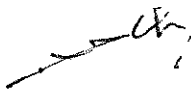


Contract No.: HY/2009/11
Central – Wanchai Bypass, North Point Reclamation

NOISE MANAGEMENT PLAN **(For Dredging Works)**

	Name	Signature
Prepared by:	China Harbour Engineering Co., Ltd. – China Road and Bridge Corporation Joint Venture	

1.0 Introduction

North Point Reclamation (Contract No. HY/2009/11) – as a part of the “permanent and temporary reclamation works including associated dredging works in Wan Chai Development Phase II (WDII) area” which is covered in the Environmental Permit No. EP-356/2009. China Harbour Engineering Company Limited – China Road and Bridge Corporation Joint Venture (CHEC-CRBC JV, hereafter JV) grants a further environmental permit (No. FEP-01/356/2009). Under the Part C of the FEP, JV prepares a noise management plan in order to fulfill the FEP condition. *Please refer to the layout on Appendix A* (The scale of layout is 1:2000).

2.0 Environmental Legislation, Policies, Plans, Standards and Criteria

Noise impacts were assessed in accordance with the criteria and methodology given in the Technical Memoranda made under the Noise Control Ordinance (NCO), and EIAO-TM.

1. The NCO provides the statutory framework for noise control. This defines statutory limits applicable to equipment used during the construction and operation phases of the Project. The NCO invokes four Technical Memoranda, which define the technical means for noise assessment
2. Technical Memorandum on Noise from Places other than Domestic Premises, Public Places or Construction Sites (IND-TM)
3. Technical Memorandum on Noise from Construction Work in Designated Areas (DA-TM) and
4. Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM).

The NCO and the accompanying Technical Memoranda provide a mechanism for assessing noise levels and provide the statutory power to control noise

5. With regard to the assessments of the construction noise impact during restricted hours and operation noise impact, the NCO designates acceptable noise levels for Noise Sensitive Receivers (NSRs) on the basis of an Area Sensitivity Rating (ASR), based on the characteristics of the area within which they are located such as rural, village, low-density residential, or urban (see Table 1). Within these areas, the presence of "influencing factors" (such as the presence of industrial activities or major roads) can further affect the ASR and hence the acceptable noise level.

Table 1 Area Sensitivity Ratings (ASRs)

Type of Area Containing NSR	Degree to which NSR is affected by Influencing Factor		
	Not Affected	Indirectly Affected	Directly Affected
Rural Area	A	B	B
Urban Area	B	C	C
Low density residential area consisting of low-rise or isolated high-rise developments	A	B	C
Area other than those above	B	B	C

3.0 Use of Powered Mechanical Equipment (PME)

Table 2 Items of powered mechanical equipment which may be used within site area.

Identification code of item of powered mechanical equipment (if applicable)	Description of item of Powered mechanical equipment	No. of Units
CNP061	Derrick Barge	1
CNP063	Dredger, grab	1
CNP221	Tug Boat	2

- 1) Tug Boat and dredger would not operated at the same time
- 2) Not more than 1 tug boat would be operated at the same time.
- 3) Derrick barge will be operated for the dredging works in day time only.

4.0 Duration of Dredging

The duration of dredging works will be commenced on 8 March 2010 and 18 September 2010 and the detail schedule is attached. *(Please refer to Appendix B).*

5.0 Operation of Dredging Works

The operation time of the PME would be carried out in day time (0700-1900) and restricted hour (1900-2300). The detail calculation showed in *Appendices E and F.*

Day Time Dredging

The individual noise level of dredger, grab and derrick barge are lower than 75.0 dB(A) which is 68.3 and 73.0 dB(A) respectively.

The difference in between two noise source (derrick barge and dredger, grab) is 4.7dB(A). According to the GW-TM, Table 4 – Summation of Noise Level (see Table 3), two noise levels between 3.5 to 4.5 dB(A) should be 1.5dB(A) add to the higher noise level. Hence the resultant noise level generated from these two sources (derrick barge and dredger, grab) during operation at the same time will become 74.5 dB (A) in which is lower than the 75.0 dB(A).

Evening time Dredging

For the use of PME for carrying out dredging works at Reclamation Site Boundary Outside City Garden to Victoria Center, JV grant a Construction Noise Permit (CNP) No. GW-RS0119-10 from Environmental Protection Department (EPD) on 17 February 2010. The detail schedule of dredging works, please refer to *Appendix C* and an approved CNP is enclosed, please refer to the *Appendix D*.

Tug boat and dredger, grab will not be operated at the same time

Table 3 Summation of Noise Levels

Difference in dB(A) between two noise levels being summed	Amount in dB(A) to add to the higher noise level
0 to 0.5	3.0
1.0 to 1.5	2.5
2.0 to 3.0	2.0
3.5 to 4.5	1.5
5.0 to 7.0	1.0
7.2 to 12.0	0.5
more than 12.0	0

When using Table 3 noise levels should be summed on a pairwise fashion and the final total rounded to the nearest whole dB(A), with values of 0.5 or more being rounded upwards.

