Appendix B – Proposed Conditions

The conditions of consent proposed below are informed by practical on-the-ground experience gained through the Herne Bay project to date and have proven to be effective at managing effects while also providing sufficient flexibility for the contractor.

The proposed conditions are based on the CI and Grey Lynn Tunnel consent conditions previously approved by Auckland Council, subject to changes to reflect current practice for condition drafting, experience from CI and implementation of the CI conditions, and specific matters relevant to the Project location The proposed conditions are intended to provide a project-specific key condition set. Watercare expects that there will be standard and administrative type conditions, along with additional other conditions, Auckland Council considers are required.

General conditions

1. Except as modified by the conditions below and subject to final design, the works must be undertaken in general accordance with the plans and information submitted with the application, including the Herne Bay Tunnel Assessment of Effects on the Environment (AEE) prepared by WSP dated April 2023 and Appendices to the AEE:
    - Appendix B – Drawings.
    - Assessment of Noise and Vibration Effects, prepared by Tonkin & Taylor Ltd, dated April 2023.
    - Preliminary Site Investigation, prepared by Tonkin & Taylor Ltd, dated April 2023.
    - Draft Erosion and Sediment Control Plan, prepared by WSP, dated XX/XX/XXXX.
    - Screening-level Assessment of Groundwater and Settlement Effects, prepared by Tonkin & Taylor Ltd, dated April 2023.
    - Arboricultural Assessment of Effects, prepared by Tree Consultancy Company, dated XX April 2023.
    - Archaeological Assessment, prepared by Clough & Associated Ltd, dated April 2023.
    - Integrated Transport Assessment, prepared by Tonkin & Taylor Ltd, dated April 2023.
2. The consent shall lapse on the expiry of a period of ten (10) years after the date on which the last of any appeals on the consent are determined or withdrawn, or if no appeals are lodged, the date on which the consent is granted in accordance with Section 104 of the RMA.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.

Detailed drawings and design

3. At least twenty (20) working days prior to commencement of works, the Consent Holder shall submit detailed engineering design plans for the Project, or for that stage of the Project works, to the Council.

Construction Phase Consent Conditions

Community Liaison and Communications

4. A liaison person shall 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 shall 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 shall 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.
5. The Consent Holder shall prepare a Communications Plan (CP) for the construction phase of the Project or for each Project stage. The CP shall be submitted to the Council no less than twenty (20) working days prior to works commencing for certification that the CP complies with the requirements of Condition 6.

   Advice note: "Project stage" means a separable part of the Project by activity, programme or location/geographic extent (e.g. tunnelling, shaft construction, TBM removal).
6. 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 shall set out:
   a. the method(s) of consultation and liaison with key stakeholders and the owners/occupiers of neighbouring properties regarding the likely timing, duration and effects of works. This shall include the method(s) to ensure affected properties are notified of noisy activities prior to works commencing;
   b. details of prior consultation or community liaison undertaken with the parties referred to in (a) 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;

c. full contact details for the person appointed in accordance with Condition 4 to manage the public information system and be the point of contact for related enquiries.

Construction Management

7. The Consent Holder shall prepare a Construction Management Plan (CMP) for the Project or for each stage of the Project (e.g. tunnelling works, shaft construction). 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 8 (a) to (l) below. The CMP shall be submitted to Auckland Council no less than twenty (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 8 as applicable.
8. The CMP required by Condition 7 above shall 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 4 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;
    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 37, 38 and 42;
    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 45 – 47;
m. Spill management procedures for the storage of hazardous substances.

9. The CMP shall 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 shall be updated as necessary and provided to the Council for certification prior to being implemented.
10. The Consent Holder shall review the draft Site Management Plan dated April 2023 (herein referred to as the CLSMP), prepared by Tonkin + Taylor, 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 sites to land or water are minimised, and to ensure that health of workers on the site and nearby sites is less than minor. 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 shall be submitted to the Manager for approval (such approval not to be unreasonably withheld).

    The CLSMP shall 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; and
    e. Measures to be undertaken for the handling of asbestos containing material.

11. The Consent Holder shall 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.

12. Confirmatory soil sampling and testing shall be undertaken at CSA1 and CSA3 construction sites prior to works commencing at these sites as described in the CLSMP.

