



ACUITY
SUSTAINABILITY
CONSULTING LIMITED



Website: www.acuityhk.com



Unit E, 12/F, Ford Glory Plaza
Nos. 37-39 Wing Hong Street,
Cheung Sha Wan, Kowloon.



Tel.: (852) 2698 6833
Fax.: (852) 2698 9383



水務署

Water Supplies Department

Contract No. 13/WSD/17

Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Landscape and Visual Mitigation Proposal

FEP Condition 2.11

Document No.

ASCL	/	200168078	/	LVMP	/	12.0
Publisher		Project Code		Sequential No.		Revision Index

	Certified by:
Name	Toby WAN
Position	Environmental Team Leader
Signature	
Date:	3 July 2026



Our ref: EMA2602/L005

Date: 15 July 2026

Water Supplies Department
New Works Branch
Consultants Management Division
6/F, Sha Tin Government Offices,
1 Sheung Wo Che Road, Sha Tin,
New Territories

By email

Attn: Mr. S K Wong

Provision of Independent Environmental Checker (IEC) Service for Operation of the First Stage of Desalination Plant at Tseung Kwan O (Quotation Ref. No. TKO1/IEC/004)

Verification of Landscape and Visual Mitigation Proposal

Dear Sirs,

Referring to the Landscape and Visual Mitigation Proposal (200168078/LVMP Issue 12) as submitted on 13 July 2026, we hereby verify the captioned report for further submission to the Director's Representative of the Project according to Environmental Permit (EP), EP-503/2015/B and the Further EP (FEP), FEP-01/503/2015/B.

Should you need any further information or clarification, please feel free to contact the undersigned at 2774 7406 or email at roy.hung@sgs.com.

Yours faithfully,

For and on behalf of **SGS Hong Kong Limited**

Roy Hung
Independent Environmental Checker

Aurecon
Binnies

(Attn.: Toby Wan)
(Attn.: Calvin Leung)

By E-mail
By E-mail

REVISION HISTORY

REV.	DESCRIPTION OF MODIFICATION	DATE
1	First Issue for Comment	5 Mar 2020
2	Revision according to EPD's comments	3 Jun 2020
3	Revision according to EPD's comments	10 Nov 2020
4	Revision according to EPD's comments	29 Jan 2021
5	Revision according to RSS's and IEC's comments	18 Jan 2022
6	Revision according to EPD's comments	31 Mar 2022
7	Update of implementation schedule of Table 2.1	01 Mar 2024
8	Revision according to revised slope mitigation works design	13 Feb 2026
9	Revision according to EPD's comments	13 Mar 2026
10	Revision according to EPD's and PlanD's comments	29 April 2026
11	Revision according to PlanD's comment	12 June 2026
12	Revision according to EPD's comment	3 Jul 2026

CONTENTS

	Page
1. Introduction.....	5
1.1. Background.....	5
1.2. Contract Description.....	6
1.3. Purpose of the Plan.....	6
1.4. Update of the plan.....	7
2. Proposed Landscape and Visual Mitigation Measures.....	8
3. Aesthetic Landscape and Architectural Treatment for Above Ground Structures.....	15
3.1. Minimization of Construction Area and Area for Temporary above Ground Structures (MM1)	15
3.2. Minimization of Above Ground Structures (MM2).....	15
3.3. Aesthetic Landscape and Architectural Treatment for Above Ground Structures (MM3)..	16
3.3.1. Green roof.....	16
3.3.2. Roadside planting.....	16
3.3.3. Vertical greening.....	17
3.3.4. Screening planting along the site.....	17
3.3.5. Landscape areas.....	17
3.3.6. Aesthetic treatment of all structures.....	17
3.3.7. Fairface finishing	18
3.3.8. Prefabricated fairface concrete façade cladding.....	18
3.3.9. Paving materials.....	19
3.3.10. Permeable perimeter fence	19
3.3.11. Architectural feature fins	19
3.4. Slope Mitigation Works (MM6).....	19
3.5. Lighting Arrangement (MM8).....	21
3.5.1. General.....	21
3.5.2. Garden Lights in Operation Phase	22
4. Tree Felling and Preservation Proposal (MM4).....	23
5. Construction Mitigation Measures	24
5.1. Blending in with the Existing Landscape and Visual.....	24
5.2. Providing soft landscaping.....	25

5.3.	Conserving/Recovering Existing Greenery	25
5.4.	Implementing Good Site Practices/ Other Recommended Mitigation Measures	25
5.5.	Conducting Regular Site Audit.....	25
6.	Conclusion.....	25

LIST OF APPENDICES

Appendix A	Layout Plan of Works Area under Contract No. 13/WSD/17
Appendix B	Tree Survey Result
Appendix C	Implementation of L&V Mitigation Measure (Operation Stage)
Appendix D	DPTKO Building Layout Plan
Appendix E	Soft Landscape Design
Appendix F	Hard Landscape Design
Appendix G	Lighting Plan
Appendix H	Detailed Design for Slope Mitigation Works

1. INTRODUCTION

1.1. BACKGROUND

Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection granted the Environmental Permit (No. EP-503/2015) and Variation of Environmental Permit (No. EP-503/2015/B) to Water Supplies Department (WSD); and granted the Further Environmental Permit (No. FEP-01/503/2015/B) to AJCJV for the Contract.

The Acciona Agua, S.A. Trading, Jardine Engineering Corporation, Limited and China State Construction Engineering (Hong Kong) Limited As AJC Joint Venture (AJCJV) is contracted by WSD to carry out the Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant (DPTKO) under Contract No. 13/WSD/17 (“the Contract”). The Further Environmental Permit (No. FEP-01/503/2015/B) to AJCJV to construct the designation contract.

Acuity Sustainability Consulting Limited (ASCL) is commissioned by AJCJV to undertake the Environmental Team (ET) services as required and/or implied, both explicitly and implicitly, in the Environmental Permit (EP), Environmental Impact Assessment Report (EIA Report) (Register No. AEIAR-192/2015) and Environmental Monitoring and Audit Manual (EM&A Manual) for the Contract; and to carry out the Environmental Monitoring and Audit (EM&A) programme in fulfillment of the EIA Report’s EM&A requirements and Contract No. 13/WSD/17 Specification requirements.

Before WSD taking over the area for DPTKO development, the construction and demolition (C&D) materials being stockpiled and grown vegetation had been removed for construction projects. Prior to being handed over the area for DPTKO development, the area for the proposed desalination plant had been cleared of the stockpiled C&D materials and grown vegetation. It was then handed over to WSD when the finished ground level reached +5.2mPD.

In 2017, design variations of Contract were proposed, the design variations in relation to landscape and visual impacts are mainly the changes in Contract layouts, which includes; the relocation of building blocks with increase in building height within the original earmarked site defined in the EIA report; the reduction of the site area for desalination plant and; the reduction of slope mitigation works inside the Clear Water Bay Country Park (CWBCP). In 2025, design variations in relation to the reduction of slope mitigation works were further proposed to alleviate the high construction risk after frequent landslides.

The change in magnitude of landscape and visual impacts of the design variations from the EIA report have been thoroughly assessed and discussed in the Environmental Review Report (ERR) prepared by Black & Veatch (now known as Binnies HK Ltd.) on 03 November 2017. The ERR has concluded that the revised Contract layout will not change the overall landscape and visual impact levels presented in the EIA Report with mitigation measures in place. No additional mitigation measures are considered required for the proposed Contract variations. The environmental outcome from landscape and visual perspectives anticipated in the EIA Report will remain valid and applicable to the latest design.

1.2. CONTRACT DESCRIPTION

The Contract includes the following key components/works:-

Stage 1 Desalination Plant works (undertaken by Contract No. 13/WSD/17)

- construction of the seawater treatment components for the First Stage of the proposed desalination plant with a water production capacity at 135,000 cubic metres (m³) per day and with provision for future expansion to the ultimate water production capacity at 270,000 m³ per day when necessary, and associated facilities;
- formation of an eight-hectare site in TKO Area 137 for the construction of the proposed desalination plant and associated facilities with the ultimate water production capacity at 270,000 m³ per day;
- construction of the intake and outfall facilities of the proposed desalination plant to cater for the ultimate water production capacity of the proposed desalination plant at 270,000 m³ per day.
- natural slope mitigation works within the Clear Water Bay Country Park, which overlooks the northeast boundary of the desalination plant at TKO Area 137; and
- associated works including engineering, environmental mitigation works and landscaping works.

Stage 2 Desalination Plant works (to be undertaken in other works contract(s))

- (under planning stage);

Freshwater Main Alignment (undertaken by Contract No. 13/WSD/16)

A dedicated trunk feed system including about 9 km long water mains for the transfer of freshwater output from the desalination plant to the existing Tseung Kwan O Fresh Water Primary Service Reservoir in Po Lam.

1.3. PURPOSE OF THE PLAN

According to Condition 2.11 of the FEP and EP-503/2015/B, a landscape and visual mitigation proposal shall be submitted to the Director of Environmental Protection for approval no later than 1 month before the commencement of construction of the desalination plant of the Contract. The proposal, with drawings in the scale of 1:1000 or other appropriate scales as agreed by the Director, shall show the landscape and visual mitigation measures of the Contract, and shall include at least the following information:

- (1) aesthetic landscape and architectural treatment for above ground structures;
- (2) tree felling and preservation proposal showing quantity, plant species, location(s) and size of trees to be retained/transplanted/felled/compensated, and location(s) of transplanted trees;

- (3) Landscape Plan showing location(s) of greening works including green roofs, roadside planting, vertical greening, screen planting, amenity planting, edge treatment along boundary and any other landscape enhancement to mitigate landscape impact of the Contract.

The scope of this LVMP covers the landscape and visual mitigation measures under Contract No. 13/WSD/17. The site layout plan for Contract No. 13/WSD/17 is shown in **Appendix A**. Before submission to the Director, the Landscape and Visual Mitigation Proposal shall be certified by the Environmental Team (ET) Leader and verified by the Independent Environmental Checker (IEC) as conforming to the requirements and recommendations contained in the EIA Report (Register No. AEIAR-192/2015), EP/FEP and ERR. All measures recommended in the approved Proposal shall be fully and properly implemented and maintained for the Contract.

1.4. UPDATE OF THE PLAN

In accordance with EP Condition 2.7, the Updated Vegetation Survey for Slope Mitigation Works (Issue 212-2) was submitted on 24 July 2017 and subsequently approved by the EPD on 31 August 2017 (hereinafter referred to as the “2017 Vegetation Survey”). The 2017 Vegetation Survey Report documented the survey findings, assessed the potential impacts, if any, arising from the proposed slope mitigation works, and recommended appropriate protection and mitigation measures for plant species of conservation importance identified during the 2016 survey. A revised report was later prepared to update the 2017 Vegetation Survey by incorporating the findings of subsequent vegetation surveys conducted in 2020, 2021, and 2023 (hereinafter referred to as the “2026 Vegetation Survey”). The 2026 Vegetation Survey was submitted to EPD on 12 February 2026 and subsequently approved on 9 March 2026.

In accordance with EP Condition 2.8, the Detailed Design Plan for Slope Mitigation Works (Issue 214-2) was submitted on 2 March 2018 and subsequently approved by the EPD on 20 April 2018 (hereinafter referred to as the “2018 DDP”). The 2018 DDP detailed the proposed slope mitigation works, including the installation of a flexible barrier, rock slope stabilisation works, boulder removal, and boulder break-off.

A series of extreme weather events subsequently occurred in Hong Kong, including a 1-in-500-year black rainstorm and Typhoons Saola and Koinu in September and October 2023, as well as an amber rainstorm in May 2024. These events triggered multiple landslides within the slope area located in Clear Water Bay Country Park. Following a review of the severity and frequency of the landslides in the relevant slope area in consultation with the Civil Engineering and Development Department (CEDD), and taking into account the low usage frequency and low risk to life and property at the slope toe area, the extent and arrangement of the slope mitigation works within Clear Water Bay Country Park were re-examined. A reduced extent and revised arrangement of slope mitigation works were subsequently proposed to the Geotechnical Engineering Office (GEO) / CEDD. GEO/CEDD provided no further comments on the design of the slope mitigation works in its memorandum dated 4 March 2025 (Ref.: () in ME-30-2025-12-226-1). In accordance with EP Condition 2.8, the Detailed Design Plan for Slope Mitigation Works was updated to reflect the revised slope mitigation works design.

The updated Detailed Design Plan was subsequently approved by EPD on 22 June 2026 (hereinafter referred to as the “2026 DDP”).

The 2018 DDP presented the initial tree survey results within the project area, and the slope mitigation works area, which were conducted by WSD in November 2015 and March 2016. CEDD carried out an extensive tree felling exercise in 2018 in accordance with their approved tree felling application (LandsD’s approval memorandum ref. (30) in LM 2 to DLO/SK 651/SGS/59 Pt.6 dated 23 October 2018), prior to site handover to WSD in December 2019. Upon handover of the site in December 2019, tree surveys were conducted within the desalination plant site and along the temporary access for boulder removal and stabilisation by break-off works in February and August 2020 to establish a new baseline record of the existing trees by WSD following site handover. After the February and August 2020 tree surveys, it was identified that certain trees had not been felled by CEDD in accordance with CEDD’s approved tree felling application. Consequently, CEDD conducted additional tree felling operations in accordance with their approved application to remove those trees originally proposed for felling. In the subsequent period, the site was affected by typhoons and adverse weather conditions. As a result, prior to the commencement of the slope mitigation works, another series of tree surveys was carried out by WSD in February, May, and June 2022, and February 2023 within the desalination plant site, the areas for rock slope stabilisation works, the area for the proposed flexible barrier, and along the temporary access for boulder removal and stabilisation by break-off works. The 2026 DDP presents updated information based on the tree surveys carried out in February and August 2020, February, May and June 2022, and February 2023.

In accordance with EP Condition 2.10, the Landscape and Visual Mitigation Proposal (Rev. 7) was submitted on 1 March 2024 and subsequently approved by EPD on 8 March 2024 (hereinafter referred to as the “2024 LVMP”). Section 3.4 of the approved LVMP presents details of the slope mitigation works and the corresponding landscape and visual mitigation measures based on the information provided in the 2017 Vegetation Survey and the 2018 DDP.

This report aims to update the following information in accordance with the 2026 Vegetation Survey and 2026 DDP, and the refinement of the proposed site layout design in Section 3.2:

- Revision of slope mitigation works in accordance with 2026 DDP;
- Revision of landscape and visual mitigation measures for slope mitigation works with respect to the revised slope mitigation works; and
- Revision of tree survey results and the corresponding compensatory planting proposal in accordance with 2026 DDP
- A uniform setback of approximately 15 m from the project boundary was considered during the design process. Achieving such a setback would require a more compact and vertically stacked arrangement of treatment facilities, resulting in increased pumping requirements, higher energy consumption, reduced hydraulic efficiency, and greater lifecycle costs and environmental impacts over the plant’s 50-year design life. This was one of the key considerations in the refinement of the proposed site layout. The proposed non-uniform setback reflects the operational, fire safety, and sustainability requirements of the

desalination plant. In particular, Workshop Y is located adjacent to the site boundary to provide operational efficiency and allows shared use with future desalination facilities. Together with the provision of natural buffering and integrated landscape and visual mitigation measures, the design achieves the intent of the setback requirements while maintaining acceptable landscape and visual impacts. Section 3.2 has also been updated to reflect the actual site conditions.

2. PROPOSED LANDSCAPE AND VISUAL MITIGATION MEASURES

Section 11.10.3 of the approved EIA Report and Annex A of the EM&A Manual recommended the following mitigation measures. Explanations of how the measures are fulfilled are given in **Table 2.1** and subsequent sections. Implementation details of mitigation measures under the Contract and the implementation schedule are described in **Table 2.1** and subsequent sections. In compliance with Clause No. 2.11(iii) of the EP, **Appendix C** illustrates the layout of the landscape plan for the proposed greening works and landscape enhancement measures, with reference to MM3 and MM6 only. MM5 is not included in **Appendix C**, as the flexible barriers have been redesigned and relocated away from the slope toe of the Clear Water Bay Country Park, thereby eliminating the need for above-ground works or soil nailing and avoiding any tree felling. Other landscape-related mitigation measures are design requirements or measures to be implemented during the construction phase, and are therefore not shown in **Appendix C**.

Table 2.1 Landscape and Visual Mitigation Measures

ID in EIA Report	Recommended Mitigation Measure in Table 11.5 of the approved EIA report	Implementation Stage	Implementation Details of Mitigation Measures under the Contract	Timing for Implementation	Agent for Implementation, maintenance and management
MM1	The construction area and area allowed for temporary structures, such as the contractor's office, will be minimized to a practical minimum. (Clause no. 2.11 (i) of EP)	Construction Stage	The construction area is limited to the contract area allowed in the EP.	Throughout the Construction Stage	AJCJV (The Contractor)
MM2	At the detailed design stage, the design team will seek to minimize the landscape footprint of the Project and above ground facilities, while satisfying all other requirements. (Clause no. 2.11 (i) of EP)	Detailed Design Stage	The landscape footprint is restricted to the contract area allowed in the EP. Please refer to Section 3 for explanation on how the coverage of ground facilities has been minimized.	During the Design Stage	Design Team of AJCJV

ID in EIA Report	Recommended Mitigation Measure in Table 11.5 of the approved EIA report	Implementation Stage	Implementation Details of Mitigation Measures under the Contract	Timing for Implementation	Agent for Implementation, maintenance and management
MM3	Design principles will be adopted to take into account the surrounding area, particularly Clear Water Bay Country Park behind and the nearby waterfront, with due consideration given to: - green roofs where practical (i.e. without equipment on the roof); - roadside planting; - aesthetic treatment of all structures; - vertical greening; - screen planting along application site; and - landscape enhancement with amenity planting where practical, including planting along the edge (site boundary) fence with native shrubs where feasible, to reduce their visual impact and blend them into the surrounding landscape. (Clause no. 2.11 (iii) of the EP)	Detailed Design Stage, Construction Stage, Operational Stage	Please refer to Section 3 for aesthetic landscape and aesthetic treatment of all above ground structures and Section 4 for soft landscape plan.	- During the Design Stage - Throughout the Construction Stage - Complete the mitigation measures before the commencement of operation of the First Stage of the Desalination Plant and maintained throughout the operation stage	Design & Construction Teams of AJCJV, and Operational Stage Contractor/WSD
MM4	All trees within the Project Site or the slope mitigation works area will be carefully protected during construction according to DEVB TCW No. 4/2020 – Tree Preservation. (Clause no. 2.11 (ii) of the EP)	Construction Stage	Tree surveys were conducted in 2020, 2022 and 2023, 148 nos. of tree are identified within the site area, 148 nos. of tree are proposed to be retained on site. Please refer to Section 4 for tree details. For tree located within the proposed slope mitigation works in Clear Water Bay Country Park, the existing trees will be carefully protected during the construction stage in accordance with DEVB TCW No.	Throughout the Construction Stage	AJCJV

ID in EIA Report	Recommended Mitigation Measure in Table 11.5 of the approved EIA report	Implementation Stage	Implementation Details of Mitigation Measures under the Contract	Timing for Implementation	Agent for Implementation, maintenance and management
			4/2020 – Tree Preservation. The details of tree preservation shall refer to the approved Detailed Design Plan for Slope Mitigation Works.		
MM5	No Tree within the Country Park will be felled. Trees within the Site unavoidably affected by the works will be transplanted where practical. For trees that need to be felled, compensatory planting will be provided to the satisfaction of relevant Government departments. A compensatory tree planting proposal including locations of tree compensation will be submitted to seek relevant government department's approval, in accordance with DEVB TC(W) No. 4/2020. (Clause no. 2.11 (ii) of the EP)	Construction Stage, Operational Stage	The slope behind the proposed Desalination Plant is located within the Clear Water Bay Country Park. For tree located within the proposed slope mitigation works in Clear Water Bay Country Park, as flexible barriers are redesigned and located away from the slope toe of the Clear Water Bay Country Park area, no above-ground elements of the flexible barriers or soil nailing works are required, thereby no tree felling is proposed. In case of tree felling is necessary for slope mitigation works, a Tree Preservation and Removal Application will be submitted to relevant authorities for approval prior to tree felling works.	- Throughout the Construction Stage - Complete the mitigation measures before the commencement of operation of the First Stage of the Desalination Plant and maintain throughout the operation stage	AJCJV and Operational Stage Contractor/WSD
MM6	Any slope mitigation works necessary to address natural terrain hazards, will be minimized to minimize any potential environmental impact to the Country Park e.g. soil nailing and rock stabilisation will aim to avoid existing trees e.g. should any restoration of vegetation be necessary, the	Detailed Design Stage, Construction Stage, Operational Stage	The slope mitigation works have been designed to minimize landscape and visual impacts. Temporary working platforms and access routes to approach unstable boulders will be	- During the Design Stage - Throughout the Construction Stage - Complete the mitigation	Binnies (SOR), AJCJV and Operational Stage Contractor/WSD

ID in EIA Report	Recommended Mitigation Measure in Table 11.5 of the approved EIA report	Implementation Stage	Implementation Details of Mitigation Measures under the Contract	Timing for Implementation	Agent for Implementation, maintenance and management
	best planting matrix with native species will be established, with the aim of resembling the existing vegetation. (Clause no. 2.11 (ii) of the EP)		planned to avoid existing trees during slope stabilisation activities. Wire mesh covering the rock face will be installed with openings around existing trees to ensure their preservation. Further details of the landscape and visual mitigation measures for slope mitigation works are provided in Section 3.4 of this LVMP. To reinstate vegetation lost or disturbed by the slope mitigation works, hydroseeding with selected grass and shrub species will be implemented. The hydroseeding areas and plant matrix are specified in Appendix E. Regular monitoring and appropriate maintenance will be carried out over a 12-month establishment period to ensure successful vegetation recovery.	measures within 1 month of completion of the slope mitigation works and maintained throughout the operation stage	

ID in EIA Report	Recommended Mitigation Measure in Table 11.5 of the approved EIA report	Implementation Stage	Implementation Details of Mitigation Measures under the Contract	Timing for Implementation	Agent for Implementation, maintenance and management
MM7	Dredging works for the installation of intake structures and outfall diffusers should be minimized to avoid or reduce any potential environmental impacts to as low as reasonably practicable (ALARP). The intake and outfall structures (e.g. intake openings and diffuser heads) will be prefabricated and transferred to site for installation. (Clause no. 2.11 (iii) of the EP)	Construction Stage	The Contractor will follow the requirement accordingly.	During the construction of the marine works	AJCJV
MM8	All night-time lighting will be reduced to a practical minimum both in terms of number of units and lux level and will be hooded and directional. (Clause no. 2.11 (iii) of the EP)	Construction Stage, Operational Stage	Please refer to Section 3.4 for lighting arrangement in construction and operational stages.	Throughout the construction stage and maintained throughout the operation stage	AJCJV, and Operational Stage Contractor/WSD

As recommended in the ERR, the following suggestions will be implemented by the Main Contractor:

- to minimise disturbances to vegetation during the construction works and shall be responsible to reinstate the vegetation in all temporary disturbed areas due to construction works to its original condition;
- Where appropriate, hydroseeding shall be applied to restore the green appearance on site;
- For any vegetation reinstatement or hydroseeding works, the appointed landscape contractor shall carry out regular monitoring and appropriate maintenance (e.g. replacement for unsatisfactory plant specimens) for a 12-month establishment period;
- The actual extent of rock slope works will be determined by the Supervising Officer during construction stage

3. AESTHETIC LANDSCAPE AND ARCHITECTURAL TREATMENT FOR ABOVE GROUND STRUCTURES

3.1. MINIMIZATION OF CONSTRUCTION AREA AND AREA FOR TEMPORARY ABOVE GROUND STRUCTURES (MM1)

The construction site is limited to the contract area allowed in the EP. The dimension of the DPTKO is around 500m long and 180m wide.

3.2. MINIMIZATION OF ABOVE GROUND STRUCTURES (MM2)

The site for the desalination plant is essentially a linear site and is oriented North West – South East along the longer side (Appendix A).

The design adopts a fragmented building layout that responds to the existing topography and surrounding natural landscape. Landscape buffering measures are incorporated to soften the interface between built structures and the natural environment, while building heights are minimised to reduce visual prominence. With these design strategies, the residual landscape and visual impacts are considered acceptable, notwithstanding the non-uniform setback arrangement. The proposed structures do not exceed 35 m above future ground level. The majority of the buildings are one- to two-storey structures accommodating process facilities and building services. The Administration Building is the only exception, comprising five storeys with an approximate height of 33 m. The layout plan and sectional elevations of the DPTKO are presented in Appendix D.

Heights of all buildings do not exceed 35m above the future ground level. The roof level over the lift machine room of the Administration Building, the highest building for DPTKO, is +39.975mPD, about 33m above the ground level of +6.65mPD.

The entire development contains two types of buildings – desalination process plants and ancillary buildings. Following the flow of operational layout, the desalination process plant is separated into 4 treatment zones, namely Intake & Outfall Zone (Combined Shaft), Pre-treatment Zone (ActiDAFF), Reverse Osmosis Processing Zone (Reverse Osmosis Building) and Post-Treatment Zone (Post-Treatment Building). They span from southeast seashore toward the northwest side of the site. Processed water will be gone through the final treatment process in the Product Water Storage Tank before fed to the TKO fresh water primary service reservoir.

The elongated site is enveloped by the richly vegetated Tin Ha Shan on the east and faces the sea (Tai Miu Wan) on the southeast. To integrate, blend, and connect/align the design with these surrounding natural environments, DPTKO is divided into 15 building blocks, dispersed around the site to avoid putting a large, single, disproportionate building mass on the site.

3.3. AESTHETIC LANDSCAPE AND ARCHITECTURAL TREATMENT FOR ABOVE GROUND STRUCTURES (MM3)

The aesthetic landscape and architectural treatment of the site are designed to respond to occupational, recreational, and travelling sensitive receivers including the residents in the nearby Tseung Kwan O residential developments. The site has a high proportion of soft landscape (including at-grade greening, roof greening, and vertical greening), and numerous landscape areas are provided at various location of the site. The use of local species for both ornamental and boundary buffer facilitate the attainment of not less than 30% of landscape coverage areas to be planted with local plant species. These soft landscape designs provide a pleasant visual environment for the neighbouring communities is to create a successful destination with attractive external environment for the enjoyment of future visitors/ users. The soft landscape design of the DPTKO is shown in the **Appendix E**.

The key aesthetic landscape (soft landscape) includes the following;

1. Green Roofs
2. Roadside Planting
3. Vertical Greening
4. Screening planting along the site
4. Landscape Areas

3.3.1. GREEN ROOF

Six nos. of buildings, namely, Administration Building, Chemical Building, Reverse Osmosis & Electrical Building, Post-treatment Building, On-site Chlorine Generation System Building and CO2 Tanks Area, and Workshop are designed with green roof as showed in **Appendix E**. Groundcover will be the main vegetation provided in green roofs, the planting schedule and the proposed planting pattern for green roofs showed in **Appendix E**. The idea of the soft landscape design is to provide an extensive greening with low maintenance. The avoidance of tall shrubs and trees, especially near the PV panels which is situated in building Reverse Osmosis and Electrical Building are the concern not to block the normal operation of the PV panels.

3.3.2. ROADSIDE PLANTING

Apart from the undisturbed slopes in the periphery, the design incorporates roadside planting verges for ornamental trees, shrubs and groundcovers along the internal vehicular road. This will help provide shade while enhancing the visual amenity to the road users for visitors to the site. The proposed planting location and planting schedule are shown in **Appendix E**.

3.3.3. VERTICAL GREENING

7 no. of building, namely, Administration Building, Reverse Osmosis Building, Main Electrical and Chiller Plant Building, ACTIDAFF, Product Waters Storage Tank and Post-treatment Building and Combined Shaft Building are designed with vertical greening. Due to the nature of the industrial site, features of climbers on a vertical fence of 1.5m/ 3.5m high are proposed along its east and west boundary. Along the northern edge abut to WSD reserve, 2.5m high wire mesh fence with vertical green is proposed. A 3.5m high fence wall with vertical green is also proposed to the west of the Site. Stainless steel wire and rope will be installed on wall and will act as the training system for the proposed climbing plant. The proposed planting location and species list are shown in **Appendix E**.

3.3.4. SCREENING PLANTING ALONG THE SITE

A 1.5m setback of fence at the main entrance is provided. In this setback zone, low shrubs and groundcover at a wavy pattern (**Appendix E**) is also provided to enhance the first impression of this particular Contract.

The establishment of functional tree belts to ameliorate external environmental effects such as noise, dust and unpleasant views is important consideration for this site – since it will be surrounded by roads with industrial heavy vehicles.

In addition to the aesthetic considerations the proposed trees, shrubs and groundcover planting will perform a number of functional roles. This will also provide a physical barrier between the hillside environment outside the site boundary and the areas inside the grounds of the facility, particular those adjacent to the main building blocks.

The plantation of heavy standard trees is extensively proposed on site as shown **Appendix E**. This will realize multiple environmental benefits including the provision of shade. Apart from the physical screening, the green buffer also functions as a noise barrier psychologically.

3.3.5. LANDSCAPE AREAS

Numerous landscape areas are provided at various locations such as, Main Entrance, Drop-off Plaza, Main Plaza, Landscape Plaza, Rain Garden, Courtyard area in Administration Building. Landscape designs at these locations are showed in **Appendix E**.

3.3.6. AESTHETIC TREATMENT OF ALL STRUCTURES

The siting and configuration of the DPTKO is designed to achieve a coherent suburban development consistent with the planning vision for TKO, and to create a compatible visual identity with the surrounding especially the adjacent Country Park (Clear Water Bay). The visual identity will focus on vigour and liveliness of TKO by identifying a family of façade materials, visual permeability at waterfront, matching of colour schemes, and fenestration control. The intervention of this contract activates the neighbourhood, inviting people to appreciate the built environment in the suburban district.

The architectural design theme is a linear interpretation of water wave in macroscopical scale, which enhance/blend in with the surrounding environment and promote the green image of DPTKO. As “water” is the essence of the desalination plant, the character of water will be expressed throughout the design. The proposed construction materials and surface finishes will enhance/ blend in with the surrounding environment.

The key aesthetic treatment (hard landscape) includes the following;

1. Fairface concrete finishing for building structures;
2. Prefabricated fairface concrete façade cladding for building structures;
3. Paving materials of grey-tone colors in random mix as main floor finishes;
4. Permeable perimeter fence;
5. Architectural feature fins

3.3.7. FAIRFACE FINISHING

The buildings of DPTKO primarily use reinforced concrete with fairface concrete finish. The roofs are green or paved with light-colour materials and installed with solar panels. For the Administration Building, full-height glazing is designed to face north to maximise and diffuse natural light.

External façade deliberately uses fairface concrete as finish. The light grey colour of fairface concrete is a mixture of the natural colour of its ingredients, including aggregates, sand and cement. It is a neutral colour that blend in with other building materials and natural vegetation superbly. Architects world-wide are fond of using fairface concrete, to create creative identity to their buildings. With the combination of fairface concrete softened by vertical greening, the buildings blend into the surroundings, minimising the visual impact to both the neighbourhood and building users.

Some of the water storage tank and ancillary buildings will be appeared in traditional on-site cast fairfaced concrete façade. To enrich the façade and reduce the dullness along the site, texture paint finish is introduced to the buildings to echo with the rhythmic pattern for the DfMA façade building.

3.3.8. PREFABRICATED FAIRFACE CONCRETE FAÇADE CLADDING

Prefabricated fairface concrete façade cladding through DfMA system would be adopted for five buildings: ActiDAFF (a building in Pre-treatment Zone), Reverse Osmosis Building & Electrical Building, Post-Treatment Building, On-Site Chlorine Generation System Building and Product Water Storage Tank & Electrical Building. Typical building elevation with prefabricated fairface concrete

cladding and colors selected for the facade panels are shown in **Appendix F**. Arrangement of DfMA façade on these buildings is shown in **Appendix F**.

3.3.9. PAVING MATERIALS

Paving materials (mainly Paving Blocks) shall be hard wearing, durable and of low maintenance. Concrete paver in grey tone (dark grey, light grey, and brown) mix in a random manner will be employed as the main floor finishes for the pavement, the material schedule and paving module plan are as shown in **Appendix F**.

3.3.10. PERMEABLE PERIMETER FENCE

Two area of the fence will adopt permeable perimeter fence to capture sea breeze, the linear arrangement of the building blocks creates “cooling corridors” in the complex by facilitating air flow and maximising natural breezes during summer. This corridor cooling effect helps create more effective cross ventilations and avoid heat accumulation in the summer days. The design details are shown in **Appendix F**.

3.3.11. ARCHITECTURAL FEATURE FINS

Architectural feature fins with blue color tone at ActiDAFF Building Shades of blue color tones were adopted along the visitors’ route. The selected colors will be applied to water pipes, GRP covers and architectural fins, to enrich the grey color of the fairface concrete. Most of the architectural fins articulated to form a wavy form in representing the relationship of the desalination plant and the sea. The rendering of feature fins is shown in **Appendix F**.

3.4. SLOPE MITIGATION WORKS (MM6)

The *Detailed Design Plan Slope Mitigation Works* submitted under EP Condition 2.8 have recommended protection/ mitigation measures to be implemented on site during the construction stage of this Project. All recommended protection/ mitigation measures shall be fully and properly implemented. No site clearance works for slope mitigation works of this Project shall be allowed prior to the completion of such protection/ mitigation works on site. The key slope mitigation measures are summarised below and present in **Appendix H**:

Flexible Barrier

The flexible barriers will be located away from the slope toe of the Clear Water Bay Country Park (CWBCP). All above-ground elements of the flexible barrier are all located outside the CWBCP. Inclined underground anchors, installed 3-4m into rock, are required and may extend into CWBCP boundary. The maximum length of the underground anchors shall be 15m. No ecological impact on plant species of conservation importance and trees anticipated as inclined anchors would be installed into bedrock situated 3-4m below the ground level.

Rock Slope Stabilisation/ Improvement Works

Rock stabilisation works will be adjusted to ensure that no tree will be felled, and no plant species of conservation importance are affected. The anchorage for the temporary working platform and access routes will be designed to avoid the plant species of conservation importance.

Slope mitigation works have been adjusted to suit the existing slope conditions, including 180m² of wire mesh, 37 nos. of rock dowels, 5 nos. of buttress and flexible barrier along the slope toe. To reinstate vegetation loss and disturbance resulting from slope stabilisation works, hydroseeding and planting of grasses and shrub seedlings undertaken at the flexible barriers which will locate at the ground level adjacent to the existing slope toe. Regular monitoring and appropriate maintenance works to be carried out for a 12-month establishment period to ensure successful vegetation recovery, green effect and diversity.

As stated in the detailed design plan for the slope mitigation works, the design of the buttress wall and the requirement for tree rings were to be confirmed following rock mapping and assessment of the specific site conditions. Upon completion of the rock mapping and site surveys, it has been verified that the proposed buttress walls are aligned with sufficient spatial separation from all existing trees. This clearance ensures that tree roots, natural growth, and trunk movement will not interfere with, or impose any load on, the wall structure.

Tree rings are normally required when structural elements are located close to trees and may encroach upon the root zone or trunk. As the buttress walls have been intentionally designed with adequate spatial separation with the existing trees, no physical conflict between the existing trees and buttress walls is expected. The protective function typically provided by tree rings is therefore inherently achieved through the spatial separation, and additional tree rings would not offer further benefit.

The adopted design provides both structural safety and protection of existing trees without the need of tree rings. In addition, stone facing has been applied to the buttress walls to reinstate the natural appearance of the slope, and the wire mesh on the rock face has been detailed with openings at tree locations to avoid obstruction.

Boulder Removal/ Break-off

There are 6 nos. of unstable boulders will be removed and 4 nos. of boulders to be break-off. A temporary working platform and a minimum access clearance of 600 mm around each boulder will be provided for the proposed boulder removal/break-off works. To avoid direct conflict between the boulder removal and nearby plant species of conservation importance, protection zones/ works exclusion zones will be established at least 1.5 m radius from the identified plant species of conservation importance to preserve them on site.

The protection zones/ works exclusion zones will be established prior to site clearance and throughout the construction period to separate the identified protected plant individuals from the works.

The temporary working platform and temporary access will be designed to avoid anchorage on the plant species of conservation importance.

Detailed design of the slope mitigation measures at Clear Water Bay Country Park could be referred to Appendix H and *Detailed Design Plan for Slope Mitigation Works*.

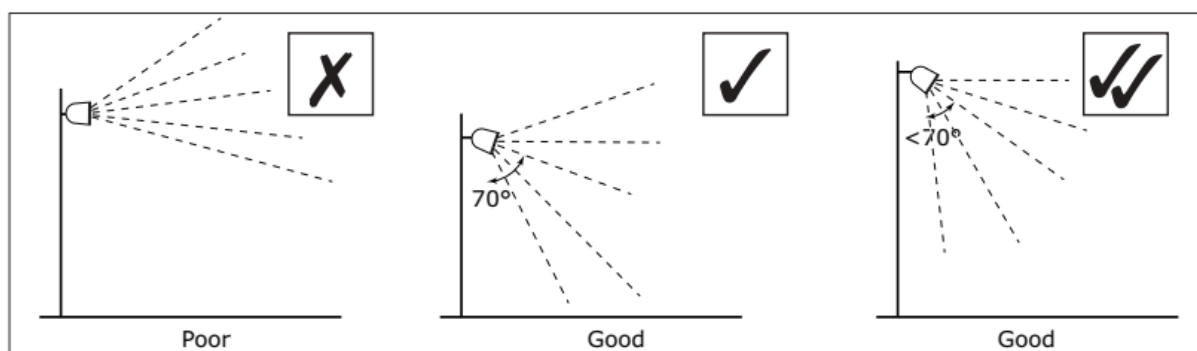
(https://www.tcodesal.hk/images/bv_tko_data/data/file/DDPIssue%209_all_flatten.pdf)

3.5. LIGHTING ARRANGEMENT (MM8)

3.5.1. GENERAL

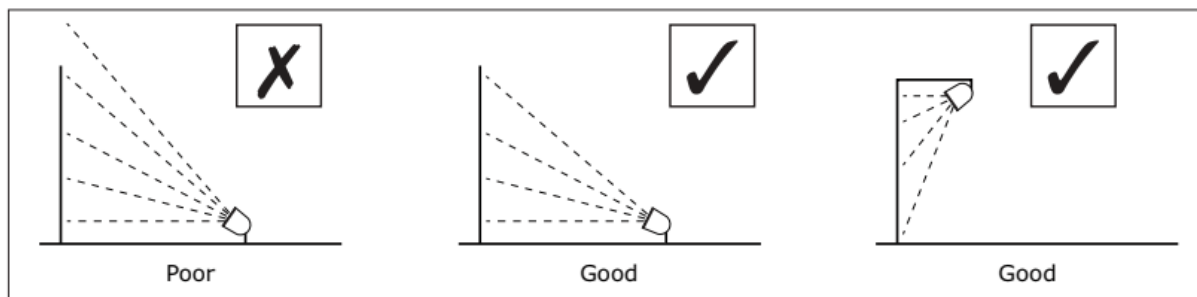
All lights provided in the construction site or the proposed desalination plant should have the following features to minimize light spill outside the contract area:

- The number of lighting should be kept minimum;
- The lux level should be designed just sufficient for safety purpose;
- Point light towards the Site to minimize light spill outside the contract boundary;
- Shielded with hood to prevent sky glow;
- High mounting light will have less spill light and glare;
- Aim light no greater than 70°;



Reference: Guidance Note 01/20 Guidance Notes for the Reduction of Obtrusive Light

- Where light has to be pointed upward, adjust the light direction to ensure no spillage outside the target.



Reference: Guidance Note 01/20 Guidance Notes for the Reduction of Obtrusive Light

3.5.2. GARDEN LIGHTS IN OPERATION PHASE

The outdoor landscape lighting system is crafted with LED bollard lighting along the pathway and spotlight implants to the landscape area will light up the entire garden at night-time that creates a fascinating foreground focal area. Bollard light with low lux level just enough for illuminating the garden will be adopted. The light will be diffused without pointing in one direction. The proposed lighting plan can be found in **Appendix G**.

4. TREE FELLING AND PRESERVATION PROPOSAL (MM4)

As described in Section 1, the project site for the proposed desalination plant was cleared of stockpiled C&D materials and vegetation by CEDD prior to site handover. Tree felling was carried out by CEDD in accordance with its approved tree-felling application (LandsD approval memorandum ref. (30) in LM 2 to DLO/SK 651/SGS/59 Pt.6 dated 23 October 2018), and the site was handed over to WSD in December 2019. Following site handover, tree surveys were conducted in February and August 2020 within the DPTKO area and along the temporary access for boulder removal and stabilisation by break-off works to establish the baseline tree condition. LVMP Revision 7 presented the survey results for the DPTKO area only, while trees surveyed along the temporary access were not included.

The 2020 tree surveys identified that some trees originally proposed for felling under CEDD's approved tree-felling application had not been removed. These trees were subsequently felled by CEDD in 2020. In addition, the site was affected by typhoons and adverse weather conditions in the subsequent period. To confirm the updated baseline tree condition prior to commencement of construction works, further tree surveys were carried out in February, May and June 2022, and February 2023, covering the DPTKO area as well as the tree survey areas for rock slope stabilisation works, flexible barriers, and the temporary access for boulder removal and stabilisation by break-off works. LVMP Revision 8 updated the number of existing trees based on the available tree survey results but was limited to the DPTKO area. LVMP Revision 9 consolidates all tree survey data and presents a complete and up-to-date baseline tree inventory covering all project-related works areas.

The LVMP was updated progressively to reflect changes in site conditions arising from additional tree felling works carried out by CEDD, tree impacts from adverse weather events, and the availability of updated tree survey data prior to commencement of construction works. LVMP Revision 9 was prepared to consolidate all available tree survey results and to ensure that the baseline tree inventory fully covers all project-related works areas, including DPTKO, rock slope stabilisation works, flexible barriers, and temporary access areas. This update was necessary to ensure accuracy, completeness, and compliance with prevailing EIA and LVMP requirements.

According to the tree surveys conducted in February and August 2020, February, May and June 2022, and February 2023, a total of 148 trees were recorded within the study area. Of these, three trees were located within the DPTKO area, while 145 trees were recorded within the tree survey areas for rock slope stabilisation works, flexible barriers, and along the temporary access for boulder removal and stabilisation by break-off works. All 148 trees were originally proposed for retention.

Following completion of the tree surveys, the site was affected by typhoons and adverse weather conditions, resulting in the collapse or loss of nine trees (i.e. T030, T031, T058, T059, T124, T128, T207, T216 and T217). Accordingly, a total of 139 existing trees are proposed for retention. The tree survey results are presented in **Table 4.1** and **Appendix B**, while the tree treatment summary is provided in **Table 4.2**.

Table 4.1 Summary of Tree Survey Results

Scientific Name	Chinese Name	No. of tree(s)
<i>Acacia confusa</i>	台灣相思	6
<i>Celtis sinensis</i>	朴樹	13
<i>Ficus hispida</i>	對葉榕(牛乳樹)	12
<i>Ficus microcarpa</i>	細葉榕	4
<i>Ficus subpisocarpa</i>	筆管榕	5
<i>Ficus variegata</i> var.	青果榕	1
<i>Litsea glutinosa</i>	潺槁樹	1
<i>Macaranga tanarius</i> var.	血桐	66
<i>Mallotus paniculatus</i>	白楸	15
<i>Peltophorum pterocarpum</i>	盾柱木(雙翼豆)	1
<i>Phoenix hanceana</i>	刺葵	2
<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	11
<i>Sterculia lanceolata</i>	假蘋婆	9
<i>Trema tomentosa</i> (Roxb.)	山黃麻	1
<i>Leucaena leucocephala</i>	銀合歡	1
Total nos. of trees		148

Table 4.2 Summary of Proposed Treatment to Existing Trees

Report record	No. of tree(s) to be retained	No. of tree(s) to be transplanted	No. of tree(s) to be removed	No. of tree(s) destroyed by adverse weather	Total nos. of tree(s)
Tree Survey	148	0	0	9	139

5. CONSTRUCTION MITIGATION MEASURES

Located in the public filling area, the site is not visually attractive and looks similar to a construction site. Nevertheless, landscape and visual mitigation measures in construction phase are recommended as below:

5.1. BLENDING IN WITH THE EXISTING LANDSCAPE AND VISUAL

- Construction area and works shall be minimized to prevent affecting nearby landscape environment;
- Area of temporary structures, such as the contractor's office, shall be minimized to a practical minimum and located at less visual prominent locations.
- Decorative hoarding with appropriate colours compatible with the surrounding area shall be erected around all works areas to minimize the visual impacts;
- Avoid potential impact on existing coastline and seashore

5.2. PROVIDING SOFT LANDSCAPING

- Exposed area and soil stockpiles shall be hydroseeded or covered with visually unobtrusive materials/ tarpaulins;
- Green roofs shall be considered on site office where possible;
- Commence landscape planting at locations where construction work has been completed.

5.3. CONSERVING/RECOVERING EXISTING GREENERY

- Existing trees near the Contract Boundary and slope mitigation work areas, and retained trees within site boundary shall be carefully protected. Detailed Tree Protection Specification shall be followed;
- The Contractor shall include a detailed working method statement for the protection of trees prior to conducting any works next to all retained trees;
- Trees unavoidably affected by the works shall be transplanted where practicable. Where possible, trees should be transplanted direct to permanent locations rather than temporary holding nurseries.

5.4. IMPLEMENTING GOOD SITE PRACTICES/ OTHER RECOMMENDED MITIGATION MEASURES

- Sufficient drainage system shall be provided to control run-off from entering the sea;
- All night-time lighting will be reduced to a practical minimum both in terms of number of units and lux level and will be hooded and directional (See **Sec.3.4**).

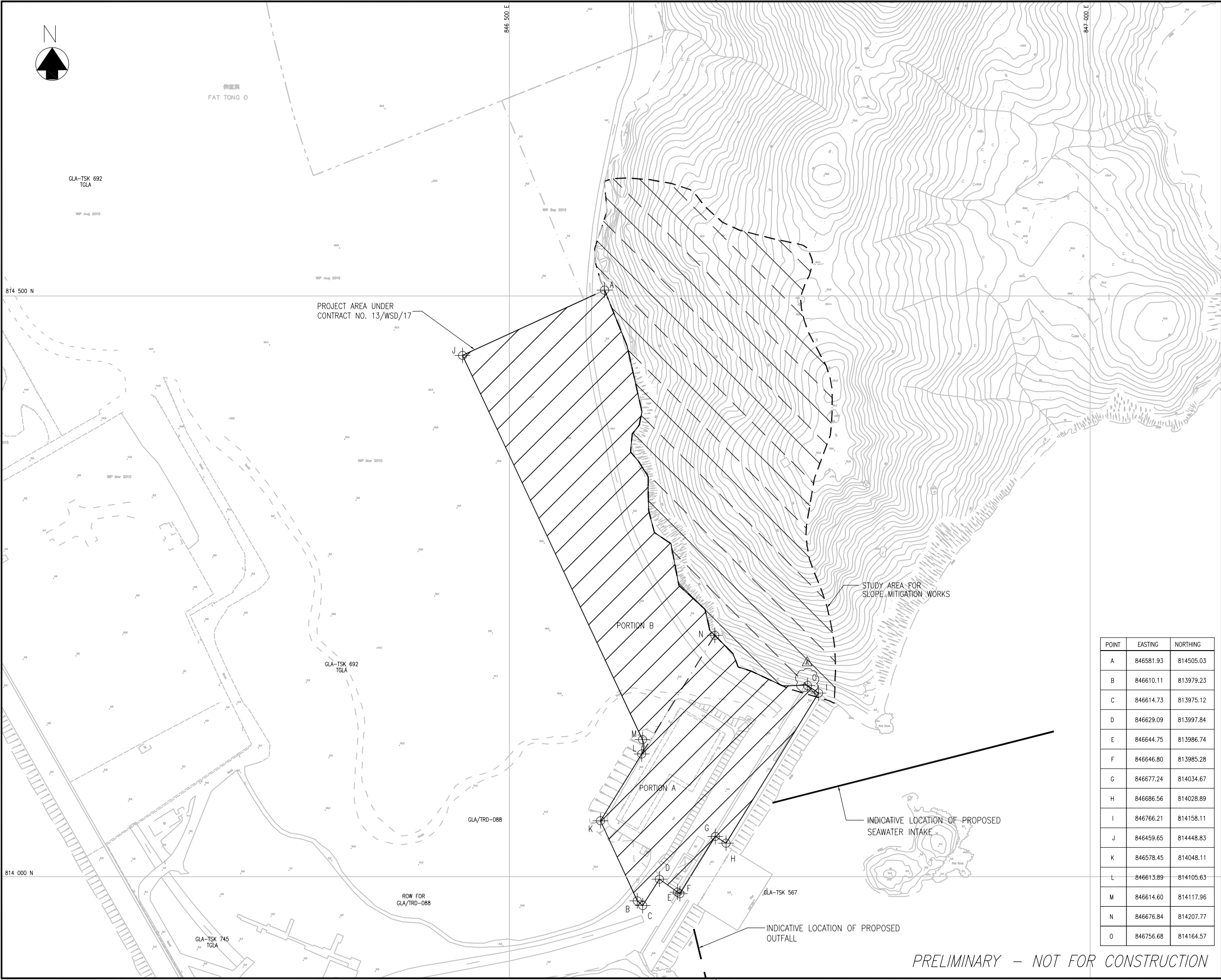
5.5. CONDUCTING REGULAR SITE AUDIT

- Site inspection shall be undertaken regularly to ensure mitigation measures are being effectively implemented;
- Coordinate implementation programme with concurrent contract, if any, to minimize potential cumulative impacts and where possible reduce the period of disturbance to visual context.

