

Your ref. -
Our ref 5207869/18.30/OC146/AL/DL/SW/IW/JC/fl
Date 20 May 2022

By Post and Email

Environmental Protection Department
Environmental Assessment Division
Strategic Assessment Group
Sheung Shui, Fanling, Tai Po Section (6)
27th floor, Southorn Centre,
130 Hennessy Road,
Wan Chai, Hong Kong

Attn: Ms. LAU Tai, Trista
Env Protection Offr (Strategic Assessment) 61

Dear Madam,

Agreement No. CE 32/2021 (CE)
Improvement Works at Lai Chi Wo Pier and Tung Ping Chau Public Pier
- Design and Construction
Environmental Permit No. EP-586/2021
Submission of Construction Works Schedule and Location Plan (Rev. 1)

Pursuant to Conditions 2.10 of the EP No. EP-586/2021, we hereby submit the Construction Works Schedule and Location Plan (Rev. 1) for the captioned Project at Lai Chi Wo Pier.

The aforesaid submission has been certified by the Environmental Team (ET) and verified by the Independent Environmental Checker (IEC). The ET certification and the IEC verification letters have been enclosed for your record.

Should you have any queries regarding the above, please feel free to contact our Mr. Arthur Lo (Email: arthur.lo2@atkinsglobal.com) at 2972 1360 or Mr. Joe Chiu (Email: Joe.Chiu@atkinsglobal.com) at 2972 1119.

Yours faithfully,
For and on behalf of
Atkins China Ltd



Dickson LAW
Project Manager

cc CEDD/CEO Mr. CHIK Kan To (Project Coordinator /Projects 3 A)

Response required No.
Due date N/A
Attachment (1) Construction Works Schedule and Location Plan (Rev. 1) (3 hard copies)
(2) ET Certification and IEC Verification Letters

Our ref 5207869/18.30/OC146/AL/DL/SW/IW/JC/fl
Title Submission of Construction Works Schedule and Location Plan (Rev. 1)
Date 19 May 2022

Attachment 1

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Construction Works Schedule and Location Plan (Rev. 1)



Agreement No. CE 32/2021 (CE) Improvement Works at Lai Chi Wo Pier and Tung Ping Chau Public Pier -Design and Construction

Construction Works Schedule and Location Plan for
Lai Chi Wo Pier (Site Investigation) (Rev. 01)
(5207869-OR014A-01a)

30 March 2022

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Appendix A	Programme for Site Investigation Works for LCW Pier
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Not Used

1. Introduction

1.1 Background

1.1.1 Hong Kong is an international metropolis and comprises many natural scenic spots, rare geological features, attractions with traditional culture and heritage, and hiking trails with rich biological diversity. The famous Hong Kong UNESCO Global Geopark (Geopark), Marine Parks, old temples, eco-tourism sites and beautiful beaches in coastal areas are some examples. Many attractions are located at remote rural areas without land access and rely on marine transport. In recent years, number of local and non-local visitors attracted to these remote destinations has been constantly increasing.

1.1.2 Public piers play an important role in accessing these remote destinations. There are about 120 public piers in Hong Kong. Majority of these piers are built, maintained and managed by the Government.

1.1.3 Although regular inspections and maintenance for the remote public piers are carried out by the Government to ensure its structural integrity, some public piers at remote rural areas have been in place for many years and cannot cope with the current needs / usages, such as:

- a) small or primitive piers leading to safety concerns during berthing and unsatisfactory boarding conditions especially for kids and elderly;
- b) inadequate depth of water for berthing during low tide;
- c) limited berthing space or narrow accesses which cannot cater for the fluctuating utilization during festive times or weekends; and
- d) aged pier structures with a need for improvement works.

1.1.4 Civil Engineering and Development Department (CEDD) commissioned an Investigation Study (IS), “Study for Pier Improvement at Lai Chi Wo and Tung Ping Chau – Investigation” (Agreement No. CE 2/2018 (CE)), in June 2018 to verify the technical feasibility of improving two potential pier items located within Yan Chau Tong Marine Park and Tung Ping Chau Marine Park in the northeast region of Hong Kong. The improvement of these two piers are designated project under Item Q.1, Part 1 of Schedule 2 of the EIAO.

