

# Technical Memo

## MARINE RECREATION CENTRE



AEE Addendum  
Kainga Ora

**TO:** Michael Treacy  
**FROM:** Sam Benson & Nick Grala

**HG PROJECT NO :** 1020-143449-01  
**DATE:** 19 August 2020

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### 1.0 INTRODUCTION

This is an addendum to the Assessment of Environmental Effects submitted with Resource Consent (Council Reference: BUN60349871). This addendum addresses elements of the resource consent that were either missed in the original application or have changed through the Section 92 process. This addendum also includes responses to the annotated S92 response dated 25-05-20 received from Auckland Council.

### 2.0 CHANGES TO THE APPLICATION

#### STAGING

The application is seeking a ten-year lapse period but now also contemplates the potential for the water access and deck (which the MRC building sits upon) to be established prior to the MRC building being constructed. This is to achieve the much needed water access (including community benefits associated with water access) as soon as possible whilst also providing sufficient time for the MRC building to be financed. In the event this scenario occurs we envisage that the entire deck will be constructed with a fit for purpose decking surface and the necessary hand-rails installed to ensure the facility meets health and safety requirements.

#### LOADING BAY

The original application relied on using a loading bay that was original planned (through a separate subdivision process) on the outside edge of roundabout at the end of Launch Road. Through this separate process, the loading bay is now no longer going to be provided at the end of this roundabout.

The applicant therefore proposes to convert the western-most three parallel car parking spaces into a P5 loading bay which will provide an adequate area for users of the MRC building to undertake drop offs and pickups (see **Figure 1** below).

We understand that Panuku will be vesting the road with Auckland Transport before the end of 2020, which means that it will be a public road by the time this resource consent is ready to be implemented. This will enable the applicant to go through the standard AT process to undertake the changes when it comes time to implement the consent.



**FIGURE 1 - INDICATIVE LOCATION OF LOADING BAY**

### **EVENTS**

The application did not cover whether the MRC building will be able to be used for any events that aren't associated with the MRC Trust (i.e. external events).

The applicant now seeks to be able to hire out the MRC to for events of up to 300 people to enable commercial viability but also to provide a community facility within the area. It is not known at this stage how regularly events may occur because this will depend on how the MRC is operated and what demand exists.

Styles Group have provided a revised Assessment of Noise Effects (dated 14<sup>th</sup> August 2020) **attached** with this addendum which provides more clarity in Section 2 around how the MRC will be hired out for third party events.

Section 6.0 of the revised Assessment of Noise Effects provides mitigation that could be implemented for any events to ensure that compliance with the permitted standards for noise can be achieved. This is shown on the table (screenshotted from the Assessment of Noise Effects) below:

**Table 2: Noise mitigation controls, Monday to Saturday**

Operating scenario	Noise control	
	Before 10:00 pm	After 10:00 pm
Up to 100 people in function area, inside and on the deck	No restrictions	All people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.
100 - 300 people in function area, inside and on the deck	No restrictions	Event must finish before 10:00pm, or be reduced to a maximum of 100 people on site. All remaining people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.

**Table 3: Noise mitigation controls, Sunday**

Operating scenario	Noise control	
	Before 6:00 pm	After 6:00 pm
Up to 100 people in function area, inside and on the deck	No restrictions	All people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.
100 - 300 people in function area, inside and on the deck	No restrictions	Event must finish before 6:00pm, or be reduced to a maximum of 100 people on site. All remaining people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.

With regard to the potential effects on the traffic network from hiring out the MRC for events, Russell Brandon from Flow has assessed these effects on the email titled “MRC S92 responses” dated 26 June 2020 **attached** with this addendum. The assessment found that the increase in parking demand and traffic resulting from events of a maximum of 300 people does not justify any specific management, or restrictions on when this can occur.

We are proposing the following operating hours:

**Monday to Saturday:**

*7am – 10pm for events of no more than 300 people*

*No restrictions for events with no more than 100 people (noting that as per the noise mitigation controls, all people must be inside after 10:00pm)*

**Sunday:**

*9am – 6pm for events of no more than 300 people*

*No restrictions for events with no more than 100 people (noting that as per the noise mitigation controls, all people must be inside after 10:00pm)*

**Duration of Events and Hiring:**

*No third party may use the MRC facility for an event of more than 100 people from Monday to Saturday that lasts for longer than 8 hours continuous (this does not apply to the use of the building by the MRC trust or events of no more than 100 people).*

*No third party may use the MRC facility for an event of more than 100 people on Sunday that lasts for longer than 5 hours continuous (this does not apply to the use of the building by the MRC trust or events of no more than 100 people).*

## EARTHWORKS

The application that 111m<sup>3</sup> of earthworks was proposed, however have since identified that this was incorrect, and the total maximum proposed volume of earthworks will be approximately 233m<sup>3</sup>.

### 3.0 ADDITIONAL REASONS FOR CONSENT

The applicant is now also applying for additional resource consents to enable vegetation removal necessary to construct the proposed MRC.

The proposal will include the removal of approximately ten trees that exceed 4m in height which requires resource consent as a **Restricted Discretionary** activity under **Rule E16.4.1(A10)**.

Resource consent is also being sought under **E15.4.1(A21)** for removal of greater than 25m<sup>2</sup> of contiguous vegetation and tree removal of indigenous trees over 3m in height within 20m of the Mean High Water Springs.

