1.0	TECHNICAL MEMO – Terrestrial Acoustics
To:	Stacey Sharp & Blair Masefield, Beca (consultant planners)
From:	Peter Runcie, Technical Director, SLR Consulting
Date:	11 July 2023

Perceived Conflict of Interest – Declaration:

I am aware that SLR Consulting NZ Ltd has recently acquired 4Sight Consulting and that Mark Poynter and Dee Isaacs (formerly 4Sight – now owned by SLR/4Sight) were engaged by the applicant to assist with the marine ecology assessment and Iwi/Hapū engagement process respectively. I can confirm that I have had no previous contact with Mark or Dee in this regard and that I have been engaged to act on behalf of Whangārei District Council for the purpose of reviewing the Northport Application as described below. I declare that I have no conflict of interest with the applicant.

1.1 Statement of Qualifications and Experience

I am a Technical Director at SLR Consulting in Auckland, specialising in environmental and architectural acoustics. I hold the qualification of a Bachelor of Science Degree with Honours in Audio Technology from the University of Salford in the United Kingdom. I am a full member of both the Institute of Acoustics (UK) and the Acoustical Society of New Zealand, a member of the New Zealand Planning Institute and SLR's New Zealand representative for the Association of Australasian Acoustical Consultants.

I have over fifteen years' experience in the field of acoustic consultancy. In my career I have worked on a range of projects within the United Kingdom, Europe, Middle East, Australia, and New Zealand. My work has involved a wide range of acoustic assessments, including working on numerous assessments of environmental noise effects from projects across New Zealand. I have presented evidence at numerous council level hearings, and in the Environment Court.

I confirm that the statements made within this memorandum are within my area of expertise and I am not aware of any material facts which might alter or detract from the opinions I express. Whilst acknowledging this consenting process is not before the Environment Court, I have read and agree to comply with the Code of Conduct for Expert Witnesses as set out in the Environment Court Consolidated Practice Note 2023. The opinions expressed in this memorandum, are based on my qualifications and experience, and are within my area of expertise. If I rely on the evidence or opinions of another, my statements will acknowledge that.

2.0 APPLICATION DESCRIPTION

Applicant's Name:	Northport Limited (Northport)
Activity type:	**Land Use (s9), Coastal Permit (s12), Water Permit (s14), Discharge Permit (s15)**
Purpose description:	Northport seek to construct, operate, and maintain an expansion of the existing port facility to increase freight storage and handling capacity, and transition into a high-density container terminal.
Application references:	Northland Regional Council: APP.005055.38.01 Whangārei District Council: LU2200107
Site address:	Ralph Trimmer Drive, Marsden Point, Whangārei

3.0 SITE AND PROPOSAL DESCRIPTION

3.1 Site and Environmental Setting

A description of the existing acoustic environment was provided in Appendix 4 of the Assessment of Environmental Effects[1] (**AEE**). This appendix was prepared by Marshall Day Acoustics (MDA) and is herein referred to as the acoustic assessment.

I concur with the description of the existing environment provided in the acoustic assessment that there are there are four distinct receiving environments:

- Dwellings in Reotahi on the northern side of the Whangārei Harbour.
- Dwellings in Marsden Bay on the southern side of Whangārei Harbour.
- Industrial areas to the south of Northport (which are not noise sensitive).
- Coastal, Rural and other Open Space Zones used for recreational purposes.

I concur that since the refinery adjacent to the port has stopped operating noise levels in the area (particularly in Reotahi) are likely to have reduced. However, the level of reduction is likely to be small (potentially a reduction of only 1 dB based on Table 6 of the acoustic assessment). This level of change is likely to be imperceptible for most but may be noticeable at some properties due to potential differences in character of the refinery noise.

