WELLAB 匯力
consulting . testing . research

Our Ref: WMA20002/AECOM/mm230704_C2.6

AECOM

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

By Mail
4th July 2023

Attn.: Mr. Chris Ho

Dear Mr. Ho,

Service Contract No. NDO 04/2019
Environmental Team for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas

- **DP5 – Sewage Pumping Stations in Kwu Tung North New Development Area**

Environmental Permit No. EP-469/2013: Submission of the Landscape Plan for Sewage Pumping Station D1-3 (Condition 2.6)

I refer to the revised Landscape Plan for Sewage Pumping Station D1-3 (EP-469/2013) submitted to us via email dated 3rd July 2023 (Ref. EP/DP5/D1-3/2022-01A).

I am pleased to inform you that I have no further comment and I hereby agree to certify the above document in accordance with the Environmental Permit (No. EP-469/2013), Condition 1.9 and 2.6.

If you need any further information, please call our Mr. Marco Ma at 2151 2073 or me at 2151 2089 / 9161 7287.

Yours faithfully,
WELLAB Limited

Dr. Priscilla Choy
Environmental Team Leader

c.c. CEDD (Attn: Mr. Raymond Cheng) By e-mail: kmcheng@cedd.gov.hk
IEC - Mott MacDonald Hong Kong Ltd
(Attn.: Mr. Thomas Chan) By e-mail: Thomas.Chan@mottmac.com

MOTT MACDONALD

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

Attention: Mr. Chris Ho

Your Reference

Our Reference
EC/TC/df/414202/L0178

3/F Manulife Place
348 Kwun Tong Road
Kowloon
Hong Kong

T +852 2828 5757
F +852 2827 1823
mottmac.hk

Agreement No. CE 33/2019 (EP)
Independent Environmental Checker for Environmental Monitoring and Audit Works in Construction Phase for the First Phase Development of Kwu Tung North and Fanling North New Development Areas – Investigation

Contract No. ND/2019/02 Kwu Tung North New Development Area, Phase 1:
Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui - Environmental Permit No. EP-469/2013: Submission of Landscape Plans (Condition 2.6)

5 July 2023

BY EMAIL

Reference is made to AECOM's submission of the revised Landscape Plan (EP Condition 2.6) of the captioned Contract (ND/2019/02) in accordance with the Environmental Permit (No. EP-469/2013) certified by the ET Leader on 4 July 2023.

We would like to inform you that we have no adverse comment on the captioned submission. Therefore, we write to verify the captioned submission in accordance with the requirement stipulated in Condition 1.9 and 2.6 of EP-469/2013.

Should you have any queries, please contact the undersigned at 2828 5967.

Yours faithfully,
For and on behalf of the
Mott MacDonald Hong Kong Limited

Ir Thomas Chan
Independent Environmental Checker
T +852 2828 5967
Thomas.Chan@mottmac.com

c.c.

CEDD	Mr. Mr. Raymond Cheng	kmcheng@cedd.gov.hk
Wellab Ltd.	Dr. Priscilla Choy	priscilla.choy@wellab.com.hk
	Ms. Ivy Tam	ivy.tam@wellab.com.hk

土木工程拓展署
Civil Engineering and Development Department
North Development Office

Agreement No. CE 13/2014 (CE)

Development of Kwu Tung North and Fanling North New Development Areas, Phase 1 – Design and Construction

DP5 – Sewage Pumping Stations in Kwu Tung North New Development Area

Submission of Landscape Plan for Sewage Pumping Station D1-3 (EP-469/2013)

(Ref. EP/DP5/D1-3/2022-01A)

Jun 2023

AECOM ASIA COMPANY LIMITED

Submission of Landscape Plan for Condition 2.6 of Environmental Permit No. EP-469/2013
Comments from Planning Department received date: 8 September 2022 via e-mail.

1. I refer to (i) AECOM's letter dated 9.8.2022 (Ref: CYCH:nlwm:60335576/C2/C65/700-2022011549L), addressed to EPD with copy to us amongst others, enclosing the subject report for Sewage Pumping Station (SPS) D1-3 together with the certifications from ET Leader and IEC; and (ii) Mr. Felix TAI (E(SA)63 of EPD)'s email dated 5.9.2022 addressed to you and me requesting for PlanD's comments on the subject submission.	-
2. It is noted from para 1.3.1, that the subject report is for partly compliance of condition 2.6 of EP-469/2013 as there are two new sewage pumping stations (SPSs) in accordance with the AEIAR Section 2.4.2.5 and another submission for SPS F1-2 will be undertaken by CEDD's Remaining Phase Team.	-
Landscape Observation and Comments	
Comments	*Responses*
3. Based on the information received, I would like to append below my comments/observation from landscape point of view for your consideration:	-
(i) Para 5.7.1, please clarify when and by which approving authority the compensatory planting proposal has been approved. Compensatory planting plan for compensatory trees to be planted outside SPS D1-3 application site area should be provided	In accordance with the Report para. 5.11 and Appendix III Proposed Species – Trees, total 9 numbers of trees are proposed to be planted within the SPS D1-3 area as compensatory tree planting which has been included in the conforming design from Drainage Services Department dated November 2019. Location of the remaining 23 numbers of approved fell tree outside SPS D1-3 application site area should refer to the approved Tree Preservation and Removal Proposal (Master TPRP) reference no.:C03-04 under the LandsD approval letter reference no. (31) in LD NDA/PD/2/2 dated 25 January 2019. The compensatory planting plan is extracted in Appendix IV – Compensatory Plan and 23 no. of compensatory planting are identified as shown in the drawing.
(ii) Para 8.1.2, DEVB TC(W) No. 7/2015 has been superseded.	Noted and DEVB TC(W) No. 4/2020 – Tree Preservation is added in the Reference list.

	Referring to the TC(W) No. 4/2020 para. 3, "*Tree Preservation and Removal Proposals (TPRPs) being considered according to DEVB TC(W) No. 7/2015 shall continue until completion of the corresponding government projects or tree removals arising from arboricultural maintenance*." Please be informed that the Master TPRP is adopted as DEVB TC(W) No. 7/2015 – Tree Preservation in which both references have been included in the reference list for ease of reference.
(iii) Appendix II – Dwg. No. LP-01 (a) No Landscape information has been shown on this drawing. The drawing title should not be named as "Location Plan and Landscape Plan" (b) The cut lines and Notes referring to drawings not provided in the submission should be suitably revised; and (c) Reference to this Appendix is missing in the main text.	(a) The drawing is showing the location of the SPS at D1-3 in KTN NDA. Hence, the drawing title is renamed as "Location Plan of SPS D1-3" (b) Noted and revised. The drawing cut line and Notes are updated for matching the drawing. (c) This drawing should be read in conjunction with the para. 2.1.1 and the corresponding paragraph is revised.
(iv) Appendix III – Landscape Design for Sewage Pumping Station (SPS) D1-3, the following information should be provided for the relevant drawings. (a) Title block with drawing title, scale, drawing number, etc.; (b) Legends; and (c) Planting schedule with scientific name, size and quantity of proposed plants, spacing and planting area of each species and necessary remarks.	(a) Title block with drawing title, scale and drawing number are included in the package of Appendix III for ease of reference. (b) Legends for each drawing have been included. (c) Planting schedule is included in the Appendix III with provided drawing no. PS-01
(v) On "Proposed Species – Trees", compensatory trees to be planted in accordance with the approved compensatory planting proposal should be indicated and a planting schedule should be provided.	Compensatory planting proposal refer to the master TPRP drawing no. 60335576/TR2/205 with 23 numbers of identified compensatory trees and the confirming planting plan within the SPS D1-3 area with 9 numbers of proposed tree planting. Location of the compensatory planting refer to Appendix III – Planting Proposal and Appendix IV – Compensatory Plan for ease of reference. Planting schedule should refer to the Appendix III – Planting schedule.
(vi) On "Proposed Species – Shrubs and Groundcover", site boundary is missing on the plan.	Noted and the site boundary is added for ease of reference.

(vii) On "Proposed Species on Roof", proposed plant species for one of the planting strips is missing.	The concerned plant species for the planting strip is *Bauhinia glauca* as a hanging plant for the building façade. The selected planting species is added in the same drawing for ease of reference.
(viii) On "Proposed Species – Climbers and Creepers", *Trachelospermum jasminoides* 絡石 is proposed at hard-paved areas and not tally with the species in para 5.9.1 (i.e. *Parthenocissus tricuspidata*). Besides, the vertical climbing plants (i.e. shown on the East Elevation) at the SE besides the main gate is missing and the area concerned is hard-paved on this plan.	There are four proposed species for climbers and creepers adopted for the SPS design. They are including *Bauhinia glauca* 粉葉羊蹄甲, *Pathenocissus tricuspidata* 爬牆虎, *Ficus pumila* 薜荔 and *Trachelospermum jasminoides* 絡石. The composition of using these species in SPS are listed as follows, - Hanging plant on roof at canopy edge adopts *Bauhinia glauca,* - Identified green visual vertical climbing plants at southern east adopts *Pathenocissus tricuspidata* and *Ficus pumila,* - Recycle wood composite fence wall with climbing plants adopts *Trachelospermum jasminoides* In align with the above principles on climber design in SPS, Section 4.1.4, Section 5.9.1 and Section 5.11.1 have been revised accordingly.
(ix) On "Proposed Water Points and Auto Irrigation Zone", the coverage of each water points and the type of auto irrigation should be indicated.	Noted. Circles showing radius 20-meter coverage of water points are added in the plan for ease of reference.
(x) On "Proposed Pavement at grade and Path on Roof", details and size of proposed paving blocks and pebbled path should be provided.	The proposed pavement for the ground floor is porous pavers while the roof is proposed for an artificial granite tiles. Pebbles are proposed between the species as maintenance access. Indication of demarcation for the use of materials is shown in the drawing.
(xi) Para. 5.1.4, GS for Civil Engineering Works, 2006 has been superseded by 2020 Edition.	Noted for the reminder. CEDD GS for Civil Engineering Works 2020 Edition is added in the reference list for reference. Compared to the CEDD GS for Civil Engineering Works, 2006 edition and 2020 edition regarding the GS clause 3.30, 3.31 and 3.34 which are mentioned in the Landscape Plan, the content and wordings remains unchanged in which no implications affect to the landscape works in matters of the editions. The designated project DP-5 at site D1-3 of Kwu Tung North New Development Area is CEDD contract no. ND/2019/02 which was commenced

	on February 2020. Both tender and contract documents are prepared under the GS for Civil Engineering Works, 2006 edition. Hence, to align on the above, CEDD GS for Civil Engineering Works, 2006 edition is listed in the reference list for ease of reference instead of 2020 edition.
(xii) Cover pages "Appendix III – Landscape Design for Sewage Pumping Station (SPS) D1-3" and "Appendix IV – Demarcation of KTN NDA SPS F1-2 and SPS D1-3" have been swapped by mistake.	Noted and revised.
Advisory Remark	
4. For any proposed tree works such as tree preservation/removal application including compensatory proposal, the Permit Holder is reminded to seek approval from relevant authorises prior to commencement of the works.	Noted and any proposed tree works mentioned in this Landscape Plan will seek approval from the relevant authorises prior to commencement of the works.

End of R-to-C

TABLE OF CONTENTS

Page

Appendices

1 INTRODUCTION

1.1 General

1.1.1 AECOM Asia Co Ltd has been commissioned by the Civil Engineering and Development Department (CEDD) to undertake Agreement No. CE 13/2014 (CE) – Development of Kwu Tung North and Fanling North New Development Areas, Phase 1 – Design and Construction.

1.2 Background

1.2.1 AECOM Asia Co Ltd has been commissioned by the Civil Engineering and Development Department (CEDD) to undertake Agreement No. CE 13/2014 (CE) – Development of Kwu Tung North and Fanling North New Development Areas, Phase 1 – Design and Construction.

1.2.2 The Territorial Development Strategy Review in 1990s first identified that there was potential for strategic growth in the North East New Territories (NENT). The Planning and Development Study on NENT (NENT Study), which was commissioned in 1998 and completed in 2003 under Agreement No. CE 64/96, identified the areas at Kwu Tung North (KTN) and Fanling North (FLN) is suitable for the development of New Development Area (NDA) in the NENT and confirmed the feasibility of development based on the findings and recommendations from various technical assessments.

1.2.3 The NENT NDA study under Agreement No. CE 61/2007(CE) was commissioned jointly by the Civil Engineering and Development Department (CEDD) and the Planning Department (PlanD) and was substantially completed in December 2013. Various planning, engineering and environmental studies were completed to formulate a revised proposal for the NENT NDA based on the NENT study, confirm the feasibility of implementing the revised proposal and formulate the implementation strategies and programme for the NDA. A planning and development framework for the KTN and FLN NDA was also established to meet the long-term demand for housing especially public housing and employment. Development of the NENT NDA could also cater for various land use needs arising from social and economic developments in Hong Kong.

1.2.4 The KTN and FLN NDA are proposed to be developed in phases as full completion by 2031. An implementation programme with phasing and packaging of works for the NDA project has been recommended under the NENT NDA study.

1.2.5 The Phase 1 of the NDA development, comprising the Advance Works and First Stage Works, was implemented from the second half of 2019 progressively.

1.2.6 The scopes of Phase 1 Works (Advance Works and First Stage Works) and Remaining Phase works for KTN and FLN NDA are summarized below:

Scope of Advance Works (PWP Item No. 7747CL)

(a) site formation of about 70 hectares (ha) of land (including soil treatment works) in the KTN and FLN NDA;

(b) construction of the eastern section of Fanling Bypass (FLBP(E)) of about 4 kilometres (km) long, which is a dual two-lane carriageway connecting the FLN NDA to Fanling Highway, and about 10 km of local roads and about 4 km cycle tracks, and associated junction/road improvements;

(c) engineering infrastructure works including drainage, sewerage (including two sewage pumping stations), waterworks (including a fresh water service reservoir of about 27 500 cubic metres (m3) capacity and a flushing water service reservoir of about 11 500 m3 capacity in the KTN NDA), landscaping works and slope works;

(d) part expansion and upgrading of Shek Wu Hui Sewage Treatment Works (SWHSTW) to increase its capacity by 20 000 m3 per day;

(e) demolition of existing North District Temporary Wholesale Market (NDTWM) to be affected by the proposed FLBPES, provision of interim market for current users and reprovisioning of NDTWM; and

(f) reprovisioning works; and

(g) implementation of environmental mitigation measures and environmental monitoring and audit (EM&A) programme for the works mentioned in paragraphs (a) to (e) above.

Scope of First Stage Works (PWP Item No. 7759CL)

(a) development of a nature park at Long Valley of about 37 ha including provision of a visitor centre and a footbridge of about 50-metre (m) long spanning across Sheung Yue River for connection between these two facilities;

(b) reprovisioning of two egretry sites in the FLN NDA and enhancement works to an existing egretry site in the KTN NDA;

(c) site formation of about 2.3 ha of land (including soil treatment works) for a village resite area and a district police station in the KTN NDA;

(d) engineering infrastructure works including roads, drainage, sewerage, waterworks, and landscaping works; and

(e) implementation of environmental mitigation measures and EM&A programme for the works mentioned in items (a) to (d) above.

Scope of Remaining Phase Works

(a) site formation of about 247 ha of land (including soil treatment works) in the KTN and FLN NDA for housing, community and commercial developments as well as engineering infrastructure;

(b) engineering infrastructure works including Fanling Bypass (Western Section),

Po Shek Wu Road Flyover, new interchanges together with widening of Fanling Highway for connection with KTN NDA, local roads, drainage, sewerage, waterworks, pumping stations, fresh water and flushing water service reservoirs, and landscaping works; and

(c) implementing the environmental mitigation measures for the works mentioned in (a) to (b) above.

1.2.7 The Environmental Impact Assessment (EIA) report for the NENT NDA study, which covered the Phase 1 Works of KTN and FLN NDA has been submitted to Environmental Protection Department (EPD) in mid-2013. The report was subsequently approved with conditions by EPD on 19 October 2013 under Register No. AEIAR-175/2013.

1.3 Purpose of This Report

1.3.1 In accordance with the approved EIA report Section 2.4.2.5, there are two new sewage pumping stations (SPSs) in KTN NDA are identified as Designated Project item 5 (DP5) in KTN NDA in which has been covered by EP-469/2013. The SPS are labelled as F1-2 and D1-3. This submission is mainly focus on the **SPS D1-3** as it falls within KTN NDA Phase 1 Work area. Another submission to cover SPS F1-2 will be undertaken by CEDD's Remaining phase team (Refer to **Appendix IV**)

1.3.2 The purpose of this report is prepared mainly for discharging the EP condition, '*Submission of the Landscape Plan*' (hereinafter named LP) in accordance with Condition 2.6 of Environmental Permit (No. EP-469/2013) Part C (Permit Conditions). As noted, the submission of this LP should solely for SPS D1-3.

1.3.3 The construction of SPS at site D1-3 would commence under Phase 1 Works while the new SPS at site F1-2 of KTN NDA would commence under the Remaining Phase Works, tentatively in 2026. The demarcation of the works is shown in **Appendix IV** for ease of reference.

