Nelson Resource Management Plan
Proposed Variation 07/01
— Port Noise

Volume Two - Section 32 Evaluation

June 2007

NELSON CITY COUNCIL

CONTENTS

1. INTRODUCTION

Proposed Variation 07/01 addresses the management of port noise and the mitigation of the adverse effects of port noise in the vicinity of Port Nelson. It addresses not only the effects of noise associated with the operation of the Port, but also noise from activities within the associated Port Industrial Area.

The Variation document (Volume One), which accompanies this Section 32 Evaluation Report, explains how it is proposed to manage the effects of what is commonly known and referred to as 'Port Noise'. The history of events leading up to the public notification of the Variation, and details of the specific changes proposed for the Nelson Resource Management Plan (NRMP), are also described.

This Section 32 Evaluation also provides historical detail in order to explain the events which have occurred leading up to and following the Environment Court decision of 2003 (*W077/03)* which was for the appeals to be adjourned to enable a Variation to be prepared. The Section 32 Evaluation then examines a range of options considered by Port Nelson Limited (PNL) in the preparation of the draft Variation, including options recommended by members of the public as being worthy of consideration.

These options have been re-examined by Nelson City Council (NCC) staff and advisors subsequent to the draft documents being handed over to the Council by PNL. Further information was requested from the port company and its consultants and ongoing meetings and discussions were held with individuals, community groups, and their legal representatives. In effect, this largely represented a retracing of ground previously traversed by the port company and its consultants. However, the exercise was a necessary step and has enabled some issues, which Council staff initially had reservations about, to be more thoroughly investigated.

Other issues have been less easy to resolve. Initially, it was considered likely that some accommodation could be made to reduce impacts from noise on outdoor activities, and peak noise events (L_{max}) but, on the basis of expert evidence from two acoustic engineers, one acting for PNL and the other for the Council, it was considered impractical to impose specific controls on outdoor noise. This process is discussed in more detail in Section 7 of this report.

The approach taken by the Proposed Variation differs significantly from that taken in the Proposed NRMP when it was notified in 1996. While it is proposed that there will be a continuing obligation on the port operator to minimise the amount of port noise at source, it will now be required to provide acoustic insulation, and in some cases ventilation, for some existing houses, in order to mitigate the effects of port noise, particularly during the night-time hours. The broad approach has recently been endorsed by the Environment Court decision with respect to Port Chalmers (Otago), and therefore has a level of acceptance with the Court. While it may not represent a perfect solution to the issue of port noise, it does attempt to provide an appropriate balance between the aspirations of the port company and the welfare of residents.

2. SECTION 32 EVALUATION

Before adopting for public notification any objective, policy, rule or other method promoted through this Proposed Variation, Section 32 of the Resource Management Act 1991 (RMA) imposes upon a Consent Authority a duty to consider alternatives, and to assess their benefits and costs.

A Section 32 Evaluation requires that the extent to which each objective is the most appropriate way to achieve the purpose of the Act is examined, and whether, having regard to their efficiency and effectiveness, the policies, rules or other methods are the most appropriate for achieving the objectives.

It must take into account the benefits and costs of the policies, rules or other methods, and the risk of acting or not acting if there is uncertain or insufficient information about their subject matter.

The next section of this report sets out the background leading to the proposed Variation, and sets the context for this Section 32 Evaluation.

3. BACKGROUND AND CONSULTATION PROCESS

3.1 Introduction

There is an extensive background of consultation and events leading up to the public notification of the proposed Variation. There have been three distinct stages to the planning process, as summarised in sections 3.2 – 3.3 below.

- Court-assisted mediation
- Port Nelson-led consultation
- Nelson City Council-led consultation

Consultation with Iwi, and other parties in terms of Schedule 1 of the RMA, was carried out at all stages of the process, as described in section 3.5 below.

3.2 Court-Assisted Mediation

The process stemmed from two unresolved references to the Environment Court from Port Nelson Limited (PNL) and from P and M Win, Port Hills residents at the time. The references relate to the decision issued by the Council on submissions to its Proposed NRMP in December 1998. The decision was to adopt the Draft New Zealand Port Noise Standards, which resulted in 'noise control lines' on the hillside adjacent to the Port. The inner noise control line (65dBA L_{dn}) serves to control the noise emanating from the Port, and the area between that line and the 55dBA L_{dn} line is an advisory area to alert the owners of affected properties that noise is a factor in these areas.

PNL's reference sought to amend the noise control lines to reflect the final Port Noise Standard. This would have the effect of moving the lines slightly. Mr and Mrs Win opposed the adoption of the port noise standards, which they believe will permit greater noise from the Port. A number of other parties also joined in with the proceedings, by lodging notices under sections 271A or 274 of the RMA.

From 1999, Council staff met with the parties in an attempt to resolve the references. In 2001 the Council engaged independent consultants, with expertise in resource management and acoustics, to assist in resolving the references. From that time considerable efforts were made to find a solution acceptable to all parties. Several meetings were held, including Environment Court-assisted mediation meetings. However, a solution acceptable to all parties was not found.

Whilst that process was occurring, PNL carried out its own review of the issues, including a review of the Port Chalmers decision, *Careys Bay Residents v Dunedin City Council C150/2003* (document '1' in Reference Documents section in ***Appendix 1*** of this report).

In 2003, PNL requested that the Council agree in principle to initiate a Variation to fully address and resolve the issues. The Council's References Committee considered that request at its September 2003 meeting. The Committee agreed in principle for PNL, entirely at its cost, and in full consultation with potentially affected persons, to prepare a draft Variation relating to port noise. This was also subject to PNL obtaining leave of the Environment Court to adjourn proceedings on references

lodged in respect of this matter, and Council reserving the right to amend the draft Variation before public notification.

The Environment Court considered PNL's request in December 2003. The Court granted an adjournment to the proceedings to enable a Variation to be prepared (document 2). The decision referred to the interim Port Chalmers decision, and commented that the issues at that port were not dissimilar to what is occurring in Nelson. The Court's reasons for agreeing to this course of action can be summarised as follows:

- the existing noise boundary in the transitional plan is not practical,
- a Variation would allow for much wider public participation including new residents in the affected areas, and
- the Variation process could be co-ordinated with (what was at the time) a pending application to extend Main Wharf South.

3.3 Port Nelson Led Consultation

PNL's consultants then embarked on a comprehensive program of consultation from early 2004.

Consultation was initially conducted with those parties who had lodged references, or had indicated their interest in the matter by lodging notices with the Court. The parties were:

- Mr P and Mrs M Win
- The Port Hills Residents Association Inc
- Gibbons Holdings Ltd
- Nicholson Marine Coatings Limited
- Herbert Fox, Albert Hutterd and Roger Harkness
- Robert Gunn, Anthony Vining, Robert Inglis, Richard Samuels and David Topliss
- Friends of Nelson Haven and Tasman Bay (Inc), and
- Nelson Waterfront Protection Association (NWPA).

In June 2004 an information sheet was sent out to the above parties, Nelson residents, and other groups, organisations and companies. The main purpose of this was to inform of the issues and to invite residents and other interested parties to attend focus groups to discuss issues and options for resolving the port noise issue. The information sheet was also posted on the Port Nelson web site.

A public flyer, requesting feedback, was distributed more widely to residents in Nelson City and Tasman District, and to port industry organisations.

Focus group meetings were held in July 2004 with residents of dwellings and apartments in the affected areas, industry groups, other interested organisations, Council staff and consultants, and PNL representatives and consultants.

PNL conducted a telephone survey in September and October 2004, to ascertain the views of Port Hills residents with respect to port noise.

Another round of consultation meetings was held between 27 October and 8 November 2004 to discuss the feedback received from the earlier consultation, and to discuss some options for addressing the port noise issue. Prior to those meetings, an Issues and Options Paper (document '3') was sent out to interested parties. This paper included six potential options for resolving the adverse effects of noise from the port, which were discussed at the consultation group meetings. The options were as follows:

Option 1. Retain the status quo

Option 2. Adopt the NZ Port Noise Standard

Option 3. The Port Chalmers (Otago) mitigation approach

Option 4. New residential zones in the affected areas

Option 5. Curfews at the Port

Option 6. Re-organise the Port operations

In November 2004, Council staff and consultants and PNL representatives observed loading operations at Port Nelson during the night and early evening, accompanied by acoustic consultants who measured noise levels at various key locations. This included noise readings from the residential property at 70 Queens Road and Latitude 41 apartments, with the owners in attendance.

Following its consultation process, PNL produced a '*Recommended Approach to Port Noise Variation Report*' (document '4'). The report contained the results of the consultation process, including feedback received on the information sheet, the public flyer, the telephone survey, and notes from the focus group meetings. That report was discussed with Nelson City Council staff and consultants in January 2005.

A Council staff report was then prepared (document '5'), recommending a variation be prepared based upon Option 3 (the Port Chalmers noise management and mitigation approach). The Council's Environment Committee considered this on 8 February 2005, and resolved that PNL, entirely at its cost should prepare a draft Variation based on the Port Otago (Port Chalmers) approach as documented in Environment Court decision C150/2003. The Environment Committee's resolution (document '6') was subject to a number of matters including:

- the Council reserving the right to amend the draft variation,
- a public meeting being held prior to the Committee considering the draft variation,
- the Council reserving the right to determine whether the proposed variation would take effect from the date of notification,

- an assessment being provided on the effects of noise received in outdoor areas of affected properties, and

- the noise contours were to be included to reflect the Main Wharf South development (which was a proposal at that time).

3.4 Nelson City Council Led Consultation

From February 2005 the consultation process has been managed by Council staff and its consultants.

PNL's role in the process was limited to preparing a draft Variation. In July 2005, it presented to Council staff and consultants a draft Variation (document '7'), and a Section 32 Evaluation report (document '8'). The draft Variation contained provisions for managing port noise and mitigating the adverse effects of port noise.

Council staff met with a legal representative for NWPA on 22 July 2005 to discuss that group's concerns on the process.

A public meeting was held on 3 August 2005 to discuss the draft Variation prepared by PNL. At that meeting Council staff and consultants described the planning process, and the PNL team presented the draft Variation that they had prepared. Several of the residents expressed concerns, and these were noted. A further consultation meeting was requested by the residents. The notes from the public meeting are contained in document '9'.

In September 2005 Council staff and consultants visited Port Chalmers in Dunedin to assess the practical implementation of their port noise management and mitigation approach. They met with residents, representatives of Port Chalmers, and Dunedin City Council staff involved in the new provisions.

Council staff and consultants then compiled a list of further information that was considered necessary in the further development of a draft Variation. In October 2005 PNL was requested to supply the following information:

- costs of retrofitting insulation to dwellings in the affected areas,

- results of the latest noise monitoring,

- complaints procedures,

- timelines to carry out mitigation of dwellings,

- effects of noise exposure in outdoor living areas, and

- additional controls on short-term noise (L_{max}).

A public workshop on noise was held on 30 November 2005 to assist residents and other interested parties involved in the process to better understand noise terminology and principles.

In late December 2005, PNL supplied the further information requested by Council staff. The following information was provided:

- Background information reports including: a telephone survey report (document '10'), noise monitoring report (document '11'), a report on container vessels at Main Wharf South (document '12'), analysis of noise complaints (document '13'), details of environmental noise mitigation projects (document '14'), and environmental mitigation at the port from 1993-2004 (document '15').

- Report on noise effects on outdoor living, including relevant case law (document '16').

- Research into insulation of dwellings and house designs to control port noise (document '17').

- Process for dealing with noise complaints, and notes on the proposed Port Noise Liaison Committee (document '18'), and

- Map of proposed Main Wharf reclamation (document '19').

In February 2006 Council staff and consultants reviewed this information and determined that the total information available was sufficient for a variation to be prepared. A work programme was formulated, and in March 2006 the residents' groups and affected parties were sent a copy of the program, and were also advised of the availability of the further information supplied by PNL.

