

Agreement No. CE 53/2008 (CE)

PLANNING AND ENGINEERING
STUDY ON DEVELOPMENT OF
LOK MA CHAU LOOP
- INVESTIGATION

**Contamination Assessment Plan
for Associated Infrastructure
outside Lok Ma Chau Loop
April 2013**



Civil Engineering and Development
Department and Planning
Department

Agreement No. CE53/2008(CE)

**Planning and Engineering Study
on Development of Lok Ma Chau
Loop - Investigation**




Contamination Assessment Plan for
Associated Infrastructure outside
Lok Ma Chau Loop

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1 Introduction

1.1 Background

On 26 May 2009, Planning Department (PlanD) in association with Civil Engineering and Development Department (CEDD) commissioned Ove Arup & Partners Hong Kong Limited (Arup) as the Consultant for undertaking the “Planning and Engineering Study on Development of LMC Loop – Investigation” (the P&E Study).

The P&E Study commenced on 1 June 2009 is to formulate a comprehensive plan for the development of the LMC Loop and the associated infrastructure based on higher education as the leading land use in the LMC Loop with some elements of new high-tech research and development facilities and creative industries incorporated. This project comprises the developments and infrastructure within the LMC Loop and the associated infrastructure outside LMC Loop.

CEDD previously applied for an EIA Study Brief under the EIAO, and the EIA Study Brief ESB-201/2008 was issued in January 2009. The aim of the EIA Study is to provide information on the nature and extent of environmental impacts arising from the construction and operation of the developments proposed under the Project and related works that take place concurrently.

In accordance with Section 3.4.9.4 and 3.4.9.5 of the EIA Study Brief ESB-201/2008, a Contamination Assessment Plan (CAP), Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) for the Project within LMC Loop have been prepared and received no further comments from EPD on 14 September 2009 and 12 August 2010 respectively. Subsequently, further Environmental Investigation (EI) works have been conducted to ascertain the extent of the contamination identified within LMC Loop and the findings are presented in the Supplementary CAR/RAP for the Project within LMC Loop which was accepted by EPD on 26 October 2011.

Subsequently, an updated EIA Study Brief (No. ESB-238/2011) under section 5(1)(a) of the Environmental Impact Assessment Ordinance (EIAO) has been issued on 12 December 2011 to adjust the Study Area due to the need to accommodate the alignment of the proposed transport infrastructure falling outside the original Study Area in EIA Study ESB-201/2008. The Revised Overall Study Area, which includes LMC Loop of about 87 ha, and the associated infrastructure outside LMC Loop (i.e. Area B and Added Area B), is shown in **Figure 1.1**.

The development of the LMC Loop and various alignment / location options of the proposed supporting infrastructure outside the LMC Loop including Direct Link to MTR Lok Ma Chau Station, Eastern Connection Road, Western Connection Road and the Flushing Water Service Reservoir were studied in terms of planning and engineering feasibilities in the course of P&E Study. The alignments of the aforesaid associated infrastructure have now been confirmed as one of the outputs of the P&E Study, which formed part of the Project as shown in **Figure 1.2**.

A memo was issued by CEDD dated 12 Sept 2012 (Ref. NTNTPF 2/6/44 (E)) to confirm that the Project will only involve the development in LMC Loop and the associated infrastructures outside LMC Loop as shown in **Figure 1.2**. There will not be any works / development other than the proposed infrastructure outside LMC Loop under the Project. Therefore, the boundaries of the Project and associated areas under the Project (i.e. the assessment area as shown in **Figure 1.3**) comprises of the works sites including footprint of associated infrastructure, working space and works areas. EPD has confirmed that the EIA shall be prepared in accordance with the latest project area (i.e. the proposed items referred in aforementioned paragraph which include Area A of LMC Loop, Direct Link to MTR Lok Ma Chau Station, Eastern Connection Road, Western Connection Road and the Flushing Water Service Reservoir) on 24 Sept 2012 (Ref. (62) in EP2/G/S3/152) and the reply from EPD is extracted as below.

“In accordance with Section 6.2 of the EIA Study Brief, and on the understanding that your reduced project scope will still be within the project boundary stipulated in your Project Profile No. PP-455/2011, which the current EIA Study Brief is based upon, and that there will not be any change in project features as compared with the information in your Project Profile, there is no need for you to apply for a new EIA Study Brief as a result of reducing your project scope.

Having said so, please be reminded that the forthcoming EIA report to be formally submitted under the EIAO shall be consistently prepared in accordance with your latest project scope, in particular on the justifications and needs of the developments to be proposed.”

Section 3.4.9.4 of the updated EIA Study Brief specified that land contamination assessment shall be undertaken and that Contamination Assessment Plan (CAP) shall be submitted to the EPD prior to conducting the assessment.

As mentioned before, the CAP for the Project within LMC Loop was accepted by EPD in 2009. Therefore, this report presents the CAP for the associated infrastructure outside LMC Loop as shown in Figure 1.2. The contamination assessment area for the associated infrastructure outside LMC Loop should be the same as the boundaries of the Project and associated areas under the Project as shown in **Figure 1.3** and **Figures 1.3a - 1.3f** respectively. There will not be any works/development outside the contamination assessment area as shown in **Figure 1.4** under the present EIA Study.

The superimposition of the original Study Area, as referred in the EIA Study Brief ESB-238/2011, and the revised assessment area referred in this CAP is shown in **Figure 1.4**.

1.2 Objectives of CAP

The purpose of this CAP is to provide information, guidance and instruction to characterise land contamination and identify where contaminations are or may be present before the construction of associated infrastructure outside LMC Loop as shown in **Figure 1.2** and **Figure 1.4**. In accordance with Sections 3.4.9.3 & 3.4.9.4 of the EIA Study Brief, the objectives of this CAP are:

- To provide an account of the land use within the contamination assessment area and relevant past land use history in relation to possible land contamination;
- To identify areas of potential contamination and the associated impacts, risks or hazards; and
- To identify the chemicals of concern and scoping of requirements for sampling and laboratory testing of soil and groundwater samples, if required.

1.3 Statutory Legislation and Evaluation Criteria

This CAP is prepared in accordance with the following Technical Memorandum and Guidance Notes:

- Annex 19 of the Technical Memorandum on Environmental Impact Assessment Process (TM-EIA), Guidelines for Assessment of Impact On Sites of Cultural Heritage and Other Impacts (Section 3: Potential Contaminated Land Issues), EPD, 1997;
- Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management, EPD, 2007;
- Guidance Notes for Contaminated Land Assessment and Remediation, EPD, 2007; and
- Practice Guide for Investigation and Remediation of Contaminated Land, EPD, 2011.

In accordance with EPD's *Practice Guide for Investigation and Remediation of Contaminated Land*, a contamination assessment evaluation should:

- provide a clear and detailed account of the present land-use and the relevant past land history, in relation to possible land contamination;
- identify areas of potential contamination and associated impacts, risks or hazards; and
- submit a plan to evaluate the actual contamination conditions for soil and/or groundwater, if required.

The EPD's Guidance Note includes a summary of the general steps of a contamination assessment study.

Under Annex 19 of the TM-EIAO, a number of potentially contaminating historical land uses should be considered, including oil installations, gas works, metal workshops, car repair and dismantling workshops, which have the potential to cause or have caused land contamination.

This CAP, which is one of the land contamination assessment submissions as required under EIA Study Brief (No. ESB-238/2011), sets out the requirements for a baseline contamination evaluation of the contamination assessment area for the associated infrastructure outside LMC Loop as shown in **Figure 1.4**. A CAR will be prepared following site investigation activities. If contamination is identified in the CAR, a RAP will be developed to deal with these areas prior to or

during the construction works for the associated infrastructure outside LMC Loop. The RAP would follow the requirements specified in EPD's *Practice Guide for Investigation and Remediation of Contaminated Land*. A Remediation Report (RR) would be prepared to demonstrate adequate clean-up and submitted to EPD for agreement prior to the commencement of construction/development works of the Project.

2 Initial Site Appraisal

2.1 Desktop Review

In order to identify the potential land contamination concerns, a desktop study has been conducted to review past and present land uses and activities in the contamination assessment area for the associated infrastructure outside LMC Loop. The information reviewed includes:

- Relevant Outline Zoning Plans (OZPs) in the vicinity of the Project;
- Hong Kong Geological Survey Map;
- Selected historical aerial photographs between 1973 and 2010;
- “Mapping Hong Kong, A Historical Atlas”, Government Information Services, 1992; and
- “Sheung Shui to Lok Ma Chau Spur Line Contaminated Land Assessment, Contamination Assessment Report (CAR) and Remediation Action Plan (RAP) Final (May 2002) with Addendum (August 2002) (2141/913)”, MTR, 2002.

2.1.1 Aerial Photographs and Historical Land Use

The historical aerial photographs reviewed are shown in **Appendix A**. Current and historical land uses identified in the contamination assessment area for the associated infrastructure outside LMC Loop are summarised below.

2.1.1.1 Year 1973

Direct Link to Lok Ma Chau Station

The area mainly consisted of agricultural land and fish ponds. Village type building structures were also observed nearby (1973a of **Appendix A**).

Western Connection Road

Natural terrains and village type building structures were observed near the upper section while the lower section mainly consisted of agricultural land and fish ponds. (1973a and b of **Appendix A**).

Eastern Connection Road

The area mainly consisted of natural terrain and agricultural land. Village type building structures were also observed nearby (1973c of **Appendix A**).

Flush Water Service Reservoir

The area mainly consisted of natural terrain. (1973c of **Appendix A**).

2.1.1.2 Year 1982

Direct Link to Lok Ma Chau Station

No significant change in land use was observed as compared with Year 1973 (1982a of **Appendix A**) except a few temporary structures was erected on the open space opposite to the village houses along Lok Ma Chau Road.

Western Connection Road

No significant change in land use was observed in the upper section as compared with Year 1973 (1982a and b of **Appendix A**).

Eastern Connection Road

No significant change in land use was observed as compared with Year 1973 except that there was an increase in the number of fish ponds in the surrounding area. An open bare ground was observed next to the fish ponds (1982c of **Appendix A**).

Flush Water Service Reservoir

No significant change in land use was observed as compared with Year 1973 (1982c of **Appendix A**).

2.1.1.3 Year 1993

Direct Link to Lok Ma Chau Station

Construction of San Sham Road and Lok Ma Chau Border Control Point was completed and in operation. No significant change in land use was observed in the surrounding area as compared with Year 1982 (1993a of **Appendix A**).

Western Connection Road

No significant change in land use was observed in the upper section as compared with Year 1982. Construction of San Tin Interchange and Fanling Highway was completed and in operation. Besides, there was a significant decrease in the extent of agricultural land use especially north and northwest to the San Tin Interchange, which had been changed to container truck parking area and container yard with maintenance workshop. (1993a and b of **Appendix A**).

Eastern Connection Road

Construction of Lok Ma Chau Police Station was completed and in operation. No significant change in surrounding land use was observed as compared with Year 1982. (1993c of **Appendix A**).

Flush Water Service Reservoir

No significant change in land use was observed as compared with Year 1982 (1993c of **Appendix A**).

2.1.1.4 Year 2000

Direct Link to Lok Ma Chau Station

No significant change in land use was observed as compared with Year 1993 (2000a of **Appendix A**).

Western Connection Road

No significant change in land use in the upper section was observed as compared with Year 1993. For the lower section, construction of Chau Tau West Road, Chau Tau South Road and the Lok Ma Chau Public Transport Interchange was in progress. A nullah was also observed at the south of Fanling Highway (2000a and b of **Appendix A**).

Eastern Connection Road

No significant change in land use was observed as compared with Year 1993 (2000c of **Appendix A**).

Flush Water Service Reservoir

No significant change in land use was observed as compared with Year 1993 (2000c of **Appendix A**).

2.1.1.5 Year 2005

Direct Link to Lok Ma Chau Station

Construction of Lok Ma Chau Station and its ventilation buildings, the at-grade and viaduct sections of Lok Ma Chau Spur Line was in progress. A nullah was under construction to the west of the San Sham Road. Agricultural activities near the Lok Ma Chau Station were ceased (2005a of **Appendix A**).

Western Connection Road

No significant change in land use in the upper section was observed as compared with Year 2000. For the lower section, the agricultural land to the north of contamination assessment area was changed to paved open car park. The Lok Ma Chau Public Transport Interchange was in operation and the MTR Spur Line Site Office was erected. A piece of unpaved area, which was the site area of Fanling Highway modification works for provision of new connection road between Fanling Highway and LMC Border Control Point, was observed at the south of Fanling Highway (2005a and b of **Appendix A**).

Eastern Connection Road

No significant change in land use was observed as compared with Year 2000 (2005c of **Appendix A**).

Flush Water Service Reservoir

No significant change in land use was observed as compared with Year 2000 (2005c of **Appendix A**).

2.1.1.6 Year 2010

Direct Link to Lok Ma Chau Station

Lok Ma Chau Station was in operation and the nullah was constructed. Vegetation was observed near Lok Ma Chau Station. No significant change in land use was observed in the surrounding area as compared with Year 2005 (2010a of **Appendix A**).

Western Connection Road

No significant change in land use in the upper section was observed as compared with Year 2005. The viaduct construction between San Sham Road and San Tin Highway was completed and in operation. The previous MTR Spur Line Site Office was changed to taxi chit waiting area. The unpaved area at the south of Fanling Highway was re-vegetated (2010a and b of **Appendix A**).

Eastern Connection Road

No significant change in land use was observed as compared with Year 2005 (2010c of **Appendix A**).

Flush Water Service Reservoir

No significant change in land use was observed as compared with Year 2005 (2010c of **Appendix A**).

2.2 Site Geology

Area around Direct Link to Lok Ma Chau Station and Western Connection Road

For the area around Direct Link to Lok Ma Chau Station and Western Connection Road, the geological materials consist of fill, alluvium, saprolite with corestones, variably decomposed rock, and rock.

Fill consisting variable clay, silt, sand, gravel and cobbles was encountered from ground level. The encountered thickness of fill varied between 0.50 m to 5.10 m. Alluvium comprising variable clay, silt, and gravel and cobbles was encountered beneath fill. The encountered thickness of alluvium varied between 4.00 m and 14.30 m. Saprolite with corestones derived from the in situ weathering of metasiltstone and metasandstone was encountered beneath fill or alluvium. The saprolite with corestones comprised clayed silt and silty sand with corestones of highly and moderately decomposed rock. The thickness of saprolite with corestones varied between 2.00 m and 33.00 m. Variably decomposed rock was encountered beneath fill or saprolite. The variably decomposed rock comprised variable highly to slightly, locally completely, decomposed rock with no sections greater than 5 m in continuous length of moderately decomposed or better rock. The thickness of variably decomposed rock varied between 2.60 m and 42.44 m. Rock comprising greater than 5 continuous metres of moderately decomposed metasiltstone and metasandstone or better was encountered beneath variably decomposed rock. The strength of the rock was moderately weak to strong. The penetrated thickness of rock varied between 5.01 m and 51.67 m.

Area around Eastern Connection Road and Flush Water Service Reservoir

For the area around the Eastern Connection Road, the geological materials consist of fill, colluviums, alluvium, saprolite with corestones, variably decomposed rock, and rock.

Top soil comprising sandy clayey silt with gravel was encountered from ground level. The encountered thickness of top soil was approximately 0.50 m. Fill comprising variable clay, silt and sand with gravel was encountered from ground level or beneath top soil. The encountered thickness of fill varied between 0.50 m to 2.00 m. Colluvium comprising variable clay, silt and sand with gravel and cobbles was encountered from ground level, beneath top soil or fill. The

encountered thickness of colluviums varied between 0.50 m and 2.60 m. Alluvium comprising clayey silty sand, sandy clayey silt and gravel and cobbles was encountered beneath fill. The encountered thickness of alluvium varied between 2.10 m and 4.00 m. Saprolite derived from the in situ weathering of metasandstone and metasilstone was encountered beneath colluviums or alluvium. The Saprolite comprised variable silt and sand with gravel. The thickness of Saprolite varied between 0.50 m to 7.00 m. Variably decomposed rock comprising completely to slightly decomposed metasandstone with less than 5 continuous metres of moderately decomposed or better rock, was encountered beneath colluviums or saprolite with corestones. The encountered thickness of variably decomposed rock varied between 4.77 m and 29.10 m. Rock comprising greater than 5.00 continuous metres of moderately decomposed metasandstone or better was encountered beneath variably decomposed rock. The strength of the rock was moderately strong to strong. The penetrated thickness of rock varied between 5.98 m to 6.82 m.

2.3 Site Survey

Site surveys were conducted in February 2012 to ground truth the findings of desktop study and to identify any other land uses in the contamination assessment area which may have the potential for causing soil contamination.

Photo records of the site survey are given in **Figure 2.1** and **Figure 2.1a - 2.1f**, and the findings of the surveys are summarised as follows:

Direct Link to Lok Ma Chau Station (**Figure 2.1a** refers)

The contamination assessment area mainly consisted of fish ponds and agricultural lands, intersecting with San Sham Road and the nullah. The area extends westward towards Lok Ma Chau Station with no industrial activity identified. Location of the surveyed site LMC-1 (MTR Lok Ma Chau Station) is shown in **Figure 2.2** and its details are presented in **Appendix B**.

Western Connection Road (**Figures 2.1a - 2.1d** refer)

The upper section of the contamination assessment area comprised of fish ponds along Ha Wan Tsuen and Lok Ma Chau Road. For the lower section, Lok Ma Chau Public Transport Interchange, a taxi waiting area, and a fenced government land were observed. The contamination assessment area also includes part of the Fanling Highway, San Tin Highway and San Tin Interchange. No industrial activity with land contamination potential was identified. Locations of the surveyed sites LMC-2 (open storage area of construction materials, mainly woods and metals), LMC-3 (Lok Ma Chau Public Transport Interchange), LMC-4 (fenced-off government land (former LMC Spur Line site offices)) and LMC-5 (open storage area of construction materials, mainly woods and metals) are shown in **Figure 2.2** and their details are presented in **Appendix B**.

Eastern Connection Road (**Figures 2.1e - 2.1f** refer)

The contamination assessment area mainly consisted of fish ponds, agricultural land and natural terrain. Only Lok Ma Chau Police Station was identified and thus no industrial activity was observed.

Flush Water Service Reservoir (Figure 2.1e refers)

The contamination assessment area consisted of natural terrain only and no industrial activity was identified.

2.4 Other Relevant Information

Acquisition of other relevant information from Fire Services Department (FSD) and Environmental Protection Department (EPD) was summarized below.

2.4.1 Fire Services Department

The Fire Services Department (FSD) has been contacted in January 2013 for

- (i) The records of Dangerous Goods License(s), and
- (ii) The reported accidents of spillage/leakage within the contamination assessment area.

Based on the information provided by FSD in February 2013, there has been no record of dangerous goods licence issued and incident record found within the contamination assessment area. Only 2 types of dangerous goods including Acetylene and Oxygen were reported to have stored within the contamination assessment area.

The copy of letter to FSD and the formal reply of FSD are given in **Appendix C**.

2.4.2 Environmental Protection Department

The Environmental Protection Department (EPD) has been contacted in January 2013 for

- (i) The records of Chemical Waste Producers Registration, and
- (ii) The reported accidents of spillage/leakage within the contamination assessment area.

Based on the information provided by EPD in February 2013 and a review on the registry of chemical waste producers in EPD's Territory Control Office, neither records of Chemical Waste Producers Registration nor accidents of spillage/leakage within the contamination assessment area have been found. The copy of letter to EPD and the formal email reply of EPD are given in **Appendix D**.

3 Potentially Contaminated Sites

3.1 Identification of Potentially Contaminated Sites

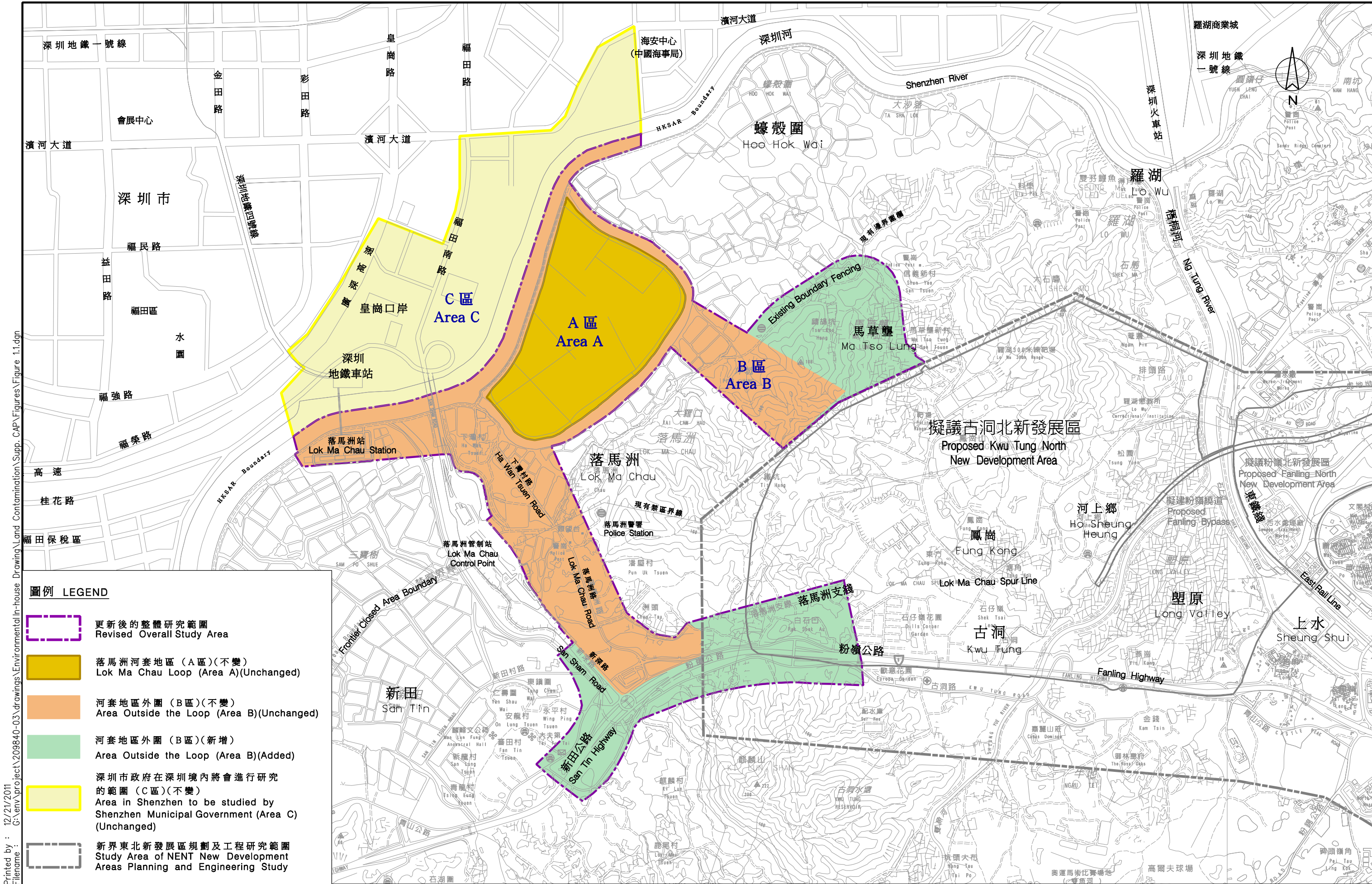
Identification of potentially contaminated sites within the contamination assessment area for the associated infrastructure outside LMC Loop was carried out based on the criteria stipulated in EPD's *Practice Guide for Investigation and Remediation of Contaminated Land*. Information collected from desktop review of available historical records e.g. historical aerial photos and from site survey have been used to assist the identification of potentially contaminated sites.

Since the construction works for the associated infrastructure outside LMC Loop will be confined within the contamination assessment area as shown in **Figure 1.3**, **Figure 1.3a to 1.3f**, and **Figure 1.4**, and there were no land contamination activities such as motor vehicle maintenance workshops, petrol filling stations etc. observed within the contamination assessment area (refer to **Appendix B** for details), based on the above approach, no potentially contaminated site was identified in the contamination assessment area for the associated infrastructure outside LMC Loop.

3.2 Re-appraisal of Contamination Assessment Area

As the construction of the associated infrastructure outside the LMC Loop would only commence a number of years later, there may be changes in land usage within the entire contamination assessment area. Therefore, re-appraisal of this area would be required to assess the prevailing site situation after the land is handed over to the Project Proponent (PP). The purpose of the re-appraisal is to review any land use changes after the approval of this CAP but before the commencement of the development could be addressed. Where re-appraisal or re-assessment is required, the PP would prepare and submit a Supplementary CAP to EPD to present the findings of the re-appraisal work. Following on from the submission of Supplementary CAP and completion of Site Investigation, if any, the PP would prepare a CAR, a RAP and a RR and submit to EPD for agreement prior to the commencement of work on the development.

