



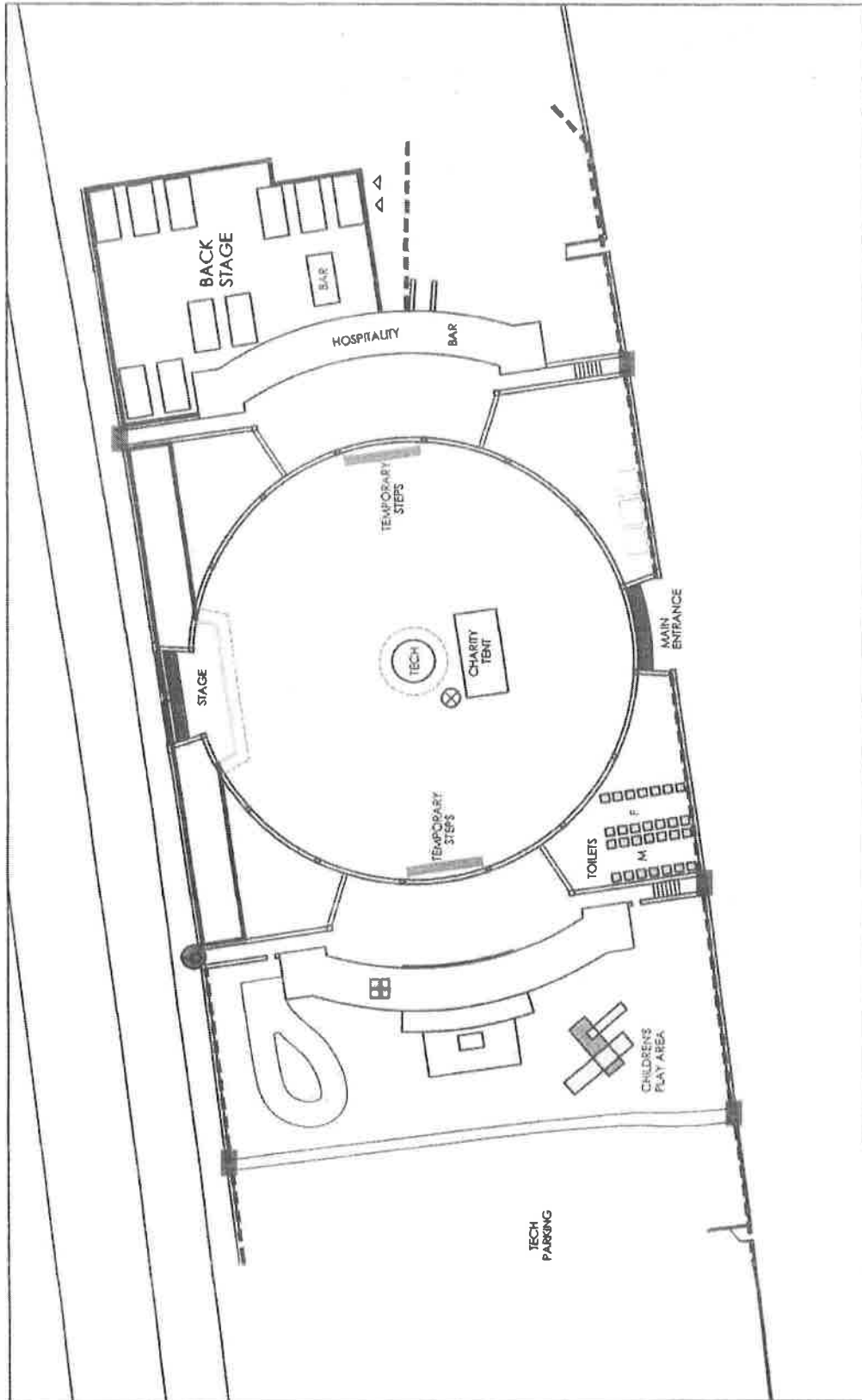
REPORT TITLE: NOISE MANAGEMENT PLAN IN RESPECT OF
RAMSGATE BOATING POOL FESTIVAL 2019
RAMSGATE BOATING POOL
ROYAL ESPLANADE
RAMSGATE CT11 0HE

