40/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong
香港灣仔告士打道 5 號稅務大樓 40 樓

ACE-EIA Paper 10/2007
For Advice

Environmental Impact Assessment Ordinance (Cap. 499)
Environmental Impact Assessment Report
Development of a Bathing Beach at Lung Mei, Tai Po

Purpose

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the Development of a Bathing Beach at Lung Mei, Tai Po (hereafter known as the Project), submitted under section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) with the application no. EIA-140/2007. The Civil Engineering and Development Department (the applicant) and their consultants will make a presentation. Comments from the public and the Advisory Council on the Environment will be taken into account by the Director of Environmental Protection when she makes the decision on the approval of the EIA report under the EIAO.

Advice Sought

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

Need for the Project

3. In response to the increasing local demand and requests of Tai Po District Council raised over the past 10 years for the provision of a bathing beach within Tai Po District, the applicant with the support of the Home Affairs Bureau proposed to develop a bathing beach at Lung Mei in Tai Po.

Description of the Project

4. The Project is to develop a bathing beach at Lung Mei. Its location and layout are shown in the attached **Figure 1** and **Figure 2** respectively. The site is at present a non-gazetted beach. Upon completion of the Project, it will be managed by the Leisure and Cultural Services Department as a gazetted beach. The Project comprises the following key features :

(i) A 200 m long beach with a groyne at each side of the beach;

(ii) A beach building with associated beach facilities, including public changing rooms and toilets; shower rooms; equipment/machinery stores; dangerous goods stores; and ancillary facilities including management office, lookout/surveillance post, first aid room, staff changing room/toilets, staff room/pantry, fast food kiosk, open seating out area, store rooms, etc.;

(iii) Retaining structures;

(iv) Refuse collection point;

(v) Outdoor shower facilities;

(vi) Lookout towers;

(vii) Shark prevention net;

(viii) A public car park including 113 fee-paying packing spaces for 100 private cars, 10 motorcycles and 3 coaches, 2 coach loading/unloading bays and 2 passenger car/taxi unloading bays;

(ix) Landscaped areas;

(x) Drainage diversion of an existing box culvert and the lower course of the adjacent Lo Tsz River;

(xi) Sewerage construction works; and

(xii) Sand replenishment during the operation phase for maintenance of the beach, when necessary, such as after extreme storm conditions.

5. The Project involves reclamation of 1.02 ha and dredging operation. The site is about 420 m from the Ting Kok site of special scientific interest (SSSI). It is classified as a designated project under Item C.2(a) *"reclamation works more than 1 ha in size and a boundary of which is less than 500 m from the nearest boundary of an existing SSSI"* and C.12(a) *"a dredging operation which is less than 500 m from the nearest boundary of an existing SSSI"* of Part I, Schedule 2 of the EIAO.

Consideration of Alternative Locations and Layout Design for Avoidance of Environmental Impacts

6. The EIA has considered three potential sites for the Project within Tai Po District, including Lung Mei, Shuen Wan and Sha Lan. The key environmental factors for site selection process are the extent of reclamation and dredging which will give rise to potential water quality, ecology and fisheries impacts, and the buffer distance between ecological sensitive areas in the vicinity.

7. In view of the aforementioned environmental factors, among other factors, and the comments received during the Continuous Public Involvement process, the Lung Mei site was considered as the preferred location for the Project. Careful considerations were given to the beach layout, design and orientation of groynes to further minimize potential environmental impacts during construction and operation of the Project. The wave and sediment modeling results show that the net sand drift would be contained within the two groynes and that no sand loss from the Project site is anticipated during operation.

Specific Environmental Aspects to Highlight

<u>Water Quality Impact</u>

8. The Project involves dredging works for groyne foundation, profiling of the beach and sandfilling. With the implementation of mitigation measures such as using closed grab dredger, controlling dredging rate and sandfilling rate, installing silt curtains, and implementing good site practices to minimize site runoff, no adverse water quality impact is anticipated during the construction phase of the Project.