6.0 Calculation of Predicted Noise Level during day time

Remarks:

- 1) Direct line of sight from the nearest receivers
- 2) Tug Boat and dredger would not operated at the same time
- 3) Not more than 1 tug boat would be operated at the same time.
- 4) Noise level predicted by means of worst case scenario

The detail calculation of noise level (Please refer to the *Appendix E*).

7.0 Calculation of Predicted Noise Level during restricted hours

Remarks:

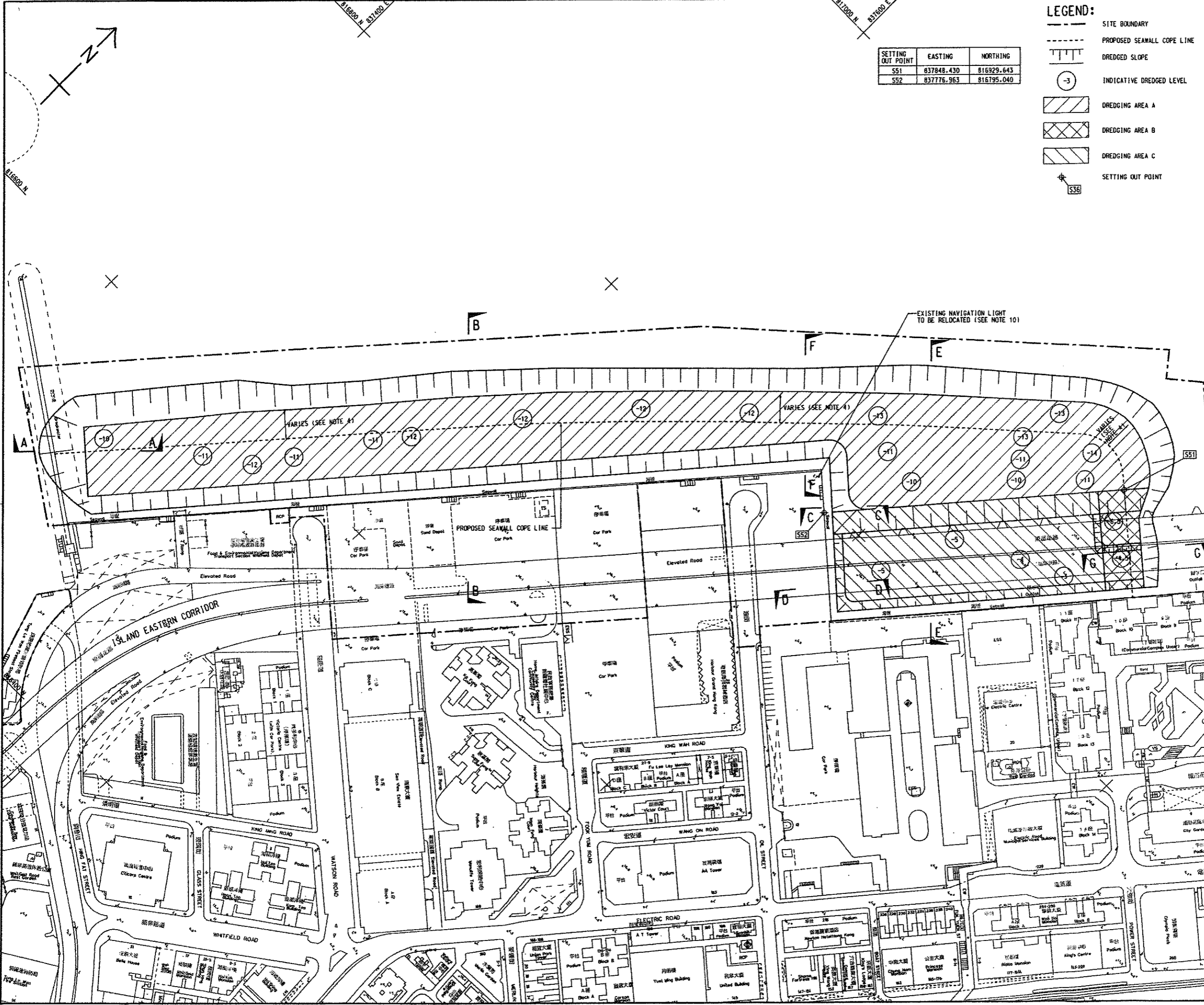
- 1) Direct line of sight from the nearest receivers
- 2) Tug Boat and dredger would not operated at the same time
- 3) Not more than 1 tug boat would be operated at the same time.
- 4) Noise level predicted by means of worst case scenario

The detail calculation of noise level (Please refer to the *Appendix F*).