The assessment for both of these reasons for consent has been provided in the Arboricultural Report (dated 16 April 2020) and the Arboricultural Addendum (dated 24 June 2020).

### 4.0 ANNOTATED S92 RESPONSE 25-05-20

The following section provides our response to the annotated s92 letter.

#### 1.0 – Vegetation Removal

Please see the Arboricultural Addendum prepared by Andrew Barrell dated 24 June 2020. The addendum suggests the type and location of mitigation planting which will be worked through with council through the TAOA process.

The TAOA has been lodged and discussed with council arborist Erika Commers.

#### 2.0 – Contamination (earthworks query)

The earthworks figures mentioned in the original AEE are incorrect and the actual proposed volume is 233m<sup>3</sup> as shown on the earthworks plan and stated in the DSI. We note that 233m<sup>3</sup> of earthworks is a Permitted activity under E12.4.1(A7).

#### 3.0 (h) – Assessment of the trusts ability to hire out the facility

Please refer to Section 2.0 of this Addendum which covers potential noise and traffic effects from hiring out the facility

#### 4.0 (a) – Viewpoints as a single frame

Please see attached updated Graphic Supplement prepared by Boffa Miskell, dated July 2020.

#### 4.0 (c) – Continuation of public access in front of the building

The applicant is not going to provide a cantilevered walkway around the sea-ward side of the MRC for the reasons already provided. Feedback from iwi groups in the design process was also against providing access around the MRC and further encroachment of the CMA.

The comment about design measures was in reference to the surface treatments shown on Plan RC03-A. This includes extension of the decked walkway/jetty approach and the concrete walkway which has bollards on either side to create a continued walkway around the Boat preparation deck and direct pedestrians to Boundary Road.

#### 5.0 – Loading Bay/Drop off area

As stated in Section 2.0 of this report, the proposal is now to use the westernmost 3 car parks on Launch Road as a loading bay (instead of a loading bay on the roundabout).

#### 7.0 (b) – Pseudo Tracking Curves

We are reluctant to provide any pseudo tracking curves given these are neither a statutory requirement nor an accepted industry design, but in the interests to enable a better understanding of the proposal, we have prepared these. Please refer to the pseudo tracking curves shown on the **attached** email from Russell Brandon of Flow dated 26th June 2020. The diagram shows that 5.5m x 2.1m yachts (which are the largest to be used by the sailing club) can be manoeuvred around the building while still maintaining a 2m wide clearance for pedestrians using Boundary Road.

#### **7.0 (d) – Public use of the wharf**

The boats that will be launched on the wharf by the MRC users are all either on handheld trailers (sailing yachts) or will be carried by rowers (skiffs). We reiterate that the proposal is not for a public boat ramp, but a wharf. The wharf is not a suitable launching place for public to launch vehicle-trailer boats as no ramp is provided.

The general public will be able to use the wharf for handheld craft but it is expected that the public wishing to launch vehicle-trailer boats will use alternative launching options around Auckland which have boat ramps and car parks for trailers.

#### **9.0 (c) – Planters**

It is anticipated that The MRC trust will maintain the planters.

#### **11.0 – Event Traffic Management**

Please refer to email from Russell Brandon of Flow (dated 26 June) which has assessed the effects of events on the traffic network. The assessment found that an increase in parking demand and traffic resulting from events of a maximum of 300 people would not require specific event traffic management.

#### **12.0 – Construction Management**

It is not practical to provide a construction management plan at this stage of the process. This is due to the dynamic environment at Catalina Bay in addition to the uncertainty of when the MRC will be constructed. These two factors mean it is premature and inappropriate to contemplate how the construction of MRC will be managed. We remain of the view that it is appropriate to require this as a condition of consent.

Stockpiling and laydown areas will be minimised as much as practicable on site and the applicant will look for alternative solutions on nearby sites. The coastal walkway should remain uninterrupted for the majority of construction but in situations where the coastal walkway will need to be closed (e.g. the first row of piles) then appropriate pedestrian detours will be in place. Details of this will be covered in the land owner approval and construction management processes.

#### **17.0 – Noise**

Please refer to the Styles Group Response dated 25 May 2020 which has found that all construction works can comply with the permitted noise limits specified in AUP Standard E25.6.27 at all receivers.

#### **21.0 Requirements of the Takutai Moana Act**

Please see the **attached** copy of emails sent out to all iwi groups.

We believe that all iwi groups required to be contacted under the Takutai Moana Act have been contacted (as suggested in the email from Michael Treacy on the 12<sup>th</sup> June 2020), however if council provides a list of any further iwi groups that are required to be contacted, the applicant will send the letter out to them as well.



# ASSESSMENT OF NOISE EFFECTS

MARINE SPORTS RECREATION CENTRE  
CATALINA BAY, HOBSONVILLE POINT

PREPARED FOR  
HLC (2017) Ltd

DATE  
14 August 2020

Assessment prepared by Styles Group for HLC.