Construction Hours

13. Construction hours shall be as follows, except where work is necessary outside the specified days or hours for the purposes specified in Condition 14 below.
    a. 7 am to 6pm, Monday to Friday; and
    b. 8am to 6pm Saturday.
14. Work may occur outside of the specified days or hours set out in Condition 13 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 any other reason specified in the CMP or CTMP; and / or
    g. for site mobilisation and pack down, which may occur up to 30 minutes before and after the hours described in Condition 13.

    Where any work is undertaken pursuant to (a) to (f) above, the Consent Holder shall, within five (5) 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 32).

Earthworks

15. At least ten (10) working days prior to the commencement of any earthworks at the site authorised by this consent, the Consent Holder must submit a final Erosion and Sediment Control Management Plan (ESCP) for certification by the Council. No earthworks activities shall commence until the ESCP has been certified. Any subsequent amendments to the certified ESCP(s) and/or methodology must be provided to the Council at least ten (10) working days prior to the proposed amendment and certified prior to any such amendment being implemented.

16. The objective of the ESCP shall be to shall be to set out the methods and techniques and management procedures and protocols for controlling the potential for erosion and sediment runoff as a consequence of earthworks. The ESCP must be prepared by a suitably qualified and experienced practitioner in accordance with Auckland Council Guidance Document, Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region, June 2016, Guideline Document 2016/005 (GD05) and the draft ESCP referenced in Condition 1.
17. The ESCP shall include the following information:
    a. Timing and duration of construction and operation of control works
    b. Specific erosion and sediment control works (location, dimensions, capacity) in accordance with GD05, including staging details (where relevant) and specific erosion and sediment controls. Erosion and sediment controls are to include:
        i. stabilised site accesses
        ii. clean water diversion around the construction areas to reduce the contributing catchment to the exposed working areas;
        iii. silt fences and super silt fences;
        iv. stabilised construction area platform surface;
        v. wheel wash facility at the site exit (as a contingency/if required);
        vi. progressive stabilisation of works area as required; and
        vii. the removal of stripped topsoil and surplus excavated material from site.
    c. Supporting calculations and design drawings;
    d. Catchment boundaries and contour information;
    e. Provision for regular inspection and maintenance of ESC measures to maximise the sediment retention efficiency of the site; and
    f. Specific dust control measures (where required) in accordance with the Good Practice Guide for Assessing and Managing the Environmental Effects of Dust Emissions, MfE (2016) and the Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region – GD05, Auckland Council (2016).
18. All perimeter controls shall be operational before bulk earthworks commence. All cleanwater runoff from stabilised surfaces including catchment areas above the construction areas shall be diverted away from earthworks areas via a stabilised system so as to prevent surface erosion.
19. At least ten (10) working days prior to the commencement of earthworks at the site, a Chemical Treatment Management Plan (ChTMP) shall be submitted to the Council for certification. The objective of the ChTMP is to set out the management methods, controls and reporting standards to be implemented relating to the chemical treatment of the water treatment devices. For the

avoidance of doubt, the ChTMP can be prepared as a standalone plan or as part of the ESCP required by Condition 12 above.

20. To prevent discharge of sediment-laden water or other debris into any public stormwater drainage systems or watercourses and therefore into receiving waters, and to prevent nuisance and amenity impacts on users of the road reserve, there shall be no deposition of earth, mud, dirt or other debris on any public road or footpath resulting from earthworks activity on the site. In the event that such deposition does occur, it shall immediately be removed. In no instance shall 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.
21. The Consent Holder shall 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, are designed, constructed and maintained to avoid, as far as practicable, any damage to buildings, structures and services (including road infrastructure assets such as footpaths, curbs, catch-pits, pavements and street furniture).
22. The Consent Holder shall ensure that all discharges from dewatering activities, wheel washes and other occasional construction site related discharges are treated to an appropriate standard prior to discharge to either land or stormwater drainage systems or other receiving waters

Contamination

23. The procedures in the CLSMP prepared by Tonkin + Taylor must be implemented during earthworks on actual or potentially contaminated soil (i.e. excludes work associated with natural uncontaminated ground for eg. underground tunnelling or shaft construction works).
24. 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.
25. 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.
26. 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).
    Stockpiling of excavated contaminated soil shall be avoided. If required, temporary stockpiles shall follow the procedures set out in the CLSMP.

