

OUTDOOR ENTERTAINMENT IN HONG KONG - A NOISE BALANCING ACT

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1. INTRODUCTION

Hong Kong is a major thriving modern metropolis. There is a great demand for concerts and other types of public entertainment. The warm sub-tropical climate in the area is ideally suited for outdoor entertainment events. However, Hong Kong is so intensively developed and compact that, it is extremely difficult to find convenient outdoor venues that have sufficient buffer separation from nearby residents and high rise residential buildings. Noise from entertainment events such as concerts held in parks, playgrounds and outdoor venues is prone to cause disturbance and annoyance.

2. CONTROL OF NOISE IN HONG KONG

The Noise Control Ordinance provides a comprehensive framework for controlling environmental noise in Hong Kong [1]. Noise from construction work is controlled by permits restricting use of powered mechanical equipment during the sensitive night-time hours and holidays, and the operating hours of percussive piling to day time on week days only; noise from particular noisy construction equipment by a noise emission label system; and neighbourhood noise by subjective means in response to complaints. Permits are issued by the Environmental Protection Department. Enforcement of permits and neighbourhood noise is by the police. Noise from places other than domestic premises, public places or construction sites, i.e. industrial and commercial noise is controlled by means of noise abatement notices which are enforced by the Department. The Department uses as a guide the four Technical Memoranda issued under the Ordinance [2][3][4][5].

3. CONTROL OF ENTERTAINMENT NOISE

Entertainment noise from concerts falls within the ambit of commercial noise. Although control by subjective annoyance is possible under the Ordinance, the Department uses objective levels whenever practicable.

Since perception of entertainment noise tends to be different in nature from most other commercial noise (usually air-conditioning and ventilation noise), the Department has used the rationale of the Memorandum for assessment of commercial noise, augmented by making reference to control guidelines in other countries [6][7][8][9][10] and accepted annoyance thresholds, to develop the following guideline:

"Noise from the event, in term of L_{eq} (15 minutes), shall not exceed the background noise level (in L_{eq}) by more than 10 dB(A) between 7:00 am and 11:00 pm; and for the night period, i.e. from 11:00 pm to 7:00 am, noise from the event shall not be audible at the nearest noise sensitive receiver (such as residences, schools and hospitals)."

4. OUTCOME OF CONTROL

Concert-goers invariably demand high music volume, especially during Western-style pop concerts. Concert enjoyment seems to increase with increased volume and bass content with a typical minimum level in the stadium of 96dBA and a general desire to maintain it at around 100dBA. The noise from such concerts at outdoor venues would become intolerable to nearby residents especially when they are close by or overlooking the event. In many of the outdoor locations in Hong Kong if the noise levels of concerts are controlled to meet the requirements set out above then concert-goers would be dis-satisfied with the noise levels within the venue. The conflict of aspirations of residents and concert-goers is shown at Figure 1.

5. BALANCING ACT AVAILABLE UNDER THE ORDINANCE

There are some flexible provisions in the Law to enable the government to balance excessive noise from some activities that would exceed the control criteria against the good of the community.

These are applicable to most essential activities. Under the relevant Memoranda the Department can permit some road/rail/utilities maintenance work, though it would exceed the noise criteria, to be carried out during sensitive hours when such work would cause significant inconvenience to the general public if it were done during the day time. In issuing these permits, the Department shall ensure that the quietest practicable working method and equipment are being employed.

