

The Hong Kong and China Gas Company Limited
17th Floor,
363 Java Road
North Point
Hong Kong



**Installation of Submarine Gas
Pipelines and Associated Facilities
from Ma Tau Kok to North Point
for Former Kai Tak Airport
Development**

Project Profile

Document No. 237926/04/B

September 2007

Mott Connell Ltd
40th floor, Hopewell Centre
183 Queen's Road East
Wanchai
Hong Kong

Tel: 852 2828 5757
Fax: 852 2827 1823

List of Contents		Page
Chapters		
1	BASIC INFORMATION	1
1.1	Project Title	1
1.2	Purpose and Nature of the Project	1
1.3	Name of Project Proponent	1
1.4	Location and Scale of Project and History of Site	1
1.5	Name and Types of Designated Projects to be Covered by the Project Profile	2
1.6	Name and Telephone Number of Contact Person	2
2	OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME	2
2.1	Project Planning and Implementation	2
2.2	Project Time-table	2
2.3	Interface with other Projects	3
3	MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT	3
4	POTENTIAL IMPACT ON THE ENVIRONMENT	3
4.1	Introduction	3
4.2	Water Quality	3
4.3	Hazard to Life / Risk	4
4.4	Ecology	4
4.5	Noise	4
4.6	Waste Management	4
4.7	Land Contamination	4
4.8	Air	4
4.9	Cultural Heritage	5
4.10	Fisheries	5
4.11	Landscape and Visual	5
5	ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS	5
5.1	Measures to Minimize Environmental Impacts	5
5.2	Possible Severity, Distribution and Duration of Environmental Effects	7
5.3	Further Implications	7
6	USE OF PREVIOUSLY APPROVED EIA REPORTS	7

FIGURES

- Figure 1.1 Location Plan
Figure 1.2 Typical Cross Section of Pipeline Trench

1 BASIC INFORMATION

1.1 Project Title

Installation of Submarine Gas Pipelines and Associated Facilities from Ma Tau Kok to North Point for Former Kai Tak Airport Development.

1.2 Purpose and Nature of the Project

The purpose of the Project is to construct a new gas pipeline network from To Kwa Wan to North Point so as to replace the existing one affected by the Proposed Cruise Terminal at Kai Tak and the proposed Central Kowloon Route at To Kwa Wan. The gas pipeline network will consist of a twin submarine gas pipeline across the Victoria Harbour, two new land sections on either ends and two new gas stations.

The Project will ensure that the replacement of the existing gas facilities from Ma Tau Kok to North Point are completed in 2012 and the new facilities are in service before the decommissioning of the existing facilities.

1.3 Name of Project Proponent

The Hong Kong and China Gas Company Limited (HKCG).

1.4 Location and Scale of Project and History of Site

The Project will consist of the following elements:

- twin submarine gas pipeline across the Victoria Harbour from Ma Tau Kok to North Point (A designated project under EIA Ordinance);
- two land gas pipelines at To Kwa Wan and North Point respectively (Not a designated project under EIA Ordinance); and
- two gas stations for pigging operation and provisional pressure regulation at Ma Tau Kok and North Point respectively (Not a designated project under EIA Ordinance).

The proposed submarine gas pipelines from Ma Tau Kok to North Point will be laid within a 500m corridor in Victoria Harbour as shown in **Figure 1.1**. The exact alignment of the submarine gas pipeline will be determined during the feasibility study and detail design, and the EIA study.

The harbour area concerned is currently the To Kwa Wan Typhoon Shelter, government mooring area, Eastern Fairway and the Eastern Quarantine and Immigration Anchorage Area.

The landfall site at Ma Tau Kok will be on previously reclaimed land. The pipeline at To Kwa Wan will run through part of the previously reclaimed land after landing. The use of landing point at To Kwa Wan has been zoned as open space ("O") according to the latest information from Planning Department.

The landfall site at North Point will be on previously reclaimed land. The pipeline at North Point will connect to existing gas pipeline network after landing. The use of landing point at

North Point has been zoned as open space (“O”) according to the latest information from Planning Department.