~ END ~

APPENDIX A

LAYOUT PLAN



SETTING OUT POINT	EASTING	NORTHING
S51	837848.430	816929.643
S52	837776.963	816795.040

- LEGEND:**
- SITE BOUNDARY
 - - - PROPOSED SEAWALL COPE LINE
 - DREDGED SLOPE
 - -3 INDICATIVE DREDGED LEVEL
 - ▨ DREDGING AREA A
 - ▩ DREDGING AREA B
 - ▧ DREDGING AREA C
 - ⊕ S51 S52 SETTING OUT POINT

- NOTES:**
- ALL LEVELS ARE IN METRES WITH REFERENCE TO HONG KONG PRINCIPAL DATUM.
 - ALL COORDINATES ARE GIVEN TO HONG KONG (1980) GRID IN METRES.
 - FOR SECTIONS REFER DRG. Nos. 60095653/NP/6206 TO 6207.
 - TOE LINE OF DREDGING FOR ROCKFILL FOUNDATION OF SEAWALL SHALL REFER TO SEAWALL DETAILS IN DRAWING Nos. 60095653/NP/6021, 6022, 6031 AND 6032.
 - SITE INVESTIGATION DETAILED ON DRG. No. 60095653/NP/6210 SHALL BE CARRIED OUT AND DREDGED LEVELS ARE TO BE DETERMINED BY THE ENGINEER PRIOR TO DREDGING.
 - THE DREDGED LEVELS GIVEN IN THIS DRAWING ARE INDICATIVE ONLY. DREDGING SHOULD BE CARRIED OUT TO BASE OF SOFT CLAY. UPON RECEIVING THE FIELDWORK RESULTS OF SITE INVESTIGATION AS STATED IN NOTE 5, THE ENGINEER WILL PROVIDE THE TARGET DREDGED LEVEL ACCORDING TO THE FOLLOWING CRITERIA:
 - WITHIN DREDGING AREA A.
 $Q_c \geq 0.7MPa$.
 - WITHIN DREDGING AREA B.
 $Q_c \geq 0.5MPa$.
 - WITHIN DREDGING AREA C.
 $Q_c \geq 0.04MPa$.
 WHERE Q_c IS THE NET CONE RESISTANCE FROM CONTINUOUS PIEZOCONE PENETRATION TESTS.
 - DREDGED SIDE SLOPE SHALL BE MAINTAINED IN A STABLE CONDITION AND THE GRADIENT SHALL BE AS STEEP AS POSSIBLE.
 - DREDGED SIDE SLOPE AT THE ROCKFILL MATERIAL OF EXISTING BREAK WATER AND SEAWALL SHALL NOT BE STEEPER THAN 1 VERTICAL ON 1.5 HORIZONTAL UNLESS OTHERWISE SPECIFIED.
 - EXISTING VERTICAL SEAWALL, PARAPET WALL AND BOLLARD SHALL BE RETAINED. FURNITURE AT THE EXISTING LANDING STEPS INCLUDING WOODEN FENDERS, PLASTIC FENDERS, PLASTIC LANDING STEPS AND HAND RAILINGS SHALL BE REMOVED. BERM STONE AND ARMOR ROCK IN FRONT OF THE EXISTING SEAWALL COPE LINE SHALL BE REMOVED PRIOR TO RECLAMATION.
 - EXISTING NAVIGATION LIGHT NEAR OIL STREET SHALL BE REMOVED DURING THE RECLAMATION. THE NAVIGATION LIGHT POLE SHALL BE RELOCATED TO THE COPING OF THE PROPOSED SEAWALL AT THE LOCATION AS SHOWN ON DRAWING No. 60095653/NP/1001. INSTALLATION DETAILS SHALL REFER TO CEDD STANDARD DRAWING NO. C3018 OR AS AGREED WITH THE ENGINEER ON SITE. THE LAMP OF THE NAVIGATION LIGHT WILL BE TAKEN OFF AND INSTALLED BY THE MARINE DEPARTMENT. THE CONTRACTOR SHALL COORDINATE WITH MARINE DEPARTMENT ON THE PROGRAMME FOR THE REMOVAL AND INSTALLATION OF THE LAMP OF THE NAVIGATION LIGHT.

A	WORKING DRAWING	DEC 09
T	TENDER DRAWING	SEP 09
Highways Department 路政署 Major Works Project Management Office		
CENTRAL - WAN CHAI BYPASS AND IEC LINK CENTRAL - WAN CHAI BYPASS - NORTH POINT RECLAMATION		
DREDGING LAYOUT		
AECOM		
DRG. NO.	60095653/NP/6205A	
DESIGNED BY	TTF	DATE
CHECKED BY	WZP	SCALE
SCALE	AS 1 : 1000	
SCALE	AS 1 : 2000	
SCALE	METRES AND MILLIMETRES	
WORKING DRAWING		CONTRACT NO. HY/2009/11 DATE OF APPROVAL BY: [Signature]
© COPYRIGHT RESERVED 版權所有		

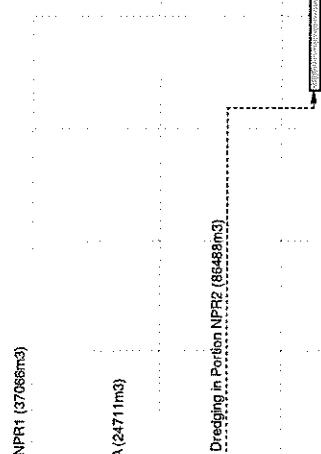
Plot File by: ZEEINGCD 2009-04-22
 project\60095653\drawing\NP\6000\NP_6205.dgn

