace Street, 85 Sarsfield Street, and the properties within Herne Bay Road Historic Heritage Area Overlay must be provided for prior to construction work commencing. At least ten working days prior to construction works commencing, the Consent Holder must provide detailed information regarding the method of protective hoarding to Council for certification (in conjunction with Team Leader – Built Heritage Implementation). All work must be carried out in accordance with the certified protection details.~~

~~78~~76	At least 20 working days prior to the commencement of works, a suitably qualified and experienced building surveyor must be engaged by the Consent Holder to undertake a building Condition survey to determine the sensitivity to vibration of the properties at 58 Wallace Street, 85 Sarsfield Street, 72 Argyle Street and 34 Herne Bay Road in terms of the classifications detailed in DIN 4150-3 (1999): Structural Vibration – Effects of Vibration on Structures criteria. The pre-works building Condition survey must include photography, specifically of the subject buildings' elevations. This will be used in conjunction with a post-construction Condition survey to assist in determination of any damage attributable to the works. Any damage attributable to the works must be remedied by the Consent Holder and their cost. *Advice Note:* *If the pre-construction survey determines that the subject buildings are not of the expected vibration classification, then upgrades may be required to the buildings before the construction works can commence. Any building upgrade works are outside the scope of this consent application and may require a separate resource consent.*
Water Permit Conditions – WAT60420394 (Conditions 79 to 110)	
~~79~~77	This consent expires 10 years from the granting of the consent unless it has lapsed, been surrendered, or been cancelled at an earlier date pursuant to the RMA.
~~80~~78	The Consent Holder must ensure that all excavation, dewatering systems, retaining structures and associated works for the construction of the shafts, tunnels, underground structures and associated works, including all temporary and permanent works, must be designed, constructed and maintained so as to avoid, subject to Conditions 89 to 96, any damage to land, buildings, structures and services (including road infrastructure assets such as footpaths, kerbs, catch-pits, pavements and street furniture).
~~81~~79	The Consent Holder must ensure that all backfilling of temporary shafts is designed and constructed to the required engineering standard, so as to avoid any damage to buildings, structures and services
~~82~~80	The Consent Holder must, at least 10 working days prior to the Commencement of Dewatering, advise the Council, in writing, of the date of the proposed commencement of this work.
~~83~~81	The Consent Holder must, at least 10 working days following Completion of Dewatering and excavation, advise the Council, in writing, of the date of completion
~~84~~82	Under section 128 of the RMA the Conditions of this consent may be reviewed by the Council at the Consent Holder's cost within six months after Completion of Dewatering in order to: a. deal with any adverse effects on the environment which may arise or potentially arise from the exercise of this consent and which it is appropriate to deal with at a later stage; and / or b. vary the monitoring and reporting requirements, and performance standards, in order to take account of information, including the results of previous monitoring and changed environmental knowledge on: • ground Conditions; • aquifer parameters; • groundwater levels; and • ground surface movement.