6. CONCLUSION

The landscape and visual mitigation measures to be implemented under Contract No. 13/WSD/17 have complied with the requirements and recommendations contained in the EIA Report (Register No. AEIAR-192/2015), the EP, the FEP and ERR. All measures recommended in this LVMP will be fully and properly implemented and maintained for the Contract.

Appendix A – Layout Plan of Works Area under Contract No. 13/WSD/17



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LEGEND:

- BOUNDARY OF SENT LANDFILL EXTENSION
- PROJECT AREA UNDER CONTRACT NO. 13/WSD/17
- STUDY AREA FOR SLOPE MITIGATION WORKS

NOTE:

TEMPORARY WORKS AREA 1 WILL BE HANDED OVER AT +6 MPD WITH A TOLERANCE OF ±500mm.

C	26/03	UPDATE NOTES			YLC
B	10/03	UPDATE NOTES			YLC
A	07/18	UPDATE COORDINATES			YLC
Revision	Date	Description			Initial
	Designed	Checked	Drawn	Checked	
Initial	YLC	CKH	SZ	WLS	
Date	02/18	02/18	02/18	02/18	

Approved

Agreement No.
CE 8/2015 (WS)

Contract No.
13/WSD/17

Contract Title
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT

Drawing Title
SITE HANDOVER WORKS AREAS

Drawing No.	Revision
190495/K/TEND/10/0003	C

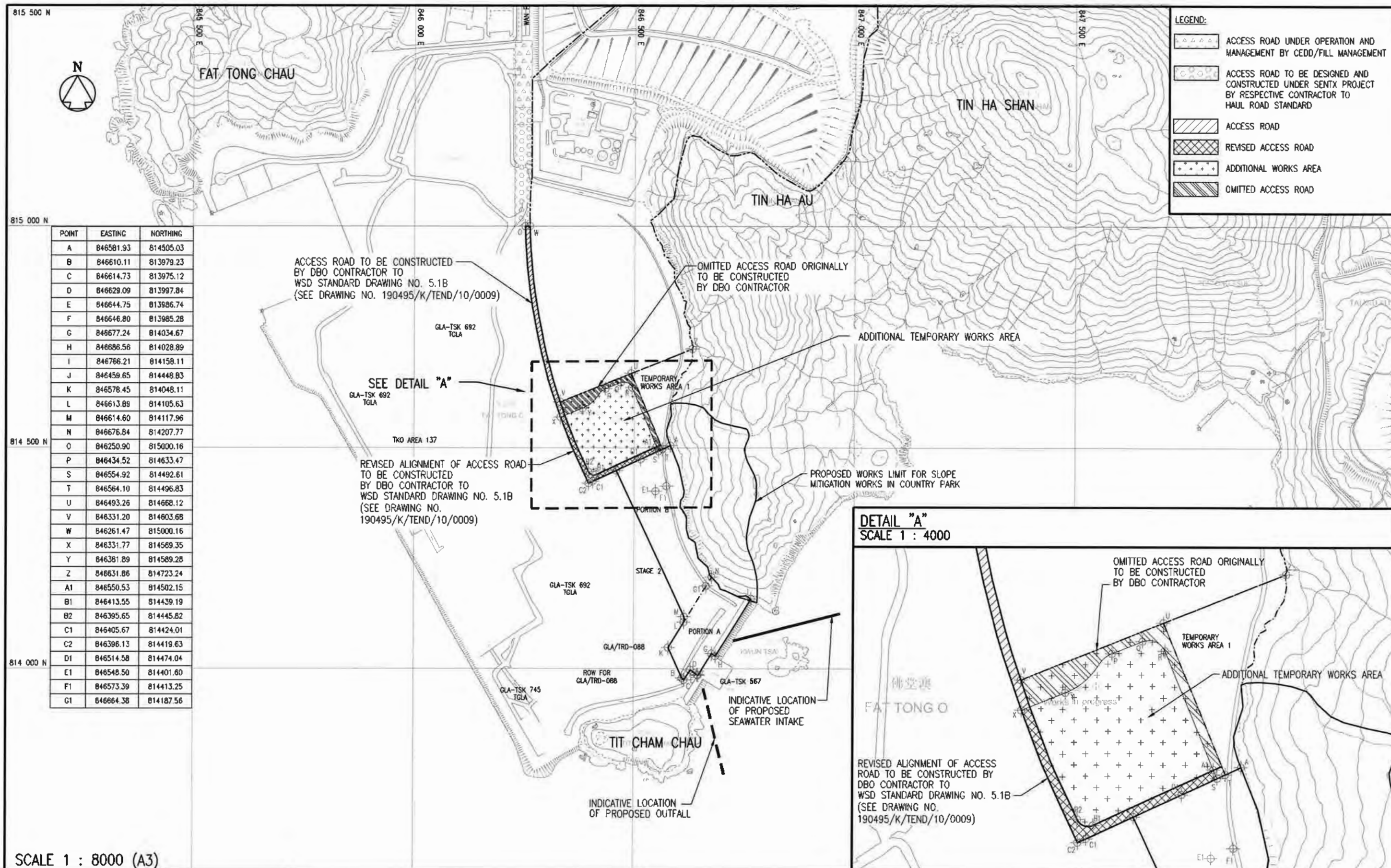
Scale
A1 1 : 1500
A3 1 : 3000

水務署
Water Supplies
Department

BINNIES HONG KONG LIMITED
賓尼士工程顧問有限公司

POINT	EASTING	NORTHING
A	846581.93	814505.03
B	846610.11	813979.23
C	846614.73	813975.12
D	846629.09	813997.84
E	846644.75	813986.74
F	846646.80	813985.28
G	846677.24	814034.67
H	846686.56	814028.89
I	846766.21	814158.11
J	846459.65	814448.83
K	846578.45	814048.11
L	846613.89	814105.63
M	846614.60	814117.96
N	846676.84	814207.77
O	846756.68	814164.57

PRELIMINARY – NOT FOR CONSTRUCTION



SCALE 1 : 8000 (A3)



BLACK & VEATCH HONG KONG LIMITED
博威工程顧問有限公司

CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

REVISED ACCESS ROAD AND
ADDITIONAL WORKS AREA

Date:

05/12/2019

Drafted by

SCT

Outgoing letter Ref. No.:

Checked by

Reference Drawing:

SW

Sketch No.:

SK/190495B/C13/48-05001

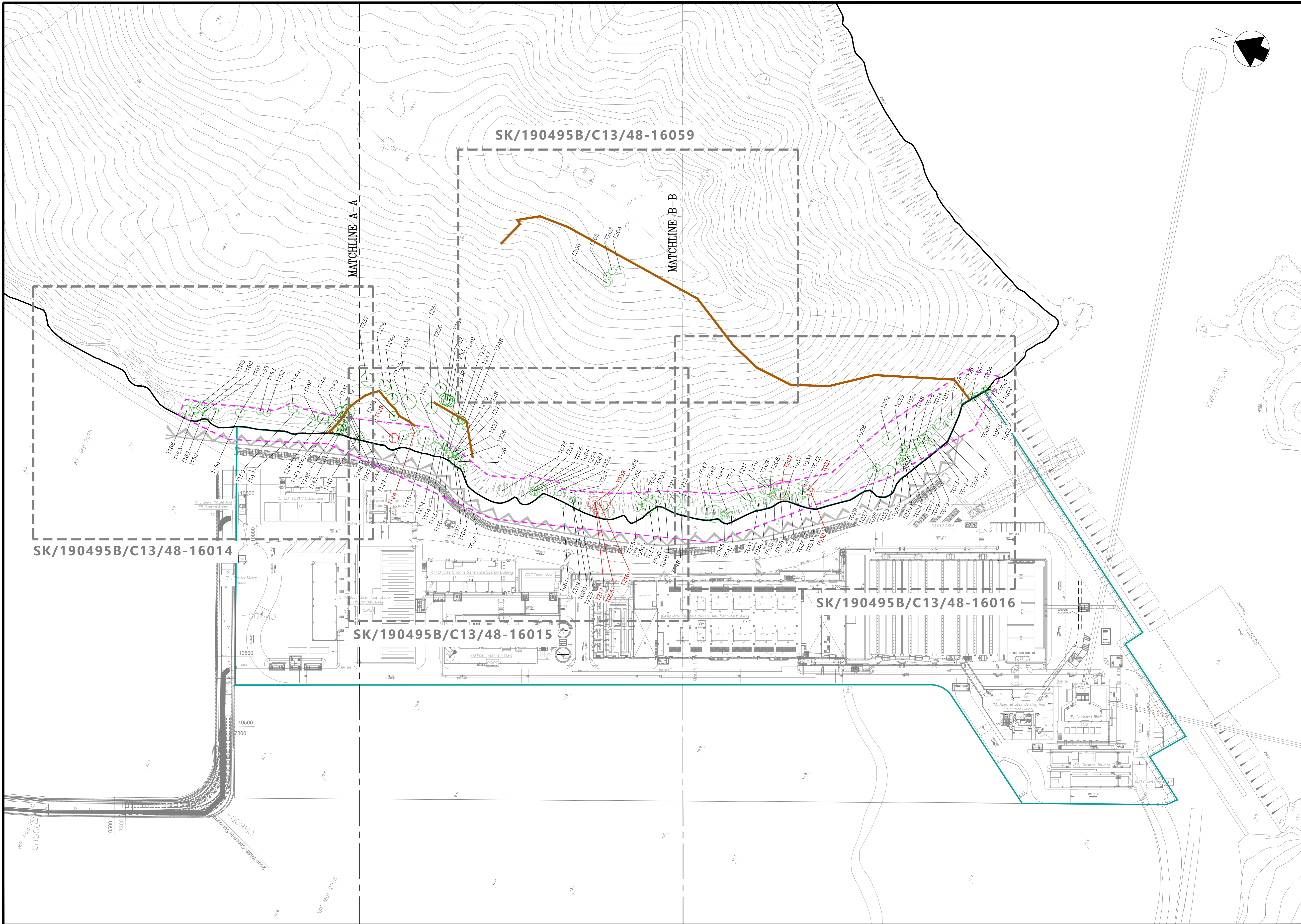
Rev.:

0

Approved by

RW

Appendix B – Tree Survey Result



- MAP NOS. T12SW
- LEGEND:
- EXISTING TREES TO BE RETAINED
 - CLEAR WATER BAY COUNTRY PARK
 - PROPOSED FLEXIBLE BARRIER
 - SITE BOUNDARY
 - OPEN CHANNEL
 - TREE DESTROYED DUE TO ADVERSE WEATHER
 - TREE SURVEY FOR ROCK SLOPE STABILISATION WORKS
 - TREE SURVEY ALONG TEMPORARY ACCESS FOR BOULDER REMOVAL/STABILISATION WORKS

N.T.S.



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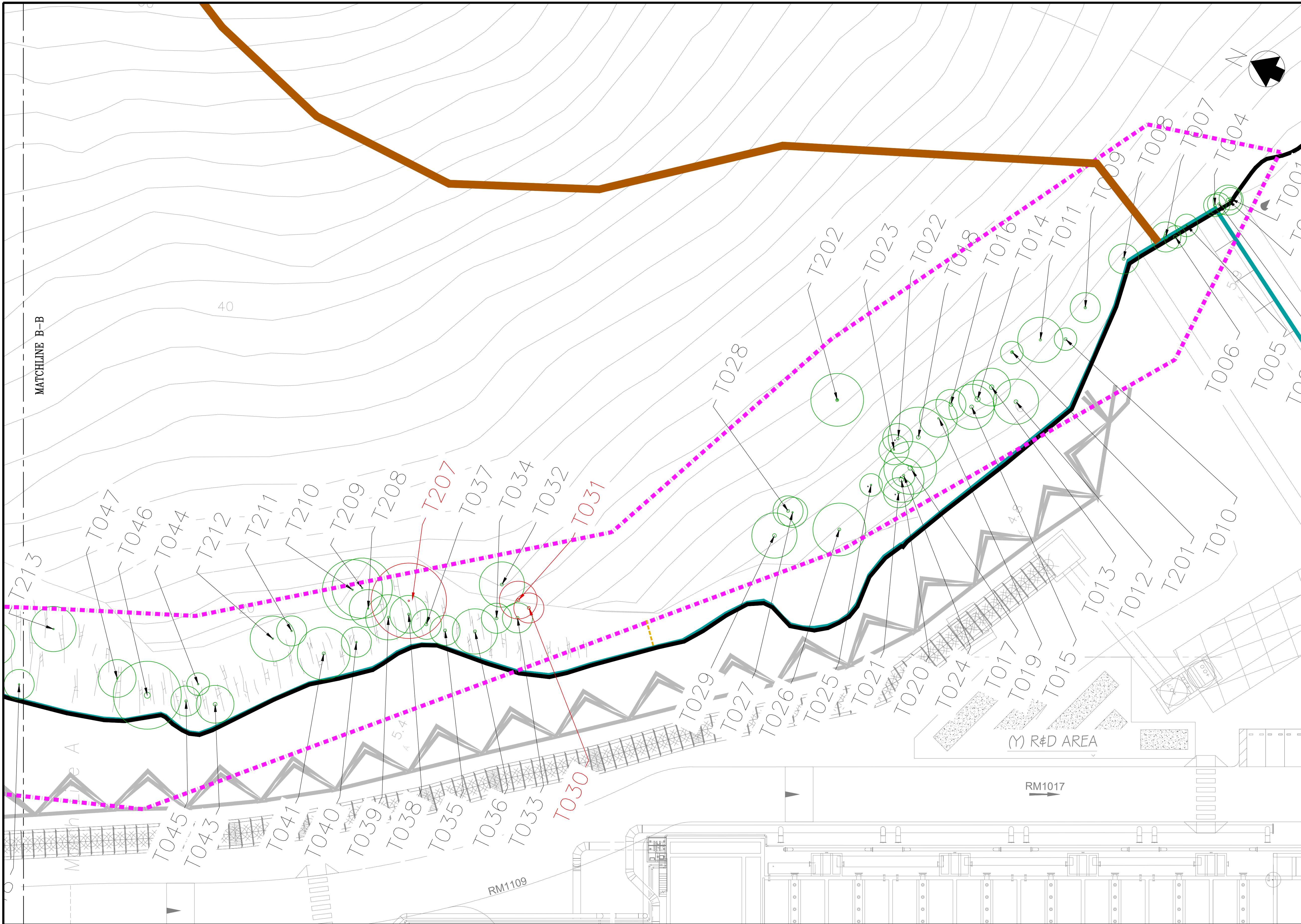
CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

APPENDIX D –
TREE SURVEY PLAN
(SHEET 1 OF 5)

Date:	2026/01/07
Outgoing letter Ref. No.:	BY E-MAIL
Reference Drawing:	
Sketch No.:	SK/190495B/C13/48-16013

Drafted by	CL
Checked by	IY
Approved by	MP



- MAP NOS. T12SW
- LEGEND:
- EXISTING TREES TO BE RETAINED
 - CLEAR WATER BAY COUNTRY PARK
 - PROPOSED FLEXIBLE BARRIER
 - SITE BOUNDARY
 - OPEN CHANNEL
 - TREE DESTROYED DUE TO ADVERSE WEATHER
 - TREE SURVEY FOR ROCK SLOPE STABILISATION WORKS
 - TREE SURVEY ALONG TEMPORARY ACCESS FOR BOULDER REMOVAL/STABILISATION WORKS

Scale: A1 1 : 250
A3 1 : 500



BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

APPENDIX D –
TREE SURVEY PLAN
(SHEET 4 OF 5)

Date: 2026/01/07

Drafted by
CL

Outgoing letter Ref. No.: –

Checked by
IY

Reference Drawing:

Approved by
MP

Sketch No.:
SK/190495B/C13/48-16016

Rev.:
C



MAP NOS. T12SW

LEGEND:

-  EXISTING TREES TO BE RETAINED
-  CLEAR WATER BAY COUNTRY PARK
-  PROPOSED FLEXIBLE BARRIER
-  SITE BOUNDARY
-  OPEN CHANNEL
-  TREE DESTROYED DUE TO ADVERSE WEATHER
-  TREE SURVEY FOR ROCK SLOPE STABILISATION WORKS
-  TREE SURVEY ALONG TEMPORARY ACCESS FOR BOULDER REMOVAL/STABILISATION WORKS

Scale: A1 1 : 250
A3 1 : 500



BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

APPENDIX D –
TREE SURVEY PLAN
(SHEET 5 OF 5)

Date: 2026/01/07

Outgoing letter Ref. No.: –

Reference Drawing:

Sketch No.: SK/190495B/C13/48-16059

Rev.: –

Drafted by
CL

Checked by
IY

Approved by
MP

Tree Survey Schedule

Project Title: Contract No. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Date of Survey: 2020/0210. 2020/02/19, 2020/08/20, 2022/02/15, 2022/05/03, 2022/06/02

Tree No.	Species		Measurement			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting		Conservation status	Recommendation	Department to provide expert advice to LandsD		Additional Remarks
	Scientific name	Chinese name	height (m)	DBH (mm)	crown spread	(high/medium/low)	(good/average/poor)			(high/medium/low)	Remarks		(retain/transplant/fell)			
T001	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	240	3	Medium	Average	Average	Average	Low	Near structure	N/A	Retain	AFCD		-
T002	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	230	4	Medium	Average	Average	Average	Low	Near structure	N/A	Retain	AFCD		-
T003	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	4	140	3	Low	Poor	Average	Average	Low	Poor form	N/A	Retain	AFCD		Bark crack
T004	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	3	165	3	Low	Poor	Average	Average	Low	Poor form	N/A	Retain	AFCD		Leaning
T005	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	3	130	3	Low	Poor	Average	Average	Low	Poor form	N/A	Retain	AFCD		Leaning
T006	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	4	140	3	Medium	Average	Average	Average	Medium	-	N/A	Retain	AFCD		-
T007	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	200	4	Medium	Average	Average	Average	Medium	-	N/A	Retain	AFCD		-
T008	<i>Celtis sinensis</i>	朴樹	7	170	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T009	<i>Sterculia lanceolata</i>	假蘋婆	5	130	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T010	<i>Phoenix hanceana</i>	刺葵	4	240	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T011	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	150	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T012	<i>Celtis sinensis</i>	朴樹	8	240	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Cross branches
T013	<i>Ficus hispida</i>	對葉榕(牛乳樹)	5	289	5	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Multiple trunks
T014	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	180	5	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T015	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	191	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunks
T016	<i>Phoenix hanceana</i>	刺葵	4	285	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T017	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	150	5	Medium	Average	Poor	Average	Low	On slope	N/A	Retain	AFCD		-
T018	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	300	8	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Broken branch, Exposed dead wood on trunk
T019	<i>Celtis sinensis</i>	朴樹	9	297	7	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunks
T020	<i>Celtis sinensis</i>	朴樹	9	250	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T021	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	140	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Broken branch
T022	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	170	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T023	<i>Litsea glutinosa</i>	潺槁樹	5	140	4	Medium	Average	Poor	Average	Low	On slope	N/A	Retain	AFCD		-
T024	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	130	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T025	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	120	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T026	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	9	240	7	Medium	Average	Poor	Poor	Low	On slope	N/A	Retain	AFCD		Codominant branches, dead tree
T027	<i>Celtis sinensis</i>	朴樹	6	140	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T028	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	180	4	Medium	Average	Poor	Average	Low	On slope	N/A	Retain	AFCD		-
T029	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	220	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T030	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	4	95	4	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Destroyed by adverse weather
T031	<i>Celtis sinensis</i>	朴樹	7	140	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Destroyed by adverse weather
T032	<i>Ficus subpisocarpa</i>	筆管榕	7	230	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T033	<i>Sterculia lanceolata</i>	假蘋婆	6	130	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T034	<i>Ficus subpisocarpa</i>	筆管榕	6	120	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T035	<i>Sterculia lanceolata</i>	假蘋婆	5	150	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches

Tree Survey Schedule

Project Title: Contract No. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Date of Survey: 2020/0210. 2020/02/19, 2020/08/20, 2022/02/15, 2022/05/03, 2022/06/02

Tree No.	Species		Measurement			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting		Conservation status	Recommendation	Department to provide expert advice to LandsD		Additional Remarks
	Scientific name	Chinese name	height (m)	DBH (mm)	crown spread	(high/medium/low)	(good/average/poor)			(high/medium/low)	Remarks		(retain/transplant/fell)			
T036	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	180	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T037	<i>Ficus hispida</i>	對葉榕(牛乳樹)	7	140	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches
T038	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	155	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T039	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	160	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T040	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	130	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T041	<i>Acacia confusa</i>	台灣相思	10	150	7	Medium	Poor	Average	Poor	Low	On slope	N/A	Retain	AFCD		Root-plate movement
T043	<i>Ficus subpisocarpa</i>	筆管榕	5	200	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T044	<i>Ficus hispida</i>	對葉榕(牛乳樹)	5	163	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunks
T045	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	150	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Leaning
T046	<i>Ficus microcarpa</i>	榕樹(細葉榕)	11	420	9	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches
T047	<i>Ficus hispida</i>	對葉榕(牛乳樹)	5	198	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunks
T048	<i>Ficus microcarpa</i>	榕樹(細葉榕)	5	197	4	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Multiple trunks
T049	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	212	5	Medium	Average	Poor	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunks
T050	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	180	5	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Leaning
T051	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	180	7	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T052	<i>Ficus subpisocarpa</i>	筆管榕	8	264	8	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T053	<i>Ficus hispida</i>	對葉榕(牛乳樹)	6	140	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T054	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	160	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches
T055	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	244	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunks
T056	<i>Ficus microcarpa</i>	榕樹(細葉榕)	10	407	9	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Multiple trunks
T058	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	196	4	Low	Poor	Poor	Average	Low	On slope	N/A	Retain	AFCD		Climber Destroyed by adverse weather
T059	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	120	3	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Destroyed by adverse weather
T060	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	149	3	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Leaning
T061	<i>Mallotus paniculatus</i>	白楸	5	130	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	WSD		-
T064	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	135	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T067	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	185	7	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T076	<i>Ficus microcarpa</i>	榕樹(細葉榕)	5	120	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T078	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	160	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T096	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	150	4	Low	Poor	Average	Poor	Low	On slope	N/A	Retain	AFCD		Trunk wound
T104	<i>Sterculia lanceolata</i>	假蘋婆	6	105	4	Medium	Average	Average	Average	Medium	-	N/A	Retain	WSD		-
T106	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	259	7	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Multiple trunks
T107	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	170	4	Low	Poor	Average	Average	Low	On slope	N/A	Retain	AFCD		Leaning
T110	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	198	4	Medium	Poor	Average	Poor	Low	On slope	N/A	Retain	AFCD		Leaning
T113	<i>Sterculia lanceolata</i>	假蘋婆	7	100	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T114	<i>Ficus hispida</i>	對葉榕(牛乳樹)	6	160	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-

Tree Survey Schedule

Project Title: Contract No. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

Date of Survey: 2020/0210. 2020/02/19, 2020/08/20, 2022/02/15, 2022/05/03, 2022/06/02

Tree No.	Species		Measurement			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting		Conservation status	Recommendation	Department to provide expert advice to LandsD		Additional Remarks
	Scientific name	Chinese name	height (m)	DBH (mm)	crown spread	(high/medium/low)		(good/average/poor)		(high/medium/low)	Remarks		(retain/transplant/fell)			
T118	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	9	330	9	Medium	Poor	Average	Poor	Low	On slope	N/A	Retain	AFCD		Root-plate movement
T124	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	140	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Destroyed by adverse weather
T125	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	100	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T127	<i>Ficus hispida</i>	對葉榕(牛乳樹)	7	200	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Bark crack
T128	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	140	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Destroyed by adverse weather
T139	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	9	180	6	Medium	Average	Average	Average	Medium	-	N/A	Retain	AFCD		-
T140	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	100	3	Medium	Average	Average	Average	Medium	-	N/A	Retain	AFCD		-
T141	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	180	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T142	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	230	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Abnormal bark crack
T143	<i>Ficus hispida</i>	對葉榕(牛乳樹)	6	170	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T144	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	240	8	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T145	<i>Ficus hispida</i>	對葉榕(牛乳樹)	5	150	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T147	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	330	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T148	<i>Ficus hispida</i>	對葉榕(牛乳樹)	6	190	4	Low	Poor	Poor	Average	Low	On slope	N/A	Retain	AFCD		Climber, Old termite track
T149	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	260	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T150	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	360	5	Low	Poor	Poor	Poor	Low	-	N/A	Retain	AFCD		Abnormal bark crack, dead branch, exposed dead wood
T152	<i>Sterculia lanceolata</i>	假蘋婆	7	210	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T153	<i>Sterculia lanceolata</i>	假蘋婆	7	280	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Multiple trunks
T155	<i>Mallotus paniculatus</i>	白楸	7	220	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T156	<i>Celtis sinensis</i>	朴樹	4	95	3	Medium	Average	Average	Average	Medium	-	N/A	Retain	AFCD		-
T159	<i>Mallotus paniculatus</i>	白楸	5	95	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T160	<i>Celtis sinensis</i>	朴樹	4	120	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T161	<i>Acacia confusa</i>	台灣相思	12	500	11	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant trunk
T162	<i>Acacia confusa</i>	台灣相思	4	240	1	Low	Poor	Poor	Poor	Low	On slope	N/A	Retain	AFCD		Topped, decay
T163	<i>Acacia confusa</i>	台灣相思	10	170	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Decay
T165	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	210	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T166	<i>Celtis sinensis</i>	朴樹	8	210	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T201	<i>Acacia confusa</i>	台灣相思	4	110	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T202	<i>Peltophorum pterocarpum</i>	盾柱木(雙翼豆)	10	398	7	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T203	<i>Celtis sinensis</i>	朴樹	7	240	7	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T204	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	4	145	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T205	<i>Celtis sinensis</i>	朴樹	7	230	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Climber
T206	<i>Celtis sinensis</i>	朴樹	7	198	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Climber
T207	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	230	10	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Destroyed by adverse weather

Tree Survey Schedule

Project Title: Contract No. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant

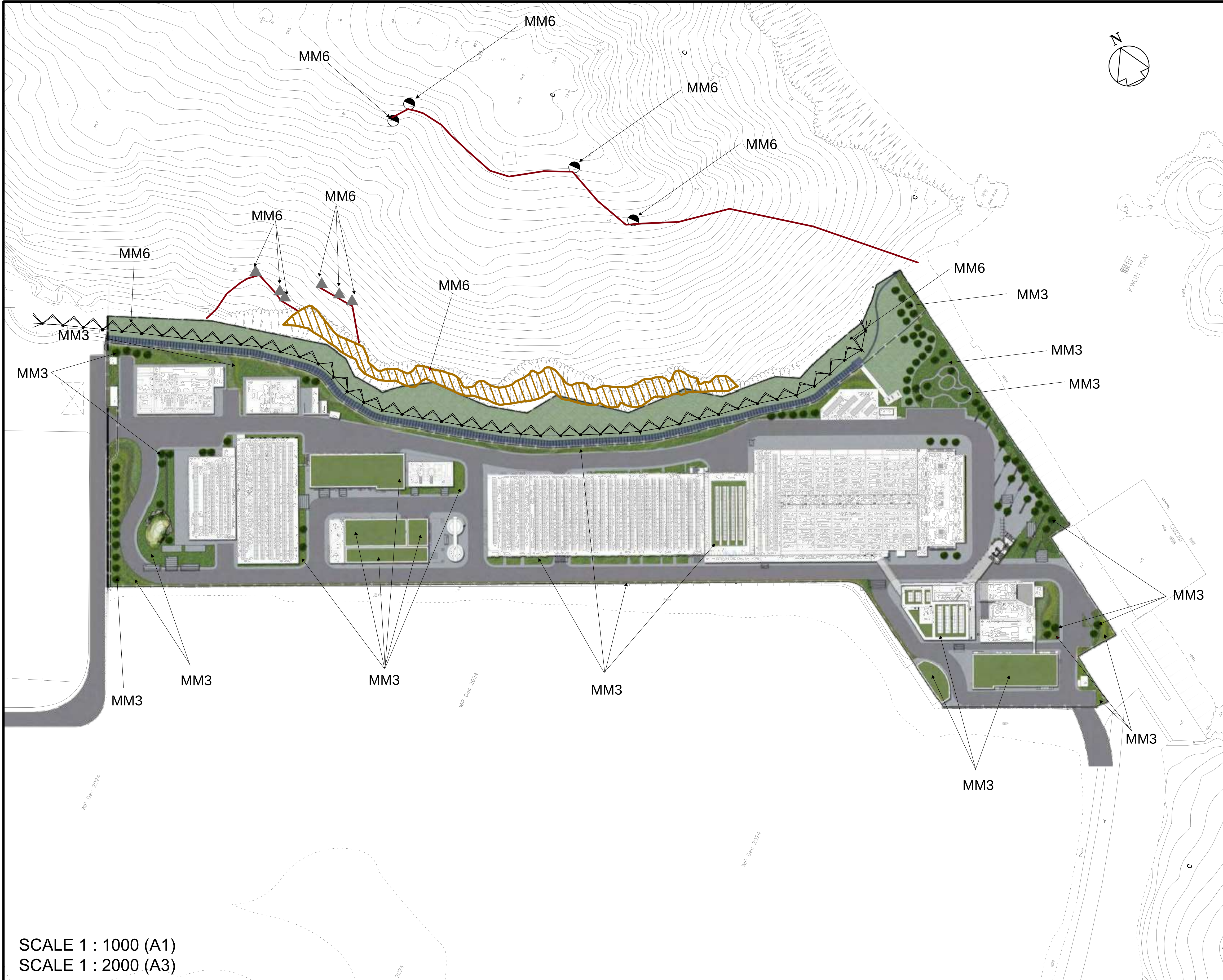
Date of Survey: 2020/0210. 2020/02/19, 2020/08/20, 2022/02/15, 2022/05/03, 2022/06/02

Tree No.	Species		Measurement			Amenity value	Form	Health condition	Structural condition	Suitability for transplanting		Conservation status	Recommendation	Department to provide expert advice to LandsD		Additional Remarks
	Scientific name	Chinese name	height (m)	DBH (mm)	crown spread	(high/medium/low)		(good/average/poor)		(high/medium/low)	Remarks		(retain/transplant/fell)			
T208	<i>Ficus hispida</i>	對葉榕(牛乳樹)	7	190	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T209	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	7	220	8	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches
T210	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	8	225	8	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T211	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	5	110	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T212	<i>Acacia confusa</i>	台灣相思	8	260	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches
T213	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	110	6	Low	Poor	Average	Poor	Low	On slope	N/A	Retain	AFCD		Leaning, exposed dead wood at trunk base
T214	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	5	160	6	Low	Poor	Average	Poor	Low	On slope	N/A	Retain	AFCD		Leaning
T215	<i>Trema tomentosa</i> (Roxb.) H.Hara	山黃麻	5	120	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T216	<i>Ficus subpisocarpa</i>	筆管榕	11	468	12	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Exposed root wound Destroyed by adverse weather
T217	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	7	120	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Wound, dead branch Destroyed by adverse weather
T219	<i>Ficus hispida</i>	對葉榕(牛乳樹)	5	115	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T221	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	6	232	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T222	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	220	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Leaning
T223	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	290	7	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T224	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	130	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T225	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	130	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T226	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	297	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T227	<i>Ficus variegata</i> var. <i>chlorocarpa</i>	青果榕	6	145	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Bark crack, wound
T228	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	258	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T229	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	4	190	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T230	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	9	200	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T231	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	7	320	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T232	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	6	170	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T234	<i>Celtis sinensis</i>	朴樹	8	160	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T235	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	4	140	5	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-

Tree Survey Schedule

Project Title:		Contract No. 13/WSD/17 Design, Build and Operate First Stage of Tseung Kwan O Desalination Plant												Date of Survey: 1 February 2023		
Tree No.	Species		Measurement			Amenity value	Form	Health condition	Structura condition	Suitability for transplanting		Conservation status	Recommendation	Department to provide expert	2m Winthin Construction area	Additional Remarks
T236	<i>Sterculia lanceolata</i>	假蘋婆	6	100	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T237	<i>Mallotus paniculatus</i>	白楸	7	210	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches, climber
T238	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	5	130	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Branch crossed with a undersized tree
T239	<i>Mallotus paniculatus</i>	白楸	8	210	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Climber
T240	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	6	130	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Climber
T241	<i>Macaranga tanarius</i> var. <i>tomentosa</i>	血桐	8	240	6	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Bark crack
T242	<i>Mallotus paniculatus</i>	白楸	6	110	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T243	<i>Sterculia lanceolata</i>	假蘋婆	6	115	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T244	<i>Mallotus paniculatus</i>	白楸	7	120	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T245	<i>Mallotus paniculatus</i>	白楸	6	120	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches, climber
T246	<i>Leucaena leucocephala</i>	銀合歡	6	120	2	Low	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Invasive species
T247	<i>Mallotus paniculatus</i>	白楸	4	95	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T248	<i>Schefflera heptaphylla</i>	鵝掌柴(鴨腳木)	3	145	3	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T249	<i>Mallotus paniculatus</i>	白楸	6	125	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Codominant branches
T250	<i>Mallotus paniculatus</i>	白楸	6	110	4	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T251	<i>Mallotus paniculatus</i>	白楸	6	105	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T252	<i>Mallotus paniculatus</i>	白楸	6	95	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		-
T253	<i>Mallotus paniculatus</i>	白楸	6	100	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Climber
T254	<i>Mallotus paniculatus</i>	白楸	6	115	2	Medium	Average	Average	Average	Low	On slope	N/A	Retain	AFCD		Climber

Appendix C – Implementation of L&V Mitigation Measure (Operational Stage)



Legend:

- | | |
|-------------------------|---|
| Hydroseeding (MM6) | Rock Slope Stabilisation |
| General Planting (MM3) | Temporary Access |
| Green Roof (MM3) | Hydroseeding area |
| Rain Garden (MM3) | Flexible Barrier |
| Trees (MM3) | Boulder Removal |
| Vertical greening (MM3) | Boulder to be in-situ broken off into pieces with all dimensions less than 1m and deposited in stable condition |

Landscape and Visual Mitigation Measures

MM3: (Details given in Appendix D to Appendix G:)
Design principles will be adopted to take into account the surrounding area, particularly Clear Water Bay Country Park behind and the nearby waterfront, with due consideration given to:

- green roofs where practical (ie without equipment on the roof);
- roadside planting;
- aesthetic treatment of all structures;
- screen planting along application site and
- landscape enhancement with amenity planting where practical, including planting along the edge (site boundary) fence with native shrubs where feasible, to reduce their visual impact and blend them into the surrounding landscape.

MM6: (Details given in Appendix H and Detailed Design Plan for Slope Mitigation Works)

Any slope mitigation works necessary to address natural terrain hazards, was minimized to minimize any potential environmental impact to the Country Park, e.g. soil nailing and rock stabilization were aimed to avoid existing trees e.g. should any restoration of vegetation be necessary, the best planting matrix with native species was established, with the aim of resembling the existing vegetation.

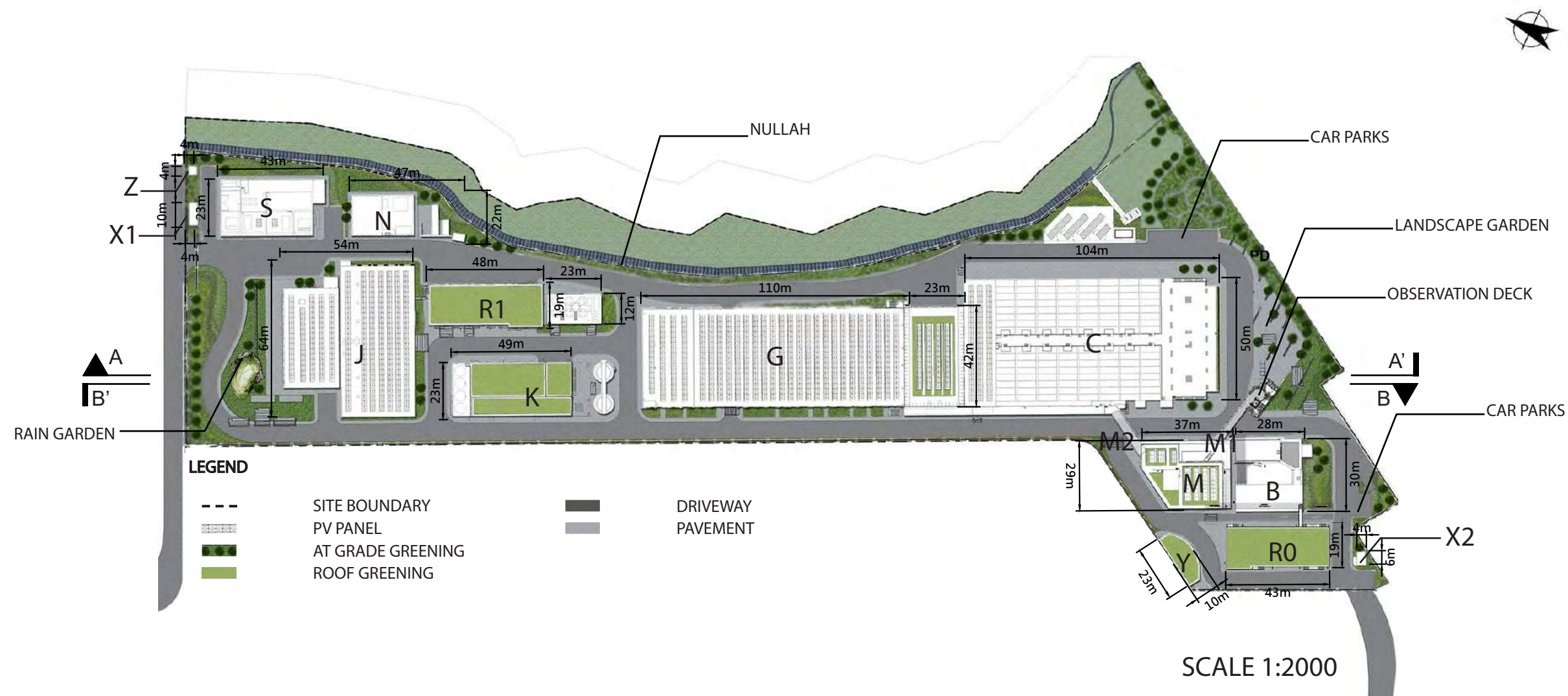
SCALE 1 : 1000 (A1)
SCALE 1 : 2000 (A3)

 BINNIES HONG KONG LIMITED 賓尼士工程顧問有限公司	CONTRACT NO. 13/WSD/17 DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT	Title: Landscape and Visual Mitigation Measures	Date: 16/04/2026	Drafted by CL
			Outgoing letter Ref. No.: ---	Checked by ---
			Reference Drawing: ---	Approved by ---
			Sketch No.: SK/190495B/C13/48-16058	Rev.: ---

Appendix D – DPTKO Building Layout Plan



Appendix D - Layout Plan of TKO Desalination Plant



LEGEND

M - ADMINISTRATION BUILDING
M1 - ELEVATED WALKWAY
V - INSPECTION CORRIDOR
B - COMBINED INTAKE & OUTFALL SHAFT
R0 - CHEMICAL BUILDING
C - ACTIDAFF
G - REVERSE OSMOSIS & ELECTRICAL BUILDING
K - POST-TREATMENT BUILDING
J - PRODUCT WATER STORAGE TANK AND ELECTRICAL BUILDING
R1 - ON-SITE CHLORINE GENERATION SYSTEM BUILDING AND CO₂ TANK AREA

N - MAIN ELECTRICAL & CHILLER PLANT BUILDING
S - TKO DESALINATION PLANT SUBSTATION
Z - MASTER METER ROOM
X1 - GUARD HOUSE A
X2 - GUARD HOUSE B
Y - WORKSHOP

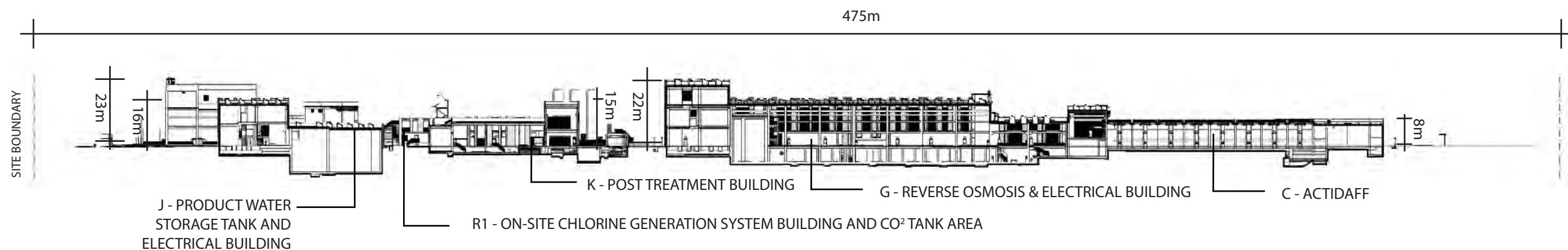


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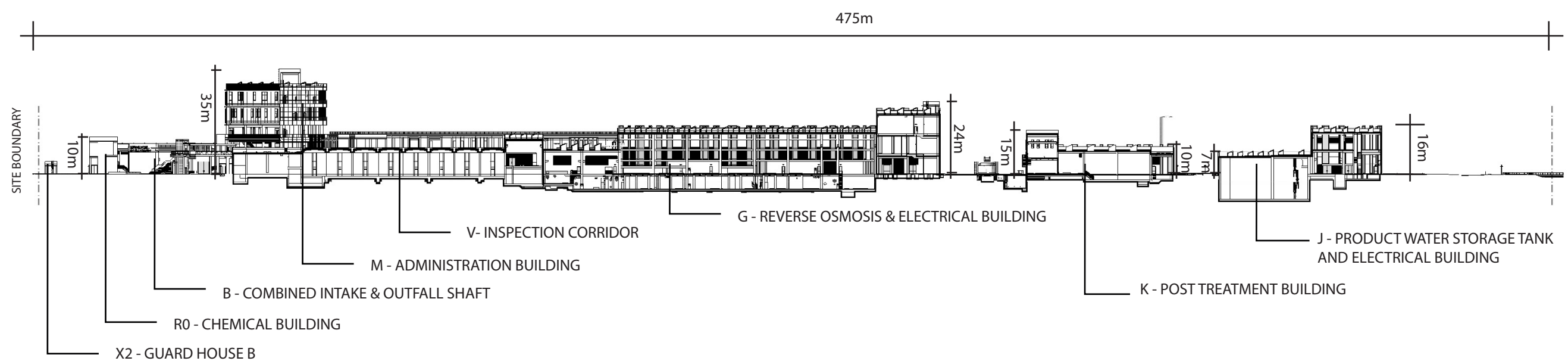




SITE SECTION AA'



SITE SECTION A-A (SCALE 1:500)

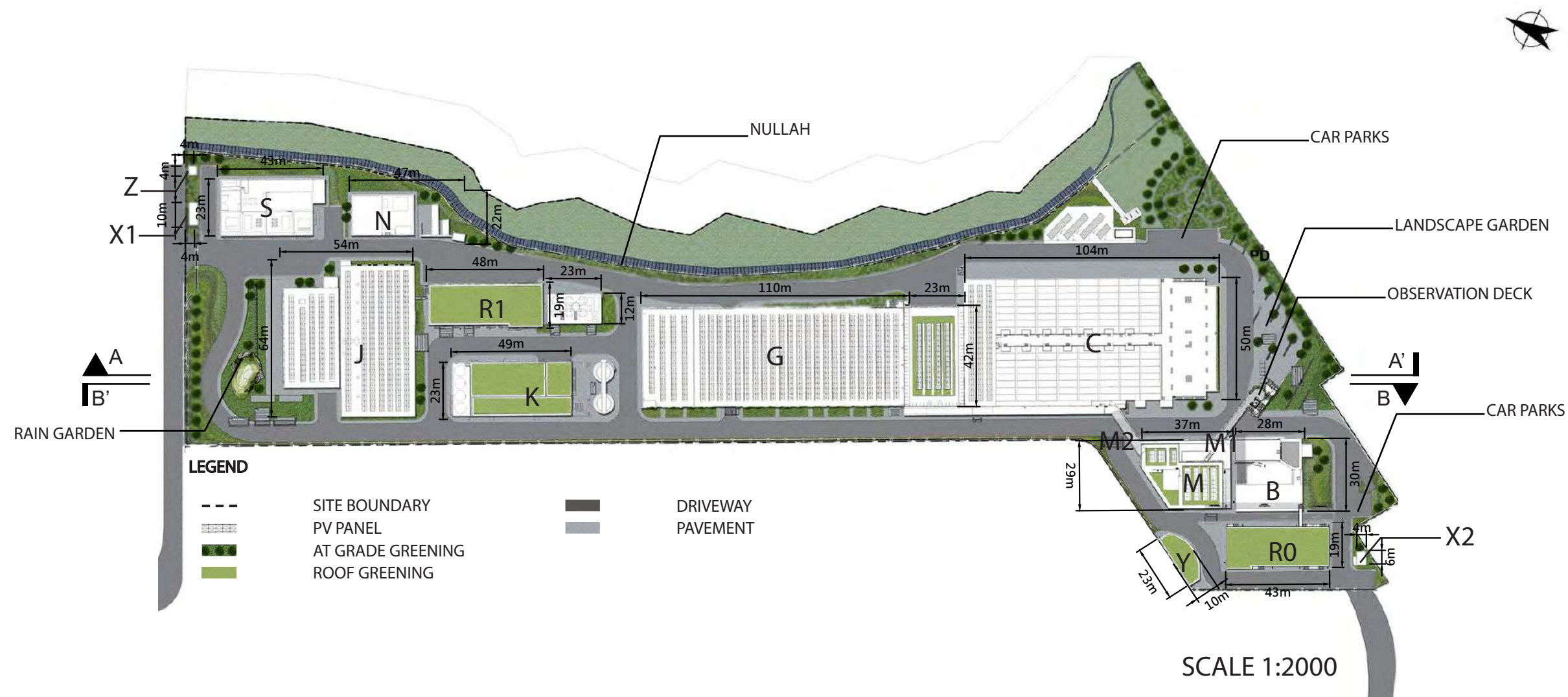


SITE SECTION B-B (SCALE 1:500)

Appendix E – Soft Landscape Design



App E - Soft landscape design (Overview)



LEGEND

M - ADMINISTRATION BUILDING
M1 - ELEVATED WALKWAY
V - INSPECTION CORRIDOR
B - COMBINED INTAKE & OUTFALL SHAFT
R0 - CHEMICAL BUILDING
C - ACTIDAFF
G - REVERSE OSMOSIS & ELECTRICAL BUILDING
K - POST-TREATMENT BUILDING
J - PRODUCT WATER STORAGE TANK AND ELECTRICAL BUILDING
R1 - ON-SITE CHLORINE GENERATION SYSTEM BUILDING AND CO₂ TANK AREA

N - MAIN ELECTRICAL & CHILLER PLANT BUILDING
S - TKO DESALINATION PLANT SUBSTATION
Z - MASTER METER ROOM
X1 - GUARD HOUSE A
X2 - GUARD HOUSE B
Y - WORKSHOP

App E - Soft landscape design
(Overview)

