

Proposed District Plan Change 49

Port Noise & Building Insulation Provisions

Proposed District Plan Change 49

DISTRICT PLAN MAPS

Add attached Maps 1a and 3 as Map 55 of the District Plan

CHAPTER 3.10 - DEFINITIONS

Add a new definition

“PORT RELATED ACTIVITIES (For the purpose of rules and standards relating to port noise): means activities within the Operational Port Area and the Port Redevelopment Precinct including the berthing, departure and movement of ships, storage and cargo handling, handling of goods and passengers, all activities associated with the movement, storage and handling of cargo and any activities (including construction, maintenance and repair) associated with buildings, machinery and equipment used in connection with the port or its administration. Activities not directly connected to the operation of the port such as office activities, retail activities, and other non-port uses within the Operational Port Area and Port Redevelopment Precinct are excluded.”

CHAPTER 4 - RESIDENTIAL AREAS (OBJECTIVES AND POLICIES)

4.1 Introduction

In the last paragraph of 4.1, modify the start of the first sentence to read (new wording underlined):

“Council is exercising its responsibilities under the Act by including provisions to manage noise and control hazardous substances and contaminated sites ...”

Modify start of final sentence to read (new wording underlined):

“Examples include provisions for noise mitigation in or near the port and airport and controlling residential development ...”

Policy 4.2.2.3 (*Control the adverse effects of noise within Residential Areas*)

Amend the third paragraph of the explanation to Policy 4.2.2.3 to read (new wording underlined):

“However within the Outer Residential Area adjoining Wellington International Airport and near to the Operational Port Areas, there is a need to recognise the potential effects of airport and port noise on new residential and other Noise Sensitive Activity developments, and conversely, the potential constraints of such activities and developments on the airport and port activities. The rules relating to residential developments near the airport (being the land inside the air noise boundary depicted on Map 35) and residential and other Noise Sensitive Activity developments near the Operational Port Area (being the land within the Port Noise Affected Area shown on District Plan Map 55) reflect these issues.”

CHAPTER 5 – RESIDENTIAL AREA RULES

Rule 5.1.3 (*Permitted Construction Rule*)

Add the following new permitted activity condition to Rule 5.1.3:

“5.1.3.8a Noise Insulation - Port Noise Affected Area.

5.1.3.8a.1 Any **habitable room** in a building used by a residential activity within the Port Noise Affected Area shown on Plan Map 55 shall be protected from noise arising from outside the building by ensuring the **external sound insulation level** achieves the following minimum performance standard:

$$D_{nT,w} + C_{tr} > 30 \text{ dB}$$

Compliance with this performance standard shall be achieved by ensuring habitable rooms are designed and constructed in a manner that:

- accords with the schedule of typical building construction set out in Appendix X;
- or**
- accords with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.

5.1.3.8a.2 Where bedrooms with openable windows are proposed, a positive supplementary source of fresh air ducted from outside is required at the time of fit-out. For the purposes of this requirement, a bedroom is any room intended to be used for sleeping. The supplementary source of air is to achieve a minimum of 7.5 litres per second per person.

5.1.3.8a.3 The above provisions do not apply to construction of new residential buildings within the airnoise boundary.”

Add a new explanatory paragraph at the end of Rule 5.1.3 as follows:

“Acoustic insulation is required in areas affected by port noise to mitigate potential adverse effects on residents. The construction of new residential buildings within the airnoise boundary is excluded from the port noise insulation rule (Rule 5.1.3.8) as the existing provisions for airport noise are adequate to also manage port noise. Noise emission levels from both port and airport operations will be considered when assessing proposals that do not meet the permitted activity noise insulation condition for airport noise.

The ventilation requirement for bedrooms is required to ensure noise attenuation is not compromised if compliance with the requirements of the Building Code (G4) for natural ventilation is achieved by installing openable windows. The required airflow level is based on the minimum standard for habitable spaces set out in NZS 4303.”

