AECOM
8/F Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, Hong Kong
香港新界沙田鄉事會路 138 號
新城市中央廣場第 2 座 8 樓
www.aecom.com

+852 2251 0600 tel
+852 2251 0698 fax

H 01224

Your Ref : (17) in EP2/N7/A/52Ax(1) Pt.10
Our Ref : (CV/2013/08)/M45/200/H01224

26 February 2016

By Hand

Environmental Impact Assessment Ordinance Register Office
Environmental Protection Department
27/F, Southorn Centre,
130 Hennessy Road,
Wanchai, Hong Kong

Attn.: Mr. Charles Pang

Dear Sirs,

Agreement No. CE38/2010(CE)
Liantang / Heung Yuen Wai Boundary Control Point and Associated Works
(Site Formation and Infrastructures) – Design and Construction

Contract No. CV/2013/08
Liantang / Heung Yuen Wai Boundary Control Point
Site Formation and Infrastructure Works – Contract 6

Environmental Permit No. EP-404/2011
Condition 2.12 – Submission of Updated Topsoil Management Plan

I refer to your above referenced letter dated 29 November 2013 for the approval of Topsoil Management Plan (Rev.01) submitted on 16 October 2013 and 5 November 2013 for the Project titled "Liantang / Heung Yuen Wai Boundary Control Point and Associated Works" under the captioned Environmental Permit.

I would like to submit three hard copies of the Updated Topsoil Management Plan, with sampling and testing results for Contract 6 of the Project, which had been certified by the ET Leader and verified by the IEC, for your reference.

Should you have any queries, please contact the undersigned or our Mr. Perry Yam at 2171 3350.

Yours faithfully,

Simon Leung
Chief Resident Engineer
AECOM Asia Co. Ltd.

Encl.

c.c.	CEDD/BCP	- Attn: Mr. Chris Wong / Mr. Steve Lo	- 1 hard copy
	AECOM	- Attn: Mr. Francis Leong / Mr. Pat Lam	- 1 CD copy
	SMEC(IEC)	- Attn: Mr. Antony Wong	- 1 CD copy
	AUES(ET)	- Attn: Mr. T. W. Tam	- 1 CD copy
	CCKJV	- Attn: Mr. Vincent Chan	- w/o encl.

SL/GW/PY/tc

Liantang / Heung Yuen Wai Boundary Control Point and Associated Works

Environmental Permit (EP No.: EP-404/2011/C)

Updated Topsoil Management Plan

Dec 2015

SMEC
Local People. Global Experience.

Unit A-C, 27/F Ford Glory Plaza
37-39 Wing Hong Street
Cheung Sha Wan, Kowloon, Hong Kong
T +852 3995 8100 **F** +852 3995 8101 **E** hongkong@smec.com
www.smec.com

24 February 2016 Our ref: 7076192/L120022/KA/AB/AW/FL/rw

AECOM
8/F, Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, N.T.

By Email & Post

Attention: Mr Simon LEUNG

Dear Sirs

Agreement No. CE 45/2008 (CE)
Liantang/Heung Yuen Wai Boundary Control Point and Associated Works
Independent Environmental Checker – Investigation
Topsoil Management Plan (February 2016)

Reference is made to the Topsoil Management Plan dated December 2015 received by email on 15 February 2016 certified by the ET Leader (ET's ref.: TCS00694/13/300/L0142 dated 23 February 2016). Please be noted that we have no adverse comments on the captioned submission. We herewith verify the captioned submission in accordance with Condition 2.12 of the Environmental Permit No. EP-404/2011/C.

Thank you for your attention and please do not hesitate to contact the undersigned on tel. 3995 8120 or by email to antony.wong@smec.com; or our Mr Francis LEE on tel. 3995 8144 or by email to francis.lee@smec.com.

Yours faithfully
for and on behalf of
SMEC Asia Limited

Antony WONG
Independent Environmental Checker

cc	CEDD/BCP	-	Mr C S LAU	by fax: 3547 1659
	AECOM	-	Mr Pat LAM/ Mr Perry YAM	by email
	CCKJV	-	Mr Vincent CHAN	by email
	AUES	-	Mr TW TAM	by email

AUES 安順聯合環境服務及顧問
Action-United Environmental Services & Consulting

Our Ref: TCS00694/13/300/L0142

AECOM
8/f Grand Central Plaza, Tower 2
138 Shatin Rural Committee Road
Shatin, Hong Kong

Attn: Mr. Simon Leung

23 February 2016
By E-mail

Dear Sir,

Re: CEDD Contract CV/2013/08
Liantang/Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6
Updated Topsoil Management Plan

I refer to the updated Topsoil Management Plan submitted by CRBC-CEC-Kaden JV (Contractor of Contract 6) on 12 February 2016, please note that we have no adverse comment on this submission. We herewith certify the captioned submission accordance with *Condition 2.12* of Environmental Permit (EP) No. EP-404/2011/C.

Should you have any queries, please feel free to contact the undersigned at Tel: 2959-6059 or Fax: 2959-6079 or E-mail: twtam@fordbusiness.com.

Yours sincerely,
For and on Behalf of
Action-United Environmental Services & Consulting

T. W. Tam
Environmental Team Leader
TW/nh

cc	CRBC-CEC-Kaden JV (Contractor of C6)	Mr. Vincent Chan	by e-mail
	SEMC (IEC)	Mr. Antony Wong	by e-mail

香港新界葵涌大連排道35-41號金基工業大廈20樓A室
Unit A, 20/F, Gold King Industrial Building,
35-41 Tai Lin Pai Road, Kwai Chung, New Territories, Hong Kong
Tel (852) 2959-6059
Fax (852) 2959-6079
Email info@fordbusiness.com
Ford Business International Ltd.

Content

Blank Page

1 Introduction

1.1 Purpose of the Plan

The Updated Topsoil Management Plan (the Plan) provides detailed guidance and direction for the management and use of topsoil recovered from the construction of Liantang/ Heung Yuen Wai Boundary Control Point and Associated Works (the Project). This Plan addresses the stripping, transport and re-use of recovered topsoil from construction works. This Plan identifies the different sources of topsoil that may be recovered during construction, and identifies the locations where this soil can be stockpiled. It also identifies the monitoring program to be undertaken to measure ongoing topsoil viability.

1.2 Project Background

Currently, there are four Boundary Control Points (BCP) in the HKSAR providing vehicular crossing at the Hong Kong – Shenzhen boundary. They are namely Shenzhen Bay, Lok Ma Chau, Man Kam To and Sha Tau Kok. On the eastern part of the boundary, the existing vehicular crossing points at Man Kam To and Sha Tau Kok have already reached their limits in the crossing capacity, while scope for the expansion works to enhance their capacities is limited by site constraints and capacity of connecting roads on both Hong Kong and Shenzhen sides. It is anticipated that the volume of cross-boundary traffic will continue to increase with the closer ties of Hong Kong- Shenzhen and the completion of the Eastern Corridor (東部過境通道) in Shenzhen. The establishment of a new BCP in the eastern part of Hong Kong-Shenzhen boundary is thus required to meet the future traffic demand and re-distribute cross-boundary traffic amongst the crossings in the east.