- Hydroseeding
- General Planting
- Green Roof
- Rain Garden



PLANTING LIST

序號	植物名稱	中文名稱	高度	冠寬	胸徑	間距	G/F 數量	Admin Building	總數量	備註
Item	Botanical Name	Chinese	Height	Spread	DBH	Spacing	G/F Qty.	1/F Qty.	Total Qty.	Remark
	Common Name	Name	(mm)	(mm)	(mm)	(mm)	(nos.)	(nos.)	(nos.)	
Trees										
BJ	<i>Bischofia javanica</i>	秋楓	5000	3000	100	7000	19	-	19	Native
IR	<i>Ilex rotumda</i> var. <i>microcarpa</i>	小果鐵冬青	3000	2000	60	5000	6	2	8	Native
LF	<i>Liquidambar formosana</i>	楓香	5000	3000	90	5000	6	-	6	Native
PP	<i>Pongamia pinnata</i>	水黃皮	4000	3000	80	5000	12	-	12	Native
SL	<i>Sterculia lanceolata</i>	假蘋婆	5000	3000	90	6000	17	-	17	Native
TM	<i>Terminalia mantaly</i>	小葉欖仁	5000	2500	90	5000	18	-	18	Exotic
TS	<i>Triadica sebifera</i>	烏柏	4000	2000	80	5000	8	-	8	Native
							Total		88	

App E - Soft landscape design
(Planting List)

序號	植物名稱	中文名稱	高度	冠寬	間距	G/F 數量	R/F 數量	Admin Building				總數量	本地品種/外來品種	備註
Item	Botanical Name	Chinese	Height	Spread	Spacing	G/F Qty.	R/F Qty.	1/F Qty.	2/F Qty.	3/F Qty.	4/F Qty.	Total Qty.	Native / Exotic	Remark
	Common Name	Name	(mm)	(mm)	(mm)	(nos.)	(nos.)	(nos.)	(nos.)	(nos.)	(nos.)	(nos.)		
Groundcovers														
Adu	<i>Arachis duranensis</i>	蔓花生	100	100	200	630	10913	-	-	-	-	11543	Exotic	-
Ccm	<i>Chlorophytum comosum</i> cv. <i>Marginatum</i>	金邊吊蘭	200	200	200	-	9303	-	-	-	-	9303	Exotic	-
Lmo	<i>Lantana montevidensis</i>	紫花馬纓丹	200	200	200	2797	16692	-	-	-	-	19489	Exotic	-
Nau	<i>Nephrolepis auriculata</i>	腎蕨	250	200	200	8918	9903	210	93	-	-	19124	Native	-
Oja	<i>Ophiopogon japonicus</i>	麥冬	250	200	200	-	6024	-	-	-	-	6024	Native	-
Ojs	<i>Ophiopogon jaburan</i> (Siebold) Lodd.	花葉沿階草	250	200	200	446	13208	-	-	-	-	13654	Exotic	-
Pmy	<i>Phyllanthus myrtifolius</i>	錫蘭葉下珠	250	200	150	8147	17537	-	148	-	-	25832	Exotic	-
Shrubs														
Aca	<i>Allamanda cathartica</i>	軟枝黃蟬	400	300	200	10834	-	-	-	-	-	10834	Exotic	-
Acu	<i>Asclepias curassavica</i>	馬利筋	300	200	200	14651	-	-	-	-	-	14651	Exotic	-
Aod	<i>Aglaia odorata</i>	米仔蘭	400	300	200	5575	-	70	122	-	-	5767	Exotic	-
Cal	<i>Cassia alata</i>	翅莢決明	1200	800	600	576	-	-	-	-	-	576	Exotic	-
Drp	<i>Duranta repens</i> 'golden'	金連翹	300	250	150	28249	-	-	102	-	-	28351	Exotic	-
Drv	<i>Duranta repens</i> 'Variegata'	花葉連翹	300	250	200	3482	-	-	-	-	-	3482	Exotic	-
Fja	<i>Fatsia japonica</i>	八角金盤	500	350	300	6043	-	30	-	-	-	6073	Exotic	-
Gja	<i>Gardenia jasminoides</i>	梔子花	500	350	250	1692	-	30	147	-	-	1869	Native	-
Ich	<i>Ixora chinensis</i>	龍船花	500	300	200	13092	-	130	-	-	-	13222	Native	-
Lcr	<i>Loropetalum chinensis</i> var. <i>rubrum</i>	紅繼木	300	200	150	10387	-	-	-	-	-	10387	Exotic	-
Lsi	<i>Ligustrum sinense</i>	山指甲	500	350	250	9191	-	-	-	-	-	9191	Exotic	-
Msa	<i>Melastoma sanguineum</i>	毛萼	500	300	200	13910	-	-	41	-	-	13951	Native	-
Rsi	<i>Rhododendron simsii</i>	紅杜鵑	400	300	200	19040	-	-	67	-	-	19107	Native	-
Rto	<i>Rhodomyrtus tomentosa</i>	桃金娘	500	300	200	19705	-	-	-	-	-	19705	Native	-
She	<i>Schefflera heptaphylla</i>	鵝掌柴	400	300	250	17750	-	40	17	-	-	17807	Native	-
Zpo	<i>Zanthoxylum piperitum</i> cv 'odorum'	胡椒木	300	200	150	3964	-	-	116	-	-	4080	Exotic	-
Rain Garden														
Cin	<i>Canna indica</i>	美人蕉	400	300	200	1167	-	-	-	-	-	1167	Exotic	-
Hfu	<i>Hemerocallis fulva</i>	萱草	400	300	200	603	-	-	-	-	-	603	Exotic	-
Ite	<i>Iris tectorum</i>	鳶尾	500	300	200	510	-	-	-	-	-	510	Exotic	-
Lsa	<i>Lythrum salicaria</i>	千屈菜	400	400	200	826	-	-	-	-	-	826	Exotic	-
Msi	<i>Miscanthus sinensis</i>	細葉芒	400	300	200	595	-	-	-	-	-	595	Exotic	-
Climber														
BcoC	<i>Bauhinia corymbosa</i>	首冠藤	800	300	500	550	-	-	-	-	-	550	Exotic	-
LjaC	<i>Lonicera japonica</i>	金銀花	800	300	500	550	-	-	-	-	-	550	Native	-
QinC	<i>Quisqualis indica</i>	使君子	1000	300	500	700	-	-	-	10	10	720	Exotic	-
Hydroseed														
Cga	<i>Chloris gayana</i>	非洲虎尾草	-	-	-	1130m ²	-	-	-	-	-	1130m ²	Exotic	按平方米計算(m ²)
Cda	<i>Cynodon dactylon</i>	狗牙根	-	-	-	1130m ²	-	-	-	-	-	1130m ²	Native	按平方米計算(m ²)
Lpe	<i>Lolium perenne</i>	黑麥草	-	-	-	1130m ²	-	-	-	-	-	1130m ²	Exotic	按平方米計算(m ²)
Msa	<i>Melastoma sanguineum</i>	毛萼	-	-	-	1130m ²	-	-	-	-	-	1130m ²	Native	按平方米計算(m ²)
Rhi	<i>Rhus chinensis</i>	鹽膚木	-	-	-	1130m ²	-	-	-	-	-	1130m ²	Native	按平方米計算(m ²)
Rto	<i>Rhodomyrtus tomentosa</i>	桃金娘	-	-	-	1130m ²	-	-	-	-	-	1130m ²	Native	按平方米計算(m ²)
Lawn														
Zja	<i>Zoysia japonica</i>	台灣草	-	-	-	410m ²	-	-	-	-	-	410m ²	Exotic	按平方米計算(m ²)

A	GENERAL REVISION	AC	2021/11/11
Rev	Description	By	Date
Employer			
			
Supervising Officer designate			
			
Design Checker			
			
Contractor			
			
Designer			
 In Association with APU			
Project title			
CONTRACT NO. 13/WS/D/17			
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
PLANTING LIST			
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Drawing no.			Rev.
TKOD1—DWG—A000—WLA3101			A
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AC	10 MAY 2021	XL	—
Scale	Status		
N.T.S.	DETAILED DESIGN APPROVAL		

App E - Soft landscape design
(Tree Planting Plan)

PLANTING LIST

序號	植物名稱	中文名稱	高度	冠寬	胸徑	間距	G/F 數量
Item	Botanical Name	Chinese	Height	Spread	DBH	Spacing	G/F Qty.
	Common Name	Name	(mm)	(mm)	(mm)	(mm)	(nos.)
Trees							
BJ	Bischofia javanica	秋楓	5000	3000	100	7000	19
IR	Ilex rotumda var.microcarpa	小果鐵冬青	3000	2000	60	5000	6
LF	Liquidambar formosana	楓香	5000	3000	90	5000	6
PP	Pongamia pinnata	水黃皮	4000	3000	80	5000	12
SL	Sterculia lanceolata	假蘋婆	5000	3000	90	6000	17
TM	Terminalia mantaly	小葉欖仁	5000	2500	90	5000	18
TS	Triadica sebifera	烏柏	4000	2000	80	5000	8

LEGEND:

- SITE BOUNDARY
- PROPOSED NEW TREE
- RETAINED TREE

REMARKS:
NOT LESS THAN 1200mm CLEAR
SOIL WIDTH AND DEPTH
SHOULD BE PROVIDED FOR ALL
TREE PLANTING AREAS.

A	GENERAL REVISION	AC	2021/11/11
Rev	Description	By	Date
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Supervising Officer designate			
binnies			
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ARCADIS Design & Consultancy for natural and built assets			
Contractor			
acciona JEC CPC AJC JOINT VENTURE			
Designer			
wsp In Association with APU			
Project title			
CONTRACT NO. 13/WS/17			
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
TREE PLAN – GROUND FLOOR			
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Drawing no.			Rev.
TKOD1–DWG–A000–WLA3111			A
Drawn	Date	Checked	Approved
AC	10 MAY 2021	XL	—
Scale		Status	
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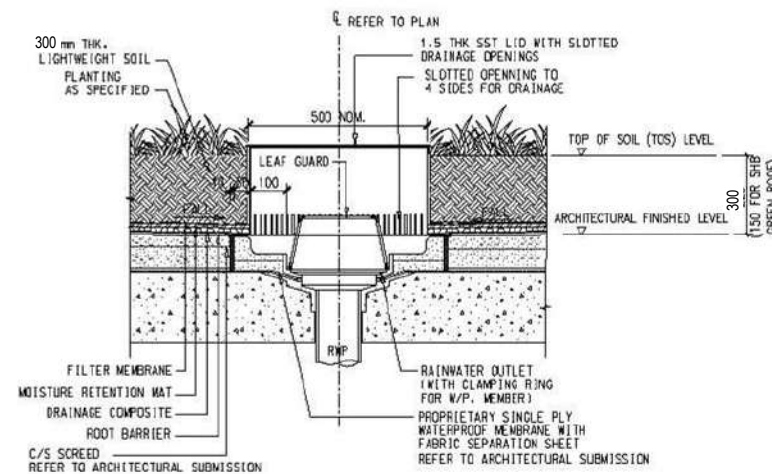
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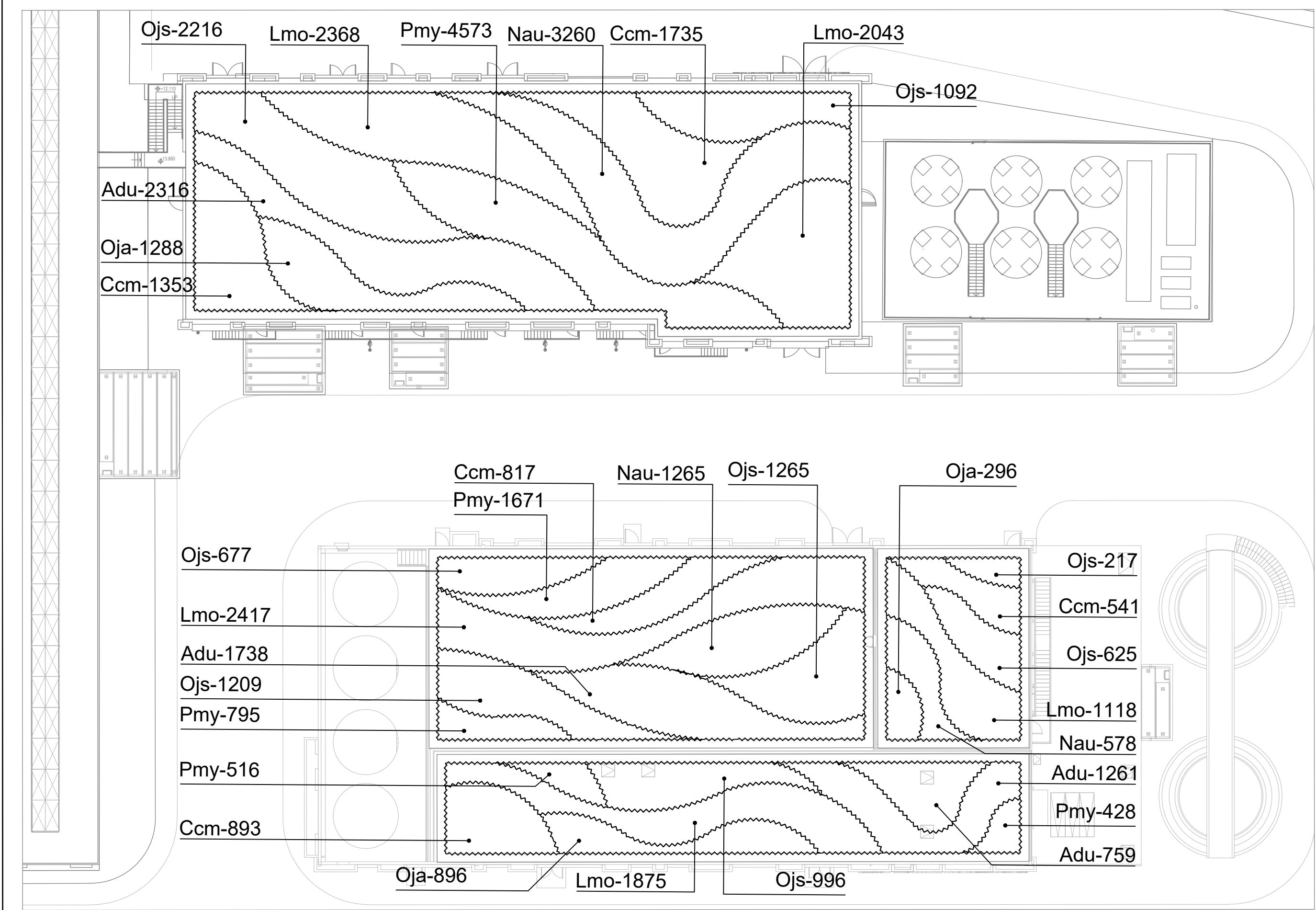
App E - Soft landscape design
(Shrubs Planting Plan)

序號	植物名稱	中文名稱	高度	冠寬	間距	G/F 數量	備註
Item	Botanical Name	Chinese	Height	Spread	Spacing	G/F Qty.	Remark
	Common Name	Name	(mm)	(mm)	(mm)	(nos.)	
Rain Garden							
Cin	<i>Canna indica</i>	美人蕉	400	300	200	1167	-
Hfu	<i>Heemerocallis fulva</i>	萱草	400	300	200	603	-
Ite	<i>Iris tectorum</i>	鳶尾	500	300	200	510	-
Lsa	<i>Lythrum salicaria</i>	千屈菜	400	400	200	826	-
Msi	<i>Miscanthus sinensis</i>	細葉芒	400	300	200	595	-
Climber							
BcoC	<i>Bauhinia corymbosa</i>	首冠藤	800	300	500	550	-
LjaC	<i>Lonicera japonica</i>	金銀花	800	300	500	550	-
QinC	<i>Quisqualis indica</i>	使君子	1000	300	500	700	-
Hydroseed							
Cga	<i>Chloris gayana</i>	非洲虎尾草	-	-	-	1130m ²	按平方米計算(m ²)
Cda	<i>Cynodon dactylon</i>	狗牙根	-	-	-	1130m ²	按平方米計算(m ²)
Lpe	<i>Lolium perenne</i>	黑麥草	-	-	-	1130m ²	按平方米計算(m ²)
Msa	<i>Melastoma sanguineum</i>	毛蕊	-	-	-	1130m ²	按平方米計算(m ²)
Rhi	<i>Rhus chinensis</i>	鹽膚木	-	-	-	1130m ²	按平方米計算(m ²)
Rto	<i>Rhodomyrtus tomentosa</i>	桃金娘	-	-	-	1130m ²	按平方米計算(m ²)
Lawn							
Zja	<i>Zoysia japonica</i>	台灣草	-	-	-	410m ²	按平方米計算(m ²)

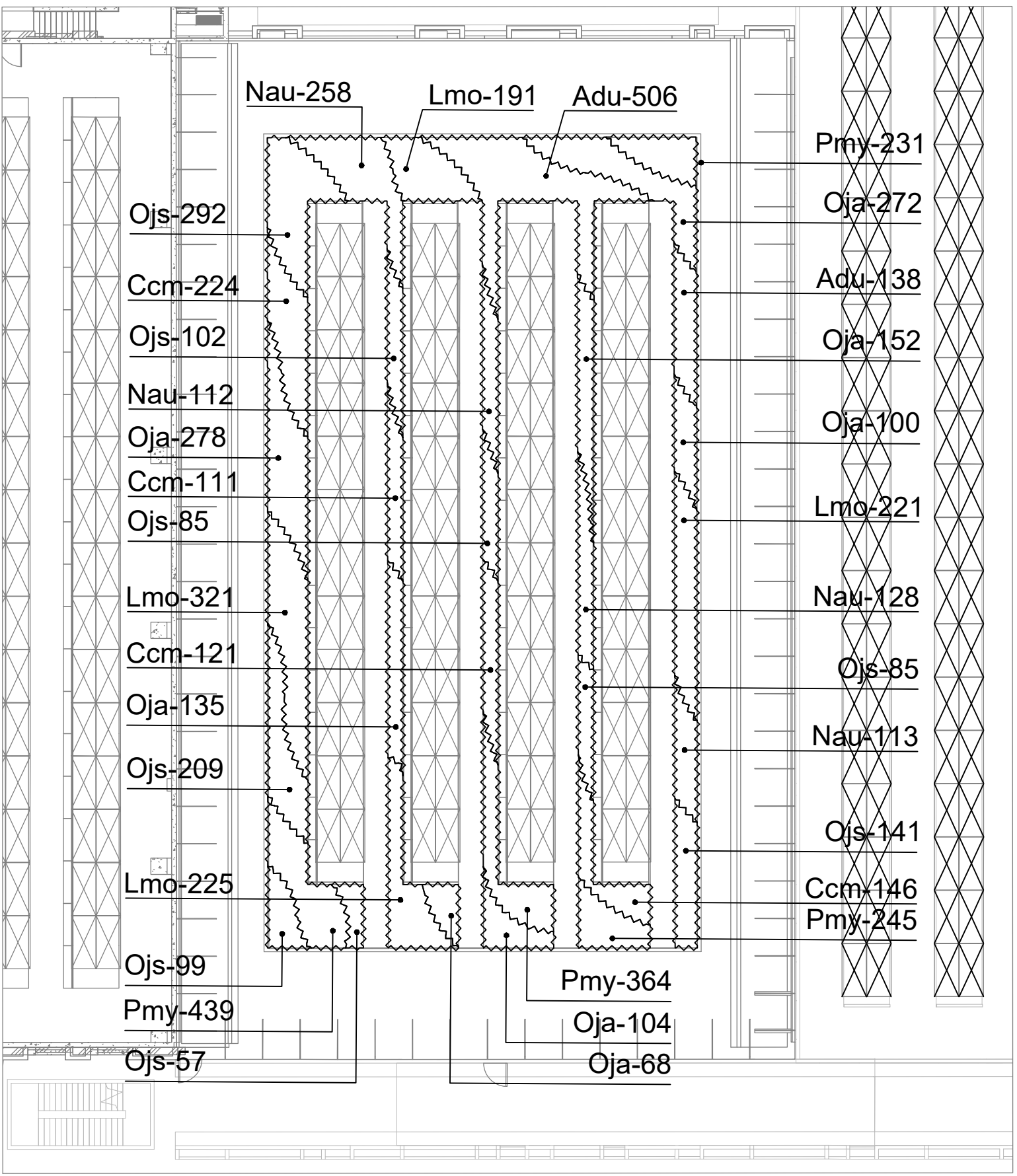
REMARKS:
NOT LESS THAN 600mm SOIL
DEPTH SHOULD BE PROVIDED
FOR THOSE AREAS PLANTED
WITH SHRUBS AND 300mm SOIL
DEPTH FOR GROUNDCOVERS.

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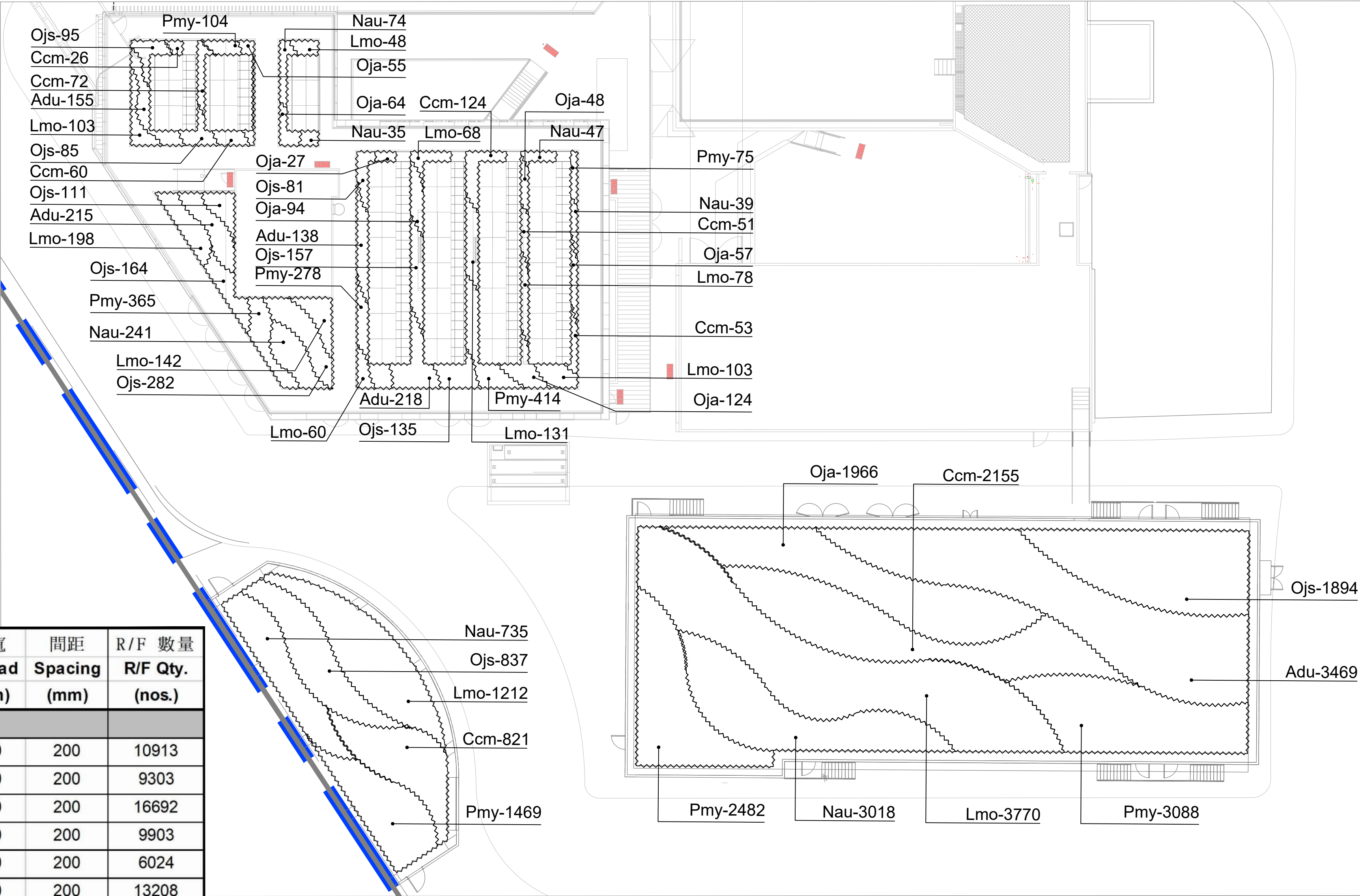




BLOW UP 1 SCALE 1:250



BLOW UP 2 SCALE 1:200

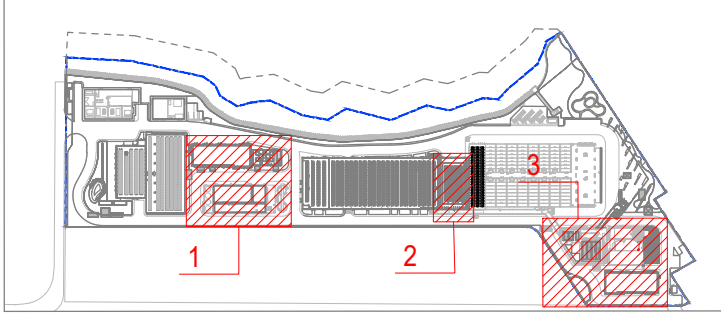


BLOW UP 3 SCALE 1:200

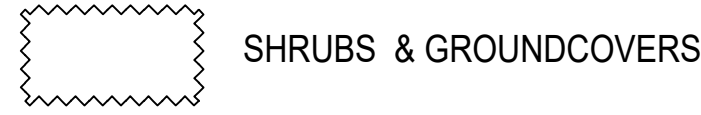
PLANTING LIST

序號 Item	植物名稱 Botanical Name Common Name	中文名稱 Chinese Name	高度 Height (mm)	冠寬 Spread (mm)	間距 Spacing (mm)	R/F 數量 R/F Qty. (nos.)
Groundcovers						
Adu	<i>Arachis duranensis</i>	蔓花生	100	100	200	10913
Ccm	<i>Chlorophytum comosum</i> cv. <i>Marginatum</i>	金邊吊蘭	200	200	200	9303
Lmo	<i>Lantana montevidensis</i>	紫花馬纓丹	200	200	200	16692
Nau	<i>Nephrolepis auriculata</i>	腎蕨	250	200	200	9903
Oja	<i>Ophiopogon japonicus</i>	麥冬	250	200	200	6024
Ojs	<i>Ophiopogon jaburan</i> (Siebold) Lodd.	花葉沿階草	250	200	200	13208
Pmy	<i>Phyllanthus myrtifolius</i>	錫蘭葉下珠	250	200	150	17537

KEY PLAN scale 1:6000



LEGEND:



REMARKS:
NOT LESS THAN 300mm SOIL
DEPTH SHOULD BE PROVIDED
FOR THOSE AREAS PLANTED
WITH FOR GROUNDCOVERS.

A	GENERAL REVISION	AC	2021/11/11
Rev	Description	By	Date
Employer			
			
Supervising Officer designate			
			
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Designer			
			
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Project title			
CONTRACT NO. 13/WSD/17			
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
SHRUBS PLAN – ROOF FLOOR			
Drawing no.			
TKOD1–DWG–A000–WLA3113			
Rev.			
A			
Drawn	Date	Checked	Approved
AC	10 MAY 2021	XL	–
Scale	AS SHOWN@A1	Status	DETAILED DESIGN APPROVAL
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PLANTING LIST

序號	植物名稱	中文名稱	高度	冠寬	間距	G/F 數量	備註
Item	Botanical Name	Chinese	Height	Spread	Spacing	G/F Qty.	Remark
	Common Name	Name	(mm)	(mm)	(mm)	(nos.)	
Rain Garden							
Cin	<i>Canna indica</i>	美人蕉	400	300	200	1167	-
Hfu	<i>Hemerocallis fulva</i>	萱草	400	300	200	603	-
Ite	<i>Iris tectorum</i>	鳶尾	500	300	200	510	-
Lsa	<i>Lythrum salicaria</i>	千屈菜	400	400	200	826	-
Msi	<i>Miscanthus sinensis</i>	細葉芒	400	300	200	595	-
Climber							
BcoC	<i>Bauhinia corymbosa</i>	首冠藤	800	300	500	550	-
LjaC	<i>Lonicera japonica</i>	金銀花	800	300	500	550	-
QinC	<i>Quisqualis indica</i>	使君子	1000	300	500	700	-
Hydroseed							
Cga	<i>Chloris gayana</i>	非洲虎尾草	-	-	-	1130m ²	按平方米計算(m ²)
Cda	<i>Cynodon dactylon</i>	狗牙根	-	-	-	1130m ²	按平方米計算(m ²)
Lpe	<i>Lolium perenne</i>	黑麥草	-	-	-	1130m ²	按平方米計算(m ²)
Msa	<i>Melastoma sanguineum</i>	毛蕊	-	-	-	1130m ²	按平方米計算(m ²)
Rhi	<i>Rhus chinensis</i>	鹽膚木	-	-	-	1130m ²	按平方米計算(m ²)
Rto	<i>Rhodomyrtus tomentosa</i>	桃金娘	-	-	-	1130m ²	按平方米計算(m ²)
Lawn							
Zja	<i>Zoysia japonica</i>	台灣草	-	-	-	410m ²	按平方米計算(m ²)

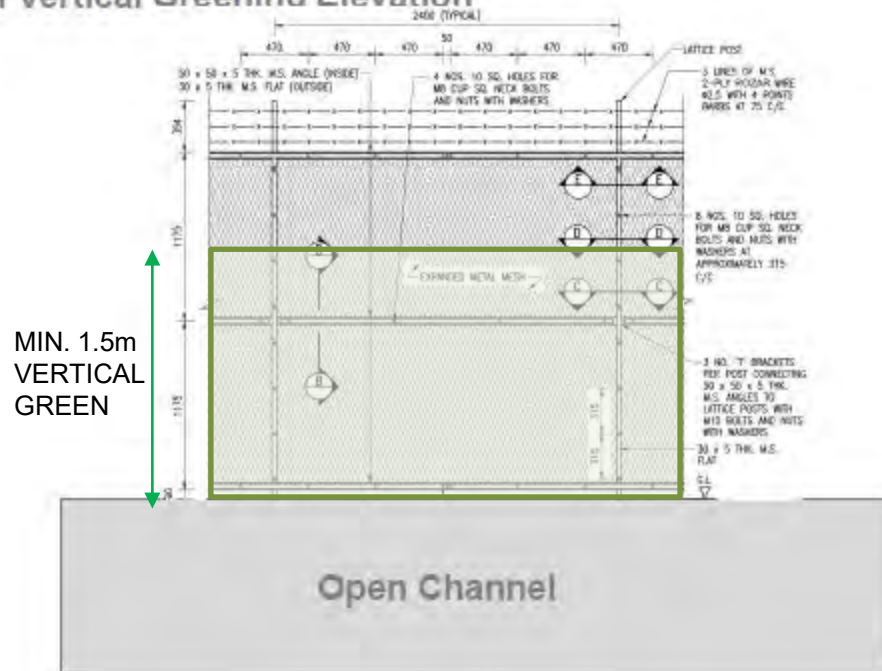
 RETAINED TREE

[illegible]

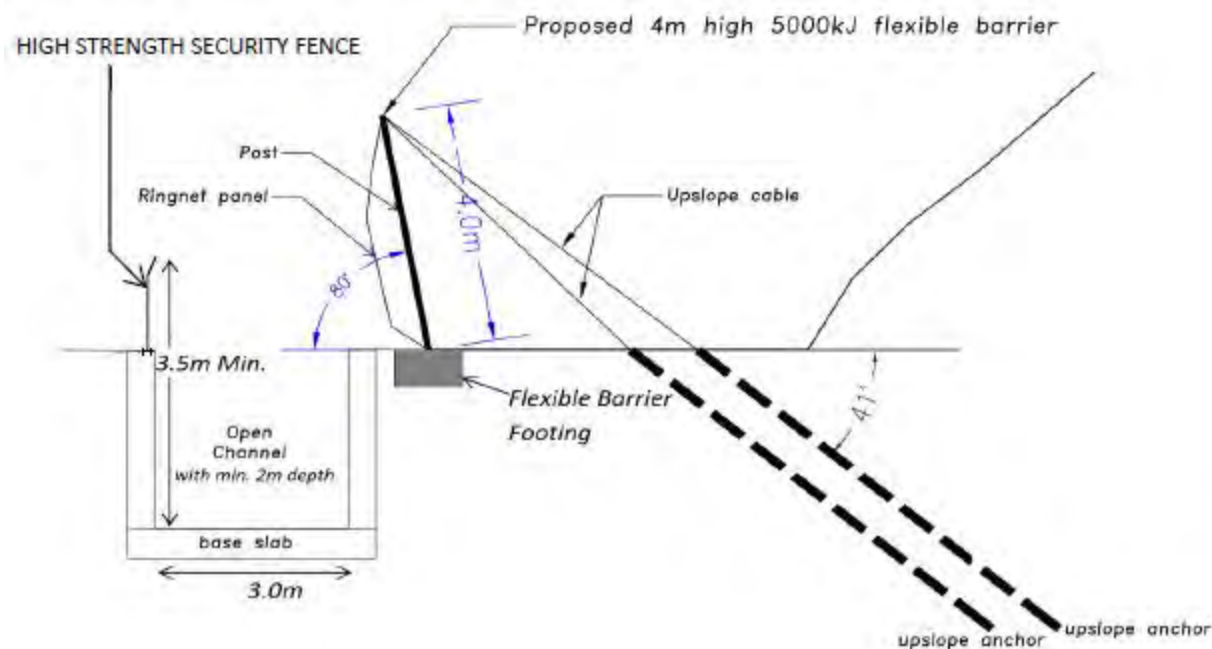
©COPYRIGHT RESERVED

Appendix E - Soft Landscape Design (Vertical Greening)

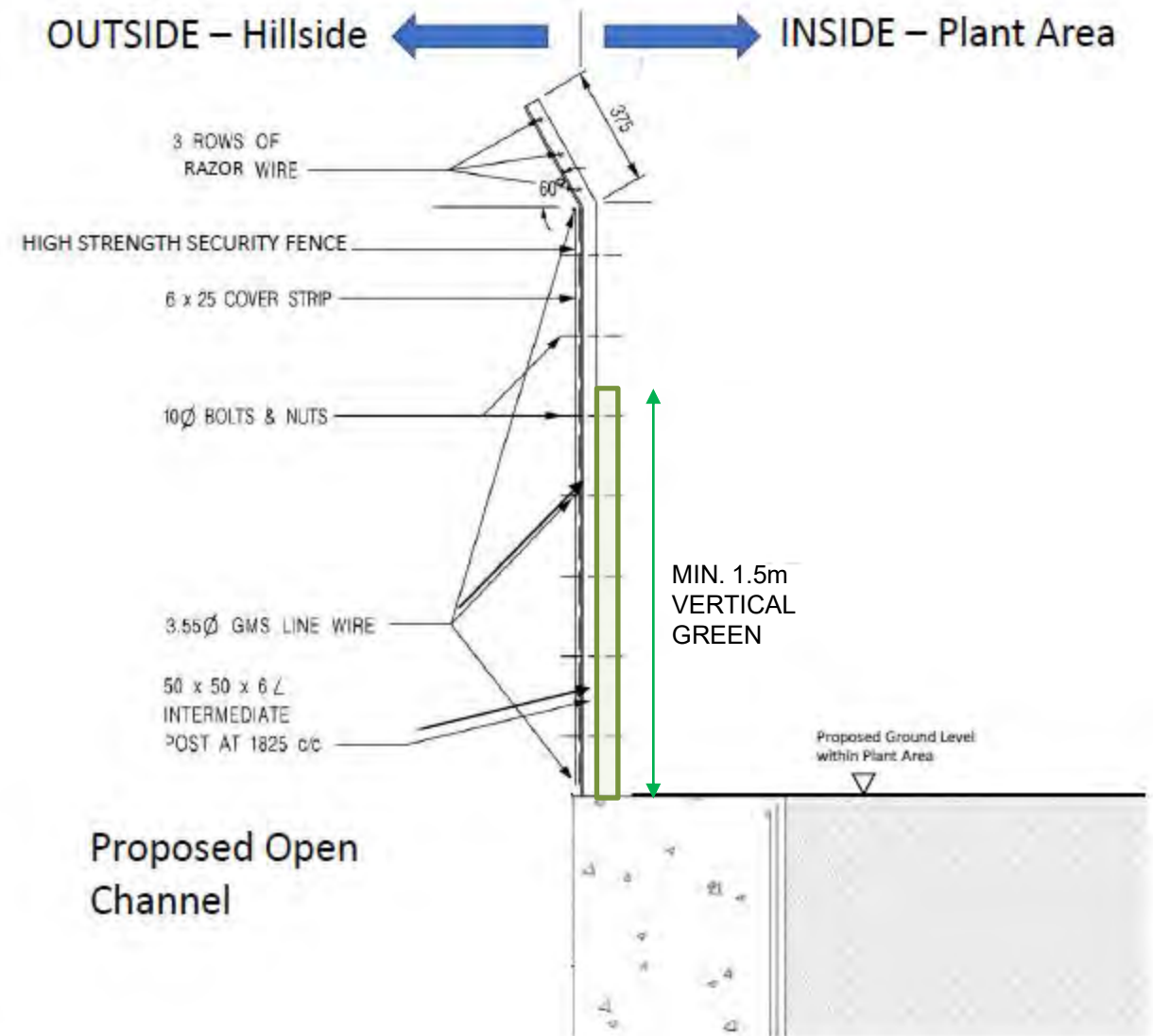
Typical Vertical Greening Elevation



Vertical Greening adjacent to Open Channel

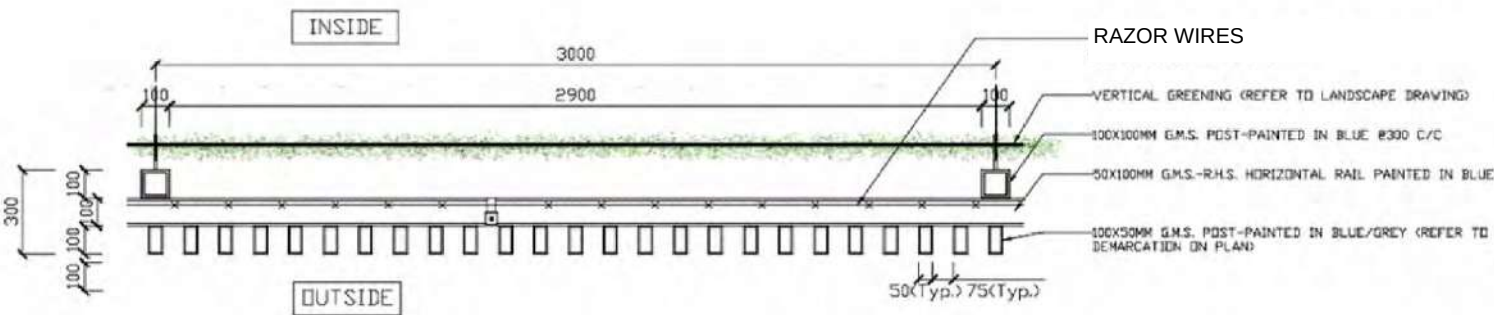


Typical Vertical Greening Section
OUTSIDE – Hillside ← → INSIDE – Plant Area

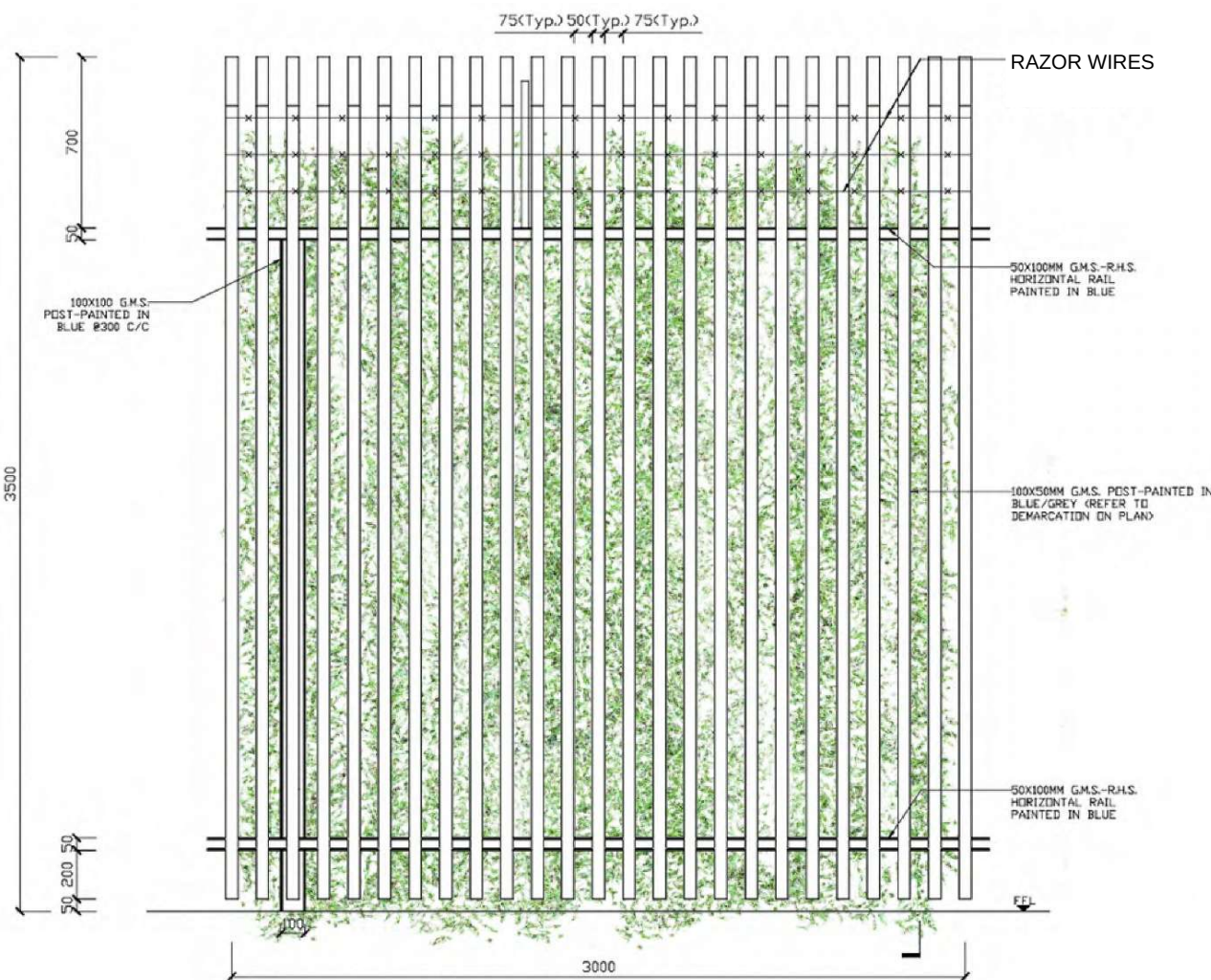


Appendix E - Soft Landscape Design (Vertical Greening)

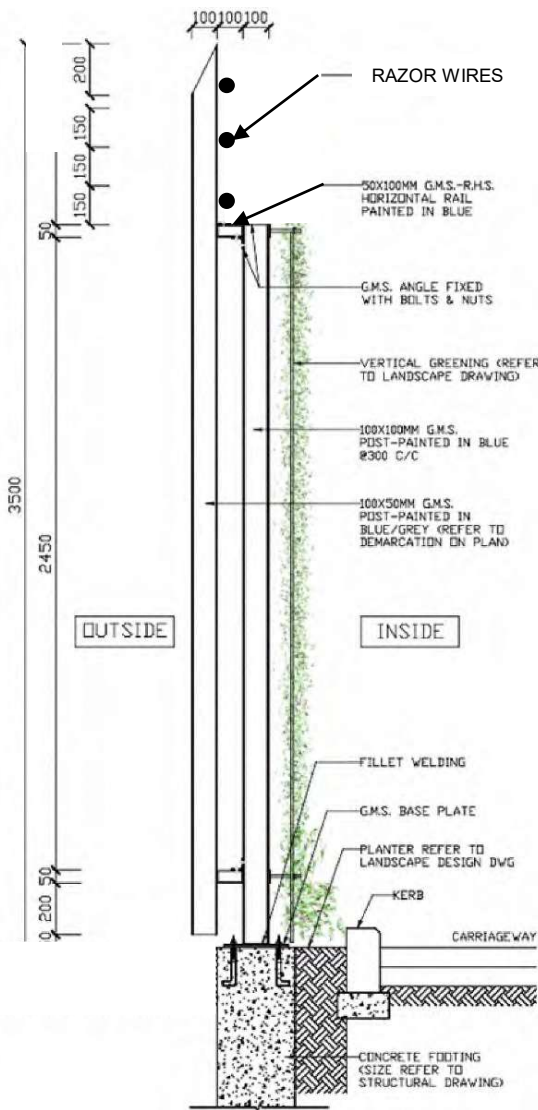
Typical Vertical Greening Zoomin Plan



Typical Vertical Greening Elevation

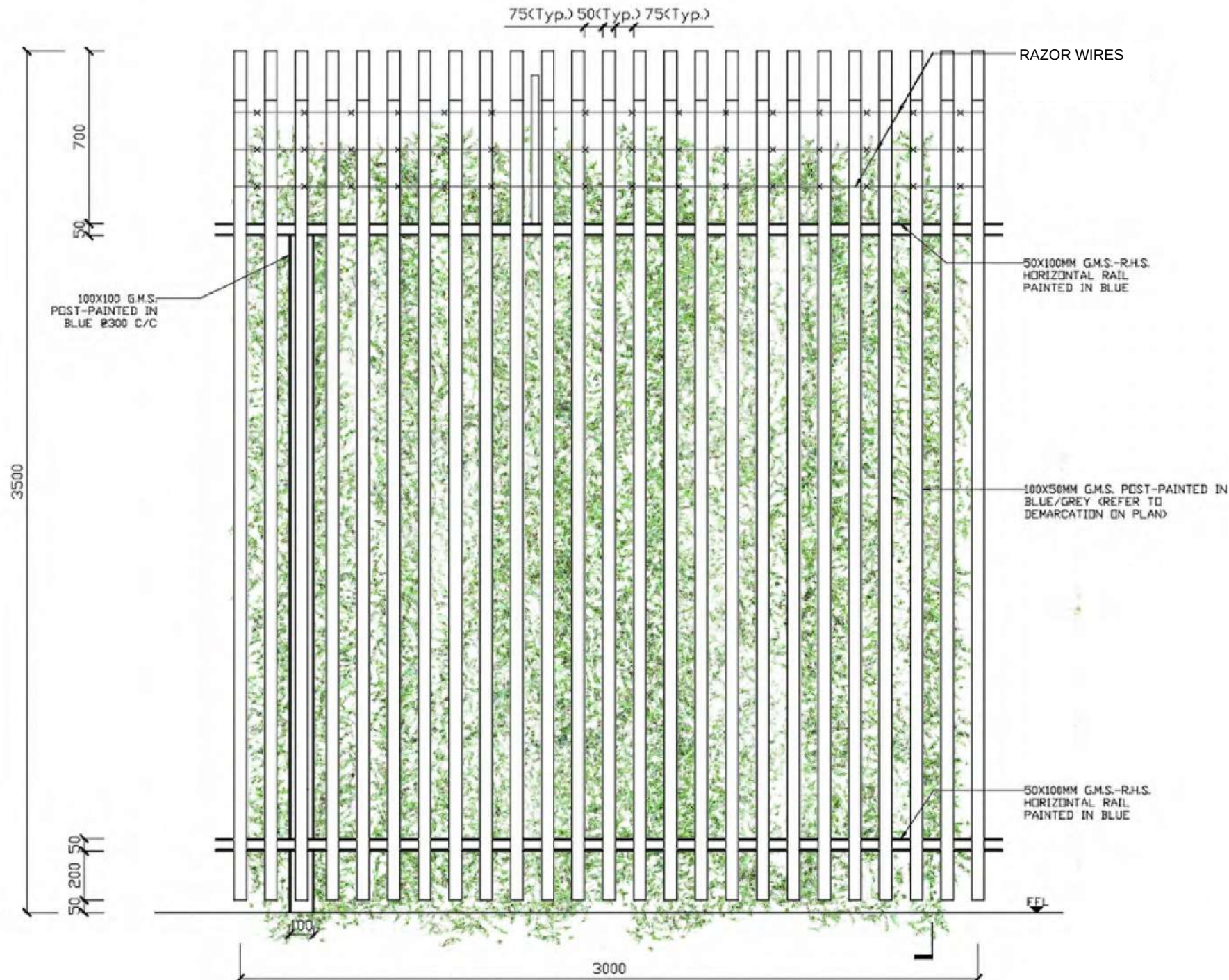


Typical Vertical Greening Section

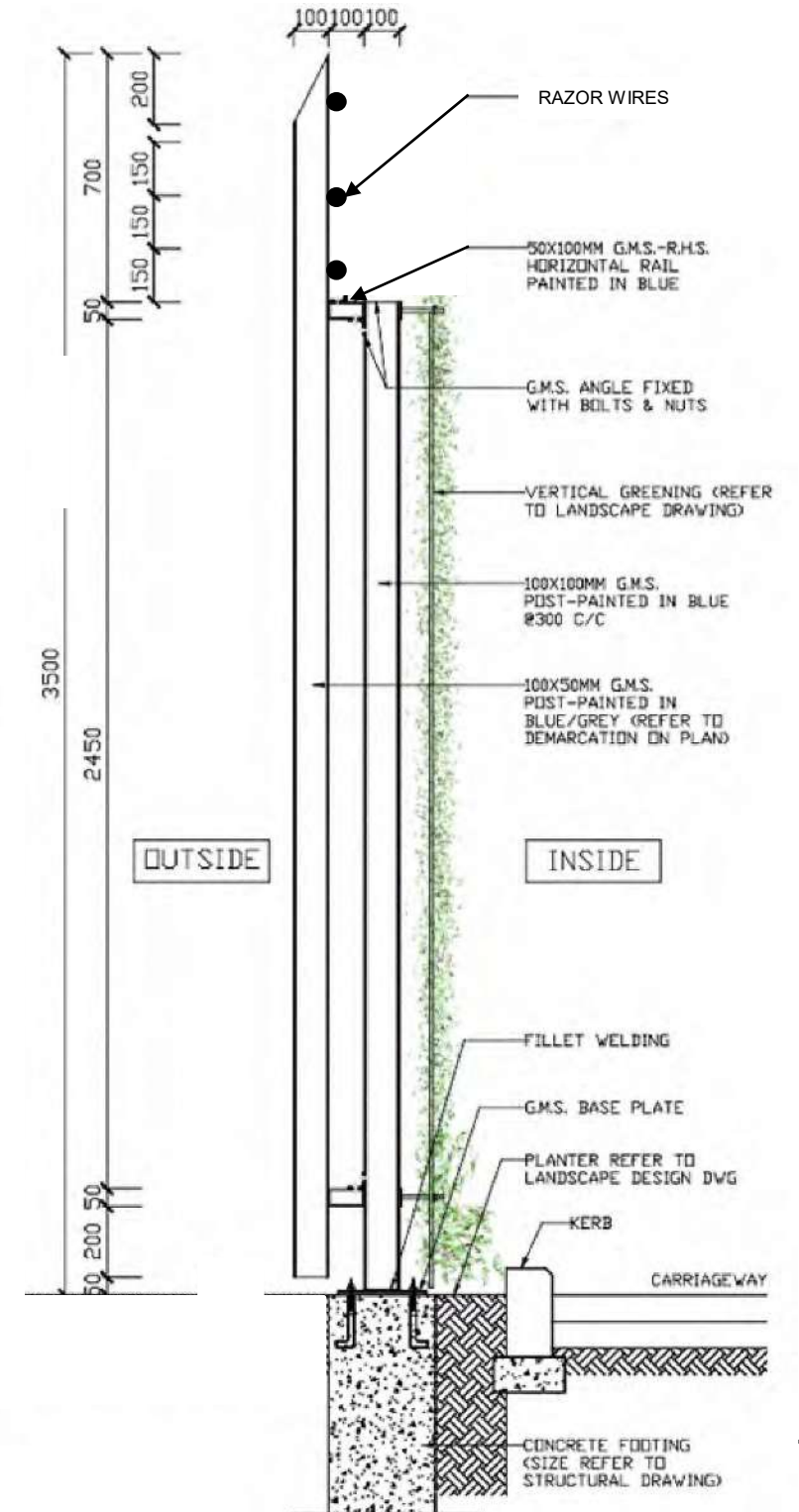


Appendix E - Soft Landscape Design (Vertical Greening)