Groundwater and Settlement Monitoring and Contingency Plan	
~~85~~83	The Consent Holder must, before Commencement of Dewatering, prepare a Groundwater and Settlement Monitoring and Contingency Plan (**GSMCP**) addressing groundwater and settlement monitoring for each of the relevant Project stages. This includes a draft and final GSMCP as required by Condition 8~~6~~4. The GSMCP must demonstrate how the conditions of this consent will be implemented and must include the following: a. Details of the groundwater monitoring programme. b. Details of the ground surface settlement and building movement monitoring required. c. Details of the building risk assessment process and building Condition surveys process. d. A location plan of settlement and building deformation marks, retaining wall deflection markers and the location of existing and proposed groundwater monitoring bores. e. Details of the shaft retaining wall monitoring programme. f. The groundwater, deformation and settlement Alert and Alarm Levels (Trigger Levels) to be utilised for early warning of settlement with the potential to cause damage to buildings and services and details of the processes used to establish, and if necessary, to review these triggers. g. Details on the procedures for notification of the Council in the event that Trigger Levels are exceeded. h. Options for additional investigations and analyses to determine the potential for groundwater effects or settlement and for damage to structures, including additional groundwater or settlement monitoring and building Condition surveys. i. Details of the contingency measures to be implemented in the event of Trigger Levels being exceeded, including details on the practicable methodologies to avoid, remedy, or mitigate surface settlements with the potential to cause damage to buildings. *Advice Note:* *'Commencement of Dewatering' means commencement of bulk excavation and/or commencing taking any groundwater from a chamber/shaft or tunnel excavation.*
~~86~~84	The Consent Holder must submit to the Auckland Council for certification: a. A draft GSMCP including aspects dealing with pre-construction monitoring and locations of monitoring marks, including the pre-construction monitoring required under the Conditions of this consent. This must be provided at least six months prior to the Commencement of Dewatering for chamber excavations/shaft sinking or tunnelling of any Project stage. b. The final GSMCP. This must be provided at least 20 working days prior to Commencement of Dewatering for chamber excavations/shaft sinking or tunnelling of any Project stage.
~~87~~85	The Consent Holder must comply with the GSMCP at all times. The Consent Holder may amend the GSMCP from time to time, as necessary for the Project or any Project stage. Any amendments to the GSMCP must be certified by Auckland Council prior to any such amendment being implemented.
Risk Assessment	
~~88~~86	The Consent Holder must undertake a risk assessment to identify existing buildings and structures at risk of damage due to settlement caused by shaft sinking and chamber excavations, or tunnelling activities. The risk assessment process must be set out in the GSMCP required by Condition 8~~6~~4 and must be based upon the final tunnel alignment and construction methodology of the tunnel and chamber/shaft excavations, the groundwater

	and settlement monitoring required under this consent, and groundwater and settlement modelling completed using this data. The risk assessment must include: a. identification of the zone of influence where differential settlements of greater (steeper) than 1:1,000 are predicted due to chamber excavations/shaft sinking or tunnelling activities; b. identification of the building types in this zone, and their susceptibility to settlement induced damage; and c. identification of the buildings and structures at risk of damage due to chamber excavations/shaft sinking or tunnelling activities.
~~89~~87	A schedule of the addresses of existing buildings and structures identified as being potentially at risk of damage through the risk assessment process defined in Condition 8~~8~~6 must be included in the GSMCP required by Condition 8~~3~~5. *Advice Note:* *This requirement does not apply to the Consent Holder's infrastructure or where written approval has been obtained from the relevant network utility operator.*
Pre-Construction Condition Survey	
~~90~~88	The Consent Holder must consult with owners of existing buildings and structures identified through the building risk assessment process defined in Condition 8~~9~~7 and as a minimum, those buildings listed in Table 4.1 of the report titled " *Herne Bay Connector Project – Groundwater and Settlement Monitoring & Contingency Plan*", prepared by Tonkin & Taylor, dated October 2023, Job No. 1090120v2, referenced in Condition 1; and all retaining walls at the block of five units at 92, 94 ,96 & 98 Sarsfield Street and 51 Wallace Street, together with the swimming pool and adjacent area at 99 Sarsfield Street, the garage, retaining walls, swimming pool and adjacent area at 2 Stack Street, and subject to the owner's approval on terms acceptable to the Consent Holder, undertake a detailed pre-construction Condition survey of these structures to confirm their existing Condition and enable the sensitivity of the existing buildings and structures to any groundwater and ground settlement changes to be accurately determined. The survey must be completed at least three months prior to the Commencement of Dewatering of any Project stage involving shaft sinking and chamber excavation, or tunnelling. The intent of the survey is to assist in enabling the magnitude of allowable effects from changes in groundwater pressure and ground settlement movements to be reasonably determined. The survey must include but not necessarily be limited to the following: a. Major features of the buildings and site developments, including location, type, construction, age, and existing Condition. b. Type and capacity of foundations. c. Existing levels of aesthetic damage. d. Existing level of structural distress or damage. e. Assessment of structural ductility. f. Susceptibility of structure to movement of foundations, including consideration of the local geological Conditions. *Advice Note:* *'Commencement of Dewatering' means commencement of bulk excavation and/or commencing taking any groundwater from a shaft or tunnel excavation (after construction of the pile walls (if required) and/or dewatering prior to bulk excavation).*
Post-Construction Condition Surveys	