Council staff and consultants met with Mr Jim Sinner on 6 April 2006, at his request, to discuss concerns relating to Auckland Point School. During May 2006 Council staff and consultants met with legal representatives of residents and other groups to further discuss their outstanding concerns.

A further public workshop was held on 6 June 2006. The workshop was to provide an overview of the draft Variation prepared by PNL, to discuss possible areas for improvement, and to obtain feedback from the parties on remaining areas of concern. Staff notes from that meeting were sent to the attendees and other parties, and are contained in document '20'.

In July 2006 Council staff and consultants met with PNL representatives to discuss issues still requiring clarification, including matters raised at the public meeting. A request was made for PNL to supply further information on:

- the implications of possible curfews on night-time Port operations, and

- costs associated with a re-organisation of the various terminals at the Port.

The information was supplied in August 2006, and is contained in document '21'.

During September 2006, Council staff and consultants prepared a document summarising the concerns of residents groups, and listing the responses and actions proposed with respect to those concerns (document '22'). This was sent to the parties for information.

At that stage, Council staff considered that sufficient consultation had taken place, and sufficient information was now available to finalise a draft Variation for consideration by the Council. A project plan was prepared, including a timetable for preparing the variation, reporting to Council, and for public notification of the variation. This was sent to the parties for information.

The Environment Court was advised on progress with this matter at a Pre-Hearing Conference on 8 December 2006. The Court was advised that a Variation was being prepared, and it directed that in the event the Variation is not notified by 30 June 2007, a hearing date be set down after 4 October 2007 and that evidence be prepared and exchanged in September 2007.

Council staff then contacted all parties and extended an offer to meet again to discuss any outstanding concerns. The Nelson Waterfront Protection Association (NWPA) requested a meeting with Council staff and consultants, and this took place on 14 December 2006. A number of concerns were raised, including those matters summarised in document '22'. Council staff and consultants then met with PNL's representatives on 19 December 2006 to advise them of the residents' outstanding concerns and to seek their response. A follow up meeting was held with NWPA on 20 December 2006.

In January 2007 the first of two workshops was held for Councillors on the Environment Committee, to re-familiarise them with the port noise issues in general.

During March 2007, Council staff and consultants finalised their work on the Variation. This was discussed with Councillors at a follow up workshop on 27 March 2007. As a result of discussions at the workshop a number of amendments were made to the Variation.

3.5 Schedule 1 Consultation

Section 73 of the RMA provides that a territorial authority may, in accordance with Schedule 1, change a district plan. Clause 3 of Schedule 1 specifies the parties with whom the local authority shall consult in the preparation of a proposed plan.

In accordance with this requirement, the following parties were consulted in the preparation of the Proposed Variation for port noise at Nelson:

- The Minister of the Environment
- The Minister of Transport
- Minister of Conservation
- Minister for Social Development and Employment
- The Tangata Whenua of the area

The respective Ministers were sent copies of the draft Variation as prepared by PNL in the early consultation rounds, and were invited to attend the public meetings, and were sent the notes from the public workshops.

PNL representatives initially met with the Nelson Iwi Resource Management Komiti (NIRMAK) on 12 July 2004. NIRMAK was advised of the background leading to the development of a variation to address noise issues. NIRMAK advised that it would examine the proposed variation when it was notified, and would take account of matters contained in its proposed Iwi Management Plan, and in its document entitled *Te Whiri Matea*.

A PNL representative met with Mr Edward Chambers of Ngati Awa on 16 December 2004, at Mr Chambers' request after having received the Issues and Options Report (document '3'). Support for Option 3 (the Port Chalmers approach) was noted in the minutes from those meetings, as contained in document '4'.

PNL's representatives had a follow up meeting with iwi on 2 February 2005, when the results of further consultation, and the recommended option were discussed.

The Iwi Advisory Komiti (C/o Ngati Rarua Trust), Te Runanga O Ngati Kuia, and Ngati Awa were all placed on the list of people to be contacted, and received updates and correspondence from Council staff and consultants throughout the process. Iwi representatives were also invited to attend the public meetings. Mr Chambers attended the public meeting on 3 August 2005, at which the draft Variation was discussed.

Further consultation with iwi was then conducted in terms of a new process advocated by the various iwi groups.

By April 2007 work had progressed to the stage where a final draft variation had been prepared. On 11 April 2007 copies of that latest draft were sent to the various iwi groups (as set out below) with a request for them to respond with any comments or general feedback prior to the meeting of the Environment Committee on 8 May 2007, when a staff report on the variation was scheduled for consideration.

NCC staff made follow-up telephone calls with the contact people from Tiakino te Taiao (representing Ngati Rarua, Ngati Tama, Te Atiawa and Ngati Koata), Ngati Toa, and Ngati Kuia.

Whilst the contact person for Ngati Toa was not able to be contacted, feedback was received from Ngati Kuia to the effect that there were not likely to be any issues that would concern them. A consultation meeting at NCC with Ngati Kuia on 17 April 2007 confirmed that there are no issues of concern.

The contact person from Tiakino te Taiao's advised that she would respond if any concerns were identified. No concerns had been raised at the time of preparing this Section 32 Evaluation.

3.6 Summary

From the lodgement of references in 1999 by P and M Win, and PNL, through to the notification of the proposed Variation in July 2007, the issue of Port noise has been extensively researched and a considerable number of meetings and discussions have been held with interested parties.

The early initiative was taken by PNL, after gaining Council's approval in principle to prepare a draft variation in consultation with the parties. A draft Variation was prepared based upon the management and mitigation of port noise, as endorsed by the Environment Court as appropriate for Port Chalmers.

Following its own investigations, the Council staff and its advisers have generally supported this approach. However the subsequent consultation led by Council staff and advisers has focused on understanding the concerns of residents in the affected areas. As a result, a considerable amount of additional work and research was carried out in areas such as the effects of noise in outdoor living areas, use of maximum noise controls, insulation requirements for dwellings, and noise complaint and reporting procedures.

It is recognised that some residents, in particular NWPS, still have concerns about this approach. However, it is considered that from the extensive consultation and research that has been carried out over this period, the proposed Variation is an appropriate planning response to the issues of Port noise, and provides a realistic and equitable solution in the Nelson context.

4. ANALYSIS OF OPTIONS

4.1 Introduction

This section describes and analyses the six main options investigated for addressing Port noise, as listed in section 3.3 above.

The table in ***Appendix 2*** of this Section 32 Evaluation provides a summary of the benefits and costs of each option, how each option achieves the objectives and policies of the NRMP and the appropriateness of the various options.

4.2 Option 1 - Retain the Status Quo

Description

The proposed NRMP contains rule INr.40 for the Industrial Zone requiring that the rolling 5 day noise level generated from activities in Port Nelson does not exceed 65dBA L_{dn} at or beyond the Port Noise Limit Line as shown on the Planning Maps. In addition, short term (L_{eq} 15 minute) daytime noise levels of 70 dBA and night time levels of 65dBA (and 85dBA L_{max}) are not to be exceeded at the Port Noise Limit Line. These lines are often referred to as the enforcement lines, because on the occasions when noise exceeds these limits, a prosecution may ensue.

The measurement and assessment of noise levels is required to be in accordance with what was at the time a draft version of the New Zealand Port Noise Standard (DZ 6809:1999 version 14 - *Port Noise Management and Land Use Planning*). The Port Noise Standard has since been amended and finalised by the New Zealand Standards Authority.

The NRMP also contains an Overlay on the Planning Maps delineating a 'Port Effects Control Overlay' and 'Port Effects Advisory Overlay'. The Port Effects Control Overlay is the area on the port side of the 60dBA contour line shown on the Planning Maps. The Port Effects Advisory Overlay is the area between the 60dBA line and the 55dBA line, i.e. an area that is influenced by noise from the port, but to a lesser degree than the area within the Port Effects Control Overlay.

Rule REr.64 requires a minimum site area of 600 square metres in the Port Effects Control Overlay area, and Rule REr.65 contains acoustic insulation requirements for construction or substantial alterations of bedrooms and living areas of buildings within that overlay. The function of the Port Effects Advisory Overlay is purely advisory, i.e. that this area will be subject to the effects of port noise.

Benefits/Advantages

The current rules provide all parties with certainty as to the position of the noise limit lines, and the maximum noise levels that are allowable. These are clearly expressed in the NRMP.

A benefit to the port operator is that they need not conduct their own monitoring, as Council noise enforcement officers are required to monitor noise and to respond to any complaints and breaches of the rules.

The Port is also not required to mitigate the adverse effects of noise generated from the Port (for example by providing acoustic treatment of affected dwellings).

Costs/Disadvantages

Whilst the current rules may appear to have some advantages for the Port Operator as noted above, in reality they are considered to be particularly inflexible and are not appropriate for the effective and efficient operation of a large shipping operation such as Port Nelson.

Extensive monitoring data provided by PNL indicate that, at times, the port does not meet the noise levels as delineated by the noise limit lines in the NRMP. The Environment Court has determined (refer to C150/2003, document '2') that the existing noise line boundary is clearly not practical to retain in the face of existing and future operations at the port.

Some significant improvements have been made over recent years to the port's practices, and PNL has implemented a number of measures to minimise noise (documents '14' and '15'). However, despite those measures, there have been instances where it has clearly been impractical to achieve the specified noise limits. This is particularly the case with short-term noises such as from dropping of hatch lids, and other clangs and bangs that cannot effectively be controlled by short term noise limits such as L_{max}.

A main disadvantage with this approach for PNL is that is sets up a process whereby failure to meet the noise limit line could result in enforcement action and on-going litigation between residents, the Council and PNL. The outcomes of consultation, particularly with the focus group meetings, show that there has been little support from any of the parties for retaining the current rules, and one of the major concerns is the inability to adequately enforce the current provisions.

Another disadvantage of the current rules regime, is that there is no requirement to provide mitigation in the form of acoustic insulation to the most-affected residents. If the noise from the port meets the noise limit line the noise level is considered acceptable. The financial costs of acoustic insulation, and other off-site mitigation, needs to be entirely borne by residents under this approach.

Recent Environment Court cases have been resolved with ports being required to carry out mitigation in the form of acoustic insulation of the most affected dwellings near ports (e.g. at Port Chalmers and at Lyttelton).

In addition, the current rules are based on a draft New Zealand Port Noise Standard, which has since been published in altered form. This was one of the reasons for PNL's reference to the Environment Court.

The objectives and policies indicate a philosophy of the Port being able to reduce its noise levels (e.g. the current DO12.1.5). This is considered to be inconsistent with the realities of most growing regional ports in New Zealand. Over the next 10 to 20 years it is anticipated that most ports in New Zealand will aim to maintain noise at existing levels for the receiving environment and will rely on other resource management techniques such as mitigation and alternative remedies to achieve this.

Summary

Maintaining the status quo is considered an unrealistic option. The current rules are based on a draft port noise standard, are inflexible, and have not been supported as a practical resolution to the issue, as has been acknowledged by the Environment Court (document '2').

4.3 Option 2 - Port Noise Standard with Mitigation

Description

This option essentially retains the current rule-based approach in the NRMP based on the Port Noise Standard approach, but with the assessment and measurement of noise to be in accordance with the finalised port noise standard rather than the earlier draft version.

This option involves an updating of the current provisions by placing a new 65dBA Ldn noise limit line, which would be developed by PNL's acoustic consultant and NCC's acoustic advisors. A new 55dBA Ldn contour line (outer control boundary) would also be implemented.

Option 2 places controls on residential building work as follows:

- On the Port side of the 55dBA Ldn contour, any new dwellings and extensions would be required to have insulation provided at the owner's expense, and an indoor design sound level of 45dBA Ldn would be required in rooms used for any noise sensitive activity.

