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ACE-EIA Paper 8/2007
For Advice

Environmental Impact Assessment Ordinance (Cap. 499)
Environmental Impact Assessment Report
Dredging Works for Proposed Cruise Terminal at Kai Tak

PURPOSE

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the Dredging Works for Proposed Cruise Terminal at Kai Tak (hereafter known as the Project), submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO). The applicant, Civil Engineering and Development Department (CEDD), and their consultants will make a presentation.

ADVICE SOUGHT

2. Members' views are sought on the findings and recommendations of the EIA report.

NEED FOR THE PROJECT

3. In October 2006, the Government of the Hong Kong Special Administrative Region announced its plan to develop a new cruise terminal at the southern tip of the former Kai Tak Airport runway. The proposed dredging works are essential to provide the necessary water depth for the safe manoeuvring of cruise vessels served by the terminal.

DESCRIPTION OF THE PROJECT

4. Only the dredging works required for the manoeuvring basin of the Cruise Terminal is under the control of the EIAO. The scope of dredging includes:

- dredging of about 1.38 Mm^3 of marine sediment from the existing seabed in an area of the Victoria Harbour off the southern tip of the former Kai Tak Airport runway; and
- removal of about 322,300 m^3 of existing seawall and the seabed underneath along the southern tip of the runway by dredging for cruise berth construction.

5. Dredging in the Harbour will be required within three dredging zones, namely Zone A, Zone B and Zone C as delineated and shown in **Figure 1**.

6. A pair of 400 mm diameter submarine gas pipelines currently lies within the dredging Zone C to the west of the former Kai Tak Airport runway. These pipelines would need to be re-provisioned before dredging can commence in Zone C, hence the dredging works have to be implemented in two stages as illustrated in **Figure 2**.

7. The Project is a Designated Project under Item C.12 Part I Schedule 2 of the EIAO: "***A dredging operation exceeding 500,000 m^3***".

VIEWS OF THE DIRECTOR AND RELEVANT AUTHORITIES

8. The Director of Environmental Protection (DEP), in conjunction with the relevant authorities, considers that the report meets the requirements of the EIA Study Brief and the Technical Memorandum on Environmental Impact Assessment Process (TM). Comments from the public and the Advisory Council on the Environment will be taken into account before DEP makes the final decision on the approval of the EIA report under the EIAO.

SPECIFIC ENVIRONMENTAL ASPECTS TO HIGHLIGHT

Water Quality

9. The water quality impact arising from the proposed dredging works has been assessed quantitatively by mathematical modeling. All possible concurrent projects that may have potential cumulative water quality impacts to the Project have been identified and input to the model to assess the worst-case scenario. The modeling results indicated that, with the implementation of mitigation measures, the cumulative water quality impact at all identified water quality sensitive receivers could comply with the TM criteria. The recommended mitigation measures include the use of:

- close grab dredgers;
- silt curtains around dredgers for seawall dredging; and
- silt screens around affected flushing water intakes.

Marine Ecology

10. Based on the water quality modeling results under the mitigated case, no significant indirect marine ecological impact on marine resources was anticipated. The assessment

included far field sensitive coral sites in Green Island, Cape Collinson and Junk Bay; fish culture zones in Ma Wan and Tung Lung Chau.

11. Ecological surveys have revealed that all the identified habitats in the proposed dredging area are generally of very low ecological value due to their highly artificial and disturbed nature. Species diversity and abundance in these habitats were low and no rare or restricted species was recorded. The species of conservation interest recorded within the Project area include a single species of common hard coral (*Oulastrea crispate*) and a few species of water birds (the Little Egret and Great Egret) which are found common and widespread in other parts of Hong Kong waters.

12. All coral colonies found in the Project area are small in size, sparsely distributed and of very low coverage. Notwithstanding this, to avoid and minimize the direct loss or damage to this fauna of conservation interest, it is recommended to translocate directly affected coral colonies found attached on small rocks and boulders that could be manually moved by a diver underwater to a recipient site in Junk Bay. Moreover, the re-construction of new seawalls for the berth structure of the cruise terminal would provide a large area of hard substrate for the subsequent recruitment and settlement of fauna similar to those previously recorded from the existing habitats.

13. With the implementation of the proposed mitigation measures, no significant and unacceptable marine ecological impact on marine resource is expected.

Cultural Heritage

14. A Marine Archaeological Investigation carried out for the proposed dredging area concluded that none of the targets indicated archaeological resources on the seabed within the study area. As a precautionary measure, it is recommended that the dredged spoil be monitored for the presence of archaeological material.

15. The EIA concluded that the actual structural elements of the runway and seawall do not have heritage value. As such, the heritage significance of the remaining seawall structure is low.

Waste Management

16. The EIA estimated that about 430,000 m^3 of dredged marine sediment would be contaminated (Category M sediment and Category H sediment) and would need to be disposed of by either open sea disposal at dedicated sites (Type 1 disposal) or confined marine disposal (Type 2 disposal); and about 950,000 m^3 of dredged marine sediment

would be uncontaminated (Category L sediment) and could be disposed of at open sea disposal sites (Type 1 disposal). The Secretary of the Marine Fill has no in-principle objection to the sediment disposal proposal.

