



33/F, Revenue Tower, 5 Gloucester Road, Wan Chai, Hong Kong

香港灣仔告士打道 5 號稅務大樓 33 樓

ACE-EIA Paper 7/2016

For advice on 24 October 2016

Environmental Impact Assessment Ordinance (Cap. 499) Environmental Impact Assessment Report

Hung Shui Kiu New Development Area

PURPOSE

This paper presents the key findings and recommendations of the Environmental Impact Assessment (EIA) report for the engineering feasibility study of the Hung Shui Kiu (HSK) New Development Area (NDA) (“the Project”) submitted under Section 6(2) of the Environmental Impact Assessment Ordinance (EIAO) (Application No. EIA-248/2016). The Civil Engineering and Development Department (CEDD) (“the Applicant”) and their consultants would present the EIA report at the meeting of EIA Subcommittee.

ADVICE SOUGHT

2. Members’ views are sought on the findings and recommendations of the EIA report. The Director of Environmental Protection (DEP) would take into account comments from the public and the Advisory Council on the Environment (ACE) in deciding whether or not to approve the EIA report under Section 8(3) of the EIAO.

BACKGROUND

3. The HSK NDA (Figure 1) was first studied under the "Planning and Development Study on North West New Territories" (the “NWNT Study”) completed in

2003. The need was reaffirmed in the “Hong Kong 2030: Planning Vision and Strategy” (the “HK2030 Study”) completed in 2007 to address long-term housing demand and employment opportunities. Subsequently, the 2007-08 Policy Address has included the planning for HSK NDA as one of the ten major infrastructure projects for Hong Kong.

4. In 2011, the Applicant had commissioned a planning and engineering study to take forward the findings and recommendations of the NWNT Study; to engage stakeholders; and to confirm feasibility of the proposed development in meeting long-term housing, social, and economic needs. The engineering feasibility study has drawn up a Recommended Outline Development Plan (RODP) for detailed EIA study. Public views, including ACE, green groups, district councils and other stakeholders, were solicited through three rounds of formal community engagement in 2011, 2013 and 2015. The EIA for the Project is based on the RODP which covers 714 ha with an intended total population of 218,000.

5. Key environmental issues raised during the three community engagement exercises include: protection of San Sang San Tsuen egret, preservation of cultural heritage, reuse of effluent, green living and relocation of brownfield operation.

6. In the course of the EIA study, the RODP was further refined to avoid, reduce and minimize environmental impacts. The revised recommended option of HSK NDA development is at Figure 2.

7. The DEP, in conjunction with all relevant authorities, considers that the EIA report meets the requirements of the EIA Study Brief and the Technical Memorandum on EIA Process (TM), for the purpose of exhibiting the report for public inspection, under Section 7(4) of the EIAO.

NEED FOR THE PROJECT

8. HSK NDA is one of the ten major infrastructure projects announced in the 2007-08 Policy Address to meet long-term housing need and to provide for local employment opportunities.

9. The HSK NDA would create land for approximately 61,000 flats and industrial & commercial buildings to provide 150,000 new employment opportunities in the NWNT region. The first population intake is scheduled for 2024 with full population intake in 2038.