- New residential development and other noise sensitive activities would be prohibited on the port side of the 65dBA Ldn contour line, and extensions to existing dwellings would be discretionary activities.

This option also involves the Port Operator providing some additional acoustic insulation to affected properties. From the consultation it was apparent that some residents supported the Port Noise Standard for the certainty it provides, but they also supported the provision of additional acoustic insulation by the Port Operator.

Three sub-options were investigated involving acoustic insulation and ventilation being offered to the specified affected properties (i.e. dwellings on the port side of the 65dBA L_{dn} line). These are outlined in the Issues and Options Report and the Recommended Approach Report (documents '3' & '4').

Benefits/Advantages

This approach has been followed by a number of other ports in New Zealand (e.g. Napier, Tauranga and Lyttelton) with varying degrees of success. As for the Status Quo option, the use of a noise limit line, and short term L_{eq} and L_{max} limits (based on the Port Noise Standard), would provide residents with some certainty as to the levels of noise that the Port is permitted to make. The difference from the Status Quo is that Option 2 would offer the opportunity to review the position of the line and get agreement between NCC and the Port Operator as to its location.

Another advantage is that acoustic insulation will be provided to identified noise-affected properties, resulting in lower noise levels inside those dwellings at night. This gained some support in the consultation rounds.

A key advantage for the Port Operator is that it involves only one-off costs for acoustic insulation and ventilation of dwellings on the port side of 65dBA L_{dn}.

Costs/Disadvantages

As for the Status Quo option, the most significant cost of this option is that it may reduce the Port's efficiency, particularly if the nature of port activities change (e.g. cargo types or size of ships). This may make it difficult to meet the noise lines.

There are additional costs to PNL in carrying out acoustic insulation, depending upon which sub-option is pursued. For example, the estimated cost of acoustically insulating all dwellings on the port side of the 65dBA L_{dn} (i.e. sub-option B in document '4') is more than $0.5 million, plus the costs in project managing the process.

The Port Noise Standard approach also requires extensive monitoring by the Council to ensure that the noise lines are being met, and there is an associated enforcement regime required for breaches of the noise limits. This is a cost to the Council, and hence ratepayers. There is a risk with this option that in a few years time, NCC, residents and PNL could find themselves going through enforcement proceedings to uphold the noise limit line. In addition, to make changes to the noise lines in response to any necessary changes in the acceptable noise environment would require a further Variation or plan change, which can be costly and time consuming.

Summary

In overall terms, this option is seen as potentially providing a realistic solution, but has some inherent difficulties of inflexibility and administration.

4.4 Option 3 - The Port Chalmers (Otago) Mitigation Approach

Description

Option 3 stems from the Port Chalmers case (document '1'). It is also noted that the recent Port Lyttelton case, JN Frater and Lyttelton Port Company Limited *C38/2007* (document '23'), includes some elements of this mitigation and management approach to port noise.

It represents a significant shift from the traditional enforcement approach used in Options 1 and 2. It requires that the Port Operator is responsible for the appropriate management of activities giving rise to noise, as well as for the mitigation of the adverse effects of noise in the adjacent residential areas.

This is the general approach used in the development of Proposed Variation 07/01. Certain refinements have been made, to reflect the Nelson situation, and to take account of concerns raised by parties and by the NCC Environment Committee, as discussed in Section 5 of this Section 32 Evaluation.

This option focuses on providing an acceptable sleeping environment for residents in noise-affected dwellings (40 dBA Ldn within habitable spaces) near the Port. The approach is to permit activities that generate noise in the Port Operational Area, provided the Port Operator prepares, establishes and operates:

- A Port Noise Management Plan
- A Port Noise Mitigation Plan, and
- A Port Noise Liaison Committee.

The Port Noise Management Plan is required to include such matters as procedures for achieving noise reduction through operations and staff and contractor training, noise modelling, monitoring, auditing and reporting procedures, and complaint handling procedures.

The Port Noise Mitigation Plan will provide mitigation for dwellings in the Residential Zone, within the following noise contour areas, which are shown on a map in the Port Noise Management Plan:

- **Greater than 65dBA L_{dn}**– the Port Operator is required to offer to purchase, or provide acoustic insulation to, all existing dwellings not already able to meet the indoor design sound level in living areas and bedrooms (of 40dBA L_{dn}). If acoustic insulation is chosen, the Port operator is not required to spend on acoustic treatment more than 50% of the value of the property.

- **Greater than 60 dBA L_{dn}** and up to 65dBA L_{dn} - the Port is required to offer to contribute up to 50% of the cost of acoustic insulation and ventilation of all existing dwellings not already able to meet the acceptable level for sleeping at night in living areas and bedrooms.

- **Between 55 - 60dBA L_{dn}** – the Port Noise Liaison Committee will provide technical advice to the owners of properties within these areas on noise levels and possible noise mitigation (acoustic insulation and ventilation). The Port operator may offer to contribute on the recommendation of the Port Noise Liaison Committee up to 50% of the costs of acoustic treatment.

The Port Noise Mitigation Plan is required to include details on the staging of the program for purchase and mitigation of affected properties.

The mitigation package also applies to properties where the actual recorded noise levels exceed the contours described above on more than three occasions. This provides back-up protection for properties in the unlikely event that actual noise events do not correspond to the noise contour lines as modelled.

The Port Noise Liaison Committee will be comprised of representatives from PNL, NCC, residents living in the Port Hills area, and Port Industrial Area users and cargo users. The role of the Committee is to consider all noise issues arising from the port operation and to carry out its functions listed in the Port Noise Management Plan and in Appendix 29.B of the proposed variation. The Committee will ensure that the community is involved and is in a position to advise the Port Operator on port noise issues.

Benefits/Advantages

One main benefit from a planning and operational point of view is that there is no enforcement line, therefore the Port Operator will not be under the threat of enforcement action or the possible imposition of curfews. The Port Operator does however have a strong incentive to manage its noise environment through the on-going financial commitment of having to either purchase or provide acoustic insulation and ventilation to properties experiencing noise at the particular levels established by the approach.

This gives the Port flexibility in managing its operations, but it will also have a significant incentive to reduce noise at source. Whilst it eliminates the potential for prosecution, there remains a duty to avoid unreasonable noise in terms of Section 16 of the RMA.

This approach, with the Port Operator providing acoustic insulation and ventilation (and in some cases outright purchase) of the most affected residential properties, met with some favour during consultation with interested parties and residents.

Another advantage is that the onus for monitoring and enforcement falls on the Port Operator rather than on NCC staff and residents. The monitoring requirements, and complaints procedures, are outlined in the Port Noise Management Plan, with direction on these provided in the proposed Variation (in Appendix 29).

It is also relevant, when considering this difficult and long-standing problem of port-generated noise near sensitive land uses, that this general mitigation and noise management approach has been tested and endorsed through the Environment Court case at Port Chalmers. The Court's decision on the references to the NRMP in December 2003 (document '2') referred to the interim Port Chalmers decision, and commented that the issues at that port were not dissimilar to what is occurring in Nelson. The decision also stated that such mitigation measures would be a more realistic approach than controlling noise limits by way of enforcement.

Costs/Disadvantages

Financial costs will fall, to a large extent, to the Port Operator in implementing the mitigation package. There are understood to be 11 properties within the greater than 65dBA area, and the marginal cost of their potential purchase (once properties have been on-sold with acoustic insulation and ventilation, and covenants added) has been estimated at more than $1.5 million (document '4'). The estimated total cost of provision of acoustic insulation as required in terms of the proposed variation is approximately $2 million. These estimated costs might vary if new activities cause a change in the position of the contours, resulting in additional properties being affected.

The Port Operator is required to undertake its own monitoring to ensure that the noise contours accurately reflect the noise environment, and regular review of the contours will be required and will be updated if required. Further costs will arise from the preparation of the noise management and noise mitigation plans, and from establishing and operating a Port Noise Liaison Committee.

Consultation with affected residents, and in particular the groups (particularly the NWPA) revealed some fundamental concerns, and potential costs and disadvantages, associated with the mitigation approach embodied in Option 3. In summary, these are:

- Lack of monitoring and enforcement provisions
- No maximum noise level control
- No control on the adverse effects of noise on outdoor living areas
- Insufficient attention to reduction of noise (rather than mitigation)
- Mitigation package is inadequate and inequitable
- Noise complaint procedures are unclear

Council staff and consultants acknowledged these concerns, and in particular the issue of potential adverse effects from noise received in outdoor areas of affected properties. Option 3 focuses only on attenuating noise received within dwellings. The affected residents perceived there was a fundamental shortcoming in using the 'Port Chalmers approach' in the Nelson situation, which was seen as quite different. The NCC Environment Committee in February 2005 identified that the outdoor noise issue required further investigation (document '6').

A full list of the matters raised as potential costs and disadvantages for Option 3 is contained in document '22', together with comments and recommendations of NCC staff and consultants. The concerns raised by residents resulted in a considerable amount of additional investigation and reports being produced. For convenience, these issues are also analysed and discussed in more detail in Section 7, 'Appropriateness of Proposed Rules'.

Summary

In overall terms Option 3 offers flexibility for port operations, while at the same time the Port Operator will be responsible for managing noise to minimise noise, and for mitigating the adverse effects of its activities.

This is the general approach endorsed by the Environment Court for the recent case at Port Chalmers, and with the appropriate modifications made in Variation 07/01 to reflect the concerns of the parties in the Nelson context, this option is considered to offer the best potential to resolve the conflicts.

Further discussion on the modifications made to reflect the concerns of parties is provided in section 6 of this Report, 'Appropriateness of Rules'.

4.5 Option 4 - New Residential Zones in the Affected Areas

Description

This option involves the establishment of two new residential zones in the areas adjacent to the port, based upon their proximity and exposure to noise levels from the port.

Rules for each zone would be established and provide for the Port Operator to offer to provide acoustic insulation to all existing affected properties in the new zone located nearest to the port. The Port Operator would contribute to the acoustic insulation of properties in the zone further from the port.

There would be no noise limit line, and land use planning rules would apply for new dwellings and extensions to dwellings within the two zones (similar to Option 2).

After initial discussion this option was not considered in further detail. It was considered unlikely that two new residential zones could successfully be achieved through the public planning process with the boundaries of each zone in an agreed place. The approach was also considered too inflexible and would provide little protection to residents if the Port changed its operations and created substantially more noise within the planning period.

Benefits/Advantages

A benefit of this approach is that the NRMP clearly identifies on the Planning Maps the location of properties potentially affected by noise arising from port activities, in two distinct zones.

Another benefit for owners of properties within the zone closest to the Port is that the Port Operator would be responsible for mitigation of the adverse effects of noise arising from the port.

Costs/Disadvantages

A disadvantage with this is it does not offer the same flexibility as other options (particularly Option 3), and is therefore not supported by PNL.

It has no mechanism for limiting or re-addressing noise levels should they increase in the future, apart from through the plan change procedures in the RMA. This option is therefore unlikely to find favour with affected residents.

From an NCC administration point of view, the concern is that once the zone boundaries have been set and shown on the Planning Maps, any changes to those zone boundaries as activities change at the Port would require plan changes. This is a costly and time-consuming process.

From the consultation there was little support from residents for having special zones focused only on the level of noise exposure they receive from the Port.

Summary

In overall terms, it is considered that this option does not adequately address the fundamental issues of managing port noise such that it ensures the health of residents at all times. This option gives neither flexibility to the Port, nor a mechanism to ensure noise levels do not increase over time. This option was not favoured by any of the parties consulted.

4.6 Option 5 - Curfews at the Port

Description

This option involves imposing a curfew on the Port's night operations. This would involve limiting the times where loading and unloading of ships and other associated activities could take place.