Figures



圖例 LEGEND

- 更新後的整體研究範圍
Revised Overall Study Area
- 落馬洲河套地區 (A區)(不變)
Lok Ma Chau Loop (Area A)(Unchanged)
- 河套地區外圍 (B區)(不變)
Area Outside the Loop (Area B)(Unchanged)
- 河套地區外圍 (B區)(新增)
Area Outside the Loop (Area B)(Added)
- 深圳市政府在深圳境內將會進行研究的範圍 (C區)(不變)
Area in Shenzhen to be studied by Shenzhen Municipal Government (Area C)(Unchanged)
- 新界東北新發展區規劃及工程研究範圍
Study Area of NENT New Development Areas Planning and Engineering Study

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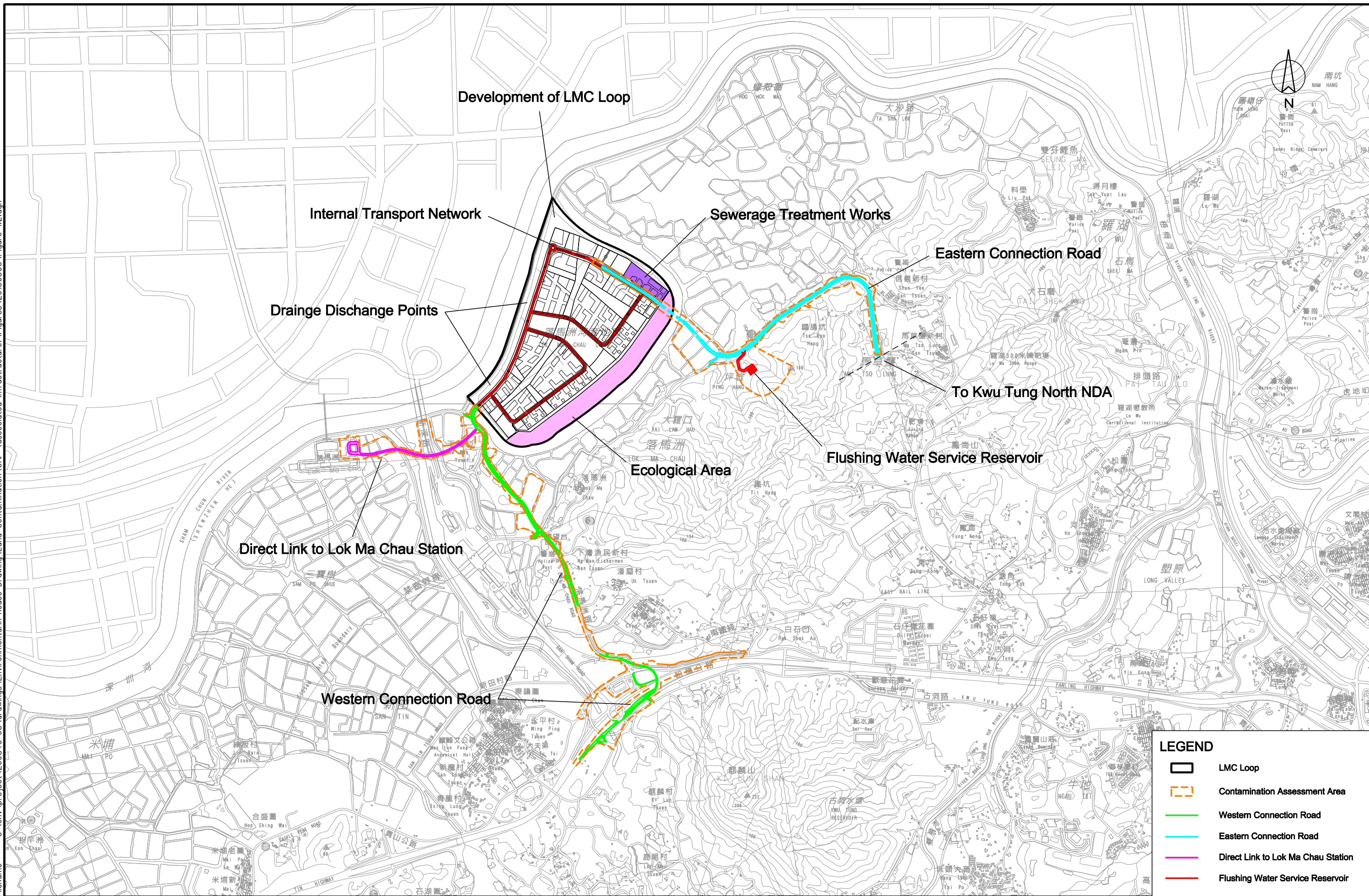
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Location Plan of
Revised Study Area

Rev	Description	Date
-	FIRST ISSUE	12/11

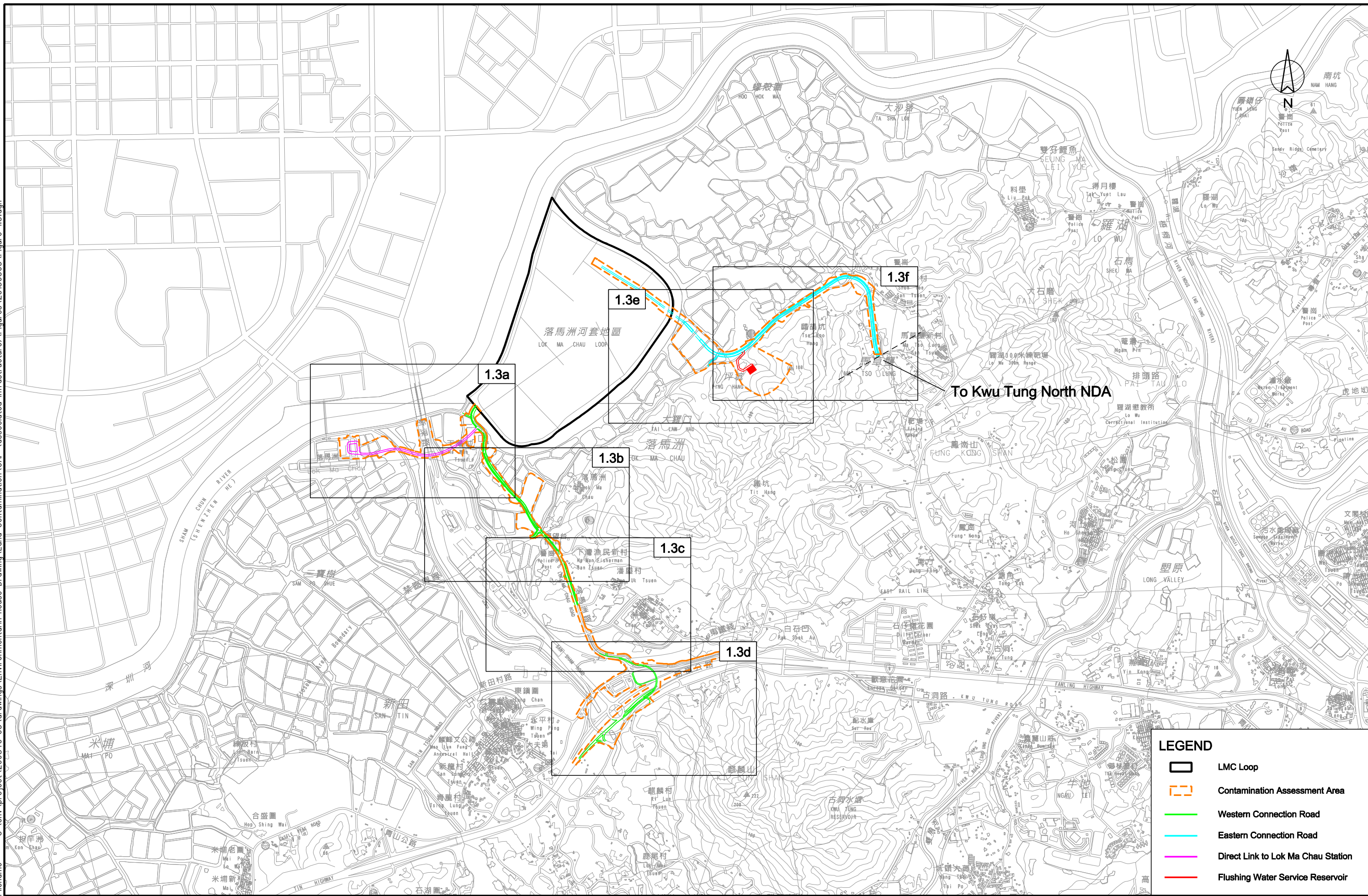
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LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir

CEDD 土木工程拓展署
 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

PLANNING DEPARTMENT 規劃署

ARUP Ove Arup & Partners Hong Kong Limited

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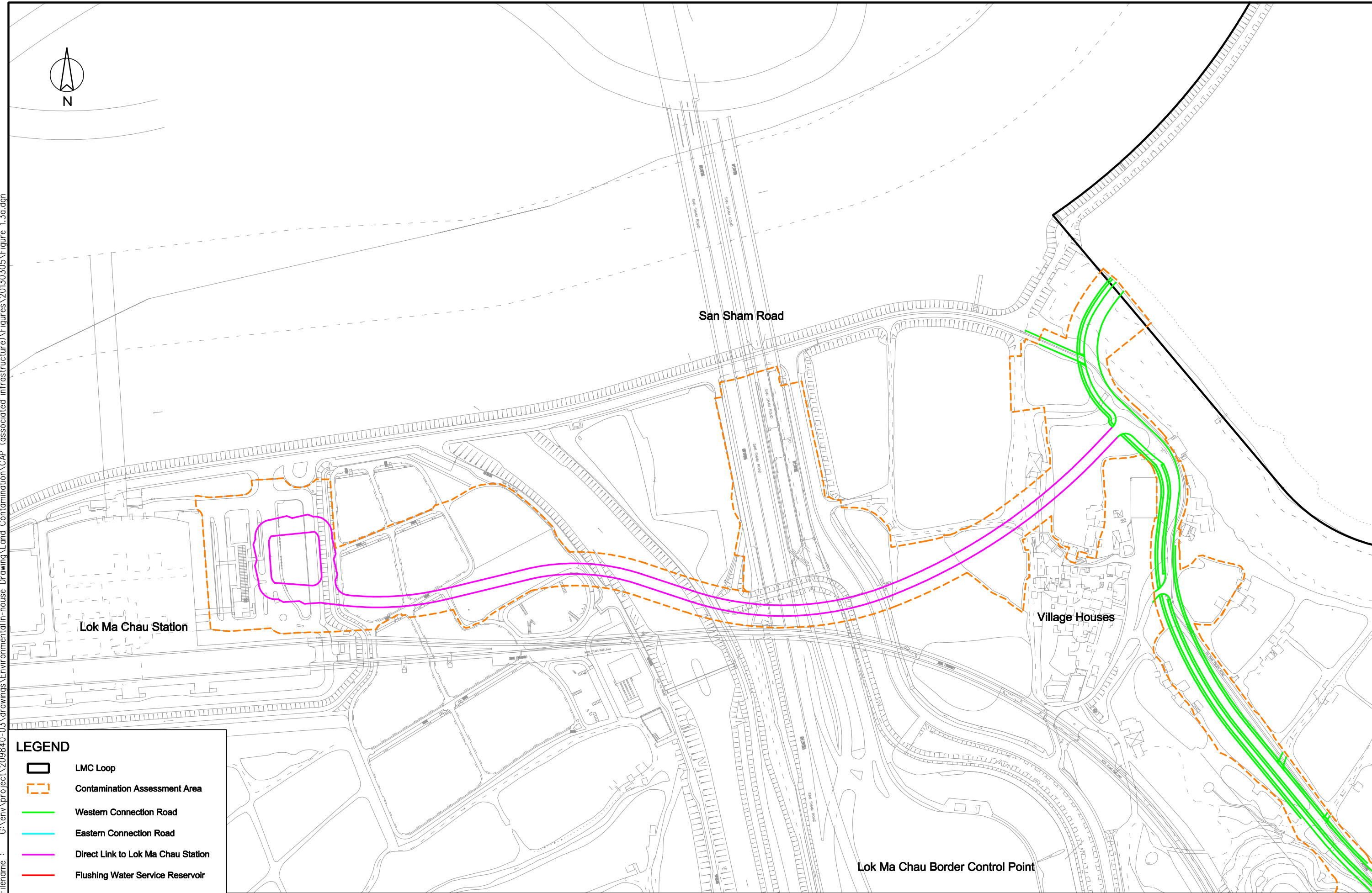
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A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

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Figure 1.3
 Rev. **A**

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LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir



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Agreement No. CE 53/2008 (CE)
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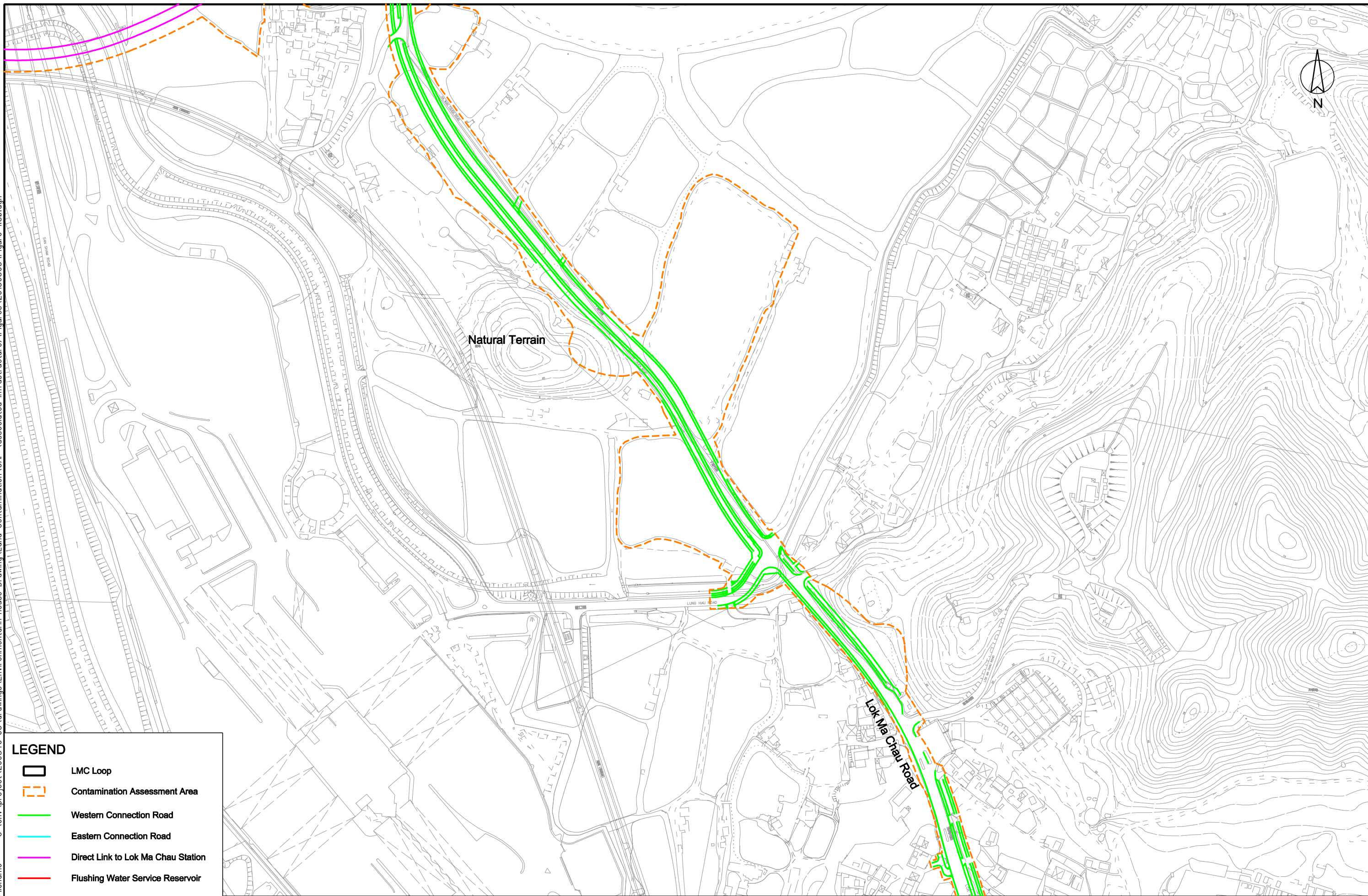
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Contamination Assessment
Area (Sheet 2 of 7)

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A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12







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 Rev. **A**

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LEGEND

-  LMC Loop
-  Contamination Assessment Area
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flushing Water Service Reservoir



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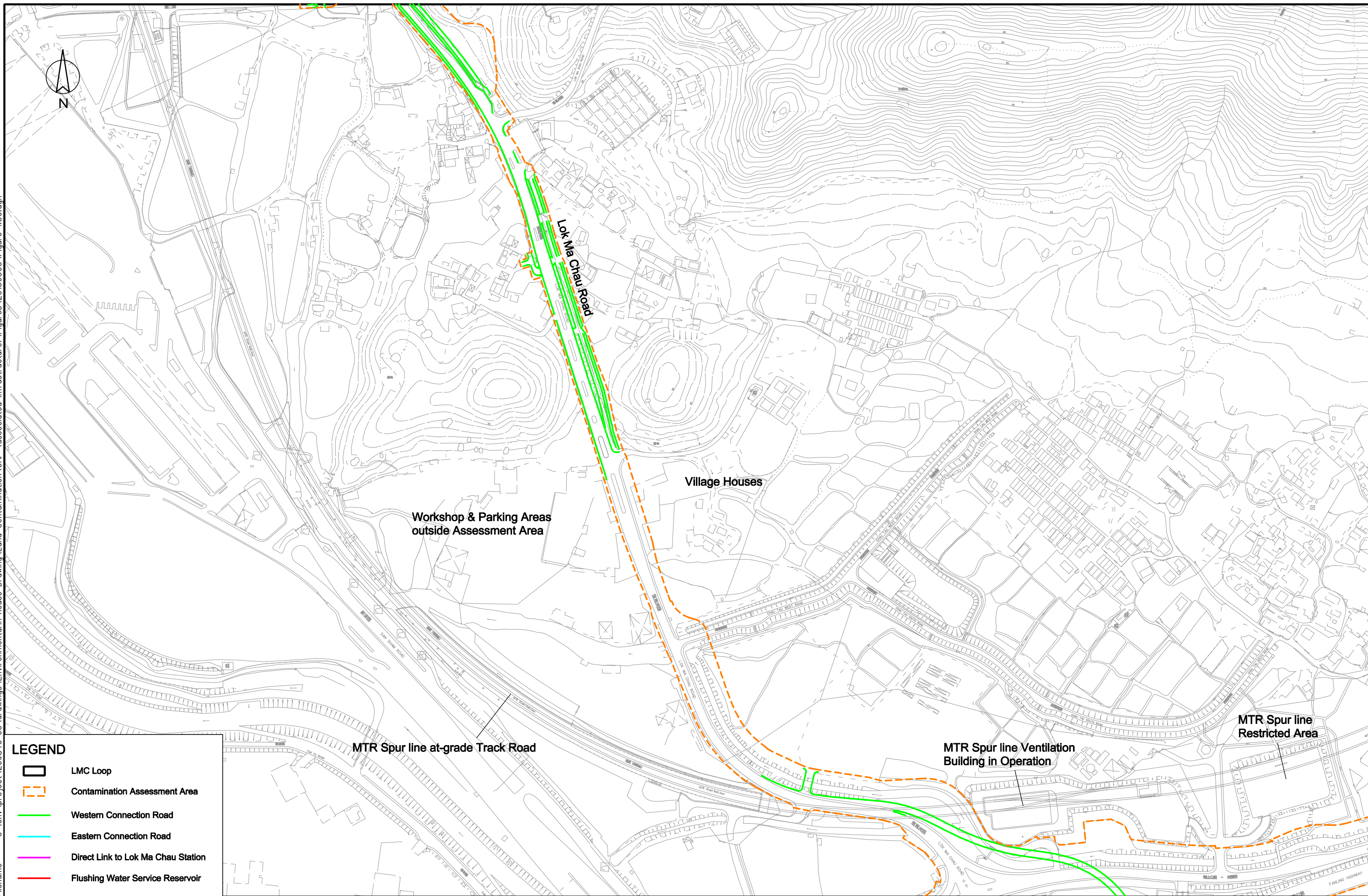
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Contamination Assessment
Area (Sheet 3 of 7)

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1.3b
 Rev. **A**

Printed by : 3/20/2013
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 1.3c.dgn



LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

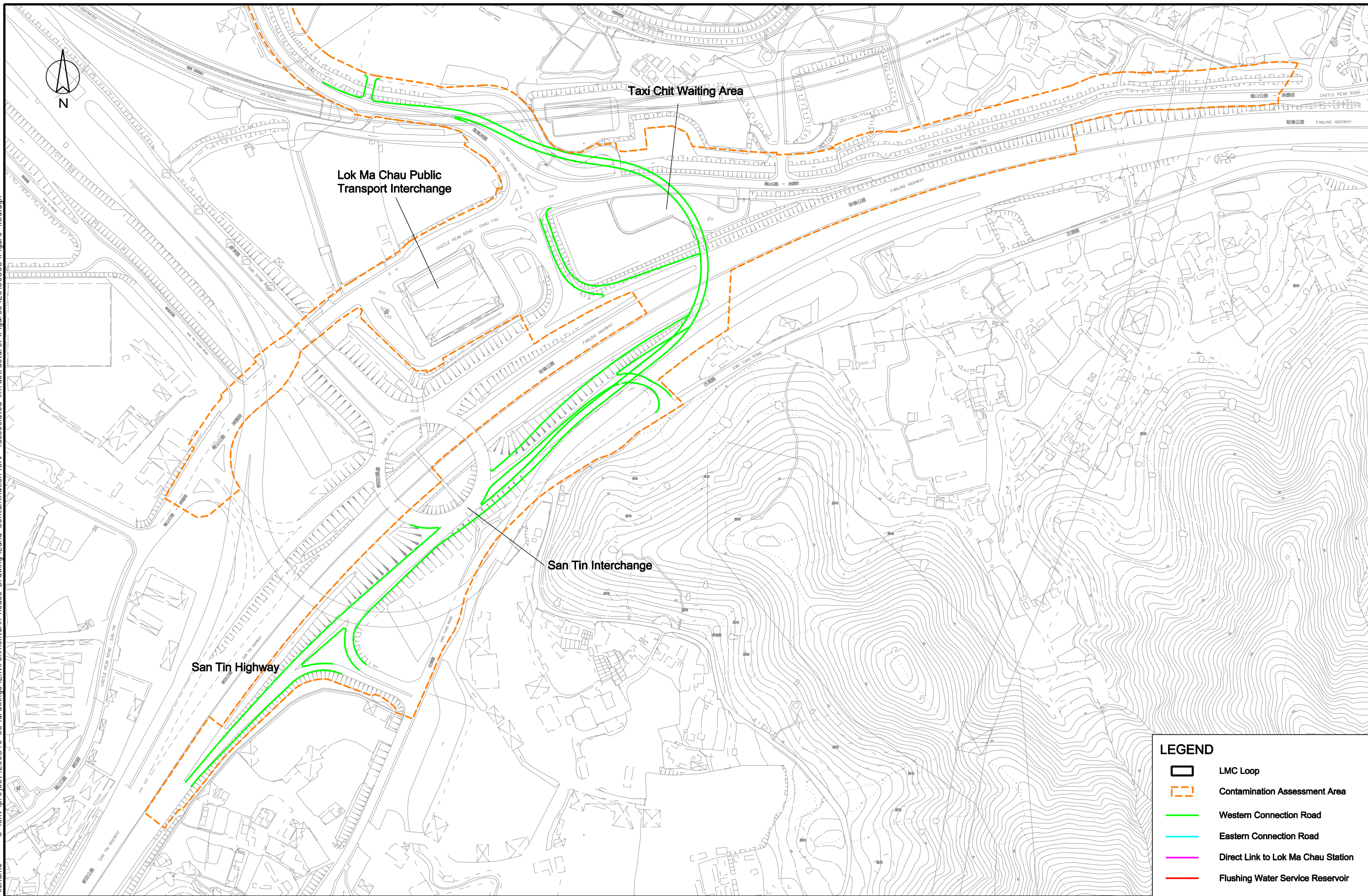
Drawing Title
Contamination Assessment
Area (Sheet 4 of 7)

Rev	Description	Date
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-	FIRST ISSUE	12/12

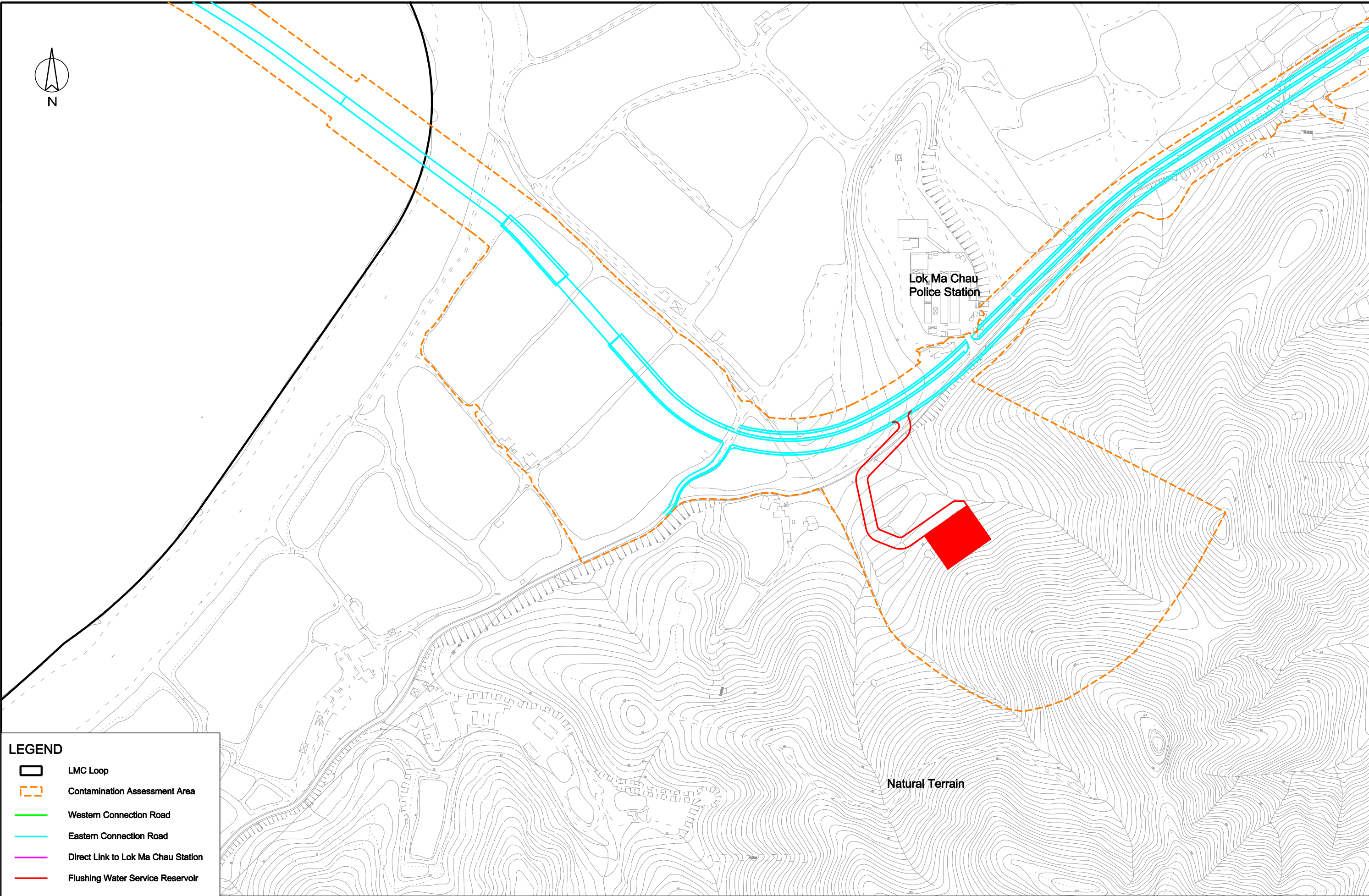
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Checked	TC	Approved	ST
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Drawing No.
Figure 1.3c
 Rev. **A**

Printed by : 3/20/2013
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing_Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 1.3d.dgn



Printed by : 3/20/2013
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 1.3e.dgn



LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

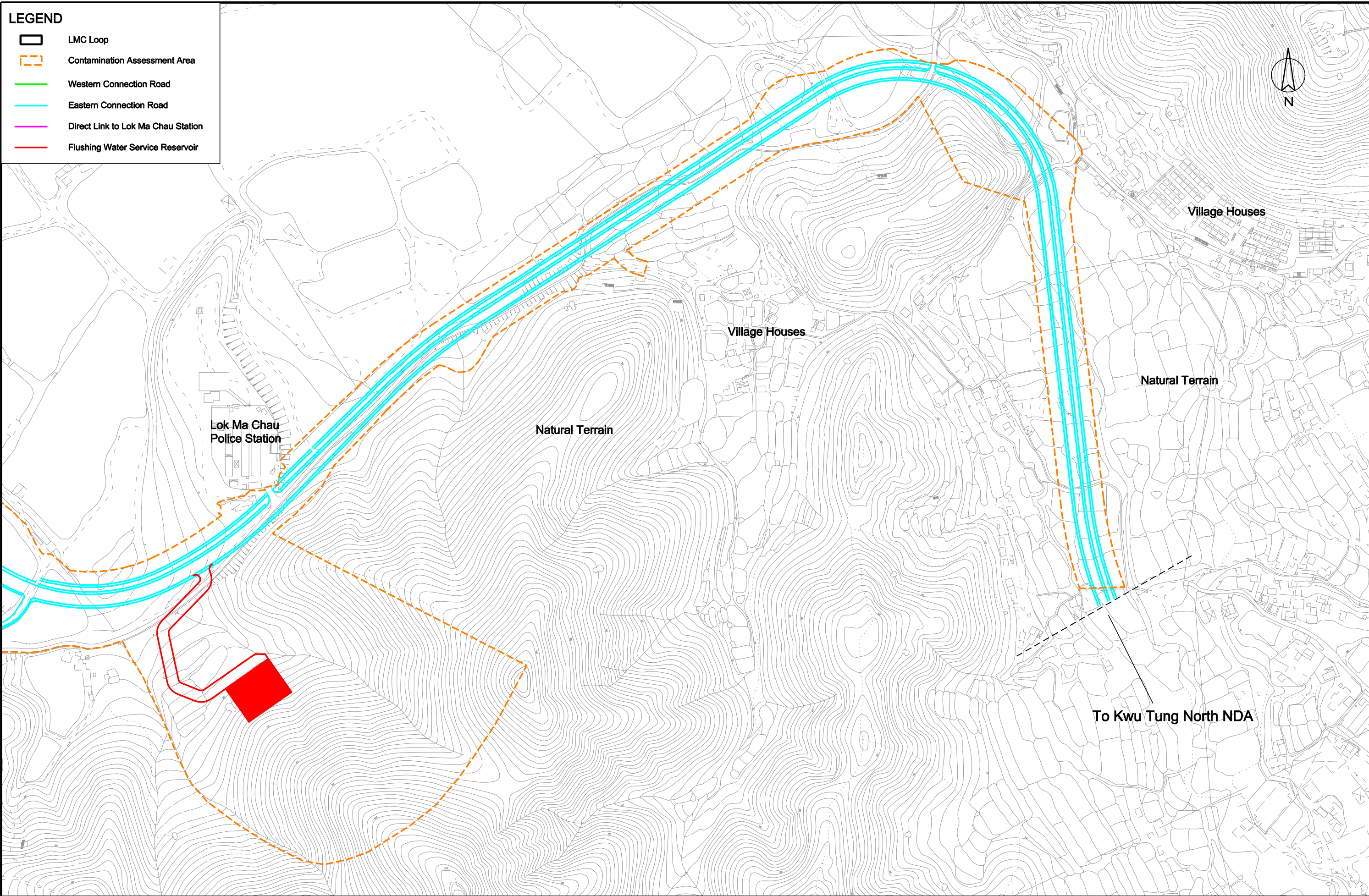
Drawing Title
Contamination Assessment
Area (Sheet 6 of 7)