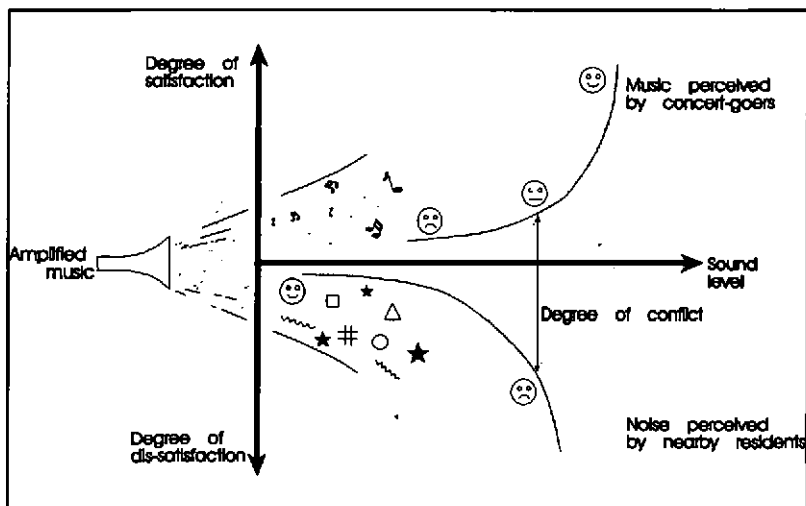


Figure 1 : Conflict of interests between concert-goer & nearby residents

For some construction work which by virtue of the magnitude or purpose may have significant social implications and public interest, the Department shall, on the advice of the Secretary for Planning, Environment and Lands (i.e. the minister for the environment) permit such work to be done during sensitive hours even if the criteria are exceeded. Apart from the need to use quiet construction methods and equipment, additional conditions such as relocation, sound insulation with air conditioning could be attached to the special permission.

But for industrial and commercial noise, the Department has no direct flexibility. Instead, there are appeal provisions and an Appeal Board has the power to vary the requirement of the noise abatement notice on the grounds of reasonableness or economic hardship seriously prejudicial to the conduct of the appellant's business.

The ultimate balancing act under the Ordinance is vested in the Governor of Hong Kong in consultation with his policy-making advisory body (the Executive Council). The Governor in Council may, by order, exempt with conditions any area, place, premises or activities from all or any of the provisions of the Ordinance.

6. THE BALANCING ACT IN PRACTICE

The above balancing provisions under the Ordinance and Technical Memoranda have been used in the territory to allow temporary road/rail/utilities maintenance work by permits, major construction works for

a new airport, bridges and reclamation by special permits and exemptions to go ahead. It appears that the general public, and the affected people are aware of the necessity of such maintenance work and the need for the airport and related infrastructure. The Appeal Board has also served its function in handling appeals, upholding or directing adjustments to the requirements of the notice based on the need to protect noise sensitive receivers and reasonableness as appropriate.

However, when entertainment noise is at issue, the problem is more complex because of the compact environment in Hong Kong as illustrated below.

7. ISSUES ON ENTERTAINMENT NOISE

When the biggest outdoor venue in Hong Kong, a new stadium, was used to host concerts, widespread complaints were received from nearby residents whose apartments overlooked the stadium.

Typical noise levels of Western-pop concerts within the stadium and neighbouring residences are indicated at Figure 2. Community response on noise from various activities at the stadium in the past two years are shown in Table 1.

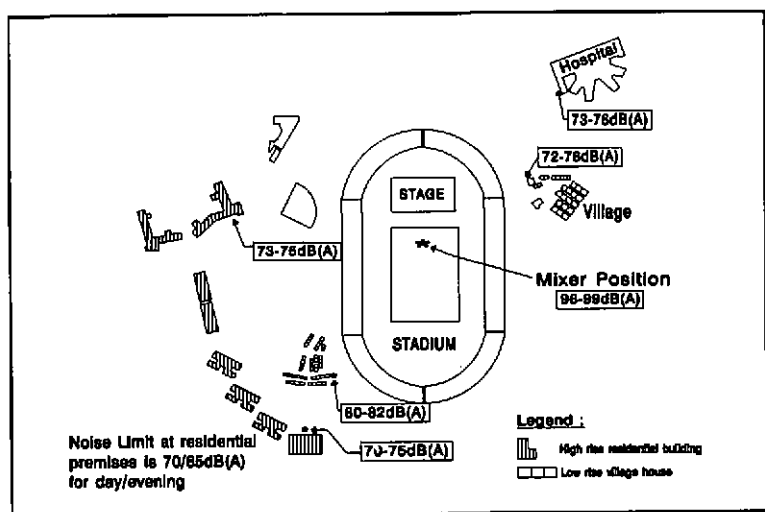


Figure 2 - Typical noise levels in Leg (15 minutes) of a western rock concert within the stadium and at neighbouring residences

Following the early noisy concerts the Department issued a noise abatement notice to protect the noise sensitive receivers.