1.3.4 The boundary of the Landscape Plan submission of SPSs is shown in Figure 1 of the corresponding EP-469/2013 (Refer to **Appendix I**) for reference. It is corresponding to DP5 location stated in the AEIAR-175/2013/A and Project Implementation Schedule (PIS) in the approved EM&A Manual.

1.4 Document Reference

1.4.1 This Landscape Plan (hereinafter named LP) report shall read conjunction with:-

- Approved North East New Territories New Development Areas Environmental Impact Assessment Report (April 2013) (register no.: AEIAR-175/2013).
- Environmental Permit no. EP-469/2013.
- The section of DP5 of the Project Implementation Schedule (PIS) of the latest approved Environmental Monitoring and Audit (EM&A) Manual.

2 SITE CONDITIONS AND EXISTING LANDSCAPE ASSETS

2.1 Site Locations

2.1.1 The application site is located nearby the edge of Sheung Yue River and the proposed footbridge connection to Long Valley Nature Park. Referring to the location plan listed in the EP, Location Plan and landscape designs with annotation are shown in the **Appendix II** and **Appendix III** respectively for ease of reference.

2.1.2 Site location of designated area is about 0.16ha.

2.1.3 Referring to the Figure 12.51.12 Landscape Resources (LRs) DP Package B (5) (Sheet 2 of 2) and Figure 12.52.2 Landscape Character Areas (LCAs) DP Package B (5) (extracted as **Appendix VI** in this report for ease of reference) of approved EIA report, the majority of landscape resource of existing condition of D1-3 area is zoned as agricultural land and zoned as a lowland agricultural landscape of the landscape character.

2.2 Existing Vegetation and Tree Preservation

2.2.1 Tree surveys for the SPS within the DP boundary and its immediate surrounding were conducted. A total of 32 no. of trees were surveyed locates within the DP boundary. A summary of recorded species is listed in Table 2.1 below:

Table 2.1 Record of Existing Vegetation and Their Distribution

Dominant Tree Species	Vegetation Remarks
• *Litchi chinensis* (荔枝); Exotic species • *Macaranga tanarius* (血桐); Native species	Both of them are common species in Hong Kong.

2.2.2 The Tree Preservation and Removal Proposal (TPRP) has been reviewed by relevant departments and approved by Lands Department in June 2021. All the trees with this application boundary have been approved to be felled.

2.2.3 There is no Old and Valuable Tree (OVT), rare tree species and Tree of Particular Interest (TPI) found within the boundary.

3 LANDSCAPE AND VISUAL MITIGATION MEASURES

3.1 General

3.1.1 To ensure that the proposed mitigation measures comply with the conditions stated in the approved EIA and EM&A Manual, a summary of mitigation measures required is tabulated in **Table 3.1** below for reference. All relevant landscape mitigation measures are further elaborated in **Section 5** of this report.

Table 3.1 EP Requirements and mitigation measures to be implemented during different phases of the Project

(Ref. EP/DP5/D1-3/2022-01A)

EIA Ref. (EM&A Log Ref.)	PIS of DP5	Implementation of Landscape Mitigation Measures		Section in this Report
		By Whom	At When	
S.12.B9 (LV1-DP5)	**General Good Practice Measures** For areas unavoidably disturbed by the Project on a short-term basis e.g. works areas, the general principle to try and restore these to their former state to suit future land use, should be adhered to. With regard to topsoil, where identified, it should be stripped, treated appropriately, and where suitable and practical stored for re-use in the construction of the soft landscape works such as roadside amenity strips, and open space sites.	Detailed Design Consultant/ Contractor	Prior to Construction, Construction & for all planting, this should be installed as soon as the areas become available, to achieve early establishment	5.1
S.12.B9 MM1 (LV2-DP5)	**Minimum Topographical Change** To minimize landscape and visual impacts, the footprint and elevation of such elements should be optimized to reduce topographical/ landform changes, as well as reduce land take and interference with natural terrain. Where there is a need to significantly cut into the existing landform, retaining walls should be considered as well as cut slopes, to minimize landform changes and land resumption, while also considering visual amenity. Earthworks and engineered slopes should be designed to be a visually interesting landform, compatible with the surrounding landscape and to mimic the natural contouring and terrain e.g. introduction and continuation of natural features such as spurs and ridges where appropriate, to support assimilation with the hillside setting.	Government/ Detailed Design Consultant/ Contractor	Prior to Construction	5.2
S.12.B9 MM2 (LV3-DP5)	**Detailed Design (Visual)** The footprint and massing of development components and the works area should also be kept to a practical minimum and the detailed design of development components for Construction phase should follow the Sustainable Building Design Guidelines. The form, textures, finishes and colours of the proposed development components should aim to be compatible with the existing surroundings. To improve visual amenity designs should be aesthetically pleasing and treatment of structures also improve visual amenity. For example, natural	Detailed Design Consultant	Prior to Construction	5.3

	building materials such as stone and timber, should be considered for architectural features, and light earthy tone colours such as shades of green, shades of grey, shades of brown and off-white should also be considered to reduce the visibility of the development components, including all roadwork, buildings and noise barriers. In addition, the design of structures should consider green roofs were feasible, following stated guidelines. All Noise barriers, particularly noise barriers but also any barriers proposed for ecological impact mitigation, should be kept to a practical minimum, and be of such a designed as to integrate as well as possible into the surrounding visual context and be as low as practical to minimize blocking views. Noise barrier design, including vertical, cantilever or curved, and noise enclosures including semi-enclosure and full enclosure, at grade and/ or elevated, should follow the guidelines stated. Construction time frame should also be considered and designs seek to keep it to a practical minimum.			
S.12.B9 MM4 (LV4-DP5)	**Tree Protection & Preservation** Exiting trees to be retained within the Project Site should be carefully protected during construction. In particular OVTs will be preserved according to ETWB Technical Circular (Works) No. 29/2004. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees prior to undertaking any works adjacent to all retained trees, including trees in Contractor's works areas. A detailed tree survey will be carried out for the Tree Removal Application (TRA) process which will be carried out at the later detailed design stage of the Project. The detailed tree survey will propose which trees should be retained, transplanted or felled and will include details of tree protection measures for those trees to be retained.	Government/ Detailed Design Consultant/ Contractor	Prior to Construction and Construction Phase	5.4
S.12.B9	**Tree Transplantation**	Government/	Prior to	5.5

MM5 (LV5-DP5)	Trees unavoidably affected by the Project works should be transplanted where practical. Trees should be transplanted straight to their final receptor site and not held in a temporary nursery as far as possible. A detailed Tree Transplanting Specification shall be provided in the Contract Specification, where applicable. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme. A detailed transplanting proposal will be submitted to relevant government departments for approval in accordance with ETWBTC 2/2004 and 3/2006 and final locations of transplanted trees should be agreed prior to commencement of the work. For trees associated with highways e.g. roadside planting along highways, that are unavoidably affected and should be transplanted, HyD HQ/GN/13 'Interim Guidelines for Tree Transplanting Works under Highways Department's Vegetation Maintenance Ambit' should be referred to.	Detailed Design Consultant/ Contractor	Construction, Construction Phase & Maintenance in Operation Phase	
S.12.B9 MM6 (LV6-DP5)	**Slope Landscaping** Site formation should be reduced as far as possible. Seeding of modified slopes should be done as soon as grading works are completed to prevent erosion and subsequent loss of landscape resources and character. Woodland tree seedlings and/ or shrubs should be planted where slope gradient and site conditions allow. In addition, landscape planting should be provided for the retaining structures associated with modified slopes where conditions allow. All slope landscaping works should comply with GEO Publication No. 1/2011-Technical Guidelines on Landscape Treatment for Slopes.	Government/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.6
S.12.B9 MM7 (LV7-DP5)	**Compensatory Planting** Compensatory tree planting for felled trees shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Removal Application process under ETWBTC 3/2006. Compensatory planting is proposed at the	Government/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.7

	potential open areas such as open spaces, amenity areas, open areas of the streetscapes, as well as the open areas within development lots. Compensatory planting for shrubs should be considered in suitable locations. Native species such as *Melastoma malabathricum*, *Diospyros vaccinioides*, *Gardenia jasminoides*, *Ixora chinensis*, *Ligustrum sinense*, *Litsea rotundifolia*, *Melastoma dodecandrum*, *Atalantia buxifolia*, *Rhodomyrtus tomentosa*, *Rhaphiolepis indica*, and *Rhododendron simsii* are suggested.			
S.12.B9 MM8 (LV8-DP5)	**Woodland Compensatory Planting** Specific Woodland compensatory planting is proposed for any areas of quality woodland that are unavoidably affected by the Project. The location and design of the woodland compensatory planting will principally be within habitats of lower value such as upland grassland. The proposed locations are identified, for example, on the foothills of Tai Shek Mo, and on the higher ground of Fung Kong Shan in KTN NDA; along Fanling Bypass; and a small area in the northern FLN NDA. The intention of the compensatory woodland will be to recreate areas of quality woodland, not necessarily to compensate for loss of trees on a like for like basis (See E18 & E27 also). Native tree species are suggested for planting in the appropriate locations, including *Ailanthus fordii*, *Bischofia javanica*, *Castanopsis fissa*, *Celtis sinensis*, *Cinnamomum burmannii*, *Cinnamomum camphora*, *Xanthoxlyum avicennae*, *Hibiscus tiliaceus*, *Liquidambar formosana*, *Sapium discolor*, *Schefflera heptaphylla* and *Ilex rotunda*. In addition, some understory vegetation may be planted including shrubs such as *Atalantia buxifolia*, *Diospyros vaccinioides*, *Gardenia jasminoides*, *Ixora chinensis*, *Ligustrum sinense*, *Litsea rotundifolia*, *Melastoma malabathricum*, *Melastoma dodecandrum*, *Rhodomyrtus tomentosa*, *Rhaphiolepis indica*, and *Rhododendron simsii*. The area allocated for compensatory woodland planting allows in part for the fact that it will take some time for the	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.8

	compensatory planting to achieve the landscape and ecological function and value of the area to be lost. In addition, it allows for the fact that not all of the areas identified for planting will prove to be plantable, by virtue of topography and ground conditions and, especially, because though the areas identified are largely grassland it is inevitable that these areas will already support some patches of trees and shrubs which would be inappropriate for further planting.			
S.12.B9 MM9 (LV9-DP5)	**Vertical Greening** Planting of climbers to grow up vertical surfaces were appropriate (e.g. viaduct piers, noise barriers).	Government/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.9
S.12.B9 MM10 (LV10-DP5)	**Green Roof** Roof greening where appropriate should be established on proposed buildings as per the guidelines stated. These guidelines provide further details including information regarding structural loading, design, maintenance, etc. considerations as well as providing information on what types of plants might be suitable.	Government/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.10
S.12.B9 MM11 (LV11-DP5)	**Screen Planting** Tall screen/buffer trees and shrubs should be planted. This measure may additionally form part of the compensatory planting.	Government/ Detailed Design Consultant/ Contractor	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.11
S.12.A9 MM14.3 (LV12-DP5)	**Enhancement Planting along Embankment** For channelized watercourses, if these are modified, the Drainage Services Department Practice Note No.1/2005 – Guidelines on Environmental Considerations for River Channel Design, should be considered and appropriate mitigation measures included ensuring the new watercourses match the existing as far as possible. Measures can include enhancement planting to upgrade the channels as appropriate, including consideration of wetland planting along embankments where appropriate; as well as consideration of the best materials for the channel lining (e.g. gabion). All	Project Proponent/ Detailed Design Consultant/ Contractor/ Maintenance Authority	Prior to Construction, Construction Phase & Maintenance in Operation Phase	5.12

	measures must also ensure any necessary maintenance work can be carried out and that the channel meets all its requirements for water flow, etc. For example, a stretch of the Ma Wat River Channel in the south of FLN NDA will have to be diverted for the construction of the Fanling Bypass Eastern Section. This measure will be particularly relevant in this area.			
S.12.A9 MM16 (LV13-DP5)	**Screen Hoarding** Screen hoarding shall be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs). It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used. Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report). Any works areas near the ecological sensitive areas should erect 2m high dull green site boundary fence. Details can refer to the ecological impact assessment (Chapter 13 of the EIA report).	Contractor	Construction Phase	5.13
S.12.A9 MM17 (LV14-DP5)	**Light Control** Construction day and night time lighting should be controlled to minimize glare impact to adjacent VSRs during the Construction phase. Street and night time lighting shall also be controlled to minimize glare impact to adjacent VSRs during the operation phase.	Government/ Contractor	Construction and Operation Phase	5.14

4 DESIGN PRINCIPLE OF THE DESIGNATED PROJECT

4.1 Soft Landscape Design Principle

4.1.1 For the proposed planting design for this SPS D1-3, the size of site is very limited. Most of the area will be utilized by SPS building to serve its fundamental functions. The planting design principles are listed as follow and detailed landscape designs are included in **Appendix III**.

(i) To plan a row of canopy tree at the north-east side at-grade planting area to provide a good screening planting.

(ii) To enrich the textural contrast of building and reduce the bulkiness of the building mass, a feature wall with wavy patterns wrapping around the major facades and proposed vertical greening (i.e. climber planting) on eastern main entrance façade as well as the boundary fence walls.

(iii) To incorporate roof greening with wavy plant pattern, to relieve the heat gain and to provide a good look-down view form the future nearby buildings.

(iv) To use "low-maintenance" plants and native species as far as possible.

4.1.2 At-grade planting

Due to the limited size of the site, a row of canopy tree will be planted to provide a better greening and screening to the SPS. Another tree will be introduced at the entrance to enrich the sense of arrival to the SPS. It also gives a better greening ambience as viewed from the pedestrian walkway. Proposed planting species on ground floor and irrigation systems refer to **Appendix III**.

4.1.3 Green features – Green Roof

The provision of green roof can relieve the heat gain of the building, provide a good landscape pattern as viewed from height and offer a communal space for the staffs. Several ground-cover plant species are proposed to form a wavy plant pattern. Hanging plant is proposed on canopy edge. Adequate irrigation system to the plants will be provided. Reasonable maintenance pathways are incorporated to facilitate on-going maintenance works. Proposed planting species on roof and irrigation systems should refer to **Appendix III**.

4.1.4 Green features – Vertical Greening

The provision of vertical greening will be introduced at the main façade of building facing the pedestrian walkway and boundary fence walls. Vertical greening at the main façade will be achieved by climber planting at toe planter. It is more sustainable, easy to maintain and provide a good greening effect. Also, climbing plants at the fence walls at north-east sides and south-west side are proposed to soften the building edges and bring a sense of naturalistic. Proposed planting species refer to **Appendix III.**

4.1.5 The method statement on planting and topsoil preparation will be prepared by the Contractor and accepted by the Project Manager prior to the planting works. It is important to secure their workmanship can meet the specifications and design intention.

4.1.6 The topsoil depths for tree, shrub and groundcover planting works are 1,200mm, 600mm and 300mm respectively. These topsoil depths exclude the subsoil drainage layer. It should be mixed between completely decomposed granite (CDG) and the accepted soil conditioner in the ratio of 3:1 in accordance with Section 3 of General Specifications (GS) for Civil Engineering Works, 2006 issued by CEDD. All existing soil could be stripped, treated and reused as far as possible.

4.2 Plant Species Selection and Justifications

4.2.1 Plant Species selected should meet the following criteria:

- Native species recorded in local and commonly used in Hong Kong should be prioritized;
- Availability from the markets;
- Robust, tough-growing, comparatively low maintenance requirement; and
- Familiarly used and maintained by local practices.

4.2.2 It is important to source all the specified plant materials at early of construction stage. The contractor should be required to secure their plant sources and qualities well before the planting works. All planting works will be supervised by CEDD RSS team.

4.3 Basic Planting Configuration

4.3.1 Sufficient topsoil should be provided for proposed plantings in which at least 300mm topsoil for groundcovers, 600mm topsoil for shrubs and 1,200mm topsoil for trees according to departmental common practices.

4.3.2 For the at-grade planting, open bottom planters will be used to allow water to soak away after irrigation and raining. It is good to benefit root system as it can be freely extended within the growing media.

4.3.3 For green roof planting area, water points and subsoil drains would be incorporated for allowing sufficient watering for the plants.

4.4 Execution of Landscape Works

4.4.1 All planting works will be planted with the growing season (i.e. from March to September) so as to enhance better establishment of plants. Planting between October to February will also be considered given these species are common in nature and be relatively tolerant in Hong Kong climatic condition. However, frequency of watering should be adjusted to suit the plant growth.

4.4.2 All plantings will be checked to ensure they are free of pest, fungi and disease before planting to permanent location.

4.5 Hard Landscape

4.5.1 In accordance with paving plan shown in **Appendix III**, grey colour roof tiles are proposed on roof of the SPS while grey colour ground permeable/ porous paving blocks are proposed on ground. It gives a subtle colour tone to match with the surrounding pathways and minimize the surface run-off.

5 DESIGN AND CONSTRUCTION PHASE: IMPLEMENTATION OF LANDSCAPE AND VISUAL MITIGATION MEASURE

5.1 General Good Practice Measures and Topsoil Management – measures corresponding to EIA Ref. S.12.B9 (EM&A Log Ref. LV1-DP5)

5.1.1 For areas avoidably disturbed by the SPS during its construction period, the areas would either be reserved and redeveloped for future site use, or be reinstated to their former states.

