

PROJECT PROFILE FOR DESIGNATED PROJECT : ‘HONG KONG SPACE ISLAND’

Project Title

Construction and operation of a strategic tourism project with a theme park and retail component, entitled “The Hong Kong Space Island Project” (the Project).

Purpose and Nature of the Project

The purpose of the Project is to construct a world class theme park and retail complex to assist in the development of tourism and the retail industry in a strategic location for the future development of the HKSAR. The Project will also include a residential component and will be based on environmentally sustainable design practices.

The Project has been designed in line with the current Government policy of railway-lead sustainable development and this is reflected in the layout which is fully integrated with the design plans for the proposed KCRC Sheung Shui to Lok Ma Chau (SSLMC) Spur Line transport infrastructure. The alignment of the SSLMC Spur Line and other road diversions in the area of the site have already been gazetted by Government. The Project, which adopts a ‘single-roof’ concept is anticipated to become a core tourist attraction for Hong Kong.

In order to enable the commissioning of the proposed development, essential associated infrastructure including a public transport interchange, road works, water supplies, sewerage, stormwater drainage, various utilities, etc. will need to be constructed.

Name of Project Proponent

Mass Ocean International Limited

Location and Scale of Project

The proposed Project site area is 224,600m² (not including the existing Cross-Boundary Truck Holding Area) and is entirely encompassed by the newly gazetted San Tin Outline Zoning Plan (OZP) No. S/YL-ST/2. The Project location is displayed by Figure 1.

The Project site is bordered by the San Tin Highway (New Territories Circular Road) to the south, with a section of the site located between the Highway and Castle Peak Road. San Sham Road passes through the approximate centre of the site, with part of the existing Lok Ma Chau Road slightly further east but still within the site boundary.

Immediately to the north-west and adjoining the site is the Lok Ma Chau Control Point. The land to the east of the site constitutes mixed agricultural land and woodland around the villages of Chau Tau and Pun Uk Tsuen. There are further villages to the south-west of the site, with Wing Ping Tsuen being the closest at around 100m and Tung Chai Wan and Yan Shau Wai villages at around 200m.

The total Gross Floor Area of the Project is 1,224,268 m². Details of the scale of the Project are as follows:

- A three level podium to include the theme park, commercial / retail, car-parking, landscape deck and public transport interchange;
- A container truck holding area designed to hold 600 waiting China-bound vehicles to remove current problems of queue-backs onto the NT-Circular Road;
- Residential towers of staggered height (between 8 and 39 storeys) over approximately 15 hectares of podium to accommodate a design population of 30,000;

- A new KCRC station on the SSLMC Spur Line to serve the development;
- Road improvement works to the existing San Tin Interchange;
- The addition of extra truck holding area to remove the congestion caused by trucks queuing to cross the Lok Ma Chau Control Point;
- A sewage treatment plant (required until 2008 when the Ngau Tam Mei / San Tin Trunk Sewerage Line is scheduled to be connected to the Yuen Long Sewage Treatment Plant);
- The necessary site formation to construct the development including possible levelling works at the north-east edge of the site; and
- The possible relocation of a number of graves due to the site formation works.

The public transport interchange is to serve cross-boundary movements and function as a holding area for the public bus and public light bus network in the northern area of the NWNT. It also includes a cross-boundary coach parking area for tour groups from the Mainland.

History of Site

Historically the land use of the site comprised agricultural land with fishpond harvesting. Presently however the site is significantly degraded and is predominantly used for container parking / open storage and other vehicle maintenance related uses. The site area includes the main access road to the Lok Ma Chau Control Point.

The area is currently earmarked for development in that it is largely zoned Undetermined (“U”), Other Specified (Service Stations) Use (“OU(SS)”), Greenbelt (“GB”) and Road. The “Undetermined” zoning is due to uncertainty in the alignment of the KCRC Lok Ma Chau Spur Line and its impacts on fish ponds within Wetland Conservation Area (WCA) to the north of the site.

Most of the proposed Project area lies within the Wetland Buffer Area (WBA), although the existing land use is a mixture of village housing, open storage areas, vehicle maintenance workshops and public transport interchange. There has been extensive infilling of the fish ponds within the site area and, as a direct result of these operations, the site is anticipated to be of low ecological value, although this will be subject to full assessment and evaluation. Additionally, the site is also adversely impacted by cross-boundary activities in terms of air and noise pollution. There are no active fishponds left within the Project area and no part of the Project area falls within Wetland Conservation Area.

The general area has been subject to previous planning and engineering studies. The main studies include:

- (a) Lok Ma Chau Spur Line EIA (KCRC – submitted to Government in Feb. 2000); and
- (b) Main Drainage Channels and Poldered Village Protection Scheme for San Tin, NWNT - EIA (TDD – 1999).