~~91~~89	Unless otherwise agreed in writing with the building owner that such survey is not required, the Consent Holder must (subject to the owner(s) approval on terms acceptable to the Consent Holder), within six months of the Completion of Dewatering of any Project stage involving shaft sinking, chamber excavation or tunnelling, undertake a post construction survey of buildings identified in accordance with Condition 8~~7~~9, and as a minimum, those buildings listed in Table 4.1 of the report titled " *Herne Bay Connector Project – Groundwater and Settlement Monitoring & Contingency Plan*", prepared by Tonkin & Taylor, dated October 2023, Job No. 1090120v2, referenced in Condition 1; and all retaining walls at the block of five units at 92, 94 ,96 & 98 Sarsfield Street and 51 Wallace Street, together with the swimming pool and adjacent area at 99 Sarsfield Street, the garage, retaining walls, swimming pool and adjacent area at 2 Stack Street. The Consent Holder may, if they are able to provide evidence to show the deformation was not caused by activities related to this consent, seek written approval from Auckland Council to waive this Condition. If any building damage is identified following completion of the pre-construction survey, the survey must determine the likely cause of damage. *Advice Note:* *'Completion of Dewatering' means when all the permanent chamber and shaft lining, base slab and walls are complete and the tunnel lining is complete, and effectively no further groundwater is being taken for the construction of the chamber/shaft/tunnel, in accordance with the design.*
Additional Condition Surveys	
~~92~~90	The Consent Holder must, at the direction of Auckland Council, and subject to the owner's approval on terms acceptable to the Consent Holder, undertake an additional survey on any existing building or structure surveyed in accordance with Condition 88~~90~~, for the purpose of checking for damage and for following up on a report of damage to that building. The requirement for any such survey will cease six months after the Completion of Dewatering of any Project stage involving shaft sinking, chamber excavation or tunnelling
~~93~~91	The Consent Holder must ensure that a copy of the pre, post-construction and any additional building survey reports are provided to the respective property owner(s). A copy is also to be made available to Auckland Council upon request (unless the property owner(s) has instructed the Consent Holder not to do so).
~~94~~92	The building Condition surveys required by the Conditions of this consent must be undertaken by an independent and SQEP or SQBS. When requested in writing by the Council, the Consent Holder must provide the contact details and qualifications of this person within five workings days.
Repair of Damage	
~~95~~93	If the exercise of this consent causes any unforeseen damage to buildings, structures or services not assessed under Conditions 88~~90~~ and/or ~~92~~90, the Consent Holder must notify Auckland Council as soon as practicable, and provide in writing to the Auckland Council a methodology for repair of the damage caused that has been certified by a Chartered Professional Engineer, and must urgently undertake such repairs in accordance with the certified methodology, at its cost, unless written approval for this damage is provided from the owners. *Advice Note:* *Unforeseen damage - means damage to buildings and structures that has occurred outside the area identified as the zone of influence under Condition 89 or to buildings or structures that are located within the zone of influence but were not considered to be at risk at the time of the approval of the GSMCP.*
Groundwater Monitoring	
~~96~~94	The Consent Holder must install and maintain groundwater monitoring boreholes at the locations described in the GSMCP and as shown on the draft monitoring plans – Figures 1 to 17, rev 0, dated September 2023 provided as Appendix A to the *Herne Bay Connector Project – Groundwater and Settlement Monitoring & Contingency*

