

Connor Marner

From: James Taylor <james.taylor@beca.com>
Sent: Friday, 27 October 2017 01:05 p.m.
To: Melissa Shipman
Cc: Peter (TMC Ltd)
Subject: RE: LUC-2017-408 - 139 Portobello Road - Tourism Activity - Clarification

Hi Melissa,

With respect to the error on the Affected Party Approval Form, Mr Graham is getting it resigned with the correct information.

I provide a response to your comments below.

James Taylor

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From: Melissa Shipman [mailto:Melissa.Shipman@dcc.govt.nz]
Sent: Monday, 2 October 2017 11:54 a.m.
To: James Taylor <james.taylor@beca.com>
Subject: LUC-2017-408 - 139 Portobello Road - Tourism Activity - Clarification

Hello James,

I have been referred this application for processing. Ahead of submissions coming in, I thought I'd just seek a little clarification around the following items:

- Did the harbourmaster have any particular lighting requirements for the pontoon – type, brightness etc? Further to the information provided in response to the s92 we are no longer providing lighting – reflectors compliant with Harbourmaster requirements only.
- Pictures depict 3 golfers teeing off at once. Is this the maximum? Was the noise testing completed with three golfers teeing off? As outlined in the AEE the three closest residential properties are 144 Portobello Road (67m), 32 Glengyle Street (74m) and 137 Portobello Road (82m). Additionally, the applicant has had noise testing completed utilising portable sound monitors. The area has higher than average background noise levels from sea and road sound generation. Over the distances to the residential receivers, sound

power generated from striking a golf ball is expected to reduce close to ambient noise levels. Background noise at the bus stop adjoining the road is measured between 60 and 90dB. Ball striking conducted at the proposed location was measured at 76dba at the bus stop.

- Have you liaised with Kai Tahu further regarding their requirement for new golf balls, i.e. by discussing a daily ball retrieval as opposed to a weekly retrieval? **No. We acknowledge that there is a difference here. Costs associated with using new balls every time or sending a diver out every day would render the activity unviable and they would not provide any environmental benefit. I note that Ngati Tuwharetoa, legal owners of lake Taupo following treaty settlement, have recently purchased the hole in one challenge up there. That Iwi does not seem to have any problems with weekly ball collection or reusing balls. How is this part of the DCC assessment?**
- Can you provide a site plan showing the 1m high temporary portable safety fence and a picture of what it type of fence is proposed? **We are finalising a Site Plan.**
- It would be helpful to see an overlay of the golf ball striking zone ('exclusion zone') onto Figure 1 and calculate the total area m². The applicant has just indicated that this has already been provided to ORC? I have asked for a copy of the s92 response documentation. **This was in the s92 – The temporary exclusion zone is 1.06Ha. How is this part of the DCC assessment?**
- Will the coffee/office van have the engine running at all times? Gas bottles? Generator? What is the signage proposed for the van? What is the size of the coffee/van – caravan size or single car park size? **The coffee van will be mobile and will change regularly over the course of the operation. Flexibility is required as suppliers of the service will vary. Fixed signage to the land is specifically proposed. Mobile coffee van operators will contain signage but this will vary. This consent seeks consent for any mobile food vendor that can fit within the dimensions nominated in the application.**
- I've attached a photo of the bird resting area in the Andersons Bay inlet. Have you consulted with DOC on any potential wildlife taking resident on the pontoon (8 x 12m)? **Yes. Conditions with DoC have been agreed.**
- Do you anticipate after hours use by recreational golfers will increase with the pontoon remaining in place? Perhaps the operating hours until 10pm negate this? **People already hit balls into the harbour illegally. If people continue to do this it will be an improvement if they undertake their illegal activity at the pontoon location, as the regular golf ball collection will collect these balls that would otherwise remain in the harbour.**
- Lake Taupo contains fresh water. The Otago Harbour, salt water. The applicant has indicated the professor reports mentioned in the application on were in relation to salt water. Can you confirm. **Salt water provides no greater ability to break down zinc or the plastics used in golf balls. Plastic materials are used in boating, navigation, recreational water use and harbour operations everywhere.**
- The application states there were no other sites suitable. Can you indicate what other sites were considered and the criteria needing to be met? **Please refer Section 7.1.4.3.4 of the AEE.**
- Will the coloured flags on the pontoon be removed each day? **No.**
- Have you carried out any consultation with the Andy Bay Sea Scouts or the Windsurfing Community? **The application was publically notified – however no specific engagement has occurred.**
- What is golf pontoon monitoring equipment? **CCTV is proposed on the pontoon.**

