
I hereby give notice that a hearing by commissioners will be held on:

Date: **Wednesday 7, Thursday 8 and Friday 9 February 2024**
(with Monday 12 February 2024 if required)
Time: **9.30AM**
Meeting Room: **Stevenson Room**
Venue: **Franklin: The Centre,
12 Massey Avenue, Pukekohe**

HEARING REPORT – VOLUME ONE
NOTICE OF REQUIREMENT
372 GLENBROOK BEACH ROAD, GLENBROOK
WATERCARE SERVICES LIMITED

COMMISSIONERS

Chairperson **Kitt Littlejohn (Chairperson)**
Commissioners **Mark Farnsworth**
Helen Mellsop

Bevan Donovan
KAITOHUTOHU WHAKAWĀTANGA
HEARINGS ADVISOR

Telephone: 09 890 8056 or 021 325 837
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Website: www.aucklandcouncil.govt.nz

Note: The reports contained within this document are for consideration and should not be construed as a decision of Council. Should commissioners require further information relating to any reports, please contact the hearings advisor.

WHAT HAPPENS AT A HEARING

Te Reo Māori and Sign Language Interpretation

Any party intending to give evidence in Māori or NZ sign language should advise the hearings advisor at least ten working days before the hearing so a qualified interpreter can be arranged.

Hearing Schedule

If you would like to appear at the hearing please return the appearance form to the hearings advisor by the date requested. A schedule will be prepared approximately one week before the hearing with speaking slots for those who have returned the appearance form. If changes need to be made to the schedule the hearings advisor will advise you of the changes.

Please note: during the course of the hearing changing circumstances may mean the proposed schedule may run ahead or behind time.

Cross Examination

No cross examination by the requiring authority or submitters is allowed at the hearing. Only the hearing commissioners are able to ask questions of the requiring authority or submitters. Attendees may suggest questions to the commissioners and they will decide whether or not to ask them.

The Hearing Procedure

The usual procedure for a hearing is:

- **the chairperson** will introduce the commissioners and will briefly outline the hearing procedure. The Chairperson may then call upon the parties present to introduce themselves. The Chairperson is addressed as Madam Chair or Mr Chairman.
- The Requiring Authority (the applicant) will be called upon to present their case. The Requiring Authority may be represented by legal counsel or consultants and may call witnesses in support of the application. After the Requiring Authority has presented their case, members of the hearing panel may ask questions to clarify the information presented.
- **Submitters** (for and against the application) are then called upon to speak. Submitters' active participation in the hearing process is completed after the presentation of their evidence so ensure you tell the hearing panel everything you want them to know during your presentation time. Submitters may be represented by legal counsel or consultants and may call witnesses on their behalf. The hearing panel may then question each speaker.
 - Late submissions: The council officer's report will identify submissions received outside of the submission period. At the hearing, late submitters may be asked to address the panel on why their submission should be accepted. Late submitters can speak only if the hearing panel accepts the late submission.
 - Should you wish to present written evidence in support of your submission please ensure you provide the number of copies indicated in the notification letter.
- **Council Officers** will then have the opportunity to clarify their position and provide any comments based on what they have heard at the hearing.
- The **requiring authority** or their representative then has the right to summarise the application and reply to matters raised. Hearing panel members may ask further questions. The requiring authority's reply may be provided in writing after the hearing has adjourned.
- **The chairperson** will outline the next steps in the process and adjourn or close the hearing.
- The hearing panel will make a recommendation to the Requiring Authority. The Requiring Authority then has 30 working days to make a decision and inform council of that decision. You will be informed in writing of the Requiring Authority's decision, the reasons for it and what your appeal rights are.

**A NOTIFIED NOTICE OF REQUIREMENT TO THE AUCKLAND COUNCIL UNITARY PLAN
BY WATERCARE SERVICES LIMITED**

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Jimmy Zhang, Planner

Reporting on a proposed Notice of Requirement to designate land at 372 Glenbrook Beach Road to enable the construction, operation and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant, and the provision of an odour buffer area around the wastewater treatment plant.

REQUIRING AUTHORITY: WATERCARE SERVICES LIMITED

SUBMITTERS:	
Page 343	Jacques Nel
Page 344	Kulwinder Kaur
Page 345	Rebecca Brand
Page 346	Josh Langford
Page 347	Vincent Asia

Page 348	Glenbrook Residents (Coral Farkash)
Page 349	Kyle Cunningham
Page 350	Kimberley Webster
Page 355	Deepika Mudaliar
Page 361	Peter Wrightson
Page 363	Jean- Paul Eason
Page 364	Emma Cuming
Page 365	Lania Gribben
Page 369	Joseph Ford
Page 370	Elijah Nino Mondero
Page 371	Benjamin Ross
Page 373	Michelle Cunningham
Page 374	Rex Potter
Page 375	Dan Meredith
Page 382	Grant Mackay
Page 384	Joanne Scott
Page 386	Debbie Tapper
Page 387	Emma Ford
Page 388	Olivia Jackson
Page 399	Nicola Jane Marii
Page 401	VikramSinh Rajput
Page 403	Sarah Fisher
Page 405	Shelley Moynihan
Page 408	John Nicolson
Page 410	Anton Paul Tyers
Page 412	Chris Tapper
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Page 436	Corbyn Miller
Page 439	Del Morgan
Page 441	Mike Williams
Page 444	Monique Hubers
Page 447	Jacqueline Lee Sibbald

Page 450	HEB Construction Limited
Page 451	Laurel J Simons
Page 453	Samantha-Jane Dell
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Page 483	Maki Ito
Page 485	Kathryn Anderson
Page 489	The Manukau Harbour Restoration Society (MHRS) (Stephen Lasham)
Page 491	Amy Huang
Page 492	Paul Arthur
Page 496	Robert and Rosalie McCarthy
Page 500	Hayley Miller
Page 502	SPTHM (Jim Jackson)
Page 506	Susan Quinnell
Page 510	Sophie Koligi
Page 514	Ropa Kudzotsa
Page 516	Alvin Changamire
Page 520	Ankit Bhardwaj
Page 524	Rob Hughes
Page 528	Naveen Bhatia
Page 532	Ariana Harvey
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Page 1261	Amanda Carol Gasson
Page 1266	Tessa Gasson
Page 1272	Stop Polluting The Manukau Harbour Inc (Mark Gasson)
Page 1278	Greg McLaughlin
Page 1287	Ministry of Education
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Page 1546	Owen and Joanne Grigg
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Page 1557	Susie Koppens
Page 1560	Hope Dufty
Page 1564	Peter Craig
Page 1568	Ian Hadwin

**Notice of Requirement under Section 168
of the RMA by Watercare Services
Limited for the Southwest Wastewater
Treatment Plant**

To: Hearing Commissioners

From: Jimmy Zhang, Reporting Planner, Plans and Places

Report date: 18 December 2023

Notes:

This report sets out the advice of the reporting planner.

This report has yet to be considered by the Hearing Commissioners delegated by Auckland Council (the council) to make a recommendation to the requiring authority.

The recommendations in this report are not the decisions on the notice of requirement.

A decision on the notice of requirement will be made by the requiring authority after it has considered the Hearing Commissioners' recommendations, subsequent to the Hearing Commissioners having considered the notice of requirement and heard the requiring authority and submitters.

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Summary

Requiring authority	Watercare Services Limited
Notice of requirement reference	Southwest Wastewater Treatment Plant
Site address	372 Glenbrook Beach Road, Glenbrook
Legal description	Lot 1 DP 367461
Lodgement date	1 September 2023
Notification date	13 October 2023
Submissions close date	13 November 2023
Number of submissions received	296

Report prepared by:



Jimmy Zhang – Senior Policy Planner, Plans & Places

Date: 18 December 2023

Reviewed and approved for release by:



Craig Cairncross – Team Leader, Central South

Date: 18 December 2023

Abbreviations

AEE	Assessment of Environmental Effects
AT	Auckland Transport
AUP	Auckland Unitary Plan Operative in Part
CNMP	Construction Noise Management Plan
CMP	Construction Management Plan
CTMP	Construction Transport Management Plan
Ha	Hectares
HNZPT	Heritage New Zealand Pouhere Taonga
LMP	Landscape Management Plan
MDRS	Medium Density Residential Standards
NES:CS	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
NoR	Notice of Requirement
NPS	National policy statement
NPS-UD	National Policy Statement on Urban Development 2020
NPS-HPL	National Policy Statement on Highly Productive Land 2022
OPW	Outline plan of works
Project	The WWTP and odour buffer authorised by the NoR
RA	Requiring Authority
RMA	Resource Management Act 1991 and all amendments
RPS	Regional Policy Statement Chapter B AUP
the council	Auckland Council
WWTP	Wastewater Treatment Plant

1 Introduction

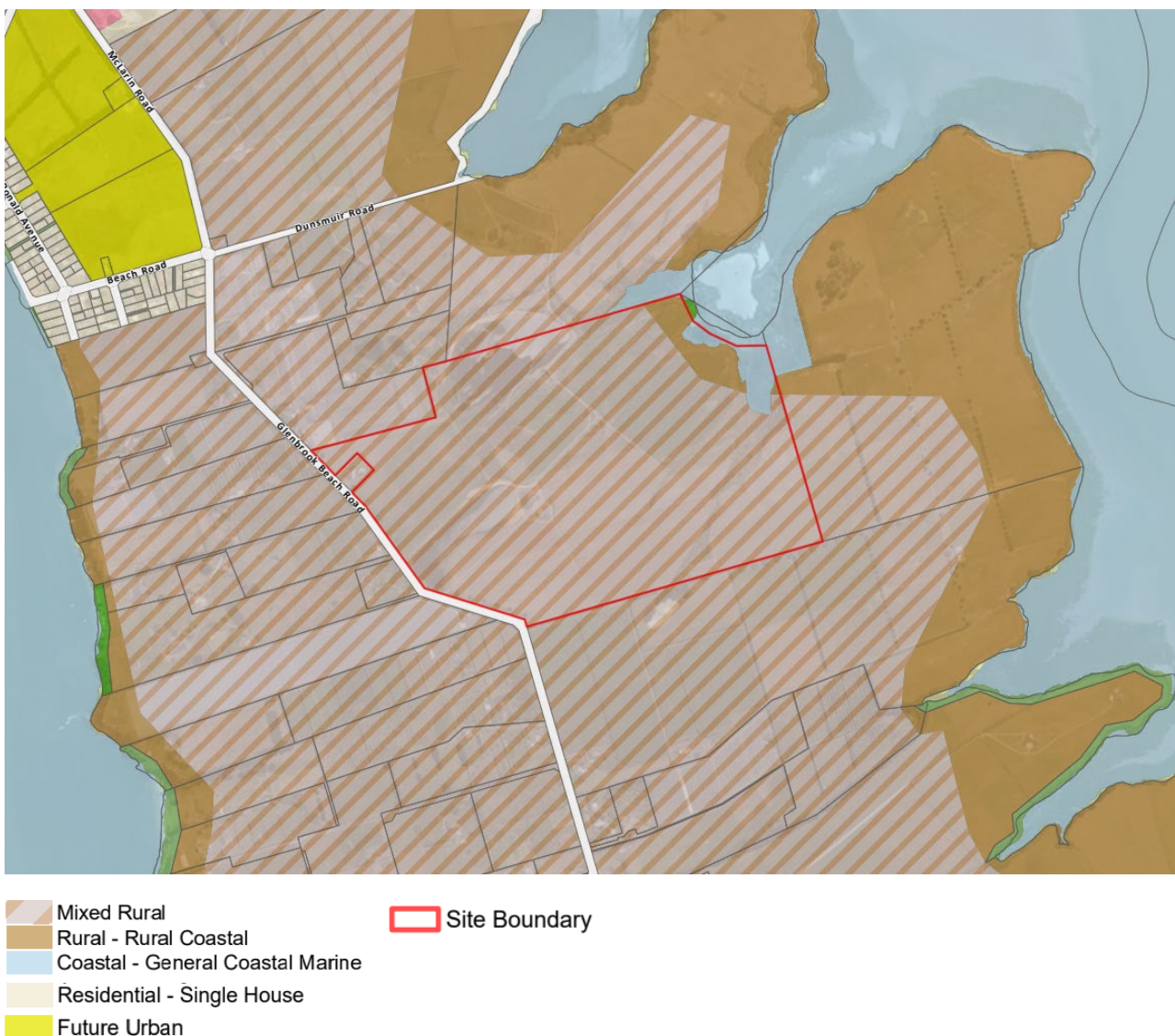
1.1 The Notice of Requirement

1. Pursuant to section 168 of the Resource Management Act 1991 ('**RMA**'), Watercare Services Limited ('**Watercare**') as the requiring authority, lodged a Notice of Requirement ('**NoR**') for a designation for the Southwest Wastewater Treatment Plant ('**WWTP**') in the Auckland Unitary Plan (operative in part) ('**AUP**') at 372 Glenbrook Beach Road, Glenbrook (the '**site**'). The NoR was served on Auckland Council on 1 September 2023.

1.2 Locality plan

2. The location of the site and the AUP zoning is shown in **Figure 1** below. The site has a split zoning, with the majority of the site being zoned Rural – Mixed Rural Zone and the remainder being the Rural – Rural Coastal Zone and the Coastal – General Coastal Marine Zone.

Figure 1: Location of site



1.3 Notice of Requirement documents

3. The lodged NoR consist of the following documents:

Document Name
<ul style="list-style-type: none"> • Form 18, prepared by Watercare, dated 31 August 2023 • Assessment of Effects on the Environment, prepared by Stantec, dated 31 August 2023 • Indicative Design and Operational Report, prepared by Stantec, dated 30 August 2023 • Assessment of Alternative Sites, prepared by Beca Limited, dated 7 December 2022 • Engagement Report, prepared by Watercare, dated October 2023 • Landscape Planting Plan, prepared by Boffa Miskell Limited, dated 29 August 2023 • Landscape and Visual Assessment – Graphic Supplement, prepared by Boffa Miskell Limited, dated 29 August 2023 • Ecology Assessment, prepared by Boffa Miskell Limited, dated 29 August 2023 • Archaeological Assessment, prepared by CFG Heritage Limited, dated 29 August 2023 • Air Quality Technical Assessment, prepared by Beca Limited, dated 28 August 2023 • Stormwater and Flooding Assessment, prepared by Stantec, dated 30 August 2023 • Acoustic Impact Assessment, prepared by Marshall Day Acoustics, dated 31 August 2023 • Transportation Report, prepared by Stantec, dated 31 August 2023

4. The documents above can be found on the Auckland Council Website:

<https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/unitary-plan/auckland-unitary-plan-modifications/Pages/details.aspx?UnitaryPlanId=203>

1.4 Section 92 requests and responses

5. A section 92 request for further information was sent to Watercare on 15 September 2023. Watercare's response was received on 4 October 2023. Council's request and the requiring authority's responses are provided in **Attachment 1** to this report.

6. The section 92 request sought further information on the following matters to gain a better understanding of the adverse effects and/or potential mitigation measures:

- Planning matters (including conditions);
- Mana Whenua engagement;
- Landscape and visual amenity;
- Natural hazards;
- Transport (including access, transport modelling and conditions);
- Acoustics; and
- Heritage and archaeology.

7. In response to the section 92 request, Watercare provided the following documents:
 - NOR s92 Response, including proposed NOR Conditions in Appendix 2
 - NOR s92 Response to traffic matters, including SIDRA modelling results in Appendix 1.2 and 2.2
8. The NoR was publicly notified once it was determined that the response to the section 92 request was satisfactory.

1.5 Specialist reviews

9. This report takes into account reviews and advice from the technical specialists listed in **Table 1** below.

Table 1: Specialist input into s42A report

Specialist	Specialty
Andrew Gordon, Specialist (Contamination, Air & Noise Team), Auckland Council	Noise effects
Jason Smith, Morphum Environmental	Ecology effects
Martin Peake, Progressive Transport Solutions Limited	Transport effects
Mica Plowman, Principal Heritage Advisor, Auckland Council	Archaeology and historic heritage effects
Rachel Terlinden, Specialist (Contamination, Air & Noise Team), Auckland Council	Air quality effects
Trent Sunich, 4sight Consulting	Stormwater and flooding effects
Stephen Brown, Brown NZ Limited	Landscape and visual amenity effects

10. These specialist reviews are included in **Attachment 2**.

2 Notice of requirement description

2.1 Proposal

11. Watercare is proposing a new designation for wastewater treatment purposes at 372 Glenbrook Beach Road, Glenbrook (also referred to as **'the Project'**). The purpose of the NoR is for the 'construction, operation and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant, and the provision of an odour buffer area around the wastewater treatment plant'.

12. The site is 56.06 ha in size. The extent of the land to be designated to shown in **Figure 2** below (approximately 54.68 ha in size).

Figure 2: Extent of NOR



13. Watercare has indicated the need for a sub-regional WWTP to manage future growth in the 'southwest' area (including Waiuku, Clarks Beach, Glenbrook Beach and Kingseat) given the capacity constraints of the three small wastewater treatment plants at Clarks Beach, Waiuku and Kingseat. This designation is part of a programme of works required to ensure growth that is provided for through the AUP (i.e. the zoning approach to land use) is adequately supported by infrastructure.
14. The WWTP is expected to service a long-term population equivalent of 60,000 in Southwest Auckland. The development of the WWTP will be staged to provide capacity in line with population growth. The indicative staging is set out in **Table 2** below. The indicative plant facility layouts for Stage 1 and 2 is set out in **Figure 3** overpage and Stage 3 is set out in **Figure 4** overpage.

Table 2: Indicative staging of the proposed WWTP

	Stage 1	Stage 2	Stage 3
Plant Capacity	20,000 PE	30,000 PE	60,000 PE
Description	This is construction of the plant catering for the current population as well as growth up to 20,000PE.	This is an upgrade to the Stage 1 construction to increase capacity from 20,000PE to 30,000PE. Involves some additional physical works within the footprint of the Stage 1 facility. Expected to be required over the next 30 years, but depends on actual population growth rates.	This is a 'duplication' of the Stage 2 plant to double capacity from 30,000PE to 60,000PE, constructed within the same property. This is estimated to be required beyond 2053. Upgrades to the Plant will be completed in line with Auckland Council's growth projections



Figure 3: Southwest Wastewater Treatment Plant Stage 1 + 2 site layout



Figure 4: Southwest Wastewater Treatment Plant Stage 3 site layout

15. Watercare has noted that the construction of the WWTP will allow for the eventual decommissioning of the three existing WWTPs at Clarks Beach, Kingseat and Waiuku and their associated discharge points.
16. The detailed design of the WWTP will be determined at a later stage through an Outline Plan of Works ('OPW'). Watercare has provided a concept plan to show a possible layout of the facilities and the overall site plan. It is proposed that the primary operational area of the WWTP is located in the centre of the site, ensuring that the surface structures are set back at least 200m from the site boundary and 300m from neighbouring residential properties. **Figure 5** overpage shows the proposed concept plan and layout for the Stage 3 plant.

Figure 5: Concept plan



17. The project objective for the NoR is discussed in the Assessment of Environmental Effects ('**AEE**') and is as follows:

To provide for the treatment of wastewater in southwest Auckland in a manner that:

- Responds to planned growth*
- Protects public health*
- Provides for flexible implementation including potential wastewater reuse in the future*
- Keeps the overall costs of service to customers at sustainable levels*
- Helps Watercare achieve its targets for reducing carbon emissions*
- Has regard to mana whenua's cultural and spiritual values.*

2.2 Site and surrounding environment description

18. A description of the site has been provided in Section 5.2 of AEE. Having undertaken a site visit on 10 August 2023, I concur with the description of the site and note that:
- The site to which the NoR applies is 372 Glenbrook Beach Road, Glenbrook. The site is located approximately halfway up the Glenbrook peninsula and is accessed by a single driveway on Glenbrook Beach Road, opposite 381-389 Glenbrook Beach Road.
 - The land subject to the NoR is predominately zoned Rural – Mixed Rural Zone with a smaller part of the land adjoining the coast being zoned Rural – Rural Coastal

Zone. Outside of the area subject to the NoR is the Coastal – General Coastal Marine Zone.

- The bulk of the site is currently used for market gardening. There are two large farming sheds at the end of an unsealed access path, near the middle of the site. Two constructed ponds are also located onsite for the purposes of irrigation. The pond closest to the road is fed from a bore on the site, and in turn feeds the second pond which straddles the northern boundary of the site.
- Natural features on the site include two watercourses, three natural inland wetlands and areas of salt marsh adjacent to the Coastal Marine Area ('CMA').
- The site has a gently undulating topography with the highest point of the site being situated near its centre. The site slopes downward in a northeast direction towards the Taihiki River.
- Land uses immediately around the site include horticulture, farming and rural lifestyle blocks. Dwellings are present on adjoining sites and in adjacent sites across Glenbrook Beach Road.
- The surrounding environment is rural in nature and is predominately zoned Rural – Mixed Rural Zone with the Rural – Rural Coastal Zone adjoining the eastern coast of the peninsula. The northern end of the peninsula contains an urban node consisting of sites zoned Residential – Single House Zone, Business – Neighbourhood Centre Zone and the Future Urban Zone. At 80 McLarin Road, Glenbrook, proposed Private Plan Change 91, which was the subject of a recent hearing, aims to rezone the site from Future Urban zone to Residential – Mixed Housing Suburban zone. Refer to **Figure 6** for zonings in the wider area.



Figure 6: Location of site and surrounding AUP zoning

2.3 Other designations, resource consents and other statutory approvals

19. The land within the NoR area is not subject to any existing designations or other NoRs.
20. The only activities authorised by the proposed designation would be those at the district plan level. Regional consenting requirements, where these are triggered, are not authorised by the designation and will require future resource consents. Section 2.4 of the AEE sets out the regional resource consents required to enable the future operation of the proposed WWTP:
 - Bulk earthworks;
 - Stormwater discharge; and
 - Air discharge.
21. Although these regional consents are not being sought at this stage, the requiring authority has considered their implications in the indicative concept plan. It is understood that necessary consents will be sought when the detailed designs for the Project is completed.
22. Though not specifically required at this stage, compliance with the National Environmental Standards ('NES') is addressed in Section 6 of this report. Any approvals required can be sought at a later stage.

2.4 Consultation

23. A summary of the consultation undertaken in preparing the NoR is provided in Section 3 of the AEE which outlines specific parties whom were consulted. The Stakeholder and Engagement Report (Appendix D to the application) provides a more detailed record of consultation undertaken.

2.4.1 Mana Whenua

24. The requiring authority has noted that it has an established process for iwi engagement that it applies to any of its projects which affect the strategic interests of Mana Whenua in the region. This process is known as the Mana Whenua Kaitiaki Forum as described in the AEE:

A "Kaitiaki Managers Projects List" is provided on a monthly basis to nominated representatives of all 19 Mana Whenua in the Auckland Council area. A summary of each project is included in the list and Mana Whenua are invited to indicate which projects they have an interest in. Further information on the identified project is then provided to those parties, followed by further engagement depending on the responses received.

25. Based on the Stakeholder and Engagement Report, the consultation timeframe with mana whenua is understood to be as follows:

- Consultation on the project was initiated in June 2021. Mana Whenua were consulted as part of the site selection process. Inputs were gathered from Mana Whenua which informed the long and short-listing process.
 - In July 2022, consultation began on the designation process following selection of Site B.
 - In April 2023, following a revised short list process, confirmation was given that Site T (the current site) has been successfully acquired following the inability to secure Site B. Consultation on the designation process at the new site was undertaken.
26. It is understood that the following mana whenua groups indicated an interest in the project when it was added to the Kaitiaki List in 2021:
- Ngāti Te Ata;
 - Ngāti Tamaoho;
 - Te Ākitai Waiohūa;
 - Ngāti Maru; and
 - Te Kawerau a Maki
27. The Stakeholder and Engagement Report states that Ngāti Maru and Te Kawerau a Maki deferred to other Mana Whenua groups for comment.
28. Details and records of the consultation undertaken is set out in Section 3 of the Stakeholder and Engagement Report. It is understood that regular meetings were held with representatives of both Ngāti Te Ata and Ngāti Tamaoho and regular email updates were provided to Te Ākitai Waiohūa.
29. At the time of notification, Auckland Council sent e-mails to all 19 iwi authorities in Tamaki Makaurau, Auckland. The e-mail provided the submission dates and a link to the NoR on council's website.
30. Submissions were received from Ngāti Te Ata and Ngāti Tamaoho in opposition to the NoR.

2.4.2 Franklin Local Board

31. The NoR is located within the boundary of the Franklin Local Board. Views were sought from the Franklin Local Board following the close of submissions. The Franklin Local Board provided their views at their local board meeting on 28 November 2023 as resolution number FR/2023/190:

That the Franklin Local Board:

- a) *whakarite/ provide the following local board views on the Notice of Requirement for a new wastewater treatment plant at 372 Glenbrook Beach Road, Glenbrook:*

- i) *acknowledge that the community has raised concerns about this location in terms of impact on the neighbouring community in terms of visual amenity, noise and odour and request that in considering this notice of requirement, that these concerns are carefully considered*
 - ii) *acknowledge the varying local opinions on the appropriateness of site selection, however note that this process can only consider if sufficient alternatives have been investigated with sufficient rigour*
 - iii) *consider that community suggestions on creating effective buffers would be appropriate where this does not create unreasonable safety issues e.g. additional planting where appropriate*
 - iv) *note that matters raised through consultation such as discharge consent, road damage, traffic over the construction period and location of pipeline are outside the scope of this process; however recommend that Watercare continue to progress plans for these elements with significant effort to mitigate the impact on the local community*
 - v) *note the site selected has highly productive land as per the Unitary Plan mapping and this needs to be factored into the assessment, given other types of development have been denied due to this*
 - vi) *note that this new plant will replace three old plants with one new facility with modern technology and futureproofing for growth*
- b) *whakakahē / decline the opportunity to appoint a local board member to speak to the local board views at a hearing (if one is held) on the Notice of Requirement, given the board is providing a formal resolution*
 - c) *whakamihi / acknowledge the Auckland Council Plans and Places team for activating a 'friend of the submitter' process to better enable the community to develop effective submissions that reflect their concerns appropriately*

3 Consideration of the Notice of Requirement

3.1 Designations under the Resource Management Act 1991

32. The RMA provides that the procedures adopted in processing a NoR are generally those adopted for processing a resource consent application. This includes lodgement, requiring further information, notification, receiving and hearing of submissions. In respect of this NoR, all of those procedures have been followed.

33. The procedure differs from the resource consent process in respect of the council consideration of the NoR. Section 171(1) of the RMA states:
- (1) *When considering a requirement and any submissions received, a territorial authority must, subject to Part 2, consider the effects on the environment of allowing the requirement, having particular regard to—*
- (a) *any relevant provisions of—*
 - (i) *a national policy statement:*
 - (ii) *a New Zealand coastal policy statement:*
 - (iii) *a regional policy statement or proposed regional policy statement:*
 - (iv) *a plan or proposed plan; and*
 - (b) *whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if—*
 - (i) *the requiring authority does not have an interest in the land sufficient for undertaking the work; or*
 - (ii) *it is likely that the work will have a significant adverse effect on the environment; and*
 - (c) *whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought; and*
 - (d) *any other matter the territorial authority considers reasonably necessary in order to make a recommendation on the requirement.*
34. Section 171(1) is subject to Part 2 of the RMA. Part 2 contains the purpose and principles of the RMA. It has been confirmed by the Environment Court that, in relation to a designation matter:
- ...all considerations, whether favouring or negating the designation, are secondary to the requirement that the provisions of Part II of the RMA must be fulfilled by the proposal.¹*
35. After considering these matters, the council needs to make a recommendation to the requiring authority under section 171(2) of the RMA which states:
- (2) *The territorial authority may recommend to the requiring authority that it –*
- (a) *confirm the requirement:*
 - (b) *modify the requirement:*
 - (c) *impose conditions:*

¹ See Estate of P.A. Moran and Others v Transit NZ (W55/99)

(d) *withdraw the requirement.*

36. Reasons must be given for the recommendation under section 171(3) of the RMA.

3.2 Effects on the environment

3.2.1 Effects that may be disregarded – permitted baseline assessment

37. The permitted baseline refers to the adverse effects of permitted activities enabled by the AUP on a site.

38. The Environment Court in *Beadle v Minister of Corrections* A074/02 accepted that the obligation to apply permitted baseline comparisons extended to Notices of Requirement. In *Nelson Intermediate School v Transit NZ* (2004) 10 ELRNZ 369, the Court accepted that the permitted baseline must define the “environment” under section 5(2) (b) and (c) and from that section 171(1). When considering the adverse environmental effects of a proposal, the effects may be considered against those from permitted baseline activities. As the effects resultant from permitted baseline activities may be disregarded, only those environmental effects which are of greater significance need be considered.

39. In *Lloyd v Gisborne District Council* [2005] W106/05, the Court summed up the three categories of activity that needed to be considered as part of the permitted baseline as being:

1. What lawfully exists on the site at present
2. Activities (being non-fanciful activities) which could be conducted on the site as of right; i.e., without having to obtain a resource consent (see for example *Barrett v Wellington City Council* [2000] CP31/00).
3. Activities which could be carried out under granted, but as yet unexercised, resource consent.

40. As set out above, the purpose of the permitted baseline is to isolate and make irrelevant effects of activities that are permitted by a district plan or have already been consented to on the subject land.

41. The AEE at Section 7.3.2.1 has put forward the requiring authority’s approach to the application of the permitted baseline. The AEE notes that the proposed WWTP in terms of scale, form and characteristics is not out of place with development that could be reasonably anticipated as permitted activities in the zone:

The permitted activities that could foreseeably be located on the site that also have large buildings include plant nurseries and market gardens with tall glasshouses and shade houses. The individual buildings for these activities are permitted to be 200m² and up to 15m high and can locate as close as 12m from the boundary to neighbouring sites.

These activities have characteristics comparable to the WWTP in that they often involve multiple large structures, water tanks, traffic generation and there is the potential for odour and noise associated with generators and ventilation systems to control temperature and humidity at all times and in some cases 24/7 activity.

42. Application of the permitted baseline approach is optional depending on its merits in the circumstances of the NoR being considered.
43. In this case, a WWTP in a rural zone would require resource consent as a Restricted Discretionary activity under the AUP.
44. For this NoR, whilst I acknowledge the building height, setback and building area standards referenced, I do not consider that the permitted baseline approach should be applied as it will offer relatively limited assistance in the context of this Project.

3.2.2 Effects that may be disregarded – written approvals.

45. Any effect on a person who has given written approval to the NoR may be disregarded if it is appropriate to do so.
46. No written approvals were included in the application.

3.2.3 Use of Management Plans

47. The requiring authority proposes to use management plans to address the majority of anticipated environmental effects, and these have been offered as conditions of consent. If confirmed, the management plans would provide the framework to guide the final design of the site and the plant facilities and to manage any adverse effects of the construction activities associated with the implementation of the Project. The following management plans have been offered by the requiring authority:

- Construction Management Plan ('CMP');
- Construction Noise Management Plan ('CNMP');
- Construction Traffic Management Plan ('CTMP');
- Landscape Management Plan ('LMP');
- Flood Hazard Report; and
- Operational Lighting Plan.

48. It is acknowledged that the NoR process is primarily about protecting the land required for a Project and authorising the work, rather than implementation, and in that regard a management plan approach is accepted as an appropriate method, given that detailed designs and implementation would occur at the OPW stage. I note that the use of management plans enables some fine-tuning of controls set in conditions. The ability to fine-tune is preferred to an approach of setting absolutes, given that detailed designs are still to be confirmed and a degree of flexibility is appropriate.

49. However, it is important that the NoR conditions set out a robust resource management process for the preparation of management plans. In that regard management plan conditions should have a clear objective as to what it is to achieve as well as specific measures to avoid, remedy or mitigate potentially adverse effects.
50. While the use of management plans at the NoR stage of a designation is generally supported, I have recommended amendments to the management plans to address certain adverse effects and/or make the management plans more effective. I have relied on the input of my experts and their recommendations as discussed in Sections 3.4 and 4.3 of this report.
51. It is general practice for the Council to certify any management plans that form conditions of designations. This is considered appropriate as a great deal of reliance is being placed on management plans as the principal method to avoid, remedy or mitigate adverse effects on the environment. I note that a certification clause has been proposed to each of the management plan conditions.

3.3 Positive effects

52. The AEE states that the Project has several positive effects, which is summarised below:
- The proposed WWTP will support the residential growth anticipated in the Southwest Growth Area and enabled through the AUP;
 - there will be social and economic benefits for the Southwest Growth Area as the present and future communities will have access to wastewater services, particularly as the population grows;
 - a new sub-regional WWTP will allow the decommissioning of the three existing WWTPs (Clarks Beach, Kingseat and Waiuku) and has the potential to reduce any adverse effects associated with the existing treatment plants (such as from discharges and older treatment technologies);
 - the proposed WWTP will treat wastewater to a higher standard compared to the existing WWTPs;
 - the proposed WWTP reduces the potential for wastewater overflows particularly as the population and urban areas grow. The capacity provided by the plant will meet the future needs of several communities;
 - the land use change from away short rotation cropland will reduce the potential effects of erosion and sediment discharge onto the watercourses, wetlands, the coastal environment and the Taihiki River; and
 - in the long term, there is potential that the facility could provide for the reuse of treated wastewater.

53. It is my view that the positive effects of a new sub-regional WWTP are significant and long term. Public wastewater infrastructure (i.e. the local network, the transmission network and the treatment plants) are an essential element of any community in the Auckland Region. It serves the important function of safeguarding public health while providing a necessary service to individuals and communities. The proposal will provide a crucial piece of infrastructure for the communities of Clarks Beach, Glenbrook Beach, Waiuku and Kingseat, particularly given the capacity constraints of the three existing WWTPs (Waiuku, Kingseat and Clarks Beach) in the West Franklin area.
54. Furthermore, the Project addresses the longstanding challenge in the region of ensuring that development is aligned with the appropriate provision of infrastructure. The Project will provide certainty for growing communities that wastewater infrastructure will be delivered in a timely and coordinated manner to support development.

3.4 Actual and potential adverse effects

55. Effects on the environment are addressed in Section 6 of the AEE and accompanying specialist reports.
56. I note that should the NoR be confirmed, the OPW process under section 176A of the RMA provides for an ‘Outline Plan’ to be submitted to Council prior to the commencement of construction, detailing all relevant aspects of the Project following the completion of detailed design and complying with the conditions applied to the designation.
57. This process provides the Council with the mechanism to review the detail of the works that are proposed, to check compliance with conditions and to request any changes before the commencement of construction.
58. However, it is still the responsibility of the requiring authority to demonstrate that the effects of the designation, including its implementation have been assessed and appropriate conditions to manage those effects have been applied to the designation.
59. The following discussion addresses the actual and potential adverse effects of the NoR. The relevant specialists’ reports are referred to and are provided in **Attachment 2**.

3.4.1 Landscape, natural character and visual effects

3.4.1.1 Application

60. Watercare has provided a ‘Landscape, Visual and Natural Character Effects Assessment’ (**‘LVNC report’**) by Boffa Miskell, dated 29 August 2023, to support its NoR. The LVNC is complemented by the ‘Graphic Supplement’ and the ‘Landscape Planting Plan’ to support the assessment of effects and mitigation measures proposed.

61. Section 5 of the LVNC provides a description of the existing landscape, both in terms of the wider landscape and immediate site character. With respect to the wider context, I highlight the following key points from the LVNC report:
- *The landscape is characterised by its flat to strong rolling terrain defined by the extensive and branching complex inland reaches of the Taihiki River to the east and Waiuku River to the west.*
 - *The extent of modification of the landscape for agriculture has resulted in a scarcity of remnant pre-settlement indigenous vegetation.*
 - *The dominant landcover is pasture, however there are also significant areas of agricultural orchard and perennial crops within geometric fields bordered by tall exotic shelterbelt planting.*
 - *The Taihiki and Waiuku Rivers have several expansive marine Significant Ecological Area (SEA) overlays and small terrestrial pockets of terrestrial SEAs along the margins of the rivers.*
 - *There are no Outstanding Natural Landscapes (ONLs), Outstanding Natural Features (ONFs), Outstanding Natural Character Areas (ONCs or High Natural Character Areas (HNCs) within the surrounding landscape context of the Glenbrook Peninsula.*
62. With respect to the site characteristics, I highlight the following key points from the LVNC report:
- *The site has a gently undulating topography which gently falls to the east towards the Taihiki River.*
 - *The natural landform of the site has been modified over time to enable farming practices and the construction of two artificial irrigation ponds*
 - *The highest point of the site is situated near its centre, at approximately RL16m and features two large agricultural sheds, measuring 6m and 4.5m in height respectively.*
 - *The site contains three natural inland wetlands which drain into the Taihiki River to the east. These wetlands follow naturally formed pathways, although these have been partly altered by long term farming practices*
 - *The site is currently used primarily for short rotation cropland. Although there are a variety of vegetation typologies around the southern and western boundaries, other forms of vegetation within the main body of the site are scarce.*
 - *Riparian vegetation is present within the two watercourses that run to the south of the site. Cumulatively the riparian vegetation is a small fraction of the overall vegetation within the site.*

Effects on Landscape Attributes and Values

63. The LVNC report provides a description of the existing landscape attributes and values of the site.
64. The LVNC states that the physical changes to the landform arising from new buildings, structures and additional artificial ponds within the site, along with alterations to the existing landform are assessed to result in 'very low' adverse effects given that the existing gently undulating landform is not noteworthy and is of a highly modified nature prevalent in the wider landscape.
65. The LVNC confirms that the proposed WWTP will be set back from the streams, wetlands, Significant Ecological Area ('SEA') and the coastal environment. No direct impacts are expected from the establishment and operation of the WWTP on these features.

Effects on Landscape Character Effects

66. The proposed WWTP will alter the undulating landform attributes of the site and introduce localised changes to the physical landscape. In terms of effects on landscape character, the LVNC report states:

Although the landform is a legible topographical feature the landform has been continuously altered through its farming use and does not contain unique or important landscape features. The proposed sunken thickening, storage and stormwater treatment ponds will permanently alter the landform in the site but this will not be noticeable in the wider landscape context. The shape and form of the proposed ponds can be designed to integrate within the surrounding landform, similar to the existing artificial irrigation ponds. The proposed ponds will have limited visual influence on the surrounding landscape.
67. The Landscape Planting Plan proposes to establish indigenous and exotic planting alongside existing vegetation to assist in integrating the site into the landscape and provide visual screening of the main plant facilities.
68. The LVNC report states that initially the proposed WWTP will result in Moderate adverse landscape character effects which is expected to reduce to between Low-Moderate and Low adverse once the proposed mitigation plantings have become 'established'.

Effects on Natural Landscape Character

69. As assessed in the LVNC report, the wetlands and watercourses are generally considered to have low natural character value due to human influences (farming practices), predominately exotic biotic values and their relatively poor condition. The natural character of the streams and wetlands are not expected to be directly impacted by the project as the proposed WWTP will be set back from the existing streams and wetlands on site.

70. As confirmed in the LVNC report, the coastal environment is considered to have the highest degree of natural character and is a valued feature within the wider landscape. The proposed WWTP will be sited approximately 200m from the edge of the CMA and will not result in any direct impacts upon the margins of the Taihiki River or the SEA.

Visual amenity effects

71. The visual effects of the proposal is discussed in Section 6.8.4 of the AEE and in Section 7.3 of the LVNC report. A summary is provided below which focuses on the more significant effects.
72. The LVNC report confirms that the site is located on land which has a low-lying aspect similar to the land in the surrounding landscape. The slightly elevated portion of land towards the centre of the site, although more visible within the site, is not prominent within the wider landscape.
73. The tallest part of the facility is expected to be the two inlet pump stations proposed to be situated at the highest point of the site's landform (due to hydraulic requirements of the plant). The two inlet pump stations are expected to be 14m in height which is noted to be within the permitted maximum height standard in the Rural - Mixed Rural zone. The LVNC report states that the other buildings are expected to be lower in height at between 5m and 9m and will be sited on the lower lying parts of the site.
74. The LVNC report expects that the materials used in most of the proposed buildings and structures will appear similar to many other large agricultural builds, though the inlet pump stations are expected to have elements that are:

...less commonly seen in the rural landscape including:

- *metal storage tanks and piping*
- *coloured cranes and lifting equipment*

75. As part of its methodology for assessing visual effects, the LVNC report has categorised four viewing audience groups into the following geographical groups (refer to **Figure 7** overpage):

Viewing Audience Group 1 to the North of the Site

- *Residents of properties to the north of the site accessed from Glenbrook Beach Road and Dunsmuir Road and workers within agricultural industries to the north.*

Viewing Audience Group 2 to the South of the Site

- *Workers within agricultural industries to south of the site, road users and distant elevated residential audiences accessed from Glenbrook Beach Road.*

Viewing Audience Group 3 to the East of the Site

- *Recreational users of the Taihiki River*

- Residents and road users to the east of the Taihiki River at the western extents of Estuary View and Percy Millen Drive.

Viewing Audience Group 4 to the West of the Site

- Residents, agricultural workers and road users along Glenbrook Beach Road, to the west of the site. In particular residences with open primarily eastern facing outlooks



Figure 7: Viewing Audience Groups 1-4

76. When the LVNC refers to ‘Stage 1’, ‘Stage 2’ or ‘Stage 3’, it assumes the following time periods for each stage:

Stage 1 - proposed mitigation planting will have a minimum three-year growth period before the project is completed.

Stage 2 – mitigation planting will be established to a minimum of three years; in this way the Stage 1 and Stage 2 conditions are comparable.

Stage 3 – mitigation planting will have a minimum period of 20 years before construction of this stage is complete.

Viewing Audience Group 1 to the North of the site

77. The viewing audiences with south facing views are considered by the LVNC report to be the most relevant for this project. Residential properties with views towards the site that are not fully screened by intervening vegetation or landform are:

- 450 Glenbrook Beach Road;
- 454 Glenbrook Beach Road;
- 62A Dunsmuir road; and
- 149 McLarin Road.

78. As stated in the LVNC report, at Stage 1 and 2, the proposed mitigation planting is excepted to partially soften the lower parts of the facility though it is noted that for properties with open views of the site, the new buildings and structures will be immediately apparent.

79. According to the LVNC report, after 10 years when the mitigation planting is more established between Stage 2 and Stage 3, it is expected that the plantings:

...will visually soften and partially screen the majority of the project, however the tops of the tallest buildings are expected to remain visible through gaps in the vegetation.

80. The Graphic Supplement (Appendix E to the application) provides some illustrative panoramas of what proposed WWTP is expected to look like from properties with the most open views to the plant.

81. **Figure 8** below shows indicative views of the proposed WWTP as viewed from 450 Glenbrook Beach Road at Stages 1 & 2, and Stage 3 with mitigation planting.



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting

Figure 8: Indicative view from 450 Glenbrook Beach Road (extracted from Graphic Supplement)

82. **Figure 9** below shows indicative views of the proposed WWTP as viewed from 454 Glenbrook Beach Road at Stages 1 & 2, and Stage 3 with mitigation planting.



Proposed View Stage 1 & 2 With Planting



Proposed View Stage 3 With Planting

Figure 9: Indicative view from 454 Glenbrook Beach Road (extracted from Graphic Supplement)

83. As assessed in the LVNC report, the potential effects of the proposed WWTP on the aforementioned audiences are summarised in **Table 3** below:

Table 3: level of potential effects for viewing audience Group 1

Viewing audiences	Level of potential effects at Stages 1 - 3		
	Stage 1	Stage 2	Stage 3
450 Glenbrook Beach Road	Moderate	Low	Low
454 Glenbrook B	– High	Moderate	Moderate
62A Dunsmuir Road		to	to
149 McLarin Road		Moderate	Moderate

Viewing Audience Group 2 to the South of the Site

85. The effects of the proposed WWTP on Group 2 is generally considered to be low adverse as views from audiences to the south in the short to middle distance are restricted by undulating landform and intervening vegetation. For long distance residential audiences, the LVNC report states:

- *... the site will be viewed within the context of the very long distance panoramic views along the peninsula and out over the Manukau Harbour*
- *At this distance and elevation the project will not alter the experience of the landform or backdrop to views.*

- ... within the context of the wider view the project will be seen as a relatively small element in the view

Viewing Audience Group 3 to the East of the Site

86. Audiences within this group include recreational users on the Taihiki River and residents, workers and road users to the east of the Taihiki River. The LVNC report provides the following description of views towards the proposed WWTP:

...views are generally restricted by tall mature bands of vegetation along the river banks and amenity vegetation surrounding properties. Views into the site from these locations are further limited by the linear bands of vegetation along the field boundaries to the east of the site.

87. The LVNC report states that the site is most visible for rural workers and residents at the western extents of Percy Millen Drive and Estuary View Road, noting that the majority of residential audiences will have no views of the proposed WWTP.
88. The proposed mitigation planting (refer to **Figure 10** below) is not expected to be tall enough at Stage 1 to provide screening for elevated residential audiences. At Stage 3, the mitigation planting is expected to provide the following:

...the proposed mitigation is anticipated to provide screening of buildings and structures which are lower lying in the landscape. Taller buildings and structures that are positioned in more elevated parts of the site will be softened but not screened entirely by the mitigation planting.



Figure 10: Mitigation planting at area identified as P04 in the Landscape Planting Plan

89. The LVNC report confirms that the majority of residential audiences to the east of the site will have no view of the public works.
90. As assessed in the LVNC report, the potential effects of the proposed WWTP on the aforementioned audiences are summarised in **Table 4** overpage:

Table 4: level of potential effects for viewing audience Group 3

Viewing audiences	Level of potential effects at Stages 1-3		
	Stage 1	Stage 2	Stage 3
Recreational users of the Taihiki River			Very low
Residents, workers and road users to the east of the Taihiki River at the western extents of Estuary View and Percy Millen Drive.	Low-Moderate	Low-Moderate	Low to Very Low

Viewing Audience Group 4 to the West of the Site

91. For this group, the most notable effects of the proposed WWTP apply to residential audiences at 393A Glenbrook Beach Road and 424 Glenbrook Beach Road.
92. The LVNC report states that the proposed WWTP will be viewed from the property at 393A Glenbrook Beach Road from across the artificial irrigation pond adjacent to Glenbrook Beach Road. Mitigation planting is not able to be provided in a location between the road and the pond.

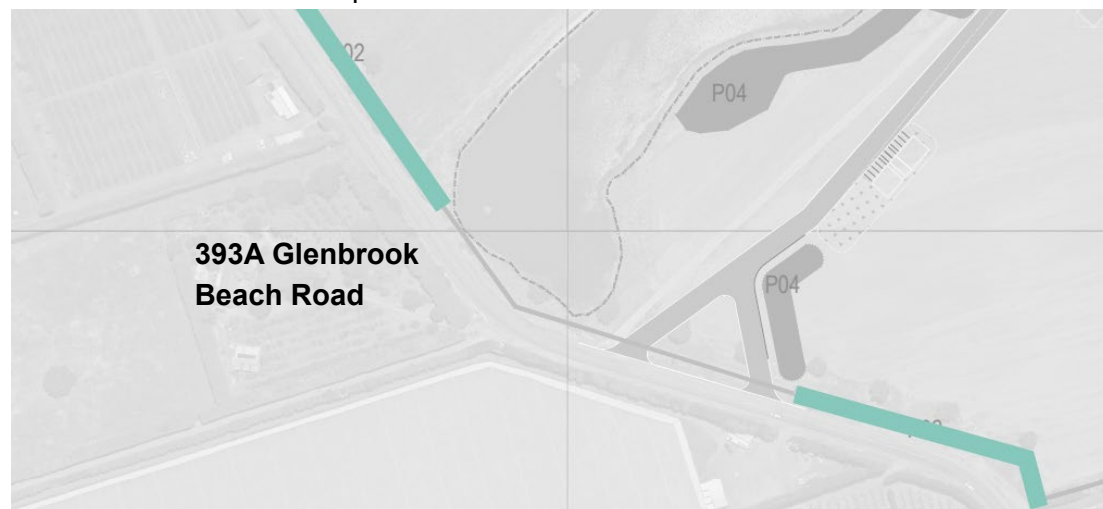


Figure 11: Mitigation planting (Teal) and 393A Glenbrook Beach Road

93. The LVNC report describes the views from 393A Glenbrook Beach Road:

Views from 393A will be partially filtered by amenity vegetation to the east of the property, beyond this initial amenity vegetation is approximately 330m of open space towards the site. Views of the project for this audience will be similar to the open road views described above. As a result of the lack of mitigation planting it is anticipated that adverse views on this audience will be Low-Moderate adverse.

94. The residential audiences at 424 Glenbrook Beach Road are expected to have open easterly views across the site given the lack of vegetation around the northern and eastern boundaries of the property. The property is said to be at approximately the same ground level as the proposed WWTP.
95. The proposed mitigation planting (refer to **Figure 12**) is expected to filter views from the ground floor of the property. For views from the second storey windows, the LVNC report provides the following discussion:

From second storey windows occupants will be able to see the majority of the proposed buildings and structures with some intervening screening to break up the mass or form of the built form. It is anticipated that the tallest buildings and structures in the project will be viewed against the sky making these elements stand out further. As described in the Viewing Group to the North the project will feature materials and elements that are in keeping with common and less common rural buildings.

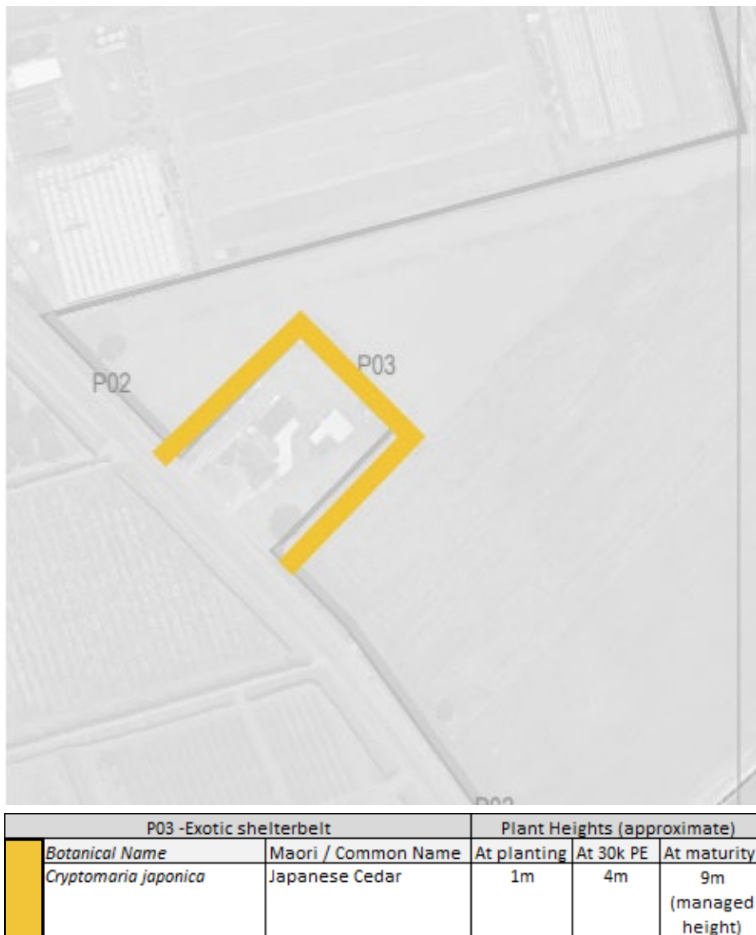


Figure 12: Proposed mitigation planting in area identified as P03 in the Landscape Planting Plan

96. At stage 3, the proposed exotic shelterbelt is expected to be ‘established’ at a height of approximately 6-8m. No views of the WWTP are expected from the ground floor. From the second storey window, occupants could potentially obtain partial views of elements of the proposed WWTP through intervening vegetation.
97. As assessed in the LVNC report, the potential effects of the proposed WWTP on the aforementioned audiences are set out in **Table 5** below:

Table 5: level of potential effects for viewing audience Group 4

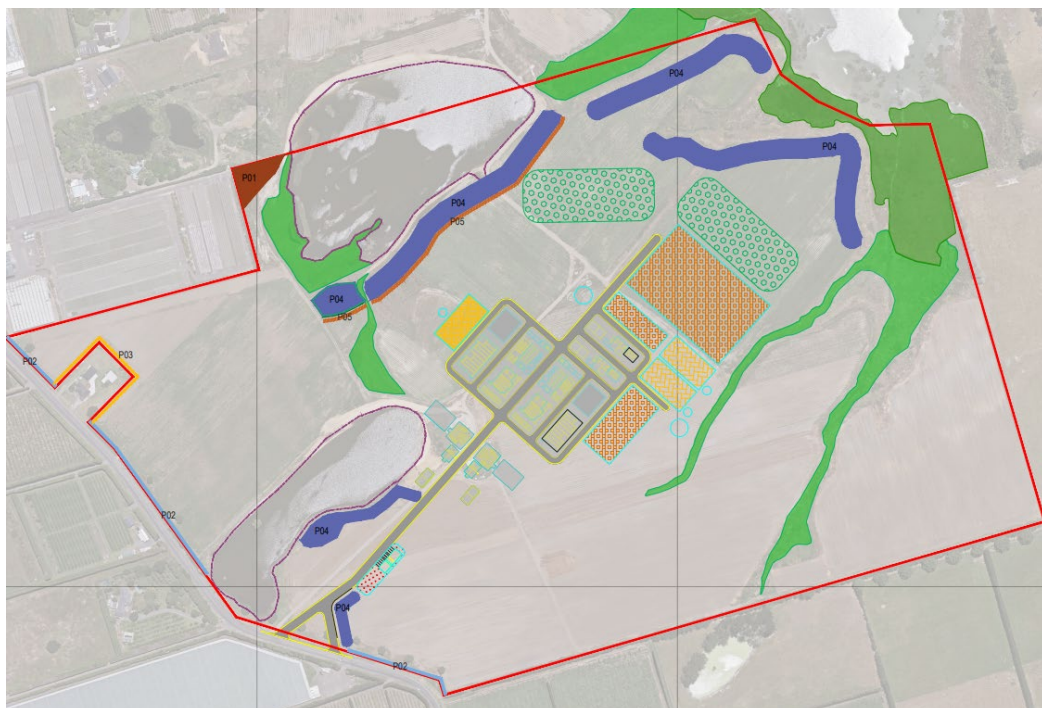
Viewing audiences	Level of potential effects at Stages 1 -3		
	Stage 1	Stage 2	Stage 3
424 Glenbrook Beach Road	Low-Moderate from Ground Floor	Low-Moderate from Ground Floor	No views from Ground Floor
	Moderate-High from second storey	Moderate-High from second storey	Low from second storey
393A Glenbrook Beach Road	Low – Moderate	Low - Moderate	Low-Moderate

Proposed mitigation

98. In order to mitigate the landscape and visual effects of the project, the LVNC report outlines three key objectives to achieve mitigation:
- Integrate the perimeter of the site with the surrounding landscape and coastal edge.
 - Reduce the visibility of the public works from the surrounding landscape
 - Reduce impacts related to proposed lighting
99. Some of the key mitigation actions which follow from the objectives are summarised below:
- The area outside the proposed WWTP footprint is expected to be maintained as rural land use with opportunities for arable or pastoral farming.
 - Mitigation planting is proposed to soften the transition between the coastal environment and the core of the site.
 - The proposed Landscape Planting Plan (see **Figure 13**) will aim to break up the bulk and scale of the structures and provide a screen to reduce views to the facilities where possible. The plantings will comprise of the following:

- i) *An indigenous species hedge (*Pittosporum crassifolium*, Karo) along the western site boundary adjacent to Glenbrook Beach Road.*
 - ii) *A tall shelterbelt of evergreen trees around three sides of the residential property at 424 Glenbrook Beach Road.*
 - iii) *A linear belt of indigenous trees and shrubs along the southern edge of the northern artificial irrigation pond.*
 - iv) *In the northwest corner of the site along the boundary with the property 450 Glenbrook Beach Road, an approximately 1450m² block of low indigenous shrubs will be planted.*
 - v) *Along the eastern site boundary adjacent to the Taihiki River two 15m wide linear bands of indigenous trees and shrubs are proposed*
- Make use of neutral/low reflectivity finishes on the proposed structures to reduce the contrast of the structures against surrounding rural landscape. For elements of the structures not requiring bright colours for safety reasons, more recessive colours in keeping with the surroundings are recommended.
 - The facilities will not be continuously lit however security lighting will be required. Mitigation measures to reduce the visual effects of lighting include using timers to limit duration of lighting, using directional cones to limit and focus light downwards and using LED bulbs to reduce light spill.

Figure 13: Mitigation Planting as proposed in the Landscape Planting Plan



100. In terms of overall effects, the LVNC report concludes that:

...the short term adverse effects on the landscape, visual and natural character of the site and surrounding landscape context can be managed in the long term by mitigation and design control measures recommended in this report.

3.4.1.2 Specialist assessment

101. Mr Stephen Brown has undertaken an assessment of the landscape and visual effects of the Project, including a review of the AEE associated technical documents and the submissions. Mr Brown's report is included in **Attachment 2**.

102. Mr Brown considers that the assessment undertaken in the LVNC report, together with the Graphic Supplement and Landscape Planting Plan follows a well-established process that is consistent with the guidance offered by the NZILA Landscape Assessment Guidelines (May 2022).

103. The main concerns as noted in Mr Brown's report are:

- The anticipated heights of the structures and buildings need to be clarified;
- The proposed plant would not readily 'fit in to' its rural and coastal landscape setting when assessed against the relevant provisions of the Rural - Mixed Rural and Rural - Coastal Marine Zones which address rural character and amenity values;
- A lack of certainty around mitigation measures to reduce the industrial profile and character of the proposed WWTP through the use of built forms, materiality or colour in its design and architecture that would make it more sympathetic to its rural location.
- A more comprehensive mitigation planting strategy is required to mitigate visual (rural character and amenity) effects, particularly to address effects on neighbouring residential properties.

Height

104. Mr Brown has identified a disparity in the descriptions of the height and scale of buildings and structures between the AEE and LVNC report. A consistent description of the proposed plant is essential for assessing potential effects.

Consistency with the objectives and policies of the Mixed Rural Zone and Rural - Coastal Marine Zone

105. Mr Brown has reviewed the objectives and policies of the Rural - Mixed Rural Zone and Rural – Rural Coastal Zone where they address rural character and amenity values. Mr Brown states:

My interpretation of these provisions is that, even though the Mixed Rural Zone is more accommodating of a range of development than the Rural Production Zone, it still anticipates the maintenance of an environment that contains a relatively high proportion of open space to buildings, a predominance of rural production activities (in various guises) and a degree of compatibility between rural and non-rural activities. The Rural Coastal Zone is more restrictive in all respects, anticipating the protection of natural coastal values, the retention of larger scale (more extensive) rural properties near the CMA, and a greater level of control over the incursion of non-rural activities, large buildings and development into the coastal environment.

106. Mr Brown notes that the provisions stress:

- *The maintenance and enhancement of rural and coastal character, amenity values, and landscape values; and*
- *That new buildings are located, and of a scale and intensity, that do not detract from the zone's rural and coastal character and amenity values.*

107. Mr Brown does not consider that the design and mitigation as currently proposed is consistent with the relevant objectives and policies of the zones.

Architectural treatment (as mitigation) for the proposed WWTP

108. As part of the section 92 request, Mr Brown requested the following:

Has or can Watercare and / or its consultants considered architectural treatment (as mitigation) for the plant that would reduce its industrial profile and character, and lend it a more 'rural' appearance?

109. The reason for the request was as follows:

The Pukekohe plant on Parker Lane has a profile and visual signature that is markedly utilitarian and industrial in appearance – as shown in the photo below. However, it is located in a quite remote, visually recessive, location. By contrast, the proposed WWTP would be much more prominent near Glenbrook Beach Road, with vehicle movements to and from the settlements of Glenbrook Beach and Kahawai Point passing the proposed plant on a regular basis, while local residents living on 4-6 nearby properties would be more directly exposed to the plant. In order to ameliorate and mitigate the effects associated with such exposure, it would appear appropriate to employ measures designed to integrate the WWTP into its landscape setting, including the use of architectural forms, detailing and colouring that is sympathetic to its rural location. These concerns form the basis for this request.

110. Mr Brown considers that taking a more sympathetic approach to the design and architecture of infrastructure can complement the use of plantings for mitigation purposes.

Visual effects on residential properties and Glenbrook Beach Road

111. Mr Brown is of the view that the proposed WWTP has a distinct industrial profile and character with industrial componentry. When sited at the proposed location, the topography would make the plant more elevated and increase its visual presence, and prominent skyline elements such as tanks, pipes, gantry and other, elevated structures would likely be visible above proposed mitigation plantings.
112. Mr Brown is of the view that additional mitigation is required to address visual effects, particularly for neighbouring residential properties as they are expected to experience significantly higher effects relative to other viewpoints. Mr Brown addresses the key viewpoints that would be most affected:

Viewpoint 2. *The proposal would significantly change the outlook from 454 Glenbrook Beach Road. Even in the longer term, the industrial profile and skyline of the proposed plant would be clearly apparent, rising above the intervening pond and planting. The associated effects would be high for Stages 1 and 2, and Moderate-High for Stage 3. These effects are a ‘step’ above those identified by BML.*

Viewpoint 3. *Most of the proposed plant would be starkly apparent on the eastern skyline from Glenbrook Beach Road. During Stages 1 and 2 it would fundamentally change the nature and values of the local landscape resulting in a high level of effect. However, once the karo planting next to the road corridor has matured – hopefully during Stage 3 – this level of effect would reduce dramatically to a very low level. This stark transition highlights the importance of a multi-layered approach to planting along that road corridor, in my opinion. These ratings contrast with BML’s low then ‘no adverse’ rating of effects for ‘Group 2’.*

Viewpoint 6. *Looking from 393A Glenbrook Beach Road [View from Glenbrook Beach Road opposite the residential property at 393A Glenbrook Beach Road], the pond at the edge of the application site would be backed by two large sheds at the western end of the site (previously described), with the rest of the plant arrayed beyond them. The sheds could conceivably be rural in nature, but the distinctive profile of the rest of the plant would still be clearly apparent. Planting next to the pond would help to reduce this ‘intrusion’ but would not entirely obviate it. As a result, it is considered that the waste treatment plant would have a moderate-high level of effect during Stages 1 and 2, reducing to a moderate level of effect in Stage 3. This evaluation largely accords with that of BML.*

Viewpoint 9. *The property at 450 Glenbrook Beach Road offers views similar to those associated with no.454 (Viewpoint2), but closer to the application site. As a result, I anticipate that the wastewater treatment plant would have effects similar to those identified for Viewpoint 2, but*

the plant would appear more immediate. It would have a greater degree of visual prominence and would be slightly more intrusive. As a result, I consider that it would also have a high level of effects during Stages 1 and 2, and a moderate-high impact thereafter. Again, these ratings are higher than those attributed by BML.

113. Mr Brown has provided an assessment for the visual effects of the proposed WWTP on 424 Glenbrook Beach Road:

Finally, I note that BML's assessment does not directly address effects on 424 Glenbrook Beach Road with photos or simulations, but its Mitigation Planting Strategy proposes the planting of a line Japanese cedar (or similar) around the boundary of that property which is shared with the subject site. I do not know if this planting has been specifically agreed with the owners / occupants of that property, but effects on it are of concern, as it is the closest residential property to the Watercare Services site.

Without additional screening / buffer planting, this property is very exposed to the subject site, and I anticipate that the proposed plant would have effects on it very similar to those ascribed to 450 and 454 Glenbrook Beach Road, ie. of a high level, reducing to moderate-high over time (as the planting matures). As for Viewpoints 2 and 9, these ratings are a step above those identified for no.424 by BML.

114. As noted earlier, Mr Brown recommends that the mitigation strategy needs further development and the mitigation plantings need to be more substantial to reduce effects, particularly on neighbouring properties.

Recommendations

115. Overall, Mr Brown's considers that the 'macro level effects on landscape and natural character values would be of a relatively low order' but the effects in relation to neighbouring residential properties needs further consideration and mitigation, even if in the long term, the level of impact for neighbouring properties and Glenbrook Beach Road would reduce as mitigation plantings matured.
116. Mr Brown recommends the following solutions to address his concerns:

In order to rectify this situation and reduce the wastewater plant's effects, it is my opinion that there are two options:

(a) Development of a More Comprehensive Mitigation Planting Scheme:

A more comprehensive mitigation planting strategy needs to be developed – ideally involving consultation with neighbouring residents – including those at 393A, 424, 450 and 454 Glenbrook Beach Road with local community input – which affords more comprehensive planting near those same properties, including the use of native canopy species within the proposed planting near the ponds and ‘stream courses’, together with more in-depth and layered planting near 424 Glenbrook Beach Road and the public road corridor. Both types of planting should be integrated, and such a strategy could well involve the use of bunding along the road boundary, with native planting on it.

(b) Retention Of The Current Planting Scheme and Use Of Architectural Mitigation:

The retention of the current level of screen planting (albeit with more than just a line of Japanese cedars facing 424 Glenbrook Road and single line of karo down the road corridor) combined with the use of architectural forms, detailing, materials, and colours to lend the treatment plant’s elevated structures more of a rural, less industrial, character. Such treatment should also make it appear more recessive, so that it is more compatible with its rural-coastal setting and exposure to multiple residential properties – together with the communities of Glenbrook Beach and Kahawai Point, who would pass it daily.

117. Mr Brown considers that additional conditions are required to address the above measures and if implemented, will ‘ensure that the proposed wastewater treatment plant both fits into its landscape setting and is generally compliant with the relevant Rural - Mixed Rural and Rural - Coastal Marine Zone provisions.’

3.4.1.3 Planning assessment

118. I rely on the expert opinion of Mr Brown in regard to his assessment of the application, submissions and recommendations on the conditions associated with the NoR.
119. I agree with Mr Brown’s assessment that a more comprehensive programme of planting around the proposed WWTP will more appropriately mitigate the adverse visual effects of the facility on neighbouring properties and the wider environment by creating a screen/buffer of permanent vegetation.
120. I also agree with Mr Brown that the properties identified as being exposed to the most significant visual effects should be specifically recognised to ensure they are appropriately considered in the preparation of the Landscape management Plan.
121. Following from Mr Brown’s assessment, I recommend that the following conditions are included as part of the Landscape Management Plan condition (refer to **Attachment 4**):

The Landscape Management Plan shall also include the following planting details:

- a. Planting design that incorporates at least two rows of taller planting along the boundaries shared with Glenbrook Beach Road and neighbouring properties, provided that this does not compromise the safety of access to and from the site;
- b. A planting programme which ensures that the planting comprise species that attain a height of at least 12m, with a similarly scaled canopy, at maturity. Those species are to achieve an average height of at least 8m after 10 years and complete canopy closure after that time;
- c. The screen planting near Glenbrook Beach Road shall be linked to the proposed around the ponds and wetlands within the subject site so that it 'reads' as a cohesive body of vegetation, taking into account any potential safety risks for site access; and
- d. Planting design to demonstrate that adverse visual effects arising from the development of the WWTP on the residential properties at 393A, 424, 450 and 454 Glenbrook Beach Road are appropriately mitigated.

122. I discussed the issue of height with Mr Brown given that there was some uncertainty around how high the tallest parts of the plant might be. We consider that a maximum height of 14m (as stated in the LVNC report) should be conditioned to ensure that there is some certainty around maximum height, noting that further increases in height will challenge the effectiveness of any mitigation planting especially given the proposed topographical location of the plant on the site. The addition condition is as follows:

The maximum height of buildings and other structures within the designated area shall be 14m.

123. Mr Brown has recommended that architectural mitigation is applied in the design of proposed WWTP to assist the plant's more elevated structures to have a more rural, less industrial, character. I consider that architectural mitigation is well suited to working jointly alongside mitigation planting, particularly as it helps to reduce effects in the short-medium term as mitigation planting matures and reduces impacts in the longer term. The additional condition is as follows:

All structures over 5m high are required to have exterior cladding and /or employ colours that recessive, such as mid to dark grey or earthy tones, with the exception of pipes and exposed 'gantry' structures and where bright colours are required for safety reasons.

