

PROVISIONAL LOCAL VESSEL ADVISORY COMMITTEE

Central Reclamation Phase III

1. Purpose

The purpose of this paper is to present to the members the scope, impact on marine activities, and the programme for implementation, of the Central Reclamation Phase III (CRIII) contract.

2. Background

The detailed design for CRIII to an original reclamation configuration was substantially completed in 1997.

Following enactment of the Protection of the Harbour Ordinance in the same year, a critical review of the scope of the Central and Wan Chai Reclamation, including CRIII, was conducted in order to formulate a scheme which would comply with the Ordinance and at the same time provide enough land to serve the long term needs of the territory. This review led to the development of a revised layout for CRIII, with significant changes to the original reclamation configuration. The reclamation area has been reduced from 32 hectares to approximately 18 hectares.

3. Scope of Works

The CRIII Project Area is located between the already completed Central Reclamation Phase I (CRI) and the planned Wan Chai Development Phase II (WDII). The area to be reclaimed under CRIII extends from outside the General Post Office Building in the west, to Lung King Street in the east. The limit of the CRIII reclamation is illustrated on Figure 1.

One of the main purposes of the CRIII Project is to provide the essential land for construction of the Hong Kong Station Extended Overrun Tunnel (HOKEOT) and the North Island Line (NIL) of MTR Corporation Limited (MTRCL), and the Central-Wan Chai Bypass (CWB). These facilities are important to Hong Kong's strategic provision of transport infrastructure.

A further benefit of the CRIII project is that it will provide land for the creation of a world class waterfront promenade. The major infrastructure works and future land uses for the CRIII are illustrated on Figure 2.

The following major works are to be constructed under the CRIII contract :

- ✂✂ Approximately 18 hectares of reclamation and associated seawalls;
- ✂✂ Reprovisioning of the existing Queen's Pier, public landing steps, wallah wallah moorings and motor boat/launch operators' kiosks to the new Public Piers 9 & 10;
- ✂✂ Reprovisioning of the existing "Star" Ferry Piers to the refurbished Ferry Pier 7 & new Ferry Pier 8;
- ✂✂ Provision of a military dock with 150m long berth along the waterfront and direct road access to the Central Barracks at Tamar for use by the Chinese People's Liberation Army Forces Hong Kong (PLA);
- ✂✂ Reprovisioning of the existing Government Heliport at Tamar to the breakwater at Wan Chai Basin;
- ✂✂ Reprovisioning of the existing Public Cargo Working Area (PCWA) at Wan Chai Basin to Chai Wan Basin;
- ✂✂ A section of CWB tunnel structure (entrusted works from Highways Department);
- ✂✂ HOKEOT tunnel structure and associated ventilation structures, and NIL protection works (entrusted works from MTRCL);
- ✂✂ Extensions to existing stormwater drainage culverts F, J and K;
- ✂✂ Cooling water systems comprising reprovisioning of affected existing cooling water supply systems and provision of new cooling water pumping station shells for planned future development;
- ✂✂ Surface roads, underpass, emergency vehicular access/promenade, and associated services; and
- ✂✂ At-grade public transport interchange and footbridge link extending from Ferry Pier 7 to the General Post Office.

4. Marine Operations

4.1 Current Marine Facilities

The CRIII development borders the Central and Hung Hom fairways; these waterspaces are among the busiest in Hong Kong. Furthermore, significant marine activity is focussed within the present waterfront associated with the CRIII reclamation. It is critical that the CRIII development does not unduly impact the safety of vessels passing the reclamation or originating/terminating at the CRIII site during the construction phase, or following the completion of works. In order to investigate these issues a Marine Impact Assessment (MIA) was conducted in 2000.

The following facilities lie within the area to be reclaimed under CRIII :

✍✍ **CRI Public Landing Steps** : - These four steps are adjacent to the approach to the “Star” Ferry Piers, and as such their approach crosses the path of “Star” ferries. Their use is not promoted by Marine Department and their utilisation is very low.

✍✍ **“Star” Ferry Piers** : - This facility provides the Hong Kong Island terminal for services to Tsim Sha Tsui, on the western pier, and Hung Hom on the western berth of the eastern pier. Discovery Bay ferry services are operated from the eastern berth of the eastern pier and an adjacent pontoon.

✍✍ **Queen’s Pier** : - This is the principal public pier on Hong Kong Island for serving the large number of small craft associated with harbour operations, harbour tours and recreational users. Vessels waiting for pick-up of passengers generally wait within a waterspace 25 – 75m north of the pier.

✍✍ **Tsim Sha Tsui East Ferry Pontoon** : - This is a pontoon providing a single berth for a ferry service from Central to Tsim Sha Tsui East.

✍✍ **Public Landing Steps at Tamar** : - These five steps are located in front of the Central Barracks. Lack of cover and restrictions on vehicle stopping mean that these facilities are not used.

4.2 Reprovisioning of Marine Facilities

4.2.1 Reprovisioning within the CRIII Site

The marine and other facilities to be reprovisioned under CRIII are presented in Figure 3. Existing ferry piers, public pier, and public landing steps (with associated moorings and motor boat/launch operators’ kiosks) are to be relocated to the refurbished Ferry Pier 7, new Ferry Pier 8, and new Public Piers 9 and 10 located at the western end of the reclamation. All existing ferry services will be reprovisioned within the CRIII site, with the exception of the Discovery Bay service which will be relocated to Pier 3 before construction starts.

4.2.2 Off Site Reprovisioning

The existing Government Heliport at Tamar will be relocated to the breakwater at Wan Chai Basin, as shown in Figure 4. The existing PCWA facility at Wan Chai Basin will in turn be moved to Chai Wan Basin, as shown in Figure 4A.

4.3 New Marine Facilities

4.3.1 PLA Berth

A military dock with 150m long berth for PLA vessels will be provided along the central portion of the CRIII waterfront. The berth fulfills two basic requirements, namely :

✍✍ It is located in front of the Central Barracks.

✍✍ It is at least 150m away from any other pier structure.

It is Government's planning intention to make the military dock open for public access and as part of the future waterfront promenade when it is not in military use.

4.3.2 Wave Absorbing Seawalls

In recognition of concerns over the deterioration in wave conditions within Victoria Harbour, a wave absorbing seawall will be used along the northern edge of the reclamation. The seawall units have slots in the front with an internal chamber to absorb waves and reduce wave reflection. The performance of the seawall design has been assessed and refined by physical model testing.

5. Construction Impact

5.1 Constraints

The construction of the reclamation is constrained by a number of factors largely associated with maintaining existing facilities and operations prior to completion of reprovisioned facilities. The key constraints are as follows :

- ✍✍ Ferry operations and private vessel operations from the existing "Star" Ferry Piers and Queen's Pier must be maintained until completion and opening of the reprovisioned ferry piers and the new Public Pier 9;
- ✍✍ Flows from stormwater drainage culverts F, J and K must be maintained at all times throughout the CRIII works;
- ✍✍ The operation of the cooling water facilities located along the Central waterfront affected by the CRIII works must be maintained until completion, commissioning and operation of the reprovisioned facilities;
- ✍✍ Existing PCWA at Wan Chai Basin must be maintained until completion and opening of the new PCWA at Chai Wan Basin.
- ✍✍ Construction of the reprovisioned heliport on the breakwater at Wan Chai Basin shall start only after relocation of the existing Wan Chai PCWA to Chai Wan Basin. Until this reprovisioned facility is completed and opened, helicopter operations from the existing Government Heliport located to the north of the Central Barracks must be maintained.
- ✍✍ Sufficient land must be provided as early as possible for key tunnel and highway works to be constructed on the reclaimed area.

The feasibility of maintaining the marine facilities in safe operation during construction, and until they have been reprovisioned, was assessed in the Marine Impact Assessment. The assessment identified that restrictions need to be placed on the size and sequencing of the different stages of the reclamation construction - these requirements have been included in the construction contract documents. Also, to ensure the "Star" Ferry services can operate safely whilst the initial reclamation and Piers 8 & 9 are under construction, the services will be re-arranged by vacating the

western berth of the western “Star” Ferry Pier before CRIII construction commences - this will require prior relocation of the Discovery Bay service now at the eastern berth of the eastern “Star” Ferry Pier to Pier 3 in turn.