	Plan", prepared by Tonkin & Taylor, dated October 2023, Job No. 1090120v2, for the period required by Conditions 98, 100 and 102 or as otherwise set out in the GSCMP. Should any of the monitoring bores be damaged and become in-operable or unsuitable for monitoring, then the Consent Holder must contact the Council within three working days and a new monitoring bore must be installed at a nearby location in consultation with, and to the satisfaction of, the Council.
~~97~~95	The Consent Holder must monitor groundwater levels in the groundwater monitoring boreholes within telemetry instrumentation which allows for near-continuous remote monitoring to be undertaken (at 15-minute intervals) and keep records of the water level measurement and corresponding date. All water level data must be recorded to an accuracy of at least ± 5mm. These records must be compiled and submitted in an appropriate format, to the Council at six monthly intervals.
~~98~~96	The Consent Holder must monitor groundwater levels monthly in boreholes identified in the GSMCP and keep records for a period of at least six months before the Commencement of Dewatering of any Project stage involving shaft sinking or tunnelling. The variability in groundwater levels over this period will be utilised to establish the seasonal groundwater level variability. The Consent Holder must monitor groundwater levels at regular intervals in all proposed monitoring boreholes during the monitored period (three readings indicating steady state) before the Commencement of Dewatering of any Project stage involving shaft sinking or dewatering.
~~99~~97	Prior to the Commencement of Dewatering of any Project stage involving shaft sinking or tunnelling, the Consent Holder must assess the potential groundwater effects resulting from the exercise of this consent. The output of this assessment must be used to define the expected groundwater level at each borehole and to establish groundwater Trigger Levels for each borehole that minimise the potential for damage to existing buildings or structures. The process for establishing groundwater Trigger Levels must be set out in the GSMCP and must be based upon the final tunnel alignment and construction methodology, and any groundwater monitoring required under this consent, and must be based upon groundwater modelling completed using this data. A factor of natural seasonal variability must be allowed for in this review based on the survey completed under Condition 9~~8~~6.
~~100~~98	From Commencement of Dewatering of any Project stage involving shaft sinking or tunnelling, the Consent Holder must monitor groundwater levels in each borehole at a minimum of monthly intervals and records must be kept of each monitoring date, the corresponding water level in each borehole and the corresponding depth of all excavations or as otherwise set out in the GSCMP. In addition to the above, all boreholes located within 100 metres of the shaft construction site or within 100 metres of the tunnel excavation face must be monitored for groundwater level at least once in any period of seven consecutive days or as otherwise set out in the GSCMP. These records must be compiled and submitted to the Council at six monthly intervals.
~~101~~99	All monitoring data obtained pursuant to Condition 100 must be compared to the predicted groundwater levels for each borehole. Where Trigger Levels are exceeded the actions as set out in the GSMCP must be undertaken and the Council must be notified within three working days, advising of the trigger exceedance, the risk of settlement causing damage to buildings and details of the actions taken.
~~102~~100	The Consent Holder must continue to monitor groundwater levels in each borehole at monthly intervals for a period of 12 months following Completion of Dewatering of any Project stage involving shaft sinking or tunnelling, or for a lesser period if groundwater levels in any particular borehole show either: a. recovery of the groundwater level to within 2m of the pre-construction groundwater level and is above trigger levels; or b. a trend of increasing groundwater level in at least three consecutive monthly measurements and is above trigger levels, in which case monitoring at that borehole may cease. After 12 months following the Completion of Dewatering of any Project stage involving shaft sinking or tunnelling, monitoring of groundwater levels must continue at the direction of the Council if groundwater levels are not recovering from construction effects and there is a risk of adverse effects on neighbouring buildings or