ISSUED TO: [REDACTED]
Ramsgate Boating Pool
Royal Esplanade
Ramsgate CT11 0HE

ISSUED BY: [REDACTED]

CHECKED BY: [REDACTED]

DATE: May 2019



- Trailer for Acts
- First Aid Station
- Event Control
- Emergency Exit
- Disabled Access
- Toilet
- Generator
- Cold Food Stall
- Hot Food Stall
- Ais Fence
- Solid Fence (3m high)
- Emergency Routes
- Guard Fencing

Urban		RICS NDA 14	
Client Details: Dorothy Holt		Project Details: The Booting Pool Royal Esplanade, Itanigalla	
Drawing Title: Event Management Plan		Drawing No.: 19.1469.PJ.EM01	
Event:	Date:	Drawn By:	Checked By:
1:500 @ A3	April 2019	PLJ	



SUMMARY

- Ramsgate Boating Pool 2019 is proposed as a two day music festival to be held within the grounds of the Ramsgate Boating Pool.
- A Noise Management Plan has been designed for this year's Ramsgate Boating Pool 2019.
- The plan assesses music noise levels at the festival in order that agreeable entertainment is provided for festival goers whilst minimising disturbance to local residents.
- Calculations have been undertaken to predict noise levels at potential noise sensitive locations based on music levels at audience position within the festival site and assessed against guideline noise criteria.
- The assessment illustrates that where guideline noise criteria are adhered to, satisfactory and enjoyable music levels may be achieved for festival goers without adversely affecting the amenity of local residents.
- A methodology is provided for monitoring and controlling music noise levels during the festival together with a scheme for responding to complaints should they arise.



1. INTRODUCTION

Rosco Ltd. has been commissioned to provide and undertake a Noise Management Plan (NMP) for Ramsgate Boating Pool Festival 2019 to take place on Saturday 14th & Sunday 15th September at Ramsgate Boating Pool, Royal Esplanade, Ramsgate CT11 0HE.

Rosco Ltd. have been designing and commissioning sound systems for temporary and permanent installation nationally and internationally for twenty years and have produced and applied approximately thirty Noise Management Plans for public events similar to Ramsgate Boating Pool Festival 2019 on behalf of licencees and in conjunction with local authorities including North, Mid and East Hertfordshire District Councils, Central Bedfordshire Council, Huntingdonshire District Council, Oxfordshire County Council, Tower Hamlets, City Of Westminster, Camden Council et al.

Rosco Team Members (RTMs) possess a wealth of event noise monitoring and/or sound production/music experience and hold relevant Institute Of Acoustics and BSc Acoustics qualifications.

This NMP seeks to ensure guideline noise limits and criteria are established by agreement with Thanet District Council Environmental Health Office and are managed during the course of the festival.

This NMP includes:

- Description of the festival, site location and surrounding area;
- Review of guideline noise level criteria;
- Assessment of predicted noise levels at Noise Sensitive Locations (NSLs) against guideline noise levels;
- Noise monitoring survey methodology including complaints procedure.

2. EVENT DESCRIPTION

Ramsgate Boating Pool Festival 2019 is a two day music festival held to be on Saturday 14th & Sunday 15th September 2019. The festival represents the beginning of events proposed for the site of the current Ramsgate Boating Pond.

The site was originally built as a bandstand and tea pavilion in the 1920s as part of the St Lawrence Estate Scheme then demolished in the 1960s and flooded to create the current boating pool. The pool is to be drained and restored to its original purpose as a music venue.

The site is located between Westcliff Promenade and Royal Esplanade looking south over cliffs forming the coastline of the English Channel. The nearest NSLs are NSL 1 at a distance of 60m due north, NSL 2 at 75m due northwest and NSL 3, 90m due northeast. In order to protect the amenity of local residents, a barrier 3m in height is to be established at the north of the site with the addition of a tuned cardioid subwoofer sound system employed to reduce sound reaching the NSLs to the north.