Typical Vertical Greening Elevation



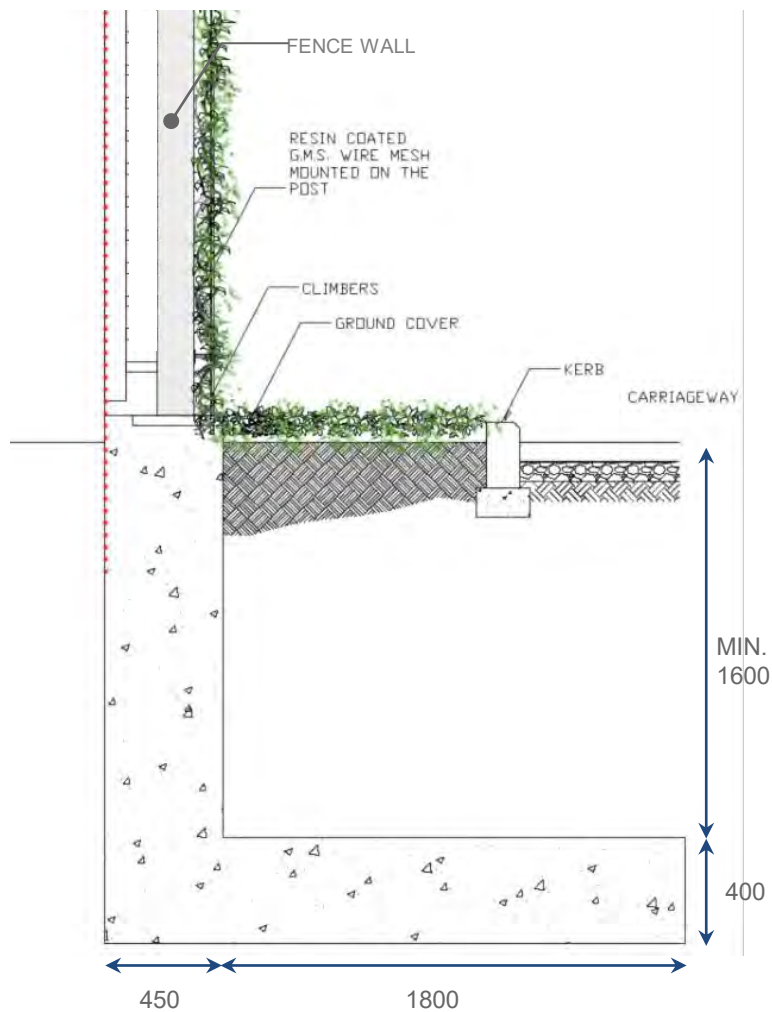
Typical Vertical Greening Section



Appendix E - Soft Landscape Design (Vertical Greening)

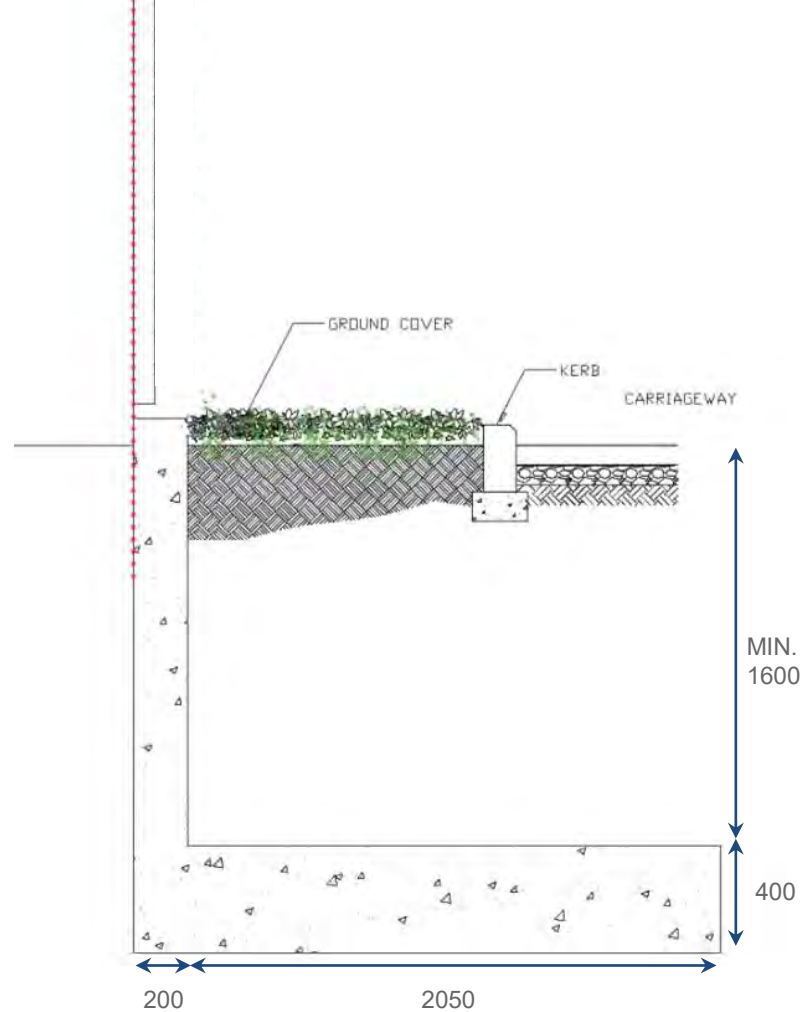
Typical Vertical Greening
Blow-up Section A-A (FENCE WALL)

B.L.

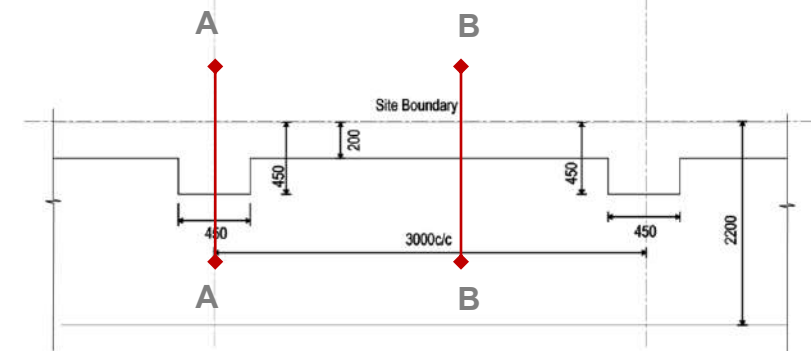


Blow-up Section B-B (FEATURES ONLY)

B.L.

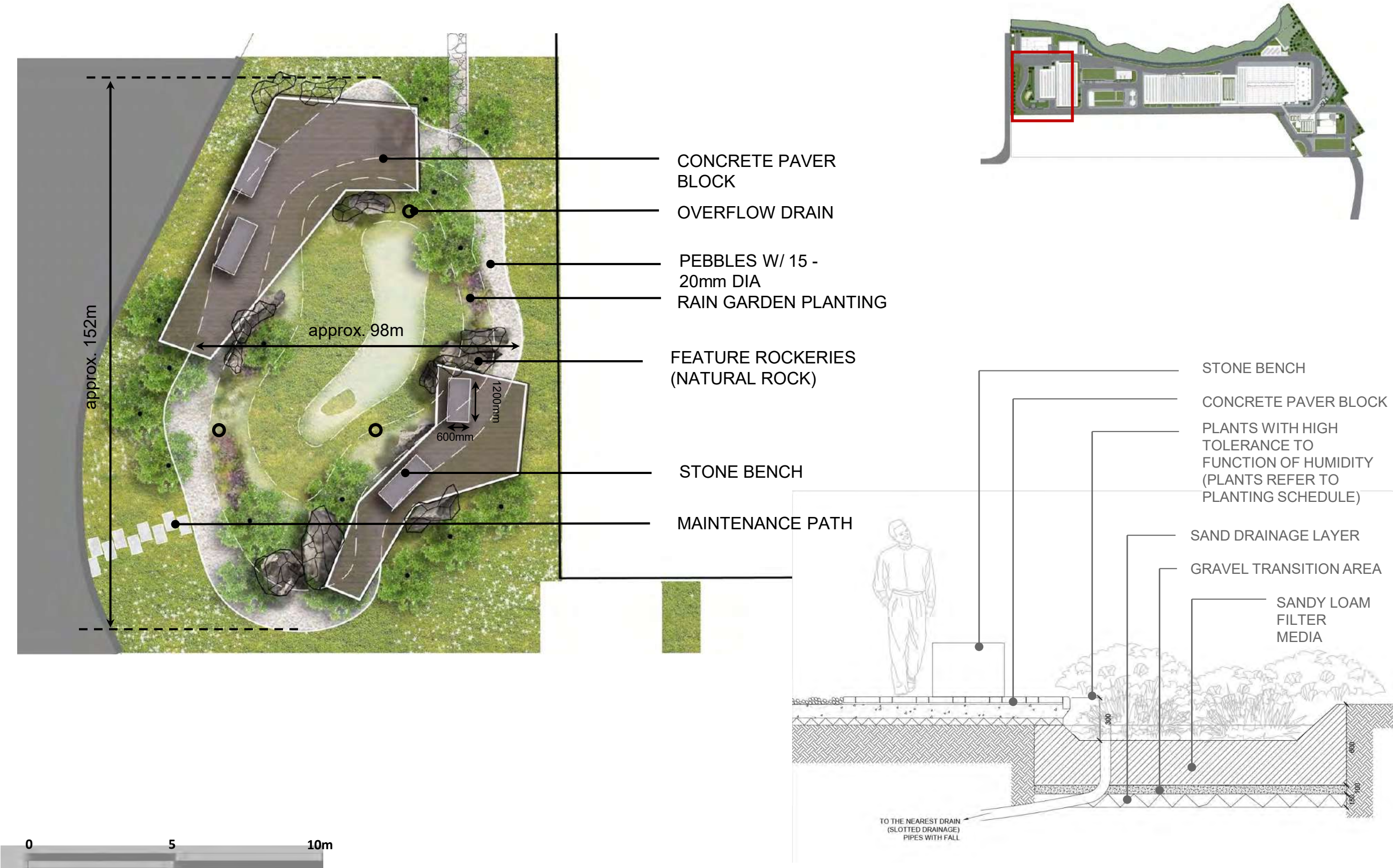


Footing Location Plan



Appendix E - Soft Landscape Design

Landscape Design | Rain Garden



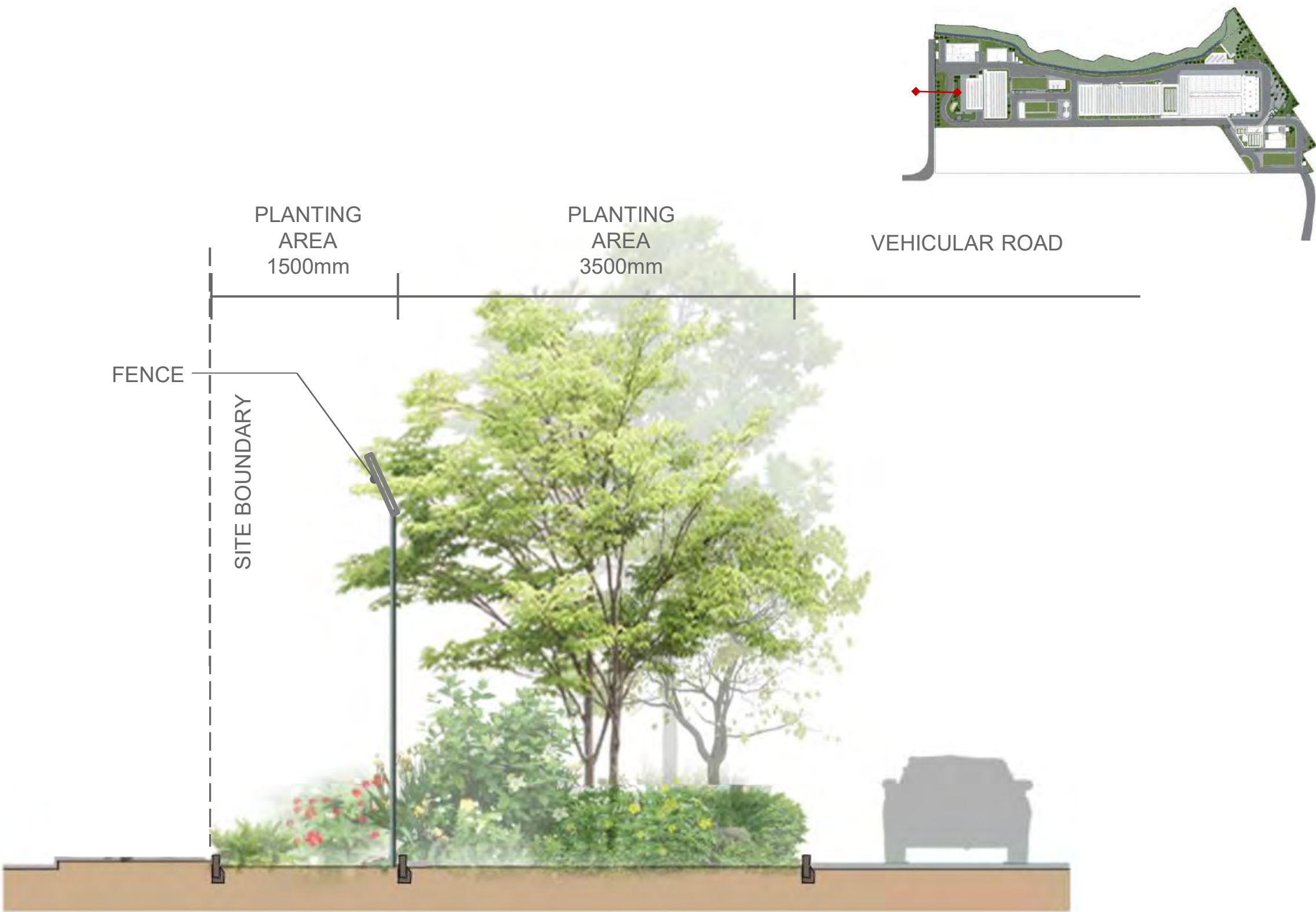
Appendix E - Soft Landscape Design

Landscape Design | Main Entrance



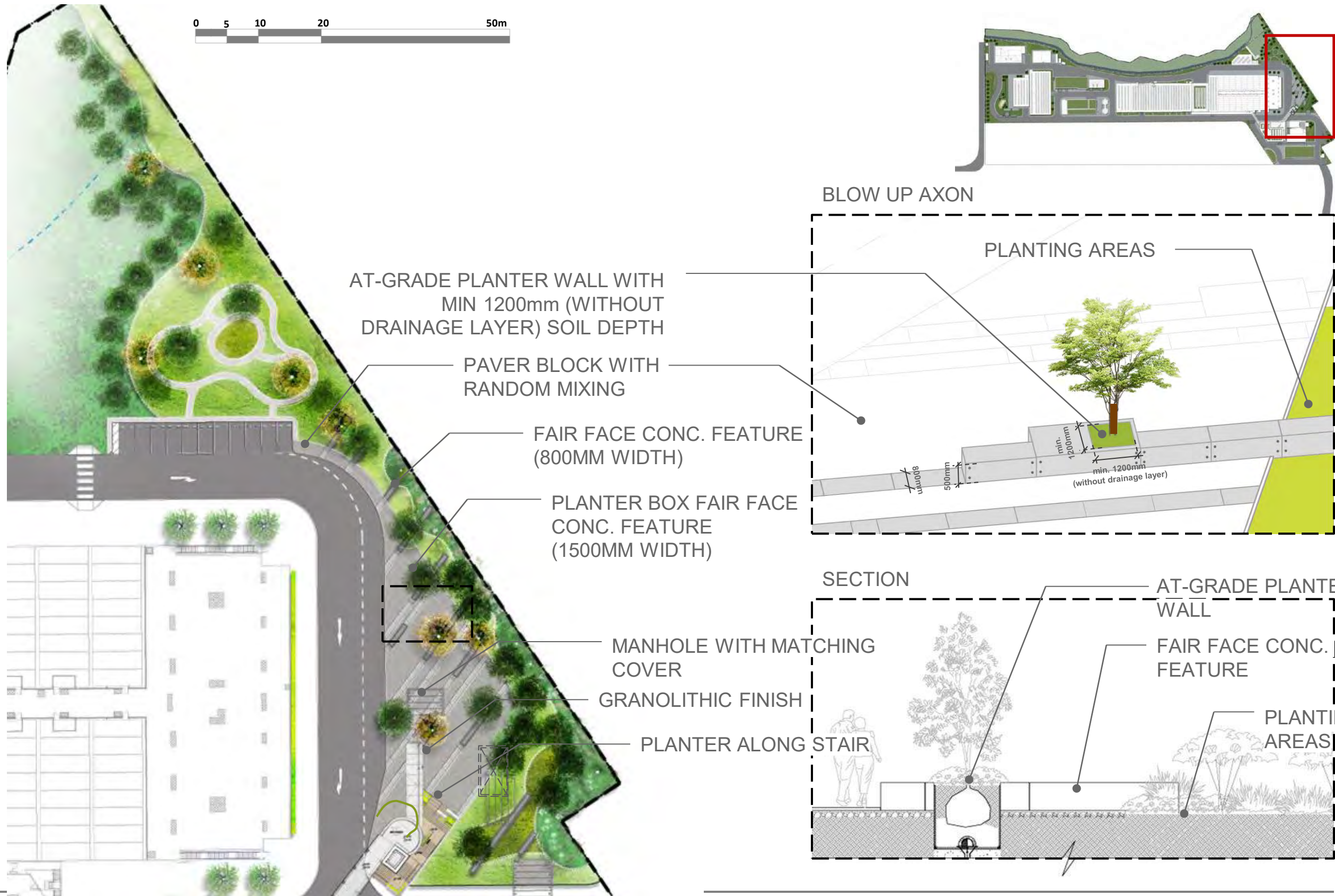
Appendix E - Soft Landscape Design

Landscape Design | Main Entrance



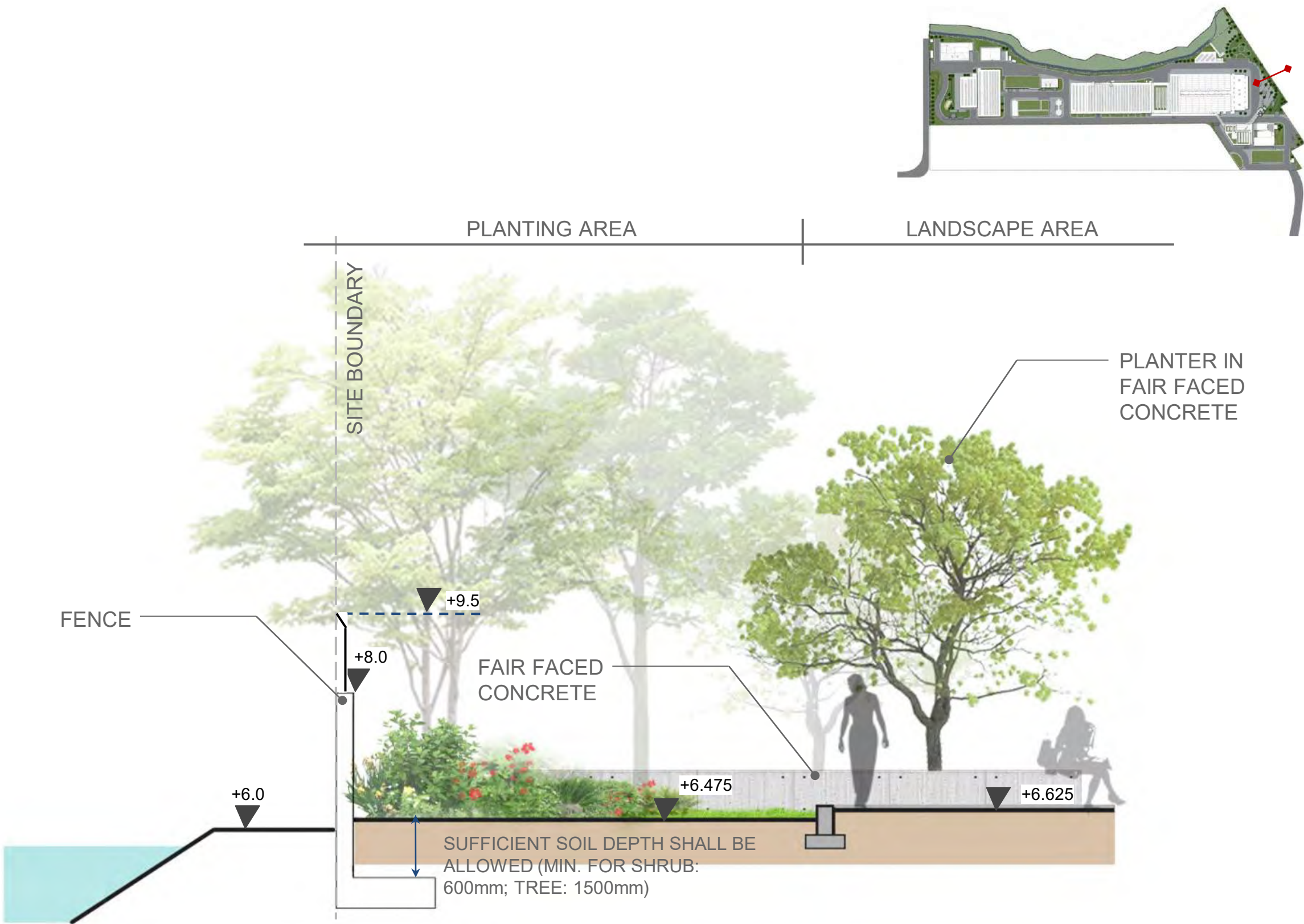
Appendix E - Soft Landscape Design

Landscape Design | Drop off Plaza



Appendix E - Soft Landscape Design

Landscape Design | Main Plaza



Appendix E - Soft Landscape Design

Landscape Design | Admin Building



Appendix E - Soft Landscape Design

Landscape Design | Admin Building

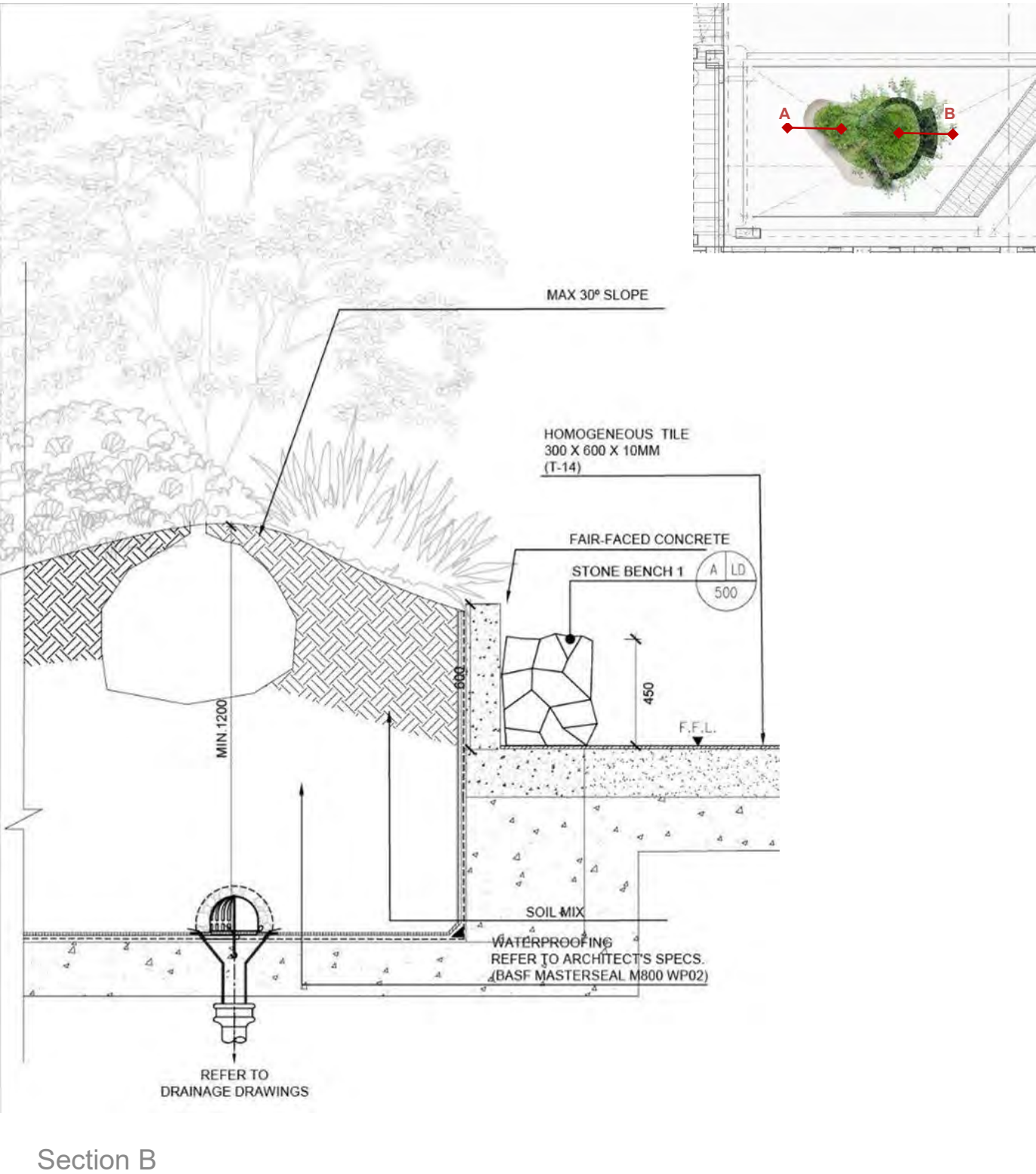
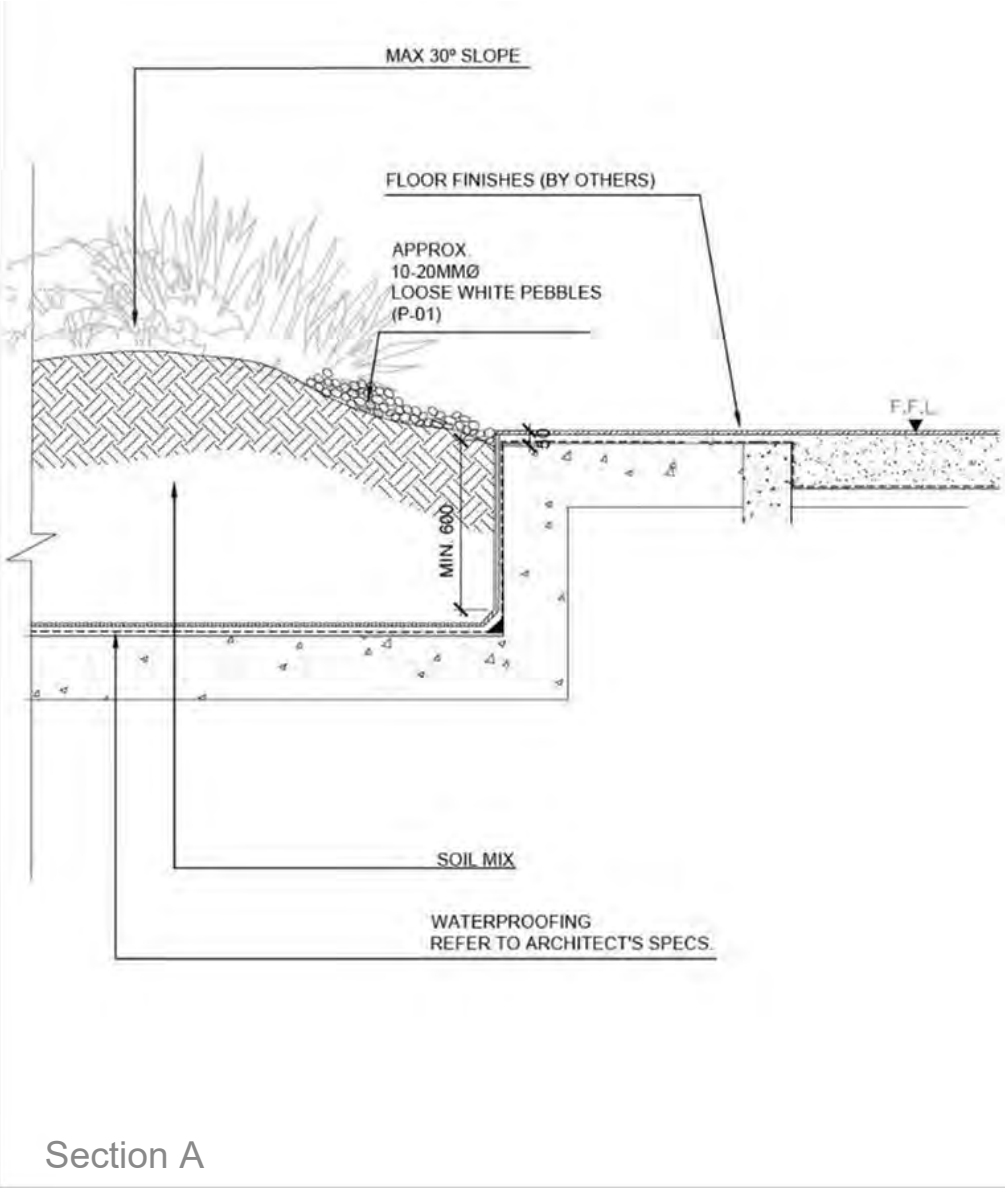


Admin Building - 1st Floor

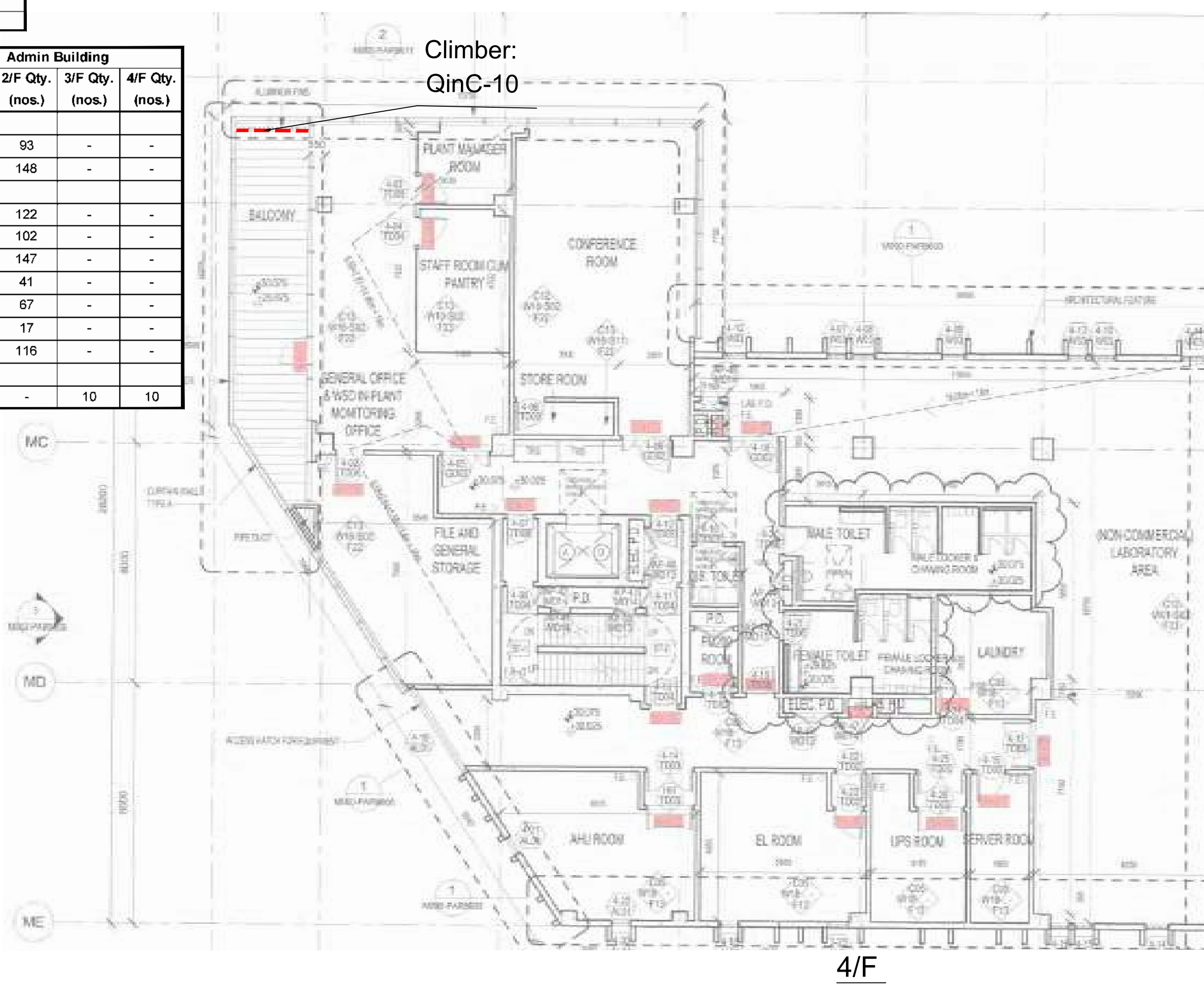
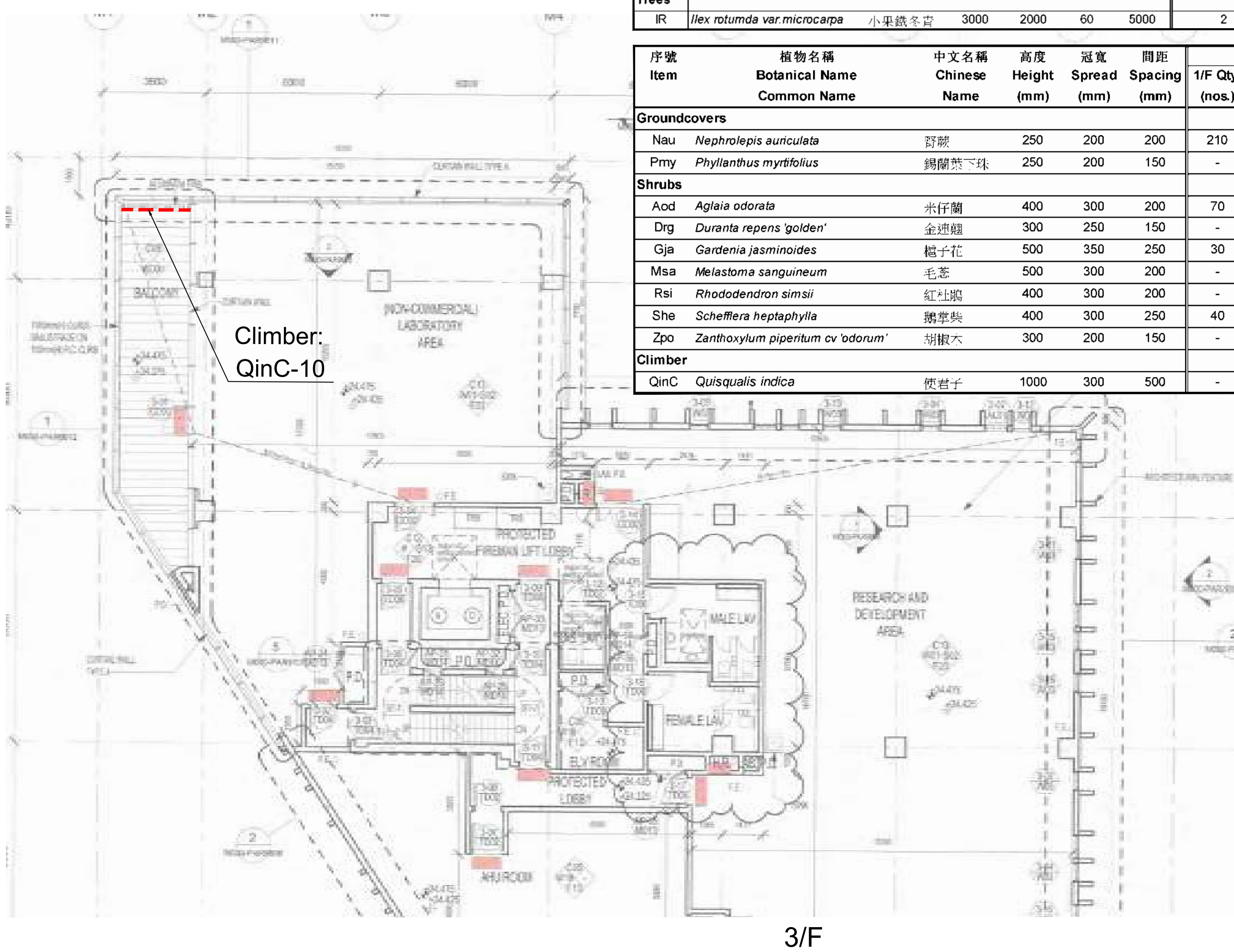
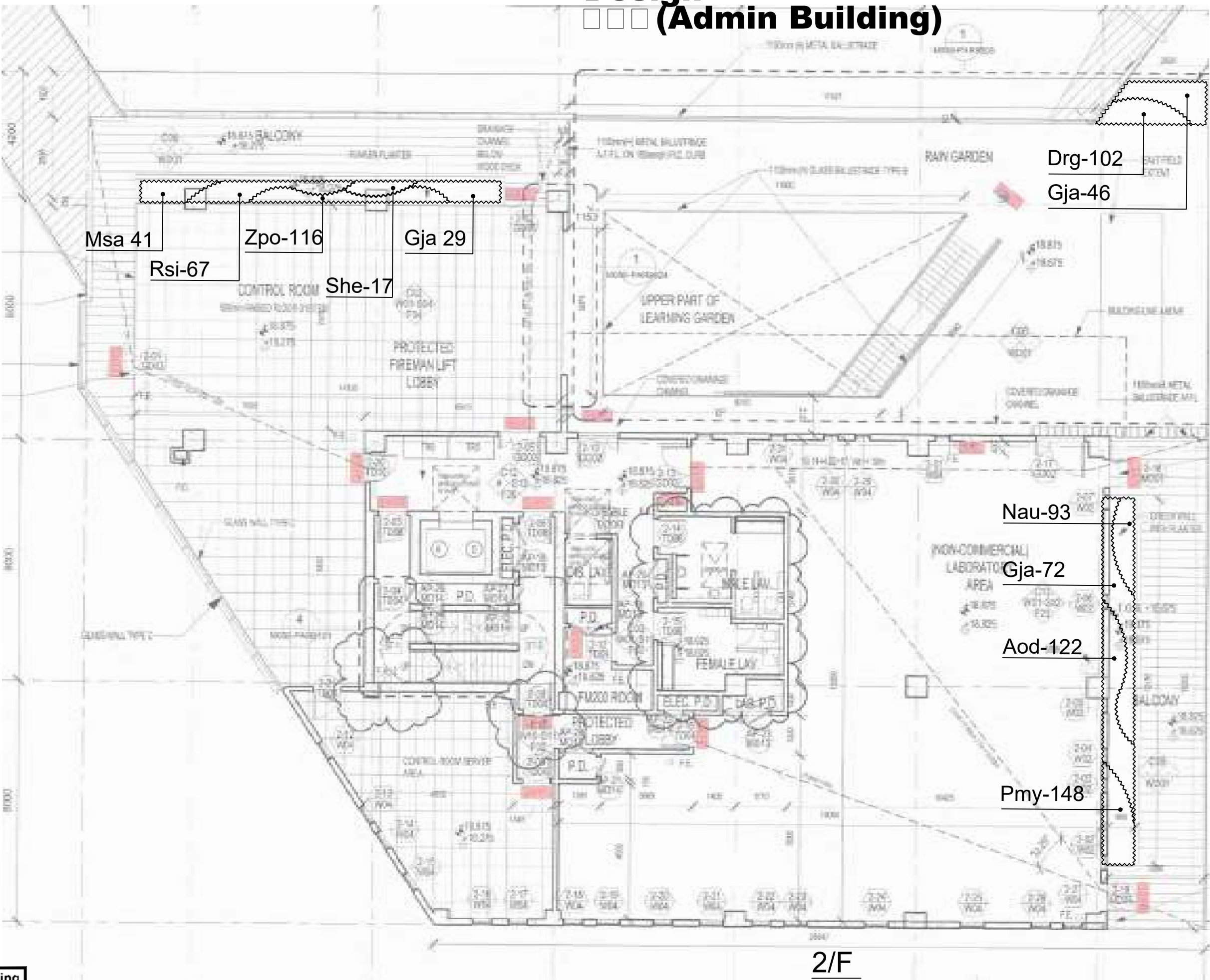
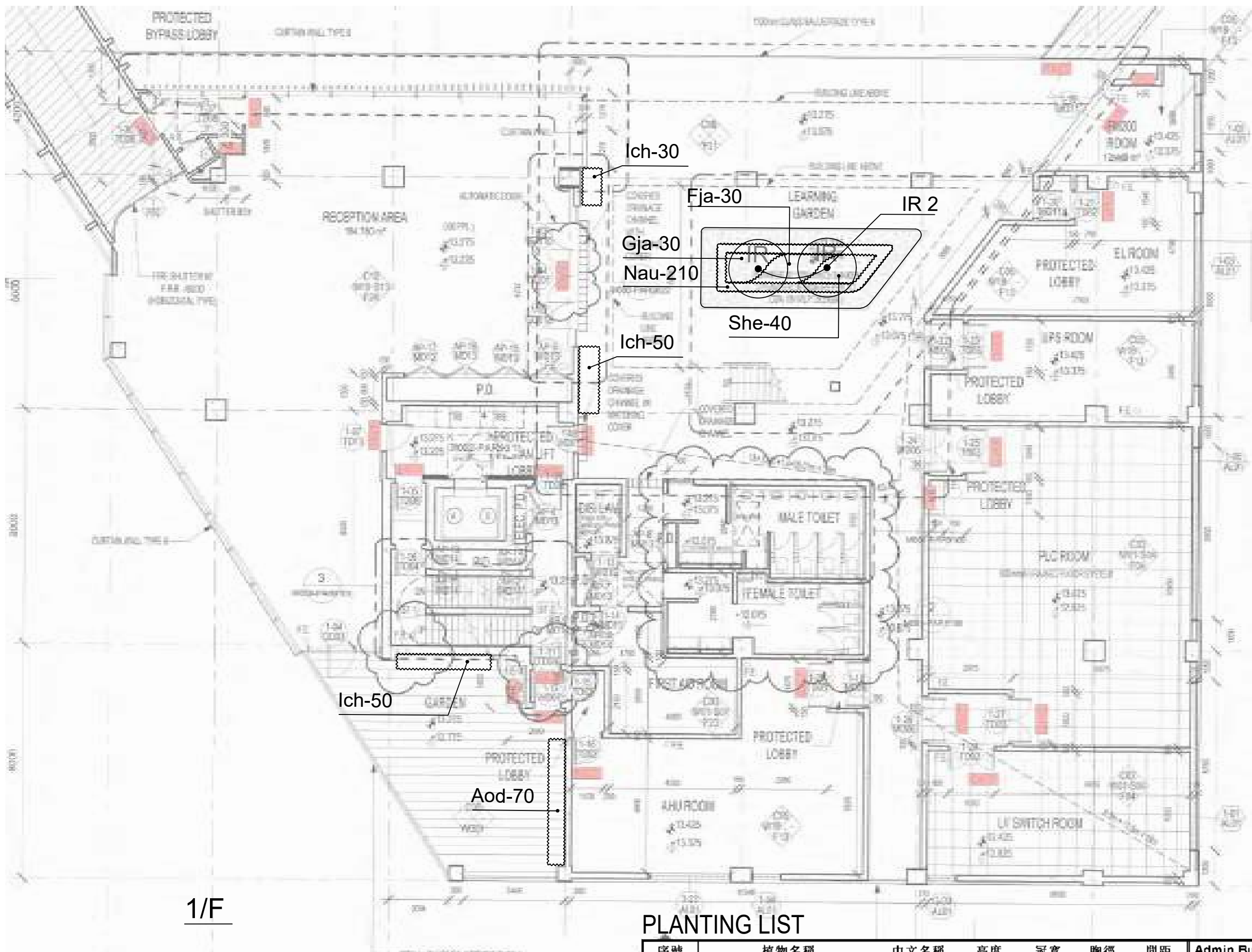


Appendix E - Soft Landscape Design

Landscape Design | Admin Building



Appendix E - Soft Landscape Design (Admin Building)

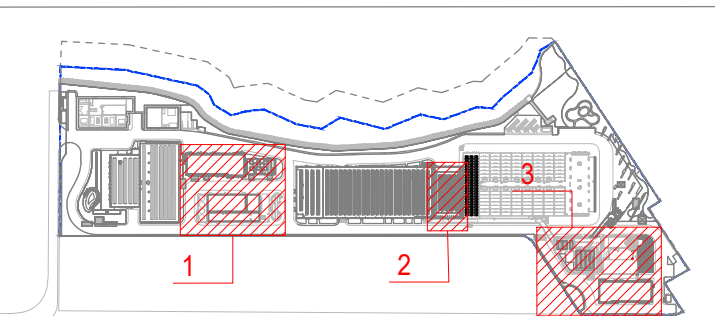


PLANTING LIST

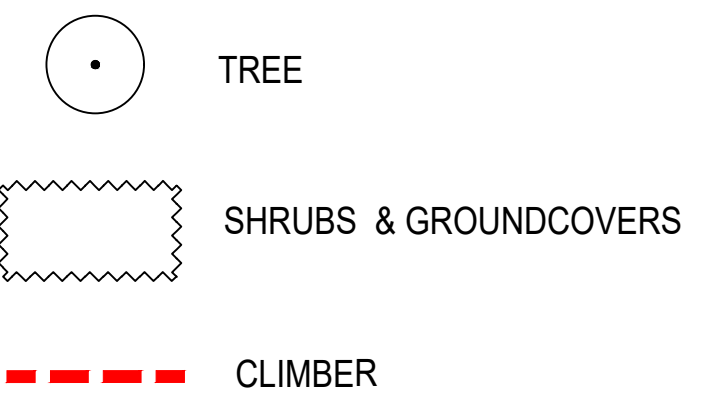
序號 Item	植物名稱 Botanical Name Common Name	中文名稱 Chinese Name	高度 Height (mm)	冠寬 Spread (mm)	胸徑 DBH (mm)	間距 Spacing (mm)	Admin Building 1/F Qty. (nos.)
Trees							
IR	<i>Ilex rotunda</i> var. <i>microcarpa</i>	小葉鐵冬青	3000	2000	60	5000	2

序號 Item	植物名稱 Botanical Name Common Name	中文名稱 Chinese Name	高度 Height (mm)	冠寬 Spread (mm)	間距 Spacing (mm)	Admin Building 1/F Qty. (nos.)	2/F Qty. (nos.)	3/F Qty. (nos.)	4/F Qty. (nos.)
Groundcovers									
Nau	<i>Nephrolepis auriculata</i>	腎蕨	250	200	200	210	93	-	-
Pmy	<i>Phyllanthus myrtilifolius</i>	錦蘭葉下珠	250	200	150	-	148	-	-
Shrubs									
Aod	<i>Aglaia odorata</i>	米仔蘭	400	300	200	70	122	-	-
Drg	<i>Duranta repens</i> 'golden'	金蓮花	300	250	150	-	102	-	-
Gja	<i>Gardenia jasminoides</i>	梔子花	500	350	250	30	147	-	-
Msa	<i>Melastoma sanguineum</i>	毛萼	500	300	200	-	41	-	-
Rsi	<i>Rhododendron simsii</i>	紅杜鵑	400	300	200	-	67	-	-
She	<i>Schefflera heptaphylla</i>	鵝掌柴	400	300	250	40	17	-	-
Zpo	<i>Zanthoxylum piperitum</i> cv. 'odorum'	胡椒木	300	200	150	-	116	-	-
Climber									
QinC	<i>Quisqualis indica</i>	使君子	1000	300	500	-	-	10	10

KEY PLAN scale 1:6000



LEGEND:

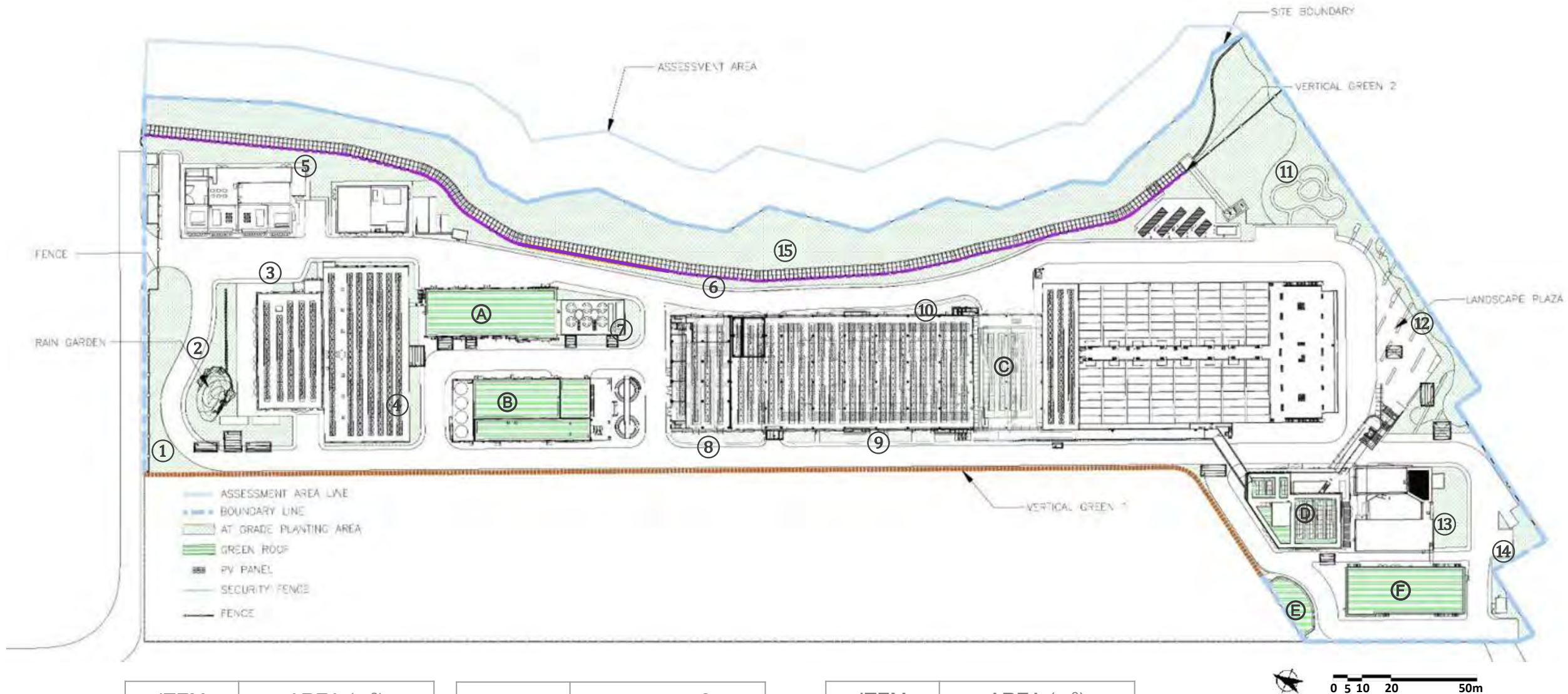


REMARKS:
NOT LESS THAN 1200mm CLEAR SOIL WIDTH AND DEPTH SHOULD BE PROVIDED FOR ALL TREE PLANTING AREAS AND 600mm SOIL DEPTH FOR SHRUBS AND 300mm SOIL DEPTH FOR GROUNDCOVERS.