5.2 Controlled Activities (Restricted)

Rule 5.2.1 (Early Childhood Centres for up to 30 Children)

Add the following to the matters controlled in respect of Rule 5.2.1:

“5.2.1.3a noise insulation”

Add new criterion to Rule 5.2.1 to read:

“5.2.1.7 Where the site is within the Port Noise Affected Area shown on Map 55:

- whether the habitable rooms in the building in which the early childhood centre activity is proposed are designed and constructed to achieve an External Sound Insulation Level of $D_{nT,w} + C_{tr} > 30$ dB
- the extent to which the site is affected by port noise, any special characteristics of the site which influence the level of port related noise received, and any mitigation proposals included in the application which will reduce the adverse effects of noise on the activity.”

5.3 Discretionary Activities (Restricted)

Add a new Rule 5.3.14

Add a new Discretionary Activity (Restricted) Rule for the construction of residential buildings in the Port Noise Affected Area that do not meet the permitted activity standards for noise insulation, in 5.1.3.8a as follows:

“5.3.14	The construction, alteration of, or addition to residential buildings, including accessory buildings, in the Port Noise Affected Area shown on Map 55, where the new building or the new part of the building does not comply with condition 5.1.3.8a, are Discretionary Activities (Restricted) in respect of:	<i>If the proposal is within the airnoise boundary, refer to rule 5.1.3.8. If the condition is not met, then the proposal is a non-complying activity</i>
5.3.14.1	noise insulation – Port Noise Affected Areas This rule does not apply to buildings or accessory buildings inside the airnoise boundary depicted on Map 35, which are subject to Rule 5.1.3.8 and Rule 5.4.6.	

Non-notification

The written approval of affected persons will not be necessary in respect of 5.3.14.1. Notice of applications need not be served on affected persons and applications need not be notified.

Standards and terms

All buildings must meet all the conditions in rules 5.1.3.1 - 5.1.3.6 and 5.1.3.9 unless consent is concurrently sought and granted for the condition(s) not met.

Assessment criteria

In determining whether to grant consent and what conditions, if any, to impose, Council will have regard to the following criteria:

- 5.3.14.2 Whether the likely exposure to port noise will adversely affect the health or amenity of occupiers of the building.
- 5.3.14.3 Whether the habitable rooms are located, orientated or designed in such a way which would make insulation to the required standards unnecessary.
- 5.3.14.4 Whether the development is likely to lead to potential conflict with and cause adverse effects, including noise sensitive effects, on port activities.

- 5.3.14.5 Whether the building is a listed heritage building and the extent to which it is practicable to insulate to the required standard without compromising the heritage significance and fabric of the building.

Normally insulation to meet permitted activity standards will be required in the Port Noise Affected Area, but in some circumstances full insulation may not be necessary due to special circumstances (such as specific building locations) that result in lower levels of port related noise.

Insulation requirements for the construction of new residential buildings that are also within the airport airnoise boundary are covered under separate provisions for airport noise.”

5.4 Discretionary Activities (Unrestricted)

Rule 5.4.1 *(Non-residential activities and non-residential buildings not specifically provided for as Permitted or Controlled activities)*

Add new criterion to Rule 5.4.1 to read:

“5.4.1.8 Where the site is within the Port Noise Affected Area shown on Map 55 and the activity is a Noise Sensitive Activity:

- whether the habitable rooms in the building in which the activity is proposed are designed and constructed to achieve an External Sound Insulation Level of $D_{nT,w} + C_{tr} > 30$ dB
- whether adequate ventilation is provided for bedrooms with openable windows
- the extent to which the site or building is affected by port noise, any special characteristics of the site or building which influence the level of port related noise received, and any mitigation proposals included in the application which will reduce the adverse effects of noise on the activity or building.”

Chapter 5 Appendices

Add the table at Schedule 1 to this Plan Change as Appendix X to Chapter 5.

CHAPTER 6 - SUBURBAN CENTRES (OBJECTIVES AND POLICIES)

6.1 Introduction

Add in paragraph eight, before the last sentence, the following:

“The Outer Residential Area adjacent to the Operational Port Area in Miramar is affected by noise from port activities. The Plan includes specific provisions to provide for this.”

