

**Contract No. DC/2009/22**  
**Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1**  
**Landscape Plan**

Review Note No. 2 for Landscape Plan (Revision 3)  
(Issue 2)


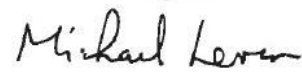
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**Contract No. DC/2009/22 -  
Drainage Improvement Works in Shuen Wan, Tai Po,  
Contract 1  
Landscape Plan**

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(Issue 2)

October 2012

	Name	Signature
Prepared by:	<b>Ida YU</b>	
Reviewed by:	<b>Dr. Michael LEVEN</b>	
Date:	<b>8<sup>th</sup> October 2012</b>	

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## 1 INTRODUCTION

### 1.1 Background

- 1.1.1 The Sha Tin and Tai Po Drainage Master Plan Study, which was completed in October 1999, indicated the hydraulic capacity of some stormwater drains and natural watercourses in the Sha Tin and Tai Po areas did not meet the flow requirement. Various construction and improvement works were proposed to reduce the risks and fulfill the development needs as identified in the Study, including the drainage improvement work at Shuen Wan.
- 1.1.2 The proposed drainage improvement work at Shuen Wan involves a construction of approximately 1.0km of box-culvert with internal cell dimension of 3m in width by 3m in height along Tung Tsz Road which leads to the loss of marsh (0.3 ha) and secondary woodland (0.08 ha) and impact on several individuals of locally protected tree species Hong Kong *Pavetta Pavetta hongkongensis*, the construction of Shuen Wan Stormwater Pumping Station to the east of Tung Tsz Nursery and Ting Kok Road, the construction of a drain pipe along Ting Kok Road, an automatic mechanical penstock at Wai Ha River estuary, and an approximately 280m drainage pipe near Wai Ha Village. Compensation for the habitat loss is required by creating an Ecological Compensatory Area (ECA or "Area C") in order to satisfy Condition 3.3 of the Environmental Permit issued by the Director of Environmental Protection on 25<sup>th</sup> February 2008. *Pavetta hongkongensis* is proposed to be transplanted to the ECA for *ex-situ* protection of this protected species. Proposed design, implementation, ecological monitoring and management of the ECA were detailed in the approved Habitat Creation Plan (HCP) (approved by EPD on 24<sup>th</sup> September 2010) (AEC 2010a), with the latest updated Review Note No. 2 of HCP (Revision 2) (AEC 2011a) also approved on 8 December 2011. Three specimens of the proposed shrub species *Pavetta hongkongensis* were transplanted to the proposed receptor sites in the ECA on 20 December 2011 in accordance with the transplantation procedures and maintenance practice stipulated in the latest Review Note for Transplantation Proposal for *Pavetta hongkongensis* (AEC 2011b).
- 1.1.3 Under Environmental Permit No. EP-303/2008, mitigation measures during the Operational Phase of the Project "Drainage Improvement Work in Shuen Wan, Tai Po" (include both Contracts 1 and 2) are required in accordance with Conditions 2.7 and 3.10 of the Environmental Permit issued on 25<sup>th</sup> February 2008 to mitigate and compensate the landscape and visual impacts resulting from the construction of the Project in Shuen Wan. The Project will be implemented under two works contracts, in which Contract 1 has been commenced in early 2010 while Contract 2 has been commenced in end of April 2011. Contract 1 involves the construction of a Stormwater Pumping Station, a drain pipe along Ting Kok Road and an automatic mechanical penstock at the Wai Ha River estuary (hereafter known as "Area A"), a box-culvert from the Station passing underneath Ting Kok Road and Tung Tsz Nursery and connect to the box-culvert (to be constructed under Contract 2) along Tung Tsz Road (hereafter known as "Area B") and construction of an ECA (i.e. Area C) (**Figure 1** of the approved Landscape Plan (Revision 3)). Contract 2 will involves the construction of the box-culvert along Tung Tsz Road and a drainage pipe near Wai Ha Village (**Figure 1** of the approved Landscape Plan (Revision 3)). A Landscape Plan is required in accordance with Condition 2.7 to meet the requirement to provide:

'locations, size number and species of planting, design details, implementation programme, maintenance and management schedules, and drawings in the scale of 1:1000 or other appropriate scale showing the landscape and visual mitigation

measures of the Project, in particular the landscape and compensatory planting and architectural and chromatic treatment of the floodwater pumping station’.

1.1.4 The Landscape Plan was prepared based on the above requirements and detailed the following soft landscape design and plans in accordance with Condition 2.7 of the Environment Permit:

- to provide a plan showing the locations, size, number and species of the proposed landscape planting;
- to provide design details, implementation programme, maintenance and management schedules and drawings for the landscape design in Areas A, B and C under Contract 1 and areas under Contract 2 of the Project;
- to detail landscape and compensatory planting of the Shuen Wan Stormwater Pumping Station, together with the architectural and chromatic treatment of the Station; and
- to provide detailed soft landscape design on the approximately 0.37ha of planting area in the ECA earmarked for planting of compensatory vegetation and transplanted trees and protected Hong Kong Pavetta from Areas A, B and areas to fall under Contract 2 of the Project.

1.1.5 The Final Landscape Plan (Revision 3) (AEC 2010b) was approved by the Environmental Protection Department (EPD) on 29<sup>th</sup> December 2010 and the subsequent Review Note No. 1 for Landscape Plan (Revision 3) was also approved by EPD on 21<sup>st</sup> October 2011. However, further comments from the Leisure and Cultural Services Department (LCSD) on the proposed tree recommendations (i.e. retain/ transplant/ fell) for the surveyed trees and the number of compensatory trees located within the works boundary of Contract 2 of the Project were made in the Tree Removal/Compensatory Planting Report for Contract 2 (AECOM 2011). All proposed recommendations for trees under Contract 2 and the proposed number of compensatory trees were reviewed in accordance with the latest work programme and design, LCSD’s comments and the approved Tree Removal/Compensatory Planting Report for Contract 2 (AECOM 2011) (approved by DLO (Tai Po) on 4<sup>th</sup> October 2011). In addition, replacement of a small number of compensatory trees planted in the ECA under Contract 1 is required due to their less satisfactory performance in the 12-month Establishment Period. The total number of individuals for each compensatory tree species is also updated in this Review Note in accordance with the availability of the nursery stock.

## 1.2 Objectives of the Review Note

1.2.1 The objectives of this Review Note is to update any changes of the tree recommendation, planting specification, soft landscape design and compensatory planting of landscape elements under Contract 2 in accordance with the approved Tree Removal/Compensatory Planting Report (AECOM 2011) (approved by DLO (Tai Po) on 4<sup>th</sup> October 2011) and the approved Review Note of Transplantation Proposal (AEC 2011b). This Review Note also updates the tree maintenance departments and the specific department to provide expert advice on tree removal stated in Annex 2 Tree Assessment Schedule, and the total number of individuals for each compensatory tree species planted in the ECA under Contract 1 of the Project. An additional Figure 15 is added to show schematic cross-section drawings of the soft landscape work to be planted along Tung Tsz Road for works areas under Contract 2.

## 2 REVIEW ON THE LANDSCAPE PLAN (REVISION 3)

2.1.1 As noted for the changes as stated in paragraph 1.1.5, the following text and figures were revised:

- Section 1 to 8 of the approved Landscape Plan (Revision 3)
- Annex 2 Tree survey schedule of areas under Contract 2
- Annex 3 Proposed planting list and planting schedule in Area C under Contract 1 and Areas under Contract 2
- Figures (Figures 9.1-9.8, 12.1 and 13.1-13.3)
- Additional Figure 15

2.1.2 The revised text in the main report (Section 1 to 8) of the revised Landscape Plan, Annexes 2 and 3 are highlighted in yellow. A full-set of revised Landscape Plan is included in this Review Note.

## 3 REFERENCES

AEC 2010a. *Contract No. DC/2009/22 – Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 – Design & Construction of Ecological Compensatory Area – Habitat Compensatory Plan (Revision 2)*. August 2010. AEC, Hong Kong.

AEC 2010b. *Contract No. DC/2009/22 – Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 – Landscape Plan (Revision 3)*. December 2010. AEC, Hong Kong.

AEC 2010c. *Contract No. DC/2009/22 – Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 – Transplantation Proposal for Pavetta hongkongensis for Contract 2 – Transplantation Proposal (Revision 1)*. December 2010. AEC, Hong Kong.

AEC 2011a. *Contract No. DC/2009/22 – Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 – Design & Construction of Ecological Compensatory Area – Review note No. 2 for Revised Habitat Compensatory Plan (Revision 2)*. October 2011. AEC, Hong Kong.

AEC 2011b. *Contract No. DC/2009/22 – Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 – Transplantation Proposal for Pavetta hongkongensis for Contract 2 – Review Note for Transplantation Proposal (Revision 1)*. November 2011. AEC, Hong Kong.

AECOM . 2011. *Contract No. DC/2010/02 – Drainage Improvement Works in Shuen Wan and Shek Wu Wai – TREE REMOVAL/ COMPENSATORY PLANTING REPORT For Shuen Wan Area (Version 1.0)* May 2011. AECOM, Hong Kong.

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## 1 INTRODUCTION

- 1.1.1 The Sha Tin and Tai Po Drainage Master Plan Study, which was completed in October 1999, indicated the hydraulic capacity of some stormwater drains and natural watercourses in the Sha Tin and Tai Po areas did not meet the flow requirement. Various construction and improvement works were proposed to reduce the risks and fulfill the development needs as identified in the Study, including the drainage improvement work at Shuen Wan.
- 1.1.2 The proposed drainage improvement work at Shuen Wan involves a construction of approximately 1.0km of box-culvert with internal cell dimension of 3m in width by 3m in height along Tung Tsz Road which leads to the loss of marsh (0.3 ha) and secondary woodland (0.08 ha) and impact on several individuals of locally protected tree species Hong Kong Pavetta *Pavetta hongkongensis*, the construction of Shuen Wan Stormwater Pumping Station to the east of Tung Tsz Nursery and Ting Kok Road, the construction of a drain pipe along Ting Kok Road, an automatic mechanical penstock at Wai Ha River estuary, and an approximately 280m drainage pipe near Wai Ha Village. Compensation for the habitat loss is required by creating an Ecological Compensatory Area (ECA or "Area C") in order to satisfy Condition 3.3 of the Environmental Permit issued by the Director of Environmental Protection on 25<sup>th</sup> February 2008. Hong Kong Pavetta is proposed to be transplanted to the ECA for *ex-situ* protection of this protected species. Proposed design, implementation, ecological monitoring and management of the ECA were detailed in the submitted Habitat Compensatory Plan (HCP) (AEC 2010a) in May 2010, with the latest Review Note No. 2 of HCP (Revision 2) (AEC 2011) approved on 8 December 2011.
- 1.1.3 Under Environmental Permit No. EP-303/2008, mitigation measures during the Operational Phase of the Project "Drainage Improvement Work in Shuen Wan, Tai Po" (include both Contracts 1 and 2) are required in accordance with Conditions 2.7 and 3.10 of the Environmental Permit issued on 25<sup>th</sup> February 2008 to mitigate and compensate the landscape and visual impacts resulting from the construction of the Project in Shuen Wan. The Project will be implemented under two works contracts, in which Contract 1 has been commenced in early 2010 while Contract 2 has been commenced in end of April 2011. Contract 1 involves the construction of a Stormwater Pumping Station, a box-culvert from the Station passing underneath Ting Kok Road and Tung Tsz Nursery and connect to the box-culvert (to be constructed under Contract 2) along Tung Tsz Road, a drainage pipe along Ting Kok Road and an automatic mechanical penstock at the Wai Ha River estuary. Contract 2 will involve the construction of the box-culvert along Tung Tsz Road and a drainage pipe near Wai Ha Village. This Landscape Plan is prepared in accordance with Condition 2.7 to meet the requirement to provide:

'locations, size number and species of planting, design details, implementation programme, maintenance and management schedules, and drawings in the scale of 1:1000 or other appropriate scale showing the landscape and visual mitigation measures of the Project, in particular the landscape and compensatory planting and architectural and chromatic treatment of the floodwater pumping station'.

## 2 OBJECTIVES OF THE LANDSCAPE PLAN

- 2.1.1 The general objective of the Landscape Plan is to mitigate and compensate the landscape and visual impacts resulting from the construction of the drainage works in Contracts 1 and 2 of the Project.

- 2.1.2 For Contract 1, mitigation and compensation measures are proposed for the construction of Shuen Wan Stormwater Pumping Station and drain pipe along Tink Kok Road (hereafter known as "Area A"), and box-culvert from the west of Area A passing underneath Ting Kok Road and part of Tung Tsz Nursery to the northeastern corner of Shuen Wan Conservation Area (hereafter known as "Area B") in accordance with the Conditions listed in the Environmental Permit. Soft landscape design (especially for the tree and shrub plantings) in the ECA (Area C) is also detailed. This Project also includes a small section of wasteground and pavement around the northern to southeastern parts of Treasure Spot Garden II (Area L), but no construction work is proposed in here under Contract 1. **Figure 1** shows the location plan with site environ photos for Areas A, B, C and L under Contract 1.
- 2.1.3 For Contract 2, mitigation and compensation measures are proposed for the construction of a box culvert close to Shuen Wan Conservation Area and Wai Ha River along Tung Tsz Road, and a drainage pipe with diameter of 1.2m near Wai Ha Village. **Figure 1** shows the areas under Contract 2.
- 2.1.4 As noted in paragraph 1.3, the Landscape Plan aims to satisfy Condition 2.7 of the Environmental Permit by:
- providing a plan to show the locations, size, number and species of the proposed landscape planting,
  - providing design details, implementation programme, maintenance and management schedules and drawings for the landscape design in Areas A, B and C under Contract 1 and areas under Contract 2 of the Project,
  - detailing landscape and compensatory planting of the Shuen Wan Stormwater Pumping Station, together with the architectural and chromatic treatment of the Station, and
  - providing detailed soft landscape design on the approximately 0.37 ha of planting area in the ECA earmarked for planting of compensatory vegetation and transplanted trees and protected Hong Kong Pavetta from Areas A, B and areas to fall under Contract 2 of the Project.

### 3 METHODOLOGY

- 3.1.1 Design philosophy of this Landscape Plan is grounded in a review of the predicted landscape and visual impacts resulting from the Project and an assessment of the feasibility and practicality of mitigation measures. The following project-related documents were reviewed:
- Environmental Impact Assessment (EIA) report (Register No.: EIA-130/2007) of *Drainage Improvement in Sha Tin and Tai Po*;
  - Environmental Monitoring and Audit (EM&A) Manual as revised to meet Condition 2.4 of the Environmental Permit;
  - Habitat Compensatory Plan (HCP) (AEC 2010a; **AEC 2011**); and
  - The proposed architectural and chromatic design of the Shuen Wan Stormwater Pumping Station and design layout of the box-culvert.
- 3.1.2 Additional sources for the Landscape Plan included the latest tree survey data (prepared by Kwan Lee – Kuly Joint Venture, i.e. main contractor of Contract 1 of the Project) collected and updated after the commencement of the Contract 1, the latest tree survey data collected in September 2010 for areas under Contract 2, and a review of existing vegetation and habitat characteristics of areas under both Contracts.

## 4 PROPOSED DESIGN FOR THE LANDSCAPE PLAN

### 4.1 Proposed mitigation measures according to EIA report

4.1.1 According to the Landscape and Visual Mitigation Measures recommended in the EIA report (EIA-130/2007) and *Review Note for Final Environmental Impact Assessment Report (January 2008)*, relevant mitigation measures under Contracts 1 and 2 of the Project during construction should consider the following Conditions listed in Table 8.4 of the EIA report (Register No. EIA-130/2007) and *Review Note for Final Environmental Impact Assessment Report*:

*CM-01 Visual Screen* – Hoardings shall serve as visual screen for the construction in certain area. They shall be properly designed to be compatible to the surroundings.

*CM02A Contaminant/ Sediment Control* – Suitable temporary barriers, covers and drainage provisions shall be provided around construction works to avoid discharge of contaminants (such as bleeding from in-situ concrete works) and sediments into sensitive water-based habitats including marshes, fish ponds and mangroves.

*CM-02B Pollution Control* – The implementation of environmental pollution control measures, such as those for controlling water quality and ecological impacts as illustrated in Sections 5 and 7, to minimize any adverse impacts to the surrounding habitats.

*CM-03 Liaison with Nursery* – The proposed box culvert passing through the existing nursery may affect its daily operation and substantially reduce its holding capacity for plants. DSD and the Contractor could continue to liaise with the nursery operator for mutual benefits as necessary.

*CM-04 Existing Trees within Works Areas* – All existing trees within work sites shall be properly maintained and protected for their crowns, trunks and roots.

*CM-05 Construction Light* – Security floodlight for construction areas shall be controlled at night to avoid excessive glare to the surrounding villages and to Plover Cove.

4.1.2 Mitigation measures under Contracts 1 and 2 during operation should consider the following Conditions listed in Table 8.4 of the EIA report (Register No. EIA-130/2007) and *Review Note for Final Environmental Impact Assessment Report*:

*OM-01 Viewing Area Formation* - The proposed concrete pipe between the pump house and mechanical gate will affect the existing strip of vegetation, which visually separates the naturalistic shore of Plover Cove from Ting Kok Road. Unlike the proposed box culvert, the concrete pipe will not support any tree planting above due to both technical and maintenance reasons. While it is apparent that the impact cannot be reversed, there is room for enhancing the overall landscape design of the strip to form a roadside landscaped viewing area overlooking Plover Cove. Although Ting Kok Road has been constructed along the shore, it is actually only few sections of the road that have an open view to Plover Cove. The area shall be planted with shrubs and grasses and a few benches.

*OM-02A Architectural Design for Pump House* – The appearance of proposed pump house shall be properly designed, including a careful selection of material colour and texture, so that it fit into the existing suburban, natural to semi-natural surroundings. According to Table 8.4 of the approved EIA report (Register No. EIA-130/2007) and *Review Note for Final EIA Report*, “The aesthetic design of the pumping station had been approved by DSD’s Vetting Committee

*on Aesthetic Design of Pumping Station Building (VCAB), and will be circulated to ASD for comment in accordance with ETWB TCW 8/2005”.*

*OM-02B Landscape Design for Pump House* – Sufficient planting shall be provided around the boundary fence of the pump house for screening.

*OM-03A Enhancement Planting along Tung Tsz Road* – An existing strip of disturbed woodland with some large trees and the marsh edge area with mostly grasses and small trees will be affected by the proposed box culvert. After the construction, the area shall be planted with shrubs/ trees of suitable species, such as *Ficus* spp., *Schefflera octophylla*, *Hibiscus tiliaceus*, which help to protect the stream and the marshes.

*OM-03B Soil Depth for Enhancement Planting* – The box culvert shall be designed with sufficient loading capacity and with at least 1.0m soil depth for shrub/tree planting above.

*OM-04A Transplanting of Trees to Adjacent Locations* – Existing trees to be affected shall be directly transplanted to other locations in vicinity, where no construction will take place.

*OM-04B Preparation for Transplanting* – The construction program should also allow sufficient time for root pruning and rootball preparation prior to transplanting.