5.2 Construction Sequence

Construction of the reclamation will involve dredging of the existing marine mud followed by construction of the seawall and filling with both marine sand and public fill.

The construction sequence for the project has been developed to satisfy the constraints outlined in Section 5.1 and the findings of the Marine Impact Assessment. The eight main stages of the construction are presented in Figures 5 to 12 and summarised below :-

Stages 1, 2 & 3

Before construction commences the Discovery Bay Service will be relocated to Pier 3, the “Star” Ferry services will vacate the western berth of its western pier, and the Public Landing Steps on the east face of CRI will be closed. The existing New World First Ferry Services will also be relocated from Pier 7 to Pier 6 in early 2003 as part of the current re-arrangement of ferry piers at Central for different existing ferry services. Construction will begin at Initial Reclamation Area West in December 2002, with the Initial Reclamation Area East starting approximately 10 months later once the Government Heliport has been relocated. During the Initial Reclamation Area West and Initial Reclamation Area East construction periods, it will be necessary to maintain an access channel at least 250m wide between the two reclamation areas in order to allow manoeuvring of vessels to existing piers prior to their relocation.

The reclamation at Initial Reclamation Area East will be in the form of an extension to the existing shoreline to ensure maximum tidal flushing and minimise potential water quality impacts. Cooling water inlets, outlets and pumping stations will be diverted to this reclamation.

Stage 4

Once Initial Reclamation Area West is completed, the ferry services and public landing steps will be relocated to the new piers and the new cooling water systems will be commissioned. With the marine facilities reprovisioned, the existing piers will be demolished.

Once the reprovisioned cooling water systems at the Initial Reclamation Area East are completed, the new cooling water systems will be commissioned. The existing systems affected can then be abandoned to permit construction of further works there.

Stages 5 to 8

The remaining portions of the reclamation and the associated infrastructure are constructed.

6. Implementation

The project was gazetted under the Foreshore and Sea-bed (Reclamations) Ordinance and Roads (Work, Use and Compensation) Ordinance separately on 30 June 2000, and was authorised by the Chief Executive in Council on 18 December 2001.

The Environmental Impact Assessment Report was approved by the Director of Environmental Protection on 31 August 2001.

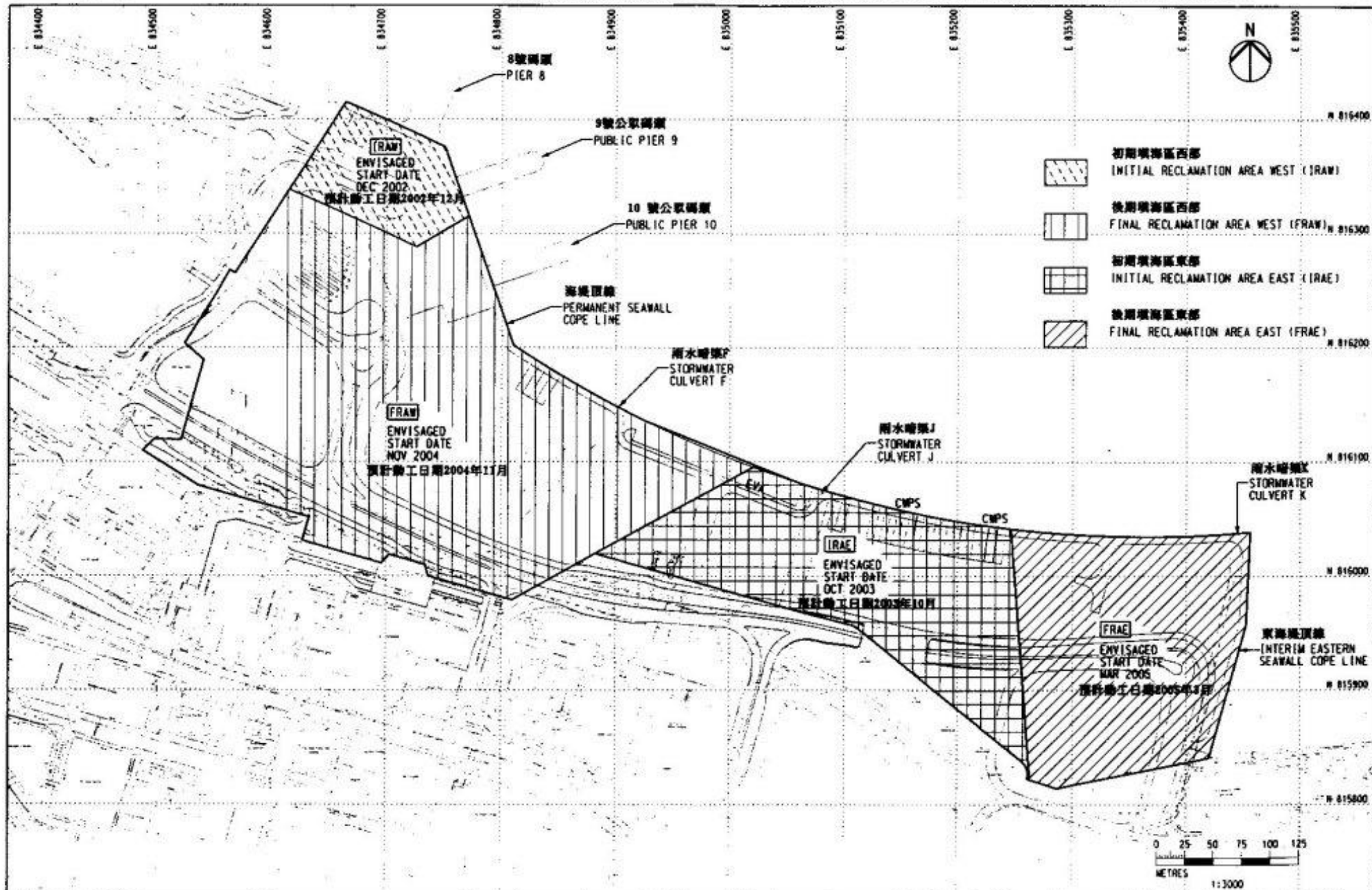
The detailed design is substantially completed. Construction is due to start in December 2002 for completion in 2007.