Rev	Description	Date
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-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
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Drawing No.
Figure 1.3e
 Rev. **A**

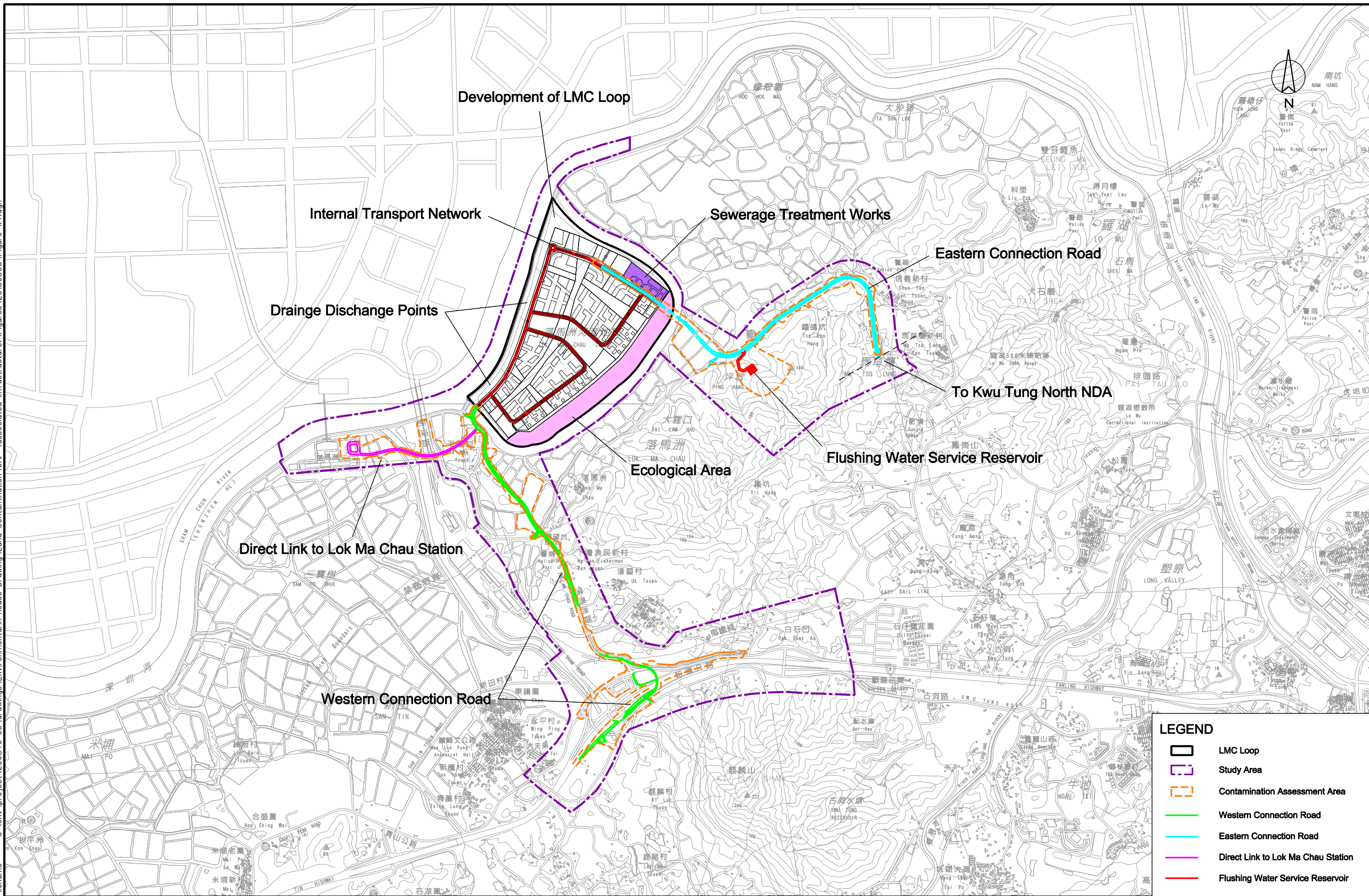
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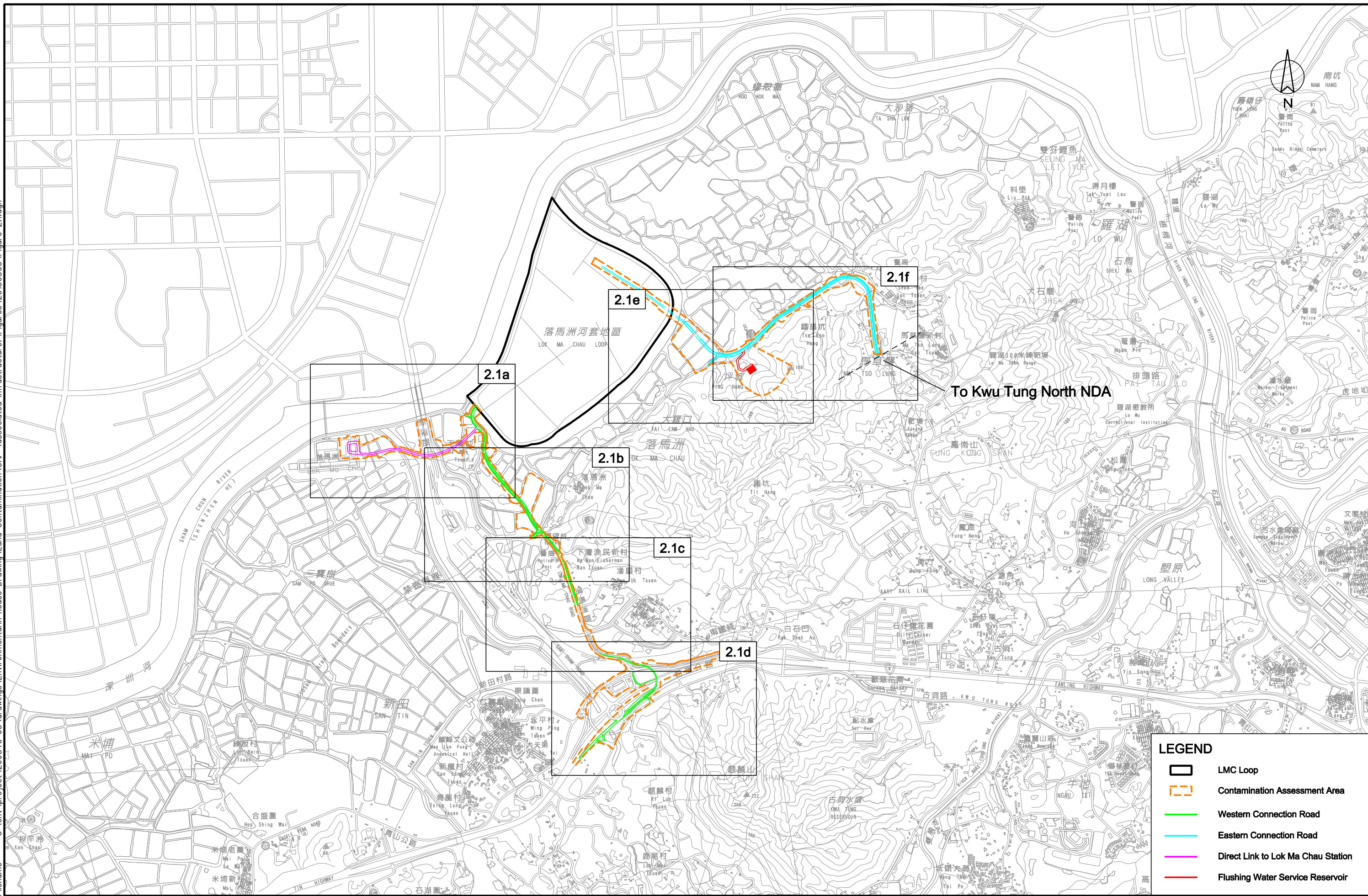
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A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

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Printed by : 3/5/2013
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 2.1.dgn



LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir

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 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

PLANNING DEPARTMENT 規劃署

ARUP Ove Arup & Partners Hong Kong Limited

Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on Development of Lok Ma Chau Loop - Investigation

Drawing Title
Photo Records along Associated Infrastructure (Sheet 1 of 7)

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:20000 ON A3		

Drawing No.
Figure 2.1
 Rev. **A**



Photo No. 0065



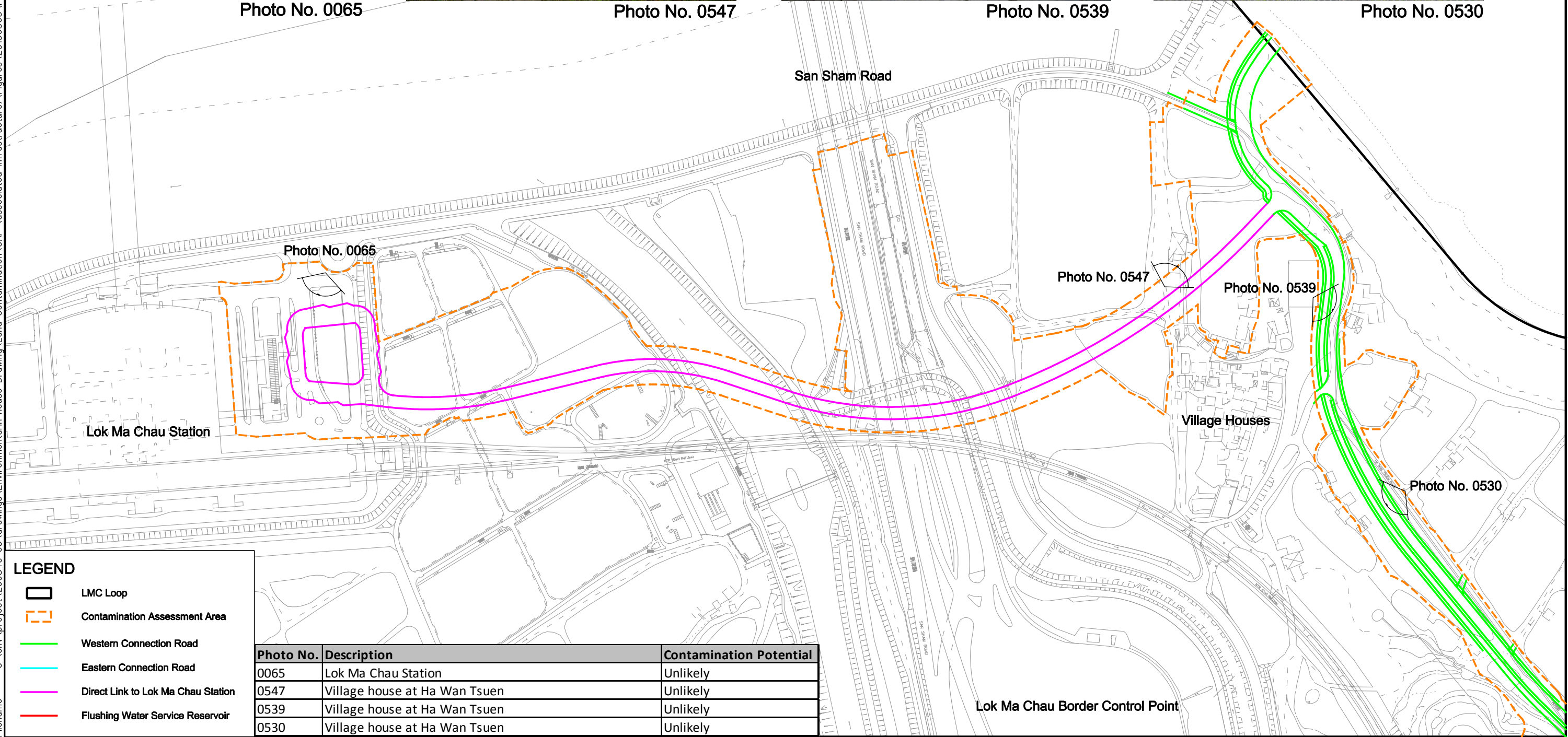
Photo No. 0547



Photo No. 0539



Photo No. 0530



LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir

Photo No.	Description	Contamination Potential
0065	Lok Ma Chau Station	Unlikely
0547	Village house at Ha Wan Tsuen	Unlikely
0539	Village house at Ha Wan Tsuen	Unlikely
0530	Village house at Ha Wan Tsuen	Unlikely

Printed by : 3/5/2013
 File name : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 2.1a.dgn



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Photo Records along
Associated Infrastructure
(Sheet 2 of 7)

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.	Figure 2.1a
Rev.	A

Printed by : 3/5/2013
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 2.1b.dgn



Photo No. 0520



Photo No. 0523



Photo No. 0552



Photo No. 0796

Photo No. 0523

Photo No. 0520

Photo No. 0796

Photo No. 0552

Natural Terrain

LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir

Photo No.	Description	Contamination Potential
0520	Fish pond near Ha Wan Tsuen Road	Unlikely
0523	Village house next to fish pond near Ha Wan Tsuen Road	Unlikely
0552	Village house along Lok Ma Chau Road	Unlikely
0796	Village house along Ha Wan Tsuen Road	Unlikely



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Photo Records along
Associated Infrastructure
(Sheet 3 of 7)

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 2.1b
 Rev. **A**

Printed by : 3/5/2013
 File name : G:\env\project\209840-03\drawings\Environmental In-house Drawing_Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 2.1c.dgn

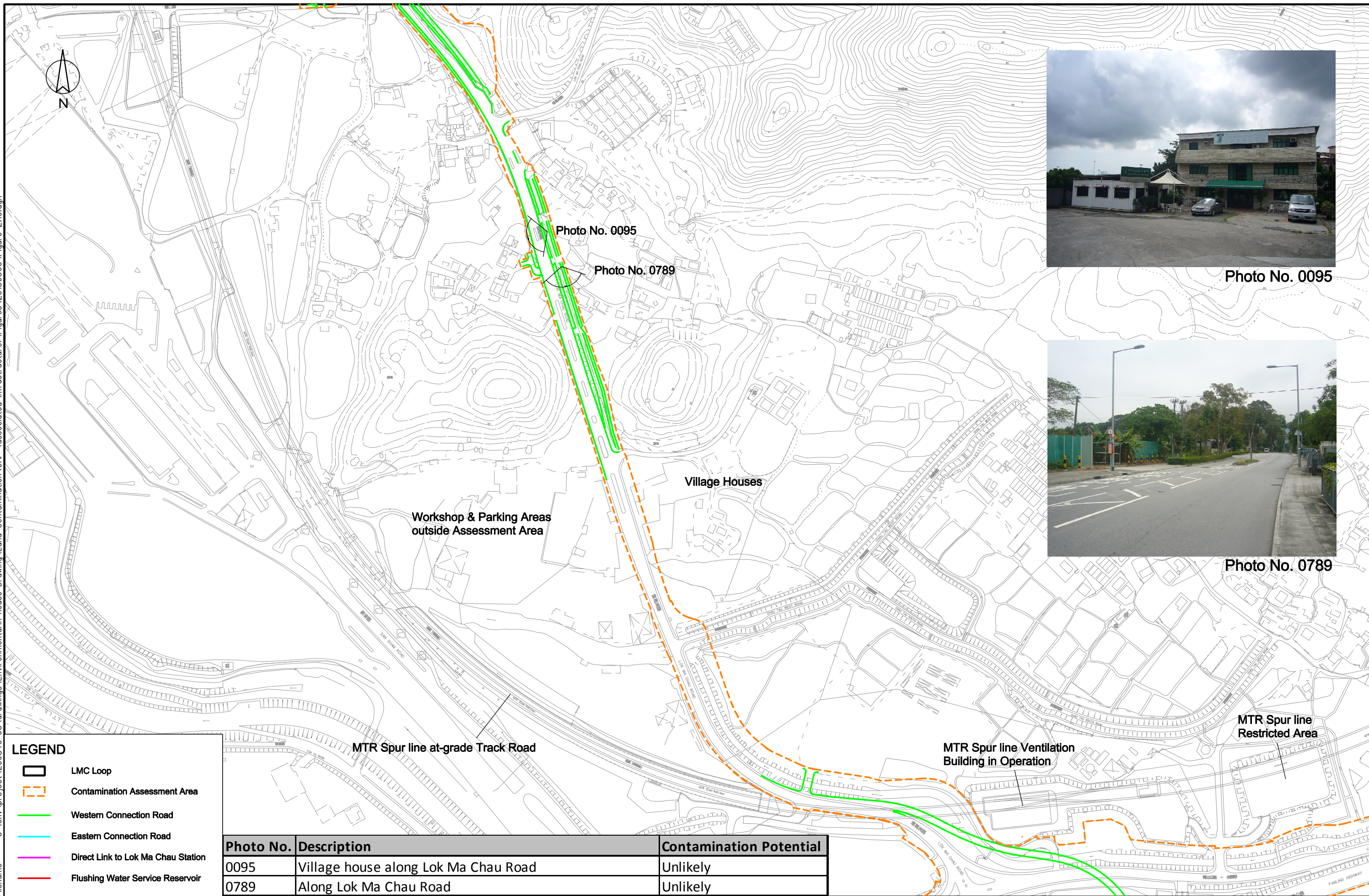


Photo No. 0095



Photo No. 0789

LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir

Photo No.	Description	Contamination Potential
0095	Village house along Lok Ma Chau Road	Unlikely
0789	Along Lok Ma Chau Road	Unlikely



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Photo Records along
Associated Infrastructure
(Sheet 4 of 7)

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 2.1c
 Rev. **A**

Printed by : 3/6/2013
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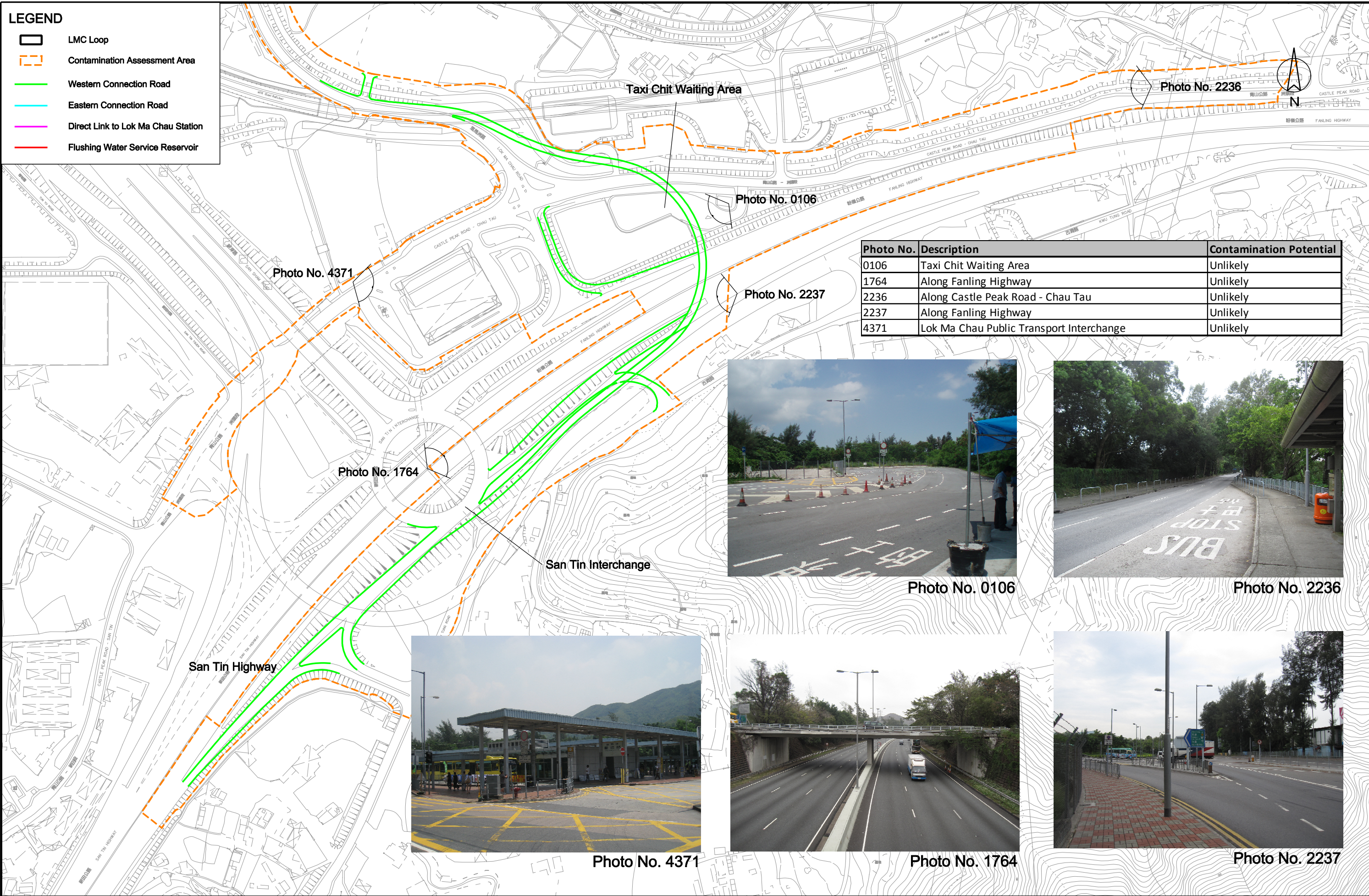


Photo No. 0106



Photo No. 2236



Photo No. 4371



Photo No. 1764



Photo No. 2237

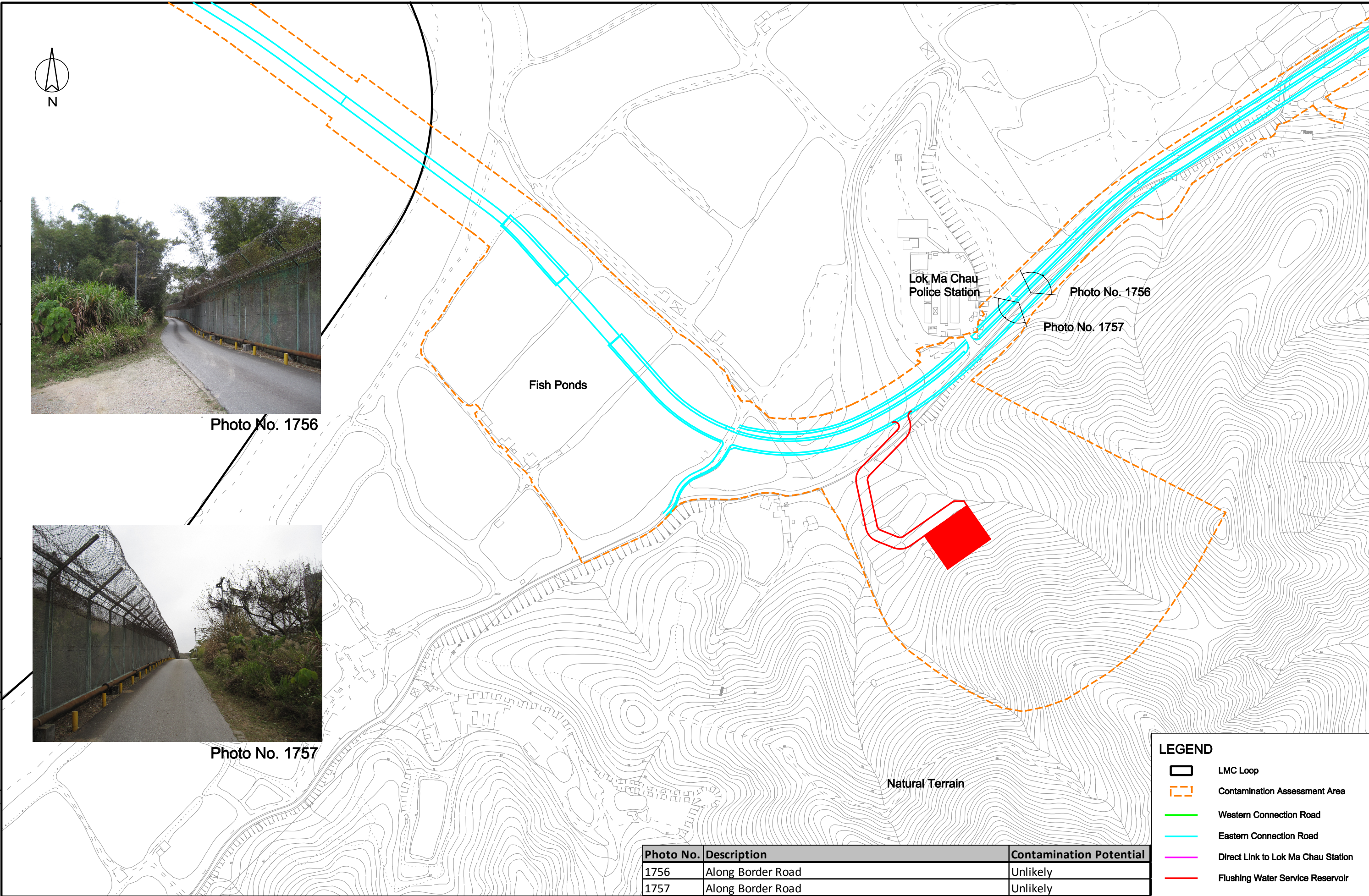
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Photo No. 1756



Photo No. 1757



LEGEND

- LMC Loop
- Contamination Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Photo Records along
Associated Infrastructure
(Sheet 6 of 7)

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn	GL	Date	03/13
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 2.1e
 Rev. **A**

Photo No.	Description	Contamination Potential
1758	Grassland	Unlikely
1759	Along Border Road	Unlikely
1760	Grassland	Unlikely
1761	Grassland	Unlikely

LEGEND







-  LMC Loop
-  Contamination Assessment Area
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flushing Water Service Reservoir