*OM-05 Reinstatement of affected area* – The works area should be properly reinstated to the satisfaction of relevant government departments.

*OM-06 Reinstatement of planters and reprovion of trees and vegetations* – The planters including all planted trees and vegetations should be properly reinstated to the satisfaction of relevant government departments.

- 4.1.3 These proposed mitigation measures are addressed in this landscape plan, including *OM-01*, in which the construction of a precast concrete pipe between the pump house and mechanical penstock will be mitigated by appropriate shrub planting.

## **4.2 Proposed mitigated measures to be implemented**

- 4.2.1 In order to satisfy the abovementioned Conditions for reducing the landscape and visual impacts resulting from the construction of the Shuen Wan Stormwater Pumping Station, drain pipe along Ting Kok Road, drainage pipe near Wai Ha Village and box-culvert along Tung Tsz Road and underneath Ting Kok Road and Tung Tsz Nursery, the mitigation measures to be implemented include establishing hoardings around the construction areas, replanting vegetation/ compensation planting, protection of existing trees, tree transplanting, topsoil conservation, architectural and chromatic measures and specific soft landscape design in Areas A, B and C.

### **4.2.2 Establishing hoarding for screening**

The work boundaries of Areas A, B and C (Contract 1) and areas under Contract 2 will be delineated during the construction phase. A temporary hoarding will be established to reduce disturbance to off-site habitats and people. During the establishment phase for the created wetland in Area C, the temporary hoarding will be replaced with chain-link fence/wire mesh fence in order to reduce disturbance to Area C through access by human and dogs.

- 4.2.3 *Establishing temporary barriers and implementing appropriate control measures for contaminant/ sediment control*

Appropriate mitigation measures for preventing contamination of water sources and site run-off will be implemented according to the latest Environmental Monitoring & Audit Manual (Chapter 3 (Air Quality) and Chapter 4 (Water Quality)).

#### 4.2.4 *Implement appropriate environmental pollution control measures*

Appropriate mitigation measures for controlling water quality and ecological impacts will be implemented and monitored according to the latest Environmental Monitoring & Audit Manual (Chapter 4 (Water Quality) and Chapter 6 (Ecological Impact)).

#### 4.2.5 *Control of construction light at night time*

Light from construction area (such as security floodlight) will be controlled at night to avoid excessive glare that affect the surrounding residential areas in Shuen Wan and Plover Cove.

#### 4.2.6 *Replanting vegetation/ compensation planting*

The existing tree specimens and plant species composition, as well as any development constraints in areas under Contracts were reviewed. Proposed treatment for existing trees (i.e. retain, transplant or fell) was assessed in accordance with the proposed latest design layout of the Project and general health and form condition of the trees. Compensatory planting is proposed which will compensate for tree loss around the Stormwater Pumping Station (Area A), along roads in Area B, around the proposed wetland (Area C) and along Tung Tsz Road and fringe of Shuen Wan Conservation Area under Contract 2.

#### 4.2.7 *Protection of existing trees*

Trees to be retained within and adjacent to the work boundary will be carefully protected to maintain health of the trees on site throughout the construction period. A tree protection zone around the drip-line with protective fencing (**Annex 4**) will be established and erected for all retained trees as far as possible during construction. Temporary protective Hessian armoring around the tree trunks should be used to protect the retained trees if erection of protective fencing is not practical in the site. No soil compaction, passage or parking of vehicles and operation of equipment or machinery shall take place within the tree protection zones during the construction period.

#### 4.2.8 *Tree transplanting*

Trees identified to be transplanted in Areas A and B under Contract 1 and areas under Contract 2 are those of normal size range and in direct conflict with the proposed construction works in the two Areas. Trees that are of reasonable health condition and form, and are technically feasible to be transported on Hong Kong roads without hard pruning will be transplanted. However, the practicality of transplanting the selected trees shall be subject to further review on the actual site conditions during the preparation stage for the transplant/ construction stage, with any amendments/ deviations from this assessment shall be fully justified during the preparation stage for the transplant/ construction stage.

Trees to be transplanted will be properly managed by root pruning, crown thinning and surgery, rootball preparation, uplifting and replanting in the permanent site in accordance with **Annex 4** and CEDD General Specification for Civil Engineering Works (CEDD 2009). Unless agreed by the Engineer, all preparation works for tree transplant, uplifting and planting trees to the receptor site should be constructed during the plant growing season (i.e. March to September) to ensure the survival rate of the trees after transplant. Tree protection zone

around the drip-line with protective fencing (**Annex 4**) will be established and erected around the trees to be transplanted. The receptor locations in Areas B and C under Contract 1 and areas under Contract 2 for the transplanted trees will be recommended in this Landscape Plan. The final receptor locations for transplanting trees within Area B (i.e. Tung Tsz Nursery) would be finalized after further liaison with LCSD (i.e. the property owner and management party of Tung Tsz Nursery).

#### 4.2.9 *Topsoil conservation*

Any excavation of topsoil in any of the construction areas under Contracts 1 and 2 shall be carefully saved and stored to one side of the works area for reuse in planting or other works upon completion.

#### 4.2.10 *Architectural and Chromatic Treatment of the Stormwater Pumping Station*

**Annex 1** details the latest architectural finishing, chromatic treatment and landscape design of the Stormwater Pumping Station. A hard copy of the architectural and landscape design (Memo Reference No.: DP 8/4115CD/17 dated 5<sup>th</sup> July 2010) was submitted to the Design Advisory Panel of Architectural Services Department (ArCh SD) for comments.

#### 4.2.11 *Soft Landscape Design and reinstatement of planters for the Project*

##### *Contract 1 – Area A*

The construction in Area A includes a stormwater pumping station (approximately +12.45mPD), with green roof and man-made slope built on or in association with the stormwater pumping station, part of the box-culvert, manholes, gullies and outfall connecting the pumping station and the coast. A drain pipe will be constructed along Ting Kok Road. A boundary wall (+7.45mPD) will be erected along the western boundary of Area A and wire fencing with evergreen herbaceous climbers will be erected along the boundary of the rest of the Area. Heavy standard trees and large shrubs will be planted in areas for screening and reducing the visual impact of the stormwater pumping station. Climbers will be planted along the northern roof edge and from the base of the northern and western sides of the stormwater pumping station. Planting these climbers would further provide an aesthetic, vertical greening effect for the pump house. Shrubs will be planted along the constructed drain pipe after reinstating the planters. Following tree and shrub planting, planting areas will be hydroseeded. Hydroseeding will also be conducted on the proposed green roof and man-made slope of the pumping station (see **Annex 1**). Trees identified to be transplanted will be protected in tree protection zones before the commencement of transplantation.

##### *Contract 1 – Area B*

A box-culvert will be constructed from the Shuen Wan Stormwater Pumping Station and passing underneath Ting Kok Road and part of Tung Tsz Nursery to the northeastern corner of Shuen Wan Conservation Area. Within the Nursery, trees that are of low amenity value and of poor health and form will be felled. Trees located at areas out of the box-culvert alignment or do not influence the construction work will be retained. Trees located at areas with direct conflict with the construction work will be transplanted and aligned along the work boundary of the Project. However, the exact receptor site for these transplanted trees is to be finalized after further liaison with LCSD and the Nursery Manager. For the reason of long-term maintenance of the constructed box-culvert, the area above the box-culvert alignment will be largely hydroseeded and planted with low density of shallow-rooted shrubs. A small area of

mangrove in Shuen Wan Conservation Area will be cut in order to permit construction of the exit point of the box culvert. This area will be vegetated by hydroseeding and shallow-rooted shrubs along the alignment of the box-culvert and planting with tree and/or shrub mix adjacent to the alignment of the box-culvert after completion of the construction work. Vegetation in the southwest of the Project Area will be retained with proper tree preservation measures. Trees identified to be transplanted will be protected in tree protection zones before the commencement of transplantation.

#### *Contract 1 – Area C*

The ECA (Area C) is an existing recreational fishpond to the northeast of Shuen Wan Conservation Area. It is designed as a self-sustaining wetland ecosystem with inter-tidal characteristics. This compensatory pond is proposed to include open water up to 1.5m in depth with shallow water margins (15 – 50 cm depth), woodland area with a mixture of tree and shrub planting, wooded area with a mixture of existing and transplanted trees from Areas A and B under Contract 1 and transplantation of the protected Hong Kong Pavetta in areas under Contract 2, mangrove area, brackish marsh and intertidal mudflat. Trees of no significant ecological values (such as fruit trees and exotic trees) within the work boundary will be felled and tree loss will be compensated by planting native trees of high ecological value.

#### *Areas under Contract 2*

The constructed box-culvert will emerge from the northwestern part of Area B (under Contract 1) and will be continued with a box-culvert of the same design passing along Tung Tsz Road and the fringe of Shuen Wan Conservation Area up to Wai Ha River at Tung Tsz Shan Road. A number of isolated trees, patches of exotic *Leucaena leucocephala* and clumps of native trees are located along the road and in areas along Wai Ha River. The affected locations along Tung Tze Road and existing paved area/ parking area will be reinstated upon completion of the box-culvert. The original vegetated area above the box-culvert will be largely hydroseeded and planted with shallow-rooted shrubs at low density. An approximately 2m wide setback area is required for maintenance purpose and this area will be largely vegetated by hydroseeding and shrub planting. Tree planting close to the box-culvert would be required along Tung Tsz Road so as to maximize the planting space for tree compensation in accordance with the approved Tree Removal/Compensatory Planting Report (approved by DLO/Tai Po dated 4 October 2011). However, the actual tree planting locations will be adjusted on-site so as to obey the 2m wide setback area as much as possible. The remaining areas falling within Shuen Wan Conservation Area will be vegetated using shrubs and scattered tree groups for landscape and amenity purposes, while other areas originally covered with clumps of trees and shrubs close to north of Wai Ha River will be vegetated with a higher density of shade-tolerant and riparian trees and shrubs. Groups of *Leucaena leucocephala* and dead trees within the work boundary along Tung Tsz Road will be removed and areas will be revegetated with trees of higher ecological and amenity values.

A drainage pipe of 1.2m in diameter will be constructed along and adjacent to the paved access road towards Treasure Spot Garden Phase II (i.e. near Wai Ha Village). It will mainly pass through abandoned agricultural land, which has, through a process of succession, developed as grassland, herbaceous vegetation and isolated trees and shrubs. The affected access road and paved areas will be reinstated after the construction, while the affected grassland will be reinstated by hydroseeding for facilitating the later design of vehicular access after the completion of the current Project.

## 5 PLANTING CONSIDERATIONS

### 5.1 Description of existing vegetation in Areas A, B and C (Contract 1)

#### 5.1.1 Area A

Area A is located to the east of Ting Kok Road. The existing vegetation composition and structure largely comprise scattered tree groups of naturally established native species (including *Bridelia tomentosa*, *Celtis sinensis*, *Litsea glutinosa* and *Macaranga tanarius*). Vegetation dominated by common coastal plants such as *Hibiscus tiliaceus*, *Thespesia populnea* and *Excoecaria agallocha*, was recorded along the southern and eastern boundary of the Area. A strip of common exotic trees *Bombax ceiba* and *Melaleuca quinquenervia* has been planted along Ting Kok Road.

A precast concrete pipe is proposed to connect with the stormwater pumping station with four mechanical penstocks along Ting Kok Road. This will impact on existing planters managed by Highway Department.

#### 5.1.2 Area B

The majority of the construction of the box-culvert will fall within Tung Tsz Nursery under the management of LCSD. The existing vegetation along the proposed affected area mainly includes exotic ornamental vegetation such as trees *Terminalia mantaly*, *Terminalia catappa* and *Aleurites moluccana*, other ornamental shrubs and herbs. Individual ornamental trees such as *Cassia fistula*, *Grevillea robusta*, *Archontophoenix alexandrae* and *Dillenia indica* are also present. A small section of roadside planting along the cycle track adjacent to Ting Kok Road will be also be affected. This roadside planting comprises common exotic trees, including *Lagerstroemia indica*, *Casuarina equisetifolia* and *Melaleuca quinquenervia*. To the west of the nursery the culvert alignment crosses a vegetated area of wasteground located to the northeastern side of Shuen Wan Conservation Area. This is dominated by common tree species (*Bauhinia purpurea*, *Celtis sinensis* and *Macaranga tanarius*). To the west of this area the northwestern part of the box-culvert will impact on a small area of mangrove (*Kandelia obovata* and *Avicennia marina*) and wetland-associated vegetation in Shuen Wan Conservation Area.

#### 5.1.3 Area C

The proposed ECA will be formed from an existing recreational fishpond to the northeast of Shuen Wan Conservation Area. The pond is located to the north of Wai Ha River. It is bordered to the north, east and west by Tung Tsz Nursery, a recreational fishpond and an area of natural mangrove forest respectively. The pond banks are artificial vertical brick/ concrete walls and the surroundings of the pond are paved with concrete. The concrete extends to the site boundary on all but the north side where there is a strip of woodland comprising a mixture of planted exotic fruit trees (such as *Dimocarpus longan*, *Litchi chinensis* and *Mangifera indica*) and self-sown native tree species (such as *Macaranga tanarius*, *Celtis sinensis* and *Bridelia tomentosa*). Scattered exotic fruit trees (such as *Dimocarpus longan*, *Litchi chinensis* and *Mangifera indica*) have been planted along the pond bund.

#### 5.1.4 Areas under Contract 2

The majority of the box-culvert will pass along Tung Tsz Road and the fringe of Shuen Wan Conservation Area. The existing Tung Tsz Road is a two-lane road adjacent to Shuen Wan



Conservation Area. Isolated trees (such as *Celtis sinensis* and *Macaranga tanarius*, clumps of weedy, exotic trees *Leucaena leucocephala* and tree groups of tall, semi-mature trees (dominated by *Dimocarpus longan*, *Celtis sinensis*, *Sapium sebiferum*, *Cleistocalyx operculatus* and *Bischofia javanica*) grow along the Tung Tsz Road. Part of the box culvert will affect vegetation along the fringe of Shuen Wan Conservation area. This mainly comprises herbaceous species (including small patches of reed, grass such as *Panicum repens* and *Brachiaria mutica*, weedy climbers *Ipomoea cairica* and *Mikania micrantha*, creeper *Commelina diffusa* and fern *Cyclosorus interruptus*) and mangroves (mainly *Acanthus ilicifolius* and *Kandelia obovata*). Several small sections of the box-culvert will intercept or adjoin the northern Wai Ha River. These sections are either vegetated by riparian herbaceous plants, trees (such as *Ficus hispida*, *Cleistocalyx operculatus* and *Syzygium jambos*) and shrubs (such as *Psychotria asiatica* and *Melicopa pteleifolia*) or with river bank maintained by retaining wall largely covered by herbs and weedy *Leucaena leucocephala*.

## 5.2 Selection of vegetation

5.2.1 In order to rehabilitate the existing vegetation and integrate the constructed buildings (i.e. Shuen Wan Stormwater Pumping Station) and proposed wetland (i.e. the ECA) with the surrounding natural environment, native shrub and tree species are selected as the major planting component proposed for compensating the tree loss and reducing the landscape and visual impacts resulting from the construction of the Project.

### 5.2.2 Area A

The proposed planting area in Area A is highly constrained by the proposed footprint of the stormwater pumping station and other associated drainage facilities (such as manholes, gullies, access opening to the box culvert and the outfall). Species to be selected are also constrained by the limited planting space and soil depth available for the planting. **Figure 10.1** shows the proposed landscape plan of Area A. Eleven existing trees of *Bombax ceiba* and *Melaleuca quinquenervia* will be transplanted at the southwestern and southeastern corners, and native trees *Cinnamomum burmannii* will be planted at the northern boundary to reduce the visual impact from the stormwater pumping station. Due to the limited planting space, shrubs *Ficus microcarpa* (Golden Leaf) with hydroseeding of *Cynodon dactylon* and *Paspalum notatum* will be undertaken in the southern, southeastern and northeastern fringes of the site. The remaining areas where hardstanding is not required for operational reasons will be hydroseeded using *Cynodon dactylon* and *Paspalum notatum* to maximize the greenery elements on the site.

Lightweight green roof of the main stormwater pumping station will be hydroseeded with *Cynodon dactylon* (Common Bermuda Grass) and *Paspalum notatum* (Bahia Grass) (see detailed in **Annex 1**). This additional layer of vegetation will not only reduce the visual impact of the building, but also will provide additional ecological services (e.g. provide limited habitat for fauna, capture airborne pollutants, capture rainwater and reduce the roof temperature).

In order to strengthen the screening effect on the stormwater pumping station, vertical greening concept is recommended by planting climbers *Arachis duranensis*, *Epipremnum aureum* and *Lonicera japonica* along the northern roof edge and from the base of the northern and western sides of the pump house. A wooden/metal frame structure will be established at ground level for providing a vertical climbing support to the climbers at the bases of the northern and western sides of the pump house (see detail in the respective computer generated perspectives in **Annex 1**). Additional planting of these flowering climbers

on the stormwater pumping station would enrich the visual and greening elements to the surrounding environment.

The planter along Ting Kok Road will be reinstated following construction of the pipe and planted with ornamental shrubs *Duranta erecta* (Figure 10.2).

### 5.2.3 Area B

Most of the box-culvert alignment will fall within Tung Tsz Nursery under the management of LCSD. Species selection, number and location of trees and/or shrubs to be transplanted within the Nursery are recommended in Figure 11 and agreed by LCSD.

The roadside planter along the cycle track adjacent to Ting Kok Road, and the gentle slope immediately adjacent to the northwestern boundary of Tung Tsz Nursery will be hydroseeded for the easy maintenance of the constructed box-culvert (Figure 11).

Mangrove and wetland-associated vegetation in the northeastern part of Shuen Wan Conservation Area to be removed by the Project will be vegetated with native shrubs, trees and hydroseeding after completion of the construction of the box-culvert. Shrub planting (including mangroves *Kandelia obovata* and *Aegiceras corniculatum*, mangrove-associated species *Scaevola taccada* and *Clerodendrum interim*, and other shrubs *Ligustrum sinense* and *Melastoma sanguineum*) and hydroseeding will be carried out in the area to the northeastern part of Shuen Wan Conservation Area (Figure 11).

### 5.2.4 Area C

The ECA will comprise a marsh and mangrove area (with habitats of brackish marsh, mangrove and intertidal mudflat) with an open pool not less than 0.8 ha, and a woodland mix of compensation planting, transplanted trees and retained trees. Design, construction, management and maintenance of this area are detailed in the approved Review Note No. 2 of HCP (Revision 2) (AEC 2011). Figures 12.1 and 12.2 show the proposed landscape plan and the proposed habitat plan of Area C, which is designed so as to integrate with the adjacent Shuen Wan Conservation Area in plant composition and structure. Native mangrove species (*Aegiceras corniculatum*, *Avicennia marina* and *Kandelia obovata*) will be planted in the proposed mangrove area. Marsh species (including *Cyperus malaccensis*, *Eleocharis dulcis*, *Scirpus mucronatus*, *Philydrum lanuginosum*, *Bacopa monnieri*, *Lindernia crustacea* and *Commelina diffusa*) will be planted in the brackish marsh habitat. Shrubs and small trees (*Bridelia tomentosa*, *Melastoma sanguineum* and *Scaevola taccada*) will be planted along the northeastern part of the ECA, while a mixture of trees (*Celtis sinensis*, *Ficus superba* var. *japonica*, *Hibiscus tiliaceus*, *Macaranga tanarius* and *Viburnum odoratissimum*), transplanted trees (including *Bombax ceiba*, *Celtis sinensis* and *Melaleuca quinquenervia* from Area A, *Melaleuca quinquenervia* and *Lagerstroemia speciosa* from Area B), and retained trees will form part of the wooded areas around the ECA (Figure 12.1). All transplanted exotic and native trees will be grouped along the northeastern boundary of Area C so as to reduce their ecological influence on the wetland functions. Four saplings of the protected tree *Pavetta hongkongensis*, which requires to be transplanted as a consequence of the Project, will be transplanted to the final receptor sites as specified in Figure 12.1.