In December 2006, the Hong Kong and Shenzhen governments jointly commissioned a study, namely "Preliminary Planning Study on Developing Liantang/Heung Yuen Wai Control Point" (the Joint Study) ("深港興建蓮塘/ 香園圍口岸前期規劃研究") to examine the need, benefit and function of a new BCP at Liantang/Heung Yuen Wai (LT/HYW). The Joint Study confirmed the need for a new BCP at LT/HYW.

In January 2007, the Planning Department (PlanD) commissioned a consultancy study "Planning Study on Liantang/Heung Yuen Wai Cross-boundary Control Point and its Associated Connecting Roads in Hong Kong – Feasibility Study" (the Feasibility Study) to examine the land, planning, traffic and engineering implications and its associated connecting road within Hong Kong territory for the LT/HYW BCP. The Feasibility Study put forward the preferred option for the LT/HYW BCP layout and alignment for its connecting road.

Both Hong Kong and Shenzhen Governments at the second meeting of the Hong Kong-Shenzhen Joint Task Force on Boundary District Development on 18 September 2008 endorsed the major findings of the Joint Study and they jointly announced after the meeting to implement the LT/HYW BCP.

CEDD commissioned the investigation and preliminary design (I&PD) and relevant impact assessments for the Project in April 2009 under Agreement No. CE 45/2008 (CE) "Liantang/Heung Yuen Wai Boundary Control Point and Associated Works". The I&PD determined the general layout of the BCP and the alignment of the connecting road. The I&PD also concluded that the Project with the recommended mitigation measures is environmentally acceptable.

1.3 Project Scope

The scope of the Project under this Assignment covers the site formation and infrastructures for the LT/HYW BCP, and comprises:

(a) site formation of about 23 hectares of land for the development of the BCP;

(b) provision of a perimeter road at the BCP together with the associated vehicular and pedestrian gates, fencing, etc;

(c) an approximately 11-kilometre (km) long dual two-lane trunk road (Connecting Road) (with about 1.0 km of at grade road, 4.3 km of viaduct and 5.7 km of tunnels) connecting the BCP with Fanling Highway and the associated traffic control and surveillance system;

(d) associated diversion/modification works at Lin Ma Hang Road;

(e) widening of access road to the resite area of Chuk Yuen Village and further modification works to the facilities in the resite area;

(f) provision of sewage collection, treatment and disposal facilities for the BCP and the resite of Chuk Yuen Village; and

(g) associated environmental mitigation measures, landscaping works, drainage/ sewerage, waterworks, utilities and traffic engineering works.

1.4 Construction Contract Packaging

To facilitate project management and implementation, the Project will be implemented in the following contract packages:

- Contract 2 (CV/2012/08)
- Contract 3 (CV/2012/09)
- Contract 4 (TCSS)
- Contract 5 (CV/2013/03)
- Contract 6 (CV/2013/08)
- Contract 7 (NE/2014/03)

The details of each contracts is summarized below and the delineation of each contract is shown in **Figure 1.0**.

Contract 2	
Contract No.:	CV/2012/08
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 2
Commencement date:	20 Dec 2013
Major Scope of Works:	• construction of an approximately 5.2km long dual two-lane connecting road (with about 0.4km of at-grade road and 4.8km of tunnel) connecting the Fanling Interchange with the proposed Sha Tau Kok Interchange; • construction of a ventilation adit tunnel and the mid-ventilation building; • construction of the north and south portal buildings of the Lung Shan Tunnel and their associated slope works; • provision and installation of ventilation system, E&M works and building services works for Lung Shan tunnel and Cheung Shan tunnel and their portal buildings; • construction of Tunnel Administration Building adjacent to Wo Keng Shan Road and the associated E&M and building services works; and • construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 3	
Contract No.:	CV/2012/09
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 3
Commencement date:	31 July 2013
Major Scope of Works:	• construction of four link roads connecting the existing Fanling Highway and the south portal of the Lung Shan Tunnel; • realignment of the existing Tai Wo Service Road West and Tai Wo Service Road East; • widening of the existing Fanling Highway (HyD's entrustment works); • demolishing existing Kiu Tau vehicular bridge and Kiu Tau footbridge and reconstruction of the existing Kiu Tau Footbridge (HyD's entrustment works); and • construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 4	
Contract No.:	To be assigned
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – TCSS Contract
Commencement date:	The contract is still yet awarded
Major Scope of Works:	• The works include provision and installation of Traffic Control and Surveillance System and the associated electrical and mechanical works for the Project.

Contract 5	
Contract No.:	CV/2013/03
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 5
Commencement date:	11 April 2013
Major Scope of Works:	• site formation of about 23 hectares of land for the development of the BCP; • construction of an approximately 1.6 km long perimeter road at the BCP including a 175m long depressed road; • associated diversion/modification works at existing local roads and junctions including Lin Ma Hang Road; • construction of pedestrian subway linking the BCP to Lin Ma Hang Road; • provision of resite area with supporting infrastructure for reprovisioning of the affected village houses; • construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 6	
Contract No.:	CV/2013/08
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 6
Commencement date:	24 June 2015
Major Scope of Works:	• construction of an approximately 4.6km long dual two-lane connecting road (with about 0.6km of at-grade road, 3.3km of viaduct and 0.7km of tunnel) connecting the BCP with the proposed Sha Tau Kok Road Interchange and the associated ventilation buildings; • associated diversion/modification works at access roads to the resite of Chuk Yuen Village; • provision of sewage collection, treatment and disposal facilities for the BCP and the resite of Chuk Yuen Village; • construction of a pedestrian subway linking the BCP to Lin Ma Hang Road; • reprovisioning of the affected facilities including Wo Keng Shan Road garden; and • construction of associated footpath, slopes, retaining structures, drainage, sewerage, waterworks, landscaping works and other ancillary works.

Contract 7	
Contract No.:	NE/2014/03
Contract Name:	Liantang/ Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works - Contract 7
Commencement date:	11 December 2015
Major Scope of Works:	• Construction of the Hong Kong Special Administrative Region portion of four vehicular bridges and one pedestrian bridge crossing Shenzhen River.

2 Topsoil Management Strategy

2.1 General

Topsoil management strategy is developed to conserve and reuse the topsoil excavated as much as possible by the Project and other projects in accordance with the Approved EIA Report. The objectives of the Topsoil Management Plan are to: -

- Optimize the recovery of topsoil for reuse as much as possible;
- Identify topsoil resources;
- Develop topsoil stripping and stockpiling guidelines; and
- Develop guidelines for re-spreading of topsoil for use.

2.2 Topsoil Recovery

2.2.1 Definition of Topsoil

Topsoil is the uppermost layer of soil capable of growing and supporting vegetation. Topsoil contains the essential nutrients, organic matter, physical characteristics necessary to grow and sustain permanent vegetation.

- Topsoil shall be evenly textured, fertile, dark brown or black, free draining, sandy loam with the following properties:
- The top 50-300 mm fertile layer immediately below undisturbed vegetation; the thickness of topsoil to be reused would be subject to the habitat of the vegetated areas.
- Containing not less than 7.5% organic matter;
- Having a pH value between 5.5 and 7.0;
- Free from all kinds of pests, toxic material, pernicious and/or perennial weed seed, weeds and roots, grass, clay lumps, non-soil material, brick, cement, concrete and other building materials, foreign matter and contamination;
- Maximum stone content % (m/m) as tested under BS 1377-2; and
- Exchangeable sodium percentage (ESP) %: <15.

