

Architectural Services Department
**The Development of AFCD
Animal Management and Animal
Welfare Building Complex in Kai
Tak Development**
Final Audit Report

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 271753

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ARUP

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1 INTRODUCTION

1.1 Background

The Environmental Permit (EP) (i.e. EP-563/2018) for Development of AFCD Animal Management and Animal Welfare Building Complex in Kai Tak Development (hereinafter referred to as the Project) was issued on 10th August 2018. After the issuance of the EP, AFCD proposed refinements to the design of the Project which are referenced in the Pre-Construction Audit Report.

In accordance with Clause 2.1 of the EP, the Permit Holder shall, no later than 3 months before the commencement of construction of the Project or otherwise, deposit with the Director of Environmental Protection (DEP) of a Pre-construction Audit Report to confirm the design measures stipulated in the Project Profile (PP) (i.e. PP-569/2018), including the location of the entrance and exits, the open-air exercise areas for animals, and the air exhausts of the ventilation system of the animal keeping areas have been fully incorporated into the relevant design drawings. The said Pre-construction Audit Report was submitted to EPD and approved on 19 Mar 2020.

Arup was commissioned by ArchSD to provide Independent Environmental Checker services. The scope of the project is as follows:

- (1) An animal management and animal welfare building complex, which mainly covers a quarantine centre, a veterinary testing laboratory and offices.

Figure 1 shows the Project location plan in the environmental permit EP-563/2018. **Figure 2** shows the management structure for environmental works of the Project.

Figure 1 Project location plan

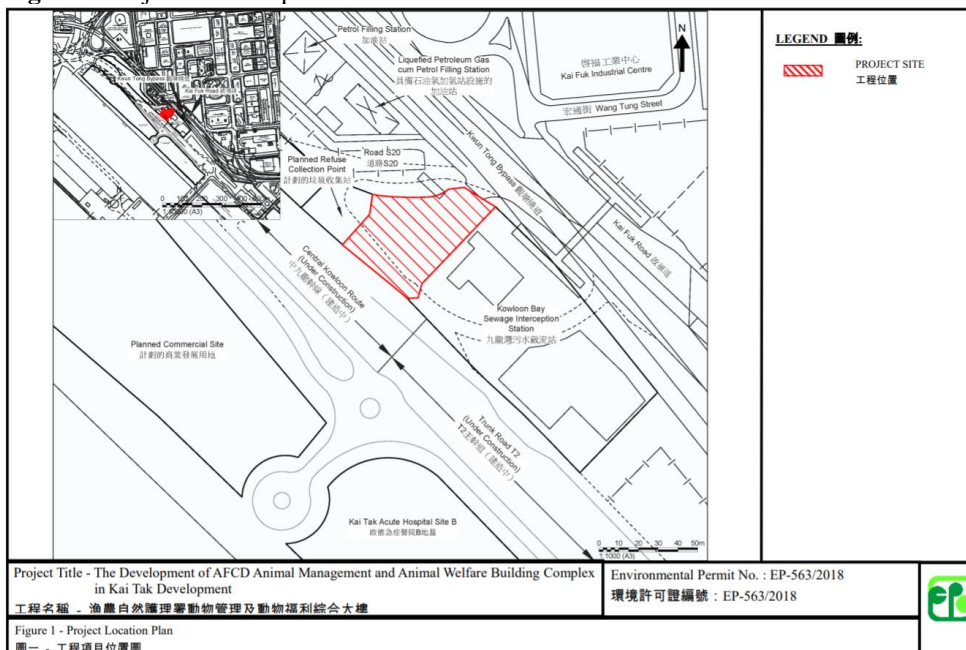
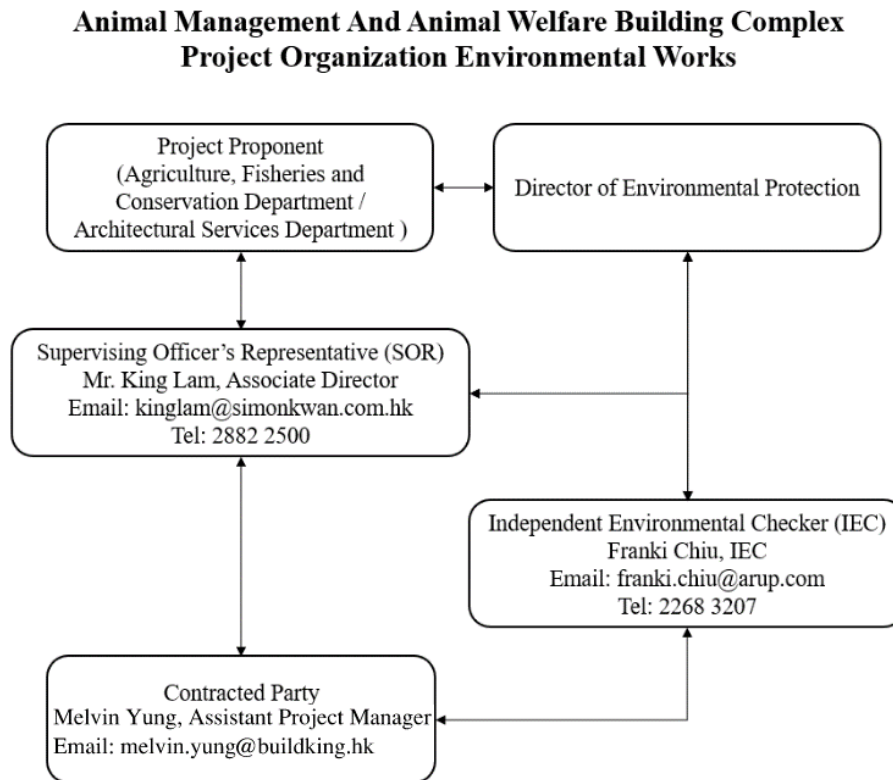