124. Based on Mr Brown's advice, I consider the overall adverse effects on visual amenity would be mitigated appropriately if the conditions are amended as set out in **Attachment 4.**

125. With respect to Mr Brown's comments around the consistency of the Project with zone provisions relating to rural character and amenity, I would like to highlight that any major infrastructure project would be hard pressed to fit into the objectives and policies of most of the AUP zones. Aside from perhaps the Special Purpose Zones, no other zones specifically anticipate the requirements of large infrastructure projects. Through the objectives and policies of Chapter E26 (Infrastructure), the AUP does recognise the positive social, economic, cultural and environmental benefits that such projects bring so it is also important to take such provisions into account when considering the NoR:

E26.2.1. Objectives [rp/dp]

- (1) *The benefits of infrastructure are recognised .*
- (2) *The value of investment in infrastructure is recognised*
- ...

E26.2.2. Policies [rp/dp] Recognise the social, economic, cultural and environmental benefits that infrastructure provides, including:

- (1) *enabling enhancement of the quality of life and standard of living for people and communities;*
 - (a) *providing for public health and safety;*
 - (b) *enabling the functioning of businesses;*
 - (c) *enabling economic growth;*
 - (d) *enabling growth and development;*
 - (e) *protecting and enhancing the environment;*
 - ...
- (2) *Provide for the development, operation, maintenance, repair, upgrade and removal of infrastructure throughout Auckland by recognising:*
 - (a) *functional and operational needs;*
 - (b) *location, route and design needs and constraints;*
 - (c) *the complexity and interconnectedness of infrastructure services;*
 - (d) *the benefits of infrastructure to communities with in Auckland and beyond;*
 - (e) *the need to quickly restore disrupted services; and*
 - (f) *its role in servicing existing, consented and planned development.*
 - ...

3.4.2 Construction effects

3.4.2.1 Application and Planning assessment

126. Construction effects are addressed in the AEE, the Indicative Design Report and in several of the technical reports supporting the NoR. The construction phase for Stage 1 of the Project is forecasted to be two to three years in duration and is understood to include the provision of internal access roads and other core essential services required to operate the plant.

127. The AEE confirms that the detailed design of the plant and the associated construction process will be provided with the first Outline Plan.
128. A construction methodology is provided in Section 4.1 of the Indicative Design Report. It notes the intention to minimise earthwork volumes and reduce time on-site wherever practical along with a non-exhaustive list of other recommended measures.
129. As noted in Section 2.3 above, regional consent for earthworks will likely be required given the scale of the works.
130. The effects of construction are discussed in more detail in the relevant sections of this report:
- Noise and vibration effects in Section 3.4.3.
 - Construction traffic effects in Section 3.4.4.
 - Potential effects on Archaeology and historic heritage in Section 3.4.6.
131. The requiring authority considers that the effects on the environment from construction activities are able to be managed through management plans including:
- Construction Management Plan (**'CMP'**);
 - Construction Noise Management Plan (**'CNMP'**); and
 - Construction Traffic Management Plan (**'CTMP'**).
132. The management plans will be developed at detailed design and consent stage to address environmental effects specific to the construction of the Project.
133. I consider that land contamination effects can be addressed at a later stage at the time that regional consents are applied for. The requirements under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (**'NES-CS'**) would be triggered by any future development undertaken on the site and potentially also Chapter E30 of the AUP (regarding Contaminated Land).
134. I consider that the potential adverse environmental effects associated with construction can be adequately avoided, remedied or mitigated through the following framework of provisions:
- the conditions (subject to some recommended amendments) which requires that a CMP, CNMP and CTMP be prepared to set out how construction effects will be managed;
 - conditions relating to dust and archaeology;
 - Chapter E11 (Land disturbance – Regional) of the AUP; and
 - requirements under the NES-CS and potentially Chapter E30 of the AUP.

3.4.3 Noise and vibration effects

3.4.3.1 Application

135. Watercare has provided a ‘Acoustic Impact Assessment’ (**‘Acoustics Report’**) prepared by Marshall Day Acoustics, dated 31 August 2023, in support of its NoR.
136. The primary issues of concern identified and addressed by the Acoustics Report are:
- Operational noise compliance/effects; and
 - Noise from the construction of large infrastructure, including sizeable early morning concrete pours and the management of potential adverse effects arising from this.
137. The Acoustics Report proposes to adopt the AUP standard E25.6.3(1) to manage the operational noise from the proposed WWTP. The Acoustics Report confirms that the operational noise of the proposed WWTP can comply with the performance standards set by the AUP standard if the facility is designed, constructed and operated with the recommended noise budget outlined in the report.
138. The night time noise limits (which adopts the AUP standard) has been assessed against the context of the existing ambient noise environment. The Acoustic Report states:
- *Operational noise (up to 45 dB LAeq) fits within the range of existing night-time ambient noise (28 to 51 dB LAeq) however is above the average of 39 dB LAeq, and*
 - *Operational noise (up to 45 dB LAeq) is above the range of existing night-time background noise (24 to 43 dB LA90 with an average of 31 dB LA90). We are of the opinion that site noise at night will be audible at some locations some of the time.*
139. As a result of the above assessment, the acoustic report states that there is the potential for moderate noise effects in the night time period in the worst-case scenario. It goes on to say:
- In this context “moderate” means audible outside. WWTP noise may be audible inside some dwellings with windows ajar for ventilation. With windows closed WWTP noise will likely be inaudible.*
140. The Acoustics Report assesses that the proposed WWTP will readily comply with the maximum noise limit as treatment plants typically only emits steady-state noise during operation.
141. To manage the effects of construction noise, the Acoustics Report proposes to adopt the limits contained in NZS 6803:1999 for construction noise. The report confirms that construction of the proposed WWTP will readily comply with the relevant limits and no adverse noise effects are anticipated when the works occur during normal construction hours (07:30am to 6:00pm Monday to Saturday).

142. No operational vibration effects and no construction vibration effects are anticipated. Refer to Section 6 and Section 8 of the Acoustics Report where construction and operational vibration have been assessed as being of no appreciable significance.
143. The Acoustic Report notes that early morning concrete pours are expected to take place during construction. The report has calculated the construction noise associated with early morning pours and assessed the levels against the night-time noise limits for residential receivers. The conclusion of this assessment is as follows:

The results confirm that combined noise from early morning concrete pours will comply with the guideline night-time noise limits in AUP:OP Standard E25.6.27(1) at the assessed receivers. We calculate marginal compliance at the closest receiver (375 Glenbrook Beach Road). This is on the basis that there is a risk of minor exceedance (3 dB) where multiple concrete pumps are used at the same time.

We are of the opinion that the exceedance will not cause adverse effects provided that:

- *all concrete pours which occur fully or partially in the night-time period are managed via a CNMP. This will include but not be limited to:*
 - o notifying nearby residents in advance of each concrete pour*
 - o reviewing available mitigation / management measures to ensure that the best practicable option is implemented, and*
 - o monitoring noise to ensure compliance with the limits (as far as practicable)*

144. The preparation of a CNMP is required at the OPW stage. All works outside typical daytime construction hours (07:30am to 6:00pm Monday to Saturday) are managed using the CNMP. The proposed CNMP conditions specifically refers to the need for management and mitigation of noise from early morning concrete pours.

3.4.3.2 Specialist assessment

145. Mr Andrew Gordon, Auckland Council's noise specialist, has undertaken an assessment of the acoustics effects of the Project, including a review of the AEE, associated technical document and the submissions received. Mr Gordon's memo is included in **Attachment 2**.

Operational noise

146. Mr Gordon confirms that the affected receivers (R1-R16 in Table 1 of the Acoustics Report) have been correctly identified.
147. Mr Gordon notes that the large site and setback distance (between the treatment plant and site boundaries) provides for good distance attenuation.

148. Mr Gordon acknowledges that the NoR proposes to adopt standard E25.6.3 (Chapter E25 of the AUP) as the operational noise limit in the design of the facilities. With respect to operational noise during the daytime, Mr Gordon states:

Predicted noise contours reproduced in Appendix E demonstrate plant and equipment will be designed to ensure day to day operational noise is ≤ 45 dB L_{Aeq} , which means during the daytime noise will be generally 10 dB below the permitted 55 dB L_{Aeq} level (or subjectively half as loud as the permitted level).

149. At night time, Mr Gordon agrees with the Acoustics Report that the proposed WWTP 'will result in moderate noise effects in the night-time period as a worst case. In this context "moderate" means audible outside'.
150. To reduce the impacts of noise effects during night time, Mr Gordon recommends that 'a target night time level of 40 dB L_{Aeq} be met where it is practicable to do so and the 45 dB L_{Aeq} will be the upper level if it is not practicable to meet 40 dB L_{Aeq} '. The reason for this recommendation is as follows:

In my view it may be practicable to implement additional noise mitigation to achieve a target level of 40 dB L_{Aeq} at the nearest receiver sites. This will subsequently reduce the indicative noise budget from 113 dB LWA to 108 dB LWA for design purposes.

Compliance with 40 dB L_{Aeq} is considered an appropriate level to mitigate potential adverse effects on amenity, particularly during the more sensitive evening and night time periods.

Vibration associated with an operational WWTP

151. Regarding vibration, Mr Gordon states:

I agree operational vibration effects will be negligible and therefore no operational vibration limits are proposed for the designation. However, a high level assessment has been completed which predicts the highest vibration level will be below the threshold of human perception vibration level of 0.3 mm/s PPV as set out in BS 5228-2:2009, Annex B, Table B.1.

152. Mr Gordon therefore concurs with the assessment of the Acoustics Report with respect to operational vibration.

Construction noise

153. Mr Gordon acknowledges that the NoR proposes to adopt standard E25.6.27 (Chapter E25 of the AUP) in relation to construction noise limits and that a CNMP will be prepared to manage and mitigate the effects of construction noise.
154. Mr Gordon concurs with the Acoustic Report that the permitted noise levels will be readily met when works are carried out during normal construction hours (i.e. 7.30am to 6pm, Monday to Saturday):

A brief description of indicative construction works and equipment expected to be used is provided. This is essential for predicting construction noise levels.

I note the noisiest equipment/activity is vibratory sheet piling typically used for retaining works and/or basement excavations. Based on a sound power level of 116 dB LWA the minimum setback distance to achieve compliance with the permitted level of 70 dB LAeq is 83m. I confirm the nearest occupied building is located approximately 450m away from proposed piling works.

155. Mr Gordon has considered the assessment of early morning concrete pours in the Acoustics Report, particularly noting that the report is of the view that compliance with the lower night time noise level of 45 dB LAeq can generally be achieved when assessed 1m from the façade of the nearest occupied building at 375 Glenbrook Road.

Vibration associated with construction works

156. Mr Gordon agrees with the Acoustics Report in that construction vibration effects will be negligible and therefore no vibration limits are proposed in the NoR conditions.
157. Mr Gordon considers that all high vibration creating activities will readily comply with E25.6.30(1)(b) of the AUP (vibration limits in buildings).

Conclusions

158. Mr Gordon draws the following conclusion following his review of the application:
- 1) *The application is supported by an Acoustic Impact Assessment which predicts operational and construction noise and vibration levels and compares predicted levels with relevant E25 standards.*
 - 2) *In my opinion the site layout and treatment plant can and will be designed to enable compliance with permitted operational noise levels set out in E25.6.3 (1) without any practicable difficulties.*
 - 3) *In my opinion, given the indicative construction methodologies and large setback distances to the nearest buildings, it will be practicable to manage works to enable compliance including if concrete pours are required during the early morning period.*
 - 4) *I confirm operational and construction vibration will be readily compliant and unlikely to be perceptible to receivers outside the application site.*
 - 5) *In my opinion, in order to further mitigate operational noise effects on rural amenity, the treatment plant design target level should be 40 dB LAeq where it is practicable to do so. This lower level (i.e. 5 dB below the permitted night time level) will mitigate effects on rural amenity to a low and reasonable level.*
 - 6) *Submissions have been considered and issues addressed.*

Recommendations

159. Mr Gordon generally supports the proposed NoR conditions specific to operational and construction noise, except that he recommends an amendment to the night time noise limits in the operational noise condition:

However, as discussed above, in proposed condition 31 I recommend a target night time level of 40 dB LAeq to be met where it is practicable to do so and the 45 dB LAeq will be the upper level if it is not practicable to meet 40 dB LAeq.

3.4.3.3 Planning assessment

160. I rely on the expert opinion of Mr Gordon and agree that the proposed conditions are generally appropriate, with the exception that I support Mr Gordon's recommendation to require compliance with lower night time noise limit where it is practicable to achieve through design.
161. Following a discussion with Mr Gordon, I recommend the following amendments to the 'Operational Noise' condition:

Operational Noise

31. *Noise from the operation of the WWTP shall meet the following noise limits at the notional boundary of rural zone receivers:*

<i>Receiving Zone</i>	<i>Daytime (7am – 10pm Mon – Sat, 9am – 6pm Sunday)</i>	<i>Night-time (all other times)</i>	<i>Assessment Position</i>
<i>Rural – Mixed Rural/zone/Rural – Rural Coastal zone</i>	<i>55 dB LAeq</i>	<i>405 dB LAeq 75 dB LA_{Fmax}</i>	<i>Notional boundary</i>

Operational noise levels are to be measured in accordance with New Zealand Standard NZS 6801:2008 Acoustics – Measurement of environmental sound and assessed in accordance with New Zealand Standard NZS 6802:2008 Acoustics - Environmental Noise.

The night-time limit of 40 dB LAeq shall not apply where an acoustic design report (or similar) prepared by a qualified acoustics specialist confirms that it is impracticable to achieve the limit. In which case, a limit of 45 dB LAeq shall apply thereafter. The acoustic design report (or similar) shall be submitted to the Council with the Outline Plan of Works application.

162. Overall, it is considered that the conditions proposed for the NoR, along with the recommended amendment above, are sufficient to ensure operational noise from the proposed WWTP can be managed in a manner such that adverse noise effects will be avoided or mitigated. The conditions relating to construction noise are supported without amendment.

3.4.4 Transport effects

3.4.4.1 Application

163. Watercare has provided a 'Transportation Report' prepared by Stantec, dated 31 August 2023, in support of its NOR.

164. The key conclusions of the Transportation Report are as follows:

- The main source of traffic effects arises from the construction period;
- Once the WWTP is operational, the traffic generated by the plant is expected to fit comfortably within the surrounding traffic environment;
- Several mitigation measures are proposed to ensure safe and efficient access to the site, particularly during construction;
- The effects of construction vehicles on the surrounding road network are considered minimal, though access upgrades are still required; and
- A CTMP is recommended in addition to the proposed mitigation measures.

165. By way of summary, the key points from the Transportation Report are as follows:

- During the construction period, it is estimated that there will be around 40 heavy vehicle movements to and from the site per day.
- During the construction period, it is estimated that there will be around 100 light vehicle movements to and from the site per day.
- Nearly all construction vehicle movements will follow the right in/left out pattern.
- Performance of the site access to Glenbrook Beach Road has been assessed through traffic modelling using SIDRA software. Modelling parameters are considered to be conservative and results indicate minimal delay to through vehicles and good levels of services will be maintained. Delays for vehicles turning into or out of the site shows lower levels of performance (i.e. level of service C for right turns and up to 25 seconds of delay).
- As supported by the results of the traffic modelling, there is expected to be a minimal impact on the surrounding road network during construction as a result of the additional construction traffic.
- Access improvements and potentially road widening is required to address inadequate sightlines and to accommodate the turning of heavy vehicles without adversely affecting the movement of opposing traffic.
- Mitigation is proposed (such as ensuring sufficient sight distances at the access point and upgrades to the access) to manage the potential effects of traffic generated through construction activities and to ensure safe access.

- A CTMP is also proposed to be developed in consultation with Auckland Transport ('AT').

166. The AEE discusses the expectations around traffic to and from the site when the plant is operational:

The facility is expected for Stages 1 and 2 to have a small number of operational staff on site daily (2-4) and deliveries of chemicals are expected to be required monthly. Maintenance staff will attend the site at irregular intervals. It is understood that the WWTP will have operational staff at the site during weekday hours between 7am till 5pm. Outside of these hours, the WWTP is remotely operated through the Watercare control centre in Newmarket. If a process alarm is triggered (not audible), the duty operational staff attend to the matter remotely. Should the alarm not be resolved, the duty operational staff travel to the site to manually intervene and correct the issue.

167. When the proposed WWTP is operational, the Transportation Report considers that traffic volumes to and from the site will be low and indiscernible with respect to the background traffic on Glenbrook Beach Road.

Access location and sight distance

168. The Transportation Report has provided three options for the site access location(s). As shown in **Figure 14** overpage, Option 1 retains the existing access point, Option 2 involves installing a new access point 60 metres south of the existing access and Option 3 combines Options 1 and 2. It is considered that Option 2 has more optimal sightlines compared with the existing access while Option 3 provides separate inwards and outwards driveways. The exact configuration of the site access will be confirmed at the OPW stage.



Figure 14: Potential access locations (taken from Transportation Report)

169. The Transportation Report states that the existing access is limited in its sight distance to the north due to vegetation and the high bank/berm. In accordance with the guidance provided in the Austroads publication Guide to Road Design (Part 4A: Unsignalised and Signalised Intersections), an improvement in the sight distance is considered appropriate.
170. A new access point can be provided to the south of the existing access (This is Option 2 as discussed above). This option will provide an improved sight distance but further optimisation is still likely to be required as the distance is still not in accordance with the AustRoads guidance. Vegetation management, road widening, removal of power poles and lowering of the berm are all considered appropriate measures and will be confirmed at the OPW stage, following discussions with AT.

Access capacity

171. In order to accommodate heavy vehicle movements onto the site in a safe and efficient manner, widening of the road shoulder and the installation of a temporary or permanent right turn bay are considered by the Transportation Report to be appropriate measures. Widening of the road shoulder would support safe manoeuvring for heavy vehicles and allow for the provision of a right turn bay. The installation of a right turn bay would reduce the potential for delay for through traffic as it would allow right turning traffic to wait outside of the through traffic lanes. The Transportation Report confirms that a full assessment of the required road infrastructure changes will be provided at the OPW stage.
172. The Transportation Report notes that the vehicle crossing(s) should be of a sufficient width to accommodate two-way light vehicle movement and also the movement of heavy vehicles during construction. The report states that Watercare will discuss changes to the site's existing vehicle crossing or new crossings with AT.

Construction Traffic Management Plan

173. In addition to the above mitigation, the preparation of a CTMP for the OPW stage is recommended by the Transportation Report to consider temporary traffic management measures during construction. Any potential construction effects will be assessed prior to actual construction commencing, taking into account the specific construction methodology and traffic environment at the time of construction.

Conclusions

174. The Transportation Report concludes that mitigation measures to address traffic effects will be confirmed as part of the detailed design of the site, and with the implementation of road/site upgrades there is expected to be 'only low-level transport effects arising from construction and operation of the WWTP in accordance with the designation'.

3.4.4.2 Specialist assessment

175. Mr Martin Peake, Auckland Council's consultant traffic specialist, has undertaken an assessment of the transport effects of the Project, including a review of the AEE, associated technical document and the submissions received on the NoR.

176. Mr Peake's report is included in **Attachment 2**.

177. Mr Peake confirms the following key transport issues in relation to the NoR are:

- *Safe design of the site access and effects on Glenbrook Beach Road and vehicle accesses in the vicinity of the proposed site access;*
- *Operation of the site access with construction traffic and horticultural traffic; and*
- *Traffic effects of the construction of the site concurrently with construction of a Watercare pipeline within the road reserve corridor.*

Construction Traffic Effects

178. Mr Peake has reviewed the forecasted construction traffic, the forecasted traffic volumes on Glenbrook Beach Road in 2032 and the modelling undertaken in SIDRA of the operation of the vehicle access to the site. With respect to the assessment, Mr Peake states:

It is considered that the assessment of the site access is a robust analysis of the traffic effects on the operation of the access as:

- a) *The SIDRA modelling has assumed the worst-case scenario of no right turn pocket on Glenbrook Beach Road; and*
- b) *Peak construction traffic volumes are assumed to all occur within an hour period and to coincide with the network traffic peak, whereas in reality, construction traffic may be spread over a longer period and occur outside of the network traffic peak.*

179. Mr Peake notes modelling of the operation of the site access (without a right turn bay) provided results which show that Glenbrook Beach Road would operate with no or little delay. Any delays that occur are expected to occur for turning movements into or out of the site, with turning movements out of the site expected to experience the most delay.

180. As part of the section 92 request, Mr Peake requested the provision of updated modelling of the proposed site access arrangement that includes a right turn bay. This information was provided in the requiring authorities' response. Mr Peake has considered the updated modelling and analysis and notes that it shows similar results with the earlier modelling (i.e. modelling an access arrangement with no right turn bay on Glenbrook Beach Road), with some exceptions:

Similar modelling results are obtained with the exception that only the turning movements associated with the operation of the site experience any delay or queuing. Through movements along Glenbrook Beach Road would not experience delays or queues.

181. Mr Peake considers that based on the modelling and analysis, construction traffic will not have an adverse effect on the efficient operation of Glenbrook Beach Road. Mr Peake is of the view that the implementation of a right turn bay is however appropriate for the following reasons:

I consider that the right turn bay would avoid delays to northbound through movements on Glenbrook Beach Road and associated queuing and would result in a safer outcome.

182. Mr Peake understands that the construction of a conveyance pipeline may take place on Glenbrook Beach Road in the future and as such, considers that an assessment of the traffic effects arising from both projects (proposed WWTP and conveyance pipeline) taking place simultaneously and potentially in proximity should be addressed either in evidence or at the hearing by the requiring authority. This issue is discussed further in response to submissions in Section 4.3.11 of this report.

183. As part of the Section 92 request, Mr Peake requested an assessment of the potential traffic effects associated with horticultural operations taking place on the site during the construction period. Having reviewed the response from the requiring authority, Mr Peake states:

With respect to the horticultural operations of the site, there are likely to be low traffic movements associated with these activities except during planting or harvesting times. It is acknowledged that traffic associated with these activities cannot be determined at this time as the scale of activities are unknown. However, to ensure that the operation of the site access operates efficiently with both construction and horticultural traffic, it is recommended that the proposed Construction Traffic Management Plan condition should require the CTMP to consider how horticultural traffic would be managed.

184. In summary, Mr Peake is of the view that site access can be provided that would operate efficiently during construction subject to the following recommendations:

- a) *An assessment of the combined effects of the construction of the site with the installation of the pipeline within the road reserve along Glenbrook Beach Road is provided either in evidence or at the hearing;*
- b) *The NoR conditions should require the provision of a right turn bay on Glenbrook Beach Road; and*
- c) *The CTMP condition should ensure that traffic associated with horticultural activities are appropriately managed with the construction traffic.*

Operational Traffic Effects

185. With respect to operational traffic, Mr Peake concurs with the Transportation Report that the day to day operational activities at the site would have a negligible effect on the operation of Glenbrook Beach Road.

Site access arrangements

186. Mr Peake has reviewed the three site access options presented in the Transportation Report and accepts that while detailed design will take place at the OPW stage, additional certainty should be provided at this stage of the process to ensure effects associated with the construction and operation of the proposed WWTP have been fully considered.
187. Mr Peake recommends that a right turn bay is provided, in line with the recommendations of the Transportation Report:

The TR recommends a right turn bay be provided. I concur that a right turn bay is appropriate, particularly for construction, as motorists travelling northbound on Glenbrook Beach Road would have restricted visibility to a vehicle waiting to turn right from the existing northbound traffic lane, particularly for the location at Option 2. Furthermore, the right turn bay would mean that right turning vehicles would not impede the flow of northbound traffic. I consider that the right turn bay is required for both the safe and efficient operation of the site access.

188. As part of the section 92 request, Mr Peake sought drawings of the layout of the proposed site access arrangements at the locations for Option 1 and for Option 2 to better understand the effects of the access arrangements on the alignment of Glenbrook Beach Road, and the effects of the access arrangements on the existing vehicle accesses to properties on the southwestern side of Glenbrook Beach Road. Mr Peake recommends that concept designs are provided either in evidence or at the hearing:

The TR states that road widening would be required to provide the right turn bay and that this is likely to affect the vehicle accesses on the opposite side of Glenbrook Beach Road. Section 92 Further Information Requests were made to request information on the effects on these vehicle accesses. The Applicant has responded that the access provided in the TR is indicative and will be developed during detailed design and will not be able to be confirmed until Auckland Transport has been consulted and approved the vehicle crossing².

As plans showing a layout of the site access arrangement (at either Option 1 or Option 2) have not been provided, I am unable to assess the implications for the vehicle crossings for the properties on the opposite of Glenbrook Beach Road from the subject site. I consider that a concept design should be provided, either in evidence or at the hearing, that shows the layout of the proposed site accesses and the potential effects on the existing vehicle crossings on the western side of Glenbrook Beach Road. The concept design is required to show the feasibility of providing the accesses, noting that there are drainage ditches on both sides of Glenbrook Beach Road. Furthermore, modifications for Option 1 could partly straighten out Glenbrook Beach Road to the north of the access which may result

² Watercare Section 92 Response, Item 7, 4th October 2023

in increased vehicle speeds and thus affect the sight visibility requirements to the north of the site.

189. In summary, Mr Peake is of the view that the options for the site access are likely to be appropriate, subject to the following further information and recommendations:

- a) *In evidence or at the hearing, concept designs should be provided that show the feasibility of the access(es) and the effects on the properties on the western side of Glenbrook Beach Road;*
- b) *The NoR conditions require the provision of a right turn bay; and*
- c) *NoR conditions require inclusion of measures for the maintenance of vegetation to provide sight lines along Glenbrook Beach Road.*

Conclusions and recommendations

190. Mr Peake concludes that subject to recommendations on amendments to the NoR conditions, and responses from the requiring authority on the matters of access design and construction works, that the traffic and transport effects of the proposed NoR can be appropriately managed.

191. With respect to access, Mr Peake recommends the following additional conditions:

The Outline Plan of Works condition relies on the S176 requirements for the design of the site access arrangements. As recommended in the applicants TR and as I recommend above, I consider that the condition should address the need for a right turn bay. I recommend the following wording:

7A. Any new or upgraded access onto Glenbrook Beach Road shall include a right turn bay on Glenbrook Beach Road to accommodate the safe movement of heavy vehicles turning right into the site from Glenbrook Beach Road.

The visibility from the site access is limited to the north and requires mitigation to ensure that visibility is not restricted by vegetation or other structures. I therefore, consider the following condition is appropriate:

7B. The OPW should demonstrate how visibility to an appropriate standard from any vehicle access on Glenbrook Beach Road will be provided and maintained to ensure visibility is not obstructed by vegetation or other objects.

192. With respect to managing the effects on Glenbrook Beach Road from horticultural vehicles utilising the site alongside construction vehicles during construction works, Mr Peake recommends the following addition to the CTMP condition:

18.(c) manage the movement of construction vehicles and any vehicles associated with horticultural or agricultural activities travel to and from the site, to manage congestion and minimise delays to road users on Glenbrook Beach Road:

193. Mr Peake has made additional recommendations in response to submissions. This is discussed in Section 4.3.11 of this report.

3.4.4.3 Planning assessment

194. I rely on the expert opinion of Mr Peake in regard to his assessment of the application, submissions and recommendations on the conditions associated with the NoR.

195. With respect to concerns around the potential construction effects of the conveyance pipeline along Glenbrook Beach Road, I note that the conveyance project is subject to a separate statutory process (consent has been lodged with Auckland Council) and the outcome of that process should not be predetermined. Nevertheless, due to the nature of the local road network (i.e. one entry and one exit and only two lanes), it is reasonably foreseeable that any works within the road reserve of Glenbrook Beach Road, in addition to the future construction of the proposed WWTP, may result in effects on the road network given the lack of alternative routes for residents. This matter is addressed further in response to submissions but I agree with Mr Peake that the requiring authority should provide their views on the potential effects of such a scenario.

196. I agree with Mr Peake's recommended conditions, and these are set out in **Attachment 4**.

197. I also agree, that subject to Mr Peake's assessment (including the conclusions and conditions), that the potential adverse traffic effects of the Project can be avoided, remedied or mitigated.

198. I consider it appropriate that the requiring authority provides a response at the hearing on the following matters:

- a) *An assessment of the combined effects of the construction of the site with the installation of the pipeline within the road reserve along Glenbrook Beach Road; and*
- b) *concept designs should be provided that show the feasibility of the access(es) and the effects on the properties on the western side of Glenbrook Beach Road.*

3.4.5 Effects on ecological values

3.4.5.1 Application

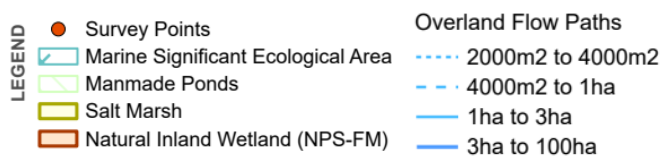
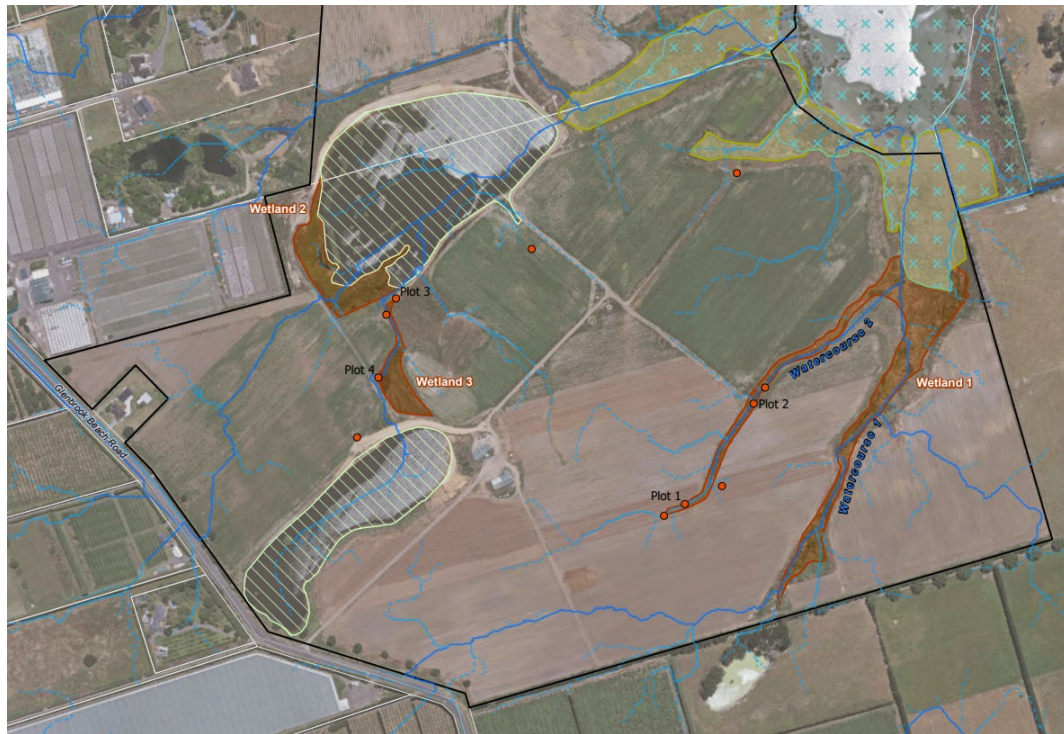
199. Watercare has provided a 'Ecology Assessment' prepared by Boffa Miskell, dated 29 August 2023, in support of its NoR.

200. The Ecology Assessment confirms that the site contains the following features, as illustrated in **Figure 15**:

- Two watercourses;

- Three natural wetlands which meet the definition of a natural inland wetland under the National Policy Statement on Freshwater Management ('NPS-FM');
- Two artificial irrigation ponds; and
- Salt marsh.

Figure 15: Ecological features of the site (extracted from Ecology Assessment)




201. Two marine SEAs extend into the site (SEA-M2-31 and SEA-M2-31w1) at its coastal edge (**Figure 16**). The Ecology Assessment provides the following description of the SEAs:

SEA-M2-31 is composed of sheltered harbour habitats including predominantly sandy intertidal flats, mangroves, and pockets of salt marsh. It is an important nursery area for young flounder and grey mullet. It is further classified as an Area of Significant Ecological Value by the Department of Conservation. SEA-M2-31w1 is identified due to its high value for wading bird species. We note that the SEAs bordering the site are fenced and planted.

Figure 16: Location of Significant Ecological Areas



 Site Boundary - 372 Gleenbrook Beach Road

Significant Ecological Areas Overlay

 Terrestrial

 Marine

202. The Ecology Assessment notes that the indicative layout of the proposed WWTP places it centrally within the site and will therefore avoid most of the ecological features of value.
203. By way of summary, the key findings of the Ecology Assessment are set out below:
- The dominant land use on the site is market gardening with highly cultivated and exposed soils. Sediment intrusions into the natural features on the site is evident.
 - Salt marsh habitats around the coastal periphery of the site are of high value and it is recommended that any construction or operations within the salt marsh, or within 10m of the salt marsh are avoided. The habitats are currently fenced to allow for natural regeneration.
 - Vegetation within the site is consistent with what is expected in the surrounding rural land uses (i.e., pasture, crops, hedgerows and shelterbelts). Indigenous vegetation is understood to be very limited on the site and is predominantly located around the wetlands and in the salt marsh. The existing plantings around the watercourses and wetlands are proposed to be retained.
 - Some coastal birds which use the site intermittently for roosting may be discouraged from doing so during the construction period. The areas not containing the plant facilities will continue to provide the same habitat assuming a similar land use is maintained.

- The site has been assessed as a very low-quality habitat for bats and as fly-through routes given the lack of mature trees on site or in the immediate surround environs.
- The site has been assessed as being a very poor habitat for indigenous lizards due to the lack of remnant indigenous vegetation and horticultural practices.
- Three natural inland wetlands were identified on the site. All three meet the definition of a natural inland wetland under the National Policy Statement on Freshwater Management ('**NPS-FM**') and are subject to the provisions of the National Environmental Standards for Freshwater ('**NES-F**'). The proposed WWTP will avoid all three natural inland wetlands.
- The NES - F sets out regulations regarding activities near natural inland wetlands. The indicative layout of the proposed WWTP puts it within 100m of wetland 3. Consenting requirements may be triggered depending on the confirmed design.
- Watercourse 1 and 2 within the Site are described as shallow open channels heavily laden with sediment. The proposed WWTP will avoid the two watercourses on the site.
- Construction earthworks are expected to occur at least 100m away from the coastal marine area.
- Construction of the WWTP has the potential to mobilise sediments into the marine environment. Erosion and sediment management will however ensure that sediment intrusions to these downstream habitats will be minimised.
- The smaller manmade pond (nearest to Glenbrook Beach Road) may be removed but no decision has been made. In the event it is removed, any resource consents required for modification of the overland flow path running within will be sought.

204. The Ecology Report draws the following conclusion:

Accordingly, we expect the designation of the Site for the construction and operation of the indicative design of the proposed SW WWTP, set within the Site's size and shape, will result in negligible adverse effects on ecological values, as effects on ecological features can be avoided or managed.

3.4.5.2 Specialist assessment

205. Mr Jason Smith, Auckland Council's consultant ecological specialist, has undertaken a review of the requiring authority's AEE, associated technical report, and the submissions received. Mr Smith's technical memo (refer to **Attachment 2**) covers the following matters:

- *The current ecological values of the site and receiving environment.*
- *The actual and potential environmental effects of the proposal.*

- *The adequacy of the effects management proposed.*
- *Conclusions and recommendations.*

206. Mr Smith considers that the:

- Methodologies, standards and guidelines used to assess the ecological values are appropriate;*
- Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects; and*
- Reported results are transparent, accurate and a fair representation of the ecological values.*

207. Mr Smith generally concurs with the Ecology Report's description of the current ecological values, the potential effects, and the magnitude of those effect.

208. In Mr Smith's opinion, sufficient evidence has been provided to demonstrate that the regional chapters of the AUP (such as for stormwater discharge, earthworks, vegetation) would appropriately manage the identified potential effects on ecological values.

209. Mr Smith's responses to the submissions is set out in Section 4.3.10 of this report.

210. Mr Smith concludes he is able to support confirmation of the NoR without any modification, noting that future consenting processes are still in place to address ecological effects.

3.4.5.3 Planning assessment

211. I rely on the expert opinion of Mr Smith in that the requiring authority has provided sufficient evidence at the NoR stage to demonstrate that any effects on ecological values that may arise from the proposal have either been addressed, or can be addressed at a later stage.

212. Any NPS and/or NES considered relevant to the NoR is discussed in Section 5 and Section 6 of this report and is not repeated here, noting that any statutory approvals that may be required can be confirmed at a later stage when the detailed designs of the Project are available.

213. No amendment to the set of conditions offered by the requiring authority is considered necessary in relation to ecology effects.

3.4.6 Archaeological and historic heritage effects

3.4.6.1 Application

214. Watercare has provided a 'Archaeological Assessment' prepared by CFG Heritage, dated 29 August 2023, to support its NoR.

215. The Archaeological Assessment notes that the coast of the Taihiki and Waiuku Rivers and Clarks Beach have been well-surveyed by archaeologists though few sites are recorded away from the coast as shown in **Figure 17** below.

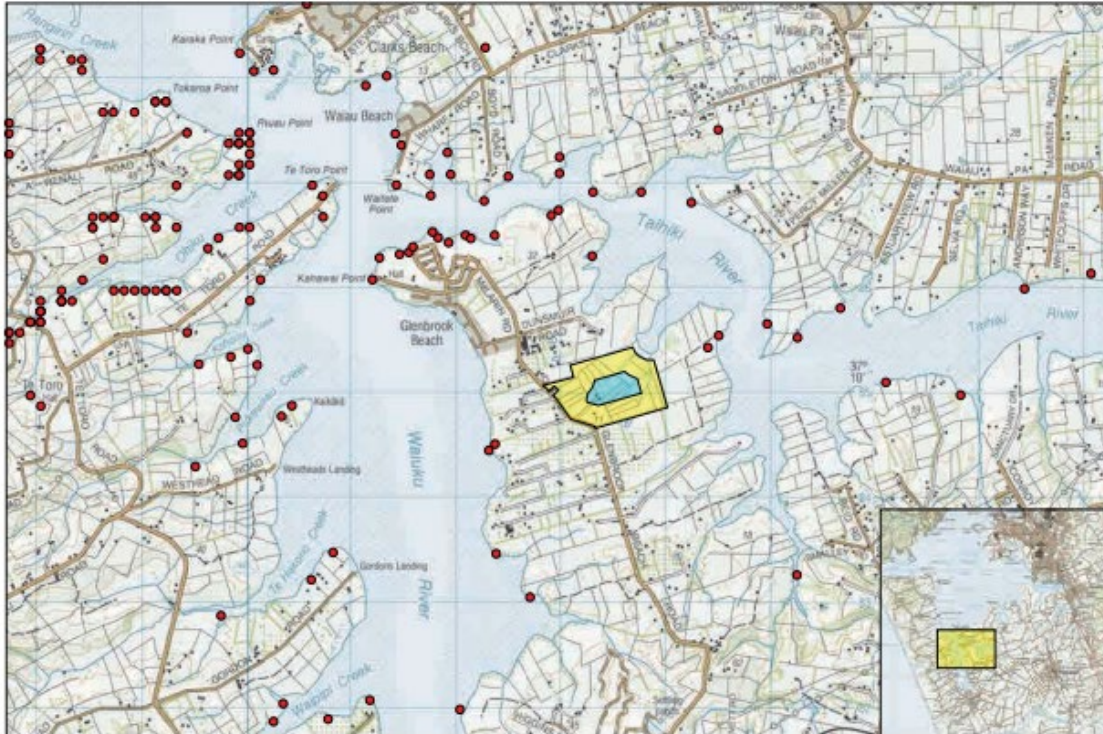


Figure 17: Location of site relative to archaeological sites recorded in the vicinity (extracted from Archaeological Assessment prepared by CFG Heritage)

216. The Archaeological Assessment states that the most likely archaeological features and deposits which are reasonably likely to be encountered during construction on the site are kumara storage pits on higher ground and shell middens closer to the river.
217. At present, no archaeological evidence had been observed during site visits (largely visual inspections) and review of resources detailed in Section 2 (methodology) of the Archaeological Assessment.
218. The Archaeological Assessment notes the earthworks required to establish the proposed WWTP could have the effect of destroying any potential archaeology in the works area. However, a full assessment of effects can only be made when final earthworks plans are developed. It is also noted that all archaeological sites, whether recorded or not, are protected by the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 and may not be destroyed, damaged or modified without an authority issued by Heritage New Zealand Pouhere Taonga (HNZPT).
219. The following recommendations are provided at the conclusion of the Archaeological Assessment:

- *when final design is available, a full assessment of effects is undertaken in support of an application to HNZPT for an authority to modify or destroy any unrecorded archaeological deposits on Lot 1 DP 367461 that may be encountered inside the identified works area under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014;*
- *since archaeological survey cannot always detect sites of traditional significance to Māori, or wahi tapu, mana whenua should be consulted regarding the possible existence of such sites, and the recommendations in this report.*

3.4.6.2 Specialist assessment

220. Ms Mica Plowman, Auckland Council's Principal Heritage Advisor, has undertaken a review of the AEE, associated specialist report, and the submissions, in relation to archaeology and historic heritage. Ms Plowman's memo is included in **Attachment 2**.

221. Ms Plowman is of the view that the information provided as part of the application is sufficiently comprehensive to enable consideration of the effects of the NoR:

- *The level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the AUP.*
- *The extent and scale of any adverse effects on the environment are able to be assessed.*

222. In her assessment, Ms Plowman has also taken the following into account:

- Auckland Council Cultural Heritage Inventory (CHI) <https://chi.net.nz/>*
- New Zealand Archaeological Association (NZAA) ArchSite Database <http://www.archsite.org.nz/>*
- Heritage New Zealand Pouhere Taonga Rārangi Kōrero/The List <https://www.heritage.org.nz/the-list>*
- ICOMOS New Zealand Charter <https://icomos.org.nz/charters/>*
- Other relevant sources containing historical and archaeological information.*

223. As part of the section 92 request, the requiring authority was asked to update the Archaeological Assessment. Ms Plowman discusses the reasons for the request, and the requiring authorities' response to the request:

As part of the initial review of this NOR, the Heritage Unit identified the presence of an early 20th structure (1920s) on the application property from historic plans (DP21299 (1927) and DP22174 (1929)). The Heritage Unit requested that the Requiring Authority update and expand the Historic Heritage Assessment to include this heritage feature and RMA historic heritage requirements that incorporate post-1900 historic heritage and provide relevant conditions to attach to the designation and any regional consents that will be applied for.

The Requiring Authority agreed that while the identified structure may have some heritage

values, its recorded location³ amid extant farm buildings suggests that it is unlikely that any in-situ evidence will remain and that the site is effectively destroyed.

The Requiring Authority declined to update the Historic Heritage Assessment on the grounds that as no evidence was provided to identify the structure as dating prior to 1900 it did not constitute an archaeological site under the Heritage New Zealand Pouhere Taonga Act 2014.

224. Ms Plowman provides further commentary on this matter:

The recommendation section of the applications HHA and the Requiring Authorities proposed mitigation and conditions are framed solely for the provisions of the Heritage New Zealand Pouhere Taonga Act (pre-1900 archaeological sites).

The term historic heritage encompasses substantially broader categories and features than an archaeological site (or pre-1900 archaeological sites) and is not limited by the inclusion of a terminus ante quem date. The RMA provides a statutory definition of historic heritage (outlined in paragraphs 3.4-3.5 above) and it is this definition that needs to be used when determining and mitigating the effects of a proposal for NOR purposes.

As part of the initial review of this NOR, the Heritage Unit identified the presence of a built structure within the application property from cadastral plans DP21299 dating to the 1920s (DP21299, 1927 and DP22174, 1929), indicating it was built in the in early 20th century.

It is important to note that archaeological/historic heritage sites (such as WW1 or WW2 military sites, or early 20th century built structures) that do not meet the definition of an archaeological site in the AUP OIP or meet the definitions provided in the Protected Objects Act 1975 are not covered by the ADR and additional management processes need to be considered where there is reasonable cause to suspect the presence of these sites.

In the Heritage Units opinion, the potential exists for subsurface features associated with the early twentieth century building to be present. The applicant has not undertaken the level of work required (for example, systematic test-pitting/trenching in the specific location of the building) to disprove this potential.

225. Ms Plowman considers that the matter above can be resolved through an additional condition:

The following protocol will apply should any post-1900 subsurface features associated with early 20th-century settlement activity be exposed during works associated with the WWTP:

- *Earthworks will be halted while an archaeologist is called in to assess the features.*
- *The features will be recorded and analysed in accordance with current archaeological practice.*
- *A report on any features exposed will be provided by the project archaeologist to Auckland Council's Heritage Unit for inclusion in the Auckland Council Cultural Heritage Inventory.*

³ Historic Plan DP 22174 was georeferenced into the project GIS.

226. Ms Plowman has considered the potential effects of the NoR on archaeological and other historical heritage values, and provides the following assessment:

The construction and operation of Southwest WWTP NoR designation will have no effects on any known archaeological or other historic heritage values.

The Heritage Unit concurs with the applicants' archaeologists' assessment that while no known pre-1900 archaeological sites will be affected by the current proposal, there is a risk, albeit low, that unidentified subsurface archaeological remains associated with Māori settlement prehistory may be exposed because of the proposed works.

227. On the matter of applying to the HNZPT for an authority under the Heritage New Zealand Pouhere Taonga Act 2014, Ms Plowman states:

It is an operational decision by the applicant to determine whether they obtain an Authority under the Heritage New Zealand Pouhere Taonga Act 2014. This decision is not an RMA matter.

228. Future earthworks on the site may trigger the Accidental discovery rule in the AUP. On how this should be addressed as part of the NoR, Ms Plowman provides the following views:

I support the applicant's proposal to undertake earthworks under the directive of Accidental Discovery Protocols. However, in the Auckland Region, earthworks must comply with the standard specified in the Accidental Discovery Rule in the Auckland Unitary Plan.

The Accidental Discovery Rule has additional triggers and process requirements relating to various sensitive materials in addition to archaeological sites (and human remains) not included in the applicant's proposed condition 9.⁴

As the Accidental Discovery Rule covers a range of sensitive materials – not just archaeological sites - it is recommended that the specific wording of the Accidental Discovery Rule provided for in Chapters E11 and E12 in the Auckland Unitary Plan Operative in part (updated 10 November 2023)) is retained.

⁴ For the purpose of this rule, 'sensitive material' means:

- Human remains and kōiwi
- An archaeological site
- A Māori cultural artefact/taonga tūturu
- A protected New Zealand object as defined in the Protected Objects Act 1975 (including any fossil or sub-fossil)
- Evidence of contaminated land (such as discolouration, vapours, asbestos, separate phase hydrocarbons, landfill material or significant odour)
- A lava cave greater than 1m in diameter on any axis.

229. As noted above, Ms Plowman highlights that the Accidental discovery rule is a regional rule that requires adherence or compliance and does not need to be included as a condition. However, if it is included, Ms Plowman is of the view that the archaeology condition as proposed should be replaced with the following wording for the reasons set out in the above paragraph:

Archaeology

9. *Should the consented works result in the identification of any previously unknown sensitive materials (i.e., archaeological sites), the requirements of land disturbance – Regional and District Accidental Discovery rules set out in the Auckland Unitary Plan Operative in part shall be complied with.*

230. Ms Plowman has identified one submission (Submission 51) that raised concerns regarding historic heritage. This is discussed in Section 7 of her assessment. Ms Plowman notes that as there are no known direct effects on archaeological or historic heritage values arising from the NoR, no specific action is recommended.

231. In summary, Ms Plowman has recommended an additional condition to cover the potential exposure of subsurface post-1900 historic heritage features, and the replacement of the wording of the proposed archaeology condition to ensure consistency and alignment with the AUP’s regional provisions. Ms Plowman is of the view that the recommended conditions will mitigate any potential archaeological/historic heritage risks.

3.4.6.3 Planning assessment

232. I rely on the expertise of Ms Plowman in regard to her conclusions and recommendations within her assessment of the NoR.

233. I agree with Ms Plowman that the ‘Archaeology’ condition is not necessarily required given that regional rules are still relevant for designations. I recommend either:

- the ‘Archaeology’ condition is deleted; or
- if the ‘Archaeology’ condition is retained, the wording of the condition is replaced with the wording set out in **Attachment 4**.

234. I consider that the adverse effects on archaeology and historic heritage can be adequately avoided, remedied or mitigated through amendments to the set of conditions attached to the NoR.

3.4.7 Cultural Effects - Mana Whenua

3.4.7.1 Application and Planning assessment

235. Consultation with Mana Whenua is discussed in Section 2.4.1 of this report.

236. Through the engagement undertaken at the site selection stage, Mana Whenua have affirmed the cultural significance of the coastal environment and the wider area in which the Project will be situated. Of particular note is the request that wastewater treatment infrastructure should be located away from culturally sensitive headlands.

237. Other key requests raised by Mana Whenua to date include:

- Recognition of the cultural significance of the whole area – including, Clarks Beach, Glenbrook Beach and Taihiki River;
- Assets should be designed to maintain a sufficient distance from the coastal boundary;
- Avoid draining wetlands around the site; and
- Implement native planting on the site.

238. The AEE has confirmed that the development of the NoR and the site design/layout has taken into account the above requests, specifically:

- One of the project objectives is to have regard to mana whenua’s cultural and spiritual values. Ngāti Tamaoho indicated to Watercare that coastal areas have high cultural significance and that there was particular significance with headland sites. The selection of this site keeps the proposed WWTP away from the headlands.
- The site is large enough to ensure the proposed WWTP is setback a sufficient distance from the coastal boundary and no works are expected in the CMA.
- There is an intention to avoid the draining of wetlands and maintain a setback from wetlands.
- Native planting is proposed in the Landscape Planting Plan.

239. As noted in the AEE and accompanying specialist reports, other matters of potential interest to Mana Whenua include:

- Diversion or reclamation of overland flow paths;
- Sedimentation resulting from earthworks and stormwater runoff associated with construction on streams, wetlands and the Taihiki River;
- Quality of stormwater run-off from the operational WWTP on streams, wetlands and the Taihiki River;
- Any effects on natural resources such as the SEAs and the coast;
- The installation of culverts; and
- Archaeology values and discovery.

240. The matters raised by Mana Whenua have been discussed in various sections of this report, and also in the AEE, as summarised below:

- The effects associated with stormwater discharge are subject to regional consenting requirements given the proposed extent of new impervious surfaces. Flooding effects and overland flow paths are discussed in Section 3.4.9 of this report.

- With respect to sedimentation, the AEE notes that earthworks associated with construction of the WWTP will be subject to regional consents and will observe the councils' relevant technical guidance, particularly Erosion and Sediment Control Guide for Land Disturbing Activities (GD05). Construction effects is discussed in Section 3.4.2 of this report.
- As discussed in Section 8 of this report, two marine SEAs extend into the property (SEA-M2-31 and SEA-M2-31w1) at the coastal margin. The location of the proposed WWTP will avoid the areas subject to the SEAs.
- With respect to archaeological values, the AEE has stated the intention to apply for an archaeological authority. It is expected that observing the protocols associated with the authority will avoid, remedy or mitigate any adverse effects of accidentally discovering kōiwi, archaeology and artefacts of Māori origin. The potential effects on archaeology from construction is discussed in Section 3.4.6 of this report.
- Mana Whenua have requested that construction of the WWTP avoids the draining of wetlands. The regulations of NES - F will apply to any works near wetlands. This is discussed in Section 6.2 of this report.

241. The AEE notes that further engagement with Mana Whenua will be undertaken at the time that the regional consents are prepared, which include stormwater and earthworks matters.

242. Ngāti Te Ata and Ngāti Tamaoho have made submissions opposing the NoR in its current form. The submissions are discussed in Section 4.3.9 of this report.

3.4.8 Air quality effects

3.4.8.1 Application

243. Watercare has provided an 'Air Quality Assessment' prepared by Beca Limited, dated 28 August 2023, to support its NoR.

244. The Air Quality Assessment state that the size of the site allows for an odour buffer area to be provided to minimise the risk of unintended emissions of an adverse nature being detected outside the site boundary. The proposed WWTP facilities will be located at least 200m from the site boundary, and 300m from any of the existing dwellings (refer to **Figure 18**). The technical assessment note that similar separation distances between treatment processes and sensitive receptors are observed at the Snells-Algies and Pukekohe WWTPs. The closest dwelling to the proposed WWTP is located 320m away from the boundary of the indicative Stage 3 plant facilities (denoted as R1 on **Figure 19**).

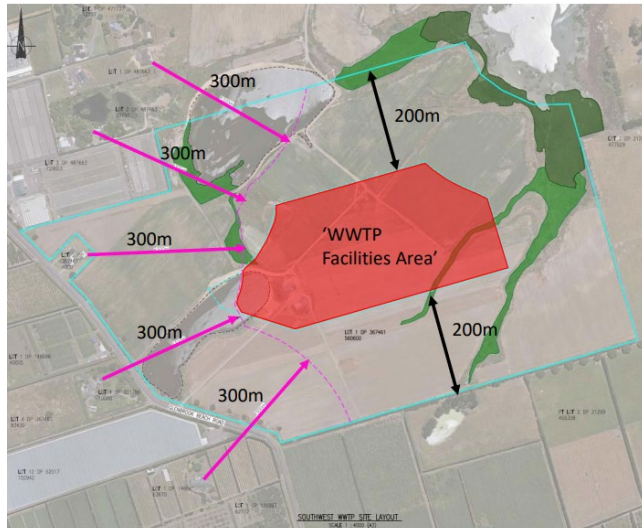


Figure 18: Separation distances between site boundary and dwellings to the facilities area (extracted from Air Quality Assessment)



Figure 19: Location of nearest dwellings (extracted from Air Quality Assessment)

245. When the proposed WWTP is operating normally, the Air Quality Assessment confirms that any odour emitted from the plant facilities would be expected to be contained within the site boundary. It is stated that industry standard odour mitigation methods will be implemented alongside appropriate management procedures. The Air Quality Assessment further clarifies that:

During normal operating conditions, emitted odour is expected to be sufficiently dispersed and diluted before reaching the boundary not to have any adverse effect (i.e. the odour concentration (intensity) is not sufficient to be considered either offensive or objection). Similarly, the nearest dwelling is located more than 320m from any proposed treatment process and would also not be expected to experience any odour nuisance effects.

246. In the event of abnormal operating conditions, the separation distance (distance between plant facilities and nearest dwellings) amongst other mitigating factors will ensure any risk of an adverse odour being detected beyond the site boundary is low. The Air Quality Assessment states:

Higher odour emissions may occur during abnormal operating conditions. However, comparisons of the separation distance between the proposed WWTP and the nearest dwellings against those recommended by Vic EPA, indicate that risk of adverse odours being experienced during such an event is still comparatively low. These events would also be expected to occur infrequently and for a short duration. The risk of abnormal events is minimised through plant design, monitoring and management procedures.

247. The Air Quality Assessment assesses that the likelihood of the nearest dwellings experiencing adverse odour effects under normal or abnormal operating conditions is considered to be unlikely:

The comparison of separation distances between the WWTP and surrounding dwellings to those recommended by the Vic EPA, indicates that the nearest dwellings are unlikely to experience odour that is offensive or objectionable to the extent that it adversely affects amenity values, even if plant upset conditions were to occur.

248. The Air Quality Assessment concludes that the emissions from the proposed WWTP would not be expected to cause any adverse odour amenity effects at any of the identified receptors.

249. The Air Quality Assessment notes that the discharge of odour to air from the proposed WWTP will require a resource consent application to Auckland Council which is separate from this process. Resource consent for a Discretionary activity is required under the AUP for discharges into air from treatment of municipal wastewater at wastewater treatment plants under Chapter E14 of the AUP. The Air Quality Assessment expects that the resource consent application will address the following in detail:

.. the discharges to air from the proposed WWTP, and the proposed mitigation implemented, monitoring and management procedures.

250. In summary, the key conclusions of the Air Quality Assessment are:

- *The primary discharge to air from the proposed Southwest WWTP, which may impact the amenity of the area, will be odour. The discharge of odour to air from the WWTP is also the subject of a separate resource consent application to Auckland Council.*
- *The potential adverse effects of these discharges on local amenity will be minimised through the implementation of appropriate odour control and management procedures. A 200m wide odour buffer around the processing units of the WWTP is proposed. Potential wastewater odour sources will also be located more than 300m from any existing dwelling. The proposed odour buffer is considered to provide an appropriate level of separation between WWTP and the nearest dwelling to minimise the risk of adverse odour. Similar separation distances between treatment processes and sensitive receptors are observed at the Snells-Algies and Pukekohe WWTPs.*

- *Provided standard odour mitigation methods are implemented, such as those included in the indicative design, only comparatively low levels of odours are expected from the proposed WWTP during normal operation. The separation distance between the wastewater treatment processes, the site boundary and surrounding dwelling is such that any odour that is generated is expected to be sufficiently dispersed not to have an adverse effect on amenity values.*
- *Overall, it is concluded that emissions from the proposed Southwest WWTP would not be expected to have any adverse odour amenity effects at any of the assessed receptors.*
- *Similarly, it is concluded that provided industry standard dust mitigation method are implement during construction any potential dust effects will be less than minor.*

3.4.8.2 Specialist assessment

251. Ms Rachel Terlinden, Auckland Council’s air discharge specialist, has undertaken an assessment of the odour effects of the Project, including a review of the AEE, associated technical document and the submissions received. Ms Terlinden’s memo is included in **Attachment 2**.

252. Ms Terlinden considers that the information submitted as part of the NoR application is sufficiently comprehensive to assess the air discharges likely to arise as a result of the proposed designation.

253. Ms Terlinden confirms that odour is considered to be the primary discharge from the proposed WWTP, and ‘hazardous air pollutants are not expected to be discharged from the site processes’. The processes considered most likely to result in odour discharges are:

- *Inlet pump stations and works facility.*
- *Emergency storage tanks (if the wastewater is anaerobic).*
- *Sludge storage ponds.*
- *Dewatering facility and dewatered sludge storage tanks.*

254. To manage odour effects from odour generating processing, Ms Terlinden describes a range of mitigation measures that could be incorporated into the design of the treatment plant:

Enclosure and extraction of air from the process sources with the highest odour generation potential (listed above) is proposed as the predominant mitigation measure. Biofilters are likely to be the main odour control on site, which have an approximate 95% efficiency, and odour is expected to only be detected within 5 – 30 m from these. Further mitigation measures will be outlined when the air discharge consent is lodged, as outlined in the AQR.

255. Ms Terlinden confirms that a Frequency, Intensity, Duration, Offensiveness and Location ('**FIDOL**') assessment was undertaken in accordance with the Good Practice Guide for Assessing and Managing Odour (Ministry for the Environment, 2016), with the following findings:

The assessment concluded that there is a low risk that odours from the site will cause an offensive or objectionable effect. As outlined in Section 5.4.2 of the AQR, poor dispersive conditions are only considered to occur 1.9 to 3.4 % of the time in the direction of the nearest sensitive receptors. Further, it is stated that the slope of the site to the northeast will assist in directing winds away from the nearest dwellings during these conditions. Additionally, due to the odour buffer the AQR states that the odour will be sufficiently dispersed and diluted.

256. Under normal operating conditions, Ms Terlinden generally agrees with the Air Quality Assessment that only low levels of odour are expected to be emitted from treatment processes:

Emissions from ASRs are stated to generally only be detected within approximately 30-50 m of the tanks, and odour from the MBR is expected to only be detectable when standing directly adjacent to the tank.

257. Ms Terlinden provides the following risk assessment in the event that the plant experiences abnormal operating conditions:

Higher odour emissions may occur during abnormal operating conditions, however, the AQR states that in these events odour is expected to occur infrequently and for a short duration, and the risk of adverse odours is still comparatively low. The potential for this will be minimised through design of the plant, which will be finalised as part of the discharge consent.

258. Ms Terlinden has considered the proposed odour buffer which sets a minimum separation distance of 200 m from the site boundary, as well as the separation distance of 300 m from any existing residential dwelling to the above ground wastewater treatment facilities. Following a review of the 'published separation distances' and 'separation distances at comparable WWTPs' as discussed in Section 5 of the Air Quality Assessment, Ms Terlinden is satisfied that:

...the proposed odour buffer and location of the plant is adequate to allow for dispersion and dilution of odour, as to not cause offensive or objectionable effects at nearby sensitive receptors.

259. Ms Terlinden notes that subject to Chapter E14 of the AUP, consenting requirements for air discharge will include an odour assessment based on the finalised design of the plant, which will allow for confirmation of management and mitigation measures to ensure that no offensive or objectionable effects will occur.

260. In summary, Ms Terlinden generally agrees with the assessment undertaken in the Air Quality Assessment and concludes that ‘significant adverse air quality effects are not likely to occur at any location beyond the boundary of the site’.

261. With respect to the effects of dust arising from construction works, Ms Terlinden has reviewed Section 6.4 of the Air Quality Assessment which states that the risk of nuisance dust from construction activities is low at distances of 50-100m from construction sources. Ms Terlinden concurs with the conclusions of the assessment undertaken and states:

As the proposed WWTP has a separation distance of 200 m from the site boundary, I agree with the conclusion of the AQR and consider it unlikely adverse dust effects will occur.

262. Ms Terlinden is supportive of the conditions offered by the requiring authority in relation to the ‘odour’ and ‘dust management’ conditions (refer to **Attachment 4**). Ms Terlinden advises that ‘further conditions specific to odour management will be implemented as part of the discharge consent application’.

263. Ms Terlinden provides the following recommendations at the end of her memo:

- *The application is supported by an Air Quality Report which outlines the likely odour and dust emissions associated with the Southwest WWTP and assesses the potential for adverse effects at nearby receptors.*
- *I consider that the overall adverse effects of the air discharges to the receiving environment are not likely to be significant.*
- *Particularly, the proposed inclusion of an odour buffer between the WWTP’s key odour sources and off-site activities sensitive to air discharges (including dwellings) as part of the Designation sufficiently minimises the risk of ‘offensive or objectionable’ odour effects arising.*
- *I note that the air discharges will be further assessed at the air discharge resource consent application stage, following the detailed design of the WWTP. In any future air discharge resource consent, specific conditions could be imposed to further avoid, remedy, or mitigate any identified air quality effects.*
- *The sensitivity of the receiving environment to the air discharges from the Southwest WWTP will not be compromised given the likely levels of discharge, the degree of separation discharges, the application of suitable control technologies, and on-site management techniques (which can be determined at the air discharge resource consent stage).*

264. Ms Terlinden’s advice on the submissions relating to odour and dust are set out in Section 4.3.7 of this report.

3.4.8.3 Planning assessment

265. I rely on the expert opinion of Ms Terlinden, in regard to her conclusions and recommendations. I agree with Ms Terlinden’s assessment that the proposed conditions offered by the requiring authority specific to air quality (odour and dust) are appropriate for managing the adverse effects of air discharge. I also agree that the proposed buffer is appropriate for managing the risks of odour being detected outside the boundaries of the site.

3.4.9 Stormwater and flooding effects

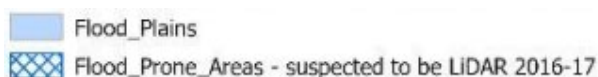
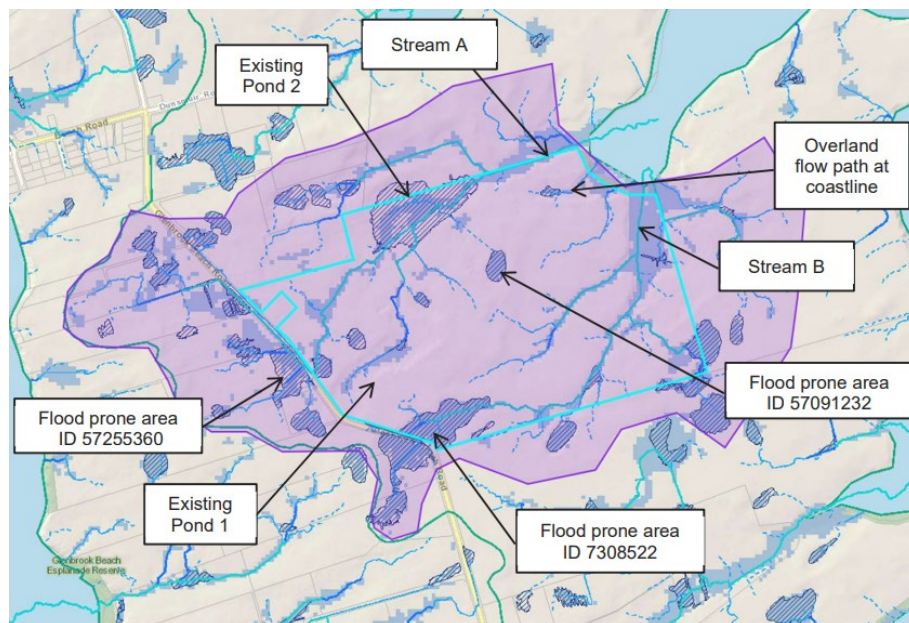
3.4.9.1 Application

266. Watercare has provided a ‘Stormwater and Flooding Assessment’ prepared by Stantec, dated 30 August 2023, in support of its NoR.

267. The hydrological features of the site are as follows (also refer to **Figure 20** overpage):

- Two permanent streams that collect overland flow paths and other unnamed streams and discharge to the coastal environment;
- two artificial ponds used for irrigation;
- some low-lying areas prone to flooding;
- flood plains for the 1% AEP event;
- overland flow paths; and
- natural wetlands.

Figure 20: Hydrological features of the site



268. Stormwater and flooding effects associated with the WWTP are categorised into those that relate to either ‘construction activities’ or ‘operational activities’. Proposed mitigation methods are discussed in the Stormwater and Flooding Assessment noting that more detailed flood modelling analysis and stormwater management measures will be undertaken at a later stage for regional consents and the Outline Plan.
269. The principal effects from construction activities on stormwater and flooding are summarised below:
- Bulk earthworks and temporary construction works can increase the risk of erosion and sedimentation which can adversely affect the health and habitat of the natural environment.
 - Construction works could result in increased flood risks, especially during the wet season, through temporary or permanent changes to overland flow paths, temporary obstructions of overland flow paths and the placement of any obstructions within existing flood prone areas.
270. In terms of mitigation, the Stormwater and Flooding Assessment states:
- Construction activities will be subject to the Outline Plan process and potentially regional consents for earthworks which will address the specific effects.*
271. Section 8.1 of the Stormwater and Flooding Assessment lists several mitigation measures that could be included in the Outline Plan and any resource consent application. One of the mitigation measures is the preparation of an erosion and sediment control plan developed to comply with Auckland Council Guidance Document 05, to manage erosion and sediment mobilisation during the construction phase.
272. The principal effects on stormwater and flooding of an operational WWTP are summarised below:
- The WWTP will result in approximately 6 hectares of impervious surfaces and could have potential effects including increases in peak runoff volume and runoff from impervious surfaces carrying contaminants.
 - The central location of the WWTP will avoid much of the hydrological features within the site, though some obstructions to existing overland flow paths may occur.
273. To mitigate the above effects, the AEE and Stormwater and Flooding Assessment has proposed a range of measures which are discussed below.
274. The Stormwater and Flooding Assessment proposes the installation of a Stormwater Treatment Pond for the purposes of stormwater conveyance, treatment and detention to reduce contaminants impacting on water quality, and to attenuate peak flows and volumes to mitigate any increases in flood risk into the downstream environment arising from the proposed WWTP.

275. To further manage the potential effects on water quality from runoff, the Stormwater and Flooding Assessment proposes the following:

Stormwater treatment will need to include on-site practices to limit contaminated runoff, including identification and isolation of areas comprising activities at risk of high contaminant load generation, such as fuel storage areas, log yard, refuelling areas, hazardous substance storage areas and workshops. Some of these areas will be isolated, diverted to wastewater and / or alternatively receive pre-treatment (consistent with the nature of the contaminant risk) prior to discharging to either the stormwater or wastewater systems.

276. As proposed in the concept plan, some plant facilities are likely to obstruct existing overland flow paths. This could result in increased flooding risks for neighbouring properties if flows are directed to new discharge points. Effects on streams and wetlands may also result from changes to the volume and flow going into the receiving environment. To manage this, the assessment proposes the following:

Obstructed flow paths can be mitigated by creating a diversion drain to discharge into nearby overland flow paths or streams as long as the works maintain the same entry and exit point of the overland flow path at the site boundary, do not alter volume and velocity of water flow and do not cause additional adverse flooding effects on neighbouring properties.

277. There are flood plains for the 1% AEP event on the site. The Stormwater and Flooding Assessment and the Indicative Design Report confirms the intention to avoid buildings being located in these areas.