9. There are villages in close proximity to the Project site. The discharge from the septic tank and soakaway system of the villages, the nearby surface drains and Lo Tsz River will have the potential to affect the water quality of the bathing beach. In this regard, the Project includes diversion of the Lo Tsz River and the surface drain to a distance of over 100 m from the beach boundary. Furthermore, the discharge from the nearby villages will be connected to the public village sewerage system which is scheduled for completion prior to operation of the Project in 2010. The EIA has predicted that the beach water quality will meet the criterion for bathing beach, i.e. *E. coli* of 180 cfu per 100 mL set out in the Water Quality Objective.

Ecological Impact

10. The ecological impacts due to the Project were avoided and minimized during the site selection process. The selected site at Lung Mei is located well away from Ting Kok SSSI (about 420 m) and the conservation area (about 250 m). Hence direct ecological impacts on these ecological sensitive areas due to habitat loss and construction runoff from the Project are not anticipated.

11. The Project site covers low ecological value habitats including village/modified area, 0.5 ha sandy shore with backshore vegetation proximately and soft bottom marine habitats covered by fine sediments and scattered rubbles. A short section of Lo Tsz River which is partially channelised and polluted and approximately 80 numbers of small mangrove seedlings/plants scattered along the sandy shore will also be affected. As confirmed by the dive surveys, no corals or species of conservation importance were identified within or adjacent to the Project site. There are about 10 individuals with less than 5% coverage of scattered colonies of 2 common hard coral species found in the artificial/disturbed shoreline at Tai Mei Tuk which is located at more than 300 m away from the dredging site. No adverse water quality impact to the coral colonies is anticipated during dredging and sandfilling based on the water quality modeling prediction.

12. Overall speaking, the potential ecological impacts due to the construction and operation of the Project are considered to be low. With the implementation of the proposed mitigation measures including active search and translocation of the Common Rat Snake, *Ptyas mucosus*, which was identified at the Project site during the baseline ecological survey (listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) but is common and widespread in Hong Kong), planting of approximately 380 mangrove seedlings and adoption of good construction practices, no adverse residual ecological impact is expected.

Other Environmental Impacts

13 The EIA report has also assessed the impacts of air quality, noise, waste management, fisheries, and recommended necessary landscape design to minimize the impacts of landscape and visual quality. The assessments concluded that, with appropriate mitigation measures in place, the anticipated environmental impacts are considered acceptable in meeting relevant requirements under the Technical Memorandum on Environmental Impact Assessment Process.