Figure 2: Management structure

1.2 Scope of the Assignment

The objective of this Project is to verify that the construction phase environmental mitigation measures stipulated in the Project Profile (Register No.: PP-569/2018) are fully implemented, and to provide all professional services of necessary technical support, professional advices, studies, coordination, verification of Contractor's submissions, and preparation of submission to EPD, etc. to ensure compliance with the EP in accordance with the PP and the study brief as follows:

- (a) Coordinate with Simon Kwan & Associates Ltd (SKA), Allied Environmental Consultants Limited (AEC) and the Contractor to check and ensure compliance with the PP and EP;
- (b) Coordinate with SKA, AEC and the Contractor and prepare all the submissions to EPD as required under EP-563/2018;
- (c) Submit Audit Reports to EPD as required under EP-563/2018;
- (d) Fulfil all duties as IEC as required by EPD under the EIAO, including, but not limited to, the verification of all relevant reports prepared by the Contractor in the course of construction; and
- (e) Attend regular & ad-hoc project meetings and environmental meetings when required.

2 Concise Overview of Assignment Period

The construction activities carried out by the Contractor summarized as following:

Reporting Months	Construction Activities
October 2020	<ul style="list-style-type: none"> • Site mobilisation • Hoarding erection • Set up site office • Wheel washing facilities installation
November 2020	<ul style="list-style-type: none"> • Hoarding erection & painting • Set up site office • Removal of existing slab • Wheel washing facilities installation • Predrilling at PD1,3,4,5 • Installation of piling rig
December 2020	<ul style="list-style-type: none"> • Removal of existing slab • Piling works
January 2021	<ul style="list-style-type: none"> • Piling works
February 2021	<ul style="list-style-type: none"> • Pre-bored and piling works • Removed of partial hoarding and erected of water barrier
March 2021	<ul style="list-style-type: none"> • Pre-bored and piling works • Removal of partial hoarding and erection of water barrier
April 2021	<ul style="list-style-type: none"> • Pre-bored and piling works • Removal of partial hoarding and erection of water barrier
May 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
June 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
July 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
August 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
September 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
October 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
November 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
December 2021	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
January 2022	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
February 2022	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
March 2022	<ul style="list-style-type: none"> • Piling works • Grout Curtain and Pipe Pile
April 2022	<ul style="list-style-type: none"> • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works
May 2022	<ul style="list-style-type: none"> • Excavation and Lateral Supporting (ELS) Works • Concreting Works