Photo No. 1758



Photo No. 1759

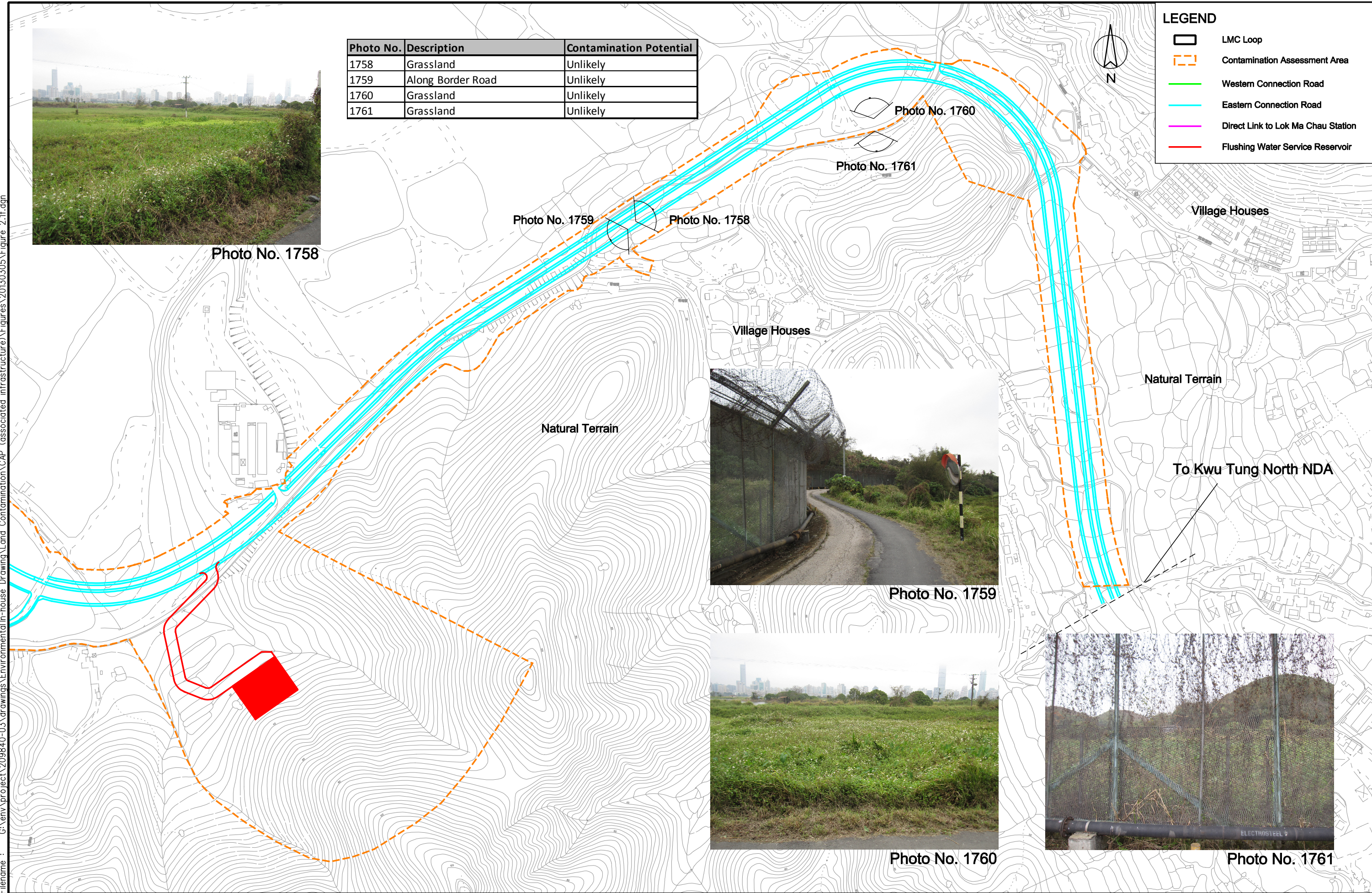


Photo No. 1760



Photo No. 1761

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 PLANNING
 DEPARTMENT

ARUP
 Ove Arup & Partners
 Hong Kong Limited

Job Title
Agreement No. CE 53/2008 (CE)
 Planning and Engineering Study on
 Development of Lok Ma Chau Loop - Investigation

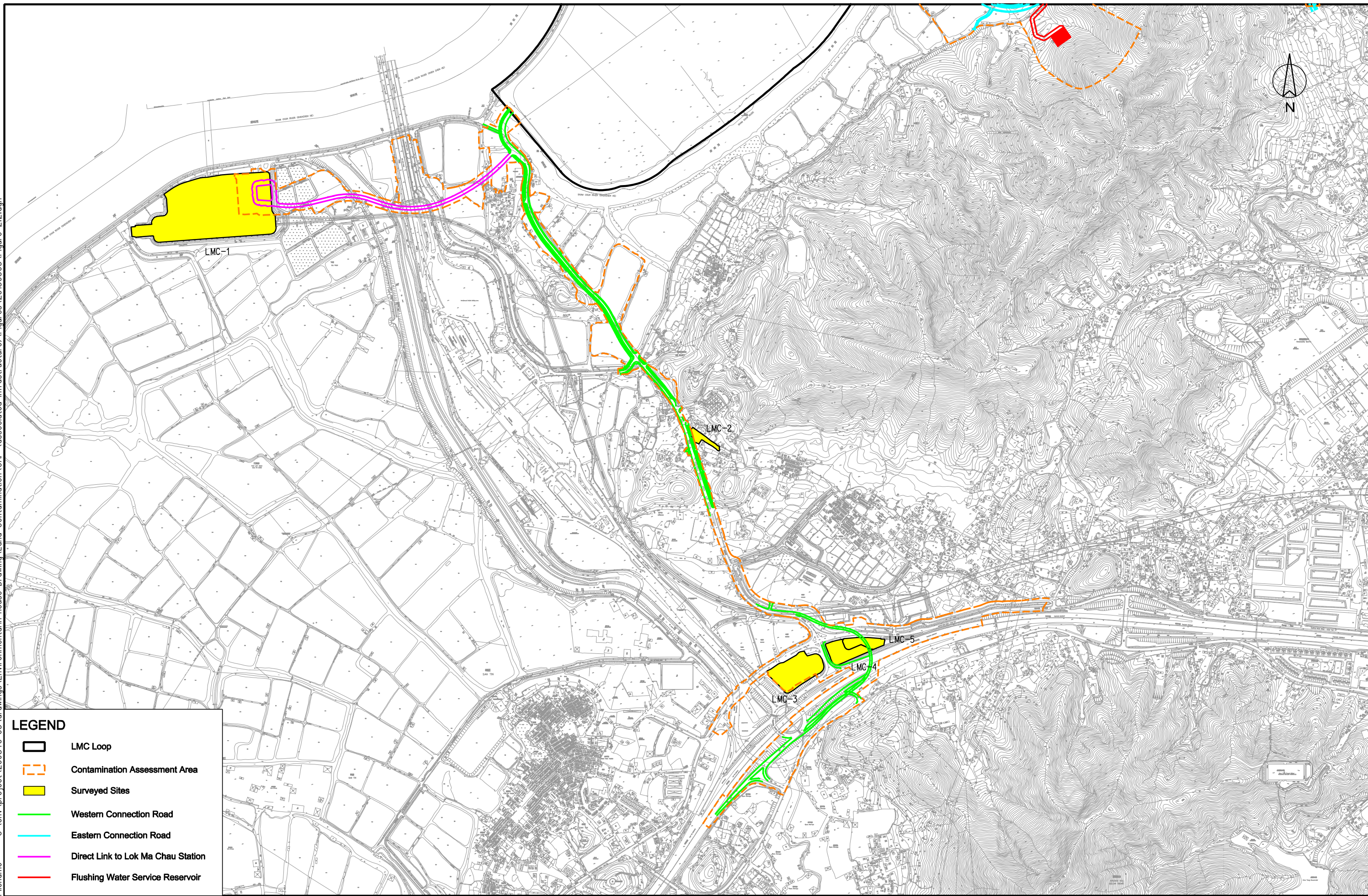
Drawing Title
**Photo Records along
 Associated Infrastructure
 (Sheet 7 of 7)**

Rev	Description	Date
A	SECOND ISSUE	03/13
-	FIRST ISSUE	12/12

Drawn GL Date 03/13
 Checked TC Approved ST
 Scale 1:3000 ON A3

Drawing No.
Figure 2.1f
 Rev. **A**

Printed by : 3/5/2013
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20130305\Figure 2.2.dgn



LEGEND

- LMC Loop
- Contamination Assessment Area
- Surveyed Sites
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flushing Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Locations of Surveyed Sites

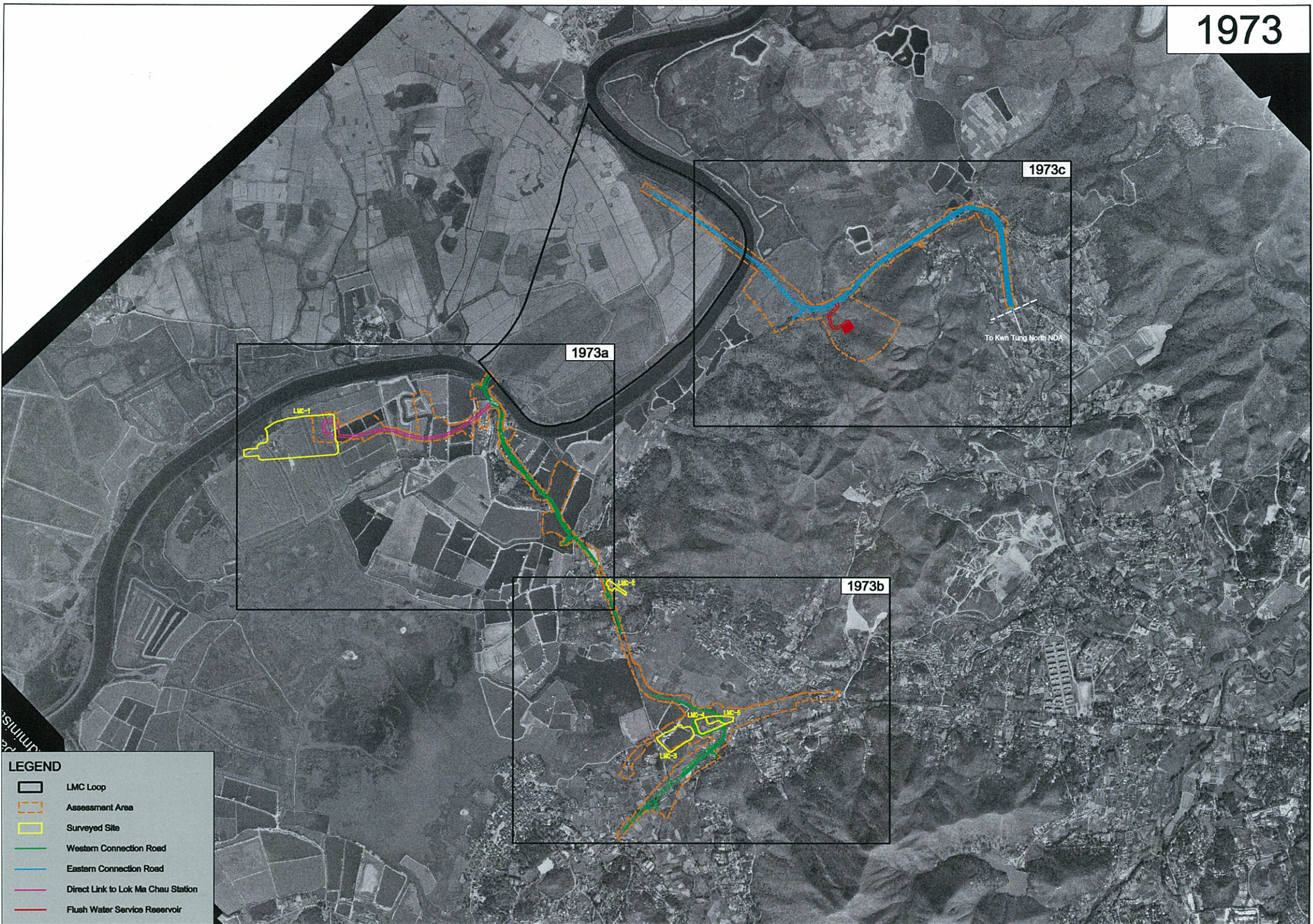
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	FIRST ISSUE	12/12

Drawn	LK	Date	03/13
Checked	TC	Approved	ST
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Drawing No.
Figure 2.2
 Rev. **A**

Appendix A

Historical Aerial
Photos



1973a

1973c

1973b

LMC-1

LMC-4

LMC-2

LMC-3

LMC-4

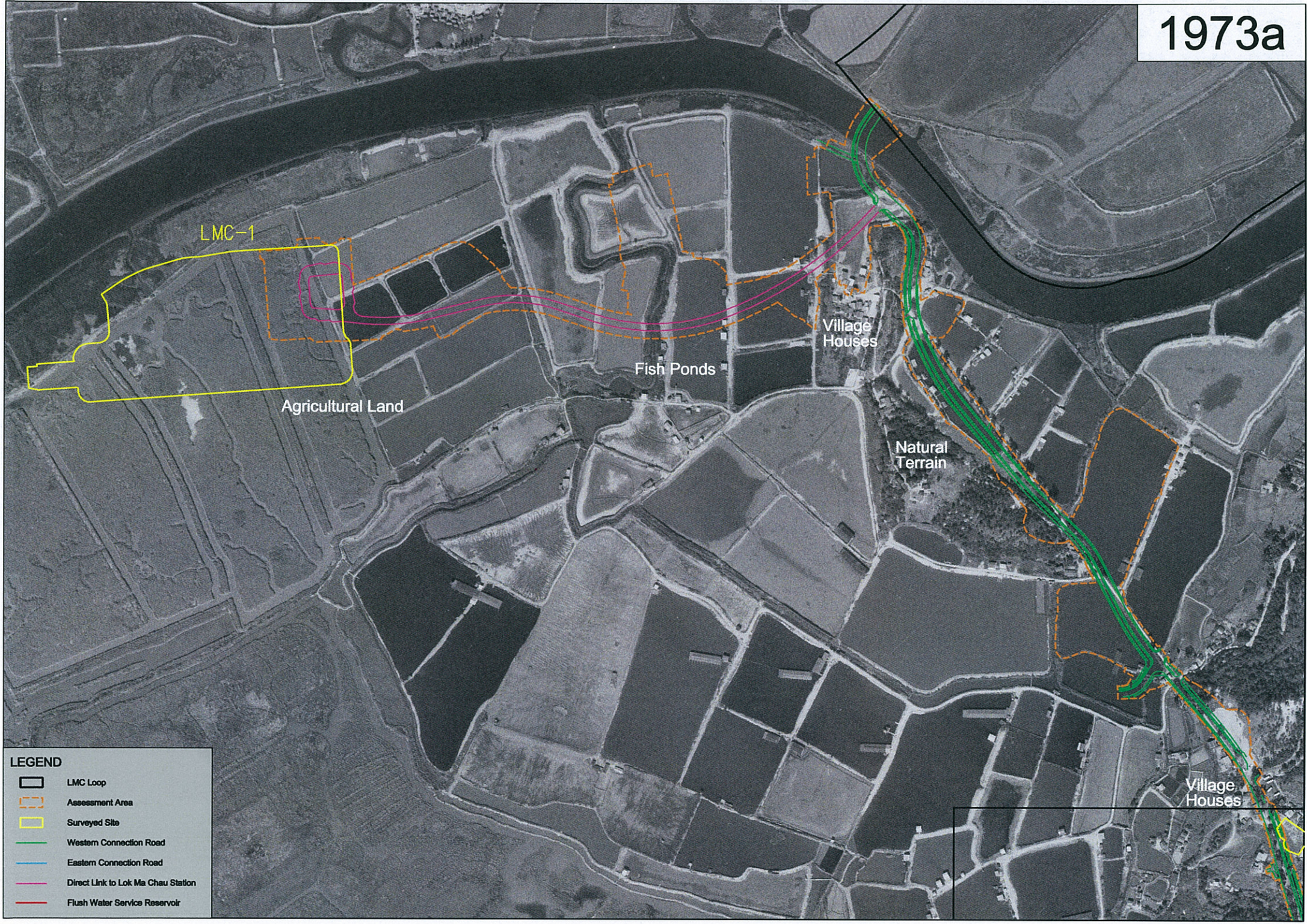
LMC-5

To Kwai Tung North NDA

LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

1973a



LMC-1

Agricultural Land

Fish Ponds

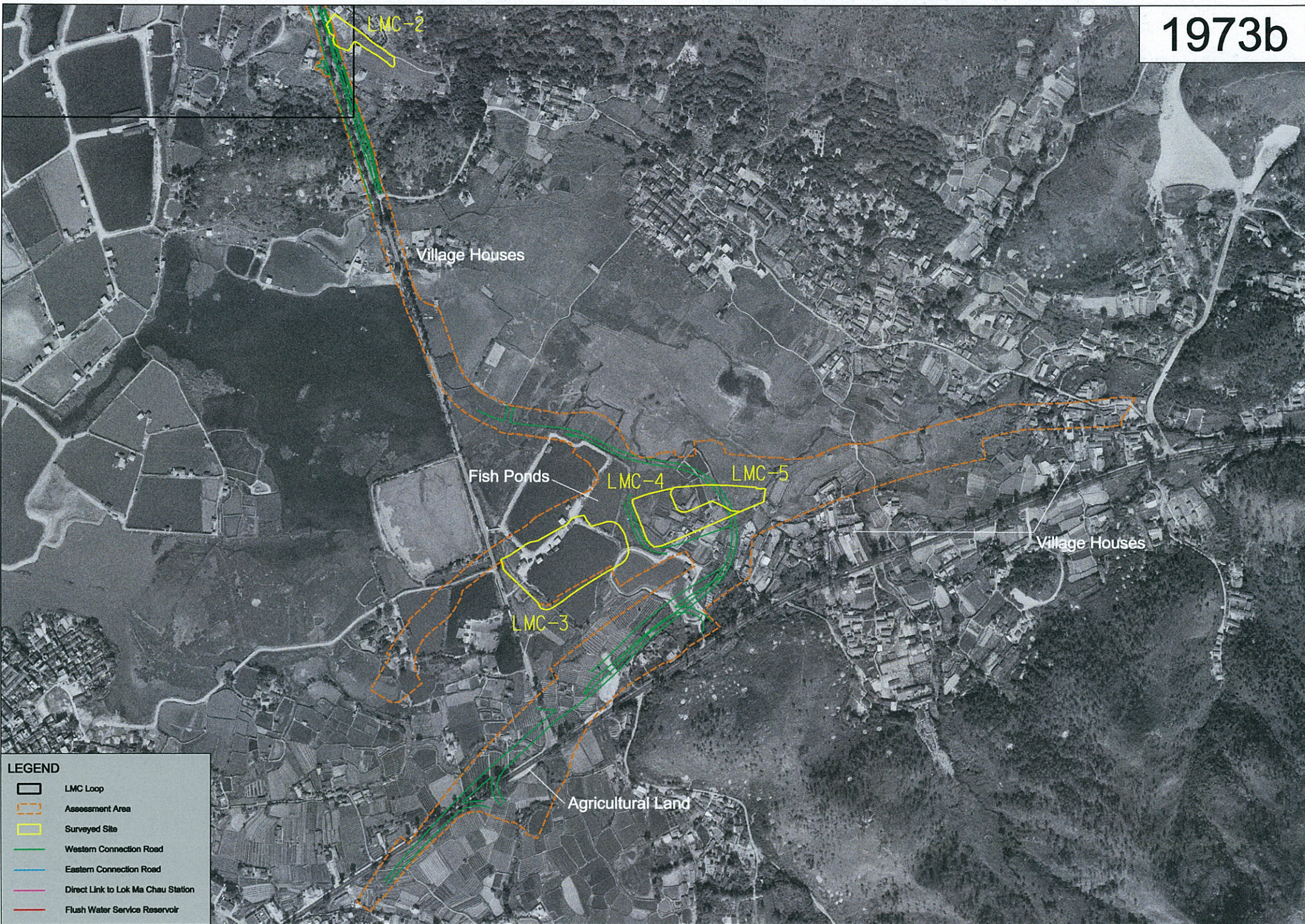
Village Houses

Natural Terrain

Village Houses

LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

1973c



LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



LEGEND

- LMC Loop
- Contamination Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

1982a

1982c

1982b

To Kwn Tung North NDA

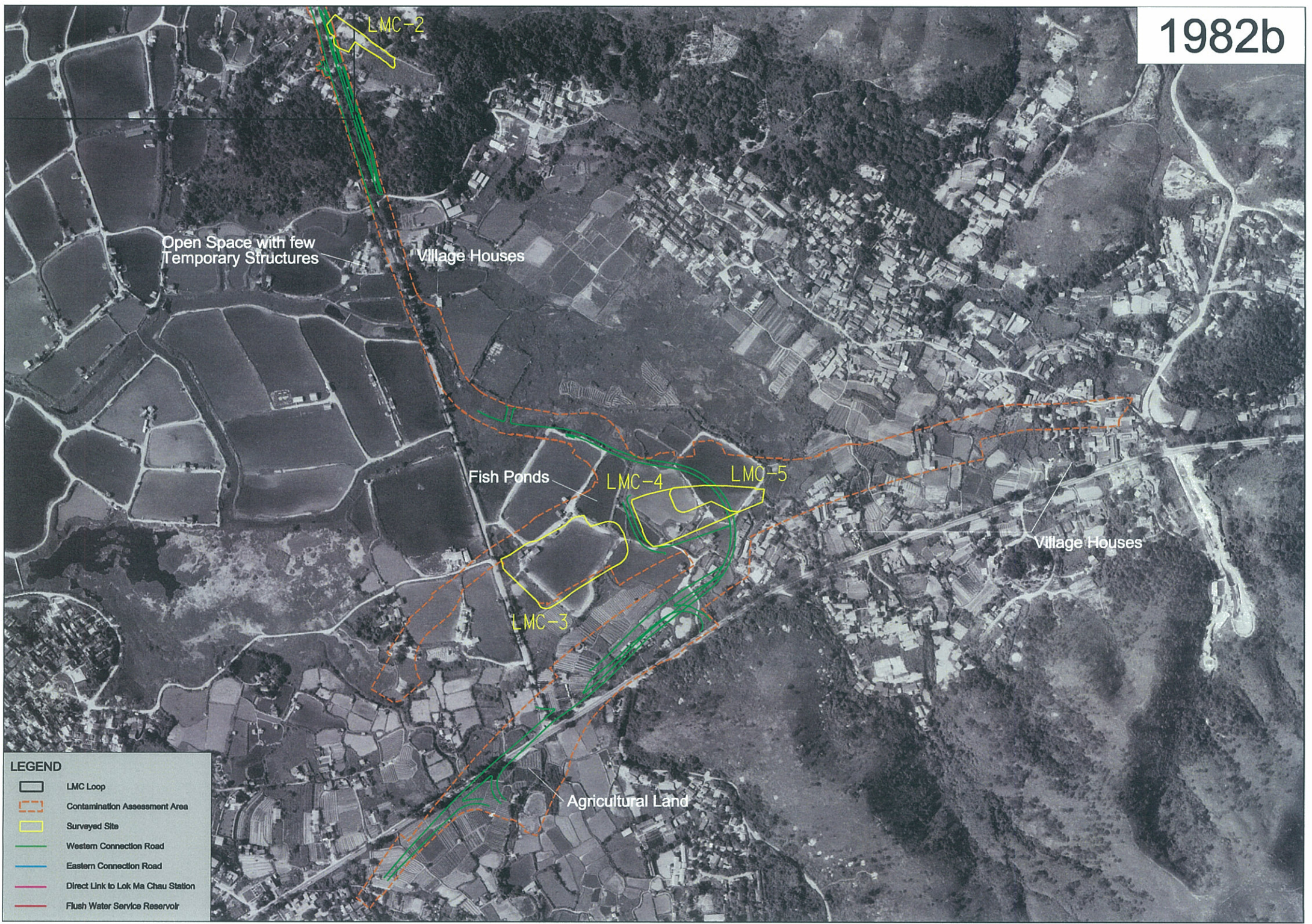
1982年10月15日

Lok Ma Chau



LEGEND

- LMC Loop
- Contamination Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Open Space with few Temporary Structures

Village Houses

Fish Ponds

LMC-4

LMC-5

LMC-3

Village Houses

Agricultural Land

LEGEND

- LMC Loop
- Contamination Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

1982c



香港特別行政區政府 地政總署測繪處

1993c

To Kwn Tung North NDA








1993a

1993b

The Government of Hong Kong Special Administrative Region
Survey & Mapping Office, Lands Department
電話 27251912
傳真 27251912

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reproduction by permis

LEGEND

-  LMC Loop
-  Assessment Area
-  Surveyed Site
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flush Water Service Reservoir



1993a



San Sham Road

LMC-1

Agricultural Land

Village Houses

Natural Terrain

Lok Ma Chau Border Control Point

Village Houses

LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Natural Terrain

Container Truck Parking Area

Agricultural Land

Heavy Vehicle Parking Area with Repairing Workshop (i.e. currently the LMC Spur Line Restricted Area and excluded from the selectively studied sites. Refer to Section 2.3 for detail)

Village Houses

Container Yard with Maintenance Workshop (i.e. currently the LMC Spur Line Restricted Area and excluded from the selectively studied sites. Refer to Section 2.3 for detail)