5.1.2 All existing soil would be stripped, treated and reused as far as possible. Where feasible, the topsoil would be stored on site and reused in the construction of soft landscaping.

5.1.3 The method statement for planting and topsoil preparation should be prepared by the Contractor and accepted by the Project Manager/ Project Manager's delegate/ Project Manager's supervisor prior to the planting works.

5.1.4 The planting soil used on site should be prepared by mixing existing topsoil (or CDG from on-site excavation or an approved local source) and the accepted soil conditioner in a ratio of 3:1 in accordance with Section 3.30(2) of GS for Civil Engineering Works, 2006 issued by CEDD.

5.2 Minimum Topographical Change – measures corresponding to EIA Ref. S.12.B9 MM1 (EM&A Log Ref. LV2-DP5)

5.2.1 It is recorded that the original site was a vegetated flat land with the existing level is approx. +5.00mPD. There is a minimum approx. 1.5m level change to match with the adjacent pedestrian walkway, cycling track and vehicular access including DSD maintenance access and EVA while accommodating those infrastructure works and utility layout of basement to support this SPS. The current level change is considered reasonably as minimum affect the existing site topographical change.

5.3 Detailed Design (Visual) – measures corresponding to EIA Ref. S.12.B9 MM2 (EM&A Log Ref. LV3-DP5)

5.3.1 All the building facades of SPS D1-3 have been wrapped with wavy pattern features (mixed with earthy brown colour metals and/or timbers (natural material)) to improve the visual interest and reduce the building mass. All the boundary fence walls will incorporate climber planting as much as possible. It gives more greenery along the footpath. Vertical climber planting at the major façade facing pedestrian walkway will be implemented to enhance greening sense and provide a better visual appearance. The entire site will be fenced off by hoarding painted with dull green colour during the construction stage. No noise barrier will be required in this project as it is located away from the carriageway.

5.4 Tree Protection & Preservation – measures corresponding to EIA Ref. S.12.B9 MM4 (EM&A Log Ref. LV4-DP5)

5.4.1 There are total 32 no. of existing trees has been surveyed and will be affected by the permanent building works, EVA and the working spaces requirements. The

associated TPRP has been approved by Lands Department in June 2021. Since all trees will be felled and there is no tree protection fences and measures required within the application site.

5.5 Tree Transplantation – measures corresponding to EIA Ref. S.12.B9 MM5 (EM&A Log Ref. LV5-DP5)

5.5.1 Based on the approved TPRPs by Lands Department (LandsD) and the actual site conditions, there is no tree proposed to be transplanted for SPS D1-3 project.

5.6 Slope Landscaping – measures corresponding to EIA Ref. S.12.B9 MM6 (EM&A Log Ref. LV6-DP5)

5.6.1 As mentioned in the Section 2 of this report, the proposed SPS D1-3 is located in a lowland and flat existing agricultural area. There is no existing slope and/or registered slope features will be disturbed by the work and slope landscaping work is considered not required.

5.7 Compensation Planting – measures corresponding to EIA Ref. S.12.B9 MM7 (EM&A Log Ref. LV7-DP5)

5.7.1 Total 32 no. of trees have been approved to be removed as stated in Para. 2.2 and the compensatory planting proposal for the 32 no. of loss trees of SPS D1-3 has been located in the following identified areas.

5.7.2 Planned surrounding land-uses are Other Specified Uses (OU) for railway associated facilities, Government, Institution or Community (GIC) and Amenity zones. Apart from the amenity zone, the OU and GIC zones are considered not feasible to plant new trees as compensatory.

5.7.3 Referring to the **Appendix III**, there are 9 no. of newly planted trees will be planted within the SPS D1-3 area. They are agreed by the Drainage Services Department (DSD) in the conforming drawing in November 2019.

5.7.4 The remaining 23 no. of compensatory trees will be planted adjacent to the SPS D1-3 area within amenity area and as streetscape. Retrieved the compensatory tree plan from the approved TPRP (reference no. C03-04) under the LandsD approval letter reference no. (31) in LD NDA/PD/2/2 dated 25 January 2019 for the Phase 1 project, the location of remaining 23 no. of trees are identified. Location of the trees can refer to **Appendix V** for ease of reference.

5.8 Woodland Compensatory Planting – measures corresponding to EIA Ref. S.12.B9 MM8 (EM&A Log Ref. LV8-DP5)

5.8.1 Although there are three areas identified in the approved EIA report for proposed woodland compensatory planting which are KTN NDA Green Belt Area E1-8, G1-3 (South) and G1-3 (North), there is none of them will be affected by SPS D1-3 works. Hence, there is no woodland compensatory planting is required.

5.9 Vertical Greening – measures corresponding to EIA Ref. S.12.B9 MM9 (EM&A Log Ref. LV9-DP5)

5.9.1 A vertical greening is proposed and located at the major building façade facing the pedestrian walkway. Self-climber planting (i.e. *Parthenocissus dalzielii* 爬牆虎 and *Ficus pumila* 薜荔) will be planted at at-grade planter. It is more sustainable and easier to be maintained.

5.9.2 All the boundary fence walls with climbers as vertical greening is proposed for mitigation measures as much as possible. The key identified fence walls with vertical greening is located at north-east side and south-west side taking into account of the shading of the SPS building.

5.9.3 Creepers is proposed on the edges of green roof to soften the building edge and visually minimize the building mass.

5.10 Green Roof – measures corresponding to EIA Ref. S.12.B9 MM10 (EM&A Log Ref. LV10-DP5)

5.10.1 A roof greening has been incorporated in the SPS D1-3 proposal. There are 5 groundcover species incorporated in the landscape design to offer colour and textural contrast. Planting species and its location, irrigation system and maintenance accesses should refer to **Appendix III**.

5.11 Screen Planting – measures corresponding to EIA Ref. S.12.B9 MM11 (EM&A Log Ref. LV11-DP5)

5.11.1 Due to the limited site area, most of the site area has been used for SPS D1-3 building works. However, the opportunity for at-grade planting (i.e. a row of canopy tree) and a feature tree planting has been proposed to offer a good visual greening as viewed from the pedestrian level. Vertical greening to the major building façade will further enhance this greening and screening effect as mentioned in Para. 5.9.

5.12 Enhancement Planting along Embankment – measures corresponding to EIA Ref. S.12.B9 MM14.3 (EM&A Log Ref. LV12-DP5)

5.12.1 In accordance with the submission boundary of SPS D1-3, it is located at the existing landscape area of grassland and plantation and is far away from Sheung Yu River and nearby embankment. Hence, there will be no embankment of the existing channelized water watercourse, i.e. Sheung Yue River, would be affected during the construction works and no enhancement on embankment of planting is required.

5.13 Screen Hoarding – measures corresponding to EIA Ref. S.12.B9 MM16 (EM&A Log Ref. LV13-DP5)

5.13.1 During the entire Construction phase, an array of screen hoardings painted with dull green colour would be erected for the safety and visually screening from the public. The selected green colour would be relatively subtle to blend with the surrounding environment. Simple graphic may be incorporated to improve the visual interest.

5.14 Light Control – measures corresponding to EIA Ref. S.12.B9 MM17 (EM&A Log Ref. LV14-DP5)

5.14.1 All the works will be carried out in daytime and no night work would be anticipated. It implied that no lighting glare would be generated to affect the surrounding neighbourhood and public during the construction stage.

6 OPERATION PHASE: POST-PLANTING MONITORING AND ESTABLISHMENT/ MAINTENANCE

6.1 General

6.1.1 The objective of all types of planting proposal for this SPS D1-3 is to establish a good sense of visual greenery for the building and to provide a green iconic architecture matching with surrounding existing environment.

6.1.2 All the planting works within this Landscape Plan submission area should be maintained by CEDD contractor at least in 12 months before handing over to the ultimate maintenance department DSD.

6.1.3 An outline of post-planting monitoring works and summary of the establishment works during the 12-month period (by CEDD) are provided in the Paragraph 6.4 of the report.

6.2 Post Planting Monitoring

6.2.1 Monthly post-planting monitoring inspections throughout the 12-month establishment period will be conducted to monitor the growth and health of the plantings to meet the specified requirements. It is important to ensure the planting works should meet the planting plan shown the Landscape Plan proposal. The proposed measures follow the requirements in the approved EM&A manual.

6.3 Personnel

6.3.1 The post-planting monitoring inspections and reports shall be carried out and prepared by a Registered Landscape Architect or a qualified arborist, who should meet the following minimum requirements,

(a) Have a bachelor's degree or higher in horticulture or a related field such as arboriculture, botany, biology, forestry, ecology, environmental science, geography, landscape studies, landscape architecture, landscape management, landscape science, from a Hong Kong university, or equivalent; and

(b) Have a minimum of two years of proven full-time practical experience in horticulture, soft landscape implementation and supervision, plant care or vegetation management.

6.4 Establishment / Maintenance Works (12-month, by CEDD)

6.4.1 The method statement on establishment works should be prepared by the Contractor and accepted by the Project Manager prior to the planting works.

6.4.2 Regular monthly establishment / maintenance works shall be carried out to ensure the healthy growth of the plants. Defective plants when observed will be recorded and rectified before the next monthly inspection. All plants should be in acceptable conditions before handing over to maintenance department after the 12-month establishment period.

6.4.3 Generally, it will be necessary to regularly remove weeds within the planting areas. Post-planting fertilizer will be applied yearly in each spring and as necessary. Dead or dying species will be replaced with a reasonable time.

6.5 Weeding

6.5.1 To reduce competition to the young trees from grass and noxious weeds, weed control through manual or mechanical means will be necessary. Meanwhile, noxious weeds like *Leucaena leucocephala* (銀合歡) and *Mikania micrantha* (薇甘菊) shall be uprooted immediately once they are identified. To prevent unintended dispersal which may affect the natural environment, herbicides and pesticides should not be used unless in exceptional circumstances.

6.6 Fertilizing

6.6.1 Apply post-planting fertilizer as per CEDD GS Clause 3.34(2) at a rate of 50g per whip tree, once each year in spring stipulated in GS Clause 3.89(c), and preferably after weeding operation. Fertilizer should be applied near the base of each whip tree and shrub, not broadcasted, so as to reduce absorption and competition from grasses.

6.7 Replacements

6.7.1 Dead and dying plants should be replaced during the establishment period based on monitoring results. Replacement planting, if necessary, shall be carried out early in the growing season to enhance the survival rate of the new plants

6.8 Long Term Maintenance After 12-Months and onwards – By other Ultimate Maintenance Department (i.e. DSD)

6.8.1 Both hard landscape and soft landscape works within the SPS boundary will be handed over to DSD for on-going maintenance. All vegetations will be handed over to DSD after 12-month Establishment Period.

7 CONCLUSIONS

7.1 Summary

7.1.1 The Landscape Plan is prepared to discharge Environmental Permit no. EP-469/2013 Condition 2.6, which is to be deposited to EPD's designated project item 5 Sewage Pumping Station at site D1-3 in KTN NDA. This Landscape Plan also shows the landscape design and mitigation measures of the project in accordance with the approved EIA and EM&A manual.

7.1.2 The Landscape Plan had been prepared with reference to the PIS DP5 in KTN NDA for SPS D1-3 only. Since the design of SPS F1-2 is in progress and being circulated to relevant parties for design endorsement, submission of Landscape Plan for SPS F1-2 in DP5 will be deposited before commencement of these works under the Remaining Phase Works.

7.1.3 Given the site constraints and with the consideration of sustainable greening design, both at-grade planting, roof greening and vertical greening will be provided to enhance the greening effect especially as viewed from the pedestrian walkway while mitigating the landscape and visual impacts from the SPS D1-3 to the existing environment .

7.1.4 The facades of building have incorporated of wavy patterns of decorative features to echo the sense of Sheung Yu River next to the building. The main objective of this design is to reduce the building mass, improve the textural contrast and enhance the visual interest of this service building.

7.1.5 The majority of proposed plants, including trees and shrubs, would be proposed native species and "low-maintenance" plants as far as possible. There is a 12-month Establishment Works to be provided by CEDD before final handover to the relevant maintenance departments, (i.e. DSD) in accordance with Development Bureau Technical Circular (Works) No. 6/2015 Maintenance of Vegetation and Hard Landscape Features.

7.2 Contract Requirements

7.2.1 All relevant landscape details included in this Landscape Plan including plant species, specified sizes and quantities, specification of works, timely procurement of plant materials, post-planting monitoring and establishment requirements mentioned in this report would be implemented effectively and monitored in both Construction phase and Operation phase.

7.3 Programme

7.3.1 According to the latest contract packaging of NENT NDA project, the proposed Landscape and Visual Mitigation Measures would be carried out under CEDD Contract No. ND/2019/02. Planting works are anticipated to be carried out in Q3 2024. The establishment period for plants should start immediately after completion of planting works for at least 12 months, subject to the agreement of the relevant

maintenance departments. Subsequent auditing works by ET team would start during both Construction phase and Operation phase.

7.4 Maintenance Agents

7.4.1 CEDD would be responsible to maintain the proposed plantings for 12 months before handover to the ultimate maintenance department (i.e. DSD). Outlines of the post-planting monitoring and establishment requirements during the establishment period by CEDD has been presented in Section 6.

8 REFERENCE

8.1 Technical Circulars

8.1.1 DEVB TC(W) No. 6/2015 – Maintenance of Vegetation and Hard Landscape Features

8.1.2 DEVB TC(W) No. 7/2015 – Tree Preservation

8.1.3 DEVB TC(W) No. 4/2020 – Tree Preservation

8.1.4 DEVB TC(W) No. 5/2020 – Registration of Old and Valuable Trees

8.2 Ordinances and Regulations

8.2.1 Forests and Countryside Ordinance (Cap.96) and its subsidiary legislations

8.2.2 Plant Varieties Protection Ordinance (Cap. 490)

8.2.3 Environmental Impact Assessment Ordinance (Cap. 499)

8.3 Government Publications and Guidelines

8.3.1 AFCD Publication – Rare and Precious Plants of Hong Kong (2003)

8.3.2 AFCD Publication – Check List of Hong Kong Plants 2012

8.3.3 General Specification for Civil Engineering Works, 2006 Edition.

8.3.4 General Specification for Civil Engineering Works, 2020 Edition.

8.3.5 All relevant guidelines and Proper Planting Practices published by Greening, Landscape and Tree Management Section (GLTMS) of Development Bureau

8.3.6 PlanD – Landscape Value Mapping of Hong Kong Technical Report (available online)

APPENDIX I

"FIGURE 1" OF ENVIRONMENTAL PERMIT NO. EP-469/2013: PROJECT LOCATION PLAN FOR DP5

associated with the construction of the Project. The information shall include at least an organization chart, names of responsible persons and their contact details.

Submission of Location Plans

2.5 The Permit Holder shall, no later than 2 weeks before the commencement of construction of the Project, deposit four hard copies and one electronic copy of location plan(s) of the Project with a scale of 1:1000 or other appropriate scale as agreed with the Director. The plans shall include the details the works boundaries, works areas, vertical and horizontal alignments of the roads and any other major facilities; and the locations of key environmental mitigation measures.

Submissions or Measures to be implemented during Construction of the Project

Submission of Landscape Plans

2.6 The Permit Holder shall, at least 6 weeks before the commencement of the corresponding parts of landscape and visual mitigation measures of the Project, deposit with the Director three hard copies and one electronic copy of landscape plan(s). The landscape plan(s) shall show the design details, confirmation of the feasibility for proposed planting, locations, implementation programme, maintenance and management schedules, and drawings in the scale of 1:1,000 or other appropriate scale, as agreed with the Director, of the landscape and visual mitigation measures of the Project. Before submission to the Director, the landscape plan(s) shall be certified by the ET Leader and verified by the IEC as conforming to the relevant information and recommendations, including those described in the EIA Report (Register No. AEIAR-175/2013). All landscape and visual mitigation measures shall be properly implemented and maintained for the Project in accordance with the deposited landscape plan. The Permit Holder shall make available additional copies to the Director upon request.

Measures to mitigate Ecology Impact during Construction of the Project

2.7 To minimise adverse impacts on habitats of ecological importance in the vicinity of the Project, 2m high solid dull green site barrier fences shall be erected around all active works areas, unless otherwise agreed with the Director.

3 Environmental Monitoring and Audit Requirements

3.1 The EM&A programme shall be implemented in accordance with the procedures and requirements as set out in the updated EM&A Manual deposited under Condition 2.3 of this Permit. Any change to the EM&A requirements or programme shall be justified by the ET Leader and verified by the IEC as conforming to the relevant requirements set out in the updated EM&A Manual and shall seek the prior approval from the Director before implementation.