278. As noted in the AEE, there will be further detailed hydraulic modelling of the stormwater network, flood risk analysis and site design to come. The requirement to obtain regional consent for stormwater is expected to be triggered as the new impervious surface is proposed to be over 5,000 m². The AEE describes these future processes:

In addition to the requirement to obtain regional consents for earthworks and stormwater (discussed above), as part of the Outline Plan process under section 176A of the RMA, Watercare will be required to show the shape, bulk and location of the proposed work, the finished contour of the site and measures proposed to avoid, remedy, or mitigate adverse effects on the environment. Accordingly, Watercare, will be required to provide information, as part of these subsequent processes, once detailed design has been finalised, confirming that there are no flooding effects on upstream or downstream properties as a result of the new structures.

279. The Stormwater and Flooding Assessment concludes that with appropriate mitigation measures in place, the impacts of flooding and stormwater during construction and operation of the WWTP are assessed to result in 'no' or 'very low' adverse effects.

3.4.9.2 **Specialist assessment**

280. Mr Trent Sunich, Auckland Council's stormwater consultant, has undertaken an assessment of the stormwater and flooding effects of the Project, including a review of the AEE and associated technical document, and the submissions received on the NoR. Mr Sunich's report is included in **Attachment 2**.
281. Mr Sunich notes that his assessment focuses on the flood risk associated with the proposed WWTP. Assessment of the effects of stormwater discharges from the creation of impervious surfaces at the site will be addressed at a later date as a regional consenting matter in accordance with the applicable rules in the Auckland Unitary Plan such as Chapter E8 Stormwater discharge and diversion. Notwithstanding this, Mr Sunich generally considers that the indicative stormwater management design appears fit for purpose.

Flood risk assessment

282. Mr Sunich confirms that the matters relevant to the assessment of flood risk include:
- *Building floor level freeboard*
 - *Proximity to floodplains and overland flow paths*
 - *Displacement of floodplain storage*
 - *Any effects on surrounding properties*

283. Mr Sunich provides the following assessment in respect to flood risk:

In order to understand and assess the potential flood hazard effects, the applicants' engineering consultant has utilised published flood hazard and overland flow information in the Auckland Council's Geomaps system. I have assessed the information detailed in the flood assessment report, and in combination with the observations made during the site visit, I conclude the construction of the WWTP and its ancillaries within the site boundary will be in a manner that will present limited change to the operation of the floodplain, namely by being located topographically above the 1% AEP flood level.

In terms of overland flow paths entering the site (such as from the western side of Glenbrook Beach Road), works to construct and operate the WWTP do not appear to be in the immediate flow path areas. However, should any enabling or permanent works take place, the proposed flood hazard condition is satisfactory to identify issues and document remedial mitigation methods for implementation.

With regard to overland flow paths on the site, their origin is within the site boundaries and therefore post construction, any diversion of overland flow paths (through being displaced by the WWTP) will be subject to detailed design proposed through the designation conditions. Notwithstanding this, it is noted that the shape of the site is a peninsular with the immediate receiving environment being stream tributaries and the Taihiki River estuary, with no dwellings or structures located downstream meaning adverse effects are not anticipated.

In terms of resilience of the WWTP and the influence of projected sea level rise, viewing the hazards layer in Geomaps concludes the plant footprint and proposed stormwater treatment pond (two options are presented in terms of site location) are clear of the modelled 1% AEP level scenario plus 2m sea level rise.

284. Mr Sunich acknowledges that further flood hazard assessment (as required by 'Flood Hazard' condition) will be undertaken during the detailed design of the proposed WWTP. Mr Sunich has reviewed the recommended flood hazard condition and does not propose any further edits.

285. Mr Sunich is of the view that at the NoR stage, the assessment undertaken is appropriate:

Overall it is concluded that the potential flood hazard effects in relation to the 1% AEP rainfall event are understood and there is a provision for mitigation as is outlined in the Flooding Assessment and through the performance-based requirements stipulated in the draft NoR conditions.

286. Mr Sunich has responded to concerns raised by submitters in Section 4 of his report. Mr Sunich considers that it would be helpful if the requiring authority provided a response to the following matters raised by submitters:

- How significant rainfall events and potential flooding of plant facilities will affect the operation of the WWTP; and
- The potential for carriageway flooding (on Glenbrook Beach Road) arising from construction or operation of the WWTP, and the opportunity to address any flooding through construction works.

287. Mr Sunich draws the following conclusions and recommendations following his review:

The assessment in this memorandum does not identify any reasons to withhold the NoR. The flood hazard effects of the proposal considered by this memorandum that could be granted subject to recommended conditions, are for the following reasons:

- *The applicant has used an established assessment method including the use of Geomaps flood hazard and coastal inundation that accounts for the influence of climate change by adjusting for changes in temperature and rainfall patterns in accordance with MfE guidance.*
- *The WWTP plant location within the site is clear of major overland flow paths and the flood plain.*
- *Subject to the imposition of NoR conditions the proposal is generally consistent with the flood hazard related objectives and policies in the Auckland Unitary Plan.*

3.4.9.3 Planning assessment

288. I rely on the expert opinions of Mr Sunich in so far as the approach taken by the requiring authority is appropriate at the NoR stage, and that the flood hazard condition as offered by the requiring authority is also appropriate.
289. I agree with Mr Sunich that it would be helpful for the submitters if the requiring authority addressed the matters raised in their submissions (as identified by Mr Sunich in paragraph 287 above) while noting that should the NoR be confirmed, the detailed assessment and implementation would occur at the OPW stage and also through regional consents.
290. Overall, I consider that the potential adverse flooding effects of the NoR can be avoided, remedied or mitigated and that the effects of stormwater will be appropriately addressed through the regional consenting process.

4 Notification and submissions

4.1 Notification

291. Watercare requested public notification in their application. The NoR was fully notified on 13 October 2023.
292. The closing date for submissions was 13 November 2023.

4.2 Late submissions

293. A total of 7 late submissions were received after the closing date for submissions. The following table lists submissions received after the closing date for submissions.

Table 6: Late submissions received

Submitters name	Date submission received by the council
Russell Voigt	14 November 2023
Ian Hadwin	14 November 2023
Peter Craig	14 November 2023
Hope Dufty	14 November 2023
Susie Koppens	14 November 2023
Pulin Investments Limited (Pulin)	22 November 2023
L. Douglas-Whyte	22 November 2023

294. At the start of the hearing, the Hearing Commissioners must decide whether to extend the closing date for late submissions. Under section 37A of the RMA, the Hearing Commissioners must take into account:

- the interests of any persons who, in the Hearing Commissioners opinion, may be directly affected by the extension or waiver; and
- the interests of the community in achieving adequate assessment of the effects of the proposal; and
- the duty under section 21 of the RMA to avoid unreasonable delay.

295. Under section 37 and section 37A of the RMA, I recommend that the late submissions on the NoR be accepted. The reasons for my recommendation are:

- the submissions are within scope;
- the matters raised in the submission are similar to other submissions that were received during the submission period and therefore do not disadvantage other directly affected parties;
- I do not consider that the waiver would directly affect the interests of any person; and
- it is considered that including the late submissions will not cause any unreasonable delay.

4.3 Consideration of submissions

296. A total of 296 submissions were received on this NOR, as summarised in Table 7 below:

NoR	Support	Oppose	Neutral	Total
Southwest WWTP	7	288	1	296

Table 7: submissions received on the NoR

297. All of the submissions lodged on the NoR have been read, including the reasons for the submissions and the relief sought. The individual submissions can be found at the following link:

<https://www.aucklandcouncil.govt.nz/have-your-say/hearings/find-hearing/Pages/Hearing-documents.aspx?HearingId=690>

298. A summary of the relief sought from each submission is provided in **Attachment 3**.

299. After reviewing the submissions, I suggest that the submissions are grouped into the following themes based on the relief sought:

- Support for the NoR
- Opposition to the NoR

- Alternate sites
- Extent of the NoR and community use
- Effects on landscape and amenity values
- Lighting effects
- Air Quality - odour effects
- Construction effects
- Effects on Maori culture and values
- Ecology effects
- Transport effects
- Noise effects
- All other matters

300. The issues raised in submissions have been considered in the assessment of the NoR, including by each of the Council specialists where they relate to the specialists' professional discipline.

4.3.1 Support for the NOR

Discussion

301. Generally, submitters express support for the NoR as the WWTP will support the growth aspirations for the Southwest area, while also providing for the basic needs of present and future communities. Other reasons given by submitters include:

- The existing infrastructure is either reaching its use by date or capacity limits
- The Southwest area is rapidly growing and areas zoned for urban development are either constrained or has stalled altogether due to insufficient infrastructure
- Proactive investment in a new plant with upgraded treatment processes will ensure beneficial outcomes for the Manukau Harbour, the wider environment and future communities.
- The construction of the plant will support the creation of local employment opportunities.
- The proposed location of the WWTP is supported in line with the site selection process.
- The proposed location of the WWTP is a cost effective option in that it reduces the length of conveyance pipelines required to be built to service the southwest area.

- The WWTP will assist in the achievement of the Future Development Strategy 2023-2053 by providing for prerequisite infrastructure.

Recommendations

302. I acknowledge the positive effects of the Project as discussed in Section 3.3 of this report and that these positive effects must be taken into account when balancing any adverse effects on the environment.

4.3.2 Opposition to the NOR

Discussion

303. The majority of submission points oppose the NoR in its entirety and request the withdrawal of the NoR.

304. The key issues raised in submissions are summarised below:

- Pollution and degradation of the Manukau Harbour from wastewater discharge is not appropriately mitigated.
- The marine ecosystem and water quality of the Manukau Harbour would be adversely affected by wastewater discharge.
- Wastewater discharge will result in health and safety concerns for recreational users in the harbour.
- Discharge of wastewater into a saltwater harbour can negatively affect fish and bird life.
- Wastewater should be discharged into the Tasman Sea or onto land.
- The proposed WWTP will detract from the rural landscape and amenity values in the area.
- The proposed WWTP will impact the attractiveness of the local environment and rural lifestyle prevalent in the area.
- The odour discharged from the proposed WWTP will taint fruit and vegetables grown in the area, and also adversely affect nearby residents.
- The proposed odour buffer is insufficient. As such, odour effects cannot possibly be mitigated.
- The effects of construction, particularly in terms of construction traffic and the effects (such as delays, safety and restrictions on access) on the users of Glenbrook Beach Road are unacceptable.
- Construction works to install the conveyance pipes along Glenbrook Beach Road will cause significant disruption for all road users and particularly residents.

- The operational noises associated with the proposed WWTP will adversely affect the quiet enjoyment of nearby property.
- Significant weather events may flood the site and result in raw sewage being discharged into the harbour.
- The AEE has not adequately determined the scale and significance of effects on the environment.
- Property values will be negatively affected.
- The proposed WWTP should not be located on highly productive land.
- There are more appropriate locations to locate the proposed WWTP.
- The site selection process was flawed.
- The community has not been adequately consulted and the consultation process was flawed.

305. The key issues raised in submissions are discussed in general below.

Effects arising from discharge of treated wastewater into the Manukau Harbour

306. The most common reason that submitters give for opposing the proposed WWTP is concerns over wastewater discharge into the Manukau harbour from the consented outfall at Clarks Beach. Submitters say that there is a lack of scientific evidence and detailed assessments to prove the treated discharge will not adversely harm human health, marine ecosystems, marine life and water quality. The effect of wastewater discharge is considered by submitters to adversely impact the health and safety of people whom fish, swim and undertake other recreational activities on the water.
307. In 2016, Watercare sought resource consents (R/REG/2016/2749 & R/REG/2026/2751) for the discharge of treated wastewater into the Waiuku Estuary, in the south Manukau Harbour, and for the construction of a new sub-surface/submerged pipeline and outfall structure to convey and diffuse the wastewater into the coastal marine area (within the Waiuku Estuary adjacent to the Clarks Beach Golf Course). The resource consents were publicly notified in 2016 and were granted late 2017 following a hearing. An appeal was received from Manukau Harbour Restoration Society Incorporated (ENV-2018-AKL-000002) in early 2018 to the granting of the consents. Following Court assisted mediation and discussions on conditions, the parties agreed to resolve the appeal by amending the conditions of consent and draft Receiving Environment Monitoring Plan. Consent order documents were filed with the Environment Court on 14 June 2018. The Environment Court consent order to grant the resource consents subject to the aforementioned amendments was dated 27 June 2018.
308. The NoR does not in any manner seek to amend the consented discharge consent. The discharge of treated wastewater from the proposed WWTP will rely on the granted consents which are now beyond challenge.

Effects arising from construction and future operation of the proposed WWTP

- 309. Submitters have provided various reasons for opposing the proposed WWTP in terms of the effects that are expected to arise from the construction and operation of the plant.
- 310. Submitters raise concerns about landscape character and visual amenity, specifically that a WWTP diminishes the visual appeal of the area and does not fit in with the existing landscape character.
- 311. Submitters raise the issue of odour and the potential to impact health and safety. The submissions suggest that ‘smells’ would be released from the WWTP and would be offensive.
- 312. Submitters are concerned about construction and operational noise from the WWTP given the quiet nature of the existing environment.
- 313. Submitters are concerned about the capacity of Glenbrook Beach Road to cater for additional vehicles, particularly during construction, noting that it could lead to delays and safety risks.
- 314. Submitters are concerned with potential flooding on the site during significant weather events, noting that flooding may result in raw sewage being released into the harbour.
- 315. Submitters are concerned with the construction effects of the conveyance pipeline on Glenbrook Beach Road. Submitters request that Glenbrook Beach Road is not excavated to install the pipeline as this is expected to result in significant disruption to road users. Other construction methods such as directional drilling is proposed. Other routes (such as under public and private property or under the harbour) have also been proposed by submitters to avoid the road corridor.
- 316. In my view, the concerns raised by submitters regarding any potential effects on the environment from the proposed WWTP have been covered in Section 3.4 of this report.
- 317. I note that the conveyance pipeline project is subject to a separate statutory process and as such, matters such as design, methods of construction and route is outside the scope of the NoR process.

Loss of highly productive land

- 318. Submitters express concern that the proposed WWTP will be built on highly productive land. A few submitters have stated that while an exemption exists for ‘specified infrastructure’, they consider that the exemption should not be relied upon when there are other sites available.
- 319. This matter is discussed in Section 5.1 of this report.

Property values

- 320. Negative effects on property values are anticipated by submitters if the proposed WWTP is built.

321. In my view, a perceived risk of decreases in property values is a reflection of the effects of an activity on the environment rather than being an environmental effect in itself. If effects on property valuation is taken into account in addition to the effect that presumably causes a decrease in valuation, this essentially double counts the effects on affected properties. Effects such as odour, which several submitters say will require them to keep windows closed and reduce their enjoyment of their property, will be addressed as part of the designation process and through regional consents. I consider it more appropriate to rely on the opinions of experts on the effects of the proposed WWTP, rather than on predictions of market valuation.

Lack of or flawed community consultation

322. Submitters have raised concerns over the consultation process with the community. Submitters state that the consultation process was flawed, lacking and did not adequately consider community feedback.
323. In my view, the assertions about a failure of consultation needs to be seen in light of the absence of any statutory requirement to consult.
324. Section 36A of the RMA is clear in that there is no statutory duty to consult in relation to NoRs, unless an obligation to consult is required under any other legislation.
325. I note the requirements under clause 1(h) of the Fourth Schedule which state that if any consultation is undertaken, it needs to be included in the application. The duty is to report on the consultation undertaken, instead of implying that consultation is required.
326. I acknowledge that consultation is often regarded as ‘best practice’ and can assist with providing a better understanding of the potential effects of a particular activity.
327. In my view, the key considerations for this report in respect to consultation is whether the potential effects of the NoR have been adequately addressed and if the NOR could have been modified to minimise any potential effects relying on information received from consultation.
328. In my view, the AEE and accompanying specialist reports have provided sufficient understanding of the potential effects of the proposal at this stage of the development process. This is confirmed in Section 3.4 of this report.

More appropriate locations for the WWTP

329. Submitters oppose the location of the proposed WWTP at 372 Glenbrook Beach Road. Submitters consider that there are more appropriate locations for the proposed WWTP.
330. The matter of alternative site/s is discussed in Section 4.3.3 and Section 11 of this report.

Recommendations

331. While I do consider several amendments to the proposed conditions are necessary as set out in **Attachment 4**, I do not support submissions seeking withdrawal of the NoR for the reasons set out in this report.

4.3.3 Alternative Sites

Discussion

332. Submitters oppose the location of the proposed WWTP at 372 Glenbrook Beach Road, Glenbrook for the following reasons:

- There are more appropriate locations elsewhere;
- the site selection process was flawed;
- the proposed WWTP should utilise existing Watercare land (elsewhere); and
- the associated effects of a WWTP (i.e. odour, amenity, natural environment) make it inappropriate to be located close to residential areas.

333. Submitters have suggested several locations which are considered to be better placed to accommodate the proposed WWTP:

- Next to the steel mill;
- On an 'industrial' zoned site;
- In Clarks Beach;
- On another site owned by Watercare; or
- Extend/upgrade the existing Waiuku plant.

334. Having undergone an assessment of alternative sites, the requiring authority has selected 372 Glenbrook Beach Road as its preferred site. The process and the consideration given to alternative sites is documented in the Assessment of Alternatives Sites report (Appendix C to the application) and in Section 7.3.1 of the AEE.

335. Section 171(1)(b) of the RMA requires that when considering a NoR, the territorial authority must, subject to Part 2 of the RMA, consider the effects on the environment of allowing the designation. In so doing it must have particular regard to whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work. A consideration of alternatives under section 171(1)(b) is only obligatory if:

(a) the requiring authority does not have an interest in the land sufficient for undertaking the work; or

(b) it is likely that the work will have a significant adverse effect on the environment

336. For this NoR, while the requiring authority has an interest in the land, significant visual effects are anticipated in the short to medium term as assessed in Section 3.4.1 of this report. I note that the AEE did not assess the visual effects to be of a 'significant' nature based on expert advice, but council's expert has determined that effects are a 'step above' what is assessed in the LVNC report and falls into the 'significant' category.
337. Therefore, it is my view that an assessment of alternative sites, routes or methods is required.
338. With respect to the requirements under section 171(1)(b), I note the following:
- The requiring authority does not have to show that it has selected the best of all available alternatives. The focus is not on the outcome, but on the adequacy of consideration given to given to alternatives.
 - Selection of the preferred site is ultimately up to the requiring authority as guided by the policy of the requiring authority whom sets its own priorities to establish its network, achieve its objectives or meet obligations to implement a wider network. It is not a function given to the territory authority even if they or any other person considers that a more ideal alternative exists.
339. I agree with the conclusions reached by the AEE regarding the assessment of alternatives. I consider that the information supplied demonstrates that the requiring authority has satisfied the requirements of section 171(1)(b), in that adequate consideration has been given to alternative sites, routes, or methods of undertaking the work.

Recommendations

340. The Project now advanced can be considered on its own merits rather than against the merits of alternatives not selected.

4.3.4 Extent of the NOR and community use

341. The key issue raised by submitters with respect to the extent of the NoR is the potential future expansion of the primary operational area outside of what is indicated in the 'concept plan'. Submitters therefore request that the extent of the NoR be reduced to cover only the area (generally accepted by submitters to be 6ha) required to accommodate the plant facilities as currently proposed.
342. Several submitters have requested that a legal covenant be placed on the site to ensure that the plant facilities cannot be extended without prior consultation with the community.
343. Several submitters request that the area not required for the plant facilities be subject to future community consultation so as to determine the most appropriate use. Possible uses as suggested include walkways, parks and community gardens.
344. Several submitters also request that Watercare lease any land not required for the plant facilities to a community group or similar for a nominal sum.

345. As set out in the AEE and in the Air Quality Assessment (Appendix H to the application), the extent of the NoR includes the primary plant facilities, access and the provision of an odour buffer. The odour buffer extends from the primary plant facilities to the boundaries of the site (a distance of 200m).
346. In my view, the odour buffer is an integral component of the proposed WWTP as it assists in managing the risks of unexpected odour discharge. The purpose and function of the odour buffer is discussed in detail out in Section 3.4.8 of this report.
347. Aside from providing for the plant facilities, the extent of the NoR also provides for the following:
- the maintenance of an odour buffer;
 - the artificial wetland for stormwater management;
 - areas needed to provide for safe site access (refer to Section 3.4.4), accessways to the primary plant facilities and the provision of manoeuvring space to enable vehicles to leave the site facing forward; and
 - the proposed mitigation plantings.
348. In my view, the proposed site layout is logical and enables a functional WWTP with provision also made for supporting facilities. I also note that proposed conditions (such as those relating to mitigation planting, odour, flooding and access) require the full extent of the NoR in order to be implemented.
349. Therefore, I consider that the extent of the NOR is well justified and reasonably necessary to provide for an operational WWTP.

Recommendations

350. No modification to the extent of the NoR is recommended.
351. In terms of public use of Watercare land, this is not a resource management issue in my view. This can be addressed by the requiring authority.

4.3.5 Landscape and amenity values

Discussion

352. The key issues raised by submitters with respect to landscape and amenity values include:
- The proposed mitigation planting does not adequately ‘hide’ the WWTP from view, particularly when viewed from Glenbrook Beach Road;
 - Earth bunds are required to increase the height of plantings to better screen the WWTP; and
 - The WWTP is out of place in the rural landscape and reduces local amenity values.

353. The key relief sought by the submitters include:

- Construct an earth bund at the front of the site, planted with native vegetation to screen the WWTP from the road;
- Construct an earth bund with plantings on top to surround the primary plant facilities, and any around the site as necessary to hide the plant from view;
- Extend the proposed mitigation planting along the Glenbrook Beach Road frontage (i.e. in areas either side of the access point);
- Ensure any trees planted are protected by legal covenants so that they cannot be removed; and
- Restrict the height of buildings to 6m.

354. Effects on landscape and amenity values are discussed in Section 3.4.1 of this report.

355. Mr Stephen Brown has considered the matters raised in the submissions in forming his conclusions and recommendations. Mr Brown considers that visual effects arising from the proposed WWTP should be addressed through additional conditions as set out in **Attachment 4**.

356. Mr Brown confirms, subject to the conditions (including amendments), that the proposed WWTP will more readily fit into its landscape setting and impacts on abutting and nearby residential properties will be reduced.

Recommendations

357. I adopt the recommendations of Mr Brown and in my view, this would address the concerns raised by submitters.

4.3.6 Lighting

Discussion

358. The key issue raised by submitters in relation to lighting effects is potential 'light spill' from the operational plant into the surrounding environment at night time.

359. The primary relief sought by submitters is that the effects from lighting on the surrounding areas be appropriately managed and is reduced as much as possible.

360. Benjamin Ross [16.3] has requested the use of directional LED lighting in combination with boundary plantings to mitigate the effects of light pollution.

361. Effects of lighting is discussed in Section 7.2.3.5 of the AEE and the requiring authority has offered the following conditions to address the potential effects of lighting:

Operational Lighting

36. *The Requiring Authority must prepare an Operational Lighting Plan with the first outline plan and submit to the Council for certification.*

37. *The Operational Lighting Plan must be prepared by a suitably qualified and experienced person.*
38. *The objective of the Operational Lighting Plan is to demonstrate how the lighting for the outdoor operational areas, access roads, and carparks on site will be designed to comply with AS/NZS 4284:2019- Control of the obtrusive effects of outdoor lighting, Zone A2 limits between 10.00pm and 7.00am to manage sky glow, glare, light spill effects on adjacent properties.*

Recommendations

362. The management approach proposed for outdoor lighting aligns with what is set out in Chapter E24 (Lighting) of the AUP.
363. The preparation of an Operational Lighting Plan would in my view would adequately manage any lighting effects arising from the ongoing operation of the proposed WWTP.
364. I support the proposed 'Operational Lighting' condition and I recommend correction of what I assume is a typological error in the condition:

The objective of the Operational Lighting Plan is to demonstrate how the lighting for the outdoor operational areas, access roads, and carparks on site will be designed to comply with AS/NZS 4284:2019- Control of the obtrusive effects of outdoor lighting, ~~Zone A2 limits~~ between 10.00pm and 7.00am to manage sky glow, glare, light spill effects on adjacent properties.

4.3.7 Air quality - Odour

Discussion

365. Key issues raised by submitters with respect to odour are:
- Odour will be detectable outside of the site and is a risk to the amenity of neighbouring residential properties and the produce from nearby orchards.
 - The odour buffer for properties surrounding the site is inadequate to contain the odour within the site.
 - Odours discharged from the plant will be offensive and unpleasant.
366. Common relief sought by the submitters include:
- Conditions to ensure no odour which is detectable outside of the site that is offensive or objectionable.
 - Increase the extent of the odour buffer.
 - Develop and undertake a monitoring regime to ensure any conditions around odour are being complied with.
367. The effects of odour is addressed in Section 3.4.8 of this report.

368. The following condition has been offered by the requiring authority with respect to odour effects:

Odour

10. *Beyond the boundary of the site, there shall be no odour caused by discharges from the wastewater treatment activities, which in the opinion of an enforcement officer, is the cause of a noxious, dangerous, offensive or objectionable effect.*

369. Ms Rachel Terlinden has considered the matters raised in the submissions, including the 'broad topics' and the 'more specific submissions' in her review, and in forming her conclusions and recommendations. The 'broad topics' are addressed through the assessment of potential odour effects in Ms Terlinden's memo.

370. Ms Terlinden's comments on the 'more specific submissions' are as follows:

Some of the submissions raised more specific concerns regarding the reporting of potential air quality effects. These included:

- *The WWTP still being in the design phase and therefore the conclusions of the AQR are hypothetical.*
- *How dewatered sludge will be stored and how long this is to remain on site.*
- *Potential for odours in use of emergency storage tanks.*
- *The NZ Steel meteorological mast (partially relied on by the AQR for the meteorological analysis) was only 6 m tall when the recommendation is for 10 m tall. Concerns regarding the accuracy of the data therefore used to calculate frequency of winds.*
- *Fruit growing around the WWTP absorbing potential wastewater odours.*

I consider the majority of these submissions have been addressed in the above assessment of effects. As odours are not expected to be significant beyond the boundary of the site, local produce is unlikely to be affected.

The meteorological data collected by NZ Steel at 64 Glenbrook Beach Road was determined by the AQR to be representative of the local area, despite the lower-than-standard meteorological mast as this is the closest meteorological monitoring station to the site. The surrounding area is considered to be relatively flat terrain, as outlined in Section 4.3 of the AQR and the meteorological conditions are likely to be similar at both sites. I also note that this NZ Steel meteorological data presents similar average wind patterns as have been recorded at other nearby monitoring locations, including by Auckland Council at Waiuku and Pukekohe. The NZ Steel dataset relied on by the AQR and these other nearby collected datasets show the prevailing south-westerly winds, with a secondary north-easterly direction. Therefore, I consider the analysis of the meteorological conditions at the Site as presented in AQR section 4.4 is robust.

With regard to first three submitter concerns listed, the design of the WWTP will be finalised prior to applying for the air discharge consent. This future application will be required to include an odour assessment based on the finalised design of the WWTP and will be assessed to ensure no offensive or objectionable effects will occur at the time of the application. This will include finalised management and mitigation measures including how sludge will be managed as well as the emergency storage tanks.

Recommendations

371. I have considered Ms Terlinden’s advice and her response to submissions. I do not consider any amendment to the ‘odour’ condition, or imposition of any new condition, is necessary in response to submissions. Also, the extent of the proposed odour buffer is supported, and no modifications are recommended.

4.3.8 Construction effects

Discussion

372. Key issues raised by submitters with respect to construction effects include:

- The effects of construction noise, vibration and dust on residential properties;
- The construction of the conveyance pipeline will cause significant disruption to users of Glenbrook Beach Road and surrounding local roads;
- Glenbrook Beach Road is narrow, rural in nature, limited in visibility at bends and prone to accidents. Construction of the WWTP and the conveyance pipeline will worsen the state of the road and also impact the activities of residents who rely on the road as the ‘only road in and out’; and
- The anticipated length of construction is significantly disruptive.

373. Common relief sought by the submitters include:

- Publicly notify the conveyance pipeline consent;
- Suspend the conveyance pipeline resource consent until the NoR has been confirmed;
- When constructing the conveyance pipeline, use construction methods that do not require trenching (such as directional drilling);
- Route the conveyance pipeline under private or public property, or in the harbour to avoid the necessity for excavation works on local roads;
- Determine the combined traffic effects of constructing both the conveyance pipeline and WWTP;
- Manage construction noise and dust to minimise effects on residential amenity; and

- Address the effects of construction on Glenbrook Beach Road in terms of delay, safety, traffic management and restrictions on movement.

374. The effects of construction are summarised in Section 3.4.2 of this report with more detailed discussions provided in Section 3.4.3 (Noise and vibration), Section 3.4.4 (Transport) and Section 3.4.8 (Air quality).
375. The potential effects of construction of both the proposed WWTP and the conveyance pipeline occurring in proximity and simultaneously on Glenbrook Beach Road is addressed in Section 3.4.4 and Section 4.3.11 of this report. It should be noted that the resource consent involving the conveyance pipeline does not form part of this NoR process.
376. In my view, the effects on the environment from construction activities are able to be managed through specific conditions (i.e. the 'dust management' condition), and the preparation of management plans (i.e. the CMP, CTMP and CNMP). The management plans will be developed at the OPW stage to address environmental effects specific to the construction of the proposed WWTP. The works and activities will also be undertaken in accordance with any relevant National Environmental Standards and regional resource consent conditions (such as for earthworks).

Recommendations

377. In my view, the conditions attached to the NoR as set out in **Attachment 4** along with any regional approvals required will ensure that any adverse construction effects will be appropriately avoided, remedied or mitigated.

4.3.9 Māori culture and values

Discussion

378. Submissions from Ngāti Te Ata and Ngāti Tamaoho raise matters relating to the cultural effects of the Project.
379. Ngāti Te Ata notes its support in principle of a 'single modern best practice technology plant to service the southwest'. Ngāti Te Ata prefers that such a plant is located on Watercare's existing Waiuku site.
380. Ngāti Te Ata is opposed to the NoR in its current form.
381. Ngāti Te Ata is concerned around the discharge of treated wastewater into the Manukau Harbour. Ngāti Te Ata requests that the NoR include conditions relating to the operational performance of the plant in treating wastewater, including requirements to remove at least 99.99% of pathogens from the wastewater stream and requiring waste sludge to be treated to a standard that it can be recovered and repurposed.
382. As discussed in Section 4.3.2 earlier in this report, the proposed WWTP will rely on approved discharge consents granted by a Consent Order issued by the Environment Court in 2018. The degree of removal of pathogens and the plant process with respect to waste sludge had been addressed through the resource consenting process.

383. Ngāti Te Ata requests that the WWTP and associated pipeline infrastructure are future proofed to account for existing and future development in Clarks Beach, Kingseat, Glenbrook Beach, Glenbrook and Waiuku.
384. This matter is addressed in the AEE and in Section 2.1 of this report.
385. Ngāti Te Ata requests that Auckland Council and Watercare formally acknowledge that any Ngāti Te Ata support for the WWTP does not signal a change of stance in its opposition to any wastewater discharge into the Manukau Harbour.
386. Ngāti Te Ata's position is noted and is recorded in its submission.
387. Ngāti Te Ata have requested that conditions be imposed to recognise the key cultural importance of the area:
- a. establish a cultural advisor (of Ngāti Te Ata) for the project and site*
 - b. set in place a cultural and environmental monitoring programme*
 - c. Set realistic timeframes for response to the various Watercare plans and not the truncated 20 working days*
 - d. Through information, art and landscaping tell the story of mana whenua in this place*
 - e. seek appropriate cultural acknowledgment and redress of the area including offset environmental restoration projects and matters that acknowledge and tell the story of Ngāti Te Ata as the mana whenua in this area.*
388. Given that only mana whenua can speak to the impact that a project may have on their cultural values, heritage, and aspirations, I consider it reasonable to introduce conditions to ensure that the methodology for assessing effects (through the management plans) is updated to require engagement with mana whenua representatives and to seek their input on the actual and potential impacts. Amendments to the proposed conditions are set out in **Attachment 4** and discussed in the recommendations below.
389. Ngāti Tamaoho requests the following relief:
- Consultation with Mana Whenua in relation to the archaeological sites that have been identified by the Taihiki Watermain Crossing archaeological report; and
 - Involvement of Mana Whenua in the design process.
390. It is my understanding that the Taihiki Watermain relates to a separate project not related to this NoR.
391. To ensure consultation with Ngāti Tamaoho will continue to occur throughout the detailed design phase of the Project and that cultural matters are appropriately addressed, I recommend amendments to the management plan conditions as set out in **Attachment 4** and discussed in the recommendations below.

Recommendations

392. In response to the submissions by Ngāti Te Ata and Ngāti Tamaoho, I recommend amendments to the proposed conditions to achieve the following:

- Ngāti Te Ata shall be invited to participate in the development of the Construction Management Plan to provide input into any cultural monitoring requirements and measures to be implemented during construction activities, to acknowledge the historic and living cultural values of the area to Mana Whenua and to minimise potential adverse effects on these values
- Ngāti Te Ata and Ngāti Tamaoho will be invited to participate in the development of the Landscape Management Plan to provide input into relevant cultural landscape and design matters. This includes the management of potential effects on cultural sites, landscapes and values.

393. My recommended amendments to the conditions are set out below:

Construction Management Plan

13. *The Requiring Authority must prepare a Construction Management Plan and submit to Council for certification. Once certified the plan must be implemented for the duration of the Works.*

14. *The objective of the Construction Management Plan is to ensure that management procedures and construction methods are adopted to avoid, remedy or mitigate adverse effects of the construction of the WWTP, and minimise as far as reasonably practicable disturbance to adjacent properties and road users and adverse effects on water quality in nearby streams, wetlands and the coastal marine environment.*

...

16. *Ngāti Te Ata shall be invited to participate in the preparation of the Construction Management Plan to provide input into any cultural monitoring requirements and measures to be implemented during construction activities, to acknowledge and historic and cultural values of the area to Mana Whenua and to minimise potential adverse effects on these values.*

17. *The Construction Management Plan must achieve the objective in Condition 11 and must include:*

...

(k) *a summary of comments received from Ngāti Te Ata and a summary of where comments have:*

- i. *been incorporated; and*
- ii. *where not incorporated, reasons why.*

...

Landscape Management Plan

24. *The Requiring Authority must prepare a Landscape Management Plan and submit it to Council for certification, either before or at the same time as submitting the first Outline Plan to Council. For the avoidance of doubt, planting in accordance with the Landscape Management Plan may be undertaken at any time after the Landscape Management Plan has been certified by the Council.*

...

26. *Ngāti Tamaoho and Ngāti Te Ata shall be invited to participate in the preparation of the Landscape Management Plan to provide input into relevant cultural landscape and design matters including how desired outcomes for the management of potential cultural effects may be reflected in the Landscape Management Plan.*

...

28. *The Landscape Management Plan must achieve the objective in Condition 22 and shall include:*

...

(g) *a summary of comments received from Ngāti Tamaoho and Ngāti Te Ata, and a summary of where comments have:*
i. been incorporated; and
ii. where not incorporated, reasons why.

4.3.10 Ecology

Discussions

394. A significant number of submissions raise concerns around the quality of the treated wastewater discharge and associated environmental effects on the Manukau Harbour. Submitters either seek withdrawal of the NoR or a change in the discharge location (i.e. to the Tasman Sea or to land) to avoid effects on the harbour.
395. As discussed earlier, the proposed WWTP will rely on the granted regional consents to discharge treated wastewater in accordance with the conditions of consent.
396. Several submitters have requested the use of native species for mitigation planting. I note that the planting of indigenous species is proposed in the planting schedule in the Landscape Planting Plan (Appendix E of the application) across multiple areas of the site.
397. Several submitters state that the construction of the irrigation ponds on the site has resulted in damage to existing wetlands. Submitters request that any damaged wetland be restored to their original state (2011 and pre-2015 states have been given).

398. Kahawai Point Development Limited [218.4] seeks a greater mix of coastal planting 'for ecological benefits' in the area identified as P04.
399. Kahawai Point Development Limited [218.5] requests the NoR provide for an ongoing pest control plan as an operational condition.
400. Section 4 of Mr Jason Smith's assessment considers the submissions received on the NoR which raise the matter of ecological effects. I highlight Mr Smith's comments on the submissions identified in paragraphs 397 to 399 above:

Restoration of Ponds/Wetlands

Several submissions have been received in relation to the restoring natural wetlands lost or modified during the construction of the existing irrigation ponds on site.

Whilst the restoration of natural wetlands, both in terms of extent and values, is supported from an ecological perspective, I am not aware of a mechanism to link this to the proposed NoR/Designation unless the applicant offers it as an undertaking.

Positive Effects

Submitter 218 (Kahawai Point Development Limited) has raised two submission points that seek to further enhance ecological values of the site:

- *218.4: On-going ecological effects should be further mitigated by the introduction of longer term and larger scale coastal native planting in area PO4 of the Landscaping Planting Plan to promote bird life e.g. Pohutakawa, Kahikatea, Kowhai, Puriri or Taraire.*
- *218.5: In order to protect the ecology of the area, a commitment to pest control is required. A pest control plan should be an on-going operational condition, which could include a requirement to join 'Predator Free Franklin', fortnightly trap management and data recording.*

From an ecological perspective, these measures would assist in improving the ecological values of the site and are therefore supported, noting as I have done above that they would not be required to address any specific impact, effect or concern.

401. Mr Smith has not recommended any specific management measures in relation to ecological matters as he has concluded that the application has sufficiently addressed the potential ecological effects associated with the NoR, with future consenting processes being able to be relied upon if the need arises.

Recommendations

402. No modification to the NoR is considered necessary in response to submissions.

4.3.11 Transport

Discussion

403. The key transport issues raised by submitters include construction traffic effects on Glenbrook Beach Road, safety of the proposed access point and construction of the conveyance pipeline within the road corridor of Glenbrook Beach Road.
404. Submitters are concerned about the construction effects on Glenbrook Beach Road associated with the proposed WWTP. Submitters state that Glenbrook Beach Road is unable to accommodate the volume of construction traffic anticipated, resulting in substantial disruptions and delays for road users and residents.
405. Several submitters also state that there are safety issues with the proposed location of site access, noting the narrowness of the road and that the bends in the road on either side of the access obscure sightlines.
406. The Ministry of Education [229.1] is concerned that an increase in truck movements associated with the construction of the WWTP presents safety risks to students at the following schools, particularly during 'peak periods' (morning drop off and afternoon pick up):
- Glenbrook School
 - Patumahoe School
 - Puni School
 - Mauku School
407. The Ministry of Education requests the following amendment to the CTMP condition to address its concerns:
- 18. The CTMP must achieve the objective in Condition 16 and must:*
- a) identify the numbers, frequencies, and timing of traffic movements for each phase of the construction programme in the Construction Management Plan, including any limitations on heavy vehicle movements during peak times, or other times as required either in relation to traffic conditions or to mitigate potential noise and vibration effects;*
- b) Identify safe site access arrangements, and site access points for construction traffic, including heavy vehicles involved in constructing the WWTP in a manner consistent with Waka Kotahi NZ Transport Agency's Code of Practice for Temporary Traffic Management.*
- c) Identify the construction traffic routes for heavy vehicle movements. Include details on how all heavy vehicle movements must avoid any school on an identified construction traffic route at peak pick-up and drop-off times. The CTMP must include details of engagement with these identified schools and the Ministry of Education to confirm the peak timeframes heavy vehicle movements must avoid the schools during school term time only.*

Advice note: A heavy vehicle is defined as any vehicle larger than the average ute or van where it has the potential to reduce visibility on the road.

408. Section 4 of Mr Peake's assessment considers the submissions received on the NoR. Mr Peake has considered the matters raised in the submissions in forming his conclusions and recommendations. Mr Peake's recommendations on the key issues raised in submissions is discussed below.

Construction effects on Glenbrook Beach Road

409. In response to submitters concerns regarding the capacity of Glenbrook Beach Road to accommodate construction traffic, Mr Peake states:

With regards to the operation of Glenbrook Beach Road, the Applicant has forecast that there would be peak hour flows of around 1,050vph two-way on Glenbrook Beach Road. The Applicant has also forecast that at peak times there could be 60 additional vehicle movements per hour associated with construction, the majority being light vehicles resulting in a flow of 1,110vph.

I consider that Glenbrook Beach Road has sufficient capacity to accommodate 1,110vph two-way. Furthermore, the construction traffic at peak times will be in the opposite direction to the peak traffic flows on Glenbrook Beach Road (i.e. in the AM peak construction traffic would be northbound into the site whereas the peak direction for general traffic is southbound, and vice versa in the PM peak). Therefore, I consider that construction traffic is unlikely to result in an appreciable difference in the operation of Glenbrook Beach Road.

I note that I have observed the operation of the network at peak traffic times, in particular around the Brookside Road / Mission Bush Road intersection and the Brookside Road / Glenbrook Road intersection. During these observations, motorists did not experience any notable delay.

Outside of peak times, traffic flows on Glenbrook Beach Road would be lower than those volumes stated above, as would construction traffic (estimated to be four vehicle movements per hour). Such an increase in traffic is unlikely to be noticeable effect on the capacity or operation of Glenbrook Beach Road.

I acknowledge that Glenbrook Beach Road is the only road that provides access to Glenbrook Beach, however, I do not consider that the addition of up to 60 vehicles per hour (1 vehicle per minute) at peak times would have a significant effect on the efficient operation of this road, particularly when the majority of these movements would be in the counter-peak direction.

410. Submitters have raised concerns that the construction of the proposed WWTP may occur simultaneously with the installation of a pipeline within roads in the vicinity of the site. As noted in Section 3.4.4 of this report, Mr Peake shares the similar concerns and recommends that an additional condition should be attached to the CTMP condition to require consideration of how construction traffic would be managed for any works within the road reserve for the following reasons:

To minimise the effect of the site's construction traffic, particularly heavy vehicles, on the operation of the road network with the construction of the pipeline at peak times, I consider that an appropriate condition be included in the CTMP condition. The key concern would be for when the pipeline is being installed on Glenbrook Beach Road south of the site access and along Brookside Road between its intersections with Glenbrook Beach Road and Mission Bush Road, as this is the only road into and out of the area.

411. The proposed wording of the additional condition is as follows:

18.(d) manage and coordinate construction traffic and construction activities with any other works undertaken within the road reserve corridor on Glenbrook Beach Road and Brookside Road north of the intersection with Brookside Road and Mission Bush Road to minimise the effects of construction traffic or construction activities on congestion and delays to road users;

Safety of site access

412. In response to concerns raised by submitters on the safety of the site access for reasons including the narrowness of the road and limited visibility around bends, Mr Peake states:

I have reviewed the assessment undertaken by the Applicant, and that subject to the provision of a concept design plan of the access arrangements, I am comfortable that the site accesses can be designed to provide appropriate visibility along Glenbrook Beach Road and that with the provision of a right turn bay the access will not block the northbound movement of traffic on Glenbrook Beach Road. As stated above, I recommend that the conditions include for the requirement for the right turn bay and to ensure that visibility splays are maintained.

Submission 229 - Ministry of Education

413. The Ministry of Education has raised concerns around construction traffic past schools that are on heavy vehicle routes and has requested amendments to the CTMP condition. Mr Peake has considered the submission and provides the following assessment:

I have reviewed the location of the schools in relation to the site and note below the distances that this schools are from the subject site as reported by Google Maps:

Glenbrook School – 6km

Patumahoe School – 15 to 20km

Puni School – 16 to 17km

Mauku School – 14 to 15km

With the exception of Glenbrook School these schools are some considerable distance from the site, and it would be difficult to manage the movement of heavy vehicles past these locations at specific times (due to the travel distances involved).

With respect to Glenbrook School, this is located closer to the site. However, it is unlikely that vehicles travelling to the proposed SWWTP would utilise the section of Glenbrook Road outside the school frontage as vehicles to/from the north would utilise Brookside Road and vehicles to/from the south would use Mission Bush Road.

414. Mr Peake does not support the relief sought and no amendments to the CTMP condition is recommended.

Submission 48 – Glenbrook Beach Residents and Ratepayers Association

415. Mr Peake has considered the concerns raised by the submitter around the safety of school students and cyclists walking along Glenbrook Beach Road with no footpath. Mr Peake states:

The submitter has raised a concern over the safety of school students walking along the berm to get to driveways once dropped off from school. I concur that there are no proposed facilities nor are there any current facilities for school students. Notwithstanding, there may be an increased risk to pedestrians with heavy vehicles using the site. I, therefore, consider that the CTMP should be amended to require this risk to be managed and this is discussed in paragraph 5.5.

416. An additional condition to the CTMP condition has been recommended to improve safety outcomes:

18.(e) Provide for public safety including the safe movement of pedestrians and cyclists along Glenbrook Beach Road along the frontage of the site.

Recommendations

417. I agree with Mr Peake's assessment and I support his recommended wording for the two conditions (as set out in paragraphs 411 and 416) which set additional requirements for the CTMP (refer to **Attachment 4**).

4.3.12 Noise

Discussion

418. The key issue raised by submitters with respect to noise is that operational noise from the WWTP would be audible at nearby residential properties, exacerbated by the fact that the local area is accustomed to being a quiet rural environment. Submitters are also concerned with the effects of construction noise on residential amenity, particularly for any works that occur outside 'normal' hours.
419. Submitters request that appropriate measures be put in place to ensure construction and operational noise are mitigated.
420. Mr Andrew Gordon has considered the noise and vibration effects raised in submissions as part of his assessment and in forming his conclusions and recommendations.
421. Mr Gordon considers that the conditions offered by the requiring authority, subject to an amendment to the night time noise limit (refer to Section 3.4.3 of this report), would adequately manage any noise effects arising from the construction and ongoing operation of the proposed WWTP.

Recommendations

422. I agree with Mr Gordon's assessment that any adverse effects associated with construction and operational noise will be avoided and/or adequately mitigated by the imposition of conditions (refer to **Attachment 4**).

4.3.13 All other matters

Discussion

423. There are a variety of submissions which raise concerns not addressed above regarding:
- Zoning
 - Property value
 - Lapse period
 - Specific restrictions/monitoring regimes for the operational WWTP

424. The concerns raised are discussed in general below.

Site zoning

425. Several of the submitter requests that the site is not rezoned as 'industrial', noting that the land is identified as being highly productive. The current zoning of Rural – Mixed Rural will be retained as a plan change would be required to change the underlying zoning. The NoR, if confirmed, will not change the zoning.

Compensation for reduction of property value

426. Several submitters have raised concerns that the proposed WWTP will have reduce the value of their properties and seek compensation.
427. My view on property values is set in Section 4.3.2.

Lapse period

428. Knight Investments Limited [50.3] have requested a 2-year lapse period for the NoR to align with the imminent lapse date of the discharge consent in 2026.
429. Watercare has requested a 5-year lapse period for the designation which aligns with what is provided for under section 184 of the RMA.
430. Section 184(1)(c) of the RMA would allow the specification of a different lapse period.
431. I am not convinced that it is necessary to reduce the lapse period provided for under the RMA. A reduction in the lapse date doesn't necessarily guarantee that the proposed WWTP will be completed earlier. Also, the matter of giving effect to the discharge consent is an issue for the requiring authority.

Confirmation of WWTP capacity

432. Knight Investments Limited [50.4, 50.5] requests confirmation of the following matters in the event that the NoR is confirmed:
- *Confirmation that the stage 1 construction capacity will include capacity for all of the submitter's landholdings within the Clarks Beach Precinct; and*
 - *Confirmation as to the future potential capacity of the WWTP to service growth beyond the current AUP future urban areas.*
433. This is a matter for the requiring authority so I do not provide any recommendations here in terms of the NoR.

Specific restrictions and/or monitoring regimes for the operational WWTP

434. Several submitters have sought to impose additional restrictions on the operation of the proposed WWTP by requiring Watercare to establish protocols or observe various limitations in its management of the site, including requirements to continually upgrade the plant over time to minimise effects.
435. Mark Gasson [51.6], Tessa Gasson [226.6] and Stop Polluting The Manukau Harbour Inc. [227.6] request that a binding covenant be placed on the site in perpetuity, to ensure the following:
- '...prohibiting the processing of any waste that contains heavy metals beyond a quantitative "baseline" amount established by Watercare and agreed to by the community.*

‘...stating that emissions of aerosols, odour, pathogens and other such ecological hazards are not to exceed a quantitative “baseline” amount established by Watercare and agreed to by the community.

436. Kahawai Point Development Limited [218.6] requests the imposition of a condition which measures and reports on the operational performance of the WWTP in regard to water quality and process efficiency.
437. The submissions in paragraphs 435 and 436 above appear to address matters that are in the realm of the granted discharge consent. The discharge of treated wastewater from the proposed WWTP will rely on consents that Watercare holds. The discharge consents set out numerous conditions such as limits on discharge quality, compliance monitoring, management plans and limits on particular contaminants.
438. Mark Gasson [51.8], Tessa Gasson [226.8] Stop Polluting The Manukau Harbour Inc. [227.8] request that a ‘Plant Community Liaison Group’ be established. The purpose of the group is set out below:
- The purpose of the PCLG would be to monitor and comment on any binding quantitative plant performance metrics agreed to by Watercare (such as the covenants above, the “Emerging Contaminants Risk Assessment (ECRA), the Monitoring and Technology Review Report (MTTR), the Operations and Management Plan (OMP)*
439. I note that Condition 5 and Condition 7 which applies to both the regional consents (CST60082600 and CST60082302) already deals with the matters raised above.
440. Condition 5 of the discharge consents requires the establishment of a ‘Community Liaison Group’. Condition 7 of the discharge consents, which sets out the functions of the Community Liaison Group, states:
- (d) The consent holder shall provide the Draft Receiving Environment Monitoring Programme, Draft Operations and Management Plan, and Draft Emerging Contaminants Risk Assessment to the Community Liaison Group for comment prior to being submitted to the Council’s Team Leader – Southern Monitoring for certification.*
441. I do not see any reason to repeat these existing conditions for this NoR.

Recommendations

442. The actual and potential adverse effects of the NoR on the environment are addressed in Section 3.4 of this report. Aside from the recommended conditions as set out in **Attachment 4**, I do not consider any further restrictions are necessary.

5 National policy statements

443. Section 171(1)(a)(ii) requires the council to, subject to Part 2, consider the effects on the environment of allowing the NoR, having particular regard to any relevant provisions of a national policy statement. The following national policy statements are considered to be relevant to the NoR.

5.1 National Policy Statement for Highly Productive Land 2022 (NPS-HPL)

444. The National Policy Statement for Highly Productive Land 2022 ('**NPS-HPL**') is discussed in Section 7.1.1 of the AEE. An assessment of the NoR against the relevant objectives and policies of the NPS-HPL is provided in Section A.1 of Appendix A to the AEE.
445. The NPS-HPL came into force on 17 October 2022 and requires the protection of highly productive land that is zoned either general rural or rural production, and is predominantly Land Use Capability ('**LUC**') 1, 2 or 3 land, and forms a large and geographically cohesive area (clause 3.4(1)).
446. The site is predominately zoned Rural - Mixed Rural which although not specifically referred to by the NPS-HPL, is consistent with the General Rural Zone under the National Planning Standards, because it provides for a range of rural production activities and associated non-residential activities.
447. Land classified as LUC 1 and 2 has been identified on the site, as shown in **Figure 21** below.

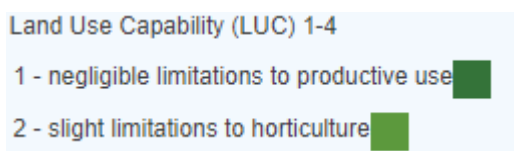
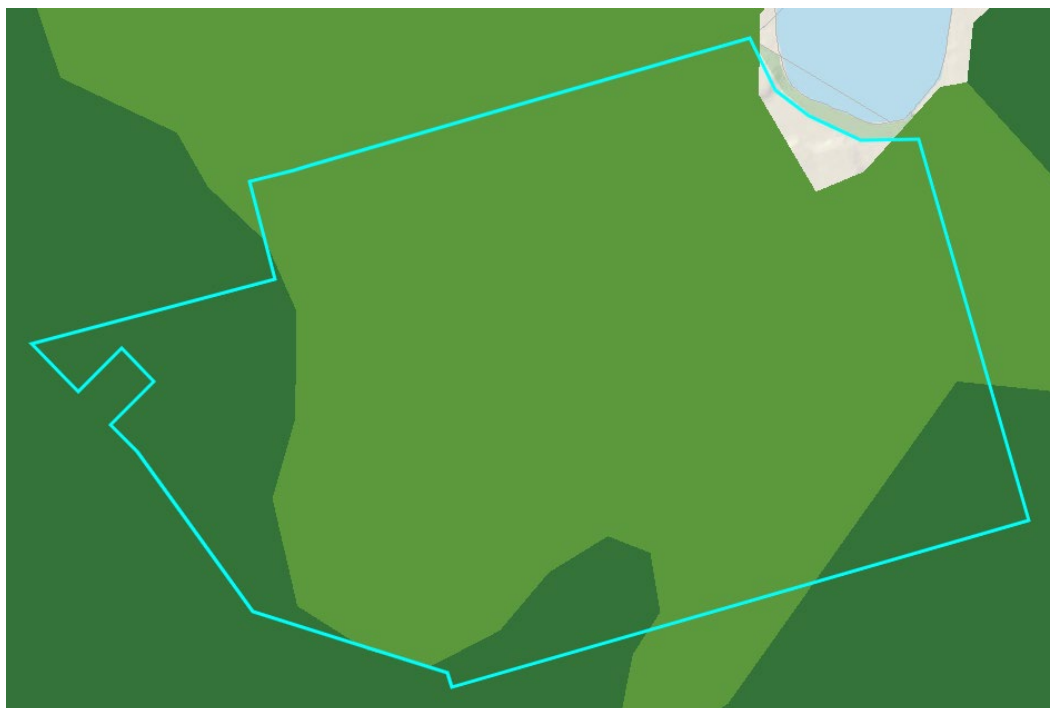


Figure 21: LUC 1-4 classifications extracted from AUP GeoMaps

448. The NPS-HPL has a single objective, which is to protect highly productive land for use in land based primary production both now and for future generations. The NPS-HPL requires regional councils to map highly productive land in the regional policy statement. This has yet to be completed by Auckland Council. Until such time as that occurs, the definition of highly productive land includes land that is zoned general rural or rural production and is classified LUC 1 – 3 land.

449. The NPS-HPL contains 9 policies to implement the objective and in this case, the following policies are particularly relevant:

- *Policy 1: Highly productive land is recognised as a resource with finite characteristics and long-term values for land-based primary production.*
- *Policy 4: The use of highly productive land for land-based primary production is prioritised and supported.*
- *Policy 8: Highly productive land is protected from inappropriate use and development.*

450. The combination of these policies set a high threshold for protection of highly productive land.

451. However, the NPS-HPL also recognises limited circumstances where the use or development of highly productive land is exempted from Clause 3.9(1) (i.e. the requirement to avoid inappropriate use or development on highly productive land that is not land-based primary production). This includes the following exception for designations or NoRs in Clause 3.9(2)(h):

(2) A use or development of highly productive land is inappropriate except where at least one of the following applies to the use or development, and the measures in subclause (3) are applied:

...

(h) it is for an activity by a requiring authority in relation to a designation or notice of requirement under the Act:

452. Also, under Clause 3.9(2)(j), an exception from the requirements of Clause 3.9(1) is provided for in the use and development of 'specified infrastructure' where there is a functional or operational need for the infrastructure to be on highly productive land:

(2) A use or development of highly productive land is inappropriate except where at least one of the following applies to the use or development, and the measures in subclause (3) are applied:

...

(j) it is associated with one of the following, and there is a functional or operational need for the use or development to be on the highly productive land:

(i) the maintenance, operation, upgrade, or expansion of specified infrastructure:

453. I agree with the conclusion reached in Section 7.1.1 of the AEE stating that there is an operational need for the infrastructure to be in the proposed location.
454. Section 7.1.1 of the AEE has given consideration to the requirements of subclause (3) of Clause 3.9 when locating the Project on highly productive land. The assessment is briefly summarised below.

Clause 3.9(3)(a) – minimise or mitigate loss of highly productive land

455. In order to minimise the loss of highly productive land, the concept plan shows that the primary plant facilities will be contained in the central area of the site ensuring that the majority of the site will retain the potential for future rural production uses. The AEE states:

The operational elements of the WWTP will not occupy all of the designated site due to the 200m wide buffer and both minimises the footprint of the WWTP and the impact on productive capacity as the remainder (not required as landscaping or an inland wetland or stream) can be used for land-based primary production.

Clause 3.9(3)(b) – reverse sensitivity

456. With respect to any actual or potential reverse sensitivity on land-primary production activities from the use or development of the proposed WWTP, the AEE states:

The WWTP is not a sensitive receiver and will not generate any reverse sensitivity effects on land-based primary production activities adjacent to the site.

457. It is my view that the NoR falls within the exceptions listed above in clauses 3.9(2)(h) and 3.9(2)(j), and also that the use and development of the proposed WWTP will meet the requirements set out under subclause (3) of Clause 3.9. Therefore, the NoR is considered to be consistent with the NPS-HPL.

5.2 National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB)

458. Section 7.1.4 of the AEE addresses the National Policy Statement for Indigenous Biodiversity 2023 ('NPS-IB'). An assessment of the NoR against the relevant objectives and policies of the NPS-IB is provided in Section A.4 of Appendix A to the AEE.
459. The purpose of the NPS-IB is to protect and maintain indigenous biodiversity across Aotearoa New Zealand by setting clear and consistent criteria for identifying and managing indigenous biodiversity across different districts and regions.
460. With respect to indigenous vegetation, the AEE notes that the site has been modified by farming activities and that there are relatively few areas of indigenous vegetation. Indigenous vegetation is stated to be located close to the streams and around the wetlands. The AEE confirms that works will avoid these natural features and the proposed mitigation planting will introduce additional indigenous vegetation to the site (refer to the Planting Schedule in the Landscape Planting Plan).

461. The AEE states that the works will avoid the SEAs (in the adjacent coastal marine area) and the saltmarshes located in it, and that erosion and sediment controls will be implemented through the CMP to ensure that sediment intrusion into these downstream habitats will be minimised.

462. The Ecology Assessment (Appendix F to the application) notes that the habitat quality for indigenous lizards in the site was poor, but the assessment did note that there are records of at-risk indigenous lizards being present in the wider ecological district (within 20km of the site).

463. With respect to indigenous birds, the Ecology Assessment provides the following assessment:

A desktop assessment of potential bird species likely to be present was undertaken. It is clear that the site's proximity to the Manukau Harbour and its flat topography would be a clear drawback for both indigenous and migratory birds. It was noted however that the current land use with periodic cultivation, planting out and harvesting of crops make this less favourable compared to pastoral grasslands close by.

464. The effects of the proposed WWTP on existing habitats on the site likely to be used by migratory species has also been assessed by the Ecology Assessment:

There are also areas important to migratory species that use the ponds and wetlands. The effects on these area from allowing the NoR will be negligible as the vegetation, ponds and wetlands will not be disturbed.

465. Ecology effects arising from the implementation of the Project has been assessed in Section 3.4.5 of this report. Mr Jason Smith, council's consultant ecological specialist concurs with the application's description of the current ecological values, the magnitude of any potential effects on those values and the overall level of effect.

466. Overall, I consider that the NoR is consistent with the NPS-IB.

5.3 New Zealand Coastal Policy Statement 2010 (NZCPS)

467. The New Zealand Coastal Policy Statement 2010 ('NZCPS') contains objectives and policies relating to the coastal environment.

468. An assessment of the NoR against the NZCPS has been provided in Section 7.1.5 of the AEE and also in Section 9 of the Stormwater and Flooding Report (Appendix I to the application). An assessment of the NoR against the relevant objectives and policies of the NZCPS is provided in Section A.5 of Appendix A to the AEE.

469. The site is within both the coastal environment and the CMA. A small portion of the site extends into the CMA though this area will not be affected by the proposed works. The AEE notes that the potential effects of the works are limited to the following:

- *Visual effects as a result of any changes close to the coastal environment as seen from the land to the north, the Taihiki River itself, and land to the east of that; and*

- *changes to the nature of the runoff from the land that enters into the coastal waters.*

470. Visual effects arising from the proposed WWTP is discussed in Section 3.4.1 of this report.
471. The AEE confirms that construction earthworks will be located at least 100m away from the CMA, and that the primary plant facilities will be located in the central part of the site well away from the CMA.
472. The AEE states that after construction of the WWTP, there is likely to be a reduction in the amount of sediment which potentially make its way to the Taihiki River due to a change of land use from market gardening. This is considered to be a consequential benefit for the CMA.
473. With respect to the potential adverse effects on the CMA from sedimentation and contamination discharge during earthworks and construction, these works are expected to be located at least 100m from the CMA and erosion and sediment controls are required through conditions to the NoR. Regional resource consents may also be required as discussed in Section 3.4.2 of this report.
474. Overall, I consider that the NoR is consistent with the NZCPS.

5.4 National Policy Statement on Urban Development 2020 (NPS-UD)

475. Section 7.1.3 of the AEE addresses the National Policy Statement on Urban Development ('NPS-UD'). Section A.3 of Appendix A to the AEE provides an assessment of the NoR against the relevant objectives and policies of the NPS-UD.
476. The purpose of the NPS-UD is to ensure that New Zealand's towns and cities are well-functioning urban environments and to enable more growth in locations within its urban environments that have good access to existing services, public transport networks and infrastructure.
477. The areas of Glenbrook Beach, Clarks Beach and Kingseat are not considered to meet the definition of 'urban environment', which is defined under the NPS-UD as any area of land that is, or is intended to be, predominantly urban in character; and is, or is intended to be, part of a housing and labour market of at least 10,000 people.
478. Waiuku, which will be serviced by the proposed WWTP does meet the definition of 'urban environment' and was included in council's intensification plan change (Plan Change 78). Plan Change 78 proposes to rezone sites (not subject to qualifying matters that utilise zonings) from the Residential – Mixed Housing Suburban Zone to the Residential – Mixed Housing Urban Zone and to incorporate the Medium Density Residential Standards (MDRS).
479. In summary, the AEE finds that the NoR will give effect to the NPS-UD because the provision of wastewater infrastructure will support and enable future growth proposed in Waiuku.
480. I agree that the NoR will give effect to the NPS-UD.

5.5 National Policy Statement on Freshwater Management 2020 (NPS-FM)

481. The applicant addresses the National Policy Statement on Freshwater Management 2020 (**'NPS-FM'**) in Section 7.1.2 of the AEE. Section A.2 of Appendix A to the AEE provides an assessment of the NoR against the relevant objectives and policies of the NPS-FM.
482. The NPS-FM sets out the statutory framework for the management of freshwater. It requires that natural and physical resources are managed in a way that prioritises the health and well-being of water bodies and freshwater ecosystems, followed by the health needs of people and then the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.
483. The NPS-FM sets out the policy framework for the NES-F and provides direction for local and regional authorities about how they must carry out their responsibilities and functions in managing freshwater. Auckland Council has not yet notified a plan change to the AUP to implement the NPS-FM.
484. The AEE has taken the NPS-FM into consideration, noting that there are natural wetlands present on the site and identified watercourses which are expected to fall under the definition of 'river' in the RMA. In terms of potential effects, the AEE states:

... direct impact on the wetlands and streams by development and use of the site for the proposed public work as provided for through this NoR, is expected to be avoided and indirect impacts are expected to be managed through the implementation of erosion and sediment controls required to be in place under the conditions of this designation and expected to be required through a regional consent. The NoR is therefore consistent with the NPS -FM.

485. I concur with the AEE's assessment of the NoR against the NPS-FM.

6 National environmental standards

486. Two national environmental standards are considered relevant to the NoR and are discussed below.

6.1 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES-CS)

487. The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (**'NES-CS'**) provides a nationally consistent set of planning controls and soil contaminant values to ensure that land affected by contaminants in soil is appropriately identified and assessed before it is developed and, if necessary, the land is remediated or the contaminants contained to make the land safe for human use.

488. I consider that the regulations of the NES-CS would apply to any future development of this site due to past land uses. Preparation of a preliminary or detailed site investigation of the land would be required to determine if there is a risk to human health as a result of current or past Hazardous Activities and Industries List ('HAIL') activities. The methods required to be followed to remediate the land, if required, can be addressed as part of any future resource consent applications as needed to develop the site.
489. The requirements under the NES-CS would be triggered by any future development undertaken on the site and potentially Chapter E30 of the AUP (regarding Contaminated Land) as well. The methods required to be followed to remediate the land, if required, can be addressed as part of any future resource consent applications as needed to develop the site.

6.2 National Environmental Standard for Freshwater 2020 (NES-F)

490. The National Environmental Standard for Freshwater 2020 ('NES-F') regulates activities that pose risks to the health of freshwater and freshwater ecosystems.
491. The NES-F regulate activities in, and within a 100 m setback of, natural inland wetlands. Regulations apply where the activity is likely to result in the complete or partial drainage of all or part of a natural inland wetland, as well as any vegetation clearance and earthworks within 10 m of a natural inland wetland.
492. As noted in the AEE, three natural inland wetlands have been identified within the site. As such, several of the regulations may be relevant and consent may be required (for discretionary activities) depending on the final earthworks plans:
- Vegetation clearance within, or within a 10 m setback from a natural wetland;
 - Earthworks within, or within a 10 m setback from, a natural wetland;
 - The taking, use, damming, diversion, or discharge of water within, or within a 100 m setback from, a natural wetland; and
 - Earthworks outside, but within a 100 m setback from, a natural wetland which result or are likely to result in the complete or partial drainage of all or part of a natural wetland.
 - For ecological effects that relate to the NES-F, these will be assessed as part of resource consent applications which are to be lodged at a future date.
493. For ecological effects that are managed under the NES-F, these will be assessed as part of resource consent applications which can be lodged following the NoR process.

7 Regional Policy Statement (Chapter B of the AUP) (RPS)

494. The Regional Policy Statement ('RPS') sets the strategic direction for managing the use and development of natural and physical resources throughout Auckland.

495. The following RPS provisions are considered relevant to the NoR and are addressed in Section 7.2.1 of the AEE and in more detail in Section A.6 of Appendix A to the AEE:

- Chapter B2 Urban growth and form
- Chapter B3 Infrastructure
- Chapter B7 Natural resources
- Chapter B8 Coastal environment
- Chapter B9 Rural environment

496. As part the requiring authority’s response to council’s section 92 request, an assessment against B10.2 Natural hazards and climate change was undertaken (refer to **Attachment 1**).

497. I generally agree with the assessments made against these provisions in the AEE and in the section 92 response.

8 Auckland Unitary Plan - Chapter D overlays

498. The AUP overlays that apply to the site are the High-Use Aquifer Management Area Overlay – Glenbrook Kaawa Aquifer and the Significant Ecological Areas Overlay – Marine 2. Refer to **Figure 22** below.

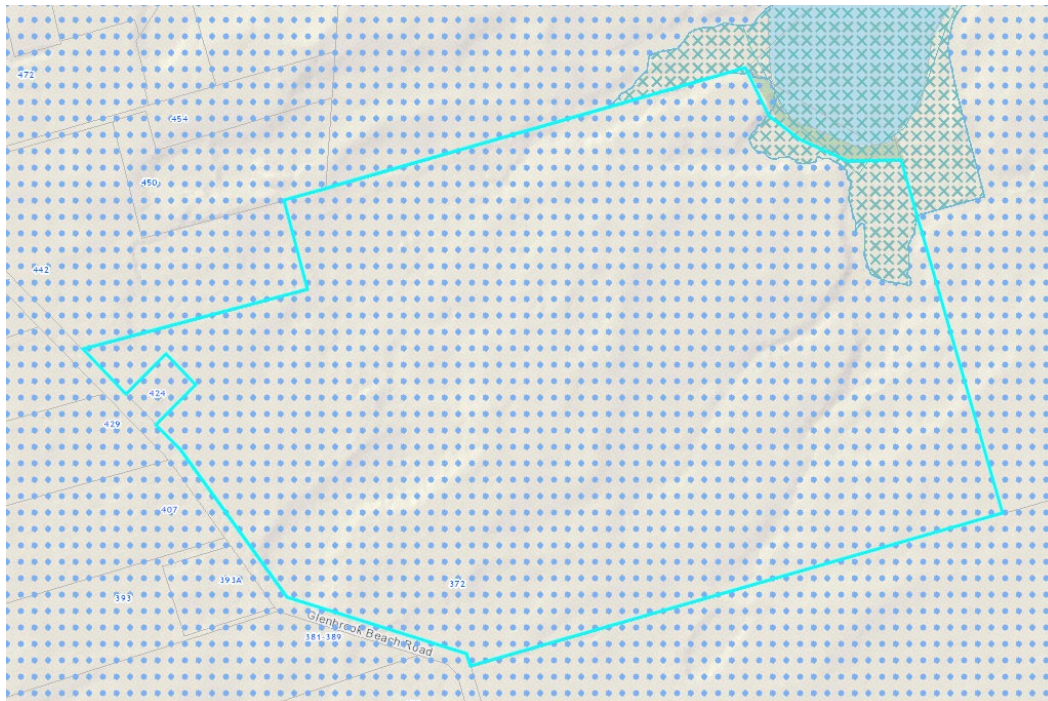


Figure 22: AUP overlays applying to the site.