There was some support for this option, particularly from residents in the area closest to container loading operations. It was suggested that even partial curfews (i.e. during the key sleeping hours) would provide residents with some certainty of sleep.

Further investigation was carried out on the implications of curfews at the Port, and the results are contained in document '21'. This contains additional information on the tidal restrictions, shipping needs (including daily costs of operating ships), berth availability at the Port, loading and time spent working.

Benefits/Advantages

Full or partial curfews, on targeted port operations such as container loading, can offer some relief from the worst effects of noise. This may improve the ability of affected residents living near the port to achieve sleep, in much the same way as curfews have been imposed on flights in and out of some airports (e.g. Wellington airport) during certain hours of the night.

Costs/Disadvantages

However, the reality in Nelson is that the most affected residential properties are in very close proximity to a long-established and busy operating Port, which to remain operational and viable will always generate a level of noise at night from deliveries of raw materials by trucks, running of generators from ships at berth, etc. The results from the further investigation into Option 5 has shown that whilst there may be some localised reduction in noise from curfews, there may also be increases in overall noise, as explained below.

The further work by PNL on noise contour sensitivity analysis demonstrates that a small improvement in the noise environment for Port hills residents can only be achieved when curfews are placed on all berths in the Port. This has significant costs and disadvantages for the Port Operator.

The costs to the Port Operator of a curfew approach are significant, particularly when the following factors are considered:

- As Port Nelson is a tidal port, ship movements are already restricted.
- Curfews will further restrict the loading and unloading of ships, possibly resulting in longer stays at berths, greater constraints on available berthage space, and a requirement for additional berths.
- Ships will need to stay in port for longer periods and, whilst sudden impact noises resulting from handling of containers and dropping of hatch covers would be less frequent, the duration of noise from the generators of ships at berth will be extended.

- The Port will have reduced efficiency if key parts of the operation are idle during curfew periods, and

- Delays in shipping schedules from curfews will have ramifications for shipping companies, potentially reducing the economic viability and competitiveness of the Port.

Summary

It is considered that it would be unreasonable to impose curfews on the Port because of the substantial costs, and potential ramifications for the viability of the port. This was accepted by most of the residents consulted.

Overall, it is considered that curfews by themselves cannot be a complete or effective solution to the issues associated with Port noise. It is considered that a more comprehensive and effective reduction in indoor noise levels in dwellings can be achieved through providing acoustic insulation and ventilation, and by implementing other noise reduction measures as part of a comprehensive Port Noise Management Plan.

4.7 Option 6 - Re-organise the Port Operations

Description

This option focuses on re-organising the Port operations to shift the location of container handling and loading/unloading operations, which are a main source of noise complaints from residents, mainly on the western facing slopes of the Port Hills.

During consultation, NWPA proposed two sub-options to be investigated, as follows:

- The first sub-option involves the utilisation of the existing 'A-B' line at Wildman Avenue, beyond which no container handling would be permitted (see plans in Appendix D of document '4'). This requires a major rebuilding of both McGlashen Quay and Kingsford Quay (to 100 tonne axle load) so that they may provide for the container operations rather than at Main Wharf South. Two container berths would be provided on McGlashen Quay with container handling and Leibherr cranes prohibited from using Main Wharf, Main Wharf South, and Brunt Quay.

- The second sub-option involves swapping the activities of Main Wharf South with McGlashen Quay. Under this scenario McGlashen Quay would become the full container berth. Main Wharf South would then be used for ships such as fruit vessels, 'LoLo' and 'RoRo' vessels using their own cranes and ramps, but the loading of container vessels and the use of the Leibherr cranes would be prohibited. This scenario would however require the lengthening of Main Wharf South to accommodate the fruit, LoLo and RoRo ships.

Further investigations were carried out on the costs of re-organising the wharf operations in the ways described above, and the results are contained in document '21'.

Benefits/Advantages

Contour modelling indicates that the 'A-B' line sub-option would have only some marginal benefit, in that it would result in a small movement of the 65BA L_{dn} contour line toward the Port (approximately one property deep).

The contour modelling for the second sub-option, i.e. swapping the activities of Main Wharf South and McGlashen Quay, indicates there may be only minor benefits in terms of reduced noise for residents in the west facing properties.

However, a consequence of shifting the container operations away from the current location is that the noise from the container handling will have a greater impact for residents of north facing properties. This is shown on contour maps prepared by PNL (document '24').

Costs/Disadvantages

The costs to implement the first sub-option option are substantial, and include costs to demolish and then reconstruct McGlashen Quay and Kingsford Quay, relocate buildings, infrastructure and services costs and property purchase costs. The total cost of this option is estimated at approximately $63 million (detailed costs are provided in document '21'). This cost is considered prohibitive.

The second sub-option of reversing the roles of Main Wharf South with McGlashen Quay (so that McGlashen Quay becomes the full container berth) is estimated to cost $24 million for upgrading and extending the wharfs. This includes the cost of extending Main Wharf South (approximately $9 million), to accommodate the activities of the vessels that are swapped to Main Wharf South.

Summary

Whilst sub-option 2 is more cost effective than sub-option 1, both options cost considerably more than the alternative of providing acoustic insulation to affected properties. These sub-options are not expected to provide significant overall noise reductions to all of the affected residential areas.

Other options are considered to be more cost effective and to provide more comprehensive reduction in noise, and mitigation of noise effects, than can be provided by substantially re-organising port activities in this way.

4.8 Summary

From the above analysis, Option 3 (the Port Chalmers mitigation approach) is considered to be the best option for resolving the port noise issues.

It offers the desired flexibility for managing port operations, whilst at the same time placing an onus on the Port Operator to minimise noise and monitor noise levels, and to be responsible for the acoustic treatment, or in some cases purchase, of the most noise affected properties in the adjacent areas. This approach has been endorsed in the Environment Court for the Port Chalmers case, and with some modifications to take account of the Nelson situation, is considered the appropriate option.

The analysis has also shown that Option 1 (the Status Quo) is unsustainable and not favoured by any party. Option 4 (new residential zones) is inflexible and will have few benefits. Option 5 (curfews) would have substantial costs, and would

significantly impede the effective operation of the Port. Option 6 (re-organise operations at the port) has substantial costs that would outweigh any benefits.

Option 2 (Port Noise Standard with Mitigation) is considered the second best option, however it has some inherent difficulties of inflexibility and administration when compared to Option 3.

5. PROPOSED OBJECTIVES AND POLICIES

5.1 Introduction

The main scope of the relevant objectives and policies in the NRMP is to emphasise the importance of the port to the region, the need for it be able to operate efficiently and effectively, whilst mitigating any adverse effects on the adjacent residential areas.

Proposed Variation 07/01 retains these main ideals with only minor amendments to the objectives and policies required.

Amendments are proposed to Chapter 5 (District-wide Objectives and Policies), in two main areas. The first is for changes in terminology. The current references in the NRMP to the Port of Nelson, the Port Industrial Area and the Port Operational Area, are confused and inconsistent. The proposed variation clarifies this by consistent use of terms, and by referring to the Port Industrial Area as a whole.

The other main changes in the policies are necessary to reflect the overall change in approach from a traditional enforcement regime in the current provisions, to the management of noise and mitigation of noise effects approach embodied in the proposed variation.

The proposed amendments to the relevant objectives and policies in the NRMP are described below.

5.2 The Port Industrial Area

The relevant objective is:

DO12.1 the Port Industrial Area

A Port Industrial Area which is enabled to function efficiently and effectively while avoiding, remedying, or mitigating adverse effects on the community and the coastal marine area.

The associated policies are set out below, together with comments. The proposed amendments are proposed to the policies, explanations and reasons, and methods are shown as tracked changes in the proposed Variation document.

DO12.1.1 recognition of port resource

To recognise the Port industrial area as a significant regional physical resource which is part of the infrastructure of the wider Nelson/Tasman region. This is of particular importance in respect of its industrial nature and character, and location partly within the coastal marine area.

DO12.1.2 future expansion in the Port industrial area

Port activities should generally be confined to those areas within the Port industrial area.

Comment:

The proposed amendments to Objective DO12.1, and Policies DO12.1.1 and DO12.1.2, are to reflect the change in terminology from the port to the 'Port Industrial Area', which is defined in Chapter 2 of the NRMP.

Other changes in the explanations and reasons section are to reflect the significance of the port to the region, and the realities that not all adverse effects may be able to be avoided, remedied or mitigated.

The proposed policy relating to noise effects is:

DO12.1.3 noise effects

Noise effects arising from port-related activities should be managed in a way that is compatible with the neighbourhoods surrounding the Port Industrial Area.

Comment:

The proposed amendments to Policy DO12.1.3, and its Explanation and Reasons and Methods, reflect the new approach adopted under Proposed Variation 07/01. The change in approach is from the current regulatory approach, to managing noise generating activities in the Port Industrial Area and the subsequent mitigation of the adverse effects of noise on the adjacent areas.

This provides the rationale for retaining noise contour lines, the purpose of which will be to determine the appropriate level of mitigation, rather than as enforcement lines.

Other changes to the Methods are required to explain the measurement of noise in terms of the current New Zealand Standard (*NZS 6809:1999 Acoustics – Port Noise Management and Land Use Planning*), and that the Port Operator is required to produce a noise management plan and a noise mitigation plan to provide for measures to minimise noise, to mitigate the effects of port noise, to carry out community consultation and liaison on port noise issues, and to monitor port noise.

The policy relating to managing the noise-receiving environment is:

DO12.1.4 management of noise receiving environment

The potential exposure of communities to port noise should be managed to ensure that a reasonable balance is achieved between the operational needs of the Port industrial area, and the amenities and well being of the community.

Comment:

Policy 12.1.4 is designed to control the potential for people to be exposed to port noise. The explanation for the policy recognises the importance of providing acoustic insulation to a level that enables sleep as the main amenity concern in the residential environment.

Proposed amendments to the Methods section emphasise the rules for restricting subdivision and new residential units in areas affected by noise from the port. The changes in the rules are shown in the proposed Variation document. The minimum site area for subdivision of $600m^2$ in the Port Effects Control Overlay area is confirmed; corresponding now to the minimum site area already required for a residential unit in the District Plan, and the acoustic insulation requirement has been increased to achieve noise levels of no greater than 40dBA L_{dn} within new and extended dwellings.

The policy for reducing noise disturbance arising from port operations is:

DO12.1.5 reduce disturbance arising from port operations

To encourage operators within the Port Industrial Area to continue to reduce or minimise the level of adverse effects on the adjacent Residential Zone.

Comment:

The proposed amendments to this policy are to reflect that it is not always possible to reduce noise, but that operators within the port area should also be encouraged to minimise the level of noise effects.

The amendments also recognise that the principal methods to achieve minimisation of noise are to prepare and operate a Port Noise Management Plan, and to establish and support a Port Noise Liaison Committee. This will be separate from the current Port Environmental Consultative Committee, and will have a more focused role to minimise noise and reduce incidences of, and investigate, noise complaints (as described in Appendix 29 of the proposed variation document).

5.3 Other Objectives and Policies

No other changes are proposed to the current objectives and policies in the NRMP.

There are however some proposed amendments to the explanations and reasons, methods, and assessment criteria for parts of the NRMP in the Residential Zone, Suburban Commercial Zone, Industrial Zone, Open Space and Recreation Zone, and the Coastal Marine Area. These proposed changes are set out in full in the proposed Variation document (Volume One).

The proposed changes to those sections are necessary to reflect new terminology and definitions, and to describe the new and amended rules introduced as part of Variation 07/01.

6. PROPOSED RULES

6.1 Introduction

There are proposed amendments in the section (Meaning of Words, Chapter 2), in the Administration section (Chapter 3), and in the relevant zone chapters in the NRMP.

6.2 Chapter 2 - Meaning of Words

New and amended definitions have been included in the proposed Variation in order to define new terms introduced as a result of the new mitigation approach.