Since typing the above, I've spoken with James around some of the above but if you can provide formal response for the record. Thank you.



Regards,

Melissa Shipman
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Dunedin City Council

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Project: OTAGO HARBOUR GOLF CHALLENGE

Prepared for: Beca
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Attention: James Taylor

Report No.: Rp 001 20171260

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Document Control

Status:	Rev:	Comments	Date:	Author:	Reviewer:
Approved	-	-	18 January 2018	A Johns	J Farren

EXECUTIVE SUMMARY

Marshall Day Acoustics has been engaged to assess the noise effects for the proposed Otago Harbour Golf Challenge in Vauxhall, Dunedin.

The Golf Challenge is proposed to operate between 0900 – 2200 hrs each day.

Predicted noise levels exceed the proposed District Plan (2GP) by 1 dB at the closest property boundary and therefore the activity is considered discretionary.

Affected Party Approval has been received from the closest residential property owner (137 Portobello Road) and therefore this site has been excluded from our assessment of effects.

Based on the existing elevated level of traffic noise, and our review of national and international guidance for appropriate noise levels in residential areas, we consider the noise level of 50 dB $L_{Aeq(15\text{ min})}$ (including special audible character adjustment), predicted at the boundary of 134 and 141 Portobello Road (the closest properties to site considered in this assessment), will result in acceptable noise effects.

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1.0 INTRODUCTION

Marshall Day Acoustics has been engaged to assess the potential noise effects of the proposed Otago Harbour Golf Challenge, where customers attempt to drive a golf ball out to a floating green in the Otago Harbour. The development is proposed to be located at 139 Portobello Road in Vauxhall, Dunedin. It will be situated on a coastal section, across the road from residential dwellings.

This report includes the following:

- Description of the proposed activities and adjacent noise sensitive locations;
- Summary of relevant District Plan noise provisions and other relevant noise related guidance documentation;
- Prediction of noise levels based on the proposed site plans; and
- An assessment of potential noise effects at nearby residential properties.

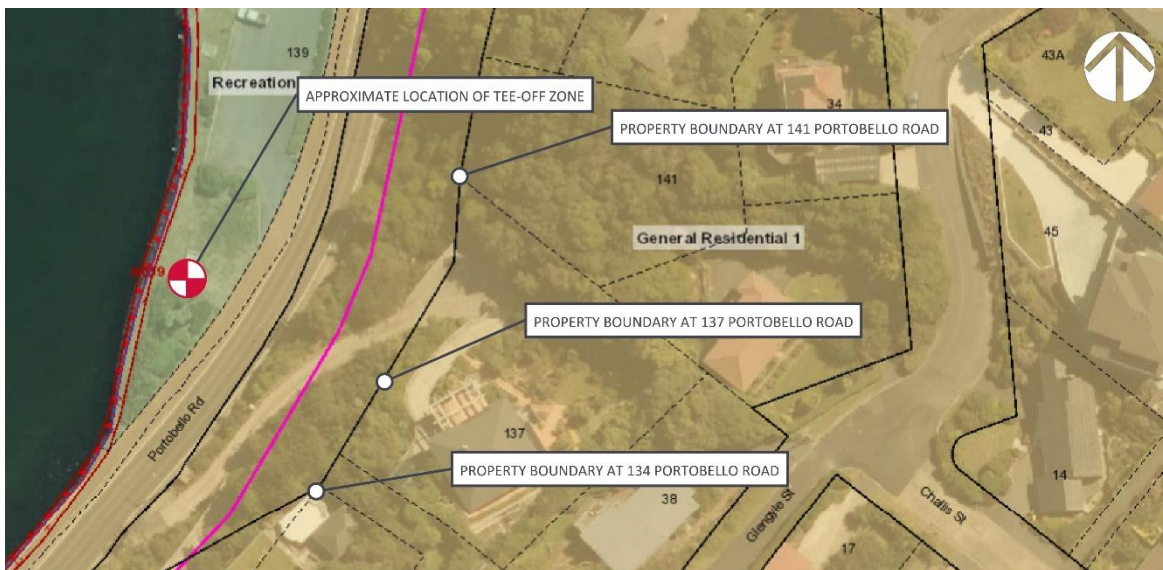
Acoustical terminology used in this report is provided in Appendix A.