APPENDIX B

CONSTRUCTION SCHEDULE

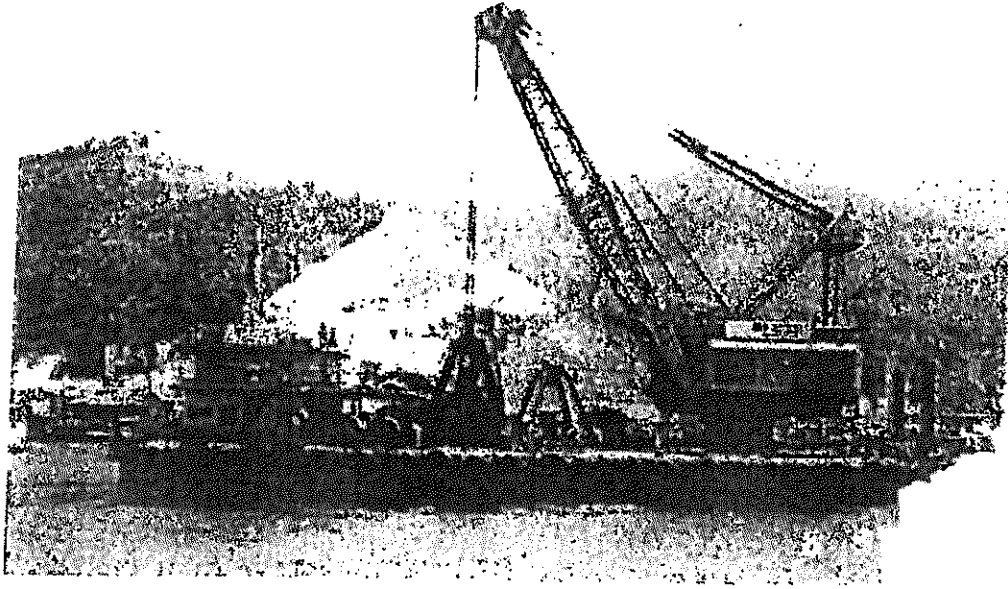
Contract No. HY/2009/11Central - Wan Chai Bypass North Point Reclamation

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2010														
						Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov					
Detailed Works Programme ver.0																				
SECTION 1 OF WORKS (290 DAYS)																				
	SEAWALLS AND RECLAMATION WORKS		10/16-Mar-10	26-Mar-10	31															
	PORTION NPR1		10/16-Mar-10	26-Mar-10	31															
11300	Dredging in Portion NPR1 (37066m3)		10/16-Mar-10	26-Mar-10	31															
SECTION 1A OF WORKS (230 DAYS)																				
	SEAWALLS AND RECLAMATION WORKS		7/09-Mar-10	15-Mar-10	24															
	PORTION NPR1A		7/09-Mar-10	15-Mar-10	24															
11100	Dredging in Portion NPR1A (24711m3)		7/09-Mar-10	15-Mar-10	24															
SECTION 2 OF WORKS (470 DAYS)																				
	SEAWALLS AND RECLAMATION WORKS		22/01-Apr-10	30-Apr-10	27															
	PORTION NPR2		22/01-Apr-10	30-Apr-10	27															
11400	Dredging in Portion NPR2 (86489m3)		22/01-Apr-10	30-Apr-10	27															
SECTION 3 OF WORKS (600 DAYS)																				
	SEAWALLS AND RECLAMATION WORKS		34/11-Aug-10	19-Sep-10	13															
	PORTION NPR3		34/11-Aug-10	19-Sep-10	13															
11500	Dredging in Portion NPR3 (98944m3)		34/11-Aug-10	19-Sep-10	13															

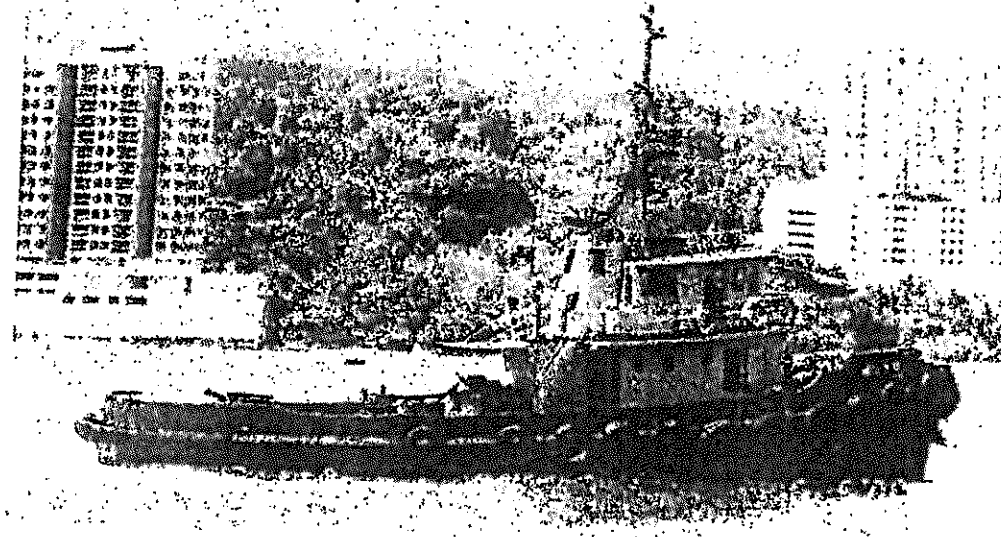


APPENDIX C

**USE OF POWERED MECHANICAL EQUIPMENT
(PME)**



挖泥機，抓斗式
Dredger, grab



拖船
Tug Boat

APPENDIX D

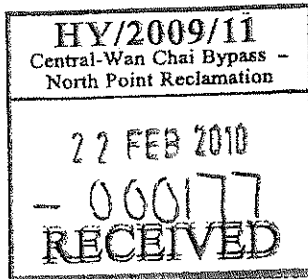
COPY OF CONSTRUCTION NOISE PERMIT (CNP) GW-RS0119-10