Fisheries

17. The Project would result in a temporary loss of approximately 57 ha of fishing area and no overall significant adverse impact on fisheries resources would be expected. No fisheries-specific mitigation measures would be required.

Noise

18. Based on the assessment results, the noise impact arising from the dredging works would comply with the TM criteria without mitigation measures.

Air Quality

19. As the moisture content of the dredged marine sediment would be very high and the level of acid volatile sulphide in the sediment was found to be very low, the dust and odour impacts arising from the Project would be negligible.

ENVIRONMENTAL MONITORING AND AUDIT

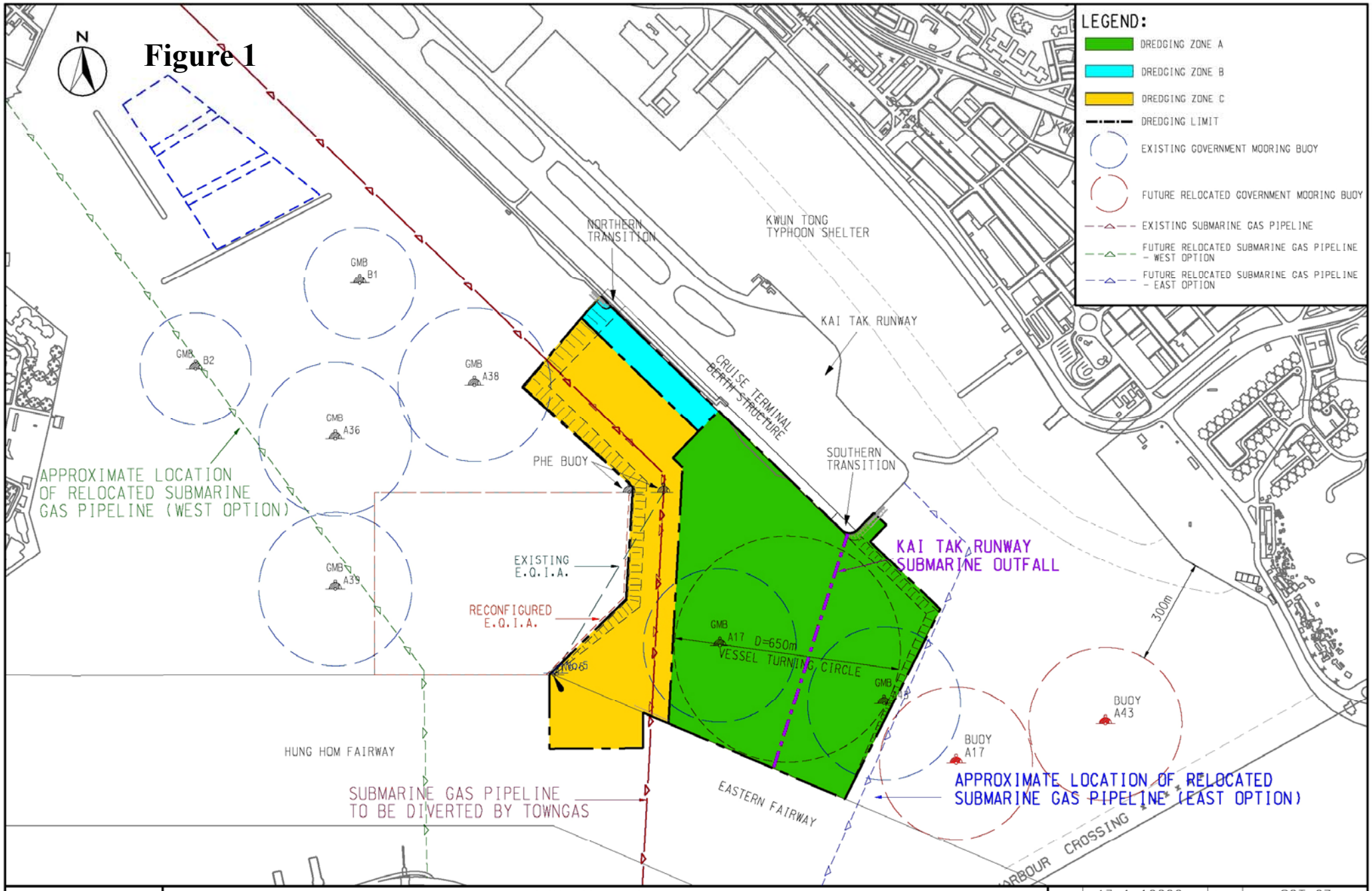
20. The EIA report includes a separate Environmental Monitoring and Audit (EM&A) Manual which recommends an EM&A programme to monitor and audit the environmental impacts arising from the dredging works, in particular water quality at flushing water intakes and post-translocation coral condition.