However, I however wish to make the following additional comments:

- The consented, but not operational at the time of the assessment, Berth 4 container operations have not been considered as part of the existing environment

[1] *Application for resource consents for the expansion of Northport*, prepared by Reyburn & Bryant, dated 6 October 2021

description. The acoustic assessment notes that they will require management to ensure cumulative compliance with the WDP noise limits – given the current port noise levels are broadly compliant and assuming effective management of Berth 4 operations this indicates the current noise levels with Berth 4 operating would not change.

- The acoustic assessment identifies that the existing port operation is just beneath the night-time noise limits in the Whangārei District Plan (WDP), based on measurement result at limited locations presented in the acoustic assessment. Appendix A of the s92 response, however, identifies predicted 1 dB infringements at five properties under the current operational scenario. Whilst a difference of 1-2 dB is likely to be imperceptible and so this could still be considered practical compliance, this conclusion is reliant on effective management to minimise intermittent impact noise events (e.g., bangs/crashes from logs dropping into empty ships and closing of hatches). There is a risk that if not managed effectively, regular noise events could give rise to special audible characteristics (SAC) which would result in an adjustment (+5dB) to the measured noise levels which would result in non-compliance.

3.2 Proposal

The proposal is as described in section 3 of the AEE and depicted on the design drawings attached as Appendix 3 of the application (referenced in Section 2.3 below).

I adopt that description for the purpose of this assessment and note the following key elements of the proposal with regard to noise matters:

- Constructing, by way of reclamation, a proposed fifth berth to enable the expansion of the existing Northport facility and eventual transition to a high-density container terminal. The expanded port area will involve the continued use of cranes and other typical port activities 24-hrs/day.
- Construction activities, including dredging and vibro-piling, over a 3.5 year period (9 months of capital dredging and 2 years of pile installation).
- Amending existing consent conditions for noise controls on the existing (and proposed) port that will enable noise to be managed in accordance with the New Zealand Standards for Port Noise (NZS Port Noise), as opposed to the Noise provisions of the WDP.
- The assessment acknowledges the WDP noise limits but assesses effects using the guidance from NZS 6809: 1999 *Acoustics – Port Noise Management and Land Use Planning* (NZS 6809). NZS 6809 is generally adopted across New Zealand for the purpose of managing noise from ports and is standard referenced in the National Planning Standards.
- Mitigation of noise from the proposal is offered by way of a Port Noise Management Plan (PNMP), which is proposed to be reviewed annually in consultation with the community. The objectives of the proposed NMP are to:

  • Ensure the port complies with the relevant noise performance standards;

• Provide a framework for the measurement, monitoring, assessment, and management of noise;

• Identify and adopt the BPO for the management of noise effects;

• Require engagement with the community and timely management of complaint;

- As part of the proposed PNMP annual review the acoustic assessment proposes that upgrades to dwellings are provided where noise levels exceed a certain threshold.

This memorandum is limited to the consideration of matters relating to terrestrial noise.

3.3 Reference documents

The following application documents have been reviewed and inform this technical memorandum.

Application

- Assessment of Environmental Effects entitled: *Application for resource consents for the expansion of Northport*, prepared by Reyburn & Bryant, dated 6 October 2021 (henceforth referred to as AEE)
- Design Drawings entitled: *Northport – Proposed Reclamation and Dredging*, prepared by WSP, sheets C01 – C04, plan set dated 18 August 2022
- *Appendix 4. Northport Container Terminal Expansion Noise Assessment,* prepared by Marshall Day Acoustics , dated 29 September 2022, version 07.

s92 Request for Information

- Further information response prepared by Marshall Day Acoustics, dated 25 October 2022 (herein referred to as s92 Response).

- Draft conditions of consent, working drafts, dated 21.04.2023.

4.0 REASON FOR CONSENT

4.1 Reasons for Consent

A list of resource consents sought (as per the application documents as lodged) are summarised in Sections 1.5 – 1.7 of the AEE and are as amended by the s92 Response.

The following has particular relevance to the consideration of noise matters:

- Non-compliance with the night-time noise limits set out in the Noise and Vibration (NAV) chapter at the 62 properties identified in Appendix A of the s92 response.