	<ul style="list-style-type: none"> • Rebar Fixing Works • Formwork Erection Works
June 2022	<ul style="list-style-type: none"> • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works
July 2022	<ul style="list-style-type: none"> • Setting Out Works • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works
August 2022	<ul style="list-style-type: none"> • Setting Out Works • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works
September 2022	<ul style="list-style-type: none"> • Setting Out Works • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works
October 2022	<ul style="list-style-type: none"> • Setting Out Works • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works
November 2022	<ul style="list-style-type: none"> • Setting Out Works • Excavation and Lateral Supporting (ELS) Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works
December 2022	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works

	<ul style="list-style-type: none"> • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works
January 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Block Wall Installation Works
February 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works
March 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works

	<ul style="list-style-type: none"> • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works
April 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works • Refuse Chute Erection Works
May 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works • Refuse Chute Erection Works
June 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works • Refuse Chute Erection Works

<p>July 2023</p>	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works • Refuse Chute Erection Works
<p>August 2023</p>	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Hoarding Works • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Placing Chute Boom Erection Works • Refuse Chute Erection Works
<p>September 2023</p>	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Lift Installation • Plastering Works • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Tower Crane Removal Works • Roof Crane Installation Works
<p>October 2023</p>	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works

	<ul style="list-style-type: none"> • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Plastering Works • Cladding Installation • Façade Planter Tray Installation • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Lift Installation • Material Hoist Removal Works • Roof Crane Removal Works
November 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Plastering Works • Cladding Installation • Façade Planter Tray Installation • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Lift Installation • Fitting – Out Works • Excavation
December 2023	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Plastering Works • Cladding Installation • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Fitting – Out Works • Excavation
January 2024	<ul style="list-style-type: none"> • Setting Out Works • Plumbing Works • Gas Installation Works • Miscellaneous Works

	<ul style="list-style-type: none"> • Scaffolding Works • Plastering Works • Cladding Installation • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Fitting – Out Works • Excavation
February 2024	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Plastering Works • Cladding Installation • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Fitting – Out Works • Excavation • Façade Aluminium Fins Installation
March 2024	<ul style="list-style-type: none"> • Setting Out Works • Concreting Works • Rebar Fixing Works • Formwork Erection Works • Plumbing Works • Gas Installation Works • Miscellaneous Works • Scaffolding Works • Plastering Works • Cladding Installation • Internal Finishers Works • Installation of Glass Wall Works • E&M Installation Works • Painting Works • Fitting – Out Works • Excavation • Façade Aluminium Fins Installation • Landscape Works • Metal Fence & Gate Installation

2.1 Construction phase environmental mitigation implementation status

The environmental mitigating measures to be implemented according to the approved Project Profile during the construction phase is subject to the site activities programme. The status is summarised in **Table 2.1**

Table 2.1: Implementation status of construction phase environmental protection measures

Mitigation Measures		Status
Air	Demolition activities should be sprayed with water or dust suppression chemical immediately prior to, during and immediately after the activities to maintain the entire surface wet.	Implemented
	Dusty excavated material should be entirely covered by impervious sheeting or sprayed with water to maintain the entire surface wet.	Implemented
	Dusty excavated material should be removed, backfilled or reinstated where practicable within 24 hours of the excavation or unloading.	Implemented
	Hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing during any open excavation and reinstatement works. Good practice should also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period;	Implemented
	Dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads or streets.	Implemented
	Dump truck loaded with dusty material should be covered entirely by impervious sheeting	Implemented
	Vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point.	Implemented
	The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore.	Implemented
	Road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials.	Implemented
	Effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building; a canopy should be provided from the first-floor level up to the highest level of the scaffolding as an alternative.	Implemented
	Skip hoist for material transport should be enclosed entirely by impervious sheeting.	Implemented
Noise	Use of Powered Mechanical Equipment (PME), parallel operation and unnecessary idling in the open areas of the Project site should be limited to a minimum.	Implemented
	Movable and temporary noise barrier and enclosure should be provided for any operating PME.	Implemented