## REVISION HISTORY

Rev:	Date:	Comment:	Version:	Prepared by:	Reviewed by:
1	7/04/20		Final Draft	Kelly Leemeyer, MASNZ Consultant Styles Group	Jon Styles, MASNZ Director and Principal Styles Group
2	14/08/20	Updates to Section 2	Final	Kelly Leemeyer, MASNZ Consultant Styles Group	Jon Styles, MASNZ Director and Principal Styles Group

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## Appendices

Appendix A	Glossary of terms
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## Executive Summary

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Styles Group has assessed the noise effects from the operation of the proposed Marine Sports Recreation Centre at Catalina Bay, Hobsonville Point. This report has been prepared to accompany the resource consent application and Assessment of Environmental Effects for the proposal.

We have prepared noise level predictions for the proposal using computer noise modelling software.

Our assessment demonstrates that noise from the Marine Sports Recreation Centre will comply with the Auckland Unitary Plan permitted noise limits for the surrounding zones during the day and at night with the proposed mitigation measures.

It is our opinion that noise from the Marine Sports Recreation Centre will not exceed a reasonable level in terms of section 16 of the Act.

We have recommended conditions of consent based on our findings.

## 1.0 Introduction

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HLC has engaged Styles Group to assess the effects of the operation of the proposed Marine Sports Recreation Centre (MSRC) at Catalina Bay, Hobsonville Point.

This report sets out an assessment of the proposal from an acoustics perspective, including:

- i. Noise level predictions at the surrounding sites prepared using Brüel & Kjær Predictor computer noise modelling software;
- ii. Recommended noise management measures and conditions of consent;
- iii. An assessment of the noise in accordance with the Auckland Unitary Plan (AUP), section 16 of the Resource Management Act (the Act) and the relevant New Zealand acoustics standards.

This assessment has been prepared following a visit to the Site and discussions with the project team. This report should be read in conjunction with the Assessment of Environmental Effects (AEE), plans and other relevant information to ensure a full understanding of the proposal.

A glossary of acoustical terms used within this document is attached as Appendix A.

## 2.0 The proposal

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HLC are managing the development of the former Hobsonville Air Force base into a new township at Catalina Bay, Hobsonville Point. The project involves several stages and will include the removal of the existing sailing facilities, construction of residential apartments where the sailing facilities have been removed and adjacent to the Hangar, and the construction of a MSRC. This assessment is for the operation of the recreation centre only.

The recreation centre will include:

- Storage facilities for the rowing and yacht clubs
- An oar and blade store
- Changing rooms and toilets
- Meeting rooms
- A function space
- A restaurant and bar

The centre will regularly be used as follows:

## 2.1 Hobsonville Yacht Club

This section sets out the typical (and existing) use of the MSRC by the Hobsonville Yacht Club.

### 2.1.1 Junior sailors

Junior sailors (aged 7 – 14 years) will use the MSRC and water access as follows:

- Wednesday and Friday nights, arrival between 4:00 – 4:30 pm. 15 – 20 yachts and up to 3 support tenders will be brought out of the club and launched. These will be moved around using hand-held trailers and will be rigged on the deck area to the north of the MSRC. They will be launched from the pontoons at the end of the water access and the juniors will sail for up to 2.5 hours maximum. The yachts and tenders will then be brought back up to the deck area to be washed and de-rigged and put back in the storage area. Juniors will leave the MSRC at around 7 pm.
- Sunday, used in the same manner as set out above. Timing will vary depending on the tide, starting sometime between 10:00 am – 2:00 pm and running for up to 3 hours maximum.

### 2.1.2 Senior sailors

Senior sailors will use the MSRC and water access as follows:

- Sundays for races. Senior sailors use larger yachts that are already moored off Kauri Point or berthed at Hobsonville Point. Races start from one of these two locations and finish between 4 – 5 pm. Races usually involve 4 – 8 yachts and a maximum of 40 people. This is anticipated to increase up to 15 yachts over time, to a maximum of 75 people. Following the completion of the races, sailors will drive to the MSRC for prizegiving at 6 pm. Most people will leave the centre before 7 pm.

## 2.2 Rowing

This section sets out the typical (and existing) use of the MSRC by Westlake Boys High School rowing club and the high performance rowing team, the Regional Performance Centre (RPC).

### 2.2.1 Westlake Boys High School rowing club

Westlake Boys will use the MSRC and water access as follows:

#### 2.2.1.1 Summer training – up to 60 athletes and several coaches (October to March)

- Monday to Friday, arrival at 4:45 am. Rowing skiffs and up to 6 support boats will be carried from the MSRC storage area and launched from the pontoon at approximately 5 am. Rowers will return to the wharf around 7:00 am to hose

down the skiffs and tenders on the deck area to the north of the MSRC. Students get collected at 8:00 am and taken to school by bus. The remaining coaches or senior students who drive will also leave at this time.

- Weekends. Westlake Boys typically participates in rowing regattas approximately every two weekends throughout summer. There may be some weekends where there is no regatta and they will train out of the facility throughout the morning.

#### 2.2.1.2 Winter training (April to September)

- Westlake Boys may occasionally use the facility for training over similar hours, but with significantly reduced frequency and participants.

#### 2.2.2 Regional performance centre

The RPC (approximately 20 rowers and several coaches) will use the MSRC and water access as follows:

- Monday to Friday, weekly training sessions from 4:45 am - 10:30 am and 4:00 pm – 7:00 pm
- Weekends, 4:45 am – 11:00 am

### 2.3 Function area, restaurant and bar (upstairs)

We understand that 1 – 2 times per week this area will be used for events, functions or gatherings of up to 100 people. For events with 100 people or less there is no restriction on the duration of the event.