This includes new definitions for 'Acoustic Certificate', Acoustic Certificate Register', 'Acoustic treatment', 'Certified level of port noise', 'Noise-Affected Property', 'Port Noise', and 'Port Noise Contour Map', which are terms used in the rules for the zones affected by the proposed Variation, and also within Appendix 29 (which contains the requirements for the Port Noise Management and Mitigation Plans).

The definition of 'Habitable Space' better describes the internal parts of a dwelling that are sensitive to noise exposure, and will therefore be considered for acoustic treatment.

The definitions of 'L_{dn}' and 'L_{eq}' have been amended to reflect the current terminology in the relevant standards.

'Mechanical ventilation' is included to define the term referred to in the amended Appendix 19 of the NRMP, which contains new provisions for ventilation in noise-affected houses to maximise the effectiveness of acoustic insulation.

'Noise-affected property' is a new definition to identify properties that may be eligible for acoustic treatment in terms of Appendix 29.

The definition of 'Port Industrial Area' is amended for grammatical reasons. A definition is included to define the term 'Port noise', and to clarify that this relates to noise generated within the Port Industrial Area which includes but is not limited to the noise arising from the normal day-to-day operations of shipping and cargo handling. The definition excludes noise from ships not at berth, and noise from construction works, emergency situations, and from vehicles on public roads.

The definition of 'Port noise contour map' describes the map that will be contained in the Port Noise Management Plan as required by Rule INr.40 and Appendix 29. This provides the basis for identifying noise-affected properties. A copy of the port noise contour map is attached to this Section 32 Evaluation (***Appendix 2***).

'Port Operator' is defined to confirm that this means Port Nelson Limited (or its successors), the body which will be responsible for meeting the requirements of Rule INr.40.1.

6.3 Chapter 3 – Administration

The main changes proposed to the Administration section reflect the change in role of the Port effects overlays under proposed Variation 07/01. The Port Effects Control Overlay in the NRMP as it currently stands denotes that area between the 60dBA L_{dn} contour and above. The port noise contours (in dBA L_{dn}) on which the overlay is based have been revised and updated from the time when the Plan was amended by decisions and also includes the effects of shading of buildings around the port on the noise environment.

This overlay essentially identifies the area near the Port affected by port noise, and the area where acoustic insulation is required. It is proposed through this Variation to extend this area to the 55dBA L_{dn} contour, and delete the Port Effects Advisory Overlay. This is more consistent with the Port Noise Standard which sets 55dBA L_{dn} as the outer control boundary for noise sensitive activities, and requires that alterations and additions to existing buildings and new noise sensitive activities be permitted activities subject to conditions requiring adequate insulation from port noise.

The Port Noise Limit Line, which regulated the maximum noise levels that port operations could generate, has been deleted. Accordingly, reference to this line has also been deleted.

6.4 Chapter 7 - Residential Zone

Changes proposed to Chapter 7 will separate the rules for the Airport Effects Control Overlay (Rule REr.65) from the rules applying to the Port Effects Control Overlay (Rule REr.65A).

In terms of the Port Effects Control Overlay, it is proposed to set the acoustic insulation requirements for new residential activity and alterations to existing residential buildings in the Residential Zone at an internal design sound level of 40dBA L_{dn} as opposed to the 45dBA L_{dn} indoor design sound level required by in the NRMP at present.

The New Zealand Port Noise Standard sets a noise level of 45dBA L_{dn} as the upper limit of acceptability, indicating that a more stringent indoor design level may be appropriate in some situations. The Environment Court decision for Port Chalmers (document ‘1’) sets the indoor design sound level at 40dBA L_{dn} for residential activities in the Residential Zone. Consequently, it is considered appropriate to include this level in proposed Variation 07/01 (see Rule REr.65A.1).

Rule REr.65A.1 also requires that ventilation be provided for habitable spaces as detailed in Appendix 19.2. This also requires that in the Port Effects Control Overlay certification from an acoustic engineer that the building design will achieve the required design noise level for the zone. In addition, Appendix 19.2 requires that a mechanical system of ventilation, or air conditioning plus mechanical outdoor air ventilation, be installed to meet the requirements set out in that rule.

These changes are considered appropriate to recognise that in the Nelson climate it will be common practice for residents to leave windows open, thereby negating the effectiveness of standard acoustic insulation. Mechanical ventilation will in many cases be essential to maintain a comfortable air temperature at times when windows need to be closed for insulation from the effects of noise. In some circumstances it will be possible to meet the standard with windows open, for example, where a bedroom faces away from the Port.

It is proposed to amend the subdivision rule (REr.107) to confirm a 600m^2 minimum site area within the Port Effects Control Overlay. By increasing the extent of the Port Effects Control Overlay to the 55dBAL_{dn} contour line the application of this rule extends to a larger area. This is however consistent with the current rule in the NRMP (REr.64.1) limiting any site in the Port Effects Control Overlay to one dwelling per 600m^2 of site area, and is also consistent with Policy RE1.4, which aims to minimise the number of residences exposed to noise from the airport (and it is appropriate to also relate this to the port).

A clause has been inserted (i.e. sub-clause iii) to enable subdivisions granted before the Variation takes effect to continue to have a residential unit on the smaller lot.

6.5 Chapters 9, 10 and 11 – Suburban Commercial, Industrial and Open Space Zones

The Port Effects Control Overlay also covers land zoned Suburban Commercial, Industrial, and Open Space and Recreation Zone.

In the Suburban Commercial and Industrial zones, rules SCr.69A and INr.71A require an indoor design sound level of 45dBA L_{dn}. This aligns with the Port Noise Standard recommendation, and is considered adequate to meet the expectations of these zones, as set out in the relevant objectives and policies. This is the standard that already exists in the NRMP for these zones, however the new rules also require ventilation in a similar manner to the proposed Residential Zone rules.

While property owners or developers may choose to adopt a higher standard (for instance 40dBA L_{dn}) when constructing residential units or when making alterations to residential units in the Suburban Commercial, Industrial, and Open Space and Recreation zones, it is considered that requiring a more stringent standard than already prescribed for these zones in the NRMP, and in the Port Noise Standard, is not cost effective or necessary. Accordingly, the requirement (set at 45dBA L_{dn}) for the provision of acoustic insulation for new buildings and additions for residential use in the Industrial and Suburban Commercial Zone is not proposed to be changed through this proposed variation.

Chapter 11 does not contain any specific rules requiring acoustic insulation standards for properties within the Open Space and Recreation Zone. However, resource

consents for properties within the Port Effects Control Overlay in this zone will be assessed in relation to effects from port noise.

The new rules for activities generating noise within the Industrial Zone are explained in section 6.7 below.

6.6 Chapter 13 – Coastal Marine Area

The only change proposed to the rule in Chapter 13 is to clarify that the noise limits for activities in the Coastal Marine Area do not apply to noise generated within the Port Operational Area and received within the Port Effects Control Overlay. These effects are addressed by separate rules in the NRMP (in particular in Chapter 10).

6.7 New Rules for Noise Generated within the Industrial Zone

As discussed, the purpose of the management and mitigation approach is to move the focus away from an enforcement regime to one in which mitigation of port noise occurs in conjunction with the port operating in a manner consistent with the Section 16 duty in the RMA to minimise noise.

To implement this, proposed amendments are required to the Industrial Zone rules in Chapter 10. Amendments are to be made to confirm that noise generated within the Port Operational Area is to be excluded from:

- Rule INr.37, which sets noise limits at the boundary of any site in the Industrial Zone, and

- Rule Inr.38, which sets noise limits at the boundary of any site within the Residential Zone

In addition, Rule INr.40 is to be deleted and replaced with a new rule which implements the management and mitigation approach. In this sense it is the key rule introduced as part of proposed Variation 07/01.

Rule INr.40 has three main parts. It requires that activities in the Port Industrial Area which emit noise shall be permitted if the Port Operator:

- Produces a Port Noise Management Plan within 6 months of notification of Variation 07/01, and thereafter operates in accordance with that plan,

- Produces a Port Noise Mitigation Plan within 6 months of notification of Variation 07/01, and thereafter implements and complies with that plan, and

- Establishes a Port Noise Liaison Committee within 6 months of notification of Variation 07/01 and thereafter maintains and participates in that Committee.

The above plans and the committee are to be established and operated in accordance with the requirements set out in Appendix 29, which are explained fully in section 6.8 of this report.

It is envisaged that there will be very few situations where a resource consent application will be necessary in terms of port noise, as the Port Operator is committed to implementing the required management and mitigation plans.

The Explanation in Rule INr.40.5 outlines the approach whereby noise is to be managed primarily through the use of management and mitigation plans, and community liaison. It also explains that this approach derives from the Environment Court decision for Port Chalmers (document '1'). The advantages of this approach are explained in section 4.4 of this report, where Option 3 is assessed. The appropriateness of the approach is further discussed in section 7 of this report, where the particular concerns of residents are analysed.

6.8 Appendices

Amendments to Appendix 19 and Appendix 29 are proposed as part of Variation 07/01.

Appendix 19

It is proposed that Appendix 19 be amended by including acoustic insulation and ventilation requirements specific to the Port Effects Control Overlay (Ap19.2). Appendix 19 is linked to Rules REr.65A.1, SCr.69A.1, and INr.71A.1, the permitted activity rules for the construction or alteration of buildings within the Port Effects Control Overlay.

Ap19.2.i requires certification from an acoustic engineer that the building design will achieve the design noise level required by rules for the respective zones affected by the Port Effects Control Overlay. The certification process is considered preferable to an alternative method of prescribing minimum construction materials and specifications, which depending upon local circumstances, may not always achieve the desired indoor design noise levels.

Ap19.2.ii contains new provisions for ventilation in noise-affected properties to maximise the effectiveness of acoustic insulation. This is in recognition of the Nelson situation, where feedback from consultation showed many households leave windows open at night time, particularly in summer months. The installation of a mechanical ventilation system, or air-conditioning system, will in many cases maintain the design indoor noise levels as achieved by acoustic ventilation.

Appendix 29

Appendix 29 is linked to Rule INr.40.1, the permitted activity rule for activities generating noise in the Port Industrial Area. It prescribes the matters that shall be included in the Port Noise Management Plan and Port Noise Mitigation Plan. It also prescribes the matters relating to the Port Noise Liaison Committee.

The use of management and mitigation plans, rather than prescriptive rules in the NRMP, has the benefits as described in section 4.4 of this report, where Option 3 is discussed. It allows considerable flexibility for the Port Operator in managing its operations so as to minimise or reduce noise, whilst still being responsible for mitigation of noise-affected properties. The Port Noise Liaison Committee will perform an important role in overseeing the implementation of these plans, responding to complaints, and seeking ways to further reduce or minimise noise. This 'package' of measures is considered the appropriate response to a difficult and significant resource management issue.

Port Noise Management Plan

AP29.A.1 prescribes the matters that the Port Noise Management Plan shall contain. These include the plan's objectives, and procedures for:

- implementation of the Port Noise Mitigation Plan
- operation and recommendations of the Port Noise Liaison Committee
- noise modelling, monitoring, auditing and reporting
- complaint handling
- achieving noise reduction of plant and operational procedures
- alterations to the Port Noise Management Plan

The Port Noise Management Plan will also contain a Port noise contour map, as explained below.

AP29.A.2 sets out the minimum monitoring and reporting requirements in terms of the Port Noise Management Plan. Key aspects are as follows:

The Port Operator is required to carry out continuous monitoring of noise from the port for at least the first five years. It is required to establish and maintain at its expense sound level monitoring equipment.

The results of the sound level monitoring are to be provided to NCC and to the Port Noise Liaison Committee on a monthly basis, highlighting any significant noise emissions. That process shall also identify situations where the monitoring results show that port noise may be exceeding the levels shown on the Port Noise Contour Map at properties eligible for mitigation.

