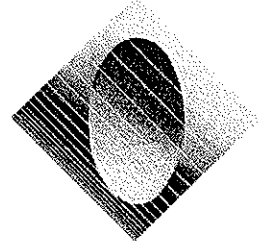


**ATTACHMENT 5**

**CAR CLUB NOISE ASSESSMENT**



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REPORT No.: 2005260B

PROJECT: GIPPSLAND CAR CLUB HILL CLIMB TRACK  
MEASURED AND PREDICTED NOISE LEVELS

CLIENT: GHD Pty Ltd  
Level 8  
180 Lonsdale Street  
Melbourne Vic 3000

ATTENTION: Mr Dale Young

DATE: 30 September 2005

MARSHALL DAY ACOUSTICS

A handwritten signature in black ink, appearing to read 'J. Alekna', written in a cursive style.

John Alekna  
Associate

A handwritten signature in black ink, appearing to read 'Amanda Robinson', written in a cursive style.

Amanda Robinson  
Associate

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## 1.0 INTRODUCTION

It is proposed to develop a new hill climb track for the Gippsland Car Club. The hill climb track will be located on the northern side of the Princes Freeway in the Yallourn / Newborough area.

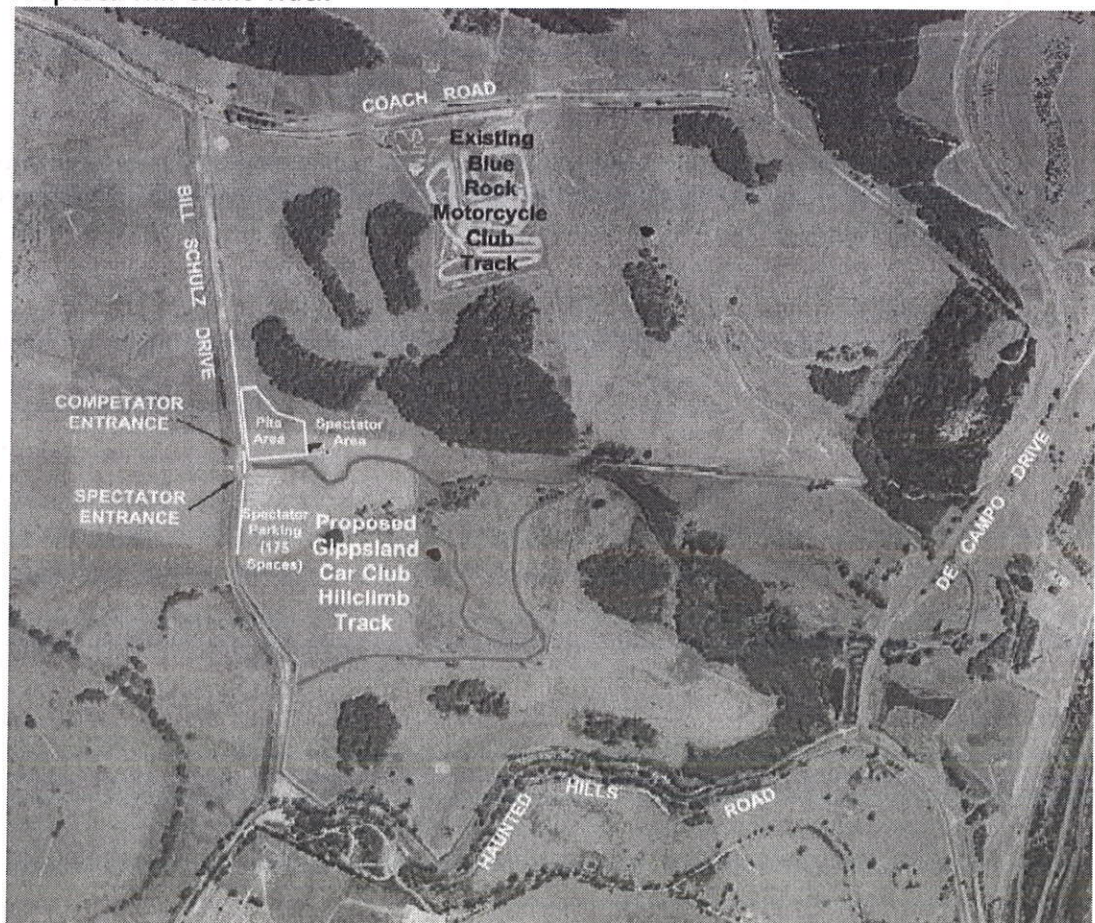
Marshall Day Acoustics has been commissioned to conduct measurements of the car racing noise at the above proposed sports and recreation area between Yallourn & Newborough. The noise measurements have been requested by the Latrobe City Council so that an indication of the noise emissions from the new facility can be obtained.

Acoustic terminology used throughout this report is provided in Appendix A.

## 2.0 SITE DESCRIPTION

It is proposed to develop a hill climb track for the Gippsland Car Club at a site nearby to the existing Blue Rock motorcycle club. A site plan of the proposed development site is provided in Figure 1. The nearest residences are to the north of the site along Fairway Drive, Yallourn Heights.

Figure 1  
Proposed Hill Climb Track



### 3.0 SITE ACTIVITIES

Details of the proposed Gippsland Hill Climb track type of activities, the proposed usage and approximate distances to nearby residences, are provided in Table 1.