### 5.2.5 Areas under Contract 2

The proposed landscape design for the construction of the box culvert and drainage pipe maintains the balance between the ecological characteristics of the Shuen Wan Conservation

Area and landscape and amenity function of the proposed trees and shrubs. **Figure 13** shows the proposed landscape plan for areas under Contract 2. The affected Tung Tsz Road, access road and any paved area/ parking area will be reinstated after the construction. Grass and lower density of shrubs (including *Scaevola taccada*, *Clerodendrum inerme*, *Melastoma sanguineum*, *Ligustrum sinense*, *Rhodomyrtus tomentosa*, *Rhododendron simsii*, *Duranta erecta*, *Melastoma candidum* and *Ixora chinensis*) will be hydroseeded and planted on top of the box-culver. The remaining works boundary along the fringe of Shuen Wan Conservation Area will be vegetated with native shrubs (mainly include mangrove such as *Kandelia obovata* and *Aegiceras corniculatum*, wetland-associated shrubs such as *Scaevola taccada* and *Clerodendrum inerme* and other native shrubs *Melastoma sanguineum* and *Rhodomyrtus tomentosa*), and scattered tree groups (such as *Sapium sebiferum*, *Cleistocalyx operculatus*, *Celtis sinensis* and *Hibiscus tiliaceus* with separation of appropriate planting space (at least 3m apart), so as to maintain the original ecological characteristic and amenity value. Tree groups (including *Hibiscus tiliaceus*, *Celtis sinensis*, *Cinnamomum burmannii*, *Ficus variegata* var. *chlorocarpa* and *Litsea glutinosa*) and tree-shrub mix (including trees *Litsea glutinosa*, *Cleistocalyx operculatus*, *Ficus variegata* var. *chlorocarpa*, *Ficus virens* and *Celtis sinensis* and shrubs *Ligustrum sinense*, *Litsea rotundifolia* var. *oblongifolia*, *Melastoma candidum*, *Rhodomyrtus tomentosa* and *Rhaphiolepis indica*) will be planted in selected areas to resemble the existing vegetation characteristics. As several sections of the box-culvert will intercept or adjoin the northern Wai Ha River, the original river bank will be reinstated as much as possible or gabion wall will be installed to protect the river bank after the construction. Details of the gabion wall design will be finalized once the commencement of the construction of Contract 2. However, the gabion wall design will consider in providing enough space for natural plant establishment.

The affected access road and paved areas due to the construction of the drainage pipe near Wai Ha Village will be reinstated after the construction. The original vegetated areas (mainly covered by grasses and climbers) will be reinstated by hydroseeding for facilitating the later design of vehicular access after the completion of the current Project.

## 6 TECHNICAL SPECIFICATION FOR LANDSCAPE AND COMPENSATORY PLANTING

### 6.1 Planting schedules

- 6.1.1 According to a broad tree survey conducted and based on the preliminary design footprint of the Project (including areas under both Contracts 1 and 2) (Register No. of the EIA report: EIA-110/2007), a total of 290 trees would be affected. Of these trees, 99 would be felled, while 168 and 23 trees would be retained and transplanted respectively.
- 6.1.2 Tree surveys (for Contract 1) were conducted and updated by Kwan Lee – Kuly Joint Venture subsequent to the commencement of the Project (Contract 1), while tree surveys (for Contract 2) was conducted by Asia Ecological Consultants Limited (now AEC Limited.) in early September 2010. A total of 376 and 207 trees were recorded and assessed for Contracts 1 and 2 respectively. The revised recommendation for treatment (i.e. retain, transplant or fell) (Annex 2) is based on a review of the latest design layouts, the proposed works boundary for areas under Contracts 1 and 2, and the health condition and form of the existing trees. Trees that are not in direct conflict with the proposed construction of the Project, nor affected by the change in level due to formation works will be retained. Trees that are of reasonable health condition and form, and technically feasible to be transported on Hong Kong roads without hard pruning, will be transplanted. However, due to the reasons of limited space available in Areas A, B and C as a receptor site for the transplanted trees and direct conflict of tree locations with the construction work (especially in Area A), any trees deemed to have an

unrecoverable health problem, poor form, low amenity and/or ecological value and low survival rate after transplanting will be felled. Trees that are proposed to be felled will be compensated with planting species of higher ecological value so as to enhance the visual and ecological value of the habitats in Shuen Wan. Trees proposed to be transplanted are of fair health condition and/or moderate amenity value. They are usually located close to the work limit and the construction work would not influence their transplantation process. Among the assessed trees, 97 and 72 trees will be retained and transplanted, while 204 and 3 trees will be felled and removed (dead trees or undesirable species such as exotic *Leuceana leucocephala*) respectively (Table 1) for Areas A, B and C. For areas under Contract 2, 77 trees and 65 trees will be retained and felled respectively. No tree will be transplanted and 65 trees (i.e. dead trees or undesirable tree species) will be removed. Justification of the proposed action on the surveyed trees is given in Annex 2.

**Table 1** Summary of the proposed action on the surveyed trees and the aggregated DBH loss (mm) in areas under Contract 1 (Areas A, B and C) and Contract 2.

Tree survey Area	Proposed action on the surveyed trees				Aggregate DBH Loss (mm)
	Retain	Transplant	Fell	Remove (Dead tree or undesirable tree)	
Area A (Contract 1)	38	29 <sup>1</sup>	153	2	20,879
Area B (Contract 1)	16	43	33	1	6,935
Area C (Contract 1)	43	0	18	0	2,415
Areas under Contract 2	77	0	65	65	18,520

Note:

1: If the transplanted tree (mainly *Bombax ceiba* and *Melaleuca quinquenervia*) in Area A is assessed as a dead specimen in the receptor site for a prolonged period after the transplantation, the according tree will be replaced by heavy standard tree of native tree species (such as *Cinnamomum burmannii* and *Viburnum odoratissimum*) of at least 80mm DBH.

- 6.1.3 For areas under Contract 1 (i.e. Areas A, B and C), it is proposed to plant a total of 384 heavy standard trees of at least 80 mm DBH (i.e. an aggregated DBH of 30,720 mm) to compensate 204 tree specimens (of aggregated DBH of 30,229 mm) to be felled, i.e. a compensation ratio of more than 1:1 in terms of number of trees and aggregated DBH size. Heavy standard trees (including *Celtis sinensis*, *Cinnamomum burmannii*, *Ficus superba* var. *japonica*, *Hibiscus tiliaceus*, *Macaranga tanarius* and *Viburnum odoratissimum*) will be planted for the compensation of the loss of 204 trees. Shrubs (*Clerodendrum interum*, *Duranta erecta*, *Ligustrum sinense*, *Ficus microcarpa* (Golden Leaf) and *Melastoma sanguineum*) will be planted to rehabilitate the overall landscape and amenity value of the site. Due to the limited planting area available in Areas A and B, trees (*Cinnamomum burmannii*) and shrubs (*Ficus microcarpa* (Golden Leaf)) will be planted to compensate the loss of tree and mitigate the landscape and visual impact in Area A. Shrubs (*Ligustrum sinense*, *Clerodendrum interum*, *Melastoma sanguineum* and *Scaevola taccada*) will be planted in Area B for the landscape and visual mitigation. Trees to be felled under this Project will be compensated by planting trees (*Celtis sinensis*, *Ficus superba* var. *japonica*, *Hibiscus tiliaceus*, *Macaranga tanarius* and *Viburnum odoratissimum*) mainly in Area C. In addition, the proposed planting locations for transplanted trees in Areas A, B and C are suggested in this Landscape Plan, but the actual tree locations would be adjusted depending on the actual on-site conditions and the final tree locations will be shown in the landscape as-built drawing(s) to be deposited to the EPD at least one month before the Project commences operation (accordance with the Condition 3.10 of the Environmental Permit). These proposed landscape plans for these Areas were appended in the Tree Felling Application Report submitted to LCSD and DLO. These were then approved

by DLO on 9th March 2011. Evergreen herbaceous climbers *Arachis duranensis*, *Epipremnum aureum* and *Lonicera japonica* will be planted to enrich the visual and greening elements on the northern roof edge, northern and western sides of the stormwater pumping station.

- 6.1.4 For areas under Contract 2, a total of 186 heavy standard trees of 100mm DBH (i.e. an aggregated DBH of 18,600mm) to compensate 65 tree specimens (of aggregated DBH of 18,520mm) to be felled within the works boundary in Shuen Wan area. The compensation ratio is more than 1:1 in terms of tree number and aggregated DBH size. In addition to the compensatory trees for the works in Shuen Wan, 19 compensatory trees are reserved to compensate the loss in vegetation due to works in Shek Wu Wai (AECOM 2011). As such, there will be a total of 205 compensatory trees to be planted along Tung Sze Road.
- 6.1.5 The existing fringe of Shuen Wan Conservation Area is an open area mainly covered by herbaceous vegetation, isolated trees and shrubs, and mangrove patches. In order to fulfill the compensation ratio (in terms of number of trees and aggregated girth size) stipulated in Technical Circular ETWB TCW No. 3/2006 and in compliance with the approved Tree Removal/Compensatory Planting Report for Shuen Wan Area (Contract 2) (AECOM 2011), a total of 186 heavy standard trees will be planted in tree groups along Tung Tsz Road. These tree groups will be planted at the locations resemble the existing tree pattern and vegetation structure, with a principle of causing less landscape obstruction to the nearby residents as much as possible. In addition, shrub planting along the fringe of Shuen Wan Conservation Area and on top of the box-culvert and drainage pipe will be proposed to compensate the loss of greenery and landscape value in this area.
- 6.1.6 For maintenance purpose, low density of shrubs (*Clerodendrum interme*, *Duranta erecta*, *Ixora chinensis*, *Melastoma sanguineum*, *Ligustrum sinense*, *Raphiolepis indica*, *Rhododendron simsii*, *Rhodomyrtus tomentosa* and *Scaevola taccada*) and hydroseeding grass will be planted on top of the box-culvert. Taking into account of the 2m setback areas from both sides of the box-culvert, appropriate density of trees (*Sapium sebiferum*, *Cleistocalyx operculatus*, *Celtis sinensis* and *Hibiscus tiliaceus*) and shrubs (mainly comprising mangroves such as *Kandelia obovata* and *Aegiceras corniculatum*, wetland-associated shrubs such as *Scaevola taccada* and *Clerodendrum inerme* and other native shrubs *Melastoma sanguineum* and *Rhodomyrtus tomentosa*) will be planted along the fringe of Shuen Wan Conservation Area and in areas close to Wai Ha River. Tree groups and tree-shrub mix will be planted at selected areas to resemble the existing vegetation structure in areas along Tung Tsz Road. Tree planting close to the box-culvert would be required along Tung Tsz Road so as to maximize the planting space for tree compensation in accordance with the approved Tree Removal/Compensatory Planting Report (approved by DLO/Tai Po dated 4 October 2011). However, the actual tree planting locations will be adjusted on-site so as to obey the 2m wide setback area as much as possible, and the final tree locations will be shown in the landscape as-built drawing(s) to be deposited to the EPD at least one month before the Project commences operation (accordance with the Condition 3.10 of the Environmental Permit).
- 6.1.7 Terrestrial (including tree and shrub planting and hydroseeding) and wetland planting to create the required planting areas for mitigation measures and habitats in ECA will be undertaken as detailed in Annex 3. Planting sizes of the proposed herbs, shrubs and trees are specified in Section 1 of Annex 4. Some of these plants will be stored in the temporary site nursery area prior to planting. Specification concerning the preparatory work, planting work, tree transplanting and tree preservation on site are given in Annex 4.

## 6.2 Planting locations

- 6.2.1 The proposed trees to be retained and transplanted in respective Areas A, B, C (Contract 1) and areas under Contract 2 are shown in **Figures 6 – 9**. The proposed planting locations for the new planting and transplanted trees at Areas A, B and C and areas under Contract 2 are shown in **Figures 10 – 13**. **Figure 14** shows proposed landscape plan with appropriate landscape and visual mitigation measures. **Figure 15** shows schematic cross-section drawings of the soft landscape works to be planted along Tung Tsz Road in areas under Contract 2 of the Project.

## 7 IMPLEMENTATION AND MAINTENANCE

### 7.1 Implementation program

- 7.1.1 The planting programmes for Areas A and B and areas under Contract 2 will be confirmed in a later stage once the work implementation programs in both Areas are finalized. The planting programme (including the transplanting trees from Areas A and B) for Area C (the ECA) will be carried out during the wet season between March to October.

### 7.2 Maintenance schedule

- 7.2.1 A list of standard maintenance schedules during the establishment period is detailed in **Annex 4**. All necessary measures shall be taken to ensure that grass, trees (including both retained, transplanted and newly planted trees), shrubs and other herbaceous plants become established and to keep the landscape softworks tidy and free from litter and rubbish. The standard maintenance schedule should include the following works:

- Monthly inspection of the established plants (including retained, transplanted and newly planted trees);
- Replacement of plants and grasses as specified after the monthly inspection;
- Regular watering for the landscape softworks;
- Regular weeding of unwanted plants (such as climber *Mikania micrantha*) during the establishment period;
- Regular grass cutting;
- Provide appropriate support system (such as stakes) to the transplanted and newly planted trees and regular check on the security and functioning of any stakes and ties throughout the establishment period;
- Pruning to remove dead, dying or damaged branches;
- Application of post-planting fertilizer in the wooded areas with newly planted trees;
- Control of pest and diseases

## 8 REFERENCES

AEC. 2010a. *Contract No. DC/2009/22 – Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 – Design & Construction of Ecological Compensatory Area – Habitat Compensatory Plan (Revision 2)*. August 2010. AEC, Hong Kong.

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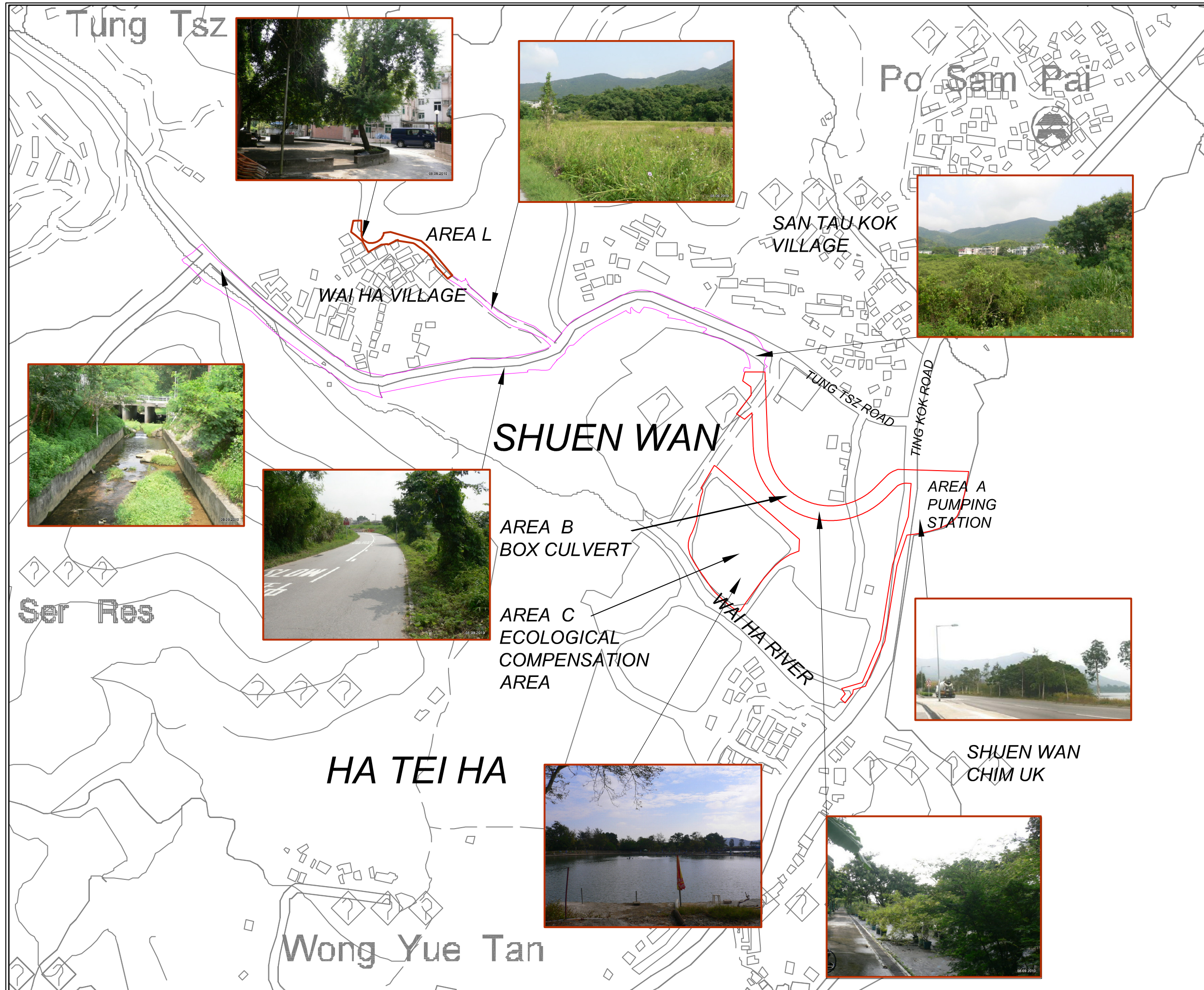
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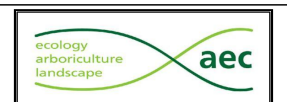
- Site Boundary (Contract 1)
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Job Title  
 DC/2009/22  
 Drainage Improvement Works in Shuen Wan,  
 Tai Po, Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Location Plan of Areas A, B, C and L  
 (Contract 1) and Areas under Contract 2



Drawing No. Figure 1	Project No. 10/370/167
Scale 1:4000@A3	Date Sept 2012
Drawn by IY	Checked by MRL


