

North East New Territories (NENT) Landfill Extension

Baseline Monitoring Report for
Construction Phase – Landscape
and Visual Monitoring

2022-12-23

Our Ref.: CL/91823/0216-VES
Date: 3 January 2023

By Email

Veolia Hong Kong Holding Limited
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Attn.: Mr. Alvin Kam

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Dear Sir

Re: Contract No. EP/SP/77/15
North-East New Territories Landfill Extension (NENTX)
Baseline Monitoring Report for Construction Phase –
Landscape and Visual Monitoring

I refer to Conditions 3.2 under Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-01/292/2007, regarding the submission of a report for baseline monitoring. I hereby verified the captioned "Baseline Monitoring Report for Construction Phase – Landscape and Visual Monitoring" dated 23 December 2022.

Yours faithfully
MEINHARDT INFRASTRUCTURE AND ENVIRONMENT LTD



Claudine Lee
Independent Environmental Checker

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Ref: P521530-0000-REV-NN-0023

By Email

3 January 2023

Meinhardt Infrastructure & Environment Ltd.
10/F Genesis
33-35 Wong Chuk Hand Road
Hong Kong

Attn: Ms. Claudine Lee,

Dear Claudine,

Re: Contract No. EP/SP/77/15
Northeast New Territories Landfill Extension
Submission of Baseline Monitoring Report for Construction Phase – Landscape and
Visual Monitoring

In accordance with the requirement specified in Condition 3.2 of Environmental Permit No. EP-292/2007 and Further Environmental Permit No. FEP-01/292/2007, we are pleased to submit the certified "Baseline Monitoring Report for Construction Phase – Landscape and Visual Monitoring" dated 23 December 2022 for your verification.

Should you require any further information or clarification, please do not hesitate to contact the undersigned or our Mr. Keith Chau on 3664 6788.

Yours faithfully,
For and on behalf of
Aurecon Hong Kong Limited

A handwritten signature in blue ink, appearing to read "Fredrick Leong".

Fredrick Leong
Environmental Team Leader

Encl.

1. Baseline Monitoring Report for Construction Phase – Landscape and Visual Monitoring

cc.

1. IEC - Ms. Claudine Lee (By email: claudinelee@meinhardt.com.hk)
2. IEC Representative - Mr. Jimmy Lui (By email: jimmylui@meinhardt.com.hk)

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Document control						aurecon	
Report title		Baseline Monitoring Report for Construction Phase – Landscape and Visual Monitoring					
Document ID			Project number				
File path							
Client		Veolia					
Client contact			Client reference		NENTX-AURE-RP-E-EM-005-I01		
Rev	Date	Revision details/status	Author	Reviewer	Verifier (if required)	Approver	
0	23 December 2022		Various	K.Chau		FL	
Current revision		0					

Approval			
Reviewer's signature		Approver's signature	
			
Name		Name	
Keith Chau		Fredrick Leong	
Title		Title	
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Appendix A	Photographic Records for LCAs, LRs and VSRs (NENTX-VHK-RP-E-ZZ-005-I01)
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Executive Summary

Aurecon Hong Kong Limited (Aurecon) was appointed to undertake the role of Environmental Team (ET) and carry out Environmental Monitoring and Audit for the North East New Territories (NENT) Landfill Extension.

An Environmental Permit (EP) No. EP-292/2007 was issued by the Environmental Protection Department (EPD) on 26 November 2007 for the construction of this project based on the Environmental Impact Assessment (EIA) Report (Register No: AEIAR-111/2007) approved by the EPD. The latest EP No. FEP-01/292/2007 was subsequently issued by the EPD in April 2022.

In accordance with the requirements specified in Section 8.2 of the approved Environmental Monitoring and Audit (EM&A), photographic records of the project site should be taken at the time when the DBO Contractor take over the site, which should be approved by the IC. The approved photographic records should be submitted to the Project Proponent, ET, IEC and EPD.

Baseline condition with photographic records taken in May 2022. The photographic records has been prepared by Veolia and submitted to IC on 14 December 2022. IC has approved the photographic records on 28 December 2022.

1. Introduction

1.1. Background

- 1.1.1. The Environmental Protection Department (EPD) commissioned a study in Year 2000 on the Extension of Existing Landfills and Identification of Potential New Waste Disposal Sites. Amongst the potential sites recommended in this territory-wide study is the extension of the existing North-East New Territories (NENT) Landfill, with a target capacity of about 19 Mm³. The proposed extension of about 70 ha, is located immediately east of the existing NENT Landfill. A large proportion of the Extension area is in fact the Stockpile and Borrow Area of the existing landfill.
- 1.1.2. The North-East New Territories Landfill Extension (the NENTX Project) is a designated project. The Environmental Impact Assessment (EIA) Report (AEIAR-111/2007) and an Environmental Monitoring and Audit Manual were approved on 20 September 2007. The project is governed by an Environmental Permit (EP) (EP-292/2007) which was granted on 26 November 2007. A further of EP (FEP) was applied and the FEP (FEP-01/292/2007) was subsequently granted in April 2022.
- 1.1.3. In accordance with the requirements specified in Section 2.5, Section 2.10 and Section 12.2 of the approved Environmental Monitoring and Audit (EM&A) and Environmental Permit (EP and FEP) condition 3.2, baseline monitoring report for Dust, Noise and Surface Water Monitoring has been submitted to the Director of Environmental Protection (DEP) for approval before commencement of construction.
- 1.1.4. Aurecon Hong Kong Limited (Aurecon) was appointed to undertake the role of Environmental Team (ET) for the baseline monitoring programme. The baseline monitoring covered Air Quality, Noise and Surface Water Quality.