The function space upstairs will accommodate up to 300 people for special events that are proposed to occur much less frequently.

On Monday to Saturday between 7am and 10pm the function space may be used for events with up to 300 people for a maximum of 8 hours.

On Sunday between 9am and 6pm the function space may be used for events with up to 300 people for a maximum of 5 hours.

The noise mitigation measures set out in Section 9 must be complied with at all times.

## 3.0 The site and surrounding environment

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The Site for the proposed marine recreation centre is partly on land and partly in the sea and crosses a number of zones, including the *Coastal – Marina Zone*, *Coastal – General Coastal Transition Zone*, *Coastal – Coastal Transition Zone* and *Open Space – Informal Recreation Zone*.

The surrounding sites are zoned *Business – Mixed Use Zone, Residential – Mixed Housing Urban Zone* and *Residential – Terrace Housing and Apartment Buildings Zone*.

Across the channel there are also receiving sites zoned *Open Space – Conservation Zone, Coastal – Ferry Terminal Zone* and *Residential – Single Housing Zone* in Beach Haven and Greenhithe. These sites are all at least 500 m from the Site.

Activities in the business zone include:

- Little Creatures brewery and a co-working space with desks, studios, meeting rooms and function areas in the Hangar building
- Pacific Destinations travel agents
- A number of shops including Fabric, Siamese Doll, Gourmet Gannet, Hushwood Hollow, Kittyhawk Cafe and the Catalina Bay Farmers Market.

The site and surrounding sites are illustrated in Figure 1 below.



**Figure 1: The site and surrounding receivers**

## 4.0 Noise standards for the operation of the marine sports recreation centre

This section sets out the framework for the management of noise effects under the Auckland Unitary Plan, relevant New Zealand acoustics standards for the measurement and assessment of noise and the Act.

### 4.1 Auckland Unitary Plan

The site for the marine sports recreation centre crosses a number of AUP zones. The permitted noise limits for these zones and any adjacent zones are outlined below.

#### 4.1.1 Permitted noise limits for Open Space – Informal Recreation Centre

**E25.6.18. Open Space – Conservation Zone, Open Space – Informal Recreation Zone, Open Space – Civic Spaces Zone or Open Space – Community Zone interface**

- 1) The noise (rating) level and maximum noise level from any activity in the Open Space – Conservation Zone, Open Space – Informal Recreation Zone Open Space – Civic Spaces Zone or Open Space – Community Zone when measured within the boundary of a site in a residential zone or notional boundary of a site in a rural zone must not exceed the levels in Table E25.6.18.1 Noise levels at the Open Space – Conservation Zone, Open Space – Informal Recreation Zone, Open Space – Civic Spaces Zone or Open Space – Community Zone interface below:

**Table E25.6.18.1 Noise limits at the Open Space – Conservation Zone, Open Space – Informal Recreation Zone, Open Space – Civic Spaces Zone or Open Space – Community Zone interface**

Time	Noise level
Monday to Saturday 7am – 10pm	50 dB L <sub>Aeq</sub>
Sunday 9am – 6pm	
All other times	40 dB L <sub>Aeq</sub> 75 dB L <sub>AFmax</sub>

#### 4.1.2 Permitted noise limits for Coastal – Marina Zone

**E25.6.11. Noise levels in the Coastal – Marina Zone [rcp/dp]**

- 1) The noise (rating) level arising from an activity in the Coastal – Marina Zone measured within the boundary of any other site in this zone must not exceed the levels in Table E25.6.7.1 Noise levels in the Coastal – Marina Zone.

**Table E25.6.7.1 Noise levels in the Coastal – Marina Zone**

Time	Coastal marine zone
All times	60 dB L <sub>Aeq</sub>

#### 4.1.3 Permitted noise limits for Coastal – Coastal Transition Zone and Coastal – General Coastal Marine Zone

The AUP does not reference specific noise rules for the *Coastal – Coastal Transition Zone* or the *Coastal – General Coastal Marine Zone*.

The rule for noise levels at the coastal interface and for all other one interfaces are provided below for reference:

#### **E25.6.14. Noise levels at the coastal interface [rcp/dp]**

- (1) The noise (rating) level generated by any activity in the coastal marine area or on a lake or river must not exceed the levels in Table E25.6.14.1 Noise levels at the coastal interface when measured within the boundary of a site in a residential zone or notional boundary of any site in the Rural – Rural Production Zone, Rural – Mixed Rural Zone, Rural – Rural Coastal Zone; Rural – Rural Conservation Zone, Rural – Countryside Living Zone, Rural – Waitākere Foothills Zone and Rural – Waitākere Ranges Zone.

**Table E25.6.14.1 Noise levels at the coastal interface**

Time	Noise level
7am - 10pm	50 dB L <sub>Aeq</sub>
10pm - 7am	40dB L <sub>Aeq</sub> 75dB L <sub>AFmax</sub>

- (2) The noise levels in Standard E25.6.14(1) above do not apply to:
  - a. the operational requirements of vessels (including cargo vessels, tugs, passenger liners, naval vessels and commercial fishing vessels); and
  - b. temporary activities in E40 Temporary activities

#### **E25.6.22. All other zone interfaces**

- 1) Except as provided for in Standards E25.6.14 to E25.6.21 above, where noise generated by any activity on a site in one zone is received by any activity on a site in a different zone, the activity generating the noise must comply with the noise limits and standards of the zone at the receiving site.