499. The objectives and policies for the High-Use Aquifer Management Area Overlay – Glenbrook Kaawa Aquifer are contained in Chapter D1 (High-use Aquifer Management Areas Overlay), and the rules are contained in Chapter E7 (Taking, using, damming and diversion of water and drilling, and Chapter E32 (Biosolids).
500. The purpose of this overlay is to manage water availability to meet user needs whilst also maintaining base flows for surface streams (Objective D1.2(1)). Policies D1.3(1) and (2) provide the consenting framework to manage water take and use within High-Use Aquifer Management Areas. These provisions may be relevant if the construction of the proposed WWTP and its associated excavation will involve diversion of groundwater or dewatering.
501. A small portion of the site near the coast is subject to the SEA - Marine 2 (SEA-M2-31 and SEA-M2-31w1) overlay. The primary method the AUP uses to protect biodiversity is the identification of SEAs. These areas receive the highest level of protection.
502. The SEA-Marine layer addresses requirements in Policy 11 of the NZCPS to protect indigenous biodiversity in the coastal environment. The SEA-Marine overlay covers significant areas within the near shore areas of Auckland’s CMA, including estuarine and intertidal areas, coastline and harbours.
503. SEA-M1 areas are considered to be the most vulnerable to any adverse effects while the SEA-M2 areas are generally less vulnerable and contain more extensive areas of indigenous vegetation and feeding sites for fauna species, including threatened species. These SEA-M2 areas generally correspond to the matters listed in Policy 11(b) of the NZCPS, reflected in Policy 17 of B4.3.4.
504. The provisions of Chapter D1 are regional provisions. Therefore, if required, an assessment of these provisions may be relevant for future regional consents.

9 Auckland Unitary Plan - Chapter E Auckland-wide

505. The following Auckland-wide provisions are addressed in Section 7.2.2 of the AEE, with more detailed assessments provided in Section A.7.2 to Appendix A of the AEE. The supporting specialist reports have also provided comments where relevant.
- Chapter E1 Water quality and integrated management
 - Chapter E3 Lakes, rivers, streams and wetlands
 - Chapter E11 Land disturbance – Regional
 - Chapter E12 Land disturbance – District
 - Chapter E14 Air Quality
 - Chapter E15 Vegetation management and biodiversity
 - Chapter E18 Natural character of the coastal environment
 - Chapter E19 Natural features and natural landscapes in the coastal environment

- Chapter E26 Infrastructure
- Chapter E36 Natural hazards and flooding
- Chapter E40 Temporary activities

506. I agree with the AEE in that a designation is still subject to the regional provisions of the AUP, and regional approvals can be sought separately from the NoR process. Nevertheless, it is my view that consideration of the regional provisions at the NoR stage can still influence the design and layout of the site and therefore an assessment of the regional provisions is still useful, as provided for in the AEE.

507. Overall, I agree with the assessment provided in the AEE on these regional matters. I provide my assessment on the following Chapters which are not addressed in the AEE.

Chapter E24 Lighting

508. The provisions in Chapter E24 provide for the management of artificial lighting to support activities and enable safety and security for people and property, while minimising potential adverse effects.

509. The relevant objectives and policies of Chapter E24 are considered to be:

E24.2. Objectives [rcp/dp]

- (1) Artificial lighting enables outdoor activities and the security and safety of people and property.*
- (2) The adverse effects of outdoor lighting on the environment and safety of road users are limited.*

E24.3. Policies [rcp/dp]

- (3) Provide for appropriate levels of artificial lighting to enable the safe and efficient undertaking of outdoor activities, including night time working, recreation and entertainment.*
- (4) Control the intensity, location and direction of artificial lighting to avoid significant glare and light spill onto adjacent sites, maintain safety for road users and minimise the loss of night sky viewing.*

510. The AEE notes that due to the 24/7 operation of the site, parts of the proposed WWTP will have intermittent lighting. In terms of potential effects, the AEE confirms the following:

While no assessment for the use of lighting is provided the distance from the nearest boundary means that lighting effects are expected to be the same or less than what is permitted under the relevant permitted activity standards. The detailed design process will identify where the lighting is located and what is required to ensure safe operation.

511. The proposed NoR conditions require the preparation and certification (by Auckland Council) of an Operational Lighting Plan. The objective of the Operational Lighting Plan generally aligns with the management approach set out in Chapter E24.
512. In my view, the potential effects of lighting can be addressed in accordance with the conditions which will ensure consistency with the relevant objectives and policies of Chapter E24 once the layout of proposed WWTP is confirmed at the OPW stage.

Chapter E25 Noise and vibration

513. Chapter E25 seeks to control the levels of noise and vibration created by activities to limit the adverse effects of noise and vibration on amenity values, human health and to protect existing noisy activities from reverse sensitivity effects.
514. The relevant objectives and policies of Chapter E25 are considered to be:

E25.2. Objectives [rcp/dp]

- (1) People are protected from unreasonable levels of noise and vibration.*
- (2) The amenity values of residential zones are protected from unreasonable noise and vibration, particularly at night*
- (3) ...*
- (4) Construction activities that cannot meet noise and vibration standards are enabled while controlling duration, frequency and timing to manage adverse effects.*

E25.3. Policies [rcp/dp]

- (1) Set appropriate noise and vibration standards to reflect each zone's function and permitted activities, while ensuring that the potential adverse effects of noise and vibration are avoided, remedied or mitigated.*
- (2) Minimise, where practicable, noise and vibration at its source or on the site from which it is generated to mitigate adverse effects on adjacent sites.*

...

Noise arising from or affecting rural zones

- (9) Avoid, remedy or mitigate the adverse effects of noise in the rural environment, having regard to the working nature of this environment*

Construction, demolition and maintenance activities

- (10) Avoid, remedy or mitigate the adverse effects of noise and vibration from construction, maintenance and demolition activities while having regard to:*
 - (a) the sensitivity of the receiving environment; and*
 - (b) the proposed duration and hours of operation of the activity; and*

(c) the practicability of complying with permitted noise and vibration standards.

515. The Acoustic Impact Assessment (Appendix J to the application) has provided an assessment of the Project in terms of operational and construction noise against the relevant rules of Chapter E25, which it proposes to adopt for the NoR conditions.
516. Conditions around operational noise and construction noise (to be managed through the CTMP) have been offered by the requiring authority to address the potential effects of noise. The Acoustic Impact Assessment states that the proposed WWTP can be designed, constructed and operated to comply with the operational and construction noise conditions.
517. The Acoustic Impact Assessment has assessed the potential effects of vibration from construction activities and finds that it will be of no appreciable significance.
518. Overall, I consider the NoR is consistent with the relevant objectives and policies in Chapter E25 given the proposed conditions relating to operational and construction noise.

10 Auckland Unitary Plan – District section

519. Chapter H provisions are addressed in Section 7.2.3 of the AEE and Section A.7 of Appendix A to the AEE. The relevant provisions are considered to be:
- Rural – Mixed Rural and Coastal Rural Zones
 - Infrastructure
 - Earthworks
 - Natural hazards
 - Noise and vibration and lighting
 - Construction activities
 - Coastal environment
520. I generally agree with the assessments made against these provisions in the AEE. Where I have considered there is a potential issue, I have addressed this in Section 3.4 of this report where much of the matters covered by Chapter H provisions have been canvassed. Where necessary, I have also recommended amendments to conditions (such as those around visual and amenity effects) as set out in **Attachment 4**.

11 Alternative sites, routes or methods – section 171(1)(b)

521. Section 171(1)(b)(i) and section 171(1)(b)(ii) establishes that if a requiring authority has an interest in the land sufficient to undertake the works, and the works will not have significant adverse effects on the environment, then the requiring authority is not required to consider alternative sites, routes or methods.

522. While Watercare has an interest in the site subject to the NoR, significant visual effects are anticipated in the short to medium term as discussed in Section 3.4.1 of this report.
523. As such, the adequacy of the consideration of alternative sites is discussed below.
524. The process undertaken for the assessment of alternative sites is discussed in Section 7.3.1 of the AEE and in the Assessment of Alternative Sites report (and its appendices). A summary of the process and assessments completed is as follows:
- Watercare engaged Beca Limited to undertake an alternative options assessment process for a new WWTP location.
 - A wide range of sites was considered and assessed using a robust assessment methodology. An initial screening of sites followed by short and long list assessments involving a multi-criteria approach was undertaken. The methodology adopted and the assessment framework used is described in detail in Section 4 of the Assessment of Alternative Sites report (Appendix C to the application).
 - Initially, 26 sites were long listed. Following community consultation, nine additional sites which met the screening criteria were added in the long list. The additional nine sites were all located west of the Waiuku River, on the Awhitu Peninsula.
 - Seven sites were short listed including 372 Glenbrook Beach Road (Site T). The alternatives assessment progressed to the identification of a preferred option at 162 Clarks Beach Road (Site B).
 - Watercare was not able to resolve commercial negotiations to purchase the site and noted that there were complexities in acquiring this site under the Public Works Act 1981. As a result, further consideration of the short-list sites was required, and 'ease of acquisition' was noted to be an essential consideration going forward.
 - 372 Glenbrook Beach Road was one of the four shortlisted sites subsequently taken forward for further consideration. Site B (the previously preferred site) and sites W and X were not taken forward due to either complexities in negotiations to purchase or a strong unwillingness of the owners to sell (i.e. Watercare specialists were not allowed access on-site).
 - 372 Glenbrook Beach Road was noted as scoring well against a number of considerations including land requirement (i.e. complexity of site acquisition), odour amenity, ecology, WWTP construction footprint and other engineering considerations (i.e. construction risk, better access, less earthworks, less complex utilities, geotechnical considerations and reduced piping lengths), operation and maintenance (i.e. sites of sufficient size, relatively flat and less complex operation and maintenance), and wastewater reuse.

- As part of consultation during the site selection, Ngāti Te Ata and Ngāti Tamaoho stated that they were strongly opposed to the WWTP being located on a coastal headland due to the high cultural significance of these areas. This was not the case for 372 Glenbrook Beach Road.
- Beca Limited recommended to Watercare that it determines Site T (372 Glenbrook Beach Road) as the preferred site.
- 372 Glenbrook Beach Road was ultimately confirmed by Watercare as the preferred site and Watercare was successful in purchasing the site.

525. Section 171(1)(b) does not require a requiring authority to fully evaluate every non-suppositious alternative with potentially reduced environmental effects.⁵ The enquiry is into whether the requiring authority has acted arbitrarily or given only cursory consideration to the alternatives.⁶

526. It is my opinion that a realistic and adequate consideration of alternative sites has been provided. In my view, the application has provided detailed documentation of the assessment process to demonstrate that sufficient investigations of several alternatives were made, and each alternative was carefully assessed as evidenced by the documents lodged. I do not consider there to be any alternative ‘methods’ to wastewater treatment that wouldn’t essentially constitute a completely new Project. Alternative ‘routes’ is not applicable given the nature of the Project.

12 Necessity for work and designation – section 171(1)(c)

527. Section 171(1)(c) provides that when considering a NoR the territory authority must have particular regard to:

(c) whether the work and designation are reasonably necessary for achieving the objectives of the requiring authority for which the designation is sought.

528. The threshold of “necessary” has been described as falling between expedient or desirable on the one hand, and essential on the other.⁷ To elevate the threshold test to the “best” site or option would depart from the everyday usage of the phrase “reasonably necessary” and significantly limit the capacity of requiring authorities to achieve the sustainable management purpose.⁸

529. The requiring authority has set out its project objectives in Section 1.3 of the AEE:

To provide for the treatment of wastewater in southwest Auckland in a manner that:

⁵ Architectural Centre Inc, para [399].

⁶ Waimairi District Council v Christchurch City Council C30/1982

⁷ Queenstown Airport Corp Ltd v Queenstown Lakes District Council [2013] NZHC 2347, para [94].

⁸ Queenstown Airport, para [96].

- a. Responds to planned growth
- b. Protects public health
- c. Provides for flexible implementation including potential wastewater reuse in the future
- d. Keeps the overall costs of service to customers at sustainable levels
- e. Helps Watercare achieve its targets for reducing carbon emissions
- f. Has regard to mana whenua's cultural and spiritual values.

530. Section 7.3.2 of the AEE provides several reasons for why the construction and operation of the WWTP is reasonably necessary to achieve the project objectives of the requiring authority.
531. Section 7.3.3 of the AEE has considered the use of land use consents and designation as mechanisms for providing for the work. The AEE concludes that the designation mechanism is the most appropriate planning mechanism and is reasonably necessary for achieving the objectives of the requiring authority.
532. I concur with the AEE that the Project and the designation are reasonably necessary to achieve the objectives of the requiring authority.

13 Any other matter – section 171(1)(d)

533. Section 171(1)(d) provides for the consideration of any other matters that may be relevant to the determination of the NoR. The reference at s171(1)(d) to 'any other matter' is qualified by the words 'reasonably necessary'.
534. As set out in the AEE, the requiring authority considers that the following matter is relevant:

It is noted that the Archaeological Assessment recommends that when the final design is available, a full assessment of effects is undertaken in support of an application to Heritage New Zealand Pouhere Taonga (HNZPT) for an authority to modify or destroy any unrecorded archaeological deposits on Lot 1 DP 367461 that may be encountered inside the identified works area under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014.

This is because all archaeological sites, whether recorded or not, are protected by the provisions of the Heritage New Zealand Pouhere Taonga Act 2014 and may not be destroyed, damaged, or modified without an authority and the assessment concludes that there is reasonable cause to suspect that archaeology will be encountered during construction.

535. The above matter is addressed in Section 3.4.6 of this report.
536. I consider that the following plans are relevant, in terms of the 'other matters' required to be considered under section 171(1)(d), and I summarise them below.

The Auckland Plan 2050

537. The Auckland Plan 2050 is Auckland’s long-term spatial plan. It is required by the Local Government (Auckland Council) Act 2009 to contribute to Auckland's social, economic, environmental, and cultural well-being.
538. The Auckland Plan 2050 in its *Development Strategy* acknowledges the need to provide the require bulk infrastructure (water, wastewater, stormwater and transport) to areas of growth and urban development in the right place at the right time. The strategy notes that future urban areas are predominately rural at present and have little or no infrastructure in place to deal with urban development.
539. I consider the works enabled by the NoR to be consistent with Auckland Plan 2050 in that it will facilitate the sustainable growth of the southwest area by providing for bulk wastewater infrastructure required to unlock plan enabled development potential.

Franklin Local Board Plan 2023

540. The Franklin Local Board Plan 2023 recognises that significant population growth and development (increasing urbanisation and housing density) is anticipated in the Franklin Local Board area and identifies initiatives to support both the existing population as well as the new population, particularly noting that employment opportunities are critical to support population growth.
541. In my view, the establishment of the WWTP will ensure that growth will be appropriately provided for and will align with the initiatives set out in the plan.
542. The Franklin Local Board Plan 2023 has identified the presence of elite soils in the Pukekohe area as an opportunity in the ‘Our Economy’ section as the soils sustains a significant proportion of New Zealand’s vegetable growers and a wide range of high-quality successful artisan food producers.
543. Considerations around highly productive land is discussed in Section 4.4.1 of this report noting that the majority of the site is not being built on and will retain the productive potential of the soil.

Future Development Strategy 2023 – 2053

544. The Future Urban Strategy 2023 – 2053 (**‘FDS’**) identifies the sequencing and timing of future urban land over the next 30 years to meet the Council’s obligations to provide for growth. The strategy also recognises the need for certainty due to the long lead in times required to plan for and fund bulk infrastructure to support growth.
545. Auckland Council is required to update the FDS under the NPS-UD. The FDS replaces the Development Strategy (2018) and the Future Urban Land Supply Strategy (2017) but remains part of the Auckland Plan 2050.
546. The FDS largely follows the quality compact approach Auckland Council has been pursuing since the first Auckland Plan, and the approach in the current Development Strategy. It mostly contains refinement of concepts and approaches in recognition of known problems related to Auckland’s growth and development.

547. The strategy has two major changes from previous strategies:

- A much stronger focus on adaptation, particularly in relation to flooding hazards and the protection of life and property.
- A greater recognition of the financial challenges facing Auckland Council and ratepayers, giving the development sector clear signals about these constraints and when council is likely to be able to invest in infrastructure and services in respective areas, particularly in greenfield bulk infrastructure. The aim is to give the sector as much certainty as possible for their own planning, but also a 'pathway' for development that wishes to proceed earlier.

548. The FDS sets the timing of future urban areas at 'Clarks Beach Stage 2' and 'Glenbrook Beach Stage 2' to '2030+' for development readiness (refer to Table 8). For the 'Clarks Beach Stage 2' and 'Glenbrook Beach Stage 2' areas (refer to Figure 23), the infrastructure prerequisite (key bulk infrastructure projects to support development readiness) is a 'South-West Wastewater Upgrade'.

Table 8: Extract from FDS on development timings

South	Oruarangi 2	2025+
	Clarks Beach 2	2030+
	Glenbrook Beach 2	2030+
	Maraetai 2	2035+



Figure 23: Extract from FDS showing FUZ at Clarks Beach (left) and Glenbrook Beach (right)

549. In my view, an operational WWTP would ensure that development readiness for the aforementioned FUZ land can be achieved within the timeframe set by the FDS.

Te Tāruke-ā-Tāwhiri: Auckland's Climate Action Framework and Plan

550. The Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan was adopted by council in 2020. It is a roadmap to a zero-emissions, resilient and healthier region. The core goals are:

- To reduce greenhouse gas emissions by 50 per cent by 2030 and achieve net zero emissions by 2050
- To adapt to the impacts of climate change by ensuring we plan for the changes we face under our current emissions pathway

551. As discussed in the Assessment of Alternative sites report, the site selection process has considered the relative impact of greenhouse gas emissions generated from the construction of the wastewater treatment and conveyance infrastructure, as well as operational greenhouse gas emissions across alternative sites. Generally, longer conveyance pipelines and higher pumping requirements equates to greater climate impacts as greenhouse gas emissions will be generated from the construction of the conveyance infrastructure, and from the energy required to pump wastewater.
552. The requiring authority has identified considerable potential whole of life carbon savings if they changed the location of the proposed WWTP to be closer to Clarks Beach and the discharge location as the length of the conveyance infrastructure, and pumping requirements are reduced.
553. The potential effects of climate change on an operational WWTP have also been considered in the AEE and accompanying specialist reports:
- The calculated stormwater runoff rates will take into account the potential impacts of climate change;
 - assets will be located away from flood plains and overland flow paths where possible; and
 - the works are located above the areas where coastal inundation is modelled to occur.

Section 171(1)(d) conclusion

554. I consider that the above plans are relevant, in terms of 'other matters' required to be considered under Section 171(1)(d). It is my view that the NoR is consistent with the general policy framework provided by these plans.

14 Lapsing of designations – section 184

555. Section 184 of the RMA provides for a designation to lapse five years after it is included in the District Plan unless:
- a) It has been given effect to; or
 - b) Within three months of the designation lapsing, the territorial authority determines that substantial progress or effort has been and continues to be made towards giving effect to the designation, or
 - c) The designation specifies a different lapse period

556. The requiring authority has requested a 5-year lapse period for the NoR.

15 Part 2 of the Resource Management Act 1991

557. The purpose of the RMA is set out in section 5(1) which is: *to promote the sustainable management of natural and physical resources.*
558. Sustainable management is defined in section 5(2) as:

...managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while –

- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

559. An assessment of the project against **Section 5** is provided in Section 7.3.5.4 of the AEE. I agree with the assessment provided, subject to the recommended amendments to the NoR conditions.
560. Section 171 matters have been addressed above, subject to Part 2 considerations. I'm of the view that the NoR achieves the sustainable management purpose of the Act. In my view, the Project once completed will assist communities in the southwest of the Auckland Region to provide for their social, economic and cultural wellbeing and for their health and safety by accommodating the wastewater flows from a growing population, while reducing the risk of wastewater overflows and protecting both the marine and coastal environments.
561. **Section 6** of the RMA sets out the matters of national importance which must be recognised and provided for. The requiring authority has assessed the project against these matters in Section 7.3.5.1 of the AEE. I agree with this assessment.
562. **Section 7** of the RMA sets out other matters which shall be given particular regard to. The requiring authority has assessed the project against these matters in Section 7.3.5.2 of the AEE. I agree with this assessment.
563. **Section 8** of the RMA requires the principles of the Treaty of Waitangi to be taken into account. The requiring authority has assessed the NoR against these matters in Section 7.3.5.3 of the AEE. I generally agree with this assessment and note that the RA has indicated a commitment to continuing engagement post the NoR process, as stated below:
- Watercare is committed to continue engaging with Mana Whenua in relation to the design and development of the WWTP. The 19 iwi (tribal) authorities in Tāmaki Makaurau are members of the Mana Whenua Kaitiaki Forum and were advised of the Southwest WWTP project in October 2021 so that they could if they wished to, be involved in the site selection (MCA) process. The engagement with mana whenua continued in 2022 with Ngāti Te Ata, Ngāti Tamaoho and Te Ākitai Waiohua being kept informed and provided the opportunity to provide feedback on the site and the development of the NoR. The engagement is set out in Appendix D. This engagement is ongoing.*
564. Submissions from Ngāti Te Ata and Ngāti Tamaoho have been considered in Section 4.3.9 of this report.

16 Conclusions

565. I consider that it is recommended to the requiring authority that the NoR be confirmed subject to conditions and with modifications, for the following reasons:

- The NoR and associated works are reasonably necessary for achieving the objectives of the requiring authority.
- Adequate consideration has been given to alternative sites, routes or methods of undertaking the work identified in the NoR.
- The NoR is generally consistent with the relevant AUP provisions.
- The NoR is generally in accordance with Part 2 of the RMA and; and relevant national environmental standards and national policy statements.
- Conditions imposed on the designation can avoid, remedy or mitigate any potential adverse environmental effects.

17 Recommendation and conditions

17.1 Recommendation

566. Subject to new or contrary evidence being presented at the hearing, pursuant to section 171(2) of the RMA, it is recommended that the NoR be confirmed by the requiring authority, subject to the amended and additional conditions.

567. That pursuant to section 171(3) of the RMA, the reasons for the recommendation are as follows:

- The NoR is consistent with Part 2 of the RMA in that it enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety.
- The NoR is consistent with and give effect to the relevant national environmental standards, national policy statements and the AUP.
- In terms of section 171(1)(b) of the RMA, adequate consideration has been given to alternative sites, routes or methods for undertaking the work.
- In terms of section 171(1)(c) of the RMA, the NoR is reasonably necessary to achieve the requiring authority's objectives.
- Conditions attached to the NoR have been recommended to avoid, remedy or mitigate adverse environmental effects associated with the works.

17.2 Recommended conditions

568. The conditions recommended by the reporting planner are set out in **Attachment 4** to this report.

Attachment 1: Section 92 requests and responses

Attachment 2: Auckland Council Specialist Advice

Attachment 3: Summary of submissions

**Attachment 4: Recommended amendments to the proposed
Conditions**

ATTACHMENT 1

SECTION 92 REQUESTS AND RESPONSES

15 September 2022

Via E-mail: Anshita.Jerath@water.co.nz

Dear Anshita

Request for further information in accordance with section 92 of the Resource Management Act 1991

Notice of requirement: Southwest Wastewater Treatment Plant

I am writing with respect to the notice of requirement described above.

After completing a preliminary assessment of the notice of requirement documents lodged on 1 September 2023, it is considered that further information is required to enable an adequate analysis of the proposal, its effects on the environment and the way in which any adverse effects on the environment may be mitigated.

The information requested will enable the council to undertake a full and proper assessment of the notice of requirement and provide a recommendation on it.

Under section 92 of the Resource Management Act 1991, I request the further information set out in Appendix 1.

Please provide this information within 15 working days or contact me so that an alternative timeframe can be mutually agreed.

In accordance with the Resource Management Act 1991, processing of your notice of requirement will remain on hold pending your response to this request. Please note that the processing clock will stop as this is the first request for additional information.

If you have any queries regarding the above, please contact me.


Yours sincerely,



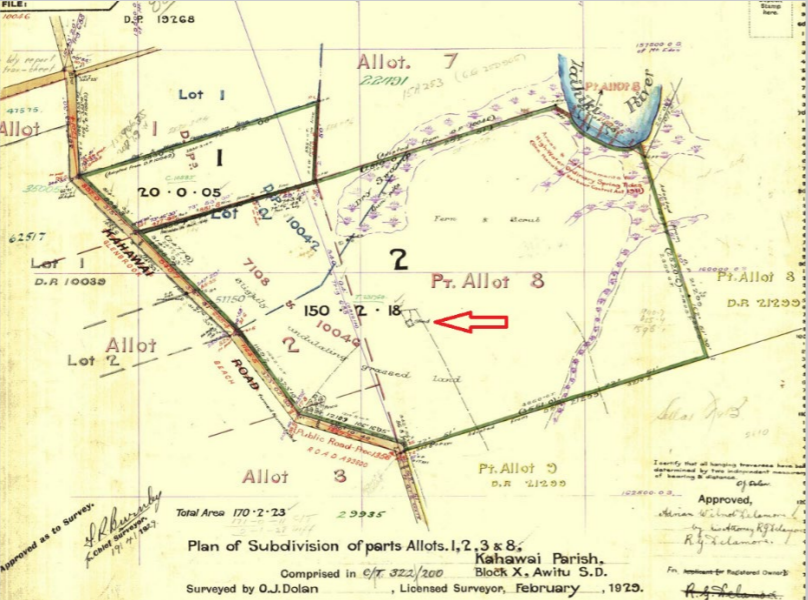
Jimmy Zhang
Reporting Planner, Central/South Planning Unit, Plans and Places

Appendix 1: Section 92 request for further information

#	Category of information	Specific request	Reason for request
1	Planning – Conditions	<p>Please clarify how the various mitigation measures proposed to address the specific effects associated with the WWTP can be secured as part of the designation process if no conditions are proposed?</p>	<p>The application has referenced designation conditions at several sections of the AEE and in the acoustics assessment. As well, several mitigation measures have been mentioned which directly address the potential effects of the WWTP. Some examples include:</p> <ul style="list-style-type: none"> • <i>‘The site will be planted with screen planting in accordance with the Landscape Planting Plan’</i> • <i>‘comprehensive mitigation planting is proposed on the site... by including native species’</i> • <i>‘avifauna management plan...’</i> • <i>‘it is proposed that a Construction Management Plan will be developed in consultation with Auckland Transport to ensure that the effects are managed’</i> • <i>‘..concrete pour activities outside normal construction hours (7:30am to 6:00pm Monday to Saturday) will be managed via a Construction Noise Management Plan with associated communication requirements ...’</i> • <i>‘..indirect impacts are expected to be managed through the implementation of erosion and sediment controls required to be in place under the conditions of this designation ...’</i> • <i>‘the erosion and sediment controls recommended to be in place under the designation...’</i> • <i>‘as a result of the range of mitigation measures proposed in the specialist technical assessments submitted in support of the notice of requirement (NoR), construction effects will be appropriately managed..’</i> • <i>‘buildings will be less than 15m tall’</i> • <i>‘in terms of operational noise, it is proposed to set (through a designation condition) a noise limit that is lower’</i> <p>The acoustics report has also proposed a set of designation conditions in section 9 relating to operational noise and construction noise.</p> <p>No conditions have been attached to the proposed designation. The conditions of a designation provide a clear framework for preparing and considering an outline plan of works, including how adverse effects of the proposal will be mitigated. The current approach provides little guidance on how effects are to be managed going into the outline plan of works process.</p>
2	Planning – background to the 200m buffer	<p>Please confirm how the 200m ‘buffer’ distance was determined? (i.e. was it a recommendation from an expert to ensure sufficient space to disperse odours)</p> <p>Please confirm if a 200m buffer is a common approach for mitigating any adverse effects of odour when Watercare considers the layout of a new WWTP?</p>	<p>The 200m buffer (between the site boundary and the main parts of the plant containing odour generating processes) is frequently mentioned in the AEE. It is understood that the buffer is able to contain unexpected or accidental odour emissions within the site. It would be helpful to understand how/where this metric was derived.</p>

#	Category of information	Specific request	Reason for request
3	Planning – future expansion	Please provide information about any likely future scenarios or operational reasons that may require Watercare to expand beyond the anticipated 6ha primary plant footprint.	The AEE notes that designating the site allows for the establishment of a WWTP that may expand over time. It is understood that this relates to the 'three stages' of development that will likely be established with a 6ha footprint. It would be helpful to understand if there are any likely scenarios that may lead Watercare to consider expanding the plant beyond the anticipated 6ha footprint.
4	Planning – mana whenua engagement	Please confirm if mana whenua have provided any recommendations relating to the matters (as summarised in the AEE) raised following consultation?	Consultation with mana whenua has been covered in the AEE and appendix D. The key matters of concern to mana whenua have been summarised. It is unclear however if mana whenua have made any recommendations or have expressed any expectations (i.e. around native plantings) for this stage of the development process.
5	Landscape and visual amenity	Has or can Watercare and / or its consultants considered architectural treatment (as mitigation) for the plant that would reduce its industrial profile and character, and lend it a more 'rural' appearance?	<p>The Pukekohe plant on Parker Lane has a profile and visual signature that is markedly utilitarian and industrial in appearance – as shown in the photo below. However, it is located in a quite remote, visually recessive, location. By contrast, the proposed WWTP would be much more prominent near Glenbrook Beach Road, with vehicle movements to and from the settlements of Glenbrook Beach and Kahawai Point passing the proposed plant on a regular basis, while local residents living on 4-6 nearby properties would be more directly exposed to the plant. In order to ameliorate and mitigate the effects associated with such exposure, it would appear appropriate to employ measures designed to integrate the WWTP into its landscape setting, including the use of architectural forms, detailing and colouring that is sympathetic to its rural location. These concerns form the basis for this request.</p> 
6	Stormwater/Flooding	Please complete an assessment of natural hazard and climate change objectives and policies in AUP Chapter B10 Environmental Risk, including coastal hazards.	To better understand the effects of natural hazards on the site.
7	Transport – access design	<p>Provide drawings of the layout of the proposed site access arrangements at the locations for Option 1 and for Option 2 that show:</p> <ul style="list-style-type: none"> For Option 1, the effects on the alignment of Glenbrook Beach Road north of the site access location. For Option 2, the effects of the access arrangements on the existing vehicle accesses to properties on the southwestern side of Glenbrook Beach Road. 	<p>The Transportation Report states in Section 6.2 that the proposed site access at the location in Option 2 would likely require the redesign of the vehicle crossings on the southwestern side of Glenbrook Beach Road. No drawings have been provided to show the design of the site access and what the changes would be to the existing vehicle crossings affected. Therefore, the effects on these accesses are unable to be assessed.</p> <p>Furthermore, no drawings have been provided on the upgrade proposed to the site access at the location in Option 1 and how this may affect the layout of Glenbrook Beach Road.</p> <p>It is acknowledged that design detail will be prepared during the development of the Outline Plan of Works and that discussions will be held with Auckland Transport, but without drawings</p>

#	Category of information	Specific request	Reason for request
			of the proposed site access arrangements it is difficult to confirm whether the proposals would appropriately address the traffic effects on Glenbrook Beach Road.
8	Transport – access design	Provide an explanation as to why a right turn bay is not required if two vehicle accesses are provided. If a bay is not required, provide details of how the traffic related effects of right turning vehicles into the site on the safe and efficient operation of Glenbrook Beach Road would be addressed.	The Transportation Report in Section 6.3 states that a right turn bay would only be required if one site access is provided. The right turn bay is required to accommodate right turning vehicles into the site safely, particularly during construction. Should two vehicle accesses be provided (one ingress and one exit as discussed in the Transportation Report), it is not clear how the omission of the right turn bay would address the traffic related effects of right turning vehicles on the safe and efficient operation of Glenbrook Beach Road.
9	Transport – traffic modelling	Provide updated modelling of the proposed site access arrangement that includes a right turn bay as described in the Transportation Report.	The description of the proposed site access includes a right turn bay on Glenbrook Beach Road. However, the SIDRA layout provided in the Appendix to the Transport Report does not include the right turn bay. The traffic modelling should reflect the intended layout of the intersection.
10	Transport – traffic modelling	Update the traffic modelling with the traffic volumes for the site access corrected to reflect the traffic volumes in Table 3 of the report.	The traffic turning volumes for the left and right turning movements from the site in the traffic modelling have been transposed from those in Table 3 of the Transportation Report in both the AM and PM peaks. Therefore, the modelling does not reflect the anticipated traffic turning movements.
11	Transport – traffic modelling	Undertake sensitivity modelling of the operation of the site access which includes for traffic associated with the horticultural operations on the site during the construction period.	Section 4.4 of the Transportation Report states that some horticultural operations will likely continue on the site. Traffic associated with these operations has not been taken into account in the traffic modelling. It is acknowledged that data is not available on traffic volumes and that traffic is likely to be dependent on the operations on site (e.g. greater traffic during harvesting), however, these operations may affect the safe and efficient operation of the proposed site accesses when considered with the construction traffic. Sensitivity testing would assist in providing confidence on the operation of the site access at peak operation times.
12	Transport – notice of requirement conditions	Confirm whether conditions are included in relation to on-going maintenance of vegetation on Glenbrook Beach Road to ensure visibility from accesses are maintained during the construction and operation of the site.	Section 6.2 of the Transportation Report states that vegetation will be maintained along the Glenbrook Beach Road frontage. This would be required for the safe operation of the site accesses, particularly at the location in Option 1. No conditions have been provided to ensure that this would occur.
13	Transport – notice of requirement conditions	Please provide any proposed conditions in relation to transport for the site, including but not limited to, any conditions concerning the site access arrangements and conditions for a Construction Traffic Management Plan.	No Notice of Requirement conditions have been provided with the application. Without the proposed conditions it is not possible to confirm that the traffic and transportation effects will be appropriately managed.
14	Acoustics	Briefly explain what 'Acoustic Centre' means, its relevance to the setback distances set out in Table 1 and, the approximate co-ordinates for the Acoustic Centre adopted for modelling purposes.	To assist in better understanding how predicted L_{Aeq} levels were calculated.
15	Acoustics	Please identify the source(s) of the indicative sound power levels set out in Table 10 and adopted for modelling purposes.	To assist in validation of predicted L_{Aeq} levels.
16	Acoustics	Please show the critical 454m setback distance on an aerial map (e.g. a hypothetical 3600 circle originating from the Acoustic Centre) based on a total noise budget of 113 dB L_{WA} .	To identify the extent of surrounding land which is predicted to be exposed to noise exceeding the permitted night time noise level of 45 dB L_{Aeq}
17	Acoustics	Please clarify if adjustments, in accordance with NZS 6802:2008, were applied to predicted L_{Aeq} levels to derive noise rating levels.	To assist in validation of predicted L_{Aeq} levels.
18	Acoustics	Please provide additional comments on rural character and rural amenity effects relative to the existing noise environment.	To assist with better understanding effects on amenity, for example, will noise have a discernible day to day effect

#	Category of information	Specific request	Reason for request
19	Heritage/Archaeology	<p>Noting the RMA definition does not have a terminus ante quem date, the assessment should incorporate a discussion of a 1920s shed shown on cadastral plans DP21299 (1927) and DP22174 (1929) (the relevant part of the 1929 plan is produced below)</p>  <p>The image is a historical cadastral plan titled 'Plan of Subdivision of parts Allots. 1, 2, 3 & 8, Kahawai Parish, Block X, Awitu S.D. Complied in 6/7 322/200. Surveyed by O.J. Dolan, Licensed Surveyor, February 1929.' The plan shows several allotments and lots. A red arrow points to a specific area within 'Pr. Allot 8'.</p>	The SW WWTP NoR archaeological assessment should be updated to include RMA historic heritage requirements that incorporate post 1900 historic heritage features.
20	Heritage/Archaeology	The recommendation section in the assessment (Section 6) is framed solely for provisions of the Heritage New Zealand Pouhere Taonga Act. This section should be expanded to explicitly cover any proposed conditions to attach to the designation and any regional consents that will be applied for	As above.

4th October 2023

Jimmy Zhang
Central/ South Planning Unit,
Plans and Places
Auckland Council

Dear Jimmy,

Southwest WWTP Notice of Requirement – Designate 372 Glenbrook Beach Road, Glenbrook - Section 92 Response

In response to your letter dated 15 September 2023, please find enclosed Watercare Services Ltd's (WSL) written response to the request for further information under s92 of the Resource Management Act 1991, in relation to the Southwest Wastewater Treatment Plant Notice of Requirement Application.

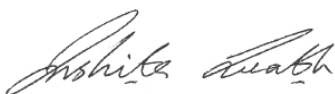
The following information is provided as part of WSL's response:

- Appendix 1: S92 request for further information response
- Appendix 2: Southwest WWTP NoR Proposed Consent Conditions

Additionally, WSL would welcome the opportunity to discuss the matters contained within the response, and the Proposed Conditions, with the relevant technical advisors', at the Council's earliest convenience.

Should you have any further queries, please do not hesitate to contact me.

Yours Sincerely,






Anshita Jerath
Senior Resource Consent Planner
Watercare Services Limited

Appendix 1: Section 92 request for further information response

#	Category of information	Specific request	Reason for request	Watercare Response
1	Planning – Conditions	Please clarify how the various mitigation measures proposed to address the specific effects associated with the WWTP can be secured as part of the designation process if no conditions are proposed?	<p>The application has referenced designation conditions at several sections of the AEE and in the acoustics assessment. As well, several mitigation measures have been mentioned which directly address the potential effects of the WWTP. Some examples include:</p> <ul style="list-style-type: none"> • <i>'The site will be planted with screen planting in accordance with the Landscape Planting Plan'</i> • <i>'comprehensive mitigation planting is proposed on the site... by including native species'</i> • <i>'avifauna management plan...'</i> • <i>'it is proposed that a Construction Management Plan will be developed in consultation with Auckland Transport to ensure that the effects are managed'</i> • <i>'..concrete pour activities outside normal construction hours (7:30am to 6:00pm Monday to Saturday) will be managed via a Construction Noise Management Plan with associated communication requirements ...'</i> • <i>'..indirect impacts are expected to be managed through the implementation of erosion and sediment controls required to be in place under the conditions of this designation ...'</i> • <i>'the erosion and sediment controls recommended to be in place under the designation...'</i> • <i>'as a result of the range of mitigation measures proposed in the specialist technical assessments submitted in support of the notice of requirement (NoR), construction effects will be appropriately managed..'</i> • <i>'buildings will be less than 15m tall'</i> • <i>'in terms of operational noise, it is proposed to set (through a designation condition) a noise limit that is lower'</i> <p>The acoustics report has also proposed a set of designation conditions in section 9 relating to operational noise and construction noise.</p> <p>No conditions have been attached to the proposed designation. The conditions of a designation provide a clear framework for preparing and considering an outline plan of works, including how adverse effects of the proposal will be mitigated. The current approach provides little guidance on how effects are to be managed going into the outline plan of works process.</p>	Draft Conditions for Southwest Wastewater Treatment Plant Notice of Requirement are provided with the s92 response.

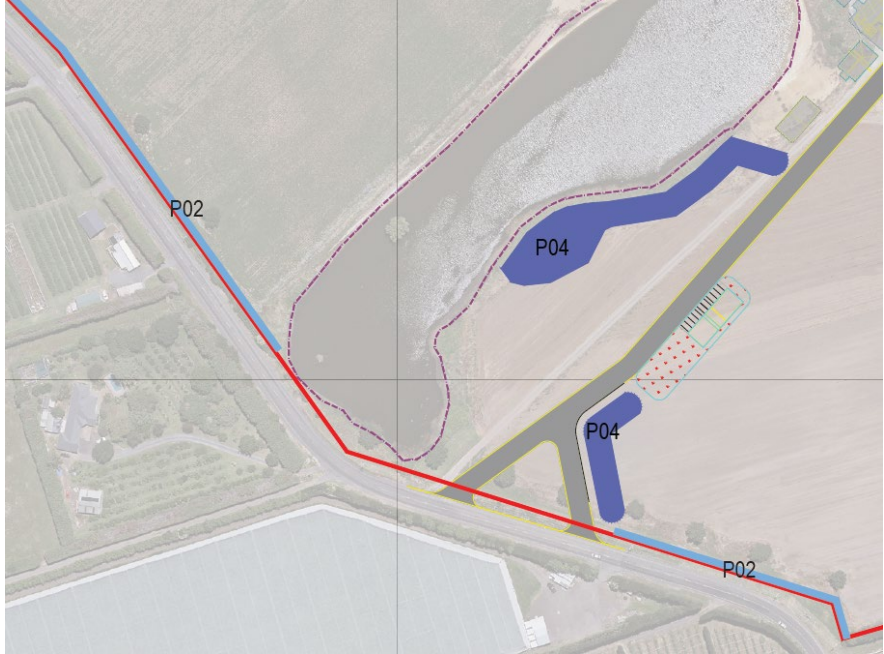
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2	Planning – background to the 200m buffer	<p>Please confirm how the 200m ‘buffer’ distance was determined? (i.e. was it a recommendation from an expert to ensure sufficient space to disperse odours)</p> <p>Please confirm if a 200m buffer is a common approach for mitigating any adverse effects of odour when Watercare considers the layout of a new WWTP?</p>	The 200m buffer (between the site boundary and the main parts of the plant containing odour generating processes) is frequently mentioned in the AEE. It is understood that the buffer is able to contain unexpected or accidental odour emissions within the site. It would be helpful to understand how/where this metric was derived.	<p>The proposed buffer distance of 200 metres for the Wastewater Treatment Plant (WWTP) was designed to minimize the risk of adverse odour being experienced outside the site boundary, particularly during upset conditions. The buffer distance was based on the odour performance observed at other WWTPs as well as the separation distances implemented at those sites. Additionally, the sensitivity of the surrounding land use was taken into consideration when establishing this buffer. The land surrounding the site is primarily used for agriculture, which has a lower sensitivity to odour effects. Therefore, the risk of adverse odour effects is relatively low.</p> <p>In response to the second question, odour buffers are a common approach to mitigating potential adverse effects from a new WWTP, and one which Watercare considers in the early stages of planning for a new WWTP. When considering the extent of an odour buffer Watercare looks at various factors including published literature/standards and its own experience with odour buffers around existing WWTPs, as noted in the previous paragraph.</p> <p>Published separation distances for mitigating odour effects are all based on the separation distance between WWTPs and sensitive receptors. These distances are applied in locations where people have a higher probability of exposure and expect a higher level of air quality, rather than at the fence line. As discussed in the Assessment of Environmental Effects (AEE), the minimum separation distance between the WWTP facilities and the nearest existing dwelling will be at least 300 metres. In practice, this separation distance will exceed 300 metres. These minimum separation distances between treatment processes and the nearest existing dwellings exceed those at other WWTPs in Auckland such as Snells-Algies and Pukekohe (where the closest rural dwellings are 260m and 270m respectively). Further, these separation distances align with recommendations from the Victorian Environment Protection Authority (Vic EPA). As discussed in the AEE the Vic EPA separation distance are considered to be conservative.</p>
3	Planning – future expansion	Please provide information about any likely future scenarios or operational reasons that may require Watercare to expand beyond the anticipated 6ha primary plant footprint.	The AEE notes that designating the site allows for the establishment of a WWTP that may expand over time. It is understood that this relates to the ‘three stages’ of development that will likely be established with a 6ha footprint. It would be helpful to understand if there are any likely scenarios that may lead Watercare to consider expanding the plant beyond the anticipated 6ha footprint.	<p>Watercare’s current plans are explained in the Indicative Design and Operational Report submitted with the Notice of Requirement. The 6ha referred to is the amount of new impervious area expected to be on the site in terms of stormwater discharge. This is based on the full build out shown in the site layout referred to in Indicative Design and Operational Report.</p> <p>There are currently no scenarios that involve expanding the operational plant outside the 6ha footprint, but it is noted that stormwater detention and treatment ponds and access arrangements around the site may be additional to the 6ha.</p>
4	Planning – mana whenua engagement	Please confirm if mana whenua have provided any recommendations relating to the matters (as summarised in the AEE) raised following consultation?	Consultation with mana whenua has been covered in the AEE and appendix D. The key matters of concern to mana whenua have been summarised. It is unclear however if mana whenua have made any recommendations or have expressed any expectations (i.e. around native plantings) for this stage of the development process.	<p>During the Options Assessment phase, Mana Whenua raised the following matters:</p> <ul style="list-style-type: none"> • Sufficient setback is required from sensitive coastal headlands; • Avoid draining the wetlands on site; • Archaeologist to carry out on site assessment; and • Plant native trees. <p>As shown in the Indicative Design and Operational Report these matters are able to be incorporated in the design as all structures will be set back from the coastal</p>

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				<p>boundary and the wetlands to ensure sufficient separation is maintained. The Project Archaeologist completed a site walkover with Mana Whenua and there are no archaeological sites recorded at this site. As noted in the Landscaping Plan prepared by Boffa Miskell, native planting is proposed around the site.</p>
5	Landscape and visual amenity	<p>Has or can Watercare and / or its consultants considered architectural treatment (as mitigation) for the plant that would reduce its industrial profile and character, and lend it a more 'rural' appearance?</p>	<p>The Pukekohe plant on Parker Lane has a profile and visual signature that is markedly utilitarian and industrial in appearance – as shown in the photo below. However, it is located in a quite remote, visually recessive, location. By contrast, the proposed WWTP would be much more prominent near Glenbrook Beach Road, with vehicle movements to and from the settlements of Glenbrook Beach and Kahawai Point passing the proposed plant on a regular basis, while local residents living on 4-6 nearby properties would be more directly exposed to the plant. In order to ameliorate and mitigate the effects associated with such exposure, it would appear appropriate to employ measures designed to integrate the WWTP into its landscape setting, including the use of architectural forms, detailing and colouring that is sympathetic to its rural location. These concerns form the basis for this request.</p> 	<p>As Boffa Miskell has discussed in the assessment provided with the NoR, the views from Glenbrook Beach Road will not be an issue in the medium to long term due to the site being screened from view road users by the karo hedge proposed along the western site boundary. Visual impacts on the closest 4-6 residential properties have been taken into account in the AEE (see Appendix 9 - Landscape, Visual and Natural Character Effects Assessment). See in particular the Mitigation Planting Strategy within Appendix 5 of that report, as well as section 8 of the report which discusses how planting proposed under the Mitigation Planting Strategy will break up the scale and bulk of the structures, and where possible screen the project from adjacent properties.</p> <p>The articulation suggested of the proposed structures and buildings to integrate the WWTP into its landscape setting is unlikely to be possible. However, the use of more recessive colours and finishes within the Watercare colour palette and beyond if necessary will be explored. The intention will be to give buildings and structures a similar appearance to other large rural buildings in the wider landscape (see agricultural buildings at 91 Brookside Road below).</p> 

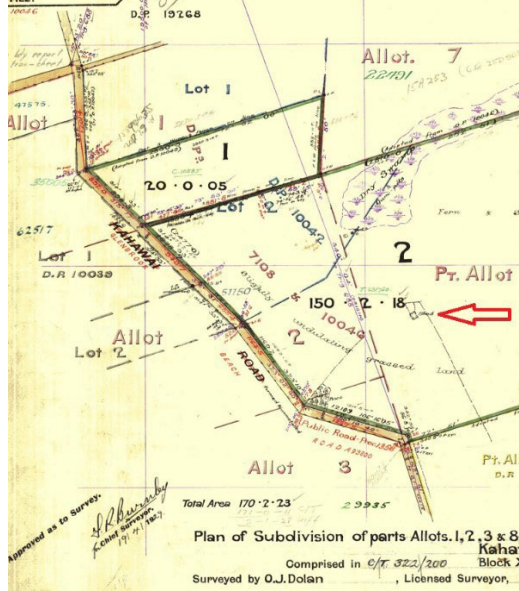

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6	Stormwater/ Flooding	Please complete an assessment of natural hazard and climate change objectives and policies in AUP Chapter B10 Environmental Risk, including coastal hazards.	To better understand the effects of natural hazards on the site.	Refer to the objectives and policies table below.
7	Transport– access design	<p>Provide drawings of the layout of the proposed site access arrangements at the locations for Option 1 and for Option 2 that show:</p> <p>For Option1, the effects on the alignment of Glenbrook Beach Road north of the site access location.</p> <p>For Option 2, the effects of the access arrangements on the existing vehicle accesses to properties on the southwestern side of Glenbrook Beach Road.</p>	<p>The Transportation Report states in Section 6.2 that the proposed site access at the location in Option 2 would likely require the redesign of the vehicle crossings on the southwestern side of Glenbrook Beach Road. No drawings have been provided to show the design of the site access and what the changes would be to the existing vehicle crossings affected. Therefore, the effects on these accesses are unable to be assessed.</p> <p>Furthermore, no drawings have been provided on the upgrade proposed to the site access at the location in Option 1 and how this may affect the layout of Glenbrook Beach Road.</p> <p>It is acknowledged that design detail will be prepared during the development of the Outline Plan of Works and that discussions will be held with Auckland Transport, but without drawings of the proposed site access arrangements it is difficult to confirm whether the proposals would appropriately address the traffic effects on Glenbrook Beach Road.</p>	<p>The layout for the proposed access shown in the Transport Assessment is indicative.</p> <p>The access arrangements will need to ensure that the access integrates with the other site development requirements such as landscaping to mitigate visual effects and stormwater management relating to the culverts under Glenbrook Beach Road and the pond located at the front of the site. The final form of the access to the site will be developed through the detailed design process and will not be able to be confirmed until Watercare has consulted Auckland Transport, and Auckland Transport is happy to approve the new vehicle crossing(s).</p>
8	Transport– access design	Provide an explanation as to why a right turn bay is not required if two vehicle accesses are provided. If a bay is not required, provide details of how the traffic related effects of right turning vehicles into the site on the safe and efficient operation of Glenbrook Beach Road would be addressed.	The Transportation Report in Section 6.3 states that a right turn bay would only be required if one site access is provided. The right turn bay is required to accommodate right turning vehicles into the site safely, particularly during construction. Should two vehicle accesses be provided (one ingress and one exit as discussed in the Transportation Report), it is not clear how the omission of the right turn bay would address the traffic related effects of right turning vehicles on the safe and efficient operation of Glenbrook Beach Road.	<p>The section of the statement “a right turn bay is incorporated into the access design for any access to the site that involves a single driveway” in Section 6.3 of the Transportation Assessment was an error and the sentence should have read “The vehicle crossing(s) should at a minimum accommodate two-way light vehicle movements and it is recommended that a right turn bay is incorporated into the access design for any access to the site”.</p> <p>The intended operation of the Option 3 scenario is that one driveway would be reserved for entry movements, and one would provide for exit movements. A right turn bay would be provided for the entry driveway.</p>

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9	Transport – traffic modelling	Provide updated modelling of the proposed site access arrangement that includes a right turn bay as described in the Transportation Report.	The description of the proposed site access includes a right turn bay on Glenbrook Beach Road. However, the SIDRA layout provided in the Appendix to the Transport Report does not include the right turn bay. The traffic modelling should reflect the intended layout of the intersection.	<p>The SIDRA model excluded the right turn bay in order to provide a more conservative assessment of the potential traffic effects and delays during WWTP construction phase (as right turning traffic would need to do so from the through northbound lane). To address this s92 query, however, the SIDRA model has been updated to incorporate the right turn bay. SIDRA results from the updated modelling for both situations – no right turn bay and with a right turn bay are provided in tables below. Additionally, an error in the turning volumes from the site access leg was corrected.</p> <p>Table 1: SIDRA Model Results - No Right Turn Bay</p> <table border="1"> <thead> <tr> <th rowspan="2">Intersection Leg</th> <th rowspan="2">Movement</th> <th colspan="2">Morning Peak Hour</th> <th colspan="2">Afternoon Peak Hour</th> </tr> <tr> <th>Level of Service</th> <th>Delay (seconds)</th> <th>Level of Service</th> <th>Delay (seconds)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Glenbrook Beach Road (south)</td> <td>Through</td> <td>A</td> <td>1.3</td> <td>A</td> <td>0.1</td> </tr> <tr> <td>Right</td> <td>B</td> <td>10.9</td> <td>B</td> <td>11.0</td> </tr> <tr> <td rowspan="2">Glenbrook Beach Road (north)</td> <td>Through</td> <td>A</td> <td>0.1</td> <td>A</td> <td>0.0</td> </tr> <tr> <td>Left</td> <td>A</td> <td>7.0</td> <td>A</td> <td>7.0</td> </tr> <tr> <td rowspan="2">Site Access</td> <td>Left</td> <td>B</td> <td>14.2</td> <td>B</td> <td>10.5</td> </tr> <tr> <td>Right</td> <td>C</td> <td>16.5</td> <td>C</td> <td>20.7</td> </tr> <tr> <td>Intersection</td> <td></td> <td>C (worst)</td> <td>1.1 (average)</td> <td>C (worst)</td> <td>0.6 (average)</td> </tr> </tbody> </table> <p>Table 2: SIDRA Model Results - Right Turn Bay Provided</p> <table border="1"> <thead> <tr> <th rowspan="2">Intersection Leg</th> <th rowspan="2">Movement</th> <th colspan="2">Morning Peak Hour</th> <th colspan="2">Afternoon Peak Hour</th> </tr> <tr> <th>Level of Service</th> <th>Delay (seconds)</th> <th>Level of Service</th> <th>Delay (seconds)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Glenbrook Beach Road (south)</td> <td>Through</td> <td>A</td> <td>0.0</td> <td>A</td> <td>0.1</td> </tr> <tr> <td>Right</td> <td>B</td> <td>10.0</td> <td>A</td> <td>9.3</td> </tr> <tr> <td rowspan="2">Glenbrook Beach Road (north)</td> <td>Through</td> <td>A</td> <td>0.1</td> <td>A</td> <td>0.0</td> </tr> <tr> <td>Left</td> <td>A</td> <td>7.0</td> <td>A</td> <td>7.0</td> </tr> <tr> <td rowspan="2">Site Access</td> <td>Left</td> <td>B</td> <td>14.2</td> <td>B</td> <td>10.5</td> </tr> <tr> <td>Right</td> <td>C</td> <td>22.3</td> <td>D</td> <td>29.5</td> </tr> <tr> <td>Intersection</td> <td></td> <td>C</td> <td>0.7 (average)</td> <td>D</td> <td>0.6 (average)</td> </tr> </tbody> </table> <p>As can be seen from the model results, the introduction of the right turn bay generally reduces the delays associated with the proposed turning movements. There is a minor increase in the delays for the right turn movement from the site. However, it is considered that few vehicles will undertake this turn from the site.</p>	Intersection Leg	Movement	Morning Peak Hour		Afternoon Peak Hour		Level of Service	Delay (seconds)	Level of Service	Delay (seconds)	Glenbrook Beach Road (south)	Through	A	1.3	A	0.1	Right	B	10.9	B	11.0	Glenbrook Beach Road (north)	Through	A	0.1	A	0.0	Left	A	7.0	A	7.0	Site Access	Left	B	14.2	B	10.5	Right	C	16.5	C	20.7	Intersection		C (worst)	1.1 (average)	C (worst)	0.6 (average)	Intersection Leg	Movement	Morning Peak Hour		Afternoon Peak Hour		Level of Service	Delay (seconds)	Level of Service	Delay (seconds)	Glenbrook Beach Road (south)	Through	A	0.0	A	0.1	Right	B	10.0	A	9.3	Glenbrook Beach Road (north)	Through	A	0.1	A	0.0	Left	A	7.0	A	7.0	Site Access	Left	B	14.2	B	10.5	Right	C	22.3	D	29.5	Intersection		C	0.7 (average)	D	0.6 (average)
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10	Transport – traffic modelling	Update the traffic modelling with the traffic volumes for the site access corrected to reflect the traffic volumes in Table 3 of the report.	The traffic turning volumes for the left and right turning movements from the site in the traffic modelling have been transposed from those in Table 3 of the Transportation Report in both the AM and PM peaks. Therefore, the modelling does not reflect the anticipated traffic turning movements.	<p>The SIDRA summary data presented in the Appendix B of the Transportation Assessment report shows the demand flows used in the models, not the input flows. In line with typical traffic environments, SIDRA assumes that the traffic volume profile over the peak hour is not constant i.e., there is a peak period within the peak hour. This peak hour profile/ factor (PHF) creates a higher demand volume that is then used in the model to provide a more robustly conservative assessment. For the WWTP modelling, standard SIDRA parameters with a PHF of 0.95 have been employed, thus the demand volumes will be 5% higher than the input volumes. The table below shows a comparison for the Morning Peak Hour model.</p> <p>Table 3 SIDRA Model Results – Demand vs Input Volumes</p> <table border="1"> <thead> <tr> <th>Intersection Leg</th> <th>Movement</th> <th>Input Volume</th> <th>Demand Volume</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Glenbrook Beach Road (East)</td> <td>Through</td> <td>275</td> <td>289</td> </tr> <tr> <td>Right</td> <td>52</td> <td>55</td> </tr> <tr> <td rowspan="2">Access Road (WWTP)</td> <td>Right</td> <td>1</td> <td>1</td> </tr> <tr> <td>Left</td> <td>7</td> <td>7</td> </tr> <tr> <td rowspan="2">Glenbrook Beach Road (west)</td> <td>Through</td> <td>1</td> <td>1</td> </tr> <tr> <td>Left</td> <td>620</td> <td>653</td> </tr> </tbody> </table> <p>Accordingly, beyond the amendments to the modelling to incorporate the right turn bay and to correct an error in the turn distribution of the traffic from the access road (as discussed and reported above), no further adjustment to the SIDRA modelling is considered necessary.</p>	Intersection Leg	Movement	Input Volume	Demand Volume	Glenbrook Beach Road (East)	Through	275	289	Right	52	55	Access Road (WWTP)	Right	1	1	Left	7	7	Glenbrook Beach Road (west)	Through	1	1	Left	620	653
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11	Transport – traffic modelling	Undertake sensitivity modelling of the operation of the site access which includes for traffic associated with the horticultural operations on the site during the construction period.	Section 4.4 of the Transportation Report states that some horticultural operations will likely continue on the site. Traffic associated with these operations has not been taken into account in the traffic modelling. It is acknowledged that data is not available on traffic volumes and that traffic is likely to be dependent on the operations on site (e.g. greater traffic during harvesting), however, these operations may affect the safe and efficient operation of the proposed site accesses when considered with the construction traffic. Sensitivity testing would assist in providing confidence on the operation of the site access at peak operation times.	As noted in the AEE and the s 92 response the NPS -HPL requires that the potential for the land to still be used for productive purposes is maintained. The scale of use of the site for horticulture during construction of the WWTP is currently uncertain as are the requirements of any construction contractor to access the site and the need to manage conflict between access users. A construction traffic management plan as recommended in the Transport Assessment and proposed in the draft conditions provided with this s92 response will be the best place to address this issue. At that time, the required construction area and programme will be clearer, and if necessary, measures will be able to be introduced to manage access to the site.																									
12	Transport – notice of requirement conditions	Confirm whether conditions are included in relation to on-going maintenance of vegetation on Glenbrook Beach Road to ensure visibility from accesses are maintained during the construction and operation of the site.	Section 6.2 of the Transportation Report states that vegetation will be maintained along the Glenbrook Beach Road frontage. This would be required for the safe operation of the site accesses, particularly at the location in Option 1. No conditions have been provided to ensure that this would occur.	While the Transport Assessment noted that the height and extent of the vegetation along the frontage will need to be maintained on an ongoing basis, the Landscape, Visual and Natural Character Effects Assessment identified the need to mitigate views of the WWTP for road users through screening the site. That assessment noted that if the irrigation pond close to the road was removed, additional planting could be provided to extend the proposed boundary hedge. In addition, as noted in the Stormwater and Flooding Assessment there are issues with flooding on Glenbrook Beach Road associated with the culverts under the road draining to the irrigation pond.																									

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				 <p>The mitigation planting shown in the appendix to the Landscape, Visual and Natural Character Effects Assessment shows the planting proposed. It is not proposed to include conditions to maintain the vegetation in the current location as there are changes likely in order to accommodate the two access legs and possible changes to the drainage arrangements to address the flooding, hence removing the vegetation from the critical zones, which currently impinge on the sightlines. The <i>Pittosporum crassifolium</i> - Karo hedge offered as mitigation will be managed at 3m tall as noted in the planting schedule in Appendix 5 and will be maintained.</p>
13	Transport – notice of requirement conditions	Please provide any proposed conditions in relation to transport for the site, including but not limited to, any conditions concerning the site access arrangements and conditions for a Construction Traffic Management Plan.	No Notice of Requirement conditions have been provided with the application. Without the proposed conditions it is not possible to confirm that the traffic and transportation effects will be appropriately managed.	Draft Conditions for Southwest Wastewater Treatment Plant Notice of Requirement are provided with the s92 response.
14	Acoustics	Briefly explain what ‘Acoustic Centre’ means, its relevance to the setback distances set out in Table 1 and, the approximate co- ordinates for the Acoustic Centre adopted for modelling purposes.	To assist in better understanding how predicted LAeq levels were calculated.	With respect to an area source or plant dispersed over a relatively wide area, the term ‘acoustic centre’ refers to a point located in the centre of the area from which noise is emitted. The term is useful for determining source-to-receiver setback distances.
15	Acoustics	Please identify the source(s) of the indicative sound power levels set out in Table 10 and adopted for modelling purposes.	To assist in validation of predicted LAeq levels.	There is no “source” for these sources. It’s a sound power level that is back-calculated from a compliant noise level at the worst-case dwelling position. We have however applied an industrial frequency spectrum representative of a WWTP when predicting noise contours.
16	Acoustics	Please show the critical 454m setback distance on an aerial map (e.g. a hypothetical 3600 circle originating from the Acoustic Centre) based on a total noise budget of 113 dB LWA.	To identify the extent of surrounding land which is predicted to be exposed to noise exceeding the permitted night time noise level of 45 dB LAeq	Refer to Figure 2 in our report Rp 002 dated 31 Aug 2023. This is shown as an orange dotted line.

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17	Acoustics	Please clarify if adjustments, in accordance with NZS 6802:2008, were applied to predicted LAeq levels to derive noise rating levels.	To assist in validation of predicted LAeq levels.	No rating level adjustments have been applied based on the understanding that WWTP noise is 24/7.
18	Acoustics	Please provide additional comments on rural character and rural amenity effects relative to the existing noise environment.	To assist with better understanding effects on amenity, for example, will noise have a discernible day to day effect	<p>From our site observations the existing acoustic environment in the area is comprised of noise from farming activities, vehicle movements on Glenbrook Beach Rd and environmental sounds e.g., birds and insects. The ambient noise level ranges from 30-61 dB LAeq (49 dB average) in the daytime; while the background noise level ranges from 24-56 dB LA90 (42dB average) in the daytime: see Table 2 in the Marshall Day report attached as Appendix J to the AEE. These levels typify a rural (farming) setting adjacent to a collector road i.e., a well-used road during the daytime. These aspects define “daytime rural character” in this context. WWTP noise in the context of the daytime acoustic environment would be audible but unintrusive as a worst-case, but generally would be inaudible.</p> <p>At night, vehicle movements on Glenbrook Beach Road are sporadic. Farming activity decreases significantly from daytime levels of activity, and these factors result in a quieter night-time acoustic environment: the Marshall Day report attached as Appendix J refers to an ambient noise level of 28-51 dB LAeq (39 dB average) in the night time; and background noise level of 24-43 dB LA90 (31dB average) in the night time. Environmental sounds would typify the “night-time rural character”, interspersed with occasional vehicle movements on the road or other distant man-made sound. WWTP noise in the context of the night-time acoustic environment would be clearly audible and likely control the background noise environment. Inside the closest dwellings WWTP noise may be audible with windows ajar for ventilation. With windows closed the WWTP would likely be inaudible or faint.</p>
19	Heritage/ Archaeology	Noting the RMA definition does not have a terminus ante quem date, the assessment should incorporate a discussion of a 1920s shed shown on cadastral plans DP21299 (1927) and DP22174 (1929) (the relevant part of the 1929 plan is produced below)	The SW WWTP NoR archaeological assessment should be updated to include RMA historic heritage requirements that incorporate post 1900 historic heritage features.	DP 22174 was georeferenced into the project GIS. There is no evidence that the building referred to in the s92 request predates 1900 and so is not an archaeological site under the Heritage New Zealand Pouhere Taonga Act. It could potentially have some heritage value, but it is in the same location as the current farm buildings and turning circle. It is unlikely that any evidence of it will remain in situ and the site is effectively destroyed.