2.0 SITE AND ACTIVITY DESCRIPTION

The proposed development and surrounding properties are all located within the *Residential 1 Zone* under the operative Dunedin City Council (DCC) District Plan.

The Second Generation Plan (2GP) proposes to rezone the site *Recreational* while the dwellings along Portobello Road will be zoned *General Residential 1*. Figure 1 below shows the zoning as per the proposed 2GP.

Figure 1: Site locality from online DCC planning maps



The closest dwellings (141, 137 and 134 Portobello Road) are located east and southeast of the proposed “tee-off” zone, elevated above the site, across Portobello Road. The nearest property boundary is over 35 m away, and nearest outdoor living area approximately 45 m, with direct line-of-sight.

We understand the intended hours of operation each day will be between 0900 – 2200 hrs.

The proposed site layout is presented in Figure 2. The proposed mobile equipment rental and refreshment stand is to be in the existing car park, to the north of the three-person tee-off zone. There is no other proposed change to the capacity or operation of the existing carpark, and therefore, parking activity is not considered further in this assessment.

Figure 2: Proposed site layout



3.0 NOISE PERFORMANCE STANDARDS

3.1 Dunedin City District Plan (Operative)

The operative District Plan and the proposed 2nd Generation Plan (2GP) contain rules for noise emissions. The applicable rules from the Operative District Plan are provided in Table 1.

Table 1: Dunedin City District Plan Criteria

Zone	Daytime 0800 – 1800 hrs	Shoulder Period ^[1] Monday - Saturday 1800 – 2100 hrs	Night-time 2100 – 0700 hrs	Sundays and statutory holidays
Residential 1 Zone (R1)	50 dB L _{A10}	45 dB L _{A10}	40 dB L _{A10}	40 dB L _{A10}
	-	-	75 dB L _{AFmax}	-

[1] Shoulder period also applies Monday to Friday from 0700 – 0800 hrs.

Note that adjustments for Special Audible Characteristics (SAC) are to be applied in accordance with *NZS 6802:1991 – Assessment of Environmental Sound* during the following periods:

- Sunday to Wednesday 2300 to 0630 hrs the following day; and
- Thursday to Sunday – 0000 to 0630 hrs the following day

The proposed operational hours are 0900 – 2200 each day and therefore SAC adjustment is not applicable.

3.2 Dunedin City 2nd Generation Plan (Proposed)

DCC has proposed the Second Generation District Plan (2GP), which will replace the existing plan.

We note that noise rules in the 2GP exclude noise generated by most sport and recreation¹ activities from the noise emission limits. However, due to the commercial nature of the proposed activity, we don't consider recreational exemption will apply. The applicable noise rules are provided in Table 2.

Table 2: 2nd Generation District Plan Criteria

Zone	Daytime	Evening	Night-time
	0700 – 1900 hrs	1900 – 2200 hrs	2200 – 0700 hrs
Residential, Recreational	50 dB L _{Aeq} -	45 dB L _{Aeq} -	40 dB L _{Aeq} 70 dB L _{AFmax}

- Activities that contravene this performance standard by less than 5 dB L_{Aeq} (15 min) are discretionary activities.
- Activities that contravene this performance standard by 5 dB L_{Aeq} (15 min) or more are non-complying activities.
- SAC adjustment is not applicable to this activity or area in the 2GP.