1.1.5 EIA study has been carried out in accordance with the requirement of the EIA Study Briefs including assessment of the potential environmental impacts, in particular water quality impact and ecological impact, and specified environmental monitoring and audit requirements to ensure the effective implementation of the recommended environmental protection and mitigation measures. The EIA Reports of the two piers were approved by DEP under the EIAO on 29 December 2020 and Environmental Permits (EPs) for construction and operation of the improvement works were granted on 19 February 2021. The EIA study made recommendations on the scope of improvement to the Lai Chi Wo Pier and Tung Ping Chau Public Pier with preliminary engineering studies for individual pier taking into account public aspiration and other constraints, prepared preliminary engineering layouts, and evaluated the feasibility of adopting innovative design elements for the piers.

1.1.6 Atkins China Ltd. was commissioned by the Civil Engineering and Development Department of the Hong Kong Government Special Administrative Region on 16 September 2021 to provide consultancy services for Agreement No. CE 32/2021 (CE) Design Consultancy for Improvement Works at Lai Chi Wo Pier and Tung Ping Chau Public Pier - Design and Construction (hereinafter called “the Assignment”).

1.2 Scope of the Assignment

1.2.1 The scope of the Assignment comprises:

- a) Demolition/reconstruction/re-provision/modification of Lai Chi Wo Pier and Tung Ping Chau Public Pier (hereinafter referred to as “the Piers”);
- b) Provisioning of temporary piers during construction phase;
- c) Following up outstanding issues listed in the approved EIA reports for the improvement works of the two piers and carrying out necessary review for any issues that would affect the assessment results and recommendations of the approved EIA reports, such as modification/revision of the preliminary engineering layout and design of the piers produced by the Investigation Study;
- d) Incorporation of associated structural works, architectural works, electrical and mechanical (E&M) works, navigation lights and marine facilities, greening and landscape works, utilities, environmental monitoring and mitigation measures, and other related works as appropriate;
- e) Adoption of Building Information Modelling (BIM) to enhance design process and collaboration with cost and time effectiveness throughout the project life cycle; and
- f) Providing services relating to the use of New Engineering Contract (NEC) for the works contracts.

1.3 Objectives of the Assignment

1.3.1 The objective of the Assignment is to enable the Piers, namely, **Lai Chi Wo Pier** and **Tung Ping Chau Public Pier** under the Project to be satisfactorily designed, constructed and commissioned in a cost-effective manner, on time and within budget. The Consultants shall provide services to implement and deliver the Project by way of reviews, surveys, impact assessments, stakeholder consultation, detailed designs, tendering, project administration, construction supervision and commissioning of the proposed works as detailed in Clause 2 of the Brief (except otherwise stated) in accordance with an agreed programme and to the satisfaction of the DR.

1.3.2 The main objectives of the Assignment are to:

- a) Conduct review of the preliminary engineering studies and carry out detailed design for each of the Piers taking into account public aspiration and other constraints and the recommendations of the Investigation Study, as well as the EIA Reports and EP conditions as stated in (b) below;

- b) Study the approved Environmental Impact Assessment Reports prepared under the Investigation Study and examine in details the requirements and conditions of the Environmental Permits in meeting the requirements of the relevant authorities;
- c) Review the environmental monitoring and audit requirements recommended under the EIA Study to ensure the effective implementation of the recommended environmental protection and mitigation measures;
- d) Evaluate the innovative design elements and carry out detailed innovative design for each of the Piers, including but not limited to floating platform, barrier-free facilities and prefabrication design, etc. recommended in the Investigation Study;
- e) Collect and review opinions from stakeholders and the public to enhance the design of the Project;
- f) Assist to gain supports from stakeholders, the public, district councils, and other statutory Councils and Committees to facilitate preparation of the PWSC paper and funding approval;
- g) Produce tender documents, invite tenders and complete the tendering process for the Works/works package(s); and
- h) Administer and supervise all construction works, works contract(s) and, where appropriate, service contract(s) of the Project.

1.4 Objective of this Report

- 1.4.1 In accordance with Clause 6.3.8.1 (b) (ii) of the Brief and Condition 2.10 of Environmental Permit EP-586/2021, the Construction Works Schedule and Location Plan for Lai Chi Wo Pier shall consist of the followings:
 - a) Programme for Site Investigation Works (**Appendix A**); and
 - b) Location Plan of Site Investigation Works (**Appendix B**).
- 1.4.2 According to the Part B (Description of Designated Project) of EP-586/2021, the project includes the followings:
 - 1) Modification of the existing pier and construction of new pier structures. The improved pier would be of approximately 155m long and 6m to 15m wide;
 - 2) Construction and removal of a temporary pier of approximately 70m long and 3m wide;
 - 3) Site investigation works for detailed design; and
 - 4) Associated facilities (e.g. barrier-free access, canopy, seats) and landscaping works, etc under the Project.
- 1.4.3 To refine the design geotechnical parameter and facilitate the detailed design, site investigation (SI) works for LCW Pier is proposed. According to the programme, the construction phase of the Project will be commenced on 16

February 2022. In accordance with Condition 2.11 of EP-586/2021, the pier Construction Works Schedule and Location Plans shall be submitted to the Director of Environmental for approval no later than one month before the commencement of construction of the Project including site investigation.