Mitigation Measures		Status
	Noisy construction process should be scheduled outside school examination periods.	Implemented during school examination periods.
	Use of quiet plant associated with the construction works as prescribed in British Standard “Noise Control on Construction and Open Sites, BS5228: Part 1: 2009”	Implemented
	Full compliance of “Recommended Pollution Control Clauses” under the Construction Contract.	Implemented
Water	Full compliance of Pro PECC Note 1/94 “Construction Site Drainage”	Implemented
	Surface run-off and sewage effluent should be discharged into sewerage system	Implemented in surface run-off, chemical toilets are adopted.
Waste Management	General housekeeping should be practiced regularly.	Implemented
	C&D materials should be reused on-site	Implemented
	Trip ticket system should be implemented and available for checking in accordance with the DEVB TCW No. 6/2010 “Trip Ticket System for Disposal of Construction and Demolition Material.”	Implemented
	Inert C&D waste and non-inert C&D waste should be properly sorted and disposed of at appropriate facilities in accordance with the Waste Disposal (Charges for Disposal of Construction Waste Regulation (Cap. 354N).	Implemented
	The Contractor is required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the “Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes”	Implemented
	Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately.	Implemented
	Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc.	Implemented
	Chemical waste should be collected by the licensed chemical waste collector for transportation and disposal at the approved Chemical Waste Treatment Centre or other licensed treatment facilities, according to the Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354C).	N/A (No chemical waste produced during construction.)
	General refuse should be temporarily stored in enclosed bins or compaction units and removed from the site on a regular basis.	Implemented
	Licensed waste collectors should be employed to remove refuse from the site for disposal.	N/A (Contractor will conduct general refuse removal.)
Life hazard	A dedicated access route should be used for construction vehicles.	Implemented
	Any lifting operation over the site boundary should be strictly minimised.	Implemented
	Any lifting (if any) should be assessed, controlled and closely supervised by Contractors and qualified operation staff.	Implemented

Mitigation Measures		Status
	Ignition sources should be confined within the site.	Implemented
	Work permit system for hot work activities within the Project site should be specified in the contractor's method statement	Implemented
Landscape	Temporary stockpile of excavated and building materials should be covered.	Implemented
	Hoardings with outlook matching with surrounding landscape should be erected.	Implemented
	Any night-time glaring should be minimised.	Implemented

2.2 Summary of valid Environmental Licenses, Permits and Notifications

Summary of valid licenses, permits and/or notifications on environmental protection for the Project as extracted from the Contractor's progress report for this reporting month is given in **Table 2.2**.

Table 2.2: Summary of valid licenses, permits and/or notifications on environmental protection

License / Notification	Ref. / Account No. / Waste Producer No.	Received Date	Expiry Date
Notification Pursuant to Section 3(1) of the Air Pollution Control (Construction Dust) Regulation	Ref. No. 459968	14 Sep 2020	Construction Period
Wastewater Discharge License	WT00037298-2020	28 Jan 2021	31 Jan 2026
Construction Waste Disposal Charging Scheme	7038488	28 Sep 2020	Construction Period
Chemical Waste Producer License	Waste Producer No. 8334-286-B2491-07	23 Oct 2020	Construction Period
Construction Noise Permit for Percussive Piling	PP – RE0034-20	28 Sep 2020	13 Apr 2021
	PP – RE0005-21	05 Mar 2021	13 Oct 2021
	PP – RE0030-21	23 Sep 2021	14 Apr 2022
Construction Noise Permit for General Construction Work	GW – RE0835-20	05 Oct 2020	20 Mar 2021
	GW – RE0144-21	19 Feb 2021	20 Sep 2021
	GW – RE0843-21	06 Sep 2021	20 Mar 2022
	GW – RE0181-22	04 Mar 2021	20 Sep 2022
	GW – RE0835-22	19 Aug 2022	20 Mar 2023
	GW – RE1106-22	11 Oct 2022	13 Apr 2023
	GW – RE0193-23	03 Mar 2023	07 Sep 2023
	GW – RE1045-23	01 Sep 2023	07 Mar 2024
	GW – RE0407-24	03 Apr 2024	07 Sep 2024