While the 2GP is not operative, it provides current direction on Council policy towards noise limits, and the periods over which they should apply.

Additionally, the 2GP also removes the lower noise limit historically set for Sundays, as the idea of less activity in residential areas on a Sunday is generally outdated. We note that this progression is typically included in most recent District Plan revisions.

3.3 Other Guidance Documentation

We have reviewed national and international guidelines for community noise levels to assist with our assessment of noise effects. The key elements are summarised below.

3.3.1 NZS 6802:2008 "Acoustics - Environmental Noise"

NZS 6802:2008 "*Acoustics – Environmental Noise*" is the latest revision of the New Zealand standard for assessing environmental noise, and refers to the following upper values for the protection of health and amenity.

- | | |
|---|------------|
| • 55 dB L _{Aeq} (15 min) | Daytime |
| • 50 dB L _{Aeq} (15 min) | Evening |
| • 45 dB L _{Aeq} (15 min) and 75 dB L _{Amax} | Night-time |

The Standard suggests that this limit is to be applied at any point within a residential site.

Additionally, if the sound being assessed has a distinctive character, such as impulsiveness, it is likely to cause adverse community response at lower levels. Activity noise exhibiting SAC are penalised by an adjustment of + 5 dB.

¹ As per the 2GP definition *Sport and Recreation* includes the use of land for organised sport, recreation activities, events, and sports education. E.g. facilities managed by clubs, Dunedin City Council, schools or private entities (including golf courses)

3.3.2 World Health Organisation Guidelines

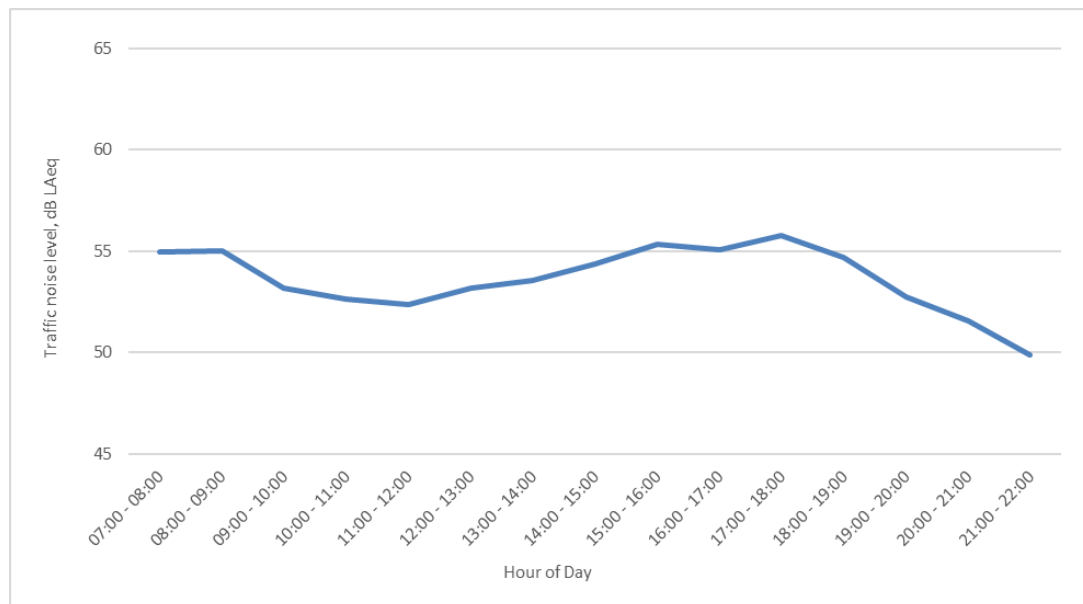
The World Health Organisation (WHO) *Guideline Values for Community Noise* (Berglund and Lindvall, 1999) give guideline values for environmental noise. These guidelines, based on extensive international research recommend a level of 50 dB $L_{Aeq(16\text{ hour})}$ or less to prevent the onset of moderate annoyance, and a level of 55 dB $L_{Aeq(16\text{ hour})}$ or less to prevent the onset of serious annoyance. These noise levels apply in outdoor living areas during daytime and evenings.