1.5 Structure of this Report

1.5.1 This Inception Report is further divided into the following sections to cover the contents mentioned in Paragraph 1.4 above:

- a) Section 2 – Site Condition;
- b) Section 3 -. Proposed Site Investigation Works

1.6 Abbreviations

1.6.1 The following abbreviations are used in this Report:

AFCD	Agriculture, Fisheries and Conservation Department
AMO	Antiquities and Monuments Office
ArchSD	Architectural Services Department
CEDD	Civil Engineering and Development Department
DEVB	Development Bureau
DO	District Office
DR	Director's Representative
EMSD	Electrical and Mechanical Services Department
EPD	Environmental Protection Department
FSD	Fire Services Department
GEO	Geotechnical Engineering Office under CEDD
GLTMS	Greening, Landscape and Tree Management Section
HAD	Home Affairs Department
HKPF	Hong Kong Police Force
HyD	Highways Department
IUCN	International Union for Conservation of Nature
LandsD	Lands Department
LegCO	The Legislative Council
LCSD	Leisure and Cultural Services Department
MD	Marine Department
MPC	Marine Parks Committee
OGCIO	Office of the Government Chief Information Officer
PIU	Pier Improvement Unit under CEDD
PlanD	Planning Department

PWD	Port Works Division
SI	Site Investigation
TC	Tourism Commission
TD	Transport Department
THB	Transport and Housing Bureau
UNESCO	United Nations Educational, Scientific and Cultural Organization
WSD	Water Supplies Department

2. Site Condition

2.1 Site Description

2.1.1 Lai Chi Wo (LCW) Pier is located in North District. The location plan of Lai Chi Wo Pier is as shown in **Appendix C**.

2.1.2 The 300 years old village of Lai Chi Wo was once one of the most affluent hamlets in the north eastern New Territories. Mostly made up of Hakka people, it also has one of the oldest surviving feng shui woodlands in Hong Kong. The village features a God of War temple and a mangrove habitat with ancient vegetation, including huge interlocking-branch trees, hollow trees and “fivefinger” camphor trees. Two buildings at Village of Lai Chi Wo, namely Hip Tin Temple & Hok Shan Monastery are Grade 3 historic buildings. Lai Chi Wo is now taking part in the Agricultural Land Rehabilitation Scheme, which aims to let tourists experience the culture of a Hakka walled village. Tourists may also visit the Siu Ying Story Room to learn about the city’s varied geological features and enjoy the beautiful scenery of Lai Chi Wo. There is however only one berthing space at Lai Chi Wo pier. Coupled with the shallow depth of water the pier is inaccessible for typical vessels during low tide.

2.1.3 The pier is located within the Hong Kong UNESCO Global Geopark (HKUGGp) and Yan Chau Tong Marine Park, the spawning and nursery grounds of commercial fisheries resources at north eastern waters and it is also adjacent to Plover Cove Country Park. Lai Chi Wo Beach Site of Special Scientific Interest (SSSI) is located about 180m to the south of the existing pier. It was designated in 1979 due to the presence of seagrass *Zostera japonica*. In addition to the seagrass bed, Yan Chau Tong Marine Park is also one of the best growing sites for corals. Water quality and other environmental concerns should be duly considered when the pier is to be reconstructed. For works within country parks or marine parks, prior consent shall be obtained from the Country and Marine Parks Authority and Lands Department before the commencement of works. If considered necessary, the Country and Marine Parks Board (CMPB) or its Country Parks Committee (CPC) and/or Marine Parks Committee (MPC) should be consulted. For any marine works in the waters of Hong Kong, and which interface or are likely to interfere with the operation of port facilities, or the navigation of vessels, or the safety of any person in the waters, permission shall be obtained from the Director of Marine prior to the commencement of marine works.

2.1.4 There have been repeated requests from the locals to extend the pier to provide adequate depth of water for vessels.