Rev	Description	By	Date
Employer			
水務署 Water Supplies Department			
Supervising Officer designate			
binnies			
Design Checker			
ARCADIS Design & Consultancy for natural and built assets			
Contractor			
acciona JEC CEC AJC JOINT VENTURE			
Designer			
wsp In Association with APU			
Project title			
CONTRACT NO. 13/WSD/17 DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
PLANTING PLAN – ADMIN BUILDING			
Drawing no.			
TKOD1-DWG-A000-WLA3114			
Rev.			
-			
Drawn	Date	Checked	Approved
AC	10 MAY 2021	XL	-
Scale	1:1250A1	Status	DETAILED DESIGN APPROVAL
©COPYRIGHT RESERVED			

Appendix E - Soft Landscape Design

Landscape Design | Green Area Calculation



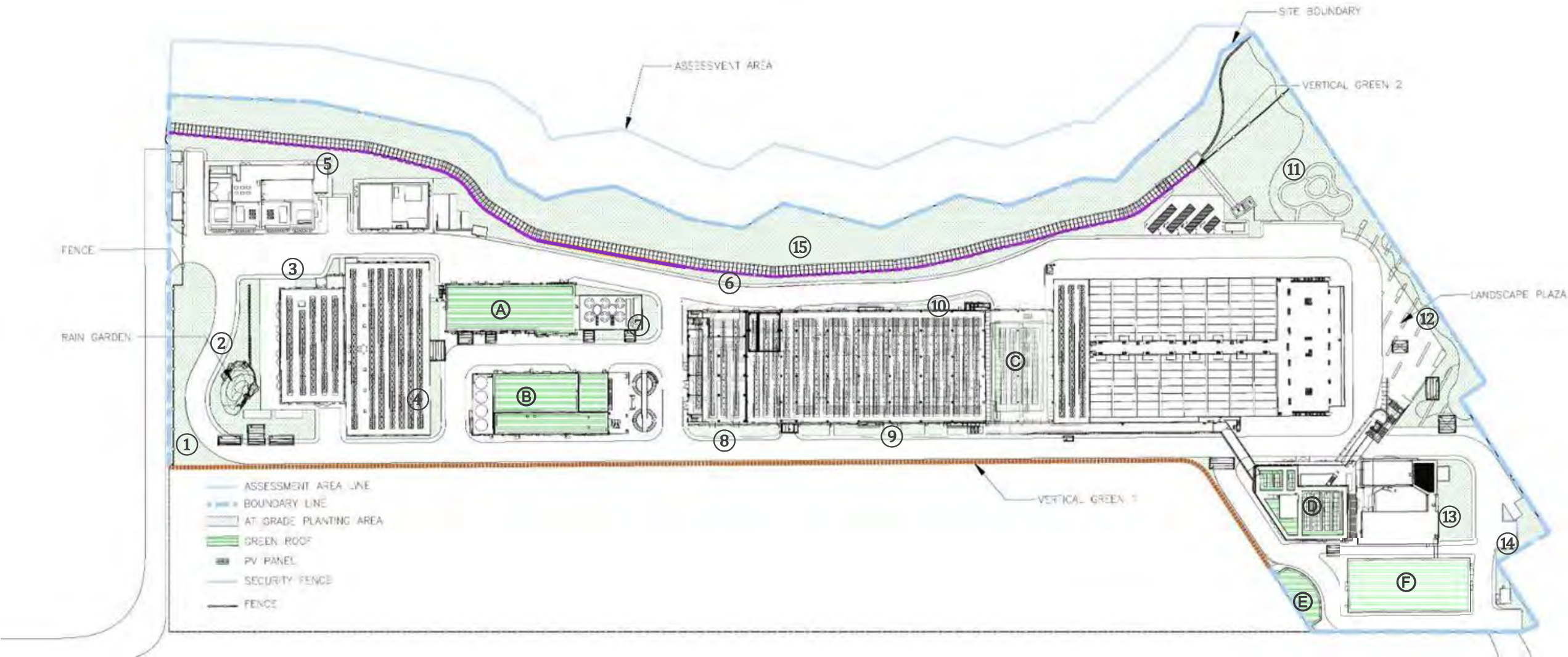
ITEM	AREA (m ²)
①	1252.578
②	736.357
③	42.288
④	250.301
⑤	805.819
⑥	1101.13
⑦	196.241
⑧	109.888

ITEM	AREA (m ²)
⑨	200.463
⑩	91.075
⑪	2245.921
⑫	663.355
⑬	318.392
⑭	259.803
⑮	5426.849
TOTAL	13700.46

ITEM	AREA (m ²)
A	696.932
B	736.342
C	197.214
D	162.64
E	152.508
F	622.136
TOTAL	2,567.772

Appendix E - Soft Landscape Design

Landscape Design | Green Area Calculation



SITE BOUNDARY: 56,120.8 SQM
30% GREENERY REQUIREMENT: 16,836.2 SQM
15% AT GRADE REQUIREMENT: 8,418.12 SQM
MAX. 30% CAP OF ALL GREENERY (VERTICAL GREEN, GRASS PAVER, COVERED PLANTING AREA): 5,050.86 SQM

AT GRADE TOTAL PLANTING AREA (EXCLUDING VERTICAL GREENING) : 13,700.46 SQM (Hence, the at grade greenery calculation requirement is achieved)
[1+2+3+4+5+6+7+8+9+10+11+12+13+14+15]
GREEN ROOF (EXCLUDING VERTICAL GREENING) : 2,567.772 SQM
[A+B+C+D+E+F]

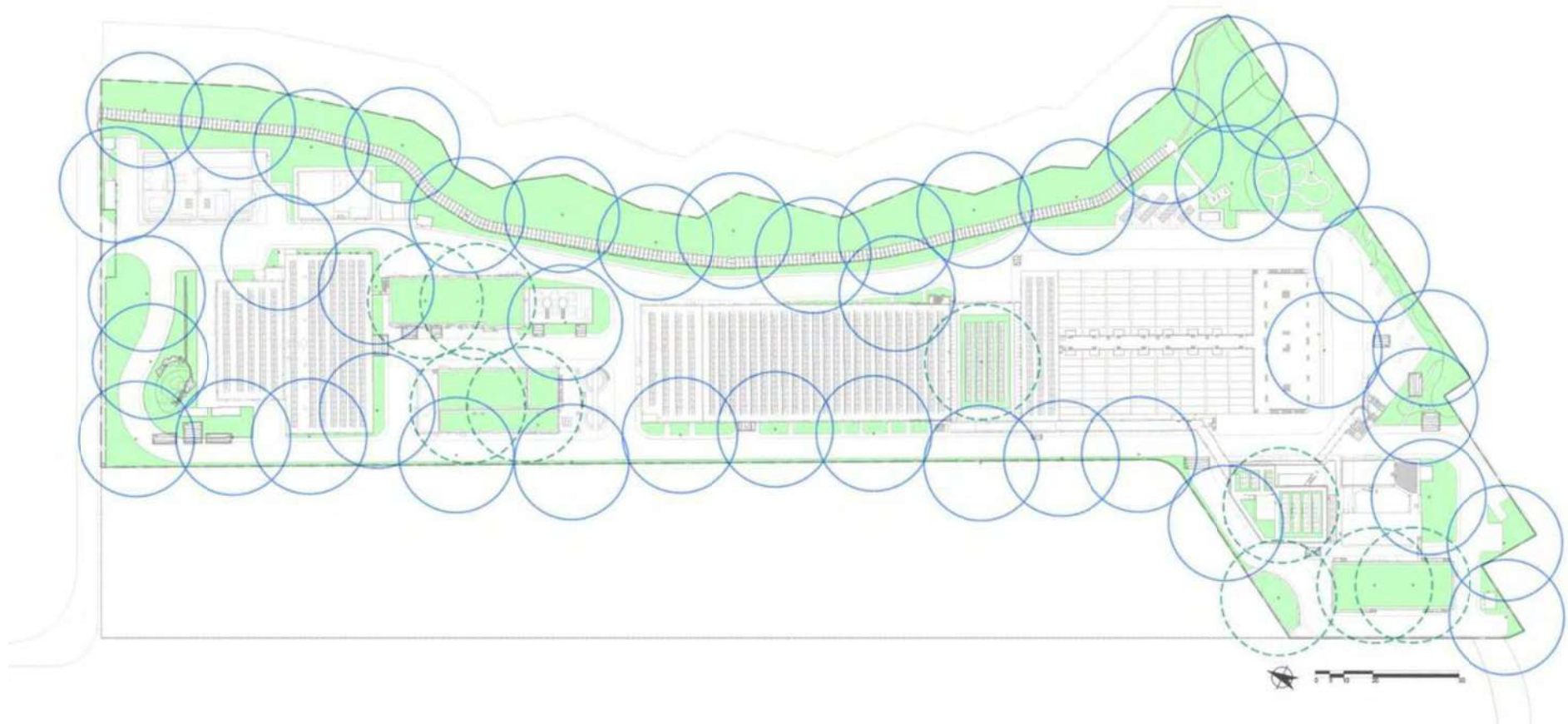
VERTICAL GREEN 1: 585.137(L) X 3(H) = 1,755.411 SQM (Detail refer to A15 and A16)

VERTICAL GREEN 2: 222.689(L) X 1.5(H) = 334.034 SQM (Detail refer to A14)

TOTAL GREENERY AREA: 13,700.46 + 2,567.772 + 1,755.411 + 334.034 = 18,357.677 SQM (32.71%)

Proposed GAC 32.7% (18358 SQ.M.) > Required GAC 30% (16836 SQ.M.)

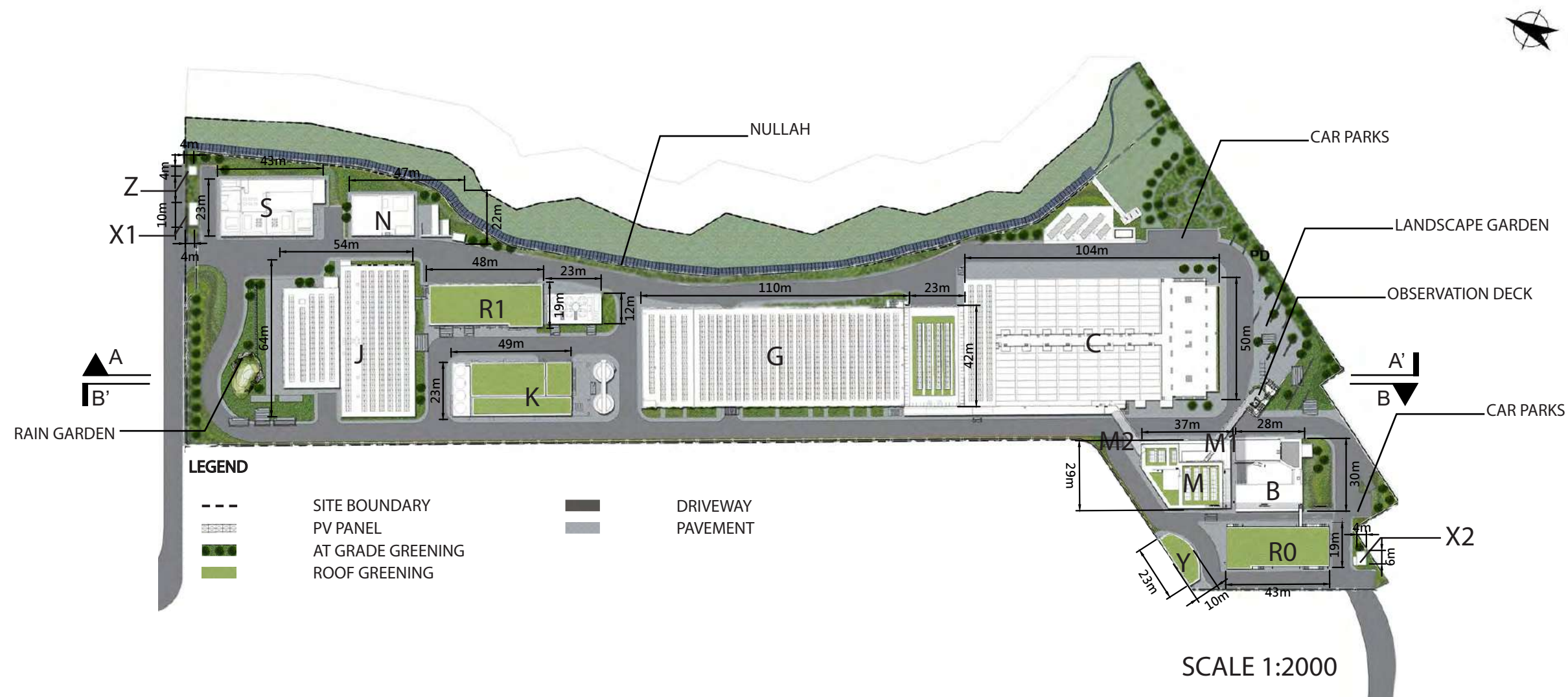
-  20m radius irrigation point on G/F
-  20m radius irrigation point on Rooftop



Appendix F – Hard Landscape Design



App F - Hard landscape design (Overview)



LEGEND

M - ADMINISTRATION BUILDING
M1 - ELEVATED WALKWAY
V - INSPECTION CORRIDOR
B - COMBINED INTAKE & OUTFALL SHAFT
R0 - CHEMICAL BUILDING
C - ACTIDAFF
G - REVERSE OSMOSIS & ELECTRICAL BUILDING
K - POST-TREATMENT BUILDING
J - PRODUCT WATER STORAGE TANK AND ELECTRICAL BUILDING
R1 - ON-SITE CHLORINE GENERATION SYSTEM BUILDING AND CO² TANK AREA

N - MAIN ELECTRICAL & CHILLER PLANT BUILDING
S - TKO DESALINATION PLANT SUBSTATION
Z - MASTER METER ROOM
X1 - GUARD HOUSE A
X2 - GUARD HOUSE B
Y - WORKSHOP



App F - Hard landscape design (Overview)



SCALE 1:1000



App F - Hard landscape design

□ □ □ (Overview)





Appendix F - Hard Landscape Design

M - ADMINISTRATION BUILDING



ELEVATION 1 (SCALE 1:300)



ELEVATION 2 (SCALE 1:300)

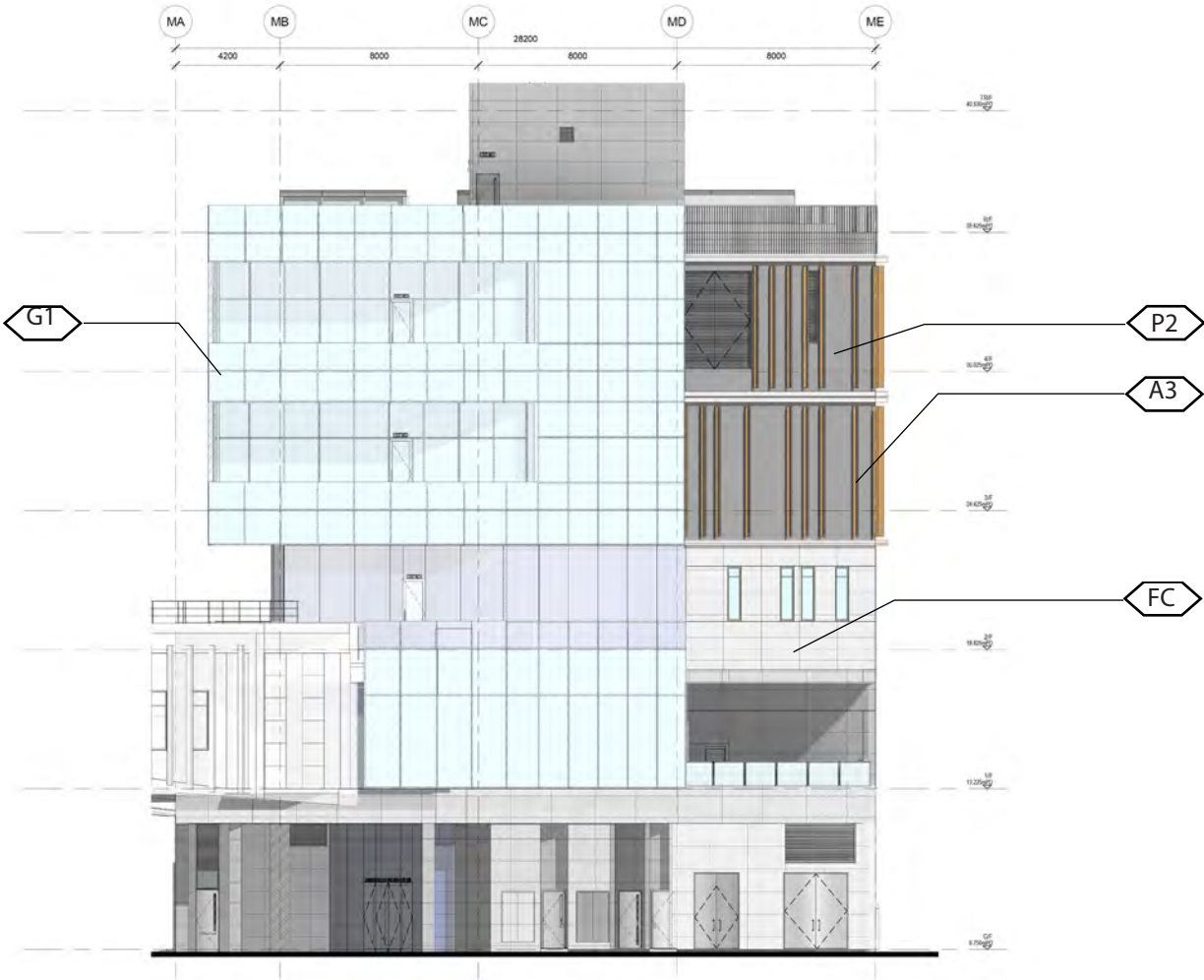
LEGEND

FAIRFACED CONCRETE	ALUMINIUM (BRIGHT COPPER)	ALUMINIUM (BLUE)	ALUMINIUM (W/. WOOD GRAIN PATTERN)	ALUMINIUM (WHITE)	ALUMINIUM (GREY)
S.S. (BEAD BLASTED)	CURTAIN WALL	GLASS WALL	GLASS BLOCK	GLASS WALL W/. REFLECTIVE COATING	
PAINT IN GRAY	TEXTURED PAINT IN GRAY	DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design

M - ADMINISTRATION BUILDING



ELEVATION 3 (SCALE 1:300)



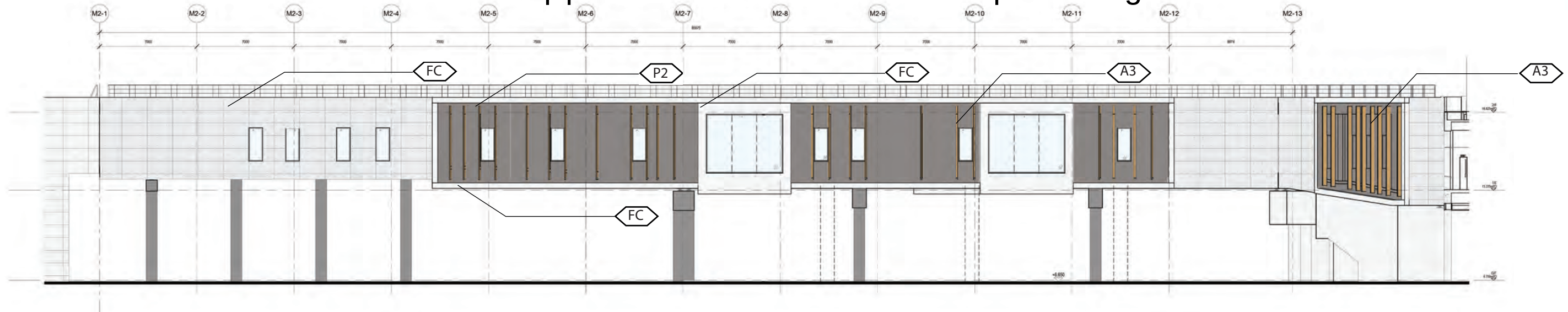
ELEVATION 4 (SCALE 1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

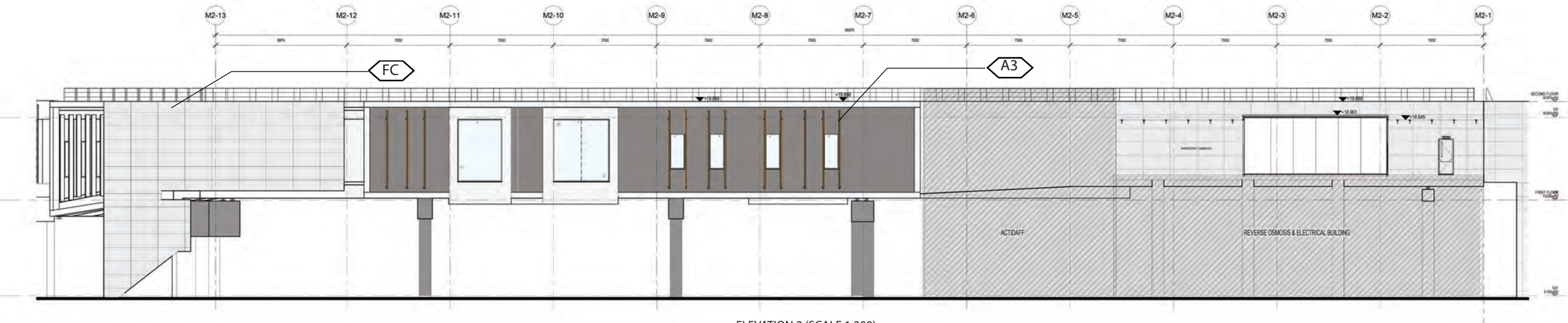


Appendix F - Hard Landscape Design

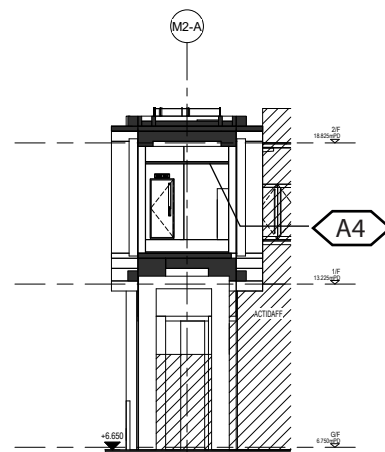
M2- INSPECTION CORRIDOR



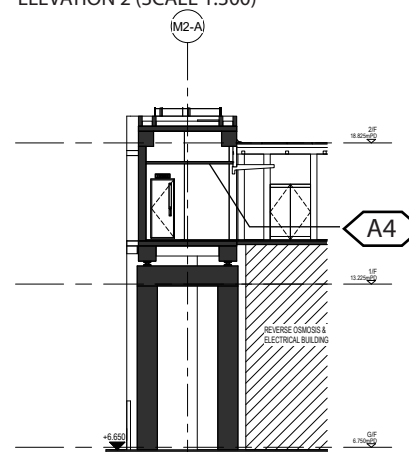
ELEVATION 1 (SCALE 1:300)



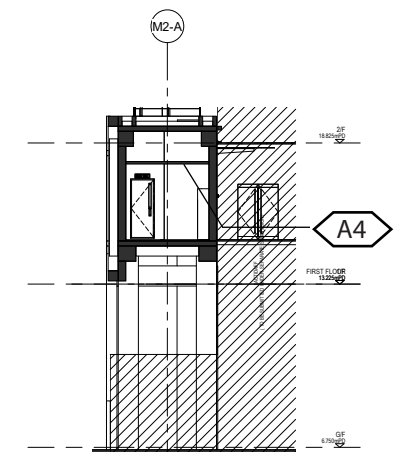
ELEVATION 2 (SCALE 1:300)



SECTION A-A (SCALE 1:300)



SECTION B-B (SCALE 1:300)



SECTION C-C (SCALE 1:300)

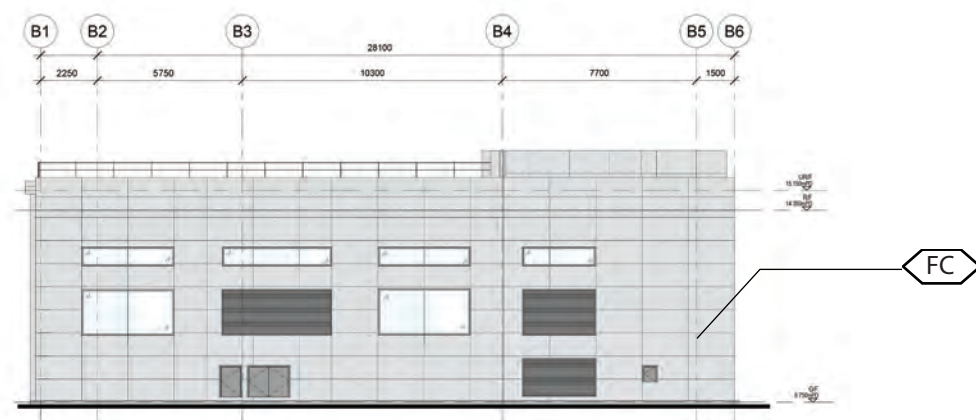
LEGEND

FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

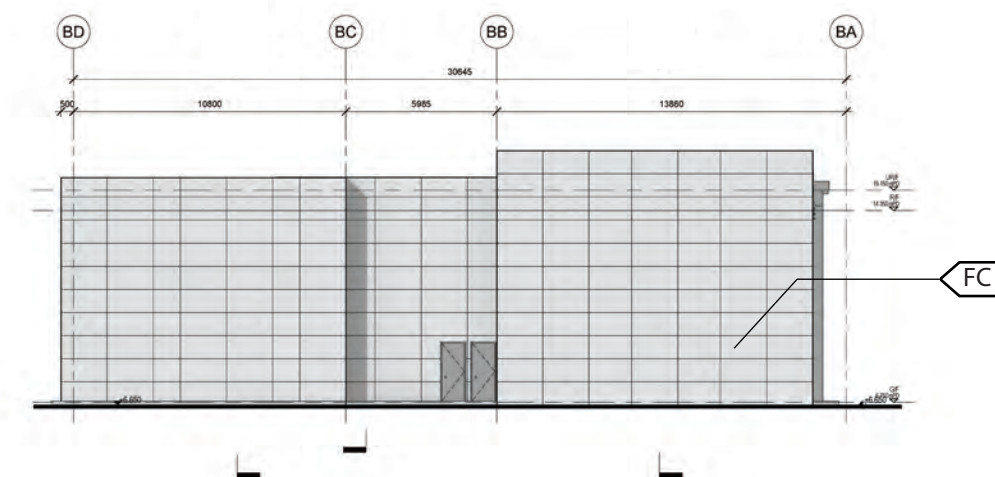
M2-03 - ELEVATION AND SECTION



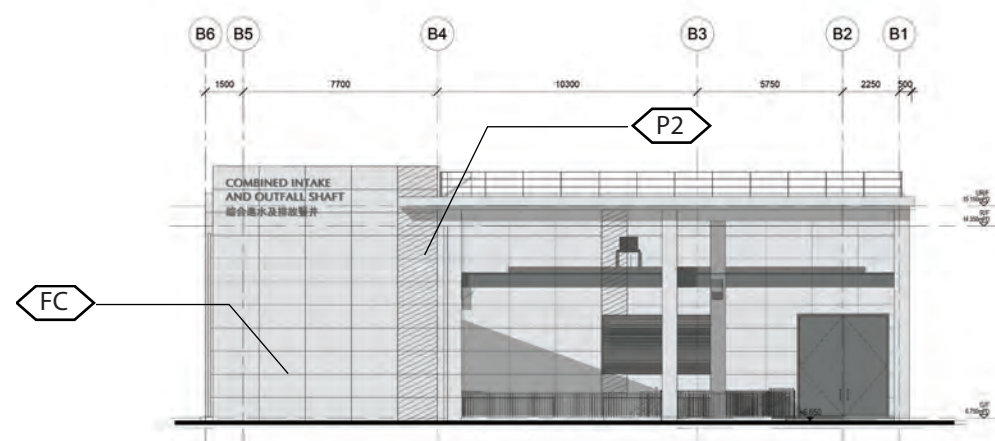
Appendix F - Hard Landscape Design B - COMBINED INTAKE & OUTFALL SHAFT



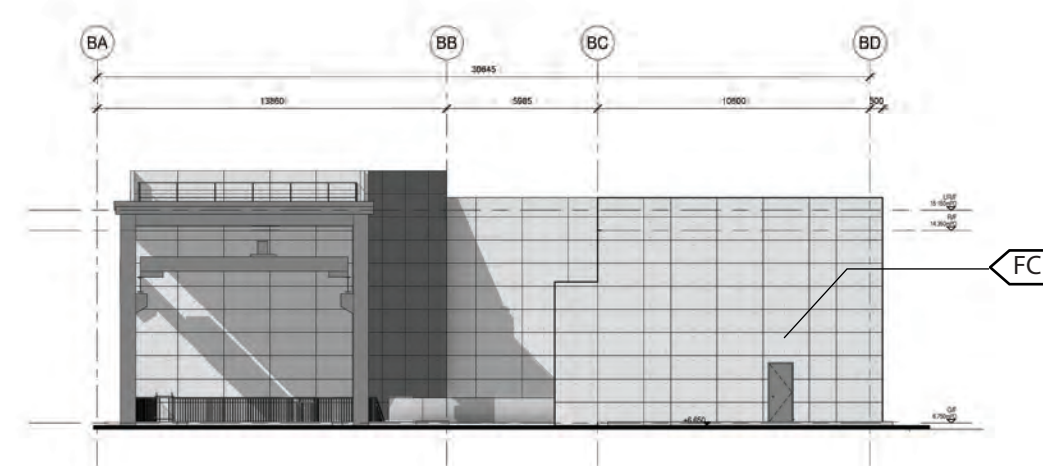
ELEVATION 1 (SCALE 1:300)



ELEVATION 2 (SCALE 1:300)



ELEVATION 3 (SCALE 1:300)



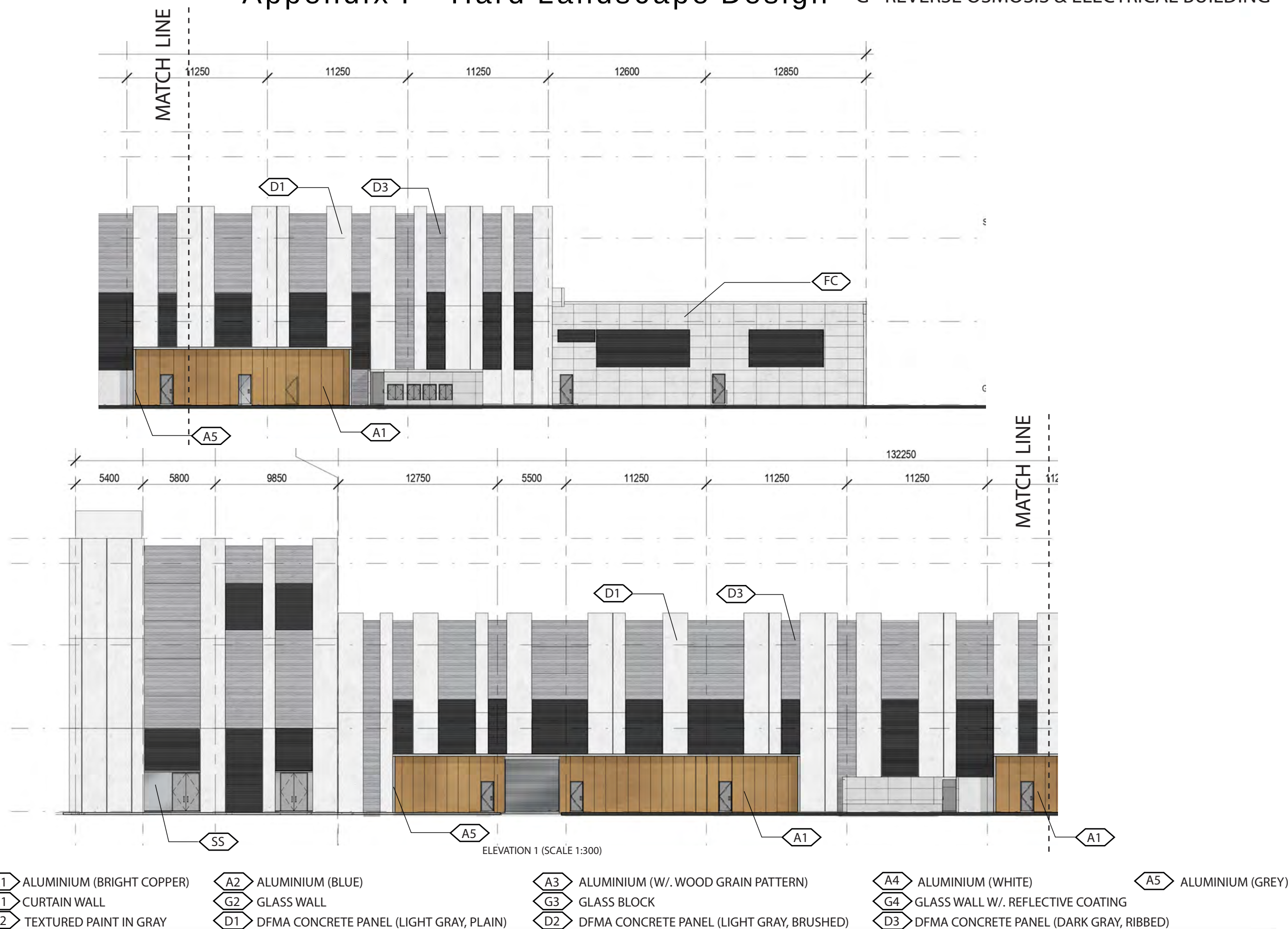
ELEVATION 4 (SCALE 1:300)

LEGEND

FAIRFACED CONCRETE	ALUMINIUM (BRIGHT COPPER)	ALUMINIUM (BLUE)	ALUMINIUM (W/. WOOD GRAIN PATTERN)	ALUMINIUM (WHITE)	ALUMINIUM (GREY)
S.S. (BEAD BLASTED)	CURTAIN WALL	GLASS WALL	GLASS BLOCK	GLASS WALL W/. REFLECTIVE COATING	
PAINT IN GRAY	TEXTURED PAINT IN GRAY	DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



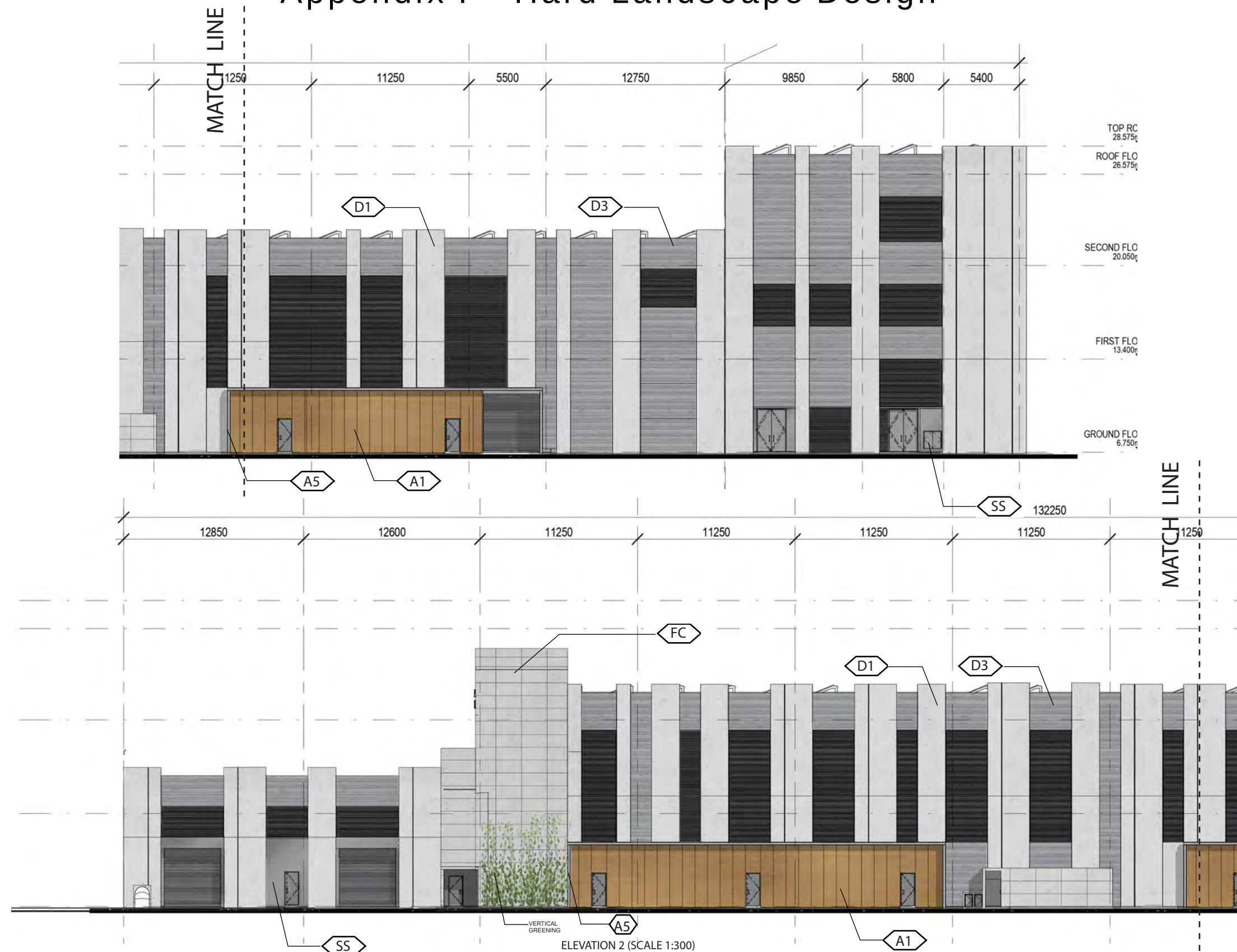
Appendix F - Hard Landscape Design G - REVERSE OSMOSIS & ELECTRICAL BUILDING





Appendix F - Hard Landscape Design

G - REVERSE OSMOSIS & ELECTRICAL BUILDING

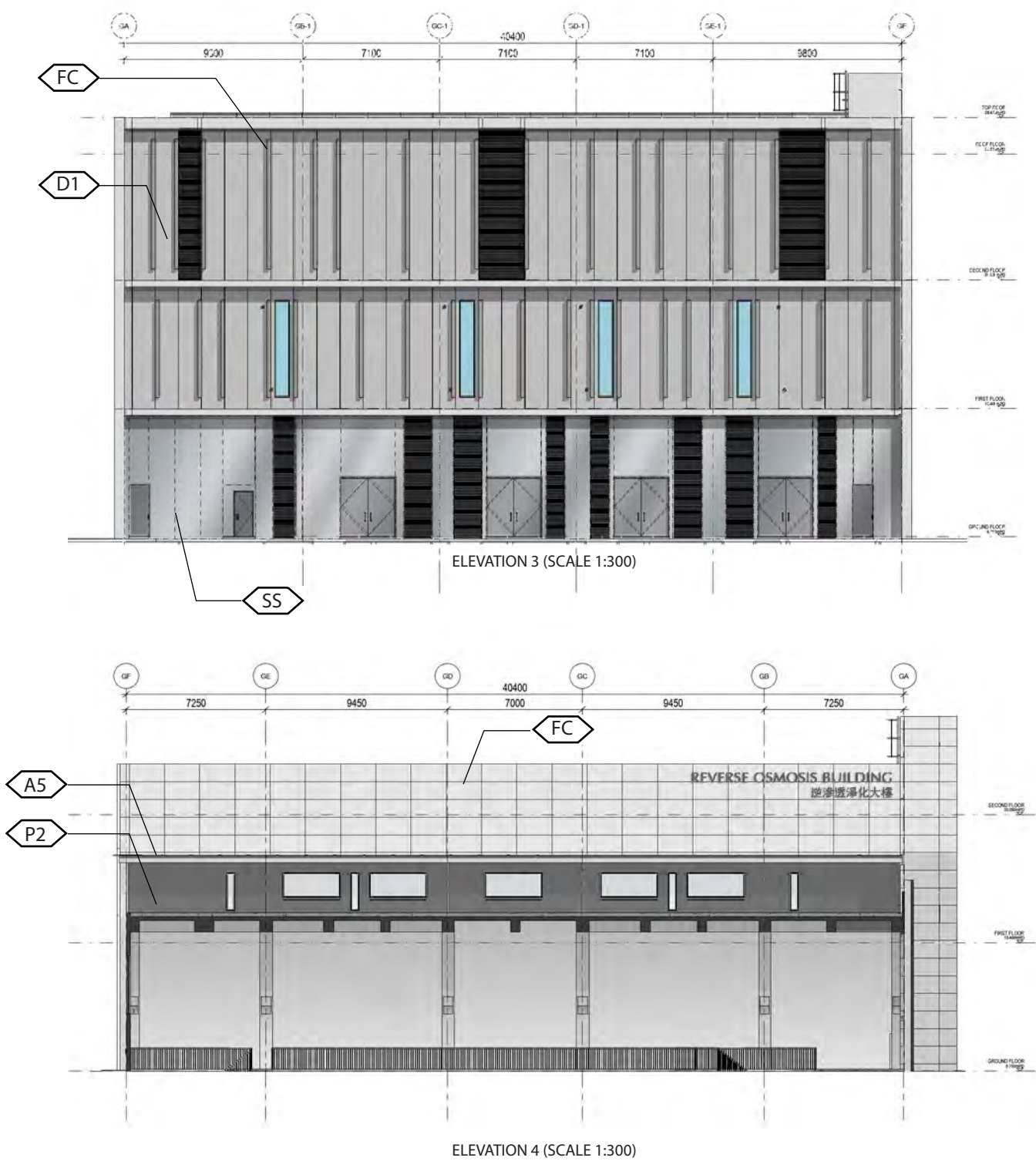


LEGEND

FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design G - REVERSE OSMOSIS & ELECTRICAL BUILDING