2.2.2 Identification of Topsoil for Reuse

Existing vegetated areas within the project boundary shall be surveyed by the Contractor to determine the availability of soil materials for reuse and to formulate topsoil and stockpiling strategies. According to the Habitat Map (Drawing No. 60212563/ER1/901 – 908) within the project boundary, the following areas shall be surveyed to identify topsoil for the reuse:

- Woodland;
- Shrubland;
- Plantation;
- Active Agricultural Land;
- Abandoned Agricultural Land; and
- Hillside Grassland.

The depth of topsoil to be reused for different vegetated areas would be depending on the habitat type. In general, there would be thicker available potential topsoil to be reused in Plantation, Active Agricultural Land and Abandoned Agricultural Land. Relatively, there would

be thinner available potential topsoil to be reused in Hillside Woodland, Shrubland and Grassland.

Initial soil samples have been collected and tested. The test results of organic matter content showed that the soil samples can be classified as "Not Topsoil" according to the definition in the Section 2.2.1. Further soil sampling and testing would be carried out at different habitat locations. In case topsoil is identified on site confirmed by testing, the estimated volume would be submitted accordingly.

2.2.3 Stripping

Prior to the commencement of stripping, areas will be cleared of vegetation. At locations where topsoil is to be recovered, soil stripping will be undertaken by conventional earth-moving equipment such as bulldozers, scrapers, graders and off-road trucks where practical, giving consideration to operational safety and accessibility, to maximize the preservation of the quality of the topsoil. In areas where the topsoil is relatively thin, the Contractor shall remove the topsoil using smaller equipment. The Contractor shall provide detailed method statement for the stripping operation according to site condition to the Engineer for approval prior to the commencement of any works.

2.2.4 Stockpiling

Where possible, topsoil stripped off shall be re-spread directly from stripped areas onto recipient sites. However, based on the anticipated construction sequence and programme, it is likely that topsoil stripped off shall be stored in stockpiles for use at a later stage. General requirements for topsoil handling and stockpiling are listed below: -

- The surface of the completed stockpiles shall be left in a "rough" condition to help promoting water infiltration and minimize erosion prior to vegetation establishment;
- The height of topsoil stockpiles shall not be higher than 3m in order to limit the potential for anaerobic conditions to develop within the topsoil pile;
- The embankment of the topsoil stockpiles shall not be steeper than 3H:1V (to limit the potential for erosion of the outer pile face);
- If the stockpile is to be retained for a period of more than 6 months, the stockpile will be deep ripped and hydroseeded in order to keep the soil viable and to maintain biological activity.
- The establishment of weeds on the stockpiles shall be monitored and weed controlled measures shall be implemented as required.

The Contractor shall provide detailed method statement for the topsoil stockpiling including the proposed locations stockpiling, temporary soil stabilization and erosion treatment to the Engineer for approval prior to the commencement of any works.

2.2.5 Respreading

Prior to the use of any topsoil from each approved stockpiling site for landscaping works, for every 300m^3 delivered to Site, the Contractor shall produce certificates of analysis of Topsoil from an approved laboratory within 14 calendar days of taking the samples. An approved laboratory shall mean one of the Employer's laboratories or a laboratory accredited by the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for the relevant tests in which case the laboratory shall have no affiliation as a legal entity to the Contractor or its sub-contractors. Particulars of the laboratory proposed by the Contractor shall be submitted to the Engineer for

approval. Tests shall be carried out according to BS 3882 and BS 1377. Each certificate shall state the results of test for the properties stipulated for compliance in the topsoil properties listed in Section 2.2.1.

During the removal of the topsoil from the stockpiles, care will be taken to minimise structural degradation of the topsoil. If required, soil conditioner shall be applied to the topsoil before re-spreading to mitigate any deficiencies in the topsoil to meet the requirement for landscaping works.

The detailed method statement for re-spreading works to the designated planting areas would be provided after topsoil identification and based on the estimated volume.

3 Plan Update

The landscape plan submitted separately under EP Condition 2.11 will indicate the approximate landscape areas to accommodate the topsoil.

An implementation programme for maximizing the reuse of the excavated topsoil would be submitted after the volume of topsoil to be generated is estimated.

Under the Engineer's supervision, topsoil samples were collected in August 2015 and September 2015 at different planned work locations of the Project, namely North Portal, Bridge A, Bridge C, Bridge D, BCP. Please refer to Appendix A for allocation of the sampling points.

4 Topsoil Sampling and Testing

Analytical testing results are presented in Appendix B. Test results are summarized in Table 4.1.

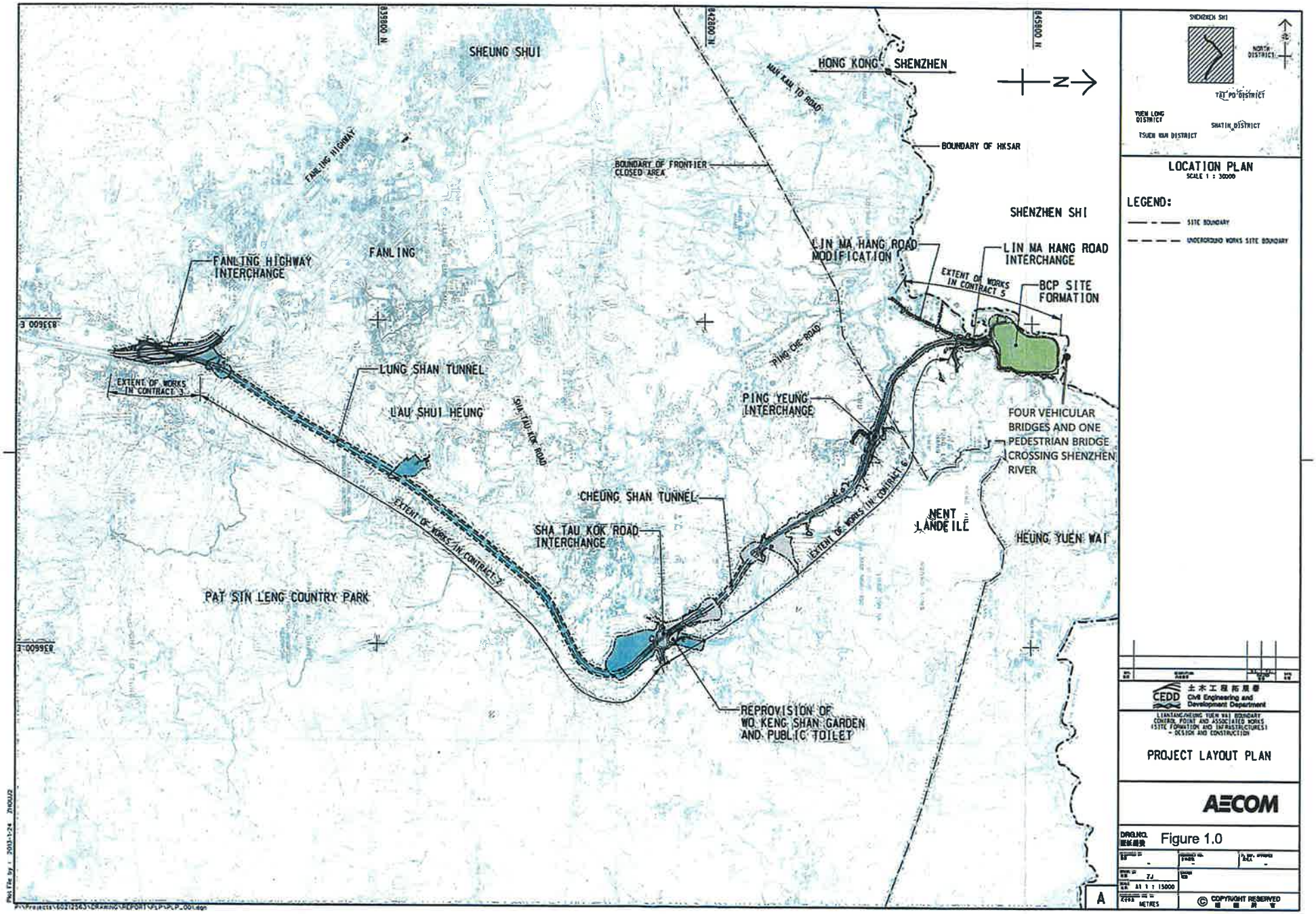
Table 4.1: Summary of topsoil analytical testing results

