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Attention: Kath Coombes

DATE: 14 May 2008

PROJECT: **Wynyard Quarter – Proposed**  
**Plan Change 3**  
**Review of Submissions**

REPORT NO.: 2008112A

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## 1.0 INTRODUCTION

Marshall Day Acoustics (MDA) has been engaged by the Auckland Regional Council (ARC) to review the submissions received relating to the noise rules contained in Proposed Plan Change 3 (PC3 – Wynyard Quarter).

This report also addresses the conflicting acoustic expectations of the marine industries and future residential activities and the relationship between the noise rules of PC3 and those of the Auckland City Council Modification No. 4 – Wynyard Quarter and the Viaduct Harbour Precinct Plan provisions.

## 2.0 SUBMISSIONS

The following submissions have been received relating to noise rules and related provisions. The content of these submissions is summarised and relevant comment provided.

### 2.1 Provision 35

- Submission No. 3/7: Brian McClure  
 Submission No. 12/4: Bowery Holdings Ltd  
 Submission No. 5/5: E J Wickham and E B Ikin

These four submitters object to the "*notified noise levels on the wharves given the proximity to residential apartments*".

#### Comment

The proposed external noise limits of Rule 35.5.3 reflect the need to provide for continuation of the existing maritime and industrial activities in the Wynyard Quarter. It is not considered reasonable, at this early stage of the Wynyard Quarter redevelopment to introduce more stringent noise limits which would have the effect of making existing activities rely on 'existing use rights' and potentially prevent change to those existing activities, many of which have a lengthy history of occupation. Further, it is observed that the noise limits of PC 3 are the same as those currently applying in the Regional Plan Coastal in Rule 35.5.3 (b) for noise generated in Port Management Area 4A which includes Wynyard Wharf, the nearest wharf to the property at 121 Customs Street occupied by the submitters.

Therefore, in terms of the potential for received noise levels and the controlling limits, the status quo effectively remains.

### 2.2 Provision 35.5.3 (b)

- Submission No. 26: Lighter Quay Residents' Society  
 Submission No. 21: Wei-Ling Lim

These submitters refer to the *"potential adverse effects of late evening entertainment"* from the Halsey Street Extension Wharf *"and consequential effects by people leaving"* on residential and visitor accommodation in the Lighter Quay area.

More specifically there is reference to noise effects of entertainment, traffic noise and noise and disturbance effects of inebriated people walking along Halsey Street around the edge of the harbour to the Viaduct Basin.

The submitters seek the following, in relation to potential noise effects:

- Non-complying activity status for entertainment and social type events on the wharf after 11.00 pm Monday to Thursday, and after 12 midnight on Friday and Saturday.
- Plan provisions to ensure that 'social type activities' are directly related to organised marine events and for non-complying activity status for such activities that are not directly related to that purpose.

#### Comment

The submitters' contention that entertainment events have the potential to cause noise effects generally in the manner described by them is accepted. The issue to be considered, is whether or not such activity should be able to take place as of right, or be subject to restriction in the manner described by the submitters, and if the proposed noise limits are appropriate.

The provisions of the both the ARC and ACC plans for the Wynyard Quarter both generally categorise 'entertainment' and 'residential accommodation' as permitted, albeit subject to some restrictions. It appears therefore, that there is an overall planning policy to provide for these generic activities in relatively close proximity, notwithstanding that in terms of noise effects they are potentially incompatible. This policy requires general acceptance by noise generators (entertainment facilities) that there will be some restrictions on the level of noise such activities may emit from their premises, and by noise-sensitive receivers (residences) that noticeable external impact from entertainment noise will occur and that residential buildings must be insulated against such noise to an acceptable degree.

In relation to the appropriateness of the noise limits, PC 3 in Rule 35.5.3 limits noise levels to 65 dBA  $L_{10}$  daytime and 60 dBA  $L_{10}$  and 75 dBA  $L_{max}$  night-time, which are the same as the limits of the Operative Regional Coastal Plan that currently apply to the land occupied by the submitters at 75 – 89 Halsey Street. On this basis it can be contended that there is no change to the existing controls.

However, there are two further factors which should be given consideration. Firstly, the character of the noise source is likely to be different with amplified music from entertainment facilities containing significant low frequency components which are less readily attenuated by building structures. Noise rule (7.6.3) of the ACC Central Area Plan which applies to land occupied by the submitters contains the same A-weighted noise limits as Rule 35.5.3 (65, 60 dBA  $L_{10}$  and 75 dBA  $L_{max}$ ) but also

contains low frequency controls applying at night (11.00 pm to 7.00 am) as follows:

70 dB L<sub>10</sub> at 63 Hz

65 dB L<sub>10</sub> at 125 Hz.