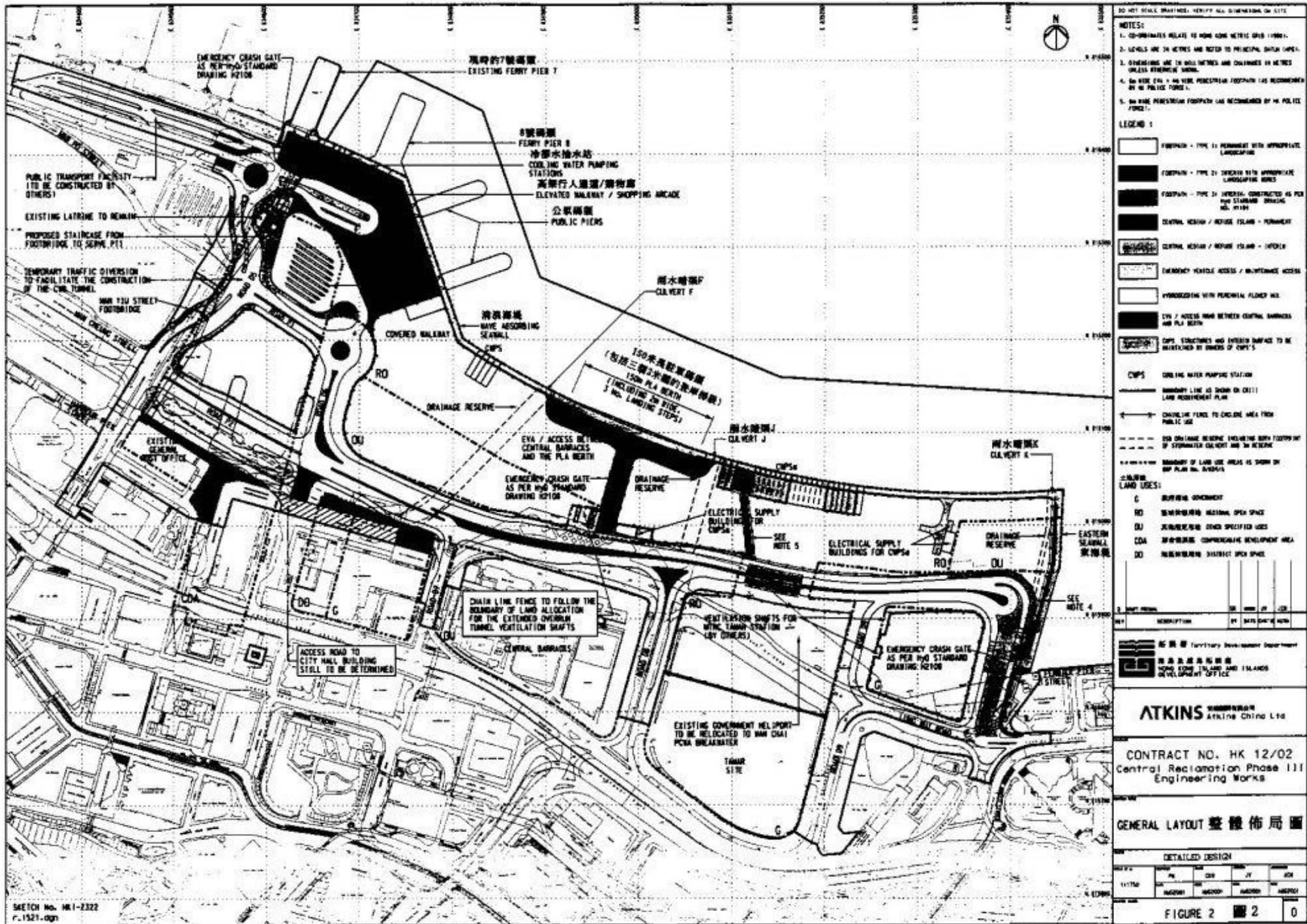
Government will implement promenade development works in the area under another project to achieve a landscaped waterfront of the highest international quality in the heart of the Central Business District.

7. Views Invited

Members are invited to give their views on the implementation arrangement of the CRIII contract.

Territory Development Department
July 2002





DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON SITE.

NOTES:

1. CO-ORDINATES RELATE TO HONG KONG METRIC GRID (1980).
2. LEVELS ARE IN METRES AND REFER TO PRINCIPAL DATUM LEVEL.
3. DIMENSIONS ARE IN MILLIMETRES AND DIMENSIONS IN METRES UNLESS OTHERWISE SHOWN.
4. ON ROAD PAVEMENT FOOTPATHS ARE RECOMMENDED BY H. POLICE FORCE.
5. ON ROAD PAVEMENT FOOTPATHS ARE RECOMMENDED BY H. POLICE FORCE.

LEGEND 1

- FOOTPATH - TYPE 1: PERMANENT WITH APPROPRIATE LANDSCAPING
- FOOTPATH - TYPE 2: DESIGNATED WITH APPROPRIATE LANDSCAPING WORKS
- FOOTPATH - TYPE 3: TEMPORARY, CONSTRUCTED AS PER THE STANDARD DRAWING NO. H114
- CENTRAL RESERVE / RESERVE ISLAND - PERMANENT
- CENTRAL RESERVE / RESERVE ISLAND - TEMPORARY
- TEMPORARY VEHICLE ACCESS / MAINTENANCE ACCESS
- HYDROLOGICAL WITH PERENNIAL FLOODED WET
- DU / ACCESS ROAD BETWEEN CENTRAL BARRACKS AND PLA BERTH
- CPS: STRUCTURES AND EXTENDED SURFACE TO BE MAINTAINED BY OWNERS OF CPS'S

CPS

- COOLING WATER PUMPING STATION
- BOUNDARY LINE IS SHOWN ON CELL LANE REVISION PLAN
- CHAINS LINE TO EXCLUDE AREA FROM PUBLIC USE
- DU: DRAINAGE RESERVE, INCLUDING BOTH FOOTPATH OF STORMWATER CULVERT AND AN RESERVE
- DU: DRAINAGE RESERVE, INCLUDING BOTH FOOTPATH OF SWP PLUM AND OVERFLOW

LAND USES:

- G: GOVERNMENT
- RO: RECREATION INCLUDING OPEN SPACE
- DU: DEVELOPMENT OTHER SPECIFIED USES
- CDA: COMPREHENSIVE DEVELOPMENT AREA
- DD: DEVELOPMENT DISTRICT OPEN SPACE

NO.	DESCRIPTION	BY	DATE	REV.
1				

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ATKINS
 亞細亞有限公司
 Atkins China Ltd

CONTRACT NO. HK 12/02
 Central Reclamation Phase III
 Engineering Works

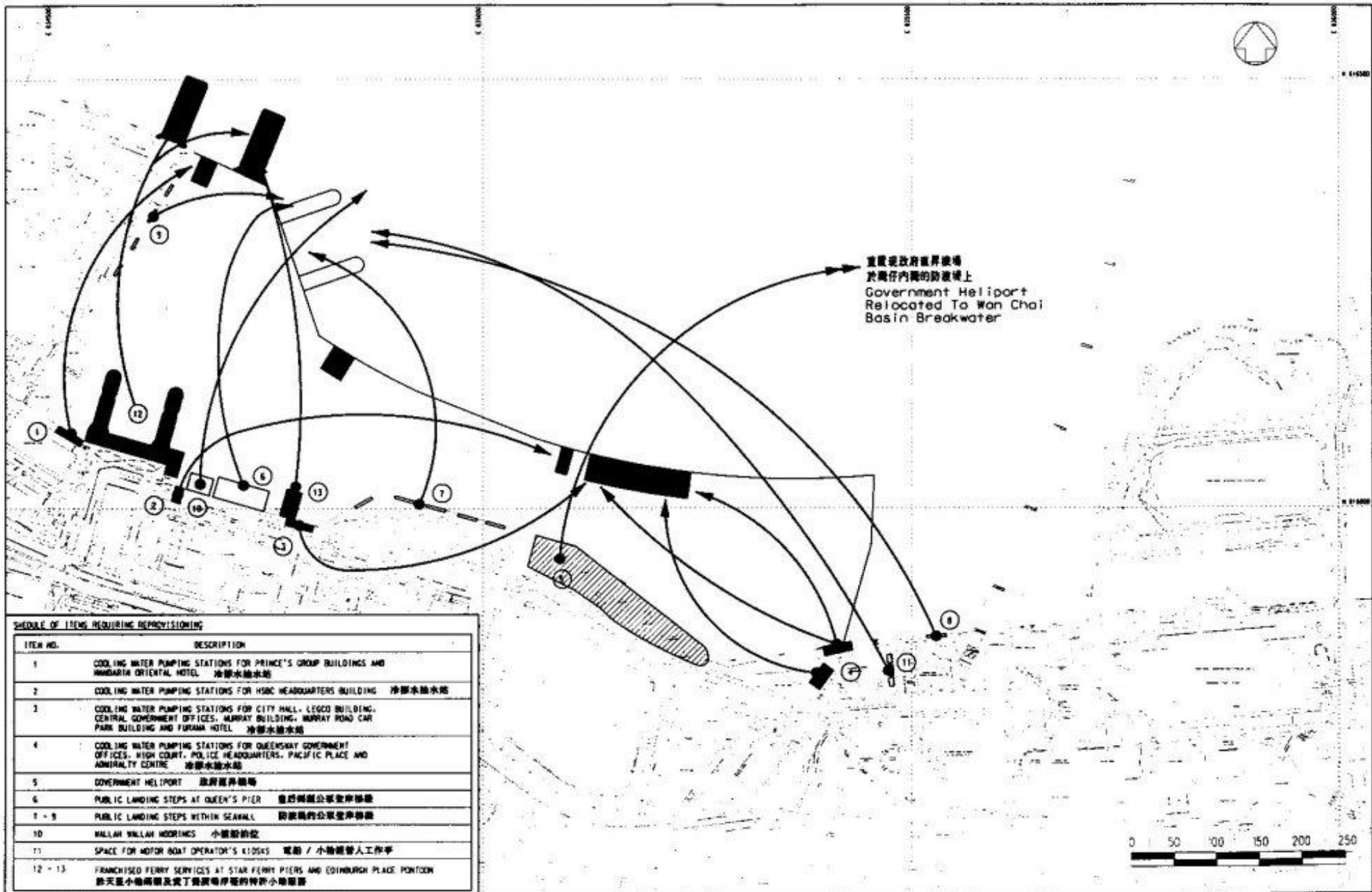
GENERAL LAYOUT 整體佈局圖

DETAILED DESIGN

NO.	DESCRIPTION	BY	DATE	REV.
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FIGURE 2 2 0