群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture

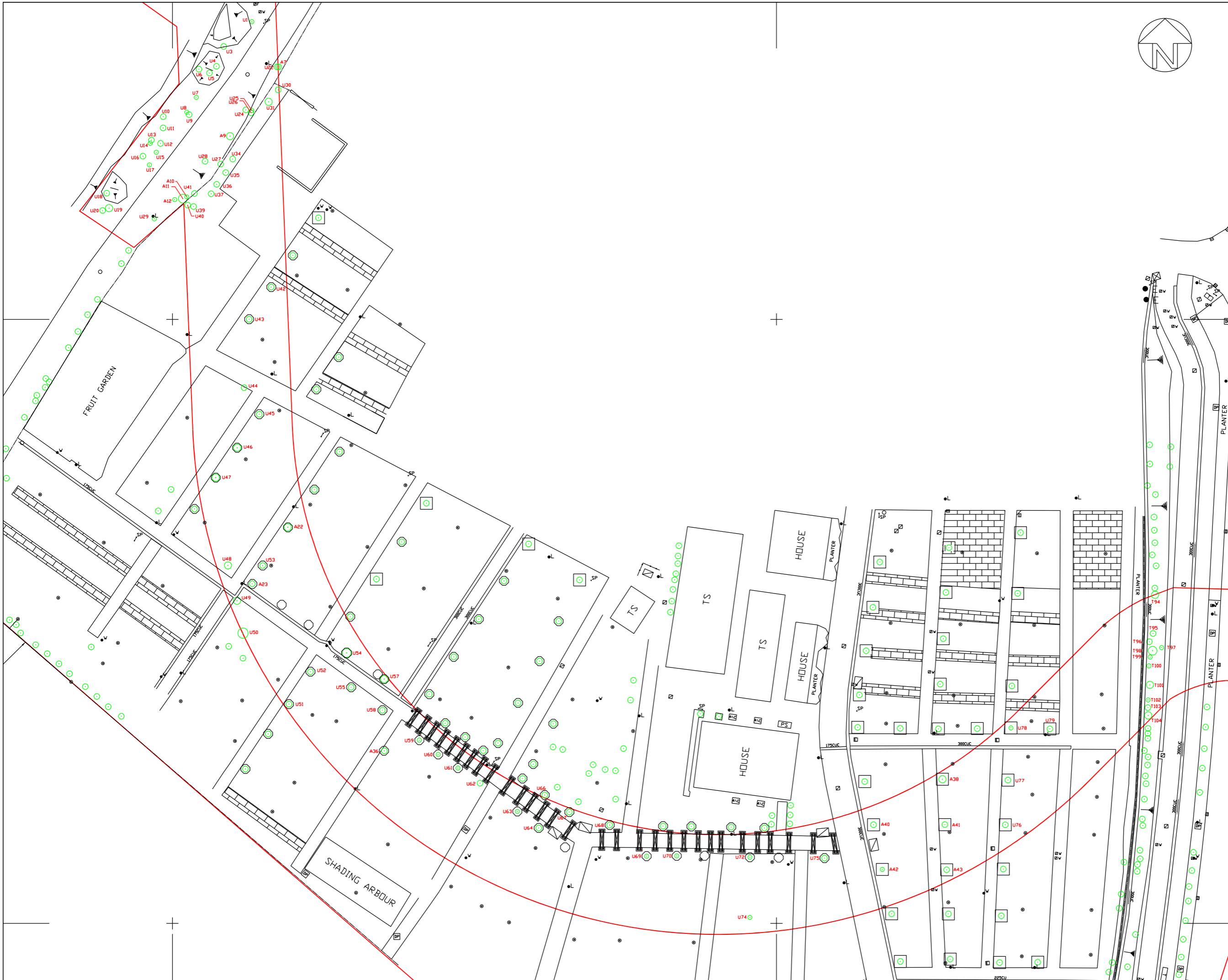




**NOTES :**  
 1. Grid lines are in Hong Kong Metrics Grid 1980.  
 2. All levels are in meters above Hong Kong Principal Datum (mPD)

**LEGEND :**  
 Existing tree  
 Site boundary

DSD Contract no. DC/2009/22	
Contract title Contract No. DC/2009/22 - Drainage Improvement Works In Shuen Wan, Tai Po, Contract 1- Preparation and Submission of Landscape Plan	
Drawing title Tree Location Plan (Area A) (Provided by Kwan Lee - Kuly Joint Venture)	
Drawing no. Figure 2	Scale 1:300@A3
Contractor  Kwan Lee - Kuly Joint Venture	



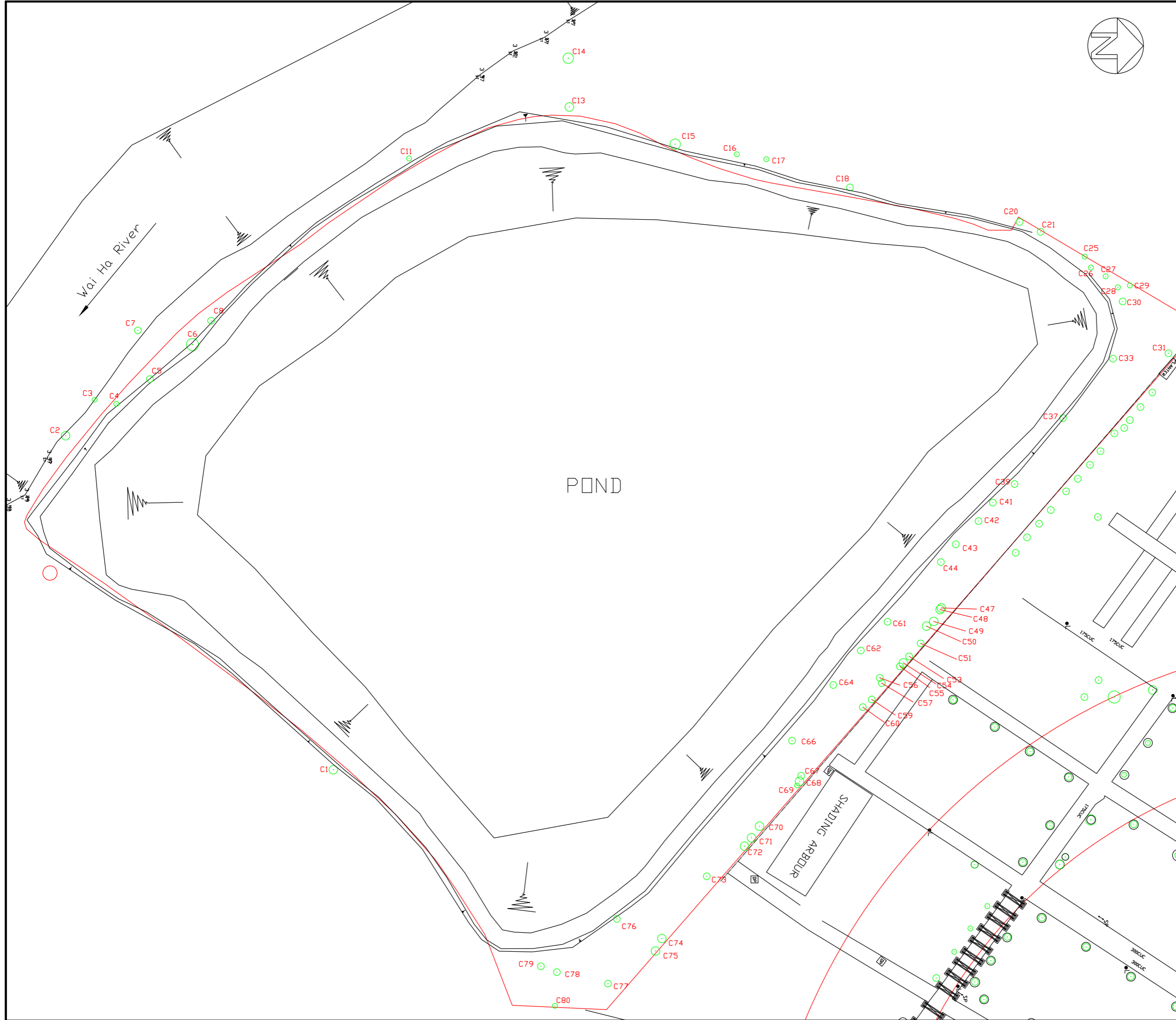
**NOTES :**

1. Grid lines are in Hong Kong Metrics Grid 1980.
2. All levels are in meters above Hong Kong Principal Datum (mPD)

**LEGEND :**

- EXISTING TREE
- EXISTING TREE WITH CONCRETE RING
- EXISTING TREE WITH BRICK RING
- SITE BOUNDARY

<b>DSD Contract no.</b> DC/2009/22	
<b>Contract title</b> DC/2009/22 Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1- Preparation and Submission of Landscape Plan	
<b>Drawing title</b> Tree Location Plan (Area B) (Provided by Kwan Lee - Kuly Joint Venture)	
<b>Drawing no.</b> Figure 3	<b>Scale</b> 1:600@A3
<b>Contractor</b> Kwan Lee - Kuly Joint Venture	



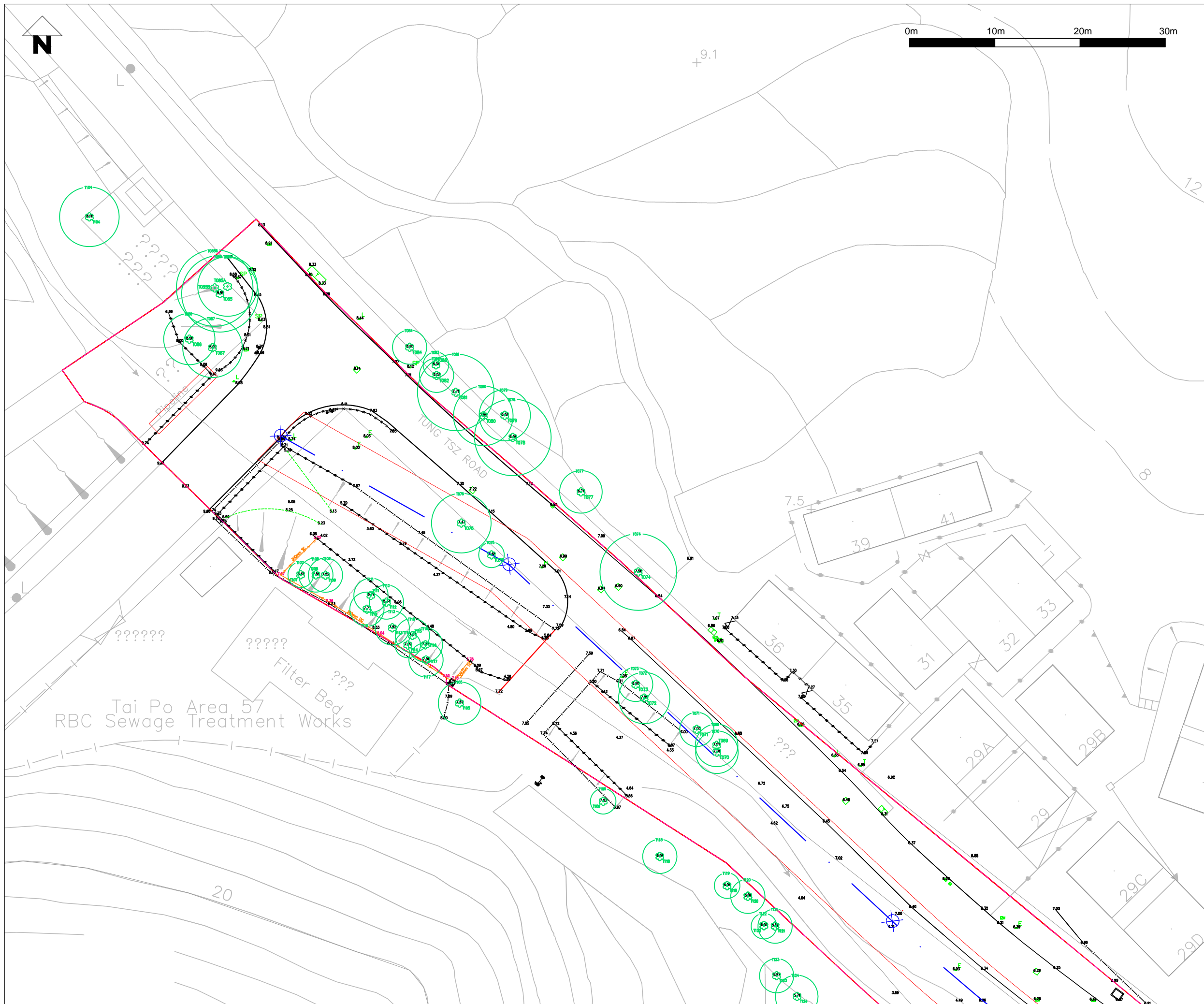
**NOTES :**

1. Grid lines are in Hong Kong Metrics Grid 1980.
2. All levels are in meters above Hong Kong Principal Datum (mPD)



**LEGEND :**

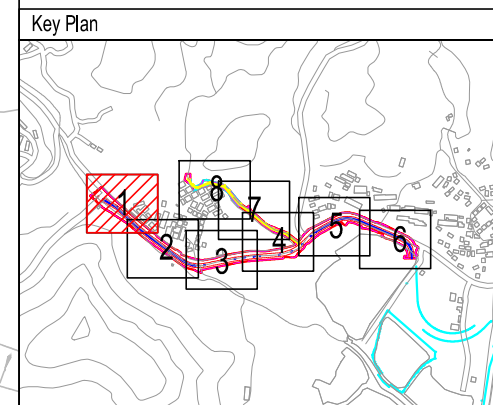
- EXISTING TREE
- SITE BOUNDARY

<b>DSD</b>		DC/2009/22
<b>Contract no.</b>		
<b>Contract title</b>		Contract No. DC/2009/22 - Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 - Preparation and Submission of Landscape Plan
<b>Drawing title</b>		Tree Location Plan (Area C) (Provided by Kwan Lee - Kuly Joint Venture)
<b>Drawing no.</b>	<b>Scale</b>	
Figure 4	1:500@A3	
<b>Contractor</b>		Kwan Lee - Kuly Joint Venture



Legend

-  Existing Trees
-  Site Boundary



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 1)

Drawing No. Figure 5.1	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

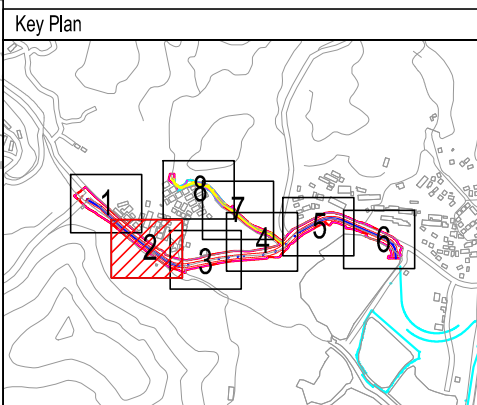
 群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





Legend

- Existing Trees
- Site Boundary



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 2)

Drawing No. Figure 5.2	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

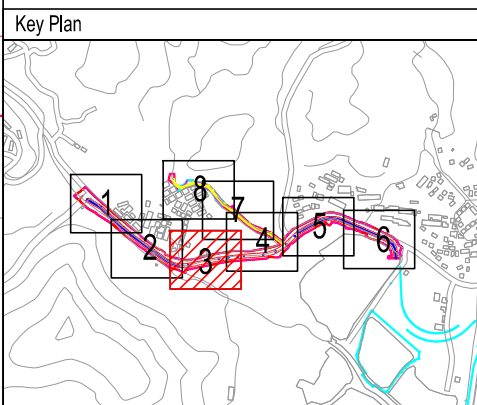
群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





Legend

- Existing Trees
- Site Boundary



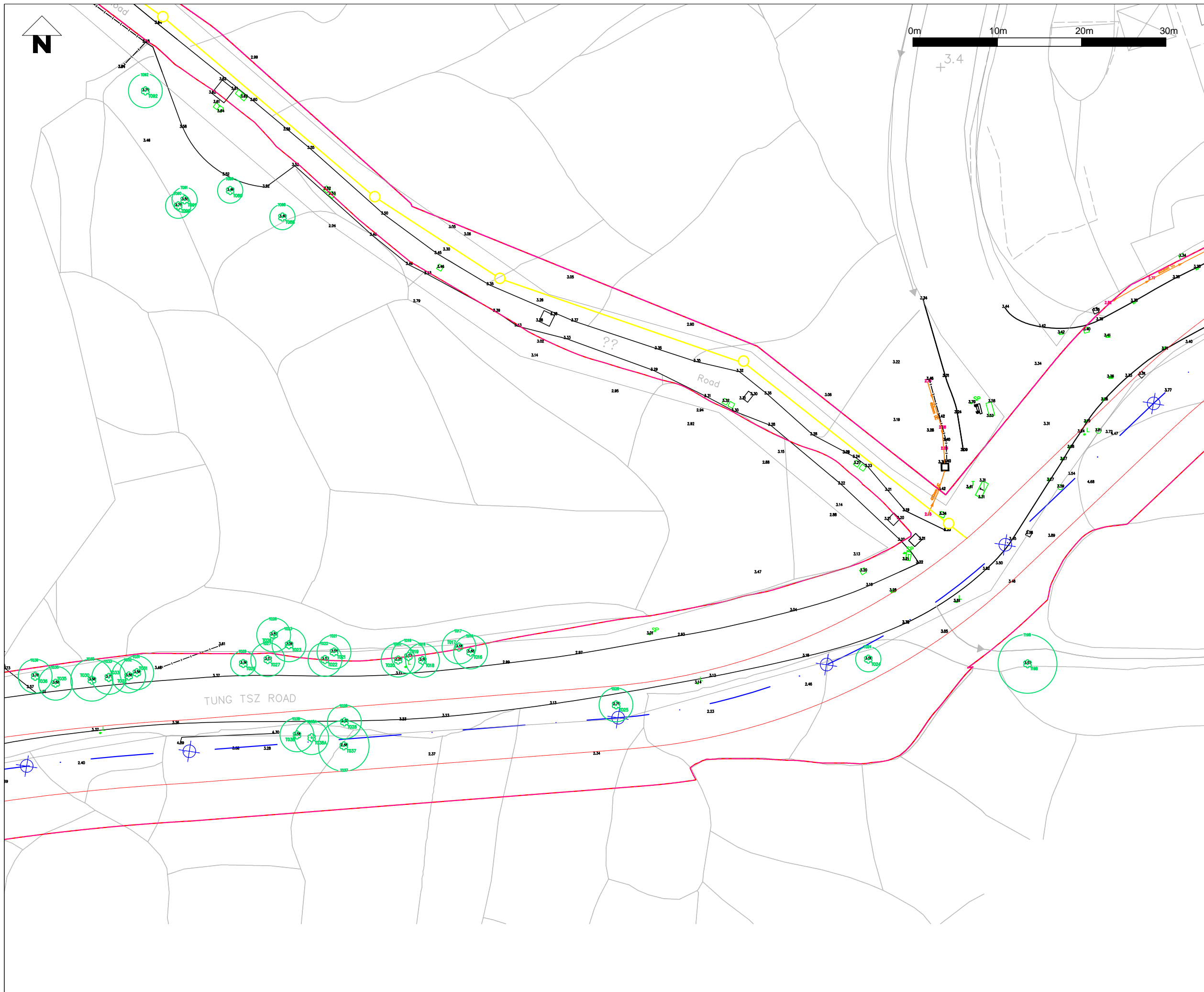
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 3)