The event comprises one music stage projecting south to be in operation from 12:00 to 23:00 on Saturday 14th September and between 12:00 and 22:00 on Sunday 15th September.

A site location plan indicating the proposed barrier, NSLs and stage cross section are given in Appendix A.

3. GUIDELINE MUSIC NOISE LEVEL CRITERIA

The Code of Practice on Environmental Noise Control at Concerts 1995 (The Code) is a document produced by a working party of professionals in the field known at the time as the Noise Council that is broadly adopted as a reference guide in controlling noise for events such as Ramsgate Boating Pool Festival 2019.

Table 1 of The Code below sets out guideline Music Noise Levels (MNL) for different event scenarios:

Concert days per calendar year, per venue	Venue Category	Guideline MNL; $L_{Aeq,15\ min}$
1 to 3	Urban Stadium or Arena	$\leq 75\text{dB}$
1 to 3	Other Urban and Rural Venues	$\leq 65\text{dB}$
4 to 12	All Venues	$\leq \text{Background noise } (L_{Aeq,7}) + 15\text{dB}$

Table 1: Table 1 of The Code; Guideline Music Noise Levels (MNLs)

The following descriptions are also provided by The Code:

- MNLs are defined as free-field broadband $L_{Aeq,15\ min}$ levels not to be exceeded between the hours of 09:00 and 23:00 (day period) measured at pre-identified NSLs and additionally at any other unanticipated NSLs identified during the course of the festival;
- NSLs include residential properties, hospitals or similar institutions, education establishments, places of worship or any premises used for other purposes likely to be adversely affected by the music noise;
- MNLs should not include contributions from noise sources other than music from the event;
- For events occurring between the hours of 23:00 and 09:00 (night period) the music noise shall not be audible from within any noise sensitive premises with windows open for ventilation;
- At distances greater than 2km from the event, the free-field broadband $L_{Aeq,15\ min}$ at any NSL shall not exceed 70dBZ in either the 63Hz or 125Hz octave band.

The day period MNL guideline value of $L_{Aeq,15\ min} \leq 65\text{dBA}$ relating to "Other Urban and Rural Venues" taken from Table 1 of The Code is considered appropriate for this event.

A summary of the guideline maximum MNL proposed by this NMP and to be used at this Ramsgate Boating Pool Festival 2019 subject to the agreement of the licensing authority is given below in Table 2:

Description	Guideline Maximum MNL; $L_{Aeq,15\ min}$
Day Period 09:00-23:00	$\leq 65\text{dB}$

Table 2: Proposed Maximum Guideline MNL for Ramsgate Boating Pool 2019.

4. NOISE CALCULATIONS & PREDICTIONS

Table 3 below calculates projected day period free-field receiver music noise levels at NSLs during Ramsgate Boating Pool Festival 2019:

Location	FOH Mix	NSL 1	NSL 2	NSL 3
Distance from source (m)	20	60	75	90
Theoretical L_p @ 1m (dBA)	124	124	124	124
Distance Attenuation (dB)	-26	-36	-38	-39
PA Directivity Correction (dB)	0	-10	-9	-9
Cardioid Sub Directivity Correction (dB)	0	-8	-8	-8
Ground Attenuation (dB)	0	0	0	0
Barrier Attenuation (dB) [†]	0	-8	-8	-8
Free-field Receiver Music Noise Level (dBA)	98	62	61	60

Table 3: Projected day period free-field music noise levels

[†] Barrier attenuation based on least effective (63Hz octave band frequency) and therefore worst case scenario attenuation calculated in accordance with ISO 9613 (1996) pt.2 - Attenuation of sound during propagation outdoors:

octave band frequency (Hz)	63	125	250	500	1k	2k	4k	8k	16k
barrier attenuation (dB)	-8	-10	-13	-15	-18	-20*	-20*	-20*	-20*

* capped at -20dB

It can be seen from Table 3 that projected total day period music noise levels are within the proposed guideline 65 dBA $L_{Aeq,15 \text{ min}}$ day period value at all NSLs as outlined in Section 3, Table 2.