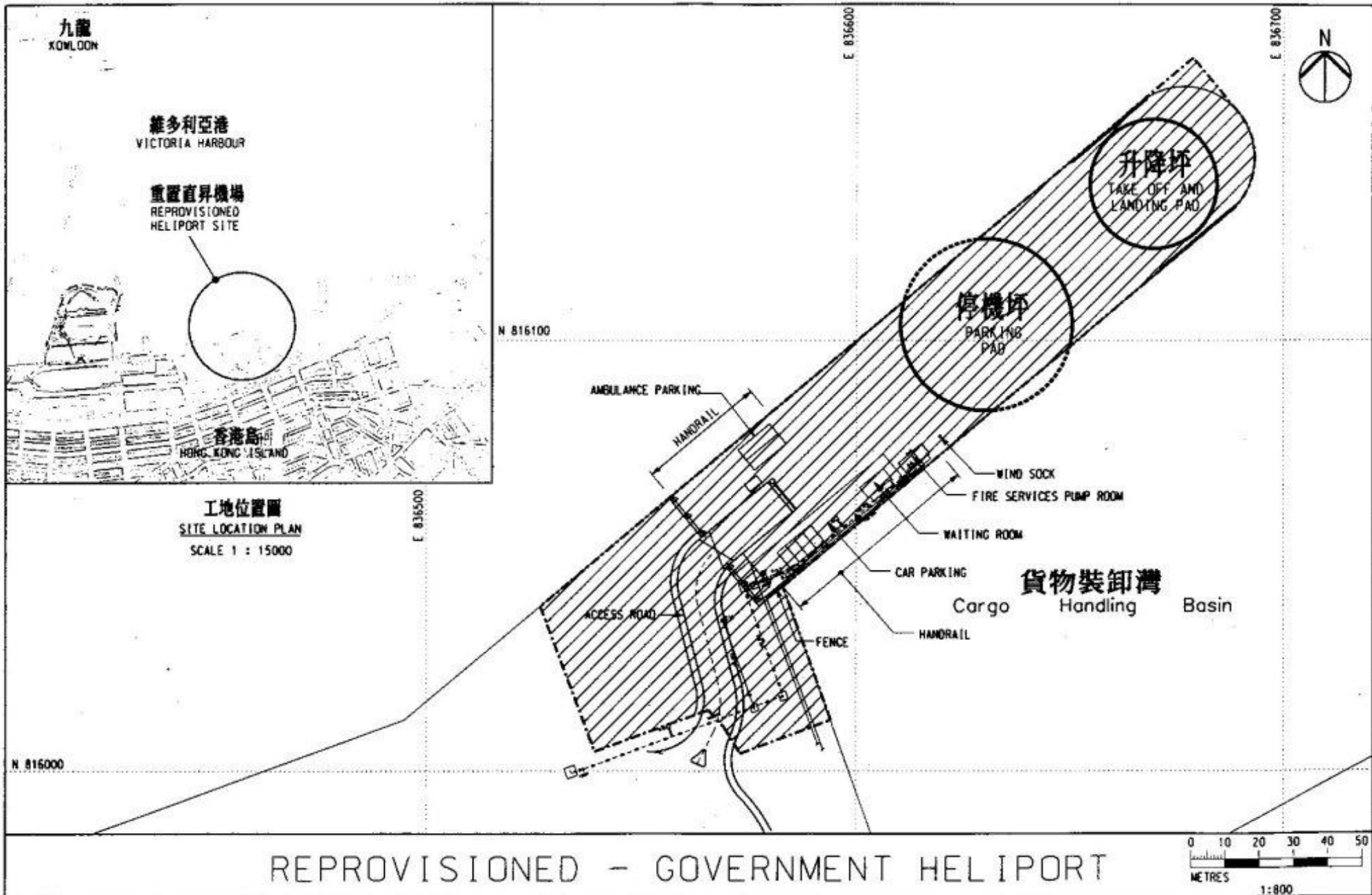
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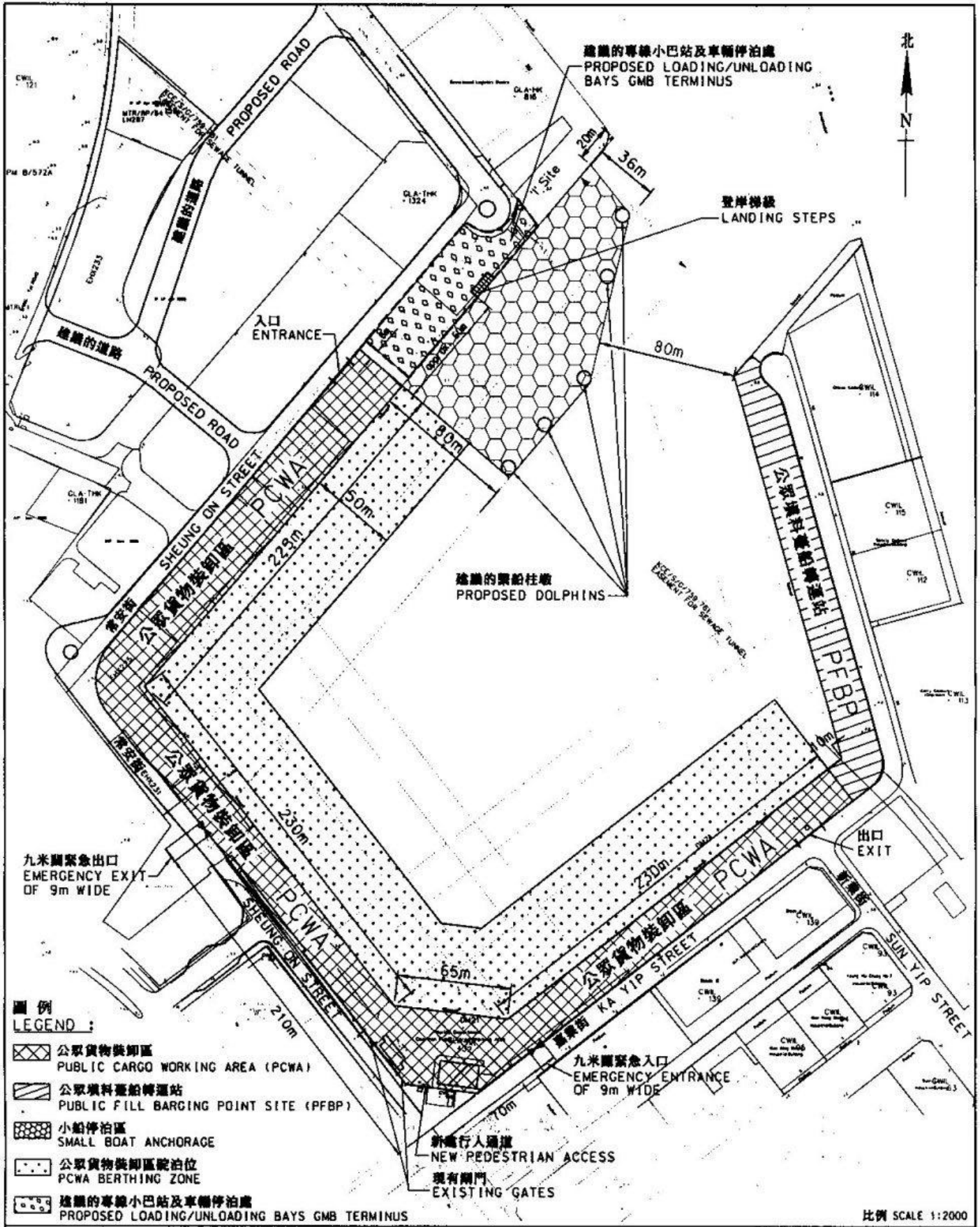
SKETCH NO. HK1-2323
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PROPOSED REPROVISIONING SCHEME FOR CR III 中環填海工程第三期的擬定重置方案