4.2 Overall Activity Status

Overall, the resource consent is considered as a **Discretionary Activity**.

5.0 TECHINICAL ASSESSMENT OF APPLICATION AND EFFECTS

5.1 Assessment of Effects on the Environment

The following potential effects have been identified and assessed:

- Construction noise and vibration; and
- Operational noise.

In my opinion the relevant potential effects have been identified. The applicant's key assessment conclusions and my technical review of these findings are outlined under the sub-headings below.

Construction Noise and Vibration

Section 8 of the acoustic assessment outlines that vibration is predicted to be imperceptible at the closest sensitive receivers due to the large distances separating them from the works. I consider that vibration is not likely to be perceptible during the works and would be expected to be comply with the NAV limits at surrounding properties.

Section 8.1 of the acoustic assessment outlines the relevant noise performance criteria. Section 8.2 provides typical noise levels from likely construction equipment along with calculated setback distances at which compliance with the daytime and night-time noise limits can be achieved.

Section 8.3 of the acoustic assessment notes that due to the distance from the works to the closest receivers, and noting that piling is not proposed to be undertaken at night, compliance is expected. Furthermore, due to the distance from the works, noise from construction work is likely to be comparable to that already received from current port operations.

I concur with this assessment that construction noise and vibration levels can be managed to be within the WDP limits with the result that effects would be reasonable.

Whilst not proposed, due to the potential for night works and the need to manage works to achieve compliance I recommend that a construction noise management plan is prepared for the works which identifies which activities can take place at what times to avoid potential misunderstanding and ensure compliance is achieved. This could take the form of a section in the construction environmental management plan or in a standalone document. I have recommended a condition of consent to this effect.

Predicted Operational Noise Levels

The noise assessment methodology is set out in Section 4 of the acoustic assessment. I consider that the modelling approach, inputs and software are appropriate for this

application. The acoustic assessment notes good correlation between measured existing port noise levels and predicted 'current' noise levels, providing a further level of confidence in the model results.

The predicted noise levels are provided as noise contour graphics as well as in a table identifying where exceedances of the WDP night-time limits are predicted (Appendix A of the s92 response).

Section 6.2 of the acoustic assessment notes that both predicted current and proposed future port noise comply with the WDP daytime noise limit (55 dB $L_{Aeq,15min}$). Predicted current port noise exceeds the night-time noise limit (45 dB $L_{Aeq,15min}$) by 1-2 dB and future port noise by up to 7 dB.

These results appear reasonable based on the inputs and methodology. However, as noted earlier this assumes no SAC which is reliant on effective management to minimise impact noise events (e.g., bangs/crashes from logs dropping into empty ships and closing of hatches). There is a risk that if not managed effectively, regular noise events could give rise to SACs which would result in an adjustment (+5 dB) to the predicted noise levels resulting in a greater level of exceedance. A PNMP is proposed to manage such effects, which I support.

Effects

The relative change in night-time noise levels at properties where exceedances are predicted varies at receivers depending on their relative exposure to existing and future noise sources. The most common increases are in the range of 5-7 dB, with the largest increase being 9 dB at 17 Beach Road in Reotahi.

Table 3 in the acoustic assessment provides descriptions of subjective perceptions based on noise level change and provides a potential impact description related to that change. I consider the descriptions in Table 3 to be reasonable for providing an overview of likely subjective perception in general populations. Using these descriptions, the predicted impacts of the change in noise levels on the 62 dwellings where night-time exceedances are predicted would range from slight (3-4 dB – just perceptible change) to moderate (5-8 dB – appreciable to clearly noticeable change, the most common impact) and significant (9-11 dB – halving/doubling of loudness). In a Resource Management Act (RMA) context these impact descriptions related to changes in external noise levels could be considered to correlate to **minor** (for slight), **more than minor** (for moderate) and **significant**.