A Post Event Report for Ramsgate Boating Pool 2019 including full details of all findings relating to music noise levels will be available within one calendar month of the event.



5. NOISE MONITORING METHODOLOGY

5.1 Before The Event

It is advisable that a letter be distributed to local residents warning them of the event and describing how it may affect their day. This may include higher levels of traffic and congestion in the locality and noise disturbance from either people passing by or amplified music.

The letter will outline a scheme designed for controlling noise and include the nature, dates and timings of the event, number of personnel commissioned to respond and a telephone complaints number that can be called in the event of a noise complaint relating to the event.

There is no rule as to the necessary distribution of such a letter and every local authority has a slightly different view on this. Rossco's view is to look at the final site plan and identify the streets or individual residences that are obviously going to be affected, and extend the cover to those that look likely.

All Front of House (FOH) audio personnel will be briefed to ensure that they are entirely comfortable with having to work inside strict guideline music noise levels. The PA company must agree to adhere to noise limits as a condition of their engagement / contract. They will understand that they are to act on instructions from RTMs, any Thanet District Council representative or the Licensee without question in respect of noise attenuation, and under no circumstances should limits be breached.

5.2 Music Noise Level Monitoring During The Event

An RTM qualified to BSc Acoustics level is assigned to undertake noise monitoring at the festival and will be present in or around the site throughout the duration of the festival. The RTM will be equipped with a Class 1 sound level meter and an additional Class 1 sound level meter will reside by the FOH sound engineer. The sound level meters are to be calibration-verified before and after the noise monitoring day's measurements using Class 1 calibrators.

The RTM will monitor music noise levels at the NSLs and be in transit between local residences responding and acting to any complaints should they arise.

Noise measurements are to be recorded principally as 15 minute samples of broadband L_{Aeq} values, with shorter measurement periods used for spot checks. Samples of octave band values will also be obtained at times at the NSLs and other measurement locations to provide frequency content information of noise levels.

For communication, both the RTM and the FOH sound engineer will possess a two-way radio and mobile 'phone (as backup) to enable communication. In addition, the RTM will carry an additional two-way radio linking in to festival security staff enabling any complaints received by the telephone hotline to be quickly relayed and responded.

When action has been requested for the FOH sound engineer to attenuate levels, it shall be determined that this has been undertaken by the observation of an immediate reduction in the FOH $L_{Aeq, 1 min}$ and secondarily by seeking verbal confirmation from the RTM that levels are within limits at the NSL.