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

This project profile will cover the following designated projects as stipulated under Schedule 2, Part I of the EIA Ordinance:

- (a) Item A.1 – “A road which is an expressway, trunk road, primary distributor road or district distributor road including new roads, and major extensions or improvements to existing road”. (Note: this depends on the level of improvement works required for the San Tin Interchange);
- (b) Item F.1 – “Sewage treatment works with an installed capacity of more than 15,000m³ per day”;

- (c) Item F.2 – “Sewage treatment works with an installed capacity of more than 5,000 m³ per day, and a boundary less than 200m from the nearest boundary of an existing or planned [sensitive receiver/s] – type of sensitive receiver depends on precise location of proposed STP.
- (d) Item P.1 - “A residential development, other than New Territories exempted houses, within Deep Bay Buffer Zone 1 or 2”;
- (e) Item P.2 – “A residential development of (a) not less than 2000 flats, and (b) not served by public sewerage networks by the time a flat is occupied”;

The exact number and details of all designated projects to be implemented will be ascertained in the course of the detailed EIA study.

Name and Telephone Number of Contact Person

Outline of Planning and Implementation Programme

Project planning is currently being undertaken with the support of consultants for the key required disciplines. The current implementation programme is divided into two or three phases as follows:

Theme Park & Theme Retail (commercial)

- Phase I completion (end 2004)
- Phase II completion (end 2006)

Residential Development

- Phase I completion (end 2004)
- Phase II completion (end 2006)
- Phase III completion (end 2008)

The phasing is sequential, i.e. there is no overlap of development.

Potential interface / timing issues have been identified with both the San Tin Main Drainage Channel and the KCRC Lok Ma Chau Spur Line alignment projects.

Possible Impact on the Environment

The proposed development will generate environmental impacts which have the potential to adversely affect the surrounding environment. Moreover, there are certain elements of the surrounding environment which may impact upon the proposed development. Areas of concern which will need to be evaluated further under the detailed EIA include noise, air quality, water, waste, ecology /

conservation and landscape / visual impacts. Special consideration must also be given to potential land contamination issues which may have resulted from current open storage and vehicle maintenance practices, and from filling of historical fish ponds within the site area. The following sections represent the broad approach for assessing the various identified and predicted impacts associated with Project development.

(a) Noise

Construction related noise impacts will likely be an issue for the nearby village housing areas. Accordingly, based on the outcome of impact assessment and evaluation appropriate noise mitigation measures such as quiet plant, equipment scheduling, percentage on-time and mobile and / or fixed noise barriers shall be considered under the EIA. Any impacts relating to the road improvement works required for the San Tin Interchange will also be fully evaluated under the EIA.

During the actual occupation of the development, noise generated from road traffic along the New Territories Circular Road, Castle Peak Road and any new roads constructed as part of the development, truck movements/queuing along San Sham Road and within the Control Point Area.

Train movements along the proposed SSLMC Spur Line shall also be considered under the EIA. As rail noise is covered under the Noise Control Ordinance (NCO), complete compliance with the regulations will be mandatory. Current proposals to include much of the rail line within the podium will be very effective in this respect. However, track run-ins and run-outs which are within direct sight of residences will also likely require mitigation. This, as well as the issue of structural borne noise and vibration, will be addressed during both the detailed design phase and EIA for this project.

With respect to the future West Rail Phase II line it is believed that given its uncertainty, the preliminary state of its planning and long lead time to implementation, it must take the proposed development as a constraint and not vice-versa. As such any environmental mitigation requirements will be subject to the findings / recommendations of the formal EIA for that phase of the West Rail if it proceeds.

The layout and orientation of the residential towers shall be carefully reviewed, as will any podium based mitigation opportunities. Impacts affecting existing or future sensitive receivers related to vehicle movements along any new roads will be assessed and mitigated as necessary. It is anticipated that traffic noise generated at the Lok Ma Chau Control Point will largely be controlled by the podium which extends over San Sham Road. However, if any further mitigation measures are required they will be presented in the EIA Report.

(b) Air Quality

Construction related air quality impacts (particularly dust) may potentially affect village residences around the site, particularly Chau Tau and Pun Uk Tsuen to the east. Minor impacts upon the western sensitive receiver locations of Yan Shau Wai and Tung Chan Wai are also anticipated.

Mitigation measures will be adopted wherever necessary, and the requirements of the Air Pollution Control (Construction Dust) Regulations shall be adhered to throughout the construction programme. Dust control measures required will be detailed in the EIA.

During the operation phase of the development, air quality impacts arising from vehicle traffic along the New Territories Circular Road, Castle Peak Road and any new roads

constructed as part of the development, truck movements/queuing along San Sham Road and within the Control Point Area will need to be evaluated.