The port noise contour map is based on a busy 5 day operating scenario (generally as per the NZ Port Noise Standard), and is modelled at 1dB intervals between $55L_{dn}$ and $70L_{dn}$. It identifies noise-affected properties eligible for mitigation, and is required to be updated on an annual basis for the first five years and every two years thereafter. The current map is attached to this Section 32 Evaluation in ***Appendix 3***.

It is considered appropriate that the port noise contour map is contained within the Port Noise Management Plan, where it may be readily updated, rather than in the NRMP where a Plan Change procedure would be required on each occasion that an update is required.

The accuracy of the port noise contour map is to be checked by a qualified acoustic engineer by field verification of calculated sound exposure levels at monitoring points identified in the Port Noise Management Plan.

An Acoustic Certificate Register and a Noise Complaints Register are required to be maintained as part of the Port Noise Management Plan.

The Port Noise Management Plan is required to be publicly available, and information on the annual update of noise modelling is to be made available to owners of properties shown on the current Port Noise contour map. It is considered appropriate that this information is publicly available, particularly given the change in approach from a noise limit line based regime (which has public input through the submission process) to a management and mitigation approach implemented to a large extent by the Port Operator, but with the Port Noise Liaison Committee also having a key role.

AP29.A.3 requires that the measurement of Port noise shall be in accordance with NZ 6801:1999, with adjustments to be made for log and container handling activities, and to audible warning devices where there is no practical alternative for safety reasons.

Port Noise Mitigation Plan

AP29.B contains the criteria and procedures for mitigation for properties affected by noise from port activities. There are three main categories of properties for which mitigation is proposed. These are properties receiving:

- Above 65dBA.
- 60dBA and up to 65dBA, and
- 55dBA and up to 59dBA.

For the first category, AP29.B.1 requires the Port Operator to offer to purchase or provide acoustic treatment for those properties that are:

- Shown on the current Port noise contour map as being above the 65dBA contour, or
- Receive a measured 65dBA L_{eq} or greater on more than three occasions during a 12 month period.

The second point above has been referred to in consultation as the 'three strikes' scenario. This is considered an appropriate back-up mechanism for including any properties that experience higher than expected levels of noise from the port than has been predicted through modelling and as shown on the Port noise contour map.

AP29.B.1 also sets out the conditions and standards that apply to the offer to purchase or provide acoustic treatment. These include the rights of the affected property owners, the determination of fair market value and procedures for acoustic treatment. Where acoustic treatment is to be carried out, there is a cap on the maximum contribution of the Port Operator of 50% of the value of improvements on the property (i.e. excluding land). If for an affected dwelling the cost of treatment is greater than this level, it is considered appropriate that the owner pays the balance of the cost of treatment, or accepts an offer by the Operator to purchase the property.

Where acoustic treatment fails to achieve the certified level of port noise for any property in this category, the Port Operator shall offer to purchase the property or undertake further acoustic treatment. This is an appropriate response for situations where noise levels may increase over time, protecting the property owner's rights to receive no more than the certified level of noise.

Properties purchased by the Port Operator under these provisions are not to be used for residential purposes unless they have received acoustic treatment and hold an appropriate acoustic certificate.

The second category (between 60dBA and 65dBA) works in a similar way as for the first category, with the exception that the Port Operator is not required to purchase properties. The 'three strikes' provision has been retained in this category, as it is considered important that owners of properties in this category of noise affected properties are similarly protected from receiving higher noise levels. Another difference from the first category is that the Port Operator is required to contribute 50% of the cost of acoustic treatment (with no cap on the total cost of treatment). This is considered an equitable and fair contribution, as whilst the Port Operator is responsible for much of the noise received at these properties, owners of these properties have chosen to live adjacent to the port which even under the best of conditions will emit noise, and for which it would be reasonable to expect some degree of acoustic treatment.

For both of the above categories, the timeframes and staging of work required of the Port Operator is to be specified in the Port Noise Mitigation Plan.

For the third category of properties (between 55dBA and 59dBA) the Port Noise Liaison Committee is required to provide technical advice to the owners of those properties. Whilst there is no requirement for the Port Operator to contribute to the cost of any acoustic treatment, such offers may be made on the recommendation of the Port Noise Liaison Committee on a case-by-case basis as it sees fit. This is considered an appropriate level of mitigation for the Port Operator, as these properties are the least affected of the three categories by port noise, but there is a recognition that there is a greater effect than for other properties even further removed from the influence of the port.

AP29.B.4 provides the staging requirements for mitigation of noise-affected properties. These are summarised as follows:

- Above 65dBA, offers to be made within 1 year of the notification of proposed Variation 07/01, and settlement or completion of the acoustic certificate within 6 months of fair market value being determined or the owner's acceptance of the offer.

- 60 – 65dBA, offers to be made progressively within 3 years from notification of proposed Variation 07/01 in order of priority based on decibel intervals.

- 55 – 59dBA, all request for contributions towards acoustic insulation to be considered by the Port Noise Liaison Committee on their merits.

AP29.B.5 provides the procedure for assessing the value of properties in terms of the Port Noise Mitigation Plan. This is to be, in the first instance, by agreement between two valuers acting for each party. If the valuers are unable to agree, the fair market value is to be determined by a valuer appointed as agreed, or by the Law Society.

Port Noise Liaison Committee

The composition of the Port Noise Liaison Committee is set out in AP29.C. It is to comprise members with equal representation from the Port Operator, NCC, residents, and Port industrial area users and cargo owners. It is considered appropriate that there be equal representation as this committee has an important role in considering all noise issues arising from the port operation (AP29.C.3). The Port Operator is required to implement such recommendations of this committee as can be implemented within budget and without compromising the efficiency, safety and competitiveness of port operations.

It is considered appropriate that the Port Noise Liaison Committee remains focused on issues relating directly to port noise. Accordingly, it will be constituted separately from the current Port Nelson Environment Consultative Committee, which has a wider role.

The Port Operator is responsible for providing a budget that makes adequate provision for this Committee to undertake its functions, including investigating and recommending noise reduction measures at the port (AP29.C.4).

6.9 Planning Maps

New Planning Maps are included in Appendix A of proposed Variation 07/01. These are necessary to replace the current planning maps 6L, 9L and 10L, because of amendments in respect of the Port Effects Control Overlay and the Port Effects Advisory Overlay.

These new planning maps show the new Port Effects Control Overlay has been extended over a wider area than previously to include the 55dBA L_{dn} line, and the Port Effects Advisory Overlay which previously extended over these properties has been deleted. This is considered to be more consistent with the Port Noise Standard, which sets 55dBA L_{dn} as the outer control boundary for noise-sensitive activities and requires that construction or alteration of a building is permitted subject to specific requirements for acoustic insulation.

The Port Noise Limit Line has also been deleted from the Planning Maps.

7. APPROPRIATENESS OF PROPOSED VARIATION

7.1 Introduction

During the consultation phases, some parties raised concerns regarding the Port Chalmers approach to the management of port noise. These concerns are summarised in the notes from the public meetings on August 2005 (document '9') and 6 June 2006 (document '19'), and also in the notes on community concerns and recommended approach (document '22').

The main concerns, and the further work and responses to those concerns, are further discussed in this section of the Section 32 Evaluation, as a convenient basis for further analysing the appropriateness, efficiency and effectiveness of the proposed variation.

7.2 Removal of Enforcement and Monitoring Requirements

Concern

One main concern expressed by some residents was that the variation removes the ability for the Council to enforce a noise limit line.

There was also a concern that the regulatory role of NCC in the process would be significantly reduced, and that the Port Operator would essentially be able to carry out its activities without monitoring of noise levels by the Council.

Response

The proposed variation does not provide a system where enforcement action can be taken if the port activities exceed the noise levels shown on the noise contours.

The philosophy of the proposed Variation is to allow the Port Operator some flexibility (without the potential for enforcement action), while imposing a financial incentive for the reduction of noise levels. The Port Operator is required, at its own expense, to provide mitigation in the form of property purchase or acoustic insulation and ventilation to noise-affected properties. This is considered an appropriate method of addressing the noise issue, rather than maintaining a regulatory regime for all of the reasons set out in section 4.4 of this Section 32 Evaluation.

In recognition of the concern relating to monitoring, the proposed Variation requires continuous noise recording to be carried out by the Port Operator, as set out in rule AP29.A.2.i(a). The results of the sound level monitoring are to be provided to NCC and the Port Noise Liaison Committee, on a monthly basis as set out in AP29.A.2.i(b), and the information is to able to be used for updating the port noise contour map, managing the operations at the Port to minimise or reduce noise where noise received at properties is greater than predicted in the modelling, and to respond to any one-off incidents.

7.3 Commitment to Reducing Noise

Concern

Some parties were concerned that the approach advocated in the variation would lead to the Port Operator concentrating on mitigating the effects of noise (through property purchase and acoustic treatment of dwellings), rather than on measures to actively reduce and minimise the level of noise generated from the port. There was considerable dissatisfaction expressed as to a perceived lack of commitment by the Port Operator to noise reduction measures in the past.

Response

It is considered that there will be a strong financial incentive for the Port Operator to minimise noise levels, in order to reduce the costs of purchasing and acoustically treating properties affected by noise.

However, it is accepted that the proposed Variation is equally focussed on promoting noise reduction and minimisation. In response to the concerns, NCC requested that a report be provided on the measures taken by PNL over recent years to reduce noise or minimise it at source. Two reports were prepared showing a wide range of environmental mitigation projects being investigated, and other measures carried out at the port since 1993 (documents '14' and '15').

These measures include:

- Moving log operations away from the residential areas, quieter log loaders.
- Restricting use of loudspeakers and ships horns while at berth.
- Purchasing quieter plant and machinery (e.g. generators, log loaders).
- Changing forklift backing alarms to strobe lighting.
- For container operations to include buffer areas, delivery time restrictions, face refrigerator engines away from residential areas.
- A staff awareness campaign.
- Issues register including mitigation approach for each complaint, and
- Projects to investigate soundproofing of the crane winch room, and dampening of the impact noise from containers and hatch covers placed on the wharf, and between container spreaders and containers.

It is an expected outcome of proposed Variation 07/01 that these types of noise reduction measures will continue to be implemented through the Port Noise Management Plan, and the operation of the Port Noise Liaison Committee.

7.4 Noise Complaints

Concern

From consultation undertaken it was apparent that there is considerable dissatisfaction with the current process for making complaints about port noise, and the follow up actions and outcomes arising from those complaints. There was some uncertainty regarding whether complaints should be made to the Port Operator or to NCC, and who was responsible for following up on complaints. There was also dissatisfaction over the length of time taken to investigate and take action on complaints.

The feedback was that any new approach would need to significantly improve the current noise complaints procedures.

Response

A report provided by PNL suggested a Noise Complaints Procedure (document '18'). NCC staff and consultants reviewed this and have since developed a refined draft Noise Complaint Procedure. This is advocated for inclusion in the Port Noise Management Plan (refer to ***Appendix 4***). This shows a clear delineation between the respective roles of NCC monitoring and enforcement staff, the Port Operator's environmental staff, and the Port Noise Liaison Committee.

In the first instance complainants will be encouraged, through a public awareness campaign, to contact the NCC Environmental Officer. The officer will visit the property and take noise level readings. If the noise source is from leased land at the port, the officer will proceed to take such action as appropriate in terms of the Industrial Zone rules applying to the leased land boundaries (i.e. under the current rules). If the noise source is from land used by the Port Operator, the officer will contact the Port Operator on its 24 hour line so that the complaint can be logged and immediately followed up on by the Port security, with an aim to taking action as soon as possible to stop the noise if it is still occurring.