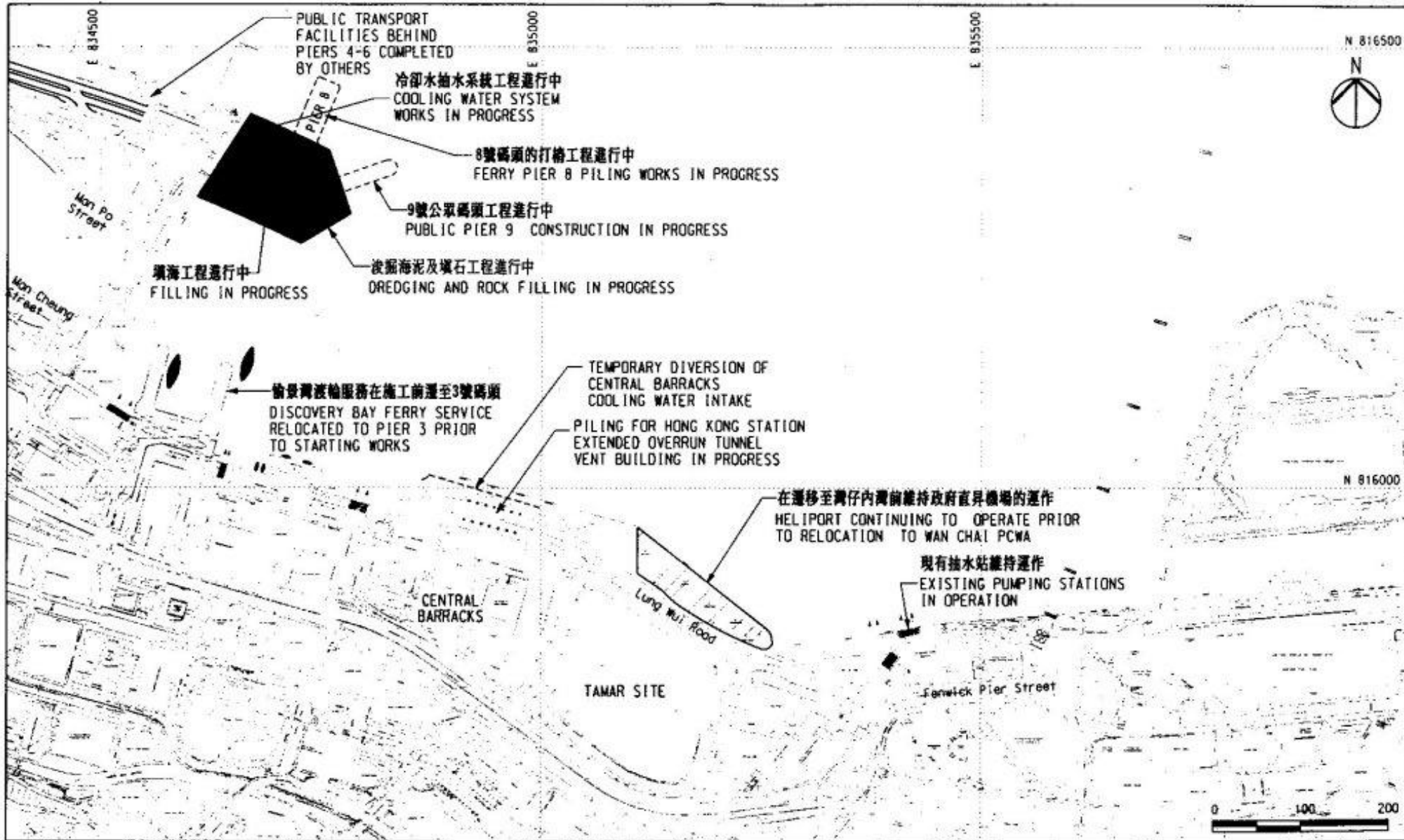
圖 3
FIGURE 3



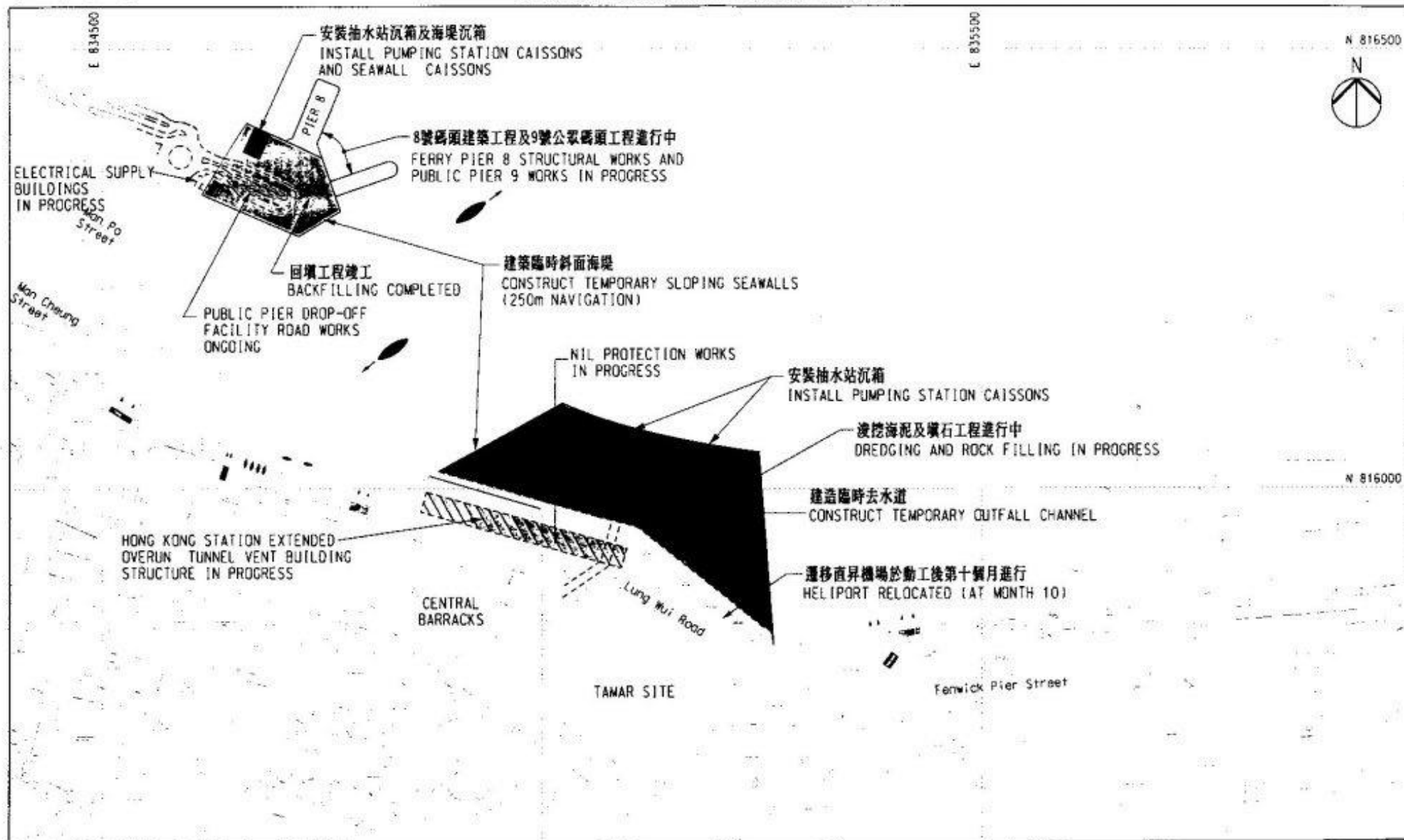
REPROVISIONED - GOVERNMENT HELIPORT



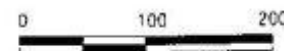
柴灣公眾貨物裝卸區整體佈局圖
CHAI WAN PUBLIC CARGO WORKING AREA - GENERAL ARRANGEMENT