4.0 EXISTING AMBIENT NOISE LEVELS

Broadly speaking, traffic along Portobello Road is the dominant noise source at the proposed site, and nearby residential properties. We have predicted noise levels² at the nearest residential property boundary based on a typical average daily traffic (ADT) volume passing the proposed site, in the order of 6,200 vehicles³ a day.

This analysis shows that traffic noise levels are relatively consistent, generally between 50 – 55 dB $L_{Aeq(1\text{ hour})}$ throughout daytime hours. Noise levels are not expected to drop below 50 dB $L_{Aeq(1\text{ hour})}$ during the proposed operating period. Figure 3 provides the predicted traffic noise levels at the nearest property boundaries along Portobello Rd between 0700 hrs and 2200 hrs.

Figure 3: Predicted variation in ambient traffic noise at Portobello Road



We note that peak activity at the Harbour Challenge site is likely to coincide with busy daytime periods when traffic volumes, and therefore, road noise on Portobello Road is heightened.

² Calculation of Road-Traffic Noise (CRTN) UK Department of Transport, Welsh office, using adaptations for New Zealand road surfaces.

³ Source data from mobileroad.org, provided by DCC databases as of 16/09/2014.

5.0 PREDICTED NOISE LEVELS

Based on our previous involvement with golf clubs and driving ranges, we have predicted noise levels associated with the proposed activity, including golf-driving impact and people noise.

5.1 “Tee-off” Golf Noise

Marshall Day Acoustics has performed many measurements of golf driving activity during professional and amateur events at golf clubs and driving ranges.

Based on a likely scenario where three individuals drive approximately 20 golf balls each, over a 15-minute period, we predict noise levels to be in the order of 46 dB L_{Aeq} (15 min) at the nearest residential boundary (137 Portobello Road).

Due to the impulsive nature of golf ball driving activity, noise generated at the tee-off area will be clearly audible in the nearest outdoor living areas (137 and 134 Portobello Road), when the flow of traffic reduces in the evening. However, for the purposes of compliance, neither the operative District Plan or proposed 2GP requires the application of a penalty for special audible character.

We predict typical maximum noise levels of golf ball driving activity to be in the order of 65 dB L_{Amax} at the nearest residential boundary.

5.2 People Noise

We have extensive data on measured noise levels for groups of people outdoors.

For a group of around ten people, talking at normal voice level outdoors, we have predicted a noise level of 39 dB L_{Aeq} at the nearest property boundary. This is comparable to a predicted noise level from three raised male voices.

5.3 Cumulative Noise On-site

While the 2GP is not operative, it indicates Council’s future policy towards noise assessments.

The total noise generated on-site from the proposed development, including both people and golf activity is predicted for the nearest properties at 137 and 134 Portobello Road.

Table 3 provides a summary of our predicted noise levels in comparison with the 2GP noise limits.

Table 3: Predicted cumulative residential noise levels

Descriptor	2GP noise limit	137 Portobello Rd property boundary		134 and 141 Portobello Rd property boundary	
	Daytime/Evening	Predicted	Compliance achieved?	Predicted	Compliance achieved?
L_{Aeq} , (15 min)	50 / 45	46	No	45	Yes
L_{Amax}	-	65	Yes	63	Yes

Under the proposed noise limits of the 2GP, the predicted noise level achieves the daytime noise limit at all residential boundaries.

Golf Challenge activity from 1900 – 2200 is predicted to contravene the 2GP evening noise limit by 1 dB at 137 Portobello Road. Therefore, the activity status is discretionary and an assessment of noise effects is appropriate.