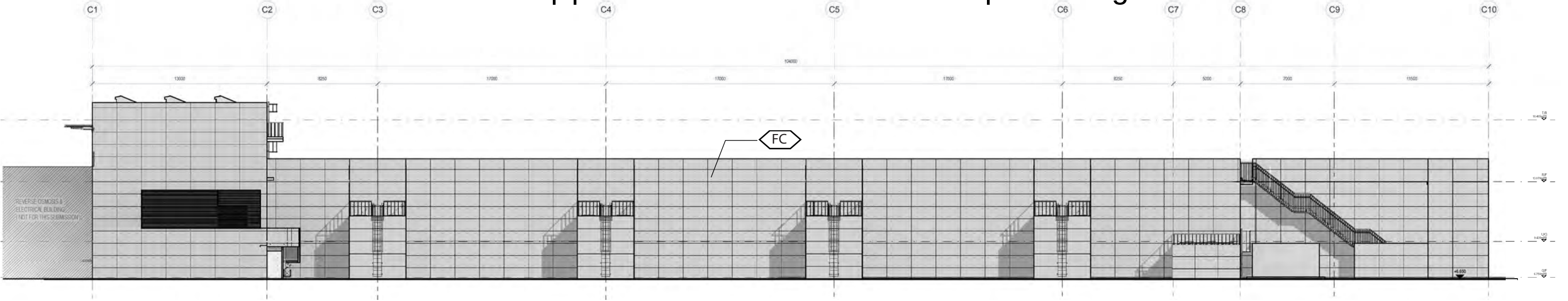


LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

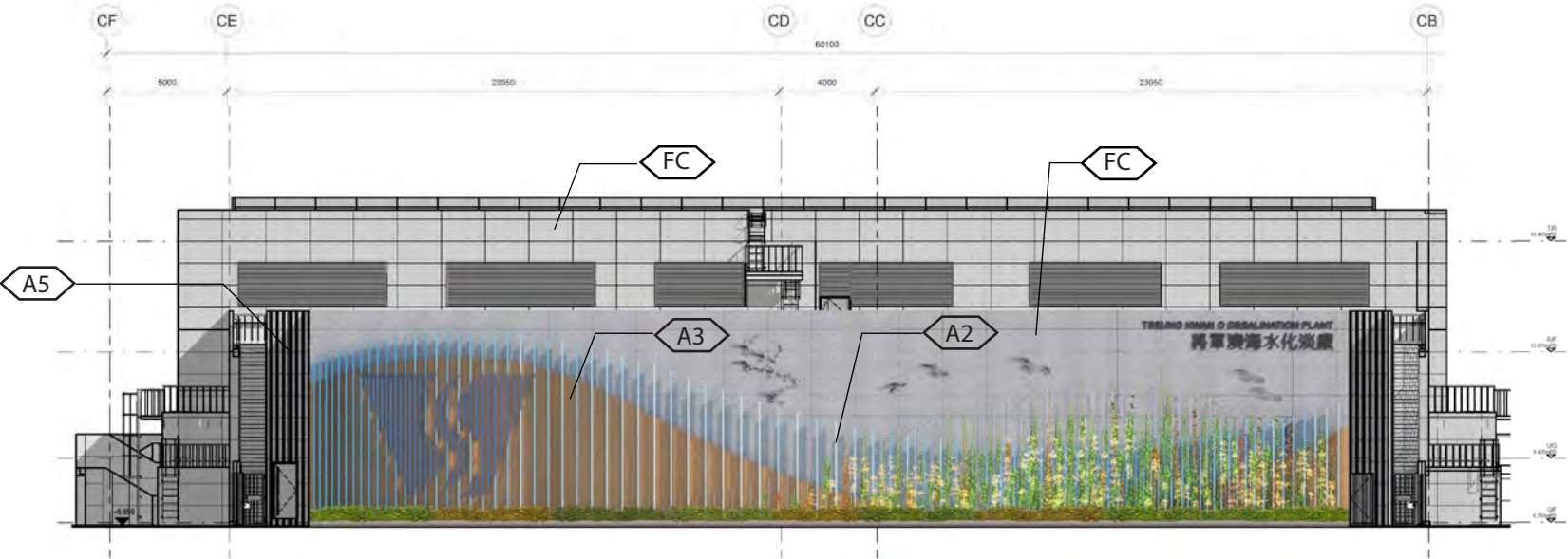


Appendix F - Hard Landscape Design

C - ACTIDAFF



ELEVATION 1 (SCALE 1:300)



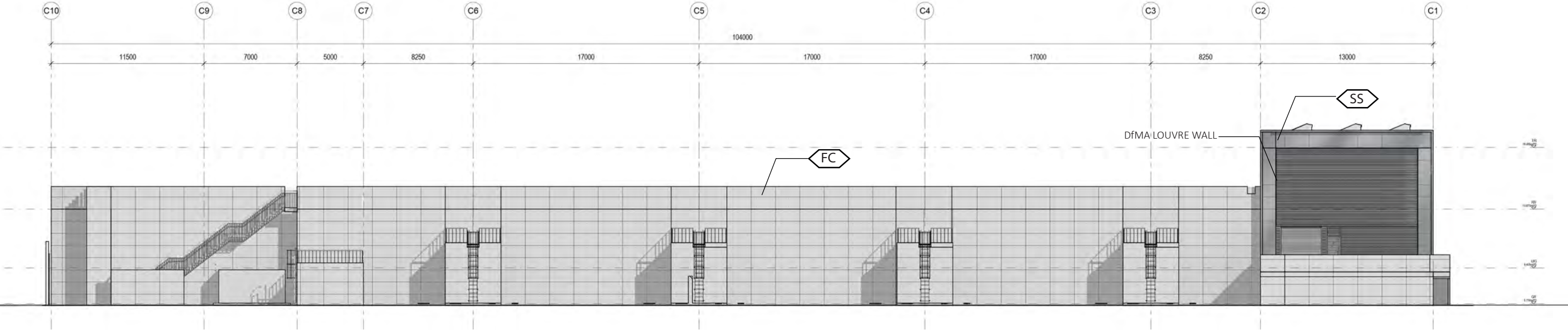
ELEVATION 2 (SCALE 1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

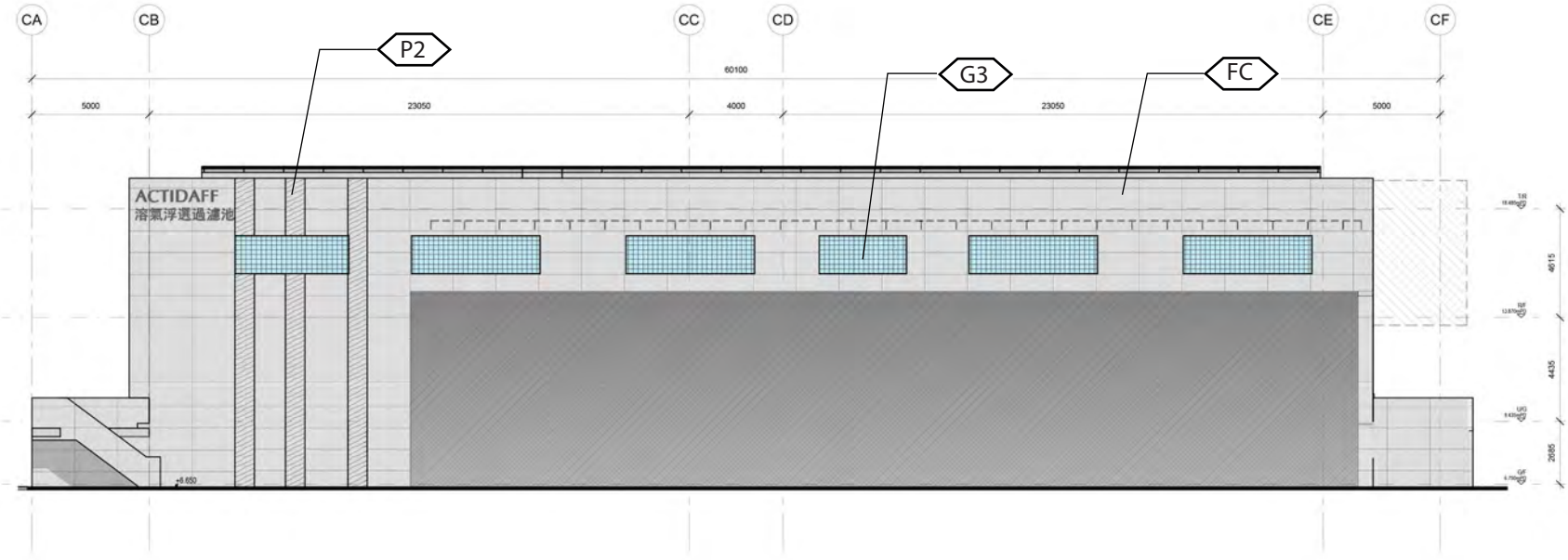


Appendix F - Hard Landscape Design

C - ACTIDAFF



ELEVATION 3 (SCALE 1:300)



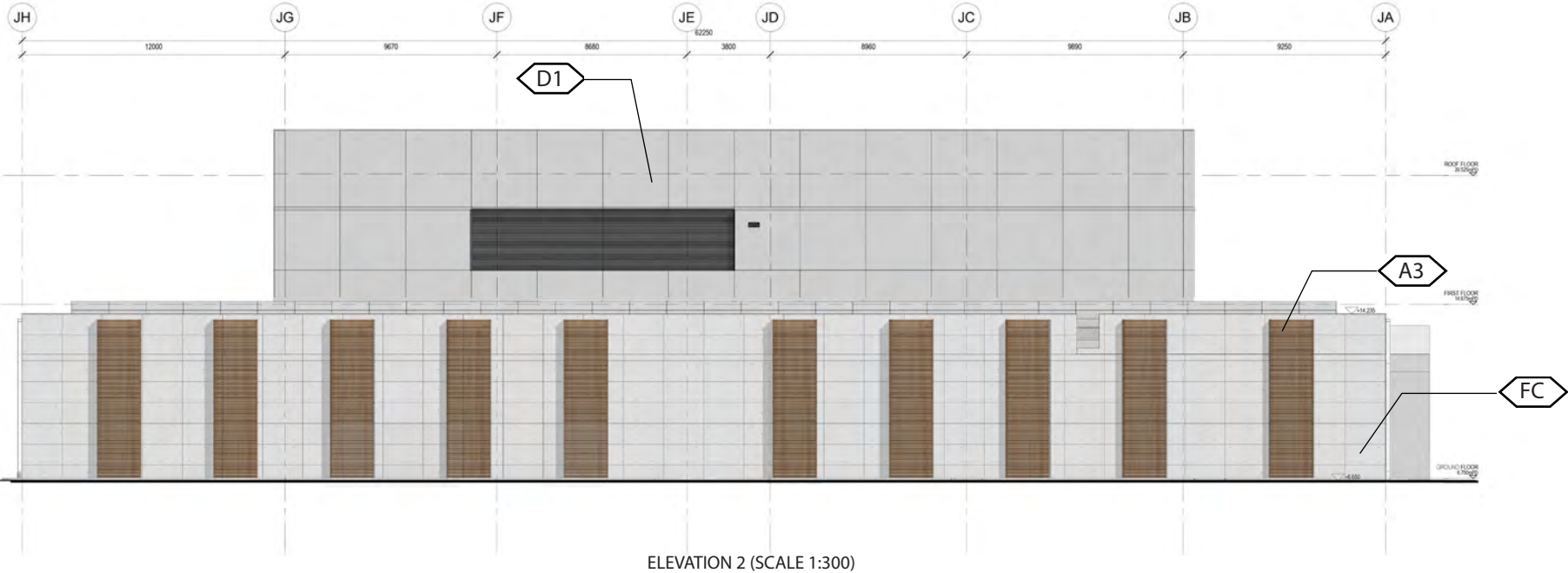
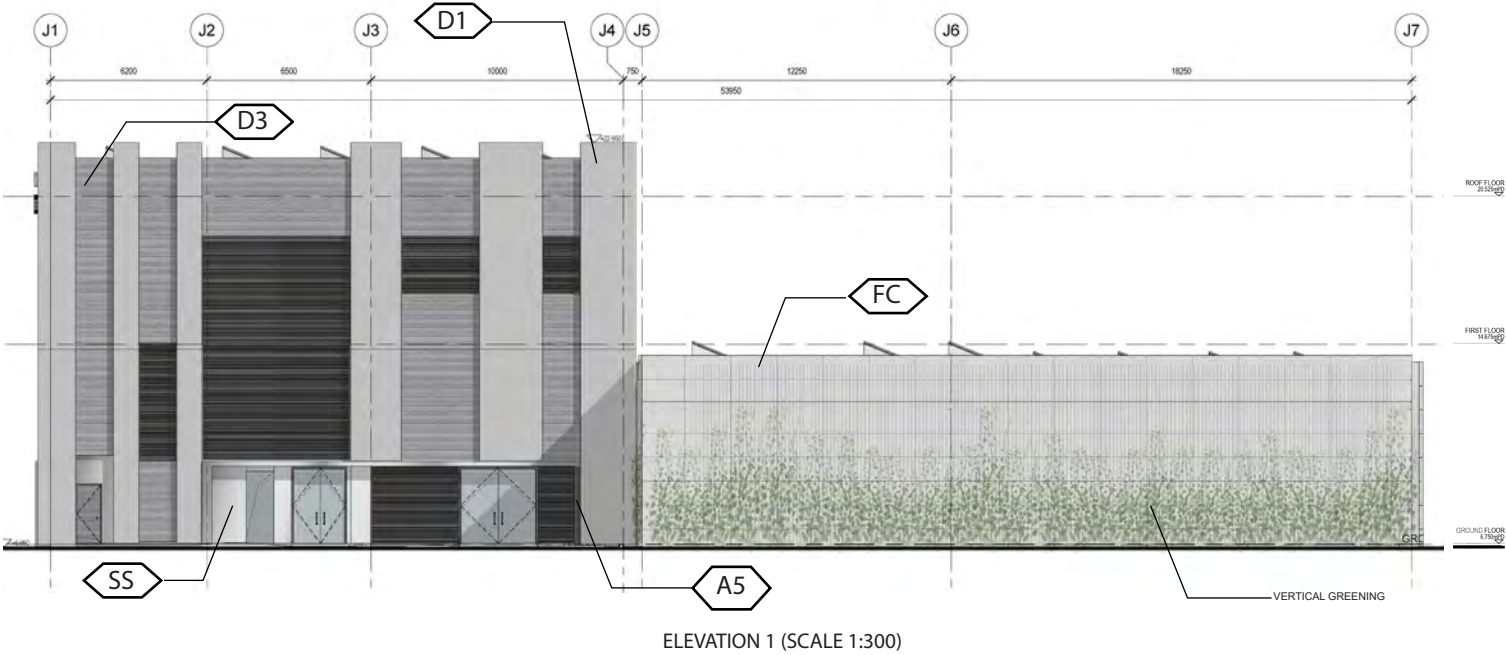
ELEVATION 4 (SCALE 1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design

J - PRODUCT WATER STORAGE TANK AND ELECTRICAL BUILDING

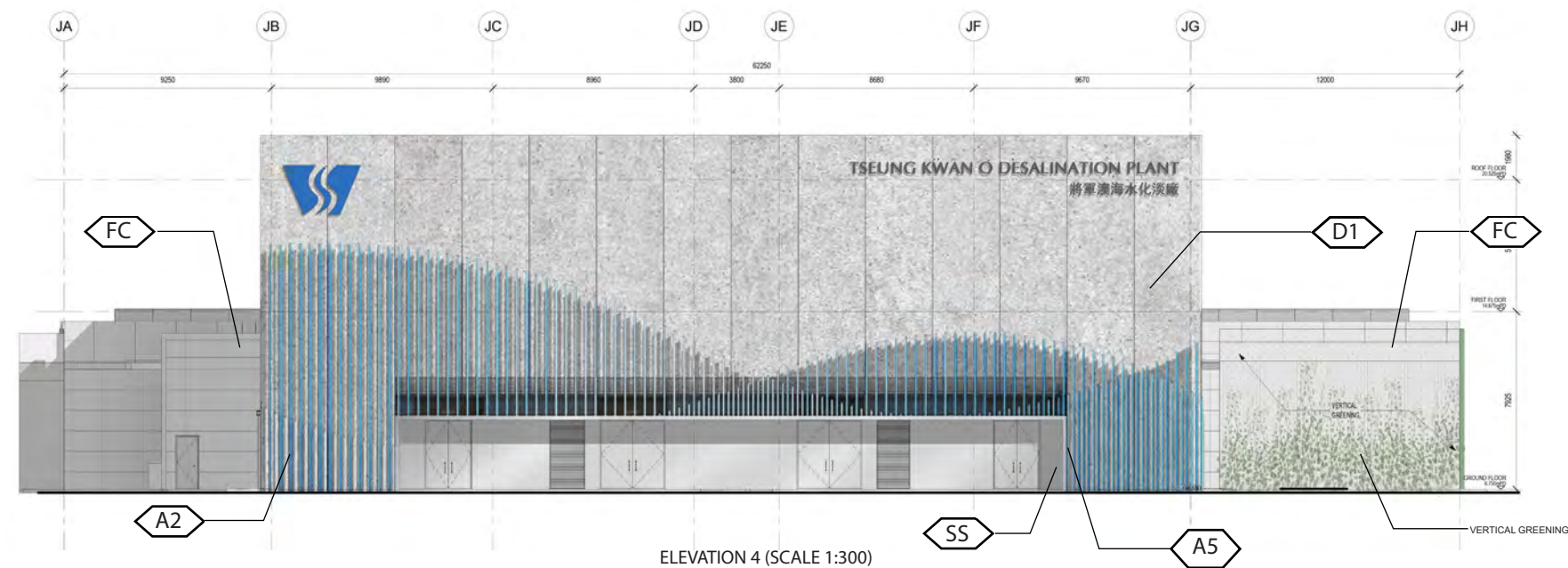
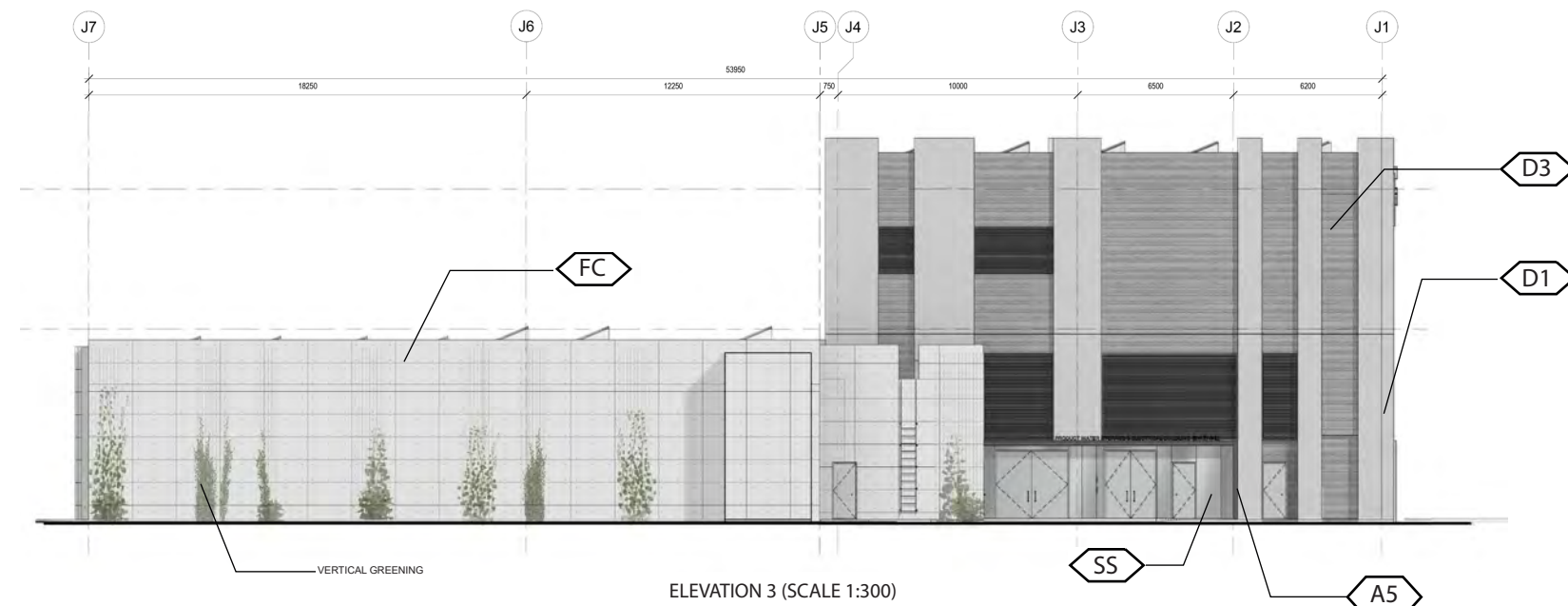


LEGEND					
FAIRFACED CONCRETE	ALUMINIUM (BRIGHT COPPER)	ALUMINIUM (BLUE)	ALUMINIUM (W/. WOOD GRAIN PATTERN)	ALUMINIUM (WHITE)	ALUMINIUM (GREY)
S.S. (BEAD BLASTED)	CURTAIN WALL	GLASS WALL	GLASS BLOCK	GLASS WALL W/. REFLECTIVE COATING	
PAINT IN GRAY	TEXTURED PAINT IN GRAY	DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design

J - PRODUCT WATER STORAGE TANK AND ELECTRICAL BUILDING



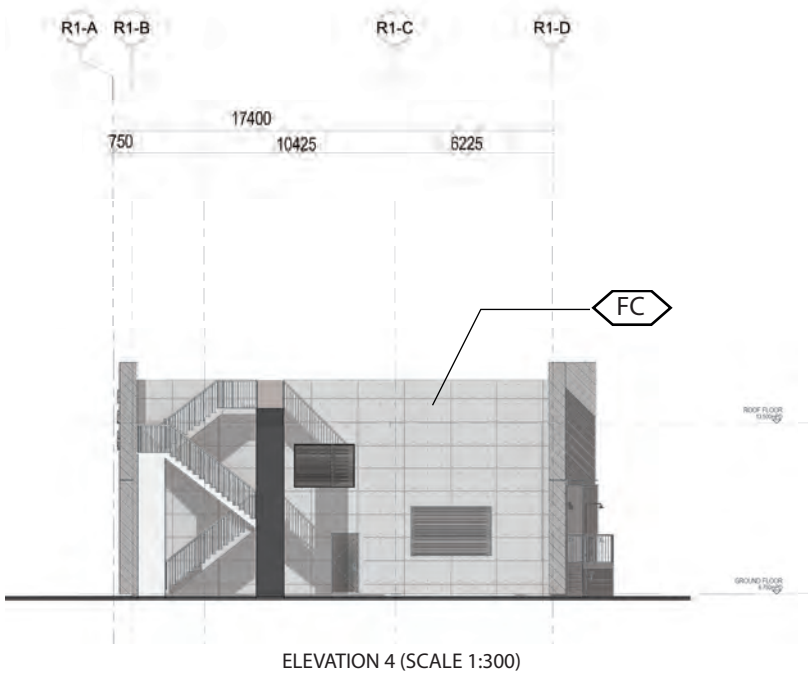
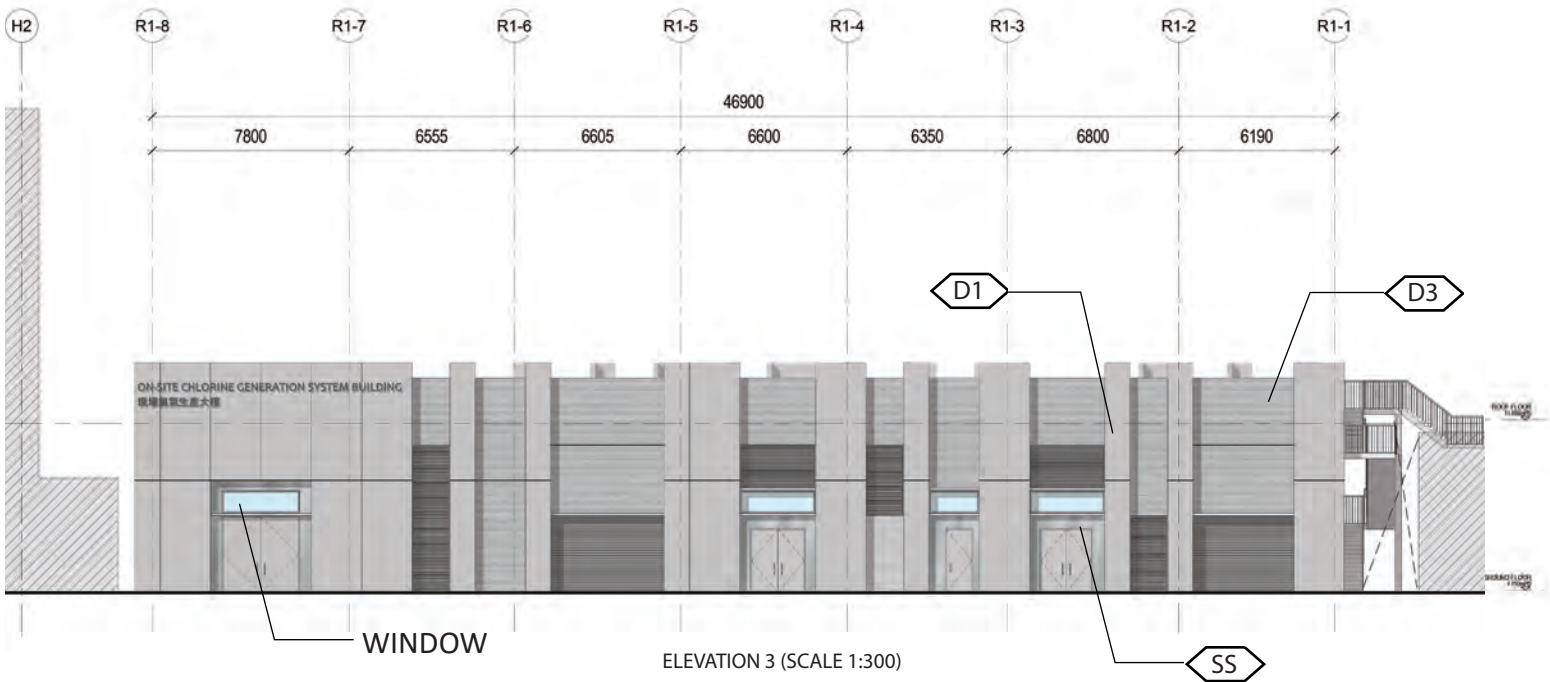
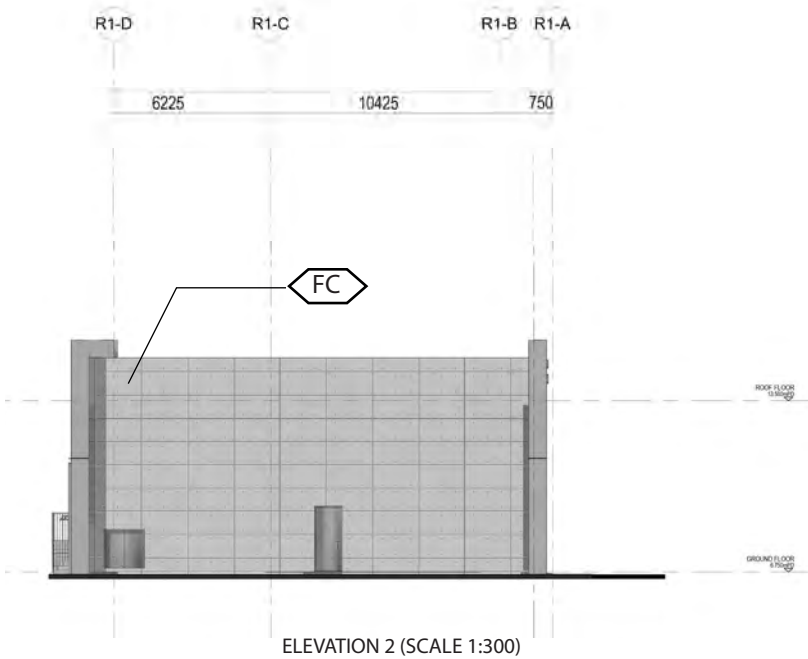
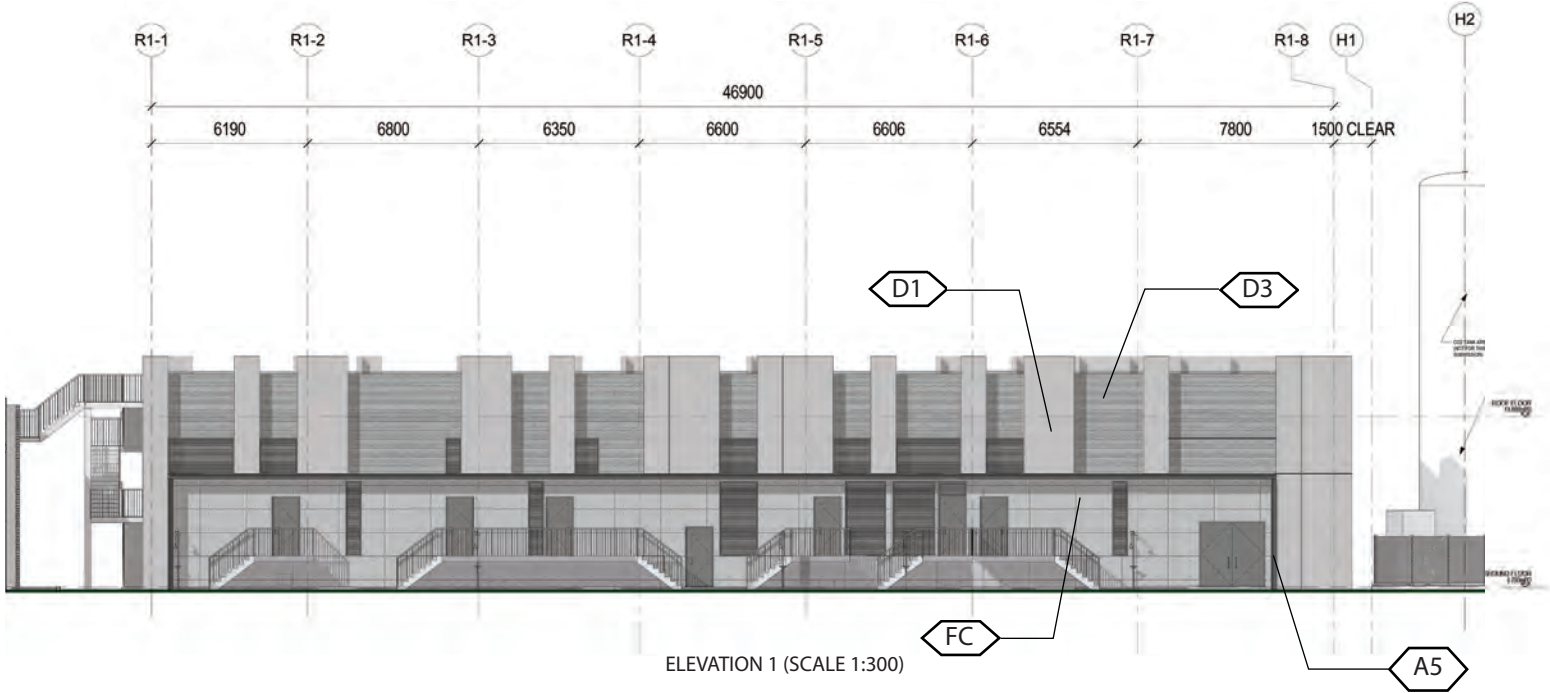
LEGEND

FAIRFACED CONCRETE	ALUMINIUM (BRIGHT COPPER)	ALUMINIUM (BLUE)	ALUMINIUM (W/. WOOD GRAIN PATTERN)	ALUMINIUM (WHITE)	ALUMINIUM (GREY)
S.S. (BEAD BLASTED)	CURTAIN WALL	GLASS WALL	GLASS BLOCK	GLASS WALL W/. REFLECTIVE COATING	
PAINT IN GRAY	TEXTURED PAINT IN GRAY	DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design

R1 - ON-SITE CHLORINE GENERATION SYSTEM BUILDING

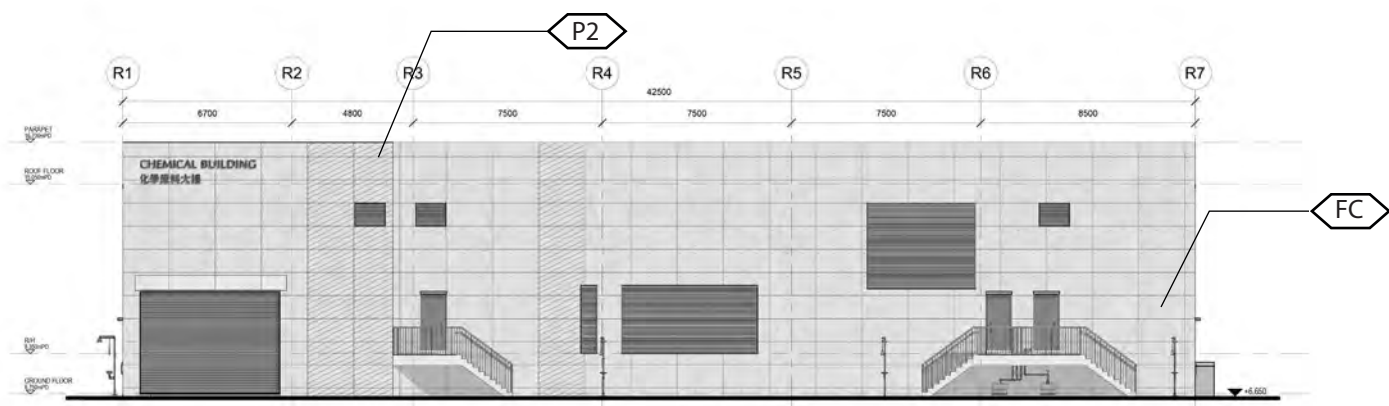


LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

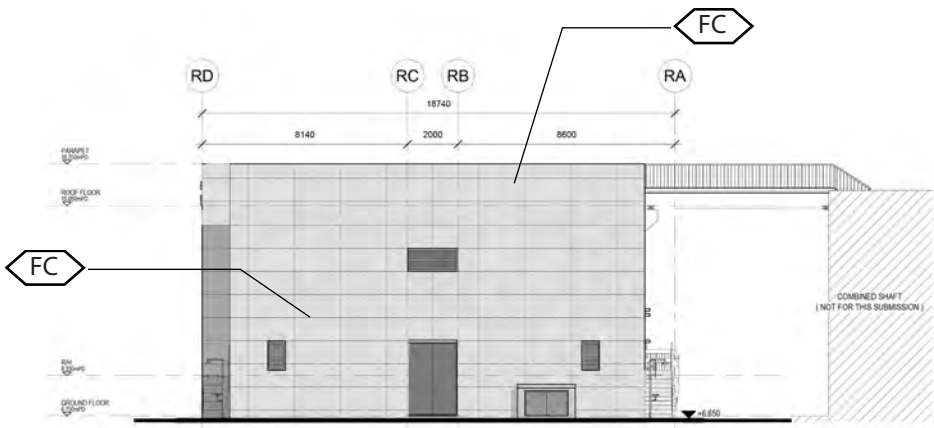


Appendix F - Hard Landscape Design

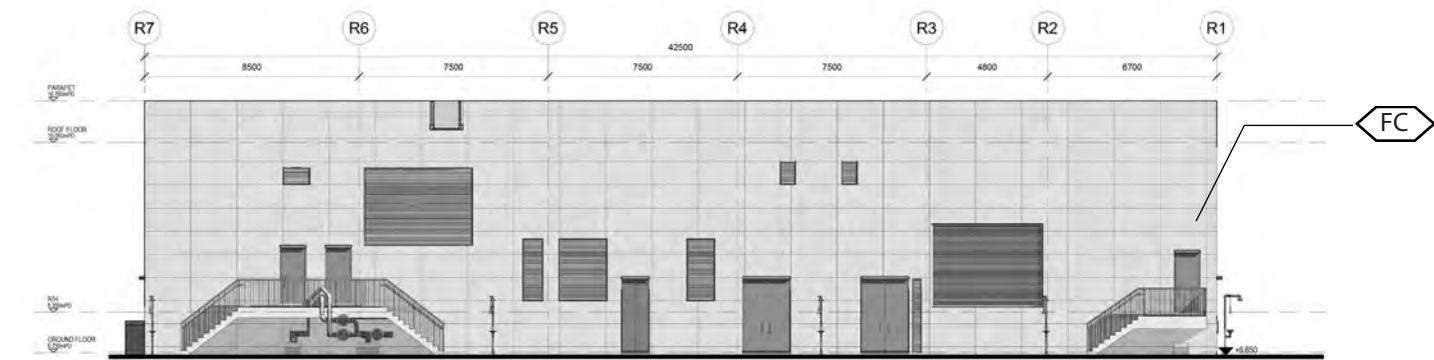
R0 - CHEMICAL BUILDING



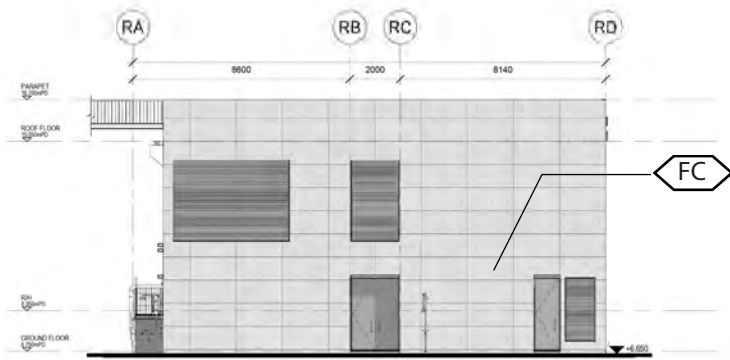
ELEVATION 1 (SCALE1:300)



ELEVATION 2 (SCALE1:300)



ELEVATION 3 (SCALE1:300)



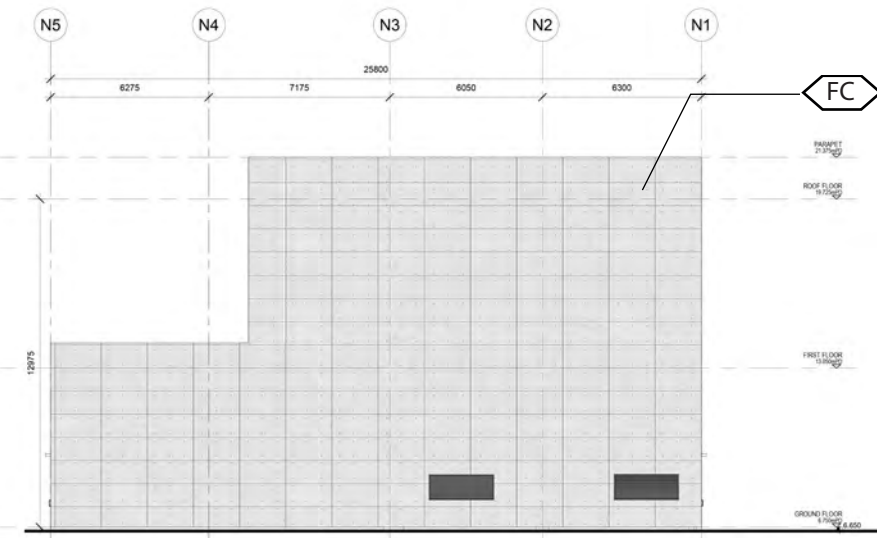
ELEVATION 4 (SCALE1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

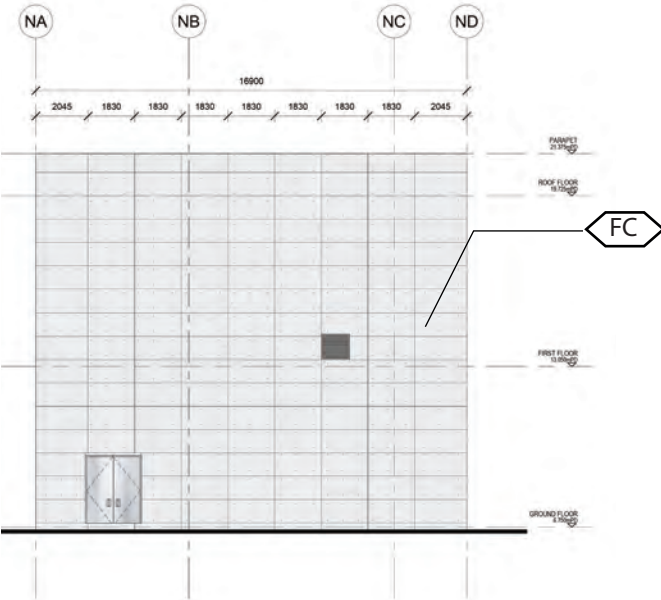


Appendix F - Hard Landscape Design

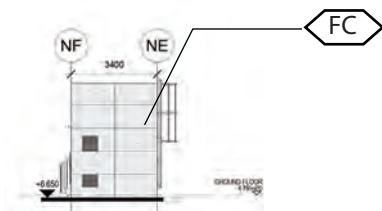
N - MAIN ELECTRICAL & CHILLER PLANT BUILDING



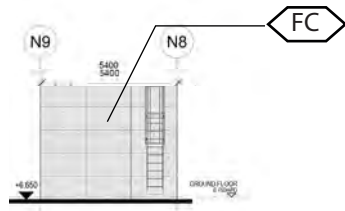
ELEVATION 1 (SCALE 1:300)



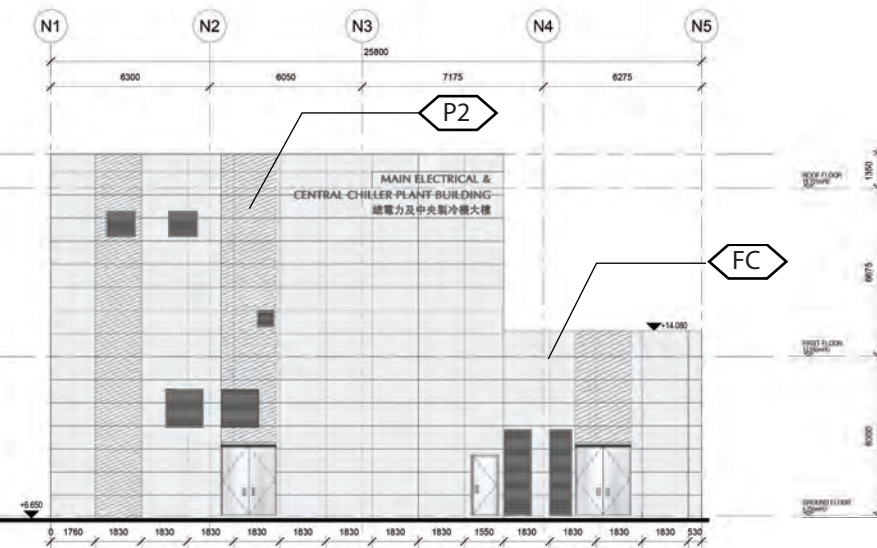
ELEVATION 2 (SCALE 1:300)



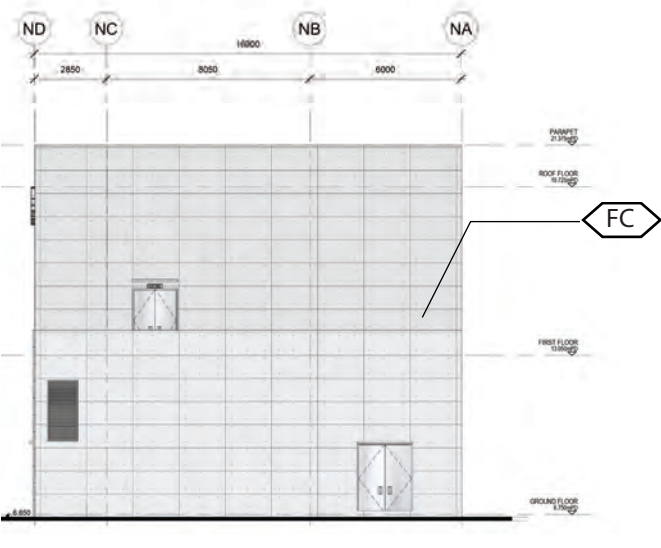
ELEVATION 5 (SCALE 1:300)



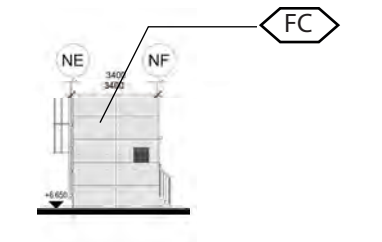
ELEVATION 6 (SCALE 1:300)



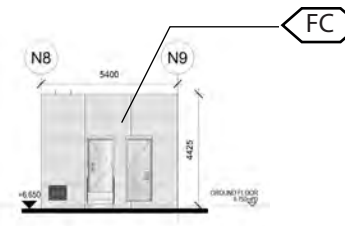
ELEVATION 3 (SCALE 1:300)



ELEVATION 4 (SCALE 1:300)



ELEVATION 7 (SCALE 1:300)



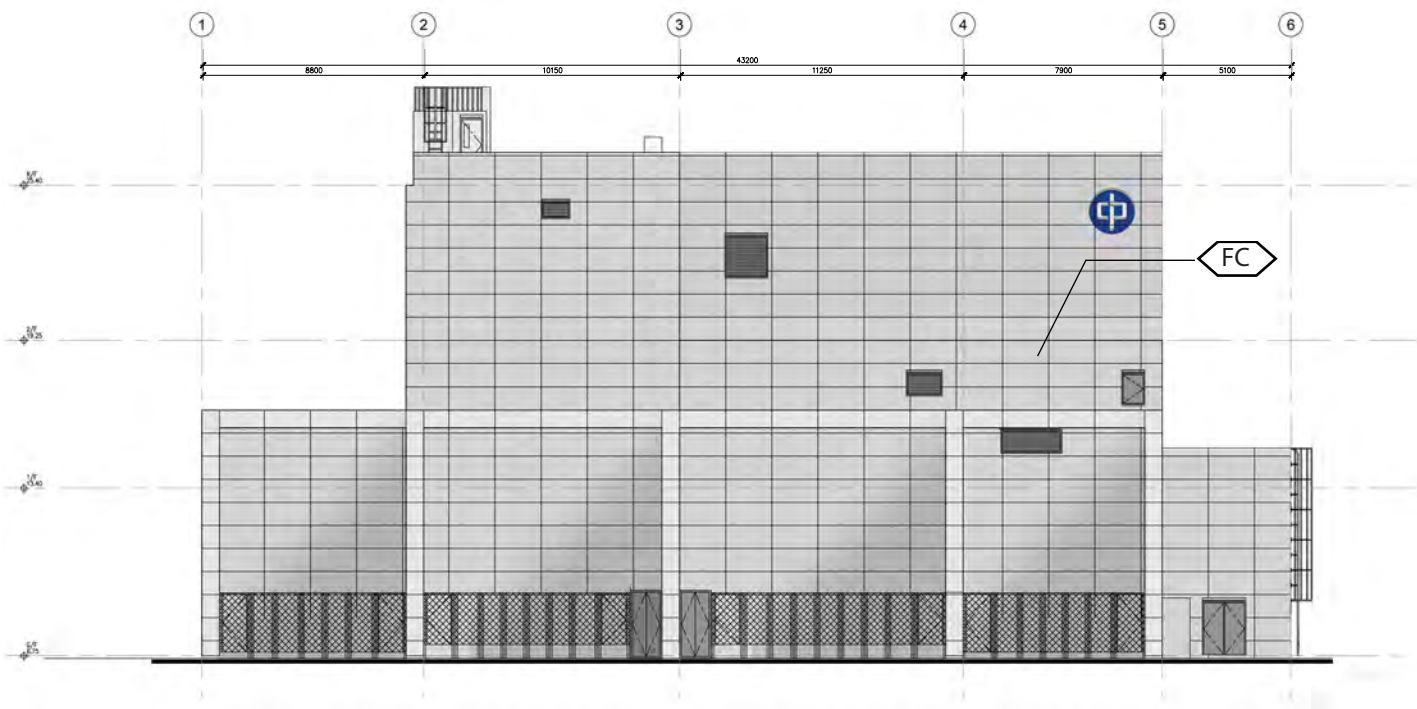
ELEVATION 8 (SCALE 1:300)

LEGEND					
FC	FAIRFACED CONCRETE	A1	ALUMINIUM (BRIGHT COPPER)	A2	ALUMINIUM (BLUE)
SS	S.S. (BEAD BLASTED)	G1	CURTAIN WALL	G2	GLASS WALL
P1	PAINT IN GRAY	P2	TEXTURED PAINT IN GRAY	D1	DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)
				A3	ALUMINIUM (W/. WOOD GRAIN PATTERN)
				G3	GLASS BLOCK
				D2	DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)
				A4	ALUMINIUM (WHITE)
				G4	GLASS WALL W/. REFLECTIVE COATING
				D3	DFMA CONCRETE PANEL (DARK GRAY, RIBBED)
				A5	ALUMINIUM (GREY)