ENVIRONMENTAL BENEFITS

10. The EIA report states that the key environmental benefits of the HSK NDA include:

- (i) Relocate Brownfield Operation & Avoid Industrial/Residential (I/R) Interface Problems: At present, there are about 200ha of brownfield operations scattered within the Project area. Incompatible adjoining land use would be avoided through relocation. Approximately 24ha of land at the northern fringe is reserved for development of purpose-built Multi-Storey Buildings (MSBs) for port back-up, storage and workshop uses;
- (ii) Remove Noisy Tin Ying Road: Tin Ying Road would be demolished and replaced by a pedestrian promenade along Tin Shui Wai Channel. In addition, the road network within the Project area would be re-arranged to divert heavy vehicles to Kong Sham Western Highway thereby minimising impacts on residential areas;
- (iii) Promote Environmentally Friendly Transport: A Green Transit Corridor, comprising an Environmentally Friendly Transport System (EFTS) and networks of cycle tracks & pedestrian walkways, is planned in the NDA to promote green transport and green mobility through walking & cycling;
- (iv) Reduce Traffic Noise through Extensive use of Low Noise Road Surfacing (LNRS) and Depressed Road: To reduce road traffic noise and to alleviate visual impact of noise barriers, extensive use of low noise road surfacing for both new and existing roads is recommended under the EIA. In addition, sections of depressed roads would be constructed at new roads D2, D4 and D6; and
- (v) Adopt Green Initiatives: A number of green initiatives have been proposed. These include a district cooling system for non-domestic developments, reuse of treated effluent, green building designs, on top of the EFTS mentioned above.

11. In addition, the EIA also recommends preservation of the San Sang San Tsuen egret as well as existing cultural heritage:

- (i) Avoid Encroachment into San Sang San Tsuen Egrettry: The egrettry would be preserved intact. A 100 m wide corridor for flight path for birds (ardeids) is purposely reserved, and the adjacent area is zoned “Local Open Space” (“LO”) to provide additional buffer. Construction activities in adjacent areas would strictly avoid breeding seasons; and
- (ii) Avoid Encroachment into Existing Villages and Cultural Heritage: The existing village zones would be preserved. All declared monuments and graded historic buildings would be kept intact. A cultural heritage trail would be provided to facilitate public appreciation of the culturally important features within the Project area.

DESCRIPTION OF THE PROJECT

12. The Project is an engineering feasibility study covering 714ha. It is a designated project (DP) under Item 1¹, Schedule 3 of the EIAO. The development of the HSK NDA also covers 12 other DPs under Schedule 2 of the EIAO (Figure 3), viz:

- (i) Item A.1^[2]: Construction of a new primary distributor road (Road P1);
- (ii) Item A.1^[2]: Construction of eight new district distributor roads (Roads D1 to D8);
- (iii) Item A.2^[3]: Construction of a new West Rail HSK Station (Site ref. 4-34);
- (iv) Item A.3^[4]: Construction of an Environmentally Friendly Transport System;
- (v) Item A.8^[5]: Construction of slip roads between (a) Road D8 Junction and existing Castle Peak Road; (b) Junction of D8/P1 and Junction of D7/P1; and (c) Kong Sham Western Highway connection to Road D3;
- (vi) Item A.9^[6]: Construction of partly depressed and partly decked-over roads

¹ Item 1 of Schedule 3 – “Engineering feasibility study of urban development projects with a study area covering more than 20ha or involving a total population of more than 100,000”.

² Item A.1 of Part I, Schedule 2 – “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 roads”.

³ Item A.2 of Part I, Schedule 2 – “A railway and its associated stations”.

⁴ Item A.3 of Part I, Schedule 2 – “A tramway and its associated stations”.

⁵ Item A.8 of Part I, Schedule 2 – “A road or railway bridge more than 100m in length between abutments”.

⁶ Item A.9 of Part I, Schedule 2 – “A road fully enclosed by decking above and by structure on the sides for more than 100m”.

located at Road D2, Road D4 and Road D6;

- (vii) Item B.5^[7]: Construction of a new container back-up and storage area (Sites 3-1, 3-4, 3-5, 3-13 and 3-14) (potential DP subject to further review);
- (viii) Item F.1^[8]: Construction of new HSK Sewage Treatment Works (STW) (Site 3-26 and part of existing San Wai STW);
- (ix) Item F.3(b)^[9]: Construction of four new Sewage Pumping Stations (SPSs) (Sites 2-34, 3-41, 3-48 and 4-35);
- (x) Item F.4^[10]: Construction of flushing water service reservoirs for reuse of reclaimed water at Tan Kwai Tsuen and Fung Kong Tsuen (Sites 3-3 and 5-40);
- (xi) Item G.2^[11]: Construction of one Refuse Transfer Station (RTS) (Site 3-12); and
- (xii) Item Q.1^[12]: Construction of Road P1 and a slip-road from Kong Sham Western Highway to Road D3 partly located within the “CA” zone in Yuen Tau Shan.