Port noise effects are described in Section 6.3 of the acoustic assessment. Daytime levels are described as predicted to increase noticeably (typically 5 dB) in both Marsden and Reotahi (including residential gardens, parks, and beach areas) but remaining below 55 dB L_{Aeq}, the permitted daytime level in the WDP. This level is described as "*appropriate for residential use, and would not influence conversation voice level or general amenity in outdoor spaces, but general annoyance would likely increase.*" I concur with this statement. Further I note that this change in levels could be described as a moderate (**more than minor**) noise effect using the above discussed descriptions.

Night-time levels are discussed in the context of likely indoor noise levels in bedrooms facing the port. The acoustic assessment is based on an assumption that typical noise level

reductions from predicted external levels to those received inside a typical bedroom would be 15 dB with windows open and 20 – 25 dB with windows shut.

I concur with the assumption regarding reductions with windows shut. However, whilst I consider a reduction of 15 dB through a partially open window to be feasible in some buildings (e.g., new buildings with brick or other high performing sound insulation facades) in my experience it is not uncommon for this reduction to be only 10 dB (or lower) depending on the amount the window is open and the construction of the façade (e.g., older style timber cladding). Clause C5.2 of NZS 6809 (the port noise Standard referenced in the acoustic assessment) also notes that a 10 dB reduction is typical for New Zealand dwellings assuming there is a window open. Given the variety of ages and styles of dwellings surrounding the site I consider it likely that a number of the dwellings in the surrounding the area may experience a lesser reduction (and therefore higher internal levels) than that described in the acoustic assessment. The effect of assuming a 10 dB reduction through a partially open window would be that the potential impact on dwellings could be greater than that described in Table 5 of the acoustic assessment.

Given the port is already undertaking similar activities to those forming part of the expansion there are no expected change in general levels associated with intermittent noise events (bangs or crashes). There is, however, expected to be a predicted increase in the frequency of the number of such events proportional to the increase in intensity of activity proposed. Port noise complaints are acknowledged in the acoustic assessment as often driven by such events rather than the ongoing 'hum' of port noise. It is my opinion therefore that careful management of the activities which can give rise to such noise events (dropping items, hard closing of hatches etc) is important to minimise impacts and likelihood of complaints which could occur as a result of increased activity on the site. I concur with the proposal that management of these instances is proposed through an PNMP with regular review and updates to capture issues and enable proactive and reactive management to mitigate effects.

There are no expected cumulative effects identified in the acoustic assessment due to the refinery no longer operating at the same level, leaving the port as the dominant noise source in the area.

Despite the above, no clear summary description of noise effects at receivers (i.e., moderate or other) is presented in the acoustic assessment.

It is my opinion that, based on the provided information and as noted in the same, the predicted change in external noise levels at surrounding residences would constitute a moderate noise effect at most properties and potential significant effect at the most exposed properties. Whilst noise levels would increase, for the majority of dwellings this would not be expected to be at a level which require them to close windows to provide a reasonable internal acoustic environment. However, a number of properties would be exposed to increased noise at a level which would likely result in them wishing to keep windows closed at night. In those instances I support the proposal for the applicant to fund at property treatment in the form of mechanical ventilation and cooling (or other upgrades as required), this is discussed below.

<u>Mitigation and Noise Controls</u>

Section 7 of the acoustic assessment recommends:

- adopting noise limits aligned with those identified in NZS 6809;
- implementing an NMP to be reviewed annually in consultation with the community; and
- to offer to mitigate any further existing dwellings exposed to port noise levels above 55 dB Ldn (5-day) to achieve an internal noise level of 40 dB Ldn (5-day).