Whilst that is occurring the NCC officer will carry out an independent investigation and prepare a report on the incident, with a copy to the Port Operator.

The proposed Variation requires the establishment of a Port Noise Liaison Committee, and one of its key roles is be to review the complaints procedures and to continually review the action taken in response to specific complaints.

The Port Noise Liaison Committee will consider the report, and may either recommend mitigation action be undertaken at source or a review of the noise contours (where the 'three strikes' scenario applies) be carried out.

The NCC officer's report on any noise complaint incident will form the basis of determining whether a 'strike' has occurred in terms of rule AP29.B.

7.5 Costs and Effectiveness of Acoustic Treatment

Concerns

A concerned expressed by some residents was that the Variation proposed that owners of houses within the 55 to 59dBA contours would only be eligible for a maximum of 50% of the total costs of acoustic insulation for their dwellings. The view was expressed that as the Port Operator was generating the noise it should be responsible for the total costs of mitigation.

A related concern was the effectiveness of the acoustic insulation requirements contained in the Variation, and the length of time before houses would be purchased or acoustically treated.

Response

As discussed in section 6.7 of this report, the 50% contribution by the Port Operator for acoustic treatment is considered an equitable and fair contribution. It recognises that whilst the Port Operator has a responsibility to reduce, minimise or mitigate noise effects, port noise is a reality in residential areas adjacent to the port, and it is not unreasonable for owners to contribute some of the costs to achieve a low level of noise in dwellings. Acoustic insulation to this level will also mitigate against road traffic noise and noise from other sources.

In response to a request from NCC staff, PNL investigated and reported on the effectiveness of acoustic insulation treatments in the various types of dwellings on the Port Hills in Nelson (document '16'). Four typical dwellings were examined in Russell Street, Mt Pleasant Avenue and Queens Road, to determine the treatment that would be required to achieve the internal design level of 40dBA L_{dn} in all habitable rooms, including the 3dBA tolerance added to the outside noise level predicted at each dwelling from the noise contour plans.

The report shows that the internal design level can be achieved with houses constructed of timber weatherboard with sash windows, and also plastered Hardiflex. In those dwellings, the total cost for treatment was between $33,000 and $61,000, including the ventilation systems. This level of acoustic treatment is based upon those dwellings receiving outside noise levels ranging between 66dBA and 71dBA. The cost of acoustic treatment for the majority of properties further removed from the port, and receiving less noise, is expected to be significantly less, and the owners would be required to contribute no more than 50% of those costs.

Given that there are some 124 properties contained in the Port Effects Control Overlay eligible for purchase or acoustic treatment under the proposed Variation, the mitigation program has the potential to be quite time-consuming. This was a principal concern of residents facing the prospect of waiting potentially several years for relief from noise effects in terms of the Port Noise Mitigation Plan. Accordingly, the proposed Variation contains some definite and realistic time frames for the program of mitigation to be initiated and implemented.

Firstly, the Port Noise Mitigation Plan is to be produced within 6 months of the notification of Variation 07/01. AP29.B.4 requires staging for mitigation of noise-affected properties so that within the 65dBA contours offers are made within 1 year, and settlement or completion of the acoustic certificate within a further 6 months; and within the 60 – 65dBA contours offers are made progressively within 3 years in order of priority based on decibel intervals.

Some residents had suggested the Variation should not take effect until the outcome from the submission and hearing process is determined. However, it was considered more appropriate for the Proposed Variation to take effect from its date of notification, as this would bring forward the program of acoustic treatment for existing noise-affected dwellings.

7.6 Exposure to Outdoor Noise

Concern

One potential shortcoming of the approach adopted in the Proposed Variation is that it focuses only on attenuating noise received within dwellings. The reason for this is that the health and safety focus is on achieving an adequate sleeping environment for residents in noise affected areas of the Port Hills. The mitigation package has been designed to achieve this outcome.

Accordingly, noise received in outdoor living areas would not be specifically controlled. It is accepted that, in view of the Nelson climate and lifestyle, it is important that outdoor living areas are not subject to excessive noise, especially during the twilight hours in summer months. The NCC Environment Committee, in its resolution of February 2005, recognised the concern, and resolved that an assessment be provided on the effects of noise received in outdoor areas of affected properties.

One potential means to address the concern, suggested by some residents, was to impose an upper limit of acceptable noise received at a residential property boundary, i.e. an L_{max} control.

Response

NCC staff requested that PNL provide an assessment on the noise effects on outdoor living in Nelson, and that this include an evaluation of potential methods to address the issue. A report was prepared by PNL's acoustic consultant (document '16') and the findings of the report are summarised as follows:

- A large number of residential properties close to the port are exposed to relatively high levels of traffic noise, and this is a major factor in their current noise environment regardless of noise from the port and will continue to be the case.

- The actual increase in port noise is not expected to alter significantly over time, and there will be only a small increase in the number of days of the year when noise from the port is present.

- Confining loading operations to winter months (when exposure to outdoor noise is less of a concern) is not practical.

- To take account of the greater sensitivity at night time, a penalty of 10dBA is applied to any sound that occurs from 10pm to 7am, and the busy five day period is adopted in the analysis, recognising that there will be periods when the noise is less when the port is not as busy.

- Significant efforts have been made to reduce noise at source (refer documents '14' and '15').

- Additional controls on noise are best achieved by treatment of dwellings, although this will not protect against outside noise.

- A number of relevant Environment Court cases were assessed (mainly concerning airports and ports), and they show that outdoor amenity is, at best, of secondary importance to the primary issue of providing insulation for improving the indoor environment.

- Enjoyment of outdoor areas will still be possible at times when port noise is not present, but it is unrealistic for residents to expect that these areas will be free from noise at all times.

- There are no effective and practical means of mitigating or shielding outdoor areas from noise exposure (e.g. screens will block views from dwellings, may obstruct access, and must be large and continuous to be effective).

The Council's acoustic consultant has reviewed the above report and concurs that there are no effective and practical means of mitigating against outdoor noise exposure.

Introducing an L_{max} control (i.e. specifying a maximum noise level which must not be exceeded at any time during the night) is not supported for the following reasons:

- This represents an enforcement based approach and is inconsistent with the approach adopted in the Proposed Variation, which is focused on management of noise and mitigation of adverse effects.

- An appropriate L_{max} level would need to be set at a high level (e.g. 75dBA-85dBA) to enable operations to continue at the port, as discussed in the Careys Bay case (document '1'), and

- The sudden impact noises such as from lowering containers and hatch covers, which cause the most disturbance to sleep, are difficult to enforce by rules and monitoring, and are better addressed through staff awareness, training and actions by the Port Noise Liaison Committee.

The Port Noise Management Plan is a key document in that it will include measures for reducing and minimising noise from activities at the port. Whilst the focus will be on minimising noise received indoors, a consequence of the Port Noise Management Plan will be to improve practices at the port to minimise overall noise. This may also have benefits in terms of reduced noise received in outdoor areas.

8. RISKS

The RMA requires that the risk of acting or not acting is taken account of in the Section 32 Evaluation, if there is uncertain or insufficient information about the subject matter.

Extensive work and consultation has taken place in the resolution of references and in development of the proposed Variation since 1999. In the course of this process, considerable monitoring, modelling, research, investigation and reporting has taken place. This work has been instigated by PNL, and by NCC staff and consultants, and is summarised in earlier sections of this Section 32 Evaluation.

Much of the information is contained in reference documents, which have been made publicly available (refer to the Reference Document List in ***Appendix 1***). Where residents and other parties have pointed to shortfalls in information throughout the process further work and assessment has been carried out as recorded in this Section 32 Evaluation.

The proposed Variation has a strong focus on requiring further monitoring of noise from the port operations, and continuous noise recording is required. The information from that process will enable the noise contours to be regularly reviewed and updated, the extent of properties requiring mitigation will be updated, and any issues of contention arising from the updated noise information can be addressed as appropriate by the Port Noise Liaison Committee.

In summary, it is considered that there is currently sufficient information available about this issue, and further noise information will become available as required by the proposed Variation. There is accordingly considered to be no risk of acting, in the manner recommended, from insufficient information being available.

9. CONCLUSION

Noise from activities at Port Nelson, and its effects on adjacent residential properties, has been a long-standing issue. The NCC, PNL, affected residents, and the Environment Court, have all recognised that the current situation is untenable, and a comprehensive review of the planning mechanisms is required.

References were lodged by residents and by PNL relating to decisions on the proposed NRMP, and these were not able to be resolved through the Court-assisted mediation process. A draft Variation was initially prepared by PNL and the Environment Court agreed, on the basis of recent experiences at Port Chalmers, to allow the Council to further develop a Variation to comprehensively address the issues.

Extensive consultation on this issue has occurred since 1999, and a number of options and planning responses have been investigated and assessed. The management of noise at source, and the mitigation of the effects of adverse noise at residential properties, has been assessed as the appropriate approach to take in this instance.

Concerns have been noted from some parties who appear fundamentally opposed to this approach, and these have all been analysed and addressed in the development of Proposed Variation 07/01. A number of refinements and improvements have been made following on from the recent Port Chalmers resolution, and it has been tailored for the Nelson environment, particularly with regard to the acoustic treatment including ventilation requirements.

In overall terms, it is considered that Proposed Variation 07/01 achieves the purpose of the RMA, and provides a realistic solution to the port noise issues in Nelson.

APPENDIX 1: REFERENCE DOCUMENTS

1. Environment Court Decision C130/2003: Careys Bay Residents v. Dunedin City Council, 2003

2. Environment Court Decision W77/2003: Port Nelson Limited , W&M Win v. Nelson City Council, December 2003.

3. Glasson, Potts Fowler October 2004: Issues and Options Discussion Paper, Port Noise Variation (Report prepared for Port Nelson Limited).

4. Glasson, Potts, Fowler, January 2005: Recommended Approach to Port Noise Variation - Report to Nelson City Council Advisors. (Report prepared for Port Nelson Ltd).

5. Nelson City Council, January 2005: Staff Report to Environment Committee on 'Port Noise Variation' (Report No. 6245).

6. Nelson City Council, February 2005: Minutes of Environment Committee of 8 February 2005 – Resolution in respect of staff report (No 6245)

7. Glasson, Potts, Fowler, July 2005: Nelson Resource Management Plan – Proposed Variation 01/05 – Draft Port Noise, Port Nelson (Amendments). (Report prepared for Port Nelson Ltd).

8. Glasson, Potts, Fowler, July 2005: Nelson Resource Management Plan – Proposed Variation 01/05 – Draft Port Noise, Port Nelson – Assessment and Section 32 Evaluation. (Report prepared for Port Nelson Ltd).

9. Nelson City Council, August 2005: Staff Notes of Matters Raised at Public Meeting on Port Noise held on 3 August 2005.

10. Glasson, Potts, Fowler, November 2005: Telephone Survey Report September & October 2004 – Port Noise – Port Hills Residents, Nelson. (Report prepared for Port Nelson Ltd).

11. S Hughes & Associates Ltd, April 2005: Noise Monitoring @ Port Nelson 19/4/2003 – 29/6/2003. (Report prepared for Port Nelson Ltd).

12. S Hughes & Associates Ltd, April 2005: Noise Monitoring – Container Vessel @ Main Wharf South. (Report prepared for Port Nelson Ltd.)

13. S Hughes & Associates Ltd, April 2005: Analysis of Noise Complaints from the Issues Register 1995 – 2004. (Report prepared for Port Nelson Ltd).

14. S Hughes & Associates Ltd, June 2005: Port Nelson Environmental Projects: 2005 – Port Noise. (Report prepared for Port Nelson Ltd).

15. S Hughes & Associates Ltd, June 2005: Port Nelson Environmental Mitigation 1993-2004 – Port Noise. (Report prepared for Port Nelson Ltd).