	properties. The Consent Holder must request termination of groundwater level monitoring from Council, supported with a letter of justification for the termination, prepared by a SQEP.
Settlement and Deflection Monitoring	
~~103~~101	The Consent Holder must establish and maintain a Settlement Monitoring Network of ground and building settlement monitoring marks to detect any deformation (vertical and/or horizontal movements) at the locations described in the GSMCP and for the period required by the Conditions of this consent. a. The locations of the monitoring marks must be identified on a plan within the GSMCP, as required under Condition 85 (note: this must reflect the draft monitoring plans – Figures 1 to 17, rev 0, dated September 2023 provided as Appendix A to the *Herne Bay Connector Project – Groundwater and Settlement Monitoring & Contingency Plan*", prepared by Tonkin & Taylor, dated October 2023, Job No. 1090120v2, referenced in Condition 1); in addition four ~~eigh~~ building settlement pins are required on the block of five units at 92, 94 ,96 & 98 Sarsfield Street and 51 Wallace Street. b. The locations and number of monitoring marks must be sufficient to provide a reliable basis for assessing, monitoring and responding to settlement risk during chamber/shaft and tunnel construction work, and for confirming compliance with the limits set out in the GSMCP.
~~104~~102	In the event of any of the monitoring marks required under Condition 10~~3~~1 being destroyed or becoming inoperable, the Consent Holder must, unless otherwise agreed in writing by the Council, replace the monitoring marks with new monitoring marks.
~~105~~103	The Consent Holder must ~~access and utilise AC INSAR data AC~~ survey and record the elevation of each monitoring mark and record the corresponding date. Monitoring marks must be surveyed at least three times over a 12-month period prior to commencement of any Project stage involving shaft sinking or tunnelling to establish seasonal variability, and twice within 1 month prior to commencement of excavation to establish the pre-construction reference ground level. ~~ALternativeltAlternatively~~Alternatively, the consent holder may ~~utilised~~utilise Auckland Council ~~C~~ approved INSAR data to undertake this 12 month monitoring. During excavation /dewatering monitoring marks are to be surveyed as follows: Weekly for: a. All monitoring markers within 50 m of TBM tunnel/trench excavations. b. All monitoring markers within 20 m of a TBM shaft Fortnightly where: c. All monitoring markers within 100 m of TBM tunnel/trench excavations d. All monitoring markers within 50 m of a TBM shaft Every two months for: e. All monitoring markers following establishment of baseline readings (to monitor seasonal fluctuations) After excavation /dewatering monitoring marks are to be surveyed as follows: f. Monthly for six months or until such time following the completion of excavation and dewatering that stable measurements are demonstrated. The Consent Holder must request termination of groundwater level monitoring from Council, supported with a letter of justification for the termination, prepared by a SQEP. All surveys are to be completed to an accuracy of at least ± 2mm for level and ± 5mm for plan position, or as otherwise achieved by best practice precise levelling. These records must be compiled and submitted to the Council at six monthly intervals.

~~106~~104	Prior to the Commencement of Dewatering of any Project stage involving chamber/shaft sinking or tunnelling, the Consent Holder must assess the potential settlement effects resulting from the exercise of this consent. The output of this assessment must be used to define the expected settlement levels and to establish settlement Trigger Levels (Alert Levels and Alarm Levels) that minimise the potential for damage to existing buildings or structures. The process for establishing settlement Trigger Levels must be set out in the GSMCP and must be based upon the final tunnel alignment and construction methodology, any groundwater, deformation or settlement monitoring required under this consent, and groundwater and settlement modelling completed using this data. A factor of natural seasonal variability must be allowed for in this review. *Advice Note:* *'Alert Level' is the Differential and Total Settlement Limit set at a threshold less than the Alarm Level, at which the Consent Holder must implement further investigations and analyses as described in the GSMCP to determine the cause of settlement and the likelihood of further settlement.* *'Alarm Level' is the Differential and Total Settlement Limit set in Condition 10~~98~~, or which has the potential to cause damage to buildings, structures and services, at which the Consent Holder must immediately stop dewatering the site and cease any activity which has the potential to cause deformation to any building or structure or adopt the alternative contingency measures approved by the Council.*
~~107~~105	The Consent Holder must compare all settlement monitoring data obtained during shaft sinking and tunnelling construction work to the pre-construction minimum levels in accordance with the GSMCP. Where Trigger Levels are exceeded, the appropriate actions as set out in the GSMCP must be undertaken and the Council must be notified within three working days, advising of the trigger exceedance, the risk of settlement causing damage to buildings, and details of the actions taken.
~~108~~106	The Consent Holder must ensure that the exercise of this consent does not cause building or ground settlement greater than the Alarm Level thresholds specified below or as otherwise identified in accordance with Condition 107 and set out in the approved GSMCP. a. Greater (i.e., steeper) than 1:1,000 differential settlement (the Differential Settlement Alarm Level) between any two adjacent settlement monitoring marks required under this consent; or b. Greater than 10 mm total settlement (the Total Settlement Alarm Level) at any settlement monitoring mark required under this consent.
~~109~~107	The Consent Holder must continue to monitor the Monitoring Stations at monthly intervals for a total period of 12 months after Completion of Dewatering of any Project stage involving shaft sinking or tunnelling, or for a shorter period if certified by the Council. At 12 months following the Completion of Dewatering of any Project stage involving shaft sinking or tunnelling, monitoring of ground and settlement marks must continue at the direction of the Council if monitoring marks have breached trigger levels and there is risk of adverse effects. The Consent Holder must request termination of groundwater level monitoring from Council, supported with a letter of justification for the termination, prepared by a SQEP.
~~110~~108	The Council must be advised in writing within 10 working days of when excavation and dewatering has been completed. *Advice Note:* *The Consent Holder is advised that the discharge of pumped groundwater to a stormwater system or waterbody will need to comply with any other regulations, bylaws or discharge rules that may apply.*
Discharge of Contaminants Conditions – DIS60422394 (Condition 111) and LUC60420246 Conditions 30 to 35	
~~111~~109	This consent expires 10 years from the granting of the consent unless it has lapsed, been surrendered, or been cancelled at an earlier date pursuant to the RMA.