2. Landscape and Visual Monitoring

2.1 Monitoring Requirement

- 2.1.1 According to Section 8 of the Updated EM&A Manual, the design, implementation and maintenance of landscape mitigation measures should be checked to ensure that they are fully implemented and that potential conflicts between the proposed landscape measures and other construction and operational requirements are timely resolved without compromise to the intention of the proposed mitigation measures. Photographic records for baseline landscape and visual monitoring of NENTX Project site should be taken at the time when Veolia take over the site and then be approved by the Independent Consultant (IC). .

2.2 Monitoring Parameters, Frequency and Location

- 2.2.1 The detail monitoring parameters, frequency and location are provided in **Appendix A**.

2.3 Monitoring Result

- 2.3.1 The monitoring results are provided in **Appendix A**.

Appendix A

Doc. Type: **Report**

No: NENTX-VHK-RP-E-ZZ-005-I02

Description: Photographic Records for Landscape Characters Areas (LCAs),
Landscape Resources (LRs) and Visual Sensitive Receivers (VSRs)

Document History

Revision	Date	Status	Prepared by	Approved by	Change
I01	7 December 2022	First issue	WW	AK	
I02	23 December 2022	Second issue	WW	AK	Update the fonts of TOC and re-organize the content of Section 1.1

Package: Follow up & Content

Document Name	Submitted in Package Rev No.:	Comment	Included in this submission
Photographic Records for Landscape Characters Areas (LCAs), Landscape Resources (LRs) and Visual Sensitive Receivers (VSRs)	I01		Soft/Hard Copy
Photographic Records for Landscape Characters Areas (LCAs), Landscape Resources (LRs) and Visual Sensitive Receivers (VSRs)	I02		Soft/Hard Copy

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Attachment 1 – Photographic records of the LCAs

Attachment 2 – Photographic records of the LRs

Attachment 3 – Photographic records of views of NENTX from VSRs

1. Purpose of this Report

- 1.1 The purpose of this report is to set the baseline levels for landscape and visual characteristics. These baseline levels will be used as:
- the basis for checking of the effectiveness of implemented mitigation measures for reduction of landscape and visual impact on all the specified and affected landscape characters areas (LCAs) and landscape resources (LRs) during the impact monitoring in construction, operation, restoration and aftercare stages of the Project,
 - collection of information and observations on the site characteristics prior to the commencement of construction in order to make comparisons between pre-development and post-development,
 - as reference materials of the Landscape Plan to be provided in accordance with Condition 2.13 of the Environmental Permit EP-292/2007 and Condition 2.11 of the Further Environmental Permit FEP-01/292/2007.
- 1.2 This report presents the photographic records of NENTX Project site in May 2022, when no site clearance works was commenced.

2. Monitoring Requirements

- 2.1 According to Section 8 of the Updated EM&A Manual, the design, implementation and maintenance of landscape mitigation measures should be checked to ensure that they are fully implemented and that potential conflicts between the proposed landscape measures and other construction and operational requirements are timely resolved without compromise to the intention of the proposed mitigation measures. Photographic records for baseline landscape and visual monitoring of NENTX Project site should be taken at the time when Veolia take over the site and then be approved by the Independent Consultant (IC).

3. Monitoring Methodology







- 3.1 Site visits around NENTX Project area were conducted in May 2022. Photographic records of the LCAs, LCs and views of NENTX from the visual sensitive receivers (VSRs) identified in the approved EIA Report were taken as far as practicable to verify if there is any major change of landscape baseline with reference to the approved EIA Report.

4. Monitoring Results

4.1 Landscape Character Areas (LCAs)

LCAs were identified during the EIA stage and detailed description of these LCAs are summarised in Table 4.1. Photos of these LCAs within 500 m from the site boundary of NENTX were taken in May 2022.

Table 4.1 – LCAs within 500 m from the site boundary of NENTX







LCAs	Colour	Type	Location	Description	Size (Ha)	Sensitivity
LCA1		Disturbed land	Existing NENT Landfill Site	Comprises mainly the existing NENT Landfill site under operation and its associated stockpile and borrow area (SBA) to its east	90.2	Low
LCA2A		Rural Settlement Landscape	Tong To Shan Tsuen & Ngong Tong	Comprises lowland with abandoned rural settlement, abandoned agricultural field and associated hillside backdrop	66.5	High
LCA2B		Rural Settlement Landscape	Ping Yuen	Comprises lowland with rural settlement, agricultural field and associated hillside backdrop	15.9	Medium
LCA3A		Upland Landscape	NW facing slope of Robin's Nest	Natural steep hillside slope covered by mainly grassland and some woodland, located to the east of SBA	32.4	Medium
LCA3B		Upland Landscape	SE facing slope of Wo Keng Shan	Natural steep hillside slope covered by mainly grassland and some woodland, located on the other side of the hill ridge away from SBA	54.1	High
LCA3C		Upland Landscape	NW facing slope of Wo Keng Shan	Natural steep hillside slope covered by mainly grassland and shrubland, half of the area is surrounding by the existing NENT landfill site	40.1	Medium

The baseline conditions with photographic records of the landscape character areas (LCAs) are presented in Attachment 1. No change of landscape character areas was identified when compared the photographic records to Table 8.4 and Figure 24315/13/702 of the approved EIA Report.

4.2 Landscape Resources (LRs)

LRs were identified during the EIA stage and detailed description of these LR are summarised in Table 4.2. Photos of these LR within 500 m from the site boundary of NENTX were taken in May 2022.