Drawing No. Figure 5.3	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

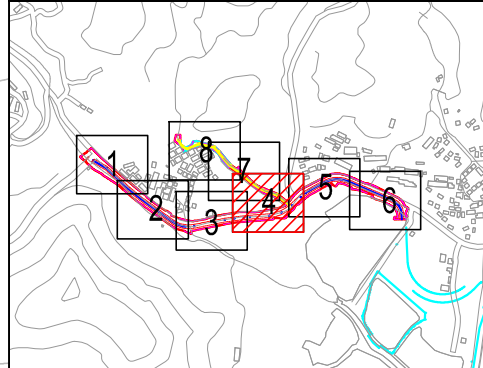
群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





- Legend
- Existing Trees
  - Site Boundary

Key Plan



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

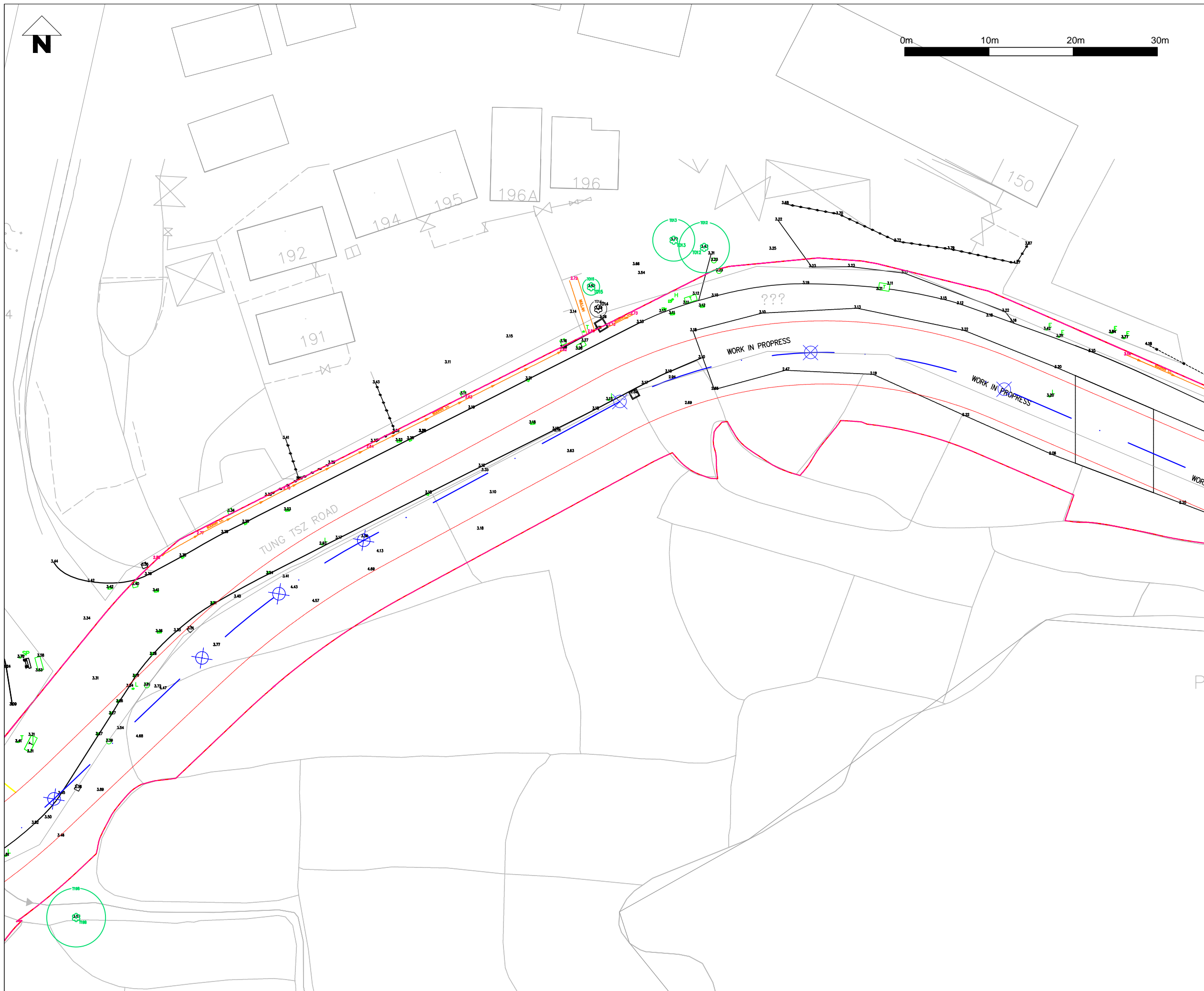
Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 4)

Drawing No. Figure 5.4	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

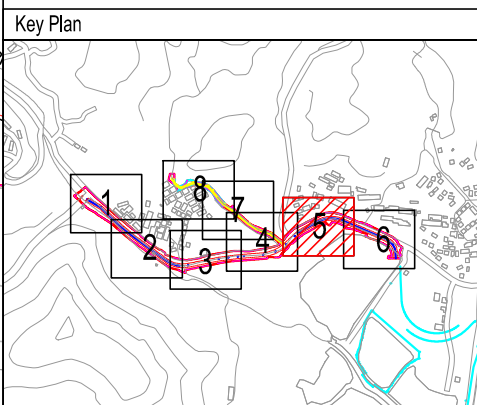
群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture







Legend  
 Existing Trees  
 Site Boundary



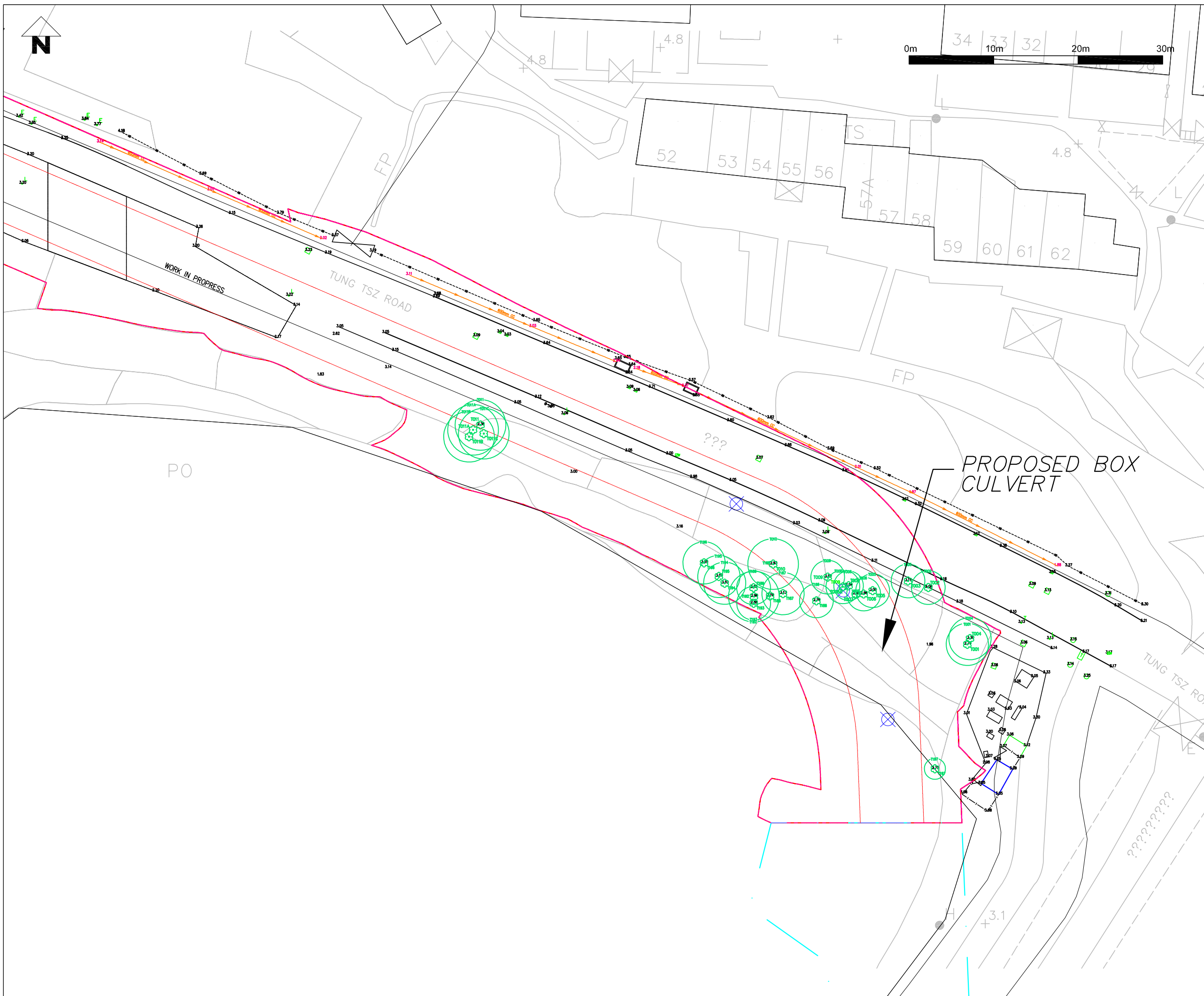
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 5)

Drawing No. Figure 5.5	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





Legend

- Existing Trees
- Site Boundary

Key Plan

Job Title

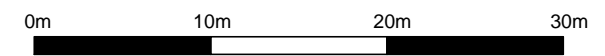
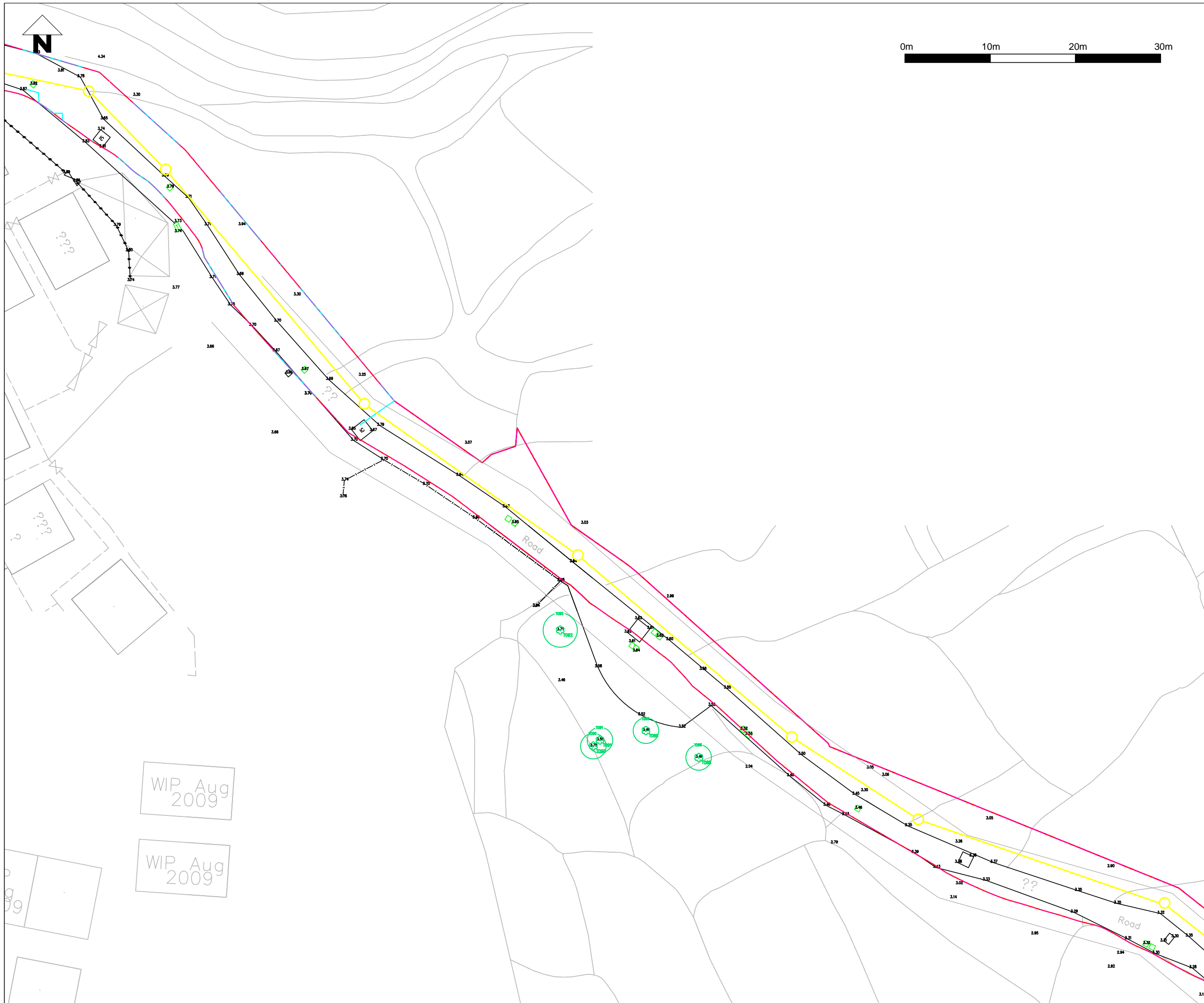
Contract No. DC/2009/22 -  
Drainage Improvement Works in Shuen Wan, Tai Po,  
Contract 1 -  
Preparation and Submission of Landscape Plan



Drawing Title

Tree Location Plan (Area under Contract 2)  
(Sheet 6)

Drawing No. Figure 5.6	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

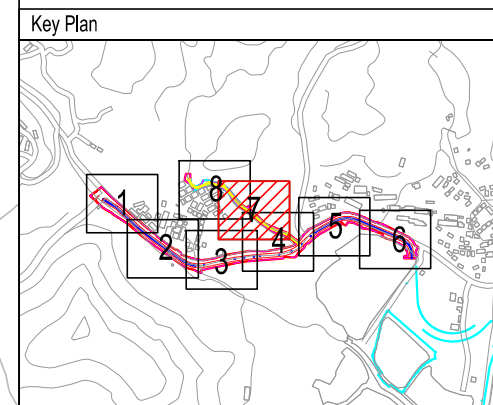
群利 - 豐利聯營  
Kwan Lee - Kuly Joint Venture



- Legend
-  Existing Trees
  -  Site Boundary

WIP Aug 2009

WIP Aug 2009



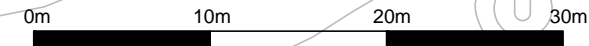
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 7)



Drawing No. Figure 5.7	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY

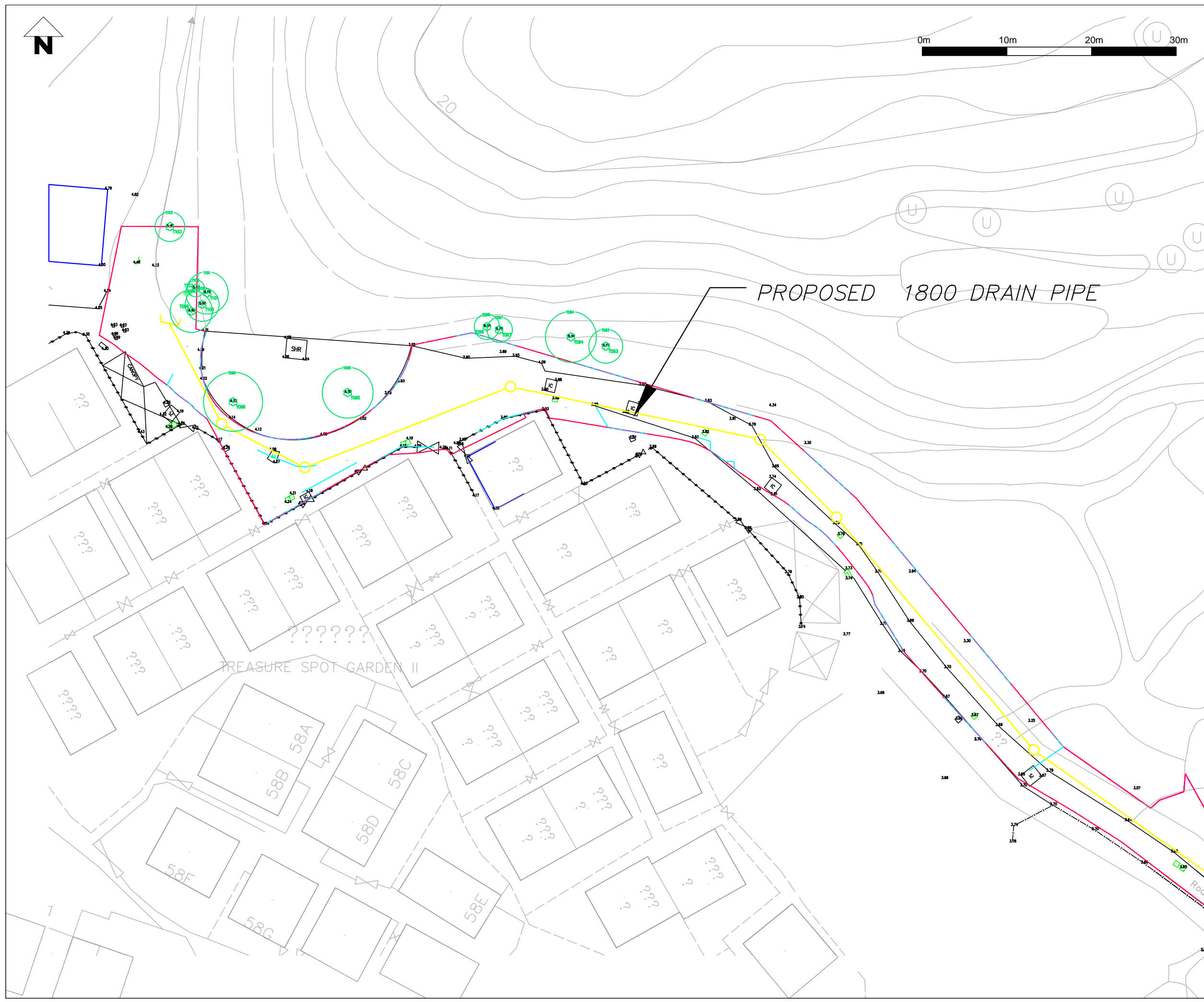
 群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





Legend

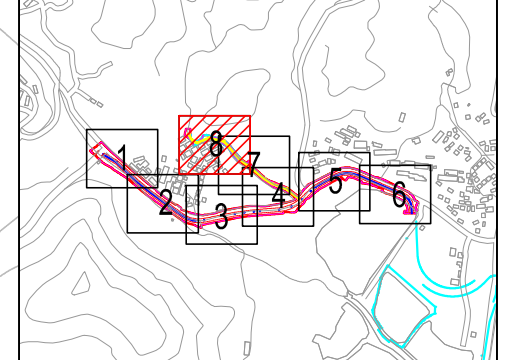
-  Existing Trees
-  Site Boundary



PROPOSED 1800 DRAIN PIPE

TREASURE SPOT GARDEN II

Key Plan



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Location Plan (Area under Contract 2)  
 (Sheet 8)