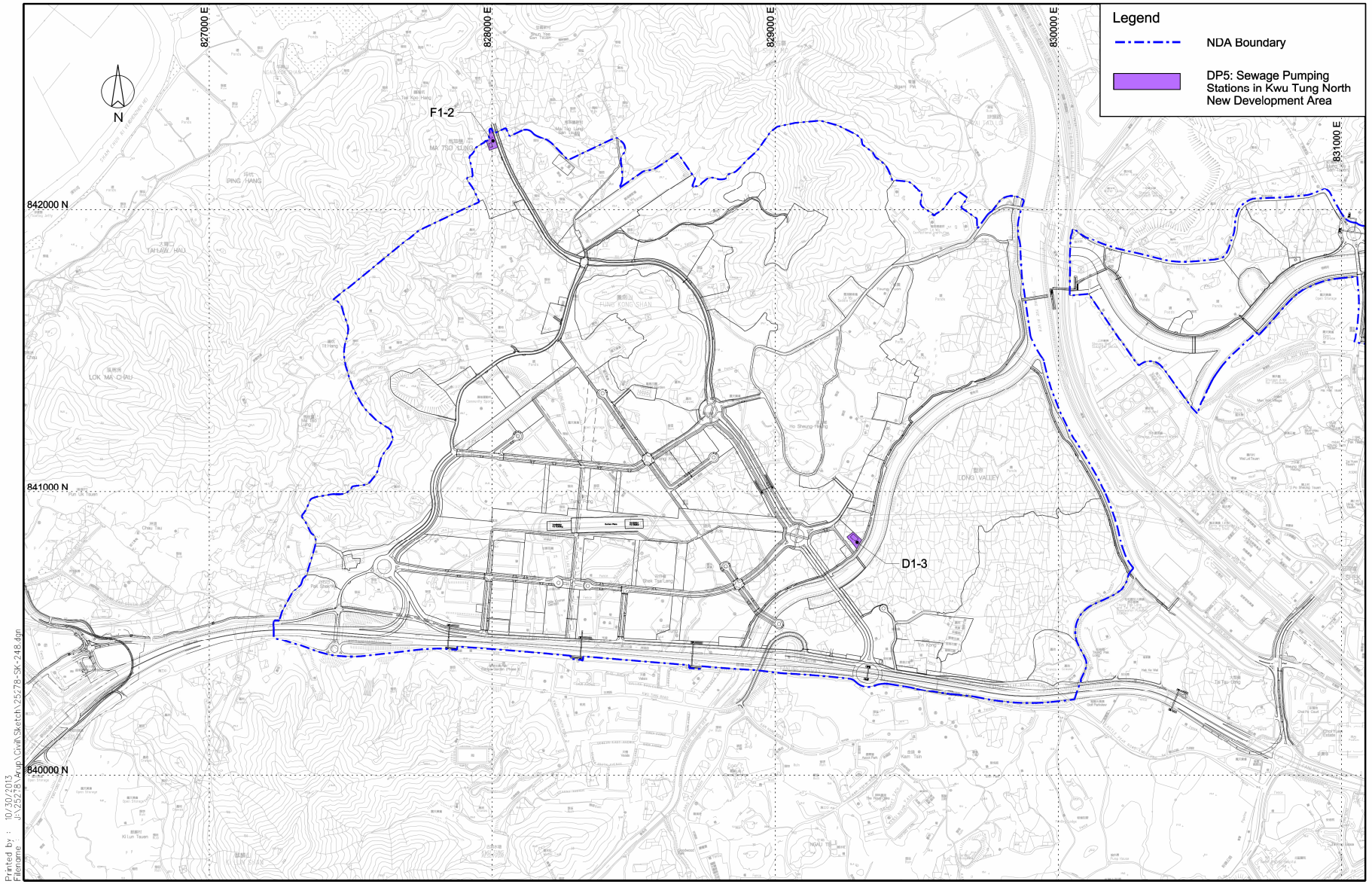
3.2 Samples, measurements and necessary remedial actions shall be taken in accordance with the requirements of the updated EM&A Manual by:-

(i) conducting baseline environmental monitoring;

(ii) conducting impact monitoring;

(iii) carrying out remedial actions described in the Event/Action Plans of the updated EM&A Manual in accordance with the time frames set out in the Event/Action Plans, or as agreed by the Director, in case where specified criteria in the updated EM&A Manual are exceeded; and

(iv) logging and keeping records of details of all parameters within 3 working days of the collection of data or completion of remedial action(s), for the purpose of preparing and submitting the monthly EM&A Reports and to make available for inspection on site.



Project Title: Sewage Pumping Stations in Kwu Tung North New Development Area

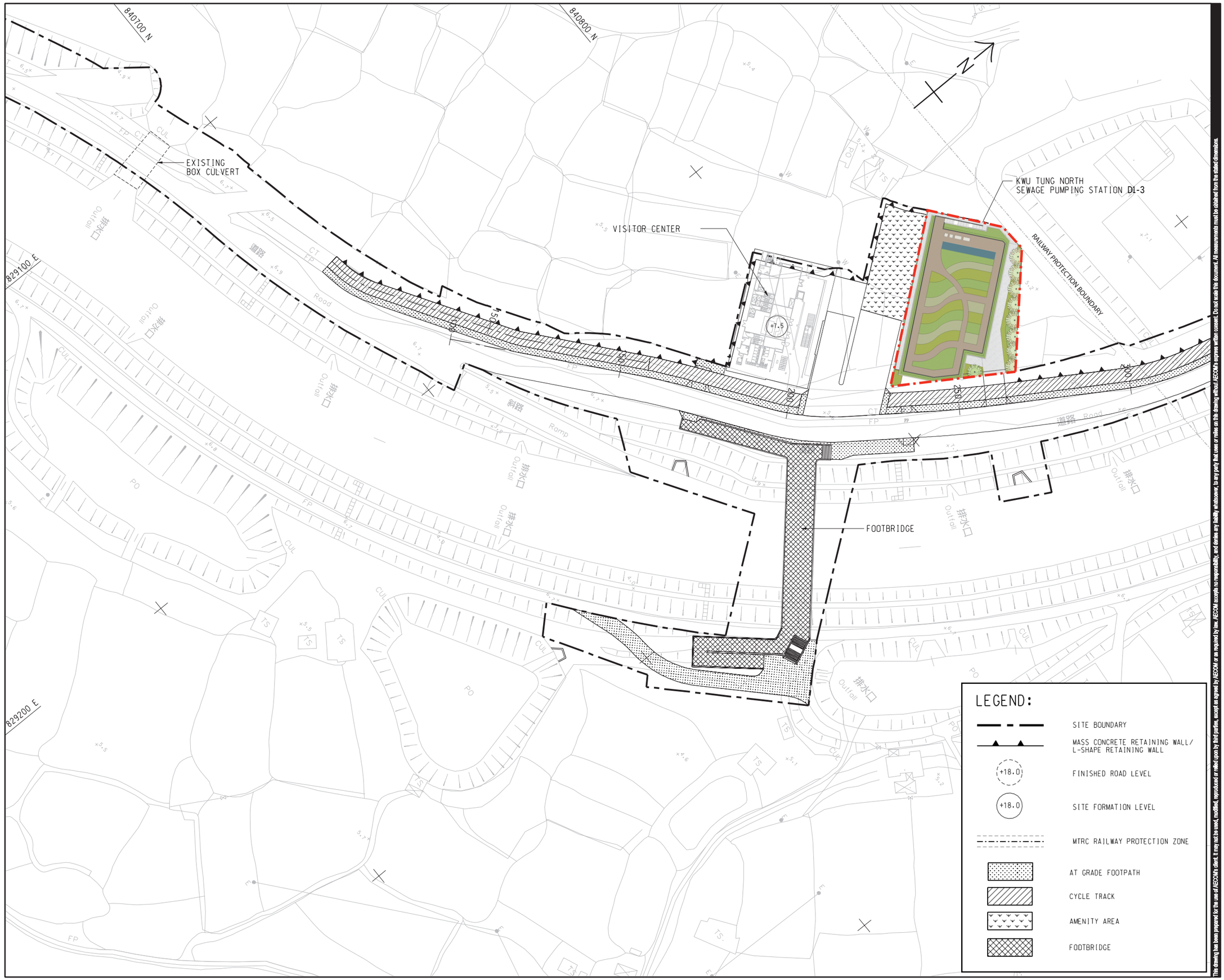
Figure 1: Location Plan for the Proposed Pumping Stations

(Extracted from Drawing No. SK/248 of North East New Territories New Development Area Planning and Engineering Study)

Environmental Permit No: EP-469/2013

APPENDIX II

LOCATION PLAN (1:1000 IN A3 SIZE)



AECOM

PROJECT
項目

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROADS AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

CLIENT
業主

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
工程顧問公司

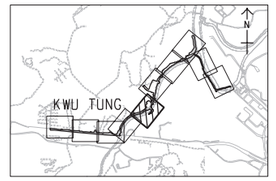
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

SCALE 比例
A1 1:500
A3 1:1,000

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
LOCATION PLAN

SHEET NUMBER 圖紙編號
LP-01

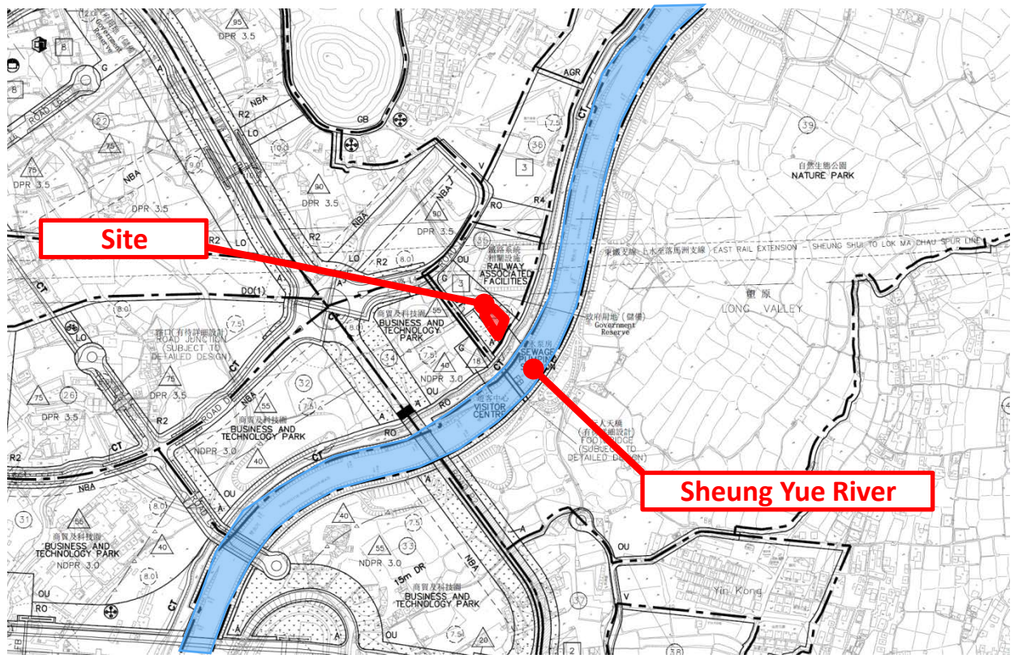
APPENDIX III

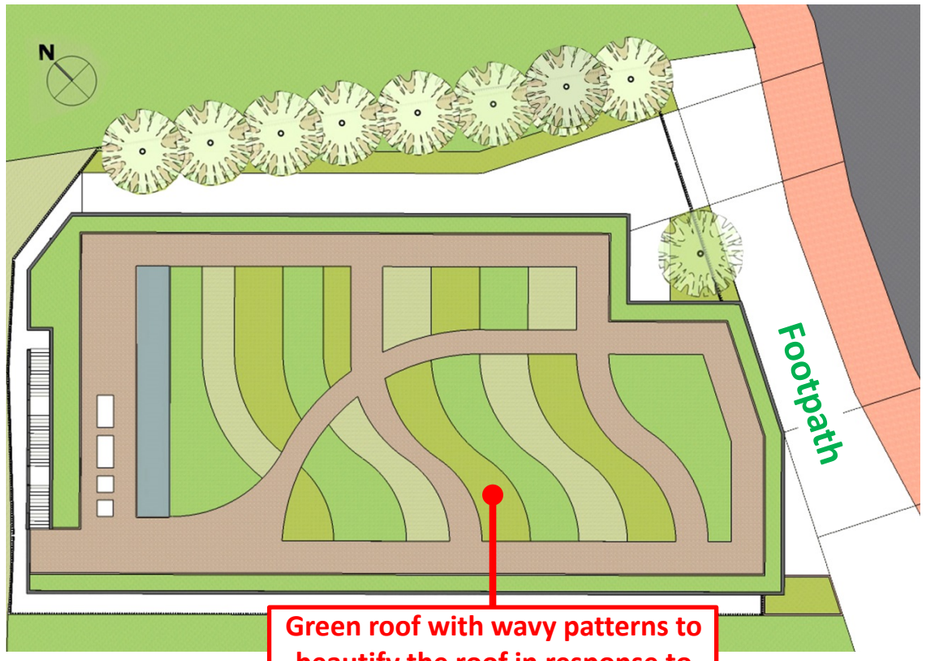
LANDSCAPE DESIGN FOR SEWAGE PUMPING STATION (SPS) D1-3

1. Main Design Concept

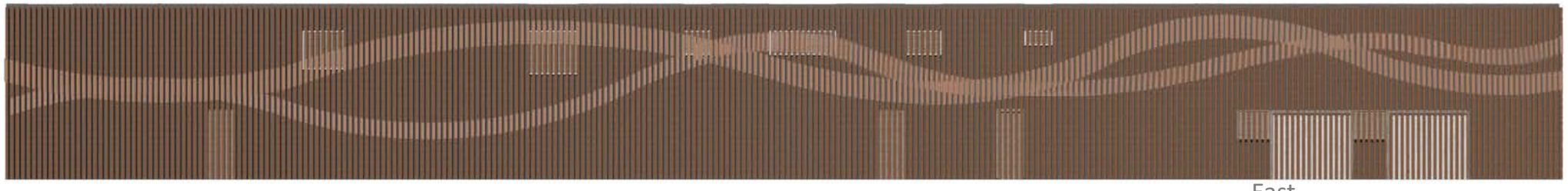
Wave Design Elements in Response to Sheung Yue River

Due to the very limited site area, the frontage of the building is very close to the footpath. To avoid monotonous blank front wall and bulkness of the building mass, a feature wall wrapping around the major facades with wave patterns, a curved roof to smoothen the edge of canopy and a green roof of wavy patterns are designed. Moreover, slats of fence wall with climbing plants are used to provide more greenery along the footpath.





Combined Major East and South Elevations to show the continuity of the waves on the façade



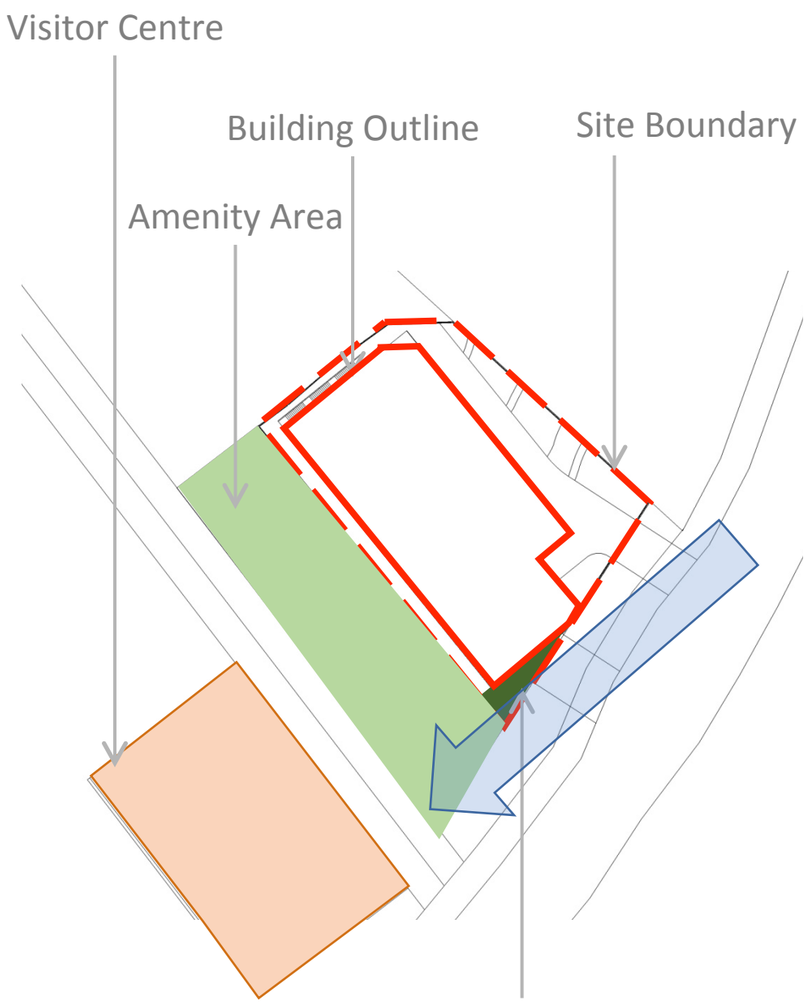
South
(Side wall facing the amenity area and the visitor centre)

East
(Front wall facing the footpath)