Despite the highest predicted (and assessed) noise levels in the assessment being 52 dB $L_{Aeq,15min}$ and 51 dB $L_{Aeq,night}$, Table 7 of the acoustic assessment recommends higher noise limits of 58 dB $L_{Aeq,15min}$ and 53 dB $L_{Aeq,night}$. The proposed $L_{dn\ (5\text{-}day)}$ limit does align with the highest predicted $L_{dn(5\text{-}day)}$ level assessed. These limits are recommended to apply at "At any point on land in the General Residential and Rural Village Residential Zones". It is possible that the night-time noise limits are typographical errors, however, no justification of the correlation between the proposed limits and the predicted future noise levels at receivers has been provided to confirm this. I recommend that the night-time condition limits are modified to reflect the highest levels predicted in the acoustic assessment (52 dB $L_{Aeq,15min}$ and 51 dB $L_{Aeq,night}$) upon which the assessment of effects is based (the proposed conditions recommend levels higher than those predicted and/or assessed).

The acoustic assessment recommends mitigation for existing dwellings exposed to levels above 55 dB $L_{dn\ (5\text{-}day)}$; this is noted as aiming to achieving an indoor noise limit of 40 dB L_{dn}. I consider an internal design noise level of 40 dB L_{dn} to be reasonable in this instance noting that it is both 5 dB quieter than the upper limit of acceptability noted in NZS 6809 and likely to align with the level of noise inside the most exposed dwellings under current operation of the port, with windows partially open. However, I note that this would mean if properties do not achieve the 15 dB reduction assumed in the acoustic assessment (as discussed above) the external level where this treatment would apply would drop to at or above 50 dB L_{dn} rather than the 55 dB L_{dn} proposed. Therefore, the requirement for at property treatment to reduce levels to 40 dB L_{dn} may apply to a greater number of dwellings than the 16 in Reotahi identified in the acoustic assessment.

On the basis that the port noise limits are changed to reflect those predicted in the assessment and that a condition requires the offer of at property treatment for existing dwellings to ensure indoor port noise levels are no higher than 40 dB L_{dn} I consider the proposed approach to be effective at managing the resulting noise effects.

5.2 Conclusion

Overall I conclude that, subject to conditions and the implementation of at property treatment, the actual and potential adverse effects of the proposal can be managed to be reasonable.

6.0 TECHNICAL RESPONSE TO MATTERS RAISED IN SUBMISSIONS

6.1 Noise in General

Relevant submissions: 6, 9, 12, 14, 18, 24, 25, 27, 53, 80, 92, 103, 104, 118, 121, 124, 125, 126, 131, 132, 135, 141, 150, 160, 165, 167, 171, 172, 174, 179, 183, 185, 186, 191, 200, 205, 210, 214, 215, 218, 220, 222 and 223.

- The above submissions raise general concerns around increases in noise, changes to the WDP noise limits and the adoption of improved technology to mitigate noise.

- Whilst noise levels are predicted to increase due to the proposed expansion, daytime noise levels are still expected to comply with the existing WDP noise limits. These limits were identified in the Whangārei District Plan to provide a level of protection to the daytime amenity of the surrounding areas commensurate with what is considered reasonable.

- Night-time noise levels are predicted to increase and not comply with the existing noise limits. In response to this, controls are proposed which require an offer of mitigation, such as but not limited to ventilation and cooling, to achieve reasonable internal levels in dwellings and mitigate effects. This control would result in internal port noise levels within dwellings being broadly comparable with those currently experienced.

- The predicted noise levels are based on current technology; however, as the port expansion occurs newer technology mean that noise levels may not reach those predicted as newer and quieter technology can be implemented. This is captured in the PNMP which seeks to adopt the best practicable options to manage noise emission from port operations.

7.0 STATUTORY CONSIDERATIONS

7.1 Resource Management Act 1991

Relevant statutory considerations under the RMA include:

- Section 16 RMA – Duty to avoid unreasonable noise

- Section 17 RMA – Duty to avoid, remedy, or mitigate adverse effects

- National Planning Standards (NPS)

Conclusion

Having reviewed the relevant provisions of the above-referenced documents I can confirm that through the adoption of controls as discussed above and in the recommended conditions below noise effects can be controlled to be reasonable and therefore satisfy the overarching requirements of Section 16 of the RMA.

8.0 RECOMMENDATION

8.1 Adequacy of information

The above assessment is based on the information submitted as part of the application. It is considered that the information submitted is sufficient to enable the consideration of the above matters on an informed basis.