Location	Sample ID	Testing parameter		Likely to be Topsoil
		pH	Organic Content	
Bridge A	Point A	4.9	0.7	No
	Point B	4.6	0.4	No
North Portal	Point C	5.4	0.1	No
	Point D	4.7	1.1	No
Bridge C	Point E	6.5	1.7	No
BCP	Point F	5.3	0.9	No
	Point G	6.3	1.0	No
	Point H	7.6	0.7	No
Bridge D	Point I	5.9	1.2	No
	Point J	6.2	0.7	No
	Point K	6.3	0.7	No
	Point L	6.4	0.6	No
	Point M	5.3	0.6	No
	Point N	5.4	1.4	No

The results indicated that all areas within the Project boundary do not contain any soil that fall into the definition of topsoil as stated in Section 2.2.1 of this Plan.

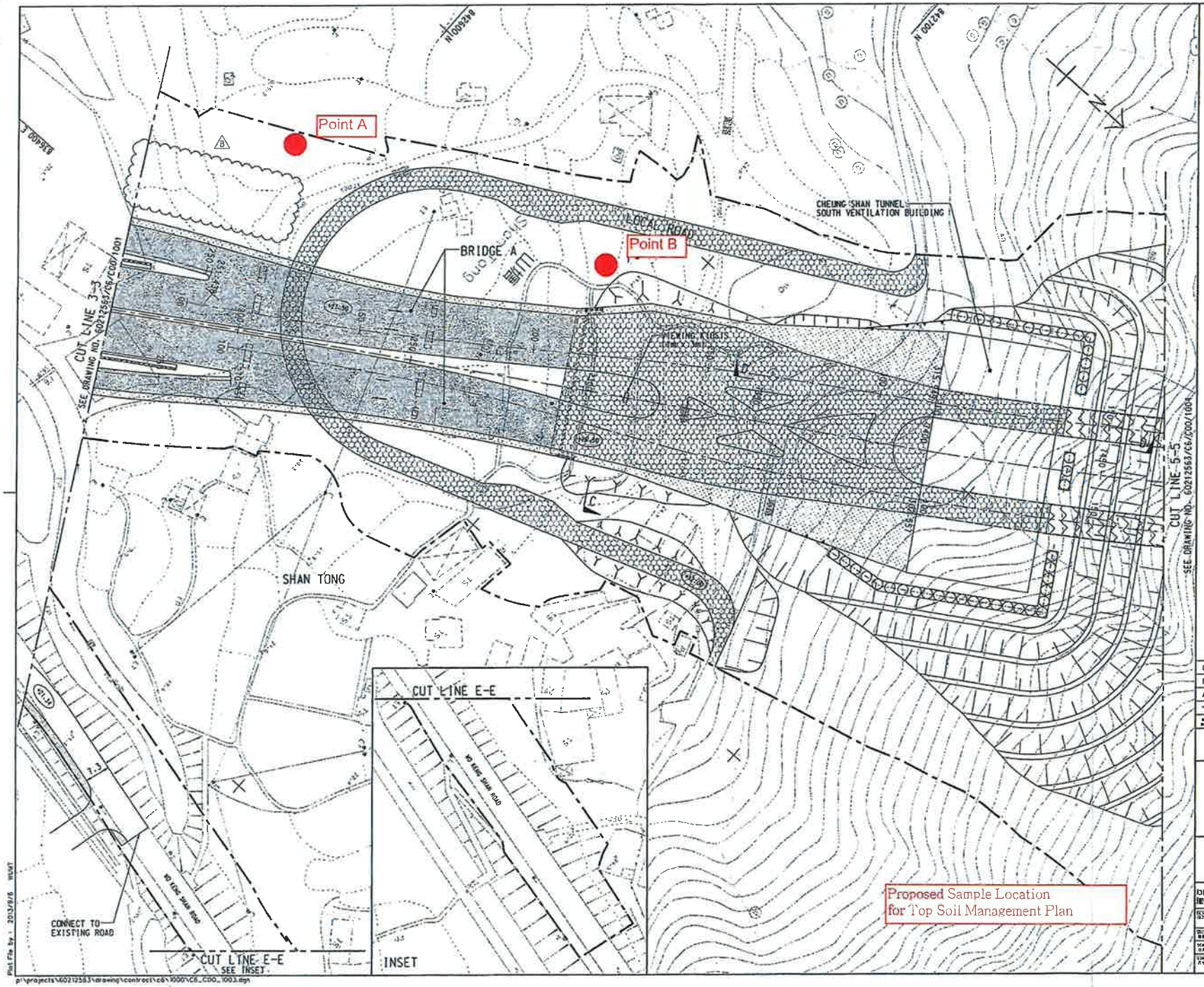
Therefore, the accommodation of the topsoil and the implementation programme for reuse of the excavated topsoil are not required.

Figure


SHEUNG SHUI
HONG KONG - SHENZHEN
MAN KAM TO ROAD
FANLING HIGHWAY
BOUNDARY OF FRONTIER CLOSED AREA
BOUNDARY OF HKSAR
SHENZHEN SHI
FANLING
FANLING HIGHWAY INTERCHANGE
LIN MA HANG ROAD MODIFICATION
LIN MA HANG ROAD INTERCHANGE
EXTENT OF WORKS IN CONTRACT 5
BCP SITE FORMATION
PING CHE ROAD
EXTENT OF WORKS IN CONTRACT 3
LUNG SHAN TUNNEL
LAU SHUI HEUNG
SHA TAU KOK ROAD
PING YEUNG INTERCHANGE
FOUR VEHICULAR BRIDGES AND ONE PEDESTRIAN BRIDGE CROSSING SHENZHEN RIVER
CHEUNG SHAN TUNNEL
EXTENT OF WORKS IN CONTRACT 6
HEUNG YUEN WAI
SHA TAU KOK ROAD INTERCHANGE
EXTENT OF WORKS IN CONTRACT 4
PAT SIN LENG COUNTRY PARK
REPROVISION OF WO KENG SHAN GARDEN AND PUBLIC TOILET
N
LOCATION PLAN
SCALE 1 : 30000
LEGEND:
SITE BOUNDARY
UNDERGROUND WORKS SITE BOUNDARY
CEDD
Civil Engineering and Development Department
LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT AND ASSOCIATED WORKS (SITE FORMATION AND INFRASTRUCTURES) - DESIGN AND CONSTRUCTION
PROJECT LAYOUT PLAN
AECOM
Figure 1.0
© COPYRIGHT RESERVED