CONSIDERATION OF ALTERNATIVES

13. The EIA report has considered various development options under the Preliminary ODP, RODP, as well as the Revised RODP formulated after three community engagement exercises with relevant stakeholders. Alternatives were considered in the EIA report to avoid, reduce and minimise environmental impacts e.g. avoiding encroachment into San Sang San Tsuen egrettry, avoiding I/R interface problems, extensive use of LNRS, reuse of treated effluent, development of EFTS, etc.

⁷ Item B.5 of Part I, Schedule 2 – “A container back-up area, container storage, container handling or container packing area (including a container vehicle parking area) more than 5ha in size and within 300m of an existing or planned receiver”.

⁸ Item F.1 of Part I, Schedule 2 – “Sewage treatment works with an installed capacity of more than 15,000m³ per day”.

⁹ Item F.3(b) of Part I, Schedule 2 – “A sewage pumping station – (b) with an installed capacity of more than 2,000m³ per day and a boundary of which is less than 150m from an existing or planned receiver”.

¹⁰ Item F.4 of Part I, Schedule 2 – “An activity for the reuse of treated sewage effluent from a treatment plant”.

¹¹ Item G.2 of Part I, Schedule 2 – “A refuse transfer station”.

¹² Item Q.1 of Part I, Schedule 2 – “All projects including new access roads, railways, sewers, sewage treatment facilities, earthworks, dredging works and other building works partly or wholly in an existing or gazetted proposed country park or special area, a conservation area, an existing or gazetted proposed marine park or marine reserve, a site of cultural heritage, and a site of special scientific interest”.

14. The environmental benefits and dis-benefits of the options have been evaluated. The recommended land use options have taken into account environmental considerations, site constraints and comments received during the public engagement exercises. The key approaches adopted by the Applicant to avoid or minimise environmental impacts are summarised as below:

Avoidance of Impacts

- (i) To avoid the disturbance to the San Sang San Tsuen egret, the area would be retained intact as “GB” and buffered by “LO”;
- (ii) To avoid disturbance to breeding of ardeids, construction works near San Sang San Tsuen egret would be scheduled outside the breeding season (between March and August) of the ardeids; and
- (iii) To avoid cultural heritage impact, all declared monuments and graded historic buildings within the Project area would be kept intact.

Minimisation of Impacts

- (i) To minimise I/R interface issues between existing brownfield operations and new residential development, approximately 24ha of land is provided at the northern fringe of the Project area in early stage of the development of the NDA to accommodate some of the existing brownfield operations through MSBs;
- (ii) To minimise noise and air emission from road traffic, a Green Transit Corridor would be in place to promote walking and cycling;
- (iii) To minimise visual impact caused by noise barriers, extensive use of low noise road surfacing and depressed roads are proposed;
- (iv) To minimise construction noise, use of quieter plants and careful scheduling of construction works would be implemented; and
- (v) To minimise construction dust, good site practices including watering of exposed areas and careful scheduling of construction works would be implemented.

SPECIFIC ENVIRONMENTAL ASPECTS TO HIGHLIGHT

Ecology

15. As mentioned above, one key ecological issue is preservation and protection of the egrettry near San Sang San Tsuen. The EIA report recommends retain it intact as “GB”. Additional buffer would be also provided by the adjacent “LO”. To avoid impact on breeding of ardeids, construction works would be scheduled outside the breeding season of the ardeids i.e. between March and August.