Construction Lighting

27. Construction lighting shall be minimised to the extent practicable and shall meet the relevant permitted standards in Chapter E24 of the Auckland Unitary Plan.

Construction Noise and Vibration

28. The Consent Holder shall 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 shall be consistent with the draft CNVMP (dated XX/XX/XX) referenced in Condition 1.

    The CNVMP shall be submitted to the Council no less than twenty (20) working days prior to works on that stage commencing for certification by Council that the CNVMP complies with the requirements of Conditions 28 to 36, 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.
    c. Ensure engagement with affected receivers and timely management of complaints.

29. The CNVMP shall be prepared by a suitably qualified and experienced practitioner and shall set out, as a minimum:

    a. The relevant construction noise and vibration criteria/limits set out in these conditions;
    b. Description and 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 processes to be undertaken including general acoustic management and mitigation measures proposed to be implemented throughout the course of the Project consistent with best practice and the triggers or thresholds for implementing them (if relevant);
    d. 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 shall also include the following, as required to ensure a BPO approach to the management of noise: setting minimum setback

distances from sensitive receivers (dwellings); acoustic screening of the control chamber construction area and shaft site construction area; and/or open trenching;

e. 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;
f. 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 land owner(s) of the sites where the sensitive activities are located and any management measures that will be adopted, where required, based on this consultation;
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; and
k. Training procedures for construction personnel.

The CNVMP shall 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 shall be updated as necessary and provided to the Council for certification prior to being implemented.

30. Construction noise shall be measured and assessed in accordance with NZS6803:1999 Acoustics – Construction Noise.
31. Construction noise in the Construction Support Areas (CSAs) shall comply with the following AUP noise limits, except where authorised by an ASCNVMP (Condition 32):

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

Advice note: i. These limits are contained in Table E25.6.27(1) of the AUP and modified by Standard E25.6.27(4).
ii. Project construction hours are subject to Condition 13.

32. An Activity Specific Construction Noise and Vibration Management Plan (ASCNVMP) shall 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.
33. In preparing an ASCNVMP, the Consent Holder shall consult with those parties likely to be exposed to noise levels exceeding the relevant noise limit(s) and shall submit the results of this consultation to Auckland Council, including any response by the Consent Holder to a matter raised in consultation. The ASCNVMP(s) shall be submitted to the Council for review and approval at least 7 working days prior to the proposed works commencing.
    Works subject to the ASCNVMP(s) shall 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 shall stop and not recommence until further mitigation is implemented in accordance with an amended ASCNVMP approved by the Council.
    An ASCNVMP must:
    a. describe the activity (including duration), plant and machinery that is expected not to comply with the noise limits in Condition 31;
    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 24, 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 31 may not be met at all times, but that the Consent Holder will adopt the Best Practicable Option to achieve compliance.

34. An ASCNVMP shall be submitted to Auckland Council no less than seven (7) working days prior to works on that stage commencing for certification that the ASCNVMP complies with the requirements of Conditions 32 and 33, as applicable.
35. Construction activities shall 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), except where approval has been sought for an infringement to this standard.
36. All tunnelling and construction works must be designed and undertaken to ensure that vibration from the Project does not exceed the guideline vibration limits as set out in the DIN 4150-3:1999 Standard.

    Note: Works generating vibration for three days or less between the hours of 7 am to 6 pm may exceed these limits subject to compliance with Condition 35 and provided that all occupied buildings within 50 m of the extent of the works generating vibration are advised in writing no less than three days prior to the vibration-generating works commencing. The written advice must include details of the location of the works, the duration of the works, a phone number for questions and complaints and the name of the site manager.
    Advice note: These limits are contained in Table E25.6.30.1 of the AUP

Traffic Management

37. The Consent Holder shall submit a Construction Traffic Management Plan (CTMP) to Council at least twenty (20) working days prior to the commencement of Project works. No construction activity shall commence until certification is provided from Council that the CTMP satisfactorily gives effect to the objectives set out below, and complies with the requirements in Condition 38.
    The objectives of the CTMP are to:

a. Ensure construction traffic movements on the transport network, including construction vehicles travelling to and from the CSAs at Salisbury Reserve and 94a - b Shelley 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;
f. Manage integration with other construction projects and Auckland Transport projects.