2.2 Arrangement and Condition of Existing Pier

2.2.1 General

2.2.1.1. The LCW Pier has been built over than 50 years which is a straight solid concrete finger pier of about 64m long and 2.5m wide. Access of the pier is relatively narrow. The existing pier level is about 2.9mPD only. Flooding occurs in the high tide.

The existing pier has only one primitive berth at the head of pier. There are a number of bollards on each side of the pier and one navigation light post at the head. The layout and condition of existing LCW Pier is shown in the **Figure 2.1** and **Figure 2.2**.

Figure 2.1: General Layout of Existing LCW Pier

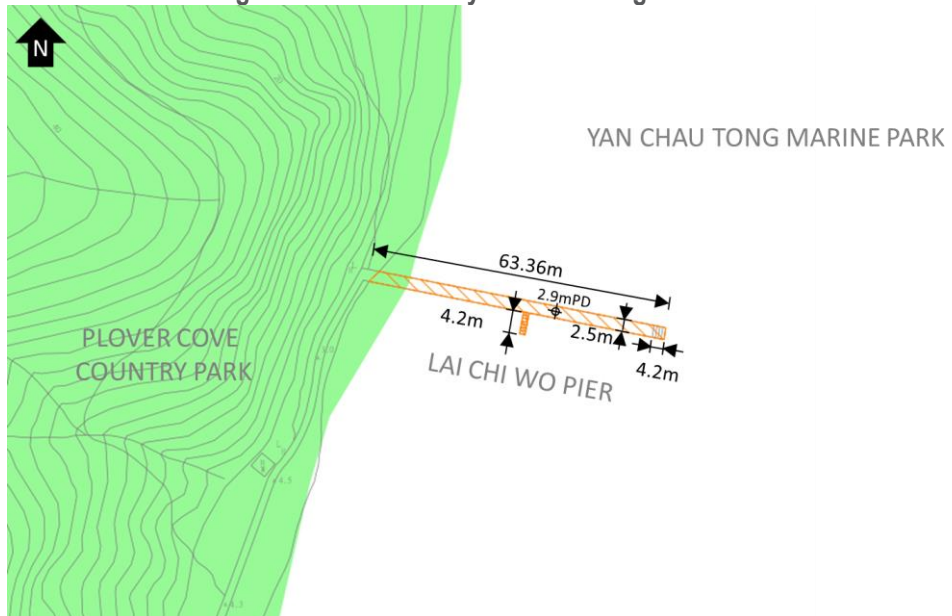


Figure 2.2: Condition of Existing LCW Pier



3. Proposed Site Investigation Works

3.1 General

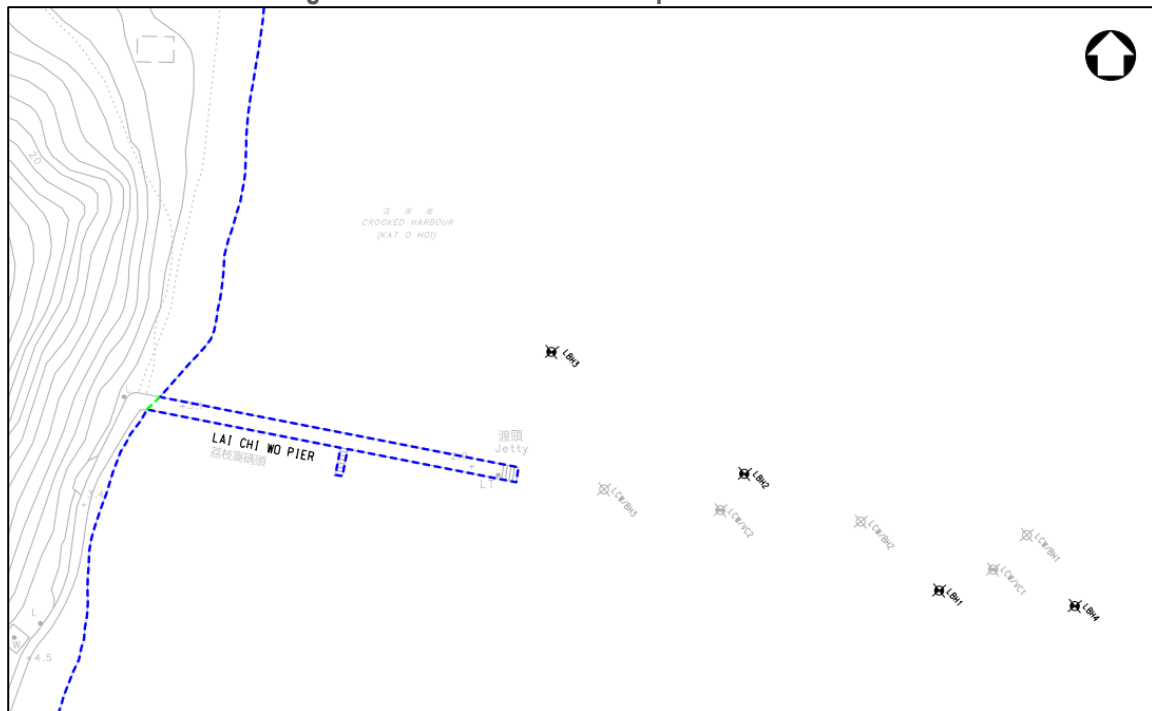
3.1.1 The proposed SI includes four (4) drillholes at positions along the length of the proposed pier extent. Details of the drillholes are shown in the Table 3.1.