LMC-4

LMC-5

Fanling Highway

LMC-3

San Tin Interchange

LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

1993c

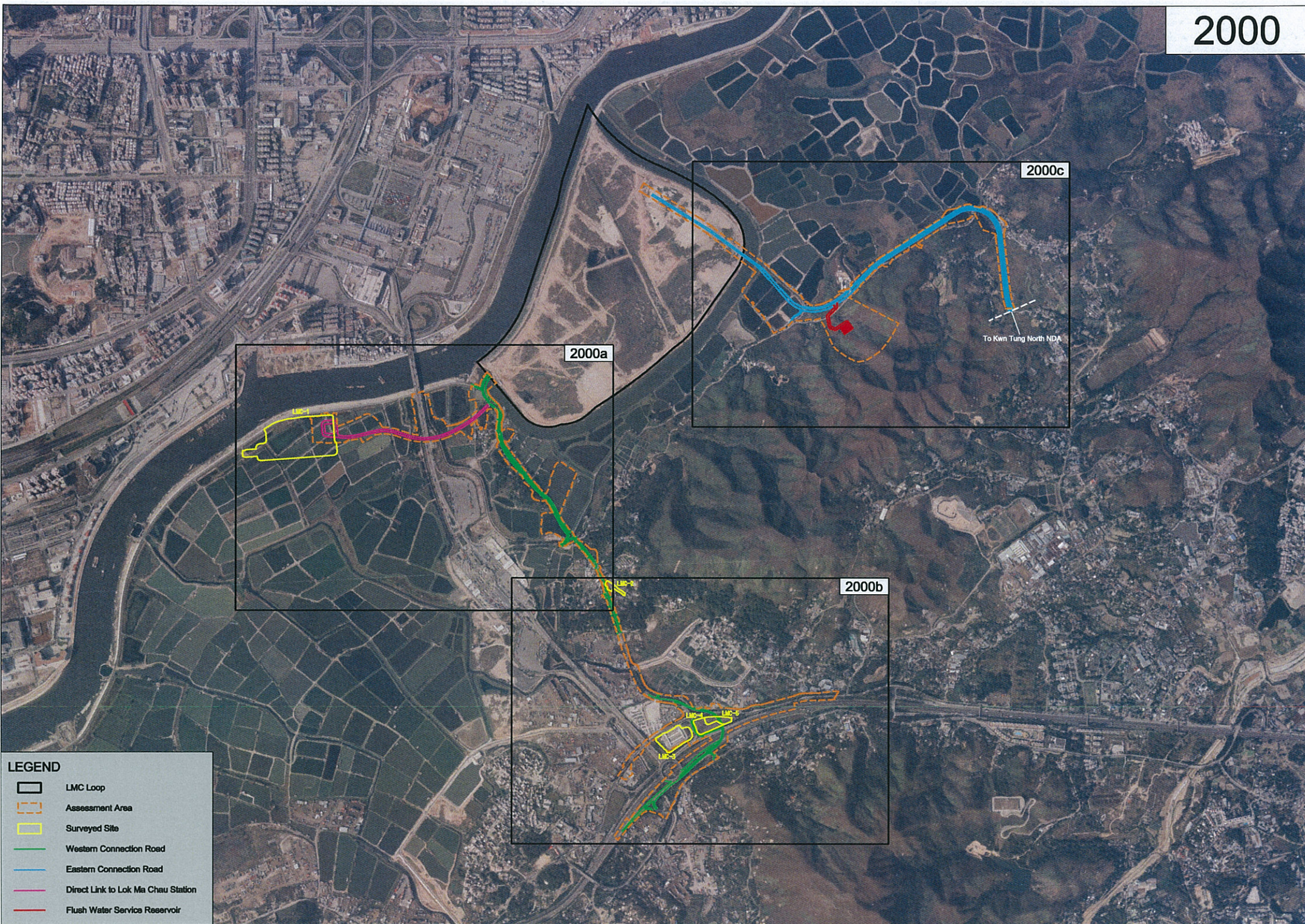
香港測量師學會



LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

2000



LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

2000a

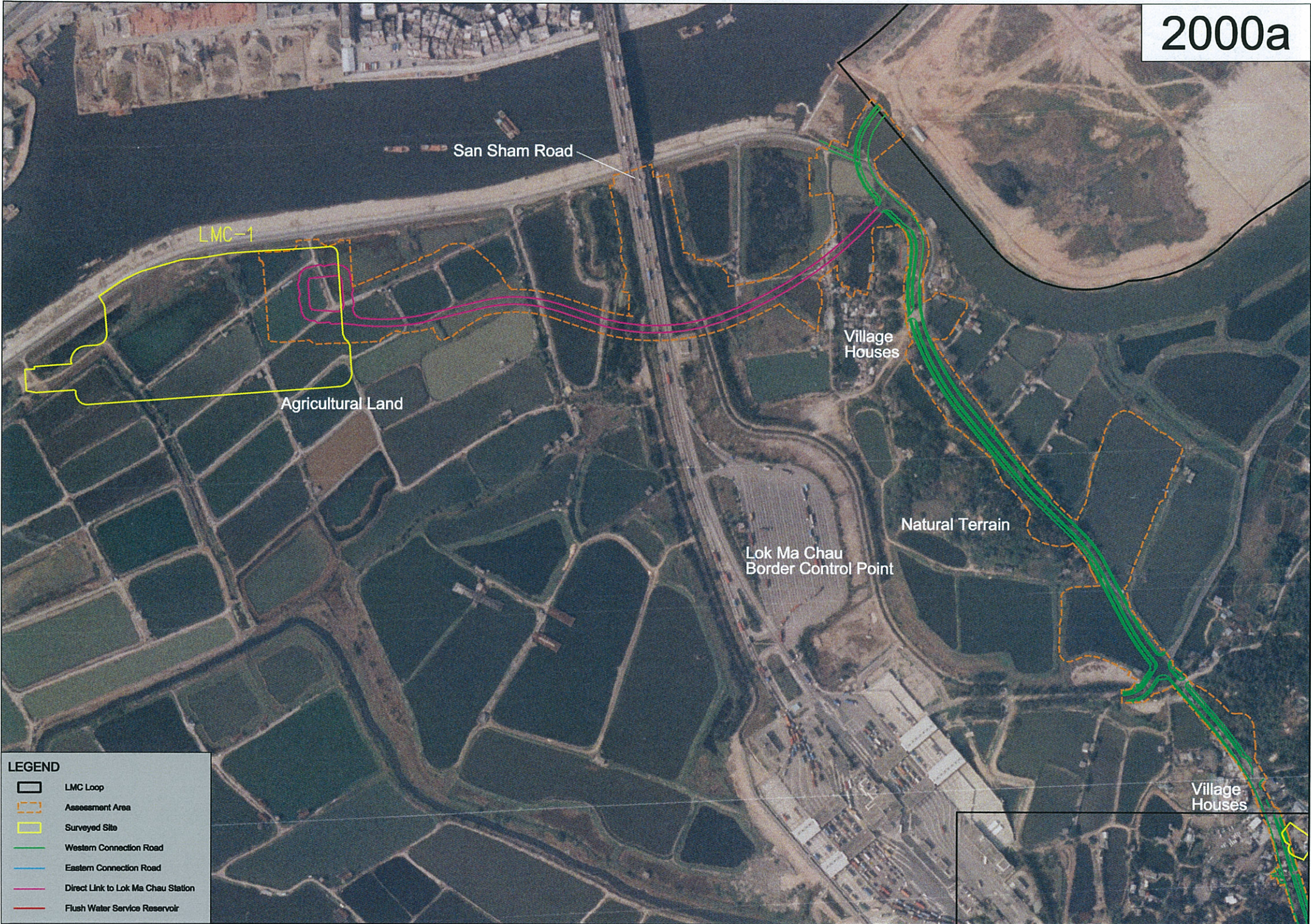
2000c

2000b








To Kwn Tung North NDA

LMC-1
LMC-2
LMC-3
LMC-4
LMC-5

2000a



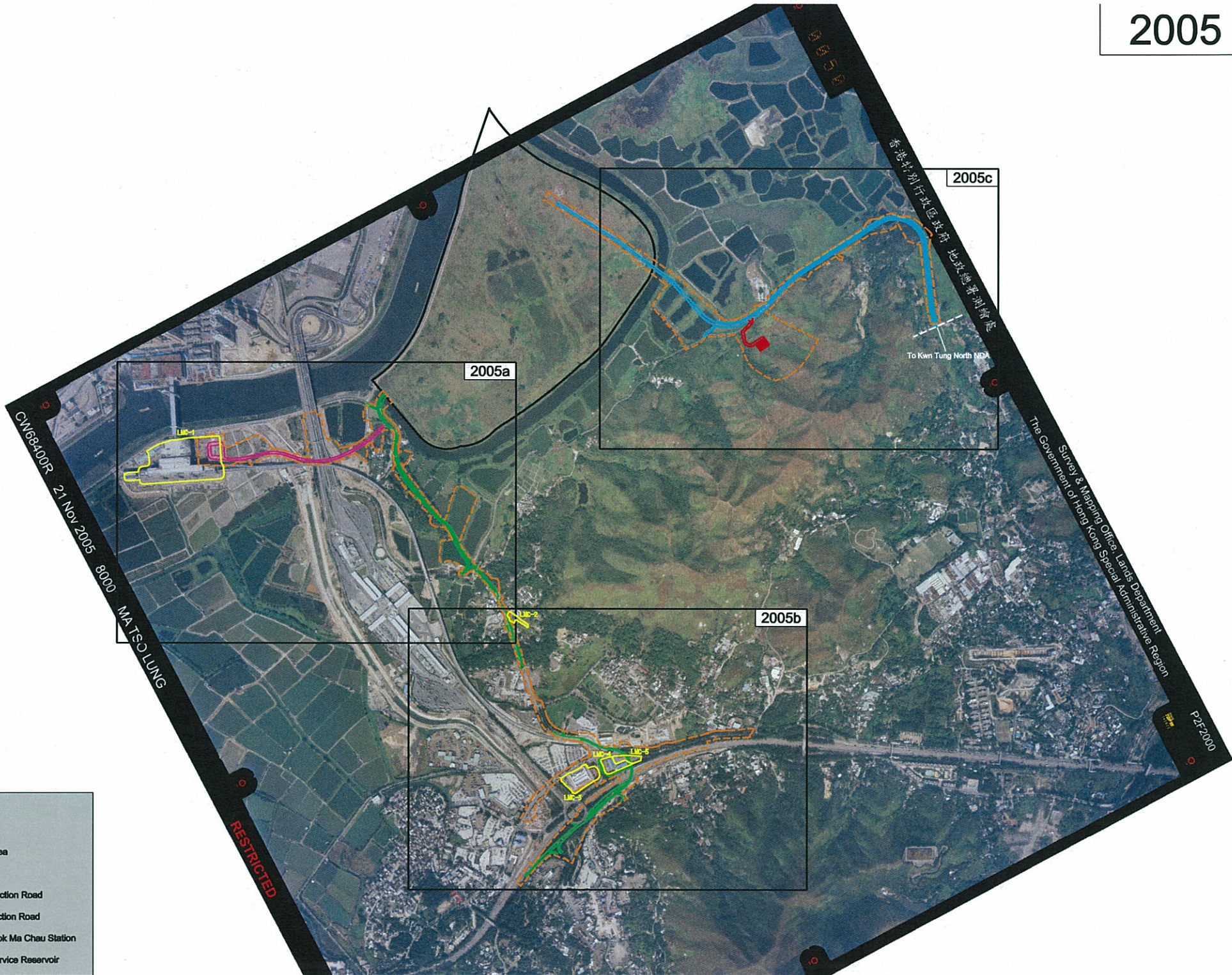
LEGEND

-  LMC Loop
-  Assessment Area
-  Surveyed Site
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flush Water Service Reservoir



2000c





LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

香港特別行政區政府 地政總署測繪處
 To Kwn Tung North MDA

CW6840R 21 Nov 2005 8000 MA TSO LUNG

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 Survey & Mapping Office, Lands Department

P2F2000

2005a

2005c

2005b



San Sham Road

LMC-1

Construction of LMC Station in progress (i.e. excluded from the selectively studied sites. Refer to Section 2.3 for detail)

Construction of Nullah in Progress

Village Houses

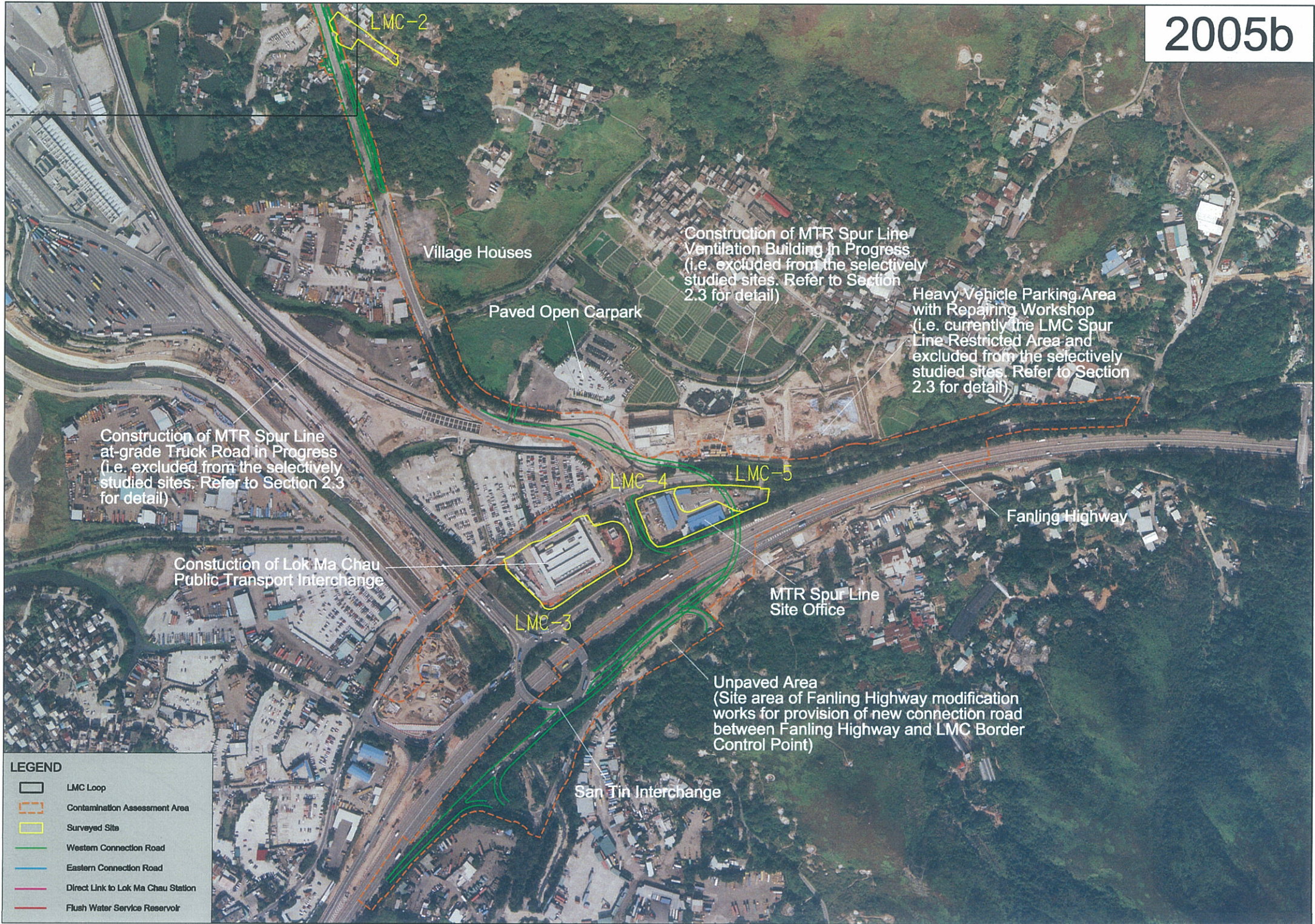
Lok Ma Chau Border Control Point

Natural Terrain

Village Houses

LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



LMC-2

Village Houses

Paved Open Carpark

Construction of MTR Spur Line Ventilation Building in Progress (i.e. excluded from the selectively studied sites. Refer to Section 2.3 for detail)

Heavy Vehicle Parking Area with Repairing Workshop (i.e. currently the LMC Spur Line Restricted Area and excluded from the selectively studied sites. Refer to Section 2.3 for detail)

Construction of MTR Spur Line at-grade Truck Road in Progress (i.e. excluded from the selectively studied sites. Refer to Section 2.3 for detail)

Construction of Lok Ma Chau Public Transport Interchange

LMC-4

LMC-5

Fanling Highway








MTR Spur Line Site Office

LMC-3

Unpaved Area (Site area of Fanling Highway modification works for provision of new connection road between Fanling Highway and LMC Border Control Point)

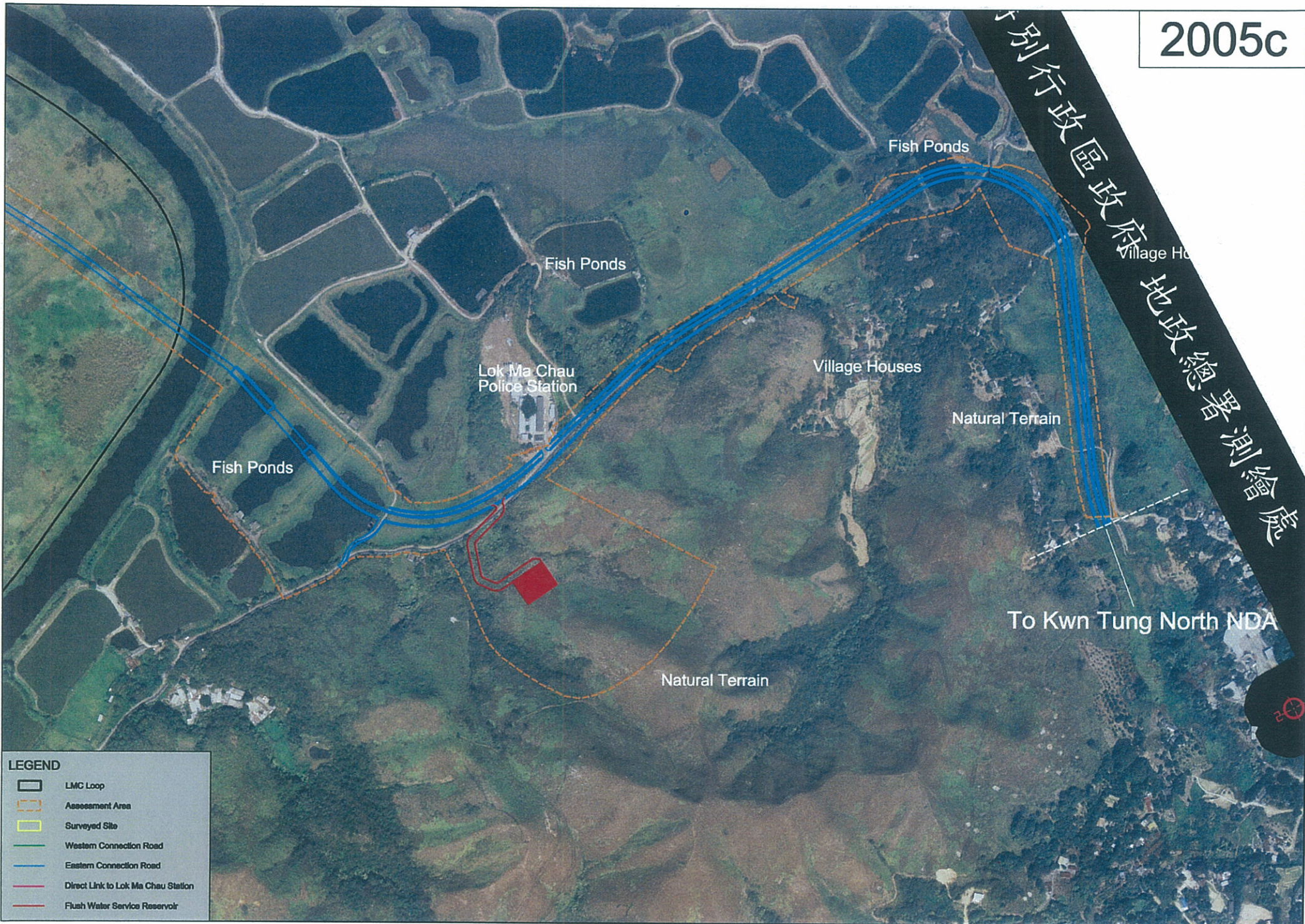
San Tin Interchange

LEGEND

-  LMC Loop
-  Contamination Assessment Area
-  Surveyed Site
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flush Water Service Reservoir

2005c

特別行政區政府
地政總署
測繪處



LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



2010

深圳河

皇崗口岸
Huanggang Port

2010c

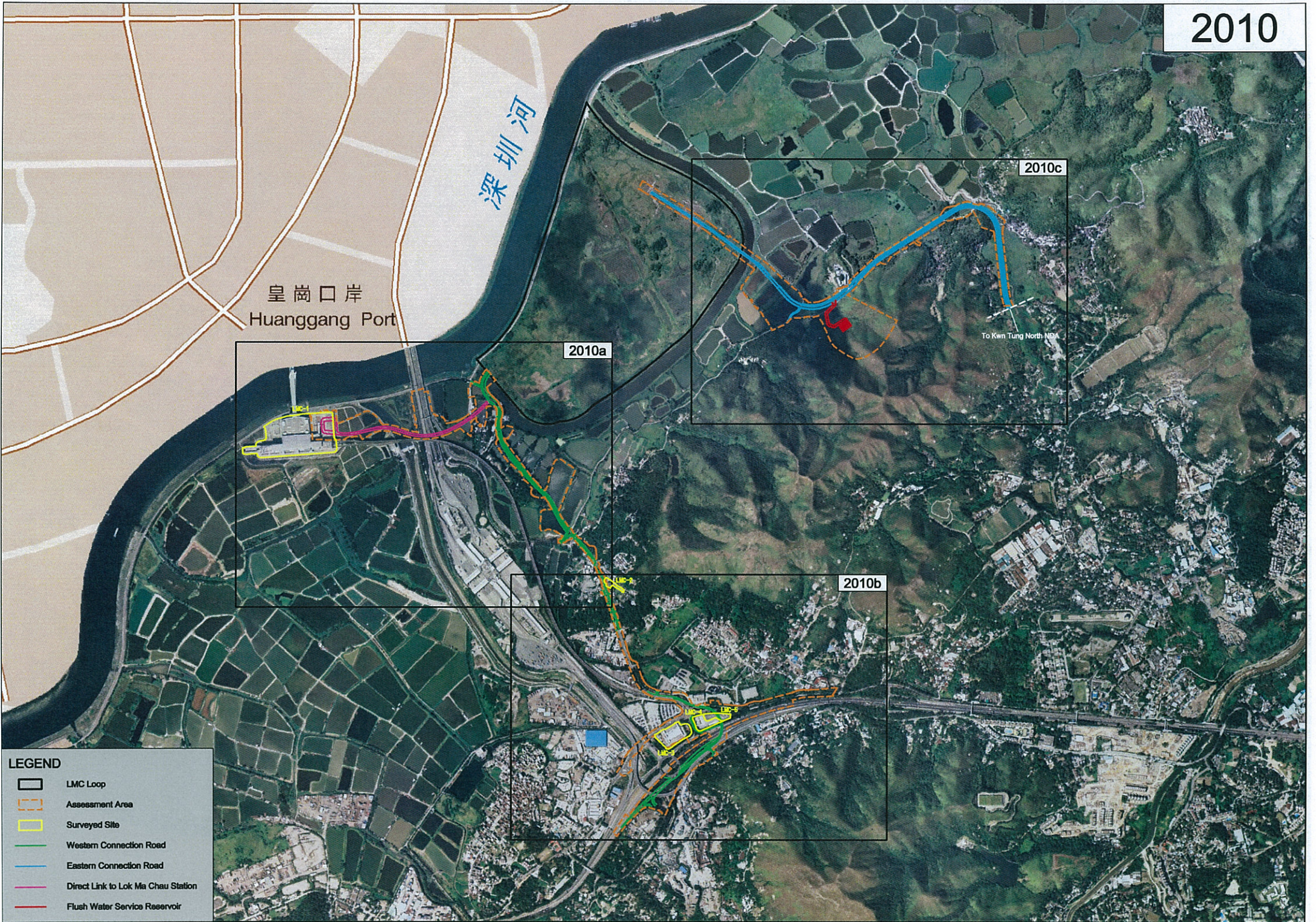
2010a

To Kwn Tung North NDA

2010b

LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



2010a



LEGEND

- LMC Loop
- Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Main Access Road to Different Workshops and Parking Areas

LMC-2

Village Houses

MTR Spur Line Ventilation Building in Operation (i.e. excluded from the selectively studied sites. Refer to Section 2.3 for detail)

MTR Spur Line Restricted Area (i.e. excluded from the selectively studied sites. Refer to Section 2.3 for detail)

MTR Spur Line at-grade Truck Road in Operation with an adjacent vacant land (restricted area) (i.e. excluded from the selectively studied sites. Refer to Section 2.3 for detail)

LMC-4

LMC-5

Fanling Highway

Lok Ma Chau Public Transport Interchange in Operation

LMC-3

Taxi Chit Waiting Area

Re-vegetated Area (Previously site area of Fanling Highway modification works for provision of new connection road between Fanling Highway and LMC Border Control Point)

San Tin Interchange

San Tin Highway

LEGEND

- LMC Loop
- Contamination Assessment Area
- Surveyed Site
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir

2010c



Appendix B

Summary of
Surveyed Sites

Legend for Outline Zoning Plan and Geological Survey Map

Outline Zoning Plan

Abbreviations	Land Use Zones
AGR	Agriculture
C/R	Commercial / Residential
CDA	Comprehensive Development Area
G/IC	Government / Institution / Community
GB	Green Belt
I	Industrial
I(D)	Industrial (Group D)
O	Open Space
OS	Open Storage
OU	Other Specified Uses
R(A)	Residential (Group A)
R(B)	Residential (Group B)
R(C)	Residential (Group C)
REC	Recreation
U	Undetermined
V	Village Type Development

Geological Survey Map

Abbreviations	Principal Rock Types/ Characters
Qa	Clay/Silt, Sand and Gravel; Well-sorted to Semi-sorted
Qam	Clayey silt or sand
Qb	Sand
Qrb	Sand
QHH	Undivided, Mainly dark grey marine mud
ms	Marine sand, part silty
Qd	Unsorted sand, gravel, cobbles and boulders; clay/silt matrix
Qpa	Clay/silt, gravelly sandy, well-sorted to semi-sorted
Qpd	Silt/sand, gravelly, clayey with cobbles and boulders; unsorted
Qck	Undivided; red, yellow and grey clay, silt, sand and gravel
KKO	Bregcia with conglomerate and coarse-grained sandstone
JTM	Coarse ash crystal tuff
s	Sandstone
CTs	Metasandstone with metaconglomerate and phyllite
Cmp	Phyllite, metasiltstone with metasandstone and graphite schist
Cyl	Marble
cg	Metaconglomerate
gr	Graphite schist
gf*	Fine-grained granite, 0.06-2mm
gfm*	Fine- to medium-grained granite
rq	Quartzphyric rhyolite
ap	Aplite
q	Quartz vein
-	Natural earth and waste
~	Schist
...	Slightly metamorphosed

Site Background	
Survey Area	Assessment Area for Associated Infrastructure
Site No.	LMC-1
Current Land Use	MTR Lok Ma Chau Station
Approximate Area (m ²)	58,725
Location:	Beside Shenzhen River

Desktop Review	
Land Use Zoning on the Outline Zoning Plan	OU
Principal Rock Types/ Characters on the Geological Survey Map	QHH
Site History (Review of Historical Aerial Photos)	<ul style="list-style-type: none"> • 1973: Agricultural purposes and fish ponds with some residential buildings. • 1982: Predominantly Fish ponds. • 1993: Predominantly Fish ponds. • 2000: No significant change. • 2005: Construction of Lok Ma Chau Station. • 2010: Currently occupied by MTR Lok Ma Chau Station for the border crossing terminal.
Lot No.	--
Land Ownership Status	Government

Site Survey Information and Recommendation	
Date of Survey:	Feb-12
Conducted by:	Thomas Chan and Lawrence Kan
Site Observation & Potentially Sources of Contamination:	Public transport interchange was in operation. Other at-grade areas were restricted from public access. No adverse contaminated land impacts are identified based on site survey observation.
Necessity for Site Investigation	No
Recommended No. of Boreholes	NA

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Appendix B\LMC-1.dgn

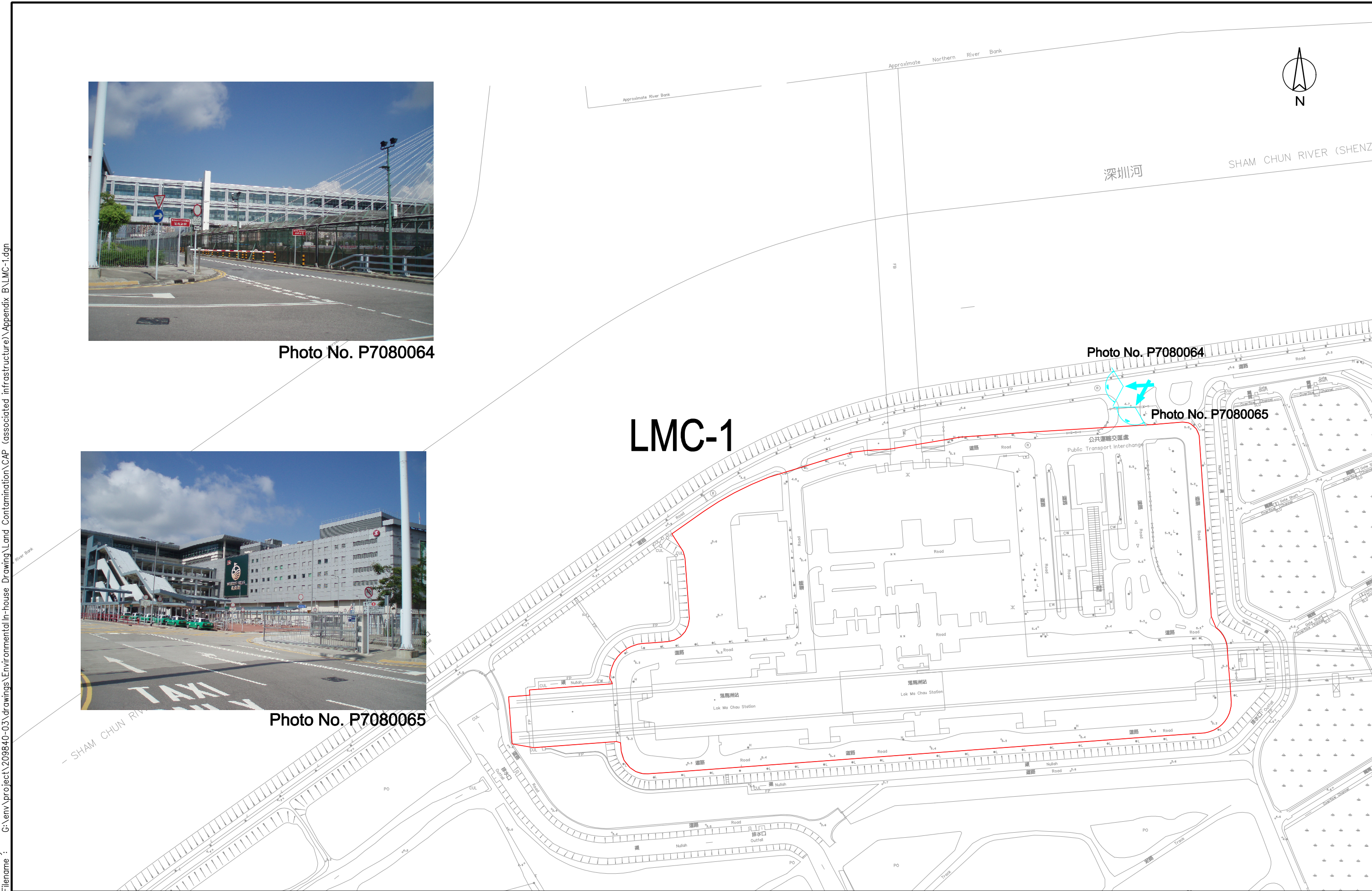


Photo No. P7080064



Photo No. P7080065

LMC-1



Site Background	
Survey Area	Assessment Area for Associated Infrastructure
Site No.	LMC-2
Current Land Use	Open storage area of construction materials, mainly woods and metals. (partially paved)
Approximate Area (m ²)	1,816
Location:	East of Lok Ma Chau Road