Table 4.2 – LR within 500 m from the site boundary of NENTX

LRs	Colour	Type	Description	Size (Ha)	Sensitivity
LR1		Woodland	Mainly found near the ravine valley of upland hillside and near the rural area of Tong To Shan	72.7	High
LR2		Shrubland	Frequent hill fire has been recorded. Regarded as a transitional phase from grassland to woodland in natural succession if not prevented by frequent hill fire.	26.1	Medium
LR3		Grassland	Frequent hill fire has been recorded and landscape quality and value considered as low	95.5	Low
LR4		Agricultural Field	Mainly found in rural settlement areas near Ping Yuen (under cultivation) and near Tong To Shan (abandoned)	13.0	Medium
LR5		Natural Stream Course	The downstream of Lin Ma Hang Stream which is ecological rich	505 m length	High
LR6		Existing NENT Landfill Site and SBA	Comprises mainly the existing NENT Landfill site under operation and its associated stockpile and borrow area (SBA) to its east	90.2	Low

The baseline conditions with photographic records of the landscape resources (LRs) are presented in Attachment 2. No change of landscape resources was identified when compared the photographic records to Table 8.5 and Drawing 24315/13/702 of the approved EIA Report.

4.3 Visual Sensitive Receivers (VSRs)

VSRs were identified during the EIA stage and detailed description of these VSRs are summarised in Table 4.1. Photos of these VSRs were taken in May 2022.

Table 4.3 – VSRs of NENTX

VSRs	Location	Type	Populations of VSRs	Min. Viewing Distance (km)	Sensitivity
VSR1	Tong To Shan Tsuen	Village Residents	None (Abandoned)	0.7	Low
VSR2	Lin Ma Hang	Village Residents	Very Few	1.4	High
VSR3	Wo Keng Shan Tsuen	Village Residents	Very Few	0.9	High
VSR4	Ping Yeung	Village Residents	Medium	1.6	Medium
VSR5	Ping Che, Ping Che New Village	Village Residents	Medium	1.9	High
VSR6	Sing Ping Village, Tai Po Tin	Village Residents	Few	2.4	Medium
VSR7	Kan Tau Wai, Ta Kwu Ling Village	Village Residents	Medium	2.8	Medium
VSR8	Sheung Shan Kai Wat, Ha Shan Kai Wat	Village Residents	Few	3.2	Low
VSR9	Hikers at the top of Robin's Nest	Hikers	Very Few	1.3	High
VSR10	Ha Heung Yuen, Heung Yuen Wai	Village Residents	Medium	1.8	Medium
VSR11	Chuk Yuen	Village Residents	Few	2.8	Medium
VSR12	Potential future users at the existing NENT Landfill during its aftercare period	Village Residents	Few	0.7	Medium

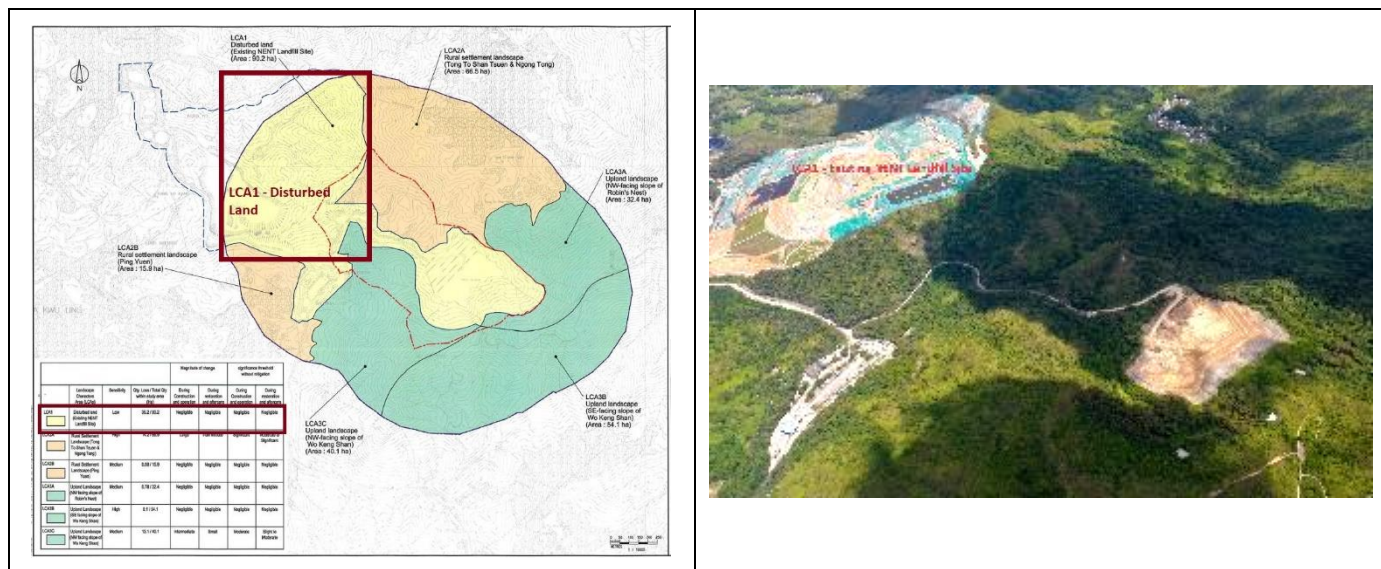
The baseline conditions with photographic records of the views of NENTX from the visual sensitive receivers (VSRs) are presented in Attachment 3. No change of the views of NENTX from the VSRs was identified when compared the photographic records to Drawings 24315/14/010 to 012 of the approved EIA Report.