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		 <p>Plan of Subdivision of parts Allots. 1, 2, 3 & 8, Kahay Block X Comprised in O/T 322/200 Surveyed by O.J. Dolan, Licensed Surveyor, 1926</p>		
20	Heritage/ Archaeology	The recommendation section in the assessment (Section 6) is framed solely for provisions of the Heritage New Zealand Pouhere Taonga Act. This section should be expanded to explicitly cover any proposed conditions to attach to the designation and any regional consents that will be applied for	As above.	<p>The only known early 20th century structure known is a shed which is assessed as effectively destroyed.</p> <p>An Accidental Discovery Protocol condition has been proposed – please refer to the proposed draft conditions document.</p>

Response to Question 6

B10.2. Natural hazards and climate change

B10.2 Objective and Policies	Assessment
<p><u>B10.2.1. Objectives</u></p> <p>(1) Communities are more resilient to natural hazards and the effects of climate change.</p>	<p>Enabling the operation of the WWTP at all times is a way of ensuring resilience for an essential network that the community relies on. This is expected to be achieved by designating this site and placing the WWTP above the anticipated 1 in 100 year return 2 m sea level rise.</p>
<p>(2) The risks to people, property, infrastructure and the environment from natural hazards are not increased in existing developed areas.</p>	<p>The Stormwater and Flooding Assessment noted that while the WWTP will increase impervious areas on the site and that will increase runoff and that the WWTP may have some elements located in flood prone areas and obstruct existing overland flow paths, existing properties/buildings with habitable floor levels were not identified within the existing 1% AEP (Annual Exceedance Probability) flood plain and even <u>without</u> mitigation effects were low. The Assessment noted that the site is large enough that mitigation, such as diverting overland flow paths – while still enabling flows to wetlands and streams, can be undertaken.</p>
<p>(3) New subdivision, use and development avoid the creation of new risks to people, property and infrastructure.</p>	<p>The designation of the site and its use as a WWTP with the increase in runoff and diversion of flows does not create new risks to people and property. The WWTP will be designed to manage the risk of flood inundation.</p>

(4) The effects of climate change on natural hazards, including effects on sea level rise and on the frequency and severity of storm events, is recognised and provided for.	The WWTP will be designed to address the future climate change conditions and maintain functionality.
(5) The functions of natural systems, including floodplains, are protected from inappropriate subdivision, use and development.	As noted in the Stormwater and Flooding Assessment none of the wetlands are being directly affected or obstructed by the location of proposed WWTP, and the existing planting around the streams and wetlands will be retained. While diversions of overland flow paths around new structures was likely to be needed the functions of the natural systems present on the site will be protected.
(6) The conveyance function of overland flow paths is maintained	The overland flow path routes may change but as noted in the Stormwater and Flooding Assessment sufficient land is available within the site to divert the flows successfully to maintain conveyance.
B10.2.2. Policies Identification and risk assessment (1) Identify areas potentially affected by natural hazards, giving priority to those at high risk of being affected, particularly in the coastal environment.	The areas potentially affected by natural hazards on the site and adjacent to it have been identified in the Stormwater and Flooding Assessment based on the indicative design and desktop information available from Auckland Council GIS (GeoMaps) and through the recent experience on 27 January 2023. There are none proposed in locations where a high risk currently exists. Through the detailed design process, careful consideration will be given to the location and nature of earthworks and buildings in relation to those areas affected by natural hazards to ensure that the risk is not increased as a result of development.
(2) Undertake natural hazard identification and risk assessments as part of structure planning.	This is not a structure plan process.
(3) Ensure the potential effects of climate change are taken into account when undertaking natural hazard risk assessments.	The Stormwater and Flooding Assessment has considered future effects of climate change and the detailed design process will consider this as well.
(4) Assess natural hazard risks: (a) using the best available and up-to-date hazard information; and (b) across a range of probabilities of occurrence appropriate to the hazard, including, at least, a 100-year timeframe for evaluating flooding and coastal hazards.	The Stormwater and Flooding Assessment noted that the available LiDAR data from 2017 and the catchment and hydrology information from AC GIS regarding ponds, low lying areas and existing overland flow paths, are outdated due to modifications that have occurred in relation to the horticultural activities on the site. As part of the detailed design process Watercare will have the site surveyed to provide more up-to date information.
(5) Manage subdivision, use and development of land subject to natural hazards based on all of the following: (a) the type and severity of potential events, including the occurrence natural hazard events in combination; (b) the vulnerability of the activity to adverse effects, including the health and safety of people and communities, the resilience of property to damage and the effects on the environment; and (c) the cumulative effects of locating activities on land subject to natural hazards and the effects on other activities and resources	The WWTP's design and development of the site will consider the potential for natural hazard events and while the WWTP is not a less or more vulnerable activity as defined in the AUP, the ongoing operation of the plant and its design to ensure it is resilient is essential for the benefit of the wider community and the cumulative effects of locating the WWTP on the site.
(6) Adopt a precautionary approach to natural hazard risk assessment and management in circumstances where: (a) the effects of natural hazards and the extent to which climate change will exacerbate such effects are uncertain but may be significant, including the possibility of low-probability but high potential impact events; or (b) the level of information on the probability and/or impacts of the hazard is limited.	Given the significance of the infrastructure a precautionary approach will be adopted. Watercare adopts a Safety in Design approach that includes ensuring the health and safety of all those who may be affected by the asset, by taking responsibility to provide information on existing hazards associated with a project, making decisions relating to potential risks, hazards, and the mitigation measures identified by the Safety in Design process.
Management approaches (7) Avoid or mitigate the effects of activities in areas subject to natural hazards, such as earthworks, changes to natural and built drainage systems, vegetation clearance and new or modified structures, so that the risks of natural hazards are not increased.	Earthworks are necessary as part of development of the site and will be subject to a separate regional consent process. However, works that have the potential to result in changes to the conveyance function of existing overland flow paths or obstruction of flow that could impact on natural hazards will be carefully assessed to ensure that there are no increased risks associated with the works.
(8) Manage the location and scale of activities that are vulnerable to the adverse effects of natural hazards so that the risks of natural hazards to people and property are not increased.	Elements of the WWTP are more vulnerable to risk than others. The Stormwater and Flooding Assessment notes the need to consider the location of the control building and workshop area as they will require habitable floor levels above the 1% AEP flood plain. Other activities need to ensure that they are above the 1% AEP flood levels.
(9) Encourage activities that reduce, or do not increase, the risks posed by natural hazards, including any of the following: (a) protecting and restoring natural landforms and vegetation; (b) managing retreat by relocation, removal or abandonment of structures; (c) replacing or modifying existing development to reduce risk without using hard protection structures; (d) designing for relocatable or recoverable structures; or	Retention of the streams and wetlands and associated planting and avoiding works close to them wherever possible will as a minimum maintain the status quo in relation to natural landforms and vegetation.

(e) providing for low-intensity activities that are less vulnerable to the effects of relevant hazards, including modifying their design and management.	
(10) Encourage redevelopment on land subject to natural hazards to reduce existing risks and ensure no new risks are created by using a range of measures such as any of the following: (a) the design and placement of buildings and structures; (b) managing activities to increase their resilience to hazard events; or (c) change of use to a less vulnerable activity	The culvert crossings at Glenbrook Beach Road that drain the upstream catchment under the road into the site have been identified as constrained. The two irrigation ponds on the site were not included in the flood model analysis undertaken in 2009. The works being undertaken on the site are expected to consider these elements and to allow for adequate peak flow capacity to ensure that existing flooding risk is not increased.
Role of natural systems (11) Strengthen natural systems such as flood plains, vegetation and riparian margins, beaches and sand dunes in preference to using hard protection structures.	N/A
Infrastructure (12) Minimise the risks from natural hazards to new infrastructure which functions as a lifeline utility by: (a) assessing the risks from a range of natural hazard events including low probability but high potential impact events such as tsunamis, earthquake and volcanic eruptions; (b) utilising design, location and network diversification to minimise the adverse effects on infrastructure and to minimise the adverse effects on the community from the failure of that infrastructure.	Watercare is defined as a lifeline utility in terms of Schedule 1, Part B of the Civil Defence Emergency Management Act 2002 as it is an entity that provides a wastewater or sewerage network or that disposes of sewage. The WWTP proposed on the site will be a fundamental part of the wastewater network in Southwest Auckland. Watercare is aware of the risks related to the site and will minimise adverse effects on the WWTP and the adjacent road related to flooding and diversions of overland flow paths.
Coastal hazards (13) Require areas potentially affected by coastal hazards over the next 100 years to do all of the following: (a) avoid changes in land use that would increase the risk of adverse effects from coastal hazards; (b) do not increase the intensity of activities that are vulnerable to the effects of coastal hazards beyond that enabled by the Plan; (c) in the event of redevelopment, minimise natural hazard risks through the location and design of development; and (d) where it is impracticable to locate infrastructure outside of coastal hazard areas, then ensure coastal hazard risks are mitigated.	<p>The risk of coastal inundation is limited to the coastal areas of the site as can be seen in Figure 5-10 of the AEE.</p>  <p>The bulk of the WWTP even at full build out as can be seen from the Indicative Design and Operational Report is avoiding the area shown as subject to the 1 in 100-year return at both 1 m and 2 m sea level rise.</p>

Given the above points, we consider that Watercare has satisfactorily responded to your section 92 letter with regards to the matters raised above. If you have any further questions, please contact me.

Yours sincerely



Anshita Jerath
Senior Resource Consents Planner
Anshita.jerath@water.co.nz

Appendix 2: Southwest WWTP NoR draft proposed consent conditions

General

1. Except as modified by the conditions below or any outline plan(s), the works authorised by this designation (**Works**) must be undertaken, and the Wastewater Treatment Plant (**WWTP**) must be operated, in general accordance with the following information provided by the Requiring Authority:

Document	Author	Dated
Form 18 Notice of Requirement by Watercare Services Limited to Designate land at 372 Glenbrook Beach Road for wastewater treatment infrastructure	Watercare Services Limited	31 August 2023
Southwest WWTP Notice of Requirement AEE	Stantec	31 August 2023
Southwest wastewater servicing – Wastewater Treatment Plant – Indicative Design and Operational report	Stantec	30 August 2023
Southwest Wastewater Treatment Plant – Assessment of Alternative Sites and Addendum and Appendices	Beca	7 December 2022
Southwest Wastewater Treatment Plant Glenbrook beach road - Engagement report	Watercare Services Limited	September 2023
Southwest Wastewater Treatment Plant NOR project Landscape, Visual and Natural Character Effects Assessment	Boffa Miskell	29 August 2023
Southwest Wastewater Treatment Plant NOR project Landscape and Visual Assessment graphic supplement	Boffa Miskell	August 2023
Southwest Wastewater Treatment Plant NOR project Landscape Planting Plan	Boffa Miskell	29.08.2023
Southwest Wastewater Treatment Plant - Ecological Assessment in support of Notice of Requirement	Boffa Miskell	29 August 2023
Southwest Wastewater Treatment Plant Designation – Archaeological Assessment	CFG Heritage	29 August 2023
Southwest Wastewater Treatment Plant - Air Quality Notice of Requirement	Beca Limited	28 August 2023
Notice of requirement – Southwest Wastewater Treatment Plant – Stormwater and Flooding Assessment	Stantec	30 August 2023
Southwest Wastewater Treatment Plant Designation - Acoustic Impact Assessment	Marshall Day Acoustics	31 August 2023
Notice of Requirement -Southwest Wastewater Treatment Plant – Transportation Report	Stantec	31 August 2023

Where there is any inconsistency between the documents listed above and these conditions, these conditions shall prevail.

Lapse Period

2. In accordance with section 184(1)(c) of the Resource Management Act 1991, this designation will lapse if not given effect to within 5 years from the date on which it is included in the Auckland Unitary Plan (Operative in Part).

Management plans

3. At least 20 working days prior to the Works commencing the management plan(s) specified in Condition 7 must be submitted to the Team Leader Compliance and Monitoring at Auckland Council (Council) for certification that the plan(s) meets the requirements of the relevant condition(s). Once certified the management plan(s) must be implemented.
4. Management plan(s) may be prepared and submitted for one or more stages, aspects, sections, or locations of the Works.
5. Once the Requiring Authority has submitted a management plan to the Council for certification:
 - (a) If the management plan meets the requirements of the relevant condition, the Council must certify it within 20 working days of the date the Requiring Authority submitted the management plan.
 - (b) If the Council considers the management plan does not meet the requirements of the relevant condition(s), it must advise the Requiring Authority within 15 working days of the date the Requiring Authority submitted the management plan. The Requiring Authority must then consider the Council's advice and resubmit an amended management plan for certification.
 - (c) If the Requiring Authority has not received a response from the Council within 20 working days of the date of the Requiring Authority submitted the management plan, the management plan is deemed to be certified.
 - (d) If the Requiring Authority has not received a response from the Council within 5 working days of the date of resubmission under Condition 5 (b) above, the management plan is deemed to be certified.

Outline Plan

6. An outline plan may be submitted for one or more stages, aspects, sections, or locations of Works at least 20 working days prior to the Works detailed in the outline plan commencing.
7. In addition to the information required under s 176A of the RMA, the outline plan(s) must include as relevant to the particular stage, aspect, section or location of the design or construction matters being addressed, the following plans and reports and any updates of any already certified management plans:
 - (a) Construction Management Plan
 - (b) Construction Traffic Management Plan
 - (c) Construction Noise Management Plan
 - (d) Landscape Management Plan (if not already approved under Condition 20)
 - (e) Flood Hazard Report (if not already approved under Condition 24)
 - (f) Operational Lighting Plan

Odour

8. Beyond the boundary of the site, there shall be no odour caused by discharges from the wastewater treatment activities, which in the opinion of an enforcement officer, is the cause of a noxious, dangerous, offensive or objectionable effect.

Archaeology

9. If any archaeological site is uncovered during the works, and no Archaeological Authority has been granted by Heritage New Zealand (Pouhere Taonga) (HNZPT), the following Accidental Discovery Protocol shall apply:
 - (a) Work shall cease immediately at that place;
 - (b) All machinery shall be shut down and the area secured in the immediate vicinity of the discovery;
 - (c) The Requiring Authority shall notify the landowners and the relevant HNZPT Regional Archaeologist, and if necessary, the appropriate Archaeological Authority application shall be initiated;
 - (d) If the site is of Maori origin, the Requiring Authority shall notify the appropriate mana whenua group(s) to determine what further actions are appropriate to safeguard the archaeological site or its contents, and what further actions are appropriate with regard to tikanga Maori;
 - (e) If skeletal remains are uncovered, the Requiring Authority shall advise the New Zealand Police, HNZPT and the appropriate mana whenua group(s); and
 - (f) Works affecting the archaeological site shall not resume until any approval required from HNZPT has been obtained.

Construction Management Plan

10. The Requiring Authority must prepare a Construction Management Plan and submit to Council for certification. Once certified the plan must be implemented for the duration of the Works.
11. The objective of the Construction Management Plan is to ensure that management procedures and construction methods are adopted to avoid, remedy or mitigate adverse effects of the construction of the WWTP, and minimise as far as reasonably practicable disturbance to adjacent properties and road users and adverse effects on water quality in nearby streams, wetlands and the coastal marine environment.
12. The Construction Management Plan must be prepared by a suitably qualified person.
13. The Construction Management Plan must achieve the objective in Condition 11 and must include:
 - (a) a construction programme, including identifying key stages of the Works, any seasonal timings for works and early morning works expected to occur before 7:00am Monday – Saturday and 9am Sundays;
 - (b) a detailed site layout that:
 - i. includes details related to the storage of materials and containment of hazardous substances to minimise the risk of spills.
 - (c) the design and management specifications for all earthworks on-site, including disposal sites and their location, and include the erosion and sediment controls
 - (d) details of dust management
 - (e) the design of temporary lighting for the construction works and construction support areas;
 - (f) details on the timing of the installation of screening and planting and opportunities where this can be undertaken prior to works commencing;
 - (g) the approach to the management of construction waste;
 - (h) a description of training requirements for all site personnel (including employees, subcontractors and visitors) including details of briefings for employees and subcontractors about the accidental discovery protocol adopted by the Requiring Authority;
 - (i) environmental incident and emergency management procedures; and
 - (j) contact numbers for key construction staff, and staff responsible for any monitoring requirements

Dust management

14. The Requiring Authority must ensure that there is no noxious, dangerous, objectionable or offensive dust from the construction of the WWTP to the extent that it causes an adverse effect beyond the legal property boundary.

Construction Traffic Management Plan

15. The Requiring Authority must prepare a Construction Traffic Management Plan and submit to Council for certification. Once certified the plan must be implemented for the duration of the Works.
16. The objective of the Construction Traffic Management Plan (CTMP) is to outline the methods that will be undertaken to avoid, remedy or mitigate adverse effects from traffic associated with the Works on property access, road user safety and efficiency of traffic movements.
17. The CTMP must be prepared by a suitably qualified and experienced person.
18. The CTMP must achieve the objective in Condition 16 and must:
 - (a) identify the numbers, frequencies, and timing of traffic movements for each phase of the construction programme in the Construction Management Plan, including any limitations on heavy vehicle movements during peak times, or other times as required either in relation to traffic conditions or to mitigate potential noise and vibration effects;
 - (b) identify safe site access arrangements, and site access points for construction traffic, including heavy vehicles involved in constructing the WWTP in a manner consistent with Waka Kotahi NZ Transport Agency's Code of Practice for Temporary Traffic Management.
19. The CTMP must be reviewed and updated as required to align with the key stages identified in the construction programme required in the Construction Management Plan.

Advice Note: Any temporary traffic management (TTM) measures on the road must be carried out in accordance with a Traffic Management Plan (TMP) that has been approved by the Auckland Transport as Road Controlling Authority.

Landscape Management Plan

20. The Requiring Authority must prepare a Landscape Management Plan and submit it to Council for certification, either before or at the same time as submitting the first Outline Plan to Council. For the avoidance of doubt, planting in accordance with the Landscape Management Plan may be undertaken at any time after the Landscape Management Plan has been certified by the Council.
21. The Landscape Management Plan must be prepared by a suitably qualified and experienced person.
22. The objective of the Landscape Management Plan is to demonstrate how the design of the WWTP, and proposed planting avoids, remedies or mitigates potential adverse visual effects of the WWTP on landscape character, visual amenity and natural character.
23. The Landscape Management Plan must achieve the objective in Condition 22 and shall include:
 - (a) the location and types of proposed plantings (including plant size, numbers and spacing), including planting around the boundary, ponds, streams and wetlands,
 - (b) a description of design measures including but not limited to:

- i. the form of the proposed structures and buildings
 - ii. How the finishes of non – safety elements of structures reduce glare and contrast with the surrounding rural landscape through choice of neutral or recessive colours and surface reflectivity
- (c) a description of how the plantings and other design measures:
- i. Reduce the visibility of the WWTP from Glenbrook Beach Road to the west, the Taihiki River to the east and rural-residential properties to the north;
 - ii. Contribute to enhancing local biodiversity;
 - iii. mitigate adverse effects on, the natural character of waterbodies on the site, and
 - iv. where practicable, use eco-sourced seeds and;
- (d) the proposed timing for conducting any planting, including:
- i. planting the line of trees along the southern boundary of the northern artificial irrigation pond, which must be implemented before construction of stage 1 is completed;
 - ii. the remainder of the planting, which must be commenced in the first planting season following the completion of each stage or discrete location of the Works;
- (e) the growing conditions required to ensure the successful establishment, growth and on-going viability of planting;
- (f) the process and programme for maintaining any landscape or visual amenity planting (including, but not limited to, plant and animal pest management).

Flood Hazard

24. The Requiring Authority must prepare and include a Flood Hazard Report and submit it to Council for certification either before or at the same time as submitting the first Outline Plan to Council. Once certified, the methods identified in the report for mitigating potential flooding effects must be implemented. For the avoidance of doubt, Works in accordance with the Flood Hazard Report may be undertaken at any time after the Flood Hazard Report has been certified by the Council.
25. The Flood Hazard Report must be prepared by a suitably qualified and experienced person.
26. The objective of the Flood Hazard Report is to demonstrate how the design of the WWTP avoids or mitigates the potential flooding effects related to new stormwater discharge, any loss of flood plain storage or changes to overland flow paths.
27. The Flood Hazard Report must:
- (a) achieve the objective in Condition 26;
 - (b) identify potential effects of site development on flood risk;
 - (c) identify methods for reasonable mitigation of any identified flooding effects;
 - (d) confirm that, with or without such mitigation, there will be no flood effects on upstream or downstream properties; and
 - (e) confirm that design and construction work avoid changes to the drainage of the natural wetlands and sustain a neutral ground and surface water hydrological regime to avoid impacts to the natural wetlands and downstream (including coastal) environment.

Operational Lighting

28. The Requiring Authority must prepare an Operational Lighting Plan with the first outline plan and submit to the Council for certification.
29. The Operational Lighting Plan must be prepared by a suitably qualified and experienced person.

30. The objective of the Operational Lighting Plan is to demonstrate how the lighting for the outdoor operational areas, access roads, and carparks on site will be designed to comply with AS/NZS 4284:2019- Control of the obtrusive effects of outdoor lighting, Zone A2 limits between 10.00pm and 7.00am to manage sky glow, glare, light spill effects on adjacent properties.

Construction Noise Management plan

Operational Noise

31. Noise from the operation of the WWTP shall meet the following noise limits at the notional boundary of rural zone receivers:

Receiving Zone	Daytime (7am – 10pm Mon – Sat, 9am – 6pm Sunday)	Night-time (All other times)	Assessment Position
Rural – Mixed Rural/zone/Rural –Rural Coastal zone	55 dB LAeq	45 dB LAeq 75 dB LAFmax	Notional boundary

Operational noise levels are to be measured in accordance with New Zealand Standard NZS 6801:2008 *Acoustics – Measurement of environmental sound* and assessed in accordance with New Zealand Standard NZS 6802:2008 *Acoustics - Environmental Noise*.

Construction Noise

32. Construction noise must be measured and assessed in accordance with the provisions of New Zealand Standard NZS 6803:1999 “Acoustics - Construction Noise” and comply with the limits in the following table except where authorised by the required CNMP in condition 34.

Time	Weekdays (dBA)		Saturdays (dBA)		Sundays and Public Holidays (dBA)	
	Leq	Lmax	Leq	Lmax	Leq	Lmax
0630 - 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 - 0630	45	75	45	75	45	75

33. The Requiring Authority must prepare and submit a Construction Noise Management Plan (CNMP) to Council for certification. The CNMP must be prepared by a suitably qualified person.
34. The objective of the CNMP is to identify the best practicable option for management and mitigation of noise from early morning concrete pours, including where full compliance with the levels in condition 32 cannot be achieved at all times.
35. The CNMP must as a minimum include the following information:
- (a) Construction noise criteria;
 - (b) Identification of the most affected dwellings where there exists the potential for noise effects.

- (c) Description and duration of the works, anticipated equipment and the processes to be undertaken;
- (d) Hours of operation, including specific times and days when construction activities causing noise would occur;
- (e) Mitigation options where noise levels are predicted or demonstrated to approach or exceed the relevant limits. Specific noise mitigation measures must be set out which may include, but are not limited to, acoustic screening, time management procedures and alternative construction methodologies;
- (f) The erection of temporary construction noise barriers where appropriate; and
- (g) Schedule and methods for monitoring and reporting on construction noise.

DRAFT

9th October 2023

Jimmy Zhang
 Central/ South Planning Unit,
 Plans and Places
 Auckland Council

Dear Jimmy,

Southwest WWTP Notice of Requirement – Designate 372 Glenbrook Beach Road, Glenbrook - Section 92 Response – Transport related queries

In response to your email dated 5 October 2023, please find enclosed Watercare Services Ltd’s (WSL) written response to the Transport related queries.

Please see the response to the two questions below:

Question 7: As no drawings have been provided it is not possible to comment on the potential effects on the accesses on the south side of Glenbrook Beach Road.

As per our previous s92 response, the layout for the proposed access shown in the Transport Assessment is indicative.

The final form of the access to the site will be developed through the detailed design process and will not be able to be confirmed until Watercare has consulted Auckland Transport, and Auckland Transport is happy to approve the new vehicle crossing(s). The access arrangements will need to ensure that the access integrates with the other site development requirements such as landscaping to mitigate visual effects and stormwater management relating to the culverts under Glenbrook Beach Road and the pond located at the front of the site.

Also, it should be noted that addressing vehicle access for the site is a requirement under s176 of the RMA and part of the Outline Plan Process. Therefore, any changes to the road will need to be resolved as part of that process.

Question 9: Details of forecast queues should be provided. Summary SIDRA model outputs for Lane and Movements should be provided.

Table 1. Site access intersection without Right Turn Bay

Intersection without right-turn bay							
Intersection Leg	Lane (Movement)	Morning Peak Hour			Afternoon Peak Hour		
		Level of Service	Delay (s)	95 th Percentile Queue Length (m)	Level of Service	Delay (s)	95 th Percentile Queue Length (m)
Glenbrook Beach Road (East)	Lane 1 (Through & Right)	A	2.8	6.0	A	0.2	1.2

Intersection without right-turn bay							
Intersection Leg	Lane (Movement)	Morning Peak Hour			Afternoon Peak Hour		
		Level of Service	Delay (s)	95 th Percentile Queue Length (m)	Level of Service	Delay (s)	95 th Percentile Queue Length (m)
Site Access	Lane 1 (Left & Right)	B	14.5	0.5	B	10.7	1.8
Glenbrook Beach Road (West)	Lane 1 (Through & Left)	A	0.1	0.0	A	0.1	0.0
Intersection		-	1.1	6.0	-	0.6	1.8

Table 2 Site access intersection with Right Turn Bay

Intersection with right-turn bay							
Intersection Leg	Lane (Movement)	Morning Peak Hour			Afternoon Peak Hour		
		Level of Service	Delay (s)	95 th Percentile Queue Length (m)	Level of Service	Delay (s)	95 th Percentile Queue Length (m)
Glenbrook Beach Road (East)	Lane 1 (Through)	A	0.0	0.0	A	0.1	0.0
	Lane 2 (Right Turn Bay)	B	10.0	0.3	A	9.3	0.3
Site Access	Lane 1 (Left & Right)	C	15.2	0.1	B	10.8	1.9
Glenbrook Beach Road (West)	Lane 1 (Through & Left)	A	0.1	0.0	A	0.1	0.0
Intersection		-	0.7	1.9	-	0.6	1.9

As per the discussion in the Traffic Assessment Report (dated 31 August 2023) and S92 letter (dated 4 October 2023), the length of queuing is modest – at 95th percentile level less than one vehicle (i.e. 95% of the time the queue should be equal to or less than this length), except for the Glenbrook Beach Road (East) leg in the “Without Right Turn Bay” where in the morning peak period the 95th percentile is forecast at 6m i.e. equivalent to one vehicle.

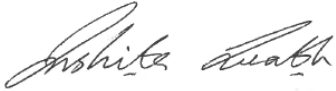
The following information is provided as part of the response to Question 9:

- Appendix 1.2: SIDRA Site Layout – Access with Right Turn Bay
- Appendix 2.2: SIDRA Site Layout – Access without Right Turn Bay

Additionally, WSL would welcome the opportunity to discuss the matters contained within the response with the relevant technical advisors', at the Council's earliest convenience.

Should you have any further queries, please do not hesitate to contact me.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Anshita Jerath', written in a cursive style.

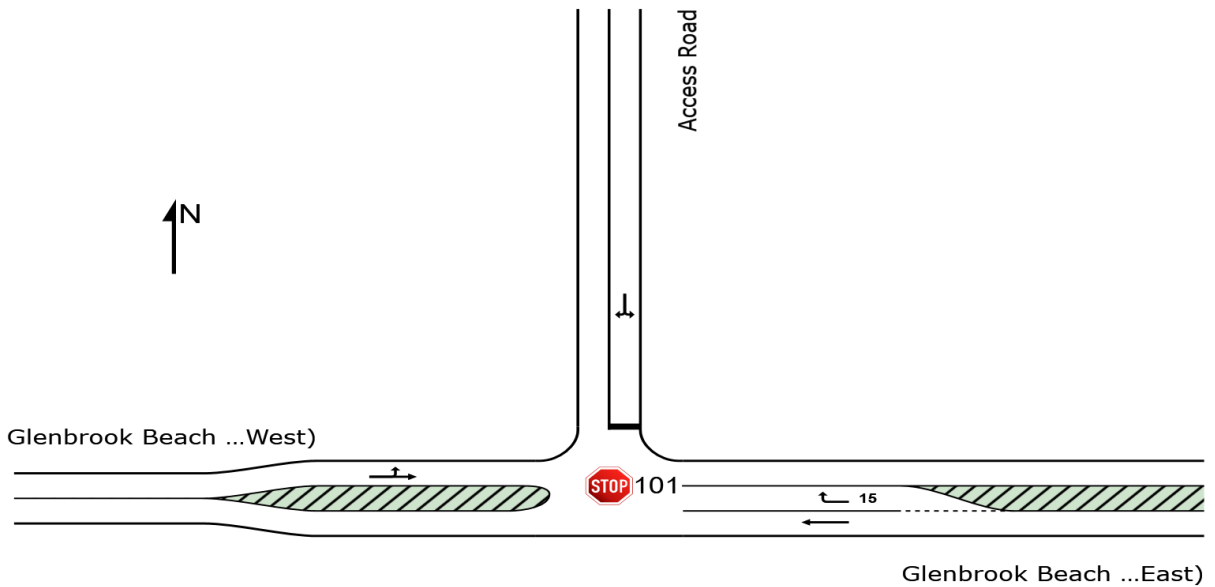
Anshita Jerath
Senior Resource Consent Planner
Watercare Services Limited

SITE LAYOUT

 Site: 101 [GBR Access - AM Peak (Site Folder: With Right Turn Bay)]

New Site
Site Category: (None)
Stop (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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Project: \\Nz4105-pfss01\shared_projects\310103911\technical\Transport\SIDRA_Modelling\372_GBR_Access.sip9

MOVEMENT SUMMARY

 Site: 101 [GBR Access - AM Peak (Site Folder: With Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

Reprocess the Site in this Version to see the selected Movement Class results. All results may be affected by reprocessing compared with Version 9.0 results.

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh.	Dist]				km/h
			veh/h		veh/h					veh	m				
East: Glenbrook Beach Road (East)															
5	T1	All MCs	289	8.0	289	8.0	0.158	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.9
6	R2	All MCs	55	4.0	55	4.0	0.067	10.0	LOS B	0.3	1.9	0.59	0.79	0.59	51.6
Approach			344	7.4	344	7.4	0.158	1.6	NA	0.3	1.9	0.09	0.13	0.09	73.5
North: Access Road															
7	L2	All MCs	7	29.0	7	29.0	0.020	14.2	LOS B	0.1	0.6	0.66	0.95	0.66	43.3
9	R2	All MCs	1	0.0	1	0.0	0.020	22.3	LOS C	0.1	0.6	0.66	0.95	0.66	48.0
Approach			8	25.4	8	25.4	0.020	15.2	LOS C	0.1	0.6	0.66	0.95	0.66	43.9
West: Glenbrook Beach Road (West)															
10	L2	All MCs	1	0.0	1	0.0	0.353	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.4
11	T1	All MCs	653	8.0	653	8.0	0.353	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.7
Approach			654	8.0	654	8.0	0.353	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.7
All Vehicles			1006	7.9	1006	7.9	0.353	0.7	NA	0.3	1.9	0.04	0.05	0.04	76.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: \\Nz4105-pfss01\shared_projects\310103911\technical\Transport\SIDRA_Modelling\372_GBR_Access.sip9

MOVEMENT SUMMARY

 Site: 101 [GBR Access - PM Peak (Site Folder: With Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

Reprocess the Site in this Version to see the selected Movement Class results. All results may be affected by reprocessing compared with Version 9.0 results.

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh.]	[Dist]				km/h
			veh/h		veh/h					veh	m				
East: Glenbrook Beach Road (East)															
5	T1	All MCs	678	8.0	678	8.0	0.367	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.7
6	R2	All MCs	729	0.0	729	0.0	0.008	9.3	LOS A	0.0	0.3	0.49	0.64	0.49	52.0
Approach			685	8.2	685	8.2	0.367	0.2	NA	0.0	0.3	0.01	0.01	0.01	79.3
North: Access Road															
7	L2	All MCs	55	4.0	55	4.0	0.070	10.5	LOS B	0.3	1.9	0.49	0.91	0.49	50.4
9	R2	All MCs	1	0.0	1	0.0	0.070	29.5	LOS D	0.3	1.9	0.49	0.91	0.49	50.1
Approach			56	3.9	56	3.9	0.070	10.8	LOS B	0.3	1.9	0.49	0.91	0.49	50.4
West: Glenbrook Beach Road (West)															
10	L2	All MCs	1	0.0	1	0.0	0.232	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.5
11	T1	All MCs	429	8.0	429	8.0	0.232	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Approach			431	8.0	431	8.0	0.232	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.8
All Vehicles			1172	7.9	1172	7.9	0.367	0.6	NA	0.3	1.9	0.03	0.05	0.03	77.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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LANE SUMMARY

 Site: 101 [GBR Access - AM Peak (Site Folder: With Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

New Site
 Site Category: (None)
 Stop (Two-Way)

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue		Lane Config	Lane Length m	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist] m			%	%
East: Glenbrook Beach Road (East)															
Lane 1	289	8.0	289	8.0	1836	0.158	100	0.0	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	55	4.0	55	4.0	815	0.067	100	10.0	LOS B	0.3	1.9	Short	15	0.0	NA
Approach	344	7.4	344	7.4		0.158		1.6	NA	0.3	1.9				
North: Access Road															
Lane 1	8	25.4	8	25.4	415	0.020	100	15.2	LOS C	0.1	0.6	Full	500	0.0	0.0
Approach	8	25.4	8	25.4		0.020		15.2	LOS C	0.1	0.6				
West: Glenbrook Beach Road (West)															
Lane 1	654	8.0	654	8.0	1854	0.353	100	0.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	654	8.0	654	8.0		0.353		0.1	NA	0.0	0.0				
All Vehicles	1006	7.9	1006	7.9		0.353		0.7	NA	0.3	1.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Lane LOS values are based on average delay per lane.
 Minor Road Approach LOS values are based on average delay for all lanes.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
East: Glenbrook Beach Road (East)										
Mov.	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From E To Exit:	W	N								
Lane 1	289	-	289	8.0	1836	0.158	100	NA	NA	
Lane 2	-	55	55	4.0	815	0.067	100	0.0	1	
Approach	289	55	344	7.4		0.158				
North: Access Road										
Mov.	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From N To Exit:	E	W								
Lane 1	7	1	8	25.4	415	0.020	100	NA	NA	
Approach	7	1	8	25.4		0.020				
West: Glenbrook Beach Road (West)										
Mov.	L2	T1	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL %	Ov. Lane No.	
From W										

To Exit:	N	E							
Lane 1	1	653	654	8.0	1854	0.353	100	NA	NA
Approach	1	653	654	8.0	0.353				
Total		%HV	Deg.Satn	(v/c)					
All Vehicles	1006	7.9	0.353						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Glenbrook Beach Road (East)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: Access Road				
Lane 1	0.0	0.0	0.0	0.0
West: Glenbrook Beach Road (West)				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

 Site: 101 [GBR Access - PM Peak (Site Folder: With Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

New Site
 Site Category: (None)
 Stop (Two-Way)

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			%	%
East: Glenbrook Beach Road (East)															
Lane 1	678	8.0	678	8.0	1846	0.367	100	0.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Lane 2	7	29.0	7	29.0	940	0.008	100	9.3	LOS A	0.0	0.3	Short	15	0.0	NA
Approach	685	8.2	685	8.2		0.367		0.2	NA	0.0	0.3				
North: Access Road															
Lane 1	56	3.9	56	3.9	796	0.070	100	10.8	LOS B	0.3	1.9	Full	500	0.0	0.0
Approach	56	3.9	56	3.9		0.070		10.8	LOS B	0.3	1.9				
West: Glenbrook Beach Road (West)															
Lane 1	431	8.0	431	8.0	1854	0.232	100	0.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	431	8.0	431	8.0		0.232		0.1	NA	0.0	0.0				
All Vehicles	1172	7.9	1172	7.9		0.367		0.6	NA	0.3	1.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Lane LOS values are based on average delay per lane.
 Minor Road Approach LOS values are based on average delay for all lanes.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
East: Glenbrook Beach Road (East)										
Mov.	T1	R2	Total	%HV	Cap.	Deg. Satn	Lane Util.	Prob. SL	Prob. Ov.	Ov. Lane No.
From E					veh/h <td>v/c <td>% <td>% <td></td> <td></td> </td></td></td>	v/c <td>% <td>% <td></td> <td></td> </td></td>	% <td>% <td></td> <td></td> </td>	% <td></td> <td></td>		
To Exit:	W	N								
Lane 1	678	-	678	8.0	1846	0.367	100	NA	NA	
Lane 2	-	7	7	29.0	940	0.008	100	0.0	1	
Approach	678	7	685	8.2		0.367				
North: Access Road										
Mov.	L2	R2	Total	%HV	Cap.	Deg. Satn	Lane Util.	Prob. SL	Prob. Ov.	Ov. Lane No.
From N					veh/h <td>v/c <td>% <td>% <td></td> <td></td> </td></td></td>	v/c <td>% <td>% <td></td> <td></td> </td></td>	% <td>% <td></td> <td></td> </td>	% <td></td> <td></td>		
To Exit:	E	W								
Lane 1	55	1	56	3.9	796	0.070	100	NA	NA	
Approach	55	1	56	3.9		0.070				
West: Glenbrook Beach Road (West)										
Mov.	L2	T1	Total	%HV	Cap.	Deg. Satn	Lane Util.	Prob. SL	Prob. Ov.	Ov. Lane No.
From W					veh/h <td>v/c <td>% <td>% <td></td> <td></td> </td></td></td>	v/c <td>% <td>% <td></td> <td></td> </td></td>	% <td>% <td></td> <td></td> </td>	% <td></td> <td></td>		

To Exit:	N	E									
Lane 1	1	429	431	8.0	1854	0.232	100	NA	NA		
Approach	1	429	431	8.0	0.232						
Total		%HV Deg. Satn (v/c)									
All Vehicles	1172	7.9	0.367								

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

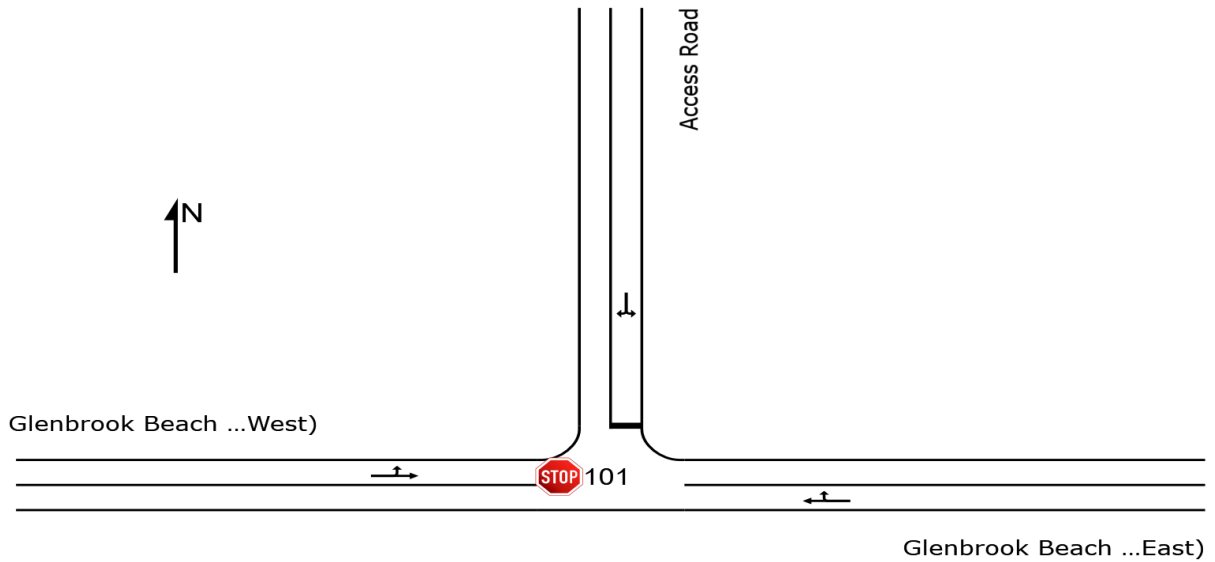
Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Glenbrook Beach Road (East)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: Access Road				
Lane 1	0.0	0.0	0.0	0.0
West: Glenbrook Beach Road (West)				
Lane 1	0.0	0.0	0.0	0.0

SITE LAYOUT

 Site: 101 [GBR Access - AM Peak (Site Folder: Without Right Turn Bay)]

New Site
Site Category: (None)
Stop (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

 Site: 101 [GBR Access - AM Peak (Site Folder: Without Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

Reprocess the Site in this Version to see the selected Movement Class results. All results may be affected by reprocessing compared with Version 9.0 results.

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh.	Dist]				km/h
			veh/h		veh/h					veh	m				
East: Glenbrook Beach Road (East)															
5	T1	All MCs	289	8.0	289	8.0	0.224	1.3	LOS A	0.8	6.0	0.28	0.12	0.28	75.3
6	R2	All MCs	55	4.0	55	4.0	0.224	10.9	LOS B	0.8	6.0	0.28	0.12	0.28	57.4
Approach			344	7.4	344	7.4	0.224	2.8	NA	0.8	6.0	0.28	0.12	0.28	71.7
North: Access Road															
7	L2	All MCs	7 29.0		7 29.0		0.019	14.2	LOS B	0.1	0.5	0.64	0.94	0.64	43.7
9	R2	All MCs	1 0.0		1 0.0		0.019	16.5	LOS C	0.1	0.5	0.64	0.94	0.64	48.4
Approach			8 25.4		8 25.4		0.019	14.5	LOS B	0.1	0.5	0.64	0.94	0.64	44.2
West: Glenbrook Beach Road (West)															
10	L2	All MCs	1 0.0		1 0.0		0.353	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.4
11	T1	All MCs	653	8.0	653	8.0	0.353	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	79.7
Approach			654	8.0	654	8.0	0.353	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.7
All Vehicles			1006	7.9	1006	7.9	0.353	1.1	NA	0.8	6.0	0.10	0.05	0.10	76.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

 Site: 101 [GBR Access - PM Peak (Site Folder: Without Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

Reprocess the Site in this Version to see the selected Movement Class results. All results may be affected by reprocessing compared with Version 9.0 results.

New Site
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh.	Dist]				km/h
			veh/h		veh/h					veh	m				
East: Glenbrook Beach Road (East)															
5	T1	All MCs	678	8.0	678	8.0	0.374	0.1	LOS A	0.2	1.2	0.02	0.01	0.03	79.7
6	R2	All MCs	729	0.0	729	0.0	0.374	11.0	LOS B	0.2	1.2	0.02	0.01	0.03	59.2
Approach			685	8.2	685	8.2	0.374	0.2	NA	0.2	1.2	0.02	0.01	0.03	79.4
North: Access Road															
7	L2	All MCs	55	4.0	55	4.0	0.068	10.5	LOS B	0.3	1.8	0.49	0.91	0.49	50.5
9	R2	All MCs	1	0.0	1	0.0	0.068	20.7	LOS C	0.3	1.8	0.49	0.91	0.49	50.2
Approach			56	3.9	56	3.9	0.068	10.7	LOS B	0.3	1.8	0.49	0.91	0.49	50.5
West: Glenbrook Beach Road (West)															
10	L2	All MCs	1	0.0	1	0.0	0.232	7.0	LOS A	0.0	0.0	0.00	0.00	0.00	74.5
11	T1	All MCs	429	8.0	429	8.0	0.232	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	79.8
Approach			431	8.0	431	8.0	0.232	0.1	NA	0.0	0.0	0.00	0.00	0.00	79.8
All Vehicles			1172	7.9	1172	7.9	0.374	0.6	NA	0.3	1.8	0.04	0.05	0.04	77.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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LANE SUMMARY

Site: 101 [GBR Access - AM Peak (Site Folder: Without Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

New Site
 Site Category: (None)
 Stop (Two-Way)

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			%	%
East: Glenbrook Beach Road (East)															
Lane 1	344	7.4	344	7.4	1537	0.224	100	2.8	LOS A	0.8	6.0	Full	500	0.0	0.0
Approach	344	7.4	344	7.4		0.224		2.8	NA	0.8	6.0				
North: Access Road															
Lane 1	8	25.4	8	25.4	446	0.019	100	14.5	LOS B	0.1	0.5	Full	500	0.0	0.0
Approach	8	25.4	8	25.4		0.019		14.5	LOS B	0.1	0.5				
West: Glenbrook Beach Road (West)															
Lane 1	654	8.0	654	8.0	1854	0.353	100	0.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	654	8.0	654	8.0		0.353		0.1	NA	0.0	0.0				
All Vehicles	1006	7.9	1006	7.9		0.353		1.1	NA	0.8	6.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Lane LOS values are based on average delay per lane.
 Minor Road Approach LOS values are based on average delay for all lanes.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
East: Glenbrook Beach Road (East)										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E					Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N								
Lane 1	289	55	344	7.4	1537	0.224	100	NA	NA	
Approach	289	55	344	7.4		0.224				
North: Access Road										
Mov.	L2	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From N					Cap. veh/h	v/c	%	%	No.	
To Exit:	E	W								
Lane 1	7	1	8	25.4	446	0.019	100	NA	NA	
Approach	7	1	8	25.4		0.019				
West: Glenbrook Beach Road (West)										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W					Cap. veh/h	v/c	%	%	No.	
To Exit:	N	E								
Lane 1	1	653	654	8.0	1854	0.353	100	NA	NA	

Approach	1	653	654	8.0	0.353
Total %HV Deg.Satn (v/c)					
All Vehicles	1006	7.9		0.353	

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Glenbrook Beach Road (East)				
Lane 1	0.0	0.0	0.0	0.0
North: Access Road				
Lane 1	0.0	0.0	0.0	0.0
West: Glenbrook Beach Road (West)				
Lane 1	0.0	0.0	0.0	0.0

LANE SUMMARY

Site: 101 [GBR Access - PM Peak (Site Folder: Without Right Turn Bay)]

Output produced by SIDRA INTERSECTION Version: 9.0.3.9771

New Site
 Site Category: (None)
 Stop (Two-Way)

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap.	Deg. Satn	Lane Util.	Aver. Delay	Level of Service	95% Back Of Queue		Lane Config	Lane Length	Cap. Prob. Adj. Block.	
	[Total veh/h]	[HV %]	[Total veh/h]	[HV %]						[Veh]	[Dist]			%	%
East: Glenbrook Beach Road (East)															
Lane 1	685	8.2	685	8.2	1830	0.374	100	0.2	LOS A	0.2	1.2	Full	500	0.0	0.0
Approach	685	8.2	685	8.2		0.374		0.2	NA	0.2	1.2				
North: Access Road															
Lane 1	56	3.9	56	3.9	820	0.068	100	10.7	LOS B	0.3	1.8	Full	500	0.0	0.0
Approach	56	3.9	56	3.9		0.068		10.7	LOS B	0.3	1.8				
West: Glenbrook Beach Road (West)															
Lane 1	431	8.0	431	8.0	1854	0.232	100	0.1	LOS A	0.0	0.0	Full	500	0.0	0.0
Approach	431	8.0	431	8.0		0.232		0.1	NA	0.0	0.0				
All Vehicles	1172	7.9	1172	7.9		0.374		0.6	NA	0.3	1.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Lane LOS values are based on average delay per lane.
 Minor Road Approach LOS values are based on average delay for all lanes.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Approach Lane Flows (veh/h)										
East: Glenbrook Beach Road (East)										
Mov.	T1	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From E					Cap. veh/h	v/c	%	%	No.	
To Exit:	W	N								
Lane 1	678	7	685	8.2	1830	0.374	100	NA	NA	
Approach	678	7	685	8.2		0.374				
North: Access Road										
Mov.	L2	R2	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From N					Cap. veh/h	v/c	%	%	No.	
To Exit:	E	W								
Lane 1	55	1	56	3.9	820	0.068	100	NA	NA	
Approach	55	1	56	3.9		0.068				
West: Glenbrook Beach Road (West)										
Mov.	L2	T1	Total	%HV		Deg. Satn	Lane Util.	Prob. SL	Ov. Lane	
From W					Cap. veh/h	v/c	%	%	No.	
To Exit:	N	E								
Lane 1	1	429	431	8.0	1854	0.232	100	NA	NA	

Approach	1	429	431	8.0	0.232
Total %HV Deg.Satn (v/c)					
All Vehicles	1172	7.9	0.374		

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Merge Analysis											
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
There are no Exit Short Lanes for Merge Analysis at this Site.											

Variable Demand Analysis				
	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
East: Glenbrook Beach Road (East)				
Lane 1	0.0	0.0	0.0	0.0
North: Access Road				
Lane 1	0.0	0.0	0.0	0.0
West: Glenbrook Beach Road (West)				
Lane 1	0.0	0.0	0.0	0.0

ATTACHMENT 2

AUCKLAND COUNCIL SPECIALIST ADVICE

2A Landscape and visual



Brown NZ Ltd
5 Waitomo Avenue
Mt Eden
Auckland 1014

7th December 2023

Jimmy Zhang | Policy Planner
Plans & Places
Auckland Council

e. Jimmy.Zhang@aucklandcouncil.govt.nz

Jimmy,

RE: Southwest Waste Water Treatment Plant NOR: Landscape Effects Review

This review report addresses the landscape and visual effects of the proposed Southwest Water Treatment (Watercare) NOR designation at Glenbrook Beach. The proposed water treatment plant – to be located at 372 Glenbrook Beach Road – would sit on farmland east of that road corridor and southeast of the Glenbrook Beach settlement. It would also be located between two arms of the Manukau Harbour: the Waiuku River to the west and the Taihiki River to the east. Farmland and associated residences wrap around three sides of the site, while Glenbrook Beach Road runs down its western boundary.



Location Map showing the waste water plant together with the Glenbrook Beach settlement, flanked by the Waiuku & Taihiki Rivers

In preparing this report, the following NOR documents have been reviewed:

- The *Form 18 Notice of Requirement* by Watercare Services Limited to Designate land at 372 Glenbrook Beach Road for wastewater treatment infrastructure;
- *Southwest Wastewater Servicing – Wastewater Treatment Plant – Indicative Design and Operational Report* (August 2023, Stantec);
- *Southwest Wastewater Treatment Plant NOR Project Landscape, Visual and Natural Character Effects Assessment* (29th August 2023, Boffa Miskell Ltd);
- *Southwest Wastewater Treatment Plant NOR Project Landscape and Visual Assessment Graphic Supplement* (August 2023, Boffa Miskell Ltd); and
- *Southwest Wastewater Treatment Plant NOR project Landscape Planting Plan* (29th August 2023, Boffa Miskell Ltd).

In addressing the effects of the proposed plant, this report is structured as follows:

- a) A brief precis of Boffa Miskell Limited's (BML's) assessment of effects and key findings;
- b) My review of that assessment;
- c) Public Submissions; and
- d) My Key findings and recommendations.

Boffa Miskell Limited's Assessment of Effects

BML's assessment report, together with its Graphic Supplement and Landscape Planting Plan, follow a well-established path of:

- Describing the proposal;
- Describing the assessment approach and methodology;
- Reviewing the proposal's statutory context and relevant statutory instruments;
- Describing and analysing both the site and its wider landscape setting / context;
- Describing where and who would be affected by the wastewater plant;
- Evaluating the proposal's landscape, natural character, and visual effects;
- Outlining the mitigation measures proposed – essentially screen / buffer planting – and evaluating their likely effectiveness;
- Evaluating the proposal against relevant statutory instruments; and
- Providing recommendations and an overall conclusion.

This process is consistent with the guidance offered by *Te Tangi A Te Manu* (NZILA Landscape Assessment Guidelines, May 2022). As I will explain later in this report, I further consider that the material evaluation of the proposed waste water plant complies with those guidelines. Consequently, I do not consider it necessary to describe each step of BML’s assessment process.

Indeed, the only matter of concern to me at this stage is an apparent inconsistency in the description of the proposed plant within the Stantec and BML reports.

In relation to the configuration and design of the proposed waste water plant, Stantec’s ‘design report’, describes the “*Appearance of the Facility*” at section 3.2.6 as follows:

The treatment facility will include structures, plants, equipment, and water and sludge storage lagoons. The operational requirement for structures is that they are constructed above ground to facilitate safe access into the structures for maintenance and asset renewal work. The inlet works could be 6-m above ground level, the highest structure on site, followed by the activated sludge reactors (ASRs) that would be around 5.6-m above ground level. The control building and other equipment buildings will be of similar height.

Following an initial assessment of the site, it was confirmed that the WWTP, especially the inlet works and ASRs, are visible from the north side and the section of Glenbrook Beach Road adjacent to the site. Screening by planting trees in certain areas will be provided to mitigate the visual impact. There is sufficient space around the boundary of most of the site for planting.

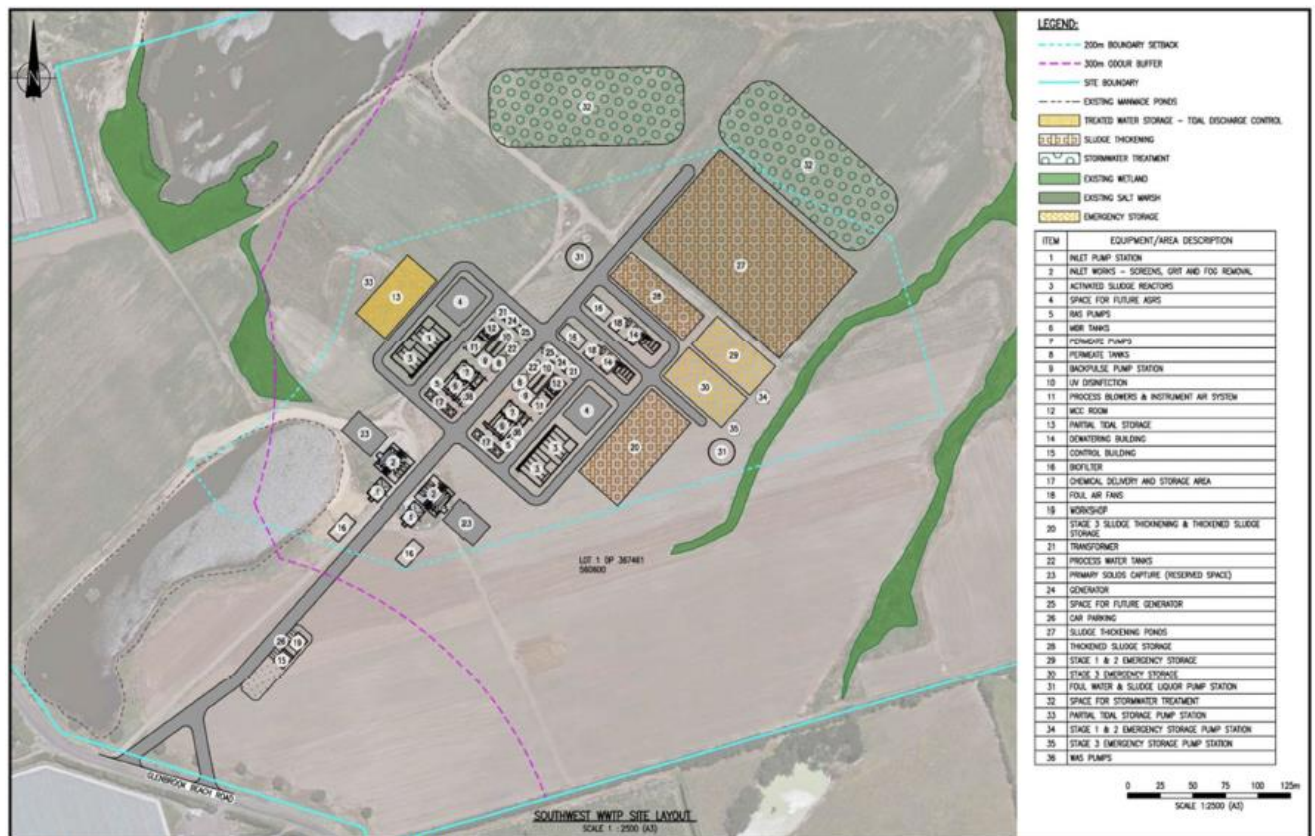


Figure 1: Indicative Configuration of Southwest WWTP

By contrast, BML’s description of the proposal in its Executive Summary states that:

The wastewater treatment plant proposes above ground buildings and structures that range in height from between 2m and 14m (approximately). The majority of the buildings and structures will be approximately 8m in height.

The disparity in heights referred to is significant, although at page 5 of BML’s report, it is also indicated that, “*the size, position and location (within the established project envelope) of the proposed buildings are still under development and may change following the NoR process*”. On the other hand, BML’s description of the scale of the proposed buildings is consistent with the description of the project provided by Watercare representatives in the course of a site visit on the 10th of August 2023. In the course of that site visit, the proposal was also described as being similar in terms of its components and overall character to the already established waste Water plant at Parker Lane, Pukekohe (shown below), albeit physically smaller.



The waste treatment plant in Parker Lane, Pukekohe

The colours also referenced in BML's Appendix 3 mainly comprise light greys in the A03 and the B15 columns of the BS5252 Colour Chart. These are consistent with the natural concrete colouring of most walls and the bare metal of most structural elements found at Parker Lane. This suggests that over time the proposed waste water plant will evolve to be similar to that near Pukekohe.

Returning to the main body of BML's assessment, I consider that it appropriately addresses the site and its landscape context, together with the receiving environments and audiences that would be exposed to the proposed wastewater plant (including 5 residential properties around its periphery). It then addresses the range of landscape, natural character and visual effects that the proposal would have on those 'catchments' and audiences, together with more intrinsic values. The report then turns to BML's mitigation strategy, before evaluating the proposal in relation to sections 6 and 7 of the RMA, and the two AUP Rural zones that encompass and surround the application site.

As a result, BML's assessment concludes that:

The proposed public work will introduce a buildings, structures and land use into the established rural landscape. Whilst the site is within proximity to the coastal environment and the Taihiki River SEA, the public work will have no direct impacts on these features. It is recognised that there is the potential for adverse effects on the coastal environment, however these can be managed by implementing the MPS.

The rural character of the site will primarily be retained around the borders of the site. The preservation of rural character and the integration of the site will be achieved through the implementation and management of the MPS.

Views from the wider context are limited in the wider context by existing landform and vegetation patterns within the landscape. Some audiences will experience partially screened or glimpsed views of the public work, as the proposed mitigation planting develops over time these views will be further restricted or screened. Residential audiences identified to the north and west of the project work with open views over the site will experience an obvious change in the view after Stage 1 is completed and mitigation planting is young. However, as the MPS planting becomes more mature visual effects will be reduced.

It is considered that short term adverse effects on the landscape, visual and natural character of the site and surrounding landscape context can be managed in the long term by mitigation and design control measures recommended in this report.

BML's Graphic Supplement (Appendix E) is integral to the assessment of effects. It includes existing views towards the subject site from a range of viewpoints, together with photo simulations that portray the proposed plant when viewed from those same vantage points – including Glenbrook Beach Road and residential / lifestyle properties at 393A, 450 and 454 Glenbrook Beach Road, and outside 393A Glenbrook Beach Road.

Finally, a number of the photo simulations show mitigation planting at Stages 1 and 2 of the plant's proposed development, then Stage 3. This planting is based on the Mitigation Planting Strategy (Appendix E) also prepared by BML. Of note, it includes the planting of karo along the edge of Glenbrook Beach Road, Japanese cedar around the boundary shared with a residential property at 393A Glenbrook Beach Road, and some large areas of wetland planting near ponds and stream courses that both traverse the site and the sit on the edge of it. Again, this planting,

and the screening it would provide, are integral to BML's assessment of effects, especially in the longer term.

Review of The BML Assessment

In addressing the anticipated effects of the NOR proposal, a number of factors need to be taken into account, including:

- The profile, scale and character of the proposed wastewater works and, in particular, its more elevated structures. In this regard, I have taken guidance from BMLs' description of the proposal, together with their visual simulations.
- The outcomes anticipated for the Rural - Mixed Rural and Rural – Rural Coastal Zones in the AUP.
- The more fine-grained rural character and amenity values associated with the site and surrounding properties.
- The changes that the proposed wastewater plant and operations would generate relative to that character and those values.

Rather than go through BML's assessment piece by piece, the following are some key factors that have contributed to my interpretation of the landscape, natural character and 'visual' effects that the proposed plant would generate, taking into account the proposed mitigation planting:

The Proposed Plant:

The proposed plant is sizeable and has a distinctly industrial profile and character. Some of its taller components would sit on a shallow ridge near the current market garden accessway, exacerbating its visual presence. No mitigation measures are proposed in relation to its structural / infrastructural content and profile – in terms of built forms, materiality or colour.

Rural Qualities Supported By The AUP:

The Rural - Mixed Rural Zone is described as follows at H19.4.1 of the AUP:

The purpose of the Rural – Mixed Rural Zone is to provide for rural production, generally on smaller rural sites and non-residential activities of a scale compatible with smaller site sizes.

These areas often have a history of horticulture, viticulture, intensive farming and equine-related activities. These activities have in turn supported the establishment of produce sales or retail services such as cafés, restaurants, tourist and visitor-related facilities.

Sites in this zone provide flexibility to accommodate a range of rural production activities and associated non-residential activities while still ensuring good amenity levels for residents who use their land for rural lifestyle purposes.

Related objectives and policies include the following:

H19.4.2 Objectives

- (3) *Rural character and amenity values of the zone are maintained while anticipating a mix of rural production, non-residential and rural lifestyle activities.*

H19.4.3 Policies

- (1) *Enable rural production, rural industries and rural commercial services that are compatible with the existing subdivision pattern and recognise that these activities are significant elements of, and primary contributors to, rural character and amenity values.*

The adjoining Rural – Rural Coastal Zone, abutting the Taihiki River is described at H19.5.1 as follows:

The purpose of the Rural – Rural Coastal Zone is to retain and enhance the rural character and amenity values, local coastal character and biodiversity values of rural areas along Auckland’s harbours, estuaries and coastline. It is also to enable rural production activities, local non-residential activities, maintain recreational opportunities and manage the effects of existing scattered rural lifestyle development. The zone also provides opportunities to access the coastal marine area and support marine-related activities.

The zone is more extensive than the coastal environment line identified by using the New Zealand Coastal Policy Statement criteria. It recognises the significance of the coast to the character and identity of Auckland and its role as a favoured place to live and work and for recreational and leisure activities. The coastal environment, and in particular the coastal edge and margins of lakes and rivers, is important to Mana Whenua.

Again, relevant objectives and policies are as follows:

H195.2 Objectives

- (2) *The development and operation of activities that provide recreational and local non-residential services are enabled where they maintain and enhance the zone’s rural and coastal character, amenity values, landscape and biodiversity values.*
- (3) *Buildings are of a scale and intensity that do not detract from the zone’s rural and coastal character and amenity values.*

H19.5.3 Policies

- (1) *Manage activities and development to maintain the distinctive rural and coastal character of the zone which include:*
- a) farming and forestry with a low density of buildings and other significant structures;*
 - b) rural character and amenity values, biodiversity values, values based on particular physical and natural features such as beaches, ridgelines, estuaries, harbours, indigenous vegetation, wetlands, or similar features;*
- (5) *Maintain the rural and coastal character and amenity values in the coastal environment by controlling the number, location, size and visual impact of dwellings and other non-residential buildings and their curtilage and accessways.*
- (6) *Require the location and design of buildings and other significant structures to:*
- a) avoid locating on the top of ridgelines so their profile does not protrude above the natural line of the ridge;*
 - b) minimise building platforms and accessways and earthworks associated with these;*

My interpretation of these provisions is that, even though the Mixed Rural Zone is more accommodating of a range of development than the Rural Production Zone, it still anticipates the maintenance of an environment that contains a relatively high proportion of open space to buildings, a predominance of rural production activities (in various guises) and a degree of

compatibility between rural and non-rural activities. The Rural Coastal Zone is more restrictive in all respects, anticipating the protection of natural coastal values, the retention of larger scale (more extensive) rural properties near the CMA, and a greater level of control over the incursion of non-rural activities, large buildings and development into the coastal environment.

Rural Character and Amenity Values:

Addressing the various landholdings and, in particular, lifestyle blocks around the application site, key attributes include:

- The area's connection with the Taihiki River;
- Its gently rolling terrain;
- The merger of ponds, streams, and wetland areas – including planting – with the coastal edge;
- The matrix of horticulture, pasture, and lifestyle blocks that dominate the local landscape;
- Its 'checkerboard' of shelterbelts and hedgerow planting; and
- By contrast, the relative openness of much of this landscape.

Key qualities or values associated with the locality's lifestyle / residential blocks – both individually and cumulatively – include:

- Its rural character, notwithstanding its proximity to the settlement of Glenbrook Beach;
- Its coastal character – again linked to views of and (in many cases) an outlook towards, the Taihiki River;
- Its sense of (relative) solitude and isolation;
- Its passiveness and tranquillity; and
- The locality's relatively high level of 'pleasantness' and cohesion – without being exceptional in either regard.

Although the area around the proposed water treatment plant has the feeling of being part of the much larger rural and horticultural, 'working landscape' that northern Franklin is renowned for, its connection with the Taihiki River, its coastal margins, its residual water courses, and its vegetation cover combine to create a local environment that is, in many respects appealing – if far from exceptional or outstanding. As such, it appears to exemplify the types of landscape that the combination of Rural - Mixed Rural and Rural – Rural Coastal zoning might be expected to encompass.

Changes To The Glenbrook Beach Landscape:

Having reviewed BML's photos and photo simulations, it is my assessment that the more elevated components of the waste water plant would clearly register as an industrial installation of significant scale and multiple components in relation to most of the viewpoints employed by Boffa Miskell – particularly so during the Stage 1 and 2 periods. Mitigation of the plant's profile and character would be minimal, apart from that associated with screen planting near Glenbrook Beach Road and neighbouring properties.

In this regard, I have more concern about effects in relation to the following viewpoints on Glenbrook Beach Road and residential properties:

Viewpoint 2: 454 Glenbrook Beach Road

Viewpoint 3: Glenbrook Beach Road at the south-western corner of the site

Viewpoint 6: 393A Glenbrook Beach Road

Viewpoint 9: 450 Glenbrook Beach Road

In addition to these properties, I agree with BML that two additional residential at 62A Dunsmuir Road and 149 McLarin Road (no photos or photo simulations provided) would have clear views of the proposed plant, while I also suspect that **Viewpoint 5**, located at 131 Percy Millen Drive, would have a clear overview of the proposed plant and Watercare's operational area. However, BML's photo for that last viewpoint is not from the actual residence (perched above the eastern side of the Taihiki River), so I can't confirm this.

Focusing solely on BML's photo simulations addressing the Stage 3 period, it is my assessment that the proposed plant would continue to still register as an industrial installation in relation to:

Viewpoint 2: 454 Glenbrook Beach Road

Viewpoint 6: 393A Glenbrook Beach Road

Viewpoint 9: 450 Glenbrook Beach Road

Again, it also appears that 62A Dunsmuir Road and 149 McLarin Road would also continue to be exposed to the proposed water water treatment plant and its operations during Stage 3.

The planting of karo along Glenbrook Beach Road appears likely to mediate quite effectively between that key thoroughfare and the proposed waste water plant in the longer term. Even so, those neighbouring properties more reliant on wetland planting and strategically placed stands of vegetation to screen and buffer the proposed plant would still be exposed to at least part of it into the Stage 3 period, and conceivably beyond. More specifically, the plant's skyline of tanks, pipes, gantry and other, more elevated, structures would still provide 'pointers' to its presence.

On the other hand, the two large sheds that are particularly prominent in the Viewpoint 6 images would have an appearance that is more 'rural' than the remaining structures which sit beyond them and are less immediately apparent.

Regardless, the very obviously, industrial nature and componentry of most of the plant and componentry that is visible would not, in my opinion, help to maintain the rural character of Glenbrook Beach. Viewed from many of the residential properties that currently have views of the site, it would be intrusive and disruptive, negating many of the rural and coastal values of the locality, including its sense of tranquillity and (relative) isolation. Furthermore, it would erode the residual 'naturalness' associated with its watercourses, coastal margins and even its artificial ponds. In particular, the plant's more prominent skyline elements would appreciably erode the pleasantness and aesthetic coherence of the locality.

Landscape Effects:

On the other hand, when addressed in the context of the Auckland Region (as a whole) or even the Franklin area, I agree with BML that the landscape around the proposed waste water plant displays quite modest values. Most people experiencing it for the first time would be hard pressed to differentiate it from the rest of Franklin and its rural production landscapes, even allowing for the presence of the Taihiki River nearby.

Reflecting this situation, BML have determined (section 7.1.1) that the proposal would have a Moderate (adverse) level of effect on the broader landscape values of Glenbrook Beach in the short to medium term, and by Stage 3 those effects would reduce to a Low-Moderate, perhaps Low, level.

By and large, I agree with this assessment, although I am concerned that this reduction in effects – which focuses on public exposure to the local landscape, largely from Glenbrook Beach Road – is heavily reliant on the single row of karo to be planted down that public thoroughfare. Reflecting my concerns in this regard, and the likelihood that at least some of the more elevated components of the waste water plant are still 'pop up' above this cover in places, it is my opinion that the broader, landscape effects of the proposal will eventually reduce to a Low-Moderate level – but not a Low level.

I would, however, prefer to see a more in-depth mitigation planting scheme developed for the Glenbrook Beach Road margins to ensure that the level of mitigation anticipated is actually achieved.

Natural Character Effects:

BML explains at section 7.2 that:

The proposed elements of the project will not directly impact any of the natural character areas. The project will introduce a range of structures and facilities and into the site, which will meet the minimum ecological offset from the wetlands, streams and the Taihiki River.

The existing biophysical, hydrological functions and ecology of the three wetlands are considered to have reduced degrees of natural character (Low/Very Low for biophysical and Low for Experiential). Whilst defined as 'wetlands', providing hydrological functions, these wetlands are primarily made up of exotic species and of low quality habitats. Their degraded condition and context within arable farmland have reduced their degree of natural character.

Located some 120m from the Taihiki River's margins, BML therefore conclude that the effects of the proposal will be of low(adverse) order. I agree with this assessment in relation to the biophysical values of the river.

However, I also consider that its impact on the perceived character and values of the river corridor – as a whole – would be greater than BML's assessment suggests. Although not physically close to the river / harbour, the proposed plant would occupy a promontory that overlooks part of both and its signature on that high ground would inevitably diminish some of the perceived naturalness of the coastal environment that includes the Taihiki River and its margins. This evaluation has to be balanced against the highly modified state of most of the river corridor and the rest of its hinterland. Even so, it is my opinion that the proposed water treatment plant would have a Moderate level of effect on the perceived naturalness of the river.

Overall, therefore, I consider than the proposal would have a (combined) Low-Moderate level of impact on its natural character values – still well below the 'significant effects' threshold found in Policy 13 of the NZ Coastal Policy Statement.