8.2 Recommendation

The assessment in this memo does not identify any reasons to withhold consent. The aspects of the proposal considered by this memo could therefore be granted consent, subject to recommended conditions detailed in Section 8.3 below.

8.3 Recommended Conditions and Advice Notes

Should consents be granted, the following conditions and advice notes (based on the draft conditions provided by the applicant) are recommended to avoid, mitigate, or remedy environmental effects of the proposal and to implement mitigation proffered by the Applicant.

Conditions and Advice Notes

NDC Conditions (no changes recommended)

41. Construction noise from activities within the CMA, including from capital and maintenance dredging, must not exceed the noise limits in the following table:

RESIDENTIAL ZONES AND DWELLINGS IN RURAL AREAS:

Upper limits for construction noise received in residential zones and dwellings in rural areas

Time of week	Time period	Noise limits (dB)	
		L_{Aeq}	L_{AFmax}
Weekdays	0630-0730	55	75
	0730-1800	70	85
	1800-2000	65	80
	2000-0630	45	75
Saturdays	0630-0730	45	75
	0730-1800	70	85
	1800-2000	45	75
	2000-0630	45	75
Sundays and public holidays	0630-0730	45	75
	0730-1800	55	85
	1800-2000	45	75
	2000-0630	45	75

INDUSTRIAL OR COMMERCIAL AREAS:

Upper limits for construction noise received in industrial or commercial areas on all days

Time period	*Noise limits (dB L_{Aeq})*
0730-1800	*70*
1800-0730	*75*

Advice Note: *The limits in the above table are reproduced from New Zealand Standard NZS 6803: 1999 "Acoustics -Construction Noise"*

42. Construction noise must be measured and assessed in accordance with New

Zealand Standard NZS 6803:1999 “Acoustics – Construction Noise”.

67. The CEMP must include the following sections:

(a) Construction phase roles and responsibilities protocols;

(b) Environmental Risk Assessment;

(c) Dust;

(d) Hazardous Substances;

(e) Erosion and Sediment Control;

(f) Marine Works;

(g) Wildlife, including:

(i) Avifauna; and

(ii) Marine Mammals;

(h) Archaeology;

(i) Noise;

(j) Marine Biosecurity; and

(k) Communications Protocols, including Complaints Procedures.

WDC Conditions

Construction Noise and Vibration

11. Expansion Project construction noise from activities on land must not exceed the noise limits in Table One:

Table One: construction noise limits

RESIDENTIAL ZONES AND DWELLINGS IN RURAL AREAS:

Upper limits for construction noise received in residential zones and dwellings in rural areas

Time of week	Time period	Noise limits (dB)	
		L_{Aeq}	L_{AFmax}
Weekdays	0630-0730	55	75
	0730-1800	70	85
	1800-2000	65	80

	2000-0630	45	75
Saturdays	0630-0730	45	75
	0730-1800	70	85
	1800-2000	45	75
	2000-0630	45	75
Sundays and public holidays	0630-0730	45	75
	0730-1800	55	85
	1800-2000	45	75
	2000-0630	45	75

INDUSTRIAL OR COMMERCIAL AREAS:

Upper limits for construction noise received in industrial or commercial areas on all days

Time period	***Noise limits (dB L_{Aeq})***
0730-1800	*70*
1800-0730	*75*

Advice Note: *The limits in* ***Table One*** *are reproduced from New Zealand Standard NZS 6803: 1999 "Acoustics -Construction Noise"*

12. Construction noise must be measured and assessed in accordance with New Zealand Standard NZS 6803:1999 "Acoustics – Construction Noise".

Advice Note: Northland Regional Council resource consents for the Expansion Project include noise limits for construction noise from activities within the coastal marine area.

XX. A construction noise management plan must be provided (either standalone or as part of the construction management plan prepared for the works). This must include the relevant limits and identify controls to ensure compliance with the construction noise limits in Condition 11 and the vibration limits in the Noise and Vibration Chapter of the Whangārei District Plan.