Table 3.1: Summary of Drillholes

Boreholes Nos.	Coordinate (m)		Anticipated Depth (m)
	Easting	Northing	
LBH1	845230.962	843308.443	30
LBH2	845199.719	843327.221	30
LBH3	8451666.256	843344.433	25
LBH4	845252.779	843305.946	30

3.1.2 The proposed SI location plan is shown in Figure 3.1 and **Appendix B**.

Figure 3.1: Location Plan for Proposed Drillholes at LCW



4. Conclusion

4.1 General

- 4.1.1 To refine the design geotechnical parameter and facilitate the detailed design, 4 nos. of drillholes, namely LHB1, LBH2, LBH3 and LBH4, are proposed for the site investigation works at LCW pier.
- 4.1.2 The anticipated depths of the drillholes are around 25m to 30m.
- 4.1.3 The SI works will be commenced on 16 February 2022. The anticipated completion date of the field works is 31 March 2022. It is expected that the SI works including final fieldwork report submission will be completed on 28 April 2022.

4.2 Future Submission

- 4.2.1 The current submission covers the works schedule and location plan for the SI works only. The detailed phasing programme, successive construction sequence and location plans of the main works, will be further developed in design phase.
- 4.2.2 In accordance with EP Condition 2.10, an updated Construction Works Schedule and Location Plan for the main works at LCW Pier will be submitted to EPD no later than 1 month before the commencement of construction. The submission will include the detailed phasing programme, successive construction sequence, location plans, temporary berthing and mooring facilities, installation of piles, and modification of the existing pier and construction of new pier structures.

Not Used

Appendix A

Programme for Site Investigation Works for LCW Pier

Contract No. : CV/2021/06

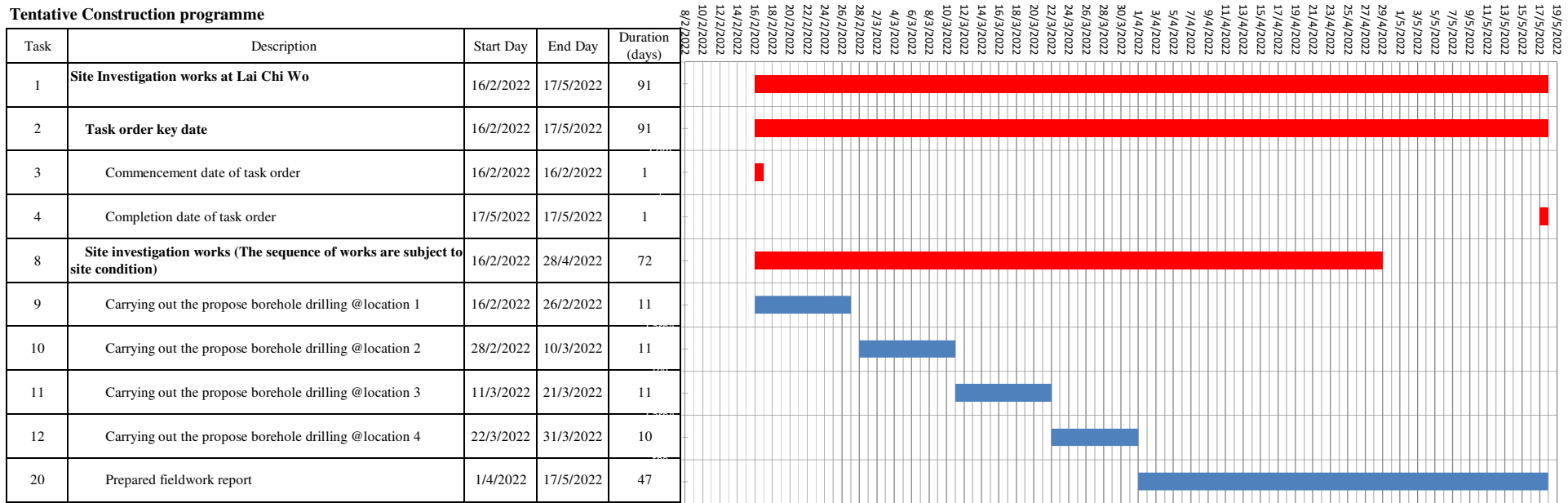
Contract Title : CEDD Maintenance Contract for Seawalls and Navigation Channels (2021-2026)