Policy 6.2.1.2 (*Encourage a wide range of activities ...*)

Add at the end of the 4th paragraph of the explanation to Policy 6.2.1.2 the following paragraph:

“A similar situation arises at the Kaiwharawhara and Miramar areas where part of the Suburban Centre Area lies within the defined Port Noise Affected Area. Here conditions for Noise Sensitive Activities apply to permitted activities.”

Policy 6.2.2.3 (*Control the adverse effects of noise within Suburban Centres*)

Add between the first and second paragraphs of the explanation to Policy 6.2.2.3 the following paragraph:

“A similar situation arises at the Kaiwharawhara and Miramar areas where part of the Suburban Centres Area lies within the defined Port Noise Affected Area. Here conditions for noise sensitive activities apply to permitted activities.”

CHAPTER 7 - SUBURBAN CENTRES RULES

Rule 7.1.1 (*Permitted Activity Rule*)

Add at the start of condition 7.1.1.1 and 7.1.1.4, the following (new wording underlined):

“Except for noise from port related activities within the Operational Port Area, which is covered in Rule 7.1.1.5, noise emission levels ...”

Add a new condition to Rule 7.1.1 as follows:

“7.1.1.5 At any point on land at, or beyond the Port Noise Control Line shown on the Plan Map 55, noise from port related activities shall not exceed the following levels:

Time Period	Sound Level
Any 5 consecutive 24 hour periods	65dBA L _{dn}
Any 24 hour period	68dBA L _{dn}
10pm – 7am (all days)	60dBA L _{eq} (9 hr)
	65dBA L _{eq} (15 min)
	85dBA L _{max}

Measurements shall be made in accordance with the requirements of NZS 6801:1991 *Measurement of Sound* and NZS 6809:1999 *Port Noise Management and Land Use Planning*.

7.1.1.1.6 The port company shall undertake a noise monitoring programme to ensure that noise from port related activities comply with condition 7.1.1.1.5 at the Port Noise Control Line. This monitoring will be undertaken at least 2 times per year at 4 points in accordance with the CentrePort Noise Management Plan and the information shall be supplied in a twice yearly report to Wellington City Council.

7.1.1.1.7 The port company shall produce and at all times operate in accordance with a **Port Noise Management Plan**, which shall include but is not limited to the matters set out in Appendix Y. The Port Noise Management Plan shall be developed to the satisfaction of Wellington City Council and Greater Wellington Regional Council.”

Replace the third paragraph of the explanation to 7.1.1.1 with the following:

“Noise from port related activities within the Operational Port Area is measured and assessed in terms of NZS 6809:1999 – “Acoustics – Port Noise Planning and Land Use Planning”. This provides for management of noise from port related activities and is based on a combination of short term and long term noise limits measurable at a specific Port Noise Control Line. Plan Map 55 indicates the areas that are affected by port related noise, where effects must be managed and special acoustic insulation provisions apply. These requirements are included in the relevant Area rules.

Noise generated in the Coastal Marine Area (which includes the wharf areas at Miramar) will also be measured and assessed in terms of NZS 6809:1999, using the Port Noise Control Line. Noise from the Coastal Marine Area is subject to the Regional Coastal Plan administered by Greater Wellington Regional Council.

The port company will manage noise from port related activities in the Operational Port Area and the Coastal Marine Area through the operation of the Port Noise Management Plan. Regular monitoring will test the effectiveness of the management plan and its implementation in managing port noise.”

Add new permitted activity condition and explanation following 7.1.1.9 to read:

“7.1.1.10 Noise Insulation: Port Noise Affected Areas.

7.1.1.10.1 Except for new residential activities within the airnoise boundary (Refer to rule 7.4.4), any **habitable room** in a building used by a **noise sensitive activity** within the Port Noise Affected Area shown on Plan Map 55 shall meet the acoustic insulation standards set out in Rule 7.1.2.7.