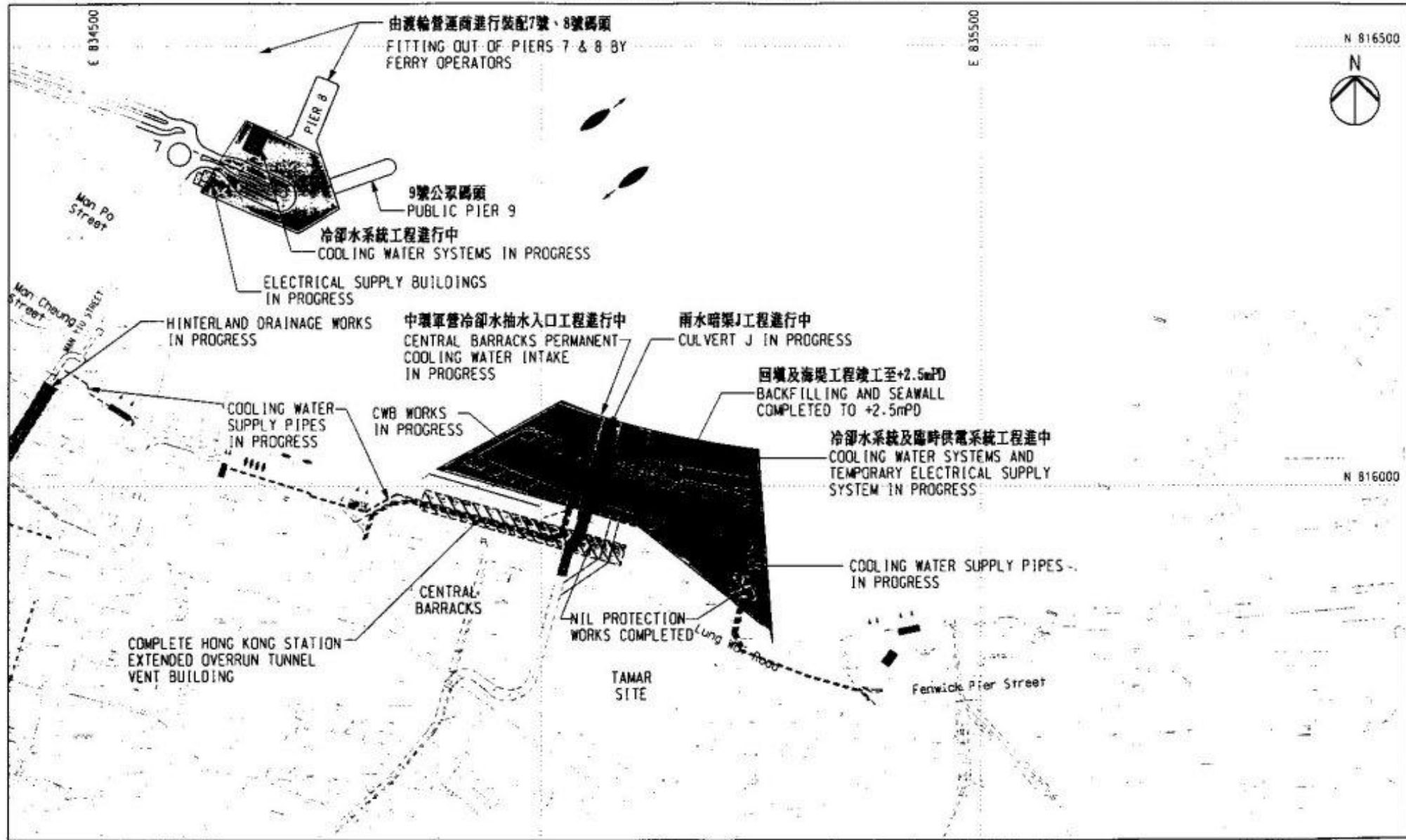


CONSTRUCTION SEQUENCE - STAGE 1 - START MONTH 1 TO END MONTH 9

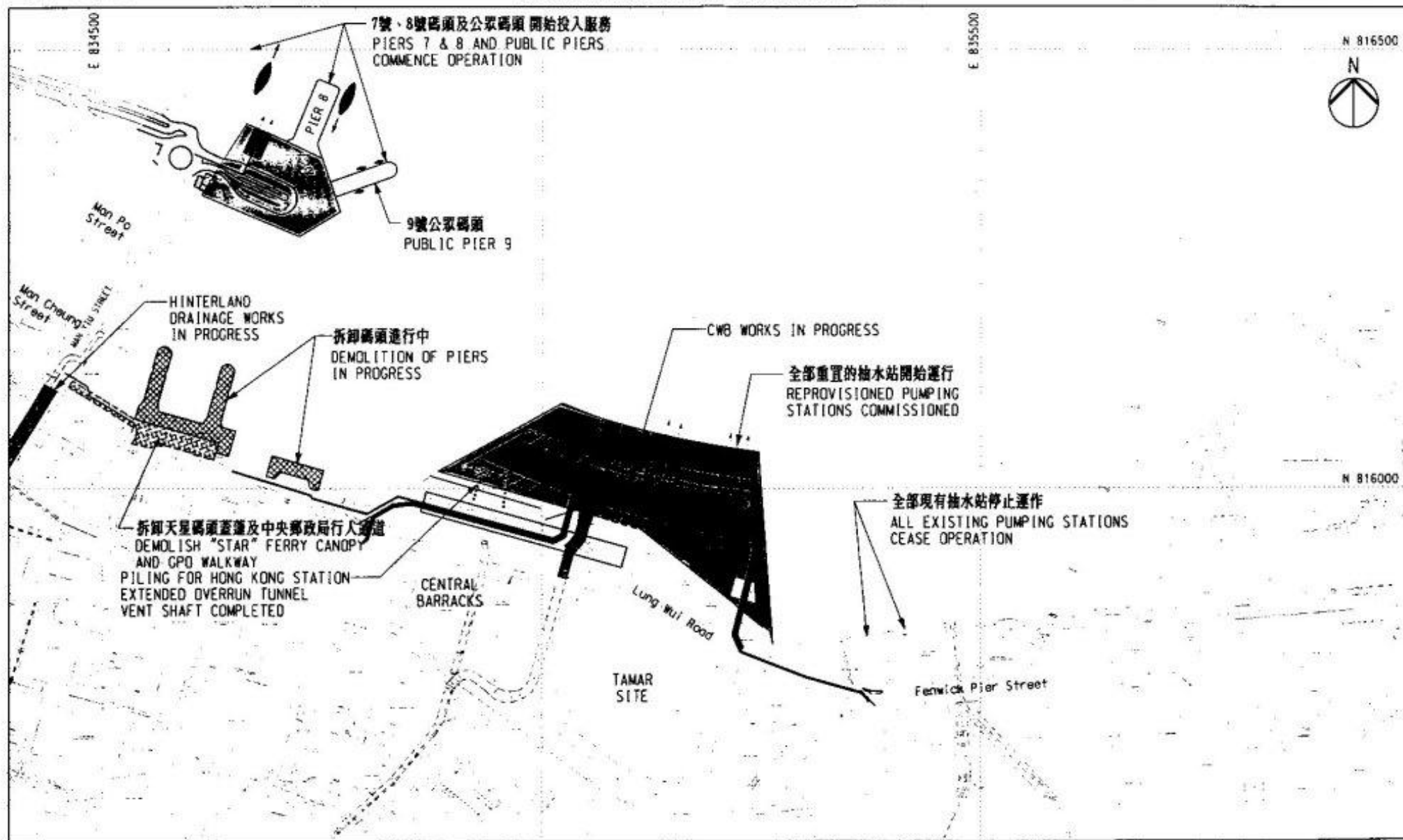