5.3 Complaints Procedure

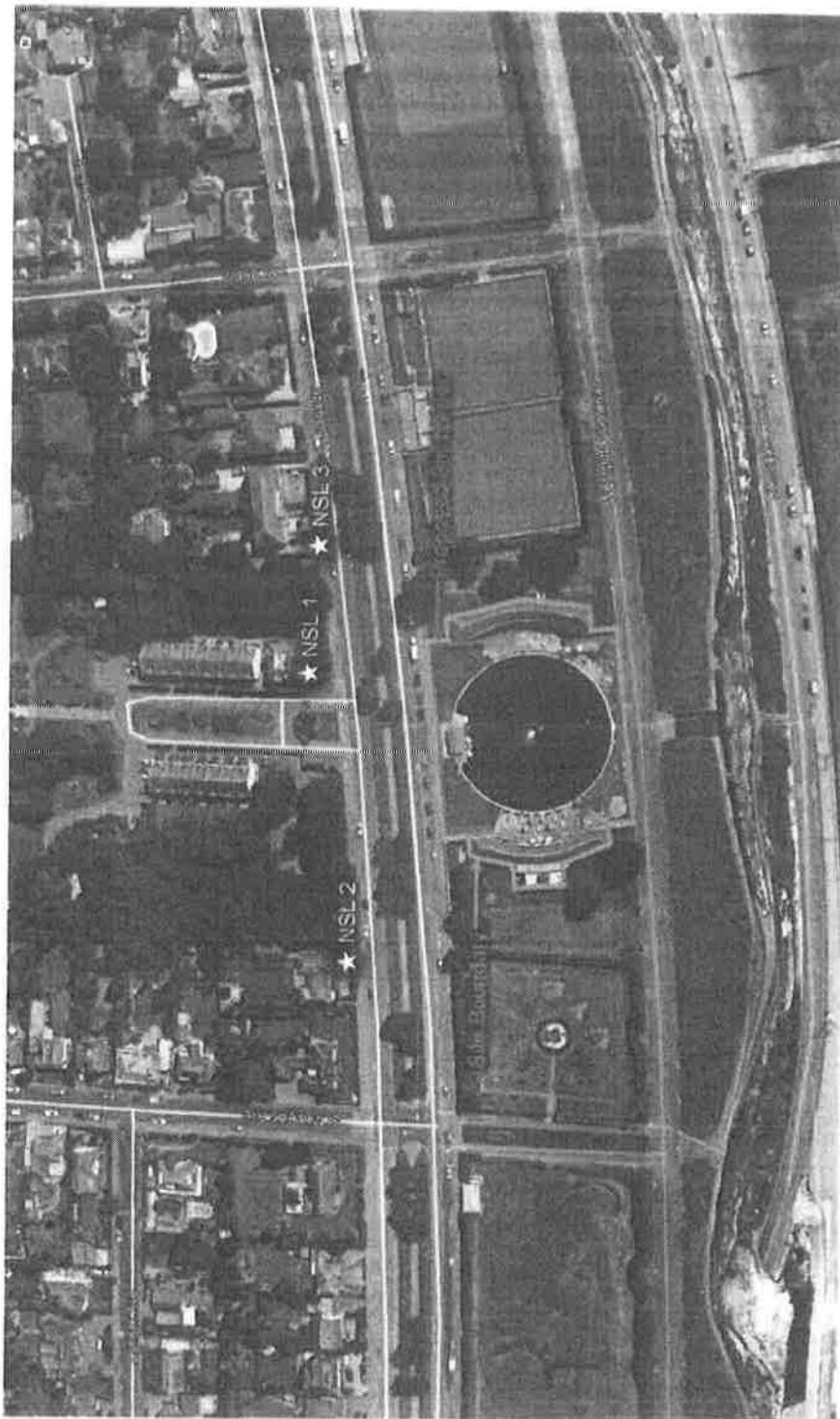
- Phone call from noise complaint received at permanently manned Event Control Centre;
- Control informs licensee and RMT;
- RTM attends the address/location of the complaint within a realistically prompt target time;
- RTM records MNL at the complaint location and takes remedial action as appropriate;
- RTM catalogues the complaint and reports back to the licensee;
- Control communicates with the complainant to report including any action undertaken;
- Control communicates with RTM again to close the case