本署檔案 (4) in 313986
YOUR REF:
來函檔案
YOUR REF:
電話 2516 1716
TEL NO:
圖文傳真
FAX NO: 2960 1760
網址
HOMEPAGE: <http://www.epd.gov.hk/>

Environmental Protection Department
Environmental Compliance Division
Regional Office (South)
2/F., Chinachem Exchange Square
1 Hoi Wan Street
Quarry Bay, Hong Kong



環境保護署
環保法規管理科
區域辦事處(南)
香港鰂魚涌
海灣街一號
華懋交易廣場二樓



Registered Post

17 February 2010

To: CHINA HARBOUR ENGINEERING COMPANY LIMITED AND
CHINA ROAD AND BRIDGE CORPORATION (trading as China
Harbour Engineering Company Limited – China Road and Bridge
Corporation Joint Venture)
19/F, CHINA HARBOUR BUILDING,
370-374 KING'S ROAD,
NORTH POINT,
HONG KONG

Dear Sir,

**Notice of Issue of Construction Noise Permit pursuant
to Section 8(6) of the Noise Control Ordinance (Cap. 400)**

I write to inform you that, under Section 8(6) of the Noise Control Ordinance, the Authority has decided to issue a construction noise permit in respect of your application, which was received by the Authority on 3 February 2010; for the use of powered mechanical equipment for carrying out construction work at **RECLAMATION SITE OUTSIDE CITY GARDEN TO VICTORIA CENTRE, NORTH POINT, HONG KONG.**

The construction noise permit No. GW-RS0119-10 is enclosed.

You are strongly advised to read the conditions of the permit carefully and to ensure compliance with these conditions. Any breaching of the conditions may lead to cancellation of the permit, subsequent prosecution action and the Authority's refusal to issue further permit for the above construction site.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'A. Cheung'.

(CHEUNG Sau-cheong, Andrew)
for Authority

FORM 3
NOISE CONTROL ORDINANCE
(Chapter 400)
SECTION 8(9)

[reg.5(a)]

**CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED
MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT
CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR
THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK**

CONSTRUCTION NOISE PERMIT NO. GW-RS0119-10

To : CHINA HARBOUR ENGINEERING COMPANY LIMITED AND CHINA ROAD AND BRIDGE CORPORATION
(trading as China Harbour Engineering Company Limited – China Road and Bridge Corporation Joint Venture)

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance with the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed :

Full address : RECLAMATION SITE OUTSIDE CITY GARDEN TO VICTORIA CENTRE, NORTH POINT,
HONG KONG Lot No. -----

The site boundary, that is, the boundary of the area within which the powered mechanical equipment may be used and the prescribed construction work may be carried out is delineated on the attached plan which forms part of this construction noise permit.

2. *PART/WHOLE of the site falls *WITHIN/OUTSIDE a designated area
3. Powered Mechanical Equipment

- a. Items of powered mechanical equipment which may be used inside the site boundary :

<i>Identification code of item of powered mechanical equipment (if applicable)</i>	<i>Description of item of Powered mechanical equipment</i>	<i>No. of units</i>
CNP 063	Dredger, grab	One
CNP 221	Tug boat	Two

- b. Validity of the construction noise permit for the use of the powered mechanical equipment:

Date and time of Commencement : 22 February 2010 at 1900 hours

Days and hours: 0000-2400 hours on general holidays (including Sundays), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday [but note Condition 3.d.1 below for the operating hours within which the use of the above listed powered mechanical equipment is allowed].

This part of the permit expires on : 22 August 2010 at 2300 hours

- c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise permit is required to be kept on the construction site and made available for inspection by the Authority.
d. Other conditions imposed on the use of the powered mechanical equipment:

1. The powered mechanical equipment listed in condition 3.a. shall only be operated during the hours shown below:

General holidays including Sundays between 0700-2300 hours.

Any day not being a general holiday between 1900-2300 hours.

4. Prescribed Construction Work

a. Type of prescribed construction work which may be carried out inside the site boundary:

Identification code of type of prescribed construction work	Description of type of prescribed construction work
-----	Not applicable

b. Validity of the construction noise permit for the carrying out of the prescribed construction work:

Date and time of Commencement : Not applicable at Not applicable
 Days and hours: Not applicable

This part of the permit expires on : Not applicable at Not applicable


c. ~~Site layout plan(s), endorsed by the Authority, may be attached with the permit to indicate the locations permitted for the carrying out of prescribed construction work described in this permit. The layout plan(s) is(are) required to be kept on the construction site and made available for inspection by the Authority.~~

d. Other conditions imposed on the carrying out of the prescribed construction work:

Not applicable

5. This construction noise permit or a copy thereof must be displayed on the construction site at the control room of grab dredger and tug boat for public information.