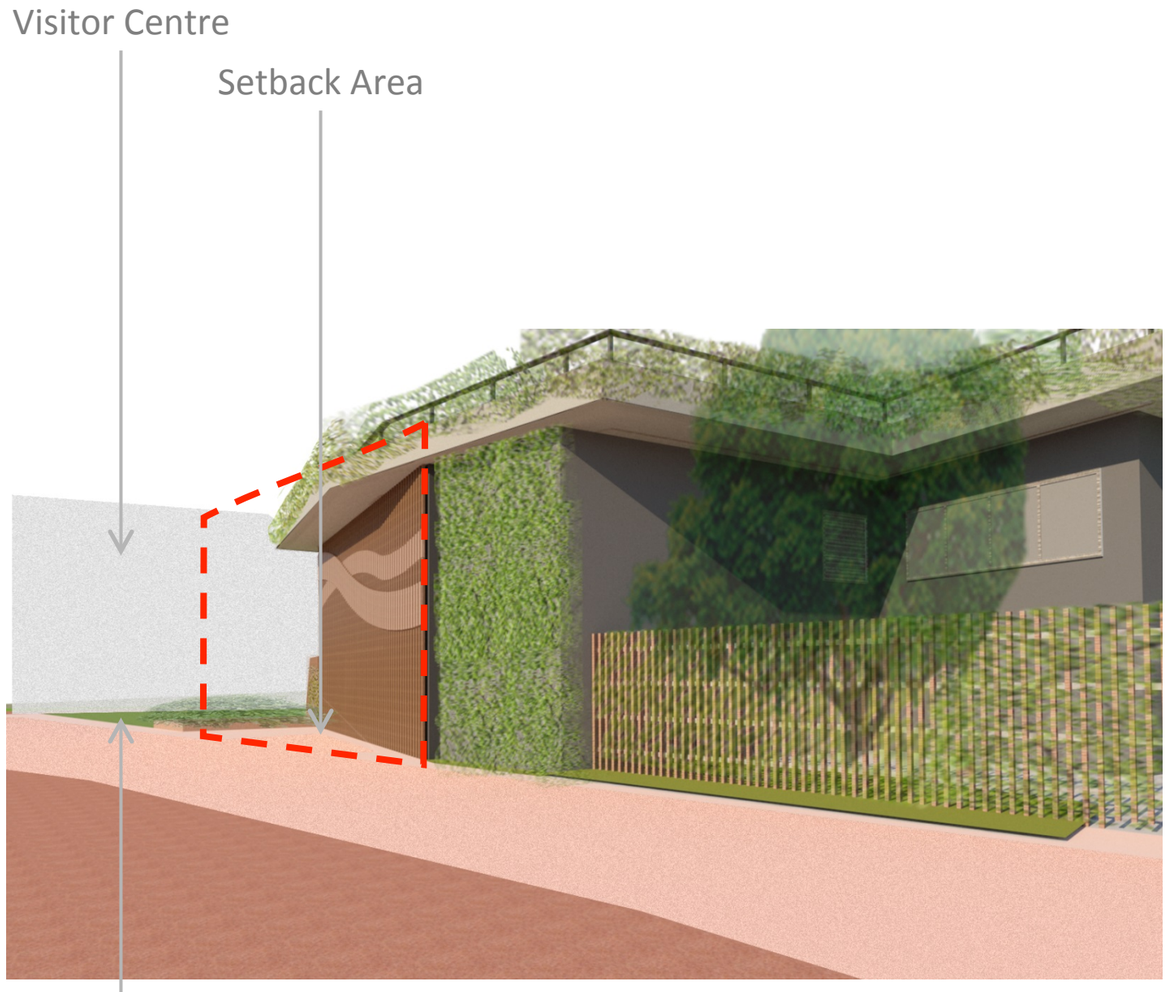
2. Design Concept of Setback at corner

Setback of Building Corner to provide more visual link to the adjacent Amenity Area and the Visitor Centre

Plan View



Perspective

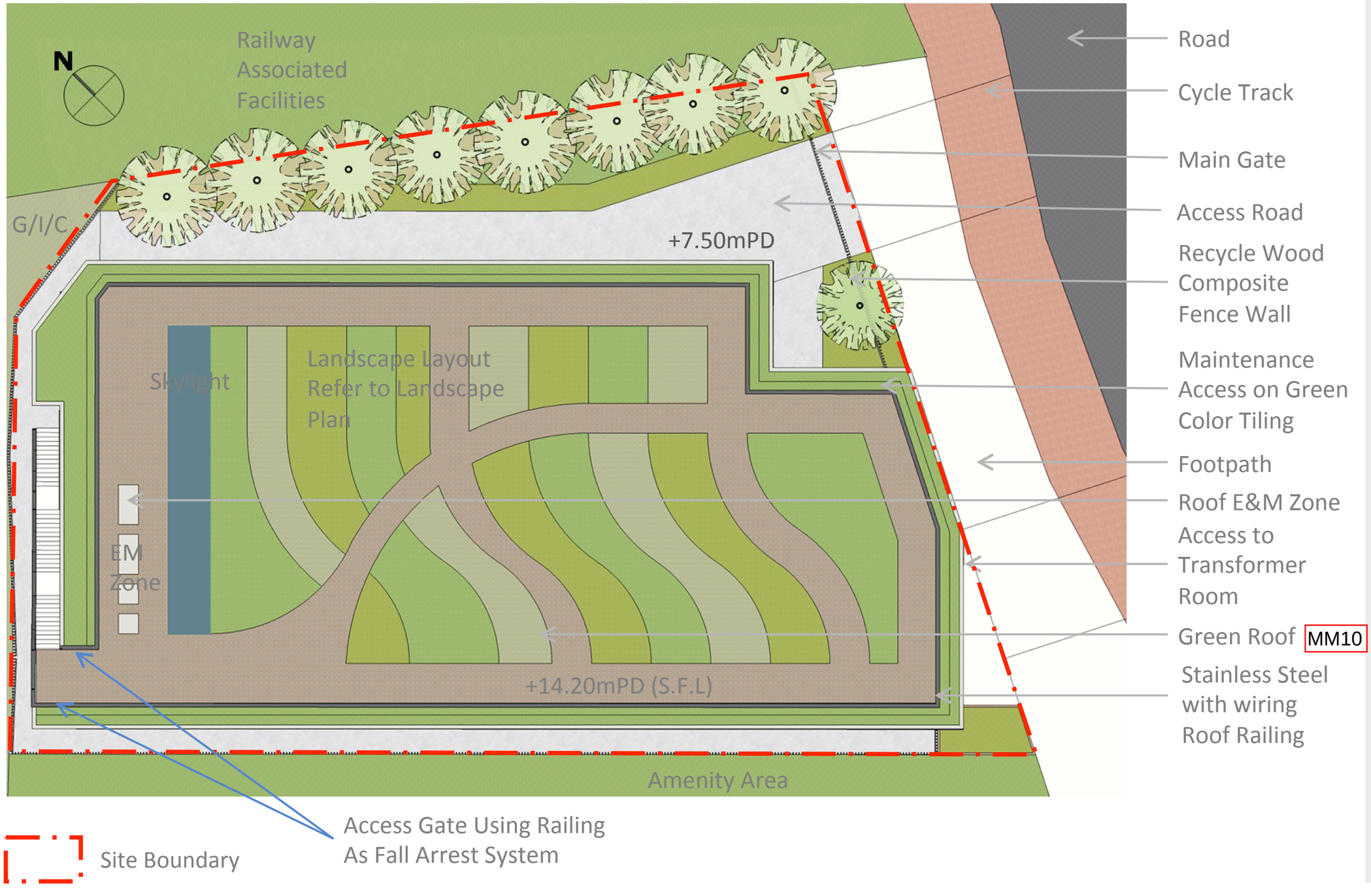


3. Design Concept of Natural Greening

Natural tone of building finishes and materials are used to harmonize with the natural surrounding. In addition, more greening like the hanging roof plants, climbing plants on the fence wall are introduced in the design of the pumping station.

Building in practically rectangular form, while the feature wall in curve pattern to echo the Sheung Yue and add more visual interest along the foothpath.

Proposed Site Layout Plan

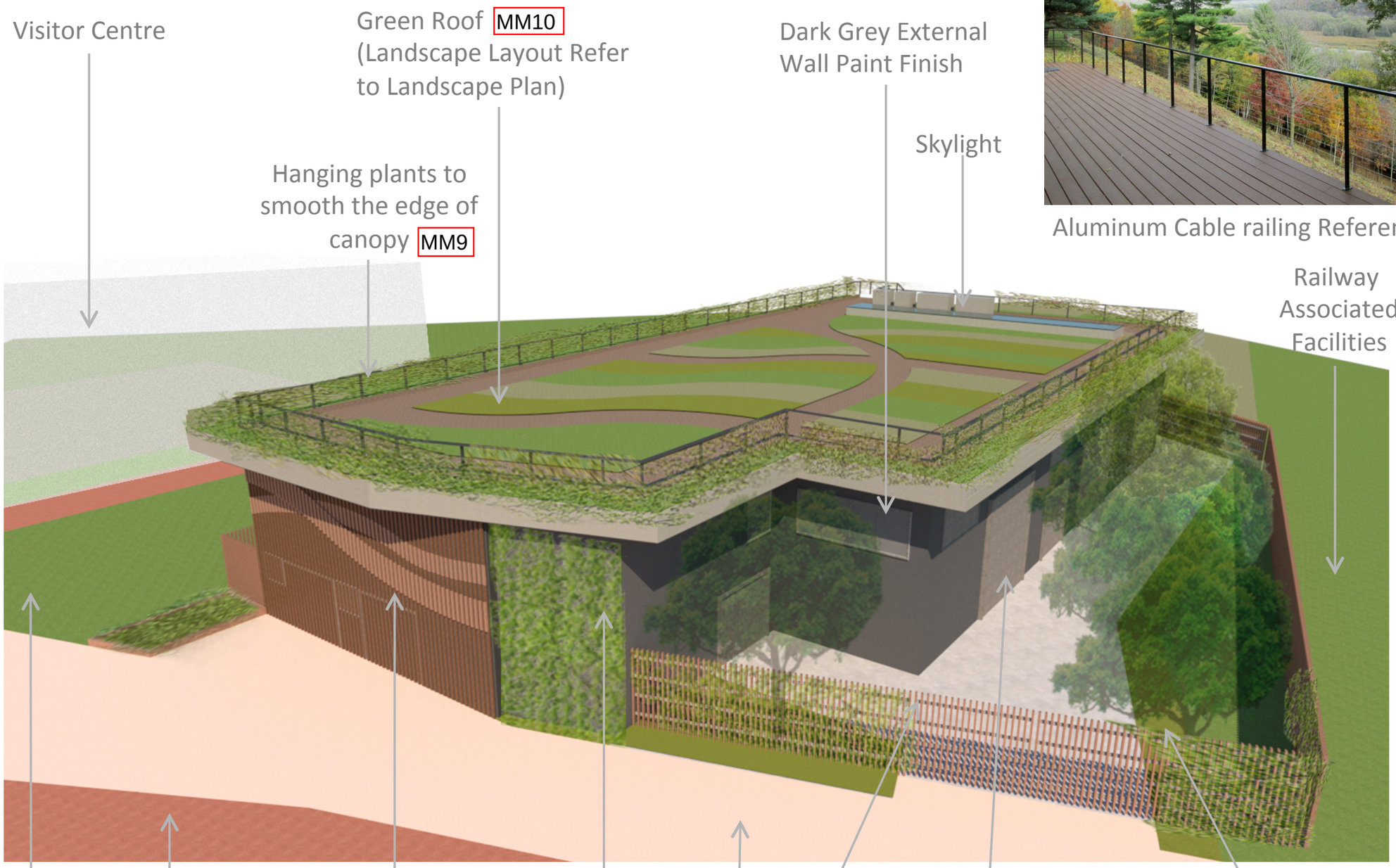


Photomontage

Before

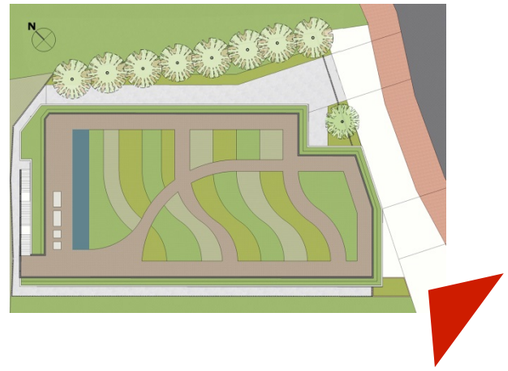
After

Proposed Pumping Station Design View 1



Aluminum Cable railing Reference

Proposed Pumping Station Design View 2



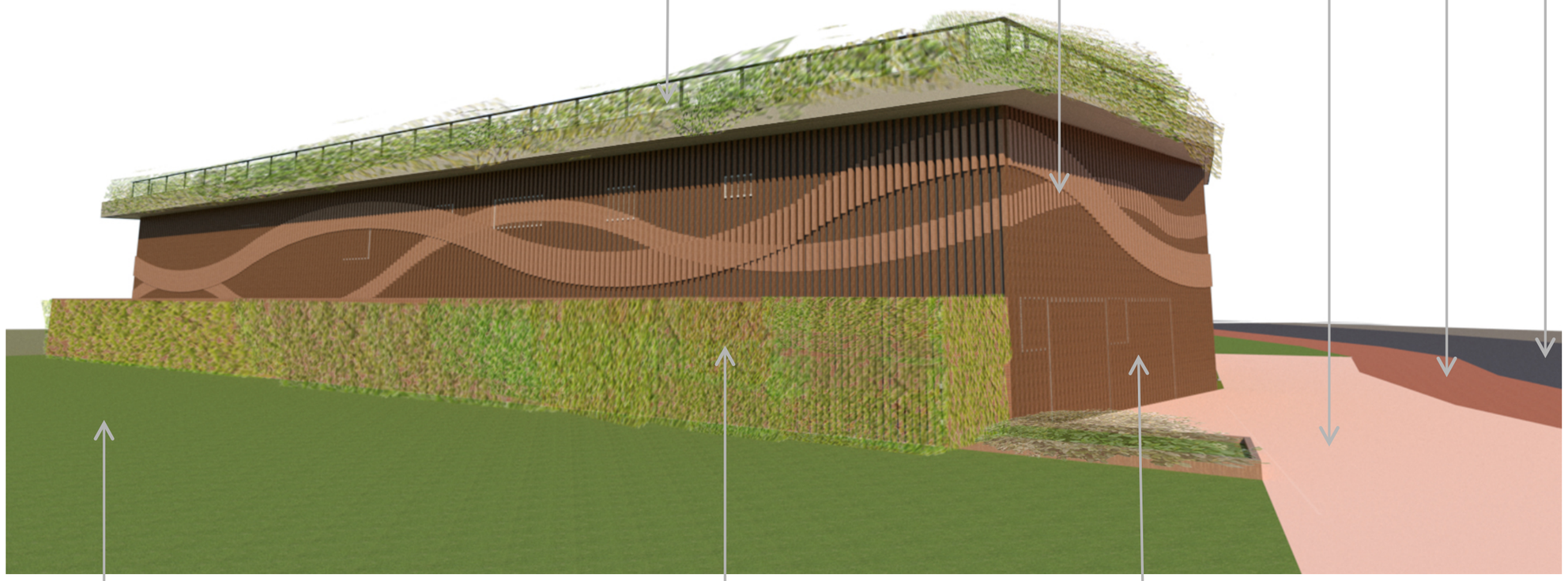
Hanging plants to smooth the edge of canopy MM9

Feature wall of Recycle Wood Composite with River pattern to avoid monotonous blank wall