2.3 Environmental Complaint, Summons and Prosecution

Summary of environmental complaint, summons and prosecution for the Project as extracted from the Contractor's progress report for this reporting month is given in **Table 2.3**.

Table 2.3 Summary of environmental complaint, summons and prosecution

Description	Cumulative total
Public Complaint on environmental issues: (Including light nuisance complaint)	0
Offences spotted by EPD during inspection	0
Abatement Notices issued by EPD	0
Notification referred by EPD	0

3 Major Accomplishment

3.1 Summary of Work Done

Upon commencement of the Assignment, accumulated number of IEC monthly audit report is summarised in **Table 3.3**.

Table 3.3 Summary of work done

Work	Number
IEC Pre-construction Audit Report	1
IEC Monthly Audit Report	42
IEC Final Audit Report	1

3.2 IEC Site Audit

The IEC site audits were conducted on Oct 2020 to Mar 2024 with the presence of Contractor and IEC representative.

Letter of Substantial Completion of the Works was issued on 21st Mar 2024, refer to Appendix 1.

Appendix 1

Letter of Substantial Completion of the Works

Our Ref: J511 – 1491

Your Ref:

28 March 2024

Build King Construction Limited
Units 601-605A, 6/F
Tower B, Manulife Financial Centre
223 Wai Yip Street
Kwun Tong, Kowloon, Hong Kong

To be collected

Attn: Mr. Joseph Tam / Mr. Melvin Yung

**Re : Contract No. SS J502
Construction of Animal Management & Animal Welfare Building Complex in
Kai Tak Development (Programme No. 187GK)
Certificate of Completion for the Works**

In accordance with Clause 53 of the General Conditions of Contract, I hereby certify that, in my opinion, the Works were substantially completed on 29 February 2024.

The Maintenance Period for the above stated part of the Works shall commence on 1 March 2024 and will expire on 28 February 2025.

Yours faithfully,
For and on behalf of
SIMON KWAN & ASSOCIATES LTD.
The Supervising Officer for the Contract



King Lam
Deputy Director
Encl.

c.c. ArchSD/PD/3	- Mr. Andrew Fung]
ArchSD/CPM	- Mr. Matthew Yuet]
ArchSD/PM	- Ms. Elsa Ching / Mr. Sam Yau / Ms. Amy Tan]
Audit Commission - D of Audit	- Prof. Nelson Lam, JP] ncylam@aud.gov.hk
DEVB/CTA(F)	- Mr. Lewis So] fs@devb.gov.hk
ArchSD/LQS	- Mr. Oscar Li]
ArchSD/SQS	- Ms. Rimmy Chan] chanmyr@archsd.gov.hk
ArchSD/CQS	- Ms. Inca Law] lawsfi@archsd.gov.hk
ArchSD/LSE	- Mr. Phillip Hung]
ArchSD/LBSE	- Mr. Clement Wong / Ms. Tody Ho]
ArchSD/SPSM	- Mr. Donald Ngai] ngaick@archsd.gov.hk
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Arcadis	- Mr. C.K. Sing]
WSP/PSE	- Mr. George Chan]
WSP/PBSE	- Mr. K. F. Tsui]
ADI	- Ms. Alison Lee]
AEC	- Ms. Grace Kwok]
PCOW, ArchSD	- Ms. W.N. Cheung]
PBSI, ArchSD	- Mr. K.K. Tam]
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