Visual (Rural Character and Amenity) Effects:

Returning to BML's viewpoints and the more fine-grained assessment that both BML and I have undertaken in respect of them, I have reached the following conclusions:

- Viewpoint 1.** The effects of the proposal would be low, during all three stages, will minimal change visible and a very low level of impact on Glenbrook Beach's rural character and amenity values. This accords with BML's assessment of effects.
- Viewpoint 2.** The proposal would significantly change the outlook from 454 Glenbrook Road. Even in the longer term, the industrial profile and skyline of the proposed plant would be clearly apparent, rising above the intervening pond and planting. The associated effects would be high for Stages 1 and 2, and Moderate-High for Stage 3. These effects are a 'step' above those identified by BML.
- Viewpoint 3.** Most of the proposed plant would be starkly apparent on the eastern skyline from Glenbrook Beach Road. During Stages 1 and 2 it would fundamentally change the nature and values of the local landscape resulting in a high level of effect. However, once the karo planting next to the road corridor has matured – hopefully during Stage 3 – this level of effect would reduce dramatically to a very low level. This stark transition

highlights the importance of a multi-layered approach to planting along that road corridor, in my opinion. These ratings contrast with BML's low then 'no adverse' rating of effects for 'Group 2'.

- Viewpoint 4.** Viewed from this quite remote vantage point, amid a broad patina of paddocks, horticulture blocks, shelterbelts and more sporadic development, the proposed waste treatment plant would have a very limited – in all likelihood, very low – level of effect. This rating appears to be generally consistent with BML's ratings.
- Viewpoint 5.** Looking across the Taihiki River from an elevated vantage point, this viewpoint would reveal the fuller extent and content of the proposed plant juxtaposed with the paddocks, horticulture blocks, shelterbelts, and coastal margins near Glenbrook Beach. Although a viewing distance of approximately 1.9km would ultimately limit the effects of such exposure, I expect that they would still be of a moderate order. This rating is higher than the low-moderate and low-very low ratings attributed its 'Group 3'.
- Viewpoint 6.** Looking from 393A Glenbrook Beach Road, the pond at the edge of the application site would be backed by two large sheds at the western end of the site (previously described), with the rest of the plant arrayed beyond them. The sheds could conceivably be rural in nature, but the distinctive profile of the rest of the plant would still be clearly apparent. Planting next to the pond would help to reduce this 'intrusion' but would not entirely obviate it. As a result, it is considered that the waste treatment plant would have a moderate-high level of effect during Stages 1 and 2, reducing to a moderate level of effect in Stage 3. This evaluation largely accords with that of BML.
- Viewpoint 7.** The waste Treatment plant would have a relatively low profile when viewed from Glenbrook Beach Road, with much of its plant screened by planting around the property at 424 Glenbrook Beach Road. I consider that it would still change some of the character of the rural landscape exposed to the road corridor, but to a limited degree – resulting in a low-moderate level of effect in the short to medium term and a low level of effect during Stage 3. Again, this generally accords with BML's rating of effects.
- Viewpoint 8.** Most of the proposed plant would either be screened or significantly filtered by intervening planting, both within the property at 393A Glenbrook Beach Road and next to Glenbrook Beach Road itself. BML identifies this property being affected to a low degree – in both the short and longer terms. I concur with that assessment.
- Viewpoint 9.** The property at 450 Glenbrook Beach Road offers views similar to those associated with no.454 (Viewpoint2), but closer to the application site. As

a result, I anticipate that the wastewater plant would have effects similar to those identified for Viewpoint 2, but the plant would appear more immediate. It would have a greater degree of visual prominence and would be slightly more intrusive. As a result, I consider that it would also have a high level of effects during Stages 1 and 2, and a moderate-high impact thereafter. Again, these ratings are higher than those attributed by BML.

Finally, I note that BML's assessment does not directly address effects on **424 Glenbrook Beach Road** with photos or simulations, but its Mitigation Planting Strategy proposes the planting of a line Japanese cedar (or similar) around the boundary of that property which is shared with the subject site. I do not know if this planting has been specifically agreed with the owners / occupants of that property, but effects on it are of concern, as it is the closest residential property to the Watercare Services site.

Without additional screening / buffer planting, this property is very exposed to the subject site, and I anticipate that the proposed plant would have effects on it very similar to those ascribed to 450 and 454 Glenbrook Beach Road, ie. of a high level, reducing to moderate-high over time (as the planting matures). As for Viewpoints 2 and 9, these ratings are a step above those identified for no.424 by BML.

Overall, most of the proposed water treatment plant's exposure to Glenbrook Beach Road would be managed to the point where its effects are of a low order by the time Stage 3 is reached. However, this mitigation / screening relies on a single line of planting down that road and I consider that the effects of the proposal would be significantly higher in relation most of the residential properties that abut the application site or are near it.

Mitigation:

This very issue was at the forefront of my s.92 review of the application. As a result, I made the following request (email: 12th September 2023):

Has or can Watercare and / or its consultants considered architectural treatment (as mitigation) for the plant that would reduce its industrial profile and character, and lend it a more 'rural' appearance?

The Pukekohe plant on Parker Lane has a profile and visual signature that is markedly utilitarian and industrial in appearance – as shown on the attached photo. However, it is located in a quite remote, visually recessive, location. By contrast, the proposed WWTP would be much more prominent near Glenbrook Beach Road, with vehicle movements to and from the settlements of Glenbrook Beach and Kahawai Point passing the proposed plant on a regular basis, while local residents living on 4-6 nearby properties would be more directly exposed to the plant. In order to ameliorate and mitigate the effects associated with such exposure, it would appear appropriate to employ measures designed to integrate the WWTP into its landscape setting, including the use of architectural forms, detailing and colouring that is sympathetic to its rural location. These concerns form the basis for this request.

The requirement for a sympathetic approach to be taken to the design and architectural treatment of utilities is not new. Indeed, conditions requiring such an approach, including consultation with local iwi and community groups, have been incorporated in a number of

recent consents for substations granted to Counties power over recent years. In my experience, they can complement the use of planting as a first line of screening and mitigation.

However, no changes have been made to the proposal as a result of this request and, as far as I am aware, and the planting mitigation proposals are also unchanged since notification of the NOR application.

Public Submissions

I have reviewed the public submissions received in relation to the proposed waste Water Plant. Almost universally, they oppose the treatment plant, many of which contain pro-forma content that includes a request to, *“ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible.”*

A number of submissions also request the provision of a bund along the front of the site, *“to screen the WWTP from the road and plant the bund with native vegetation”*, while others also request the restoration of the ponds on site to their 2011 state.

While opposition to the proposed waste water plant is therefore significant among the local community, screening of the proposed plant is – as with many other matters raised in submissions – is a fall-back measure that is often requested.

Key Findings & Recommendations

Assessed against relevant provisions of the AUP, it is my opinion that the proposed plant would not readily ‘fit in to’ its rural and coastal landscape setting. Although its more macro level effects on landscape and natural character values would be of a relatively low order, the effects in relation to neighbouring residential properties would typically start off at a high level during Stages 1 and 2, tailing off to a moderate-high level by Stage 3. It is possible that more rapid growth of some of BML’s proposed planting could result in such effects reducing to a moderate level, but as shown in BML’s photo simulations, it would still clearly register an industrial installation that remains quite prominent and visually intrusive at that stage.

Furthermore, even though the proposed plant would be largely screened from most of Glenbrook Beach Road, it would still be clearly glimpsed at the entrance to the waste water Treatment plant and some other locations, while the use of a simple strip of large shrub / small tree planting in the form of karo means that even this screening / buffering is quite fragile.

As a result, I do not consider that it is consistent with the relevant provisions of the Rural - Mixed Rural and Rural - Rural Coastal Zones which address rural character and amenity values and, among other matters, stress:

- The maintenance and enhancement of rural and coastal character, amenity values, and landscape values; and

- That new buildings are located, and of a scale and intensity, that do not detract from the zone’s rural and coastal character and amenity values.

In relation to these matters, it is notable that the existing Parker Lane waste water plant near Pukekohe would have a similar profile and indeed be larger, but is also more visually recessive due to its topographic location. At Glenbrook Beach, the proposed plant is much more exposed to its surrounds any such ‘recession’ has to be created. However, I am not convinced that this has been achieved with the current proposal.

In order to rectify this situation and reduce the waste water plant’s effects, it is my opinion that there are two options:

(a) Development of a More Comprehensive Mitigation Planting Scheme:

A more comprehensive mitigation planting strategy needs to be developed – ideally involving consultation with neighbouring residents – including those at 393A, 424, 450 and 454 Glenbrook Beach Road with local community input – which affords more comprehensive planting near those same properties, including the use of native canopy species within the proposed planting near the ponds and ‘stream courses’, together with more in-depth and layered planting near 424 Glenbrook Beach Road and the public road corridor. Both types of planting should be integrated, and such a strategy could well involve the use of bunding along the road boundary, with native planting on it.

(b) Retention Of The Current Planting Scheme and Use Of Architectural Mitigation:

The retention of the current level of screen planting (albeit with more than just a line of Japanese cedars facing 424 Glenbrook Road and single line of karo down the road corridor) combined with the use of architectural forms, detailing, materials, and colours to lend the treatment plant’s elevated structures more of a rural, less industrial, character. Such treatment should also make it appear more recessive, so that it is more compatible with its rural-coastal setting and exposure to multiple residential properties – together with the communities of Glenbrook Beach and Kahawai Point, who would pass it daily.

As a result, I therefore propose the addition of conditions like those outlined below to address these matters:

Landscaping and Visual Effects:

The purpose of the Landscape Management Plan required in Condition is to ensure planting around the water treatment plan mitigates the adverse visual and amenity effects of the treatment plant on neighbouring properties and the wider environment by creating a screen and buffer of permanent vegetation. The Landscape Management Plan must:

- a) Incorporate at least two rows of taller native planting along the boundaries shared with Glenbrook Beach Road and neighbouring properties, except where need to provide safe vehicular access to and from the site.
- b) This planting shall comprise species that attain a height of at least 12m, with a similarly scaled canopy, at maturity. Those species are to achieve an average height of at least 8m after 10 years and complete canopy closure after that time – with variations to this height and level of canopy closure only to occur with the permission of neighbouring residents;
- c) The screen planting near Glenbrook Beach Road shall be linked to the proposed around the ponds and wetlands within the subject site so that it ‘reads’ as a cohesive body of vegetation; and
- d) The planting proposed is to demonstrate that adverse visual effects arising from the development of the WWTWP on neighbouring properties at 393A, 424, 450 and 454 Glenbrook Beach Road are appropriately mitigated.

Maximum Height & Appearance of Structures

The maximum height of buildings and other structures within the designated area shall be 14m.

All structures over 5m high are required to have exterior cladding and /or employ colours that recessive, such as mid to dark grey or earthy tones, with the exception of pipes and exposed ‘gantry’ structures and where bright colours are required for safety reasons.

In my assessment, these measures are required to ensure that the proposed waste treatment both fits into its landscape setting and is generally compliant with the relevant provisions of the Rural - Mixed Rural and Rural – Rural Coastal Zone provisions.

Stephen Brown

BTP, Dip LA, Fellow NZILA



2B Noise and Vibration

MEMO

TO: Jimmy Zhang - Policy Planner

FROM: Andrew Gordon – Senior Specialist

DATE: 29 November 2023

SUBJECT: 372 Glenbrook Beach, Glenbrook - Notice of Requirement Application for a Wastewater Treatment Plant - Noise Review

Introduction

I have reviewed the application documents and specifically the acoustic assessment dated 31 August 2023 prepared by Marshall Day Acoustics and the Section 92 Response dated 4 October 2023 (items 14 – 18) in regard to noise effects for a notice of requirement (NoR) application by Watercare Services Limited for a new designation.

The designation is for the purposes of enabling the construction, operation and maintenance of infrastructure for wastewater treatment purposes.

I was involved at the pre application stage and provided comments on the draft report titled *Southwest WWTP Designation Acoustic Impact Assessment* dated 30 June 2023 prepared by Marshall Day Acoustics.

I visited the site with the applicant’s agents and other Council staff or consultants on the 10/08/2023.

The NoR application was publicly notified and received many general points of submission relating to noise and vibration which are addressed below.

Proposal

An application to designate land at 372 Glenbrook Beach Road (Lot 1 DP 367461) comprising 56.06 hectares to enable the construction, operation and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant, and the provision of an odour buffer area around the wastewater treatment plant (WWTP).

The designation provides for a WWTP at full build-out that will provide the capacity to service a long-term population equivalent of 60,000 in the Southwest area.

It is initially proposed to construct the first stage, a WWTP for 20,000 shortly followed by a second stage upgrade for 30,000.

The proposed WWTP will have operational staff at the site during weekday hours between 7am and 5pm. Outside of these hours, the WWTP will be remotely operated through the applicants control centre in Newmarket. If a process alarm is triggered (not audible), the duty operational staff would resolve remotely and if unable to be resolved remotely, duty operational staff will travel to the site.

Location map



Proposed Site Layout



AUP (OP) E25 Noise and vibration

The application site and adjoining sites are zoned Rural – Mixed Rural and Rural – Rural Coastal and subject to permitted noise levels specified in E25.6.3 (1) reproduced below: -

E25.6.3. Noise levels in rural and future urban zones

(1) The noise (rating) level from any activity in the Rural – Mixed Rural Zone, Rural – Rural Production Zone, Rural – Rural Coastal Zone or the Future Urban Zone measured within the notional boundary on any site in any rural zone must not exceed the limits in Table E25.6.3.1 Noise levels in the Rural – Mixed Rural Zone, Rural – Rural Production Zone, Rural – Rural Coastal Zone or the Future Urban Zone below:

Table E25.6.3.1 Noise levels in the Rural – Mixed Rural Zone, Rural – Rural Production Zone, Rural – Rural Coastal Zone or the Future Urban Zone

Time	Noise level
Monday to Saturday 7am-10pm	55dB L _{Aeq}
Sunday 9am-6pm	
All other times	45dB L _{Aeq} 75dB L _{AFmax}

Compliance is assessed within the notional boundary as defined in AUP (OP) J1: -

Notional boundary
A line 20m from any side of a building containing an activity sensitive to noise, or the legal boundary where this is closer to the building.

Activities sensitive to noise
Any dwelling, visitor accommodation, boarding house, marae, papakāinga, integrated residential development, retirement village, supported residential care, care centres, lecture theatres in tertiary education facilities, classrooms in education facilities and healthcare facilities with an overnight stay facility.

In regard to the construction stage, permitted noise levels are set out in E25.6.27 and permitted vibration levels are set out in E25.6.30 (1).

It is noted the permitted noise levels specified in E25.6.27 are the same as noise limits specified in NZS 6803:1999 and referenced in the applicants proposed condition 32.

As the application is for a designation, the above E25 standards would not apply, but are referenced for assessment purposes and as a basis for proposed designation conditions.

Existing Noise Environment

MDA monitored the existing noise environment by setting up a noise logger at the application site northern boundary as shown in Figure 3. The monitoring results reproduced below are typical of a quiet rural area and as expected background levels (L_{A90}) and ambient levels (L_{Aeq}) reduce to below 30 dB (typically around 4am), but note the average night time levels between 10pm and 7am are 31 dB L_{A90} and 39 dB L_{Aeq} respectively.

Table 2: Derived existing noise levels

Period	Ambient Noise (dB L _{Aeq})	Background Noise (dB L _{A90})
Monday to Sunday:		
Daytime (7:00am -10:00pm)	30 – 61	24 – 56
Daytime Average	49	42
Night-time (10:00pm -7:00am)	28 – 51	24 – 43
Night-time Average	39	31

As discussed below, at a night time compliant level of 45 dB L_{Aeq} , treatment plant noise is likely to be audible outside at the nearest receiver sites.

Discussion - Operation

I confirm relevant E25.6.3 (1) permitted operational noise levels are referenced, which are 55 dB L_{Aeq} (daytime) and 45 dB L_{Aeq} / 75 dB L_{AFmax} (nighttime) when assessed within the notional boundary on any adjacent site zoned rural.

I confirm the designation design proposes to adopt standard E25.6.3 as the operational noise limits.

I agree operational vibration effects will be negligible and therefore no operational vibration limits are proposed for the designation. However, a high level assessment has been completed which predicts the highest vibration level will be below the threshold of human perception vibration level of 0.3 mm/s PPV as set out in BS 5228-2:2009, Annex B, Table B.1.

Affected receivers are correctly identified and are listed in Table 1 reproduced below:

Table 1: Receiver table

Pos. No.	Address/location	Zoning / Usage	Min. Distance to WWTP Acoustic Centre (m) ¹
R1	28 Dunsmuir Road	Rural ² / dwelling	590
R2	36 Dunsmuir Road	Rural / dwelling	555
R3	62A Dunsmuir Road	Rural / dwelling	542
R4	349 Glenbrook Beach Road	Rural / dwelling	507
R5	375 Glenbrook Beach Road	Rural / dwelling	454
R6	381-389 Glenbrook Beach Rd ³	Rural / farm	417
R7	393a Glenbrook Beach Road	Rural / dwelling	482
R8	407 Glenbrook Beach Road	Rural / dwelling	665
R9	424 Glenbrook Beach Road	Rural / dwelling	476
Pos. No.	Address/location	Zoning / Usage	Min. Distance to WWTP Acoustic Centre (m) ¹
R10	431 Glenbrook Beach Road	Rural / dwelling	687
R11	442 Glenbrook Beach Road	Rural / dwelling	638
R12	450 Glenbrook Beach Road	Rural / dwelling	488
R13	454 Glenbrook Beach Road	Rural / dwelling	566
R14	455 Glenbrook Beach Road	Rural / dwelling	764
R15	467 Glenbrook Beach Road	Rural / dwelling	865
R16	338 Glenbrook Beach Road	Rural / dwelling	655

In regard to R6, although no dwelling currently exists on this site one may exist in the future. The assessment uses an assumed setback of 10m from the front yard as the nominal dwelling location.

As evident above, the large setback distances provide for good distance attenuation, which will not be compromised given the large application site area and siting of noisy plant well away from the application site boundaries.

Noise levels are predicted using recognised noise modelling software in accordance with best practice, for example, all receivers are downwind from the proposed treatment plant and the presence of a temperature inversion which tends to bend sound propagation waves back towards the ground over distance.

As the individual plant and equipment has not been finalised, MDAs prediction methodology involves reverse calculations from compliant noise levels (e.g. 45 dB L_{Aeq}) at the nearest receiver sites. An industrial noise spectrum has been assumed.

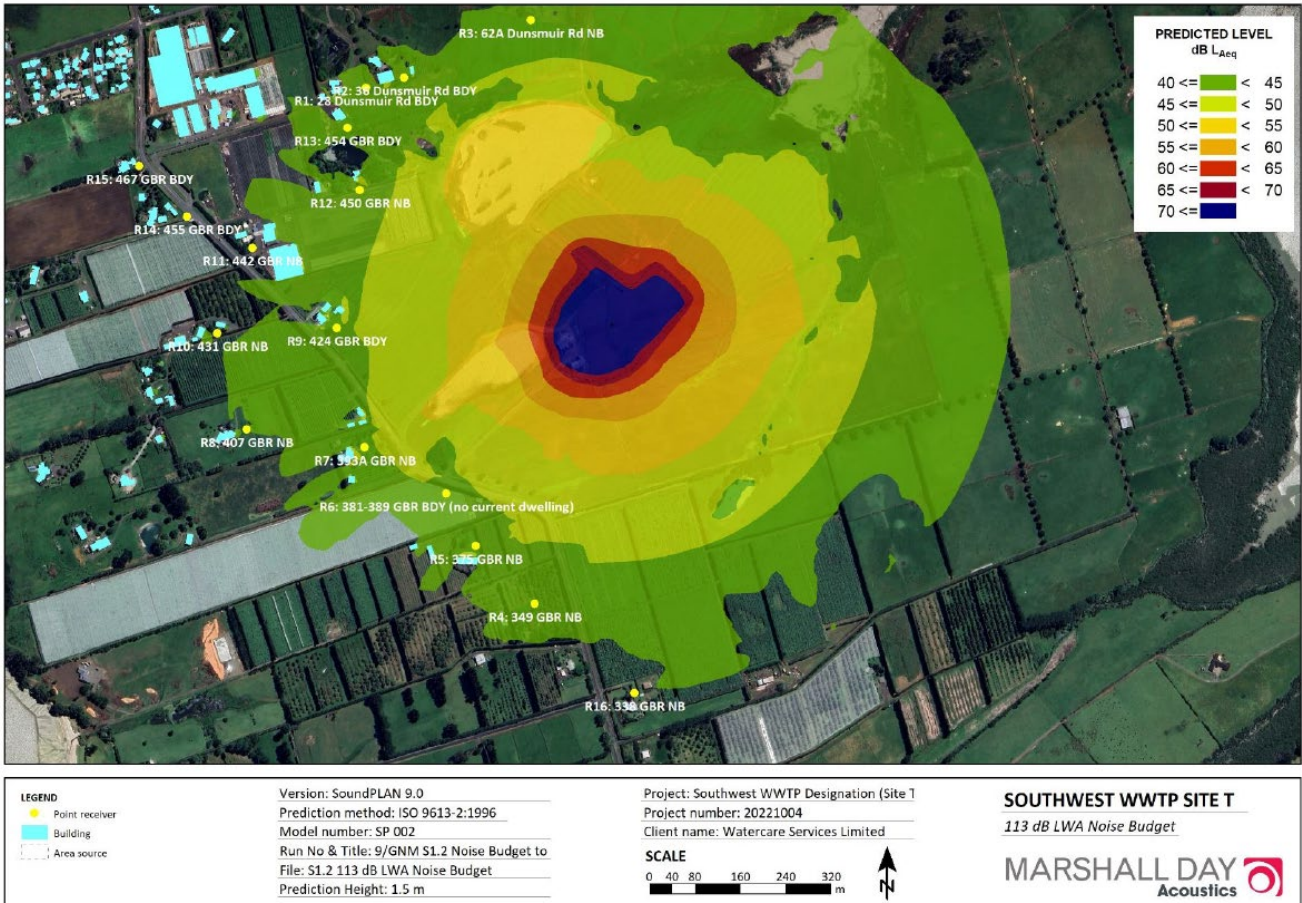
Further, as noise will be emitted by various point sources over the entire treatment plant area, MDA have adopted an 'acoustic centre' which refers to a point located in the middle of the treatment plant from which noise is emitted. MDA have assumed all significant noise sources are outside the 200m boundary setback shown in Appendix B.

By reverse calculation, a noise budget approach has been adopted based on the indicative sound power levels set out in Table 9. I confirm the noise budget of 113 dB L_{WA} is designed to enable compliance when assessed at all notional boundaries and the potential future notional boundary at 381-389 Glenbrook Road.

Based on my experience, the sound power data appears representative of plant expected to be installed. Further, I expect it will be practicable to design plant to meet the recommended noise budget including for the full build.

Predicted noise contours reproduced in Appendix E demonstrate plant and equipment will be designed to ensure day to day operational noise is ≤ 45 dB LAeq, which means during the daytime noise will be generally 10 dB below the permitted 55 dB LAeq level (or subjectively half as loud as the permitted level).

APPENDIX E CALCULATED WWTP NOISE CONTOUR ENVELOPE



In regard to amenity effects, compliance with permitted decibel levels does not necessarily mean there will be no amenity effects. The section 92 response states:-

'From our site observations the existing acoustic environment in the area is comprised of noise from farming activities, vehicle movements on Glenbrook Beach Rd and environmental sounds e.g., birds and insects. The ambient noise level ranges from 30-61 dB LAeq (49 dB average) in the daytime; while the background noise level ranges from 24-56 dB LA90 (42dB average) in the daytime: see Table 2 in the Marshall Day report attached as Appendix J to the AEE. These levels typify a rural (farming) setting adjacent to a collector road i.e., a well-used road during the daytime. These aspects define "daytime rural character" in this context. WWTP noise in the context of the daytime acoustic environment would be audible but unintrusive as a worst-case, but generally would be inaudible.

At night, vehicle movements on Glenbrook Beach Road are sporadic. Farming activity decreases significantly from daytime levels of activity, and these factors result in a quieter night-time acoustic environment: the Marshall Day report attached as Appendix J refers to an ambient noise level of 28-51 dB LAeq (39 dB average) in the night time; and background noise level of 24-43 dB LA90 (31dB average) in the night time. Environmental sounds would typify the "night-time rural character", interspersed with occasional vehicle movements on the road or other distant man-made sound. WWTP noise in the context of the night-time acoustic environment would be clearly audible and likely control the background noise environment. Inside the closest dwellings WWTP noise may be audible with windows ajar for ventilation. With windows closed the WWTP would likely be inaudible or faint.'

I agree with the above assessment.

In my view noise from the proposed treatment plant will give rise to effects by noticeably increasing existing ambient noise levels. Further, given plant noise will be steady and continuous (24 hours) background levels may also increase by at least 5 - 10 dB at eleven of the sixteen receiver sites listed in Table 1 above. A 5 dB increase is, subjectively, noticeable and a 10 dB increase is subjectively twice as loud as the existing average background level over the night time period.

I agree with MDA the proposed plant *'will result in moderate noise effects in the night-time period as a worst case. In this context "moderate" means audible outside.'*

In my view it may be practicable to implement additional noise mitigation to achieve a target level of 40 dB LAeq at the nearest receiver sites. This will subsequently reduce the indicative noise budget from 113 dB L_{WA} to 108 dB L_{WA} for design purposes.

Compliance with 40 dB LAeq is considered an appropriate level to mitigate potential adverse effects on amenity, particularly during the more sensitive evening and night time periods.

I confirm the maximum noise level of 75 dB LAeq will be met given the large separation distances and that there are no noise sources likely to give rise to loud impact and/or impulsive type noise.

In terms of operational vibration, I agree with MDA that vibration from equipment such as a dewatering centrifuge will be imperceptible when assessed at all buildings outside the application site. I note in Table 10 a vibration level of less than 0.2 is predicted at a distance of 330m. As mentioned above, the human threshold of perception in a residential area is 0.3 mm/s PPV.

Discussion – Construction

I confirm relevant E25.6.27 and E25.6.30 (1) construction noise and vibration levels are referenced, for example, 70 dB LAeq and 85 dB L_{Amax} during typical construction hours (i.e. 7:30am to 6:00pm, Monday to Saturday) assessed at 1m from the façade of occupied buildings.

The designation proposes to adopt standard E25.6.27 as the construction noise limits.

I agree construction vibration effects will be negligible and therefore no vibration limits are proposed for the designation.

A brief description of indicative construction works and equipment expected to be used is provided. This is essential for predicting construction noise levels.

I note the noisiest equipment/activity is vibratory sheet piling typically used for retaining works and/or basement excavations. Based on a sound power level of 116 dB L_{WA} the minimum setback distance to achieve compliance with the permitted level of 70 dB LAeq is 83m. I confirm the nearest occupied building is located approximately 450m away from proposed piling works.

Given the above I expect permitted noise levels will be readily met when works are carried out during normal construction hours (i.e. 7.30am to 6pm, Monday to Saturday).

MDA specifically identify concrete pours as they may occur outside the above hours namely, starting as early as 3am. MDA advise early morning concrete pours are necessary because of the large volume of concrete that requires pouring and finishing and to aid the curing process prior to an increase in daytime air temperature. Based on my reviews of similar large construction projects this is relatively common. MDA have assessed compliance can generally be achieved with the lower night time noise level of 45 dB LAeq when assessed 1m from the façade of the nearest occupied building at 375 Glenbrook Road.

Construction noise will be managed via a Construction Noise Management Plan to ensure temporary construction effects are reasonable and permitted noise and vibration levels specified in E25.6.27 and E25.6.30 (1) respectively are not exceeded, where practicable.

In regard to vibration, I agree that all high vibration creating activities will readily comply with the amenity level set out in E25.6.30 (1) (b). Further, it is likely vibration will not be perceivable when assessed at the majority, if not all, buildings located outside the application site.

Submissions

The application was publicly notified which resulted in a total of 296 submissions. Many submissions include noise and vibration effects. I have reviewed the summary of submissions and consider the following broad topics have been considered and formed part of my review.

- Amenity effects (assumed to include noise);
- The WWTP will have negative impacts on noise, odour and the visual aesthetics; enjoyed by a coastal community;
- Noise from the construction and operation of the WWTP have no place in a rural environment;
- The noise from the WWTP would be constant and is not acceptable;
- The construction and operation of the WWTP will adversely affect the quiet enjoyment of nearby property;
- Acoustic;
- Effects of odour and noise; and
- Effects on amenity and property value.

Conclusions

- 1) The application is supported by an Acoustic Impact Assessment which predicts operational and construction noise and vibration levels and compares predicted levels with relevant E25 standards.
- 2) In my opinion the site layout and treatment plant can and will be designed to enable compliance with permitted operational noise levels set out in E25.6.3 (1) without any practicable difficulties.
- 3) In my opinion, given the indicative construction methodologies and large setback distances to the nearest buildings, it will be practicable to manage works to enable compliance including if concrete pours are required during the early morning period.
- 4) I confirm operational and construction vibration will be readily compliant and unlikely to be perceptible to receivers outside the application site.
- 5) In my opinion, in order to further mitigate operational noise effects on rural amenity, the treatment plant design target level should be 40 dB L_{Aeq} where it is practicable to do so. This lower level (i.e. 5 dB below the permitted night time level) will mitigate effects on rural amenity to a low and reasonable level.
- 6) Submissions have been considered and issues addressed.
- 7) Adverse effects will be avoided and/or adequately mitigated by the imposition of conditions.

Recommended Conditions

I generally support the proposed designation conditions specific to construction noise and vibration and operational noise as proposed in Appendix 2.

However, as discussed above, in proposed condition 31 I recommend a target night time level of 40 dB L_{Aeq} to be met where it is practicable to do so and the 45 dB L_{Aeq} will be the upper level if it is not practicable to meet 40 dB L_{Aeq} .

Andrew Gordon
Senior Specialist

2C Transport

Technical Specialist Memo

To: Jimmy Zhang, Reporting Planner

From: Martin Peake - Director, Progressive Transport Solutions Ltd

Date: 1 December 2023

Subject: **Watercare – Notice of Requirement South West Waste Water Treatment Plant – 372 Glenbrook Beach Road, Glenbrook Beach**

Traffic And Transportation Assessment

1.0 Introduction

1.1 I have undertaken a review, on behalf of Auckland Council, of the Notice of Requirement (**NoR**) lodged by the Requiring Authority, Watercare, in relation to traffic and transportation effects.

1.2 In writing this memo, I have reviewed the following documents in relation to transportation:

- Assessment of Effects on the Environment, Stantec, Revision 2, August 2023
- Appendix C – Assessment of Alternatives Report plus Addendum and Appendices, Beca, 7 December 2022
- Appendix K - Transportation Report, Stantec, Revision 2, 29 August 2023
- Section 92 Responses, included Watercare letter dated 9 October 2023

Qualifications and Experience

1.3 I hold the qualification of a Masters in Civil Engineering with Management from the University of Birmingham in the UK (1993). I am a Chartered Engineer (UK) and a member of the Institution of Civil Engineers, and a member of the Chartered Institution of Highways and Transportation.

1.4 I have 30 years' experience as a traffic engineer. I have worked for several major consultant engineering firms, and as a Team Leader of one of Auckland Transport's Traffic Operations Teams. I have owned and operated my own traffic engineering consultancy since 2014. In these roles, I have worked in a variety of areas of transportation including traffic engineering, traffic modelling and temporary traffic management. I have provided expert traffic and transportation advice on a range of resource consents and plan changes across the Auckland region.

1.5 I am familiar with the site and have visited the site on a number of occasions with the most recent being on 1 December 2023.

Involvement with South West Waste Water Treatment Plant

1.6 I was engaged by Auckland Council in July 2023 to review the South West Waste Water Treatment Plant (**SWWTP**) NoR to determine whether the information provided was sufficiently detailed and accurate to understand the traffic and transportation effects of

the proposal. I sought further information on traffic and transportation effects as outlined in the Request for Further Information dated 15 September 2023 and 5 October 2023. These were responded to by Watercare on 4 October 2023 and 9 October 2023, respectively. The information provided generally satisfied my request for further information except in the following matters:

- The layout of site access on Glenbrook Beach Road has not been provided to show how the site access would be formed and demonstrate effects on Glenbrook Beach Road and vehicle accesses in the vicinity of the proposed site access(es).

1.7 This matter is addressed further in this memo.

1.8 I visited the site on 10 August 2023, 30 November, and 1 December 2023.

Expert Witness Code of Conduct

1.9 I have read the Code of Conduct for Expert Witnesses, contained in the Environment Court Consolidated Practice Note (2023) and I agree to comply with it. I can confirm that the issues addressed in this Memo are within my area of expertise and that in preparing this Memo I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

2.0 Key Transport Issues

2.1 The key transport issues in relation to the NoR are summarised below:

- a) Safe design of the site access and effects on Glenbrook Beach Road and vehicle accesses in the vicinity of the proposed site access;
- b) Operation of the site access with construction traffic and horticultural traffic; and
- c) Traffic effects of the construction of the site concurrently with construction of a Watercare pipeline within the road reserve corridor.

2.2 These and other traffic and transportation matters are discussed below.

3.0 Analysis of Watercare Traffic Assessment

3.1 The Watercare assessment of the South-West Waste Water Treatment Plant (**SWWTP**) Notice of Requirement (**NoR**) has been undertaken assuming the site would be constructed in stages, with the stage with most construction activity to be constructed in 2032. Subsequent stages are anticipated to be sometime after 2050 once there is sufficient demand to require the expansion of the site. An assessment of the traffic effects has only been undertaken for 2032 due to unknowns in terms of the traffic environment in 2050 and beyond.

3.2 The assessment has been undertaken with regards to the construction and operational effects. The following sections provide an analysis of the traffic assessment that has been undertaken.

Assessment of Future Traffic Environment – Traffic Volumes

- 3.3 The Applicant has considered the transport environment for 2032 when the main part of the SWWWTP is envisaged to be constructed. Section 4.7.2 of the Transport Report (TR) provides details of the anticipated traffic volumes on Glenbrook Beach Road and in summary, the assessment has considered traffic generated by the residential development at Kawahai Point Special Housing Area (SHA) comprising of some 900 dwellings and Plan Change 91 which anticipates 100 dwellings. These developments are anticipated to be completed by 2030. In assessing the future traffic volumes in 2032, a further 2% growth per annum has been included. On this basis, the Applicant has forecast the future traffic volumes to be 895vph in the morning peak and 1,050vph in the evening peak. No changes to the layout of the road network in the vicinity of the site are envisaged.

Analysis

- 3.4 The assumptions in forecasting future traffic volumes on Glenbrook Beach Road are accepted and are considered suitable for assessing the traffic operational effects at the site access and Glenbrook Beach Road.

Traffic Effects

- 3.5 Traffic generation has been considered during construction and during operation. These are discussed in turn below.

Construction Traffic Effects

- 3.6 TR Section 5.2 outlines the assumptions on the traffic generation during construction. This includes an estimated 40 truck movements (20 inbound and 20 outbound) per day, and 100 light vehicle movements per day (50 inbound and 50 outbound).
- 3.7 In determining the peak hour movements at the site access, the ITA has assumed that approximately half of the light vehicles and 10% of the heavy vehicle movements occur in the peak periods. It is also assumed that 90% of the light vehicles will be inbound and 10% outbound.
- 3.8 In the analysis the assessment has assumed that the peak period for construction vehicles will coincide with the network peak period.
- 3.9 The forecast construction traffic and the forecast traffic volumes on Glenbrook Beach Road in 2032 (as outlined in paragraph 3.3), have been used to model the operation of the vehicle access to the site in the intersection modelling package SIDRA.
- 3.10 The modelling results in TR Section 5.2 are based on a simple access arrangement with no right turn pocket on Glenbrook Beach Road. The Applicant considers this to be a robust assessment even though the TR has recommended that right turn bays be provided. In response to Section 92 queries, further modelling has been provided with right turn bays on Glenbrook Beach Road.

- 3.11 The results presented in the Section 92 response (which has corrected an error in the traffic volumes) shows that Glenbrook Beach Road would operate at a Level of Service A (i.e. free flow conditions) with either no or insignificant delay with the access designed with no right turn bay. The turning movements to and from the site would experience some delay with the site exit experiencing most delay.
- 3.12 It is noted that the site may continue to be used for horticultural activities during construction. Traffic volumes associated with these activities have not been considered in the assessment. In response to Section 92 request for further information, the Applicant has advised that the scale of horticultural activities is unknown at this time and that this would be addressed through the Construction Traffic Management Plan.

Analysis

- 3.13 It is considered that the assessment of the site access is a robust analysis of the traffic effects on the operation of the access as:
- a) The SIDRA modelling has assumed the worst-case scenario of no right turn pocket on Glenbrook Beach Road; and
 - b) Peak construction traffic volumes are assumed to all occur within an hour period and to coincide with the network traffic peak, whereas in reality, construction traffic may be spread over a longer period and occur outside of the network traffic peak.
- 3.14 The analysis forecasts that there is little or no delay to traffic on Glenbrook Beach Road. Any delay at the site access occurs for the right turn into the site or on the site exit; most delay occurs at the site exit.
- 3.15 In response to Section 92 queries, analysis of the operation of the site access with a right turn bay has been provided. Similar modelling results are obtained with the exception that only the turning movements associated with the operation of the site experience any delay or queuing. Through movements along Glenbrook Beach Road would not experience delays or queues.
- 3.16 Based on the analysis it is considered that the construction traffic will not have an adverse effect on the efficient operation of Glenbrook Beach Road. I consider that the right turn bay would avoid delays to northbound through movements on Glenbrook Beach Road and associated queuing and would result in a safer outcome.
- 3.17 The TR does not discuss the installation of the pipeline along roads in the vicinity of the site. This is a matter of concern for residents as the effects of the construction of the subject site and the construction of the pipeline have not been quantified or assessed. I am not aware of the timing of the construction of the pipeline. I consider that the applicant should provide an assessment of the traffic effects of construction of the site with the construction of the pipeline either in evidence or at the hearing.
- 3.18 With respect to the horticultural operations of the site, there are likely to be low traffic movements associated with these activities except during planting or harvesting times. It is acknowledged that traffic associated with these activities cannot be determined at

this time as the scale of activities are unknown. However, to ensure that the operation of the site access operates efficiently with both construction and horticultural traffic, it is recommended that the proposed Construction Traffic Management Plan condition should require the CTMP to consider how horticultural traffic would be managed.

3.19 In summary, I consider that a site access can be provided that would operate efficiently during construction subject to the following recommendations:

- a) An assessment of the combined effects of the construction of the site with the installation of the pipeline within the road reserve along Glenbrook Beach Road is provided either in evidence or at the hearing;
- b) The NoR conditions should require the provision of a right turn bay on Glenbrook Beach Road; and
- c) The CTMP condition should ensure that traffic associated with horticultural activities are appropriately managed with the construction traffic.

Operational Traffic Effects

3.20 TR Section 5.3 provides a summary of the anticipated number of vehicle movements associated with the operation of the site with an estimate of up to 10 vehicles per day (5 vehicle movements inbound and 5 outbound). The TR considers that these are low movements which would be indiscernible to most road users.

3.21 The TR notes that, if necessary, specific temporary traffic management plans may be required for particular activities where access is required for over-dimension vehicles for maintenance activities.

Analysis

3.22 It is concurred that during normal day to day operational activities that the site would have a negligible effect on the operation of Glenbrook Beach Road.

3.23 Any requirement for specific temporary traffic management plans can be determined on a case-by-case basis and I do not consider that specific conditions are required in this regard.

Site Access Arrangements

3.24 The TR in Section 4.5 describes the crash record for this section of Glenbrook Beach Road. There were three recorded crashes in the five-year period 2018-2022 plus all available crashes for 2023 at the time the TR was prepared. All the crashes were as a result of loss of control on the bends to the north and south of the site and speed was a considered a contributory factor. One of the crashes was also attributed to the lack of an advisory sign for the bend which has now been installed and has a 55km/h advisory speed. No crashes occurred due to the operation of vehicle crossings.

3.25 TR Section 5.4 identifies that mitigation works are required to provide a safe access that would be able to accommodate the operation of heavy vehicles turning to and from the

site and TR Section 6 provides consideration of upgrades. Two locations for a possible access have been considered, with a third option being the provision of an access at each of those two locations (with one an entry and the other an exit).

- 3.26 In identifying the possible locations, the TR has considered the sight distances at each of the two locations, dimensions that enable the safe and efficient movement of vehicles that are likely to use the site (including heavy vehicles) and the capacity of the access arrangement (as discussed above).
- 3.27 Access location Option 1 is located at the existing site access, and Option 2 is approximately 60m south of Option 1. Option 3 is a combination of Options 1 and 2.
- 3.28 The applicant proposes that once the designation is confirmed, the design of the vehicle access locations will be developed as part of the Outline Plan of Works (OPW).
- 3.29 TR Section 6.2 outlines the sight distances from each of the two locations identified. The assessment shows that sight distance to the north requires mitigation works to improve sight lines. This includes removal of vegetation and modification to the height of the berm to the north of the access. Option 2 does require some mitigation but to a lesser extent than Option 1. The ITA states that Watercare would need to select appropriate vegetation for the site and that they would need to undertake regular maintenance.
- 3.30 The TR has assessed that the sight lines to the south of both options are adequate with mitigation.
- 3.31 The TR states that Option 2 optimises the available sight distances but that widening of the carriageway to provide for the access would likely intrude further into the property more so than an access at Option 1 and that road widening would likely require the redesign of vehicle crossings on the opposite side of Glenbrook Beach Road to the site access. Stormwater drainage along Glenbrook Beach Road would be affected by the proposed site accesses.
- 3.32 The TR considers Option 3 which would provide two accesses (one at the location of Option 1 and one at Option 2) would operate one-way (i.e. one entry and one exit).
- 3.33 The Applicant proposes to leave the detail of the design of the site accesses to OPW and anticipates that the design would be discussed with Auckland Transport at that stage. Nevertheless, the overall arrangement is discussed in TR Section 6.3 where it considers that the design would need to:
- a) Accommodate heavy vehicle movements including longer vehicles such as semi-trailers.
 - b) Provide appropriate shoulder and lane widths to prevent left turning (heavy) vehicle movements entering opposing traffic lanes.
 - c) Where a single access is proposed, the access would need to accommodate two-way traffic movements.

- d) A right turn bay on Glenbrook Beach Road is recommended which would require widening on both sides of the carriageway.

Analysis

- 3.34 The possible site access locations have been reviewed on site.
- 3.35 It is concurred that Option 2 provides improved sight distances compared to Option 1 and requires less mitigation to achieve the sight lines.
- 3.36 The mitigation for Option 1 (as highlighted in TR Figure 6-5) requires the sight lines to extend across the property boundary and that this would need to be kept clear of vegetation as highlighted in Figure 1. Should this option be chosen, I note that the need to keep the visibility splay clear of vegetation or other obstructions may limit the ability to provide screening of the site from Glenbrook Beach Road.

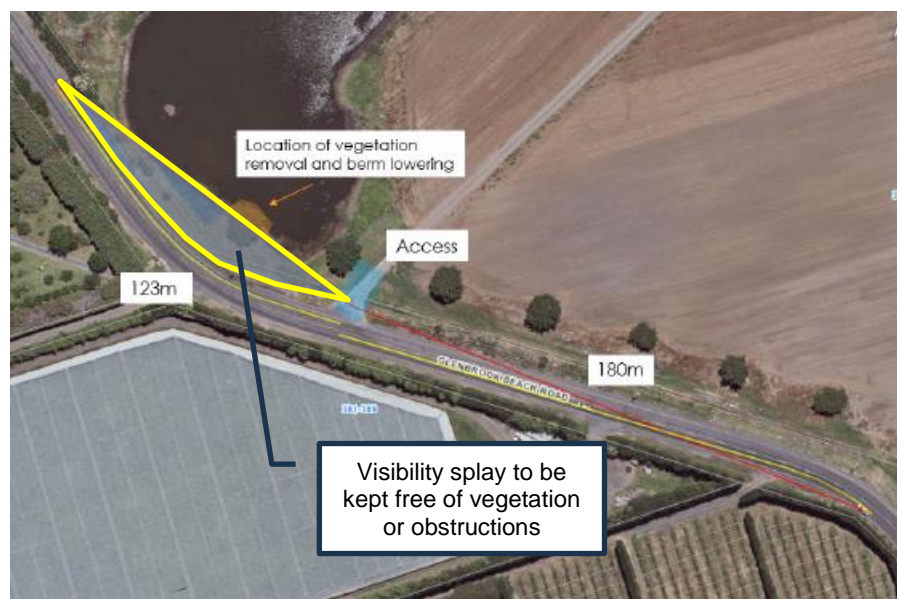


Figure 1 - Option 1 Access Location with Visibility Splay (extracted from TR Figure 6-5)

- 3.37 For Option 2, the area that would need to be kept free of vegetation is entirely within the road reserve.
- 3.38 The TR recommends a right turn bay be provided. I concur that a right turn bay is appropriate, particularly for construction, as motorists travelling northbound on Glenbrook Beach Road would have restricted visibility to a vehicle waiting to turn right from the existing northbound traffic lane, particularly for the location at Option 2. Furthermore, the right turn bay would mean that right turning vehicles would not impede the flow of northbound traffic. I consider that the right turn bay is required for both the safe and efficient operation of the site access.
- 3.39 The TR states that road widening would be required to provide the right turn bay and that this is likely to affect the vehicle accesses on the opposite side of Glenbrook Beach Road. Section 92 Further Information Requests were made to request information on the effects on these vehicle accesses. The Applicant has responded that the access provided in the TR is indicative and will be developed during detailed design and will not

be able to be confirmed until Auckland Transport has been consulted and approved the vehicle crossing¹.

- 3.40 As plans showing a layout of the site access arrangement (at either Option 1 or Option 2) have not been provided, I am unable to assess the implications for the vehicle crossings for the properties on the opposite of Glenbrook Beach Road from the subject site. I consider that a concept design should be provided, either in evidence or at the hearing, that shows the layout of the proposed site accesses and the potential effects on the existing vehicle crossings on the western side of Glenbrook Beach Road. The concept design is required to show the feasibility of providing the accesses, noting that there are drainage ditches on both sides of Glenbrook Beach Road. Furthermore, modifications for Option 1 could partly straighten out Glenbrook Beach Road to the north of the access which may result in increased vehicle speeds and thus affect the sight visibility requirements to the north of the site.
- 3.41 In relation to the safety record of this section of Glenbrook Beach Road, I consider that whilst there have been some crashes in the vicinity of the site, these are related to the bends and not to the presence or operation of vehicle crossings. Subject to the appropriate design of the site access arrangements, including right turn bay, I do not consider that the proposal would result in a significant change in the safety of this section of Glenbrook Beach Road.
- 3.42 I acknowledge that further design detail will need to be determined at a later date, such as stormwater. However, in terms of transportation effects, I consider that the options for the site access are likely to be appropriate, subject to the following further information and recommendations:
- a) In evidence or at the hearing, concept designs should be provided that show the feasibility of the access(es) and the effects on the properties on the western side of Glenbrook Beach Road;
 - b) The NoR conditions require the provision of a right turn bay; and
 - c) NoR conditions require inclusion of measures for the maintenance of vegetation to provide sight lines along Glenbrook Beach Road.

On-site Arrangements

- 3.43 ITA Section 7 provides an assessment of the proposals against the standards in Auckland Unitary Plan - Operative in Part (AUP) Chapter E27 - Transport. The assessment states that the site can comply with the relevant transport requirements.

Analysis

- 3.44 An indicative layout of the site has been included in TR Appendix A entitled '*Figure 1 Indicative Configuration of Southwest WWTP*'. I consider that given the size of the site, it should be possible for the Applicant to comply with the relevant AUP Standards as

¹ Watercare Section 92 Response, Item 7, 4th October 2023

they relate to transport for the internal layout of the site, including car parking, vehicle manoeuvring and access way design.

4.0 Submissions

4.1 A total of 296 submissions have been received on the proposals. I have reviewed the submissions as they relate to transportation. Rather than respond to each individual submission, I have identified the main themes that have been raised and these are summarised below:

- a) Construction traffic effects on Glenbrook Beach Road and ability for the road to accommodate construction with only one road in and out;
- b) Safety of proposed site access;
- c) Quality of existing Glenbrook Beach Road (including potholes); and
- d) Construction of a pipeline along the roads to the site.

4.2 In addition to these themes, some submitters raised other specific transport matters. Where this is the case, I respond to those submissions separately.

Construction traffic effects on Glenbrook Beach Road and ability for the road to accommodate construction with only one road in and out²

4.3 The issue of the effects of construction traffic on the operation of Glenbrook Beach Road was raised in many of the submissions. There appears to be two main concerns, firstly that during construction Glenbrook Beach Road would have insufficient capacity to accommodate the volume of traffic forecast from the site; secondly, that the construction would occur simultaneously with the installation of a Watercare pipeline within roads in the vicinity of the site.

4.4 In respect to the site access, the Applicant has provided traffic modelling, and this has demonstrated that there is sufficient capacity at the site access to accommodate the forecast construction traffic volumes. Therefore, I am satisfied that the site access would operate efficiently and would not result in traffic movements along Glenbrook Beach Road being stopped by right turning vehicles into the site with the provision of a right turn bay. Furthermore, I have recommended that the CTMP should consider how traffic associated with horticultural activities are managed at the site accesses.

4.5 With regards to the operation of Glenbrook Beach Road, the Applicant has forecast that there would be peak hour flows of around 1,050vph two-way on Glenbrook Beach Road. The Applicant has also forecast that at peak times there could be 60 additional vehicle movements per hour associated with construction, the majority being light vehicles resulting in a flow of 1,110vph.

• ² Submissions
3,4,8,11,12,22,28,29,30,33,35,37,39,40,41,42,43,44,47,48,49,51,52,55,59,60,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,108,109,110,112,113,114,115,116,117,118,119,120,121,124,125,126,127,128,129,131,132,134,135,138,139,140,141,142,144,145,146,147,149,150,151,153,154,155,156,157,158,159,160,161,162,163,164,166,167,168,169,170,171,172,173,174,175,176,177,178,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,216,217,220,221,222,225,226,227,229,230,228,2302,32,233,235,236,237,238,239,240,241,244,245,246,248,249,250,251,253,254,256,257,258,259,260,261,262,264,265,266,267,268,270,271,272,273,274,275, 276, 278, 280, 281, 282, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296

- 4.6 I consider that Glenbrook Beach Road has sufficient capacity to accommodate 1,110vph two-way. Furthermore, the construction traffic at peak times will be in the opposite direction to the peak traffic flows on Glenbrook Beach Road (i.e. in the AM peak construction traffic would be northbound into the site whereas the peak direction for general traffic is southbound, and vice versa in the PM peak). Therefore, I consider that construction traffic is unlikely to result in an appreciable difference in the operation of Glenbrook Beach Road.
- 4.7 I note that I have observed the operation of the network at peak traffic times, in particular around the Brookside Road / Mission Bush Road intersection and the Brookside Road / Glenbrook Road intersection. During these observations, motorists did not experience any notable delay.
- 4.8 Outside of peak times, traffic flows on Glenbrook Beach Road would be lower than those volumes stated above, as would construction traffic (estimated to be four vehicle movements per hour). Such an increase in traffic is unlikely to be noticeable effect on the capacity or operation of Glenbrook Beach Road.
- 4.9 I acknowledge that Glenbrook Beach Road is the only road that provides access to Glenbrook Beach, however, I do not consider that the addition of up to 60 vehicles per hour (1 vehicle per minute) at peak times would have a significant effect on the efficient operation of this road, particularly when the majority of these movements would be in the counter-peak direction.
- 4.10 With respect to the coincidence of the construction of the site with the installation of the pipeline along Glenbrook Beach Road, I note that traffic management plans will be in place for managing the construction of the pipeline. To minimise the effect of the site's construction traffic, particularly heavy vehicles, on the operation of the road network with the construction of the pipeline at peak times, I consider that an appropriate condition be included in the CTMP condition. The key concern would be for when the pipeline is being installed on Glenbrook Beach Road south of the site access and along Brookside Road between its intersections with Glenbrook Beach Road and Mission Bush Road, as this is the only road into and out of the area.
- 4.11 The NoR conditions require the preparation of a Construction Traffic Management Plan (CTMP). The CTMP would set out how construction traffic would be managed including any potential restrictions on the movement of vehicles at intersections or times at when construction vehicles (such as heavy vehicles) would be able to enter and exit the site.
- 4.12 In summary, I am generally comfortable that the CTMP condition is sufficient to address the concerns raised by submitters during construction without the pipeline. To address the concern with the pipeline, I provide the following recommendations:
- a) The applicant should provide either in evidence or at the hearing an assessment of the traffic effects with the simultaneous construction of the site and the pipeline in the road reserve; and
 - b) The CTMP condition should be amended to ensure construction traffic is managed if the construction of the site coincides with the construction of the pipeline along Glenbrook Beach Road and Brookside Road up to the intersection of Mission Bush Road or any other works within the road reserve along this section of road.

Safety of Site Access³

- 4.13 A number of submitters have raised concerns on the safety of the site access including concerns with the narrow road, limited visibility and that vehicles will block the movement of traffic along Glenbrook Beach Road as there is a single lane in each direction. Some submitters have questioned the timing of traffic data collection (being between 10am-11am) and that data should be collected at peak times⁴.
- 4.14 I have reviewed the assessment undertaken by the Applicant, and that subject to the provision of a concept design plan of the access arrangements, I am comfortable that the site accesses can be designed to provide appropriate visibility along Glenbrook Beach Road and that with the provision of a right turn bay the access will not block the northbound movement of traffic on Glenbrook Beach Road. As stated above, I recommend that the conditions include for the requirement for the right turn bay and to ensure that visibility splays are maintained.
- 4.15 With respect to the timing of data collection, I note that this data collection was in relation to traffic speeds. I consider that the time that these were collected is appropriate as the speeds are best collected when traffic flows are lower and free flowing which is normally at off-peak times. Volumes used in the traffic modelling were forecast peak traffic volumes.

Quality of Existing Glenbrook Beach Road⁵

- 4.16 A number of submitters have raised concerns on the quality of Glenbrook Beach Road, including comment on potholes along the road.
- 4.17 With regards to the condition of the road, I note that Auckland Transport has works proposed for the renewal of surfacing on Glenbrook Beach Road scheduled for the current financial year (ending June 2024). However, should the installation of the pipeline proceed, this work may be postponed until after the pipeline has been installed, depending on the programme for the pipeline.
- 4.18 It is standard practice for any utility provider that undertakes works within the road reserve to reinstate the road once works are complete.

Construction of Pipeline along Existing Roads⁶

- 4.19 A number of submitters have raised concerns that pipelines will need to be installed along existing roads to the proposed SWWTP which would result in significant disruption and delay for traffic travelling to and from Glenbrook Beach.
- 4.20 I note that the Assessment of Environmental Effects (AEE) Section 7.3.2.5 states that the proposed site would require 7km less pipes to take wastewater from the Waiuku

³ Submissions 35,43,44,48,217,221,222,228,230

⁴ Submissions 43, 221,228

⁵ Submissions 28,29,40,42,46,60,215,230,274,275

⁶Submissions

24,29,31,37,39,40,42,43,44,47,48,49,51,52,55,59,60,61,62,63,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,108,109,110,112,113,114,115,116,117,118,119,120,121,124,125,126,127,128,129,130,133,131,132,134,135,138,139,140,141,142,144,145,146,147,149,150,151,153,154,155,156,157,158,159,160,161,162,163,164,166,167,168,169,170,171,172,173,174,175,176,177,178,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,216,217,220,221,222,228,230,232,233,235,236,237,238,239,240,241,244,245,246,248,249,250,251,253,254,256,257,258,259,260,261,262,264,265,266,267,268,270,271,272,273,274,275,276,278,280,281,282,284,285,286,287,288,289,290,291,292,293,294,295,296

Wastewater Treatment Plant along roads compared to some of the other locations considered. Therefore, from this perspective the proposed SWWWTP will reduce the effects on the provision of the pipe in comparison to some of the alternative sites⁷.

- 4.21 Notwithstanding, the pipeline works are the subject of a separate project and other consenting processes. The works within the road reserve would be subject to temporary traffic management which would require approval from Auckland Transport. These approvals would consider the effects on road users, including the limitations on access to Glenbrook Beach. Whilst I acknowledge a pipe may be required to connect to the proposed SWWWTP, the works within the road designation are outside the scope of this NoR application. As discussed, I have recommended an amendment to the CTMP condition that would require the SWWWTP NoR to consider how construction traffic would be managed with works within the road reserve.

Other Submissions

- 4.22 In addition to the themes outlined above I provide comment on other submissions received.

Submission 229 – Ministry of Education

- 4.23 The Ministry of Education is concerned about construction traffic effects, particularly heavy vehicles, on schools in the area, in particular Glenbrook School, Patumahoe School, Puni School and Mauku School. They have proposed an amendment to the CTMP condition that would require management of construction traffic past schools that are on heavy vehicle routes.
- 4.24 I have reviewed the location of the schools in relation to the site and note below the distances that this schools are from the subject site as reported by Google Maps:
- a) Glenbrook School – 6km
 - b) Patumahoe School – 15 to 20km
 - c) Puni School – 16 to 17km
 - d) Mauku School – 14 to 15km
- 4.25 With the exception of Glenbrook School these schools are some considerable distance from the site, and it would be difficult to manage the movement of heavy vehicles past these locations at specific times (due to the travel distances involved).
- 4.26 With respect to Glenbrook School, this is located closer to the site. However, it is unlikely that vehicles travelling to the proposed SWWWTP would utilise the section of Glenbrook Road outside the school frontage as vehicles to/from the north would utilise Brookside Road and vehicles to/from the south would use Mission Bush Road.
- 4.27 Whilst I appreciate the concern raised, I do not consider that a condition that would manage the movement of heavy vehicles outside schools is required, particularly as the condition, as worded, would relate to any school, and not to the schools listed in the submission.

⁷ Assessment of Alternatives Report, 7 December 2022, Table 11

Submission 48 - Glenbrook Beach Residents and Ratepayers Association

- 4.28 This submitter has raised a number of concerns in relation to traffic and transport as follows:
- a) The road width is not designed to carry heavy equipment for the SWWWTP;
 - b) Concern over risk of crashes with heavy vehicles;
 - c) Concern of safety of school students and cyclists walking along the road with no footpath; and
 - d) Right turn movements blocking the movement of vehicles along Glenbrook Beach Road.
- 4.29 I acknowledge that Glenbrook Beach Road is a rural road and is generally used to provide access to the rural community and agricultural activities. The construction of the site is estimated to take two years and therefore the effect will only be present for a limited time. If materials are required to be transported to site that are over-dimension or over-weight these would be subject to their own traffic management plans, as is standard practice.
- 4.30 I consider that the CTMP condition is sufficient to manage the effects of larger construction vehicles (subject to my recommendations elsewhere) on traffic movements to and from the site and for the safety of the surrounding road network.
- 4.31 With regards to safety, I have reviewed the crash data provided and I discussed this in paragraph 3.41. I acknowledge that heavy vehicles do pose a risk that a crash could be more severe than with a car. In this instance, the number of trucks is not significant (around 4 per hour) and would primarily only occur during construction of the site which is of a limited duration. Provided that the site access is designed to appropriate standards and with the controls of the CTMP, I consider that the site should not result in any significant safety risks.
- 4.32 The submitter has raised a concern over the safety of school students walking along the berm to get to driveways once dropped off from school. I concur that there are no proposed facilities nor are there any current facilities for school students. Notwithstanding, there may be an increased risk to pedestrians with heavy vehicles using the site. I, therefore, consider that the CTMP should be amended to require this risk to be managed and this is discussed in paragraph 5.5.
- 4.33 The submitter has raised concerns that right turning traffic would block the movement of traffic along Glenbrook Beach Road either due to traffic movements at the site access or in the event of a crash, such as a truck rolling into the adjacent drainage ditches.
- 4.34 The Applicant has recommended that a right turn bay be installed which will provide for the safe and efficient operation of the site access by allowing right turning vehicles to be out of the way of northbound Glenbrook Beach Road through traffic. The drainage ditches would need to be redesigned with the construction of the site accesses. This is a detail that can be addressed through the detailed design of the site access at OPW stage, although as recommended above I consider that the requirement for the right turn bay be included as a NoR condition.

5.0 NoR Conditions

5.1 I have reviewed the proposed NoR conditions in relation to transportation and I consider that subject to amendments outlined below, these are sufficient to manage the effects of the proposals.

5.2 The Outline Plan of Works condition relies on the S176 requirements for the design of the site access arrangements. As recommended in the applicants TR and as I recommend above, I consider that the condition should address the need for a right turn bay. I recommend the following wording:

7A. Any new or upgraded access onto Glenbrook Beach Road shall include a right turn bay on Glenbrook Beach Road to accommodate the safe movement of heavy vehicles turning right into the site from Glenbrook Beach Road.

5.3 The visibility from the site access is limited to the north and requires mitigation to ensure that visibility is not restricted by vegetation or other structures. I therefore, consider the following condition is appropriate:

7B. The OPW should demonstrate how visibility to an appropriate standard from any vehicle access on Glenbrook Beach Road will be provided and maintained to ensure visibility is not obstructed by vegetation or other objects.

5.4 I have made recommendations that the CTMP conditions should address the following matters:

- a) horticultural activities on the site, particularly at harvesting times;
- b) how construction would be managed whilst there are other works occurring within the road reserve (including the installation of a pipeline); and
- c) the safety of pedestrians and cyclists adjacent to the site during construction.

5.5 In this regard I recommend the following amendments to the CTMP condition:

18.(c) manage the movement of construction vehicles and any vehicles associated with horticultural or agricultural activities travel to and from the site, to manage congestion and minimise delays to road users on Glenbrook Beach Road;

18.(d) manage and coordinate construction traffic and construction activities with any other works undertaken within the road reserve corridor on Glenbrook Beach Road and Brookside Road north of the intersection with Brookside Road and Mission Bush Road to minimise the effects of construction traffic or construction activities on congestion and delays to road users;

18.(e) Provide for public safety including the safe movement of pedestrians and cyclists along Glenbrook Beach Road along the frontage of the site.

6.0 Conclusions and Recommendations

6.1 In conclusion, I consider that subject to the following matters of further information to provided, either in evidence or at the hearing, and recommendations on amendments to the NoR conditions, that the traffic and transport effects of the proposed NoR can be appropriately managed:

- a) In evidence or at the hearing concept designs should be provided that show the feasibility of the access(es), effects on Glenbrook Beach Road and the effects on the properties (including property accesses) on the western side of Glenbrook Beach Road;
- b) In evidence or at the hearing, an assessment of the combined effects of the construction of the site with the installation of the pipeline within the road reserve along Glenbrook Beach Road should be provided;
- c) The NoR conditions should require the provision of a right turn bay on Glenbrook Beach Road;
- d) NoR conditions should require inclusion of measures for the maintenance of vegetation to provide sight lines along Glenbrook Beach Road;
- e) The CTMP condition should ensure that traffic associated with horticultural activities are appropriately managed with the construction traffic;
- f) The CTMP condition should be amended to ensure construction traffic and operations are managed if the construction of the site coincides with the construction of the pipeline along Glenbrook Beach Road and Brookside Road up to the intersection of Mission Bush Road or other works within the road reserve along this section of road; and
- g) The CTMP condition should manage the safe movement of pedestrians and cycles on Glenbrook Beach Road.

Martin Peake

1 December 2023

2D Ecology

Memorandum (technical specialist review of notified material)

28 November 2023

To: Jimmy Zhang - Reporting Planner

From: Jason Smith, Senior Environmental Scientist, Consultant to Auckland Council (As Regulator)

Subject: Southwest Wastewater Treatment Plant – Ecology Assessment

1.0 Introduction

- 1.1 My name is Jason Graham Smith, and I am a Senior Environmental Scientist at Morphum Environmental Limited.
- 1.2 I hold the qualification of Bachelor of Science (Hons.) – Geography (2011) from the University of Auckland.
- 1.3 I have 11 years' experience as a professional Environmental Scientist, including 8 specialising in ecology.
- 1.4 In my current role I regularly provide advice to Auckland Council, as well as several other district and regional Councils, in relation to ecology.
- 1.5 This advice includes for the processing of resource consents, plan changes and notices of requirement, as well as compliance monitoring and enforcement.
- 1.6 Prior to my employment with Morphum, I was employed by Auckland Council as an Earthworks and Streamworks Specialist in a similar role primarily providing technical input primarily on resource consent applications.
- 1.7 I have completed the Ministry for the Environment 'Making Good Decisions Course' (re-certified in November 2023).
- 1.8 I am a member of the New Zealand Freshwater Science Society and the International Erosion Control Association.
- 1.9 I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and have complied with it in preparing this evidence. Other than where I state that I am relying on the advice of another person, this evidence is within my area(s) of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope

- 2.1 Watercare Services Limited (**WSL**) have lodged a Notice of Requirement (**NoR**) for the construction and operation of a new Wastewater Treatment Plant (**WWTP**) at 372 Glenbrook Beach Road.
- 2.2 Auckland Council have engaged Morphum Environmental Limited (Morphum) to undertake an ecological review of the application material.

- 2.3 I have reviewed the material with reference to the requirements and provisions in the Auckland Unitary Plan (Operative in Part) (**AUP:OP**) to assist the preparation of the Council's s42a report.
- 2.4 More specifically, my technical memorandum assesses the effects on ecology associated with the proposal and will cover the following matters:
- a) The current ecological values of the site and receiving environment.
 - b) The actual and potential environmental effects of the proposal.
 - c) The adequacy of the effects management proposed.
 - d) Conclusions and recommendations.
- 2.3 In writing this memorandum I have reviewed the notified application material as relevant to ecology, including:
- *South West WWTP Notice of Requirement*, report prepared by Stantec, revision 2, dated August 2023 (**AEE**).
 - *Southwest Wastewater Servicing – Wastewater Treatment Plant – Indicative Design and Operational Report*, report prepared by Stantec, dated August 2023.
 - *Southwest Wastewater Treatment Plant – Assessment of Alternative Sites*, report prepared by Beca, dated 7 December 2022.
 - *Southwest Wastewater Treatment Ecological Assessment in Support of Notice of Requirement*, report prepared by Boffa Miskell, dated 29 August 2023 (**EclIA**).
 - *Notice of Requirement - Southwest Wastewater Treatment Plant – Stormwater and Flooding Assessment*, report prepared by Stantec, dated 30 August 2023.
- 2.4 I have also been provided with a summary of submission by Auckland Council and used this summary to review the submissions that raise matters related to ecology.
- 2.5 At the date of preparing this memorandum, I have not taken part in formal conferencing.
- 2.6 I undertook a site visit on the 10th August 2023.

3 Applicant's Assessment

- 3.1 Having reviewed the material listed above, I consider the:
- a) Methodologies, standards and guidelines used to assess the ecological values are appropriate.
 - b) Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects.
 - c) Reported results are transparent, accurate and a fair representation of the ecological values.
- 3.2 I concur with the Applicant's description of the current ecological values, the magnitude of any potential effects on those values and the overall level of effect.
- 3.3 No measures are proposed to address adverse ecological effects as part of the NoR/Designation.

3.4 In my opinion, for those effects identified, sufficient evidence has been provided to demonstrate that there is sufficient provision to address such effects within the AUP:OP at the time of resource consenting.

4 Submissions

4.1 The NoR has been publicly notified and 296 submissions have been received.

4.2 Submissions received that touch upon the matters considered in this assessment include submissions: 2, 6, 11, 12, 15, 19, 21, 24, 25, 27, 28, 30, 31, 33, 35, 39, 44, 47, 51, 52, 53, 56, 59, 65 - 73, 77 - 80, 82 - 88, 94 - 99, 101, 103, 105, 106, 107, 110, 112 – 120, 125, 128 – 135, 136, 138 – 142, 144 – 147, 149 – 151, 153, 155 – 160, 162 – 164, 166 – 168, 171, 172, 175, 177, 178, 180, 181, 183 – 186, 188 – 192, 19, 198, 200, 202, 203, 206 – 215, 218, 222, 225 - 228, 230, 232, 236 – 241, 244 – 246, 250, 252, 256 – 258, 260 – 262, 264 – 276, 280, 282, 284, 286 - 288, 290 - 296.

4.3 The submission points can be addressed in terms of the following key themes set out below.

4.4 I have also reviewed the submissions: 223 (The Ngāti Tamaoho Trust) and 224 (Ngāti Te Ata).

4.5 Submissions 223 and 224 are made from a cultural perspective, and I acknowledge and respect the concerns raised. I recognise that mana whenua are best placed to identify cultural values and cultural effects. I am not mana whenua and it is not within my area of expertise. Therefore, having regard to the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note, I do not provide further comment, other than the inclusion of technical points that are included in the analysis below.