Task Order No.: GI/001/2106

Location : Lai Chi Wo

Rev 01

Tentative Construction programme



Appendix B

Proposed Site Investigation Location Plans for LCW Pier

0 10 100
Millimetres



KEY PLAN
SCALE 1:10000

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES WITH REFERENCE TO HONG KONG PRINCIPAL DATUM (mPD) UNLESS NOTED OTHERWISE.

- LEGEND:**
- GAZETTED COUNTRY PARK BOUNDARY
 - PROPOSED WORKS AREA
 - SEABED LEVEL
 - EXISTING BOREHOLE
 - EXISTING VIBROCORE
 - PROPOSED BOREHOLE

TENTATIVE COORDINATES FOR PROPOSED GROUND INVESTIGATION

BOREHOLE MARK	EASTING	NORTHING
LBH1	845230.962	843308.443
LBH2	845199.719	843327.221
LBH3	845166.256	843344.433
LBH4	845252.779	843305.946

Rev.	Date	Description	By	Chkd	App'd	Submittal
-	OCT 2021	FIRST ISSUE		MD	IW	SW

Drawing Status: **DESIGN**



Client: 土木工程拓展署
Civil Engineering and Development Department

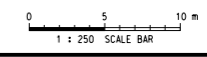
土木工程處
CIVIL ENGINEERING OFFICE

Project Title: AGREEMENT NO. CE 32/2021 (CE) IMPROVEMENT WORKS AT LAI CHI WO PIER AND TUNG PING CHAU PUBLIC PIER - DESIGN AND CONSTRUCTION

Drawing Title: LAI CHI WO PIER - GROUND INVESTIGATION LOCATION PLAN

Scale	Designed	Drawn	Checked	Authorised
1:250	MD	WMC	IW	SW
Original Size	Date	Date	Date	Date
A1	OCT 2021	OCT 2021	OCT 2021	OCT 2021