5. Conclusion

Base on the results of the baseline condition with photographic records taken in May 2022 with reference to the LCAs, LRs and views of NENTX from the VSRs identified in the approved EIA report, it is concluded that the landscape and visual baseline conditions is similar to those presented in the approved EIA report. Therefore, the landscape and visual impact assessment as presented in the approved EIA Report is considered valid.

Attachment 1 – Photographic records of the LCAs

LCA1 – Existing NENT Landfill Site



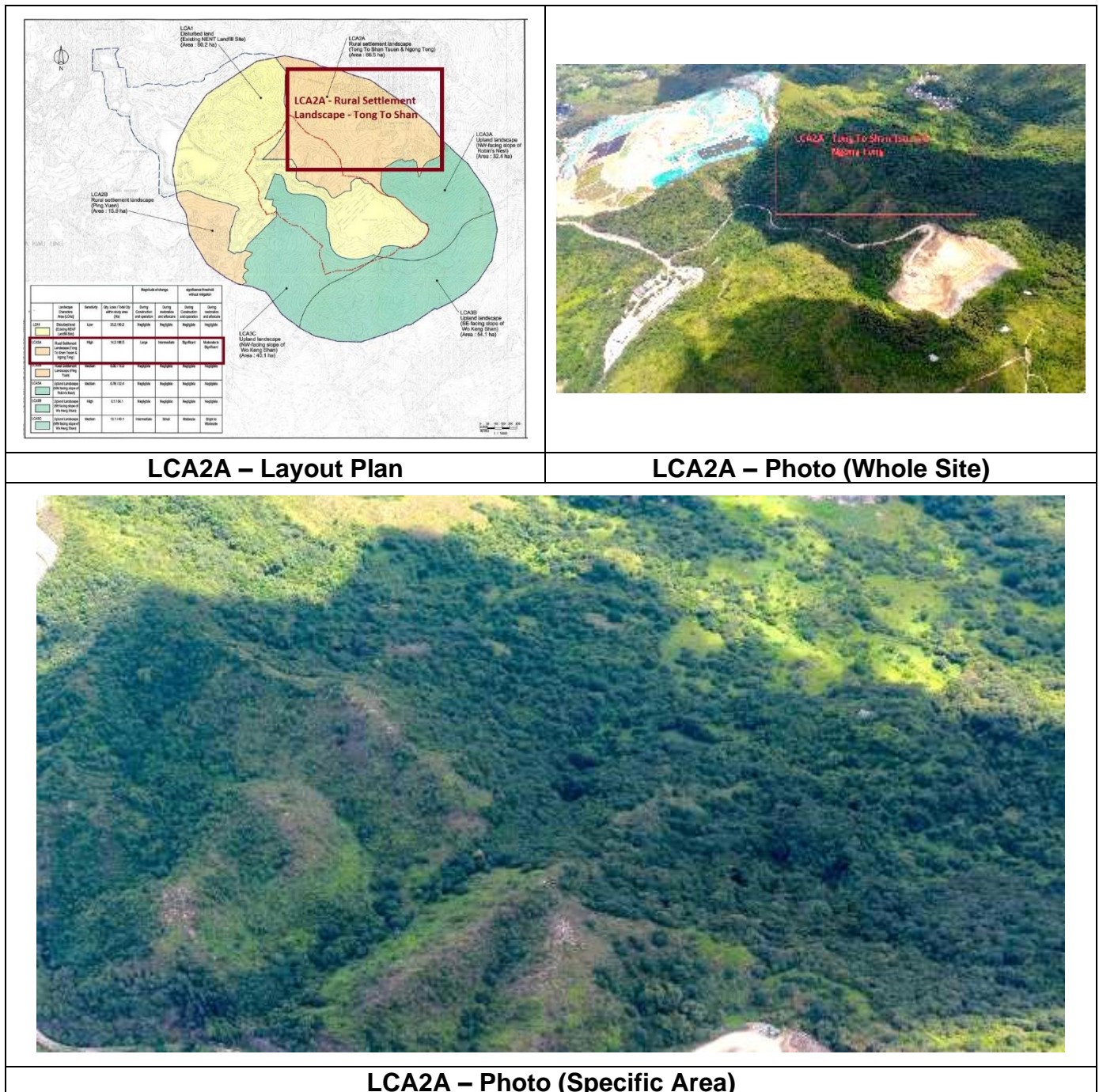
LCA1 – Layout Plan

LCA1 – Photo (Whole Site)

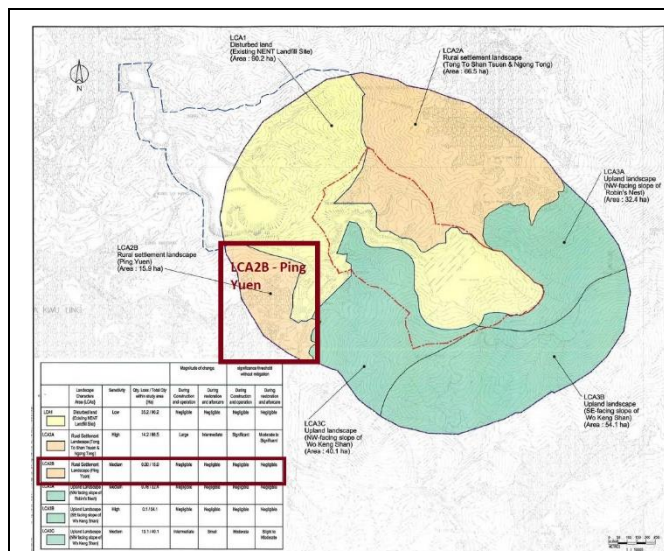


LCA1 – Photo (Specific Area)