We note that predicted Golf Challenge noise levels achieve the daytime and evening limits of the 2GP at all other properties.

6.0 ASSESSMENT OF NOISE EFFECTS

We understand that affected party approval has been received from the property owner at 137 Portobello Road, therefore noise effects are not assessed for this property.

As discussed in Section 3.3.1, NZS 6802:2008 "*Acoustics – Environmental Noise*" considers the application of a SAC adjustment of 5 dB where the sound being assessed has a distinctive character. Due to the impulsive nature of golf noise, we consider it appropriate to apply this penalty to assess the noise effects.

The predicted noise level at the property boundary of both 141 and 134 Portobello Drive is 50 $L_{Aeq}(15\text{ min})$, including a 5 dB SAC adjustment for impulsive character. This noise level still achieves the daytime noise limit set by the 2GP however, is 5 dB over the evening noise limit.

NZS 6802:2008 "*Acoustics – Environmental Noise*" refers to an upper limit of 50 dB $L_{Aeq}(15\text{ min})$ for the protection of health and amenity in the evening period. Additionally, WHO recommend a level of 50 dB $L_{Aeq}(16\text{ hour})$ or less in outdoor living areas (daytime and evening) to prevent the onset of moderate annoyance.

As predicted in Section 4.0, the existing traffic noise environment on Portobello Road is consistently 3 – 5 dB above the predicted noise level of Golf Challenge activity. Due to the elevated ambient noise environment, we consider the noise limits recommended in NZS 6802:2008 to be appropriate in this situation.

7.0 SUMMARY

We have considered the following:

- The predicted noise levels from Golf Challenge activity exceed the proposed District Plan (2GP) by 1 dB at the closest property boundary. Therefore, the activity status is discretionary;
- Affected Party Approval has been received from the property owner of 137 Portobello Road, and therefore this site has been excluded from our assessment of noise effects;
- With a Special Audible Character adjustment, the predicted noise level from Golf Challenge activity is 50 dB $L_{Aeq}(15\text{ min})$ at the two closest property boundaries relevant to our assessment (134 and 141 Portobello Road); and
- The existing level of traffic noise on Portobello Road is 3 – 5 dB above the predicted Golf Challenge noise level.

Based on the elevated ambient noise levels, our review of national and international guidance documentation, and the noise limits of the 2GP, we consider the noise effects of the proposed development to be acceptable.

APPENDIX A GLOSSARY OF TERMINOLOGY

Noise	A sound that is unwanted by, or distracting to, the receiver.
Ambient	The ambient noise level is the noise level measured in the absence of the intrusive noise or the noise requiring control. Ambient noise levels are frequently measured to determine the situation prior to the addition of a new noise source.
SPL or L_p	<u>Sound Pressure Level</u> A logarithmic ratio of a sound pressure measured at distance, relative to the threshold of hearing (20 μ Pa RMS) and expressed in decibels.
dB	<u>Decibel</u> The unit of sound level. Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of $P_r=20 \mu\text{Pa}$ i.e. $\text{dB} = 20 \times \log(P/P_r)$
A-weighting	The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.
$L_{Aeq}(t)$	The equivalent continuous (time-averaged) A-weighted sound level. This is commonly referred to as the average noise level. The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am.
$L_{A10}(t)$	The A-weighted noise level equalled or exceeded for 10% of the measurement period. This is commonly referred to as the average maximum noise level.
L_{Amax}	The A-weighted maximum noise level. The highest noise level which occurs during the measurement period.
NZS 6801:1991	New Zealand Standard NZS 6801:1991 " <i>Measurement of Sound</i> "
NZS 6801:2008	New Zealand Standard NZS 6801:2008 " <i>Acoustics – Measurement of environmental sound</i> "
NZS 6802:1991	New Zealand Standard NZS 6802:1991 " <i>Assessment of Environmental Sound</i> ".
NZS 6802:2008	New Zealand Standard NZS 6802:2008 " <i>Acoustics – Environmental Noise</i> "