#### 4.1.4 Permitted noise limits for Residential – Mixed Housing Urban Zone and Residential – Terrace Housing and Apartment Buildings Zone



The AUP zone specific rule for noise in these residential zones is provided below for reference:

E25.6.2 Maximum noise levels in residential zones

- 1) The noise (rating) levels and maximum noise level arising from any activity in the Residential – Large Lot Zone, Residential – Rural Coastal Settlement Zone, Residential – Single Housing Zone, Residential – Mixed Housing Suburban Zone, Residential – Mixed Housing Urban Zone and the Residential – Terrace Housing and Apartment Buildings Zone measured within the boundary of an adjacent site in these residential zones must not exceed the levels in Table E25.6.2.1 Noise levels in residential zones below:

Table E25.6.2.1 Noise levels in residential zones

Time	Noise level
Monday to Saturday 7 am - 10 pm	50 dB $L_{Aeq}$
Sunday 9 am – 6 pm	
All other times	40 dB $L_{Aeq}$ 75 dB $L_{AFmax}$

- 2) The levels for the daytime hours in Table E25.6.2.1 Noise level in residential zones may be exceeded by intermittent noise for reasonable periods where that noise is associated with normal household activities, such as lawn mowing or home handyman work.

4.1.5 Permitted noise limits for Business – Mixed Use Zone

**E25.6.8. Noise levels in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone or the Business – Mixed Use Zone**

The noise (rating) level and maximum noise level arising from any activity in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone or the Business – Mixed Use Zone measured or assessed as the incident level on the façade of any building on any other site in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone or the Business – Mixed Use Zone must not exceed the limits in Table E25.6.8.1 Noise levels in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone or the Business – Mixed Use Zone below:

**Table E25.6.8.1 Noise levels in the Business – City Centre Zone, Business – Metropolitan Centre Zone, Business – Town Centre Zone or the Business – Mixed Use Zone**

Time	Business – City Centre Zone	Business – Metropolitan Centre Zone	Business – Town Centre Zone	Business – Mixed Use Zone
7am - 11pm	65dB $L_{Aeq}$	65 dB $L_{Aeq}$	65 dB $L_{Aeq}$	65 dB $L_{Aeq}$
11pm – 7am	60dB $L_{Aeq}$	60dB $L_{Aeq}$	55dB $L_{Aeq}$	55dB $L_{Aeq}$

	65dB at 63Hz $L_{Aeq}$ 60dB at 125Hz $L_{Aeq}$ 75dB $L_{AFmax}$	65dB at 63Hz $L_{Aeq}$ 60dB at 125Hz $L_{Aeq}$ 75dB $L_{AFmax}$	65dB at 63Hz $L_{Aeq}$ 60dB at 125Hz $L_{Aeq}$ 75dB $L_{AFmax}$	65dB at 63Hz $L_{Aeq}$ 60dB at 125Hz $L_{Aeq}$ 75dB $L_{AFmax}$
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- 2) The 63Hz and 125Hz octave band limits do not apply to fixed mechanical plant.

## 4.2 Applicable noise limits

The noise limits for noise received from the marine recreation centre in the surrounding zones are summarised in Table 1 below:

**Table 1: Applicable noise limits under AUP**

Zone	Time	Noise level
Business – Mixed Use	7am – 11pm	65 dB $L_{Aeq}$
	11pm – 7am	55dB $L_{Aeq}$
		65dB at 63Hz $L_{Aeq}$ / 60dB at 125Hz $L_{Aeq}$ 75dB $L_{AFmax}$
Residential - Mixed Housing Urban Zone and Terrace Housing and Apartment Buildings Zone	Monday - Saturday 7am - 10pm	50 dB $L_{Aeq}$
	Sunday 9am – 6pm	
	All other times	40 dB $L_{Aeq}$ / 75 dB $L_{AFmax}$
Coastal Marina	All times	60 dB $L_{Aeq}$
Open Space – Informal Recreation	All times	No limit
Coastal - Coastal Transition and General Coastal Marine	All time	No limit

The most stringent noise limits applicable to the operation of the recreation centre are those for the *Residential* receivers, being 40 dB  $L_{Aeq}$  after 10pm on Monday to Saturday and after 6pm on Sunday.

## 4.3 New Zealand acoustics standards

Rule E25.6.1(1) *General Standards* of the AUP requires that noise levels are measured and assessed in accordance with the New Zealand Standard NZS 6801:2008 Measurement of

environmental sound and the New Zealand Standard NZS 6802:2008 Acoustics - Environmental noise except where more specific requirements apply.

Where an adjustment is applied to any noise containing special audible characteristics in terms of Appendix B4 Special Audible Characteristics in New Zealand Standard NZS 6802:2008, Rule E25.6.1(2) stipulates that an adjustment noise may apply to the A weighted level, but an adjustment must not be applied to any level measured in the 63Hz and 125Hz octave bands.