LCA2A – Tong To Shan Tsuen & Ngong Tong



LCA2B – Ping Yuen



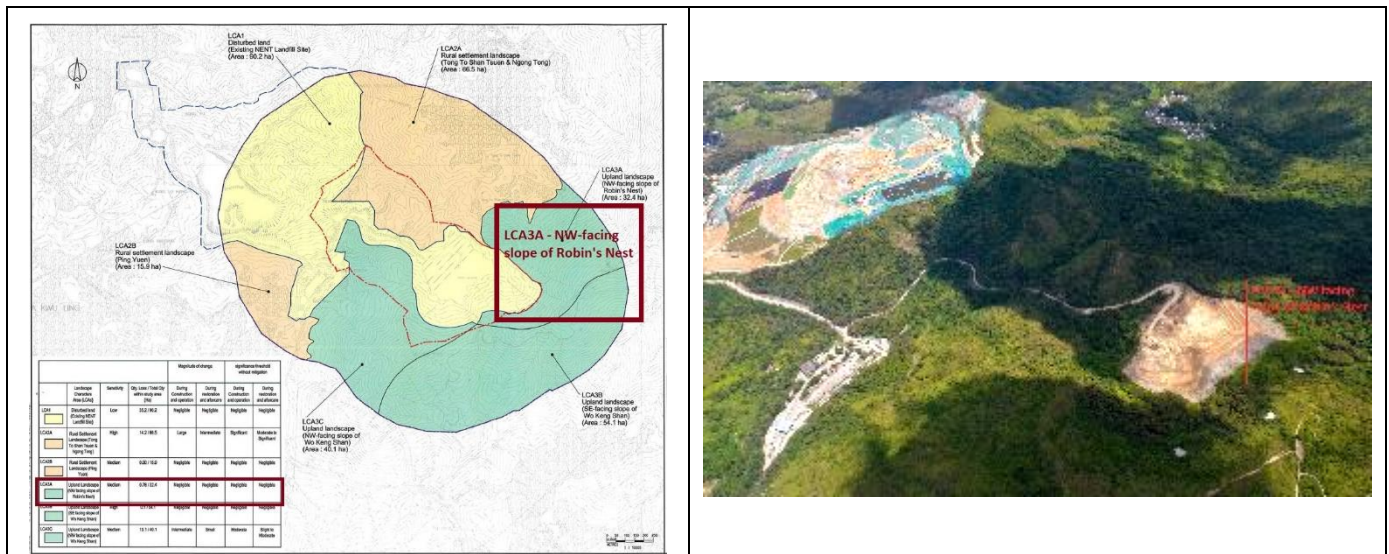
LCA2B – Layout Plan

LCA2B – Photo (Whole Site)



LCA2B – Photo (Specific Area)

LCA3A – NW facing slope of Robin's Nest



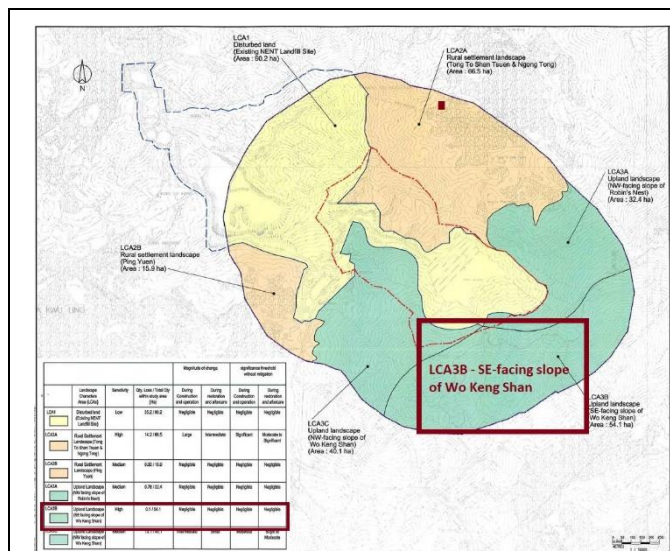
LCA3A – Layout Plan

LCA3A – Photo (Whole Site)



LCA3A – Photo (Specific Area)