The effect of these low frequency controls is to limit the volume of the low frequency components of the overall dBA sound level so as to enable building design to achieve acceptable internal levels and, to more generally ensure undisturbed sleep by residences during the night-time period.

For those reasons the submitters concerns are supported to the extent described. It is considered that it would be advantageous for reasons of appropriate control and for consistency, to align Rule 35.5.3 with the ACC Central Area Plan Rule 7.6.3.

#### Recommendation

The Rule 35.5.3(b) be further amended as shown in Section 3 overleaf.

### 2.3 Provision 35.5.3(c)

Submission No 47/11: Sanford Limited,

Submission No 48/12: Simunivich Fisheries Ltd

Submission No. 49/11: Auckland Fishing Port Ltd

These submitters seek modification of the *"noise limits for noise generated in the Coastal Marine Area around Wynyard Quarter to clarify where the noise limits are to be measured and to permit an increase in the number of high noise events each year"*.

#### Comment

In relation to the matter of 'clarification' as to where the noise limits are to be measured, it is considered that Rule 35.5.3 in its current form is clear in this matter. It requires measurement; *"1 metre from the façade of an occupied building on the southern side of Quay Street, or within the Wynyard Quarter, or when measured 1 metre from the façade of an occupied building within the Viaduct Harbour Precinct"*.

No further definition of the measurement locations is considered to be necessary.

Concerning the request for an increased number of high noise events, it is noted that the Rule 35.5.3 (c) permits 15 events per year. It is observed that the ACC Plan modification No. 33 CPM 33 also permits in Rule 14.9.12.8.4 15 events per year in Quarter Area 7 (Wynyard Quarter). In the Viaduct Harbour Precinct in Rule 14.7.6.3 (d) 15 events per year are also permitted.

This is a total of 45 high noise events per year in the general area, all of which have the potential to have an impact of varying degree, on noise-sensitive activities in the area. On this basis, to permit any additional high noise events is considered to be unsupportable.

Recommendation

No changes to Rule 35.5.3 are recommended in this regard.

**2.4 Stringency of Noise Limits**

Submission No. 45; Marine Industry Association

Submission No. 13: Westhaven Viaduct Tenants Association

These submitters seek *"higher  $L_{10}$  and  $L_{max}$  limits in recognition of sometimes noisy port and marine industrial activities and reverse sensitivity provisions in the District Plan. Make explicit reference to the requirement for non-complaints covenants."*

Comment

The general activity noise limits of Rule 35.5.3 of 65 dBA  $L_{10}$  daytime and 60 dBA  $L_{10}$  and 75 dBA  $L_{max}$  night-time are considered to be appropriate for industrial activities in the context of the circumstances under consideration. These limits align with those of the ACC in PM 4 for the Wynyard Quarter except for the qualification referred to in the comment to submission No. 26, (Section 2.2) which relates to low frequency noise.

The matter of reverse sensitivity is addressed in the provisions of ACC PM 4 in Rule 14.9.12.8.1 where all accommodation units are required to be designed and constructed to achieve appropriate internal noise criteria (35 dBA  $L_{10}$  in bedrooms and 45 dBA  $L_{10}$  in other habitable spaces), together with sufficient ventilation. The achievement of these internal criteria is to be based on external noise levels equal to those of the external noise limits (65 /60 dBA  $L_{10}$ ) and an external traffic noise level of 65 dBA  $L_{10}$ .

It is considered that these provisions are suitable for the purpose of addressing the reverse sensitivity for internal noise environments. In relation to the external noise environment there must be an acceptance by residents and other noise-sensitive activities that the Port activity is at times relatively noisy and that some noise impacts are inevitable up to the limits applying at building facades.

The relief sought by the submitter in relation to 'non-complaint covenants' is addressed in ACC PM 4 Rule 14.9.6.6 where *"permanent accommodation"* is a permitted use only where a no-complaints covenant has been entered into. In circumstances where no such covenant exists, permanent accommodation is a discretionary activity providing opportunity for the imposition of conditions addressing the issue of reverse sensitivity.

Recommendation

No changes to Rule 35.5.3 (b) are recommended in the manner sought.

