1 INTRODUCTION

1.1 BACKGROUND

1.1.1 The title of the Project is “Improvement to So Kwun Po Interchange” (hereafter referred to as the Project).

1.1.2 The So Kwun Po Interchange (SKPIC) is one of the three major interchanges in the North District connecting the northern and southern parts of Fanling and Sheung Shui. The SKPIC has been operating close to its capacity. The SKPIC was allegedly one of the causes of several numbers of serious traffic gridlocks in the North District in the past few years.

1.1.3 Media reports had also suggested that the series of traffic incidents that occurred in January 2016, which paralysed and stranded the District’s external traffic links, was partly due to the traffic gridlock and overcapacity at the Kai Leng Roundabout and other road junctions in the District. The traffic chaos that appeared in these incidents also highlighted the fragility and deficiencies of existing transport infrastructure at some locations in the District where upgrading and/or improvement works were necessary to rectify the situation. The North District Council (NDC) had made requests to the Government for its improvements on various occasions. With the anticipated population increase in the North District following the completion of public and private housing developments which are under planning, the traffic condition at the SKPIC is expected to deteriorate further.

1.1.4 In order to meet anticipated traffic needs and to address public demands, a new road link and junction modification works will be carried out to improve the existing SKPIC.

1.1.5 To address the above congestion problem, the Traffic and Transport Committee of NDC has earlier proposed a new North to South Link in an attempt to mitigate the current traffic situation.

1.1.6 WSP (Asia) Ltd. (WSP) is commissioned by the Civil Engineering and Development Department (CEDD) of the Hong Kong Government Special Administrative Region to undertake this Consultancy of “Improvement to So Kwun Po Interchange – Investigation, Design and Construction”, with Agreement No. CE1/2021 (HY). The commencement date of the Consultancy is 20 September 2021.

1.2 PURPOSE, OBJECTIVE AND BENEFITS OF THE PROJECT

1.2.1 The purpose of the Project is to construct a new carriageway linking San Wan Road and Pak Wo Road directly. The proposal will not only improve the traffic capacity of Kai Leng Roundabout but can also serve as the alternative route for the case of traffic incidents at SKPIC, in order to maintain smooth traffic for accessing the northern and southern side of Fanling Highway during contingency.

1.2.2 The objective of this Project is to improve SKPIC by:

- Provision of a new direct road link, referred to as So Kwun Po Link (SKPL), comprising an at-grade road, an underpass, a single 2-lane flyover (main ramp) and a single 1-lane flyover (side ramp) connecting San Wan Road on the north side of SKPL and Pak Wo Road on the south side of SKPIC;
- Realignment of So Kwun Po Road between SKPIC and Pak Wo Road;
- Junction modification works at San Wan Road and Pak Wo Road;
- Reprovisioning of the affected footpaths, cycle tracks and staircases; and

- Associated roadworks, geotechnical works, landscape works, drainage works, utility works, traffic aids installation, traffic signal modification works, environmental mitigation measures, street lighting and street furniture, and other ancillary works.

1.2.3 The scope of the Project mainly comprises:

(a) construction of north-south link road of about 700m connecting Pak Wo Road and San Wan Road;

(b) reconstruction of sections of So Kwun Po Road near North District Park;

(c) widening of the north-western slip road from So Kwun Po Road to San Wan Road;

(d) reconstruction/realignment of So Kwun Po Road between Kai Leng Roundabout and Pak Wo Road;

(e) improvement works at the junction of San Wan Road and the proposed north-south link road;

(f) improvement works at the junction of Pak Wo Road and So Kwun Po Road;

(g) modification of the existing pedestrian subway connecting North District Park underneath So Kwun Po Road;

(h) construction of a lift and a staircase linking San Wan Road and elevated So Kwun Po Road;

(i) construction of a pedestrian subway across So Kwun Po Road near Pak Wo Road;

(j) re-provision of the skating rink within North District Park affected by the road works; and

(k) associated works including geotechnical, landscape, drainage, water, electrical and mechanical, environmental mitigations, street lighting and utilities works, as well as installation of street furniture and traffic aids.

1.3 DESIGNATED PROJECTS

1.3.1 A Project Profile (No. PP-616/2021) was submitted to the EPD on 6 January 2021 for application for an Environmental Impact Assessment (EIA) Study Brief under Section 5(1)(a) of the Environmental Impact Assessment Ordinance (EIAO) and the EIA Study Brief No. ESB-338/2021 for the Project was issued on 2 February 2021 under the EIAO.