Cycle Track

Footpath

Road

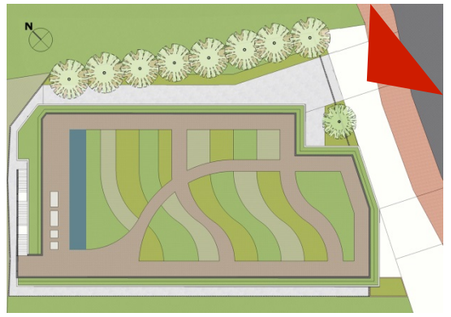


Adjacent Amenity Area

Recycle Wood Composite Fence Wall with climbing plants MM9 & MM11

Door Access to Transformer Room

Proposed Pumping Station Design View 3

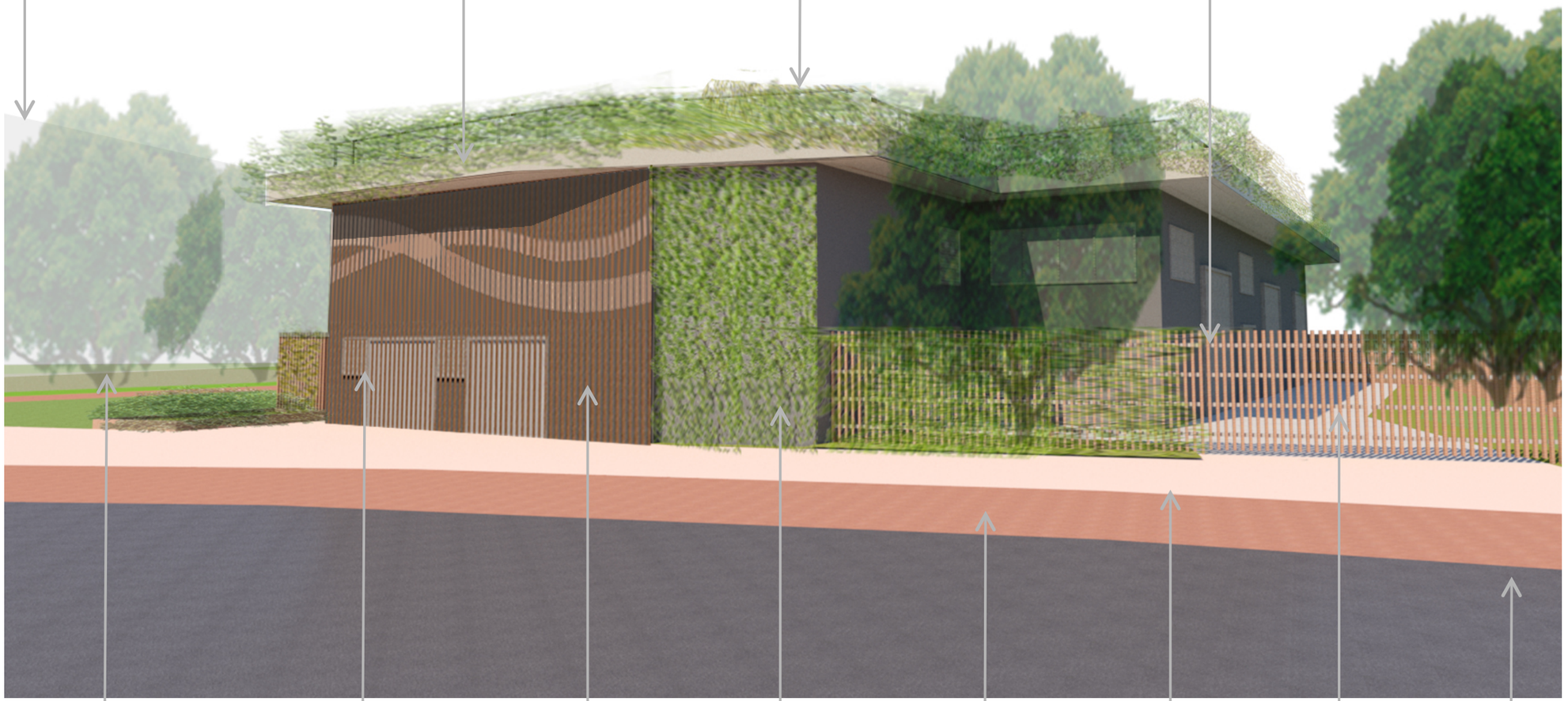


Visitor Centre

Feature wall of Recycle Wood Composite with River pattern to avoid monotonous blank wall

Hanging plants to smooth the edge of canopy MM9

Dark Grey External Wall Paint Finish



Adjacent Amenity Area

Doors to Transformer Room

Recycle Wood Composite Fence Wall with climbing plants

Vertical Climbing Plants MM9

Cycle Track

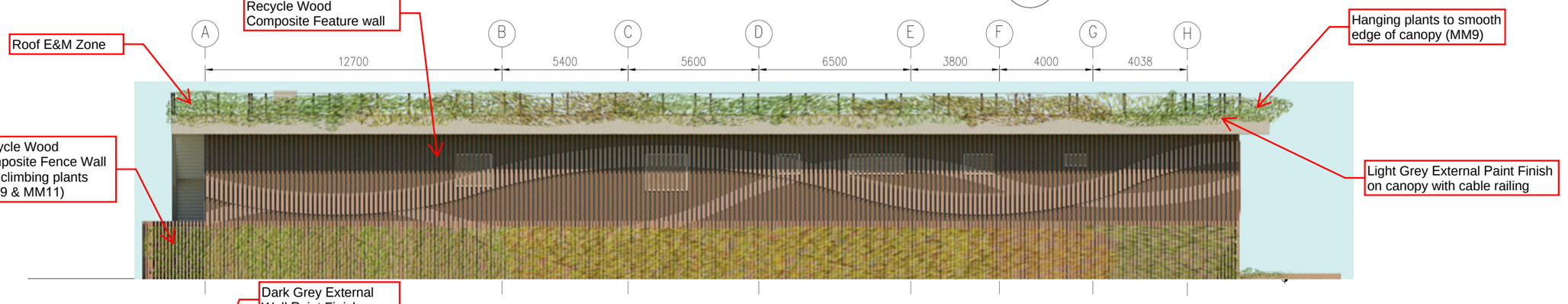
Footpath

Main Gate

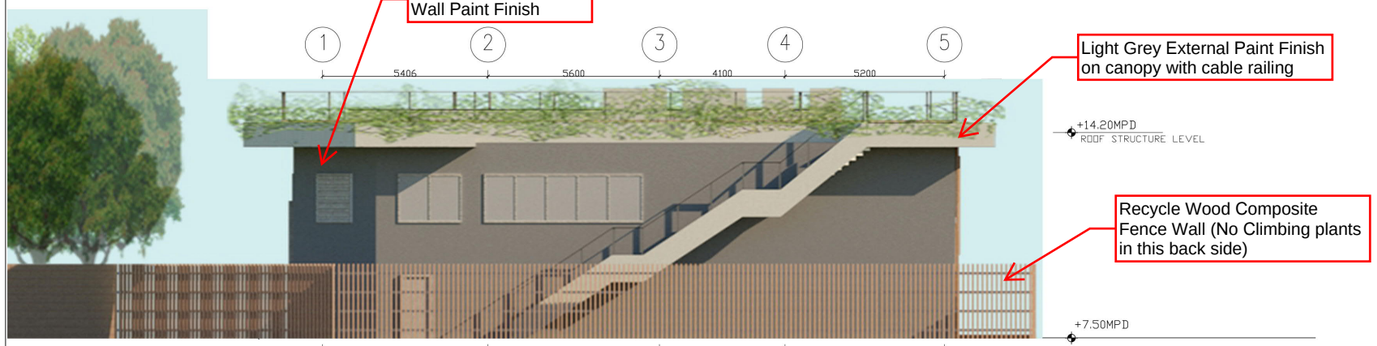
Road

Project Management Initials: Designer: ELHY Checked: CYCH Approved: IHWL ISO A1 594mm x 841mm

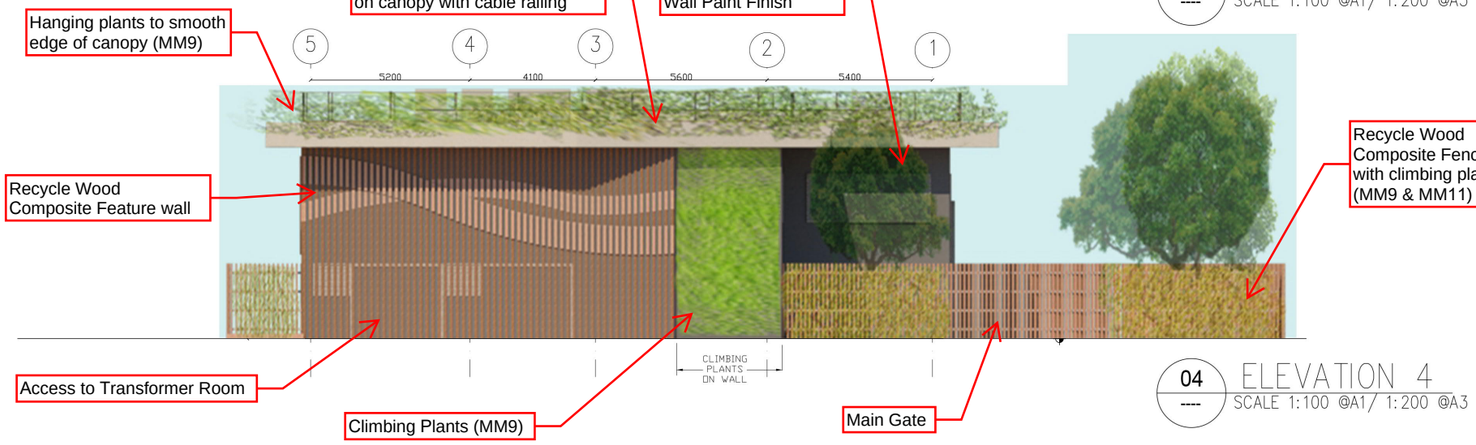
01 ELEVATION 1
---- SCALE 1:100 @A1/ 1:200 @A3



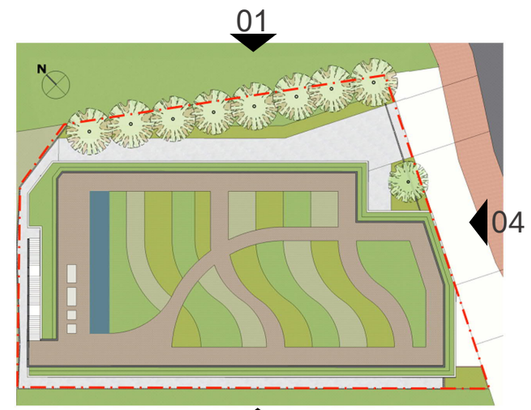
02 ELEVATION 2
---- SCALE 1:100 @A1/ 1:200 @A3



03 ELEVATION 3
---- SCALE 1:100 @A1/ 1:200 @A3



04 ELEVATION 4
---- SCALE 1:100 @A1/ 1:200 @A3



AECOM

PROJECT 項目

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE:

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROADS AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

CLIENT 業主

土木工程拓展署 Civil Engineering and Development Department

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS 分判工程顧問公司

STATUS 階段

SCALE 比例

DIMENSION UNIT 尺寸單位
MILLIMETRES

KEY PLAN 索引圖

PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
ND/2019/02

SHEET TITLE 圖紙名稱
KTN SEWAGE PUMPING STATION ELEVATIONS

SHEET NUMBER 圖紙編號
LS-01

LEGEND:

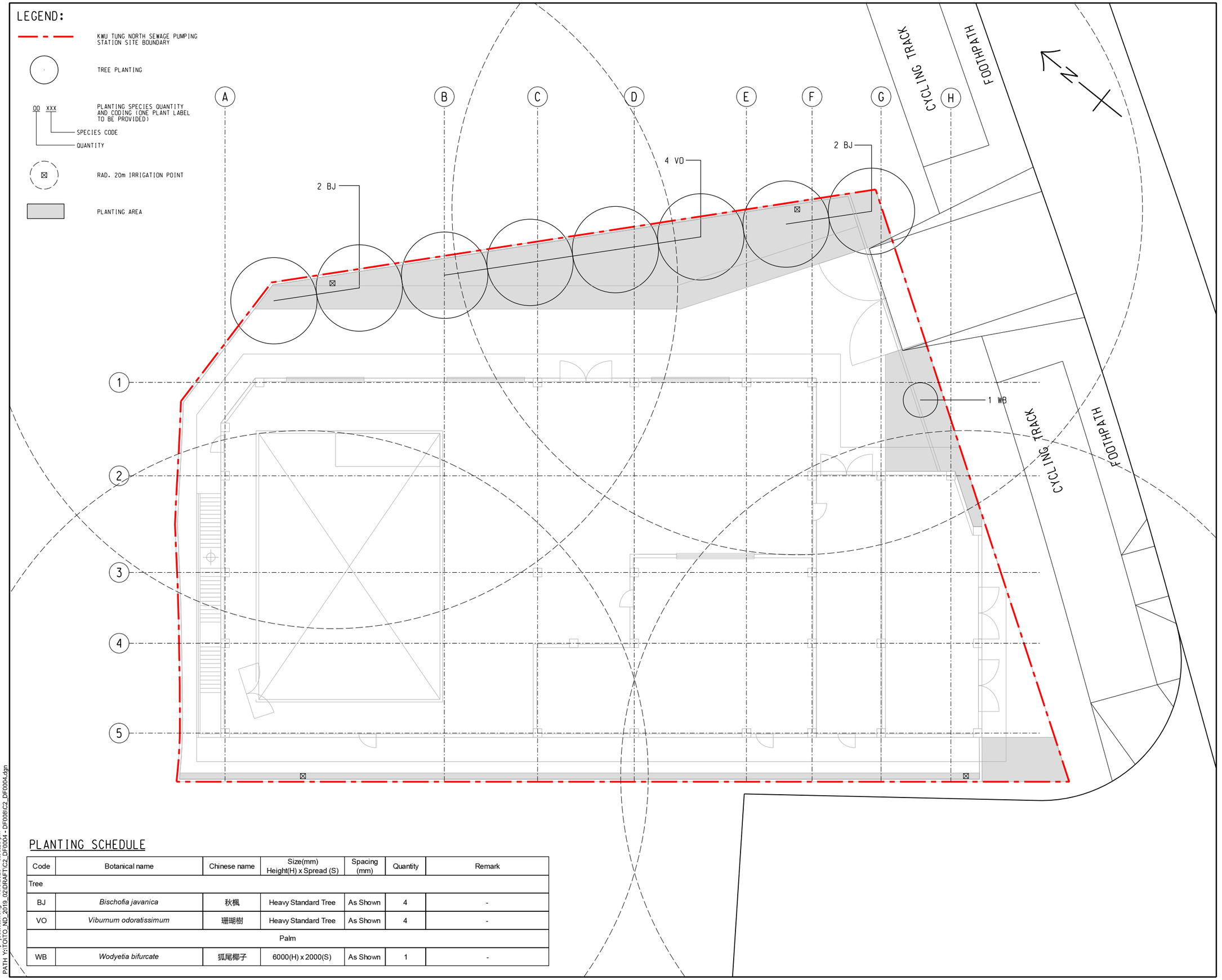
KWU TUNG NORTH SEWAGE PUMPING STATION SITE BOUNDARY

TREE PLANTING

OO XXX — PLANTING SPECIES QUANTITY AND CODING (ONE PLANT LABEL TO BE PROVIDED)
- XXX: SPECIES CODE
- OO: QUANTITY

RAD. 20m IRRIGATION POINT

PLANTING AREA



PLANTING SCHEDULE

Code	Botanical name	Chinese name	Size(mm) Height(H) x Spread (S)	Spacing (mm)	Quantity	Remark
Tree						
BJ	*Bischofia javanica*	秋楓	Heavy Standard Tree	As Shown	4	-
VO	*Viburnum odoratissimum*	珊瑚樹	Heavy Standard Tree	As Shown	4	-
Palm						
WB	*Wodyetia bifurcate*	狐尾椰子	6000(H) x 2000(S)	As Shown	1	-

Plot File by: jessica.wong 16/6/2023 3:50:23 pm
PATH: X:\TOTO_ND_2019_02\DRAFT\C2_DF0004 - DF008\C2_DF0004.dgn

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.

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

CONSULTANT
AECOM

PROJECT
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE
KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROAD AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

REMARK :

TITLE
KTN SEWAGE PUMPING STATION - TREE PLANTING PLAN GROUND FLOOR

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/02
SCALE: 1:200 (A3)	DATE: 15-JUN-23
DRAWN: JW	PREPARED: CCL
APPROVED	
SKETCH NO.: ND/2019/02/DF/0004	REV.: -

LEGEND:

KWU TUNG NORTH SEWAGE PUMPING STATION SITE BOUNDARY

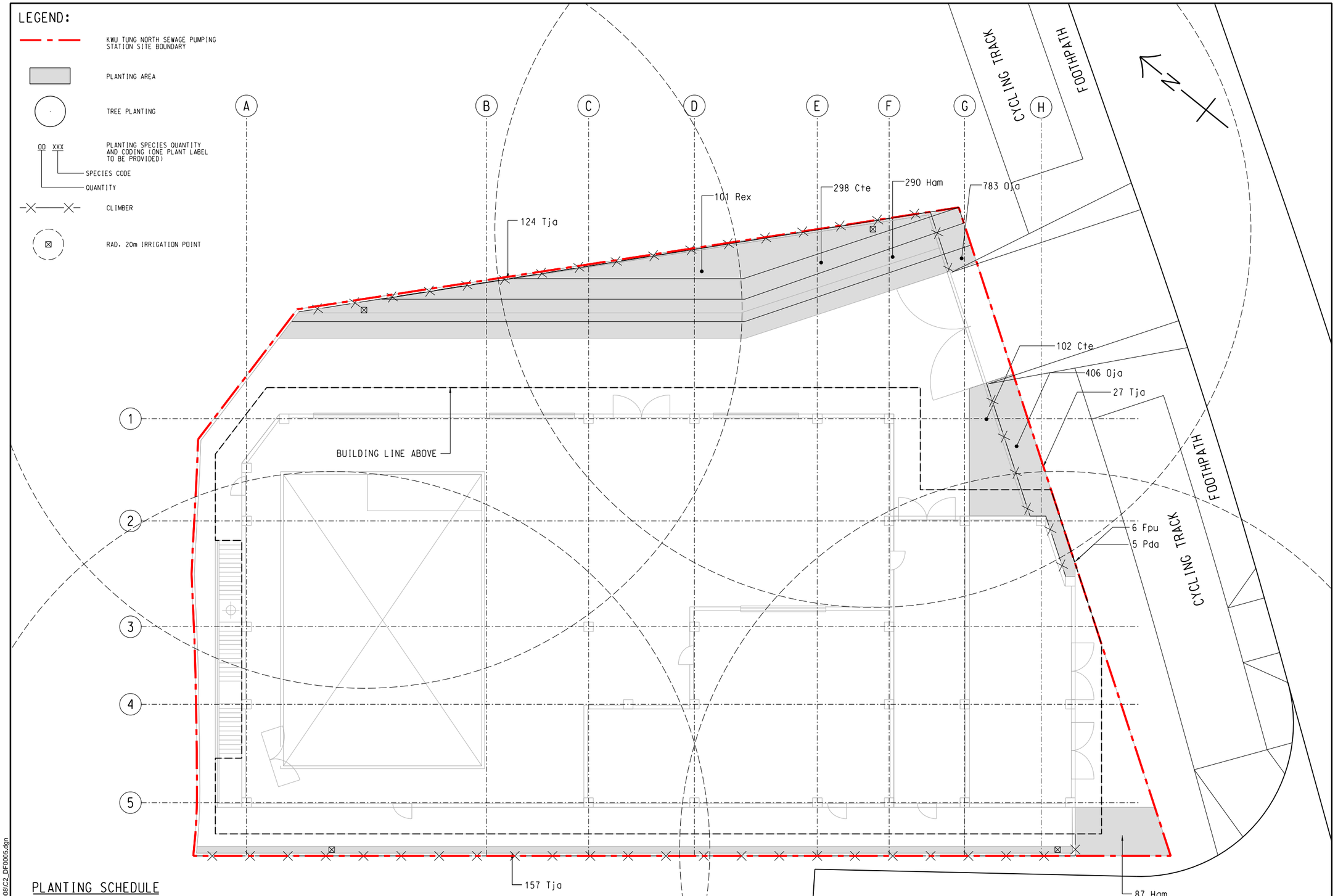
PLANTING AREA

TREE PLANTING

00 XXX — PLANTING SPECIES QUANTITY AND CODING (ONE PLANT LABEL TO BE PROVIDED)
- SPECIES CODE
- QUANTITY

CLIMBER

RAD. 20m IRRIGATION POINT



PLANTING SCHEDULE

Code	Botanical name	Chinese name	Size(mm) Height(H) x Spread (S)	Spacing (mm)	Quantity	Remark
Rex	*Rhapis excelsa*	棕竹	1000(H) x 500(S)	500	101	-
Cte	*Cordyline terminalis* 'Tricolor'	朱蕉	500(H) x 400(S)	400	400	-
Ham	*Hemerocallis* 'Americana'	萱草花	400(H) x 400(S)	400	377	-
Oja	*Ophiopogon japonicus*	麥冬	150(H) x 200(S)	200	1189	-
Tja	*Trachelospermum jasminoides*	絡石	4 shoots per plant. Each shoot 600mm long.	300	308	-
Fpu	*Ficus pumila*	薜荔	4 shoots per plant. Each shoot 600mm long.	300	6	Plant 2 species along the wall with alternate planting.
Pda	*Parthenocissus dalzielii*	爬牆虎	4 shoots per plant. Each shoot 600mm long.	300	5	

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.

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

CONSULTANT
AECOM

PROJECT
DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE
KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROAD AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

REMARK :

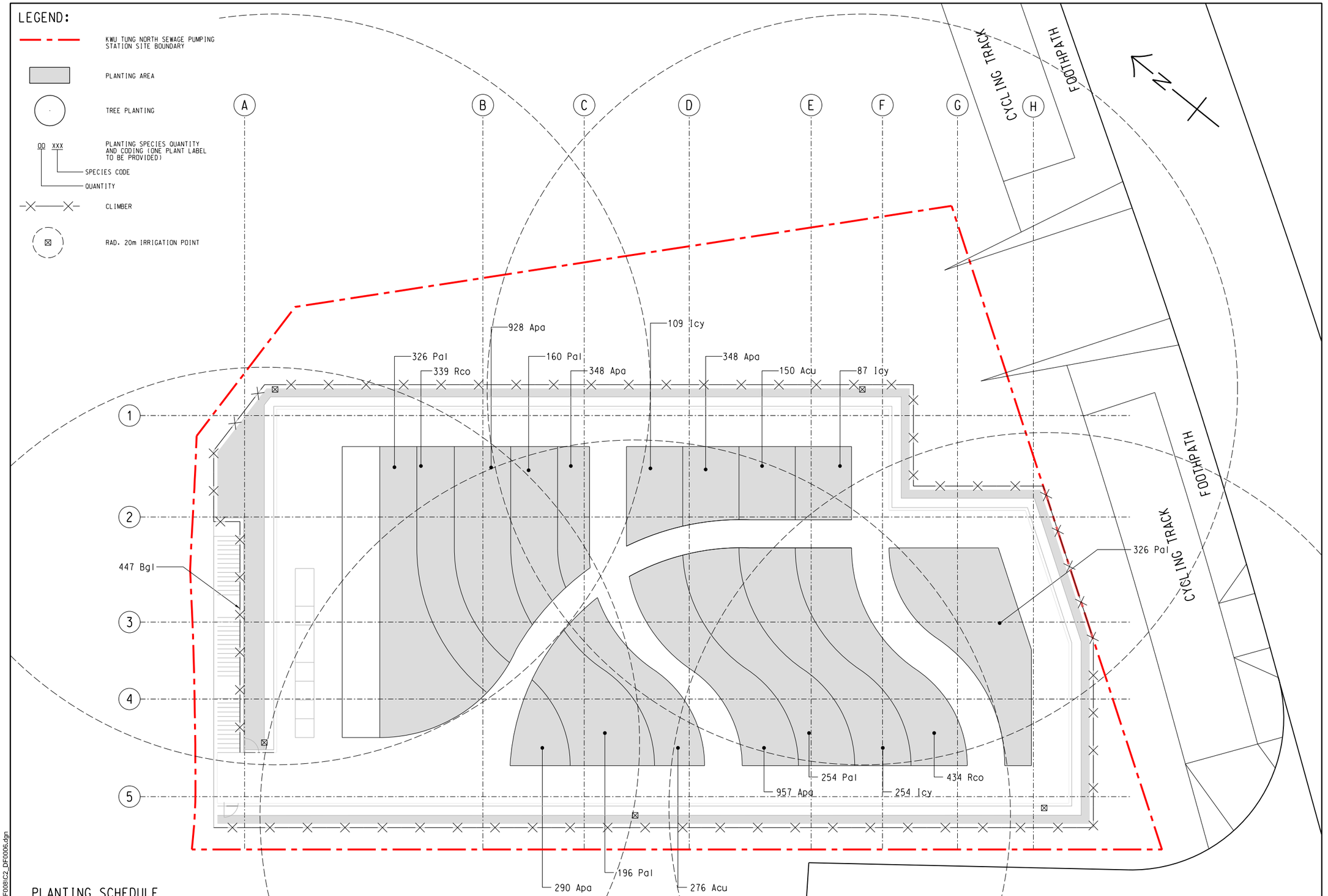
TITLE
KTN SEWAGE PUMPING STATION - SHRUBS PLANTING PLAN GROUND FLOOR

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/02
SCALE: 1:200 (A3)	DATE: 15-JUN-23
DRAWN: JW	PREPARED: CCL
APPROVED:	
SKETCH NO.: ND/2019/02/DF/0005	REV.: -

Plot File by: jessica.wong 16/6/2023 4:26:46 pm
PATH: I:\TOTO_ND_2019_02\DRAFT\C2_DF\0004 - DF\008\C2_DF0005.dgn

LEGEND:

- KWU TUNG NORTH SEWAGE PUMPING STATION SITE BOUNDARY
- PLANTING AREA
- TREE PLANTING
- PLANTING SPECIES QUANTITY AND CODING (ONE PLANT LABEL TO BE PROVIDED)
  - SPECIES CODE
  - QUANTITY
- CLIMBER
- RAD. 20m IRRIGATION POINT



PLANTING SCHEDULE

Code	Botanical name	Chinese name	Size(mm) Height(H) x Spread (S)	Spacing (mm)	Quantity	Remark
Pal	*Pennisetum alopecuroides*	狼尾草	500(H) x 400(S)	400	1262	-
Icy	*Imperata cylindrica* var. *major*	大白茅	500(H) x 400(S)	400	450	-
Acu	*Asclepias curassavica*	連生桂子花	400(H) x 300(S)	300	426	-
Rco	*Ruellia coerulea*	翠蘆莉	400(H) x 300(S)	300	773	-
Apa	*Alternanthera paronychioides*	星星蝦鉗菜	150(H) x 200(S)	200	2871	-
Bgl	*Bauhinia glauca*	粉葉羊蹄甲	4 shoots per plant. Each shoot 600mm long.	300	447	-

REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.

CLIENT

土木工程拓展署
Civil Engineering and Development Department

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROAD AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

REMARK :

TITLE

KTN SEWAGE PUMPING STATION - SHRUBS PLANTING PLAN ROOF FLOOR

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/02
SCALE: 1:200 (A3)	DATE: 15-JUN-23
DRAWN: JW	PREPARED: CCL
SKETCH NO.: ND/2019/02/DF/0006	REV.: -

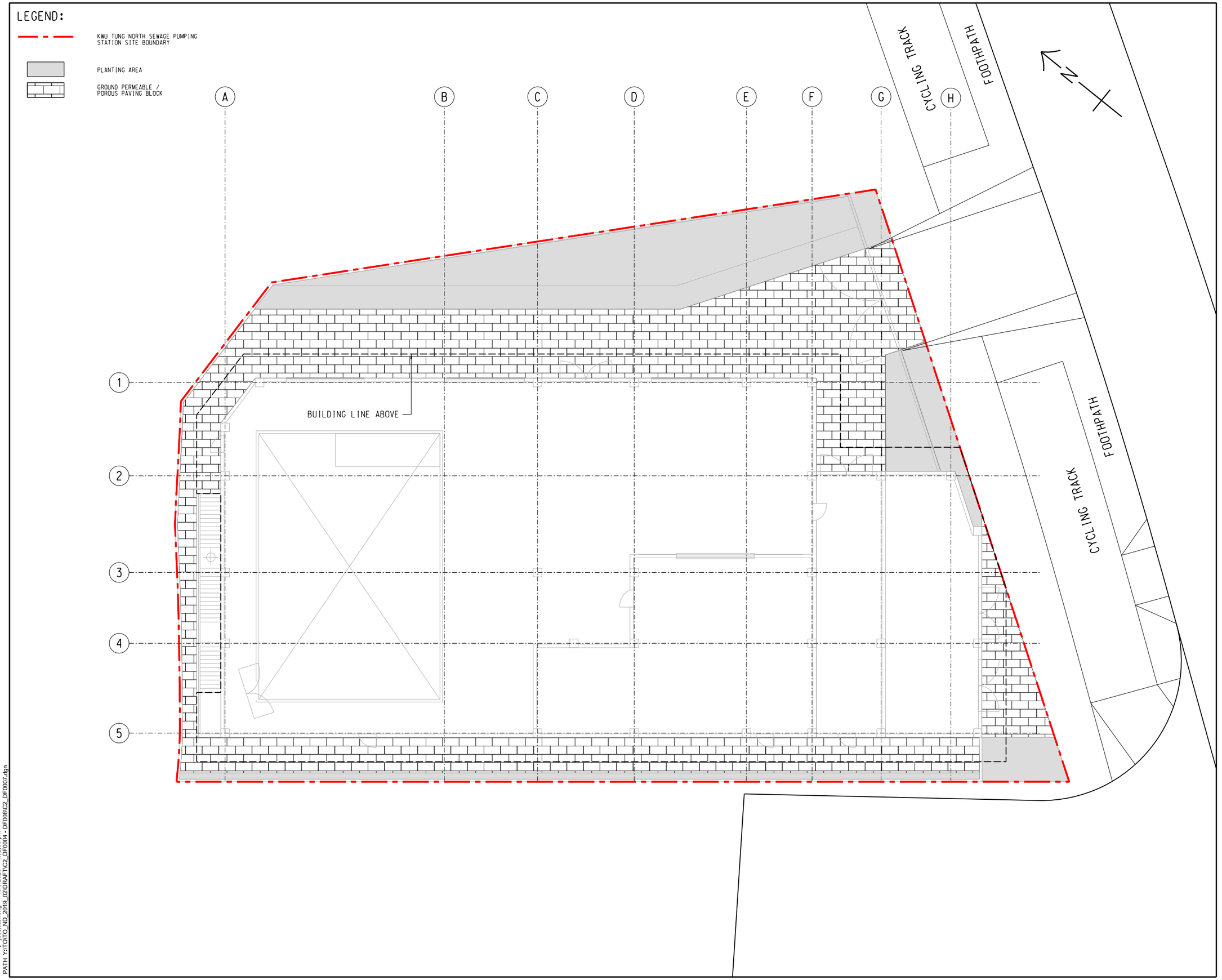
Plot File by: jessica.wong 16/6/2023 4:30:35 pm
PATH: I:\10\TO\ND_2019_02\DRAFT\C2_DF0004 - DF008\C2_DF0006.dgn

LEGEND:

KWU TUNG NORTH SEWAGE PUMPING STATION SITE BOUNDARY

PLANTING AREA

GROUND PERMEABLE / POROUS PAVING BLOCK



REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.

CLIENT

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

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROAD AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

REMARK :

TITLE

KTN SEWAGE PUMPING STATION
- PAVEMENT PLAN
GROUND FLOOR

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/02
SCALE	DATE
1:200 (A3)	15-JUN-23
DRAWN	PREPARED	APPROVED
JW	CCL	
SKETCH NO.	REV.
ND/2019/02/DF/0007	-

Plot File by: jessica.wong 16/6/2023 4:32:56 pm
PATH: I:\TOYO_ND_2019_02\DRAFT\C2_DF\804 - DF\008\C2_DF0007.dgn

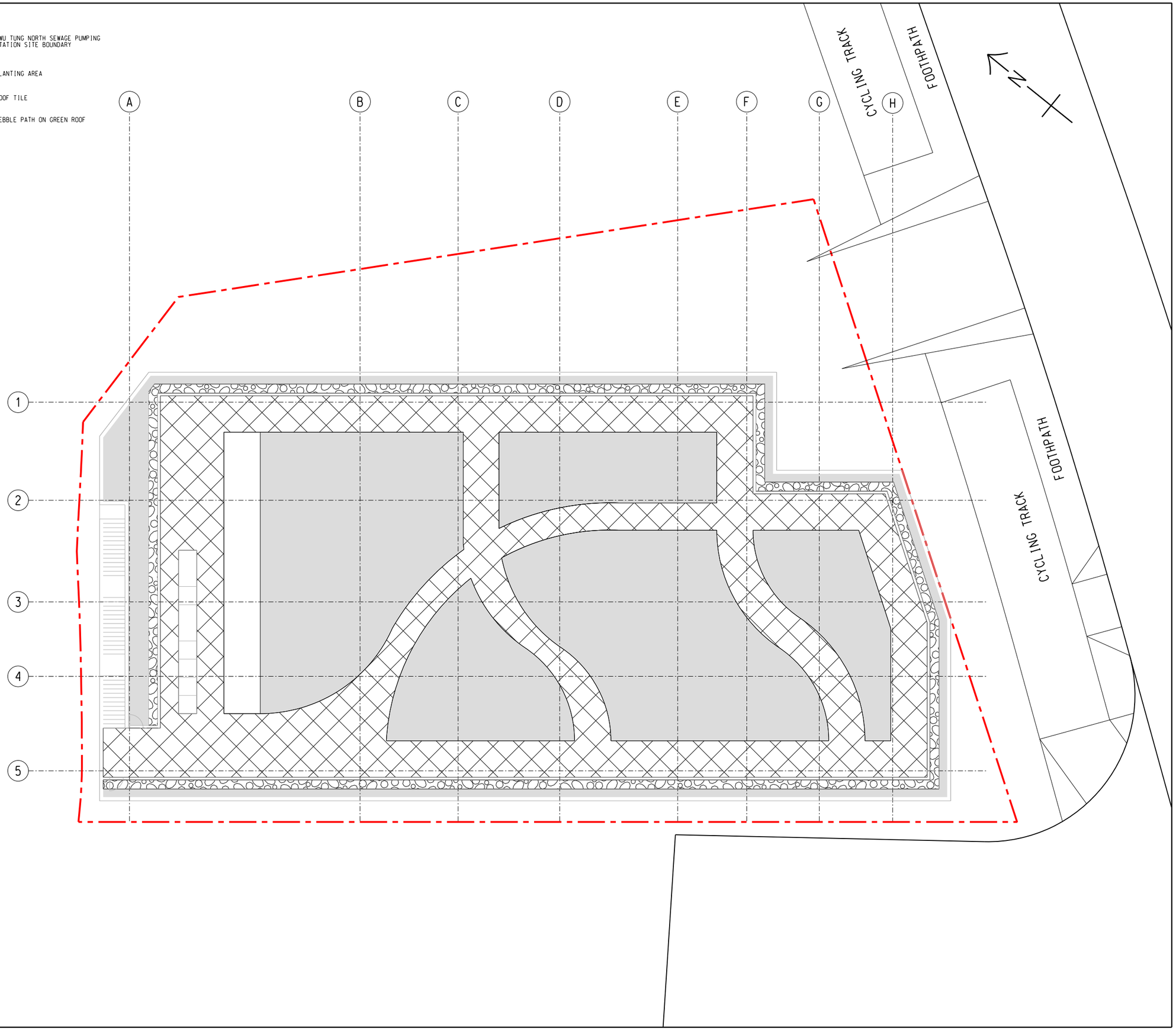
LEGEND:

KWU TUNG NORTH SEWAGE PUMPING STATION SITE BOUNDARY

PLANTING AREA

ROOF TILE

PEBBLE PATH ON GREEN ROOF



REV.	DATE	DESCRIPTION	DRAWN	PRE.	APP.