LCA3B – SE facing slope of Wo Keng Shan



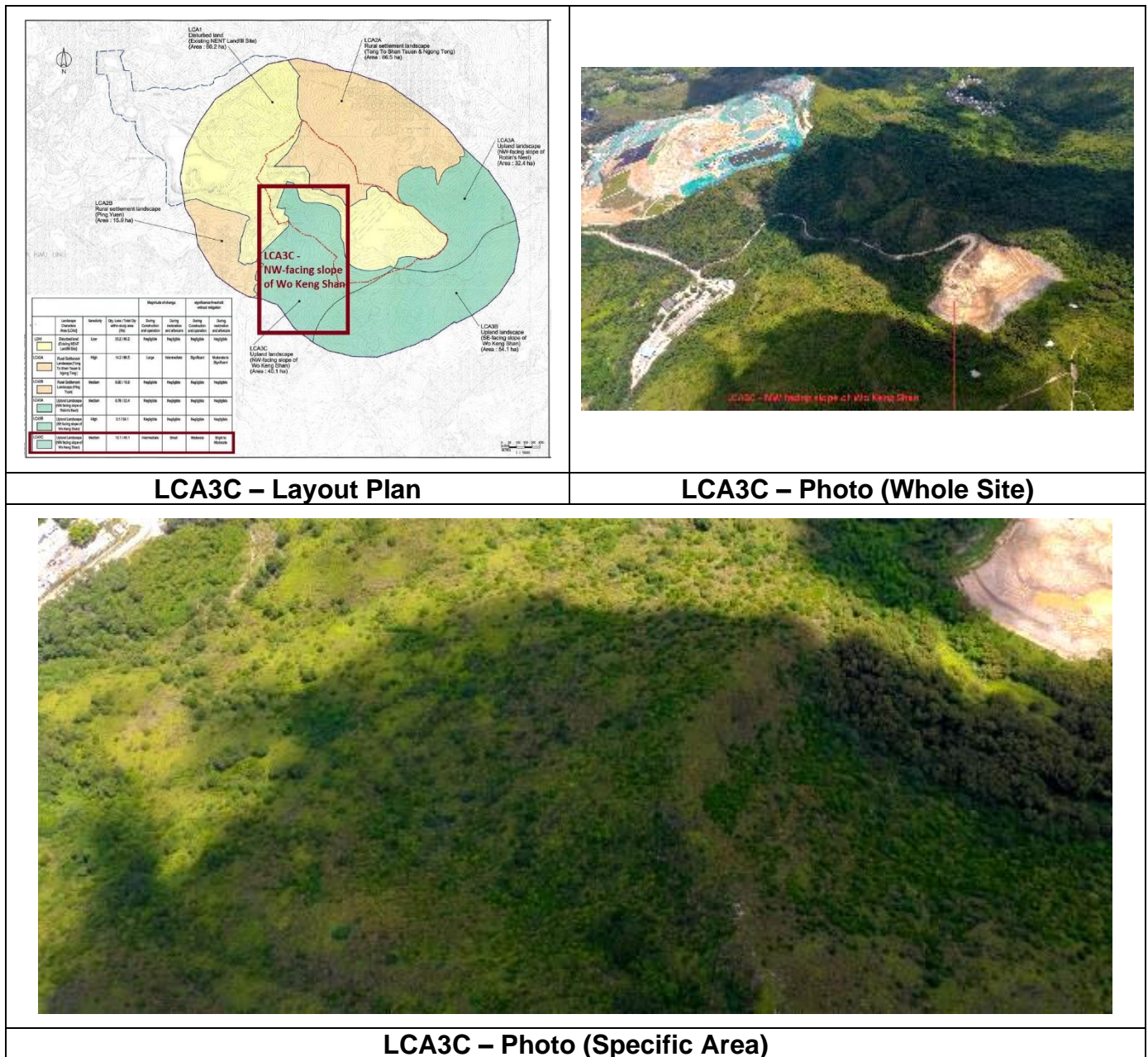
LCA3B – Layout Plan

LCA3B – Photo (Whole Site)



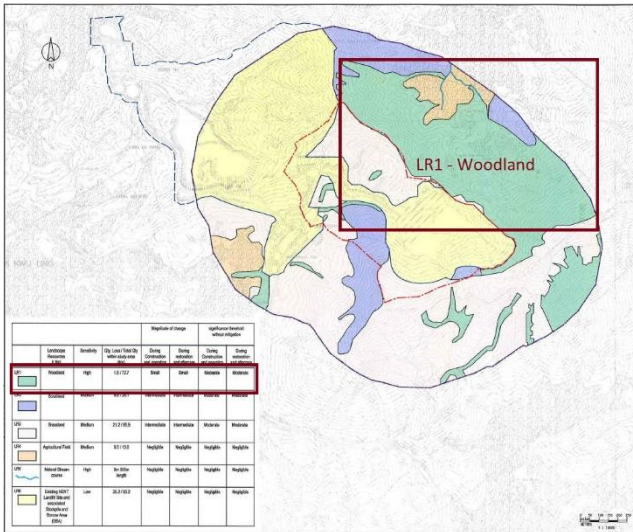
LCA3B – Photo (Specific Area)

LCA3C – NW facing slope of Wo Keng Shan



Attachment 2 – Photographic records of the LRs

LR1 – Woodland



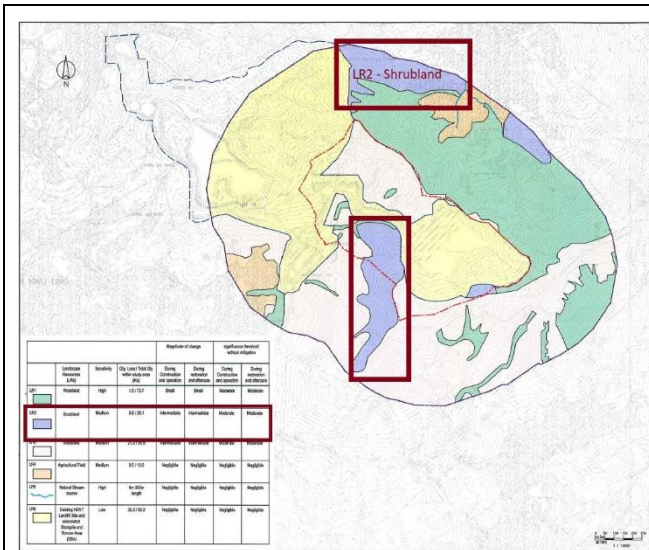
LR1 – Layout Plan

LR1 – Photo (Whole Site)