#### 4.3.1 NZS6802:2008 Special audible characteristics

Section 6.3 of NZS 6802:2008 states that where the sound being assessed has a distinctive character which may affect its subjective acceptability (for example it is noticeably impulsive or tonal), the representative sound level shall be adjusted to take this into account (in accordance with Appendix B4 of the Standard).

There will be no outdoor speakers for the function centre. Music will not be the dominant noise source from the centre and will not be audible for most receivers. This noise source is not unusual in the area, with a number of other hospitality businesses located nearby. There will not be a strong bass component to the music or any subwoofers or large diameter speakers capable of producing significant levels of bass.

It is our opinion that an adjustment for special audible characteristics is not required to be applied to the amplified music noise from the recreation centre.

#### 4.3.2 NZS6802:2008 Duration adjustment

Section 6.4 of NZS 6802:2008 states that if a sound is not present all of the time it is likely to create lesser annoyance than the same sound if it were continuously present. The Standard recommends that an adjustment of up to 5 dB shall be applied to the representative sound level to take this into account. The more the sound under investigation is present, the less the duration adjustment value is. If a sound is continuous then no duration adjustment is warranted.

Because of the importance of protecting sleep, no adjustment is allowed during a prescribed time frame defined in a consent condition, rule or national environmental standard as night-time.

With reference to Appendix A, Table A7 of NZS 6802:2008, section 6.4.6 Duration is the appropriate reference for the application of the duration correction, as follows:

For situations where the level of the sound reduces significantly for large periods of time but the sound does not switch off completely, some adjustment to account for this relief to persons exposed to the sound is also appropriate. In these cases the energy average of the sound under investigation should be calculated over the entire prescribed time frame. The rating level shall be the greater of this average value or the representative level over the reference time interval - 5 dB.

The proposal will involve noise from activities in the marine sports recreation centre over the daytime period and up until 10.30pm on Sunday – Thursday and up until 11.00pm on Friday - Saturday.

There will be little to no audible noise from the centre before 4 pm on any day. Before 4 pm noise will be from smaller groups using the storage area and taking boats down to the water.

A duration adjustment of 3 dB has been applied to the noise levels from use of the function centre.

#### 4.4 Resource Management Act 1991

The overarching requirement for noise arising from the proposed activity is compliance with Section 16 (1) of the Act, which states:

Every occupier of land (including any premises and any coastal marine area), and every person carrying out an activity in, on, or under a water body or the coastal marine area, shall adopt the best practicable option to ensure that the emission of noise from that land or water does not exceed a reasonable level.

## 5.0 Noise sources

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Noise arising from the proposal will be from amplified music, people using the marine recreation centre during the day and in the evening, vehicles movements and mechanical plant. These noise sources are discussed below.

### 5.1.1 Amplified music

Amplified music is proposed at background levels only. There will be no DJ's or live music.

The speakers will only be located inside, with no music played on the deck at any time. There will be no subwoofer or significant bass component played. The speakers and sound system will be sized, located and designed to ensure that the noise is minimised beyond the MSRC building.

### 5.1.2 People noise

The proposed recreation centre will cater for up to 300 people, but more commonly it will be used for approximately 100 people.

We have undertaken a detailed people noise assessment in this report based on our own measurements of existing establishments.

We have assessed the following scenario, to represent the worst case scenario:

- 200 people on the deck area

- 100 people inside with the windows and doors to the north open (we understand that the south-facing facade does not have any openable doors or windows)

The noise levels used in the model are based on people socialising in an animated way, with raised voices and laughter. We have used a sound power level (SWL) of 96dB for a group of 40 people. The noise level from people engaged in a relaxed conversation would be 5 – 6 dB lower.

### 5.1.3 Vehicle movements

There will be no new parking area constructed for the recreation centre. The traffic assessment<sup>1</sup> undertaken by Flow Transportation Specialists Ltd concluded that the parking available on Launch Road is sufficient to meet the minimum AUP requirements.

### 5.1.4 Mechanical plant

Mechanical plant will be required to service the kitchen and bar areas. There will also be a lift within the centre and a mechanical heating and cooling system.

Specific details and specifications for any mechanical plant have not been confirmed at this early stage of the development. The noise from the mechanical plant will be designed and located to ensure full compliance with the AUP noise limits.

When considering the scale of the development, the layout of the site and the availability of screening for the plant if required, it is our opinion that any noise from mechanical plant received at the nearest sites will likely be significantly below the ambient noise and the noise generated by other sources on site.

## 6.0 Noise mitigation

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We do not consider that restrictions or mitigation measures are necessary to control the noise of the MSRC for the use of recreational boating and sports. The only aspect of the activity that we consider requires control and mitigation is the use of the MSRC for gatherings of people for events or functions.

The noise controls set out below in Table 2 and Table 3 are proposed to reduce noise emissions from the site and have been included in our calculations. These are recommended as conditions of consent.

The controls are based on the sound system being designed and installed according to our recommendations in all cases.

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<sup>1</sup> Flow Transportation Specialists – Catalina Bay Marine Sports Recreation Centre car parking requirements – 18 July 2019

**Table 2: Noise mitigation controls, Monday to Saturday**

Operating scenario	Noise control	
	Before 10:00 pm	After 10:00 pm
Up to 100 people in function area, inside and on the deck	No restrictions	All people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.
100 - 300 people in function area, inside and on the deck	No restrictions	Event must finish before 10:00pm, or be reduced to a maximum of 100 people on site. All remaining people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.