PUBLIC CONSULTATION

21. CEDD has made the EIA report, EM&A manual and Executive Summary available for public comment under the EIAO from 18 October to 16 November 2007**.** Members will be briefed on any comments received from the public at the meeting.

October 2007
Environmental Assessment Division
Environmental Protection Department

Figure 1



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AGREEMENT NO. CE 35/2006 (CE)
KAI TAK DEVELOPMENT ENGINEERING STUDY CUM DESIGN AND CONSTRUCTION OF ADVANCE WORKS-INVESTIGATION, DESIGN AND CONSTRUCTION

DREDGING ZONES FOR THE CRUISE TERMINAL

SCALE	A3 1:10000	DATE	OCT 07
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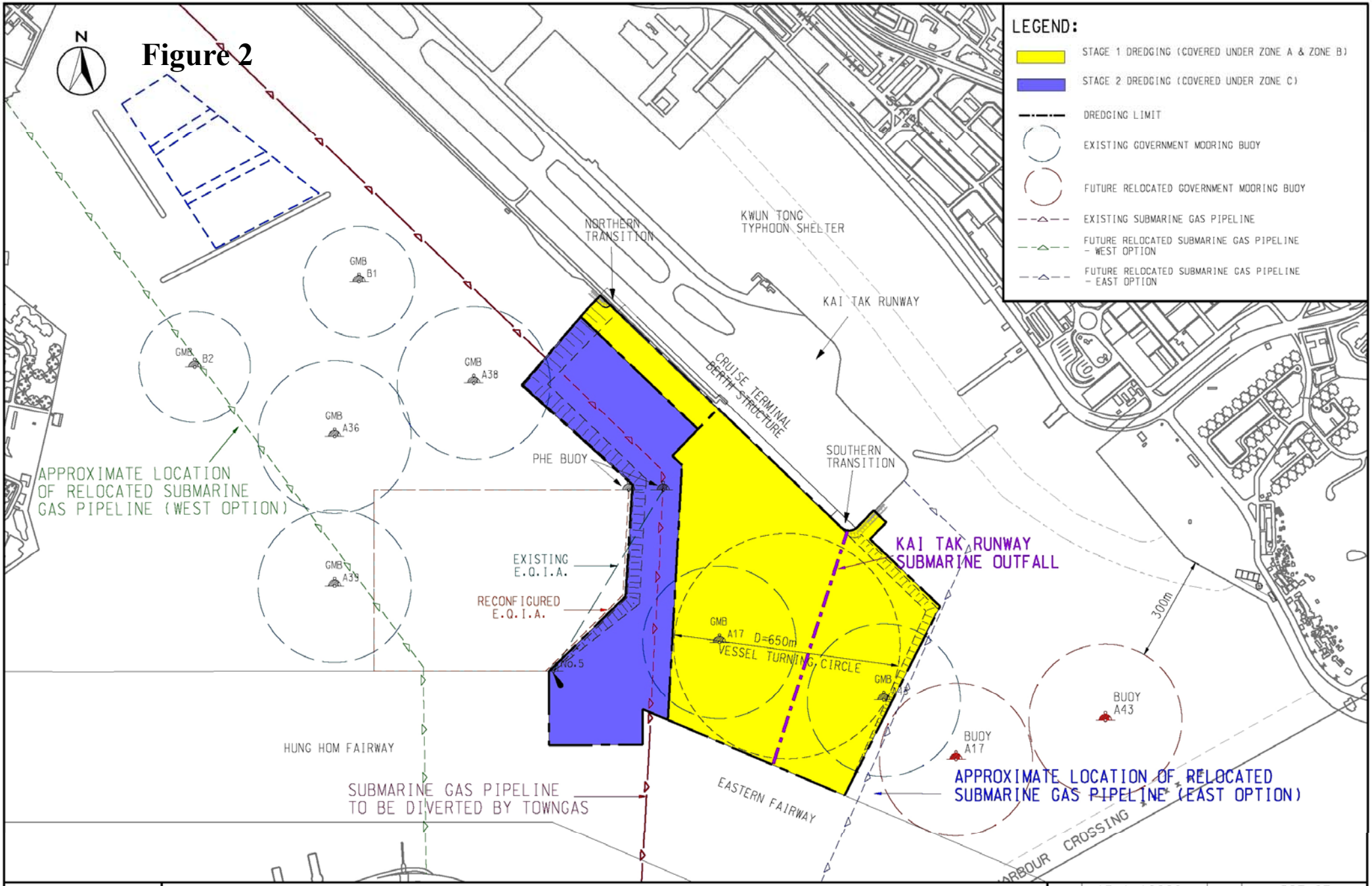
Figure 2



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AGREEMENT NO. CE 35/2006 (CE)
KAI TAK DEVELOPMENT ENGINEERING STUDY CUM DESIGN AND CONSTRUCTION OF ADVANCE WORKS-INVESTIGATION, DESIGN AND CONSTRUCTION

STAGED DREDGING REQUIREMENTS FOR THE CRUISE TERMINAL

SCALE	A3 1:10000	DATE	OCT 07
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JOB No.	60022503	DRAWING No.	2.4
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