New noise sensitive activities moving into existing buildings within areas affected by noise from port related activities are required to meet the standards that would apply if the building was built for the purpose. New residential activities within the airnoise boundary are excluded from the above rule as this activity is a restricted discretionary activity under Rule 7.4.4. and subject to separate acoustic insulation requirements.”

Rule 7.1.2 (Permitted Construction Rule)

Add a new permitted activity condition following 7.1.2.6 to read:

“7.1.2.7 Noise Insulation – Port Noise Affected Area.

7.1.2.7.1 Except for new residential activities within the airnoise boundary (refer to rule 7.4.4), any **habitable room** in a building used by a **noise sensitive activity** within the Port Noise Affected Area

shown on Plan Map 55 shall be protected from noise arising from outside the building by ensuring the **external sound insulation level** achieves the following minimum performance standards:

$D_{nT,w} + C_{tr} > 35 \text{ dB}$ – Inner Port Noise Affected Area

Compliance with this performance standard shall be achieved by ensuring habitable rooms are designed and constructed in a manner that accord with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.

$D_{nT,w} + C_{tr} > 30 \text{ dB}$ – Outer Port Noise Affected Area

Compliance with this performance standard shall be achieved by ensuring habitable rooms are designed and constructed in a manner that:

- accords with the schedule of typical building construction set out in Appendix X;
- or**
- accords with an acoustic design certificate signed by a suitably qualified acoustic engineer stating the design as proposed will achieve compliance with the above performance standard.

7.1.2.7.2 Where bedrooms with openable windows are proposed, a positive supplementary source of fresh air ducted from outside is required at the time of fit-out. For the purposes of this requirement, a bedroom is any room intended to be used for sleeping. The supplementary source of air is to achieve a minimum of 7.5 litres per second per person.

7.1.2.7.3 The above provisions do not apply to construction of new residential buildings within the airnoise boundary.”

Add a new explanatory section as follows:

“Acoustic insulation is required for noise sensitive activities in buildings in areas affected by port noise to mitigate potential adverse effects on those using such facilities. The construction of new residential buildings within the airnoise boundary is excluded from the above rule as this activity is a discretionary activity (unrestricted) under Rule 7.4.4. and subject to separate acoustic insulation requirements.

The ventilation requirement for bedrooms is required to ensure noise attenuation is not compromised if compliance with the requirements of the Building Code (G4) for natural ventilation is achieved by installing openable windows. The required airflow level is based on the minimum standard for habitable spaces set out in NZS 4303.”

Rule 7.3.1 (*Discretionary Activity (Restricted) Rule – Activities that do not comply with conditions for permitted activities*)

Add the following to the discretionary matters in respect of Rule 7.3.1:

“7.3.1.7a noise insulation”

Amend the *Non notification* statement to read (change underlined):

“The written approval of affected persons will not be necessary in respect of items 7.3.1.4, 7.3.1.5 and 7.3.1.7a and applications need not be notified.”

Add a second paragraph to 7.3.1.8, to read:

“7.3.1.8.2 For noise from port related activities, the nature and frequency of the noise, including any special audible characteristics, the duration and timing of the exceedance and any mitigation measures to reduce noise emissions at source.”

(and number the existing first paragraph 7.3.1.8.1)

Add a new Rule 7.3.1.15 and explanation as follows:

“7.3.1.15 Noise Insulation

7.3.1.15.1 Whether the likely exposure to port noise will adversely affect the health or amenity of occupiers of the building.

7.3.1.15.2 Whether the habitable rooms are located, orientated or designed in such a way which would make insulation to the required standards unnecessary.

7.3.1.15.3 Whether the development is likely to lead to potential conflict with and cause adverse effects, including reverse sensitivity effects, on port activities.

7.3.1.15.4 Whether the building is a listed heritage building and the extent to which it is practicable to insulate to the required standard without compromising the heritage significance and fabric of the building.