Noise

16. Given 441ha within the Project area would be developed for various uses, some construction noise impacts to sensitive receivers are unavoidable. The EIA study has recommended the implementation a series of carefully chosen noise mitigation measures, including the use of quiet plants and scheduling of works. With these, the construction noise would meet relevant criteria.

17. During operation stage, the EIA has proposed mitigation measures including extensive use of low noise road surfacing, depressed road, set-back and limited noise barriers to tackle traffic and rail noise problems. With these mitigation measures in place, respective noise levels would meet relevant criteria. Potential I/R interface problem is another key issue identified, given the 200 ha of existing brownfield operation in the HSK NDA. The EIA has proposed relocation of the brownfield operation before population intake to avoid I/R interface problem.

Air Quality

18. During construction stage, with mitigation measures such as good site practices, watering of exposed areas and careful scheduling of works, the construction dust level would meet relevant criteria.

19. The relocation of existing brownfield operations would minimise the I/R interface issues, and the emissions from traffic and brownfield operations during operation stage would meet relevant criteria. In addition, odour from an existing chicken farm, the upgraded San Wai STW, a new HSK STW, a new refuse transfer station and 4 sewage pumping stations would also meet relevant criteria with suitable mitigation measures.

Sewerage and Water Quality

20. Sewage from the Project area would be temporarily treated by the San Wai STW. The new HSK STW would be commissioning in 2031 and would provide sufficient capacity for the whole HSK NDA. Discharge from the San Wai STW and HSK STW would be directed to the Urmston Road outfall. No net increase in pollution loading to Deep Bay is envisaged.

Land Contamination

21. 480 sites were identified to have potential contamination. Further site investigation works would be conducted to identify the need for decontamination works before the HSK NDA development.

Landscape and Visual

22. About 28,583 trees consisting of 200 species were found within the assessment area. One (1) Old and Valuable Tree (OVT) (*Ficus microcarpa*) was found in the assessment area but outside the Project area. 63 trees are potentially OVTs and 28 trees are identified as Important Trees under DEVB TCW No. 7/2015. The actual impact on these trees would be finalised at detailed layout design stage and tree felling would be avoided as far as possible.

23. The transformation of presently predominantly brownfield sites into a contemporary planned community with proper landscape treatments would result in landscape and visual improvement.

Cultural Heritage

24. There are 2 declared monuments and 7 graded historic buildings within the Project area. All of them would be preserved intact. There are 4 Archaeological Potential Areas (APAs) within the Project area which have uncertain archaeological potential. Since archaeological fieldwork could not be conducted at this point of time, surveys would be conducted before the commencement of any construction works to ascertain the extent of any archaeological deposits within these APAs.

Other Environmental Impacts

25. Other environmental impacts including waste management and fisheries have

been satisfactorily addressed in the EIA report. With the implementation of the recommended mitigation measures, the Project would comply with the requirements of the TM.

ENVIRONMENTAL MONITORING AND AUDIT (EM&A)

26. The EIA report includes an EM&A Manual which recommends EM&A programmes during the construction and operational phases of the Project. Key recommended EM&A requirements cover air quality, noise, water quality, waste management, land contamination, visual & landscape and cultural heritage.