STAGE 2 - START MONTH 10 TO END MONTH 15

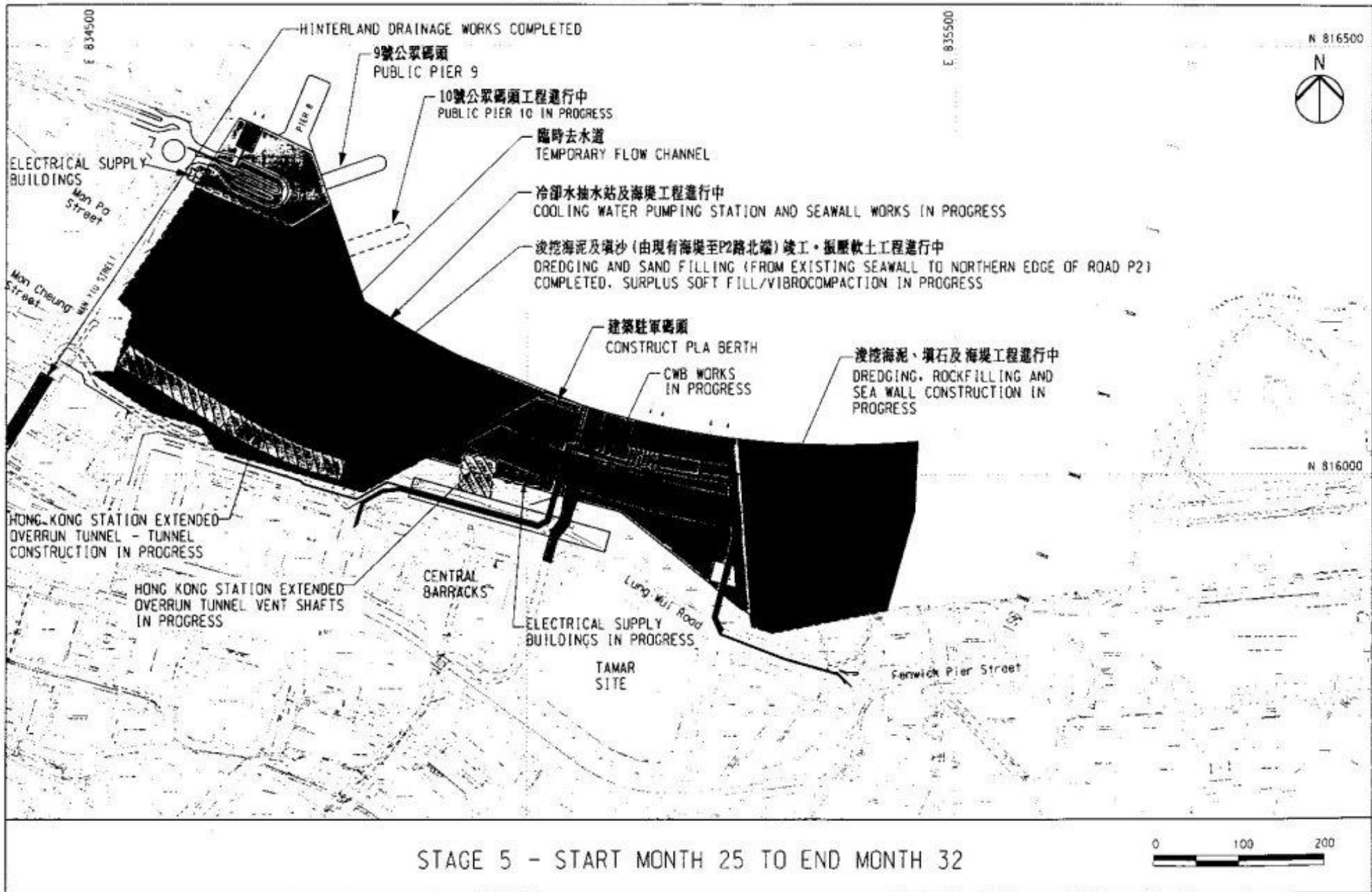




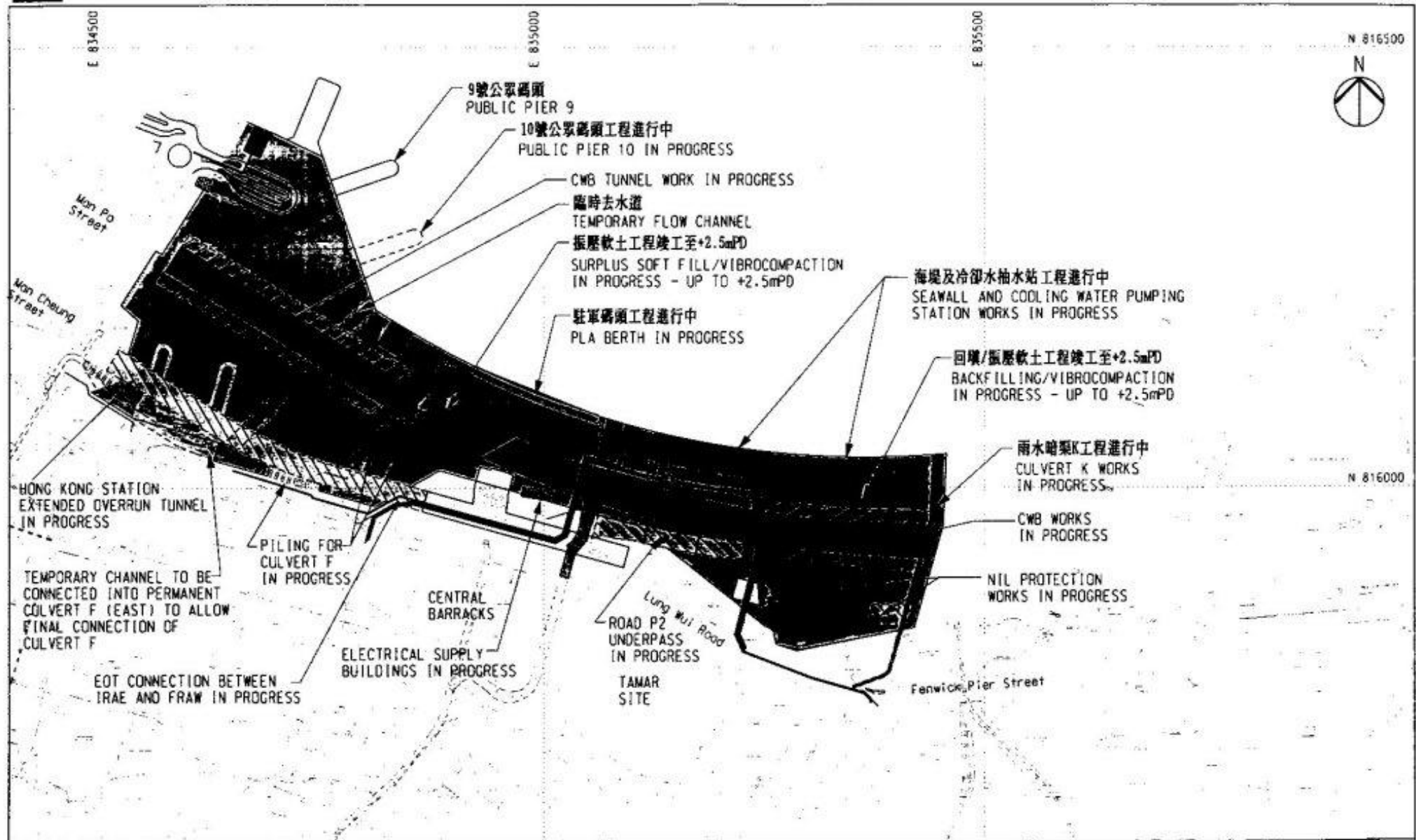
STAGE 3 - START MONTH 16 TO END MONTH 23