Normally insulation to meet permitted activity standards will be required in the Port Noise Affected Area, however the Council accepts that there may be some situations where it can be demonstrated that full compliance with the insulation standard may not be necessary or practicable.”

Rule 7.3.2 (*Discretionary (Restricted) construction rule*)

Add the following to the discretionary matters in respect of Rule 7.3.2:

“7.3.2.5a noise insulation”

Amend the *Non notification* statement to read (change underlined):

“The written approval of affected persons will not be necessary in respect of:

- items 7.3.2.4 and 7.3.2.5a; and
- design, external appearance and siting (provide consent is not also required for one or more of the matters in 7.3.2.1, 7.3.2.2, 7.3.2.3, 7.3.2.5, 7.3.2.5a)

and applications need not be notified.”

Add a new Rule 7.3.2.12 and explanation as follows:

“7.3.2.12 Noise Insulation

7.3.2.12.1 Whether the likely exposure to port noise will lead to an unreasonable level of health or amenity for occupiers of the building.

7.3.2.12.2 Whether the habitable rooms are located, orientated or designed in such a way which would make insulation to the required standards unnecessary.

7.3.2.12.3 Whether the development is likely to lead to potential conflict with and cause adverse effects on port activities.

7.3.2.12.4 Whether the building is a listed heritage building and the extent to which it is practicable to insulate to the required standard without compromising the heritage significance and fabric of the building.

Normally insulation to meet permitted activity standards will be required in Port Noise Affected Areas, however there may be some situations where it can be demonstrated that full compliance with the insulation standard may not be necessary or practicable.”

Add the following to the before the last sentence of the first paragraph of the explanation to Rule 7.4.4:

“Where proposed developments are within the Port Noise Affected Area identified on Map 55, noise from port related activities will also be considered due to the close proximity of shipping operations and the potential for intrusive sources of noise of special audible characteristics.”

Chapter 7 Appendices

Delete all of the following from Appendix 1:

“Areas Affected by Noise from the Operational Port Area

When measured in accordance with NZS 6801:1977, with corrected noise levels determined in accordance with NZS 6802:1977:

- (1) Noise from the Operational Port Area received in a Residential Area shall not result in the corrected noise levels (L10) exceeding the background noise level by more than 10 dBA.
- (2) Notwithstanding (1) above, between the hours of 10:30pm and 6:00am:
 - (i) The corrected noise level taken at any Residential Area shall not exceed 45 dBA.
 - (ii) Single events of noise shall not exceed 75 dBA or exceed the background noise by more than 30 dBA, whichever is lower.

In addition to those noise sources excluded in the definition of Noise Emission Level in Section 3.10 of this Plan, in the Operational Port Area, noise generated by safety signals, warning devices or emergency pressure relief valves shall be excluded from the measurement and assessment of noise.”

Add the following as appendix:

“Appendix Y. Port Noise Management Plan

The Port Noise Management Plan, required under Rule 7.1.1.1.7, shall:

- (i) State the objectives of the Management Plan.
- (ii) Identify all significant noise sources from port related activities within the Operational Port Area and the adjacent Coastal Marine Area.
- (iii) Identify the best practical options to ensure the emission of noise does not exceed the noise levels specified in 13.6.2.1.4a.
- (iv) Identify techniques that will be considered to reduce the emission of noise over time and indicate which of these techniques will be adopted to achieve realistic objectives in managing noise.
- (v) Explain how the port company will take noise effects into account in the design and location of new or extended port activities.
- (vi) Identify how the port company will work with independent companies to ensure that transport noise and noise from other activities within the port area will be kept to a minimum practical level.
- (vii) Identify procedures for noise reduction through the port company’s staff and contractor training.
- (viii) Provide for the establishment and maintenance of a Port Noise Liaison Committee (the port company may provide for this function within the operation of its Environmental Consultative Committee).
- (ix) List the Port Noise Liaison Committee functions; and the procedures for the recommendations of the Committee to be considered and determined by the port company.
- (x) Detail procedures for receiving and deciding on complaints.
- (xi) Detail procedures for noise monitoring; auditing and reporting.
- (xii) Include procedures for the review and alteration of the Port Noise Management Plan.”