Discharge of Contaminants Conditions – DIS604XXXXX (Conditions 112 to 126)	
Environmental Management Plan	
~~112~~110	This consent expires 10 years from the granting of the consent unless it has lapsed, been surrendered, or been cancelled at an earlier date pursuant to the RMA.
~~113~~111	The construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road must be operated and managed in accordance with an Environmental Management Plan (**EMP**) to ensure the risks from the site are managed appropriately.
~~114~~112	The EMP required by Condition 113 must be provided to and certified by the Council five working days prior works commencing within the construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road. The EMP must include, but not be limited to: a. Identification of the specific activities conducted on the site. b. The identification of potential contaminants associated with these activities. c. Methods used to prevent identified contaminants contacting stormwater runoff as far as practicable and methods to manage environmental risks from site activities. d. A Spill Response Plan (which includes the provision that all spills over 20 litres, or any spill of environmentally hazardous substances that has entered the stormwater system, a waterbody or has contacted unsealed ground, shall be reported immediately to the Auckland Council's 24 Hour Pollution Hotline (09-377-3107)). e. An up-to-date and accurate site drainage plan showing the location of all site catchpits, treatment devices and the discharge point(s) of the site stormwater system. f. An appropriate auditing programme to ensure site performance with all components of the site EMP g. Methods for providing and recording staff training. h. An Operation and Maintenance Plan as outlined in Condition 120. The EMP must be kept on the construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road, and be accessible, at all times.
~~115~~113	The EMP must be reviewed and updated after 12 months from the date of granting of this consent, to ensure all components are still relevant. *Advice Note:* *A summary of all revisions and the revised sections shall be submitted as part of the Annual Report required by Condition* of this permit.
Structural Works	
~~116~~114	The following structural works are constructed for the following catchment areas and design standards and must be completed prior to discharges from the associated new impervious areas commencing from the site:

Works	Device catchment area m^2	Design guideline
Grassed swale, Vegetated strip or proprietary treatment device	Yard total impervious area excluding roof impervious area	75% TSS removal, on long term average basis Proprietary treatment device off line and as per the manufacturer's specification Details at the Engineering Plan Approval stage
Stormwater outfall	Total site impervious areas	Erosion protection measures to minimise scour and erosion potential and accordance with Auckland Council TR2013/018

~~117~~115 In the event that any minor modifications to the management system are required, the following information must be provided:

a. Plans and drawings outlining the details of the modifications.

b. Supporting information that details how the proposal does not affect the capacity or performance of the management system.

All information must be submitted to, and verified by the Council, prior to implementation.

Advice Note:

All proposed changes must be discussed with the Council, prior to implementation. Any changes to the proposal which will affect the capacity of performance of the management system or will result in a change to the conditions of this consent will require an application to be made in accordance with Section 127 of the RMA.

Construction Meetings

~~118~~116 A pre-construction meeting must be held by the Consent Holder, prior to commencement of the construction of any stormwater device(s), that:

a. is arranged five working days prior to initiation of the construction of any stormwater device(s);

b. is located in the subject area;

c. includes representation from Council; and

d. includes representation from the site stormwater engineer or contractors who will undertake the works and any other relevant parties

The following information must be provided at the pre-construction meeting:

e. Timeframes for key stages of the works authorised under this consent.

f. Erosion and sediment control measures during construction activities.

g. Contact details of the site contractor and site stormwater engineer.

h. Preliminary stormwater drainage plans of the structural works required by Condition 11~~4~~6.