**Table 3: Noise mitigation controls, Sunday**

Operating scenario	Noise control	
	Before 6:00 pm	After 6:00 pm
Up to 100 people in function area, inside and on the deck	No restrictions	All people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.
100 - 300 people in function area, inside and on the deck	No restrictions	Event must finish before 6:00pm, or be reduced to a maximum of 100 people on site. All remaining people must move inside. Doors can remain open. Windows on eastern facade can remain open; all other windows must be closed.

## 7.0 Noise modelling and predictions

To understand the spatial propagation of noise across and beyond the site, we have prepared noise level predictions using Brüel & Kjær Predictor computer noise modelling software. This enables the accurate prediction of noise levels at multiple receivers under a wide range of meteorological and operational conditions. The computer noise models are three-dimensional and take into account the topography, buildings, ground coverage, the physical attributes of the sound sources and receivers and many other physical factors. The

Brüel & Kjær Predictor software is globally recognised and has been successfully implemented on a large number of projects throughout New Zealand.

This section sets out the methodology and results of our noise modelling.

## 7.1 Noise model parameters

Noise predictions have been calculated based on the International Standard ISO 9613-1/2 Attenuation of sound during propagation outdoors. Terrain contours, building footprints and parcel boundaries were imported from the Auckland Council GIS service, surveys and site plans. The topographical contours encompass the entire site and a large area of the surrounding land. We have ensured the integrity of the noise model by careful scrutiny of the final three-dimensional model.

The noise levels produced by the model include the effects of the abovementioned factors and assume meteorological conditions that slightly enhance propagation in all directions in accordance with NZS 6802:2008.

The input parameters of the noise model are displayed in Table 4.

**Table 4: Predictor noise model input parameters**

Parameters/calculation settings	Details
Software	Brüel & Kjær Predictor
Calculation method	ISO 9613.1/2
Meteorological parameters	Single value, C0 = 0
Ground attenuation over land	General method, ground factor: 0.8
Ground attenuation over sea	General method, ground factor: 0
Air temperature	293.15K
Atmospheric pressure	101.33kPa
Air humidity	60%
Receiver heights (relative)	1.5m above ground or 1.5m above the finished floor level of multi-storey buildings
Function room building facade (doors and windows open)	$L_{WA}$ 84 dB/m <sup>2</sup>
People congregating in external area (per group of 40 people)	$L_{WA}$ 96 dB

## 7.2 Noise rating level predictions

Table 5 displays the noise rating level predictions at 1.5 m above the local ground level or floor level. These are the highest noise rating levels expected at any location within the receiving sites and include the reduction afforded by the noise mitigation measures discussed within this report. Any site not specifically referenced in Table 5 is separated further from the proposed activity than those listed. The noise rating level at the more distant sites will be lower due to the additional separation distance and the screening provided by surrounding structures or terrain (or both).

The predicted noise rating levels displayed in Table 5 demonstrate that the AUP permitted noise limits will be complied with at all surrounding properties.

During the night time period (after 10:00 pm, Monday to Saturday, and after 6:00 pm, Sunday) there will be no more than 100 people on site, and they will be inside with doors and windows on the western facade shut. The noise levels during the night time period will comfortably comply with the night time noise limits.

**Table 5: Noise rating level predictions**

Address and assessment position	Noise rating level in accordance with NZS 6802:2008 ( $L_{Aeq}$ )	AUP permitted noise limit
1.5 m	63 dB	
Yacht Club apartments	First floor	65 dB $L_{Aeq}$
	Second floor	
	64 dB	
1.5 m	58 dB	
Catalina Bay Apartments	First floor	65 dB $L_{Aeq}$
	Second floor	
	58 dB	
	Third floor	
	58 dB	
39 Launch Road	1.5 m	50 dB $L_{Aeq}$
	47 dB	

## 8.0 Assessment of noise effects

It is our opinion that noise from the centre will not exceed a reasonable level in terms of section 16 of the Resource Management Act. This takes into account the following:



- The predicted noise levels are compliant with the permitted daytime and night-time noise limits, based on an assessment of the worst case scenario for noise
- All events in the function area with up to 100 people will move indoors from 10:00 pm on Monday to Saturday, and 6:00 pm on Sunday
- All events in the function area with 100 - 300 people will either finish or be reduced to 100 people by 10:00 pm on Monday to Saturday, and 6:00 pm on Sunday
- The proposed noise conditions and mitigation measures that form part of the application.

During daytime hours, we expect that the noise from the normal use of the site will be mostly inaudible for receivers.

During a function or event, the noise will be noticeable at the nearest receiving sites, but it will be compliant with the permitted noise limits at all times. Events will take place over several hours, but not the entire daytime period. On days when there are no events, and during winter when there is minimal use of the centre by the Hobsonville Yacht Club or the rowing clubs, there will be little to no noise from the site. There will be little or no noise audible at the receivers after 10 pm.

We have recommended a condition of consent that requires the sound system to be installed and managed to minimise the noise level received off the MSRC site, and to ensure that low frequency / bass noise is minimised.

Management-based noise mitigation measures are proposed as part of the application and are offered as conditions of consent. In our opinion these measures form part of the *best practicable option* to minimise noise emissions from the site.