Appendix A

Sampling Plan



NOTE:

1. FOR NOTE AND LEGEND REFER TO DRAWING NO. 60212563/C6/C00/1001.

C	WORKING DRAWING	WLC	KYH	JUL-15
B	TENDER ADDENDUM NO. 2	WLC	KYH	SEP-13
A	TENDER ADDENDUM NO. 1	WLC	KYH	JUL-13
-	TENDER DRAWING	WLC	KYH	MAY-13

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

LIANTANG/MEUNG YUEN WAI BOUNDARY CONTROL POINT SITE FORMATION AND INFRASTRUCTURE WORKS - CONTRACT 6

GENERAL LAYOUT

SHEET 3 OF 18

AECOM

DRG.NO. 60212563/C6/C00/1003C

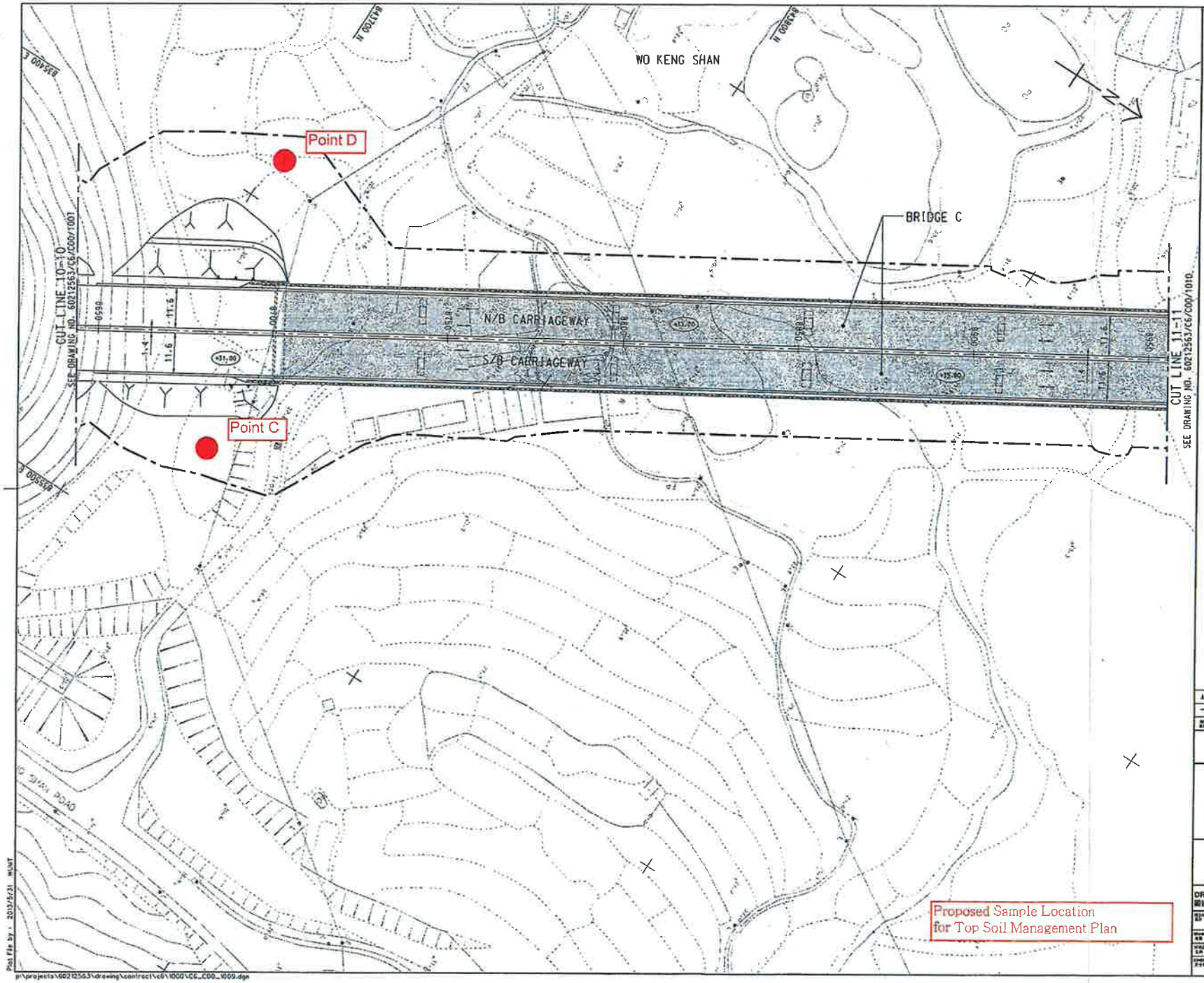
DESIGNED WLC | CONTRACT NO. CV/2013/08 | APPROVED JLT

DRAWN ZJ | SCALE A1 1 : 500 | WORKING DRAWING

STANDARD DATUM METRES

Plot File by : 2013/8/6 WONT

p:\projects\60212563\drawing\contract\c6\1000\C6_C00_1003.dgn



NOTE:

1. FOR NOTE AND LEGEND REFER TO DRAWING NO. 60212563/C6/C00/1001.

A	WORKING DRAWING	WLC	KCH	JUL-15
-	TENDER DRAWING	WLC	KYH	MAY-13

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

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT SITE FORMATION AND INFRASTRUCTURE WORKS - CONTRACT 6

GENERAL LAYOUT

SHEET 9 OF 18

AECOM

DRG.NO. 60212563/C6/C00/1009A

DESIGNED BY WLC | CONTRACT NO. CV/2013/08 | CHECKED BY JLY

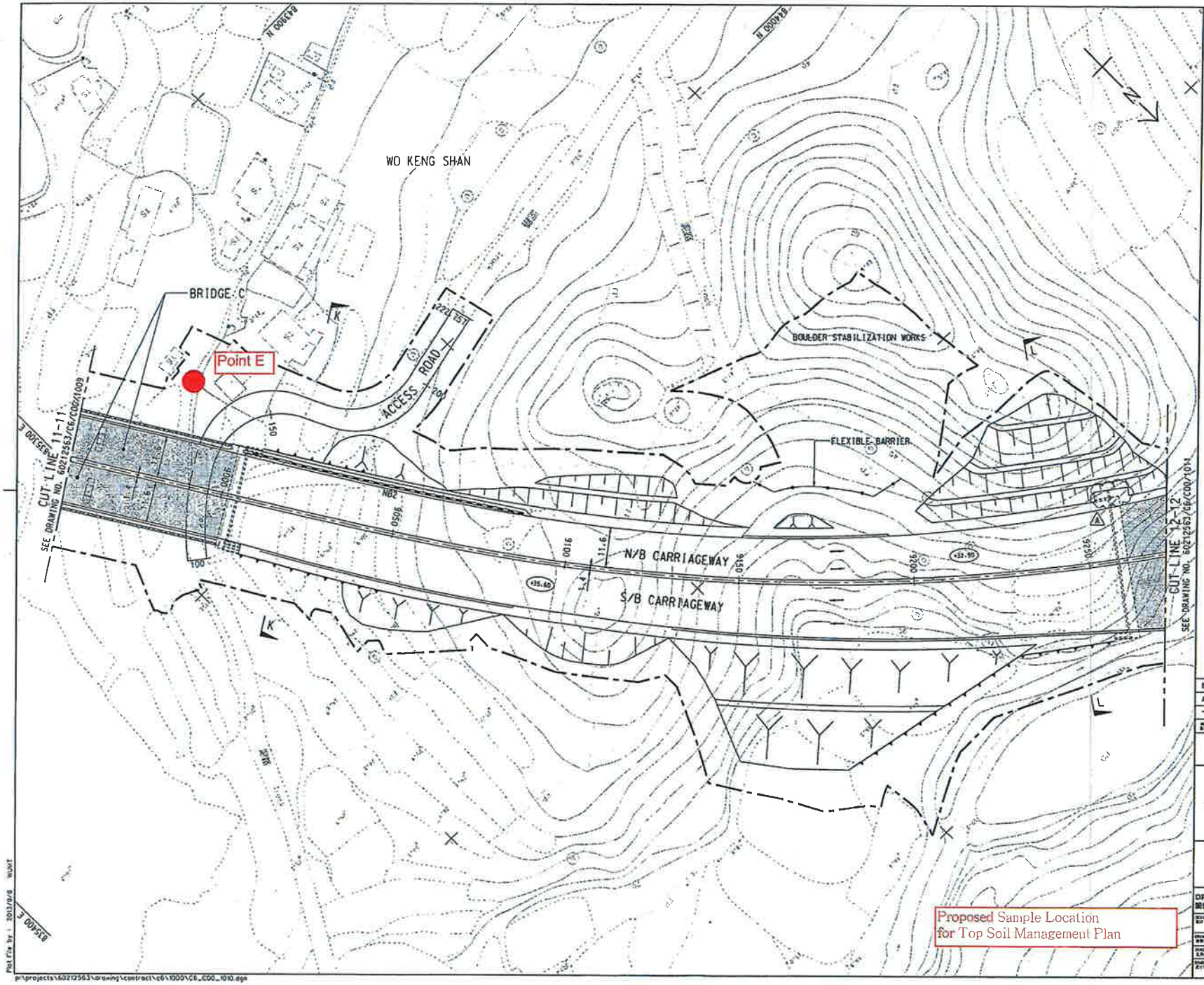
DRAWN BY ZJ | STATUS WORKING DRAWING

SCALE A1 1 : 500

ENGINEERING ARE IN METRES

Plot File by : 2013/5/31 WUNT

j:\projects\60212563\drawing\contract\c6\1000\C6_C00_1009.dgn



NOTE:

1. FOR NOTE AND LEGEND REFER TO DRAWING NO. 60212563/C6/C00/1001.

B	WORKING DRAWING	WLC	KWN	JUL-15
A	TENDER ADDENDUM NO. 2	WLC	KWN	SEP-13
-	TENDER DRAWING	WLC	KWN	MAY-13

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

LIANTANG/HEUNG YUEN WAI BOUNDARY CONTROL POINT SITE FORMATION AND INFRASTRUCTURE WORKS - CONTRACT 6

GENERAL LAYOUT

SHEET 10 OF 18

AECOM

DRG.NO. 60212563/C6/C00/1010B

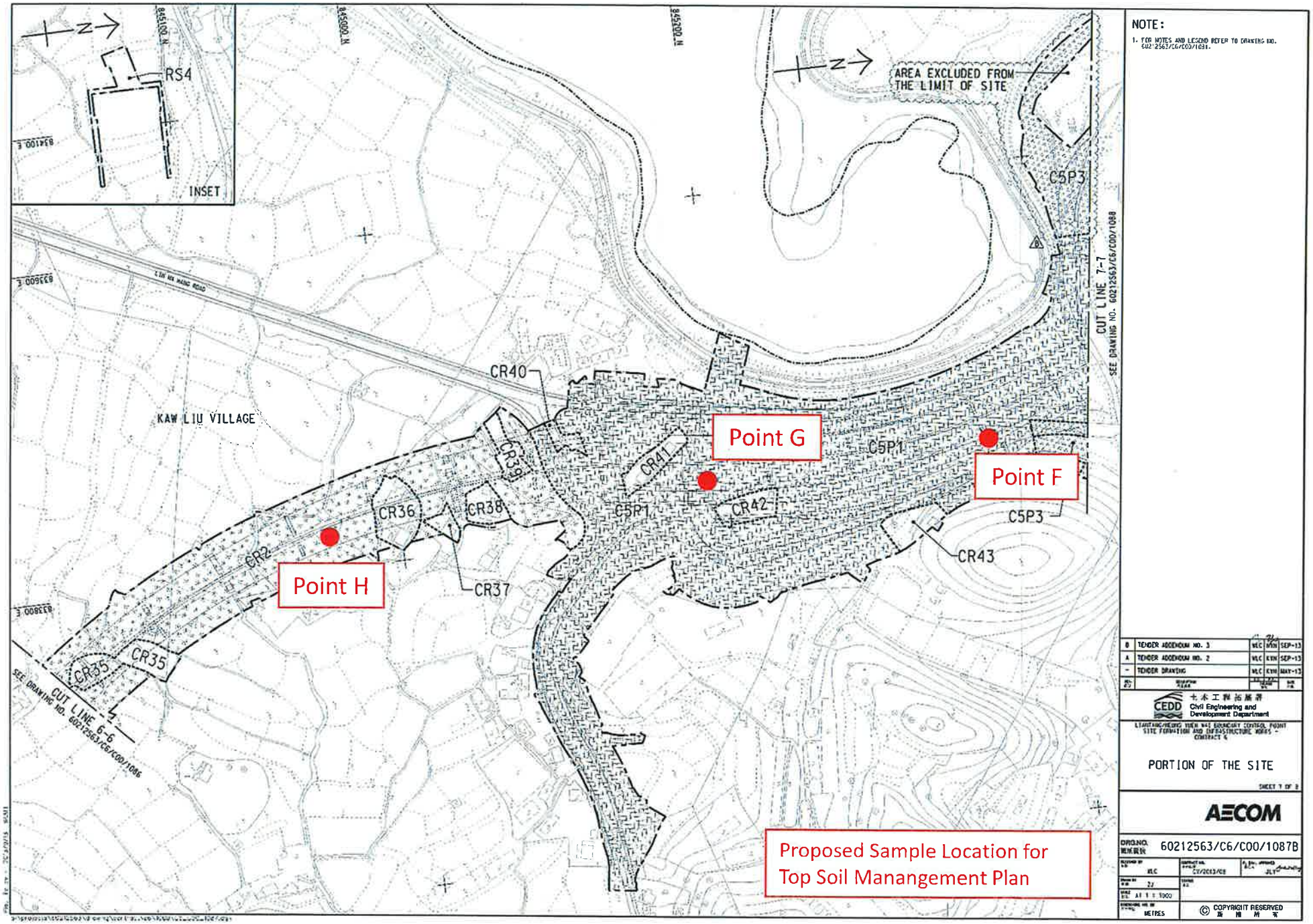
DESIGNED BY WLC | CONTRACT NO. CV/2013/08 | A. DIR. APPROVED JLY

DRAWN ZJ | STATUS WORKING DRAWING

SCALE A1 1 : 500 | DRAWING UNIT METRES

Plot File by : 2013/09/6 WUNT

p:\projects\60212563\drawing\contract\c6\1000\C6_C00_1010.dgn



NOTE:

1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60212563/C6/C03/1081.