1.5 Name and Types of Designated Projects to be Covered by the Project Profile

The Project involves the construction and operation of a twin submarine gas pipeline and associated gas stations at each end, and the land sections of pipeline. The “submarine gas pipeline” component of the Project is classified as Designated Project under item H.2 of Part I of Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499). Dredging operation associated with installation of the submarine gas pipelines may be less than 100m from a seawater intake point. The dredging operation of the project may be classified as Designated Project under item C.12 of Part 1 of Schedule 2 of the EIAO (Cap. 499). The “submarine gas pipeline” is and the dredging operation may be a Designated Project requiring an EIA report be submitted and approved by the Director of Environmental Protection under the EIAO before an Environmental Permit (“EP”) can be issued.

1.6 Name and Telephone Number of Contact Person

All queries regarding the Project can be addressed to:

Mr Sam Shum (Gas Supply Planning Manager)

The Hong Kong and China Gas Company Limited

Gas Supply Planning Department

17th floor, 363 Java Road,

North Point, Hong Kong

Tel: 2963 1010, Fax: 2516 7979

2 OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

2.1 Project Planning and Implementation

HKCG is the Project Proponent with overall responsibility for the planning, design, construction and operation of the Project. The Project Proponent has commissioned a Consultant to undertake the feasibility study, detail design and Environmental Impact Assessment (EIA) Study. The Project will be implemented by Contractors to be appointed by the Project Proponent at the construction phase.

2.2 Project Time-table

Construction of the Project is scheduled to commence in early 2010 for completion by end of 2011. Indicative project milestones include:

- Conduct EIA Study – November 2007 to August 2009
- Detailed Engineering Design – September 2007 to June 2009

- Civil Works and Pipe-laying – February 2010 to December 2011

2.3 Interface with other Projects

There are likely interface issues with the following proposed project next to the Project Area:

- Dredging Works for the Proposed Cruise Terminal at Kai Tak
- Wan Chai Development Phase II and Central-Wan Chai Bypass
- Laying of Western Cross Harbour Main and Associated Land Mains from West Kowloon to Sai Ying Pun

3 MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The landfall at Ma Tau Kok will be located on previously reclaimed land. The nearest educational institutions are the CCC Kei To Secondary School and Po Leung Kuk Ngan Po Ling College, which are approximately 100m away. The nearest residential building is the Sunrise Villa which is approximately 100m away.

The nearest water sensitive receivers in the vicinity of the submarine gas pipelines from Ma Tau Kok to North Point are the Water Supplies Department Seawater Intakes at Tai Wan, North Point and Quarry Bay and Cooling Water Intake at North Point.

The landfall at North Point will also be located on previously reclaimed land. The nearest educational institution is the Chinese Methodist School which is approximately 250m away. The nearest residential building is the Healthy Village Estate which is approximately 100m away.

4 POTENTIAL IMPACT ON THE ENVIRONMENT

4.1 Introduction

The potential environmental impacts that may arise during construction and operation phases associated with the installation of the submarine gas pipelines and associated stations are discussed below. A typical cross-section of the proposed submarine pipelines dredged trench is shown in **Figure 1.2**.

4.2 Water Quality

The key potential water quality impact for installation of the submarine gas pipelines is the release of sediments, which could be contaminated, into the water column during dredging and backfilling. Though it is expected the impacts due to dredging would be short in duration, a quantitative water quality assessment may need to be conducted to predict the extent of impacts and thus the extent of mitigation measures which needs to be adopted due to the dredging activities and construction works at both landfall sites.

4.3 Hazard to Life / Risk

Potential hazard to life / risk impacts on the environment due to construction works are not anticipated. Nevertheless, the Project will be planned, designed and constructed in full compliance with safety and health regulations.

4.4 Ecology

Potential impact on terrestrial ecology is negligible for the submarine section while the proposed dredging works may cause disturbance to sub-tidal and soft bottom substratum benthic ecology. Due to the recognised poor existing condition, unacceptable marine ecological impacts are not anticipated during the construction phase.