## 9.0 Recommendations

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We recommend the following conditions of consent are imposed and complied with. These are in addition to the standard condition requiring compliance with the application documents as lodged, including this report. They are also on the basis that the noise limits for the proposal will be the permitted noise limits of the Unitary Plan.

1. The facility must not operate with more than 300 people on site at any time.
2. After 10 pm on Monday to Saturday, and after 6 pm on Sunday, there shall be no more than 100 people in the function centre
3. The outdoor deck area must be closed and vacated at the following times:
  - i. After 10 pm, Monday to Saturday
  - ii. After 6 pm, Sunday

4. All external windows and doors on the western facade of the upper level of the centre must remain closed at the following times:
  - iii. After 10 pm, Monday to Saturday
  - iv. After 6 pm, Sunday
5. Amplified sound must not be played outside at any time. No speakers shall be installed or used outdoors.
6. Live music or performances including DJs, percussion (drums), amplified instruments, is prohibited at all times.
7. Other than the permanently installed sound system that is specified and defined in accordance with condition (8), and other than small personal devices such as small Bluetooth speakers, mobile phones or televisions, no other system for amplifying sound or music shall be brought into or used at the facility at any time.
8. At least 3 months prior to the operation of the centre, the consent holder must prepare a Noise Management Plan (NMP) for submission to Auckland Council. The objective of the NMP is to set out the methods and measures required to minimise noise emissions from the use of the marine sports recreation centre as far as practicable and to ensure compliance with the consented noise limits. The NMP must include the following provisions, as a minimum:
  - (i) Operating hours of the marine sports recreation centre, including the function centre.
  - (ii) Specific details of the requirements for closing external doors and windows, including provision for signage on doors where necessary.
  - (iii) Details of all other noise mitigation measures that are required to be adopted including restrictions on amplified music outside, live bands, and patrons in the outdoor licensed area.
  - (iv) Specifications for the in-house sound system, including loudspeaker locations and design, and the specific measures that will be implemented to ensure that the bass level is managed to avoid the application of an adjustment for Special Audible Character when assessed from the nearest receiver of noise.
  - (v) A procedure for receiving, handling and recording noise complaints.
  - (vi) Provision for signage outside the centre reminding users to minimise noise levels when leaving the centre when the night time noise limits are applicable.
9. All staff on site will be made aware of the NMP and the requirement to avoid excessive noise and minimise noise emissions from the site. The NMP must

be observed for as long as the consent is given effect to and shall be made available for inspection at the reasonable request of Auckland Council.

## 10.0 Conclusion

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Styles Group has assessed the noise effects from the operation of the proposed Marine Sports Recreation Centre at Catalina Bay.

We have proposed a number of mitigation measures, including:

- Restrictions on the number people on site at any one time
- Restrictions on event timing and use of the deck area
- Restrictions on the use of amplified sound, including prohibiting live music
- The preparation of a noise management plan setting out the methods and measures required to minimise noise emissions from the use of the marine sports recreation centre as far as practicable and to ensure compliance with the consented noise limits

Noise from the Marine Sports Recreation Centre will comply with the Auckland Unitary Plan permitted noise limits for the surrounding zones during the day and at night with the proposed mitigation measures. The noise emissions from the proposed activity are therefore within the level of effect that the Auckland Unitary Plan anticipates and provides for.

It is our opinion that noise from the Marine Sports Recreation Centre will not exceed a reasonable level in terms of section 16 of the Act.

## Appendix A Glossary of terms

Noise	A sound which serves little or no purpose for the exposed persons and is commonly described as ‘unwanted sound’. The definition of noise includes vibration under the Resource Management Act 1991.
Best practicable option	Defined in section 2 of the Resource Management Act 1991 as: in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to— a. the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and b. the financial implications, and the effects on the environment, of that option when compared with other options; and c. the current state of technical knowledge and the likelihood that the option can be successfully applied.
dB (decibel)	The basic measurement unit of sound. The logarithmic unit used to describe the ratio between the measured sound pressure level and a reference level of 20 micropascals (0 dB).
A-weighting	A frequency filter applied to the full audio range (20 Hz to 20 kHz) to approximate the response of the human ear at lower sound pressure levels.
$L_{Aeq(t)}$ (dB)	The A-weighted equivalent sound pressure level with the same energy content as the measured varying acoustic signal over a sample period (t). The preferred metric for sound levels that vary over time because it takes into account the total sound energy over the time period of interest.
LAFmax (dB)	The maximum A-weighted sound pressure level recorded during the measurement period using a fast time-weighting response.
Noise rating level	A derived noise level used for comparison with a noise limit.
NZS 6801:2008	N.Z. Standard NZS 6801:2008 Acoustics – Measurement of environmental sound.
NZS 6802:2008	N.Z. Standard NZS 6802:2008 Acoustics – Environmental noise.
The Act	The Resource Management Act 1991.
s16	Section 16 of the Act states that “every occupier of land (including any premises and any coastal marine area), and every person carrying out an activity in, on, or under a water body or the coastal marine area, shall adopt the best practicable option to ensure that the emission of noise from that land or water does not exceed a reasonable level”.
ISO 9613-1/2	International Standard ISO9613-1/2 Attenuation of sound during propagation outdoors

## Appendix B Noise rating level contours

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