Operational Noise

Application

17. Upon Practical Completion of the Expansion Project reclamation, conditions 18 to 28 apply to all Port Activities within the area shown in the figure at Appendix One.

Advice Note: In accordance with condition 17, it is intended that the consent

holder will (concurrently with, or prior to, the commencement of the application of conditions 18 to 28) surrender and/or vary other existing resource consent(s) authorising Northport operational port noise. This will consolidate, including for monitoring and enforcement purposes, the operational port noise resource consents and conditions applying to the expanded Northport, meaning that a single resource consent and single set of conditions will apply to all Northport operational port noise.

Port noise limits

18. Noise from Port Activities within the area shown in the figure at Appendix One must be measured in accordance with NZS 6801: 2008 and assessed in accordance with NZS 6809:1999 Acoustics – Port Noise Management and Land Use Planning.

19. Noise from Port Activities within the area shown in the figure at Appendix One, as measured within any residential or Settlement Zone land must not exceed the following limits :

(a) Day-night (Long Term):

58 dB Ldn (5-day)

61 dB Ldn (1-day)

(b) Night-time (Short term):

5~~3~~1 dB Lnight (10pm - 7am)

5~~8~~2 dB LAeq (15 min)

75 dB LAFmax

Port noise mitigation

20. Where the measured or predicted incident port noise level shown on the Current Port Noise Contour Map exceeds 5~~5~~0 dB Ldn (5-day) at the external façade of a habitable space in a residential unit the consent holder must investigate, and if identified as required offer to the landowner, the option to install (at the consent holder's cost) mechanical ventilation, mechanical cooling, and/or other noise mitigatory works. The Current Port Noise Map is informed by a periodic review as part of the Port Noise Management Plan detailed in Condition 24. Any ~~migatory~~ works must:

(a) Achieve an indoor design noise level no greater than 40 dB Ldn (5-day) in all habitable rooms of the residential unit when the windows and doors are

closed;

(b) Satisfy clause G4 of the New Zealand Building Code;

(c) Provide occupant controlled ventilation that provides at least six (6) air changes per hour, or occupant controlled cooling that can maintain the inside temperature of the habitable room below 250C;

(d) Provide relief for equivalent volumes of spill air; and

(e) Locate any outdoor heat pump condenser unit at least 5m from the direct external entrance to a living area.

(f) Document how the dwellings have been identified and the specific mitigation designed to meet the requirements of this condition. A copy of this documentation shall be made available to Council upon request.

Advice note: The external level at which mitigatory works may be required will depend on the existing sound insulation performance of individual dwellings. This may be required at external levels of 50 dB L_{dn} for some dwellings with lightweight uninsulated facades and not until 55 dB L_{dn} or higher for other dwellings.

21. Mechanical ventilation noise within mitigated dwellings identified under Condition 20 must be measured in accordance with AS/NZS 2107:2016 "Acoustics-Recommended design sound levels and reverberation times for building interiors". The mechanical ventilation noise levels in habitable spaces must not exceed the following:

(i) 35 dB LAeq in bedrooms, and

(ii) 40 dB LAeq in all other habitable spaces.

22. If the offer under condition 20 is accepted by the landowner, the mechanical ventilation, cooling, and/or other noise mitigatory works must be installed at the expense of the consent holder within one (1) year of the offer being accepted, ~~except that the Consent Holder shall not be responsible for more than [10] such installations in any calendar year~~ .

Advice Note: The consent holder's obligations extend only to installation of the mechanical ventilation or cooling. To avoid doubt, the consent holder is not responsible for ongoing maintenance.

23. Acceptance of the offer under condition 20 may be made by the landowner at any time during which this consent is operative.