38. The CTMP shall be prepared by a suitably qualified and experienced traffic expert and in accordance with 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 and must set out, as a minimum:
    a. Traffic management measures to be implemented;
    b. 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;
    c. Construction traffic routing;
    d. The design of the access roads and vehicle crossings;
    e. Methods to manage the effects of the delivery of construction material, plant and machinery. This shall include, but not be limited to:
        - ensuring heavy vehicles access the CSAs at Salisbury Reserve and 94a - b 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 CSA 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.
    f. Measures to maintain existing vehicle access to property where practicable, or to provide alternative access arrangements;
    g. 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 shall be provided where practicable in accordance with Condition 37. Such access shall be safe, clearly identifiable and seek to minimise significant detours.

h. Provision for construction staff and visitor parking on site as far as practicable;
i. Proposed traffic volumes and movements associated with works outside the usual construction hours specified in Condition 13 and associated management and mitigation measures to be implemented.
j. Measures to communicate traffic management measures throughout construction activities (note: these measures may form part of the CP required by Condition 5), particularly to residents on Emmett Street during the closure of Sarsfield Street;
k. All construction vehicles departing the CSA at 94A - B Shelley Beach Road shall travel north from the Curran Street on ramp, turning around at the Onewa Road interchange if they need to travel south;
l. 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;
m. 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;
n. 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;
o. Implementation of a temporary 30 Km/h speed limit on Emmett Street during the duration of Shaft One construction works;
p. Provisions for restricting movements of construction traffic on Curran Street during peak school drop-off and pick-up times (between 8.15 - 9am and 2.45 and 3.15pm) during the closure of Sarsfield Street;
q. 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.

39. Access for all vehicles to the CSA at 94a - b Shelly Beach Road shall 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 shall ensure it does not affect the effective, efficient and safe operation of the Curran Street SH1 onramp. Construction vehicles shall not egress onto Curran Street between 7am and 9am, and between 4pm and 6pm on weekdays.

40. The temporary and permanent vehicle crossings from CSA at 94A - B Shelly Beach Road onto Curran Street shall 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'.
41. The Consent Holder shall ensure the construction areas in Salisbury Reserve and 94B Shelly Beach Road are cordoned off/fenced to ensure public safety.
42. The Consent Holder shall install construction site fencing to prevent pedestrians using the section of footpath on Argyle Street adjacent to the CSA at Salisbury Reserve.
    Prior to the temporary closure of the existing footpath on Argyle Street, the Consent Holder shall undertake temporary improvements on the south side of Argyle Street for pedestrians to cross the street. This shall include the provision of a dropped kerb and tactile paving and a temporary parking restriction in the immediate area.
    These shall be maintained for the duration of the construction works. Once construction works are completed, the closed footpath on Argyle Street shall be reinstated.

    Advice note: These requirements are subject to landowner and asset manager approvals.

43. Vehicle tracking of the Project 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.
44. All construction traffic shall be managed at all times in accordance with the certified CTMP.

Tree Management

45. The Consent Holder shall provide details in the CMP (required by Condition 7) as to how the potential impacts of construction on trees and vegetation will be managed and minimised. The details shall provide for the:
    a. Identification of trees to be protected, pruned, removed, or transplanted and procedures for marking these out on site.
    b. Procedures for identifying and protecting trees to be retained where works occur in the dripline or rootzone of such trees as identified by a suitably qualified and experienced arborist.
    c. Temporary tree protection fencing which must remain in place for the duration of the works for the Project or relevant Project stage.

d. Procedures for undertaking the works under the supervision of a suitably qualified and experienced arborist including works within the dripline or rootzone of trees and the installation of the temporary fencing.