### 3.0 DISCUSSION RULE 35.5.3

Rule 35.5.3 (c), which permits high noise events, is an almost exact copy of Rule 14.9.12.4 in the ACC PM4 document. These two rules are based on, and are similar to Rule 14.7.6.3 in the ACC Victoria Harbour Precinct Plan provisions.

These rules all contain common drafting defects. In Marshall Day Acoustics opinion these defects should not be perpetuated in Rule 35.5.3, nor in ACC PM4 Rule 14.9.12.8, if the submissions received can support their remedy.

An amended version of Rule 35.5.3 containing the additions recommended in the comments for submission No. 26, and the correction of the drafting errors, is as follows and is recommended for adoption if justified by the content of the submissions. Additions are double underlined and deletions are double strike-through.

Similar recommendations have been made to the Auckland City Council in relation to Rule 14.9.12.8.4 in the Wynyard Quarter in Proposed Plan Change 4 which is attached as appendix 1.

#### Noise – 35

##### Permitted Activities

35.5.3 Noise generated within the Port Management Areas:

- b Within Port Management Areas 1C, 2A, 2B, 3 and 4A, the noise level when measured ~~4m~~ one metre from the façade of an occupied buildings on the southern side of Quay Street, ~~or Jellicoe Street, or on the western side of Brigham Street or Halsey Street (as appropriate)~~ or within the Wynyard Quarter, or when measured 1m from the façade of an occupied building within the Viaduct Harbour Precinct as defined in the Auckland City Proposed District Plan (Central Area Section) shall not exceed:

On all days between  
7.00am and 11.00 pm  $L_{10}$  65 dBA

On all days between  
11.00pm and 7.00am  $L_{10}$  60 dBA

$L_{10}$  70 dB at 63 Hz

$L_{10}$  65 dB at 125 Hz

$L_{max}$  75 dBA

- c In respect of activities under Rules ~~25.5.40~~11 and ~~25.5.41~~12 there shall be no more than 15 ~~3~~ noise events in any calendar year (1 January to 31 December inclusive) where the noise limits under Rule

35.5.3b are exceeded. Any exceedance shall be subject to the following:

i The general noise level limit under Rule 35.5.3b may be exceeded for not be for more than a cumulative duration of 6 hours within any 24 hour period for a noise event; and

ii †The maximum noise limits levels shall be not exceed the following limits:

- 75 d<sub>BA</sub> L<sub>10</sub> and 80 dBA L<sub>01</sub> (medium noise level), ~~for at least 9 of the 15 noise events:~~

and except that the levels shall not exceed:

- 85 dBA L<sub>10</sub> and 90 dBA L<sub>01</sub> (high noise level) except that for a cumulative duration of not more than 3 of the total of 6 hours permitted by this rule exclusive of one sound check of not more than one hour duration prior to each event, and for no more than 6 of the 15 noise events. The medium noise level may be exceeded to a maximum level of 85 dBA L<sub>10</sub> and 90 dBA L<sub>01</sub> (high noise level).

† iii Noise levels exceeding Rule 35.5.3b, including sound checks, shall start no earlier than 10.00am and shall finish no later than 10.30pm Sunday to Thursday inclusive, 11.00pm Friday, Saturday and 1.00am New Years Day.

† iv The medium and high noise levels shall be determined from the energy logarithmic average of the L<sub>10</sub> and L<sub>01</sub> values for any measurement periods not exceeding 15 minutes during the event. The L<sub>10</sub> values shall be determined from the logarithmic average of the L<sub>01</sub> values for representative periods not exceeding 15 minutes within the timeframe of during the event. Levels Limits shall not be exceeded by more than 5 dBA for medium noise levels and 3 dBA for high noise levels in any representative measurement period not exceeding 15 minutes during the noise event.

† v Not less than 4 weeks prior to commencement of the noise event, the organiser shall notify the ARC in writing of:

a The names and types of the acts and whether they are anticipated to be within the medium level or high level noise as defined above; and

b The person(s) and procedures for monitoring of compliance with noise limits levels; and

- c The nominated alternative date in the event of postponement due to weather.
- ~~iv~~ vi The ARC will keep a record of all noise events held and provide the information upon reasonable request.