4.5 Noise

During laying of the submarine gas pipelines, the potential construction noise impacts would be related to noise emitted from marine crafts such as grab dredgers, hopper barges and tug boats. The number of vessels involved would be kept to a minimum to ensure the least noise nuisance to the nearby Noise Sensitive Receivers (NSRs), which are essentially far away for most of the working period at sea. Therefore, it is expected that construction noise impact would be minimal.

4.6 Waste Management

Wastes that are likely to be generated from the Project during construction stage include:

- Marine dredged sediment from trench excavation;
- Construction wastes from site clearance, site preparation and earthworks;
- Chemical wastes generated from maintenance of plant and equipment;
- General construction material; and
- General refuse comprising food waste, newspaper and packaging, etc.

Marine dredged sediment will be managed in accordance with the requirements of ETWB TCW No. 34/2002 "Management of Dredged/Excavated Sediment". Other types of waste that could be generated should be minimal and good site practices would be implemented.

4.7 Land Contamination

Although the petrol station at Java Road was a potential site of land contamination, land contamination would not be an issue during construction and operation phases as the landfill site would not encroach into the petrol station site.

4.8 Air

The likely air quality impacts related to the laying of the submarine gas pipelines are the gaseous emissions from the required marine vessels such as grab dredger and hopper barges.

However, emissions from a small numbers of vessels would only have negligible impact on the background air quality.

4.9 Cultural Heritage

A Marine Archaeological Investigation (MAI) would be conducted to ascertain if any marine archaeological deposit would be affected by the submarine gas pipelines alignment. The key objective of the MAI would be to identify and assess the significance of any underwater archaeological material within the study area including the area to be dredged. The MAI would be carried out by a qualified marine archaeologist.

In accordance with the Antiquities & Monuments Office (AMO) guidelines, a desk-stop study will first be undertaken to establish if there are records of shipwrecks occurring within the Project area and its immediate vicinity. An MAI and a geophysical survey might need to be conducted and interpretation would be made of the archaeological profile of the Project area, defining sites of archaeological interest.

If anomalies are found on the bottom of the sea by the MAI, the findings would be reported to AMO for their further investigation. In any event, the submarine gas pipelines would not be placed on top of any detected sea bottom anomaly. Therefore, adverse impact on any possible underwater antiquity is not anticipated.

4.10 Fisheries

Recent water quality monitoring results from EPD showed an improvement in water quality at the eastern Victoria Harbour Water Control Zone (WCZ) after the implementation of the Harbour Area Treatment Scheme (HATS) Stage 1. The proposed works area is not known to be the major zone for capture fisheries. In addition to the long distance from the Tung Lung Chau Marine Fish Culture Zone, it is anticipated that the construction works would not cause adverse impact on the fisheries.

4.11 Landscape and Visual

The submarine section should not affect the landscape or caused any visual impact during the construction and operation phase.

5 ENVIRONMENTAL PROTECTION MEASURES TO BE INCORPORATED IN THE DESIGN AND ANY FURTHER ENVIRONMENTAL IMPLICATIONS

5.1 Measures to Minimize Environmental Impacts

5.1.1 Water Quality

The principal mitigation measures needed to keep construction water quality impacts to a minimum would be to adhere to good site practices during dredging. Good site practices during dredging may include:

- Control of dredging rate to minimize the potential release of suspended sediment during the dredging operation;
- Use of tight-closing grabs to minimize the loss of sediment to suspension;

- Use of framed box type silt curtain to enclose the spot being dredged;
- Install silt curtain at designated locations if particular sensitive receivers are expected to be adversely affected.

Water quality monitoring and audit programme will be established if necessary, during the works to detect any deterioration in water quality.

5.1.2 Hazard to Life / Risk

Safety is of paramount importance in the design, construction and operation of the Project. Appropriate measures will be implemented if needed following the Hong Kong regulations and international standards.

5.1.3 Ecology

Possible mitigation measures to minimise the potential impacts could include the installation of silt curtains, use of tightly-closed grab dredgers and phasing of dredging works. These mitigation measures are considered to be effective to avoid deterioration of the water quality and in turn reduce any potential ecological impacts on the marine environment.

5.1.4 Noise

In order to minimize the construction noise impacts, proper scheduling of work and with the adoption of the appropriate noise mitigation such as using silent equipment and temporary noise barriers during the construction phase would be sufficient. It is expected that the potential noise impacts could be reduced to the acceptable levels stipulated in the Technical Memorandum on Environmental Impact Assessment Process.

5.1.5 Waste Management

The management and disposal of the marine dredged sediment of the proposed submarine gas pipelines will follow the procedures and requirements specified in the ETWB TCW No. 34/2002 "Management of Dredged/Excavated Sediment".

To meet the relevant standards specified in the Waste Disposal Ordinance, the following waste mitigation measures will be undertaken to minimise impacts from construction waste arising from the Project:

- waste management plan and practices will be devised and implemented;
- inert materials suitable for fill will, if possible, be re-used;
- materials to be reused or recycled will be handled and stored in an appropriate manner to minimize contamination and loss;
- other construction waste/inert materials unsuitable for reuse or recycle will be disposed of properly; and
- chemical wastes will be stored and disposed of in accordance with approved methods.

5.1.6 Air

Air quality impact would be expected to be very minimal for the marine works and hence no specific mitigation measures are considered necessary.

5.1.7 Fisheries

As the Study Area is potentially of low ecological value and it is not known to be the major area for fisheries capture activities, no specific mitigation measures or monitoring programme for fisheries impact is necessary. The implementation of water quality control measures would sufficiently minimize the effects on the fisheries production in the local region.

5.2 Possible Severity, Distribution and Duration of Environmental Effects

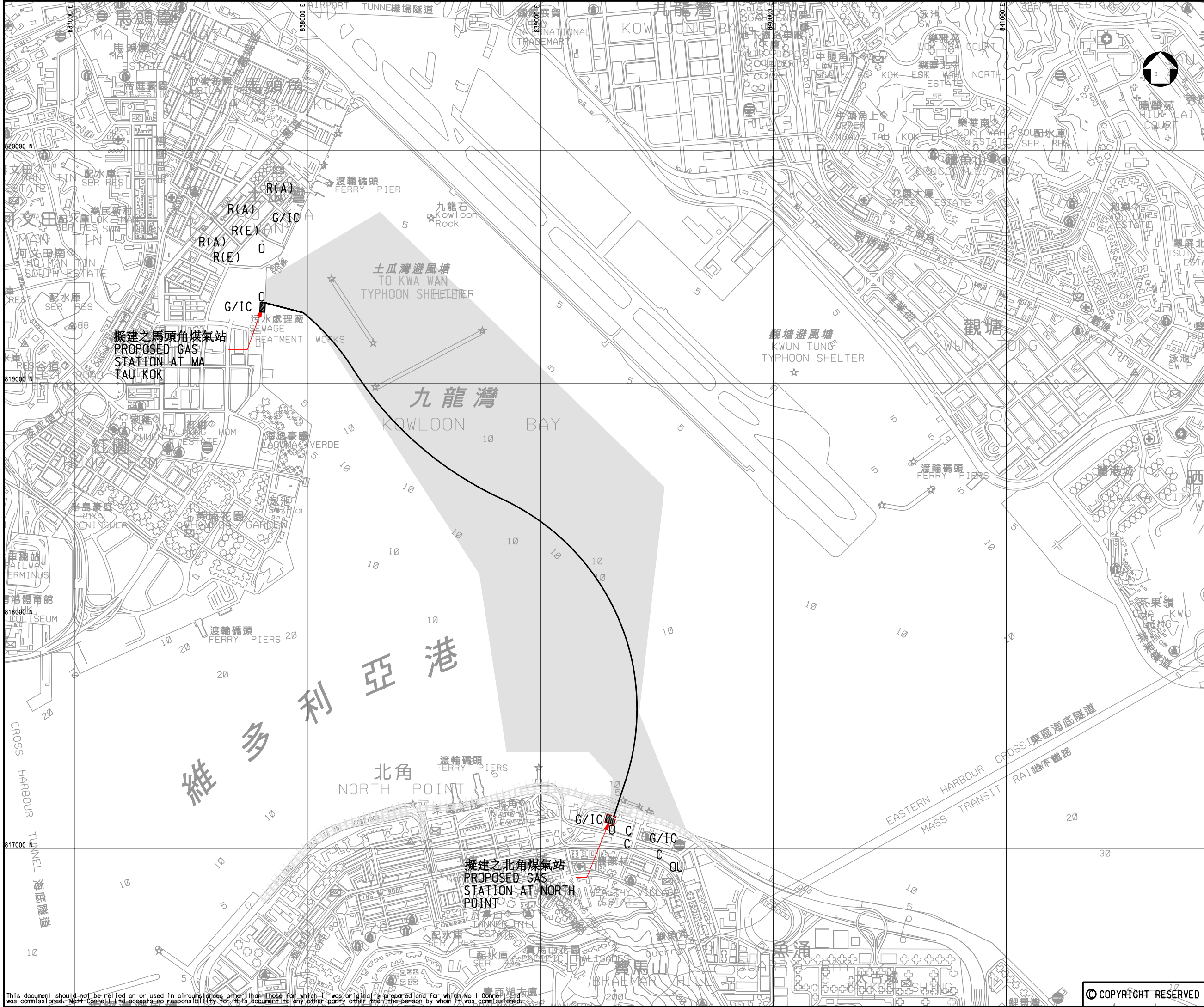
The severity and distribution of impacts on water quality, hazard to life, ecology, noise, waste, air quality, cultural heritage, fisheries and landscape and visual have been briefly outlined in Section 4. Environmental impacts are expected to be temporary and short lived and are mainly connected with the construction stage only. With the implementation of appropriate mitigation measures, no insurmountable impacts are expected.


5.3 Further Implications

No further implications are anticipated for the subject Project.

6 USE OF PREVIOUSLY APPROVED EIA REPORTS


No previous EIA Report has been approved or submitted for the subject Project.



- 圖例:**
LEGENDS:
-  擬建的研究走廊
PROPOSED STUDY CORRIDOR
 -  擬建之過海管道
PROPOSED SUBMARINE PIPELINE
 - C** 商業
COMMERCIAL
 - G/IC** 政府、機構或社區
GOVERNMENT/ INSTITUTION/ COMMUNITY
 - O** 休憩用地
OPEN SPACE
 - R(A)** 住宅 (甲類)
RESIDENTIAL (GROUP A)
 - R(E)** 住宅 (乙類)
RESIDENTIAL (GROUP E)

Rev	Date	Drawn/Description	Ch'kd/App'd
-	-	-	-


 香港中華 煤氣有限公司
 THE HONG KONG AND CHINA GAS COMPANY LIMITED.

 Mott Connell
 Mott Connell Limited
 40/F Hopewell Centre
 183 Queen's Road East
 Hong Kong
 Tel 2828 5757
 Fax 2827 1823
 Web www.mottmac.com

Project
 配合舊啟德機場發展計劃之馬頭角至北角
 海底煤氣管道及相關設施之建造工程
 Installation of Submarine Gas Pipelines
 and Associated Facilities from
 Ma Tau Kok to North Point for Former
 Kai Tak Airport Development

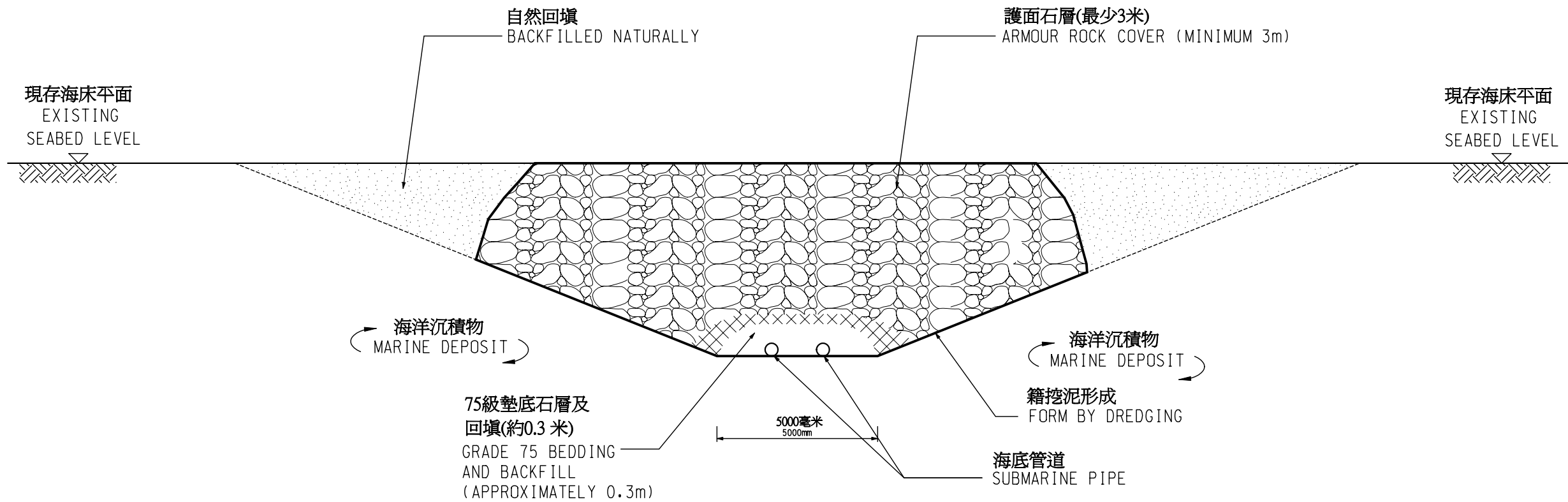
Title
 位置圖
 LOCATION PLAN

Designed	KL	Eng.Chk.	MT
Drawn	YKL	Coordination	KL
Dwg.Chk.	KL	Approved	TI
Scale	1:7500@A1	Project	237926
Drawing No.	LA\237926\REPORT\ENV\PE-070830\FIGURE 1-1.dgn	Status	PRE
		Rev	P1

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott Connell Ltd was commissioned. Mott Connell Ltd accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

© COPYRIGHT RESERVED

圖1.1 FIGURE 1.1



P1	AUG 07	YKL	STAGE 1 REPORT	MT	TI
Rev	Date	Drawn	Description	Ch'kd	App'd

Client

香港中華 煤氣有限公司
THE HONG KONG AND CHINA GAS COMPANY LIMITED.

Mott Connell 美隆

Mott Connell Limited
40/F Hopewell Centre
183 Queen's Road East
Hong Kong

Tel 2828 5757
Fax 2827 1823
Wed www.mottmac.com

Project
配合舊啓德機場發展計劃之馬頭角至北角
海底煤氣管道及相關設施之建造工程
Installation of Submarine Gas Pipelines
and Associated Facilities from
Ma Tau Kok to North Point for Former
Kai Tak Airport Development

Title
管槽典型橫切面
TYPICAL CROSS SECTION OF
PIPELINE TRENCH

Designed	KL	Eng.Chk.	MT
Drawn	YKL	Coordination	KL
Dwg.Chk.	KL	Approved	TI
Scale	AS SHOWN@A1	Project	237926
		CAD File	IA\237926\REPORT\ENV\PE-070830\FIGURE 1-2.dgn
Drawing No.	圖1.2	Status	PRE
	FIGURE 1.2	Rev	P1

This document should not be relied on or used in circumstances other than those for which it was originally prepared and for which Mott Connell Ltd was commissioned. Mott Connell Ltd accepts no responsibility for this document to any other party other than the person by whom it was commissioned.

© COPYRIGHT RESERVED