Desktop Review	
Land Use Zoning on the Outline Zoning Plan	GB
Principal Rock Types/ Characters on the Geological Survey Map	Qd+Cmp
Site History (Review of Historical Aerial Photos)	<ul style="list-style-type: none"> • 1973: Agricultural fields, no houses present. • 1982: No significant change. • 1993: A major part of the fields was replaced by open storage area • 2000: No significant change • 2005: No significant change. • 2010: No significant change.
Lot No.	DD96 - 11B.RP, 12B.RP, 12B.1, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23
Land Ownership Status	Private

Site Survey Information and Recommendation	
Date of Survey:	Feb-12
Conducted by:	Thomas Chan and Lawrence Kan
Site Observation & Potentially Sources of Contamination:	Loading/ unloading of construction materials observed. Several oil drums observed on site. Only one oil drum with manual hand pump and very minor oil staining (i.e. only few drops) was observed on the paved ground, and other areas was clean without any sign of spillage. No adverse contaminated land impacts are identified based on site survey observation.
Necessity for Site Investigation	No
Recommended No. of Boreholes	NA

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Appendix B\LMC-2.dgn

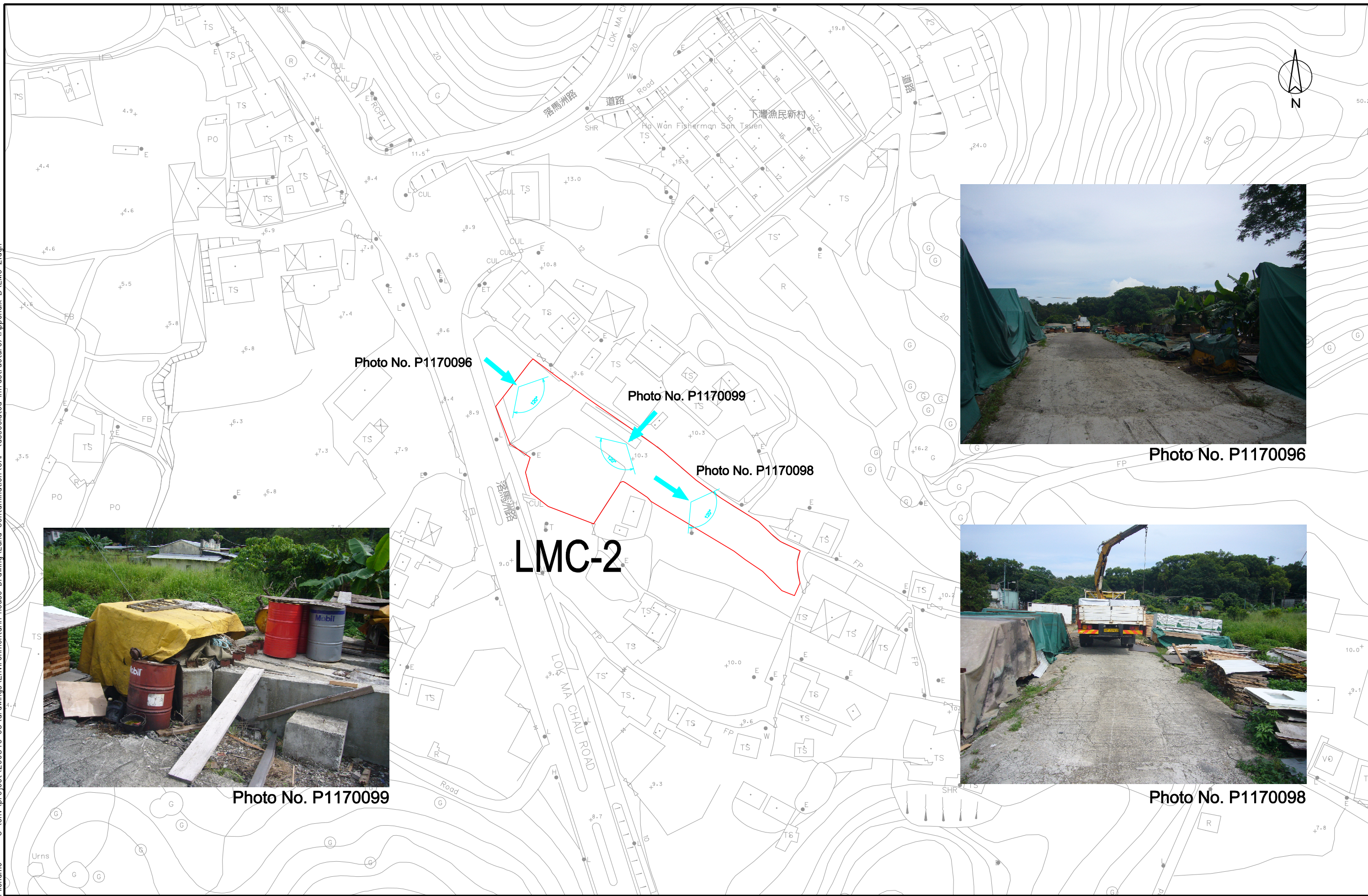


Photo No. P1170096

Photo No. P1170099

Photo No. P1170098



Photo No. P1170096



Photo No. P1170099



Photo No. P1170098

LMC-2



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Location of Surveyed
Site (LMC-2)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:1000 ON A3		

Drawing No.	LMC-2
Rev.	-

Site Background	
Survey Area	Assessment Area for Associated Infrastructure
Site No.	LMC-3
Current Land Use	Lok Ma Chau Public Transport Interchange
Approximate Area (m ²)	11,245
Location:	South-western corner of intersection of Lok Ma Chau Road and Castle Peak Road

Desktop Review	
Land Use Zoning on the Outline Zoning Plan	U
Principal Rock Types/ Characters on the Geological Survey Map	Qam+Qa
Site History (Review of Historical Aerial Photos)	<ul style="list-style-type: none"> • 1973: Agricultural fields, no houses present. • 1982: Agricultural fields, with some related buildings. • 1993: Open grassland with a temporary structure. • 2000: Construction of Lok Ma Chau Public Transport Interchange. • 2005: Lok Ma Chau Public Transport Interchange in operation. • 2010: No significant change.
Lot No.	GLA-TYL393 TGLA
Land Ownership Status	Private

Site Survey Information and Recommendation	
Date of Survey:	Feb-12
Conducted by:	Thomas Chan and Lawrence Kan
Site Observation & Potentially Sources of Contamination:	Fully paved public transport interchange. No vehicle repairing or maintenance workshop within the interchange. No adverse contaminated land impacts are identified based on site survey observation.
Necessity for Site Investigation	No
Recommended No. of Boreholes	NA

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Appendix B\LMC-3.dgn

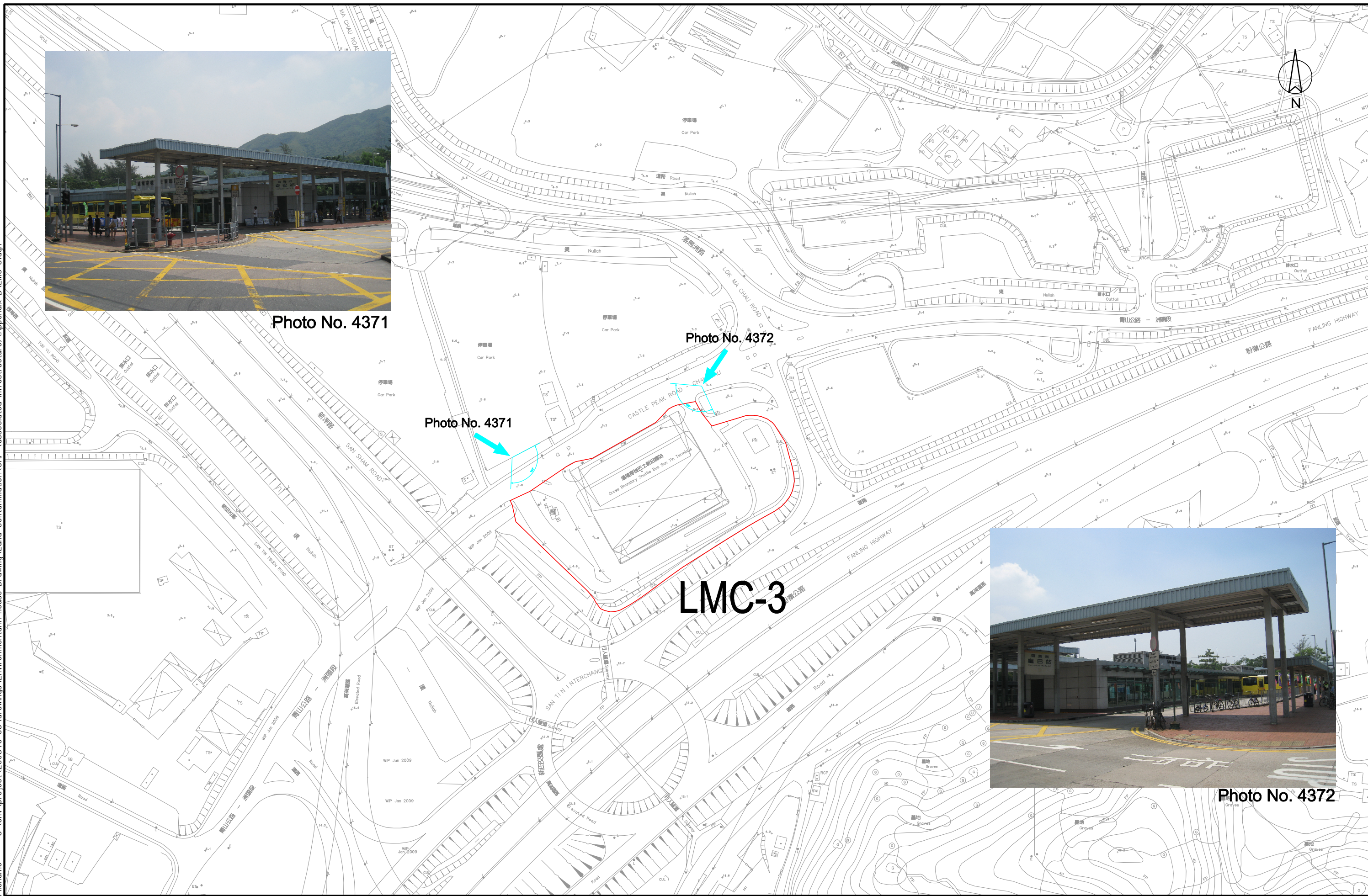


Photo No. 4371



Photo No. 4372

Photo No. 4371

Photo No. 4372

LMC-3



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Location of Surveyed
Site (LMC-3)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:2000 ON A3		

Drawing No.	LMC-3
Rev.	-

Site Background	
Survey Area	Assessment Area for Associated Infrastructure
Site No.	LMC-4
Current Land Use	Government Land (fenced vacant land, paved)
Approximate Area (m ²)	5,116
Location:	South-eastern corner of intersection of Lok Ma Chau Road and Castle Peak Road

Desktop Review	
Land Use Zoning on the Outline Zoning Plan	U
Principal Rock Types/ Characters on the Geological Survey Map	Qa+Qam
Site History (Review of Historical Aerial Photos)	<ul style="list-style-type: none"> • 1973: Agricultural fields, no houses present. • 1982: Agricultural fields, with some related buildings. • 1993: Open grassland. • 2000: Open car park. • 2005: MTR Spur Line Site Office. • 2010: Government Land (fenced vacant land).
Lot No.	TARDS/SP-003 TA
Land Ownership Status	Private

Site Survey Information and Recommendation	
Date of Survey:	Feb-12
Conducted by:	Thomas Chan and Lawrence Kan
Site Observation & Potentially Sources of Contamination:	Fenced-off paved government land. (Former LMC Spur Line site offices)
Necessity for Site Investigation	No
Recommended No. of Boreholes	NA

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Appendix B\LMC-4.dgn



Photo No. 4346

Photo No. 4346

Photo No. 4345



Photo No. 4345

LMC-4



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Location of Surveyed
Site (LMC-4)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale		1:1000 ON A3	

Drawing No.	LMC-4
Rev.	-

Site Background	
Survey Area	Assessment Area for Associated Infrastructure
Site No.	LMC-5
Current Land Use	Taxi Chit Waiting Area
Approximate Area (m ²)	3,888
Location:	South-eastern corner of intersection of Lok Ma Chau Road and Castle Peak Road

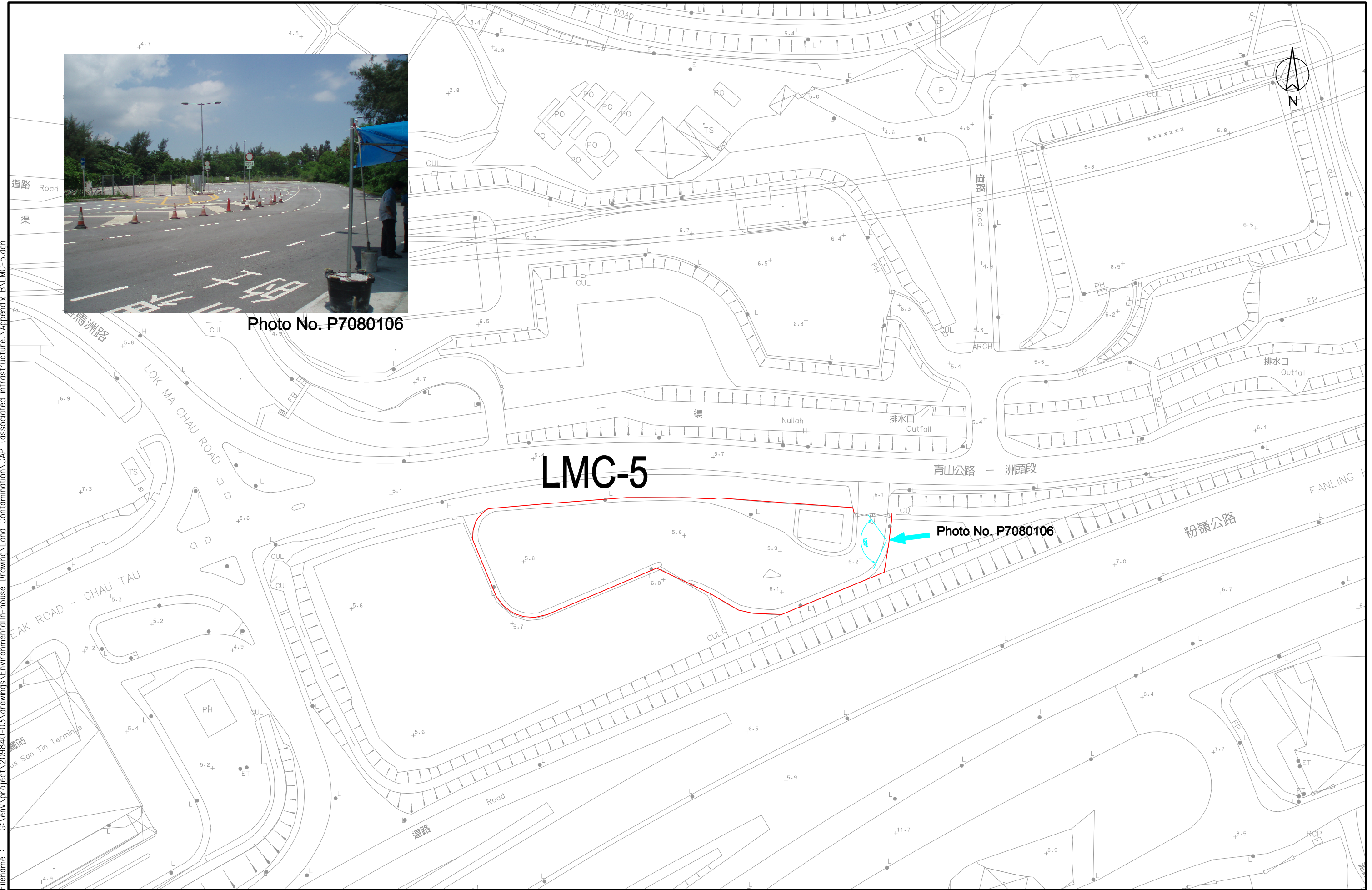
Desktop Review	
Land Use Zoning on the Outline Zoning Plan	GB
Principal Rock Types/ Characters on the Geological Survey Map	Qa
Site History (Review of Historical Aerial Photos)	<ul style="list-style-type: none"> • 1973: Agricultural fields, no houses present. • 1982: Agricultural fields, with some related buildings. • 1993: Open grassland. • 2000: Open car park. • 2005: MTR Spur Line Site Office. • 2010: Taxi Chit Waiting Area.
Lot No.	GLA-TYL686 TGLA, TARDS/SP-003TA
Land Ownership Status	Private

Site Survey Information and Recommendation	
Date of Survey:	Feb-12
Conducted by:	Thomas Chan and Lawrence Kan
Site Observation & Potentially Sources of Contamination:	Paved taxi waiting area. One-off access chit to LMC restricted area was distributed to the taxi drivers. Restricted from public access. No adverse contaminated land impacts are identified based on site survey observation.
Necessity for Site Investigation	No
Recommended No. of Boreholes	NA

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Appendix B\LMC-5.dgn



Photo No. P7080106



LMC-5

Photo No. P7080106



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

Drawing Title
Location of Surveyed
Site (LMC-5)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale		1:1000 ON A3	

Drawing No.	LMC-5
Rev.	-

Appendix C

Copy of Letter to
Fire Services
Department and the
Formal Reply of
FSD

By Post

Fire Services Department
Fire Services Headquarters Building
No.1 Hong Chong Road
Tsim Sha Tsui East, Kowloon
Hong Kong

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
t +852 3447 6300
f +852 2268 3950
www.arup.com

Attn: Director of Fire Services

23 January 2013

Dear Sir/Madam

Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on Development of Lok Ma Chau Loop –
Investigation
Request for Information on Dangerous Goods

We refer to your letter ref. (150) in FSD/GR 6-5/4 R dated 7 March 2012 regarding our previous request for information on dangerous goods to facilitate our planning and engineering study on development of Lok Ma Chau Loop – Investigation under the captioned Agreement.

Since changes have been made to the Assessment Area and the proposed alignments of the connection roads have been slightly revised (as shown in **Figure 1, 1a, 1b, 1c, 1d, 1e and 1f**), we would like to request for the following information regarding the concerned areas for our land contamination assessment:

- Records of Dangerous Goods License issued to the concerned area;
- Past and present incident records of the concerned area; and
- Any other information related to the use and/or storage of dangerous goods in the concerned area

Much appreciated if your response via either fax (2268 3950) or email (lawrence.kan@arup.com) could reach us on or before 8 February 2013.

Should you have any queries, please feel free to contact the undersigned or Mr. Lawrence Kan at 2268 3212.

Yours faithfully,

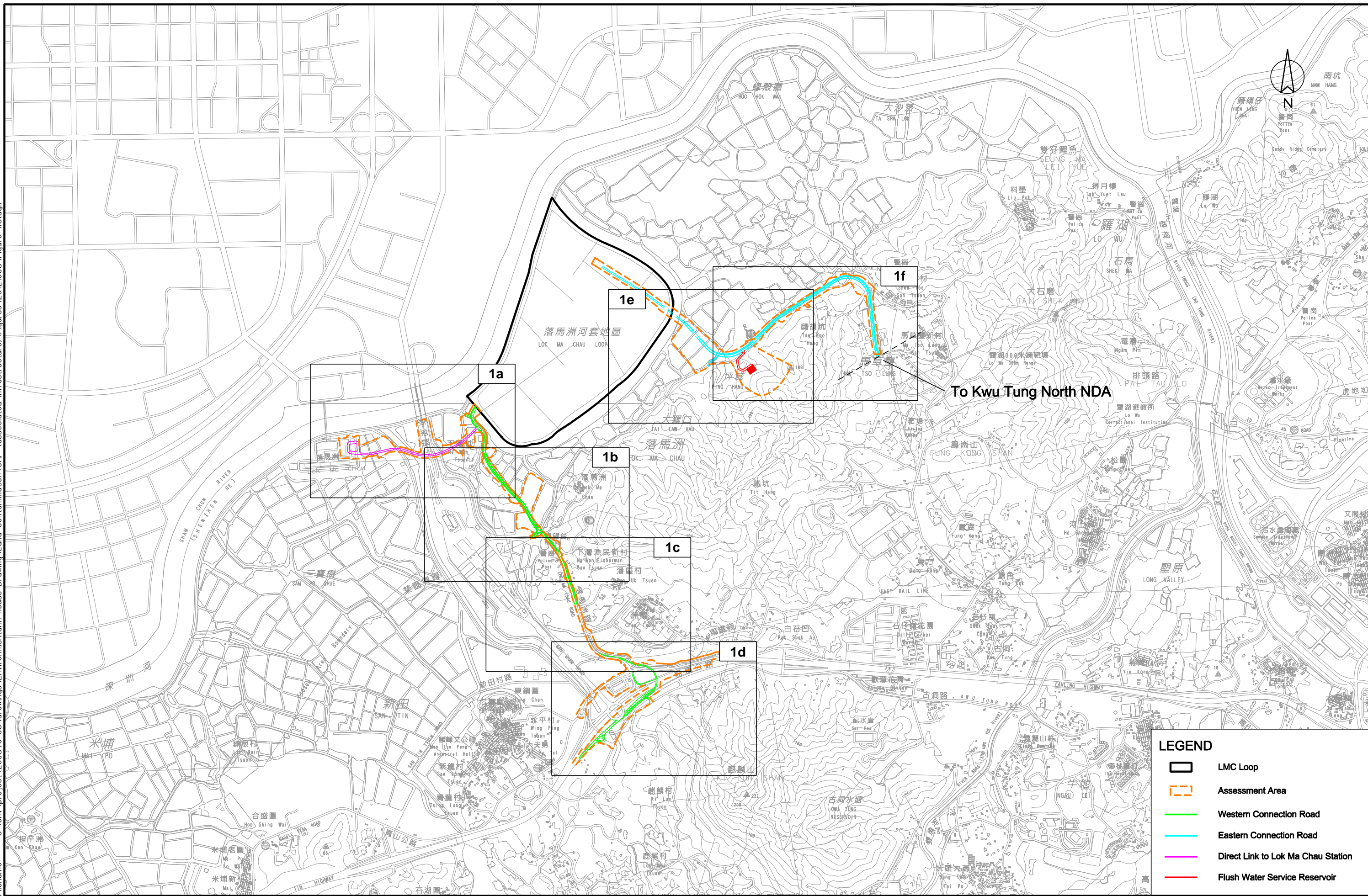


Peter Chan
Project Manager

Reply required: Yes
Date required: 8 February 2013
Attachment: Yes (Figures 1, 1a, 1b, 1c, 1d, 1e and 1f)

cc CEDD Mr. KS Chan (email:kschan@cedd.gov.hk)
 Plan D Miss Kitty Chiu (email:kkychiu@pland.gov.hk)

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3.dgn



LEGEND	
	LMC Loop
	Assessment Area
	Western Connection Road
	Eastern Connection Road
	Direct Link to Lok Ma Chau Station
	Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

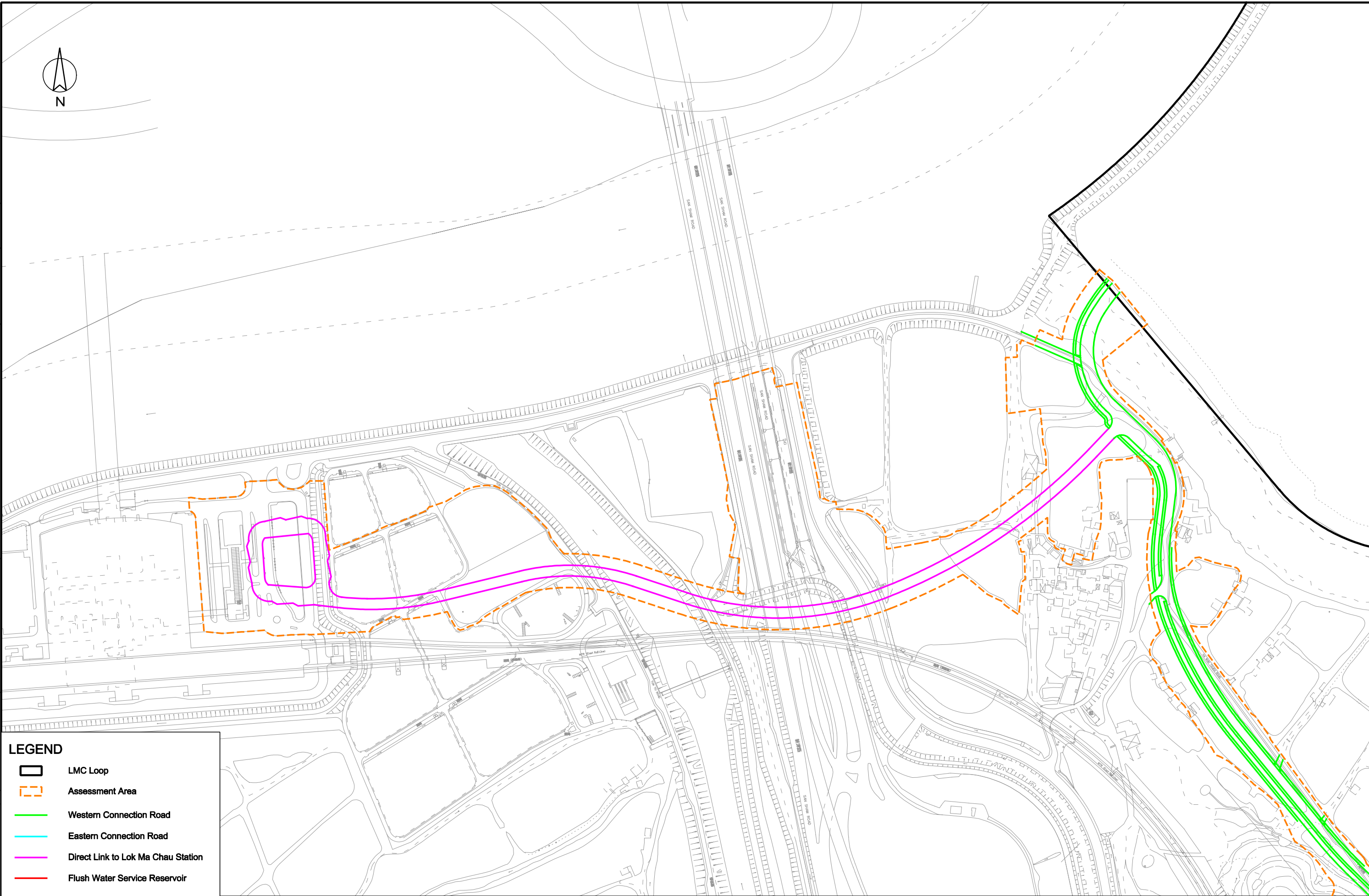
Drawing Title
Assessment Area for Land
Contamination (Sheet 1 of 7)