APPENDIX 1 : MDA Report No: 2008112

Wynyard Quarter – ACC Noise Submissions

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Attention: John Duguid

DATE: 14 May 2008

PROJECT: **Wynyard Quarter – ACC**  
**Noise Submissions**

REPORT NO.: 2008112A

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#### 4.0 INTRODUCTION

Marshall Day Acoustics (MDA) has been engaged by the Auckland City Council to undertake a review of the submissions received relating to the Wynyard Quarter Noise Rules – Proposed Plan Modification No. 4: Plan Change, and to make recommendations for amendment of the noise rules where relevant. Additionally, there is consideration given to the noise rules and associated submissions, relating to the Auckland Regional Council (ARC) Plan Change No. 3 for the Wynyard Quarter.

#### 5.0 SUBMISSION

Submission No. 37: Western Viaduct Tenants & Ratepayers Association

This submitter seeks to have Quarter Plan J modified so that Noise Area 3 aligns with and replicates Quarter Area 3 and also that the daytime  $L_{10}$  limit in the redefined Noise Area 3 should be increased to 70 dBA as received in all noise areas and that night-time  $L_{10}$  levels should also be increased by a 'similar percentage'.

##### Comment

Examination of Quarter Area Plan A and Quarter Plan J shows that Noise Area 3 applies only to Quarter Area 3 where it is south of Jellicoe Street. The portion of Quarter Area 3 north of Jellicoe Street and west of Hamer Street is partly in Noise Area 4 and partly in Noise Area 1.

The noise limits of clause 14.9.12.8.2 as they apply to the areas under consideration are, in summary, as follows:

Noise from Area 3:	60/55 dBA $L_{10}$ received in Noise Area 2 65/60 dBA $L_{10}$ received in Noise Area 3
Noise from Area 1:	60/55 dBA $L_{10}$ received in Noise Area 2 70 dBA $L_{10}$ received in Noise Areas 1, 4 65/60 dBA $L_{10}$ received in Noise Area 3
Noise from Area 4:	60/55 dBA $L_{10}$ received in Noise Area 2 70 dBA $L_{10}$ received in Noise Areas 1, 4 65/60 dBA $L_{10}$ received in Noise Area 3.

It is noted that the activity status table in Rule 14.9.6.6 does not generally permit noise-sensitive activities in Quarter Area 3 as of right. It is, therefore, not clear to MDA as to why noise sources in Quarter Area 3 are subject to more stringent noise limits than those of Noise Areas 1 and 4 where the 70 dBA  $L_{10}$  limit applies to noise received in Areas 1 and 4.

It is further noted that for noise generated in Noise Area 3 there are no limits for noise received in Noise Areas 1 and 4, it is also unclear to MDA if this intentional. On this basis the amendments sought by the submitter are more stringent in relation to Quarter Areas 1 and 4 than the existing plan provisions.

It is suggested that consideration be given to extending Noise Area 3 to coincide with Quarter Area 3, as sought by the submitter, and applying the 70 dBA noise limit to noise generated in the extended Noise Area 3 as received in Noise Areas 1, 3 and 4. It is considered that the retention of the noise limits of 60/55 dBA  $L_{10}$  for noise received in Noise Area 2 is appropriate as these potentially contain noise-sensitive activities such as residential and educational facilities.

It is also recommended that limits for noise generated in Noise Area 3 as received in Noise Areas 1 and 4 (proposed to be 3) be included in table in 14.9.2.1.8.2 as shown below, if these can be warranted by the submissions received.

The adoption of these changes would enable the reduction in the number of noise areas from 4 to 2 (existing 4 & 3 becoming Noise Area 1), a useful simplification as the same noise limits would then apply to Noise areas 1, 3 & 4. Subsequent amendments would be necessary to Quarter Plan J as shown on the attached Figure 1.

The table in Rule 14.9.2.1.8.2, amended to implement these changes, is as follows. Deletions are struck through and additions underlined:

#### 14.9.12.8.2 External Noise Levels

- a) Noise from activities in Wynyard Quarter shall comply with the following ~~levels~~ limits, ~~measures~~ measured at 1 m from the façade of any building located in the Noise Areas shown on Quarter Plan J.