Dated this 17th Day of February 2010

Signed: 
 (CHEUNG Sau-cheong, Andrew)
 for Authority

* Delete as necessary

表格 3
噪音管制條例
(第 400 章)
第 8(9) 條

[第 5(a) 條]

建築噪音許可證
為進行建築工程（撞擊式打樁除外）
而使用機動設備及／或進行訂明建築工程

建築噪音許可證編號: GW-RS0119-10

致: CHINA HARBOUR ENGINEERING COMPANY LIMITED AND CHINA ROAD AND BRIDGE CORPORATION
(trading as China Harbour Engineering Company Limited – China Road and Bridge Corporation Joint Venture)

本建築噪音許可證是按照《噪音管制條例》第 8 條的規定而發出的。現准予使用機動設備以進行撞擊式打樁工程以外的建築工程及／或進行訂明建築工程，但須受以下條件規限。若不按照該等條件進行建築工程，許可證可遭撤銷，而且會受到檢控。

條 件

1. 可使用機動設備及／或進行訂明建築工程的建築地盤：
詳細地址：香港北角城市花園至維多利中心對出之填海區

地段編號: -----

地盤範圍(即可使用機動設備及進行訂明建築工程的地方範圍)已描劃於夾附的圖則上，而該圖則是本建築噪音許可證的一部分。

2. 該地盤部份/全部*位於指定範圍之內/外*
3. 機動設備

- a. 在地盤範圍內可使用的各項機動設備：

各項機動設備的識辨代碼 (如適用的話)	各項機動設備的說明	數目
CNP 063	挖泥機，抓斗式	壹
CNP 221	拖船	貳

- b. 可使用機動設備的建築噪音許可證有效期期：

生效日期及時間：二零一零年二月二十二日 下午七時

日期及時間：公眾假日（包括星期日）的凌晨零時至晚上十二時，公眾假日以外的任何一日凌晨零時至上午七時及下午七時至晚上十二時 [但須注意條件 3. d. 1 有關可以使用上列機動設備的時間]。

此部分許可證屆滿日期及時間：二零一零年八月二十二日 晚上十一時

日期

時間

- c. 建築地盤須備有本建築噪音許可證所述每件機動設備的照片各一幀，供監督隨時查看；該等照片須經監督認可。

- d. 規限使用機動設備的其他條件：

1. 列在條件 3. a. 內的機動設備祇可於以下時間使用：

公眾假日包括星期日上午七時至晚上十一時。

公眾假日以外的任何一日下午七時至晚上十一時。

4. 訂明建築工程

a. 在地盤範圍內可進行的訂明建築工程：

訂明建築工程的識辨代碼	訂明建築工程的類別的說明
-----	不適用
/	

b. 可進行訂明建築工程的建築噪音許可證有效期：

生效日期及時間： 不適用

日期及時間： 不適用

此部分許可證屆滿日期及時間： 不適用

日期

時間

c. 本許可證可夾附經監督認可的地盤圖則，以顯示本許可證准予進行訂明建築工程的地點。該地盤圖則須存放於建築地盤供監督隨時查看。

d. 規限進行訂明建築工程的其他條件：

不適用

5. 本建築噪音許可證或其副本必須展示於建築地盤 抓斗式挖泥機及拖船的控制室內，以便
給予公眾人士參閱。

日期： 二零一零年二月十七日



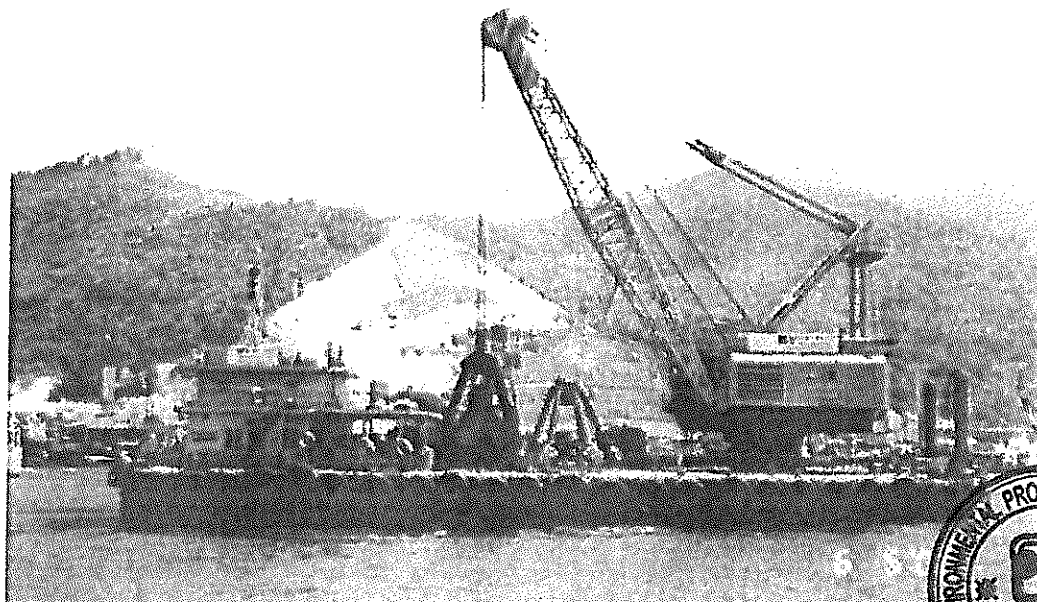
簽署： _____

(張壽昌 代行)