B	TENDER ADDENDUM NO. 3	WLC	KYN	SEP-13
A	TENDER ADDENDUM NO. 2	WLC	KYN	SEP-13
-	TENDER DRAWING	WLC	KYN	MAY-13

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

LANTAU/HEUNG YUEN WAI BOUNDARY CONTROL POINT SITE FORMATION AND INFRASTRUCTURE WORKS - CONTRACT 6

PORTION OF THE SITE

SHEET 7 OF 8

AECOM

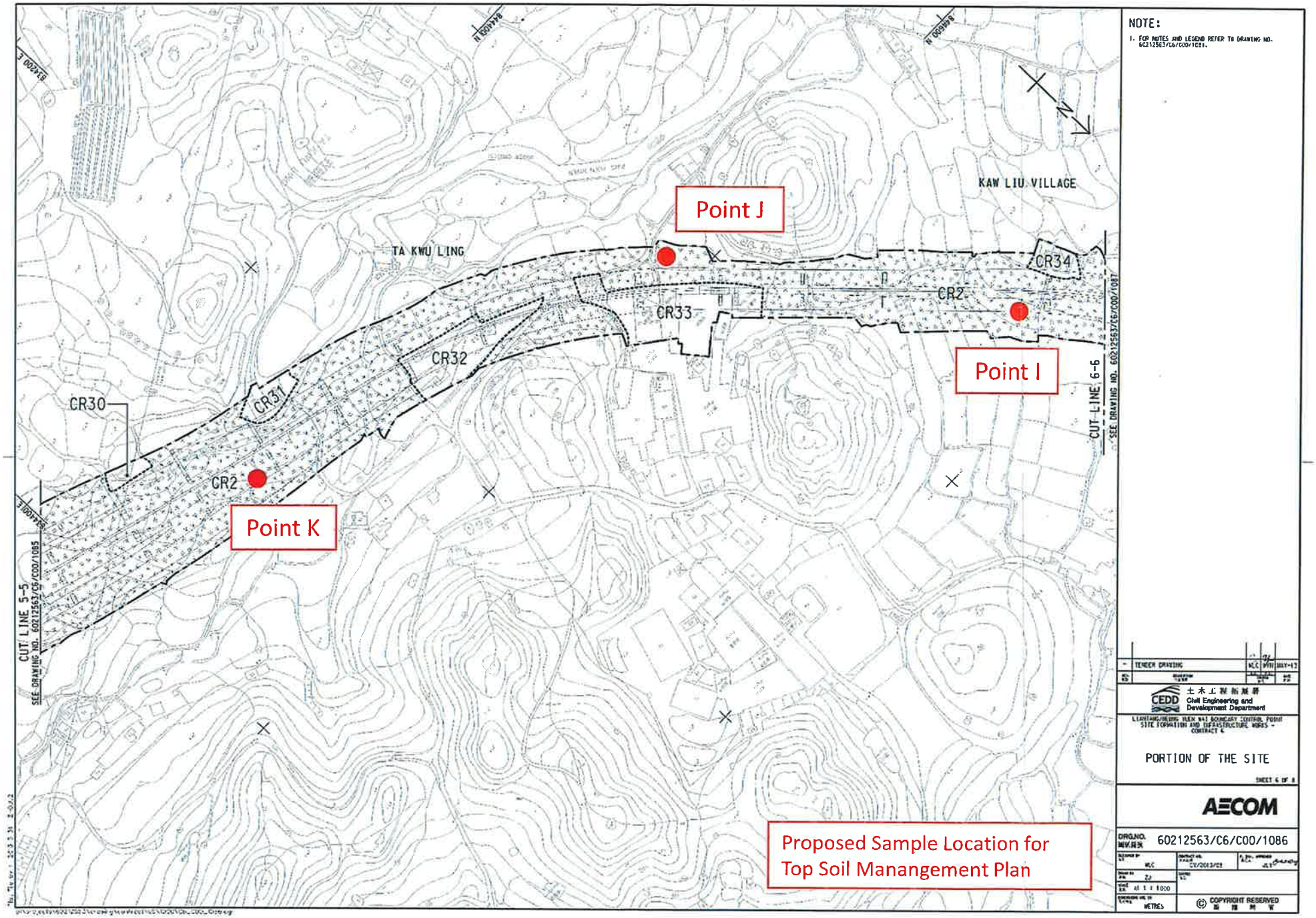
DRG.NO. 60212563/C6/C00/1087B

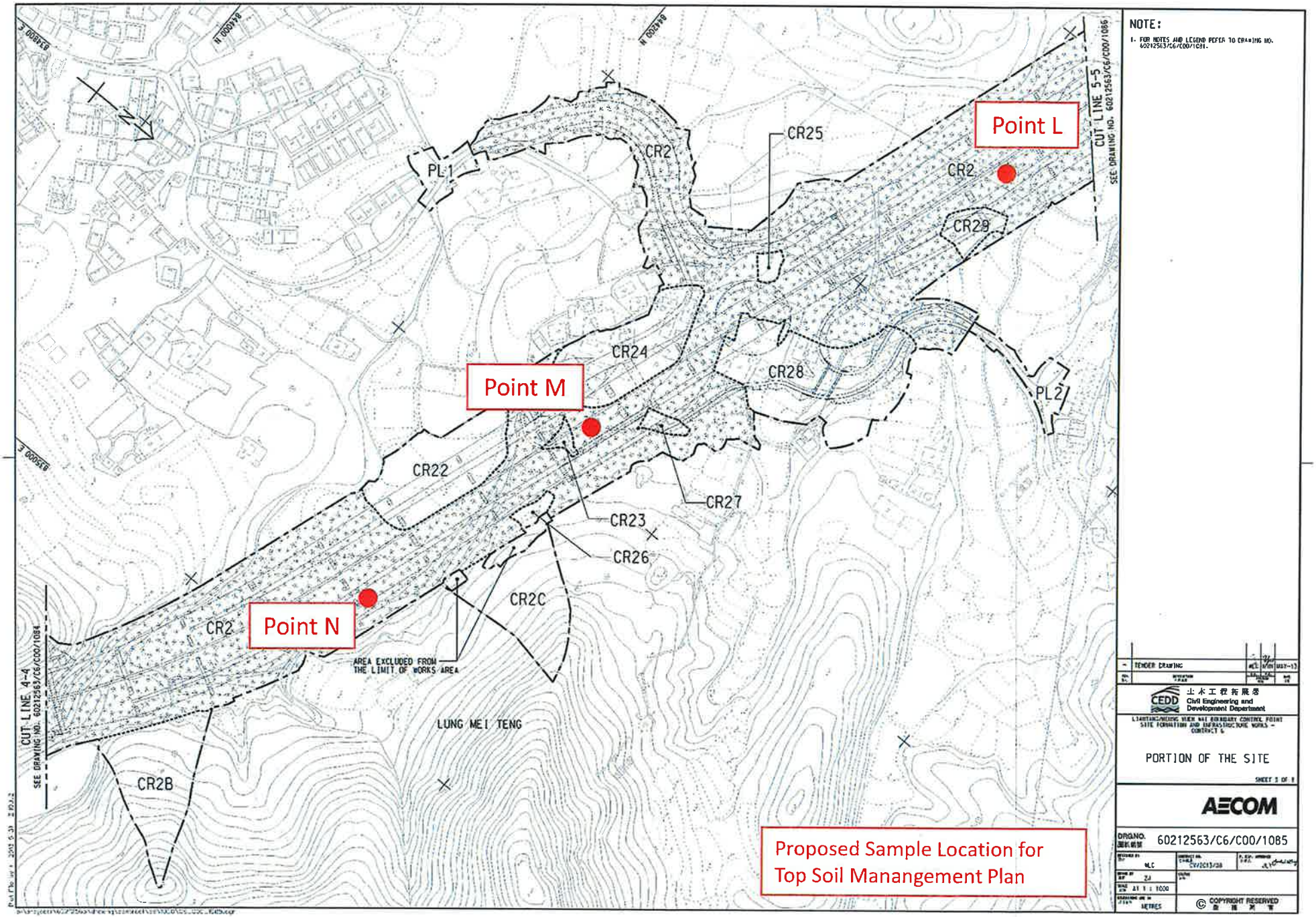
WLC | CV/2013/C6 | JLY

AT 1 : 1000

METRES

© COPYRIGHT RESERVED


Point J
Point I
Point K
KAW LIU VILLAGE
TA KWU LING
CR34
CR33
CR32
CR31
CR30
CR2
CR2
CUT LINE 6-6
SEE DRAWING NO. 60212563/C6/C00/1087
CUT LINE 5-5
SEE DRAWING NO. 60212563/C6/C00/1085
Proposed Sample Location for
Top Soil Manangement Plan
NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60212563/C6/C00/1081.
TENDER DRAWING
CEDD
Civil Engineering and Development Department
PORTION OF THE SITE
AECOM
DRG.NO. 60212563/C6/C00/1086
METRES
© COPYRIGHT RESERVED


Point L
Point M
Point N
CR2
CR25
CR29
CR24
CR28
CR22
CR27
CR23
CR26
CR2C
CR2B
PL1
PL2
CUT LINE 5-5
SEE DRAWING NO. 60212563/C6/C00/1086
CUT LINE 4-4
SEE DRAWING NO. 60212563/C6/C00/1084
AREA EXCLUDED FROM THE LIMIT OF WORKS AREA
LUNG MEI TENG
Proposed Sample Location for Top Soil Manangement Plan
NOTE:
1. FOR NOTES AND LEGEND REFER TO DRAWING NO. 60212563/C6/C00/1081.
TENDER DRAWING
CEDD
土木工程拓展署
Civil Engineering and Development Department
PORTION OF THE SITE
AECOM
DRG.NO. 60212563/C6/C00/1085
COPYRIGHT RESERVED

Appendix B

Analytical Testing Reports

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point A
Date of sampling	:	26/08/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/1
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	0.7 %
2. pH value of sample	4.0

Supervised by : H.Y. Chan

Certified by :

Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MateriaLab

Report No. : 153767CH152127(1)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point B
Date of sampling	:	26/08/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/2
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	0.5 %
2. pH value of sample	4.2

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 23/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(2)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point C
Date of sampling	:	26/08/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/3
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	<0.1 %
2. pH value of sample	4.5

Supervised by : H.Y. Chan

Certified by :

Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(3)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point D
Date of sampling	:	26/08/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/4
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.3 %
2. pH value of sample	3.6

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MateriaLab

Report No. : 153767CH152127(4)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point E
Date of sampling	:	26/08/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/5
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	99	%
1. Qualitative check for (i) sulphides	Not Detected	
(ii) chlorides	Not Detected	
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.5	%
2. pH value of sample	5.9	

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(5)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point F
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/6
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	99	%
1. Qualitative check for (i) sulphides	Not Detected	
(ii) chlorides	Not Detected	
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	2.8	%
2. pH value of sample	4.1	

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 29/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

Report No. : 153767CH152127(6)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point G