Drawing No. Figure 5.8	Project No. 10/370/167
Scale As Shown	Date Sept 2012
Drawn by EW	Checked by IY



群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





- Site boundary
- Tree to be retained
- Tree to be transplanted
- Tree to be felled
- Tree to be removed

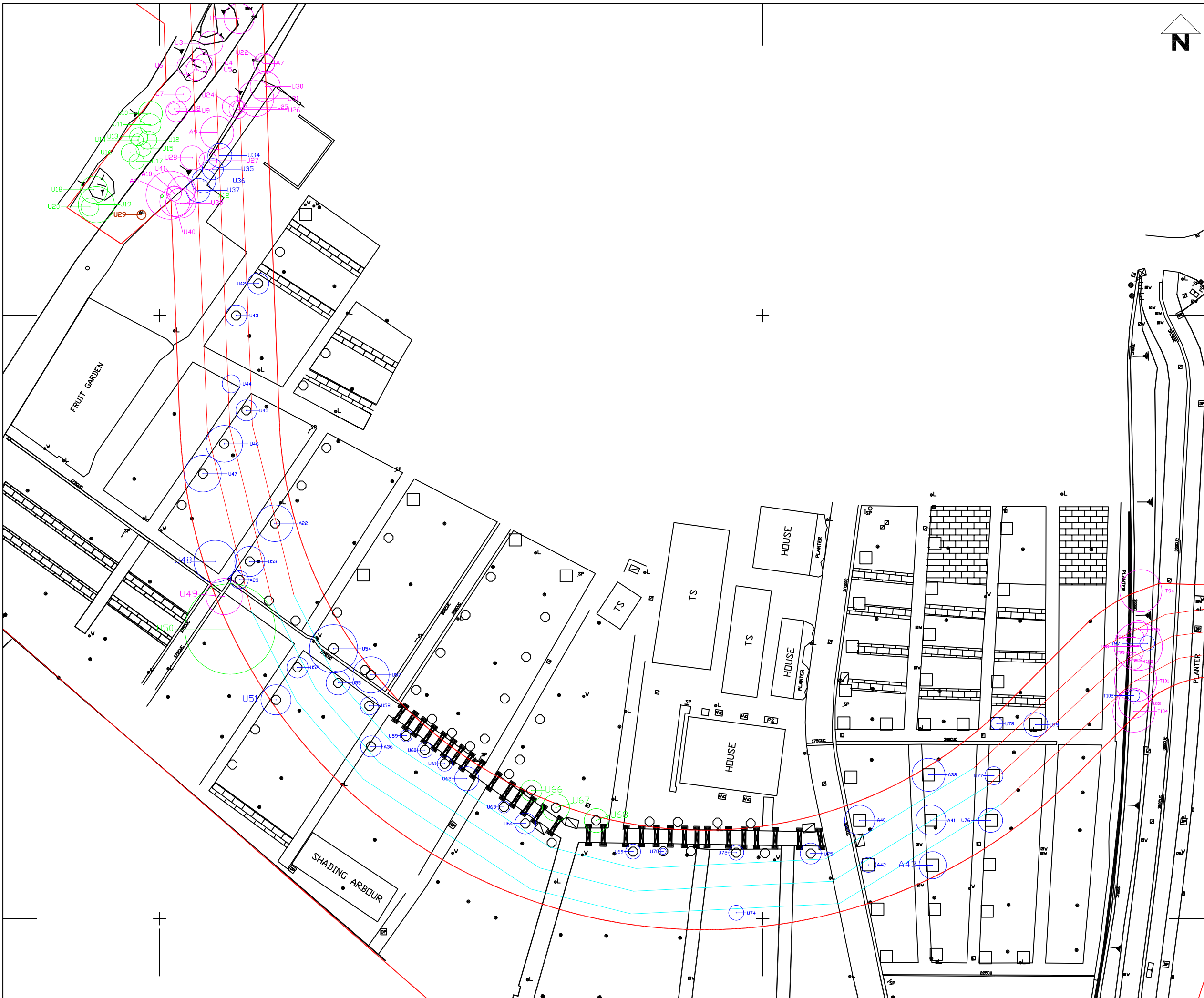
Job Title  
**DC/2009/22**  
**Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1-**  
**Preparation and Submission of Landscape Plan**

Drawing Title  
**Tree Recommendation Plan (Area A)**

Drawing No. <b>Figure 6</b>	Project No. <b>10/370/167</b>
Scale <b>1:300@A3</b>	Date Sept 2012
Drawn by <b>IY</b>	Checked by <b>MRL</b>

**LECO** 群利 - 豐利 聯營  
 Kwan Lee - Kuly Joint Venture





- Site boundary
- Tree to be retained
- Tree to be transplanted
- Tree to be felled
- Tree to be removed

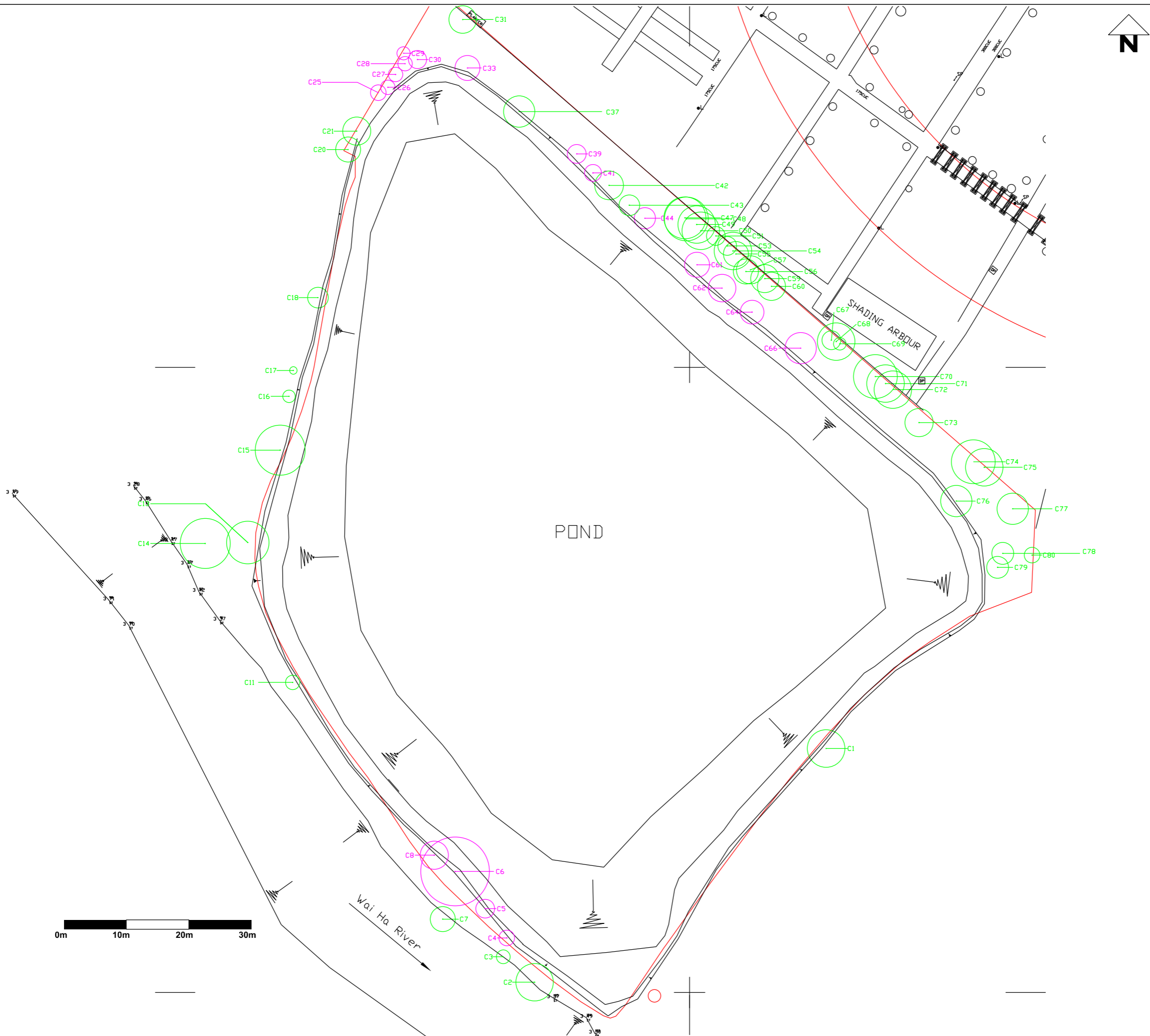
Job Title  
 DC/2009/22  
 Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1-  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area B)

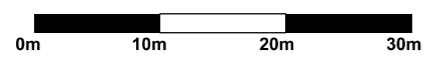
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Scale 1:600@A3	Date Sept 2012
Drawn by IY	Checked by MRL

群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture

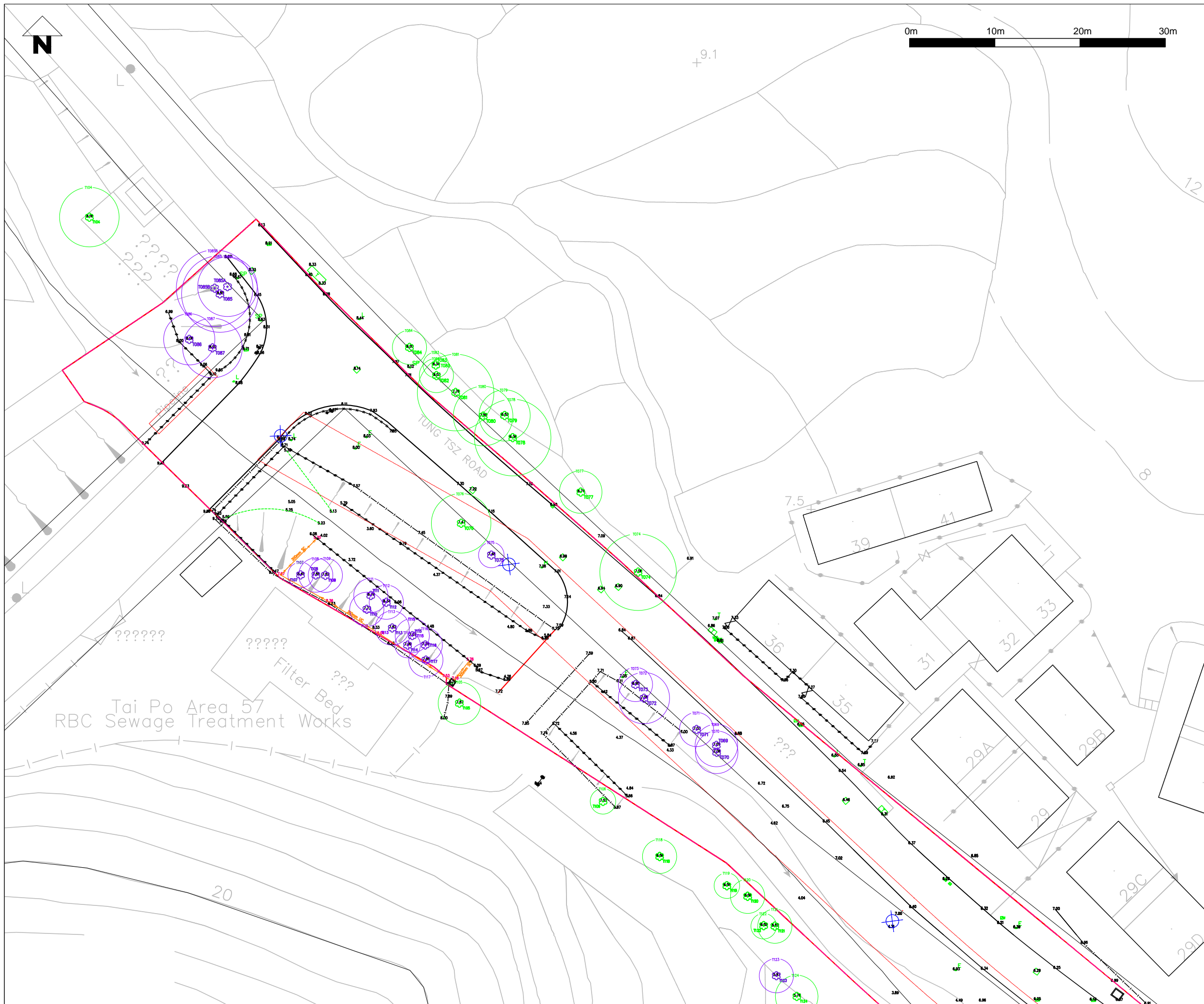




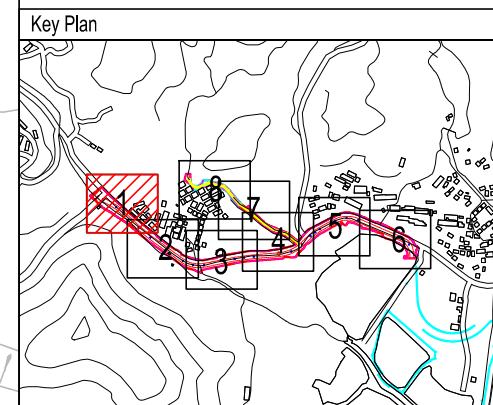
- Site boundary
- Tree no Tree to be retained
- Tree no Tree to be felled



Job Title		
DC/2009/22 Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1- Preparation and Submission of Landscape Plan		
Drawing Title		
Tree Recommendation Plan (Area C)		
Drawing No.	Project No.	
Figure 8	10/370/167	
Scale	Date	Rev
1:600@A3	Sept 2012	-
Drawn by	Checked by	
EW	IY	
群利 - 豐利聯營 Kwan Lee - Kuly Joint Venture		



- Legend
- Site Boundary
  - Trees to be felled
  - Trees to be removed
  - Trees to be retained



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 1)

Drawing No. Figure 9.1	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
Checked by IY	

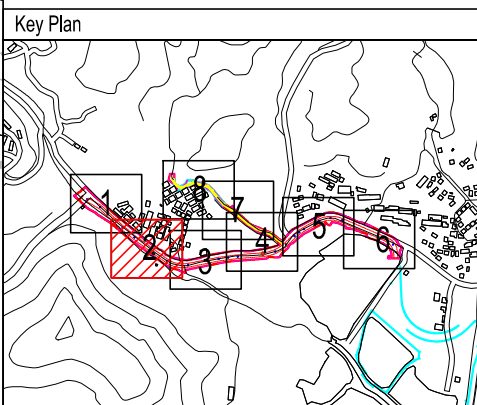
群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





Legend

- Site Boundary
- Trees to be felled
- Trees to be removed
- Trees to be retained



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 2)

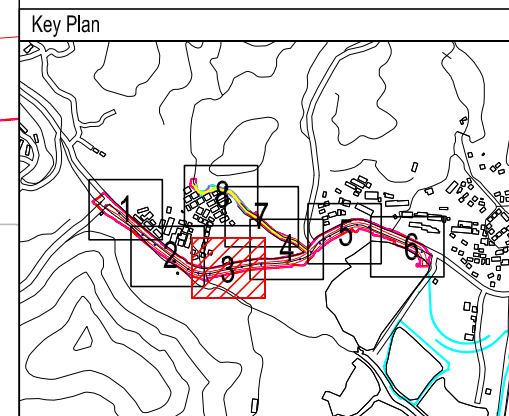
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Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
Checked by IY	

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 Kwan Lee - Kuly Joint Venture





- Legend
- Site Boundary
  - Trees to be felled
  - Trees to be removed
  - Trees to be retained



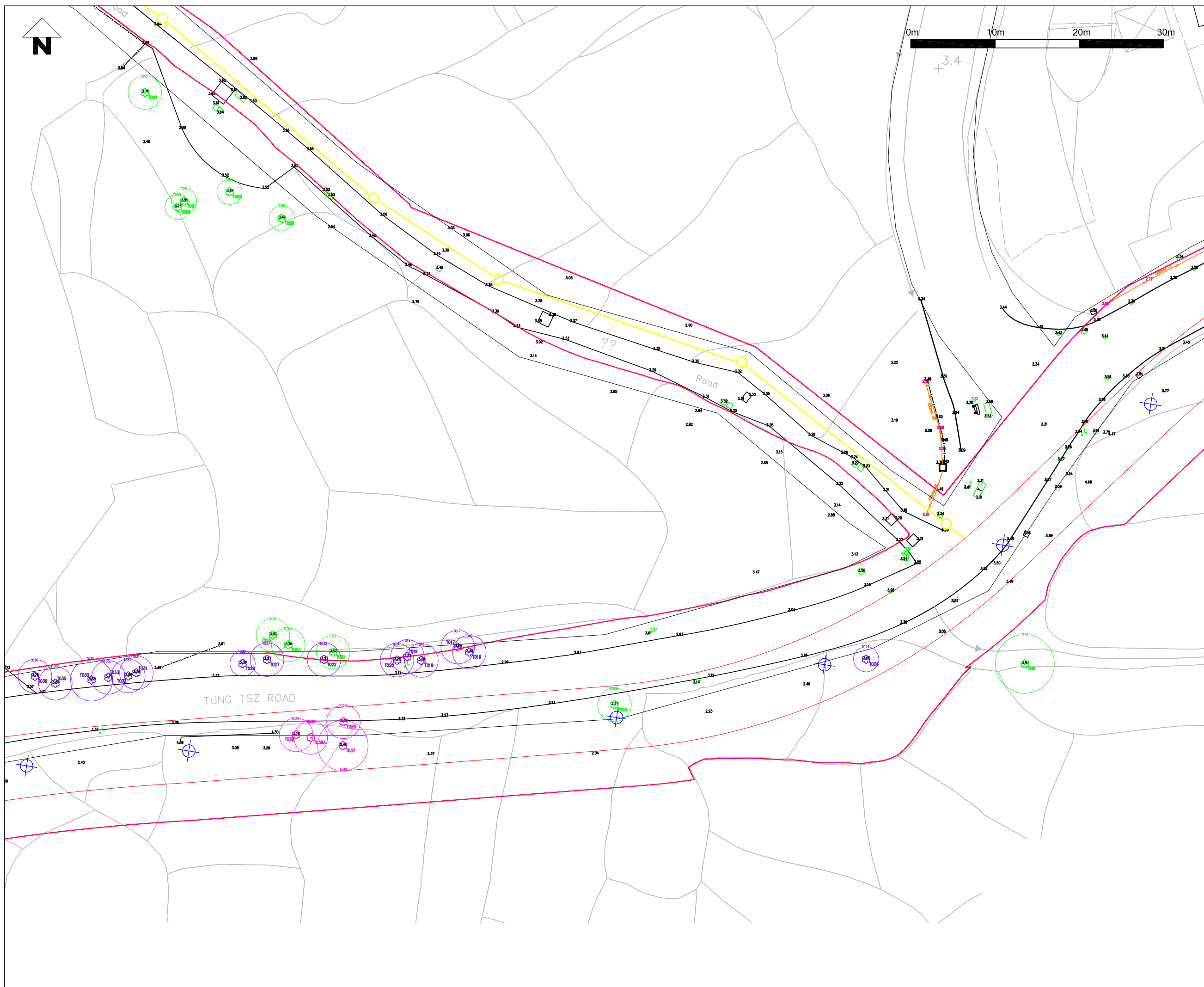
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan





Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 3)

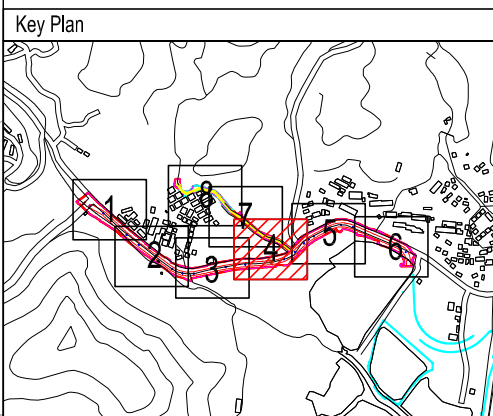
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Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
Checked by IY	

群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





- Legend
-  Site Boundary
  -  Trees to be felled
  -  Trees to be removed
  -  Trees to be retained



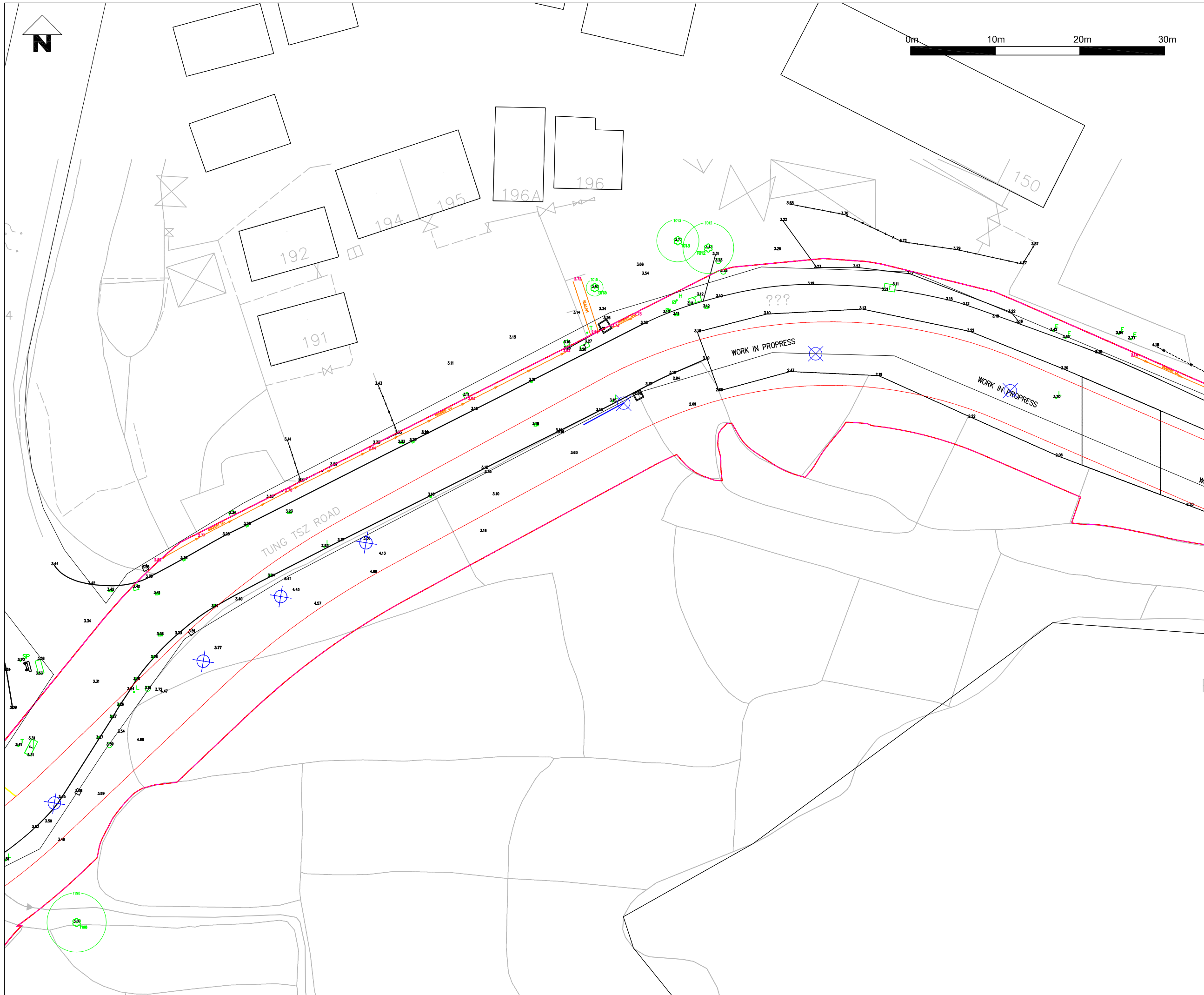
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 4)

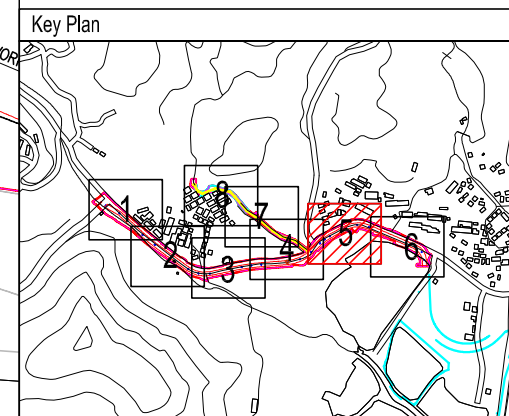
Drawing No. Figure 9.4	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
Checked by IY	

 群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





- Legend
- Site Boundary
  - Trees to be felled
  - Trees to be removed
  - Trees to be retained



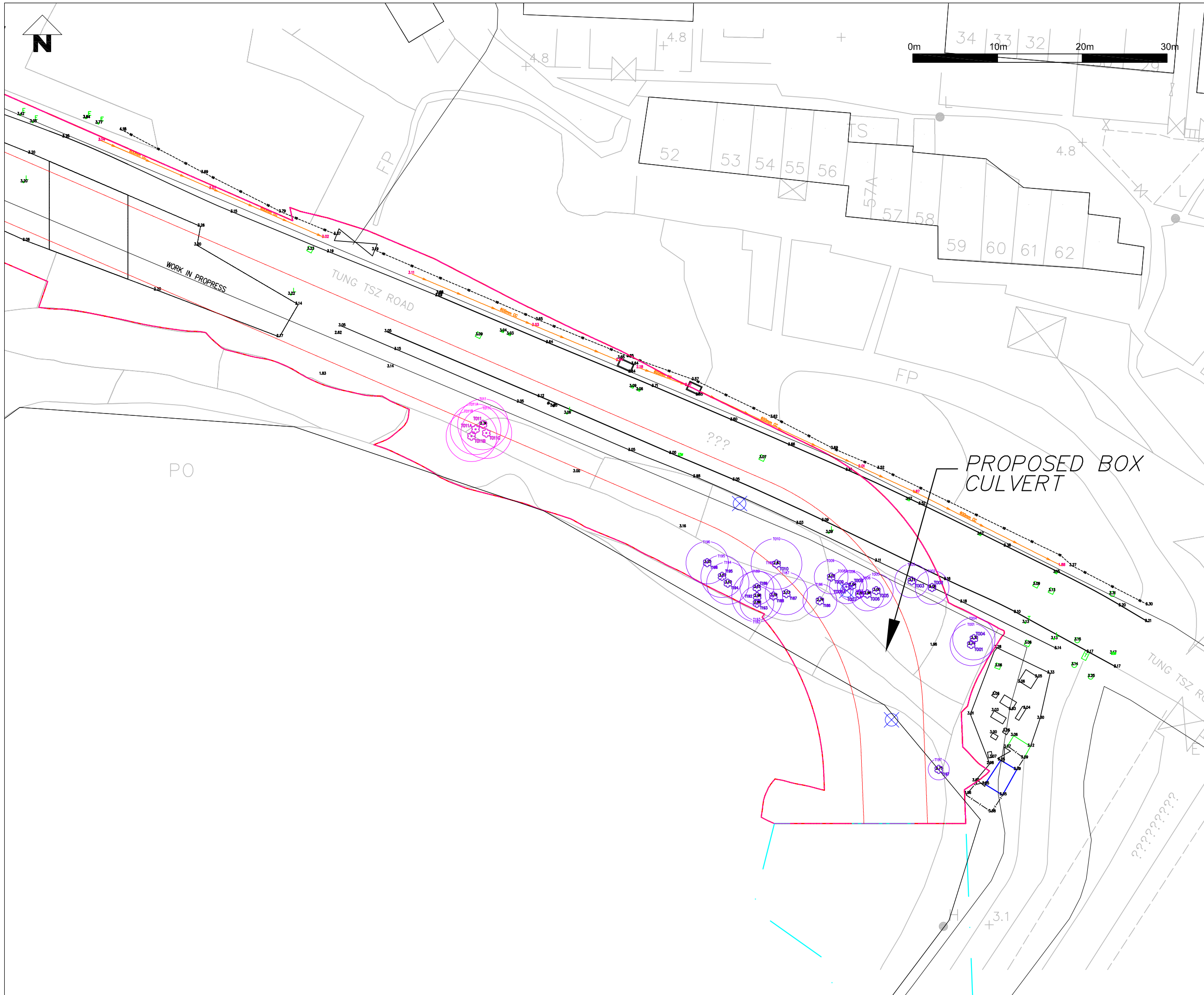
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 5)

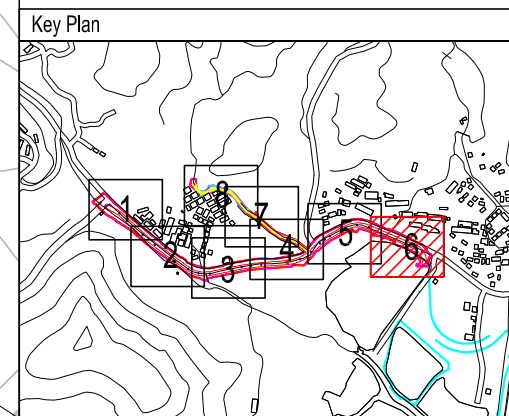
Drawing No. Figure 9.5	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
	Checked by IY

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 Kwan Lee - Kuly Joint Venture





- Legend
- Site Boundary
  - Trees to be felled
  - Trees to be removed
  - Trees to be retained

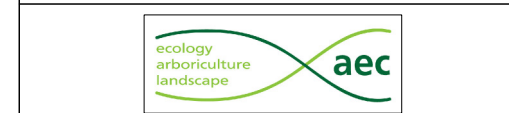


Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 6)





Drawing No. Figure 9.6	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
	Checked by IY

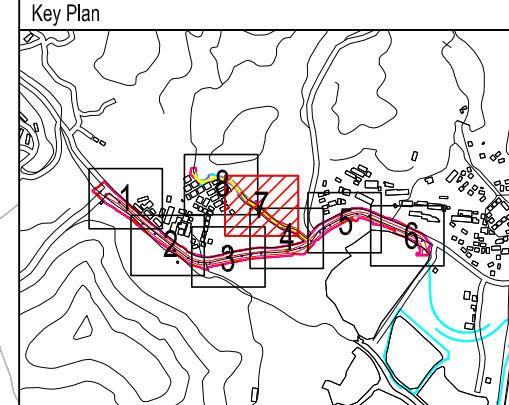
群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





Legend

-  Site Boundary
-  Trees to be felled
-  Trees to be removed
-  Trees to be retained



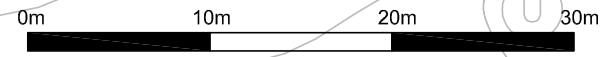
Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 7)





Drawing No. Figure 9.7	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
Checked by IY	

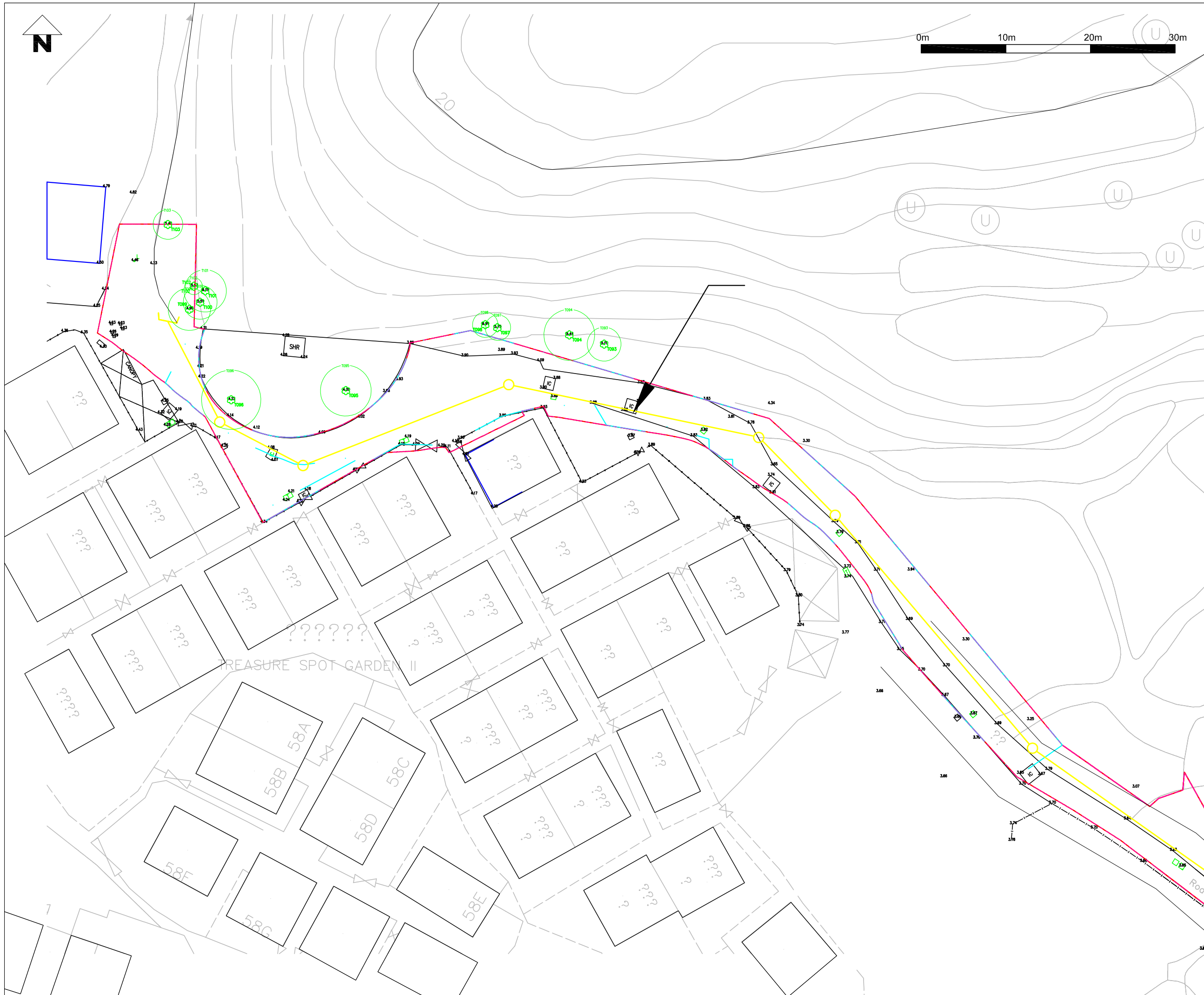
 群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture



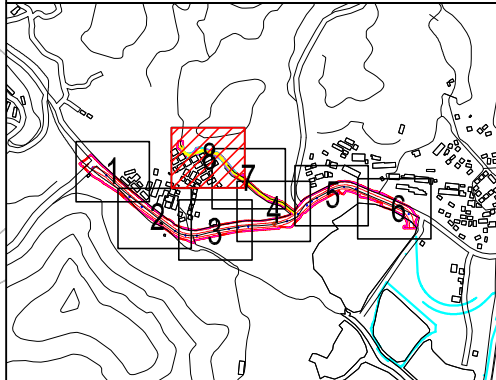


Legend

-  Site Boundary
-  Trees to be felled
-  Trees to be removed
-  Trees to be retained



Key Plan



Job Title

Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title

Tree Recommendation Plan (Area under Contract 2)  
 (Sheet 8)

Drawing No.

Figure 9.8

Project No.