Alternative WWTP location

4.6 A common submission point relates to the location of the proposed WWTP, alternative locations and the process undertaken to assess potential locations.

4.7 The notified application material includes an assessment of alternative locations.

4.8 I have reviewed the assessment of alternatives and consider that ecological values have been adequately incorporated into the assessment.

Effects of the wastewater discharge

4.9 A common submission point relates to the quality of the treated wastewater discharge and associated environmental effects, particular on water quality in the Manukau Harbour.

4.10 The application material for the NoR/Designation does not include any specific consideration of the discharge of (treated) wastewater.

4.11 It is understood, from page 2 of the AEE, that the discharge has already been consented.

4.12 As such the effects of the discharge have already been consider in a sperate process.

4.13 Such a resource consent would be the appropriate place for conditions relating to effects on the Manukau Harbour (including hydrodynamic modelling, water quality testing, impacts of shellfish, the mixing of fresh / saline waters and any reporting or monitoring conditions).

Alternative discharge location

4.14 A common submission point relates to location of the discharge be relocated to the Tasman Sea.

4.15 I note that the NoR is to a designate land at 372 Glenbrook Beach Road, to enable the construction and operation of the WWTP. The location does not include the outfall.

4.16 Paragraph 2 on page 2 of the AEE states that resource consents for the discharge of treated wastewater to Waiuku Channel off Clarks Beach Gold Course have already been granted.

4.17 As such, I do not consider that the outfall is within the scope of this review.

Level of information

4.18 A common submission point relates to the level of information and assessment that has been provided.

4.19 As set out in 3.2 above, I consider that the level of information and assessment provided by the applicant is appropriate for the NoR.

Restoration of Ponds/Wetlands

4.20 Several submissions have been received in relation to the restoring natural wetlands lost or modified during the construction of the existing irrigation ponds on site.

4.21 Whilst the restoration of natural wetlands, both in terms of extent and values, is supported from an ecological perspective, I am not aware of a mechanism to link this to the proposed NoR/Designation unless the applicant offers it as an undertaking.

Effects on Birds

4.22 A specific submission point raises the impact of the WWTP on birds due to the proximity of the WWTP to the coast.

4.23 The submission point does not identify any specific concern or impact that the proposed WWTP may have on birds.

4.24 . As such, as set out in 3.2 above, I consider that the level of information and assessment provided by the applicant is appropriate for the NoR. This includes EclA section 5.1.4 which assess the potential bird's species that may utilise the site and surrounding area; section 7.2.2 that discusses potential effects.

4.25 It is acknowledged that any birds that potential utilise the site for roosting could be disturbed during construction. The likelihood of any nesting birds using the site for roosting's is low, and there is similar habitat in the immediate surrounds that adult birds could disperse to so that the WWTP would not represent a noticeable loss of available roosting habitat.

Positive Effects

4.26 Submitter 218 (Kahawai Point Development Limited) has raised two submission points that seek to further enhance ecological values of the site:

- 218.4: On-going ecological effects should be further mitigated by the introduction of longer term and larger scale coastal native planting in area PO4 of the Landscaping Planting Plan to promote bird life e.g. Pohutakawa, Kahikatea, Kowhai, Puriri or Taraire.
- 218.5: In order to protect the ecology of the area, a commitment to pest control is required. A pest control plan should be an on-going operational condition, which could include a

requirement to join 'Predator Free Franklin', fortnightly trap management and data recording.

4.27 From an ecological perspective, these measures would assist in improving the ecological values of the site and are therefore supported, noting as I have done above that they would not be required to address any specific impact, effect or concern.

5 Conclusions and recommendations

5.1 I have reviewed the Application with reference to the requirements and provisions in the Auckland Unitary Plan (Operative in Part) to assist the preparation of the Council's reporting planner's s42a report from an ecology perspective.

5.2 I consider that the:

- a) Methodologies, standards and guidelines used to assess the ecological values are appropriate.
- b) Effort expended in the site investigations is appropriate for the scale of proposed works and potential effects.
- c) Reported results are transparent, accurate and a fair representation of the on-site values.

5.3 I concur with the Applicant's:

- a) Description of the current ecological values,
- b) The potential effects, and
- c) The magnitude of those effects on ecology.

5.4 In my opinion, for those effects identified, sufficient evidence has been provided to demonstrate that there is sufficient provision to address such effects within the AUP:OP at the time of resource consenting.

5.5 I therefore support the NoR without the need for any amendments.



Jason Smith

28/11/2023

3E Archaeology and historic heritage

Historic Heritage Technical Memo

To:	Jimmy Zhang: Senior Policy Planner, Central/South Team, Plans and Places Department
CC:	Chris Mallows: Team leader, Cultural Heritage Implementation, Heritage Unit, Plans and Places Department.
From:	Mica Plowman: Principal Heritage Advisor, Cultural Heritage Implementation, Heritage Unit, Plans and Places Department.
Date:	1 st December 2023

1.0 APPLICATION DESCRIPTION

Application and property details

Applicant's Name:	Watercare Services Limited (Watercare)
Application purpose description:	Notice of Requirements to amend the Unitary Plan to enable the construction, operation, and maintenance of the Southwest Wastewater Treatment Plant
Relevant application numbers:	n/a
Site address:	372 Glenbrook Beach Road (Lot 1 DP 367461), Glenbrook.

2.0 INTRODUCTION

- 2.1 I am a qualified archaeologist who has worked professionally in this field for the past 28 years. I am a Heritage New Zealand Pouhere Taonga (HNZPT) approved archaeologist under section 45 of the HNZPT Act (2014). I have worked as an independent consultant and as a contractor to archaeological and engineering consultancy firms on the North Island. As a result, I have relevant broad-based practical experience in all aspects of cultural heritage resource management and am fully conversant with Local Authority plan processes, the Resource Management Act (RMA), and HNZPT Act 2014 legislative requirements. The focus of my current role as Principal Heritage Advisor for the Auckland Council Heritage Unit (HU) is to provide specialist expertise and leadership in the development and implementation of plans, programmes and operational strategies to identify, conserve and enhance historic heritage features and landscapes within the Auckland region. I support council departments in meeting their requirements of the RMA (Part 2, Section 6 e and f matters) and the HNZPT Act (2014) and I routinely provide statutory and non-statutory heritage advice and reporting outputs into the regulatory process and work programmes across the council.

- 2.2 I have undertaken a review of the Southwest Wastewater Treatment Plant Notice of Requirement for 372 Glenbrook Beach Road (Lot 1 DP 367461), Glenbrook lodged by Watercare Services Limited, on behalf of Auckland Council in relation to historic heritage and archaeological effects.

3.0 ADEQUACY OF INFORMATION

- 3.1 The assessment below is based on the information submitted as part of the application. I have reviewed the following documents:

- Southwest Wastewater Treatment Plant Notice of Requirement Application Briefing Document, Prepared by Watercare Services Limited, 31 August 2023.
- Southwest WWTP Notice Of Requirement. Assessment of Environmental Effects Supporting the Notice of Requirement for the Southwest Wastewater Treatment Plant. Prepared by Stantec for Watercare Services Limited, 31 August 2023.
 - Appendix B. Southwest Wastewater Servicing Wastewater Treatment Plant. Indicative Design and Operational Report Prepared by Stantec for Watercare Services Limited, August 2023.
 - Appendix G. Southwest Wastewater Treatment Plant Designation: Archaeological Assessment. Prepared by Matthew Campbell (CFG Heritage Limited) for Watercare Services Ltd, 29th August 2023.
 - Proposed Conditions.

Sections relevant to my area of expertise”

- Southwest Wastewater Treatment Plant NoR. Project Landscape, Visual and Natural Character Effects Assessment. Prepared By Boffa Miskill for Watercare, 29 August 2023.

- 3.2 It is considered that the information submitted is sufficiently comprehensive to enable the consideration of the effects of the application on an informed basis:

- a. The level of information provides a reasonable understanding of the nature and scope of the proposed activity as it relates to the AUP OIP.
- b. The extent and scale of any adverse effects on the environment are able to be assessed.

- 3.3 In making its assessment, I have also taken into account:

- a. Auckland Council Cultural Heritage Inventory (CHI) <https://chi.net.nz/>
- b. New Zealand Archaeological Association (NZAA) *ArchSite* Database <http://www.archsite.org.nz/>
- c. Heritage New Zealand Pouhere Taonga Rārangī Kōrero/The List <https://www.heritage.org.nz/the-list>
- d. ICOMOS New Zealand Charter <https://icomos.org.nz/charters/>

- e. Other relevant sources containing historical and archaeological information.

Definitions used with this memo

- 3.4 Chapter J in the Auckland Unitary Plan Operative in part [AUP OIP] (updated 10 November 2023) defines an archaeological site as having the same meaning as in the Heritage New Zealand Pouhere Taonga Act 2014. No interpretation of an archaeological site is provided within the Resource Management Act 1991; rather historic heritage is interpreted in Part 1, Section 2¹. The interpretation of historic heritage is substantially broader than just an archaeological site and is not limited by the inclusion of a *terminus ante quem* date.
- 3.5 As such, when the term ‘archaeological’ is used within this memo, it specifically refers to a site that would meet the definition of an archaeological site as provided in Chapter J in the AUP OIP (updated 10 November 2023). All other sites would fall under the Resource Management Act 1991 definition of historic heritage.

Exclusions

- 3.6 This memo does not include an assessment of the cultural significance of the application area to mana whenua. The cultural and other values that mana whenua place in the area may differ from its archaeology/historic heritage values and are determined by mana whenua. It is the applicant’s responsibility to liaise with mana whenua to determine mana whenua values.
- 3.7 Archaeological/historic heritage mitigation proposed in the application should not be considered mitigation for effects on cultural values.

Site Visit

- 3.8 The property has not been visited by the Heritage Unit. The results provided by the project archaeologist Dr M. Campbell (CFG Heritage)² are taken in good faith.

4.0 ASSESSMENT OF EFFECTS

- 4.1 Watercare Services Limited (Watercare) is seeking to designate land at 372 Glenbrook Beach Road (Lot 1 DP 367461), Glenbrook (“the site”) to enable the construction, operation, and maintenance of infrastructure for wastewater treatment purposes, including a wastewater treatment plant, and the provision of an odour buffer area around the wastewater treatment plant (WWTP).
- 4.2 Watercare Services Limited (Watercare) has investigated how best to manage wastewater in the southwest area in response to the anticipated growth identified in the AUP OIP. Through this work, Watercare identified the need for a sub-regional Wastewater Treatment

¹ historic heritage— (a) means those natural and physical resources that contribute to an understanding and appreciation of New Zealand’s history and cultures, deriving from any of the following qualities: (i) archaeological: (ii) architectural: (iii) cultural: (iv) historic: (v) scientific: (vi) technological; and (b) includes— (i) historic sites, structures, places, and areas; and (ii) archaeological sites; and (iii) sites of significance to Māori, including wāhi tapu; and (iv) surroundings associated with the natural and physical resources.

² Assessment of Environmental Effects Appendix G: *Southwest Wastewater Treatment Plant Designation: Archaeological Assessment*. Prepared by Matthew Campbell (CFG Heritage Limited) for Watercare Services Ltd, 29th August 2023.

- Plant (WWTP) to service the anticipated population growth in the southwest growth area.
- 4.3 The Southwest WWTP is proposed to replace the three existing WWTPs with one more modern WWTP that will enable the discharge of treated wastewater into the Waiuku Channel in accordance with the higher treatment standards required under a discharge consent granted by the Environment Court in 2018. The WWTP will be constructed in three stages, with the timing dependent on population growth
- 4.4 The site is a large (56.06 ha) rural site on the Glenbrook Peninsula that is currently accessed from Glenbrook Beach Road and is now owned by Watercare. The site was chosen following a comprehensive assessment of 35 potential alternative sites, and engagement with mana whenua, adjoining neighbours, key stakeholders, and the community.

5.0 ASSESSMENT OF EFFECTS

- 5.1 Details of the project background are provided in the AEE and supporting application material and will not be repeated here unless when describing direct and indirect, actual, and potential adverse effects on historic heritage.

Historic heritage within the application boundaries

- 5.2 This section summarises the historic heritage of the areas within the Notice of Requirement applications' boundaries and includes any specific historic heritage sites that have been identified. The information derives from the NoR application and supporting documentation, (in particular the AEE³ and Historic Heritage Assessment (HAA))⁴ and other relevant sources listed in Section 3.
- 5.3 The HHA has researched the historic heritage context of the wider project area and undertaken a field survey within the proposed designation boundary, including limited subsurface testing⁵.
- 5.4 The location of the Southwest WWTP NoR designation footprint is illustrated in Figure 1.
- 5.5 There are no archaeological sites recorded within the Southwest WWTP NoR footprint or in close proximity to the Project area, and no previously unrecorded historic heritage/ archaeological sites were identified by the HHA research or field survey. The nearest recorded archaeological sites (mainly shell midden relating to Māori occupation) are located predominantly in the immediate coastal environment of the Waiuku and Taihiki Rivers (Figure 1).
- 5.6 However, the HHA cautions that despite historic modifications of the property by market gardening and associated land use, the surrounding soils were suitable for pre-European Māori cultivation and the property is located in the coastal environment where

³ Southwest WWTP Notice Of Requirement. Assessment of Environmental Effects Supporting the Notice of Requirement for the Southwest Wastewater Treatment Plant. Prepared by Stantec for Watercare Services Limited, 31st August 2023.

⁴ Assessment of Environmental Effects Appendix G: *Southwest Wastewater Treatment Plant Designation: Archaeological Assessment*. Prepared by Matthew Campbell (CFG Heritage Limited) for Watercare Services Ltd, 29th August 2023.

⁵ Assessment of Environmental Effects Appendix G: *Southwest Wastewater Treatment Plant Designation: Archaeological Assessment*. Prepared by Matthew Campbell (CFG Heritage Limited) for Watercare Services Ltd, 29th August 2023.

archaeological sites tend to be concentrated. They conclude that there is a reasonable cause to suspect that prehistoric Māori settlement features will be encountered during earthworks for the Southwest WWTP; including sites such as middens in proximity to the river and potentially crop storage pits in areas on higher ground.

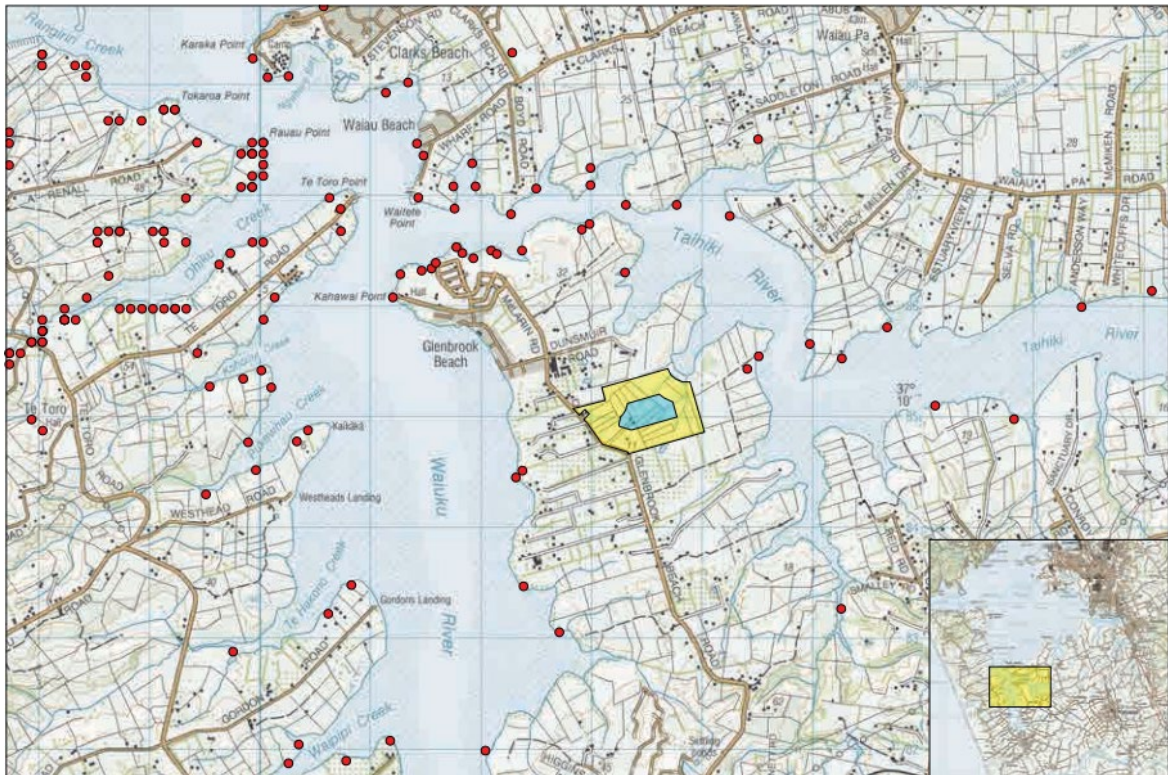


Figure 1. Location of 372 Glenbrook Road, Glenbrook illustrating recorded archaeological sites recorded in the immediate vicinity. Source CFG 2023.

Historic heritage effects and values

Historic Heritage Values and Significance

- 5.7 The HHA states that no historic heritage sites are recorded within or in the immediate vicinity of the Southwest WWTP NoR designation footprint and none were identified during the field survey. The HHA concludes that the Southwest WWTP NoR designation has no known identified heritage values.⁶
- 5.8 Nonetheless, the HHA provides a values assessment of the most likely archaeological features and deposits that might be encountered (crop storage pits and midden) based on the criteria set out in the HNZPT (2019). This assessment argues that any potential archaeological features are likely to have low amenity value and be in poor condition as a result of historic cultivation and minor earthworks of the property; but would have moderate information potential and high contextual values relating to pre-European Māori land use and the wider archaeological context of Glenbrook and the Manukau lowlands area.

⁶ Assessment of Environmental Effects Appendix G: *Southwest Wastewater Treatment Plant Designation: Archaeological Assessment*. Prepared by Matthew Campbell (CFG Heritage Limited) for Watercare Services Ltd, 29th August 2023.

- 5.9 The proposed works, as described in the AEE and supporting documents (HHA), do not affect scheduled archaeological sites in Schedule 14.1 (Schedule of Historic Heritage) in the Auckland Unitary Plan operative in part [AUP OIP] nor are there any Sites of Significance to Mana whenua identified under the AUP OIP.

Historic Heritage Effects

- 5.10 The HHA identifies that the project area has a moderate potential for unrecorded subsurface remains to be present and exposed during development.
- 5.11 Although the final design is not yet available, concept designs indicate the construction of the Southwest Wastewater Treatment Plant will require the establishment of a level construction platform through cut and fill, access roads, utility trenches and deeper excavations for sludge and stormwater ponds. These will have the effect of destroying any potential archaeology in the works Southwest WWTP area.

Applicant's proposed mitigation and designation conditions

Mitigation

- 5.12 The HHA recommends that when the project's final design is available, a full assessment of effects is undertaken in support of an application to HNZPT for an authority to modify or destroy any unrecorded archaeological deposits on Lot 1 DP 367461 that may be encountered inside the identified works area under Section 44 of the Heritage New Zealand Pouhere Taonga Act 2014.
- 5.13 The applicants' AEE confirms the historic heritage assessment's conclusion of the potential for unidentified subsurface archaeological remains to be exposed during construction and states that when the final design is available, a full assessment of effects will be undertaken in support of an application to Heritage New Zealand Pouhere Taonga (HNZPT) for an authority to modify or destroy any unrecorded archaeological deposits on Lot 1 DP 367461.

Proposed conditions

- 5.14 The applicants' proposed condition (9) nominates an Accidental Discovery Protocol is followed if an HNZPT Act authority has not been granted:
- If any archaeological site is uncovered during the works, and no Archaeological Authority has been granted by Heritage New Zealand (Pouhere Taonga) (HNZPT), the following Accidental Discovery Protocol shall apply:*
- (a) Work shall cease immediately at that place;*
 - (b) All machinery shall be shut down and the area secured in the immediate vicinity of the discovery;*
 - (c) The Requiring Authority shall notify the landowners and the relevant HNZPT Regional Archaeologist, and if necessary, the appropriate Archaeological Authority application shall be initiated;*
 - (d) If the site is of Māori origin, the Requiring Authority shall notify the appropriate mana whenua group(s) to determine what further actions are appropriate to safeguard the archaeological site or its contents, and what further actions are appropriate with regard to Tikanga Māori;*
 - (e) If skeletal remains are uncovered, the Requiring Authority shall advise the New Zealand*

Police, HNZPT and the appropriate mana whenua group(s); and (f) Works affecting the archaeological site shall not resume until any approval required from HNZPT has been obtained.

- 5.15 No advice notes relating to archaeology/historic heritage are proposed by the applicant.

6.0 SECTION 92 REQUEST

- 6.1 As part of the initial review of this NOR, the Heritage Unit identified the presence of an early 20th structure (1920s) on the application property from historic plans (DP21299 (1927) and DP22174 (1929)). The Heritage Unit requested that the Requiring Authority update and expand the Historic Heritage Assessment to include this heritage feature and RMA historic heritage requirements that incorporate post-1900 historic heritage and provide relevant conditions to attach to the designation and any regional consents that will be applied for.
- 6.2 The Requiring Authority agreed that while the identified structure may have some heritage values, its recorded location⁷ amid extant farm buildings suggests that it is unlikely that any in-situ evidence will remain and that the site is effectively destroyed.
- 6.3 The Requiring Authority declined to update the Historic Heritage Assessment on the grounds that as no evidence was provided to identify the structure as dating prior to 1900 it did not constitute an archaeological site under the Heritage New Zealand Pouhere Taonga Act 2014.

7.0 SUBMISSIONS

- 7.1 One Submission from Mr Mark Glasson (submission 51) on the WWTP NoR comments on matters concerning historic heritage. Mr Glasson states that the Watercare Assessment of Environmental Effects (AEE) accompanying the NOR is minimising the extent of adverse effects, to the extent that there are adverse effects arising, which are unnecessary, and can be avoided by utilising the existing Watercare designation at Waiuku.
- 7.2 In making this assessment, Mr Glasson includes effects “on archaeological values and features that will arise through construction on the site” which are characterised as “*unjustified, even if mitigated, when they can be avoided*”.
- 7.3 The Heritage Unit appreciates Mr Glasson’s concern for archaeological/ historic heritage values. However, the Heritage Unit does not agree that the Requiring Authority is minimising the extent of adverse effects on heritage as there are no known direct effects on archaeological or historic heritage values arising from the NoR.

⁷ Historic Plan DP 22174 was georeferenced into the project GIS.

8.0 CULTURAL HERITAGE IMPLEMENTATION TEAM'S ASSESSMENT

- 8.1 This section sets out Auckland Council's Cultural Heritage Implementation Team's assessment of the impact of the proposed designation, as described in the submitted documents, against the provisions in the Auckland Unitary Plan Operative in part (updated 10 November 2023) and whether the application can be appropriately mitigated to give effect to s6(f) of the RMA.
- 8.2 The Heritage Unit appreciates the archaeological assessment of effects provided by the application.
- 8.3 The construction and operation of Southwest WWTP NoR designation will have no effects on any known archaeological or other historic heritage values.
- 8.4 The Heritage Unit concurs with the applicants' archaeologists' assessment that while no known pre-1900 archaeological sites will be affected by the current proposal, there is a risk, albeit low, that unidentified subsurface archaeological remains associated with Māori settlement prehistory may be exposed because of the proposed works.
- 8.5 It is an operational decision by the applicant to determine whether they obtain an Authority under the Heritage New Zealand Pouhere Taonga Act 2014. This decision is not an RMA matter.
- 8.6 I support the applicant's proposal to undertake earthworks under the directive of Accidental Discovery Protocols. However, in the Auckland Region, earthworks must comply with the standard specified in the Accidental Discovery Rule in the Auckland Unitary Plan.
- 8.7 The Accidental Discovery Rule has additional triggers and process requirements relating to various sensitive materials in addition to archaeological sites (and human remains) not included in the applicant's proposed condition 9.⁸
- 8.8 As the Accidental Discovery Rule covers a range of sensitive materials – not just archaeological sites - it is recommended that the specific wording of the Accidental Discovery Rule provided for in Chapters E11 and E12 in the Auckland Unitary Plan Operative in part (updated 10 November 2023)) is retained.
- 8.9 I recommend that the wording for WWTP NOR proposed condition 10 should be replaced with the following –

Should the consented works result in the identification of any previously unknown sensitive materials (i.e., archaeological sites), the requirements of land disturbance – Regional and District Accidental Discovery rules set out in the Auckland Unitary Plan Operative in part shall be complied with.

⁸ For the purpose of this rule, 'sensitive material' means:

- Human remains and kōiwi
- An archaeological site
- A Māori cultural artefact/taonga tūturu
- A protected New Zealand object as defined in the Protected Objects Act 1975 (including any fossil or sub-fossil)
- Evidence of contaminated land (such as discolouration, vapours, asbestos, separate phase hydrocarbons, landfill material or significant odour)
- A lava cave greater than 1m in diameter on any axis.

- 8.10 The Accidental Discovery Rule is a district/regional rule that requires adherence or compliance; it does not need to be included as a condition. However, the inclusion of it as a condition is ultimately a planning decision to make and outside of my subject matter expertise.
- 8.11 The recommendation section of the applications HHA and the Requiring Authorities proposed mitigation and conditions are framed solely for the provisions of the Heritage New Zealand Pouhere Taonga Act (pre-1900 archaeological sites).
- 8.12 The term historic heritage encompasses substantially broader categories and features than an archaeological site (or pre-1900 archaeological sites) and is not limited by the inclusion of a terminus ante quem date. The RMA provides a statutory definition of historic heritage (outlined in paragraphs 3.4-3.5 above) and it is this definition that needs to be used when determining and mitigating the effects of a proposal for NOR purposes.
- 8.13 As part of the initial review of this NOR, the Heritage Unit identified the presence of a built structure within the application property from cadastral plans DP21299 dating to the 1920s (DP21299, 1927 and DP22174, 1929), indicating it was built in the in early 20th century.
- 8.14 It is important to note that archaeological/historic heritage sites (such as WW1 or WW2 military sites, or early 20th century built structures) that do not meet the definition of an archaeological site in the AUP OIP or meet the definitions provided in the Protected Objects Act 1975 are not covered by the ADR and additional management processes need to be considered where there is reasonable cause to suspect the presence of these sites.
- 8.15 In the Heritage Units opinion, the potential exists for subsurface features associated with the early twentieth century building to present. The applicant has not undertaken the level of work required (for example, systematic test-pitting/trenching in the specific location of the building) to disprove this potential.
- 8.16 I recommend the following condition to attach to the WWTP NOR to manage this risk –
- The following protocol will apply should any post-1900 subsurface features associated with early 20th-century settlement activity be exposed during works associated with the WWTP:*
- *Earthworks will be halted while an archaeologist is called in to assess the features.*
 - *The features will be recorded and analysed in accordance with current archaeological practice.*
 - *A report on any features exposed will be provided by the project archaeologist to Auckland Council's Heritage Unit for inclusion in the Auckland Council Cultural Heritage Inventory.*

9.0 RECOMMENDATIONS

- 9.1 After reviewing the Watercare Notice of Requirement (NOR) documentation for 372 Glenbrook Beach Road (Lot 1 DP 367461), Glenbrook and where the planner supports the NOR application, I make the following recommendation.
- 9.2 Should a condition be included about the Accidental Discovery Rule, the wording of the Requiring Authorities proposed condition 9 should be replaced with the wording in

paragraph 8.9.

- 9.3 An additional condition should be included to cover the exposure of subsurface post-1900 historic heritage features. Recommended wording is provided in paragraph 8.15.
- 9.4 In reviewing the application documentation, the conditions I have recommended will mitigate potential archaeological/historic heritage risk and give effect to s6 (f) of the RMA.

Contact for further information

Mica Plowman, Principal Heritage Advisor – Cultural Heritage Implementation.
Mica.plowman@aucklandcouncil.govt.nz

3F Air Discharge

Technical memo: Air quality

To: Jimmy Zhang, Senior Policy Planner – Plans & Places

From: Rachel Terlinden, Specialist – Contamination, Air & Noise

Date: 15 December 2023

1 Application details

Applicant's name: Watercare Services Ltd

Application number: D.002375

Activity type: Designation for Wastewater Treatment Plant – Notice of Requirement

Site address: 372 Glenbrook Beach Road, Glenbrook

2 Introduction

I have reviewed the above Notice of Requirement (NoR) application and relevant supporting information to determine the actual and potential air quality effects, including odour, harmful air pollutants, and greenhouse gases.

I have visited the Site and surrounding area and have reviewed following documents relevant to the application:

- *Assessment of Environmental Effects: Southwest WWTP Notice of Requirement*, prepared by Stantec, dated 31 August 2023 ('the AEE');
- *Assessment of Air Quality Effects: Southwest Water Treatment Plant – Air Quality*, prepared by Beca, dated 28 August 2023 ('the AQR').

3 Summary of proposal and background information

3.1 Proposal as relevant to air quality

The applicant, Watercare Services Ltd, is seeking a Designation within the Auckland Unitary Plan (Operative in Part) (AUP(OP)) at 372 Glenbrook Beach Road, Glenbrook, to authorise construction, operation, and maintenance of the proposed Southwest wastewater treatment plant (WWTP). A full description of the proposal is provided in the AEE. In brief:

- The proposed WWTP will service up to 60,000 population equivalents (PE) in the southwest Auckland area. The construction of this WWTP will be delivered in stages accounting for the expected population growth, with the first stage servicing 20,000 PE, and the second upgrade servicing 30,000 PE before the full capacity is reached.
- Under Chapter E14 of the AUP(OP), discharges to air from municipal wastewater treatment plans are a Discretionary Activity. Accordingly, a resource consent will be separately required to be obtained for the discharges of contaminants into air from the operation of the proposed WWTP.
- This air discharge resource consent has not yet been applied for. The future resource consent application will further detail the discharges to air, WWTP design, proposed mitigation measures, monitoring, and management.
- The primary air discharge of the proposed WWTP will be odour, however, other air discharges such as dust during construction may also occur.
- To minimise odour effects, the indicative layout of the WWTP includes a minimum separation distance of 200 m from the site boundary to odour generating WWTP components. Additionally, these will be located at least 300 m, from any existing residential dwelling.
- As part of the indicative design, raw wastewater will enter via the inlet pump station and will be screened and pumped through the activated sludge reactors (ASR), membrane bioreactors (MBR), and then disinfected by UV light before being discharged to the storage ponds.
- Waste activated sludge (WAS) would be generated from the treatment process and will be stored in covered sludge storage ponds. WAS is then dewatered to further reduce volume and is then stored in enclosed storage buns before being transported off-site.

3.2 Location

The Site is located at 372 Glenbrook Beach Road, Glenbrook, and is shown in Figure 5-2 of the AEE.

The applicant provides a description of the Site and receiving environment in section 5.1 of the AEE and section 2 of the AQR. I consider these descriptions are adequate for the purposes of the air quality assessment and note:

- The AUP(OP) predominantly zones the Site as Rural – Mixed Rural. The north-eastern corner of the site is zoned Rural – Rural Coastal, and Coastal – General Coastal Marine. Chapter E14 of the AUP(OP) schedules both rural zones as a ‘Medium air quality – dust and odour rural area (rural)’ in recognition of its reduced air quality amenity expectations. The coastal zone is scheduled as ‘High air quality – dust and odour area’.
- Surrounding sites are predominantly rural in nature. These properties are predominantly utilised for agricultural or horticultural purposes.
- A number of rural residential lifestyle blocks are also located in the vicinity of the site. As outlined in Section 4.1 of the AEE, at least one rural dwelling is located on all adjacent properties.
- Section 5.1.8 of the AEE addresses the potential for future sensitive receivers to be located nearby. It is considered there is limited potential for this to occur, as rural properties close to the site are generally smaller than the minimum size provided for in the zones, meaning these cannot be subdivided. Further, the soils surrounding the site are considered ‘elite’ and ‘prime’ soils, on which development is avoided where practicable. This further reduces the potential for the introduction of new sensitive receivers in the rural area adjacent to the site.
- The nearest existing ‘activity sensitive to air discharges’ (as defined by Chapter J of the AUP(OP)) is approximately 320 m to the southwest of the indicative WWTP boundaries. As outlined in Table 5-3 of the AQR, 10 dwellings are located within 500 m of the proposed stage 3 WWTP, and 16 within 800 m.
- The closest residentially zoned area is located to the northwest of the site boundary at a distance of approximately 410 m (> 800 m away from the indicative WWTP boundaries).
- Winds at the Site are predominantly from the west to south-west (refer Fig. 4-3 of the AQR).

4 Technical assessment of air quality effects

4.1 Assessment of air quality effects

The applicant identifies and assesses the effects of the proposed activity on the environment that are likely to arise and mitigating factors in section 6.6 of the AEE and section 5 & 6 of the AQR. The most significant air quality effects are considered to arise from discharges of odour, particularly during abnormal or unplanned operating conditions. Additionally, emissions of dust may occur during construction of the proposed WWTP. For completeness I have also assessed the potential discharges of

harmful air pollutants (being substances that impact human health) and greenhouse gases.

The application was publicly notified which resulted in a total of 296 submissions. 181 of these submissions included reference to air quality and odour effects. I have reviewed the submissions and consider the following broad topics have been considered and formed part of my review:

- Amenity effects from resulting odour;
- Sensitivity of the receiving environment;
- The adequacy of the proposed odour buffer zone;
- Construction dust effects;
- The potential for harmful air pollutants to be discharged from the WWTP;
- Meteorological concerns, regarding wind speed and direction.

More specific submission concerns are addressed in Section 5.1.4 below.

5.1.1 Odour discharges

Odour is a human perception of chemicals present in the air. In the case of wastewater, odours are a result of biological processes and primarily consist of sulphurous organic compounds such as hydrogen sulphide. As identified by the AQR, wastewater odours are generally viewed as having an unpleasant character.

The AQR has assessed the potential odour effects of the proposed WWTP by a range of qualitative methods in accordance with the *Good Practice Guide for Assessing and Managing Odour* (Ministry for the Environment, 2016) (GPG:Odour). I agree with the methodology employed for this assessment and its conclusions.

As outlined in the AQR, during normal operation odour emissions from the WWTP should be minimal provided that systems are appropriately designed, operated, and maintained. The processes considered most likely to result in odour discharges are:

- Inlet pump stations and works facility.
- Emergency storage tanks (if the wastewater is anaerobic).
- Sludge storage ponds.
- Dewatering facility and dewatered sludge storage tanks.

Other processes on site are considered to have low potential to generate odour emissions unless normal processes are disrupted, and wastewater becomes oxygen depleted and anaerobic.

Based on land use and density of housing, the rural receiving environment is considered to have a relatively low sensitivity to odour, however, nearby rural dwellings are considered to have a localised high sensitivity. Odour management will be required to avoid or mitigate odour nuisance effects once the WWTP has been developed.

Enclosure and extraction of air from the process sources with the highest odour generation potential (listed above) is proposed as the predominant mitigation measure. Biofilters are likely to be the main odour control on site, which have an approximate 95% efficiency, and odour is expected to only be detected within 5 – 30 m from these. Further mitigation measures will be outlined when the air discharge consent is lodged, as outlined in the AQR.

A desktop FIDOL assessment was undertaken in accordance with the GPG:Odour. The assessment concluded that there is a low risk that odours from the site will cause an offensive or objectionable effect. As outlined in Section 5.4.2 of the AQR, poor dispersive conditions are only considered to occur 1.9 to 3.4 % of the time in the direction of the nearest sensitive receptors. Further, it is stated that the slope of the site to the northeast will assist in directing winds away from the nearest dwellings during these conditions. Due to the odour buffer the AQR states that the odour will be sufficiently dispersed and diluted.

Higher odour emissions may occur during abnormal operating conditions, however, the AQR states that in these events odour is expected to occur infrequently and for a short duration, can be controlled by adherence to standard management procedures for WWTP, and the risk of adverse odours is still comparatively low. The potential for abnormal odour events will be further minimised through design of the WWTP, which will be finalised as part of the discharge consent.

The AQR concludes that the proposed WWTP is located in an appropriate environment, and that odour emissions are not expected to result in adverse amenity effects on nearby sensitive receptors.

5.1.2 Proposed Odour Buffer

Section 2.2 of the AQR outlines the proposed odour buffer to minimise the risk of adverse odour effects being experienced outside the site boundary. A minimum separation distance of 200 m from the site boundary and 300 m from any existing residential dwelling from the above ground wastewater treatment facilities is proposed. 105 of the submissions received included reference to concerns regarding the proposed odour buffer not being extensive enough to prevent offensive or objectionable effects.

As outlined in Section 3.3 of the AQR, during normal operating conditions, only low levels of odour are expected to be emitted from treatment process sources. Emissions from ASRs are stated to generally only be detected within approximately 30-50 m of the tanks, and odour from the MBR is expected to only be detectable when standing directly adjacent to the tank.

Section 5.2 of the AQR undertakes a review of the published separation distances recommended for a WWTP. As no New Zealand agencies have published separation distances for WWTPs, the guidelines published by the Victorian Environment Protection Agency (Vic EPA) are utilised in New Zealand. Based on the guidelines for the size of the WWTP proposed, the recommended odour buffers are outlined in Table 5-2 of the AQR. No dwellings are located within the Vic EPA's recommended distances for the capacity of the stage 1 and stage 2 WWTPs; however, five dwellings are located in the area located within the recommended separation distance for the size of the stage 3 WWTP.

As outlined in Section 5.2.2, the facilities that will be located within this recommended buffer are the inlet works facilities and the inlet pump station. These facilities are proposed to be enclosed and will vent to biofilters. Accordingly, the AQR considers it unlikely that any substantial odour would be detected at these properties.

A review of separation distances at comparable WWTPs was undertaken in Section 5.3 of the AQR. Snells-Algie WWTP is currently under construction and is expected to be similar to Stage 2 of the southwest WWTP. The designation for Snells-Algie has allowed for an odour buffer distance of 260 m to the nearest rural dwelling, and recreational areas are located within 270 m. This is noted in the AQR as consistent with the current proposal.

The Pukekohe WWTP was upgraded in 2019 to a modern activated sludge treatment plant, allowing for a capacity of 60,000 PE (comparable to the end stage of the current proposal), with the nearest rural dwelling to the Pukekohe WWTP being 270 m. Further dwellings are located between 330 m to 360 m. Further, this WWTP is considered to have similar meteorological conditions and the frequency dwellings are downwind during poor dispersion conditions are similar. As outlined in the AQR, no odour complaints have been received for this WWTP after it was upgraded, which is indicative that odour from the WWTP is adequately managed.

Based on the provided information I am satisfied that the proposed odour buffer and location of the proposed Southwest WWTP is adequate to allow for dispersion and dilution of odour, as to not cause offensive or objectionable effects at nearby sensitive receptors.

5.1.3 Harmful air pollutant discharges

Substantive quantities of harmful air pollutants (being air pollutants that pose a risk to human health or the environment) are not expected to be discharged from the WWTP processes.

Any minor discharges of harmful air pollutants that may arise from the WWTP activities (such as flaring or other combustion of biogas generated by sludge treatment) would be subject to a detailed assessment once the details of these activities are known, at the air discharge resource consent application stage.

At this Designation stage, I consider it sufficient to note that the odour buffer separation distances are also likely to provide adequate space for any harmful air pollutants to disperse to low levels, so as not to notably increase risks to human health in the surrounding area. Further, the control of any harmful air pollutant discharges would be a key consideration in the detailed design and assessment of air quality effects.

5.1.4 Dust discharges from construction

The construction and operation of major infrastructure such as the Southern WWTP results in the emission of greenhouse gases (GHG), including CO₂ and methane. I note that the majority of the GHG emissions will be embodied within the concrete infrastructure of the WWTP and wastewater conveyance network.

There is currently an absence of detailed guidance regarding how the potential GHG emissions (including embodied emissions) should be accounted for in RMA decision making processes such as this Designation application. A Guidance Note (Ministry for the Environment, 06/12/2022) broadly outlines the requirements to ‘have regard to’ the Emission Reduction Plan (ERP) and National Adaptation Plan under the RMA.

Under RMA section 74(2)(d), regard must be had to the ERP prepared under the Climate Change Response Act 2002 when making a change to a District Plan. The first ERP, covering the period to 2035 was published in May 2022. No specific emission reduction targets were included in the ERP for the construction of infrastructure of this nature. However, ERP Action 7.7 is to ‘Integrate climate mitigation into government decisions on infrastructure’. As such, I consider the strategic planning considerations for the establishment, design, and locations of the Southern WWTP must consider how the proposal best mitigates GHG emissions, including as compared to alternative wastewater treatment options.

At Section 7.3.2.5 of the AEE, the applicant describes Watercare Services Ltd.’s GHG emission reduction targets and how the proposed Southwest WWTP aligns with these. Notably, GHG emissions were included in the multi-criteria options analysis, with the proposed location deemed to favourably avoid the loss of wetlands (which sequester carbon) and reduce the lengths of conveyance pipework compared to other options.

I note that GHG emissions will also be a consideration in any future air discharge resource consent application (given that RMA section 104E has been repealed). Watercare Services Ltd will need to demonstrate how the construction and operation of the Southern WWTP mitigates GHG emissions and resulting climate change effects as part of this future resource consent application.

5.1.5 Dust discharges from construction

Section 6 of the AQR discusses the potential discharges of dust associated with the construction of the WWTP. Earthworks associated with construction do not require consent for discharges to air, and the visible nature of dust emissions means that operators can identify and remedy any issues before they become problematic.

Sources of dust are outlined in the AQR, and the surrounding environment is considered to have a low sensitivity to dust nuisance effects due to the rural nature of the surrounding area. Residential dwellings are considered to have a moderate to high sensitivity to dust. The emissions of dust during construction works can be minimised by the implantation of standard dust control procedures. Section 6.4 of the AQR states that the risk of nuisance dust from construction activities is low at distances of 50-100m from construction sources. The AQR concludes that the risk of adverse dust effects is less than minor.

As the proposed WWTP has a separation distance of 200 m from the site boundary, I agree with the conclusion of the AQR and consider it unlikely adverse dust effects will occur. Two submissions included reference to concerns regarding dust effects on local kiwifruit orchards at 429 Glenbrook Beach Road, Glenbrook. The boundary of this site is located over 300m away from the main WWTP facilities area which will be where the majority of earthworks are conducted. Accordingly, based on the information provided in the AQR, I consider it is unlikely that offensive or objectionable dust effects will occur at the property.

5.1.4 Specific submissions with regard to air quality

As above, 168 of these submissions included reference to air quality and odour effects. Some submissions raised more specific concerns regarding the reporting of potential air quality effects. These included:

- The WWTP still being in the design phase and therefore the conclusions of the AQR are hypothetical.
- How dewatered sludge will be stored and how long this is to remain on site.
- Potential for odours in use of emergency storage tanks.
- The NZ Steel meteorological mast (partially relied on by the AQR for the meteorological analysis) was only 6 m tall when the recommendation is for 10 m tall. Concerns regarding the accuracy of the data therefore used to calculate frequency of winds.
- Fruit growing around the WWTP absorbing potential wastewater odours.

I consider the majority of these submissions have been addressed in the above assessment of effects. As odours are not expected to be significant beyond the boundary of the site, local produce is unlikely to be affected.

The meteorological data collected by NZ Steel at 64 Glenbrook Beach Road was determined by the AQR to be representative of the local area, despite the lower-than-standard meteorological mast as this is the closest meteorological monitoring station to the site. The surrounding area is considered to be relatively flat terrain, as outlined in Section 4.3 of the AQR and the meteorological conditions are likely to be similar at both sites. I also note that this NZ Steel meteorological data presents similar average wind patterns as have been recorded at other nearby monitoring locations, including by

Auckland Council at Waiuku and Pukekohe. The NZ Steel dataset relied on by the AQR and these other nearby collected datasets show the prevailing south-westerly winds, with a secondary north-easterly direction. Therefore, I consider the analysis of the meteorological conditions at the Site as presented in AQR section 4.4 is robust.

With regard to first three submitter concerns listed, the design of the WWTP will be finalised prior to applying for the air discharge consent. This future application will be required to include an odour assessment based on the finalised design of the WWTP and will be assessed to ensure no offensive or objectionable effects will occur at the time of the application. This will include finalised management and mitigation measures including how sludge will be managed as well as the emergency storage tanks.

4.2 Assessment of effects conclusion

The AEE concludes that there would be negligible odour effects arising from the Designation for the Southwest WWTP. Particularly, the Designation is proposed to include an odour buffer area so that offensive or objectionable odour effects are not likely to arise.

I agree with the AQR's air quality effects assessment and consider that:

- Significant adverse air quality effects, such as 'offensive or objectionable' odour effects, are not likely to occur at any location beyond the boundary of the site, particularly given the buffer distances incorporated into the proposed Designation.
- Odour and other air quality effects shall be further assessed at the time of any future air discharge resource consent application, which shall also account for the WWTP design and emission control systems selected as part of the final detailed design process.
- Discharges of dust during construction can be adequately controlled by standard earthworks controls to minimise the risk of adverse effects.
- Discharges of GHGs will primarily be associated with embodied carbon within the WWTP and wastewater conveyance infrastructure. These and operational GHG emissions will need to be further considered and minimised as far as practicable as part of the detailed WWTP design phase.

5 Recommendation and conditions

5.1 Adequacy of information

The above air quality assessment is based on the information submitted as part of the NoR application. I consider that the information submitted is sufficiently comprehensive to assess the air discharges likely to arise as a result of the proposed Designation.

5.2 Recommendation

I consider that air quality matters should not restrict the granting of the proposed Designation of the Site for the Southwest WWTP, as:

- The application is supported by an Air Quality Report which outlines the likely odour and dust emissions associated with the Southwest WWTP and assesses the potential for adverse effects at nearby receptors.
- I consider that the overall adverse effects of the air discharges to the receiving environment are not likely to be significant.
- Particularly, the proposed inclusion of an odour buffer between the WWTP's key odour sources and off-site activities sensitive to air discharges (including dwellings) as part of the Designation sufficiently minimises the risk of 'offensive or objectionable' odour effects arising.
- I note that the air discharges will be further assessed at the air discharge resource consent application stage, following the detailed design of the WWTP. In any future air discharge resource consent, specific conditions could be imposed to further avoid, remedy, or mitigate any identified air quality effects.
- The sensitivity of the receiving environment to the air discharges from the Southwest WWTP will not be compromised given the likely levels of discharge, the degree of separation discharges, the application of suitable control technologies, and on-site management techniques (which can be determined at the air discharge resource consent stage).

5.3 Conditions

I support the proposed designation conditions specific to air quality (odour and dust) as proposed in Appendix 2 of the AEE. I note that these limit conditions adhere to the recommended wording of the GPG:Odour. These conditions are as follows:


AQ1. Beyond the boundary of the site, there must be no odour caused by discharges from the wastewater treatment activities, which in the opinion of an enforcement officer, is the cause of a noxious, dangerous, offensive or objectionable effect.

AQ2. The Requiring Authority must ensure that there is no noxious, dangerous, objectionable or offensive dust from the construction of the WWTP to the extent that is causes an adverse effect beyond the legal property boundary.


Further conditions specific to odour and other air quality monitoring and management to achieve these broad Designation conditions can be imposed as part of the air discharge consent application.

6 Review

6.1 Memo and technical review prepared by:

Rachel Terlinden <i>MSc</i> Specialist	
Contamination, Air & Noise Specialist Unit Resource Consents	
Date:	18/12/2023

6.2 Memo peer reviewed by:

Paul Crimmins <i>MSc(Hons), BA</i> Senior Specialist	
Contamination, Air & Noise Specialist Unit Resource Consents	
Date:	18/12/2023

3G Stormwater and flooding

Memorandum (technical specialist report to contribute towards Council’s section 42A hearing report)

4 December 2023

To: Jimmy Zhang, Senior Policy Planner, Plans and Places, Auckland Council

From: Trent Sunich, Consultant Stormwater Technical Specialist

Subject: Watercare Notice of Requirement, Southwest Wastewater Treatment Plant – Stormwater Technical Assessment

1.0 Introduction

This memorandum summarises the findings of my review of Southwest Wastewater Treatment Plant (‘WWTP’) Notice of Requirement (‘the NoR’). The review focuses on the flood hazard effects assessment of the project. Where applicable I have also commented on management of operational stormwater discharges from the project which will be subject to future regional resource consent applications and assessment reflecting the stormwater management and rule set in the Auckland Unitary Plan (AUP).

My involvement in the project has been from July 2023 where I have been commissioned to review the relevant reports for the NoR, any information requests/responses, and review/assess the relevant submissions culminating in the findings of this memorandum. I visited the site in August 2023.

This memorandum does not assess the effects of discharging treated wastewater to the Manukau Harbour, or the location of the discharge. These activities are authorised under existing resource consents (consent numbers CST60082600 (for the discharge) and CST60082302 (for the outfall and diffuser structure).

I hold a Bachelor of Technology (Environmental) which I obtained from the Unitec Institute of Technology in 2001. I have approximately 22 years’ experience in the field of natural resource management and environmental engineering. My expertise is in integrated catchment management planning, flood hazard assessment, stormwater quality management, and assessing associated development related stormwater effects where previously I have held roles with the Auckland Regional Council and URS New Zealand Limited. I am currently employed by SLR Consulting (previously 4Sight) as a Principal Environmental Consultant. Recently I have been the reporting stormwater technical specialist to Plan and Places of the Auckland Council for the private plan changes 48, 49 and 50, several SGA notices of requirement and the Kingseat Substation.

In writing this memo, I have reviewed the following documents:

- Notice Of Requirement - Southwest Wastewater Treatment Plant – Stormwater and Flooding Assessment, prepared by Stantec, dated 30 August 2023.
- Southwest WWTP Notice of Requirement, prepared by Stantec, dated August 2023.
- Public submissions.

2.0 Proposed Project and Flood Hazard Assessment

As described by the applicant, a notice of requirement is sought to designate land for the purposes of constructing and operating a new municipal wastewater treatment plant. An assessment of flood hazard, post development for the NoR has been documented in the report entitled ‘Notice Of Requirement - Southwest Wastewater Treatment Plant – Stormwater And Flooding Assessment’ (‘the Flooding Assessment’). A precis of the local receiving environments, flood hazard assessment methodology and findings documented by the applicant’s engineering consultant is detailed in the following subsections.

Site Location and Description

The site at 372 Glenbrook Beach Road, Glenbrook has an area of approximately 56 ha and lies within the Taihiki River catchment area, with a total catchment area of approximately 3,437 ha. The sub-catchment that includes the site and surrounding areas has a high point on the western side of Glenbrook Beach Road and is approximately 130 ha.

The current land use for the site is market gardening and the neighbouring properties also involve rural activities such as fruit farming. The existing topography of the site ranges between levels of 5 mRL to 16 mRL with slopes of approximately 2% towards the Taihiki River which at this point is tidally influenced and estuarine.

Hydrology, Overland Flow Paths and Flooding

There are two main permanent streams within the proposed WWTP site, Stream A and Stream B along with overland flow paths and other unnamed streams that discharge to the coastal environment.

Two existing ponds are located on Stream A within the site. Pond 1 a surface area of approximately 2.2 ha and lies between Glenbrook Beach Road and the site access road. The pond was built in 2019 for irrigation purposes and receives pumped water from an onsite borewell and surface runoff from the upper catchment via cut off drains and culvert crossings. Pond 2 has a surface area of approximately 4.5 ha and was constructed in 2015 for irrigation purposes which receives water from Pond 1 (naturally through the ground or pumped) and surface runoff from the surrounding catchment. No alterations are proposed to the ponds or their operation as part of the NoR.

Existing overland flow paths located within the site drain to the permanent streams (Stream A and B) and discharge into the coastal environment. These overland flow paths originate from the upper catchment on the western side of Glenbrook Beach Road and drain towards Pond 1 by means of cut-off drains and culvert crossings. Several smaller overland flow paths also originate from within the site boundary.

The eastern boarder of the site abutting the estuarine Taihiki River is subject to risk of costal inundation in both 1m and 2m sea level rise as indicated on the Auckland Council's Geomaps ('Geomaps') system.

Flood Risk Assessment

Following a site visit completed in May 2023 by the applicant's engineering consultant, it was concluded that the LiDAR elevation model data available was outdated based on the current site topography and recent developments (e.g. pond construction). Therefore, the development of a pre and post development flood hazard model has not been completed to support the food hazard assessment, instead utilising the catchment and hydrology layers of the Geomaps system. In brief, this assessment concluded:

- Based on AC GIS Geomaps and the indicative site layout, it was observed that the overland flow path from Pond 1 will drain to Pond 2. Thus, it was concluded that Pond 1 won't cause any additional flood risk to the proposed site.
- Based on the LiDAR data and a site visit, the proposed site is located on a relatively higher elevation which reduces the risk of any flood effects from the ponds.

Further flood hazard assessment is recommended during detailed design of the WWTP as follows:

- Obtain the latest LiDAR data which matches with the current topography of the site as it is anticipated that this will be available in future.
- Obtain topographic survey of the ponds which can be used with the available LiDAR to create a combined Digital Elevation Model (DEM) surface that can be used for flood modelling.
- Compile historical flood incidents records/observations to validate the model results.

Site Stormwater Management

Site stormwater runoff and contaminant management will be addressed as a regional consenting matter prior to construction of the WWTP with reference to the applicable rules in the Auckland Unitary Plan such as Chapter E8 Stormwater discharge and diversion. Notwithstanding this, the Flooding Assessment has provided an indicative stormwater management design comprising the following principles:

- Any polluted surfaces to be bunded and flows diverted into the secondary (WWTP) treatment process.
- Chemical delivery areas to be bunded and isolated to reduce risk of stormwater runoff being contaminated.
- Stormwater runoff from hardstand surfaces will be collected and diverted to a stormwater treatment pond and discharged to the natural stream and wetlands.

Recommended NoR Conditions

The following flood hazard related NoR conditions have been proposed by the applicant in relation the construction and operation of the WWTP:

24. The Requiring Authority must prepare and include a Flood Hazard Report and submit it to Council for certification either before or at the same time as submitting the first Outline Plan to Council. Once certified, the methods identified in the report for mitigating potential flooding effects must be implemented. For the avoidance of doubt, Works in accordance with the Flood Hazard Report may be undertaken at any time after the Flood Hazard Report has been certified by the Council.
25. The Flood Hazard Report must be prepared by a suitably qualified and experienced person.
26. The objective of the Flood Hazard Report is to demonstrate how the design of the WWTP avoids or mitigates the potential flooding effects related to new stormwater discharge, any loss of flood plain storage or changes to overland flow paths.
27. The Flood Hazard Report must:
 - a) achieve the objective in Condition 26;
 - b) identify potential effects of site development on flood risk;
 - c) identify methods for reasonable mitigation of any identified flooding effects;
 - d) confirm that, with or without such mitigation, there will be no flood effects on upstream or downstream properties; and
 - e) confirm that design and construction work avoid changes to the drainage of the natural wetlands and sustain a neutral ground and surface water hydrological regime to avoid impacts to the natural wetlands and downstream (including coastal) environment.

3.0 Assessment of Effects

The NoR is proposed to enable the construction and operation of the new WWTP design to service the southwestern area of the Auckland region. The plant is proposed to be constructed in stages working up to a population equivalent of 60,000 people.

As was discussed earlier in this memorandum, this assessment focuses on the flood risk of operating the WWTP at the proposed location. Effects assessment of the stormwater discharges from the WWTP impervious surfaces (separated from the wastewater treatment processing) will be addressed at a later date when any regional consent requirements are assessed. Notwithstanding this, the current design appears fit for propose and where stormwater management matters have arisen in submissions, I have commented accordingly in the Section 4 below.

Flood Risk Assessment

Matters relevant to the assessment of flood risk include building floor level freeboard, proximity to the floodplains and overland flow paths, displacement of floodplain storage and any effects on surrounding properties.

In order to understand and assess the potential flood hazard effects, the applicants' engineering consultant has utilised published flood hazard and overland flow information in the Auckland Council's Geomaps system. I have assessed the information detailed in the flood assessment report, and in combination with the observations made during the site visit, I conclude the construction of the WWTP and its ancillaries within the site boundary will be in a manner that will present limited change to the operation of the floodplain, namely by being located topographically above the 1% AEP flood level.

In terms of overland flow paths entering the site (such as from the western side of Glenbrook Beach Road), works to construct and operate the WWTP do not appear to be in the immediate flow path areas. However, should any enabling or permanent works take place, the proposed flood hazard condition is satisfactory to identify issues and document remedial mitigation methods for implementation.

With regard to overland flow paths on the site, their origin is within the site boundaries and therefore post construction, any diversion of overland flow paths (through being displaced by the WWTP) will be subject to detailed design proposed through the designation conditions. Notwithstanding this, it is noted that the shape of the site is a peninsular with the immediate receiving environment being stream tributaries and the Taihiki River estuary, with no dwellings or structures located downstream meaning adverse effects are not anticipated.

In terms of resilience of the WWTP and the influence of projected sea level rise, viewing the hazards layer in Geomaps concludes the plant footprint and proposed stormwater treatment pond (two options are presented in terms of site location) are clear of the modelled 1% AEP level scenario plus 2m sea level rise.

Flood Hazard Assessment Summary

Overall it is concluded that the potential flood hazard effects in relation to the 1% AEP rainfall event are understood and there is a provision for mitigation as is outlined in the Flooding Assessment and through the performance-based requirements stipulated in the draft NoR conditions.

4.0 Submissions

28, Shelley Moynihan
30, Anton Paul Tyers
31, Chris Tapper
38, Tracey Collins

Submission:

- Concern regarding the discharge of untreated sewage to the harbour during significant rainfall events

Relief sought:

Not specified.

Assessment:

- This is out of scope of my flood hazard related assessment, however it would be helpful for the applicant to respond to this matter. i.e. operationally how will the capacity of the plant be affected by matters such as inflow and infiltration into the wastewater network contributing to the plant.

35, Dominic Moynihan

Submission:

Having dealt with two incidents of flooding due to poor road construction and knowing that the proposed site is flood prone concerns me greatly. What will happen if the plant floods. Raw sewage being discharged into the harbour will ruin the harbour. January 27, 2023, should be an

example of what can occur in our inner harbor following such an event. Discharging fresh water into the environment will create long-term damage to the foreshore and seabed, as it has done at the Māngere wastewater treatment plant.

Relief sought:

Watercare should build a pipe to the Tasman Sea.

Assessment:

- Refer to earlier sections of this memorandum regarding the proximity of the plant to the modelled flood plain. Management of potential flood risk will also be clarified during detailed design of the plant through the proposed NoR flood hazard condition.
- Refer to commentary above regarding operation of the plant during rainfall events.

44, Jacqueline Lee Sibbald

Submission:

- There needs to be an independent investigation as to whether the ponds constructed on the land have damaged or destroyed wetland, and/or altered drainage and water pathways in the surrounding area and if so the wetland should be reinstated and all adverse effects on affected properties remedied.

Relief sought:

Not specified

Assessment:

- This is a matter for the applicant to respond to regarding the legal status of the existing ponds and their operation.

220, Ian Smith

Submission:

We all agree that we are in a climate emergency. With that in mind the plant is positioned too close to our community and if the one access road is blocked for any reason it could both affect the operation of the plant and emergency crews getting through to an incident at the plant or an emergency in our local community.

Relief sought:

Not specified

Assessment:

This submission relates to the resilience of the plant, presumably during civil defence emergencies or lesser situations. An operational matter for the applicant to respond to.

223, John and Bernice Ramsey

Submission:

- In considering the effects of allowing the NOR, the following adverse effects which affect the site and surrounding land (including our land at 338 Glenbrook Beach Road) are relevant, and totally avoidable:
 - Effects on flood hazards and stormwater overland flow paths arising from construction and ongoing operation of the site.

Relief sought:

- Most of these adverse effects are avoided completely by relocating the SWWTP to the existing Waiuku designated Wastewater Treatment Plant Site, site Z.

Assessment:

As is discussed in Section 3 above the construction and operation of the plant will have limited effect of the operation of overland flow paths on surrounding properties. I have also commented on the location of the plant and its proximity to the flood plain.

224, Rose McLaughlan

231, Greg McLaughlan

Submission:

- Watercare state that 'Effects on the existing 1% AEP flood plains and overland flow paths as a result of the construction of the WWTP and associated infrastructure. These effects can be managed by creating diversions for overland flow paths, and no increased risk from flooding has been identified'. The two ponds have only recently been constructed and replaced wetlands and an overland flow path. Ever since the land was altered and ponds were installed, we have witnessed a significant change to the water table such that properties on the opposite side of the road now are sodden in places where the earth was not soddened before. This area was significantly affected by the floods in Auckland (Cyclone Gabrielle) and the road was flooded in part, due to culverts being blocked.
- Flooding effects have been based on a 1% Annual Exceedance Probability (AEP); I am not sure where they got this figure from but basing their assessment on 1% AEP is in my opinion ridiculous. AEP is the probability that a given rainfall intensity will be exceeded in any one year, expressed as a percentage. There also does not seem to be any account given to climate change and the fact that heavy rainfall and flooding will increase.
- During the floods in January and February 2023, parts of Glenbrook Beach Road were flooded including this section of the road where the existing pond was observed to spill stormwater onto the road. (This flooding is also acknowledged in s.5.1.3 of the AEE).

Relief Sought:

The ponds should be removed and the overland flowpath/wetlands that existed before should be reinstated.

Assessment:

- There is the opportunity to address carriageway flooding as part of the proposed site construction (Refer Section 7.2.2.6 of the flood assessment report) and the detailed design addressing flood hazard matters in the proposed NoR condition. Some commentary would be of assistance from the applicant responding to this submission.
- Currently the 1% AEP rainfall event (i.e. 1-in-100 chance of occurring in any one year). This is embedded in regional and district objective, policy and rule frameworks, including the influence of climate change to accommodate predictions in rainfall intensity and duration. In this case the Geomaps includes a projected annual average temperature increase by 2090 of 3.8°C which is the most conservative metric available at this time. It is anticipated this will continue to evolve through local and national direction as an evidence base is developed in relation to planning for the influence of more extreme rainfall events.

5.0 Conditions

I have reviewed the recommended flood hazard conditions and have no further edits.

6.0 Objective and Policies

The natural hazards and flooding related Auckland Unitary Plan objectives and policies relevant to the NoR are listed as follows:

B10 Environmental Risk:

- B10.2.1 Objectives (3), (4), (5) and (6)

The design is generally cognisant to these objectives. Objective 6 is notable in adopting a precautionary approach assessing low probability but high potential impact events.

- B10.2.2 Policies (1), (3), (4), (5), (6), (10), and (12).

The design appropriately accounts for climate change and the use of up-to-date information through referring to the Geomaps (flood hazard and coastal inundation) with projections to year 2090 ((3) and (4)).

E36 Natural Hazards and Flooding:

- E36.2 Objectives (1), (3) (4)) and (5).

The applicant has sought to understand the operation of the floodplain by referring to Geomaps (including the influence of climate change).

- E36.2 Policies (3), (4), (16), (21), (22), (27), and (35).

The applicant has been cognisant to the floodplain operation in locating the footprint of the plant with a suitable freeboard above the 1% AEP floodplain.

7.0 Conclusions and recommendations

The assessment in this memorandum does not identify any reasons to withhold the NoR. The flood hazard effects of the proposal considered by this memorandum that could be granted subject to recommended conditions, are for the following reasons:

- The applicant has used an established assessment method including the use of Geomaps flood hazard and coastal inundation that accounts for the influence of climate change by adjusting for changes in temperature and rainfall patterns in accordance with MfE guidance.
- The WWTP plant location within the site is clear of major overland flow paths and the flood plain.
- Subject to the imposition of NoR conditions the proposal is generally consistent with the flood hazard related objectives and policies in the Auckland Unitary Plan.