CLIENT

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

CONSULTANT

AECOM

PROJECT

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1

CONTRACT TITLE

KWU TUNG NORTH NEW DEVELOPMENT AREA, PHASE 1: ROAD AND DRAINS BETWEEN KWU TUNG NORTH NEW DEVELOPMENT AREA AND SHEK WU HUI

REMARK :

TITLE

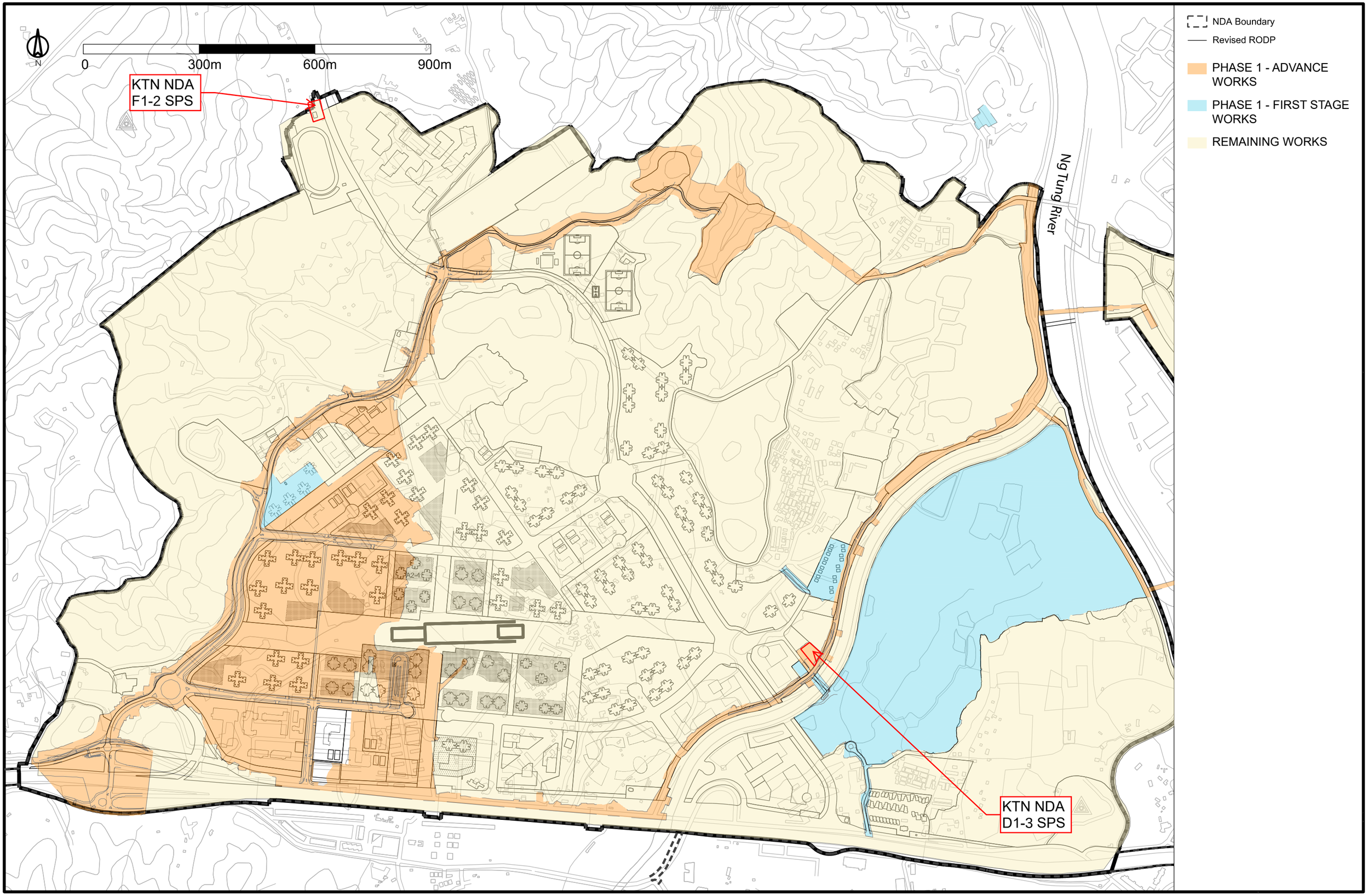
KTN SEWAGE PUMPING STATION
- PAVEMENT PLAN
ROOF FLOOR

PROJECT NO.	CONTRACT NO.
60335576	ND/2019/02
SCALE	DATE
1:200 (A3)	15-JUN-23
DRAWN	PREPARED	APPROVED
JW	CCL	
SKETCH NO.	REV.
ND/2019/02/DF/0008	-

Plot File by: jessica.wong 16/6/2023 4:06:09 pm
PATH: I:\DTO\ND_2019_02\DRAFT\C2_DF0804 - DF0808\C2_DF0008.dgn

APPENDIX IV

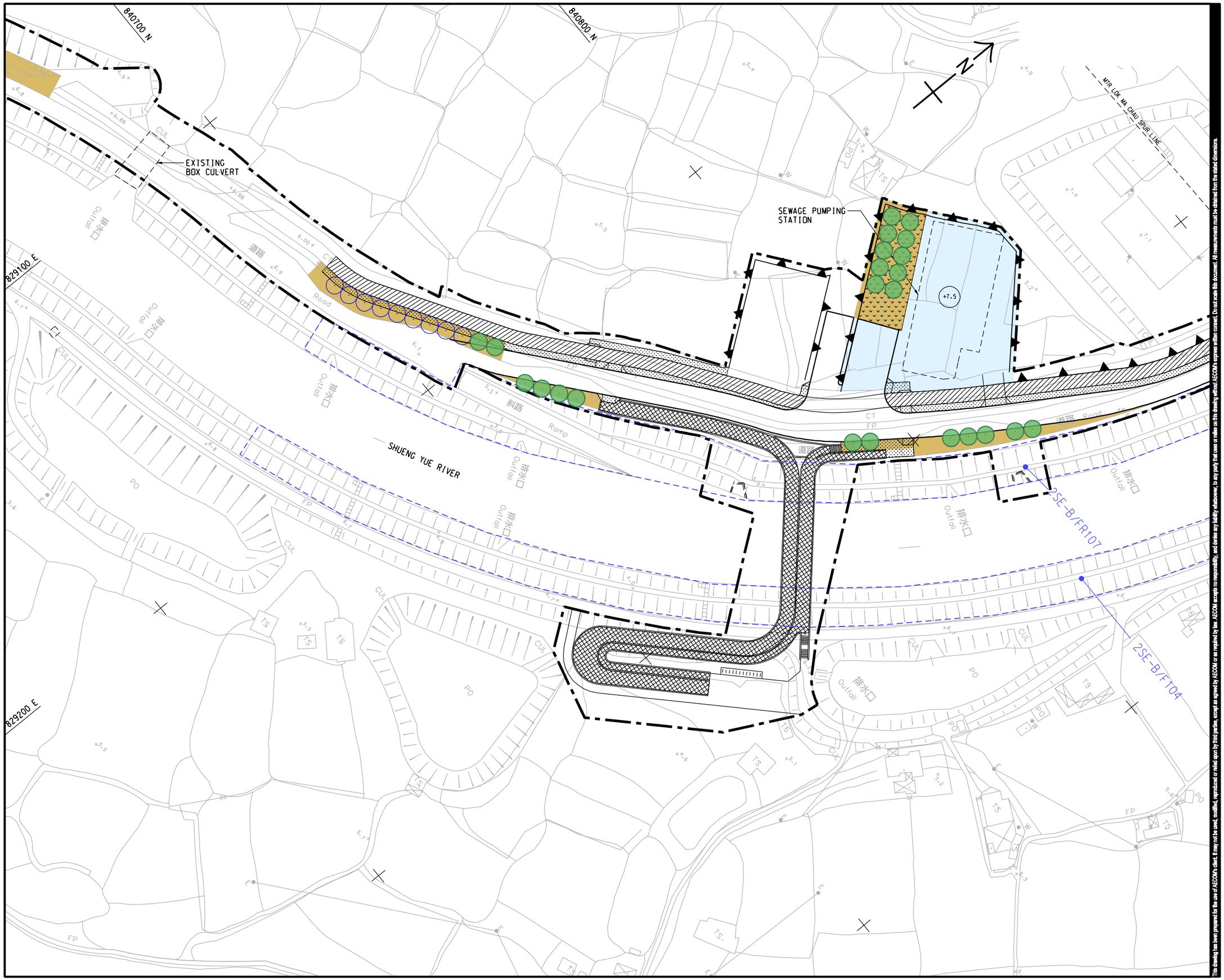
DEMARCATION OF KTN NDA SPS F1-2 AND SPS D1-3



土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT		AECOM	Job Title: Agreement No. CE 13/2014(CE) Development of Kwu Tung North and Fanling North New Development Areas, Phase 1 - Design and Construction	Drawing Title: Demarcation of KTN NDA SPS F1-2 and SPS D1-3	Rev / Description / Date	Drawn / Date / Checked / Approved / Scale: AS SHOWN	Drawing No.: DP-00 Rev.

APPENDIX V

COMPENSATORY PROPOSAL OUTSIDE SPS D1-3 AREA



AECOM

PROJECT
項目

DEVELOPMENT OF KWU TUNG NORTH AND FANLING NORTH NEW DEVELOPMENT AREAS, PHASE 1 - DESIGN AND CONSTRUCTION

CLIENT
業主

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

Legend

- Compensatory Tree outside SPS D1-3 area (total: 23 numbers)
- Compensatory Tree Planting Location refer to approved Master TPRP (ref. no.C03-04)

ISSUE/REVISION
修訂

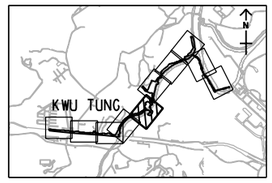
I/R 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 核核

STATUS
階段

SCALE 比例
A1 1 : 500

DIMENSION UNIT 尺寸單位
METRES

KEY PLAN 索引圖 A1 1 : 40000



PROJECT NO. 項目編號
60335576

CONTRACT NO. 合約編號
CE 13/2014 (CE)

SHEET TITLE 圖紙名稱
COMPENSATORY PLANTING PLAN

SHEET 5 OF 10

SHEET NUMBER 圖紙編號
60335576/TR2/205

APPENDIX VI

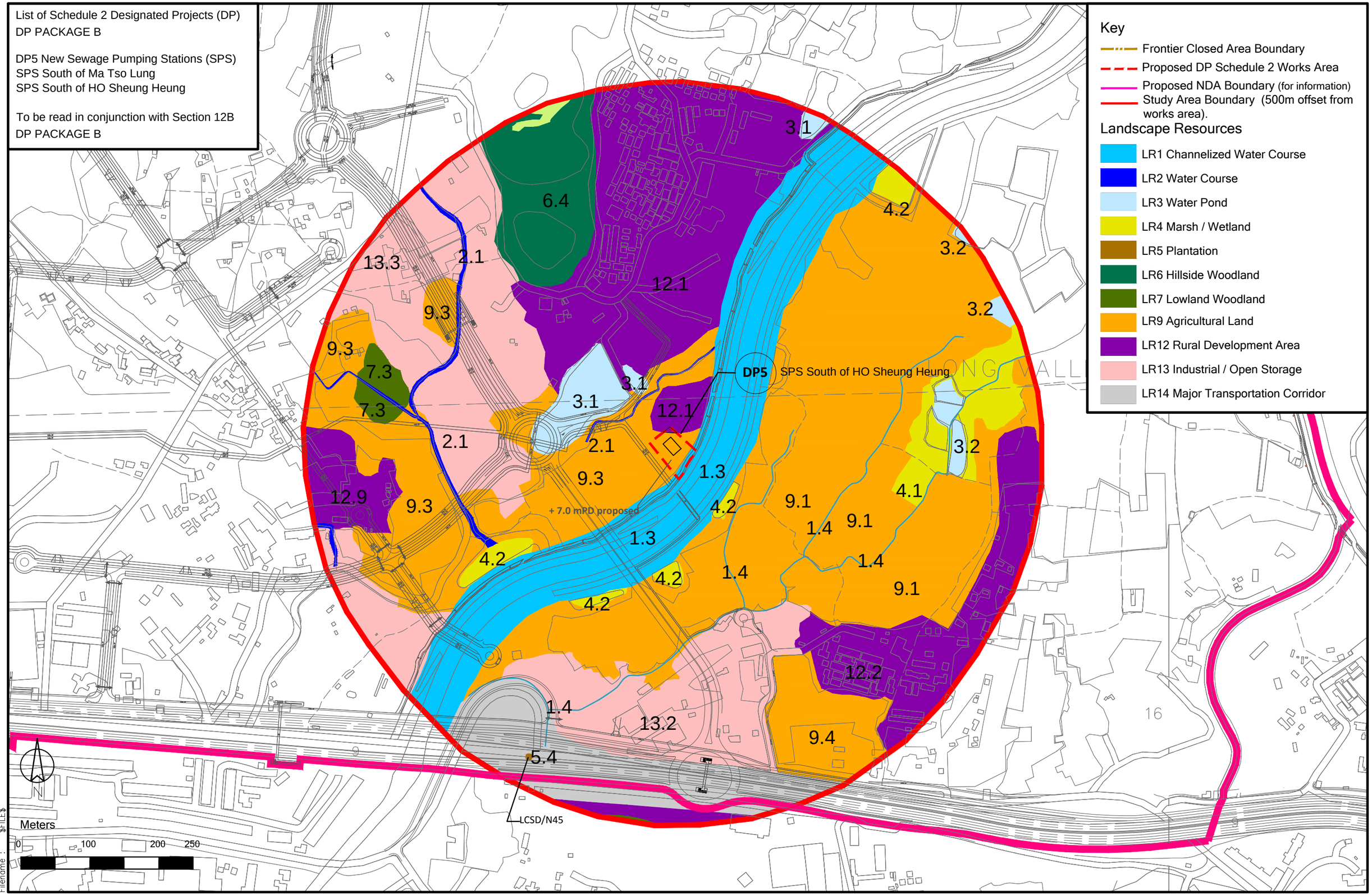
EXTRACTS FIGURES FROM APPROVED EIA REPORT (REF NO. AEIAR-175/2013)

FIGURE LIST		
	TITLE OF FIGURES	**FIGURE NO.**
1	Landscape Resources (LRs) DP Package B (5) (Sheet 2 of 2)	Fig. 12.51.12
2	Landscape Character Areas (LCAs) DP Package B (5)	Fig. 12.52.2

List of Schedule 2 Designated Projects (DP)
DP PACKAGE B

DP5 New Sewage Pumping Stations (SPS)
SPS South of Ma Tso Lung
SPS South of HO Sheung Heung

To be read in conjunction with Section 12B
DP PACKAGE B



Printed by : $DATE$
Filename : $FILE$

CEDD 土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT	規劃署 PLANNING DEPARTMENT	ARUP	Job Title: Agreement No. CE 61/2007 (CE) North East New Territories New Development Areas Planning and Engineering Study - Investigation	Drawing Title: Landscape Resources (LRs) DP Package B (5) (sheet 2 of 2.	Rev / Description / Date	Drawn: PL Date: 21/05/13 Checked: JC Approved: JC Scale: 1:5,000@A3	Drawing No. Figure 12.51.12 Rev. D

List of Schedule 2 Designated Projects (DP)
DP PACKAGE B

DP5 New Sewage Pumping Stations (SPS)
SPS South of Ma Tso Lung
SPS South of HO Sheung Heung

To be read in conjunction with Section 12B
DP PACKAGE B

DP5
SPS South of Ma Tso Lung

DP5
SPS South of Ho Sheung Heung

Key

- Frontier Closed Area Boundary
- Proposed DP Schedule 2 Works Area
- Proposed NDA Boundary (for information)
- Study Area Boundary (500m offset from works area).

Landscape Character Areas

- LCA1 Natural Hillside Landscape
- LCA2 Rural and Urban Peripheral Village Landscape
- LCA3 Urban Development Landscape
- LCA4 Industrial Landscape
- LCA5 Lowland Agricultural Landscape
- LCA6 Major Transportation Corridor Landscape
- LCA7 Major Water Course Corridor Landscape

Kilometers
0 0.5 1

$DATE$
$FILE$
Printed by :
Filename :

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

規劃署 PLANNING DEPARTMENT

ARUP

Job Title
Agreement No. CE 61/2007 (CE)
North East New Territories New Development Areas
Planning and Engineering Study - Investigation

Drawing Title
Landscape Character Areas (LCAs)
DP Package B (5)

Rev	Description	Date

Drawn	Date
PL	01/04/13
Checked	Approved
JC	JC
Scale	
1:15,000@A3	

Drawing No.
Figure 12.52.2

Rev. C