

ACOUSTIC NOISE BARRIER MAT FOR CONSTRUCTION APPLICATION

隔音墊：管理建築噪音之有效措施

by MASON Acoustics Limited

Apart from using as a single sound barrier layer, barrier mat can be employed in construction application to minimize the noise transmission from construction activities to nearby receivers. Herewith some project studies on noise treatment projects for indoor and outdoor constructions.

Exterior Construction Site Scaffolding

MTRC Express Rail Link 廣深港高速鐵路(香港段)
Obstruction Removal Project, at Sham Mong Road

Developer
MTRC

Scope of Project

In order to facilitate the construction of future Guangzhou-Shenzhen-Hong Kong Railway, an existing footbridge at Sham Mong Road has to be removed in Nov 2010. However, this demolition work brought noise nuisance to surrounding residential, therefore Contractor considered to install acoustic barrier as major noise mitigation measure.

Noise Receivers

nearby residential (eg. Married Quarters)

Measure employed

Over 200m² of 4 kg/m² acoustic barrier mat from Mason Acoustics Limited, are installed at scaffolding interior to minimize the noise impacts generated by the operation of demolition machineries. As a result, the overall noise reduction is around 12 dB(A).



Exterior Construction Site Scaffolding

“1881 Heritage” (Former Marine Police HQ)

前水警總部的保育項目

Demolition Work at Tsim Sha Tsui

Developer

Cheung Kong (Holdings) Ltd

Noise Sensitive Areas

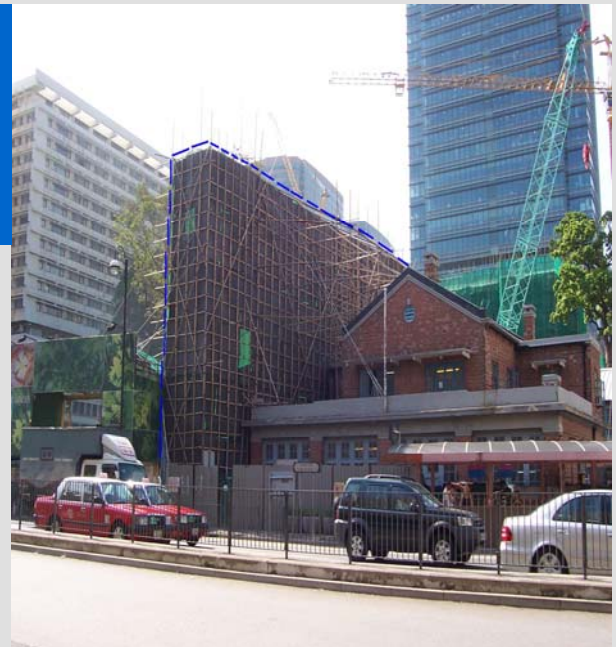
YMCA Hostel, TST Cultural & Arts Association

Scope of Project

Large scale of renovation and demolition work of Former Marine Police HQ has induced noise to surrounding noise sensitive areas, therefore demolition contractor adopted acoustic barrier on exterior scaffoldings

Measure Employed

150m² of 5kg/m² acoustic barrier mat from MASON Acoustics Limited was employed on scaffolding exterior, at approx. 10m height from ground



View from site to receiver

Temporary Noise Barrier on Hoarding

Central Reclamation Project 中環填海計劃
Demolition Work at Queen's Pier



Developer
CEDD

Noise Sensitive Areas
City Hall, Library, Exhibition Galleries

Scope of Project
Large scale of demolition works have been done for Central Reclamation Project. However, these machineries generated noise level over 90dB which exceeds the limit under EPD.

Measure Employed
5kg/m² Acoustic Barrier Mats were affixed at the back of contractor's tailor-made metal hoarding, to enhance the mass and overall noise reduction of hoarding. As a result, the overall noise reduction for reinforced hoarding is around 20dB(A).

Noise Enclosure for PMEs

Noise Sensitive Areas
Residential

Scope of Project
The operation of an Air Compressor has generated noise disturbance to surrounding residential during construction phase.

Measure Employed
A partial enclosure using plywood coupled with loaded vinyl 5kg/m² noise barrier (provided by Mason Acoustics Ltd) was constructed, and reaching the noise reduction of 19.6dB(A).



Interior

Exterior

Noisy Indoor Construction Site

Harbour City 海港城室內裝修工程
Indoor Renovation Work



Developer
Harbour City

Scope of Project

The management converted a 45,000 square feet carpark space located on the first floor of Ocean Centre into retail space in 2004.

The Noise is generated by the renovation work seriously affect tenant's normal operation and occupants in hotel nearby.

Measure Employed

1,000m² of 10kg/m² acoustic barrier mat were employed to reduce the transmission of airborne and impact noise.

Noise generated is restricted within the zone and facilitate better acoustic comfort to occupants upon installation.

Mason Acoustics Limited also provides noise barrier for following noise mitigation projects:

INDOOR Renovation Site

China Resources Building (A&A works at 49/F & 50/F)
Ocean Centre (Renovation work)
Tsim Sha Tsui Centre (Renovation site at basement)
Lok Fu Shopping Centre

China Resources Construction
Ray On Construction
SinoLand / Rigid HK
The Link / Sun Yu Chau Eng.

OUTDOOR Construction Site

Civil Aviation Dept Headquarter
Customs Headquarter
Lam Tin Estate, Phase 7 & 8
City University of Hong Kong (Library extension)
Lai Chi Kok Development
Exchange Tower

ASD/ Chun Sing Eng.
ASD/ Shui On
HKHA/ Shui On Building Contractors
CityU of HK/ Chiu Lee Construction
Leighton Contractor Asia
SinoLand/ Vibro(HK)

FURTHER STUDY

A SITE WITHOUT PROPER NOISE CONTROL MEASURE

A Trench Excavating Work for Underground Drainage Pipe, Central

This trench excavating work is located at busy commercial areas. However, no proper noise control measure is employed. The vinyl cover sheet shown could only tackle visual impact masking the excavation work to pedestrians, while resulted in almost no noise control function to the noise problem.

In order to bring better acoustic comfort to nearby residences and pedestrians, the vinyl sheet should be replaced by proper acoustic barrier (eg. vinyl loaded barrier from MASON Acoustics Ltd), to keep the nuisance to the public at minimum.



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