



MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT  
PLANNING AND URBAN MANAGEMENT AGENCY

**NOISE SURVEY REPORT No. 5**  
**(Compliance Monitoring)**

Reference Number: PC 079 08

13<sup>th</sup> July 2009

**1. BACKGROUND**

Compliance monitoring was conducted on the 2<sup>nd</sup>, 10<sup>th</sup>, and 12<sup>th</sup> of July 2009. The purpose of the compliance monitoring survey was to determine if the noise levels being emitted from Worship Center Church have been reduced.

The Agency has employed the following Sound Level Meter (SLM) to carry out compliance monitoring:

Manufacturer: Extech Instruments  
Model: HD 450 Type 2  
Serial Number: No. 07127547

The SLM was calibrated by Mr. Ken Scannell (Acoustics Consultant) on the 10<sup>th</sup> July 2009 at 8:30pm using a Brüel & Kjaer Calibrator. Uncertainty was  $\pm 0.8$  dB.

**2. NOISE LIMITS – Commercial Area**

<i>Time Period</i>	<i>Noise Limits in Decibels (dB)</i>
Day, 0700 to 1800	63 - 70
Evening, 1800 to 2200	52 - 57
Night, 2200 to 0700	47 - 52

Note: \* On Sundays and public holidays between 0700 and 1800 hours the evening noise limit applies.

Source: National Noise Policy 2006

**3. SOUND LEVEL READINGS**

**3.1 Compliance Monitoring Survey**

**Site Visit 1:**

*Date* 2<sup>nd</sup> July 2009  
*Day* Friday  
*Time* 8:30pm  
*Climatic Conditions* Light winds (negligible), no rain, reasonable conditions  
*Maximum reading* 83 dB

*Comments* There was religious activity taking place, mainly for the youth of the church. Recorded a maximum of 83 dB from shouting and singing and a 70 dB reading was recorded for the instruments that were being used for the service. Readings were taken from the main road (SLM was placed on the northern side facing south into Worship Center's property) facing the church tent.

**Site Visit 2:**

*Date* 10<sup>th</sup> July 2009  
*Day* Friday  
*Time* 8:30pm  
*Climatic Conditions* Slightly cloudy, wind was 1.2 m/s, light rain, reasonable conditions  
*Background reading* 50 dB  
*Comments* There was no activity occurring on the church property. There was also some interference coming from the Hotel Millenia water pumps. Mr. Ken Scannell was present during survey. He assisted by calibrating the Agency's Extech SLM and confirmed the background noise level to be 50 dB. Readings were taken from within the hotel facing the church at 2 meters from the boundary.

**Site Visit 3:**

*Date* 12<sup>th</sup> July 2009  
*Day* Sunday  
*Time* 11:23am  
*Climatic Conditions* Clear skies, light winds, ideal conditions.  
*Average reading* 57 dB  
*Maximum reading* 73 dB  
*Comments* The maximum reading of 73 dB singing by church choir and worship leader (amplified). Recorded 57 dB from Pastor preaching and 65 dB from clapping (church members). Readings were taken from within the hotel facing the church at 2 meters from the boundary. Non-Compliance.

**4. FINDINGS**

*The findings are as follows:*

**Compliance monitoring results:**

- 2<sup>nd</sup> July 2009 recorded a maximum noise level of 83 dB; main source was shouting and singing and a 70 dB reading was recorded for the instruments that were being used for the service. Readings were taken from the main road (north of church property) facing the church tent (south).
- 10<sup>th</sup> July 2009 recorded background noise level 50 dB; this was confirmed by Mr. Ken Scannell.
- 12<sup>th</sup> July 2009 recorded a maximum noise level of 73 dB which was a result of singing of choir and worship leader through PA system. Also recorded 57 dB from Pastor preaching and 65 dB from clapping (church members). Non compliance.

## **5. OBSERVATIONS**

2<sup>nd</sup> July 2009 observed measures by the church to reduce noise by rearranging their speakers. Observed 2 large speakers being moved near the center of the tent where religious activities were taking place. Construction of Hotel was also completed and confirmed the approximate height of the wall to be 2.3 meters.

According to Mr. Oli Ah Him on the 10<sup>th</sup> July 2009, noise levels from the Worship Center have reduced.

## **6. CONCLUSION**

The Noise Survey conducted on 12<sup>th</sup> July 2009 confirmed noise levels from Worship Center Church have reduced as stated by Mr. Oli Ah Him on the 10<sup>th</sup> July 2009. However, the noise levels from the church still exceeded the noise limits in the National Noise Policy.

Before the construction of the brick wall by Mr. Oli Ah Him, readings recorded a maximum of 82 dB on the 14<sup>th</sup> December 2008. On the 12<sup>th</sup> July 2009, after the construction of the wall, a maximum of 73 dB was recorded during church service. Both readings were taken from the same spot during the morning church service. The survey showed a reduction of noise by 11 dB

*Prepared by      Jeffery Leung Wai, Strategic Planner                      13/7/09*