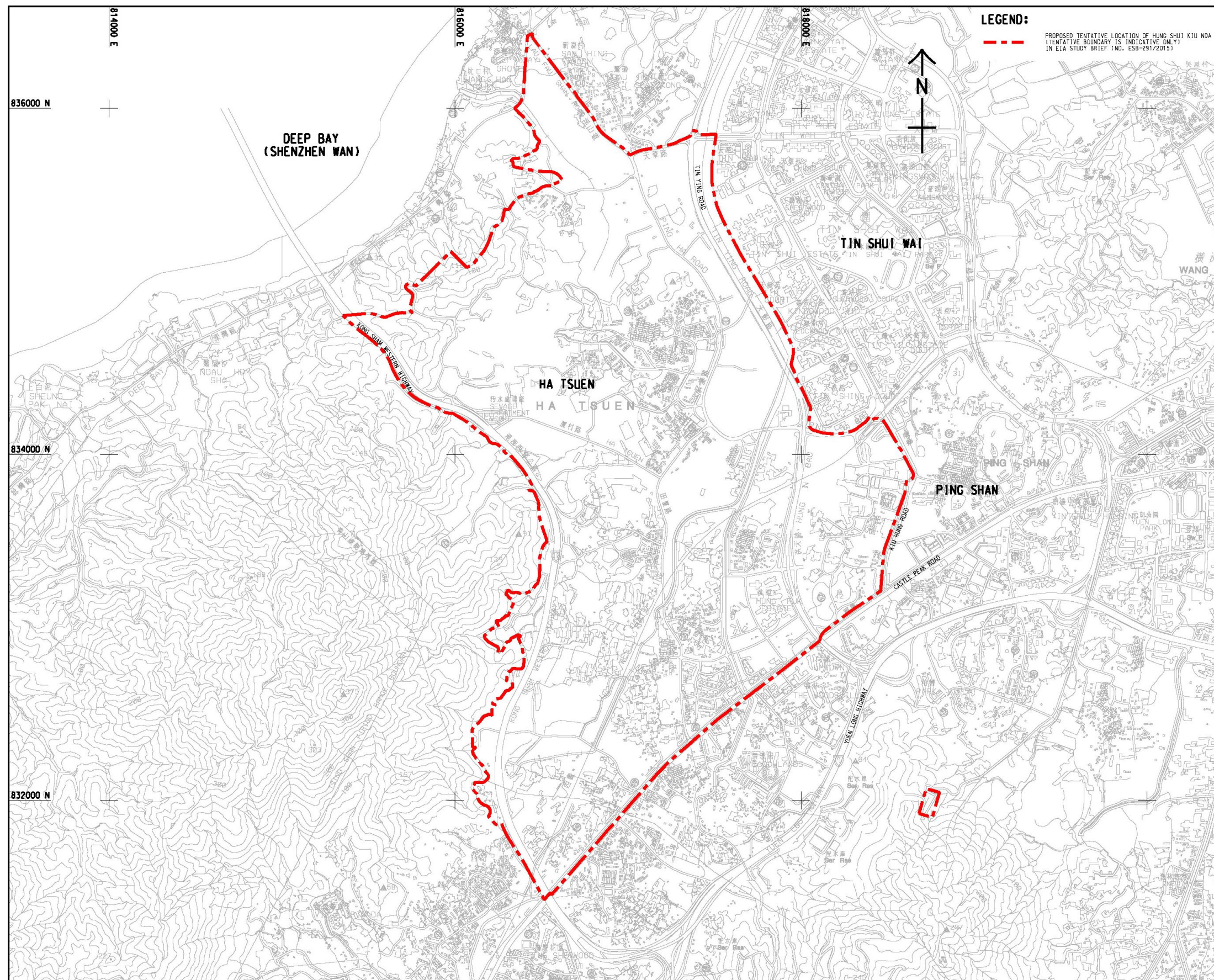
PUBLIC CONSULTATION

27. The Applicant has made the EIA report, EM&A Manual and Executive Summary available for public inspection under the EIAO from 5 September 2016 to 4 October 2016. During the inspection period, a total of 15 public comments were received by EPD. The main environmental concerns raised by the public are related to ecology, landscape, air quality, noise and waste management issues arising from the Project. These main concerns would be summarised in a gist to be provided separately.