Type of events	Noise exceedance (dB(A)) over the background noise at the nearest residences	Average no. of complaints received per event	Community response
Pop Concerts	14 - 27	75	Widespread complaints and rigorous community reaction
Variety shows & funfair etc. with singing performance	0 - 9	5	Sporadic complaints

Table 1 - Community response on noise from activities at an open venue in Hong Kong

The stadium management have tried some technical and administrative measures to minimise the disturbance. The technical measures included using directional speaker systems; integrating the in-house sound system with the touring speakers; fine tuning tilting angle and time delay of the sound system for a wider coverage and better sound quality; orientating the stage and speakers away from sensitive receivers; erecting sound barriers at strategic locations; and carrying out sound propagation tests to establish a reference level for more effective monitoring and control at the mixer position. Administrative measures adopted include limiting the time periods for sound tests, rehearsals and concerts; keeping nearby residents informed of the events and measures to reduce the noise; and establishing a hotline to respond to complaints.

However, given the close proximity of the sensitive receivers and the topography of the area, the test concert incorporating the above measures was unsuccessful as the noise was still unable to satisfy the control criteria at sensitive receivers during the evening period, while the concert-goers were generally not happy with the low music level.

The municipal council responsible for operating the stadium considered it is their role to provide entertainment to the community and there is a certain degree of support for this from the general public. The council would like to hold a number of concerts annually at the stadium.

In order to establish what may be an acceptable number and duration of concerts. Social surveys were carried out by interested parties to obtain views from nearby residents. Results of one of the surveys indicated that

about 70% of the respondents agreed that concerts can be held with noise levels according to the control criteria, while less than half of them agreed to concerts holding with higher noise levels [11]. There was no conclusive indication of support for concerts exceeding the control limit may be held [10][11].

A liaison group has now been established consisting of representatives from the municipal council, the stadium managers and nearby residents to try to work out a balance between the interest of various parties so that the stadium may hold a number of concerts per year with an exemption granted under the Law.

However, some complainants have united and determined to take action themselves if concerts exceeding the control criteria were allowed by exemption as they consider that would be an infringement of the Bill of Rights.

8. POSITION TO DATE

Whilst the case is still under debate, the rights of the individual appears to be carrying the day at present.

However it would be interesting to follow up on further political debates, possible legal battles and Court decision on statutory law versus public nuisance under common law in light of the Bill of Rights.

9. REFERENCES

- [1] Noise Control Ordinance, Laws of Hong Kong, Chapter 400 (1988)
- [2] Technical Memorandum on Noise from Percussion Piling, Environmental Protection Department, Hong Kong Government (1989)
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- [4] Technical Memorandum for the Assessment of Noise from Places Other Than Domestic Premises, Public Places or Construction Sites, Environmental Protection Department, Hong Kong Government (1989)
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- [6] "Draft Guideline on 1996 Health, Safety & Welfare at Pop Concerts & Other similar Events", Health & Safety Executive, United Kingdom (1991)
- [7] "A Study of Sound in and around Walnut Creek Amphitheatre with a Recommendation for Control", Stewart Acoustical Consultant (1992)
- [8] "Monitoring Concert Sound Levels in the Community - The Local Officials' Experience and View Point", E.G. Brickson, Vol. 2, Inter-noise 89
- [9] Environmental Noise Manual, New South Wales, Australia (1987)
- [10] "Noise Control Techniques and Guidelines for Open Air Pop Concerts", Jim Griffiths, Proc. IOA Vol. 17 (1985)
- [11] "Opinion Survey of Neighbouring Residents of Hong Kong Stadium on Holding Concerts in the Stadium", Dr. C.M. Chan and Dr. C.K. Cheung, City University Consultant Ltd. (1996)
- [12] "Opinion Survey on Concerts at the Hong Kong Stadium", Social Sciences Research Centre, the University of Hong Kong (1996)