Trent Sunich
Consultant Stormwater Technical Specialist

ATTACHMENT 3
SUMMARY OF SUBMISSIONS

Notice of Requirement - Southwest WWTP NoR

Summary of Submissions

Sub #	Sub point	Submitter Name	Oppose/Support	Relief Sought
1	1.1	Jacques Nel	oppose	Review community response with honesty
1	1.2	Jacques Nel	oppose	Review location of WWTP
2	2.1	Kulwinder kaur	oppose	Withdraw the NoR
3	3.1	Rebecca Brand	oppose	Withdraw the NoR
4	4.1	Josh Langford	oppose	Move the WWTP to the location near the Steel Mill
5	5.1	Vincent Asia	oppose	Extend the WWTP at the Steel Mill
6	6.1	Glenbrook Residents c/- Coral Farkash	oppose	Withdraw the NoR
7	7.1	Kyle Cunningham	oppose	Withdraw the NoR
8	8.1	Kimberley Webster	oppose	Withdraw the NoR
8	8.2	Kimberley Webster	oppose	Relocate the WWTP to the existing site at the Steel Mill
9	9.1	Deepika Mudaliar	oppose	Move the WWTP to an alternative location
10	10.1	Peter Wrightson	oppose	Relocate the WWTP to the existing site at the Steel Mill
11	11.1	Jean- Paul Eason	oppose	Withdraw the NoR
12	12.1	Emma Cuming	oppose	Find an alternative location for the WWTP
13	13.1	Lania Gribben	oppose	Find an alternative location for the WWTP
14	14.1	Joseph Ford	support	Confirm the NoR

15	15.1	Elijah Nino Mondero	oppose	Find an alternative location for the WWTP
16	16.1	Benjamin Ross	support	Confirm the NoR subject to modifications
16	16.2	Benjamin Ross	support	Provide an earth bund 10m high and planted with trees and bush along Glenbrook Beach Road running the length of the Watercare property boundary
16	16.3	Benjamin Ross	support	Light pollution is strictly controlled through directional LED lighting along with tree lines or bunds to absorb consequential light pollution on site boundaries
16	16.4	Benjamin Ross	support	Ensure measures such as sealed wastewater treatment tanks and odour elimination measures are in place to control and eliminate any odour releases from the facilities.
17	17.1	Michelle Cunningham	oppose	Find an alternative location for the WWTP
18	18.1	Rex Potter	oppose	Move the WWTP next to the Steel Mill
19	19.1	Dan Meredith	oppose	Withdraw the NoR
19	19.2	Dan Meredith	oppose	<p>Withdraw NoR. If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in
20	20.1	Grant Mackay	oppose	Locate the WWTP at the Waiuku site
20	20.2	Grant Mackay	oppose	Discharge in the Manukau Road is only permitted in the short term until an alternative method of wastewater treatment is provided.
21	21.1	Joanne Scott	oppose	Requests that the Requiring Authority undertake a scientific study of the current and projects effects on the Manukau Harbour and its ecosystem from discharge.
21	21.2	Joanne Scott	oppose	Alternative sites are considered noting that the Requiring Authority should be restricted to considering sites that they own.
22	22.1	Debbie Tapper	oppose	Move the WWTP next to the Steel Mill

23	23.1	Emma Ford	support	Confirm the NoR
24	24.1	Olivia Jackson	oppose	The land should not be rezoned as as a waste treatment plant
24	24.2	Olivia Jackson	oppose	The WWTP to be located at Watercare's existing site at Waiuku
24	24.3	Olivia Jackson	oppose	The extent of the site subject to the NOR should be limited to only the area required for the proposed plant.
24	24.4	Olivia Jackson	oppose	Discharge should not be going into the Manukau Harbour and should instead be going into the Tasman Sea, or to a land disposal scheme.
24	24.5	Olivia Jackson	oppose	Requests that Watercare undertake proper consultation with the community.
24	24.6	Olivia Jackson	oppose	More appropriate mitigation measures are to be taken, such as building a bund to block the plant from view.
24	24.7	Olivia Jackson	oppose	Pipelines associated with the WWTP should be constructed in a manner that does not involve substantial excavation works along Glenbrook Beach Road.
24	24.8	Olivia Jackson	oppose	An opportunity to discuss conditions
24	24.9	Olivia Jackson	oppose	Withdraw the NoR
24	24.10	Olivia Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
25	25.1	Nicola Jane Marii	oppose	Stop the discharge into the Manukau Harbour
26	26.1	VikramSinh Rajput	oppose	Withdraw the NoR

27	27.1	Sarah Fisher	oppose	Find an alternative location for the WWTP
27	27.2	Sarah Fisher	oppose	Look at alternative ways of disposing of wastewater
27	27.3	Sarah Fisher	oppose	Withdraw the NoR
28	28.1	Shelley Moynihan	oppose	The existing plant at Williams Road be extended and the treated wastewater to be reused by NZ Steel or piped out to the Tasman sea.
28	28.2	Shelley Moynihan	oppose	If the NOR is confirmed, the extent of the site subject to the NOR should be limited to the 6ha needed.
28	28.3	Shelley Moynihan	oppose	A bund is provided and appropriate planting is undertaken to hide the plant from view, if the NOR is confirmed
28	28.4	Shelley Moynihan	oppose	A legal covenant be placed on the site to ensure that the plant facilities cannot be extended without fair and appropriate consultation
28	28.5	Shelley Moynihan	oppose	The installation of air conditioning at property
28	28.6	Shelley Moynihan	oppose	Air quality to be monitored with mitigations in place should quality drop below an acceptable level
28	28.7	Shelley Moynihan	oppose	Survey vibrations that occur through construction and rectify any negative impacts
28	28.8	Shelley Moynihan	oppose	Request public reporting of the monitoring results for the water quality in the Manukau Harbour, with mitigations in place if the monitoring shows that the quality of the harbour is negatively impacted
28	28.9	Shelley Moynihan	oppose	Implement dust protection for kiwifruit orchard
28	28.10	Shelley Moynihan	oppose	Requests compensation for devaluation of property

29	29.1	John Nicolson	oppose	Withdraw the NoR
30	30.1	Anton Paul Tyers	oppose	Withdraw the NoR
30	30.2	Anton Paul Tyers	oppose	Requests the provision of a 11m high bund around the plant with plantings on top, if the NOR is confirmed
30	30.3	Anton Paul Tyers	oppose	Any area not utilised for the plant facilities be placed in trust (perpetually) for community use and be developed according to the wishes of the community, if the NOR is confirmed
31	31.1	Chris Tapper	oppose	The land should not be rezoned as industrial
31	31.2	Chris Tapper	oppose	The WWTP to be located at Watercare's existing site at Waiuku
31	31.3	Chris Tapper	oppose	Discharge should not be going into the Manukau Harbour and should instead be going into the Tasman Sea, or to a land disposal scheme.
31	31.4	Chris Tapper	oppose	Requests that Watercare undertake proper consultation with the community.
31	31.5	Chris Tapper	oppose	More appropriate mitigation measures are to be taken, such as building a bund to block the plant from view.
31	31.6	Chris Tapper	oppose	Pipelines associated with the WWTP should be constructed in a manner that does not involve substantial excavation works along Glenbrook Beach Road.
32	32.1	David Slack	oppose	Withdraw the NoR
33	33.1	Gerald John	oppose	Discharge wastewater to the Tasman sea and not the Manukau Harbour
34	34.1	Aaron Montier	oppose	Withdraw the NoR
35	35.1	Dominic Moynihan	oppose	Withdraw the NoR
35	35.2	Dominic Moynihan	oppose	The existing plant at Williams Road be extended and the treated wastewater to be reused by NZ Steel or piped out to the Tasman sea.
35	35.3	Dominic Moynihan	oppose	If the NOR is confirmed, the extent of the site subject to the NOR should be limited to the 6ha needed.
35	35.4	Dominic Moynihan	oppose	A bund is provided and appropriate planting is undertaken to hide the plant from view, if the NOR is confirmed
35	35.5	Dominic Moynihan	oppose	A legal covenant be placed on the site to ensure that the plant facilities cannot be extended without fair and appropriate consultation
35	35.6	Dominic Moynihan	oppose	The installation of air conditioning at property
35	35.7	Dominic Moynihan	oppose	Air quality to be monitored with mitigations in place should quality drop below an acceptable level
35	35.8	Dominic Moynihan	oppose	Survey vibrations that occur through construction and rectify any negative impacts
35	35.9	Dominic Moynihan	oppose	Request public reporting of the monitoring results for the water quality in the Manukau Harbour, with mitigations in place if the monitoring shows that the quality of the harbour is negatively impacted
35	36.10	Dominic Moynihan	oppose	Implement dust protection for kiwifruit orchard
35	36.11	Dominic Moynihan	oppose	Requests compensation for devaluation of property
36	36.1	David Hollis	oppose	Withdraw the NoR
37	37.1	Lana Miller	oppose	Withdraw the NoR
37	37.2	Lana Miller	oppose	If the NOR is confirmed, a bund is to be provided at the front of the site to screen the WWTP from the road and plant the bund with native vegetation
37	37.3	Lana Miller	oppose	If the NOR is confirmed, ensure that only the area required for the plant facilities is approved.
37	37.4	Lana Miller	oppose	If the NOR is confirmed, ensure trees planted are protected by legal covenants so that they cannot be removed.
38	38.1	Tracey Collins	oppose	Build a pipe to the Tasman Sea to discharge wastewater

				Withdraw the NoR, or modify the NoR to address the following: <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
39	39.1	AC Hornby	oppose	
40	40.1	Corbyn Miller	oppose	Withdraw the NoR
40	40.2	Corbyn Miller	oppose	If the NOR is confirmed, a bund is to be provided at the front of the site to screen the WWTP from the road and plant the bund with native vegetation
40	40.3	Corbyn Miller	oppose	If the NOR is confirmed, ensure that only the area required for the plant facilities is approved.
40	40.4	Corbyn Miller	oppose	If the NOR is confirmed, ensure trees planted are protected by legal covenants so that they cannot be removed.
41	41.1	Del Morgan	oppose	Drill to install the conveyance pipe instead of open cutting to reduce effects on traffic
41	41.2	Del Morgan	oppose	Upgrade the existing Waiuku Plant in place of the current proposal
42	42.1	Mike Williams	oppose	Withdraw the NoR
42	42.2	Mike Williams	oppose	If the NOR is confirmed, a bund is to be provided at the front of the site to screen the WWTP from the road and plant the bund with native vegetation
42	42.3	Mike Williams	oppose	If the NOR is confirmed, ensure that only the area required for the plant facilities is approved.
42	42.4	Mike Williams	oppose	If the NOR is confirmed, ensure trees planted are protected by legal covenants so that they cannot be removed.
43	43.1	Monique Hubers	oppose	Locate the WWTP at the existing Waiuku site
44	44.1	Jacqueline Lee Sibbald	oppose	Revisit site selection and consider the existing Waiuku plant as the preferred site for the proposed WWTP
44	44.2	Jacqueline Lee Sibbald	oppose	Avoid or reduce discharge of wastewater into the Manukau Harbour, and consider the potential for emergency discharge into the harbour
44	44.3	Jacqueline Lee Sibbald	oppose	Undertake meaningful and transparent consultation with the community
44	44.4	Jacqueline Lee Sibbald	oppose	If the NOR is confirmed, ensure that only the area required for the plant facilities is approved.
44	44.5	Jacqueline Lee Sibbald	oppose	Reinstate any wetland damaged or destroyed through the construction of the ponds
44	44.6	Jacqueline Lee Sibbald	oppose	The conveyance pipeline should be thrust rather than being constructed in trenches
44	44.7	Jacqueline Lee Sibbald	oppose	During construction, access on Glenbrook Beach Road is to be maintained at all times for emergency vehicles. There shall be no restrictions for access to properties as a result of construction.
44	44.8	Jacqueline Lee Sibbald	oppose	The safety of the proposed access to the site should be addressed further
44	44.9	Jacqueline Lee Sibbald	oppose	Requests conditions to ensure no odour is discharged from the site that is offensive or objectionable to the extent that it causes an adverse effect beyond the boundary of the site.
44	44.10	Jacqueline Lee Sibbald	oppose	Provide a bund with plantings to hide the plant. The plantings should be planted as soon as possible. The successful and speedy growth of the plantings is to be secured by any practical means.
44	44.11	Jacqueline Lee Sibbald	oppose	Provide strict controls on noise including continuous noise and maximum noise.
44	44.12	Jacqueline Lee Sibbald	oppose	Minimise effects from the lighting of the plant on the surrounding environment as much as possible
44	44.13	Jacqueline Lee Sibbald	oppose	There should be a requirement to follow best international practise to properly handle the disposal of any trade waste and any emerging contaminants from time to time and any other adverse affects, such as midges or anything else that eventuates from the construction of the WWTP.
44	44.14	Jacqueline Lee Sibbald	oppose	There needs to be stringent ongoing reporting requirements including disclosure of compliance and any breaches, transparent disclosure to the community and real consequences for breach, this includes all results from effects on the Manukau Harbour from the exercise of the discharge consent
44	44.15	Jacqueline Lee Sibbald	oppose	Require any future resource consents for the conveyance pipeline and WWTP to be notified.

44	44.16	Jacqueline Lee Sibbald	oppose	Require the Requiring Authority to fund independent experts representing the community
44	44.17	Jacqueline Lee Sibbald	oppose	Require the WWTP to be upgraded in line with best practice over time to minimise effects on the community and nearby property.
45	45.1	HEB Construction Limited	support	Confirm the NoR
46	46.1	Laurel J Simons	oppose	Explore alternative locations for the WWTP
				Withdraw the NoR, or modify the NoR to address the following: <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
47	47.1	Samantha-Jane Dell	oppose	
48	48.1	Glenbrook Beach Residents	oppose	The WWTP to be located at the existing WWTP site on Williams Road adjacent to NZ Steel
49	49.1	Margaret Slack	oppose	The WWTP should be sited at Williams Road-site Z and for the wastewater to go to the Tasman Sea or be re-used for social, economic and environmental reasons.
49	49.2	Margaret Slack	oppose	The land should not be re-zoned as industrial.
49	49.3	Margaret Slack	oppose	Ensure that the plant is screened from view on all sides
49	49.4	Margaret Slack	oppose	Place a legal covenant on the site to ensure that the plant facilities cannot be extended without fair and appropriate consultation
49	49.5	Margaret Slack	oppose	Pipelines associated with the WWTP should be constructed in a manner that does not involve substantial excavation works along Glenbrook Beach Road.
49	49.6	Margaret Slack	oppose	Air quality and acoustics to be closely monitored and reported regularly (monthly) to the community.
49	49.7	Margaret Slack	oppose	Establish an easy complaint method and ensure that complaints are acted on quickly.
49	49.8	Margaret Slack	oppose	Require compensation for loss of land value or amenity due to effects of noise and/or air quality
50	50.1	Knight Investments Limited	support	Confirm the NoR subject to modifications
50	50.2	Knight Investments Limited	support	Should the NOR be confirmed, the location of the WWTP and NoR should remain at the site at 372 Glenbrook Beach Road (Lot 1 DP 367461).
50	50.3	Knight Investments Limited	support	Should the NOR be confirmed, a two -year lapse period for the NoR is sought.
50	50.4	Knight Investments Limited	support	Should the NOR be confirmed, confirmation that the stage 1 constriction capacity will include capacity for all of the submitters landholdings within the Clarks Beach Precinct is sought.
50	50.5	Knight Investments Limited	support	Should the NOR be confirmed, confirmation as to the future potential capacity of the WWTP to service growth beyond the current AUP future urban areas is sought.
51	51.1	Mark Gasson	oppose	Withdraw the NoR
51	51.2	Mark Gasson	oppose	Should the NoR be confirmed, the two artificial ponds on the site at 372 Glenbrook Beach Road are to be restored to their pre-2015 condition with riparian plantings of indigenous flora.
51	51.3	Mark Gasson	oppose	Should the NoR be confirmed, Watercare must offer a perpetual lease to a community group or similar at a peppercorn sum (eg. \$10 per annum) for the 50 hectares not required for the plant. This 50 hectares is to be repurposed for boardwalks, cycleways, community gardens or similar to be paid for by Watercare
51	51.4	Mark Gasson	oppose	Should the NoR be confirmed, a covenant shall be placed on the entire site stating that the total solar electric (photovoltaic) generation is not to exceed 10 kW.
51	51.5	Mark Gasson	oppose	Should the NoR be confirmed, an earth bund to be constructed around the 6 ha extent of the proposed plant (stage 3). The height of the bund to be greater than the height of the largest fans on the plant so as to attenuate the noise of the plant to a level that it cannot be heard at night beyond the boundaries of the site. The bund shall be planted in indigenous species with a minimum height of 3 m at the time of planting.
51	51.6	Mark Gasson	oppose	Should the NoR be confirmed, a binding covenant in perpetuity is to be placed on the site prohibiting the processing of any waste that contains heavy metals beyond a quantitative "baseline" amount established by Watercare and agreed to by the community.

51	51.7	Mark Gasson	oppose	Should the NoR be confirmed, a binding covenant in perpetuity is to be applied to the entirety of the site (at 372 Glenbrook Beach Road) stating that emissions of aerosols, odour, pathogens and other such ecological hazards are not to exceed a quantitative "baseline" amount established by Watercare and agreed to by the community.
51	51.8	Mark Gasson	oppose	Should the NoR be confirmed, a waste water treatment "Plant Community Liaison Group" (PCLG) is to be established. The purpose of the PCLG would be to monitor and comment on any binding quantitative plant performance metrics agreed to by Watercare (such as the covenants above, the "Emerging Contaminants Risk Assessment (ECRA), the Monitoring and Technology Review Report (MTTR), the Operations and Management Plan (OMP) for the plant at 372 Glenbrook Beach Road.
51	51.9	Mark Gasson	oppose	Should the NoR be confirmed, a binding commitment is to be made by Watercare to ensure that the height of any part of the plant is restricted to the 6m in the application documentation.
51	51.10	Mark Gasson	oppose	The progress of the pipeline conveyancing consent must be stopped by Auckland Council as the location and design of the pipeline may become redundant given its reliance on where the WWTP is built, which is yet to be determined. Once the Site is determined, the pipeline conveyancing consent is to be publicly notified.
52	52.1	Johnathan Oliver	oppose	<p>Withdraw the NoR, or modify the NoR to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
53	53.1	Stephen Lasham	oppose	Requests that the hydrodynamic model for the entire Manukau Harbour be published so that the full impacts of this and any other discharges (combined current or future), be understood.
53	53.2	Stephen Lasham	oppose	Change the discharge point and pipe the discharge from the proposed WWTP and all other WWTPs into the Tasman Sea
53	53.3	Stephen Lasham	oppose	The WWTP should treat wastewater to the standard that it can be used as drinking water
53	53.4	Stephen Lasham	oppose	Provide for alternative uses of treated wastewater such as for industrial or agricultural use
53	53.5	Stephen Lasham	oppose	Undertake consultation with all communities that border the Manukau Harbour
53	53.6	Stephen Lasham	oppose	Withdraw the NoR in its current form, or amend it to address the requirements presented in the submission
54	54.1	Maki Ito	oppose	Relocate the WWTP to the existing site at the Steel Mill
54	54.2	Maki Ito	oppose	Drill to install the conveyance pipe instead of open cutting to reduce effects on traffic
55	55.1	Kathryn Anderson	oppose	Extend the WWTP at Williams Road and for the wastewater to be directed out to the Tasman Sea or explore opportunities to reuse the water.
55	55.2	Kathryn Anderson	oppose	If the NoR is confirmed, bund and landscaping are provided to a very high standard
55	55.3	Kathryn Anderson	oppose	If the NoR is confirmed, a penalty is charged to Watercare every time untreated wastewater is pumped in the harbour
55	55.4	Kathryn Anderson	oppose	If the NoR is confirmed, Watercare must offer to purchase the property at 424 Glenbrook Beach Road.
55	55.5	Kathryn Anderson	oppose	If the NoR is confirmed, Watercare is only allowed to rezone the portion of the land that is required for the WWTP.

				<p>Withdraw the NoR, or modify the NoR to address the following:</p> <ul style="list-style-type: none"> • Remove discharge to the Manukau Harbour • Create an outflow pipe to the Tasman Sea • Publish a hydrodynamic model for the entire Manukau Harbour and evaluate full impacts of discharge on the harbour. • Undertake consultation with all communities that border the Manukau Harbour • Relocate the proposed WWTP next to the steel mill • Treat wastewater as an asset and that the WWTP treat wastewater to the standard that it can be used as drinking water
56	56.1	The Manukau Harbour Rest	oppose	
57	57.1	Amy Huang	oppose	Withdraw the NoR
58	58.1	Paul Arthur	oppose	Withdraw the NoR
58	58.2	Paul Arthur	oppose	Wastewater should not be discharged into the Manukau Harbour
59	59.1	Robert and Rosalie McCarthy	oppose	Withdraw the NoR
59	59.1	Robert and Rosalie McCarthy	oppose	The plant at Williams Road be extended/upgraded with provision for the wastewater to potentially be re-used and go to the Tasman Sea or to a suitable land outfall facility.
59	59.1	Robert and Rosalie McCarthy	oppose	If the NOR is confirmed, imposition of a legal covenant to limit the size of the plant with no provision to extend further without notified consent.
59	59.1	Robert and Rosalie McCarthy	oppose	If the NOR is confirmed, the construction of an appropriate bund at the site to ensure that there is no overflow, spillage of untreated or partially treated effluent due to flooding, equipment failure/breakdown etc.
59	59.1	Robert and Rosalie McCarthy	oppose	If the NOR is confirmed, the Council to oversee the development of a regime for testing/monitoring/restricting adverse odour in areas surrounding the site and that Watercare be required to comply.
59	59.1	Robert and Rosalie McCarthy	oppose	If the NOR is confirmed, Watercare be required to restore the wetlands on the site to their original state.
59	59.1	Robert and Rosalie McCarthy	oppose	If the NOR is confirmed, planting along the roadside at 372 Glenbrook Beach Road should be significantly extended. Any perceived interference with sightlines for traffic leaving the site can be mitigated by planting further away from the road frontage near the road access point.
60	60.1	Hayley Miller	oppose	Extend the plant at Williams Road and for the wastewater to go to the Tasman Sea.
60	60.1	Hayley Miller	oppose	If the NOR is confirmed, a bund is to be provided at the front of the site to screen the WWTP from the road and plant the bund with native vegetation
60	60.1	Hayley Miller	oppose	If the NOR is confirmed, ensure that only the area required for the plant facilities is approved.
60	60.1	Hayley Miller	oppose	If the NOR is confirmed, ensure trees planted are protected by legal covenants so that they cannot be removed.
61	61.1	Jim Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
62	62.1	Susan Quinnett	oppose	<p>Withdraw the NoR, or modify the NoR to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
63	63.1	Sophie Koligi	oppose	Withdraw the NOR
64	64.1	Ropa Kudzotsa	oppose	Withdraw the NOR

65	65.1	Alvin Changamire	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
66	66.1	Ankit Bhardwaj	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
67	67.1	Rob Hughes	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
68	68.1	Naveen Bhatia	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
69	69.1	Ariana Harvey	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
70	70.1	Courtney Tillotson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.

71	71.1	Vijay Sunker	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
72	72.1	Sam Smith	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
	73.1	Paul Lowe	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
74	74.1	Samantha Stephens	oppose	Withdraw the NOR
75	75.1	Deane Amos	oppose	Withdraw the NOR
76	76.1	Kiri Wynne	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
77	77.1	Hayley Hodges	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
78	78.1	Brent Bowler	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.

79	79.1	Kylee Dale	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
80	80.1	Sandra Turner	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
81	81.1	Melanie Laing	oppose	Withdraw the NOR
82	82.1	Wendy Pryde	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
83	83.1	Access NZ Attn: Edward Burke	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
84	84.1	Petra Kemp	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
85	85.1	Craig Byrnes	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.

86	86.1	New Zealand Steel Limited Attn: Debbie Lieder	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
87	87.1	Phillip Gracie	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
88	88.1	MHRSAtn: Leonie Norton	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
89	89.1	Migo Lafi	oppose	Withdraw the NOR
90	90.1	Marius Huyser	oppose	Withdraw the NOR
91	91.1	Dean Howe	oppose	Withdraw the NOR
92	92.1	Simon Clark	oppose	Withdraw the NOR
93	93.1	John Lennon	oppose	Withdraw the NOR
94	94.1	Jean Hamilton	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
95	95.1	Robert and Lynette Simms	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
95	95.2	Robert and Lynette Simms	oppose	Move the WWTP to the site near the Steel Mill

96	96.1	Libby Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
97	97.1	Mark Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
98	98.1	Dianne Bradford	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads. • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project
99	99.1	Dianne Adams	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads. • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent.
100	100.1	Deepika Mudaliar	oppose	Withdraw the NOR

101	101.1	Black Swan Retreat Attn: Jas	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
102	102.1	Freyja Taito	oppose	Withdraw the NOR
103	103.1	Michael and Claire Hyder	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
104	104.1	Ash Palmer	oppose	Withdraw the NOR
105	105.1	John Hull	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

106	106.1	Paula Hull	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
107	107.1	Brian Sims	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
108	108.1	Reece Johnson	oppose	Withdraw the NOR
109	109.1	Charlotte Gasson	oppose	Withdraw the NOR
110	110.1	Helen Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
111	111.1	Christine Watkinson	oppose	Withdraw the NOR

112	112.1	Rylee Mackay	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
113	113.1	Ellen-May Meharry	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

114	114.1	Larry van Niekerk	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
115	115.1	David Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

116	116.1	Jono Pearce	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
117	117.1	AEC & RM HoebergenAttn:	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Change the discharge point and pipe the discharge into the Tasman Sea • Manage the effects of constructing the conveyance pipeline • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares
118	118.1	Glen Yearbury	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

119	119.1	Brent Polglase	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
120	120.1	Linda GrayBrett	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
121	121.1	Abbey Hull	oppose	Withdraw the NOR
122	122.1	Shannon Hull	oppose	Do not discharge polluted fresh water into a natural harbour ecosystem as this will have a negative impact on the natural environment.
123	123.1	Nico Gerber	oppose	Withdraw the NOR
124	124.1	Mark Bradley	oppose	Withdraw the NOR

				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
125	125.1	Robert Patten	oppose	
126	126.1	Jayne Dunford	oppose	Withdraw the NOR
127	127.1	Nicola Hartley	oppose	Withdraw the NOR
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
128	128.1	Neal Narayan	oppose	

129	129.1	Sharon Eason	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
130	130.1	Euan Craig	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • Address effects of construction noise and operational noise • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares
131	131.1	Carolyne Jackson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

132	132.1	Greer Houston	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
133	133.1	Skye Scheib	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
134	134.1	Shane Bradford	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

135	135.1	Andrew Smith	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
136	136.1	Paul Collis	oppose	<p>If NoR is not withdrawn, modifications are sought to address the AEE which has not adequately determined the scale and significance of the effects on the environment</p>
137	137.1	Brendan Watts	oppose	<p>Withdraw the NOR</p>
138	138.1	Ben Telfer	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

139	139.1	Devon & Makereta Brown	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
140	140.1	Diana Howard	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
141	141.1	Darren Arnold	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

142	142.1	Sophia Graham	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
143	143.1	Zoe Oleary	oppose	Withdraw the NoR
144	144.1	Carol Craig	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

145	145.1	Brian Wynne	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
146	146.1	Darryn Robin	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

147	147.1	Harrison Stewart	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
148	148.1	Lisa Bate	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Restrict the extent of the NoR to 6 hectares
149	149.1	Andy Neish	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

150	150.1	Gavin Kelleway	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
151	151.1	Chad Brown	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
152	152.1	Conor Keegan	oppose	Withdraw the NoR

153	153.1	Kelvin Baker	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
154	154.1	Lew Turner	oppose	Withdraw the NoR
155	155.1	Ross Tucker	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
156	156.1	Dean Tollen	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

157	157.1	Susan Hale	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
158	158.1	Malcolm Stenersen	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
159	159.1	Sela Tae	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

160	160.1	Dean Sweetman	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
161	161.1	Shane O'Flaherty	oppose	Withdraw the NoR
162	162.1	Mike Reid	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

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163	163.1	Melina Martene	oppose	
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
164	164.1	Peter Cox	oppose	
165	165.1	Duncan CotterillAttn: Victor	oppose	Withdraw the NOR

166	166.1	Colin Maloney	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
167	167.1	John Logan	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

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168	168.1	Craig Duthie	oppose	
169	169.1	Sunita Christy	oppose	Withdraw the NoR
170	170.1	Genelle Palmer	oppose	Withdraw the NoR
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
171	171.1	Gareth Evans	oppose	

				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
172	172.1	Paul Clement	oppose	
173	173.1	Macauley Cunningham	oppose	Withdraw the NoR
174	174.1	JDW Chartered Accountant	oppose	Withdraw the NoR
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
175	175.1	Tokarahi Tobeck	oppose	
176	176.1	Richard Yoakley	oppose	Withdraw the NoR

177	177.1	Sanet Kelleway	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
178	178.1	Anna Farley	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
179	179.1	Alan McArdle	oppose	Withdraw the NoR
180	180.1	John Anderson	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

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181	181.1	Toni Mackay	oppose	
182	182.1	Jack Swinkels	oppose	Withdraw the NoR
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
183	183.1	Darren Smythe	oppose	
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
184	184.1	Annette Lusk	oppose	

185	185.1	Jordy Vitali	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
186	186.1	Carol Fearon	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
187	187.1	Amanda Tait	oppose	Withdraw the NoR
188	188.1	Christine Harvey	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

189	189.1	Steve Fearon	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
190	190.1	Peter Myler	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
191	191.1	Keith Harris	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

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192	192.1	Dianne Harris	oppose	
193	193.1	Peter Munro	oppose	Withdraw the NoR
194	194.1	Annette Tossell	oppose	Withdraw the NoR
195	195.1	Keith Squires	oppose	Withdraw the NoR
196	196.1	Fairview ProjectsAttn: Mike	oppose	Withdraw the NoR
197	197.1	Angela Davies	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

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198	198.1	Linda Squires	oppose	
199	199.1	Caroline Kean	oppose	Withdraw the NoR
				<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
200	200.1	Grahame Harvey	oppose	
201	201.1	Rosalind Campbell	oppose	Withdraw the NoR
201	201.2	Rosalind Campbell	oppose	Utilise Watercare's existing site in Waiuku for the WWTP

202	202.1	Michele Gunns	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
203	203.1	Diane Taylor	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
204	204.1	Erin Geaney	oppose	Withdraw the NoR
205	205.1	Pat Jemmett	oppose	Withdraw the NoR
206	206.1	David Bruce	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

207	207.1	Nick Elderton	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
208	208.1	Benjamin Frith	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
209	209.1	Gillian Dunlop	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

210	210.1	Kim Lovett	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
211	211.1	Marcel Wadek	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
212	212.1	Michael MacAulay	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

213	213.1	Megan Means	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
214	214.1	Mike Miller	oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
215	215.1	Brian Bellingham	oppose	If NoR is not withdrawn, the wastewater cannot be pumped into the Manukau Harbour. As well, the road would have to be completely rebuilt.
216	216.1	Barbara Bellingham	oppose	Put a very high bund immediately in front of the tallest part with high trees planted on top.
217	217.1	Ian Smith	oppose	Locate the new WWTP in the industrial zoned land at Glenbrook.
218	218.1	Kahawai Point Development Limited	Support	Confirm the NoR, subject to modifications
218	218.2	Kahawai Point Development Limited	Support	Proposed Condition 2 and a five year lapse period is supported
218	218.3	Kahawai Point Development Limited	Support	Provide for additional visual and acoustic mitigation through the use of bunds, particularly adjacent the northern boundary and along the Glenbrook Beach Road frontage.
218	218.4	Kahawai Point Development Limited	Support	Provide for a greater mix of coastal planting for ecological benefits in area P04 of the Landscape Planting Plan.
218	218.5	Kahawai Point Development Limited	Support	Provide for an ongoing pest control plan as an operational condition, which could include a requirement to join 'Predator Free Franklin', fortnightly trap management and date recording.
218	218.6	Kahawai Point Development Limited	Support	Provide a condition which measures and reports on the operational performance of the WWTP in regard to water quality and process efficiency.
218	218.7	Kahawai Point Development Limited	Support	Consider providing a condition for an on-going formal process with iwi regarding cultural monitoring and performance.
218	218.8	Kahawai Point Development Limited	Support	Consider providing for the reuse of treated water

219	219.1	Auckland Federated Farmers	Oppose	Withdraw the NoR
220	220.1	John and Bernice Ramsey	Oppose	Withdraw the NoR
221	221.1	Rose McLaughlan	Oppose	Extend the plant at Williams Road and for the wastewater to go to the Tasman Sea.
221	222.2	Rose McLaughlan	Oppose	If the NoR is not withdrawn, some protection is applied to the land so that the plant cannot be extended in the future without proper consultation
221	222.3	Rose McLaughlan	Oppose	If the NoR is not withdrawn, Watercare should offer to purchase the site at 424 Glenbrook Beach Road.
222	222.4	Nigel Pemberton	Oppose	Revisit site selection and consider the existing Waiuku plant as the preferred site for the proposed WWTP
222	222.5	Nigel Pemberton	Oppose	Avoid or reduce discharge of wastewater into the Manukau Harbour, and consider the potential for emergency discharge into the harbour
222	222.6	Nigel Pemberton	Oppose	Undertake meaningful and transparent consultation with the community
222	222.7	Nigel Pemberton	Oppose	If the NOR is confirmed, ensure that only the area required for the plant facilities is approved.
222	222.8	Nigel Pemberton	Oppose	Reinstate any wetland damaged or destroyed through the construction of the ponds
222	222.9	Nigel Pemberton	Oppose	The conveyance pipeline should be thrust rather than being constructed in trenches
222	222.10	Nigel Pemberton	Oppose	During construction, access on Glenbrook Beach Road is to be maintained at all times for emergency vehicles. There shall be no restrictions for access to properties as a result of construction.
222	222.11	Nigel Pemberton	Oppose	The safety of the proposed access to the site should be addressed further
222	222.12	Nigel Pemberton	Oppose	Requests conditions to ensure no odour is discharged from the site that is offensive or objectionable to the extent that it causes an adverse effect beyond the boundary of the site.
222	222.13	Nigel Pemberton	Oppose	Provide a bund with plantings to hide the plant. The plantings should be planted as soon as possible. The successful and speedy growth of the plantings is to be secured by any practical means.
222	222.14	Nigel Pemberton	Oppose	Provide strict controls on noise including continuous noise and maximum noise.
222	222.15	Nigel Pemberton	Oppose	Minimise effects from the lighting of the plant on the surrounding environment as much as possible
222	222.16	Nigel Pemberton	Oppose	There should be a requirement to follow best international practise to properly handle the disposal of any trade waste and any emerging contaminants from time to time and any other adverse affects, such as midges or anything else that eventuates from the construction of the WWTP.
222	222.17	Nigel Pemberton	Oppose	There needs to be stringent ongoing reporting requirements including disclosure of compliance and any breaches, transparent disclosure to the community and real consequences for breach, this includes all results from effects on the Manukau Harbour from the exercise of the discharge consent
222	222.18	Nigel Pemberton	Oppose	Require the WWTP to be upgraded in line with best practice over time to minimise effects on the community and nearby property.
223	223.1	The Ngāti Tamaoho Trust attn: Arabela Boatwright	Oppose	Require the consultation of Mana Whenua in relation to the archaeological sites that have been identified by the Tahiki Watermain Crossing archaeological report.
223	223.2	The Ngāti Tamaoho Trust attn: Arabela Boatwright	Oppose	Ensure the involvement of Mana Whenua in design processes to mitigate adverse effects on the cultural significance of the area in question.
224	224.1	Ngāti Te Ata	Oppose	Ngati Te Ata does not support the NOR as it is currently proposed. Ngati Te Ata does support in principle establishing a single modern best practice technology plant to service the south west.

224	224.1	Ngāti Te Ata	Oppose	<p>If this NOR is to be confirmed; then: Appropriate conditions be imposed to ensure the highest environmental practice and cultural appropriateness associated with the treatment plant. This includes:</p> <p>a. conditions requiring the plant to be operated to a standard that removes at least 99.99% of pathogens from the wastewater stream, consistent with Watercare's written guarantee to Ngati Te Ata. b. conditions requiring the waste sludge to be treated using existing technology in a way that it can be recovered and repurposed (e.g., converted to vermicast) and not sent to landfill.</p>
224	224.1	Ngāti Te Ata	Oppose	<p>If this NOR is to be confirmed; then: A condition of consent be imposed that require Watercare to recognise the key cultural importance of this area and that the conditions of consent:</p> <p>a. establish a cultural advisor (of Ngati Te Ata) for the project and site b. set in place a cultural and environmental monitoring programme c. Set realistic timeframes for response to the various Watercare plans and not the truncated 20 working days d. Through information, art and landscaping tell the story of mana whenua in this place e. seek appropriate cultural acknowledgment and redress of the area including offset environmental restoration projects and matters that acknowledge and tell the story of Ngāti Te Ata as the mana whenua in this area.</p>
224	224.1	Ngāti Te Ata	Oppose	<p>If this NOR is to be confirmed; then: Ensure the plant and pipe work to and from the plant are future proofed to take all existing and future development in Kingseat, Clarks Beach, Glenbrook Beach, Glenbrook and Waiuku.</p>
224	224.1	Ngāti Te Ata	Oppose	<p>If this NOR is to be confirmed; then: That the formal record of Auckland Council as regulatory agency and Watercare as requiring authority acknowledge that any Ngāti Te Ata support for this plant in no way signals its change of stance in terms of its opposition to wastewater discharge within the Manukau Harbour. The preference is that treated waste (at 99.99% termination of pathogen) be piped to the Westcoast avoiding kaimoana sites of significance, within the estuary and harbour.</p>
224	224.1	Ngāti Te Ata	Oppose	<p>If this NOR is to be confirmed; then: That the WWTP be located at Waiuku as originally considered particularly if the waste water can be used at the NZ Steel Plant.</p>
225	225.1	Amanda Gasson	Oppose	Withdraw the NoR
225	225.2	Amanda Gasson	Oppose	Should the NoR be confirmed, the two artificial ponds on the site at 372 Glenbrook Beach Road are to be restored to their pre-2015 condition with riparian plantings of indigenous flora.
225	225.3	Amanda Gasson	Oppose	Should the NoR be confirmed, an earth bund to be constructed around the 6 ha extent of the proposed plant (stage 3). The height of the bund to be greater than the height of the largest fans on the plant so as to attenuate the noise of the plant to a level that it cannot be heard at night beyond the boundaries of the site. The bund shall be planted in indigenous species with a minimum height of 3 m at the time of planting.
225	225.4	Amanda Gasson	Oppose	The progress of the pipeline conveyancing consent must be stopped by Auckland Council as the location and design of the pipeline may become redundant given its reliance on where the WWTP is built, which is yet to be determined. Once the Site is determined, the pipeline conveyancing consent is to be publicly notified.
226	226.1	Tessa Gasson	Oppose	Withdraw the NoR
226	226.2	Tessa Gasson	Oppose	Should the NoR be confirmed, the two artificial ponds on the site at 372 Glenbrook Beach Road are to be restored to their pre-2015 condition with riparian plantings of indigenous flora.

226	226.3	Tessa Gasson	Oppose	Should the NoR be confirmed, Watercare must offer a perpetual lease to a community group or similar at a peppercorn sum (eg. \$10 per annum) for the 50 hectares not required for the plant. This 50 hectares is to be repurposed for boardwalks, cycleways, community gardens or similar to be paid for by Watercare
226	226.4	Tessa Gasson	Oppose	Should the NoR be confirmed, a covenant shall be placed on the entire site stating that the total solar electric (photovoltaic) generation is not to exceed 10 kW.
226	226.5	Tessa Gasson	Oppose	Should the NoR be confirmed, an earth bund to be constructed around the 6 ha extent of the proposed plant (stage 3). The height of the bund to be greater than the height of the largest fans on the plant so as to attenuate the noise of the plant to a level that it cannot be heard at night beyond the boundaries of the site. The bund shall be planted in indigenous species with a minimum height of 3 m at the time of planting.
226	226.6	Tessa Gasson	Oppose	Should the NoR be confirmed, a binding covenant in perpetuity is to be placed on the site prohibiting the processing of any waste that contains heavy metals beyond a quantitative "baseline" amount established by Watercare and agreed to by the community.
226	226.7	Tessa Gasson	Oppose	Should the NoR be confirmed, a binding covenant in perpetuity is to be applied to the entirety of the site (at 372 Glenbrook Beach Road) stating that emissions of aerosols, odour, pathogens and other such ecological hazards are not to exceed a quantitative "baseline" amount established by Watercare and agreed to by the community.
226	226.8	Tessa Gasson	Oppose	Should the NoR be confirmed, a waste water treatment "Plant Community Liaison Group" (PCLG) is to be established. The purpose of the PCLG would be to monitor and comment on any binding quantitative plant performance metrics agreed to by Watercare (such as the covenants above, the "Emerging Contaminants Risk Assessment (ECRA), the Monitoring and Technology Review Report (MTTR), the Operations and Management Plan (OMP) for the plant at 372 Glenbrook Beach Road.
226	226.9	Tessa Gasson	Oppose	Should the NoR be confirmed, a binding commitment is to be made by Watercare to ensure that the height of any part of the plant is restricted to the 6m in the application documentation.
226	227.10	Tessa Gasson	Oppose	Should the NoR be confirmed, either move the plant eastward so that our property is out of the 391m buffer zone OR Watercare purchases the property under the Public Works Act at a fair value plus other allowances permitted by the Public Works Act. Watercare should extend this provision to cover all properties that fall inside the 391m odour zone.
226	227.11	Tessa Gasson	Oppose	The progress of the pipeline conveyancing consent must be stopped by Auckland Council as the location and design of the pipeline may become redundant given its reliance on where the WWTP is built, which is yet to be determined. Once the Site is determined, the pipeline conveyancing consent is to be publicly notified.
227	227.1	SPTMH attn: Mark Gasson	Oppose	Withdraw the NoR
227	227.2	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, the two artificial ponds on the site at 372 Glenbrook Beach Road are to be restored to their pre-2015 condition with riparian plantings of indigenous flora.
227	227.3	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, Watercare must offer a perpetual lease to a community group or similar at a peppercorn sum (eg. \$10 per annum) for the 50 hectares not required for the plant. This 50 hectares is to be repurposed for boardwalks, cycleways, community gardens or similar to be paid for by Watercare
227	227.4	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, a covenant shall be placed on the entire site stating that the total solar electric (photovoltaic) generation is not to exceed 10 kW.
227	227.5	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, an earth bund to be constructed around the 6 ha extent of the proposed plant (stage 3). The height of the bund to be greater than the height of the largest fans on the plant so as to attenuate the noise of the plant to a level that it cannot be heard at night beyond the boundaries of the site. The bund shall be planted in indigenous species with a minimum height of 3 m at the time of planting.

227	227.6	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, a binding covenant in perpetuity is to be placed on the site prohibiting the processing of any waste that contains heavy metals beyond a quantitative "baseline" amount established by Watercare and agreed to by the community.
227	227.7	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, a binding covenant in perpetuity is to be applied to the entirety of the site (at 372 Glenbrook Beach Road) stating that emissions of aerosols, odour, pathogens and other such ecological hazards are not to exceed a quantitative "baseline" amount established by Watercare and agreed to by the community.
227	227.8	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, a waste water treatment "Plant Community Liaison Group" (PCLG) is to be established. The purpose of the PCLG would be to monitor and comment on any binding quantitative plant performance metrics agreed to by Watercare (such as the covenants above, the "Emerging Contaminants Risk Assessment (ECRA), the Monitoring and Technology Review Report (MTTR), the Operations and Management Plan (OMP) for the plant at 372 Glenbrook Beach Road.
227	227.9	SPTMH attn: Mark Gasson	Oppose	Should the NoR be confirmed, a binding commitment is to be made by Watercare to ensure that the height of any part of the plant is restricted to the 6m in the application documentation.
227	227.10	SPTMH attn: Mark Gasson	Oppose	The progress of the pipeline conveyancing consent must be stopped by Auckland Council as the location and design of the pipeline may become redundant given its reliance on where the WWTP is built, which is yet to be determined. Once the Site is determined, the pipeline conveyancing consent is to be publicly notified.
228	228.1	Greg McLaughlan	Oppose	Extend the plant at Williams Road and for the wastewater to go to the Tasman Sea.
228	228.2	Greg McLaughlan	Oppose	If the NoR is not withdrawn, some protection is applied to the land so that the plant cannot be extended in the future without proper consultation
228	228.3	Greg McLaughlan	Oppose	If the NoR is not withdrawn, Watercare should offer to purchase the site at 424 Glenbrook Beach Road.
229	229.1	Ministry of Education	Neutral	<p>The proposed conditions below are supported, with requested amendments in red:</p> <p>15. The Requiring Authority must prepare a Construction Traffic Management Plan and submit to Council for certification. Once certified the plan must be implemented for the duration of the Works.</p> <p>16. The objective of the Construction Traffic Management Plan (CTMP) is to outline the methods that will be undertaken to avoid, remedy or mitigate adverse effects from traffic associated with the works on property access, road user safety and efficiency of traffic movements.</p> <p>17. The CTMP must be prepared by a suitably qualified and experienced person.</p> <p>18. The CTMP must achieve the objective in Condition 16 and must:</p> <p>a) identify the numbers, frequencies, and timing of traffic movements for each phase of the construction programme in the Construction Management Plan, including any limitations on heavy vehicle movements during peak times, or other times as required either in relation to traffic conditions or to mitigate potential noise and vibration effects;</p> <p>b) Identify safe site access arrangements, and site access points for construction traffic, including heavy vehicles involved in constructing the WWTP in a manner consistent with Waka Kotahi NZ Transport Agency's Code of Practice for Temporary Traffic Management.</p> <p>c) Identify the construction traffic routes for heavy vehicle movements. Include details on how all heavy vehicle movements must avoid any school on an identified construction traffic route at peak pick-up and drop-off times. The CTMP must include details of engagement with these identified schools and the Ministry of Education to confirm the peak timeframes heavy vehicle movements must avoid the schools during school term time only.</p> <p>Advice note: A heavy vehicle is defined as any vehicle larger than the average ute or van where it has the potential to reduce visibility on the road.</p> <p>19. The CTMP must be reviewed and updated as required to align with the key stages identified in the construction programme required in the Construction Management Plan.</p>
230	230.1	Peter Savage	Oppose	<p>Withdraw the NoR, or modify the NoR to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.

231	231.1	Glenbrook Beach Partnership attn: Mark Gasson	Oppose	Withdraw the NoR, or if not withdrawn: Increase the distance between our property and the plant
232	232.1	Stephen Benham	Oppose	If NoR is not withdrawn, modifications are sought to address the following: <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
233	233.1	Gurpreet Singh	Oppose	Withdraw the NoR
234	234.1	Shane Eason	Oppose	Withdraw the NoR
235	235.1	Matthew Ward	Oppose	Withdraw the NoR
236	236.1	The Onehunga Enhancement Society (TOES) Attn: Jim Jackson	Oppose	If NoR is not withdrawn, modifications are sought to address the following: <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

237	237.1	Selwyn St Properties Ltd Attn: Jim Jackson	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads. • The shoreline below MHWS between Waiuku and Glenbrook Beach be used as the pipe line corridor linking the various locations together and avoid passing under properties
238	238.1	Luke Daly	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

239	239.1	Ian Jemmett	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
240	240.1	Ted Watts	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

241	241.1	Te Ariki Gardiner	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
242	242.1	David Dixon	Oppose	Withdraw the NoR
243	243.1	Natalie Cassin	Oppose	Withdraw the NoR
244	244.1	Shannan Langman	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

245	245.1	Wayne Langman	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
246	246.1	Jacqui Blake	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
247	247.1	Adrienne True	Oppose	Withdraw the NoR
248	248.1	David Medricky	Oppose	Withdraw the NoR
249	249.1	David Birchall	Oppose	Withdraw the NoR
250	250.1	Katrina Birchall	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
251	251.1	Reg and Catherine Wright	Oppose	Withdraw the NoR

252	252.1	Catherine Windsor	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill
253	253.1	Rapahel Leonidas	Oppose	Withdraw the NoR
254	254.1	Jennifer McLennan	Oppose	Withdraw the NoR
255	255.1	Andy Kean	Oppose	Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill
256	256.1	Felicity Reber	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
257	257.1	Lorraine Cunningham	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

258	258.1	Stephen Snowdon	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
259	259.1	Scott Warrender	Oppose	Withdraw the NoR
260	260.1	Maureen Davidge	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The effects associated with constructing the conveyance pipeline • Restrict the extent of the NoR to 6 hectares
261	261.1	Rochelle Yoakley	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
262	262.1	Steve Davy	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

263	263.1	Jeremy Clark	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill
264	264.1	Sally Crene	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
265	265.1	Anthony Saunders	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

266	266.1	Alan Day	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
267	267.1	Nicky Marshall	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
268	268.1	Graham and Natasha Brown	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

269	269.1	Edna Lupton	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible
270	270.1	Nina Bhatia	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
271	271.1	Nicholas Brown	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

272	272.1	Audrey Ashby	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
273	273.1	John Richard Keir and Rachael Keir	Oppose	Withdraw the NoR
273	273.2	John Richard Keir and Rachael Keir	Oppose	<p>If the NoR is not withdrawn, the following conditions are to be imposed:</p> <ul style="list-style-type: none"> • Only the required 6Ha of land is designated, not the entire land comprising the title as per the NOR. • Covenants to prevent future changes of land use to the remaining rural and coastal land are implemented. • Covenants to ensure that only activities beneficial to the community are conducted on the non-designated rural land remaining. This would include areas for walking, biking, horse riding or other sporting or recreation. • A public system, implemented and easily viewed advising users of the potential hazards and latest environmental testing results from the plant. • The creation of a Community Liaison Group for the Glenbrook area, including all interested parties including NZ Steel, Watercare, Power and Telecommunications Companies, Auckland Council and Iwi as an extension of the currently consented NZ Steel Site 1 Landfill CLG. The critical mass required to support such a CLG on an ongoing basis is now present in the local community. • Mitigation of amenity, visual, noise, odour and pollution effects by the construction of an earth bund and native plantings at a minimum equivalent to the height of the constructed plant on the immediate boundary to the 6Ha area designated. • The height of the plant is restricted to the 6m in the application documentation, not the advised 14m to residents. • The full benchmarking of the initial state of the environment (using test parameters agreed with Auckland Council and the community the results being released to the community). • The implementation of an extensive environmental and air quality monitoring system that fully surrounds the designated site. • Any changes to the type of industrial technology operating or the introduction of new waste streams at the plant would not be possible without public notification of the variation of conditions to the consent. • Appropriate mitigations to any adverse effects in relation to the AEE analysis in Section 7. • Any other effects determined prior to hearing or in the future, by way of consent renewal and assessment of performance and conditions of consent every 5 years.
273	273.3	John Richard Keir and Rachael Keir	Oppose	Auckland Council to provide Watercare's engineering analysis of the energy/carbon usages by the conveyancing pipeline down Glenbrook Beach Road, including full detail of the analysis, modelling, calculations, assumptions or projections used by Watercare (or it's experts) as documented in Section 5.
274	274.1	Richard Guy	Oppose	<p>Withdraw the NoR, or modify the NoR to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.

275	275.1	Russell Voigt	Oppose	<p>Withdraw the NoR, or modify the NoR to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Watercare to install conveyance network under private and public property, or in the harbour to avoid the requirement to excavate local roads.
276	276.1	L. Douglas-Whyte	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
277	277.1	Pulin Investments Limited Attn: James R Hook	Support	Confirm the NoR
278	278.1	Matthew Kerwin	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Change the discharge point and pipe the discharge into the Tasman Sea • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
279	279.1	Eric Muir	Oppose	Withdraw the NoR
280	280.1	Sarah Okudaira	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
281	281.1	Rosie Smith	Oppose	Withdraw the NoR

			Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
282	282.1	Lorraine Ward-Allen		
283	283.1	Carey Walter	Oppose	Withdraw the NoR
			Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
284	284.1	David Ward-Allen		
285	285.1	Paul Broster	Oppose	Withdraw the NoR

286	286.1	Vanshika Sudhakar	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
287	287.1	Elizabeth Gasson	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
288	288.1	Cathy Roche	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
288	288.2	Cathy Roche	Oppose	<p>I would like Council reassurance that the long term sustainable health and stability of the Manukau Harbour ecosystem is the objective that will not be compromised.</p>

			Oppose	Given the climate change effect, water is a resource and solutions which recycle and reuse water should be sought, especially if significant new investments are considered. Solutions that fail to recycle water where possible are likely to be seen as obsolete and wasteful in near future, and more funds will be needed to correct them.
288	288.3	Cathy Roche		
289	289.1	Diana Waite	Oppose	Withdraw the NoR
			Oppose	If NoR is not withdrawn, modifications are sought to address the following: <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
290	290.1	Owen and Joanne Grigg		
			Oppose	If NoR is not withdrawn, modifications are sought to address the following: <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
291	291.1	Faye Abel		

292	292.1	Michelle Miller	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
293	293.1	Susie Koppens	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

294	294.1	Hope Dufty	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
295	295.1	Peter Craig	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Change the discharge point and pipe the discharge into the Tasman Sea • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • The odour buffer for properties surrounding the Glenbrook site is inadequate • Address effects of construction noise and operational noise • Ensure plantings along as much of the frontage of 372 Glenbrook Beach Road as possible • Determine the combined traffic effects associated with the NoR and for the conveyance pipeline project. Until the combined effects are determined, the project should not proceed. • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.
296	296.1	Ian Hadwin	Oppose	<p>If NoR is not withdrawn, modifications are sought to address the following:</p> <ul style="list-style-type: none"> • A hydrodynamic model for the entire Manukau Harbour is operational before NOR hearing commences. • Ensure AEE adequately addresses scale and significance of effects • Relocate the NoR to the existing Waiuku WWTP next to the Steel Mill • Restore the artificial ponds to their 2011 state • Publicly notify the conveyancing consent. • Restrict the extent of the NoR to 6 hectares • Watercare to install the conveyance network under the harbour, or utilise thrusting or directional drilling to install the pipes to avoid the requirement to excavate local roads.

ATTACHMENT 4

RECOMMENDED AMENDMENTS TO THE PROPOSED CONDITIONS

Appendix 4: Recommended amendments to Southwest WWTP NoR conditions

General

1. Except as modified by the conditions below or any outline plan(s), the works authorised by this designation (**Works**) must be undertaken, and the Wastewater Treatment Plant (**WWTP**) must be operated, in general accordance with the following information provided by the Requiring Authority:

Document	Author	Dated
Form 18 Notice of Requirement by Watercare Services Limited to Designate land at 372 Glenbrook Beach Road for wastewater treatment infrastructure	Watercare Services Limited	31 August 2023
Southwest WWTP Notice of Requirement AEE	Stantec	31 August 2023
Southwest wastewater servicing – Wastewater Treatment Plant – Indicative Design and Operational report	Stantec	30 August 2023
Southwest Wastewater Treatment Plant – Assessment of Alternative Sites and Addendum and Appendices	Beca	7 December 2022
Southwest Wastewater Treatment Plant Glenbrook beach road - Engagement report	Watercare Services Limited	September 2023
Southwest Wastewater Treatment Plant NOR project Landscape, Visual and Natural Character Effects Assessment	Boffa Miskell	29 August 2023
Southwest Wastewater Treatment Plant NOR project Landscape and Visual Assessment graphic supplement	Boffa Miskell	August 2023
Southwest Wastewater Treatment Plant NOR project Landscape Planting Plan	Boffa Miskell	29.08.2023
Southwest Wastewater Treatment Plant - Ecological Assessment in support of Notice of Requirement	Boffa Miskell	29 August 2023
Southwest Wastewater Treatment Plant Designation – Archaeological Assessment	CFG Heritage	29 August 2023
Southwest Wastewater Treatment Plant - Air Quality Notice of Requirement	Beca Limited	28 August 2023
Notice of requirement – Southwest Wastewater Treatment Plant – Stormwater and Flooding Assessment	Stantec	30 August 2023
Southwest Wastewater Treatment Plant Designation - Acoustic Impact Assessment	Marshall Day Acoustics	31 August 2023
Notice of Requirement -Southwest Wastewater Treatment Plant – Transportation Report	Stantec	31 August 2023

Where there is any inconsistency between the documents listed above and these conditions, these conditions shall prevail.

Lapse Period

2. In accordance with section 184(1)(c) of the Resource Management Act 1991, this designation will lapse if not given effect to within 5 years from the date on which it is included in the Auckland Unitary Plan (Operative in Part).

Management plans

3. At least 20 working days prior to the Works commencing the management plan(s) specified in Condition 7 must be submitted to the Team Leader Compliance and Monitoring at Auckland Council (Council) for certification that the plan(s) meets the requirements of the relevant condition(s). Once certified the management plan(s) must be implemented.
4. Management plan(s) may be prepared and submitted for one or more stages, aspects, sections, or locations of the Works.
5. Once the Requiring Authority has submitted a management plan to the Council for certification:
 - (a) If the management plan meets the requirements of the relevant condition, the Council must certify it within 20 working days of the date the Requiring Authority submitted the management plan.
 - (b) If the Council considers the management plan does not meet the requirements of the relevant condition(s), it must advise the Requiring Authority within 15 working days of the date the Requiring Authority submitted the management plan. The Requiring Authority must then consider the Council's advice and resubmit an amended management plan for certification.
 - (c) If the Requiring Authority has not received a response from the Council within 20 working days of the date of the Requiring Authority submitted the management plan, the management plan is deemed to be certified.
 - (d) If the Requiring Authority has not received a response from the Council within 5 working days of the date of resubmission under Condition 5 (b) above, the management plan is deemed to be certified.

Outline Plan

6. An outline plan may be submitted for one or more stages, aspects, sections, or locations of Works at least 20 working days prior to the Works detailed in the outline plan commencing.
7. In addition to the information required under s 176A of the RMA, the outline plan(s) must include as relevant to the particular stage, aspect, section or location of the design or construction matters being addressed, the following plans and reports and any updates of any already certified management plans:
 - (a) Construction Management Plan
 - (b) Construction Traffic Management Plan
 - (c) Construction Noise Management Plan
 - (d) Landscape Management Plan (if not already approved under Condition ~~20~~24)
 - (e) Flood Hazard Report (if not already approved under Condition ~~24~~32)
 - (f) Operational Lighting Plan

Site access

8. Any new or upgraded access onto Glenbrook Beach Road shall include a right turn bay on Glenbrook Beach Road to accommodate the safe movement of heavy vehicles turning right into the site from Glenbrook Beach Road.
9. As part of the Outline Plan to be submitted, the requiring authority must also demonstrate how visibility to an appropriate standard from any vehicle access on Glenbrook Beach Road will be provided and maintained to ensure visibility is not obstructed by vegetation or other objects.

Odour

10. Beyond the boundary of the site, there shall be no odour caused by discharges from the wastewater treatment activities, which in the opinion of an enforcement officer, is the cause of a noxious, dangerous, offensive or objectionable effect.

Archaeology

9. ~~If any archaeological site is uncovered during the works, and no Archaeological Authority has been granted by Heritage New Zealand (Pouhere Taonga) (HNZPT), the following Accidental Discovery Protocol shall apply:
(g) ~~Work shall cease immediately at that place;~~
(h) ~~All machinery shall be shut down and the area secured in the immediate vicinity of the discovery;~~
(i) ~~The Requiring Authority shall notify the landowners and the relevant HNZPT Regional Archaeologist, and if necessary, the appropriate Archaeological Authority application shall be initiated;~~
(j) ~~If the site is of Maori origin, the Requiring Authority shall notify the appropriate mana whenua group(s) to determine what further actions are appropriate to safeguard the archaeological site or its contents, and what further actions are appropriate with regard to tikanga Maori;~~
(k) ~~If skeletal remains are uncovered, the Requiring Authority shall advise the New Zealand Police, HNZPT and the appropriate mana whenua group(s); and~~
(l) ~~Works affecting the archaeological site shall not resume until any approval required from HNZPT has been obtained.~~~~

11. Should the consented works result in the identification of any previously unknown sensitive materials (i.e., archaeological sites), the requirements of land disturbance – Regional and District Accidental Discovery rules set out in the Auckland Unitary Plan Operative in part shall be complied with.

12. The following protocol will apply should any post-1900 subsurface features associated with early 20th-century settlement activity be exposed during works associated with the WWTP:
 - Earthworks will be halted while an archaeologist is called in to assess the features.
 - The features will be recorded and analysed in accordance with current archaeological practice.
 - A report on any features exposed will be provided by the project archaeologist to Auckland Council's Heritage Unit for inclusion in the Auckland Council Cultural Heritage Inventory.

Construction Management Plan

~~40~~13. The Requiring Authority must prepare a Construction Management Plan and submit to Council for certification. Once certified the plan must be implemented for the duration of the Works.

~~44~~14. The objective of the Construction Management Plan is to ensure that management procedures and construction methods are adopted to avoid, remedy or mitigate adverse effects of the construction of the WWTP, and minimise as far as reasonably practicable disturbance to adjacent properties and road users and adverse effects on water quality in nearby streams, wetlands and the coastal marine environment.

~~42~~15. The Construction Management Plan must be prepared by a suitably qualified person.

16. Ngāti Te Ata shall be invited to participate in the preparation of the Construction Management Plan to provide input into any cultural monitoring requirements and measures to be implemented during construction activities, to acknowledge any historic and cultural values of the area to Mana Whenua and to minimise potential adverse effects on these values.

~~43~~17. The Construction Management Plan must achieve the objective in Condition ~~44~~14 and must include:

- (a) a construction programme, including identifying key stages of the Works, any seasonal timings for works and early morning works expected to occur before 7:00am Monday – Saturday and 9am Sundays;
- (b) a detailed site layout that:
 - i. includes details related to the storage of materials and containment of hazardous substances to minimise the risk of spills.
- (c) the design and management specifications for all earthworks on-site, including disposal sites and their location, and include the erosion and sediment controls
- (d) details of dust management
- (e) the design of temporary lighting for the construction works and construction support areas;
- (f) details on the timing of the installation of screening and planting and opportunities where this can be undertaken prior to works commencing;
- (g) the approach to the management of construction waste;
- (h) a description of training requirements for all site personnel (including employees, subcontractors and visitors) including details of briefings for employees and subcontractors about the accidental discovery protocol adopted by the Requiring Authority;
- (i) environmental incident and emergency management procedures; and
- (j) contact numbers for key construction staff, and staff responsible for any monitoring requirements.
- (k) a summary of comments received from Ngāti Te Ata and a summary of where comments have:
 - i. been incorporated; and
 - ii. where not incorporated, reasons why.

Dust management

~~44~~18. The Requiring Authority must ensure that there is no noxious, dangerous, objectionable or

offensive dust from the construction of the WWTP to the extent that it causes an adverse effect beyond the legal property boundary.

Construction Traffic Management Plan

~~45~~19. The Requiring Authority must prepare a Construction Traffic Management Plan and submit to Council for certification. Once certified the plan must be implemented for the duration of the Works.

~~46~~20. The objective of the Construction Traffic Management Plan (CTMP) is to outline the methods that will be undertaken to avoid, remedy or mitigate adverse effects from traffic associated with the Works on property access, road user safety and efficiency of traffic movements.

~~47~~21. The CTMP must be prepared by a suitably qualified and experienced person.

~~48~~22. The CTMP must achieve the objective in Condition ~~46~~20 and must:

- (a) identify the numbers, frequencies, and timing of traffic movements for each phase of the construction programme in the Construction Management Plan, including any limitations on heavy vehicle movements during peak times, or other times as required either in relation to traffic conditions or to mitigate potential noise and vibration effects;
- (b) identify safe site access arrangements, and site access points for construction traffic, including heavy vehicles involved in constructing the WWTP in a manner consistent with Waka Kotahi NZ Transport Agency's Code of Practice for Temporary Traffic Management.
- (c) manage the movement of construction vehicles and any vehicles associated with horticultural or agricultural activities travel to and from the site, to manage congestion and minimise delays to road users on Glenbrook Beach Road;
- (d) manage and coordinate construction traffic and construction activities with any other works undertaken within the road reserve corridor on Glenbrook Beach Road and Brookside Road north of the intersection with Brookside Road and Mission Bush Road to minimise the effects of construction traffic or construction activities on congestion and delays to road users; and
- (e) provide for public safety including the safe movement of pedestrians and cyclists along Glenbrook Beach Road along the frontage of the site.

~~49~~23. The CTMP must be reviewed and updated as required to align with the key stages identified in the construction programme required in the Construction Management Plan.

Advice Note: Any temporary traffic management (TTM) measures on the road must be carried out in accordance with a Traffic Management Plan (TMP) that has been approved by the Auckland Transport as Road Controlling Authority.

Landscape Management Plan

~~20~~24. The Requiring Authority must prepare a Landscape Management Plan and submit it to Council for certification, either before or at the same time as submitting the first Outline Plan to Council. For the avoidance of doubt, planting in accordance with the Landscape Management Plan may be undertaken at any time after the Landscape Management Plan has been certified by the Council.

~~24~~25. The Landscape Management Plan must be prepared by a suitably qualified and experienced

person.

26. Ngāti Tamaoho and Ngāti Te Ata shall be invited to participate in the preparation of the Landscape Management Plan to provide input into relevant cultural landscape and design matters including how desired outcomes for the management of potential cultural effects may be reflected in the Landscape Management Plan.

2227. The objective of the Landscape Management Plan is to demonstrate how the design of the WWTP, and proposed planting avoids, remedies or mitigates potential adverse visual effects of the WWTP on landscape character, visual amenity and natural character.

2328. The Landscape Management Plan must achieve the objective in Condition 2227 and shall include:

- (a) the location and types of proposed plantings (including plant size, numbers and spacing), including planting around the boundary, ponds, streams and wetlands,
- (b) a description of design measures including but not limited to:
 - i. the form of the proposed structures and buildings
 - ii. ~~How the finishes of non – safety elements of structures reduce glare and contrast with the surrounding rural landscape through choice of neutral or recessive colours and surface reflectivity~~
any architectural treatment of buildings and structures as required to comply with Condition 31
- (c) a description of how the plantings and other design measures:
 - i. Reduce the visibility of the WWTP from Glenbrook Beach Road to the west, the Taihiki River to the east and rural-residential properties to the north;
 - ii. Contribute to enhancing local biodiversity;
 - iii. mitigate adverse effects on, the natural character of waterbodies on the site, and
 - iv. where practicable, use eco-sourced seeds and;
- (d) the proposed timing for conducting any planting, including:
 - i. planting the line of trees along the southern boundary of the northern artificial irrigation pond, which must be implemented before construction of stage 1 is completed;
 - ii. the remainder of the planting, which must be commenced in the first planting season following the completion of each stage or discrete location of the Works;
- (e) the growing conditions required to ensure the successful establishment, growth and on-going viability of planting;
- (f) the process and programme for maintaining any landscape or visual amenity planting (including, but not limited to, plant and animal pest management).
- (g) a summary of comments received from Ngāti Tamaoho and Ngāti Te Ata, and a summary of where comments have:
 - i. been incorporated; and
 - ii. where not incorporated, reasons why.

29. The Landscape Management Plan shall also include the following planting details:

- (a) Planting design that incorporates at least two rows of taller planting along the boundaries shared with Glenbrook Beach Road and neighbouring properties, provided that this does not compromise the safety of access to and from the site;
- (b) A planting programme which ensures that the planting comprise species that attain a height of at least 12m, with a similarly scaled canopy, at maturity. Those species are to achieve an average height of at least 8m after 10 years and complete canopy closure after that time;

- (c) The screen planting near Glenbrook Beach Road shall be linked to the proposed around the ponds and wetlands within the subject site so that it 'reads' as a cohesive body of vegetation, taking into account any potential safety risks for site access; and
- (d) Planting design to demonstrate that adverse visual effects arising from the development of the WWTP on the residential properties at 393A, 424, 450 and 454 Glenbrook Beach Road are appropriately mitigated.

Maximum height and architectural treatment

30. The maximum height of buildings and other structures within the designated area shall be 14m.
31. All structures over 5m high are required to have exterior cladding and /or employ colours that recessive, such as mid to dark grey or earthy tones, with the exception of pipes and exposed 'gantry' structures and where bright colours are required for safety reasons.

Flood Hazard

- ~~24~~32. The Requiring Authority must prepare and include a Flood Hazard Report and submit it to Council for certification either before or at the same time as submitting the first Outline Plan to Council. Once certified, the methods identified in the report for mitigating potential flooding effects must be implemented. For the avoidance of doubt, Works in accordance with the Flood Hazard Report may be undertaken at any time after the Flood Hazard Report has been certified by the Council.
- ~~25~~33. The Flood Hazard Report must be prepared by a suitably qualified and experienced person.
- ~~26~~34. The objective of the Flood Hazard Report is to demonstrate how the design of the WWTP avoids or mitigates the potential flooding effects related to new stormwater discharge, any loss of flood plain storage or changes to overland flow paths.
- ~~27~~35. The Flood Hazard Report must:
- (a) achieve the objective in Condition ~~20~~32;
 - (b) identify potential effects of site development on flood risk;
 - (c) identify methods for reasonable mitigation of any identified flooding effects;
 - (d) confirm that, with or without such mitigation, there will be no flood effects on upstream or downstream properties; and
 - (e) confirm that design and construction work avoid changes to the drainage of the natural wetlands and sustain a neutral ground and surface water hydrological regime to avoid impacts to the natural wetlands and downstream (including coastal) environment.

Operational Lighting

- ~~28~~36. The Requiring Authority must prepare an Operational Lighting Plan with the first outline plan and submit to the Council for certification.
- ~~29~~37. The Operational Lighting Plan must be prepared by a suitably qualified and experienced person.
- ~~30~~38. The objective of the Operational Lighting Plan is to demonstrate how the lighting for the

outdoor operational areas, access roads, and carparks on site will be designed to comply with AS/NZS 4284:2019- Control of the obtrusive effects of outdoor lighting, ~~Zone A2~~ limits between 10.00pm and 7.00am to manage sky glow, glare, light spill effects on adjacent properties.

Construction Noise Management Plan

Operational Noise

3439.Noise from the operation of the WWTP shall meet the following noise limits at the notional boundary of rural zone receivers:

Receiving Zone	Daytime (7am – 10pm Mon – Sat, 9am – 6pm Sunday)	Night-time (All other times)	Assessment Position
Rural – Mixed Rural/zone/Rural – Rural Coastal zone	55 dB LAeq	405 dB LAeq 75 dB LAFmax	Notional boundary

Operational noise levels are to be measured in accordance with New Zealand Standard NZS 6801:2008 *Acoustics – Measurement of environmental sound* and assessed in accordance with New Zealand Standard NZS 6802:2008 *Acoustics - Environmental Noise*.

The night-time limit of 40 dB LAeq shall not apply where an acoustic design report (or similar) prepared by a qualified acoustics specialist confirms that it is impracticable to achieve the limit. In which case, a limit of 45 dB LAeq shall apply thereafter. The acoustic design report (or similar) shall be submitted to the Council with the Outline Plan of Works application.

Construction Noise Management Plan

Construction Noise

3240.Construction noise must be measured and assessed in accordance with the provisions of New Zealand Standard NZS 6803:1999 “Acoustics - Construction Noise” and comply with the limits in the following table except where authorised by the required CNMP in condition 3441.

Time	Weekdays (dBA)		Saturdays (dBA)		Sundays and Public Holidays (dBA)	
	Leq	Lmax	Leq	Lmax	Leq	Lmax
0630 - 0730	55	75	45	75	45	75
0730 – 1800	70	85	70	85	55	85
1800 – 2000	65	80	45	75	45	75
2000 - 0630	45	75	45	75	45	75

3341.The Requiring Authority must prepare and submit a Construction Noise Management Plan (CNMP) to Council for certification. The CNMP must be prepared by a suitably qualified person.

~~3442~~. The objective of the CNMP is to identify the best practicable option for management and mitigation of noise from early morning concrete pours, including where full compliance with the levels in condition ~~3240~~ cannot be achieved at all times.

~~3543~~. The CNMP must as a minimum include the following information:

- (a) Construction noise criteria;
- (b) Identification of the most affected dwellings where there exists the potential for noise effects.
- (c) Description and duration of the works, anticipated equipment and the processes to be undertaken;
- (d) Hours of operation, including specific times and days when construction activities causing noise would occur;
- (e) Mitigation options where noise levels are predicted or demonstrated to approach or exceed the relevant limits. Specific noise mitigation measures must be set out which may include, but are not limited to, acoustic screening, time management procedures and alternative construction methodologies;
- (f) The erection of temporary construction noise barriers where appropriate; and
- (g) Schedule and methods for monitoring and reporting on construction noise.