Any identified or predicted adverse impacts will be fully mitigated against if design changes are not feasible. Mitigation options such as building orientation and setback will be reviewed, and all necessary ventilation for gaseous traffic emissions will be provided to comply with APCO requirements and other statutory / non-statutory requirements. Consideration shall be given to forced ventilation in the public transport interchange and the covered portion of San Sham Road, and smoke extraction (if required) in compliance with Fire Services Department requirements.

It is anticipated that the proposed relocation of the existing cross-boundary truck holding area, together with forced ventilation if needed, will at least partly mitigate potential air quality impacts. Full attention shall be given to the identification and assessment of any residual impacts using detailed numerical modelling.

(c) Water Quality

Wastewater generated during the construction phase will need to be tightly controlled. This will involve the collection and treatment of all wastewater to avoid any flows into the Wetland Conservation Area.

Given the proximity of stream courses to the Project area, the control practices as stipulated in ProPECC Note PN 1/94 on "Construction Site Drainage" shall be adopted throughout the construction phase as a minimum. A full review of potential impacts will be required under the detailed EIA.

As part of the planning submission, the development will be supported by both Drainage and Sewerage Impact Assessments. The findings of both of these assessments will form the basis for the design of any additional infrastructure required to support the sewerage / water supply aspects of the development. As the proposed site will not be served by a Government Sewerage Treatment Scheme until year 2008, the resultant design and its potential impacts will need to be fully evaluated under the EIA.

Opportunities for re-use of 'grey water' (i.e., bath, showers, washing machines) within the development will be explored under the EIA in full recognition of any health related issues which must also be resolved prior to the inclusion of this feature in the scheme.

The development will not adversely affect the construction, operation, or water quality of the planned San Tin Main Drainage Channel.

(d) Waste Management

Waste management strategies to identify reuse and recycling opportunities within the construction phase of this project will be fully explored under the EIA. A required output of the EIA will likely be a Waste Management Plan. The Plan will identify the relative percentages of the various waste types likely to be generated during the construction phase and will highlight the final uses / disposal locations for these wastes. A 'green corridor' is to be developed around parts of the site which will involve creating embankments and ditches of both conservation and aesthetic value. Wherever practicable, work scheduling will be arranged to enable the use of inert construction waste in the formation of these features.

All chemical / fuel storage areas will be equipped with bunding / interceptors and shall be enclosed as necessary to secure them from potential transport pathways. All chemical wastes will be subject to a separate control plan. Finally, in recognition of the sensitivity of this

construction site, a Spill Control Plan will be formulated with formal emergency response training being provided to key members of the work force. This will be supplemented with environmental awareness training for the entire work force.

Operational waste management is a key item that will be considered fully under the detailed design of the project, as well as the EIA. Architectural design elements within the residential flats will be formulated to encourage recycling. Moreover, central sorting systems will likely be integrated into the tower designs so that the maximum benefits from the generated wastes can be attained while reducing landfill requirements.

(e) Ecology / Conservation Value

The construction and operation of the development adjacent to the Wetland Conservation Area, and within the Wetland Buffer Area, at first glance poses a significant challenge in terms of avoiding ecological impacts. However, with respect to existing land uses the site is almost totally degraded with respect to its past wetland function and does not pose any direct threat to the function of existing adjacent wetlands.

There is very little natural habitat within the Project site area with strips of planted trees around the San Sham Road the most common habitat type. There is also a section of water channel passing through the site. Land immediately adjacent but outside the Project boundary has more diverse habitat types, including possible marsh and inactive / active agricultural land. There are inactive and active fish ponds to the north and west of the Project site.

In order to quantify the actual impacts, a full ecological impact assessment shall be conducted in full accordance with the 'Town Planning Board Guidelines for Application for Developments within Deep Bay Area' and the requirements stipulated under Annexes 8 and 16 of the TM on the EIA Ordinance. The scope of survey work shall be in agreement with AF&CD.

(f) Traffic Generation

Instead of using San Sham Road, an access road leading to the development is to be constructed off Fanling Highway some 1.5km to the east. This road will also serve the general community in this area and will segregate passenger vehicles which will access the development from the cross-boundary heavy goods vehicles which shall continue to use San Sham Road.

In order to reduce the traffic queues on Fanling Highway and San Tin Highway, it is proposed to expand the existing north-bound heavy goods vehicle holding area. The current proposal is that an area of about twice the size of the existing holding area will be used. This will help to relieve existing traffic congestion which is common-place along the New Territories Circular Route.

The proposed development will contain a new railway station on the SSLMC Spur Line which is in line with Government policy on railway-lead development. The railway station will also be integrated with road access options in the form of a public transport interchange. It is envisaged that this integrated approach will offer efficient transport communications resulting in discouraging private vehicle trips.