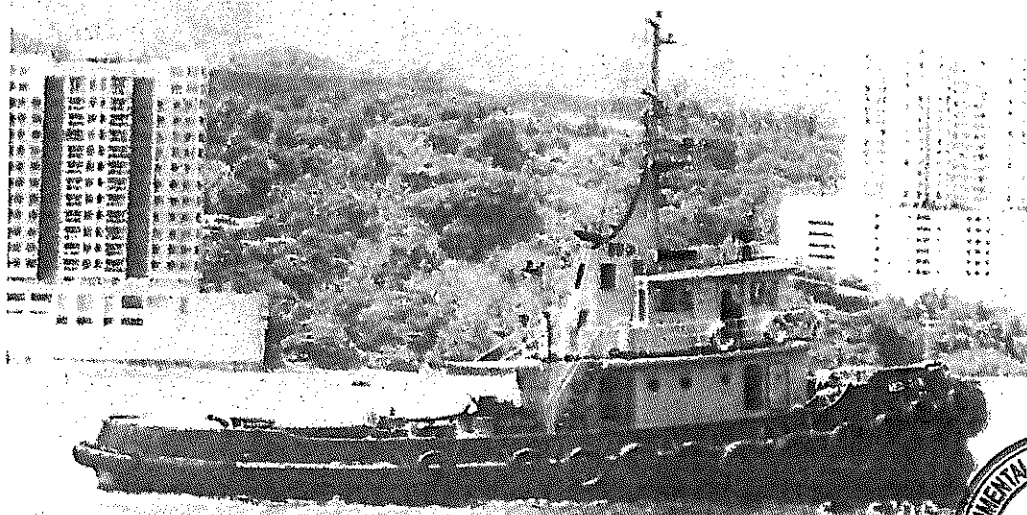
監督

* 刪去不適用者

建築噪音許可證編號 GW-RS0119-10 的相片
Photographs attached to Construction Noise Permit No. GW-RS0119-10