Noise Source Location	Noise Limit		Noise Receiver Location
	Day 7am – 11pm	Night 11pm – 7am	
Noise Areas 1,2, <del>3</del> ,4	$L_{10}$ 60 dBA	$L_{10}$ 55 dBA $L_{10}$ 66 dB @ 63 Hz $L_{10}$ 62 dB @ 125 Hz $L_{max}$ 90 dBA	Noise Area 2
Noise Areas 1,2,4	$L_{10}$ 70 dBA	$L_{10}$ 70 dBA $L_{10}$ 76 dB @ 63 Hz $L_{10}$ 73 dB @ 125 Hz $L_{max}$ 90 dBA	Noise Areas 1,4
Noise Areas <del>1</del> ,2, <del>3</del> ,4	<del><math>L_{10}</math> 65 dBA</del>	<del><math>L_{10}</math> 60 dBA</del>	Noise Area <del>3</del>

## 6.0 RULE 14.9.12.8.4 NOISE LEVELS FOR SPECIAL EVENTS

This rule is based on Rule 14.7.6.3 of the Viaduct Harbour Precinct section of the Plan relating to Temporary Activities. This rule contains some drafting defects and, if supported by submissions received, it is recommended that it should be amended to correct those defects so as to avoid their perpetuation in Plan Change 4.

Similar recommendations have been made to the Auckland Regional Council in relation to Rule 35.5.3 (c) in the Wynyard Quarter Coastal Plan Change 3 which is attached as appendix 1.

The Rule amended to remedy these defects is as follows. Deletions are struck through and additions underlined:

### 14.9.12.8.4 Noise ~~Limits~~ Levels for Special Events

- b) Events in Quarter Area 7 shall comply with rule 14.9.12.8.2 above, except that for no more than 15 noise events in any calendar year (1 January to 31 December inclusive) those ~~levels~~ limits may be exceeded subject to the following:
- i) The noise ~~level~~ limit specified in rule 14.9.12.8.2 is not to be exceeded for a cumulative duration of more than 6 hours within any 24 hour period for a noise event; and
  - ii) The ~~maximum~~ noise levels shall not exceed the following limits:
    - 75 dBA ~~L10~~ L<sub>10</sub> and 80 dBA ~~L01-L<sub>01</sub>~~ (medium noise level); ~~for at least 12 of the 15 noise events; and~~  
except that the levels shall not exceed;
    - 85 dBA ~~L10~~ L<sub>10</sub> and 90 dBA ~~L01-L<sub>01</sub>~~ (high noise level) for a cumulative duration of not more than 3 of the total 6 hours permitted in paragraph i) above exclusive of one sound check of no more than one hour duration prior to each event, and for no more than 3 of the 15 noise events.
  - iii) The medium and high noise levels shall be determined from the energy logarithmic average of the L<sub>10</sub> and L<sub>01</sub> values for any measurement periods not exceeding 15 minutes during the event. ~~The L01 values shall be determined from the logarithmic average of the L01 values for representative periods not exceeding 15 minutes within the time frame of~~ during the event. The noise ~~levels~~ limits shall not be exceed by more than 5 dBA for medium noise levels and 3 dBA for high noise levels in any representative measurement period not exceeding 15 minutes during the noise event.

- iv) Noise levels exceeding the standard in clause a e) including sound checks, shall start no earlier than 10.00am and shall finish no later than 10.30 pm Sunday to Thursday inclusive, 11.00pm Friday and Saturday and 1.00am New Year's Day.
- v) Not less than 4 weeks prior to the commencement of the noise event, the organizer shall notify the Council in writing:
  - The names and types of the acts and whether they are anticipated to be within the medium noise level or high noise level as defined in iv) above.
  - The person(s) and procedures for monitoring of compliance with noise levels
  - The nominated alternative date in the event of postponement due to the weather.
- vi) The Council will keep a record of all Noise Events held and provide this information upon reasonable request.

## 7.0 ALINGMENT WITH ARC PROPOSED PLAN CHANGE 3

The matter of alignment of the ACC noise provisions with those of the of the ARC Plan Change 3, are largely dealt with in the MDA report No: 2008112A dated 18 March 2008 prepared for the ARC. A draft copy of this report is attached as Appendix 1 to this report for information purposes.

## 8.0 RECOMMENDATIONS & CONCLUSIONS

The relief sought by the submitter to the noise provisions of Proposed Plan Modification no: 4 are effectively addressed by proposed amendments to Rule 14.9.12.8.2. Additional amendments are recommended, reducing the number of Noise Areas from 4 to 2. This results in a useful simplification of the noise limit table.

In relation to Rule 14.9.12.8.4 Noise Levels for Special Events, it is recommended that this be amended to remedy drafting defects and to align with similar recommendations made to the ARC, if considered to be justified by the submissions.

FIGURE 1: PROPOSED AMENDED QUARTER PLAN J

Quarter Plan J