(g) Landscape and Visual

In accordance with the requirements stipulated under the Annexes 10 and 18 of the TM on the EIA Ordinance, landscape and visual impact assessment will be undertaken and appropriate mitigation proposals will be presented for affected sites. The overall development will incur

some level of impact particularly in visual terms. However, it is important to consider these factors in the overall context of the contribution and value of the development.

The existing landscape character surrounding the proposed Space Island development is relatively open to the north and east, and the site is partially enclosed by the hills, Lok Ma Chau and Ki Lun Shan, to the south and northwest. Therefore, any proposed high structures within the site would be visible from distant views. Comprehensive landscape treatment and sensitive building design will minimize intrusiveness to the adjacent and existing communities and minimize visual impacts.

There is potential to visually integrate the site to near views with the introduction of landscape and buffer areas along sections of the site boundary. Landscape proposals shall be developed with full consideration given to enhancing the nature conservation value of the area. Roads will also be specially designed and covered to minimize adverse visual and environmental impacts and to create a pedestrian-oriented environment. In addition, landscape mitigation measures such as terraced planting and screening on the podium will help reduce impacts to nearby villages.

The existing vegetation within the site is not considered particularly valuable, however, the edge and perimeter areas contain significant existing vegetation, which when retained and protected, would assist integration of the “edge conditions” with the development proposals.

(g) Cultural and Heritage

The issue of grave relocation will be fully studied under both the detailed design of the project, as well as the detailed EIA (taking account of the grave relocation already planned for the SSLMC Spur Line). All reasonable attempts will be made to avoid encroachment into areas containing existing grave sites.

Major Elements of the Surrounding Environment

Various sensitive receivers have been discussed in the previous section. Essentially, the primary ‘first-tier’ sensitive receivers or elements of the natural environment which may be directly or indirectly impacted by the construction/operation of the proposed project include:

- (a) the village of Chau Tau located over 150 m to the east of the proposed development edge;
- (b) the village of Pun Uk Tsuen located some 200 m to the east of the proposed development edge;
- (c) the village of Tung Chan Wai located over 200 m to the west of the proposed development edge;
- (d) the village of Yan Shau Wai located over 300 m to the west of the proposed development edge;
- (e) the village of Wing Ping Tsuen located over 400 m to the west of the proposed development edge;
- (f) grave sites located in the north-east quadrant of the site;
- (g) drainage reserve to the immediate west (and partly within) the Project site;
- (h) water channels within the site and a larger channel 150m to the west near fish ponds;

- (i) the Wetland Conservation Area; and
- (j) the Wetland Buffer Area.

Elements of the surrounding environment which may impact upon the proposed development include vehicle traffic along the New Territories Circular Road and Castle Peak Road, truck movements / queuing along San Sham Road and within the Control Point Area, as well as train movements along the SSLMC Spur Line and the future West Rail Phase II alignment. There may be ground contamination at open storage / vehicle maintenance areas within and adjacent to the Project area.

Environmental Protection Measures to be Incorporated in the Design and Any Further Environmental Implications

The following environmental protection measures will be considered in the EIA study:

- Construction equipment selection and scheduling;
- Dust control technology;
- Vehicle emission control technology;
- Wastewater minimisation and treatment;
- Adoption of pre-fabricated building elements to reduce on-site work (and associated construction phase impacts);
- Waste Management Plan;
- Site layout and building orientation;
- Acoustic barriers, enclosures and decking;
- Buffer zones and landscaped open space on a biodiversity / conservation value theme;
- Retention of natural environmental features / topography (e.g. minimising earth works);
- Application of the Deep Bay Guidelines for dredging, reclamation and drainage works;
- Adherence to TPB Guidelines for Application for Development within Deep Bay Area;
- Application of Chapter 8, 9 and 10 of the Hong Kong Planning Standards and Guidelines; and
- Adherence to various ProPECC Notes for construction site management.

With the incorporation of appropriate mitigation measures, construction impacts are anticipated to be short term only. In order to ensure that construction impacts will not be severe, a strict environmental monitoring and audit programme will be established for all construction phases of the development. Prior to Project operation measures shall be developed in the design to control air quality, water quality and noise impacts.

Since a large area of the proposed site is already degraded from an environmental view point due to the existing land uses, cross-boundary Control Point Area and Main Drainage Channel, potential

opportunities exist for the proposed development to bring an overall beneficial environmental enhancement to the area.

Contact with various public interest conservation groups has been initiated to present the development proposals and to enable involvement of these groups at an early stage in project development.

Use of Previous Approved EIA Reports

During the course of the detailed EIA study, reference will be made to the EIA reports of the following previous studies.

- (a) Main Drainage Channels and Poldered Village Protection Scheme for San Tin, NWNT - EIA (TDD – 1999);
- (b) Lok Ma Chau Spur Line EIA (KCRC – under review); and
- (c) Expansion of Kiosks and Other Facilities at Lok Ma Chau Border Crossing (ASD – when available).