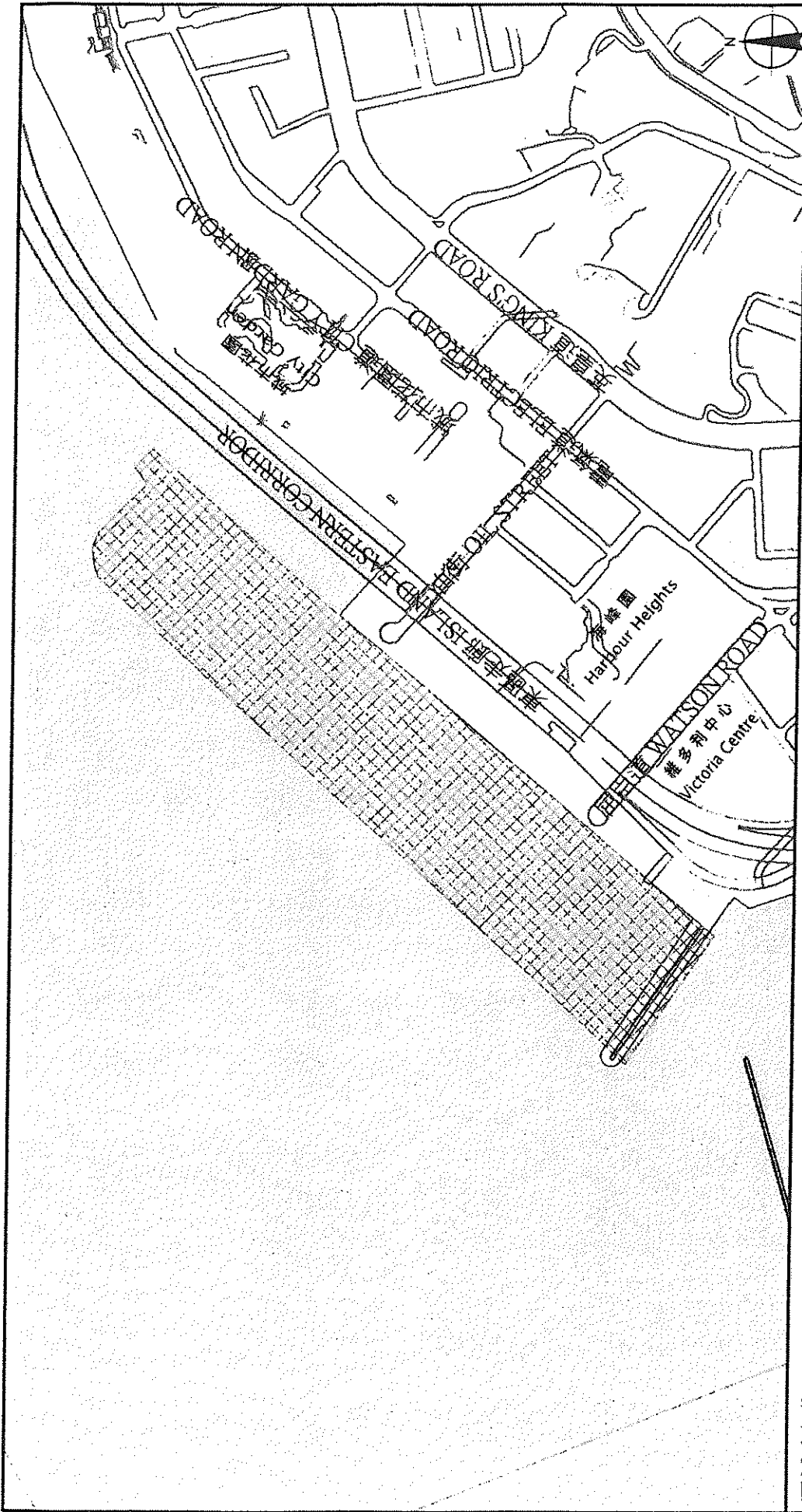


挖泥機，抓斗式
Dredger, grab



拖船
Tug Boat





環境保護署

噪音管制監督

圖例 Legend

Environmental Protection Department

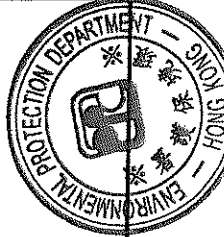
Noise Control Authority



建築地盤 Construction Site

建築噪音許可證編號 GW-RS0119-10 的附圖

比例 Scale 1:5,200



Plan attached to Construction Noise Permit No. GW-RS0119-10



APPENDIX E

CALCULATION OF PERDICTED NOISE LEVEL (DAY TIME)

Predicted Noise Level at M4 - Harbour Height (Daytime)

CNP No.	Equipment (PME)	PME Sound Power			Distance m	Corrections			Predicted Noise Level dB(A)
		SWL of PME dB(A)	No. of PME	Total SWL of PME dB(A)		Distance dB(A)	Barrier dB(A)	Reflect dB(A)	
CNP 063	(weekday 0700-19:00) Dredger, grab	112	1	112.0	86.0	-46.7	0	3	68.3
68.3 dB(A)									

- 1) Direct line of sight from the nearest receivers
- 2) Tug Boat and dredger would not operated at the same time
- 3) Not more than 1 tug boat would be operated at the same time.
- 4) Noise level predicted by means of worst case scenario

Predicted Noise Level at M5 - City Garden Block 10 (Daytime)

CNP No.	Equipment (PME)	PME Sound Power			Distance m	Corrections			Predicted Noise Level dB(A)
		SWL of PME dB(A)	No. of PME	Total SWL of PME dB(A)		Distance dB(A)	Barrier dB(A)	Reflect dB(A)	
CNP 061	(weekday 0700-19:00) Derrick Barge	104	1	104.0	20.0	-34.0	0	3	73.0
73.0 dB(A)									

- 1) Direct line of sight from the nearest receivers
- 2) Tug Boat and dredger would not operated at the same time
- 3) Not more than 1 tug boat would be operated at the same time.
- 4) Noise level predicted by means of worst case scenario

The difference of two noise level is 73.0-68.3= 4.7 dB(A); hence the resultant noise level from these two noise source would be 73.0+1.5=74.5 dB(A) in which lower than 75.0 dB(A).

APPENDIX F

CALCULATION OF PERDICTED NOISE LEVEL (RESTRICTED HOUR)

Predicted Noise Level at M4 - Harbour Height (Evening)

CNP No.	Equipment (PME)	PME Sound Power			Distance m	Corrections			Predicted Noise Level dB(A)
		SWL of PME dB(A)	No. of PME	Total SWL of PME dB(A)		Distance dB(A)	Barrier dB(A)	Reflect dB(A)	
CNP 063	(weekday 19:00-2300 & general holiday 07:00- 2300) Dredger, grab	112	1	112.0	86.0	-46.7	0	3	68.3
									68.3 dB(A)

- 1) Direct line of sight from the nearest receivers
- 2) Tug Boat and dredger would not operated at the same time
- 3) Not more than 1 tug boat would be operated at the same time.
- 4) Noise level predicted by means of worst case scenario

Predicted Noise Level at M5 - City Garden Block 10 (Evening)

CNP No.	Equipment (PME)	PME Sound Power			Distance m	Corrections			Predicted Noise Level dB(A)
		SWL of PME dB(A)	No. of PME	Total SWL of PME dB(A)		Distance dB(A)	Barrier dB(A)	Reflect dB(A)	
CNP 063	(weekday 19:00-2300 & general holiday 07:00- 2300) Dredger, grab	112	1	112.0	86.0	-46.7	0	3	68.3
									68.3 dB(A)

- 1) Direct line of sight from the nearest receivers
- 2) Tug Boat and dredger would not operated at the same time
- 3) Not more than 1 tug boat would be operated at the same time.
- 4) Noise level predicted by means of worst case scenario