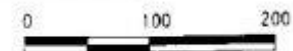
STAGE 4 - START MONTH 24 TO END MONTH 24

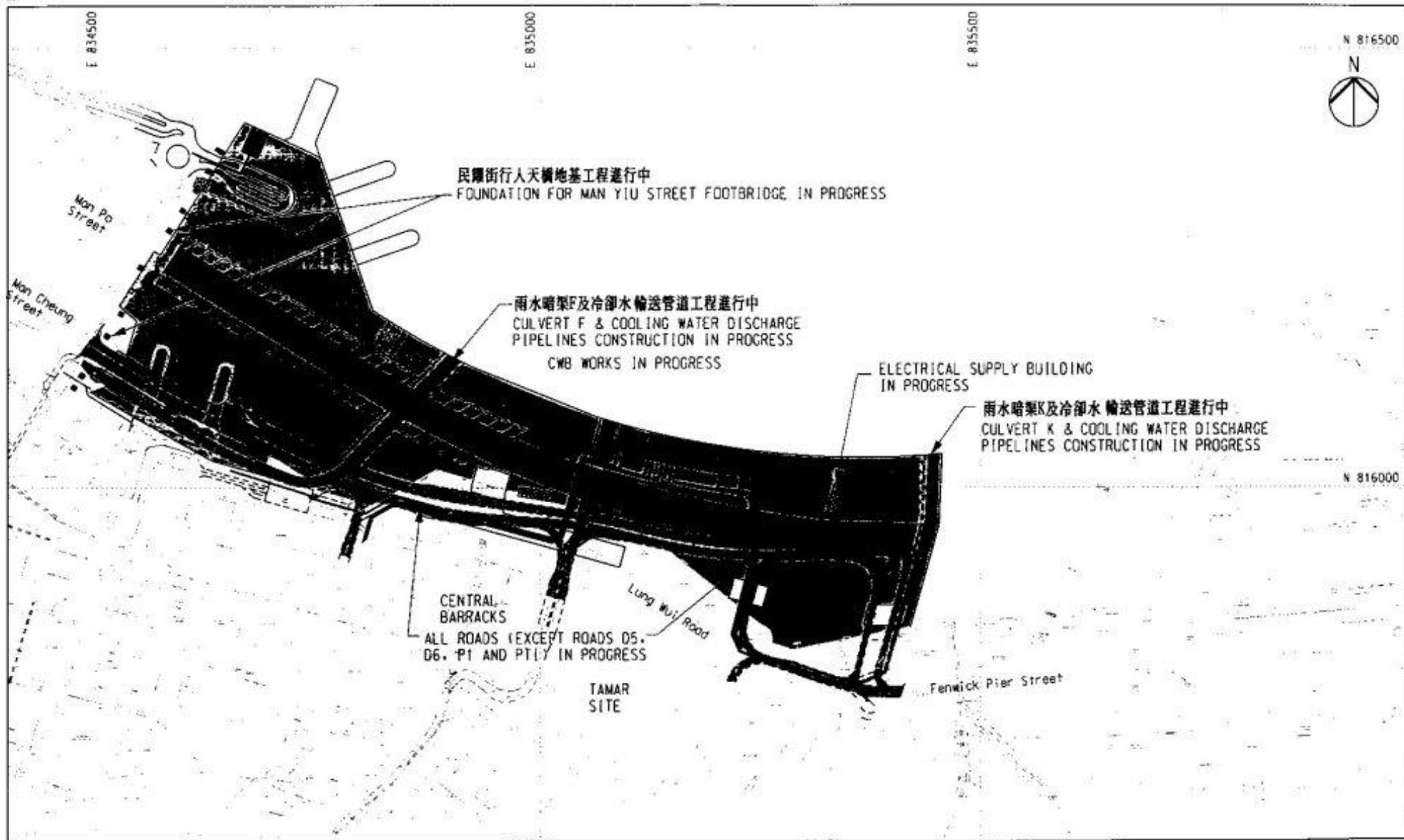


STAGE 5 - START MONTH 25 TO END MONTH 32

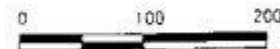


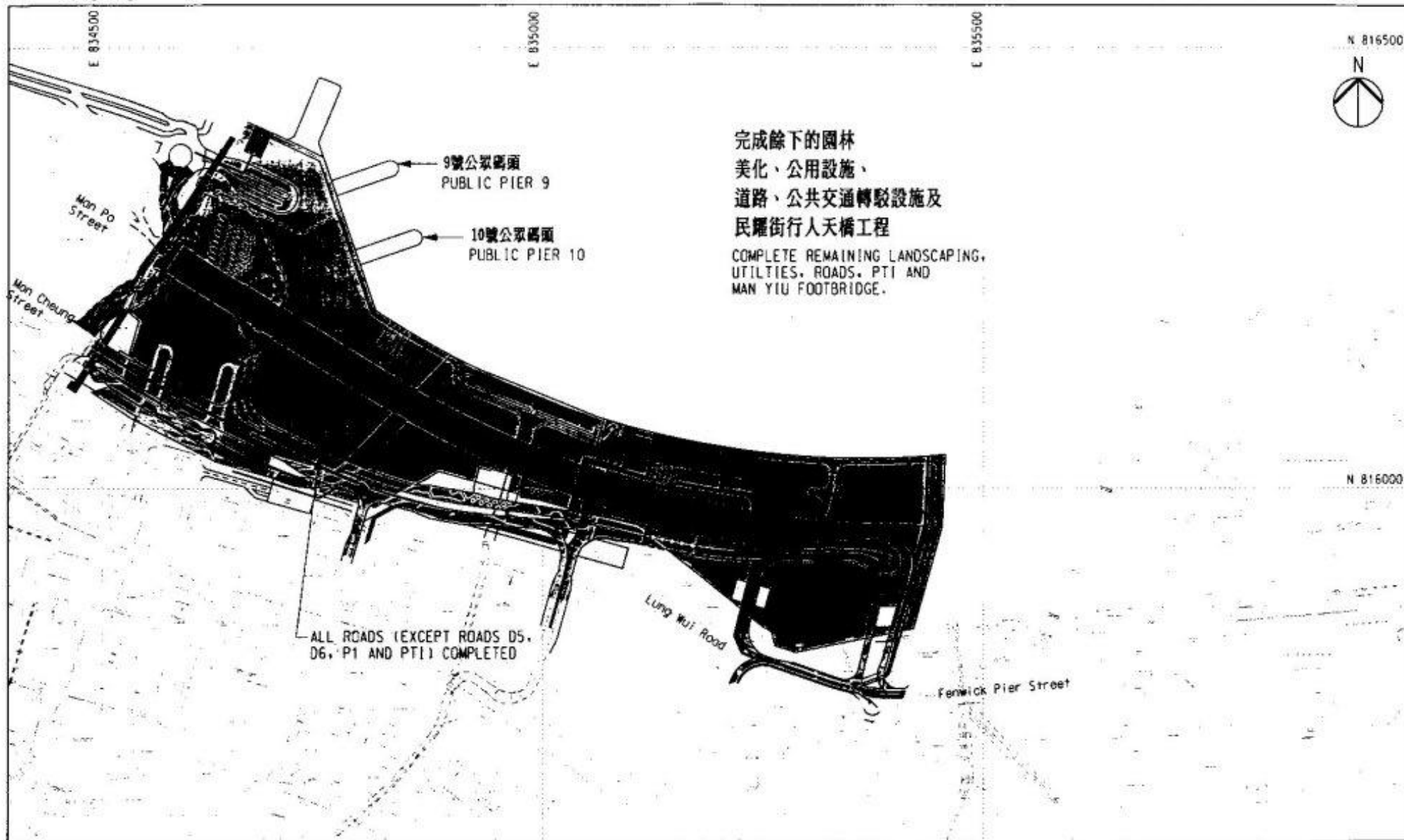
STAGE 6 - START MONTH 33 TO END MONTH 40





STAGE 7 - START MONTH 41 TO END MONTH 50





STAGE 8 - START MONTH 51 TO END MONTH 55