16. Hegley Acoustic Consultants, December 2005: Noise Effects on Outdoor Living (Report prepared for Port Nelson Ltd).

17. S Hughes & Associates Ltd, November 2005: House Designs to Control Port Noise. (Report prepared for Port Nelson Ltd).

18. S Hughes and Associates Ltd, December 2005: Port Noise Liaison Committee & Flow Chart – Noise Complaints. (Report prepared for Port Nelson Ltd).

19. Map of Main Wharf South - Proposed Reclamation.

20. Nelson City Council, June 2006: Staff Notes on Issues Raised at Public Meeting held on 6 June 2006.

21. Port Nelson Limited, August 2006: Additional information provided by Port Nelson Limited relating to Implications of a Port curfew, and costs associated with the reorganisation of port activities.

22. Nelson City Council (Project team), November 2006: Summary of Community Concerns and Recommended Approach.

23. Environment Court Decision C38/2007: JN Frater & Lyttleton Port Company v.Christchurch City Council.

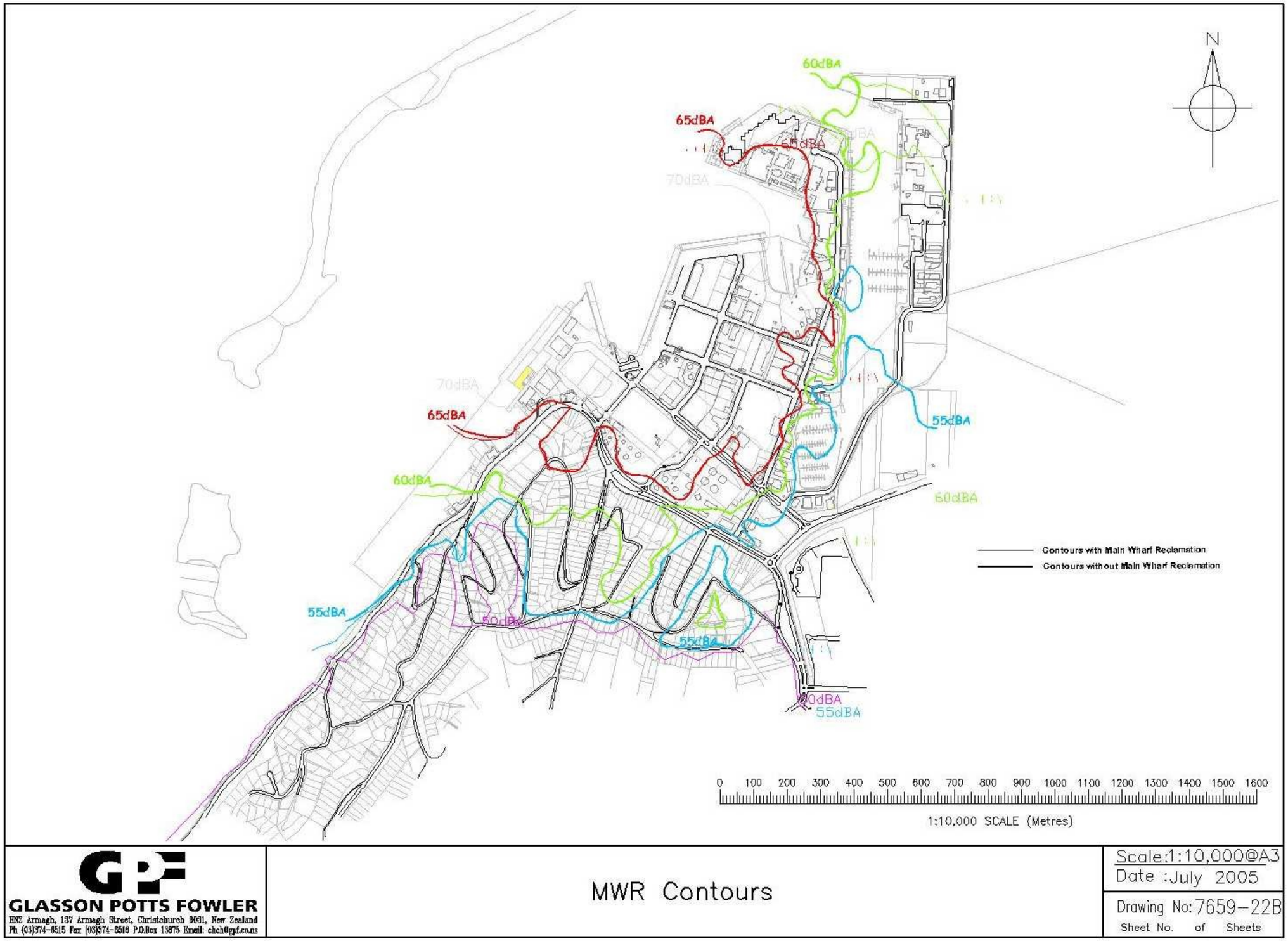
24. Contour Map prepared by PNL showing effects of A-B line scenario re-organisation (Containers North of Wildman Ave), October 2004.

APPENDIX 2: SUMMARY TABLE - ASSESSMENT OF OPTIONS

	Option 1: Status quo	**Option 2: Port Noise Standard, with Mitigation Port side of 65dBA line**	**Option 3: Port Otago approach**	**Option 4: Zoning approach (2 new Residential zones)**	**Option 5: Curfews**	**Option 5A: Re-organise port activities – confine containers to south of Wildman Ave**	**Option 5B: Re-organise port activities – reverse roles of McGlashen & Main Wharf South**
Benefits/ Advantages	All parties have certainty - the noise limit lines and maximum noise levels allowable are clearly expressed in the NRMP. The Port is advantaged by not being required to undertake monitoring, noise reduction measures and mitigation.	All parties have certainty. A program of acoustic insulation/ventilation is an advantage over status quo, where residents must carry out their own mitigation. Potentially the cheapest option for the Port company if it can guarantee its activities will not change significantly once the noise contour is in place.	Acoustic insulation provided (to varying degrees), will improve sleeping environment inside affected dwellings, and possible purchase of most-affected properties, by Port Operator to benefit of residents. Port has an incentive (financial) to manage its noise effects. Provides Port Company with flexibility and security of operation. Reduces extent of Council monitoring and potential enforcement action. This approach recently tested through the Environment Court and found to be appropriate (at Port Chalmers).	Residents in affected areas are alerted by the special zonings to the exposure to Port noise in these areas. Some certainty for residents by having prescribed maximum noise levels in the new residential sub-zones. Reduced costs for Port Operator if it is able to comply with the standards established.	Some reduction in noise levels during night-time hours, especially a reduction in periodic impact noises from container handling at night (but will be limited to the period of the curfew). However there will be noise from ships at berth, and effectiveness of curfews depends on curfews being placed on <u>all</u> berths in Port). Mitigation by acoustic insulation and property purchase not required (if sole reliance on curfews).	Would move container vessel activity away from West-facing residents. Little real advantage – noise contour modelling indicates there is very minimal effect on noise contours.	Would move container vessel activity away from West-facing residents. Little real advantage – noise contour modelling indicates there is very minimal reduction in effect on west-facing residents, but an increase in noise effects for north-facing residents.
Costs/ Disadvantages	Current Plan provisions cannot practically be achieved at all times by Port, as recognised by Environment Court (*W077/03*) - consequently no effective control at present. Failure to meet rules results in costly enforcement action. Costs of noise insulation and other mitigation borne entirely by residents. Monitoring and enforcement costs borne by NCC and ratepayers.	Maintains a regulatory/ enforcement regime - failure to meet noise standard could result in litigation. Does not make allowances for possible changes in Port operations over time; therefore may • result in loss of efficiency if methods of operations required to change in order to meet noise standards, and • require a further plan change in the future if noise standards cannot practically be achieved. Monitoring and enforcement costs borne by NCC and ratepayers.	Significant costs to Port Operator in monitoring noise effects, re-establishing contours, preparing noise management and mitigation plans, establishing and operating Port Noise Liaison Committee, acoustic insulation and property purchase. Purchase $1.5 million. Acoustic ventilation approx $2.0 million. No enforcement through rules in the NRMP, and Port is potentially able to undertake noisy activities without threat of enforcement action or potential curfews provided they are able to pay cost of insulation. Port may potentially get noisier and contours will extend further from Port. Little effective control over noise received in outdoor living areas, and peak noise events (as with status quo and Port Noise Standard options).	Inflexible fixed zone boundaries – these could only be adjusted by Plan Change processes as Port operations and noise environment changes. Would be unable to cope with any significant changes in port operations. Unlikely to be any more effective than Port Noise Standard approach. No enforcement under this regime, may be unacceptable to residents.	Port is limited by tidal constraints and curfews will therefore cause delays, longer ship visits; may require more berths; reduced efficiency; potential loss of customers/ ships. Significant effects on viability and effectiveness of the port. Curfews would not provide a complete solution – only part of a comprehensive solution.	Would require rebuilding of McGlashen and Kingsford Quay at substantial cost ($65 million).	Would increase impact of container noise for North-facing residents. Costs of $24 million (including cost of extending Main Wharf South to provide for vessels currently at McGlashen Quay)

Effectiveness and Efficiency in achieving District Plan (NRMP) Objectives and Policies	DO12.1 The Port Industrial Area is not able to function efficiently and effectively under the current rules, which impose noise levels which cannot be achieved at all times. DO12.1.3 – The Port is not able to effectively avoid the adverse effects on the community, as recognised in the Explanation. The Port is not required by the rules to mitigate the adverse effects, contrary to the Policy. Overall, the rules in the NRMP are ineffective in achieving the NRMP objectives and policies.	The Port is still not able to function efficiently and effectively under a regulatory regime, which is inflexible and which impose noise levels which cannot be achieved in practical ways at all times. The Port would be required by the rules to manage its noise and to mitigate the adverse effects, which is an advantage for residents.	Port Operator supports the flexibility that this option offers, and accepts that it would be responsible for ongoing monitoring and management of its noise environment. The Port would be required to manage its noise and to mitigate its adverse noise effects through acoustic insulation (to varying degrees) and property purchase where appropriate. More emphasis than Options 1 and 2 on reduction or minimisation of noise through the Port Noise Management Plan and the operation of the Port Noise Liaison Committee.	The adverse effects will be partly avoided by imposing curfews, but the Port is not able to operate as efficiently and effectively.	The Port is significantly hindered in its ability to operate as efficiently and effectively with curfews – due to the tidal restrictions and operational difficulties these would impose.	Costs for Port Operator would significantly affect its viability, and will not provide mitigation or reduction in noise effects to affected residential areas.	Costs for Port Operator are significant, and will not provide mitigation or reduction in noise effects to affected residential areas.
Appropriateness	The current Plan provisions are ineffective and do not assist the Port or the residents. In light of Environment Court directive, new provisions are required.	This option better achieves the objectives and policies for mitigation of the adverse effects, but it still poses difficulties for the Port in being able to operate efficiently.	This Option better achieves the objectives of providing flexibility for a dynamic sea Port, whilst concentrating on noise reduction and minimisation as well as mitigation for the adverse effects arising from Port generated noise.	The zoning option is essentially a hybrid of the Port Noise Standard and the Port Chalmers approach. It has some advantages, but overall does not provide sufficient flexibility and will involve regular Plan Change procedures.	Some protection for residents at certain hours of the night, but unless they are of extensive duration, curfews will not by themselves provide a quiet sleeping environment throughout the night. Only a partial solution, and even short-term curfews will significantly affect Port operations.	Will provide few benefits as modelling indicates, and will incur substantial costs.	Will provide few benefits as modelling indicated, and potentially increased noise effects for north-facing residents, for substantial costs.

APPENDIX 3: PORT NOISE CONTOUR MAP



APPENDIX 4: DRAFT NOISE COMPLAINTS PROCEDURE