Port Noise Management Plan

24. A Port Noise Management Plan must be prepared in accordance with the requirements in Section 8 of NZS 6809:1999 Acoustics – Port Noise Management and Land Use Planning and submitted to the Council for certification at least three

(3) months before the commencement of any Expansion Project Port Activities (excluding Expansion Project construction). The Port Noise Management Plan must contain the following information:

(a) The Port Noise Management Plan objectives and methods to achieve the objectives, including:

(i) To ensure the consent holder complies with the noise limits in Condition 19;

(ii) To provide a framework for the measurement, monitoring, assessment, and management of port noise levels;

(iii) To identify and adopt the best practicable options for the management of noise effects;

(iv) To engage with the community and manage noise complaints in a timely manner, including through participation in a Port Noise Liaison Committee to be established as a sub-committee of the existing Community Liaison Group ;

(b) Noise modelling, noise monitoring, auditing, and reporting procedures to be undertaken and funded by the consent holder;

(c) Practices that will be used to manage noise effects, including procedures for achieving noise reduction through port operational procedures and staff and contractor training;

(d) Procedures to receive and respond to complaints, and to maintain a register of all complaints received, the details of the complaints, and any action taken to investigate and/or resolve the complaints;

(e) The Current Port Noise Contour Map;

(f) Identification of all properties where Condition 20 applies;

(g) Details of the Port Noise Liaison Committee required under condition 24(a)(iv) including:

(i) The functions and processes of the Committee, including to consider all noise issues arising from the port and to ensure that mitigation functions identified in the Port Noise Mitigation Plan are carried out;

(ii) The members for the Committee and their roles, with Committee seat invitations being required to be made as follows:

1. Two representatives of the port operator;

2. Two port user representatives (with invitations to be made

to two different port users);

3. One representative of Northland Regional Council;

4. One representative of Whangārei District Council;

5. One community representative for Reotahi;

6. One community representative for Albany Road;

7. One representative of the Ruakaka Parish Residents & Ratepayers Association;

8. One representative of the Whangārei Heads Citizens Association;

9. One representative of Patuharakeke Te Iwi Trust Board; and

10. One representative of Ngātiwai Trust Board;

11. One representative of Te Parawhau Hapu.

(iii) Details of the secretarial and logistical support to the Committee which must be provided and fully funded by the consent holder;

(iv) The frequency of Committee meetings, which must be annually at a minimum, and procedures for calling an emergency meeting of the Committee;

(v) Procedures for recording minutes of the Committee, which must be made publicly available;

(vi) Procedures for consideration by the consent holder of any recommendations by the Committee; and

(h) Where applicable, any recommendations made by the Port Noise Liaison Committee, and any actions by the consent holder to implement those recommendations (this requirement must not apply to the first Port Noise Management Plan produced).

25. The Port Noise Management Plan, including the appended Current Port Noise Contour Map, must be revised annually (at a minimum). An annual report must be prepared for the Port Noise Liaison Committee that:

(a) Details any changes to the Port Noise Management Plan and Current Port

Noise Contour Map resulting from the revision; and

(b) Provides a record of:

(i) All acoustic mitigation works undertaken in the preceding twelve (12) months, including records of offers of mitigation that have been refused or not responded to; and

(ii) Any physical monitoring undertaken and the results of that monitoring.

26. The Port Noise Management Plan must be certified in writing by the Council prior to Expansion Project Port Activities (excluding Expansion Project construction) commencing. The consent holder must undertake all Port Activities in accordance with the certified Port Noise Management Plan.

27. Any material variation to the Port Noise Management Plan, including as a result of a revision under condition 25, must be subject to certification by Council.

~~28. The Port Noise Management Plan must be in general accordance with the draft Port Noise Management Plan provided as part of the resource consent application (Marshall Day Acoustics: Northport Port Noise Management Plan, Rp 001 20170776, 3 August 2022).~~

Memo prepared by:	Peter Runcie, Technical Director, SLR Consulting
Date:	11 July 2023

Memo reviewed and approved for release by:	Blair Masefield, Technical Director, Beca Limited On behalf of the Whangārei District Council and Northland Regional Council
Date:	2 August 2023