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Rev	DESCRIPTION	Date	
-	FIRST ISSUE	10/12	

Scale
1:20000 ON A3

Drawing No.
Figure 1
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3a.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

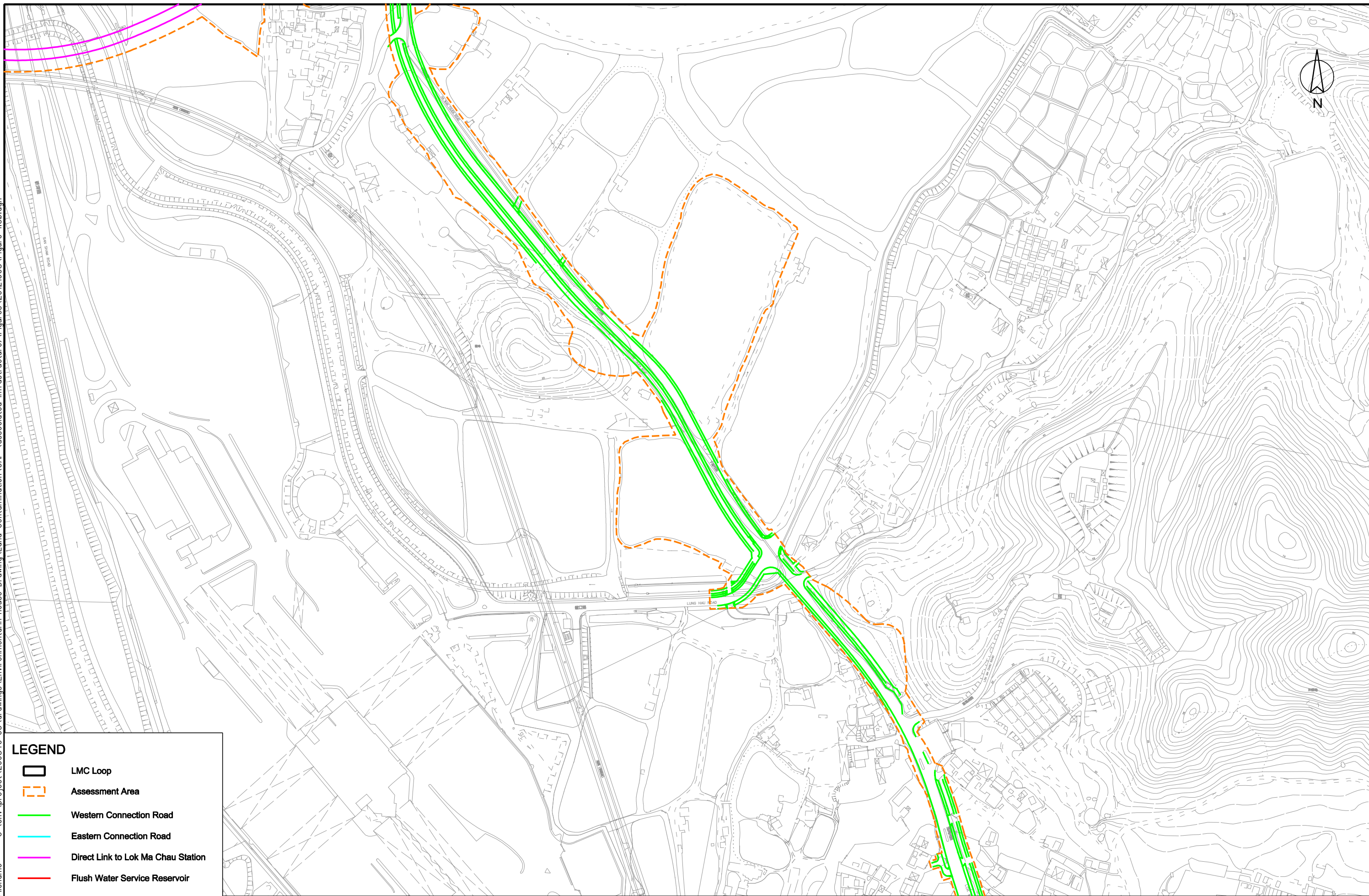
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Assessment Area for Land
Contamination (Sheet 2 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1a
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3b.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

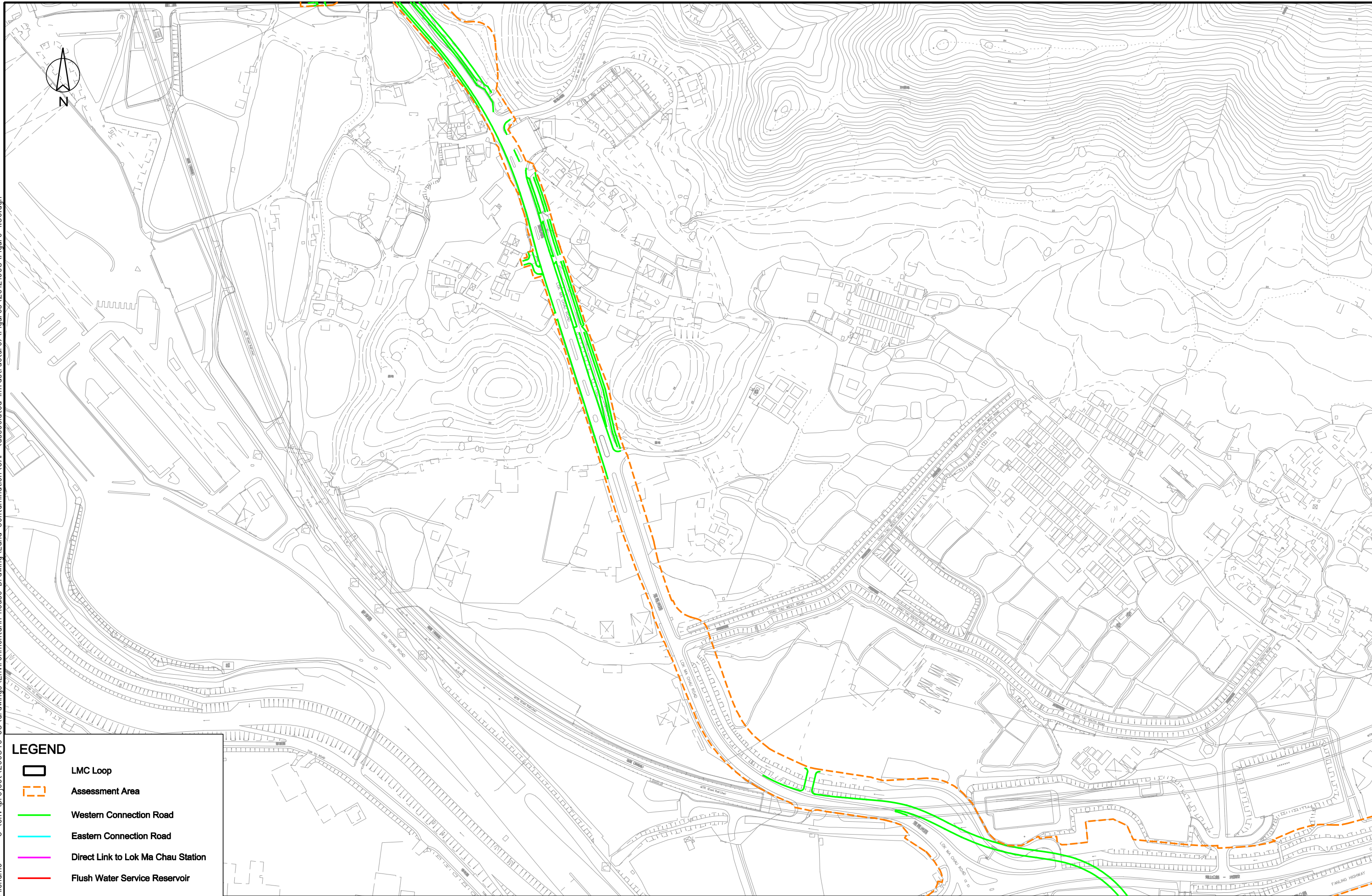
Drawing Title
Assessment Area for Land
Contamination (Sheet 3 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1b
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3c.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

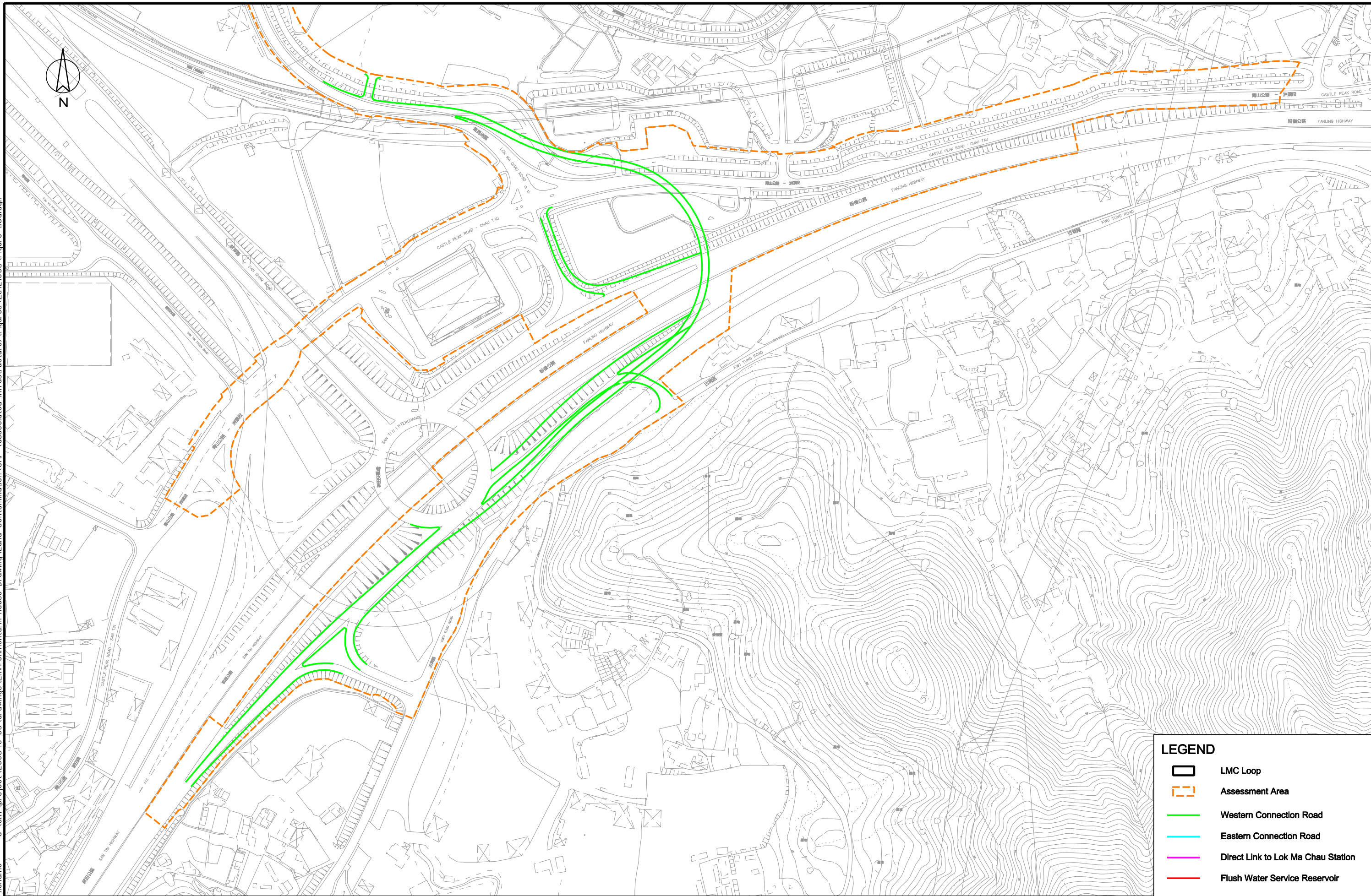
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Assessment Area for Land
Contamination (Sheet 4 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12







Drawn	GL	Date	10/12
Checked	TC	Approved	ST
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Drawing No.
Figure 1c
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing_Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3d.dgn



LEGEND

-  LMC Loop
-  Assessment Area
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flush Water Service Reservoir



土木工程拓展署
 CIVIL ENGINEERING
 AND DEVELOPMENT
 DEPARTMENT



規劃署
 PLANNING
 DEPARTMENT



ARUP
 Ove Arup & Partners
 Hong Kong Limited

Job Title
Agreement No. CE 53/2008 (CE)
 Planning and Engineering Study on
 Development of Lok Ma Chau Loop - Investigation

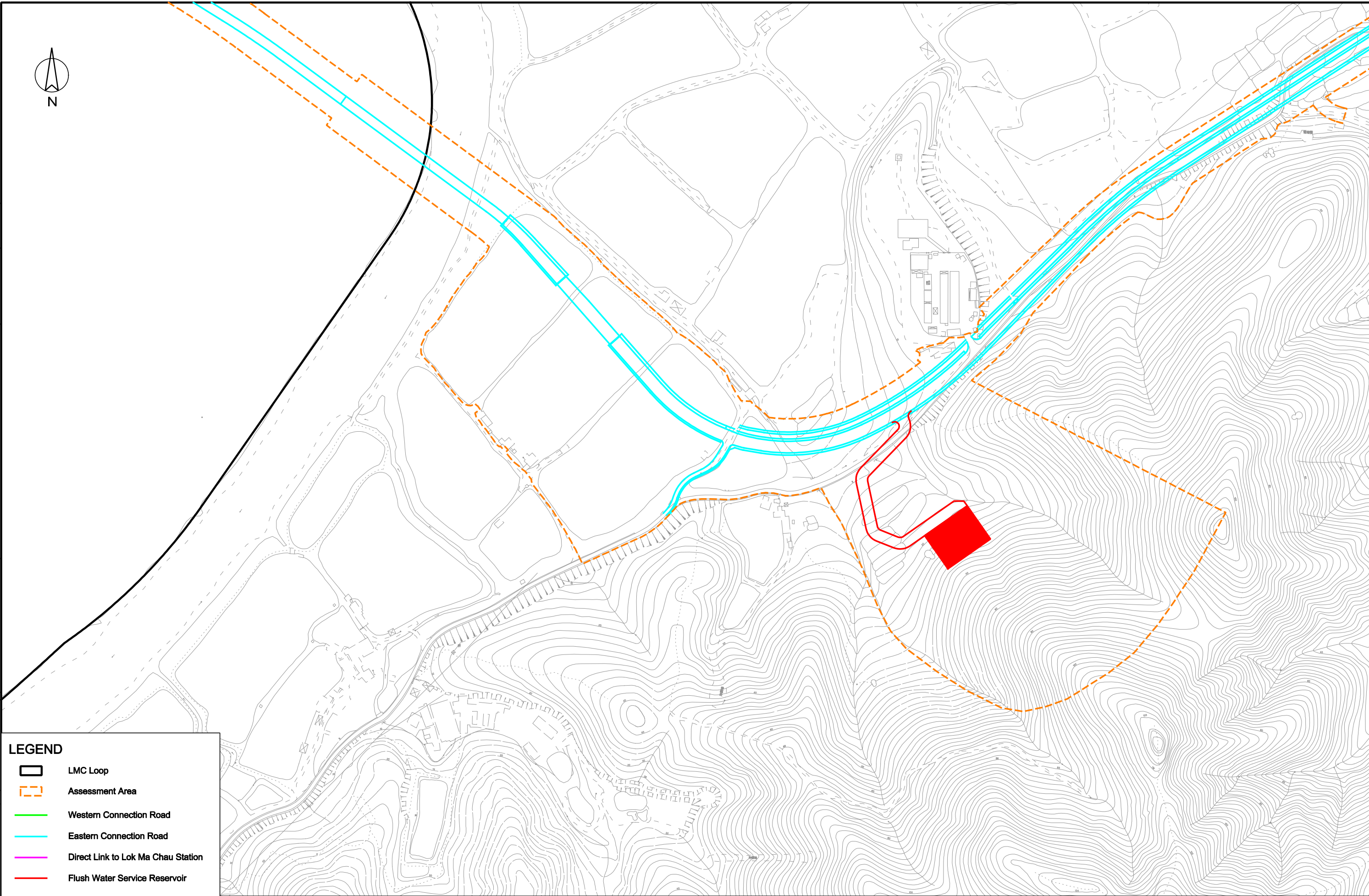
Drawing Title
**Assessment Area for Land
 Contamination (Sheet 5 of 7)**

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1d
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3e.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

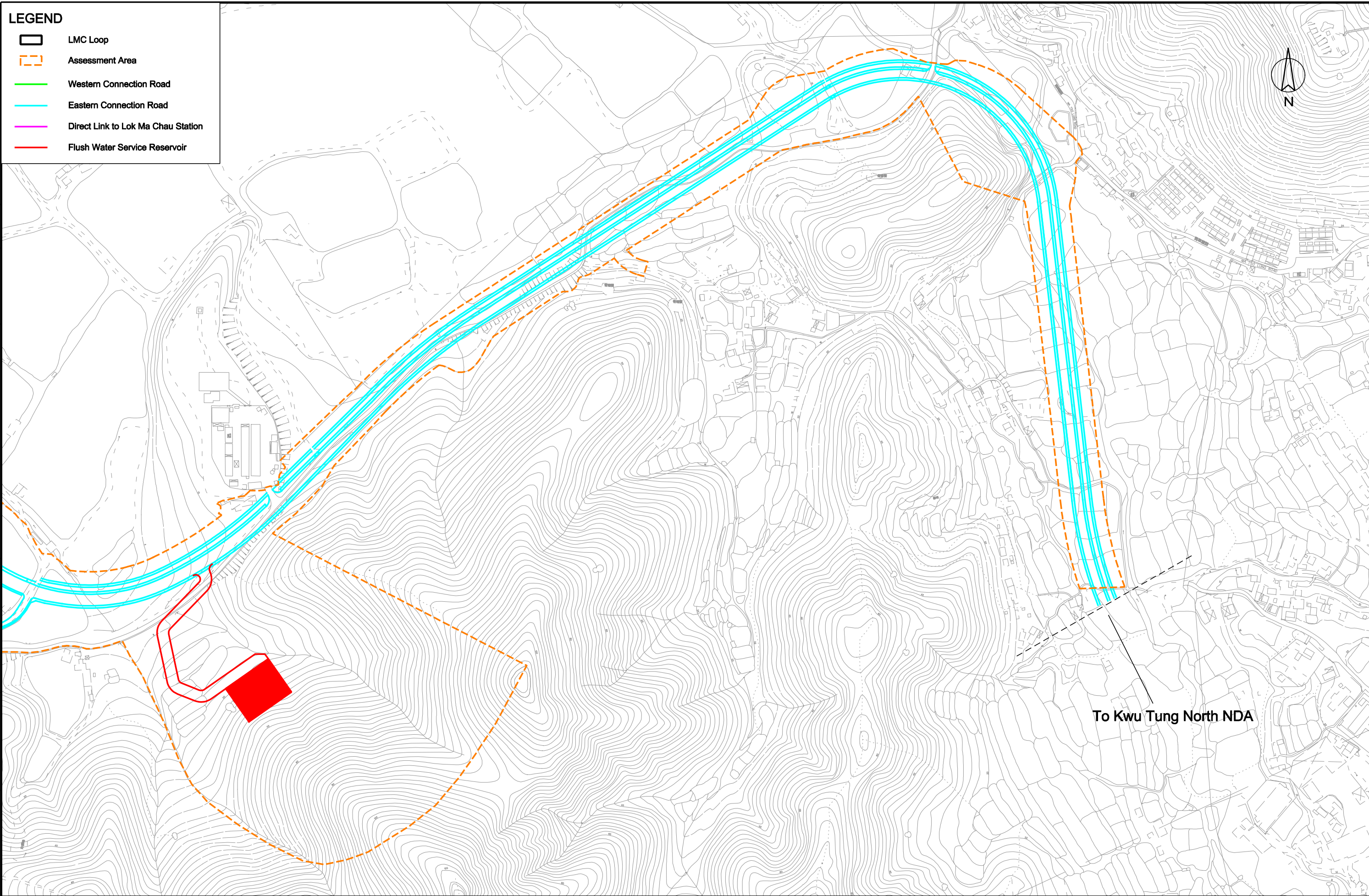
Drawing Title
Assessment Area for Land
Contamination (Sheet 6 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale		1:3000 ON A3	

Drawing No.
Figure 1e
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental\in-house Drawing_Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3.f.dgn



消防處

香港九龍尖沙咀東部康莊道1號
消防總部大廈



FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS
BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (30) in FSD GR 6-5/4 R Pt. 3
來函檔號 YOUR REF. : 209840/03/ LYPC/TC/00593
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電話 TEL NO. : 2733 7741

28 January 2013

ARUP
Level 5 Festival Walk,
80 Tat Chee Avenue,
Kowloon Tong,
Kowloon,
Hong Kong.
(Attn: Mr. Peter CHAN, Project Manager)

By fax (2268 3950) only

Dear Mr. CHAN,

Development of Lok Ma Chau Loop - Investigation
Request for Information of Dangerous Goods & Incident Records

I refer to your letter which was received by this office on 28.1.2013 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. However, please be advised that due to time lapse, this Department can only provide the following information for your requested information:

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

ARUP		Job No. 209840/03
Reply Ref.: 0		File No. 00498
Action Required:		By: [Signature] Date
Received: 05 FEB 2013		
[Signature] Thomas / Alex		
Init.	WTL/CC	WSY
Action		LYPC
Info.		CLBC
Copy	Ref. number and date should be quoted in reference to this letter	

(LO kit-hung, Eric)
for Director of Fire Services

凡提及本信時請引述編號及日期

消防處
香港九龍尖沙咀東部康莊道1號
消防總部大廈



FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS
BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (46) in FSD GR 6-5/4 R Pt. 3
來函檔號 YOUR REF. : 209840/03/LYPC/TC/00593
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2739 5879
電話 TEL NO. : 2733 7741

26 February 2013

ARUP
Level 5 Festival Walk,
80 Tat Chee Avenue,
Kowloon Tong,
Kowloon,
Hong Kong.
(Attn: Mr. Peter CHAN, Project Manager)

By fax (2268 3950) & post

Dear Mr. CHAN,

Development of Lok Ma Chau Loop - Investigation
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 23th January 2013 regarding the captioned request and my replies are stated as follows:-

- 1 & 2) Please see **Appendix A** for storage of dangerous goods.
- 3) According to our record, no incident record was found at the aforesaid location with your given conditions.

Should you have further questions, please feel free to contact the undersigned.

Yours sincerely,

ARUP		Job No.	209840/03
Reply Ref.:	2	File No.	00905
Action Required:		By:	Date
Received - 6 MAR 2013		Sam / Thomas / Alex	
Ints.	WTC/CC	USCY	LYPC
Action			CLRL
Info.			
Copy			

(LO Kit-hung, Eric)
for Director of Fire Services

Development of Lok Ma Chau Loop - Investigation
Request for Information of Dangerous Goods

S/N	Type of Dangerous Goods	Quantity	Unit
1	Acetylene	6.2m ³ x 12	cylinder
2	Oxygen	6.8m ³ x 12	cylinder

Appendix D

Copy of Letter to
Environmental
Protection
Department and the
Formal Reply of
EPD

By Post

Environmental Protection Department
Environmental Compliance Division
Regional Office (North)
10/F., Shatin Government Offices,
1 Sheung Wo Che Street, Sha Tin,
New Territories, Hong Kong.

Level 5 Festival Walk
80 Tat Chee Avenue
Kowloon Tong
Kowloon
Hong Kong
t +852 3447 6300
f +852 2268 3950
www.arup.com

Attn: Mr. Ivan W. K. Shek (Env Protection Offr(Regional N)34)

23 January 2013

Dear Mr. Shek,

Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on Development of Lok Ma Chau Loop –
Investigation
Request for Information on Chemical Waste Producer and Chemical Spillage
Accident

We refer to your letter ref. () in EP560/G1/1 dated 7 February 2012 regarding our previous request for information on chemical waste producer and chemical spillage accident to facilitate our planning and engineering study on development of Lok Ma Chau Loop – Investigation under the captioned Agreement.

Since changes have been made to the Assessment Area and the proposed alignments of the connection roads have been slightly revised (as shown in **Figure 1, 1a, 1b, 1c, 1d, 1e and 1f**), we would like to request for the following information regarding the concerned areas for our land contamination assessment:

- Records of Chemical Waste Producers Registration of the concerned areas; and
- Past and present chemical spillage / leakage records of the concerned areas.

Much appreciated if your response via either fax (2268 3950) or email (lawrence.kan@arup.com) could reach us on or before 8 February 2013.

Should you have any queries, please feel free to contact the undersigned or Mr. Lawrence Kan at 2268 3212.