Environmental Monitoring and Audit

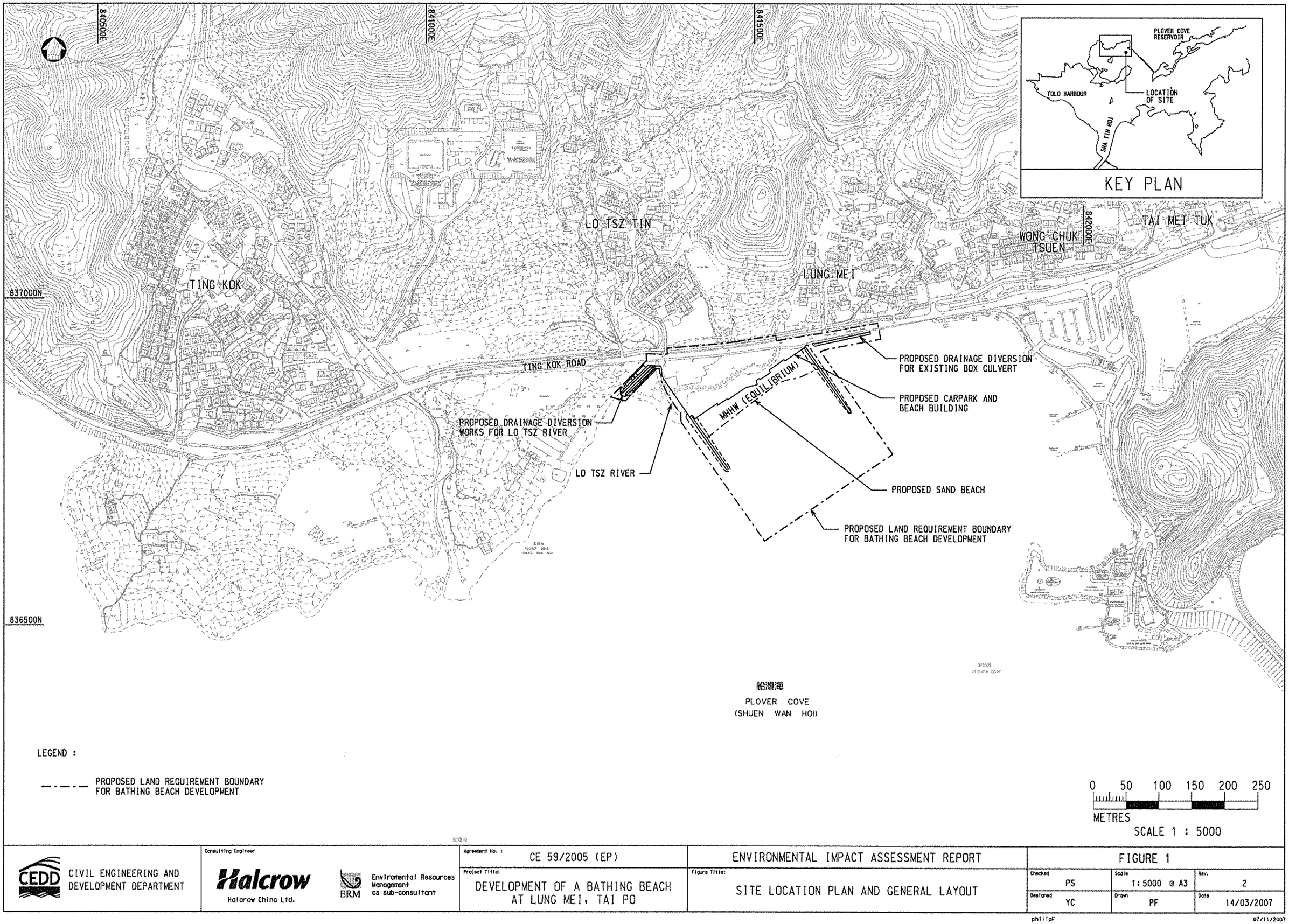
14. The EIA report includes an Environmental Monitoring and Audit (EM&A) Manual which recommends an EM&A programme during both the construction and operation phases of the Project.

Public Consultation

15. The applicant has applied the Continuous Public Involvement process and consulted some green groups, fisherman societies, Tai Po District Council and the general public through the Tai Po District Office to seek their comments on the Project during the preparation of the EIA report.

16. The applicant has also made the EIA report, EM&A Manual and Executive Summary available for public inspection under the EIAO from 23 November 2007 to 22 December 2007. Members will be briefed on any comments received from the public at the meeting.

November 2007
Environmental Assessment Division
Environmental Protection Department



LEGEND :

PROPOSED LAND REQUIREMENT BOUNDARY FOR BATHING BEACH DEVELOPMENT

0 50 100 150 200 250
METRES

SCALE 1 : 5000

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Consulting Engineer: Halcrow China Ltd. / ERM Environmental Resources Management as sub-consultant	Agreement No.: CE 59/2005 (EP)	ENVIRONMENTAL IMPACT ASSESSMENT REPORT	FIGURE 1
		Project Title: DEVELOPMENT OF A BATHING BEACH AT LUNG MEI, TAI PO	Figure Title: SITE LOCATION PLAN AND GENERAL LAYOUT	Checked: PS / Scale: 1:5000 @ A3 / Rev.: 2 / Designed: YC / Drawn: PF / Date: 14/03/2007