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/7
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.1 %
2. pH value of sample	5.5

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok YI Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MateriaLab

Report No. : 153767CH152127(7)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point H
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/8
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	99	%
1. Qualitative check for (i) sulphides	Not Detected	
(ii) chlorides	Not Detected	
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.7	%
2. pH value of sample	7.6	

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(8)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point I
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/9
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	99 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.5 %
2. pH value of sample	5.1

Supervised by : H.Y. Chan

Certified by :

Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(9)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point J
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/10
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.4 %
2. pH value of sample	5.7

Supervised by : H.Y. Chan

Certified by :

Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(10)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point K
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/11
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.3 %
2. pH value of sample	5.8

Supervised by : H.Y. Chan

Certified by :

Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

Report No. : 153767CH152127(11)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point L
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/12
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.2 %
2. pH value of sample	5.4

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(12)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point M
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/13
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	99	%
1. Qualitative check for (i) sulphides	Not Detected	
(ii) chlorides	Not Detected	
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	0.7	%
2. pH value of sample	4.5	

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.

FUGRO TECHNICAL SERVICES LIMITED
Fugro Development Centre,
5 Lok Yi Street, Tai Lam,
Tuen Mun, N.T.,
Hong Kong.

Tel : +852 2450 8233
Fax : +852 2450 6138
E-mail : matlab@fugro.com.hk
Website : www.materialab.com.hk

MaterialLab

Report No. : 153767CH152127(13)

Test Report on Analysis of Soil

Information Supplied by Client

Client	:	CRBC-CEC-KADEN Joint Venture
Client's address	:	Units 06-11, 23A/F., K. Wah Centre, 191 Java Road, North Point, Hong Kong
Project	:	Contract No. CV/2013/08 – Liantang / Heung Yuen Wai Boundary Control Point
Sample description	:	One sample of soil – Top soil
Client sample ID.	:	Point N
Date of sampling	:	04/09/2015
Test required	:	1. Organic matter content 2. pH value

Laboratory Information

Laboratory sample ID.	:	CH152127/14
Date of receipt of sample	:	09/09/2015
Date test commenced	:	09/09/2015
Date test completed	:	23/09/2015
Test method used	:	1. GEOSPEC 3: 2001 Test 9.1 2. GEOSPEC 3: 2001 Test 9.5

Results :

Sample passing a 2mm test sieve by oven-dry mass of the original sample	100 %
1. Qualitative check for (i) sulphides	Not Detected
(ii) chlorides	Not Detected
The organic matter content by oven-dry mass of the fraction of soil passing a 2 mm test sieve.....	1.8 %
2. pH value of sample	4.1

Supervised by : H.Y. Chan

Certified by :
Approved Signatory: HO Kin Man, John
Manager – Chemistry Department

Date : 25/9/2015

** End of Report **

Note : This report refers only to the sample(s) tested.