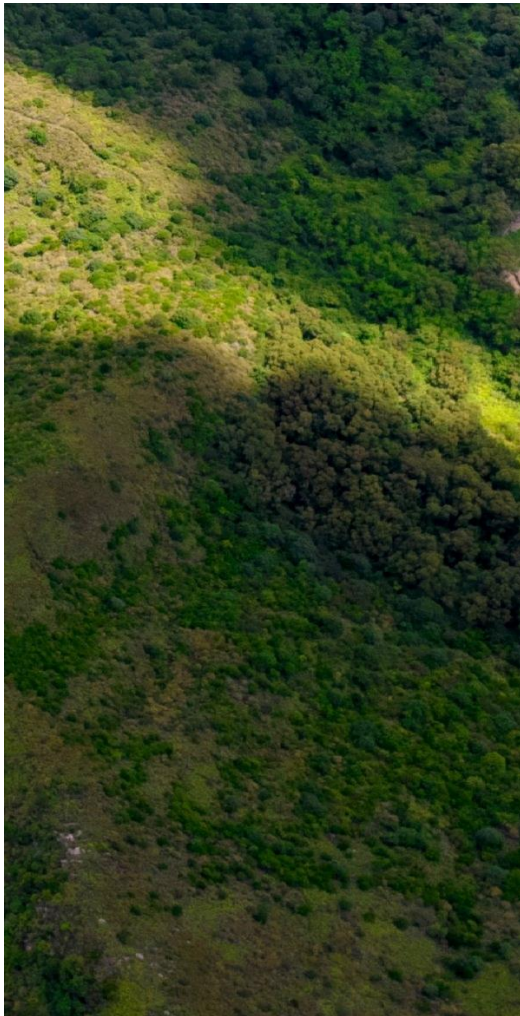
LR1 – Photo (Specific Area)

LR2 – Shrubland

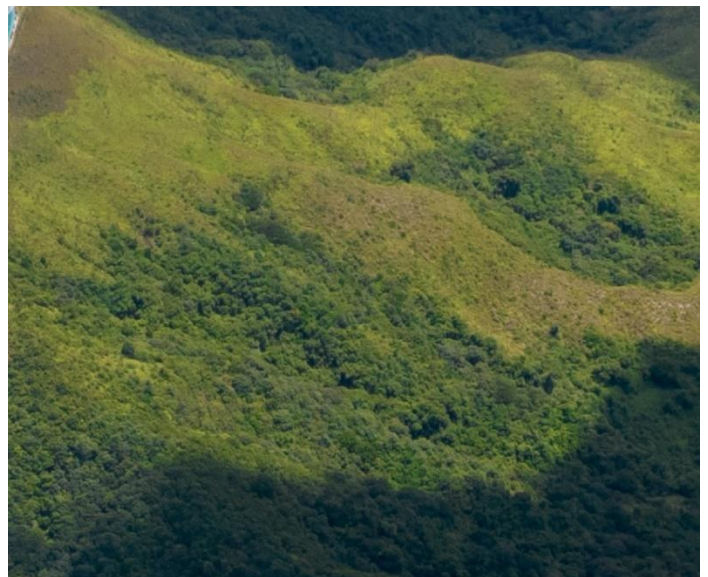


LR2 – Layout Plan

LR2 – Photo (Whole Site)

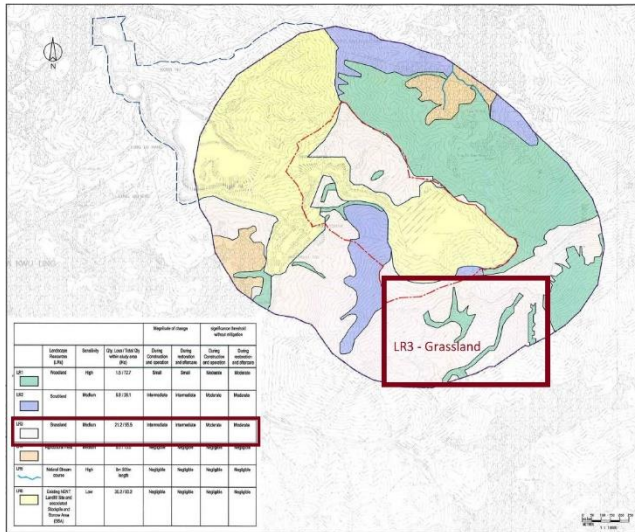


LR2 – Shrubland (Wo Keng Shan)



LR2 – Shrubland (Tong To Shan)