46. All works shall be undertaken in accordance with the Tree Protection Methodology set out in Appendix A of the Arboricultural Report referenced in Condition 1. All tree removal and pruning shall be undertaken by a suitably qualified and experienced arborist, with all work carried out in accordance with currently accepted arboricultural techniques (e.g., Arb Australia and NZ Arb Minimum Industry Standard MIS308).
47. Within thirty (30) working days following completion of works on the site, the Consent Holder must supply a completion report to Council. The report must be prepared by a suitably qualified and experienced arborist. The completion report must confirm (or otherwise) that the works have been undertaken in accordance with the tree protection measures contained within the Arboricultural Report referenced in Condition 1 and subject to the specific tree protection measures identified in accordance with Condition 46 above.

Cultural

48. *[To be developed in consultation with mana whenua and in response to forthcoming cultural values assessments].*

Archaeology and Heritage

307 0413 / archaeologistMN@historic.org.nz.

49. If any archaeological sites, including human remains are exposed during site works then the following procedures shall apply:
(a) Immediately after it becomes apparent that an archaeological or traditional site has been exposed, all site works in the immediate vicinity shall cease.
(b) The Consent Holder shall immediately secure the area so that any artefacts or remains are untouched.
(c) The Consent Holder shall notify mana whenua, the Heritage New Zealand Pouhere Taonga and the Council (and in the case of human remains, the New Zealand Police) as soon as practicable, and advise those parties that an archaeological site has been exposed so that appropriate action can be taken.
Works shall not recommence in the immediate vicinity of the archaeological site until approval is obtained from the Heritage New Zealand Pouhere Taonga.
Advice notes: *Should earthworks on the site result in the identification of any previously unknown archaeological site, including any archaeological artefact, koiwi or taonga, the Land Disturbance – Regional Accidental Discovery rule [E12.6.1] set out in the AUP(OP) apply.*

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.
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

Groundwater and Sediment

The below proposed conditions are intended to provide key conditions to inform the application. This does not preclude Auckland Council from imposing further standard groundwater conditions, including monitoring requirements.

50. Monitoring and Contingency Plan

The Consent Holder shall, before Commencement of Dewatering, prepare a Monitoring and Contingency Plan (M&CP) addressing groundwater and settlement monitoring for each of the relevant Project stages. This includes a draft and final M&CP as required by Condition 51.

The M&CP shall demonstrate how the conditions of this consent will be implemented and shall 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. details of the shaft retaining wall monitoring programme.
e. a location plan of settlement, retaining wall and building deformation marks and the location of existing and proposed groundwater monitoring bores.
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 Manager 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; and
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 shaft or tunnel excavation.

51. The Consent Holder shall submit to the Auckland Council for certification:
    a. a draft M&CP 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 shall be provided at least 6 months prior to the Commencement of Dewatering for shaft sinking, tunnelling or trenching of any Project stage; and
    b. the final M&CP. This shall be provided at least 20 working days prior to Commencement of Dewatering for shaft sinking or tunnelling of any Project stage.
52. The Consent Holder shall comply with the M&CP at all times.

    The Consent Holder may amend the M&CP from time to time, as necessary for the Project or any Project stage. Any amendments to the M&CP must be certified by Auckland Council prior to any such amendment being implemented.

Risk Assessment

53. The Consent Holder shall undertake a risk assessment to identify existing buildings and structures at risk of damage due to settlement caused by shaft sinking excavations, trenching or tunnelling activities. The risk assessment process shall be set out in the M&CP required by Condition 50 and shall be based upon the final tunnel alignment and construction methodology of the tunnel and shaft excavations, the groundwater and settlement monitoring required under this consent, and groundwater and settlement modelling completed using this data. The risk assessment shall include:

a. identification of the zone of influence where differential settlements of greater (steeper) than 1:1,000 are predicted due to shaft sinking, trenching 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 shaft sinking, trenching or tunnelling activities.

54. 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 53 shall be included in the M&CP required by Condition 50 (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

55. The Consent Holder shall consult with owners of existing buildings and structures identified through the building risk assessment process defined in Condition 53, 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 shall be completed at least three months prior to the Commencement of Dewatering of any Project stage involving shaft sinking, trenching 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 shall 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.

Post-construction condition surveys

56. Unless otherwise agreed in writing with the building owner that such survey is not required, the Consent Holder shall (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, trenching or tunnelling, undertake a post construction survey of buildings identified in accordance with Condition 57.