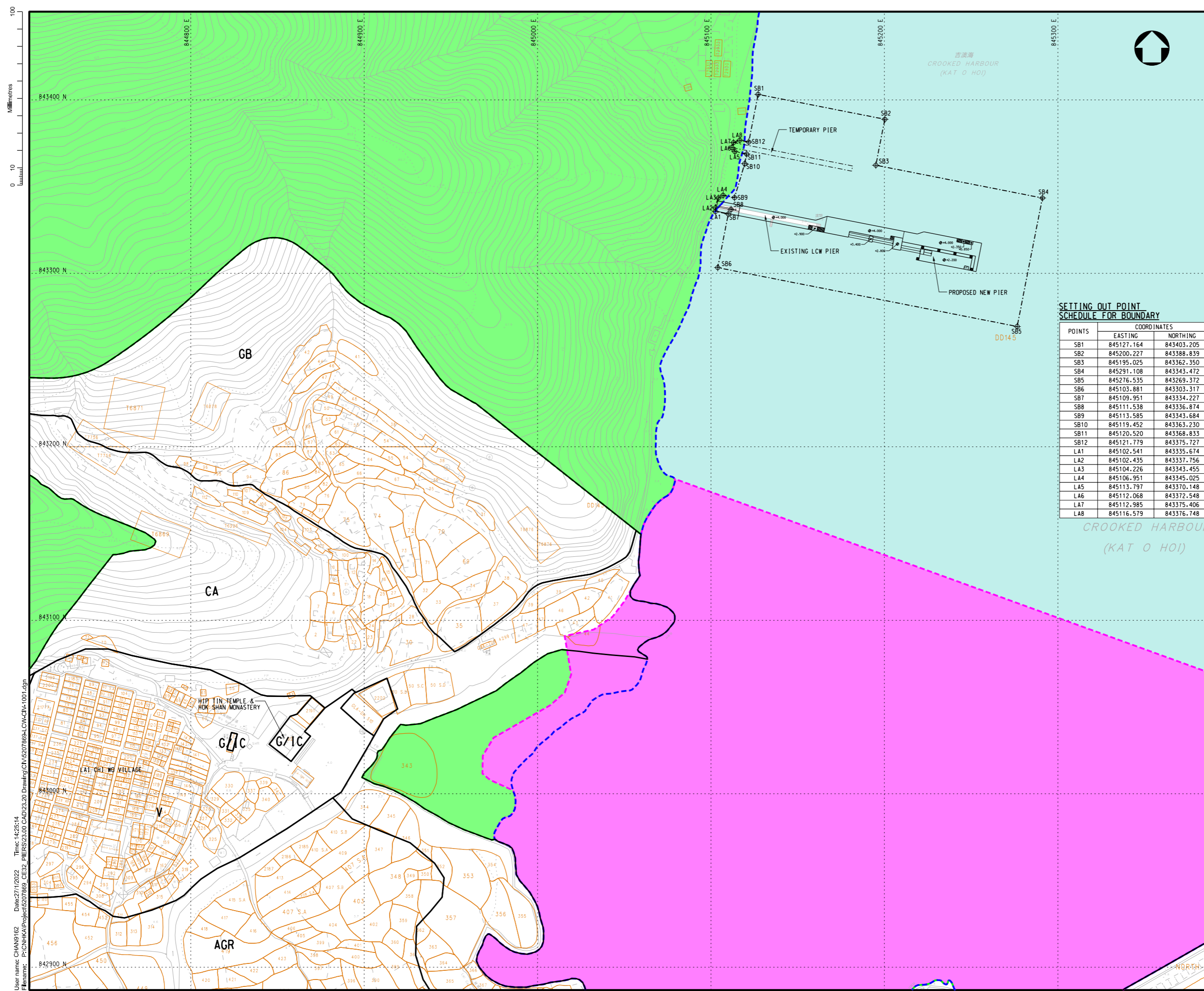
Drawing Number: 5207869-LCW-GEO-1001



User name: CHOW6266 Date: 03-Jan-22 Time: 06:00:32 PM
Filename: P:\CNHKA\Project\5207869_CES2_PIER\5207869-LCW-GEO-1001.dgn

Appendix C

Location Plan for LCW Pier



KEY PLAN
SCALE 1:10000

NOTES:
1. THE ENTIRE SITE IS SITUATED INSIDE THE AREA OF HONG KONG UNESCO GLOBAL GEOPARK.

- LEGEND:
- MARINE PARK
 - COUNTRY PARK
 - SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)
 - LAND LOT W/LAND LOT NO.
 - V VILLAGE TYPE DEVELOPMENT
 - AGR AGRICUL TURE
 - CA CONSERVATION AREA
 - G/IC GOVERNMENT, INSTITUTION OR COMMUNITY
 - GB GREEN BELT
 - SB1 SETTING OUT POINT OF AFFECTED AREA OF FORESHORE AND SEABED
 - LA1 SETTING OUT POINT OF AFFECTED AREA OF LAND

SETTING OUT POINT SCHEDULE FOR BOUNDARY

POINTS	COORDINATES	
	EASTING	NORTHING
SB1	845127.164	843403.205
SB2	845200.227	843388.839
SB3	845195.025	843362.350
SB4	845291.108	843343.472
SB5	845276.535	843269.372
SB6	845103.881	843303.317
SB7	845109.951	843334.227
SB8	845111.538	843336.874
SB9	845113.585	843343.684
SB10	845119.452	843363.230
SB11	845120.520	843368.833
SB12	845121.779	843375.727
LA1	845102.541	843335.674
LA2	845102.435	843337.756
LA3	845104.226	843343.455
LA4	845106.951	843345.025
LA5	845113.797	843370.148
LA6	845112.068	843372.548
LA7	845112.985	843375.406
LA8	845116.579	843376.748

Rev.	Date	Description	By	Chkd	App'd	Submittal
B	JAN 2022	SECOND ISSUE	KLC	JC	SW	
A	DEC 2021	FIRST ISSUE	KLC	JC	SW	
Drawing Status						Submittal
DESIGN						=