~~119~~117	A post-construction meeting must be held by the consent holder, within 20 working days of completion of the stormwater management works, that: a. is located in the subject area; b. includes representation from Council; and c. includes representation from the site stormwater engineer or contractors who have undertaken the works and any other relevant parties As-Built Plans shall be provided to Council five working days prior to the post-construction meeting required by this consent. Advice Note: *To arrange the pre and post-construction meeting required by this consent, please contact the council [on phone 09 301 0101 or monitoring@aucklandcouncil.govt.nz].*
Operation and Maintenance Plan	
~~120~~118	An Operation and Maintenance Plan (**OMP**) must be provided to and certified by Council five working days prior to the post-construction meeting required cy Condition 119. The OMP must include: a. details of who will hold responsibility for long-term maintenance of the stormwater management system and the organisational structure which will support this process; b. a programme for regular maintenance and inspection of the stormwater management system; c. a programme for the collection and disposal of debris and sediment collected by the stormwater management devices or practices; d. a programme for post storm inspection and maintenance; and e. general inspection checklists for all aspects of the stormwater management system.
~~121~~119	The stormwater management and treatment system must be managed in accordance with the OMP certified by condition 120.
~~122~~120	The OMP must be updated and submitted to Council for certification upon request.
~~123~~121	A written maintenance contract for the on-going maintenance of any proprietary devices must be entered into with a suitably qualified and experienced person, prior to the operation of the proprietary stormwater management devices**.** A written maintenance contract must be in place and maintained for the duration of the consent.
~~124~~122	A signed copy of the maintenance contract required must be forwarded to Council at least five working days prior to the post-construction meeting required by Condition 11~~79~~. A copy of the current maintenance contract must be provided to the Council upon request throughout the duration of the consent.
Maintenance Record	
~~125~~123	Details of all maintenance records (including inspections, servicing, and maintenance) for the stormwater management system must be retained by the Consent Holder for the duration of the works. The maintenance record must be provided to Council on request.
Annual Report	

~~126~~124	An annual report evaluating the site's environmental performance for the year to date shall be forwarded annually to Council from the date of granting of this consent. The Annual Report must include but not be limited to: a. all aspects of the performance of the EMP relating to this consent; b. a summary of all revisions and revised sections of the EMP; c. details of all inspections and maintenance of the stormwater system for the preceding 12 months; d. details of and changes to the person(s) or body responsible for maintenance of site and the organisations' structure supporting this process; and e. records of any spills or incidents which occurred within the previous 12 months and the response which was undertaken. *Advice Note:* *For the purpose of compliance with the conditions of consent, "Council" refers to the council's monitoring officer unless otherwise specified. Please email monitoring@aucklandcouncil.govt.nz to identify your allocated officer.*

C. Park reinstatement and permanent assets

Land Use Consent Conditions – LUC60415109 (Conditions 127 to 132)	
Mitigation Planting	
~~127~~125	The Consent Holder must provide planting to replace and mitigate the removal of street trees and trees within Salisbury Reserve. This must comprise the planting of a minimum of 46 exotic trees or 51 native trees (native trees must be preferentially used wherever practicable). 160l-grade trees must be used to mitigate the removal of four Magnolia and three Queen Palm trees within the Upton Street road reserve. *Advice Note:* *Where these trees are to be planted within Auckland Council Parks, then the location and species to be planted must be subject to the agreement of Council as landowner (Parks and Community Facilities).*
~~128~~126	Soil remediation works, including de-compactions, must be undertaken upon completion of construction activities within the road reserve of Upton Street.
Park Restoration and Landscape Plan	
~~129~~127	The Consent Holder must prepare a photographic record of the pre-construction Condition of construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road within their footprint and immediate vicinity. This record must be provided to the Council at least 1 month prior to works within these construction yards commencing.
~~130~~128	At least three months prior to the completion of the Project, the Consent Holder must prepare and submit to Auckland Council for certification a Park Restoration and Landscape Plan (**PRLP**) for the construction yard sites at ~~Salsbury~~Salisbury Reserve and 94A and 94B Shelly Beach Road. The objective of the PRLP is to provide details on the reinstatement works to restore and enhance landscape, amenity, and recreational values as applicable.
~~131~~129	The PRLP is to be prepared by a suitably qualified and experienced landscape architect in consultation with the landowner and must include the following: a. Removal of construction yards, equipment, temporary retaining walls, and construction access not required for operation and maintenance access.

