



1 Introduction

1.1 Background

The Environmental Protection Department (EPD) appointed Binnies Hong Kong Limited (**Binnies**) on 28 December 2022 to undertake the consultancy “Agreement No. CE 26/2022 (EP) - Development of Integrated Waste Management Facilities Phase 2 – Investigation, Design and Construction”. The consultancy scope includes the carrying out of an Environmental Impact Assessment (EIA) study for Development of Integrated Waste Management Facilities Phase 2 (**the Project** or **I-PARK2**).

1.2 Purposes and Objectives of the Project

The Project comprises the construction and operation of I-PARK2 which will have a design treatment capacity sufficient to handle around 6 000 tonnes per day (tpd) of Municipal Solid Waste (MSW).

The Project will adopt state-of-the-art incineration technology to substantially reduce the bulk size of waste. The energy from waste incineration will be recovered for electricity generation. Apart from meeting the electricity demand of the facility, the surplus electricity from the Project will be exported to the public power grid, thereby boosting up the portion of electricity generation from waste-to-energy (WtE) source. Moreover, appropriate community amenities will be integrated into the Project for public enjoyment.

1.3 Environmental Impact Assessment Ordinance Requirements

In accordance with the Environmental Impact Assessment Ordinance (EIAO) (Amendment of Schedule 2 and 3) Order 2023, the Project consists of the following Designated Projects (DPs) under Part I, Schedule 2 of the EIAO:

- Item G.3 - An incinerator with an installed capacity of more than 500 tpd.
- Item G.4(a) - A waste disposal facility (excluding any refuse collection point) with an installed capacity of more than 500 tpd for the disposal of refuse.
- Item G.6 - A waste disposal facility for pulverized fuel ash, furnace bottom ash or gypsum.



The Project will not involve any electricity power plant running on fossil fuel with a production capacity of more than 100 megawatts and is not the type of DP specified under Item D.1, Part I, Schedule 2 of the EIAO. The total capacity of wastewater treatment would be about 3,000 m³/day. The treated sewage effluent generated from the Project will only be reused within the I-PARK2 site or discharged after meeting relevant standards and will not be used by general public. As such, the Project would not comprise element specified under Items F.1, F.2 or F.4, Part I, Schedule 2 of the EIAO. According to the preliminary design, the storage of dangerous goods (DGs) would be less than 500 tonnes and the Project would not comprise element specified under Item K.13, Part I, Schedule 2 of the EIAO. The reclamation works of the Project (including associated dredging works) is less than 5 hectares (ha) in size. There is no reclamation works / dredging operation that are of more than 1 ha in size and less than 500m from the nearest boundary of an existing or planned specified area or 100m from the nearest boundary of an existing residential area, nor dredging operation with a dredging volume of more than 500,000 m³ under the Project. As such, the Project would not comprise element specified under Item C.1, C.2 or C.12, Part I, Schedule 2 of the EIAO. The Project is located at the Tsang Tsui Middle Ash Lagoon (TTMAL) (for the proposed waste-to-energy incinerator) and West Ash Lagoon (WAL) (for proposed seawater outfall and associated pipelines). Decommissioning of the TTMAL and WAL would be subject to the requirements under separate Environmental Permit(s) (EP(s)). Thus, this Project will not involve decommissioning activities specified under Part II, Schedule 2 of the EIAO.

The construction and operation of this Project requires an EP from the EPD under the EIAO. An application for an EIA Study Brief (Application No. ESB-365/2024) for the Project was submitted under the EIAO on 7 March 2024. An EIA Study Brief (No. ESB-365/2024) was subsequently issued on 18 April 2024 for carrying out the EIA study.

1.4 Purpose of the EIA study

The purpose of this EIA study is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the Project and related activities that take place concurrently. This information will contribute to decisions by the Director of Environmental Protection on:

- (i) the overall acceptability of any adverse environmental consequences that is to arise as a result of the Project and the associated activities of the Project.
- (ii) the conditions and requirements for the detailed design, construction and operation of the Project to mitigate against adverse environmental consequences.
- (iii) the acceptability of residual impacts after the proposed mitigation measures are implemented.



1.5 Objectives of the EIA Study

The objectives of the EIA study 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 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, and to propose measures to mitigate these impacts;
- (iv) to identify and quantify any potential impacts from point and non-point pollution sources on the identified water systems and sensitive receivers and to propose measures to mitigate these impacts;
- (v) to identify and quantify waste management requirements and land contamination prevention requirements, and to propose measures to mitigate or prevent impacts;
- (vi) to identify and quantify any potential losses or damage to flora, fauna and natural habitats, and to propose measures to mitigate these impacts;
- (vii) to identify and quantify any potential fisheries impacts and to propose measures to mitigate these impacts;
- (viii) to identify any potential visual impact and to propose measures to mitigate the impact;
- (ix) to identify and quantify any health impacts and to propose measures to mitigate these impacts;
- (x) to identify any potential risks of landfill gas and to propose measures to mitigate these risks;
- (xi) to propose the provision of mitigation measures to minimise pollution, environmental disturbance and nuisance during construction and operation of the Project;
- (xii) to investigate the feasibility, practicability, effectiveness and implications of the proposed mitigation measures;
- (xiii) to identify, predict and evaluate the residual environmental impacts (i.e. after practicable mitigation) and the cumulative effects expected to arise during



- construction and operational phases of the Project in relation to the sensitive receivers and potential affected uses;
- (xiv) 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 any risks, environmental impacts and cumulative effects and reduce them to acceptable levels;
 - (xv) to investigate the extent of the 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 the provision of any necessary modification;
 - (xvi) to design and specify the environmental monitoring and audit requirements to ensure the effective implementation of the recommended environmental protection and pollution control measures; and
 - (xvii) to develop contingency plan for the operation of the Project, covering any potential accidental event(s).

1.6 Structure of the Report

The remainder of this EIA Report are organized as follows:

- Section 2 describes the Project including the alternatives considered.
- Section 3 presents the air quality impact assessment.
- Section 4 presents the noise impact assessment.
- Section 5 presents the water quality impact assessment.
- Section 6 presents the waste management implications.
- Section 7 presents the ecological impact assessment (for both terrestrial and marine).
- Section 8 presents the fisheries impact assessment.
- Section 9 presents the visual impact assessment.
- Section 10 presents the health impact assessment.
- Section 11 presents the landfill gas hazard assessment.
- Section 12 describes the requirements for environmental monitoring and audit.



- Section 13 summarizes the environmental outcomes and gives the conclusions of this EIA Study.