-

Schedule 1

ADD to appendices for the Residential and Suburban Centre areas.

“Appendix X. Noise Insulation Construction Schedule

(the schedule describes the minimum requirements necessary to achieve an external sound insulation level of $D_{nT,w} + C_{tr} > 30$ dB)

Building Element	<u>Minimum</u> Construction Requirement	
<u>External Walls</u> of Habitable Rooms	<u>Stud Walls:</u> Exterior cladding: Cavity infill: Interior lining: Combined superficial density:	20 mm timber or 9mm compressed fibre cement sheet over timber frame (100 mm x 50 mm). * Fibrous acoustic blanket (batts or similar of a minimum mass of 9 kg/m ³) required in cavity for all exterior walls. Minimum 90 mm wall cavity. One layer of 12 mm gypsum plasterboard. Where exterior walls have continuous cladding with a mass of greater than 25 kg/m ² (e.g. brick veneer or minimum 25 mm stucco plaster), internal wall linings need to be no thicker than 10 mm gypsum plasterboard. Minimum not less than 25 kg/m ² being the combined mass of external and internal linings excluding structural elements (e.g. window frames or wall studs) with no less than 10 kg/m ² on each side of structural elements.
	<u>Mass Walls:</u>	190 mm concrete block, strapped and lined internally with 10 mm gypsum plaster board, or 150 mm concrete wall.
<u>Glazed Areas</u> of Habitable Rooms	Glazed areas up to 10% of <u>floor</u> area: Glazed areas between 10% and 35% of <u>floor</u> area: Glazed areas greater than 35% of <u>floor</u> area:	6 mm glazing single float 6 mm laminated glazing Require a specialist acoustic report to show conformance with the insulation rule.
	Frames to be aluminium window frames with compression seals.	