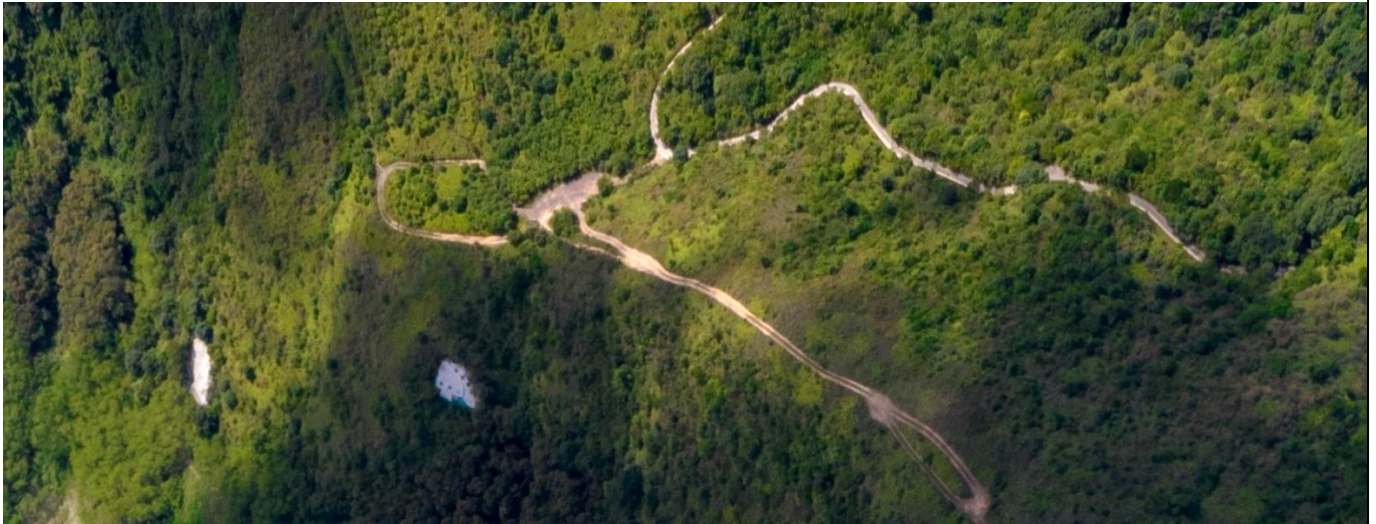
LR3 – Grassland



LR3 – Layout Plan

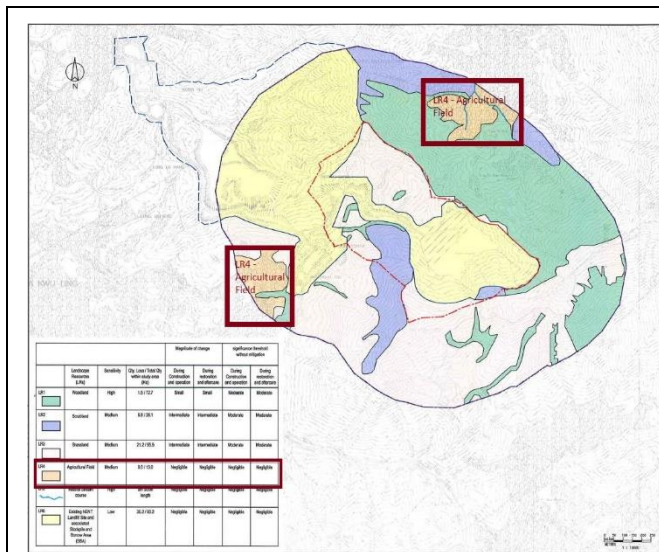


LR3 – Photo (Whole Site)



LR3 – Photo (Specific Area)

LR4 – Agricultural Field



LR4 – Layout Plan

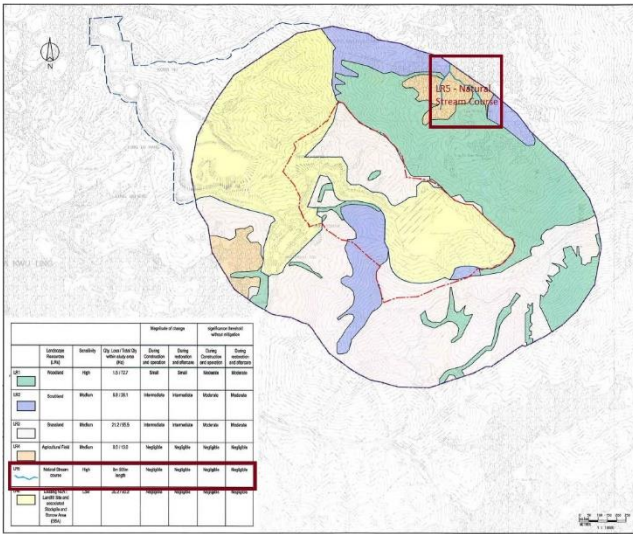
LR4 – Photo (Whole Site)



LR4 – Photo (Ping Yuen)

LR4 – Photo (Tong To Shan)

LR5 – Natural Stream Course



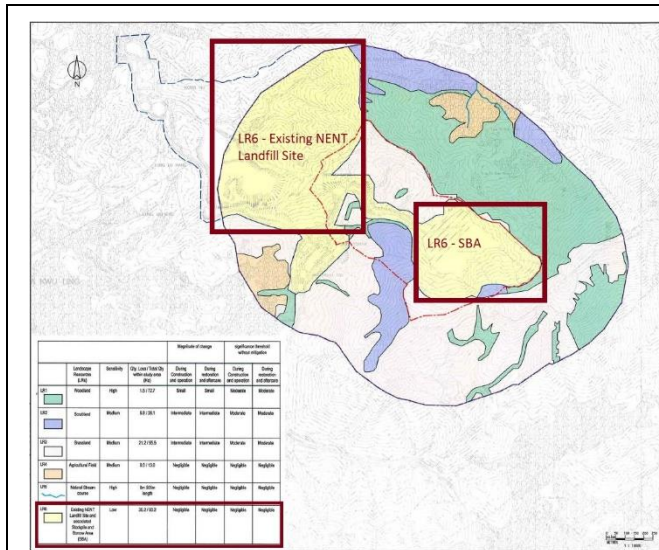
LR5 – Layout Plan

LR5 – Photo (Whole Site)



LR5 – Photo (Specific Area)

LR6 – Existing NENT Landfill Site and SBA



LR6 – Layout Plan

LR6 – Photo (Whole Site)



LR6 – Photo (Existing NENT Landfill Site)

LR6 – Photo (SBA)

Attachment 3 – Photographic records of views of NENTX from VSRs



VSR2 – Lin Ma Hang



VSR3 – Wo Keng Shan



VSR4 – Ping Yeung



VSR5 – Ping Che



VSR6 – Sing Ping



VSR7 – Ta Kwu Ling



VSR8 – Sheung Shan Kai Wat



VSR9 – Robin's Nest



VSR10 – Ha Heung Yuen



VSR11 – Chuk Yuen



VSR12 – Existing NENT

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