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 shall determine the likely cause of damage.

Advice note: '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.

57. The building condition surveys required by this consent shall be undertaken by an independent and suitably qualified and experienced practitioner. When requested in writing by Auckland Council, the Consent Holder provide the contact details and qualifications of this person within five workings days.

Additional condition surveys

58. The Consent Holder shall, 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 57, 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, trenching or tunnelling.

    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 shall determine the likely cause of damage.
59. The Consent Holder shall 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).

Repair of damage

60. If the exercise of this consent causes any unforeseen damage to buildings, structures or services not assessed under Condition 55 and/or 56, the Consent

Holder shall 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 shall 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 53 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 M & CP.

Settlement and Deflection Monitoring

61. The Consent Holder shall establish and maintain a Settlement Monitoring Network of ground settlement monitoring marks and inclinometers to detect any deformation (vertical and/or horizontal movements) at the locations described in the M&CP and for the period required by the conditions of this consent.
    a. The locations of the monitoring marks shall be identified on a plan within the draft M&CP, as required under Condition 50 (note: this shall reflect the draft monitoring plans provided as Appendix F to the Groundwater Assessment referenced in Condition 1);
    b. The locations and number of monitoring marks shall 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 M&CP.
62. Prior to the Commencement of Dewatering of any Project stage involving shaft sinking, trenching or tunnelling, the Consent Holder shall assess the potential settlement effects resulting from the exercise of this consent. The output of this assessment shall 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 shall be set out in the M&CP and shall 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 shall 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 shall implement further investigations and analyses as described in the M&CP to determine the cause of settlement and the likelihood of further settlement.

'Alarm Level' is the Differential and Total Settlement Limit set in M&CP, or which has the potential to cause damage to buildings, structures and services, at which the Consent Holder shall 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 Team Leader Compliance Monitoring Central.

63. The Consent Holder shall 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 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 50 mm total settlement (the Total Settlement Alarm Level) at any settlement monitoring mark required under this consent.

Post-Construction Conditions

64. Within three months of the completion of earthworks on the site a Site Validation Report (SVR) must be submitted to the 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 contect of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, and the contamination rules of the AUP(OP)
    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; and

j. Reports of any complaints, health and safety incidents related to contamination, and/or contingency events during the earthworks.

Park reinstatement and permanent assets

Mitigation Planting

65. The Consent Holder shall provide planting to replace and mitigate the removal of 13 street trees and one tree within Salisbury Reserve. This shall comprise the planting of a minimum of 46 exotic trees or 51 native trees (native trees shall be preferentially used wherever practicable). 160L-grade trees shall be used to mitigate the removal of four Magnolia and three Queen Palm trees within the Upton Street road reserve.
66. Soil remediation works, including de-compactions, shall be undertaken upon completion of construction activities within the road reserve of Upton Street.
67. A record of the pre-construction condition of the park and any park assets within the footprint and immediate vicinity of the CSAs shall be made. This record must be provided to the Council at least one (1) month prior to construction in Salisbury Reserve and 94a - b Shelly Beach Road commencing.
68. At least three (3) months prior to the completion of the Project, the Consent Holder shall prepare and submit to Auckland Council for certification a Park Restoration and Landscape Plan (PRLP) for each CSA site. The objective of the PRLP is to provide details on the reinstatement of Salisbury Reserve to restore and enhance the landscape, amenity and recreation values of the parks.
69. Each PRLP is to be prepared by a suitably qualified and experienced landscape architect in consultation with the landowner (Auckland Council) and mana whenua and shall 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 67.
    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
        - 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 65

- any additional planting (including proposed species, location and planting timetable). This shall include details of replacement planting in the park to mitigate tree and shrub removal.
- 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 (Auckland Council) and mana whenua.

In preparing the PRLP, consideration shall be given to opportunities to enhance Salisbury Reserve and 94a - b Shelly Beach Road including its existing recreation, landscape and amenity values (e.g. additional or alternative walkways, seating, appropriate recognition of cultural values, etc), and planting.

70. The PRLP shall set out a timeframe for implementation. This shall be as soon as reasonably practicable, and unless otherwise confirmed through the PLRP, shall be within twelve (12) months of practical completion of construction works.