ROSSCO
P.A. & SOUND DESIGN

APPENDIX A

Site Location Plan, Proposed Barrier & Noise Sensitive Locations





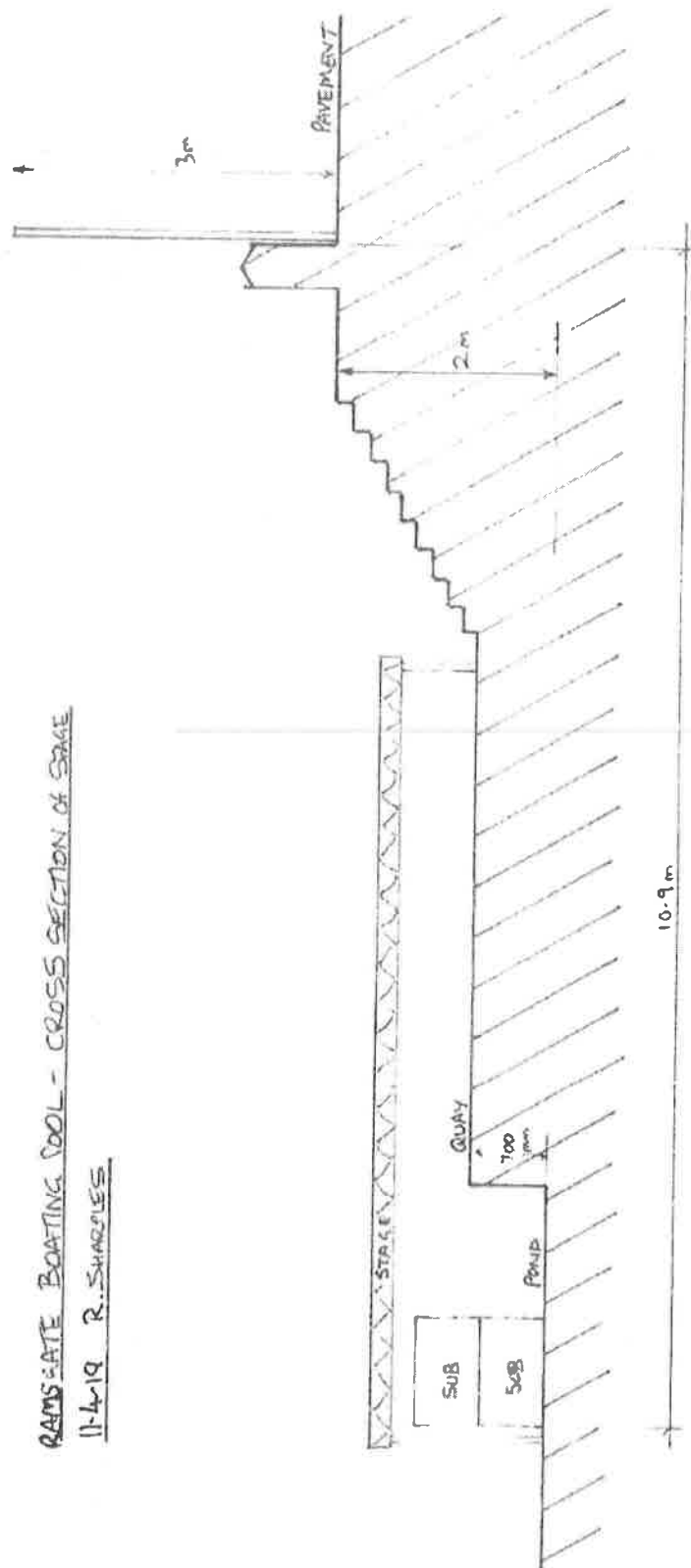
ROSSCO
P.A. & SOUND DESIGN

APPENDIX A

Proposed Site Cross Section

RAMSGATE BOATING POOL - CROSS SECTION OF STAGE

11-4-19 R. SHARPLES



APPENDIX B

Acoustic Terms

- B.1. The human ear detects sound (or "noise" if it is unwanted!) as pressure waves exert a force on the eardrum. The range of detectable forces is huge, from 0.00002 Pascals (P_0) (the threshold of hearing) to 200 Pascals (the threshold of pain). It is thus condensed down to a manageable scale by expressing the logarithm of the ratio of the sound pressure to a reference sound pressure. $SPL = 20 \log_{10}(P_1/P_0) \text{ dB}$. This is the decibel: **dB**.
- B.2. The human ear does not perceive all frequencies of sound with the same degree of sensitivity. It is less sensitive to very low and very high frequencies. To accommodate this perception in environmental monitoring an "A" weighting filter or "curve" is applied. This is expressed as **dB(A)**.
- B.3. Instantaneous noise level readings are of little use in determining the subjective response of the listener. A far more useful reading is an 'average'. The parameter widely used in environmental monitoring is expressed as **dB(L_{Aeq} , T)**. L is the level, A is the weighting, "eq" is the "equivalent continuous sound pressure level that represents the same energy as the time varying noise under investigation" over the given period, " T ".
- B.4. Background Noise is defined as the A weighted sound pressure level of the residual noise (L_{Aeq} , T) excluding specific noises under investigation) at an assessment location that is exceeded for 90% of the stated time, " T ". (L_{A90} , T). It is thus a statistical parameter.
- B.5. Level differences: We as humans can just detect a difference in loudness between two sources when there is a **3dB** difference. A **10dB** difference is perceived as a doubling (or halving) of level.
- B.6. Examples of typical noise levels:

