

**ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE (CAP499)
S.5(1)(a)**

**PROJECT PROFILE
FOR
DESIGNATED PROJECT
ON
EXPANSION OF KIOSKS AND OTHER FACILITIES
AT
LOK MA CHAU BORDER CROSSING**

**Architectural Services Department
September 1998**

PROJECT PROFILE

A. BASIC INFORMATION

a. Project title:

Expansion of Kiosks and Other Facilities at Lok Ma Chau Border Crossing

b. Purpose and Nature of the project:

With the opening of the Lok Ma Chau boundary crossing in 1989, the road traffic between Hong Kong and Huanggang, Shenzhen has been increasing rapidly. At present there are a total of 14 pairs of kiosks (seven Hong Kong bound and seven Mainland bound) for Immigration Department (ImmD) and Customs and Excise Department (C&ED) which can handle about 1000 vehicles per hour. This peak capacity is reached early in the morning and by late morning about 1400 to 1500 vehicles per hour must be handled. Long queues accumulate and the prolonged congestion does not ease off until early evening when the traffic flow again reverts to about 1000 vehicles per hour. The latest traffic forecast for the Lok Ma Chau boundary crossing has revealed that cross boundary passenger and freight traffic will continue to increase. To accommodate the anticipated increase in traffic and passenger flow, a significant increase in the number of kiosks and expansion of ancillary facilities is needed. Five additional pairs of kiosks (five for ImmD and five for C&ED) in each direction, together with ancillary customs and immigration examination facilities are required to meet the anticipated demand. The design is to facilitate future expansion to meet the projected demand in the years ahead.

The nature of the project includes the following major items of works:

- Construction of ten additional kiosks in each direction of traffic for C&ED and ImmD with relocation and re-provision of existing kiosks as necessary;
- Construction of cargo examination buildings, vehicle inspection and detention areas and related supporting facilities;
- Provision of container vehicle X-ray examination systems and associated buildings and associated services for C&ED;
- Extension and modification of the existing main building to provide additional office areas, passenger queuing areas and public amenities to cater for an average of 25,000 passengers per day, together with associated building services;
- Re-provision of electronic security installations for the cross boundary movement of people and vehicles which include additional hardware and software for the computerized Land Boundary System for C&ED and ImmD;
- Provision of sewage treatment plant facilities as necessary;
- Civil / infrastructure works including site formation and associated geotechnical works to provide additional hardstanding area to accommodate the new structures, roadworks, drainage, sewerage, lighting, traffic aids and utilities works.

The existing facilities will be maintained in operation throughout the course of the Project. None of the existing facilities will be demolished before their replacements including temporary replacements are constructed and completed in operational condition.

c. Name of project proponent:

Architectural Services Department, Hong Kong SAR Government

d. Location and scale of project (including plans)

The study area of about 20 hectares is located in the existing Lok Ma Chau border crossing area, North West New Territories. A site plan shown on drawing no. F51-SK-006 is attached at Annex 1.

e. History of Site:

Lok Ma Chau border crossing is located partly in the restricted area, northwest of the New Territories. Due to the restricted nature, the development of the Study Area was and is still very limited to small-scale fish-farming and crop cultivation.

f. Number and types of designated projects to be covered by the project profile:

1. The construction of additional border crossing kiosks falls within the definition of a Designated Project (DP) under Schedule 2, Part 1, Category A.1 of Environmental Impact Assessment Ordinance (CAP 499).
2. The proposed site area includes filling of three disused ponds within a Conservation Area, which makes this Project a DP under Schedule 2, Part 1, Category Q.1 of Environmental Impact Assessment Ordinance (CAP 499).

g. Name and telephone number of contact person:

B. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

The project will be planned, designed and implemented by consultants under Agreement No. CAA F51.

The EIA study is planned to start in early September and to be completed by end of October 1998. The construction of the project is expected to be commenced in March 1999. The project will be divided into three phases:

Phase1 - Site formation, apron and kiosks to be completed and commissioned by the end of 1999

Phase2 - Buildings and other facilities to be commissioned by August 2001

Phase3 - X-ray facilities and testing to be commissioned by August 2002

Due to the tight schedule, the detailed design of Phase 1 commenced in late August and is to be completed by March 1999. There are interactions with other projects which shall be considered, namely Shenzhen River Regulation Project, Stage III and Eastern Main Drainage Channels for San Tin and a possible railway to serve Lok Ma Chau.

C. POSSIBLE IMPACT ON THE ENVIRONMENT

The development of the study area will involve site formation, construction of drains, additional kiosks, road works, E&M works, building works and landscaped areas. The following possible impacts on the environment are identified:

a. During construction

Environmental Impacts/Issues	Details of the environmental Impacts/Issues involved
Gaseous emissions	Vehicle exhausts and gaseous emission from construction plants during construction
Dust	Dust impacts associated with excavation, filling stockpiles and movement of excess unsuitable waste off site
Odour	Vehicle exhausts and removal of unsuitable material
Noisy operation	Noise impact from construction activities during construction
Night-time operations	Not applicable
Traffic generation	Minor local traffic generated during construction
Liquid effluents, discharge or contaminated runoff	Runoff contaminated by oil from plant/vehicles; sewage from construction workers
Generation of waste or by-products	No new impacts
Manufacture, storage, use, handling, transport, or disposal of dangerous goods, hazardous materials or wastes	Not applicable
Risk of accidents which would result in pollution or hazard	Not applicable
Disposal of spoil material, including potentially contaminated material	Disposal of excavated material not required as marine mud is not contaminated. Material can be dried and re-used in landscaping works.
Disruption of water movement or bottom sediment	Concrete lined, surface storm drainage channels or v-ditches either side of border complex will need realignment
Unightly visual appearance	Negative visual impact
Ecological impacts	Three small disused ponds totalling an area of 0.9 ha on government land are proposed to be filled.
Cultural heritage impact	The land was reclaimed from fish ponds. No monuments or historical buildings of any kind were discovered or recorded. The pond mud is entirely marine / alluvial deposits on top of ancient sea bed. There is no potential for cultural heritage discovery in the immediate study area.
Contaminated land	There are no historical records of contaminated land uses in the study area. The land was reclaimed from fish ponds by Government over 10 years ago, previously agricultural / aquacultural.

b. During operation

Environmental Impacts/Issues	Details of the environmental Impacts/Issues involved
Gaseous emissions	Vehicle exhausts
Dust	Vehicle exhausts
Odour	Vehicle exhausts
Noisy operation	Already 24-hour operation: cross-border traffic, in particular truck noise from starting, queuing, accelerating, braking, sounding horns; also from trucks in nearby lorry parks/open-air container storage areas
Night-time operations	Noise levels already high at night: L ₁₀ (1 hour) data collected at some nearby Noise Sensitive Receivers in the <i>Night Time Noise Impact Assessment Study: 24 Hour Opening of Lok Ma Chau/Man Kam To Border Crossings - Study Report (July 1994)</i> showed noise levels at exceeding 80 dB(A) after 9 p.m. and noise levels never falling below 70 dB(A) at any time during the night; if 24-hour or late night border opening hours continue, it will result in higher noise level due to additional traffic flow
Traffic generation	Rationale is to improve throughput to meet projected increase in cross-border traffic; traffic will inevitably increase and so will the noise level
Liquid effluents, discharge or contaminated runoff	Runoff contaminated by oil from the platform, sewage from new office building
Generation of waste or by-products	No new impacts
Manufacture, storage, use, handling, transport, or disposal of dangerous goods, hazardous materials or wastes	Increased traffic could increase existing risk of accidental spillage of hazardous materials or wastes from vehicles crossing border; potential risk impacts associated with the dangerous goods store
Risk of accidents which would result in pollution or hazard	Increased traffic could increase existing risk of accidental spillage of hazardous materials or wastes from vehicles crossing border
Disposal of spoil material, including potentially contaminated material	Not applicable, project is a net importer of suitable filling material. Spoil will be re-useable in landscaping.
Disruption of water movement or bottom sediment	Not applicable during operation, surface channels normally stay dry
Unightly visual appearance	Appearance similar to existing appearance
Hazard to life	The storage of dangerous goods, including fuel gas and possible other types, will pose a societal risk that will need to be assessed.

D. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

a. Existing sensitive receivers and sensitive parts of the natural environment which might be affected by the proposed project include:

- nearby villages, including Lok Ma Chau and dwellings / restaurants / shops associated with access to Lok Ma Chau Lookout, Chau Tau, San Tin, Ha Wan and Kei Lun;

- Shenzhen River; and
- near Mai Po/Inner Deep Bay Ramsar Site and Buffer Zones as well as adjacent active ponds to the west.

b. Planned sensitive receivers and sensitive parts of the natural environment which might be affected by the proposed project:

- to be identified under the Study.

b. The existing and relevant past land use(s) on site which might affect the area in which the project is proposed to be located:

Project is a local extension to existing purpose built facility. Environment includes:

- nearby trunk roads and primary or secondary distributors; and
- noisy and dusty container parks.

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

The following measures will be taken into account in the EIA study of the project:

- pollution control technology
- waste management systems and practices
- potential for waste and wastewater minimization
- acoustic barriers and insulation
- buffer zones and landscaping
- construction activities arranged in sequence to minimize cumulative impact
- site layout and building design
- retention and enhancement of natural environmental features
- control of construction work practices
- application of Chapter 9 of the Hong Kong Planning Standards & Guidelines
- application of the Deep Bay Guidelines for dredging, reclamation and drainage works

Some of the major measures are summarized in the following table:

Project Phase	Potential Impact	Proposed Mitigation Measures
Construction	Noise	Use of silenced plant and temporary noise barriers near sensitive receivers; careful scheduling of activities; use of temporary acoustic barriers and acoustic machinery enclosures. Kiosks and structural elements to be pre-fabricated off-site if possible to meet tight programme. Simple spread footings to be used over pre-conditioned ground, where applicable.
	Dust	All haul roads and stockpiles will be regularly watered. Vehicles leaving the

		construction site will pass through a wheel wash.
	Water quality	<p>Site formation should ensure that draining is directed to regularly cleaned and maintained silt traps. No drainage shall be allowed to discharge into adjacent fish ponds.</p> <p>Excavated material should be sampled for contamination prior to disposal to ensure that there is no potential for pollution from spoil tips.</p> <p>Provision of silt traps to contain contaminated sediments carried by runoff from exposed soil; if fuel is stored on site, a bunded storage area should be provided; sewage generated on-site should be disposed of using portable or other facilities</p>
	Construction waste	Maximum use of re-conditioned unsuitable excavated material for landscaping
Operation	Noise from increased traffic through border	Appropriate design and landscaping; noise barriers; possible regulation of border crossing hours
	Water	Appropriate design that complies with the Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters
	Ecology	Re-provisioning of wetland ponds such as pond replacement is potentially required as a result of reclamation of abandoned / disused ponds. Compensation to a wetlands fund is another possible measure.
	Air Quality	Reduced queuing, gives improved CO but altered NOx

Increased volume of cross-border traffic is a medium and long term benefit to the transport operators using the route and associated business in both Hong Kong and China. However, the associated nuisances in terms of noise and uncontrolled expansion of lorry parks and container storage could adversely impact on sensitive receivers nearby in medium and long term.

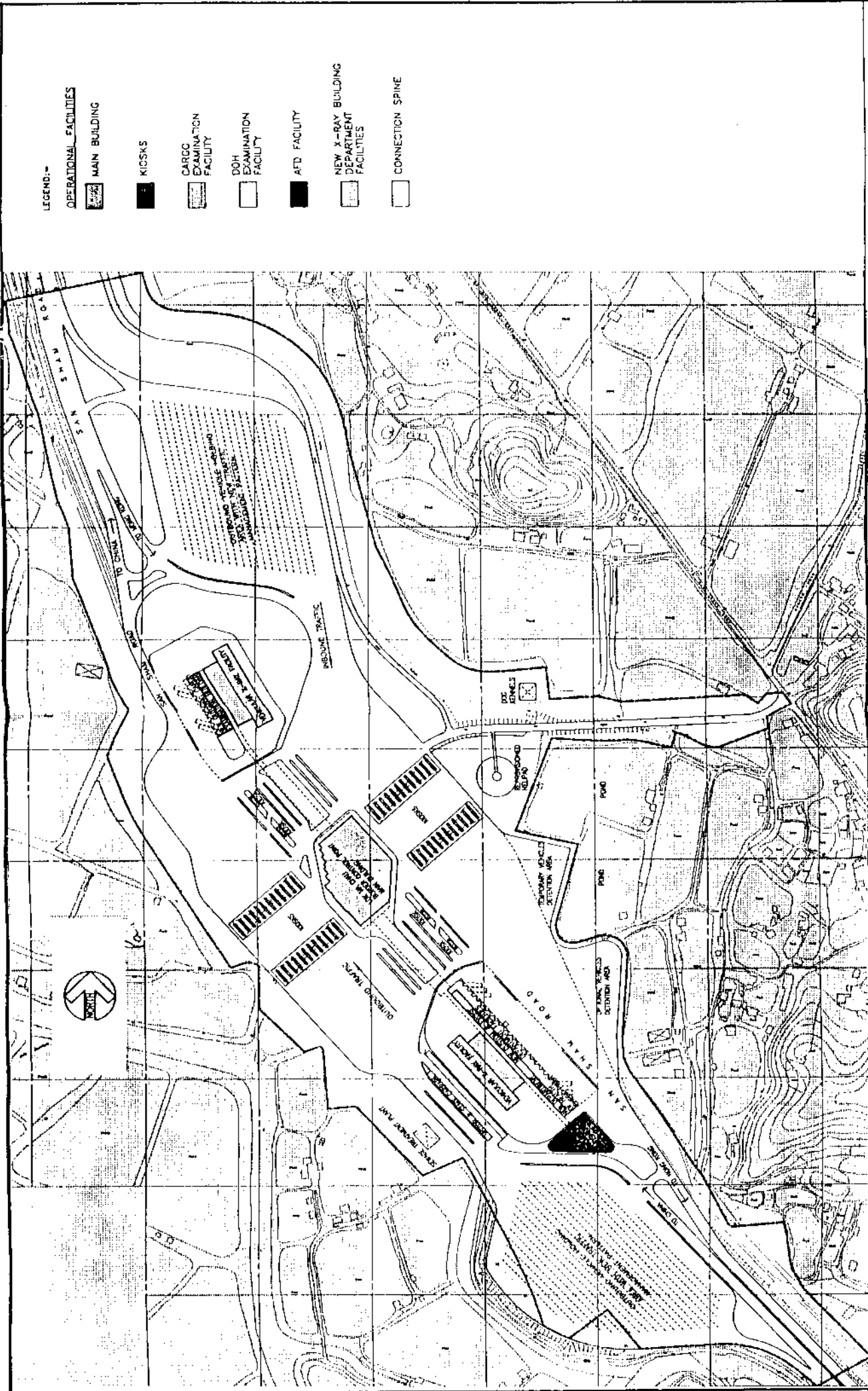
Construction impacts such as disruption to cross-border traffic are short term and should be avoided by proper traffic management.

The extended facilities have been designed to ensure that the site boundary falls within the land already previously resumed by Government. This will avoid the need to resume any additional agricultural/fish pond areas.

USE OF PREVIOUSLY APPROVED EIA REPORTS

No previously approved EIA has been conducted on the proposed project.

EIA (Initial Assessment Report) immediately adjacent San Tin drainage channels will be consulted, particularly for ecology and water quality issues.



LEGEND:-

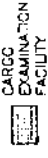
OPERATIONAL FACILITIES



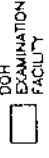
MAIN BUILDING



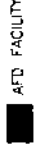
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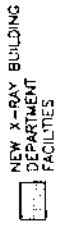
CARCC EXAMINATION FACILITY



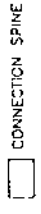
DOH EXAMINATION FACILITY



AFD FACILITY



NEW X-RAY BUILDING DEPARTMENT FACILITIES



CONNECTION SPINE

DATE

SCALE

DRAWING NO

PROJECT TITLE

CONTRACT

ENGINEER'S NAME

AUG. 1998

N.T.S.

F51-SK-006

MASTER PLAN

EXPANSION OF KOSKs AND FACILITIES AT
LOK MA CHAU BORDER CROSSING



Binnie Black & Veatch Hong Kong Limited

博威工程顧問有限公司
Engineers and Architects