	b. Details of the restoration of the open space to at least the same standard as that recorded as per Condition 129. c. Replacement or reinstatement of any park assets that were affected by the Project, or any new proposed assets, including, but not limited to: • grassed areas; • footpaths; and • park furniture d. Details of proposed contouring, landscaping and planting. This is to include: • finished contours / levels; • details on the replacement of trees removed as per the mitigation planting required by Condition 127; • any additional planting (including proposed species, location and planting timetable). This must include details of replacement planting in the park to mitigate tree and shrub removal; and • implementation and maintenance programmes (including a landscape planting management and maintenance plan) e. Any details of proposed way finding and interpretation signage within and adjacent to the park. f. Record of consultation with the landowner. In preparing the PRLP, consideration must be given to opportunities to enhance existing recreation, landscape and amenity values (e.g., additional or alternative walkways, seating, appropriate recognition of cultural values, etc), and planting.
~~132~~130	The Consent Holder must implement the final PRLP in accordance with Condition 1~~31~~28. The PRLP must set out a timeframe for implementation, which must be agreed with the Council, in consultation with the Parks Planning Team Leader. This must be as soon as reasonably practicable, and unless otherwise confirmed through the PLRP, must be within 12 months of practical completion of construction works. The Consent Holder must carry out a five-year maintenance programme following implementation of the PRLP, unless a shorter time period is agreed with Council, in consultation with Parks Planning Team Leader.

D. Definitions

Alarm Level – specific levels at which actions are required as described in the relevant Conditions.

Alert Level – Specific levels at which actions are required as described in the relevant Conditions.

Bulk Excavation – includes all excavation that affects groundwater excluding minor enabling works and piling less than 1.5m in diameter.

Commencement of Dewatering – Means commencement of bulk excavation and/or commencing taking any groundwater from a shaft or tunnel excavation (after construction of the pile walls (if required) and/or dewatering prior to bulk excavation).

Completion of Dewatering – Means when all the permanent shaft lining, base slab and walls are complete and the tunnel lining is complete and effectively no further groundwater is being taken for the construction of the shaft/tunnel, in accordance with the design.

Commencement of excavation – means commencement of Bulk Excavation for shafts, trenches and tunnels

Condition Survey – Means an external visual inspection or a detailed Condition survey (as defined in the relevant Conditions).

Damage – Includes Aesthetic, Serviceability, Stability, but does not include Negligible Damage. Damage as described in the Building Damage Classification reference table below.

GSMCP – Means Groundwater and Settlement Monitoring and Contingency Plan

Monitoring Station – Means any monitoring instrument including a ground or building settlement monitoring mark, , groundwater monitoring bore, retaining wall deflection station, or other monitoring device required by this consent.

SQEP – Means a Suitably Qualified Engineering Professional

SQBS – Means Suitably Qualified Building Surveyor

Category of damage	**Normal Degree of Severity**	**Description of Typical Damage** *(Building Damage Classification after Burland (1995), and Mair et al (1996))*	**General Category** *(after Burland – 1995)*
0	Negligible	Hairline cracks	Aesthetic Damage
1	Very Slight	Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection. Typical crack widths up to 1mm.	
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible, some repainting may be required for weather-tightness. Doors and windows may stick slightly. Typical crack widths up to 5 mm.	
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Brick pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired. Typical crack widths are 5 to 15 mm or several greater than 3 mm	Serviceability Damage
4	Severe	Extensive repair involving removal and replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted. Typical crack widths are 15 to 25 mm but also depend on the number of cracks.	
5	Very Severe	Major repair required involving partial or complete reconstruction. Beams lose bearing walls lean badly and required shoring. Windows broken by distortion. Danger of instability. Typical crack widths are greater than 25 mm but depend on the number of cracks	Stability Damage