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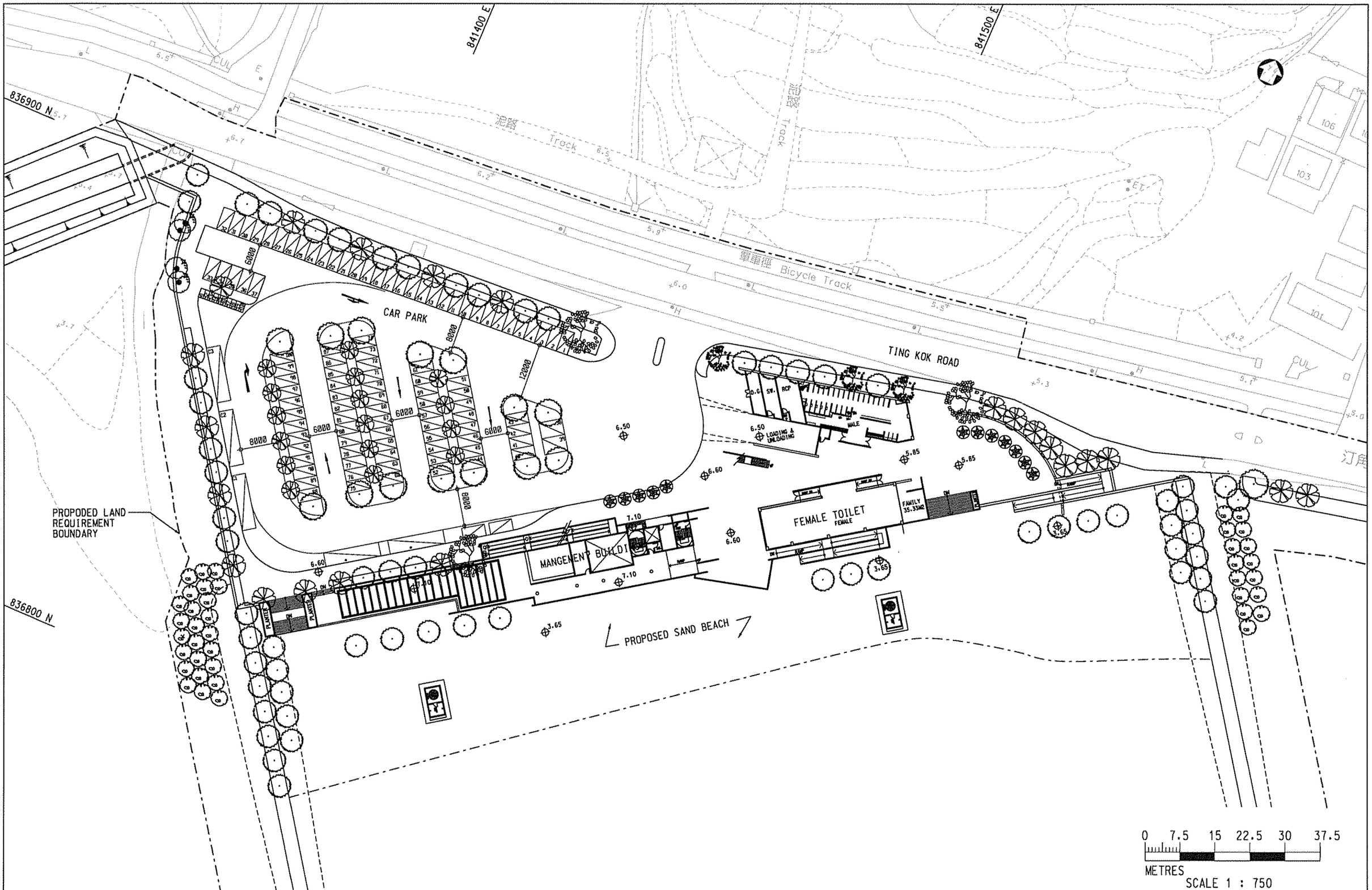

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	Consulting Engineer: Halcrow China Ltd. / ERM Environmental Resources Management as sub-consultant	Agreement No. : CE 59/2005 (EP)	ENVIRONMENTAL IMPACT ASSESSMENT REPORT	FIGURE 2
		Project Title: DEVELOPMENT OF A BATHING BEACH AT LUNG MEI, TAI PO	Figure Title: PRELIMINARY CARPARK AND BEACH BUILDING LAYOUT	Checked: PS; Scale: 1:750 @ A3; Rev.: 2; Designed: YC; Drawn: PF; Date: 14/03/2007

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