**Table 1**  
**Activities and proposed usage for Gippsland Car Club**

Events and Proposed Time of Use			Distance to residences from proposed site (m)
Major Events	Club Events	Practice Events	
2-4 / year	22 / year	2 / week	1000m to nearest section of track
Sat / Sun 9:00am – 5:00pm	Sat 9:00am – 5:00pm	2 – 3 hours / day	
Aust Championships 1 / 3-4 years			
Fri / Sat / Sun 9:00am – 5:00pm			

### 4.0 MEASURED NOISE LEVELS

#### 4.1 Activity noise levels

Noise level measurements of the activities from the Gippsland Car Club activities were undertaken at an open day on the 3 September 2005.

Bill Schulz Drive (a public road) was closed to the public, and cars associated with the club drove along a small incline. The cars ranged from 1100cc engine (Mini) to 3300cc engine (Torana).

In addition to hand held measurements, a fixed noise monitor was located at a distance of 10m from the activities. The results of the measurements are provided in Table 2.

**Table 2**  
**Measured noise levels**

Activity	Description	Distance m	Measured noise level dBA	
			L <sub>eq</sub>	L <sub>max</sub>
Hillclimb cars	Variety of cars driving at 60–70km/hr individual passby	10	62-74	67-86
	3 cars passby	10	72	84

The noise levels recorded at the site, as well as noise levels measured at other similar motorcross and speedway venues, have been used to provide an indication of the likely noise levels at the residences.



#### 4.2 Noise levels at nearby residences

Noise measurements were undertaken at the nearby residential premises.

A fixed noise monitor was located in line with the southern facade of the property at No. 44 Fairway Drive, Yallourn Heights. There was a direct line of sight from Coach Road to the logger location, but not to the activities that occurred on Bill Schulz Drive. It was noted that occasional noise from the existing Blue Rock Motorcycle Club Track, located off Coach Road, was audible at the logger location. Activity was occurring at the Blue Rock Motorcycle Club following the second hill climb demonstration along Bill Schulz Drive.

The results of the noise logging, along with the corresponding activities that were occurring trackside, are provided in Appendix B.

#### 4.3 Commentary

There would appear to be some correlation between the noise measurements taken at Fairway Drive and the short term noise levels undertaken during the car movements along Bill Schulz Drive. This may have been as a result of the cars leaving from the intersection of Coach Road and Bill Schulz Drive, which may have resulted in a direct line of sight to the cars.

### 5.0 PREDICTED NOISE LEVELS

From the events undertaken at the open day, and other data collected from similar events, preliminary predictions have been carried out of the likely noise from the facility to the nearest residential locations. The predictions are based on the information provided regarding the activities during major events, including numbers of competitors, heat times and laps from GHD Pty Ltd and the clubs. A summary is provided in Table 3.

**Table 3**  
**Predicted noise levels – proposed hill climb track**

Activity	Description	Predicted noise level at 44 Fairway Drive – dBA	
		L <sub>eq</sub>	L <sub>max</sub>
Gippsland Car Club – proposed hill climb	Major event with a variety of cars competing – up to 80 cars competing. Time trials of each car travelling around 100km/hr around course. Each lap is approximately 45 secs.	37	22

There are currently no official Victorian regulations for the control of noise from motor sports and such events that will occur at the facility. Further investigation into other State regulations is required to determine suitable criteria applicable to a venue of this nature.

## 6.0 SUMMARY

A noise survey has been carried out of activities undertaken at the open day for the Gippsland Car Club proposed hill climb track. The Gippsland Car Club is proposing to relocate their existing facility to land near Bill Schulz Drive.

Noise levels have been recorded in the vicinity of the above activities, as well as at the nearest noise sensitive receivers. In addition, predictions of the noise levels, based on the measurements undertaken as well as previous experience with this type of facility, have been undertaken to provide an indication of the likely noise levels with the proposed hill climb tracks.

The noise from the proposed relocation of the Gippsland Car Club hill climb track is predicted to be similar to the existing noise environment at the nearest residences, and is likely to be significantly less than the noise currently experienced from the Blue Rock Motorcycle club, given its proximity to the residences. The proposed location of the track is such that the land forms a natural barrier between the track and the residences.

There are currently no official Victorian regulations for the control of noise from motor sports and such events that will occur at the facility. Further investigation into other State regulations is required to determine suitable criteria applicable to a venue of this nature.

## APPENDIX A

### ACOUSTIC TERMINOLOGY

- 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.
- dB(A)** Environmental noise levels are most commonly expressed in terms of the 'A' weighted decibel scale, dB(A). This logarithmic scale closely approximates the response of the human ear, thus providing a measure of the subjective loudness of noise and enabling the intensity of noises with different frequency characteristics (e.g. pitch and tone) to be compared.
- $L_{90}$  Background noise levels are described in terms of the level exceeded for 90% of the measurement period ( $L_{90}$ ). This is commonly referred to as the typical minimum level and is generally measured in dB(A).
- $L_{eq}$  Continuous or semi-continuous noise levels are described in terms of the equivalent continuous sound level ( $L_{eq}$ ). This is the constant sound level over a stated time period which is equivalent in total sound energy to the time-varying sound level, measured over the same time period. This is commonly referred to as the average noise level and is generally measured in dB(A).
- $L_{Aeq}$  The "A" weighted equivalent continuous sound level.
- $L_{max}$  The maximum noise level ( $L_{max}$ ) is defined as the highest noise level which occurs during any noise event occurring over a particular time period. This is generally measured in dB(A).
- $L_{peak}$  The peak noise level is the peak value in dB of the linear sound pressure waveform and no averaging is carried out.



APPENDIX B

MEASURED NOISE LEVELS

Figure B1  
Activities at proposed Gippsland Car Club Hillclimb Track and corresponding noise levels at 44 Fairway Drive