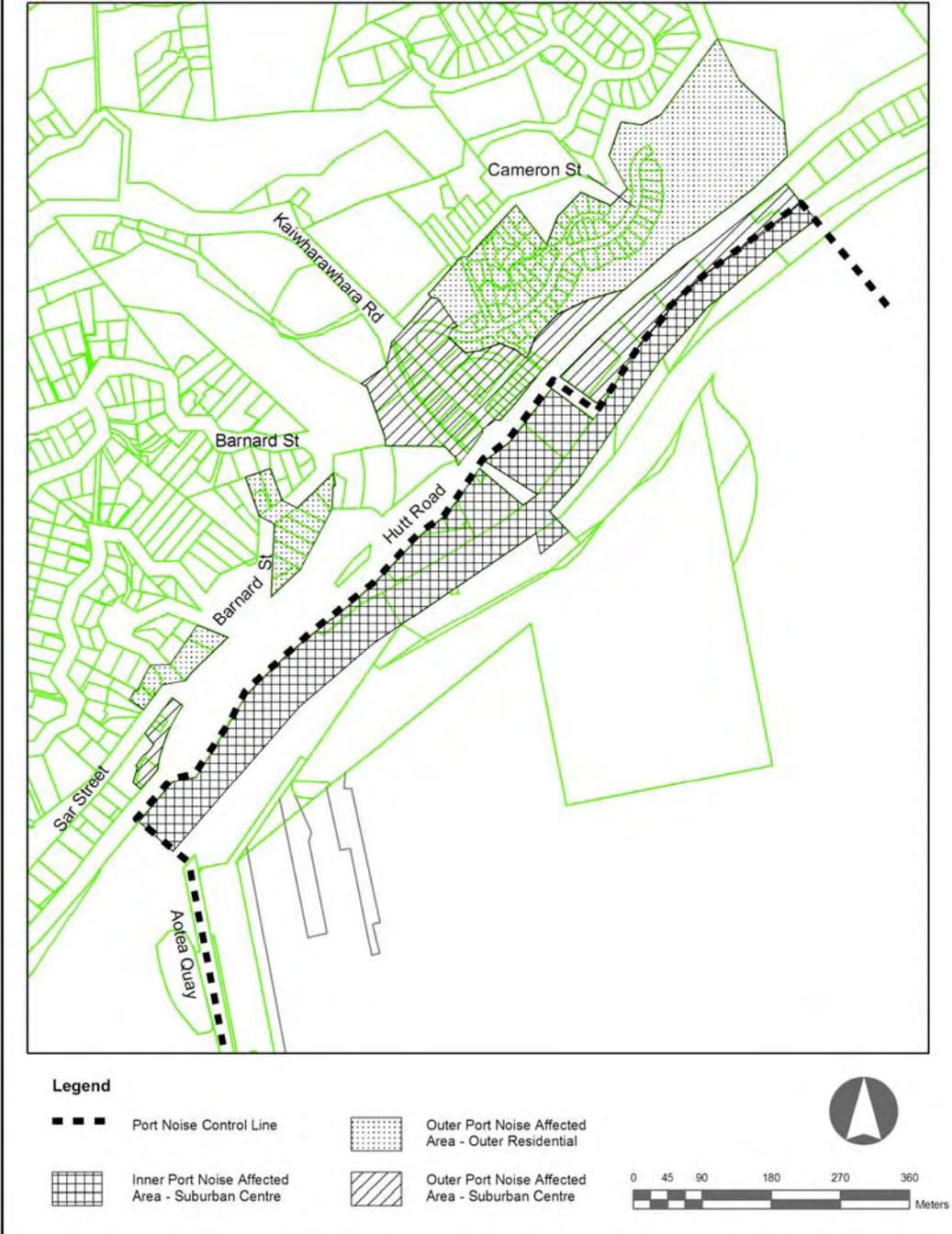
Building Element	<u>Minimum Construction Requirement</u>	
Skillion <u>Roof</u>	Cladding:	0.5 mm profiled steel or 6 mm corrugated fibre cement, or membrane over 15mm thick ply, or concrete or clay tiles.
	Sarking: Frame:	17mm plywood (no gaps). Minimum 100 mm gap with fibrous acoustic blanket (batts or similar of a mass of 9 kg/m ³).
	Ceiling:	Two layers of 10 mm gypsum plaster board (no through ceiling lighting penetrations unless correctly acoustically rated). Fibrous acoustic blanket (batts or similar of a minimum mass of 9 kg/m ³).
	Combined superficial density:	Combined mass of cladding and lining of not less than 25 kg/m ² with no less than 10 kg/m ² on each side of structural elements.
Pitched <u>Roof</u> (all roofs other than skillion roofs)	Cladding:	0.5 mm profiled steel or tiles, or membrane over 15mm thick ply.
	Frame:	Timber truss with 100 mm fibrous acoustic blanket. (batts or similar of a minimum mass of 9 kg/m ³) required for all ceilings.
	Ceiling:	12 mm gypsum plaster board.
	Combined superficial density:	Combined mass with cladding and lining of not less than 25 kg/m ² .
<u>Floor</u> areas open to outside	Cladding:	Under-floor areas of non-concrete slab type floors exposed to external sound will require a cladding layer lining the underside of floor joists of not less than 12 mm ply
	Combined superficial density:	Floors to attain a combined mass not less than 25 kg/m ² for the floor layer and any external cladding (excluding floor joists or bearers).
External <u>Door</u> to Habitable Rooms	Solid core door (min 25 kg/m ²) with compression seals (where the door is exposed to exterior noise).	

Notes:

- **The table refers to common specifications for timber size. Nominal specifications may in some cases be slightly less than the common specifications stated in the schedule for timber size.*
- *In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the jointing capping and guttering detail used in normal construction.*”

**Proposed District Plan Change 49 -
Port Noise Emission Levels and Insulation Rules**

Map 1a - Main Port - Northern Area



**Proposed District Plan Change 49 -
Port Noise Emission Levels and Insulation Rules**

Map 3 - Miramar Port Area