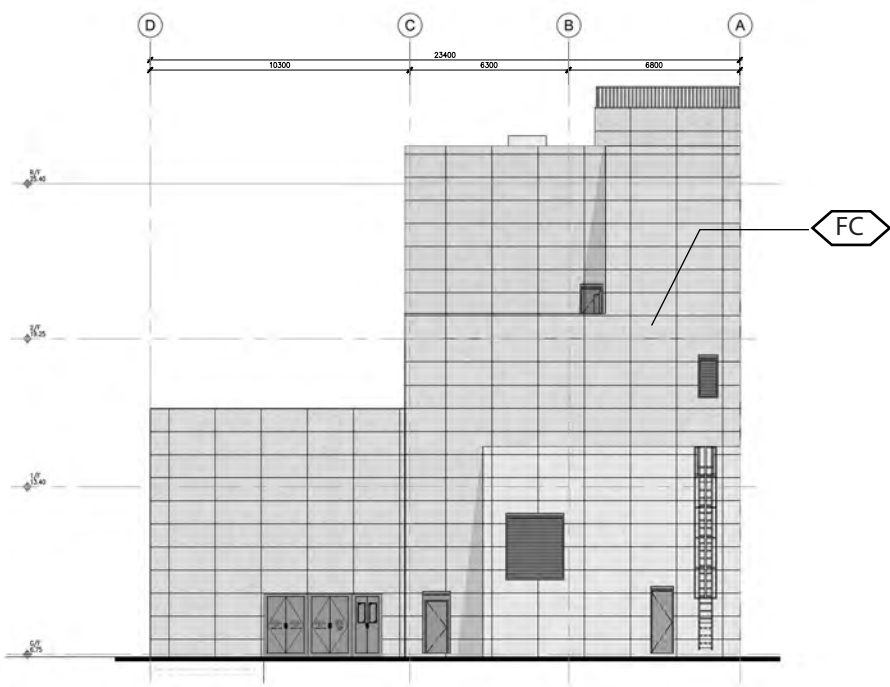


Appendix F - Hard Landscape Design

S - TKO DESALINATION PLANT SUBSTATION



ELEVATION 1 (SCALE 1:300)



ELEVATION 2 (SCALE 1:300)



ELEVATION 3 (SCALE 1:300)



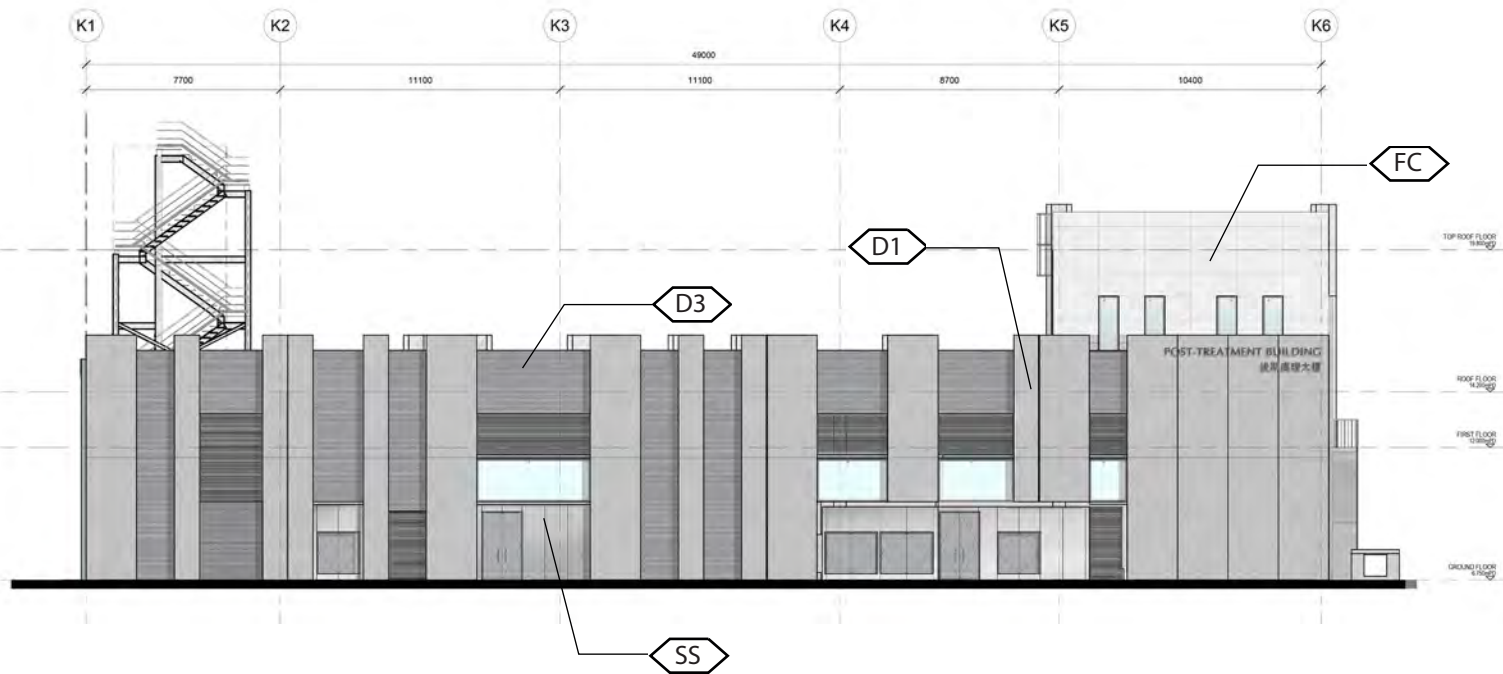
ELEVATION 4 (SCALE 1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	

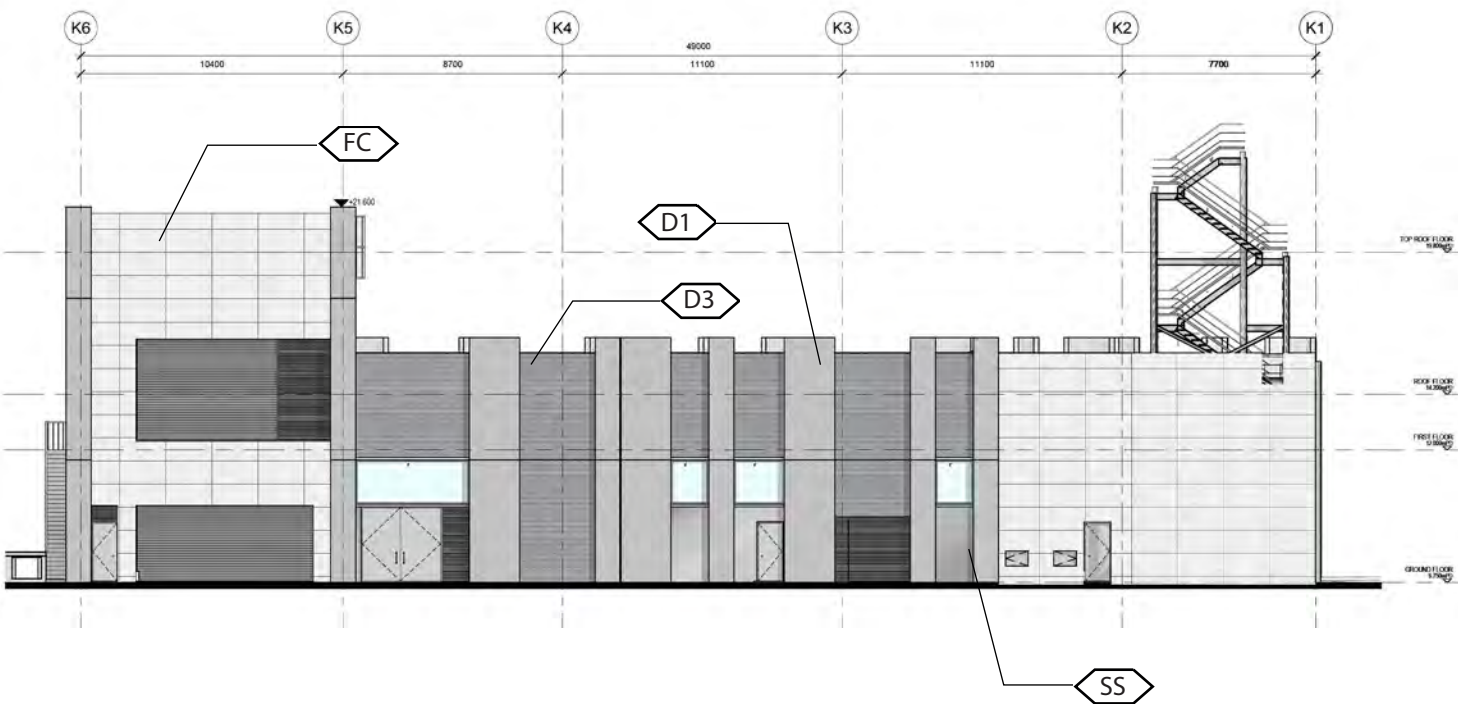


Appendix F - Hard Landscape Design

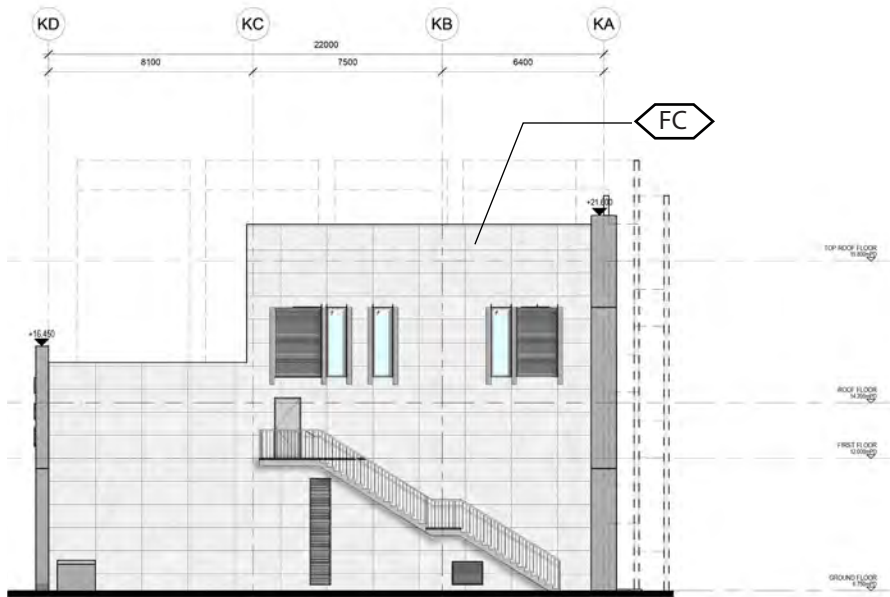
K - POSTTREATMENT BUILDING



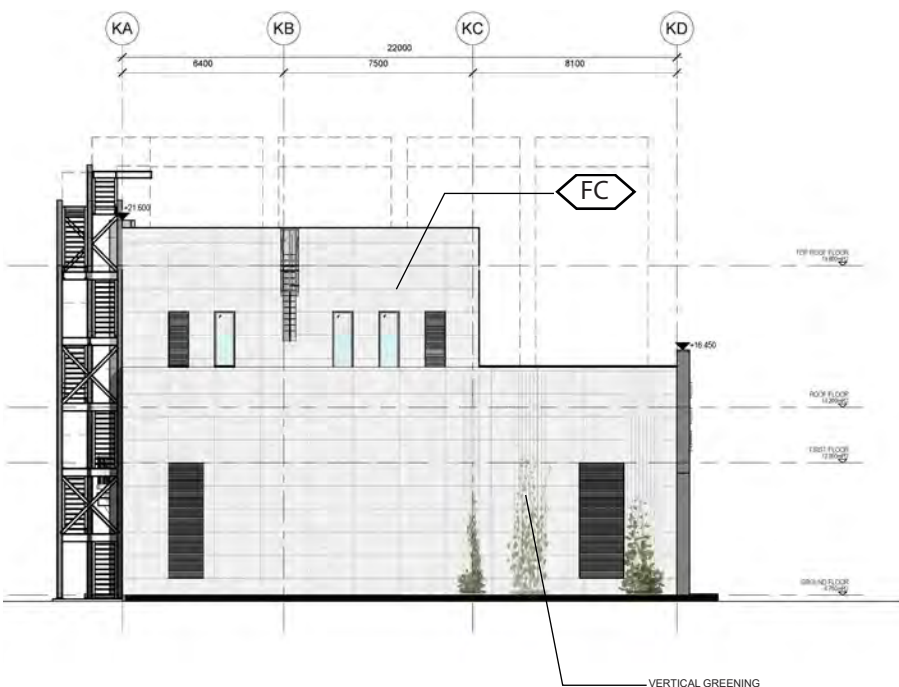
ELEVATION 1 (SCALE 1:300)



ELEVATION 2 (SCALE 1:300)



ELEVATION 3 (SCALE 1:300)



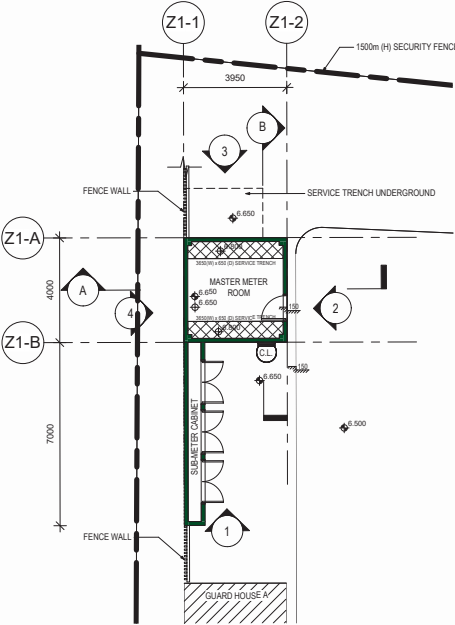
ELEVATION 4 (SCALE 1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design

Z - MASTER METER ROOM



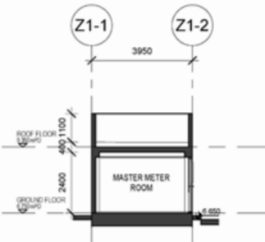
GROUND FLOOR PLAN (SCALE 1:300)



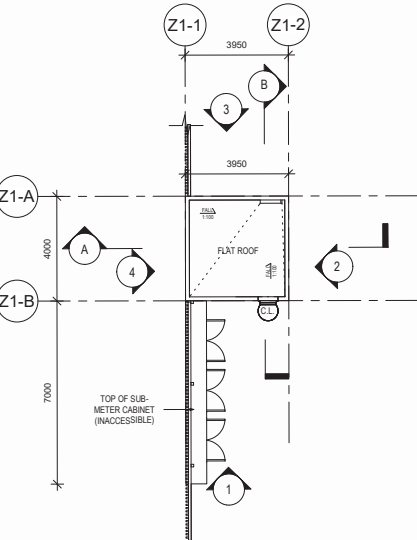
ELEVATION 1 (SCALE 1:300)



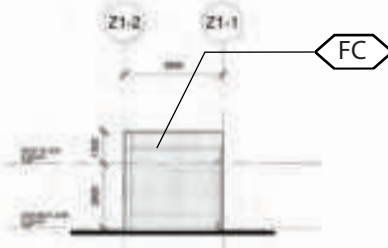
ELEVATION 2 (SCALE 1:300)



SECTION A-A (SCALE 1:300)



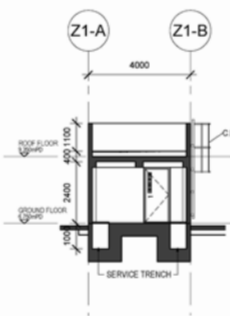
ROOF FLOOR PLAN (SCALE 1:300)



ELEVATION 3 (SCALE 1:300)



ELEVATION 4 (SCALE 1:300)



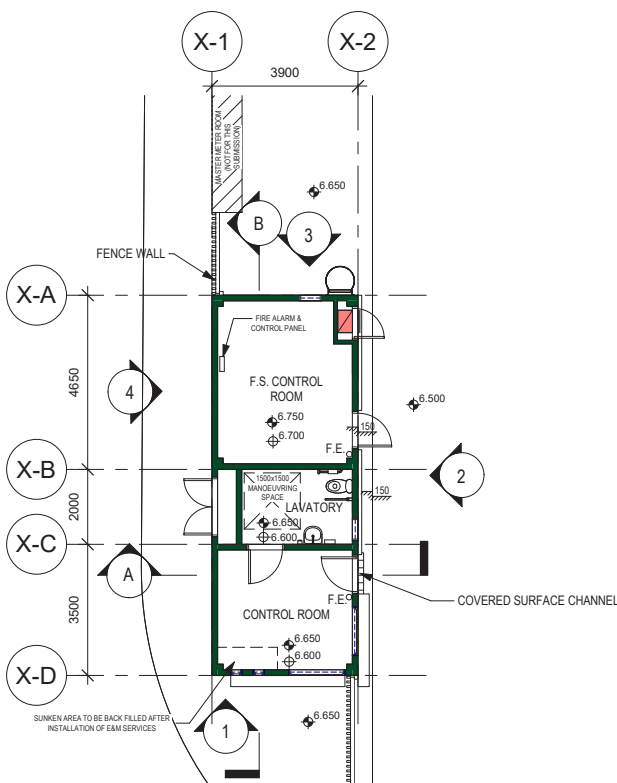
SECTION B-B (SCALE 1:300)

LEGEND					
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)	A5 ALUMINIUM (GREY)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	G4 GLASS WALL W/. REFLECTIVE COATING	
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design

X0 - GUARD HOUSE A



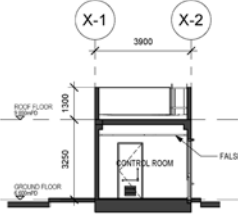
GUARD HOUSE A GROUND FLOOR PLAN (SCALE 1:300)



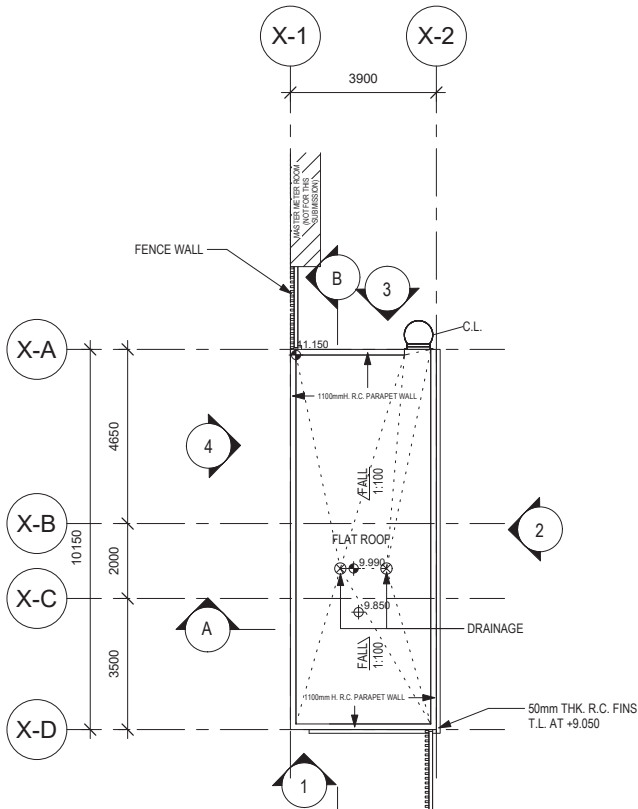
GUARD HOUSE A ELEVATION 1 (SCALE 1:300)



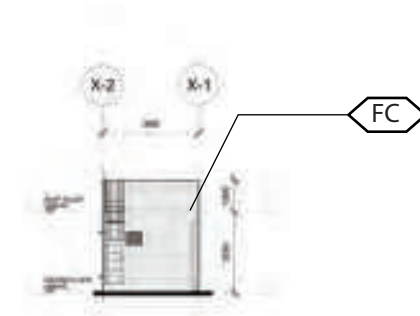
GUARD HOUSE A ELEVATION 2 (SCALE 1:300)



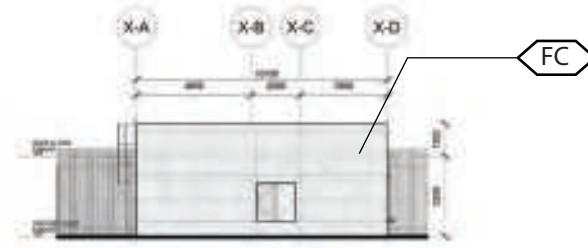
GUARD HOUSE A SECTION A-A (SCALE 1:300)



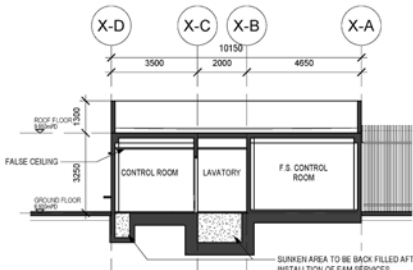
GUARD HOUSE A ROOF FLOOR PLAN (SCALE 1:300)



GUARD HOUSE A ELEVATION 3 (SCALE 1:300)



GUARD HOUSE A ELEVATION 4 (SCALE 1:300)



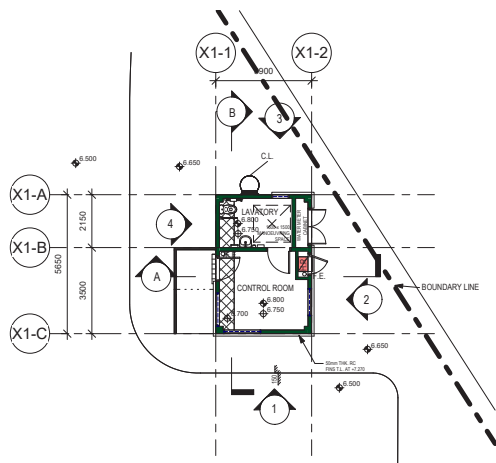
GUARD HOUSE A SECTION B-B (SCALE 1:300)

LEGEND				
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	A5 ALUMINIUM (GREY)
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)



Appendix F - Hard Landscape Design

X1- GUARD HOUSE B



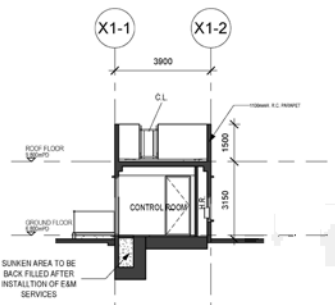
GUARD HOUSE B GROUND FLOOR PLAN (SCALE 1:300)



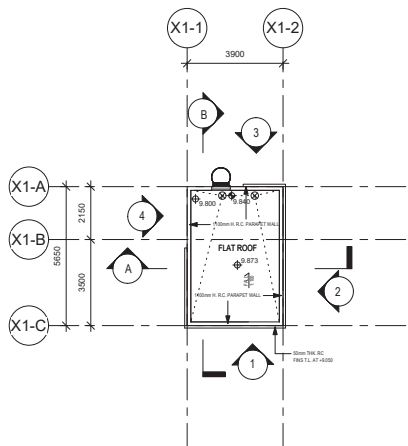
GUARD HOUSE B ELEVATION 1 (SCALE 1:300)



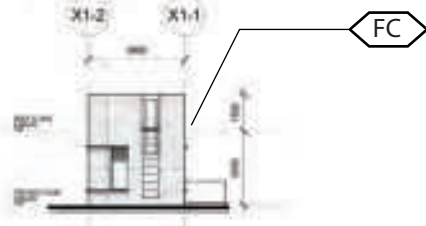
GUARD HOUSE B ELEVATION 2 (SCALE 1:300)



GUARD HOUSE B SECTION A-A (SCALE 1:300)



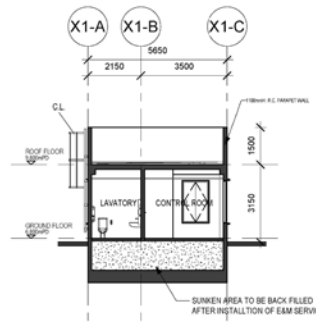
GUARD HOUSE B ROOF FLOOR PLAN (SCALE 1:300)



GUARD HOUSE B ELEVATION 3 (SCALE 1:300)



GUARD HOUSE B ELEVATION 4 (SCALE 1:300)



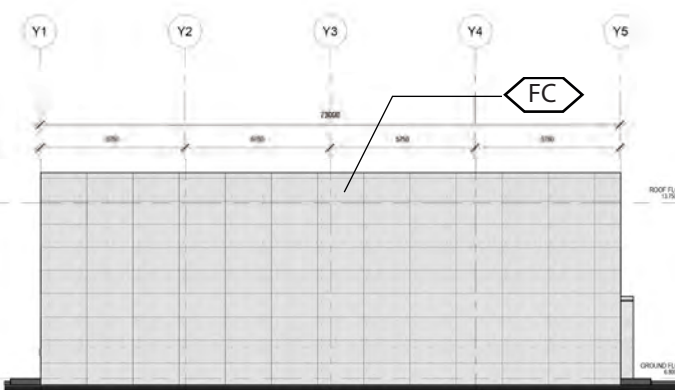
GUARD HOUSE B SECTION B-B (SCALE 1:300)

LEGEND				
FC FAIRFACED CONCRETE	A1 ALUMINIUM (BRIGHT COPPER)	A2 ALUMINIUM (BLUE)	A3 ALUMINIUM (W/. WOOD GRAIN PATTERN)	A4 ALUMINIUM (WHITE)
SS S.S. (BEAD BLASTED)	G1 CURTAIN WALL	G2 GLASS WALL	G3 GLASS BLOCK	A5 ALUMINIUM (GREY)
P1 PAINT IN GRAY	P2 TEXTURED PAINT IN GRAY	D1 DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	D2 DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	D3 DFMA CONCRETE PANEL (DARK GRAY, RIBBED)

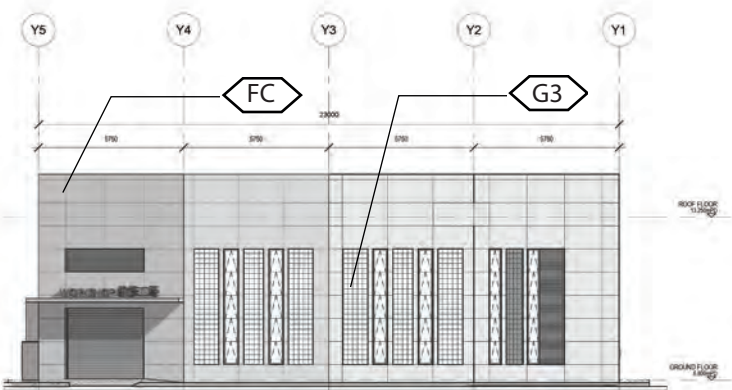


Appendix F - Hard Landscape Design

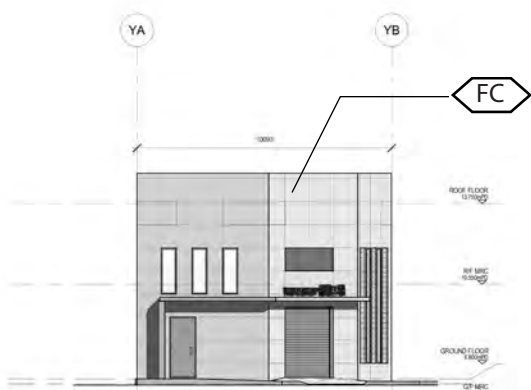
Y - WORKSHOP



ELEVATION 1 (SCALE 1:300)



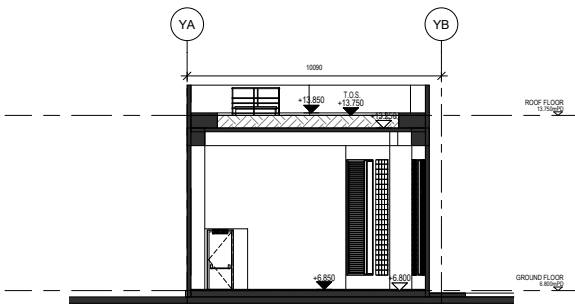
ELEVATION 2 (SCALE 1:300)



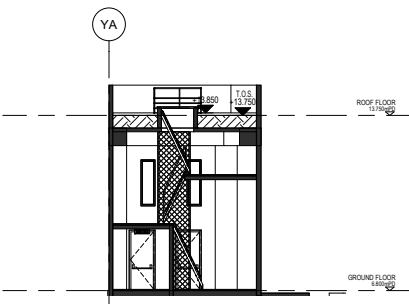
ELEVATION 3 (SCALE 1:300)



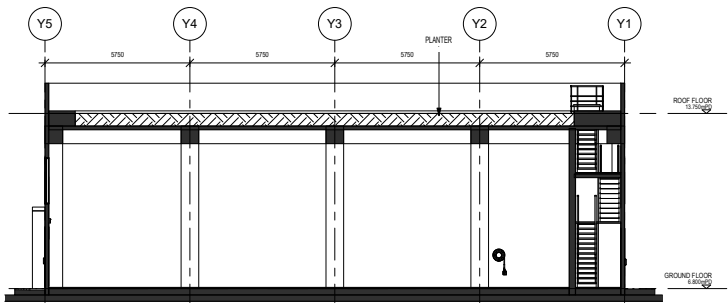
ELEVATION 4 (SCALE 1:300)



SECTION A-A (SCALE 1:300)



SECTION B-B (SCALE 1:300)

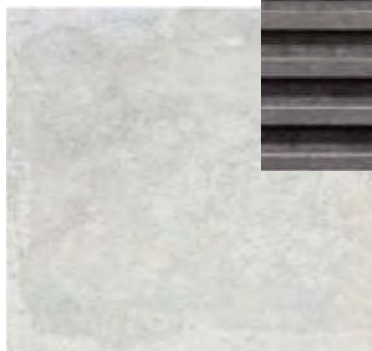


SECTION C-C (SCALE 1:300)

LEGEND					
FAIRFACED CONCRETE	ALUMINIUM (BRIGHT COPPER)	ALUMINIUM (BLUE)	ALUMINIUM (W/. WOOD GRAIN PATTERN)	ALUMINIUM (WHITE)	ALUMINIUM (GREY)
S.S. (BEAD BLASTED)	CURTAIN WALL	GLASS WALL	GLASS BLOCK	GLASS WALL W/. REFLECTIVE COATING	
PAINT IN GRAY	TEXTURED PAINT IN GRAY	DFMA CONCRETE PANEL (LIGHT GRAY, PLAIN)	DFMA CONCRETE PANEL (LIGHT GRAY, BRUSHED)	DFMA CONCRETE PANEL (DARK GRAY, RIBBED)	



Appendix F - Hard Landscape Design Material Board (Exterior)



DfMA CONCRETE PANEL
(TYPE A1, PLAIN)

D1



DfMA CONCRETE PANEL
(TYPE B, RIBBED)

D3



DfMA CONCRETE PANEL
(TYPE A2, BRUSHED)

D2



STAINLESS STEEL (SATIN)

SS



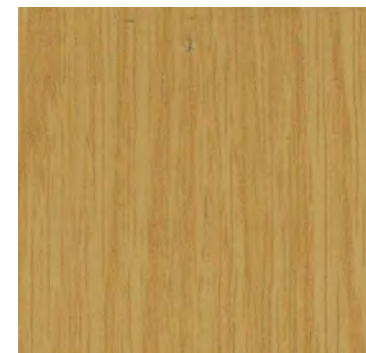
ALUMINIUM CLADDING
(BRIGHT COPPER)

A1



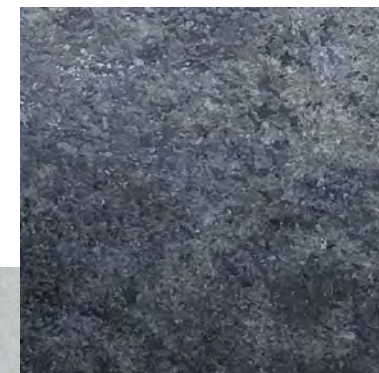
ALUMINIUM CLADDING
(GRAY TIMBER WOLF)

A5



M04 3mm ALUMINIUM WOOD GRAIN PATTERN FINISH
FOR ALUMINIUM FINS/ PANEL WITH TIMBER FINISH & FOR
EXTERNAL CEILING AT ADMINISTRATION BUILDING

A3



ST02 BLACK GRANITE
WITH BUSH HAMMERED FINISH
EDGE OF STEPS AT SAIRCASE AND
PLANTER



F38 300x600x10mm OUTDOOR FULL-BODY
PORCELAIN TILE ON (IVORY FLOW L2)
STEPS AT GRAND STAIRCASE



Appendix F - Hard Landscape Design Material Board (Exterior)



PANTONE

649CP



552CP



292CP



2386CP



PANTONE WHITE 000C



ALUMINIUM (BLUE)



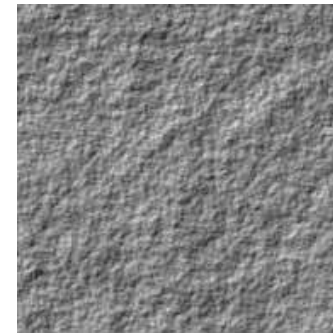
ALUMINIUM (WHITE)



PANTONE COOL GRAY 9C



GRAY PAINT



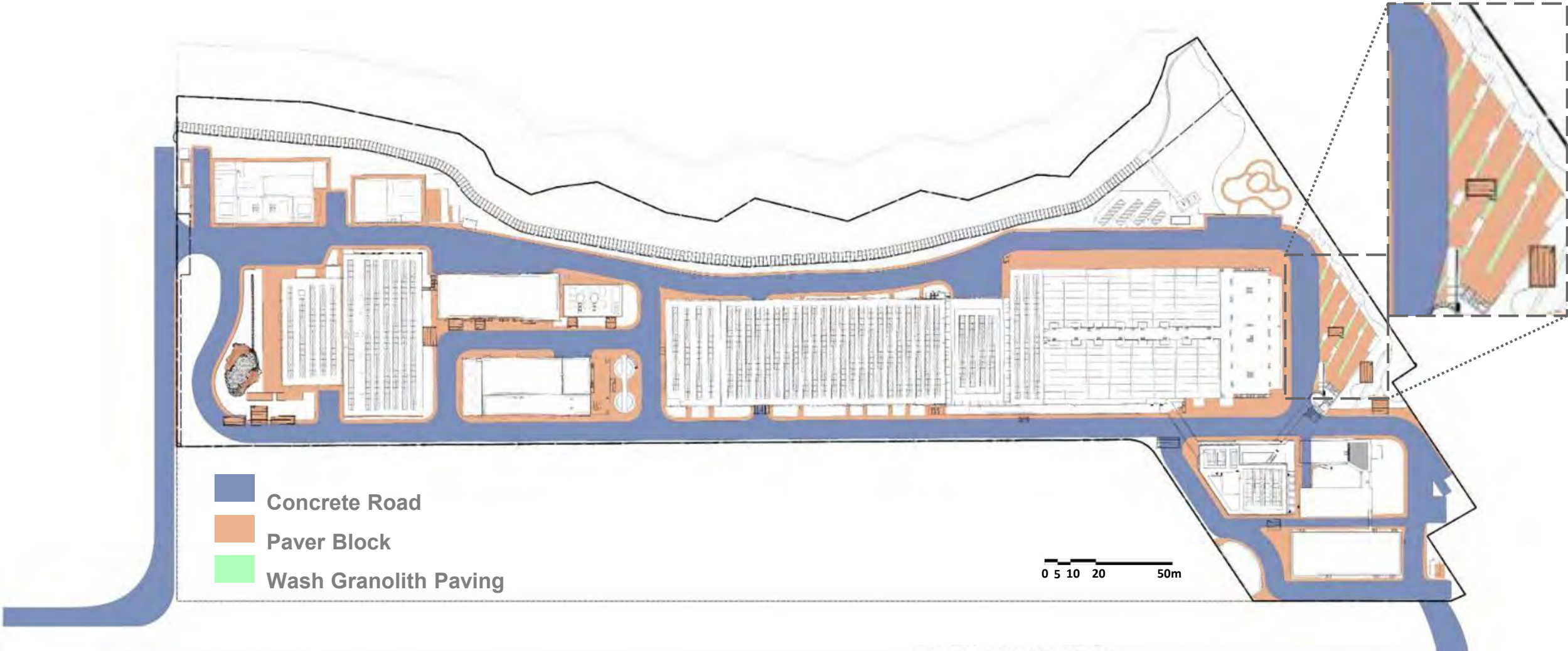
STONE TEXTURED PAINT



TEXTURED PAINT

Appendix F - Hard Landscape Design

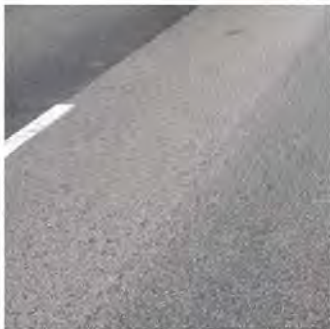
Landscape Design | Pavement



MATERIAL SCHEDULE



PAVER BLOCK



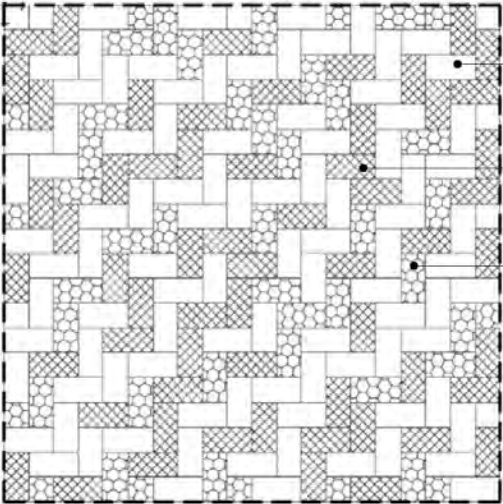
CONCRETE ROAD
(FOR VEHICULAR)



WASH GRANOLITH PAVING

PAVING MODULE PLAN

(ILLUSTRATION OF DIFFERENT COLOURS OF THE RANDOM MIX OF PAVING BLOCKS)



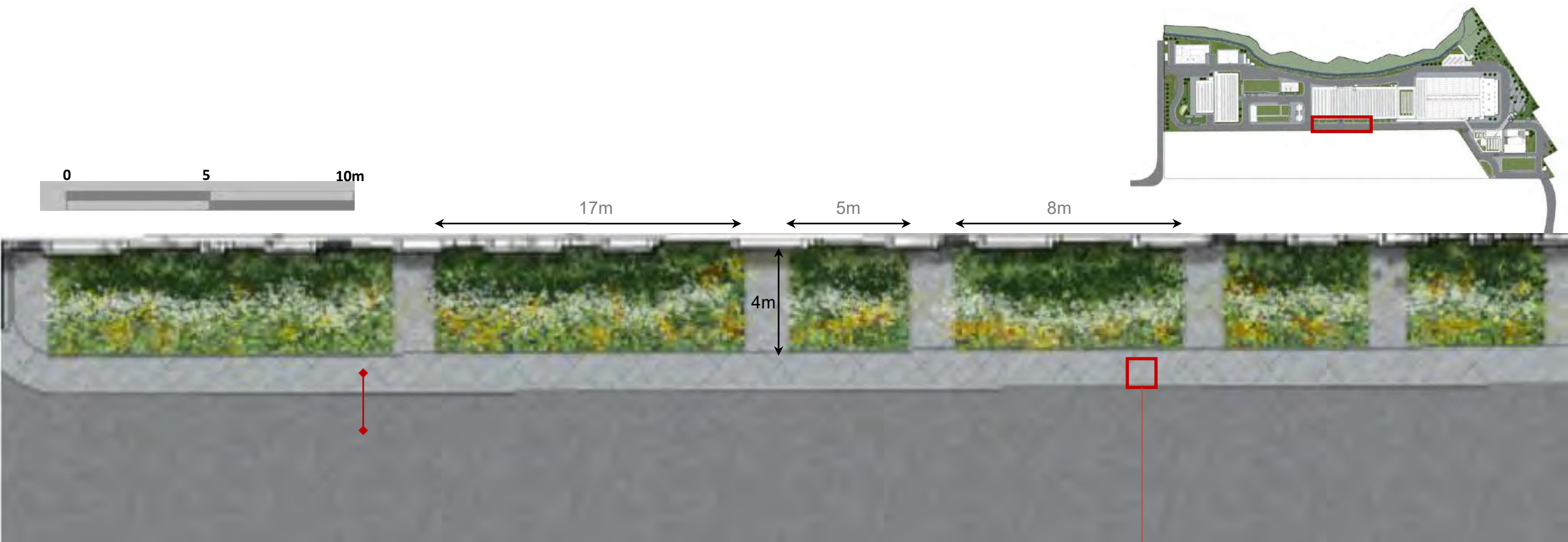
100x200x60mm THK.
COLOUR: BROWN
PERCENTAGE: 50%

100x200x60mm THK.
COLOUR: LIGHT BROWN
PERCENTAGE: 30%

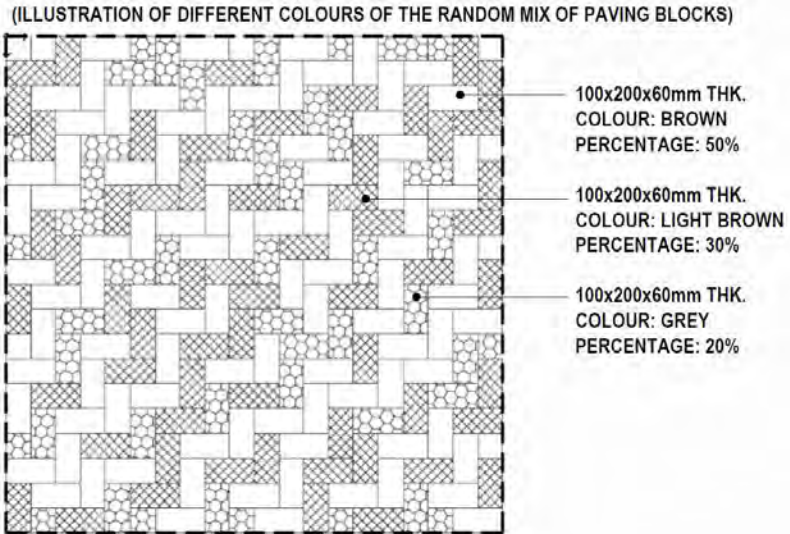
100x200x60mm THK.
COLOUR: GREY
PERCENTAGE: 20%

Appendix F - Hard Landscape Design (Paving Pattern)

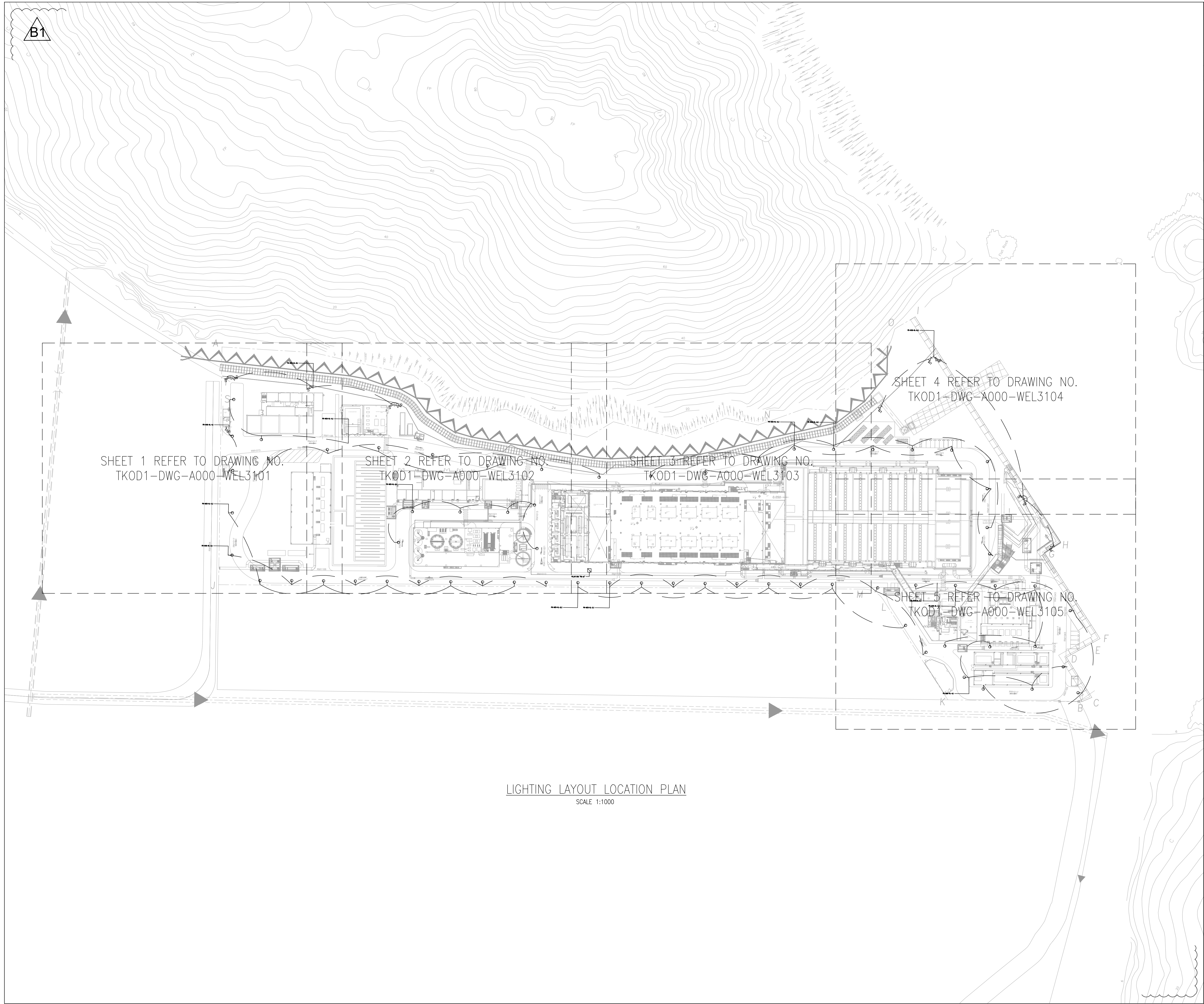
Landscape Design | Typical Details



Paving Pattern



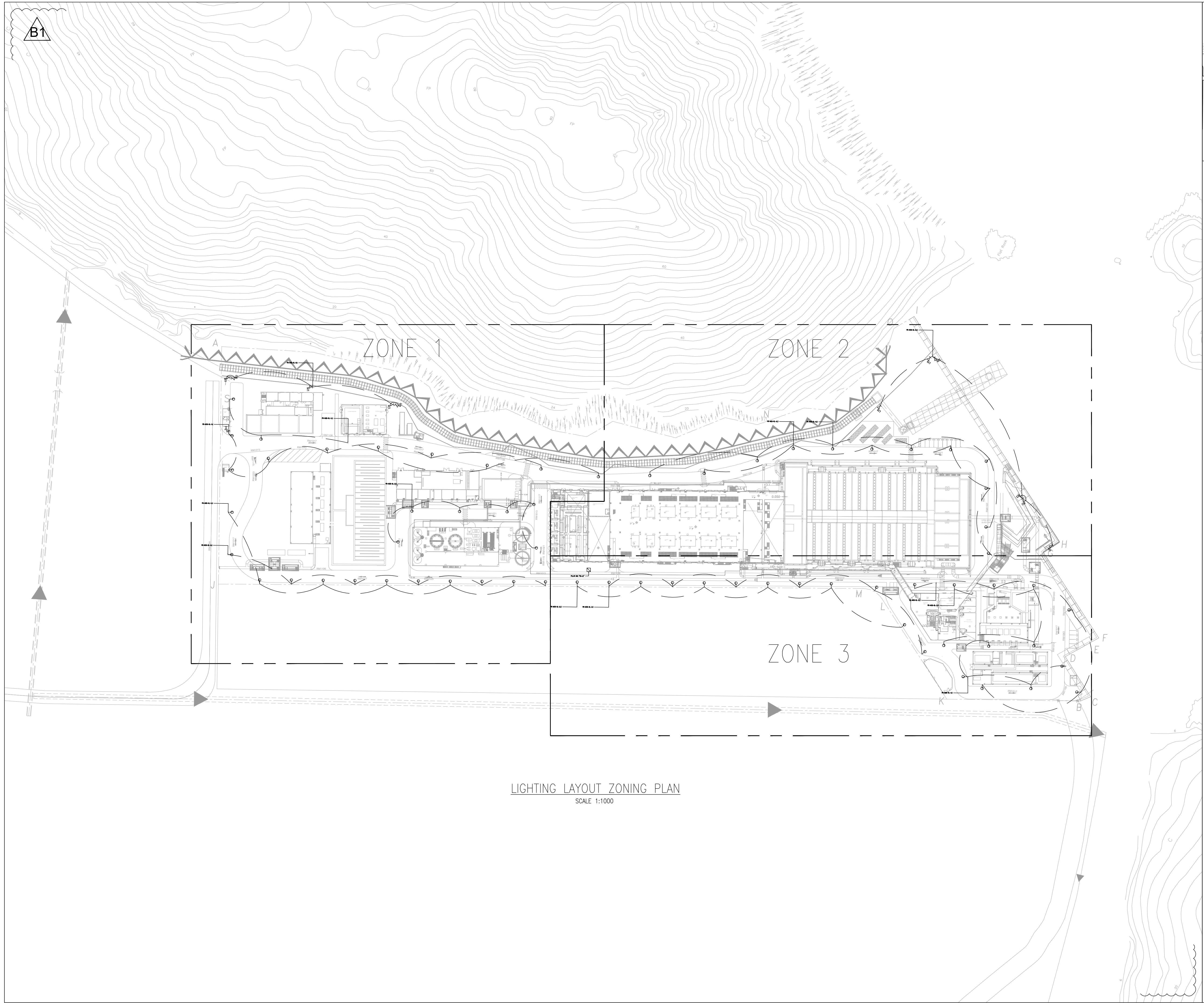
Appendix G – Lighting Plan

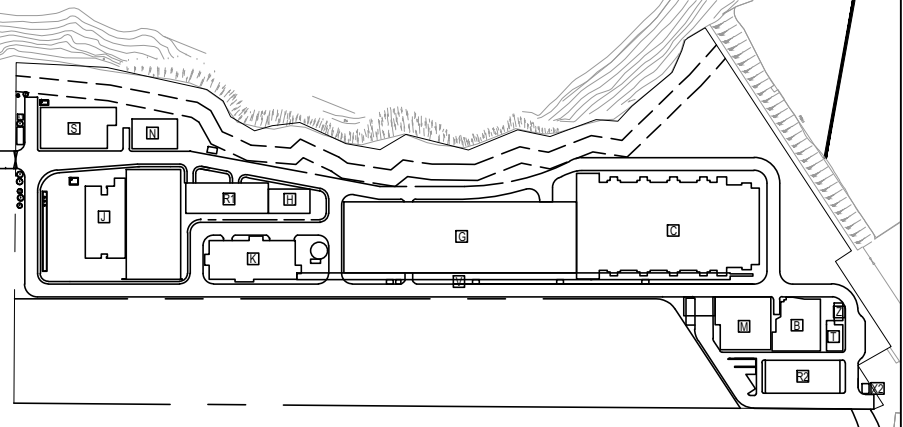
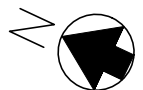