ATKINS
Member of the SNC-Lavalin Group

Client
CEDD 土木工程拓展署
Civil Engineering and Development Department

土木工程處
CIVIL ENGINEERING OFFICE

Project Title
AGREEMENT NO. CE 32/2021 (CE)
IMPROVEMENT WORKS AT LAI CHI WO PIER AND TUNG PING CHAU PUBLIC PIER - DESIGN AND CONSTRUCTION

Drawing Title
LAI CHI WO PIER - LOCATION PLAN

Scale	Designed	Drawn	Checked	Authorised
1:1000	SC	KLC	JC	SW
Original Size	Date	Date	Date	Date
A1	DEC 2021	DEC 2021	DEC 2021	DEC 2021
Drawing Number	Revision			
5207869-LCW-CIV-1001	B			

User name: CHANG162 Date: 27/12/2022 Time: 14:26:514
Filename: P:\CN\HK\Project\5207869_CE32_PIER\23.00 CAD\23.00 CAD\23.00 CAD\CIV-1001.dgn

Sean WONG
阿特金斯顧問有限公司 **Atkins China Limited**
13/F Wharf T&T Centre
Harbour City
Tsim Sha Tsui
Kowloon
Hong Kong

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Sean.Wong@atkinsglobal.com

Our ref	5207869/18.30/OC146/AL/DL/SW/IW/JC/fl
Title	Submission of Construction Works Schedule and Location Plan (Rev. 1)
Date	19 May 2022

Attachment 2

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ET Certification and IEC Verification Letters

Your ref. -
Our ref 5207869/18.30/OC119/AL/DL/SW/IW/AL/fl
Date 31 March 2022

By Post and By Email

Civil Engineering and Development Department
Civil Engineering Office
Pier Improvement Unit
Projects Section 3
4/F, Civil Engineering and Development Building
101 Princess Margaret Road
Homantin, Kowloon

Attn: Mr. LEE Man Chow, Francis
Project Team Leader

Dear Sirs,

Agreement No. CE 32/2021 (CE)
Improvement Works at Lai Chi Wo Pier and Tung Ping Chau Public Pier
- Design and Construction
Certification of Construction Works Schedule and Location Plans

Pursuant to Condition 2.10 of the Environmental Permit No. EP-586/2021, I hereby certify the Construction Works Schedule and Location Plan (Rev. 1) for the Site Investigation (SI) Works for the captioned Project.

Should you have any queries regarding the above, please feel free to contact us by telephone number 2972 1360.

Yours faithfully,
For and on behalf of
Atkins China Ltd



Arthur Hong Nam Lo
Environmental Team Leader

cc EPD - Ms. LAU Tai, Trista (Env Protection Offr (Strategic Assessment) 61)
Wilson Acoustic limited - Mr. Morgan Cheng (IEC)



Unit 601, Block A, Shatin Industrial Centre,
5 - 7 Yuen Shun Circuit, Shatin, NT
Tel: (852) 3188-1170, Fax: (852) 3422-8117
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Web: www.wal.hk

Our Ref: 21411-26

By Email

19 May 2022

Civil Engineering and Development Department
Civil Engineering and Development Building,
101 Princess Margaret Road,
Kowloon, Hong Kong

Attention: Mr. LEE Man-chow

**Subject: Agreement No. PI 2/2021 Independent Environmental Checker Services
for Improvement Works at Lai Chi Wo Pier and Improvement Works at
Tung Ping Chau Public Pier
Verification of Construction Works Schedule and Location Plans
(Revision 1)**

Dear Mr Lee,

We refer to the email on 31 Mar 2022 from Atkins China Limited about Construction Works Schedule and Location Plans (Revision 1) for site investigation works at Lai Chi Wo Pier.

We have no comment and hereby verify Environmental Permit (EP) Submission Schedule as required under Condition 2.10 of the Environmental Permit (EP-586/2021).

Should you have any queries, please feel free to contact us by telephone number 2637-0623 or fax 3422-8117.

Yours sincerely

A handwritten signature in black ink that reads "Morgan Cheng". The signature is stylized and includes a large, sweeping flourish at the end.

Morgan Cheng
Independent Environmental Checker, Wilson Acoustics Limited

MC

Encl.

c.c. Civil Engineering and Development Department (Attn.: Mr. YUNG Chung Bun, Thomas)
Environmental Protection Department (Attn.: Ms. LAU Tai, Trista)
Atkins China Limited (Attn.: Mr. Sean Wong)