1.3.2 The Project comprises the following which are classified as a Designated Project (DP) under Part I, Schedule 2 of the updated EIAO which is implemented on 30 June 2023:

Item A.1 ***"A carriageway for motor vehicles that is an expressway, trunk road, primary distributor road or district distributor road."***

1.3.3 The proposed roads listed below (See **Figure 1.1**) under the Project comprise primary distributor (PD) roads and district distributor (DD) roads, which constitute a DP item under Item A.1 of Part I, Schedule 2 of EIAO.

- Proposed roads classified as PD:
  - A single 2-lane flyover (main ramp) and a single 1-lane flyover (side ramp) across Kai Leng Roundabout; and
  - A single 2-lane underpass underneath So Kwun Po Road.
- Proposed roads classified as DD:
  - An at-grade road connecting San Wan Road and the proposed flyover; and
  - An at-grade road connecting the proposed flyover and Pak Wo Road.

1.4 PURPOSE OF THE EIA STUDY

1.4.1 The purpose of the EIA study is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project and the associated works that take place concurrently. This information will contribute to decisions on:

- the overall acceptability of any adverse environmental consequences that are likely to arise as a result of the Project;
- the conditions and requirements for the detailed design, construction and operation of the Project to mitigate against adverse environmental consequences wherever practicable; and
- the acceptability of residual impacts after the proposed mitigation measures are implemented.

1.5 OBJECTIVES OF THE EIA STUDY

1.5.1 The objectives of the EIA study as defined in Section 2 of the EIA Study Brief are as follows:

(i) to describe the Project and associated works together with the requirements and environmental benefits for carrying out the proposed Project;

(ii) to identify and describe the elements of the community and environment likely to be affected by the Project and/or likely to cause adverse impacts to the Project, including both the natural and man-made environment and the associated environmental constraints;

(iii) to identify and quantify emission sources and determine the significance of impacts on sensitive receivers and potential affected uses;

(iv) to identify and quantify potential waste management issues and impacts arising as a result of the construction activities of the Project;

(v) to identify and quantify contaminated land within any Project Area for development works, and to propose measures to avoid disposal in the first instance;

(vi) to identify, assess and quantify any potential ecological impacts arising from the construction and operation of the Project, including potential losses or damage to flora, fauna and natural habitats; and to propose measures to mitigate these impacts;

(vii) to identify any potential landscape and visual impacts and to propose measures to mitigate these impacts;

(viii) to identify any adverse impacts on cultural heritage and to propose measures to mitigate these impacts;

(ix) to propose the provision of infrastructure or mitigation measures so as to minimise pollution, environmental disturbance and nuisance during construction and operation of the Project;

(x) to investigate the feasibility, practicability, effectiveness and implications of the proposed mitigation measures;

(xi) to identify, predict and evaluate the residual (i.e. after practicable mitigation) environmental impacts and the cumulative effects expected to arise during the construction and operation phases of the Project in relation to the sensitive receivers and potential affected uses;

(xii) to identify, assess and specify methods, measures and standards, to be included in the detailed design, construction and operation of the Project which are necessary to

mitigate these environmental impacts and cumulative effects and reduce them to acceptable levels;

(xiii) to investigate the extent of secondary environmental impacts that may arise from the proposed mitigation measures and to identify constraints associated with the mitigation measures recommended in the EIA study, as well as provision of any secondary modification;

(xiv) to design and specify the environmental monitoring and audit requirements to ensure the implementation and the effectiveness of the environmental protection and pollution control measures adopted; and

(xv) to identify any additional studies necessary to implement the mitigation measures of monitoring and proposals recommended in the EIA report.

1.6 STRUCTURE OF THE EIA REPORT

1.6.1 The background of the Project, description of the Project, objectives and scope of the EIA study are introduced in this section. Details of considerations of alternative options are provided in Section 2. Sections 3 to 10 detail the relevant legislation, environmental conditions, assessment criteria, methodology and results and recommended mitigation measures of the technical assessments.

1.6.2 Sections 3 to 10 are outlined as follows:

- Section 3: Air Quality Impact;
- Section 4: Noise Impact;
- Section 5: Water Quality Impact;
- Section 6: Waste Management Implications;
- Section 7: Land Contamination;
- Section 8: Ecological Impact;
- Section 9: Landscape and Visual Impact; and
- Section 10: Impact on Cultural Heritage.

1.6.3 An outline of the requirements for the Environmental Monitoring and Audit (EM&A) is presented in Section 11. The EM&A programme is presented in detail in a separate EM&A Manual. A summary of environmental outcomes is provided in Section 12 and a conclusion of the whole assessment is given in Section 13.

1.6.4 An Executive Summary has been prepared as a separate document in both Chinese and English, which contains summaries of the key findings, recommendations and conclusions of the EIA Report.