October 2016

Environmental Assessment Division

Environmental Protection Department

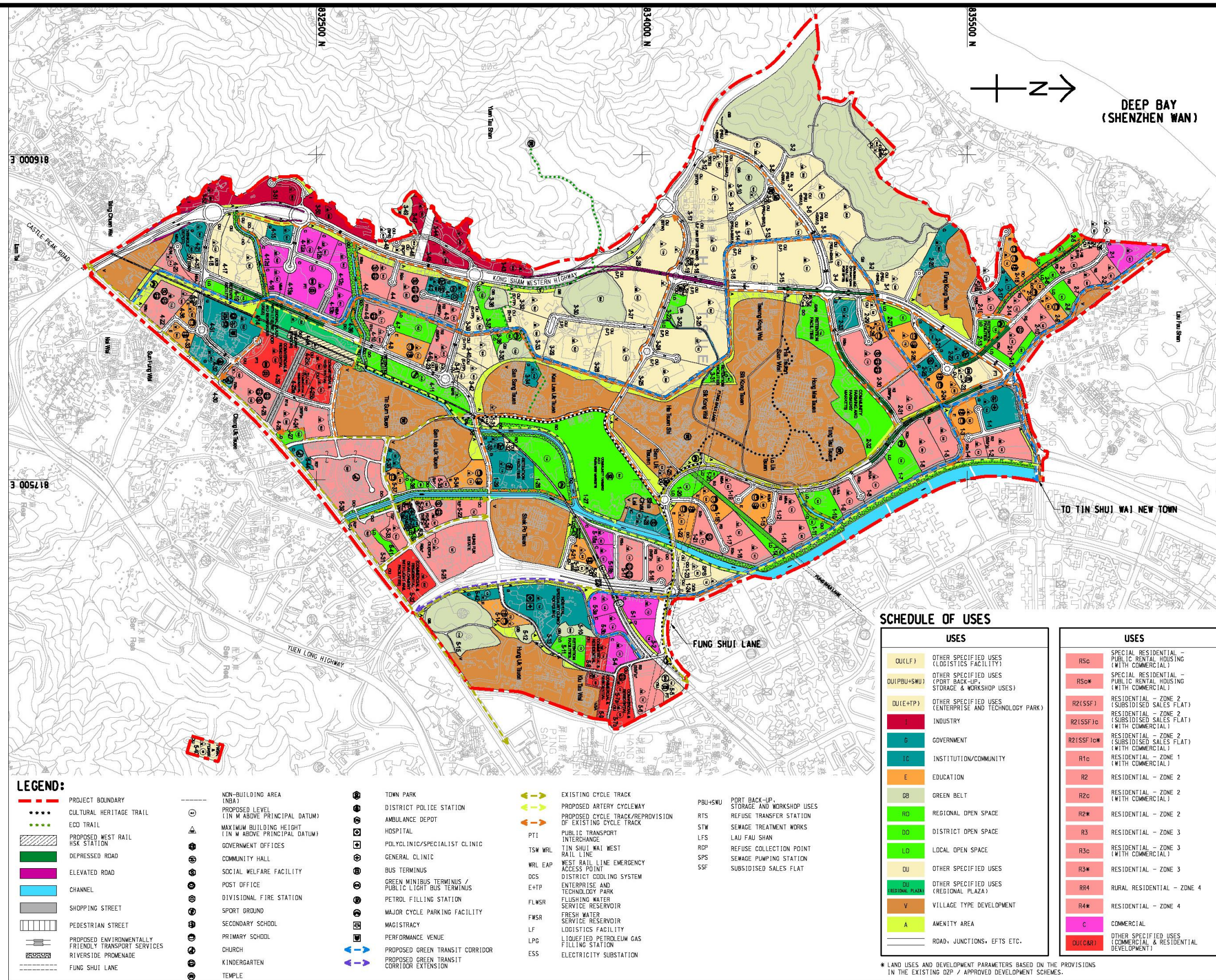


Project Title: Hung Shui Kiu New Development Area

Figure 1: Project Location

Application No.: EIA-248/2016



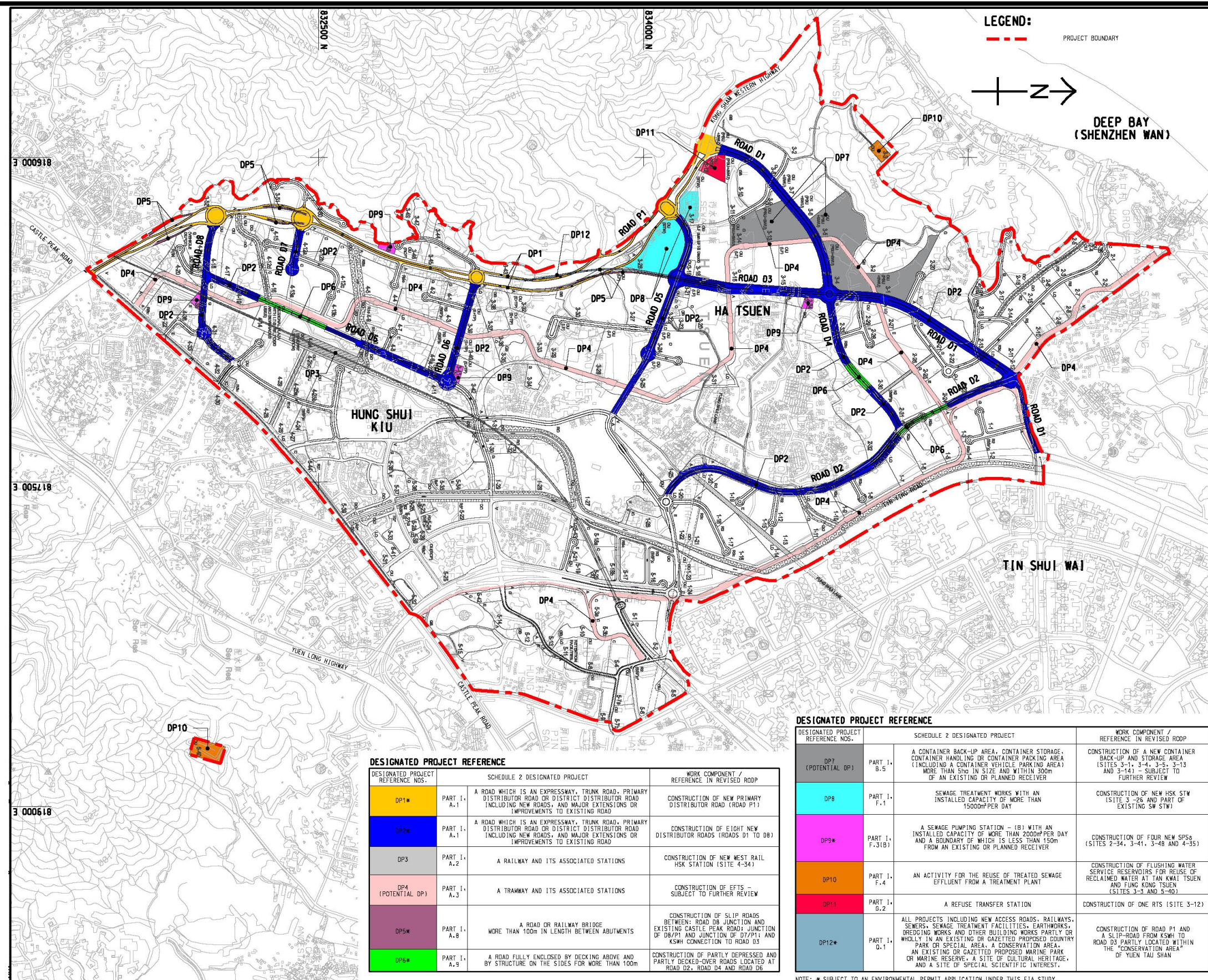


Project Title: Hung Shui Kiu New Development Area

Figure 2: Revised Recommended Outline Development Plan

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Project Title: Hung Shui Kiu New Development Area

Figure 3: Location of Designated Projects identified in the EIA Report

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