LIGHTING LAYOUT LOCATION PLAN
SCALE 1:1000

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B0	DDA SUBMISSION	CYW	09 OCT 2020
Rev	Description	By	Date
Employer			
			
Supervising Officer designate			
			
Design Checker			
			
Contractor			
			
Designer			
 In Association with APU			
Project title			
CONTRACT NO. 13/WSD/17			
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
ELECTRICAL – LIGHTING LAYOUT – LOCATION PLAN			
Drawing no.			Rev.
TKOD1-DWG-A000-WEL3000			B1
Drawn	Date	Checked	Approved
CYW	09 OCT 2020	EF	SY
Scale	Status		
A1 1:1000	DETAILED DESIGN APPROVAL		

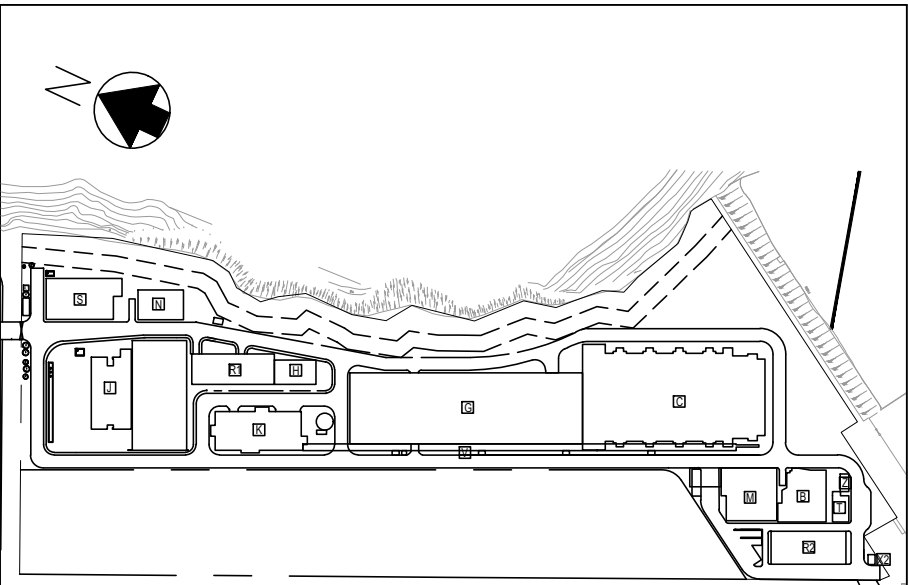
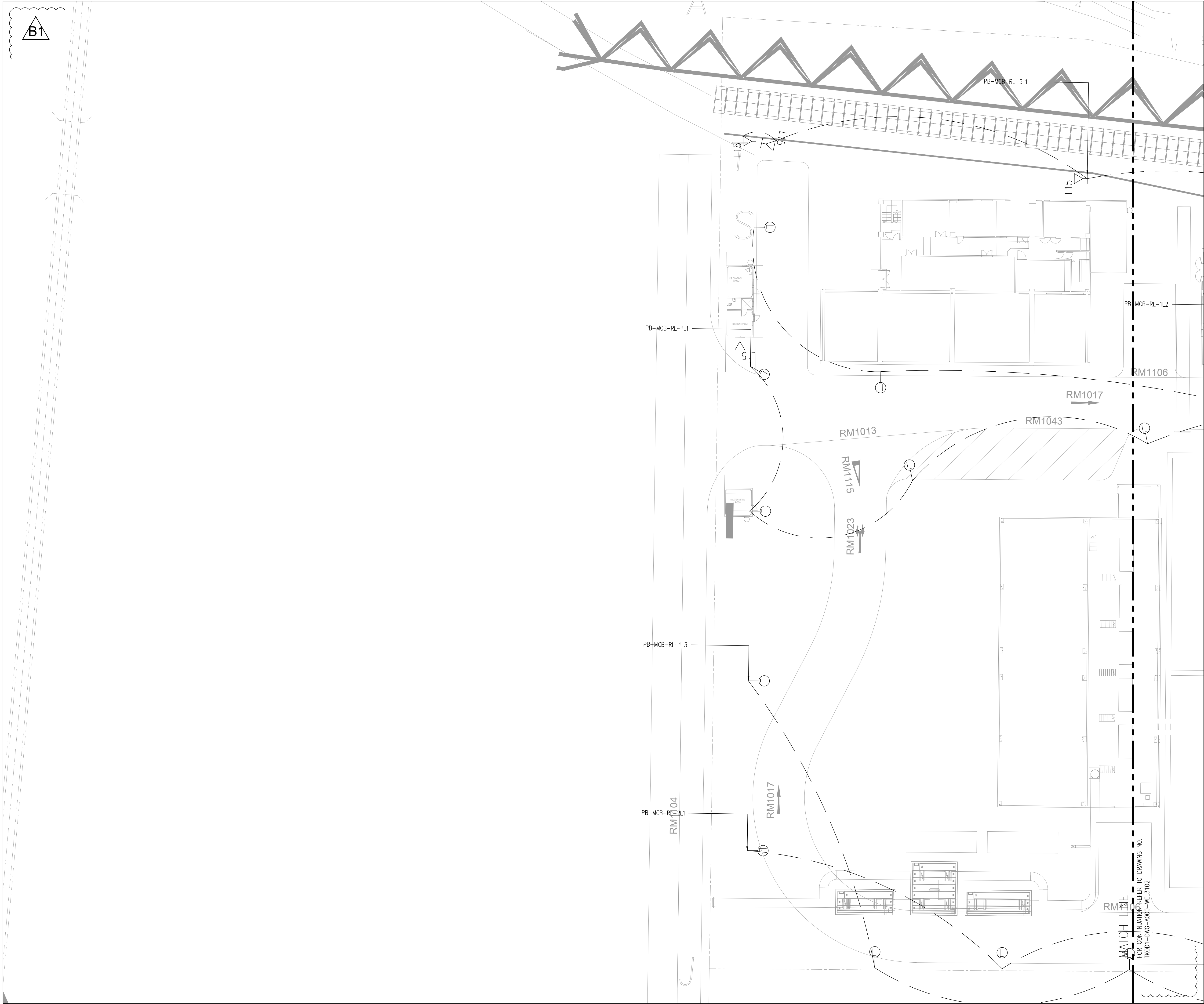
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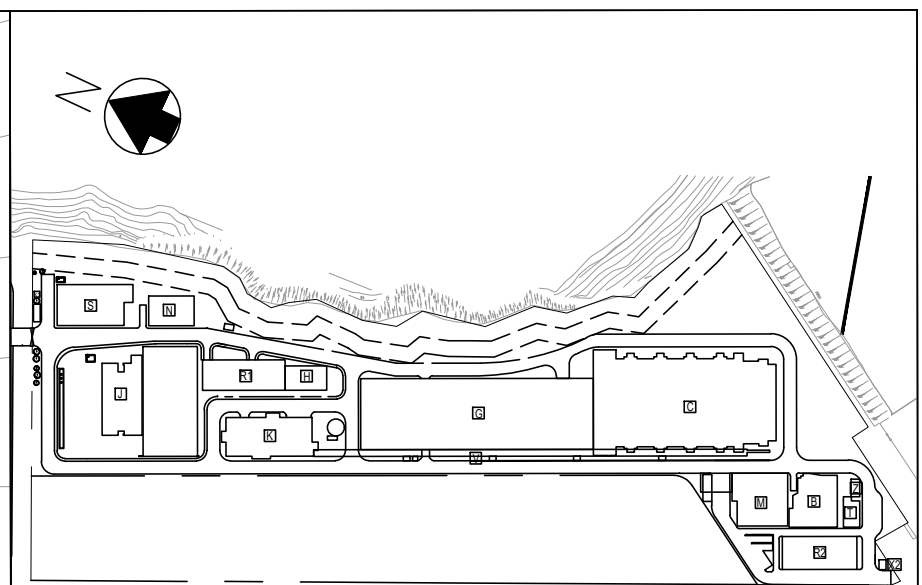
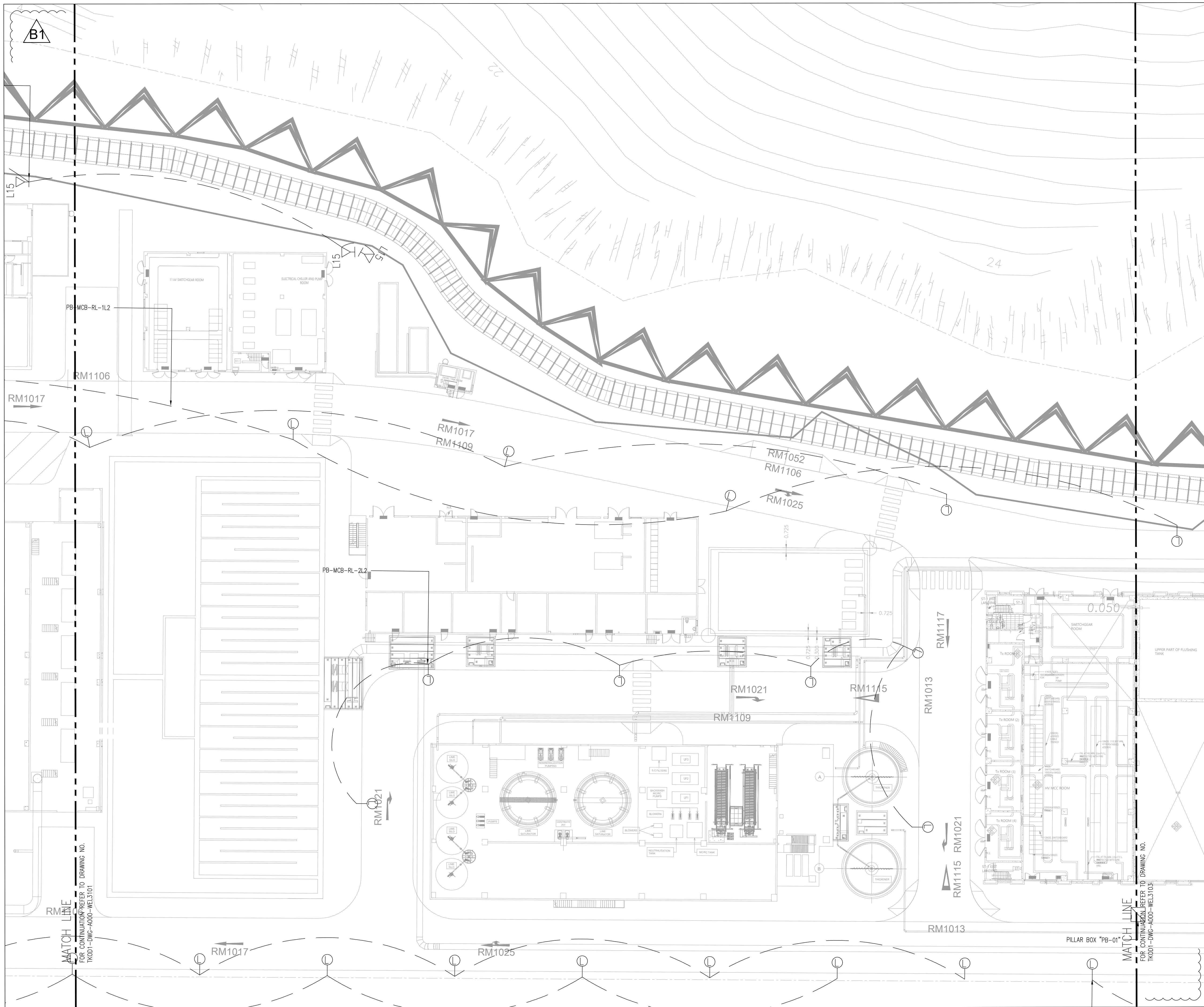
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Rev	Description	By	Date
Employer			
			
Supervising Officer designate			
			
Design Checker			
			
Contractor			
			
Designer			
 In Association with APU			
Project title			
CONTRACT NO. 13/WSD/17			
DESIGN, BUILD AND OPERATE			
FIRST STAGE OF TSEUNG KWAN O			
DESALINATION PLANT			
Drawing title			
ELECTRICAL –			
LIGHTING LAYOUT –			
ZONING PLAN			
Drawing no.		Rev.	
TKOD1–DWG–A000–WEL3001		B1	
Drawn	Date	Checked	Approved
CYW	09 OCT 2020	EF	SY
Scale	Status		
A1 1:1000	DETAILED DESIGN APPROVAL		

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B0	DDA SUBMISSION	CYW	09 OCT 2020
Rev	Description	By	Date
Employer			
 水務署 Water Supplies Department			
Supervising Officer designate			
 BLACK & VEATCH			
Design Checker			
 ARCADIS Design & Consultancy for natural and built assets			
Contractor			
 acciona JEC EPC AJC JOINT VENTURE			
Designer			
 wsp In Association with APU			
Project title			
CONTRACT NO. 13/WSD/17 DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
ELECTRICAL – LIGHTING LAYOUT – GROUND FLOOR (SHEET 1 OF 5)			
Drawing no. TK0D1-DWG-A000-WEL3101			Rev. B1
Drawn CYW	Date 09 OCT 2020	Checked EF	Approved SY
Scale A1 1:250		Status DETAILED DESIGN APPROVAL	

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B1	DDA SUBMISSION	CYW	23 DEC 2020
B0	DDA SUBMISSION	CYW	09 OCT 2020
Rev	Description	By	Date

Employer
 水務署
Water Supplies Department

Supervising Officer designate
 BLACK & VEATCH

Design Checker
 ARCADIS
Design & Consultancy
for natural and
built assets

Contractor
 acciona JEC
AJC JOINT VENTURE

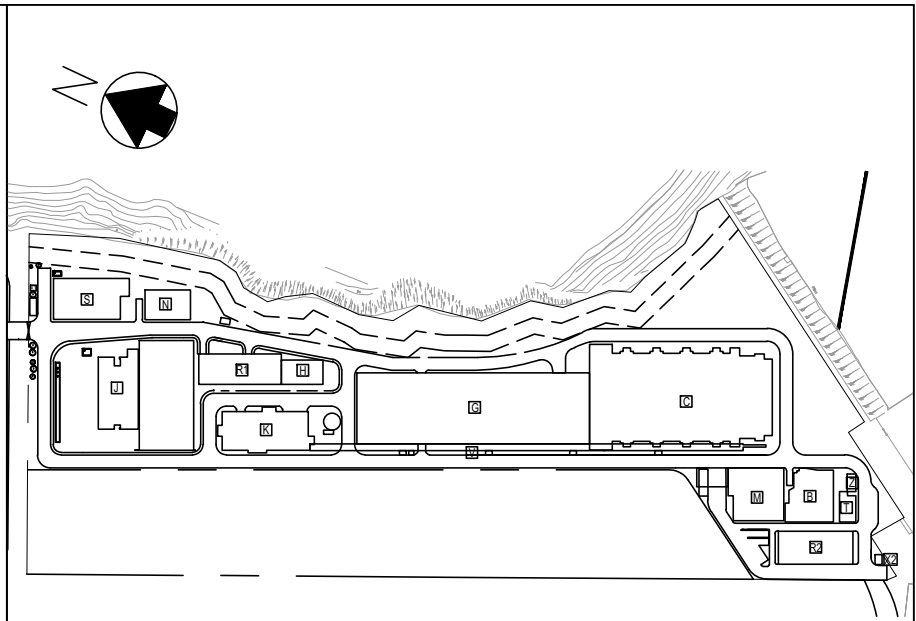
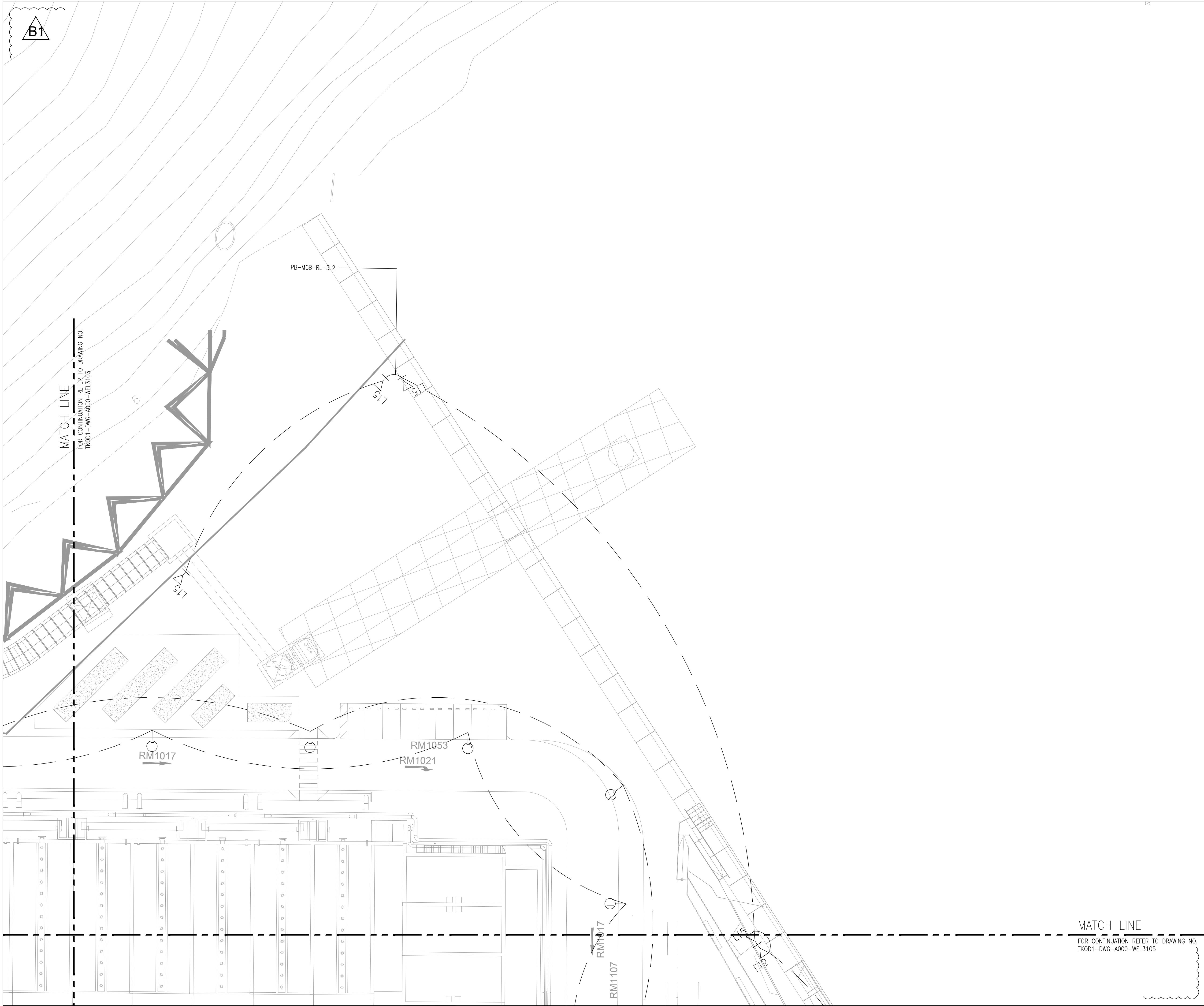
Designer
 wsp
In Association with APU

Project title
CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

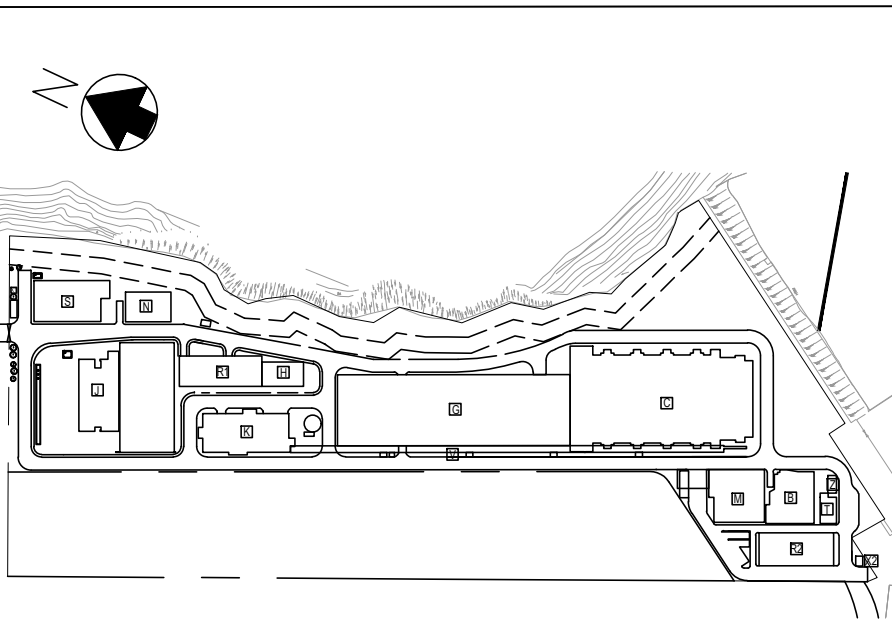
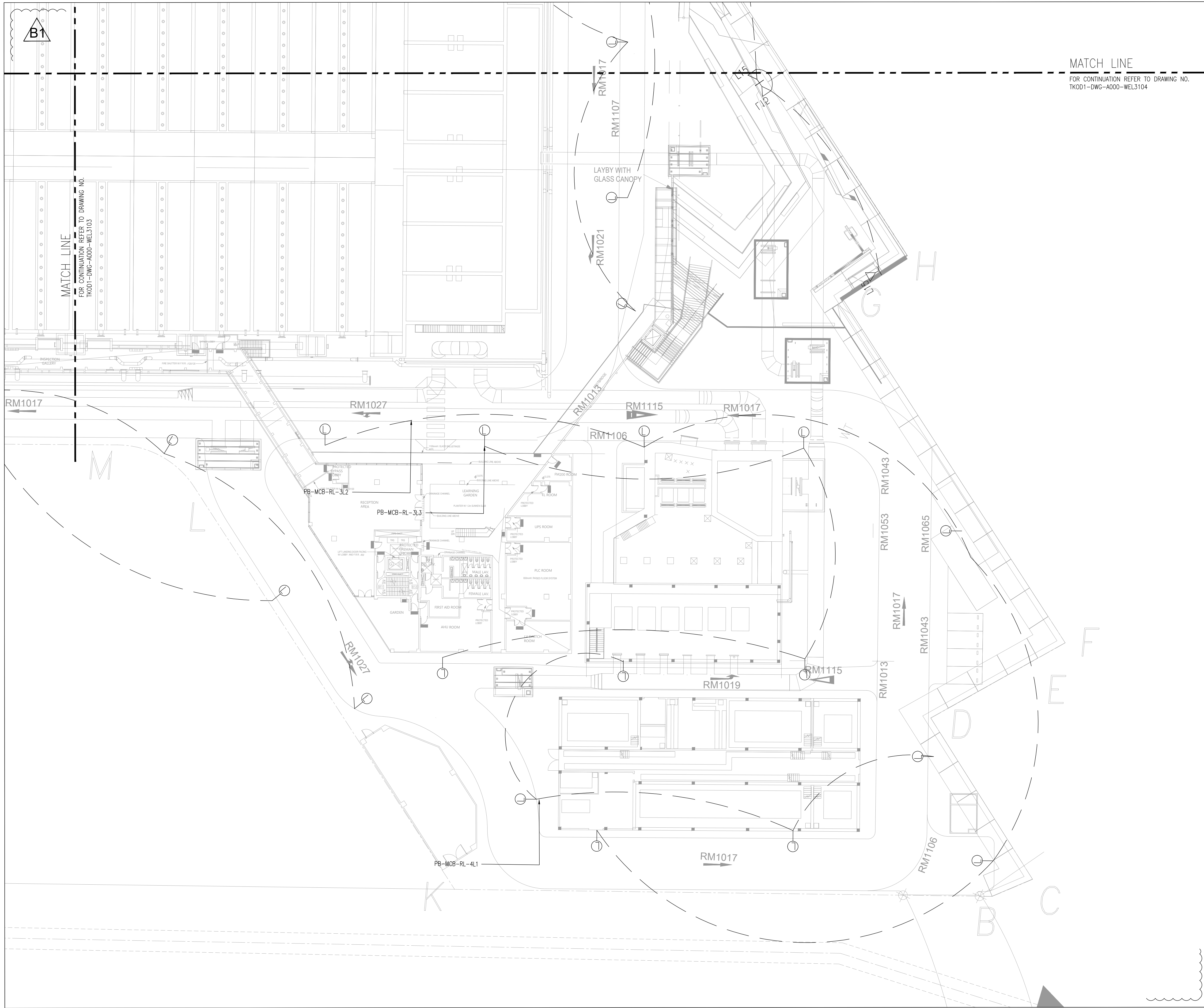
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ELECTRICAL –
LIGHTING LAYOUT –
GROUND FLOOR
(SHEET 2 OF 5)

Drawing no.	TK01-DWG-A000-WEL3102	Rev.	B1
Drawn	CYW	Date	09 OCT 2020
Checked	EF	Approved	SY
Scale	A1 1:250	Status	DETAILED DESIGN APPROVAL

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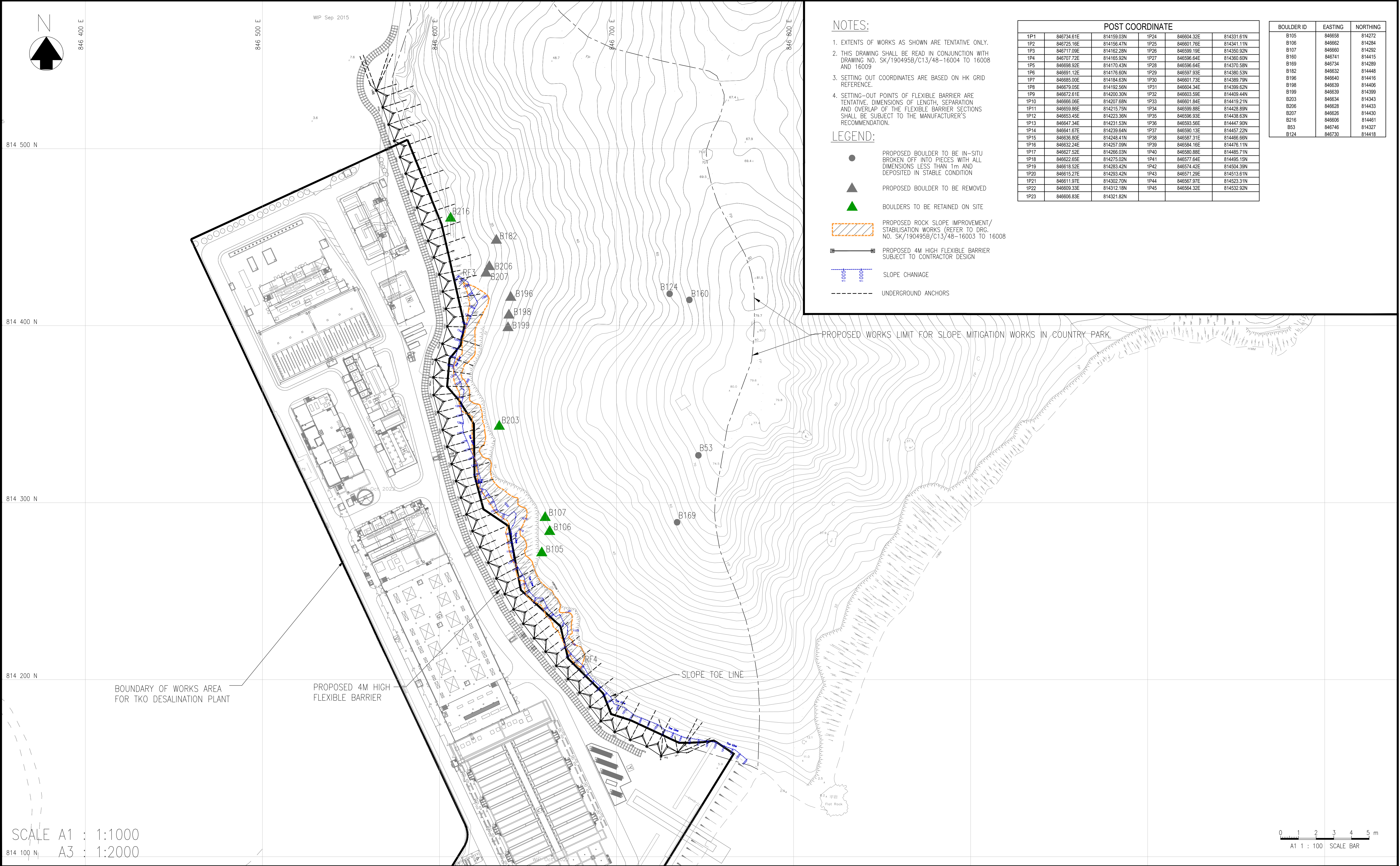


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Rev	Description	By	Date
Employer			
 水務署 Water Supplies Department			
Supervising Officer designate			
 BLACK & VEATCH			
Design Checker			
 ARCADIS Design & Consultancy for natural and built assets			
Contractor			
 acciona JEC CEC AJC JOINT VENTURE			
Designer			
 wsp In Association with APU			
Project title			
CONTRACT NO. 13/WSD/17 DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
ELECTRICAL – LIGHTING LAYOUT – GROUND FLOOR (SHEET 4 OF 5)			
Drawing no. TKOD1–DWG–A000–WEL3104			Rev. B1
Drawn CYW	Date 09 OCT 2020	Checked EF	Approved SY
Scale A1 1:250		Status DETAILED DESIGN APPROVAL	
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B0	DDA SUBMISSION	CYW	09 OCT 2020
Rev	Description	By	Date
Employer			
 水務署 Water Supplies Department			
Supervising Officer designate			
 BLACK & VEATCH			
Design Checker			
 ARCADIS Design & Consultancy for natural and built assets			
Contractor			
 AJC JOINT VENTURE			
Designer			
 In Association with APU			
Project title			
CONTRACT NO. 13/WSD/17			
DESIGN, BUILD AND OPERATE FIRST STAGE OF TSEUNG KWAN O DESALINATION PLANT			
Drawing title			
ELECTRICAL – LIGHTING LAYOUT – GROUND FLOOR (SHEET 5 OF 5)			
Drawing no. TKOD1-DWG-A000-WEL3105			Rev. B1
Drawn CYW	Date 09 OCT 2020	Checked EF	Approved SY
Scale A1 1:250		Status DETAILED DESIGN APPROVAL	
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Appendix H – Detailed Design for Slope Mitigation Works



NOTES:

- EXTENTS OF WORKS AS SHOWN ARE TENTATIVE ONLY.
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. SK/190495B/C13/48-16004 TO 16008 AND 16009
- SETTING OUT COORDINATES ARE BASED ON HK GRID REFERENCE.
- SETTING-OUT POINTS OF FLEXIBLE BARRIER ARE TENTATIVE. DIMENSIONS OF LENGTH, SEPARATION AND OVERLAP OF THE FLEXIBLE BARRIER SECTIONS SHALL BE SUBJECT TO THE MANUFACTURER'S RECOMMENDATION.

LEGEND:

- PROPOSED BOULDER TO BE IN-SITU BROKEN OFF INTO PIECES WITH ALL DIMENSIONS LESS THAN 1m AND DEPOSITED IN STABLE CONDITION
- PROPOSED BOULDER TO BE REMOVED
- BOULDERS TO BE RETAINED ON SITE
- PROPOSED ROCK SLOPE IMPROVEMENT/ STABILISATION WORKS (REFER TO DRG. NO. SK/190495B/C13/48-16003 TO 16008)
- PROPOSED 4M HIGH FLEXIBLE BARRIER SUBJECT TO CONTRACTOR DESIGN
- SLOPE CHAINAGE
- UNDERGROUND ANCHORS

POST COORDINATE				
1P1	846734.61E	814159.03N	1P24	846604.32E
1P2	846725.16E	814156.47N	1P25	846601.76E
1P3	846717.09E	814162.28N	1P26	846599.19E
1P4	846707.72E	814165.92N	1P27	846596.64E
1P5	846698.92E	814170.43N	1P28	846596.64E
1P6	846691.12E	814176.90N	1P29	846597.93E
1P7	846685.00E	814184.63N	1P30	846601.73E
1P8	846679.05E	814192.56N	1P31	846604.34E
1P9	846672.61E	814200.30N	1P32	846603.59E
1P10	846666.06E	814207.68N	1P33	846601.84E
1P11	846659.86E	814215.75N	1P34	846599.88E
1P12	846653.45E	814223.36N	1P35	846596.93E
1P13	846647.34E	814231.53N	1P36	846593.56E
1P14	846641.67E	814239.64N	1P37	846590.13E
1P15	846636.80E	814248.41N	1P38	846587.31E
1P16	846632.24E	814257.09N	1P39	846584.10E
1P17	846627.52E	814266.03N	1P40	846580.88E
1P18	846622.65E	814275.02N	1P41	846577.64E
1P19	846618.52E	814283.42N	1P42	846574.42E
1P20	846615.27E	814293.42N	1P43	846571.29E
1P21	846611.97E	814302.70N	1P44	846567.97E
1P22	846609.33E	814312.18N	1P45	846564.32E
1P23	846606.83E	814321.82N		

BOULDER ID	EASTING	NORTHING
B105	846658	814272
B106	846662	814284
B107	846660	814292
B109	846741	814415
B118	846734	814289
B119	846632	814446
B124	846640	814416
B160	846639	814406
B169	846639	814399
B203	846634	814343
B206	846628	814433
B207	846626	814430
B216	846606	814461
B53	846746	814327
B124	846730	814418

SCALE A1 : 1:1000
A3 : 1:2000

0 1 2 3 4 5 m
AT 1 : 100 SCALE BAR



BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

PROPOSED SLOPE
MITIGATION WORKS

Date: 23/09/2025

Outgoing letter Ref. No.:

Reference Drawing:
190495/K/TEND/80/1001

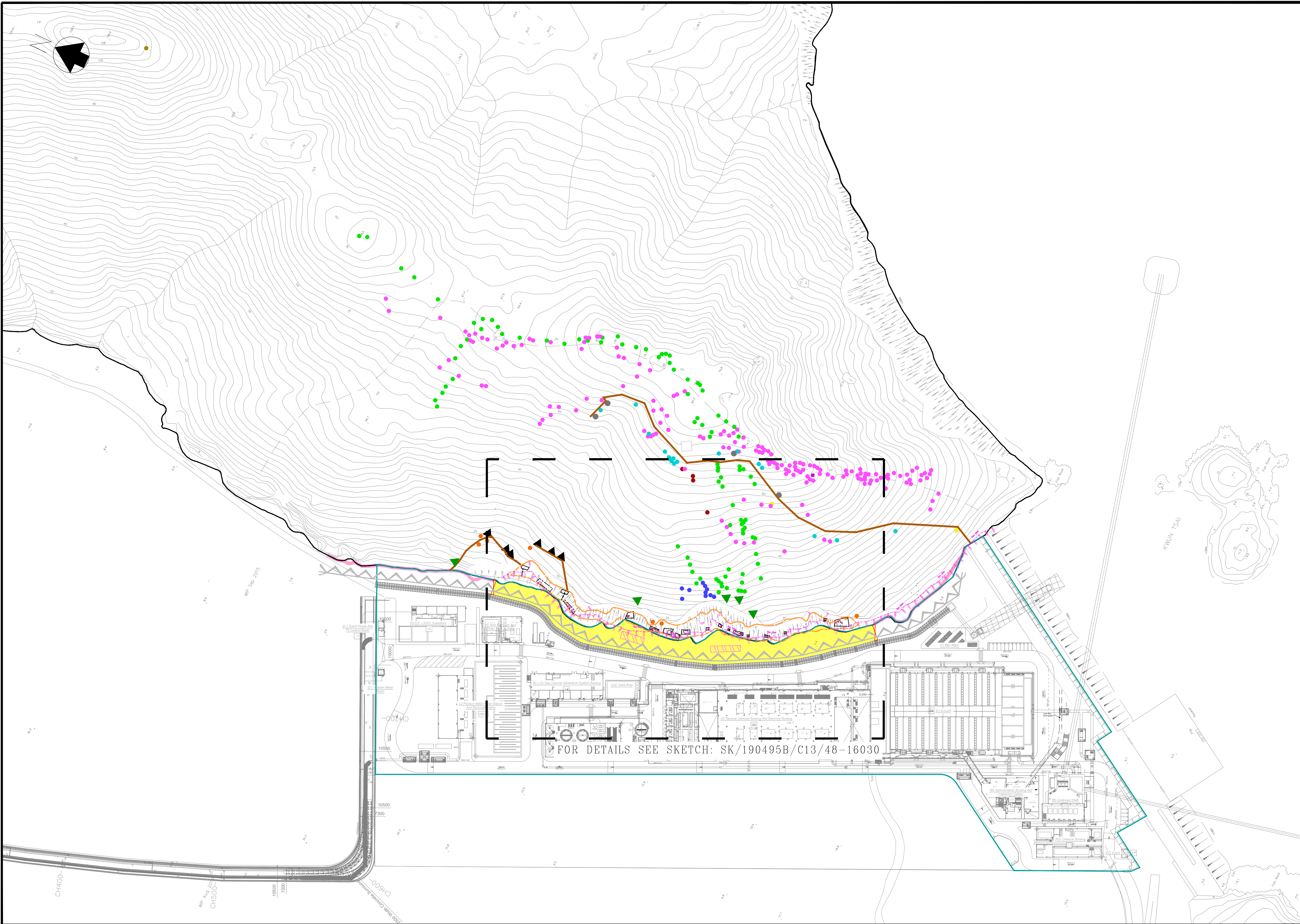
Sketch No.:
SK/190495B/C13/48-16003

Rev.:
I

Drafted by
JL

Checked by
IY

Approved by
MP



- MAP NOS. T12SW
- NOTES:
- ONLY WORKERS WITH HAND HELD TOOLS ARE ALLOWED TO ENTER THE RESTRICTED ACCESS ZONE TO CARRY OUT THE ROCK SLOPE MITIGATION WORKS.
- LEGEND:
- PROPOSED ROCK DOWELS
 - PROPOSED BUTTRESS
 - PROPOSED WIRE MESH
 - PROPOSED DENTITION
 - CLEAR WATER BAY COUNTRY PARK
 - PROPOSED FLEXIBLE BARRIER
 - SITE BOUNDARY
 - OPEN CHANNEL
 - BARRIERS
 - RESTRICTED ACCESS ZONE
 - STOCKPILING AREA
 - GATE
 - TEMPORARY WORKING PLATFORMS AND VEGETATION CLEARANCE
 - MARSDENIA LACHNOSTOMA (SURVEYED IN 2015)
 - MARSDENIA LACHNOSTOMA (SURVEYED IN 2016)
 - PLATYCODON GRANDIFLORUS (SURVEYED IN 2016)
 - HABENARIA LINGUELLA (SURVEYED IN 2020)
 - MARSDENIA LACHNOSTOMA (SURVEYED IN 2020)
 - MARSDENIA LACHNOSTOMA (SURVEYED IN 2021)
 - GNETUM LUOFUENSE (SURVEYED IN 2021)
 - GNETUM LUOFUENSE (SURVEYED IN 2023)
 - BOULDER REMOVAL
 - BOULDERS TO BE RETAINED ON SITE
 - TEMPORARY ACCESS
 - EXTENT OF WORK PLATFORM IN DETAILED DESIGN PLAN APPROVED BY EPD IN 2018
 - Proposed Garbage Chute Location
 - Lilium brownii found in 2014
 - Pachystoma pubescens found in 2014
 - PROPOSED BOULDER TO BE IN-SITU BROKEN OFF INTO PIECES WITH ALL DIMENSIONS LESS THAN 1m AND DEPOSITED IN STABLE CONDITION

N.T.S.



BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

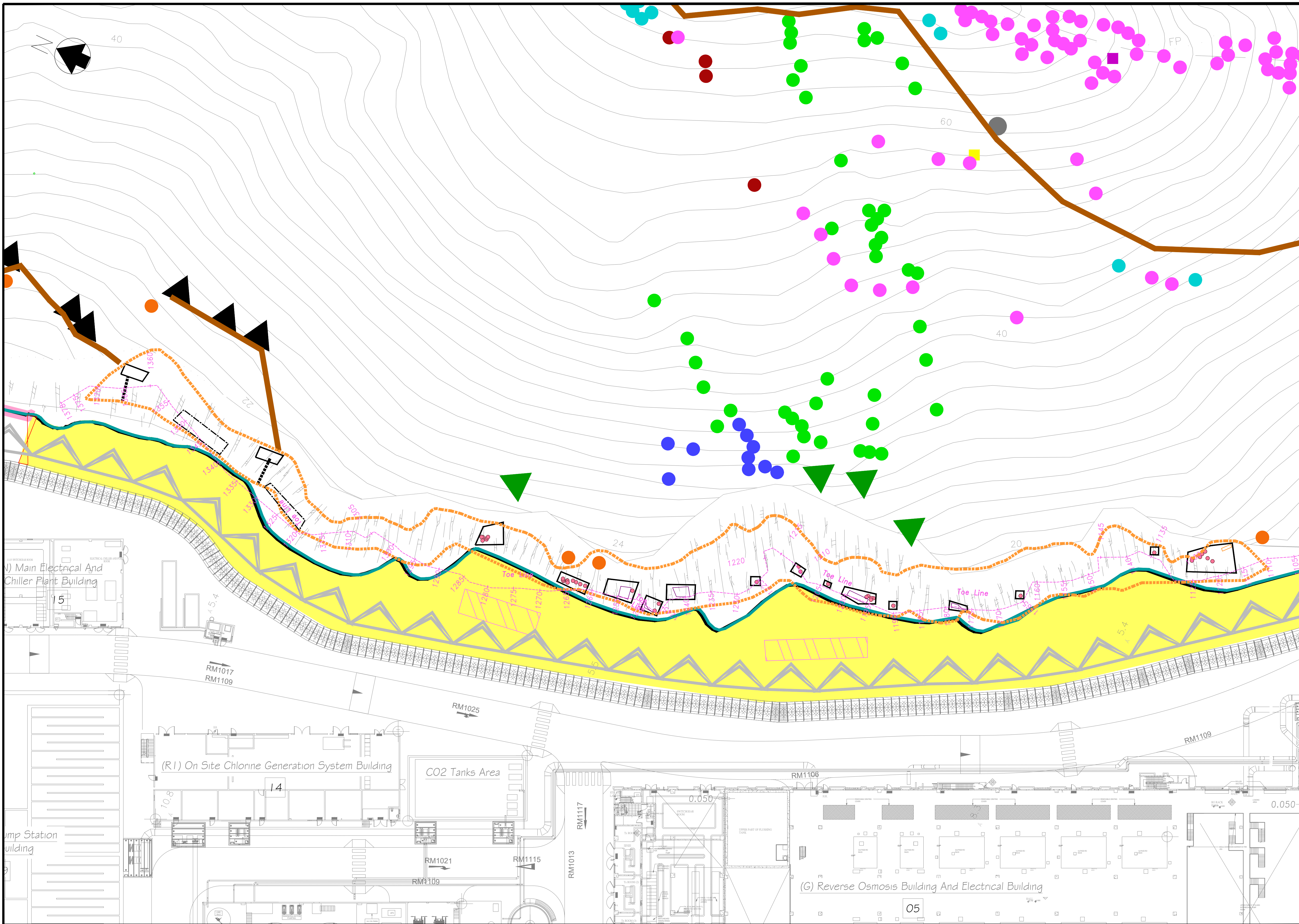
CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

LAYOUT OF GEOTECHNICAL WORKS TO BE CARRIED OUT
INSIDE THE CLEARWATER BAY COUNTRY PARK

(SHEET 1 OF 2)

Date:	2025/12/01	Drafted by	CL
Outgoing letter Ref. No.:		Checked by	IY
Reference Drawing:		Approved by	MP
Sketch No.:	SK/190495B/C13/48-16029	Rev.:	D



MAP NOS. T12SW

NOTES:

ONLY WORKERS WITH HAND HELD TOOLS ARE ALLOWED TO ENTER THE RESTRICTED ACCESS ZONE TO CARRY OUT THE ROCK SLOPE MITIGATION WORKS.

- PROPOSED ROCK DOWELS
- PROPOSED BUTTRESS
- PROPOSED WIRE MESH
- PROPOSED DENTITION
- CLEAR WATER BAY COUNTRY PARK
- PROPOSED FLEXIBLE BARRIER
- SITE BOUNDARY
OPEN CHANNEL
- BARRIERS
- RESTRICTED ACCESS ZONE
- STOCKPILING AREA
- GATE
- TEMPORARY WORKING PLATFORMS AND VEGETATION CLEARANCE
- MARSDENIA LACHNOSTOMA (SURVEYED IN 2015)
- MARSDENIA LACHNOSTOMA (SURVEYED IN 2016)
- PLATYCODON GRANDIFLORUS (SURVEYED IN 2016)
- HABENARIA LINGUELLA (SURVEYED IN 2020)
- MARSDENIA LACHNOSTOMA (SURVEYED IN 2020)
- MARSDENIA LACHNOSTOMA (SURVEYED IN 2021)
- GNETUM LUOFUENSE (SURVEYED IN 2021)
- GNETUM LUOFUENSE (SURVEYED IN 2023)
- BOULDER REMOVAL
- BOULDERS TO BE RETAINED ON SITE
- TEMPORARY ACCESS
- EXTENT OF WORK PLATFORM IN DETAILED DESIGN PLAN APPROVED BY EPD IN 2018
- Proposed Garbage Chute Location
- Lilium brownii found in 2014
- Pachystoma pubescens found in 2014
- PROPOSED BOULDER TO BE IN-SITU BROKEN OFF INTO PIECES WITH ALL DIMENSIONS LESS THAN 1m AND DEPOSITED IN STABLE CONDITION

N.T.S.



BINNIES HONG KONG LIMITED
賓尼斯工程顧問有限公司

CONTRACT NO. 13/WSD/17
DESIGN, BUILD AND OPERATE
FIRST STAGE OF TSEUNG KWAN O
DESALINATION PLANT

Title:

LAYOUT OF GEOTECHNICAL WORKS TO BE CARRIED OUT
INSIDE THE CLEARWATER BAY COUNTRY PARK

Date: 2025/12/01

Outgoing letter Ref. No.:

Reference Drawing:

Sketch No.: SK/190495B/C13/48-16030

Rev.: D

Drafted by
CL

Checked by
IY

Approved by
MP

(SHEET 2 OF 2)