Yours sincerely

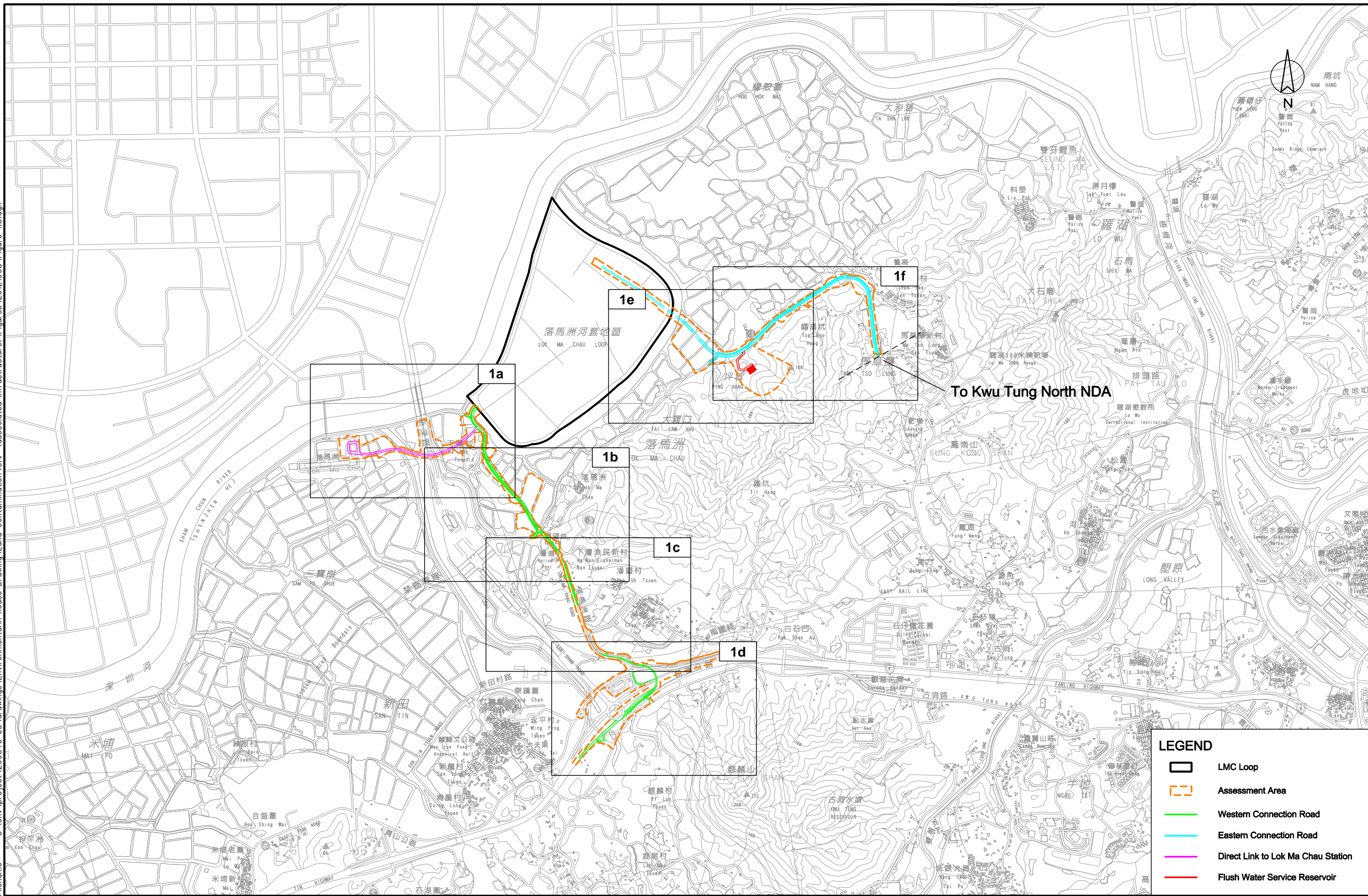


Peter Chan
Project Manager

Reply required: Yes
Date required: 8 February 2013
Attachment: Yes (Figures 1, 1a, 1b, 1c, 1d, 1e and 1f)

cc CEDD Mr. KS Chan (email:kschan@cedd.gov.hk)
Plan D Miss Kitty Chiu (email:kkychiu@pland.gov.hk)

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

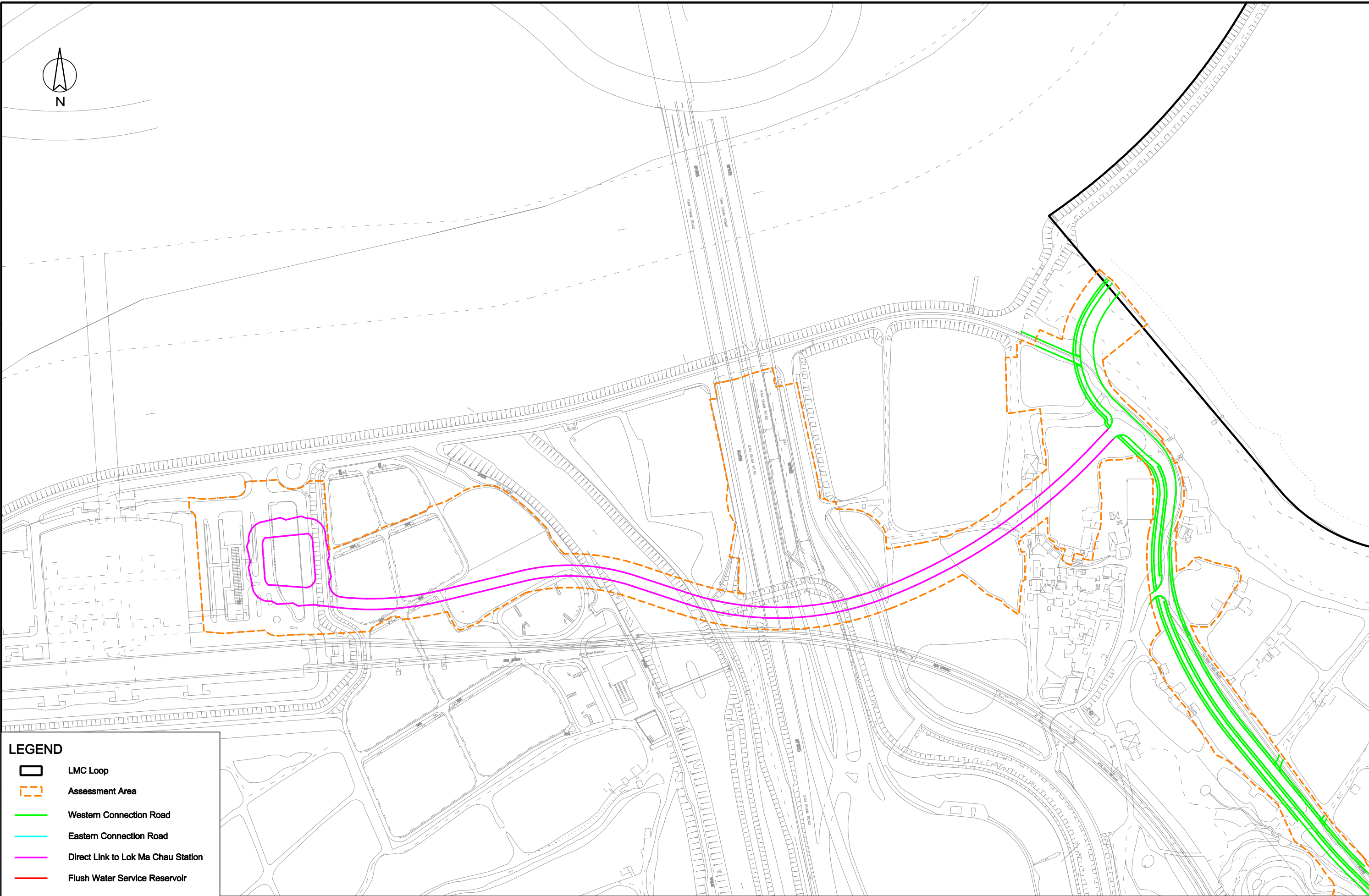
Drawing Title
Assessment Area for Land
Contamination (Sheet 1 of 7)

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Rev	DESCRIPTION	Date	
-	FIRST ISSUE	10/12	

Scale
1:20000 ON A3

Drawing No.
Figure 1
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3a.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

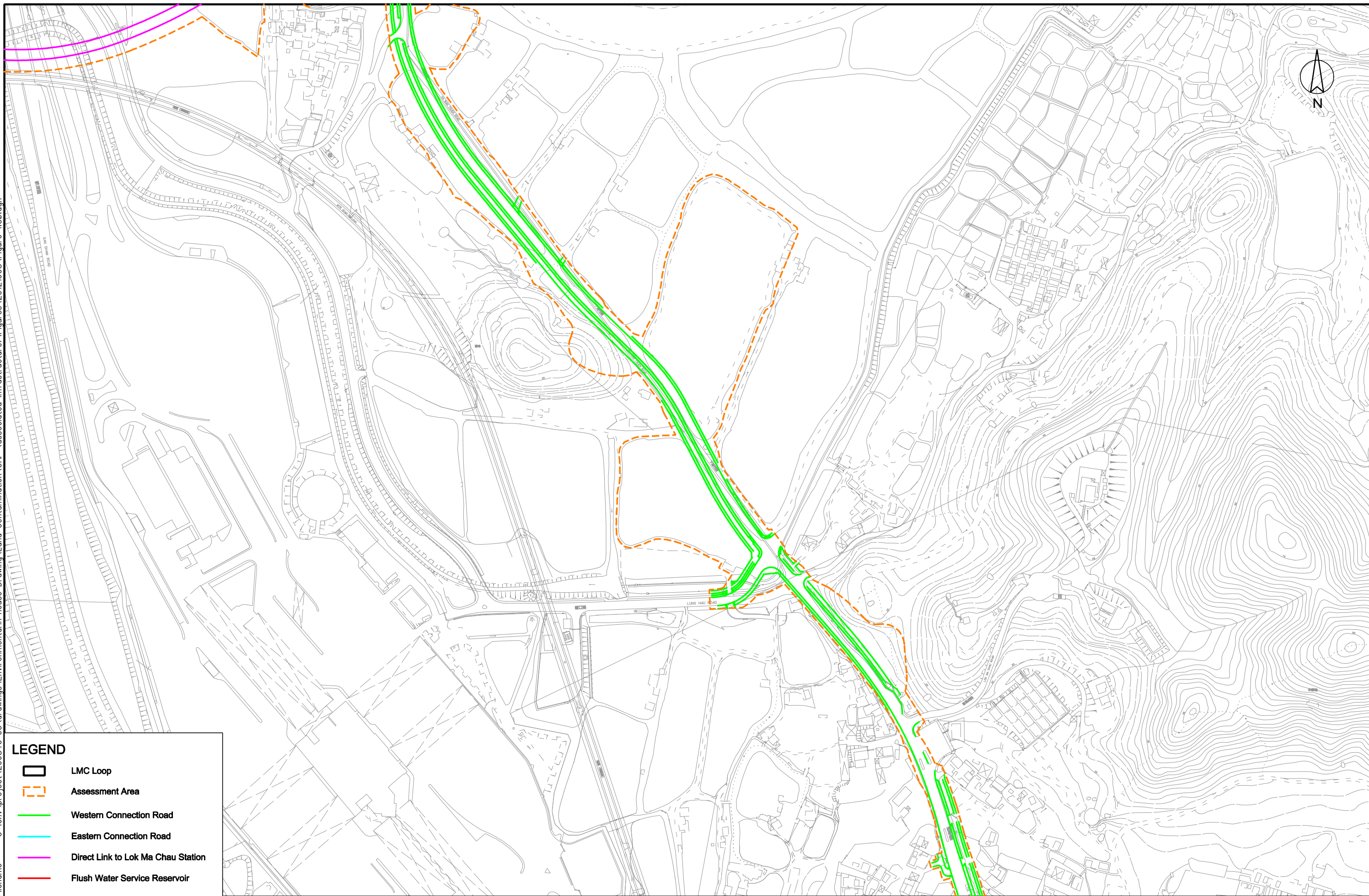
Drawing Title
Assessment Area for Land
Contamination (Sheet 2 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1a
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3b.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
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- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

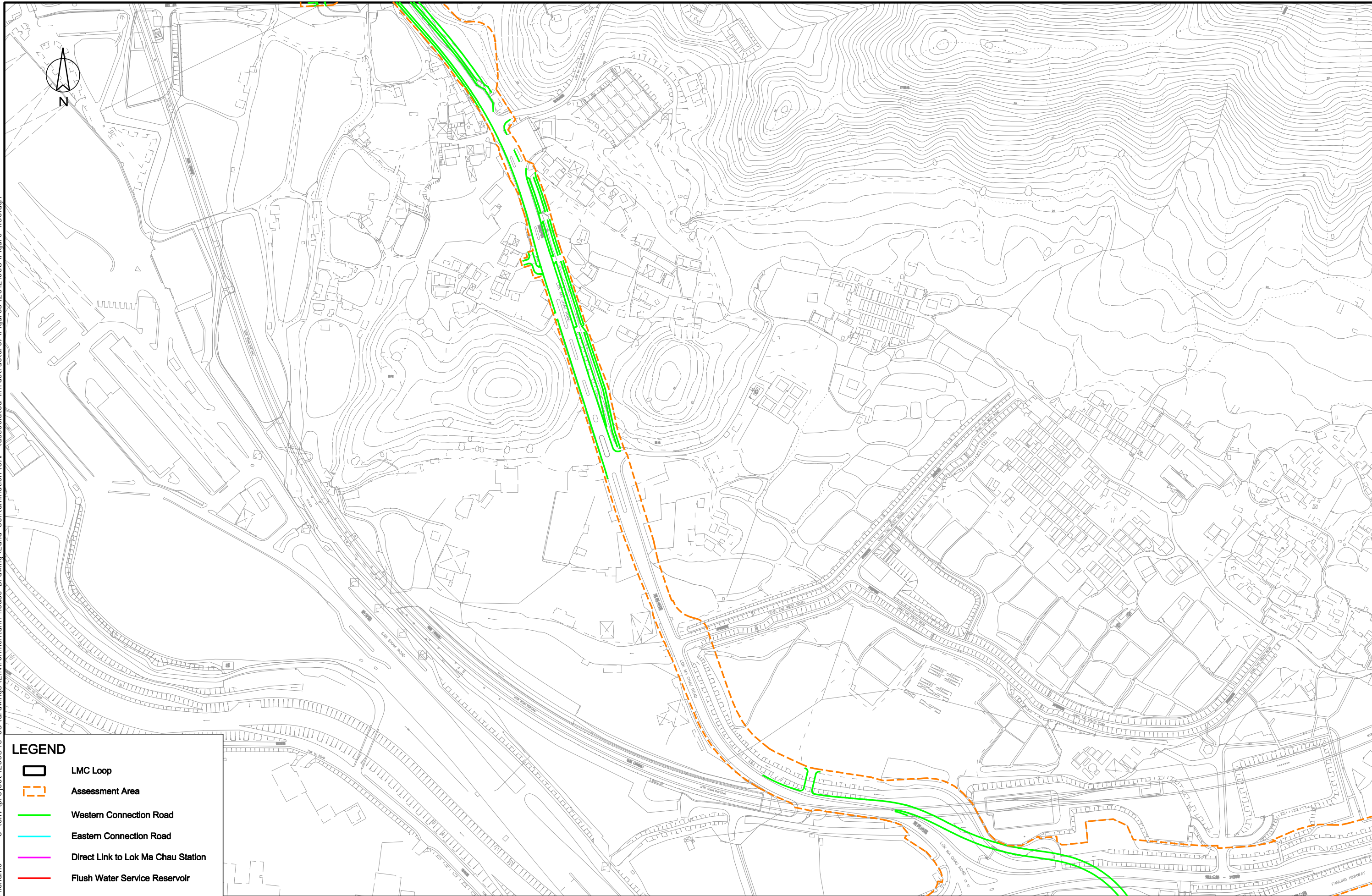
Drawing Title
Assessment Area for Land
Contamination (Sheet 3 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1b
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3c.dgn



LEGEND

- LMC Loop
- Assessment Area
- Western Connection Road
- Eastern Connection Road
- Direct Link to Lok Ma Chau Station
- Flush Water Service Reservoir



Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

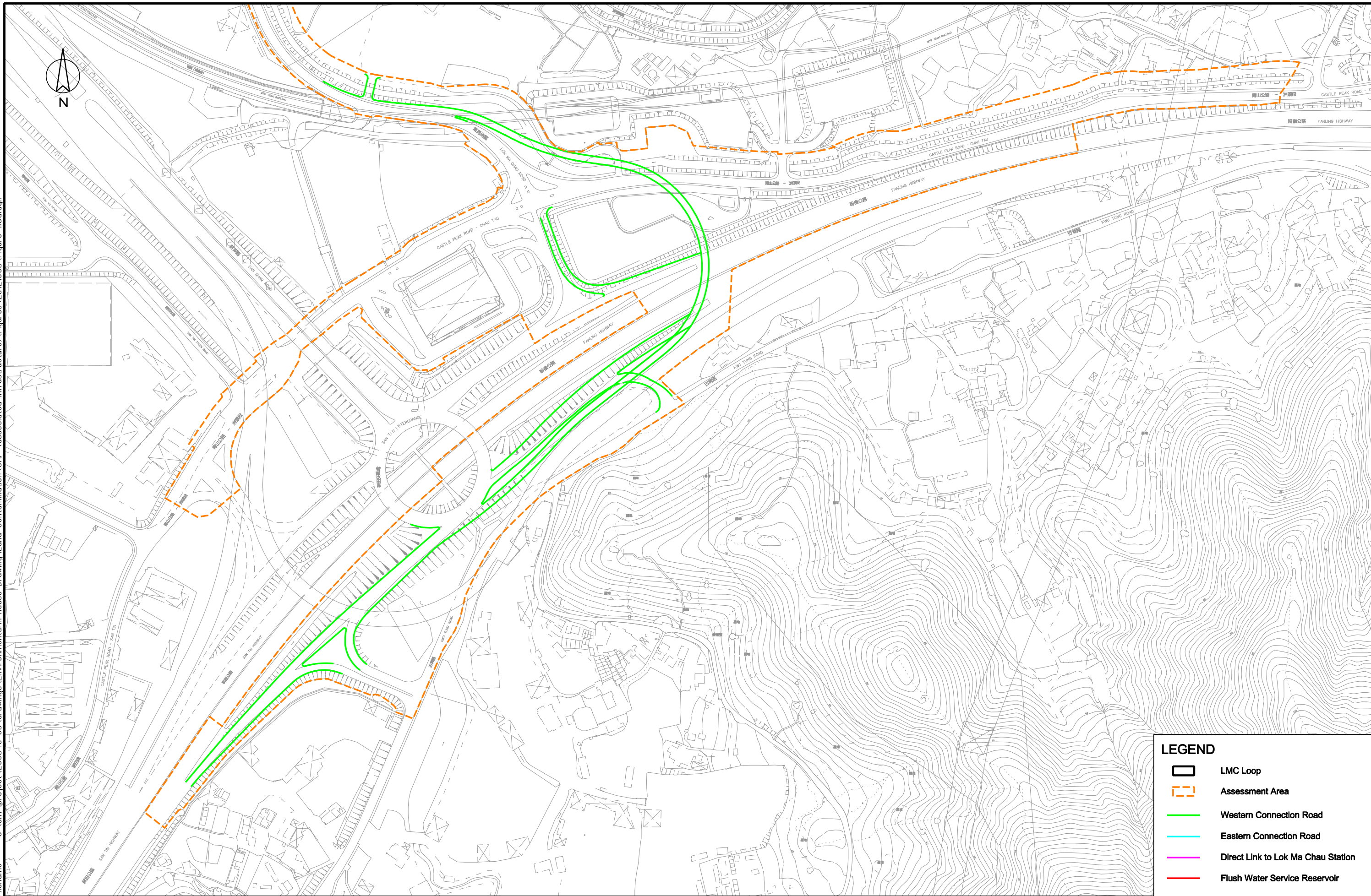
Drawing Title
Assessment Area for Land
Contamination (Sheet 4 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12







Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale		1:3000 ON A3	

Drawing No.
Figure 1c
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing_Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3d.dgn



LEGEND

-  LMC Loop
-  Assessment Area
-  Western Connection Road
-  Eastern Connection Road
-  Direct Link to Lok Ma Chau Station
-  Flush Water Service Reservoir

 土木工程拓展署
 CIVIL ENGINEERING
 AND DEVELOPMENT
 DEPARTMENT

 規劃署
 PLANNING
 DEPARTMENT

 ARUP
 Ove Arup & Partners
 Hong Kong Limited

Job Title
Agreement No. CE 53/2008 (CE)
 Planning and Engineering Study on
 Development of Lok Ma Chau Loop - Investigation

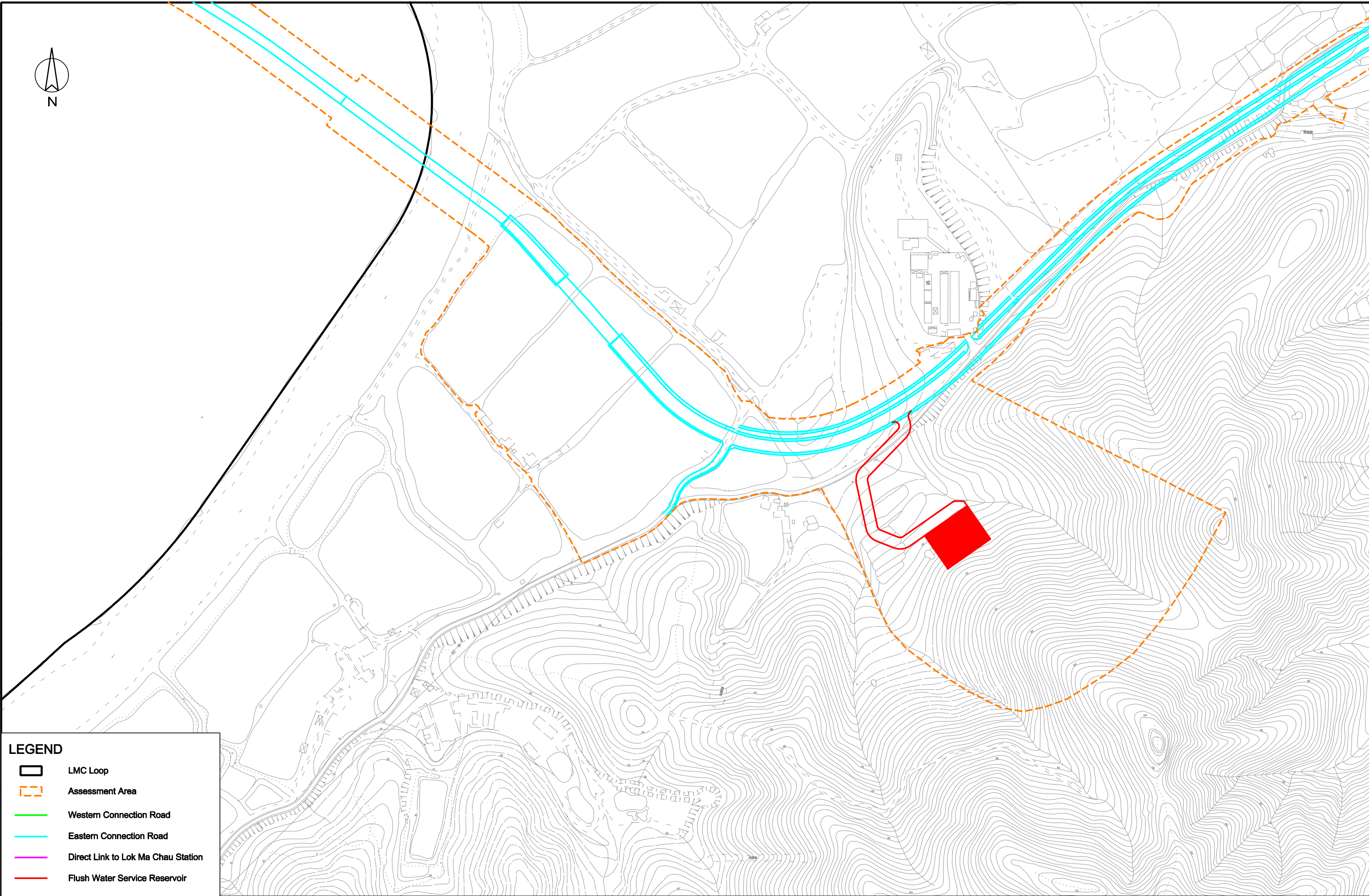
Drawing Title
**Assessment Area for Land
 Contamination (Sheet 5 of 7)**

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale	1:3000 ON A3		

Drawing No.
Figure 1d
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental In-house Drawing\Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3e.dgn



LEGEND

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Job Title
Agreement No. CE 53/2008 (CE)
Planning and Engineering Study on
Development of Lok Ma Chau Loop - Investigation

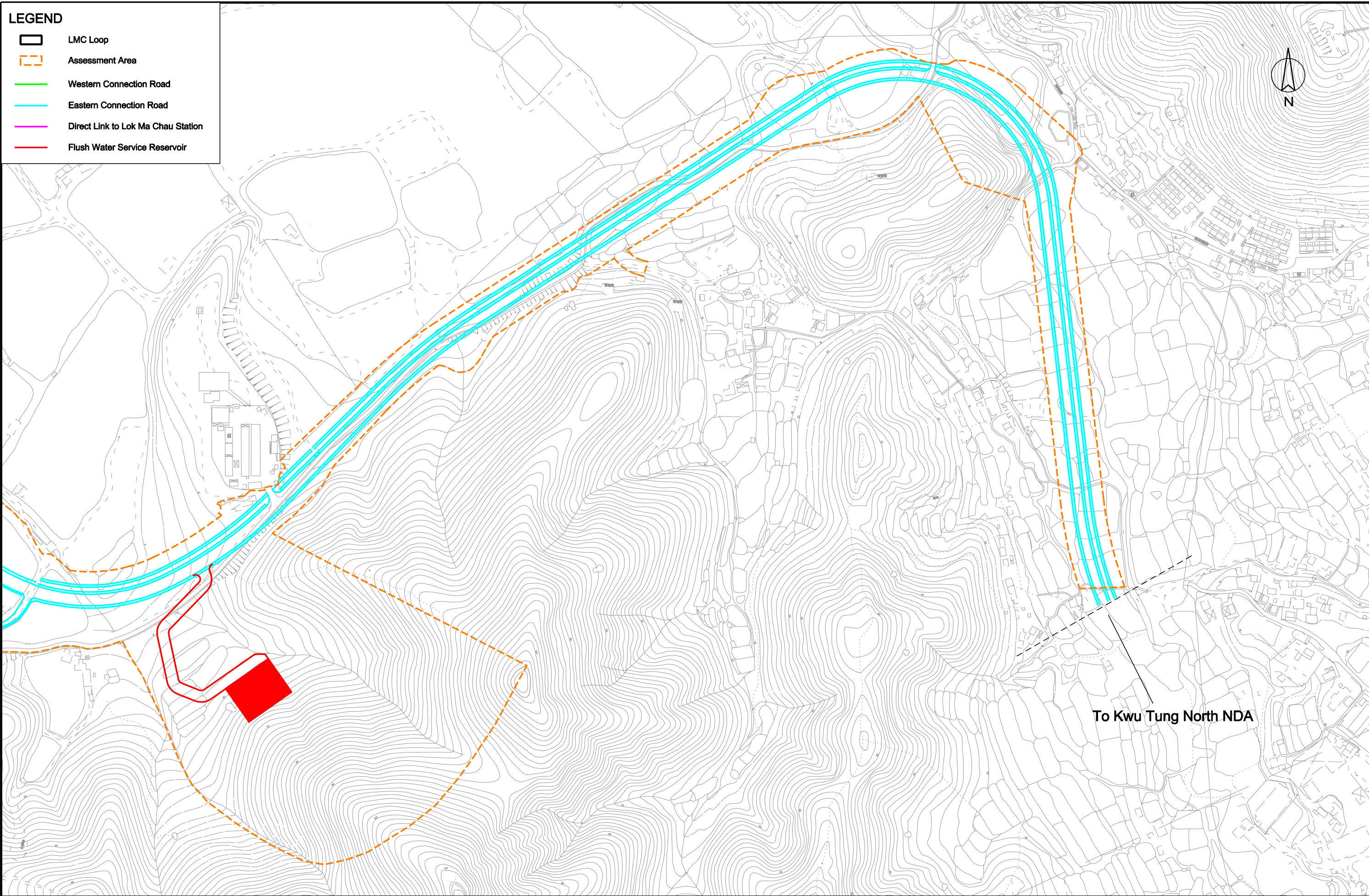
Drawing Title
Assessment Area for Land
Contamination (Sheet 6 of 7)

Rev	Description	Date
-	FIRST ISSUE	10/12

Drawn	GL	Date	10/12
Checked	TC	Approved	ST
Scale		1:3000 ON A3	

Drawing No.
Figure 1e
 Rev. -

Printed by : 10/10/2012
 Filename : G:\env\project\209840-03\drawings\Environmental\in-house Drawing_Land Contamination\CAP (associated infrastructure)\Figures\20121008\Figure 1.3.f.dgn



本署檔案
OU () EF: () in EP560/G1/1
來電檔案
YOUR REF: 209840/03/LYPC/TC/00592
電話號碼
TEL NO.: 2158 5842
圖文傳真
FAX NO.: 2685 1133
網址
HOMEPAGE: http://www.epd.gov.hk/

**Environmental Protection Department
Environmental Compliance Division
Regional Office (North)**

10/F, Shatin Government Offices,
1 Sheung Wo Che Road,
Sha Tin, New Territories,
Hong Kong

環境保護署
環保法規管理科
區域辦事處(北)
香港新界沙田
上禾輦路一號
沙田政府合署 10樓

(By fax only: 2268 3950)
29 January 2013

Ove Arup & Partners Hong Kong Limited
Level 5, Festival Walk
80 Tat Chee Avenue,
Kowloon Tong, Kowloon
(Attn. Mr. Peter CHAN, Project Manager)

ARUP		Job No. 209840/03		
Reply Ref.: 2		File No. 00701		
Action Required:		By: Date		
Received 27 FEB 2013 Sui Thomas Alvin				
Ints.	WTC	WSP	UPE	ALBC
Action				
Info.				
Copy				

Dear Mr. CHAN,

**Re. Request for Information on Chemical Waste Producer
and Chemical Spillage Accident**

We refer to your letter dated 23 January 2013 requesting the captioned information.

In so far as chemical waste producers are concerned, a registry of chemical waste producers is available in the Territory Control Office. Please contact Mr. DO Yuen-tung at 2835 1017 for making an appointment to view the records.

This Regional Office has no record of incident of spillage/leakage of chemicals at the locations concerned. You may need to check with other relevant parties/departments for such information as appropriate.

Should you have any query on the matter, please contact the undersigned at 2158 5842.

Yours faithfully,

(Ivan W.K. SHEK)

For Director of Environmental Protection

c.c.

CEDD- Mr. K.S. CHAN

Fax: 2693 2918

PlanD- Miss Kitty CHIU

Fax: 2522 8524

Internal

TCG - Mr. DO Yuen-tung