10/370/167

Scale

As Shown

Date

Sep 2012

Rev

1

Drawn by

CH

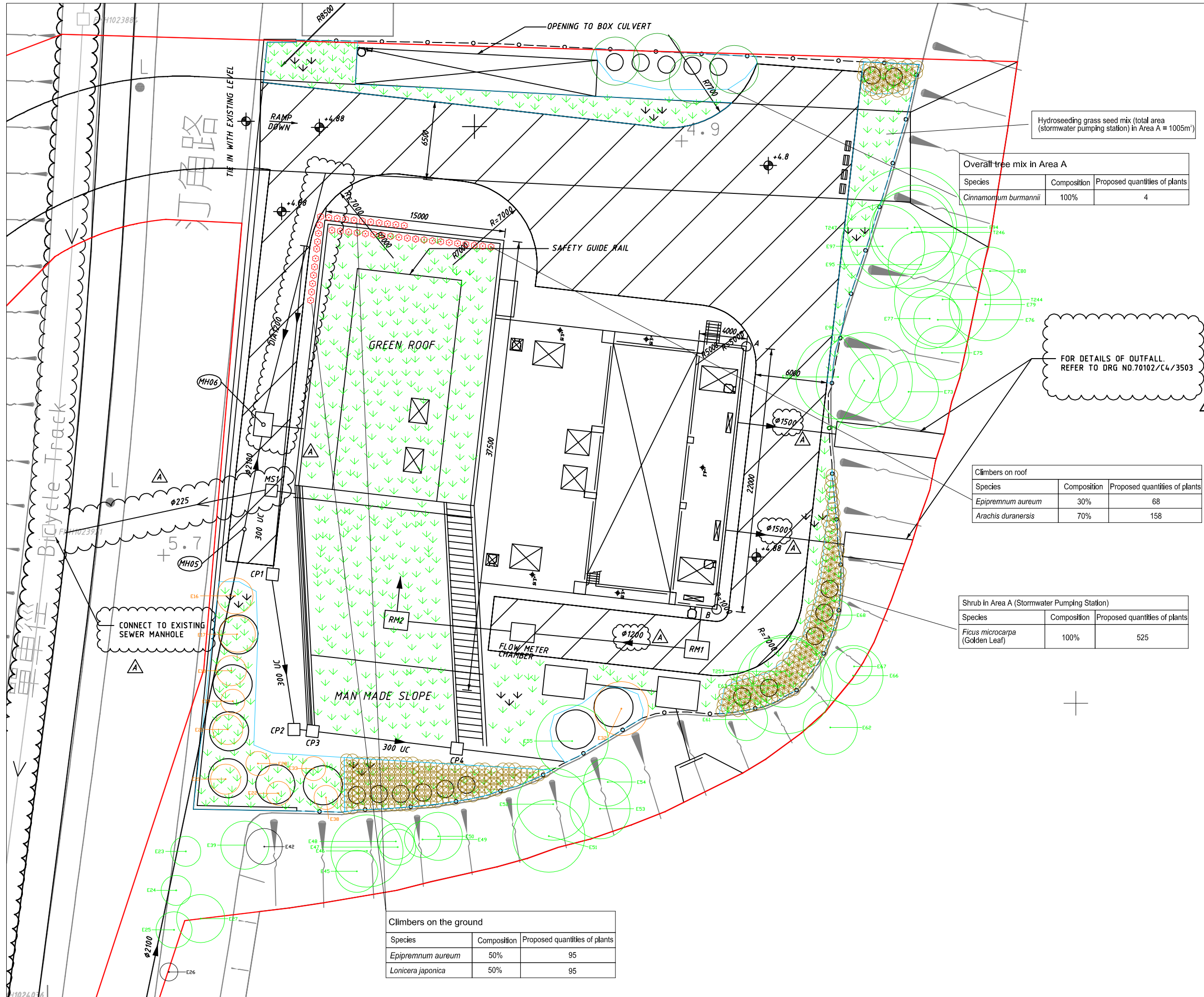
Checked by

IY



群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





- Site boundary
- Proposed trees to be planted
- Proposed shrubs to be planted
- ★ Proposed climbers to be planted
- Trees to be retained
- Transplanted trees
- ↓ Hydroseeded Area

Hydroseeding grass seed mix (total area (stormwater pumping station) in Area A = 1005m<sup>2</sup>)

Overall tree mix in Area A

Species	Composition	Proposed quantities of plants
<i>Cinnamomum burmannii</i>	100%	4

FOR DETAILS OF OUTFALL. REFER TO DRG NO.70102/C4/3503

Climbers on roof

Species	Composition	Proposed quantities of plants
<i>Epipremnum aureum</i>	30%	68
<i>Arachis duranensis</i>	70%	158

Shrub in Area A (Stormwater Pumping Station)

Species	Composition	Proposed quantities of plants
<i>Ficus microcarpa</i> (Golden Leaf)	100%	525

Climbers on the ground

Species	Composition	Proposed quantities of plants
<i>Epipremnum aureum</i>	50%	95
<i>Lonicera japonica</i>	50%	95

Job Title  
 Contract No. DC/2009/22-  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

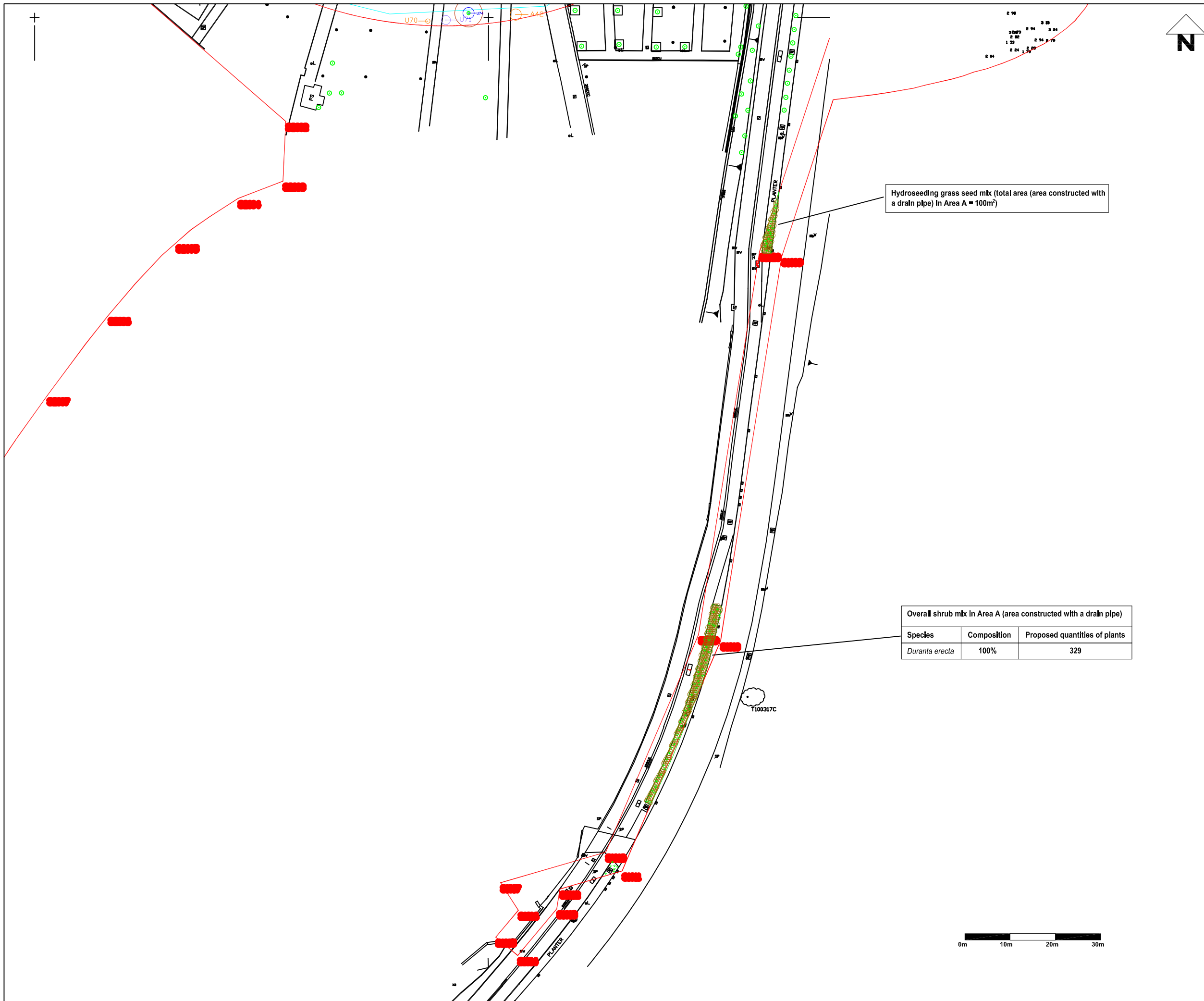
Drawing Title  
 Proposed Landscape Plan (Area A) - 1

Drawing No. Figure 10.1	Project No. 10/370/167
Scale 1:300 @A3	Date Sept 2012
Drawn by EW	Checked by IY

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 Kwan Lee - Kuly Joint Venture







- Site boundary
- ▭ Proposed shrubs to be planted
- ▨ Hydroseeded area

Hydroseeding grass seed mix (total area (area constructed with a drain pipe) in Area A = 100m<sup>2</sup>)

Overall shrub mix in Area A (area constructed with a drain pipe)

Species	Composition	Proposed quantities of plants
<i>Duranta erecta</i>	100%	329

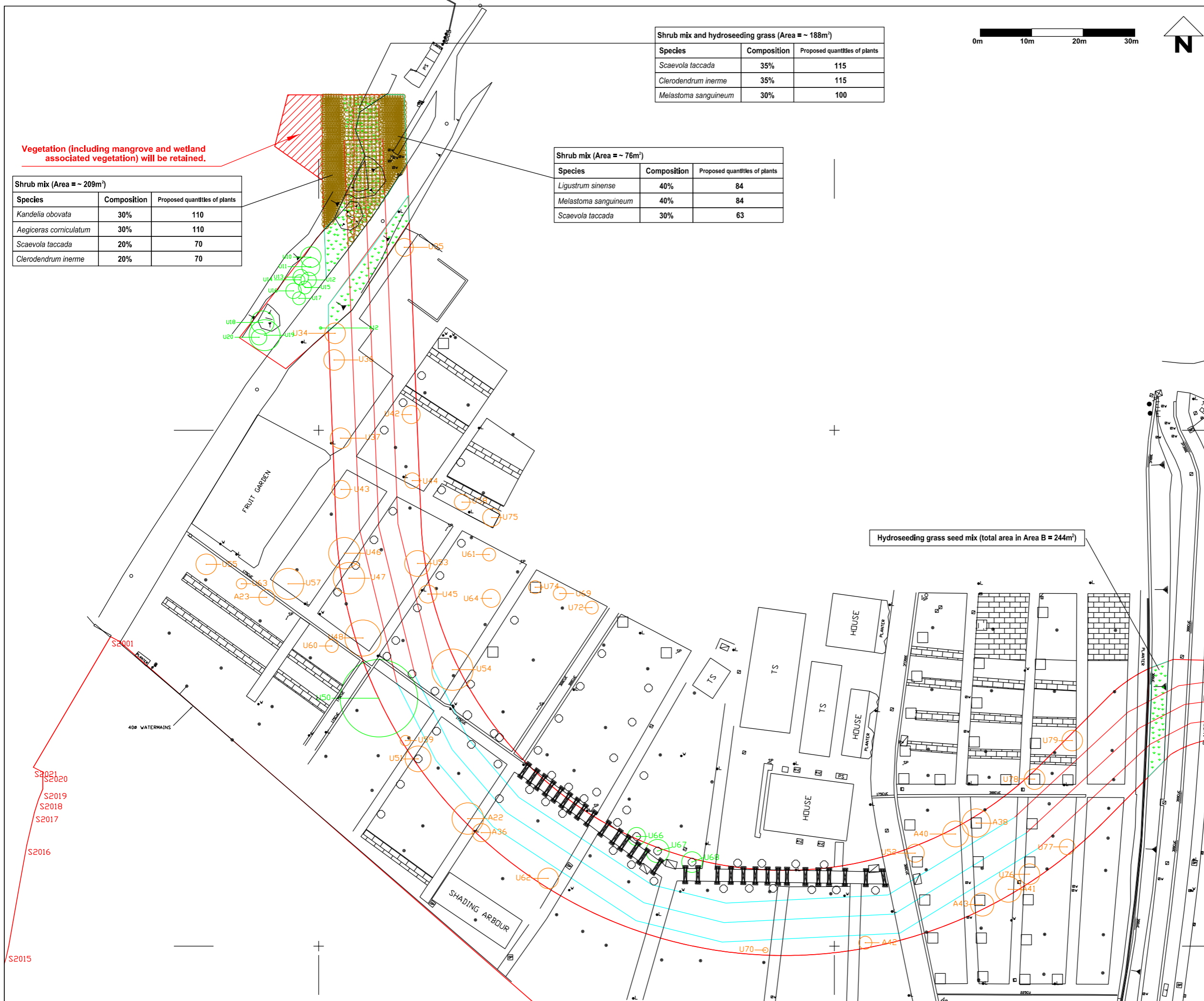
Job Title  
 DC/2009/22  
 Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1-  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Proposed Lanscape Plan (Area A) - 2

Drawing No. Figure 10.2	Project No. 10/370/167
Scale 1:800@A3	Date Sept 2012
Drawn by EW	Checked by IY

**LEO** 群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





**Shrub mix and hydroseeding grass (Area = ~ 188m<sup>2</sup>)**

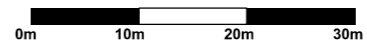
Species	Composition	Proposed quantities of plants
<i>Scaevola taccada</i>	35%	115
<i>Clerodendrum inerme</i>	35%	115
<i>Melastoma sanguineum</i>	30%	100

**Shrub mix (Area = ~ 76m<sup>2</sup>)**

Species	Composition	Proposed quantities of plants
<i>Ligustrum sinense</i>	40%	84
<i>Melastoma sanguineum</i>	40%	84
<i>Scaevola taccada</i>	30%	63

**Shrub mix (Area = ~ 209m<sup>2</sup>)**

Species	Composition	Proposed quantities of plants
<i>Kandelia obovata</i>	30%	110
<i>Aegiceras corniculatum</i>	30%	110
<i>Scaevola taccada</i>	20%	70
<i>Clerodendrum inerme</i>	20%	70

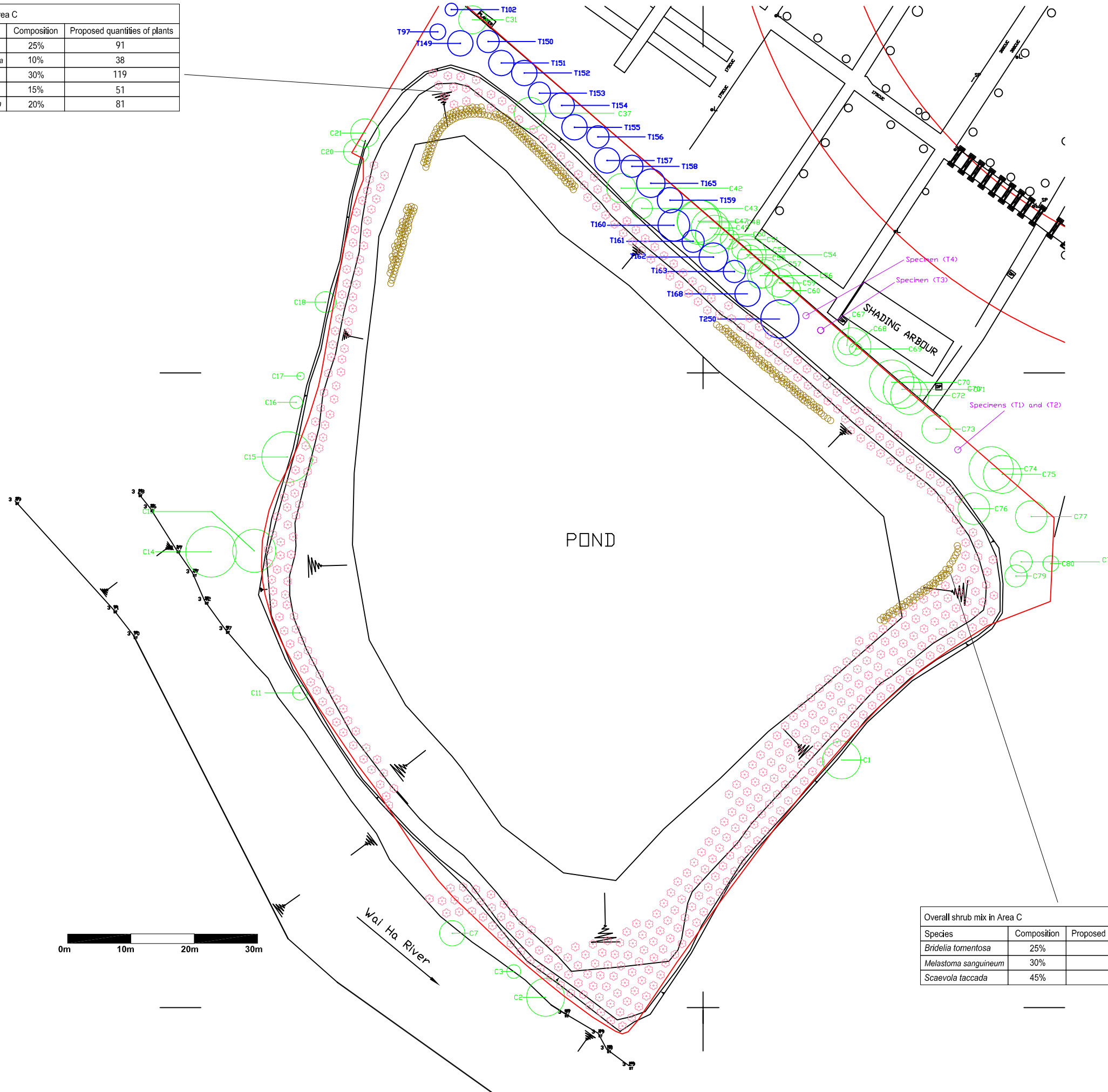


- Legend**
- Site boundary
  - Tree to be retained
  - Proposed shrubs to be planted
  - ↓ Hydroseeded area
  - Transplanted tree

Hydroseeding grass seed mix (total area in Area B = 244m<sup>2</sup>)

Job Title		DC/2009/22 Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1- Preparation and Submission of Landscape Plan	
Drawing Title		Proposed Landscape Plan (Area B)	
Drawing No.	Figure 11	Project No.	10/370/167
Scale	1:700@A3	Date	Sept 2012
Drawn by	EW	Checked by	IY
群利 - 豐利聯營 Kwan Lee - Kuly Joint Venture			

Overall tree mix in Area C		
Species	Composition	Proposed quantities of plants
<i>Celtis sinensis</i>	25%	91
<i>Ficus superba</i> var. <i>japonica</i>	10%	38
<i>Hibiscus tiliaceus</i>	30%	119
<i>Macaranga tanarius</i>	15%	51
<i>Viburnum odoratissimum</i>	20%	81



Overall shrub mix in Area C		
Species	Composition	Proposed quantities of plants
<i>Bridelia tomentosa</i>	25%	80
<i>Melastoma sanguineum</i>	30%	96
<i>Scaevola taccada</i>	45%	143

- Site boundary
- Tree to be retained
- Transplanted tree
- Proposed shrubs to be planted
- Proposed receptor sites of *Pavetta hongkongensis*

Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Proposed Landscape Plan (Area C)

Drawing No. Figure 12.1	Project No. 10/370/167
Scale 1:650@A3	Date Sept 2012
Drawn by IY	Checked by MRL

群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





**Site boundary**

**Existing trees retained and additional trees (trans)planted**

**Woodland tree and shrub planting**

**Mangrove planting**

**Brackish marsh herbs**

**Intertidal mudflat**

**Shallow water 0-50 cm at low tide**

**Deep water 50-150 cm at low tide**

**Natural rubble stone to reinforce bank and prevent scour**

Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Proposed Landscape Plan (Area C) -  
 with proposed habitat plan

Drawing No. Figure 12.2	Project No. 10/370/167
Scale 1:600@A3	Date Sept 2012
Drawn by RY	Checked by IY

**LECO** 群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture



Tree mix (Area = ~83m <sup>2</sup> )		
Species	Composition	Proposed quantities of plants
<i>Celtis sinensis</i>	25%	2
<i>Litsea glutinosa</i>	25%	2
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	25%	2
<i>Ficus virens</i>	25%	2

Tree and shrub mix (Area = ~61m <sup>2</sup> )		
Species	Composition	Proposed quantities of plants
Trees (Area = ~35 m <sup>2</sup> )		
<i>Celtis sinensis</i>	100%	5
Shrubs (Area = ~26m <sup>2</sup> )		
<i>Duranta erecta</i>	30%	22
<i>Rhodomyrtus tomentosa</i>	20%	15
<i>Ixora chinensis</i>	30%	22
<i>Melastoma candidum</i>	20%	15

Shrub and hydroseeding grass (Area = ~28m <sup>2</sup> )		
Species	Composition	Proposed quantities of plants
<i>Ligustrum sinense</i>	100%	78

Tree and Shrub mix (Area = ~172m <sup>2</sup> )		
Species	Composition	Proposed quantities of plants
Tree (Area = ~119m <sup>2</sup> )		
<i>Hibiscus tiliaceus</i>	100%	12
Shrubs (Area = ~53m <sup>2</sup> )		
<i>Ixora chinensis</i>	20%	19
<i>Duranta erecta</i>	20%	19
<i>Rhodomyrtus tomentosa</i>	20%	19
<i>Rhododendron simsii</i>	10%	10
<i>Melastoma candidum</i>	20%	19
<i>Rhaphiolepis indica</i>	10%	10

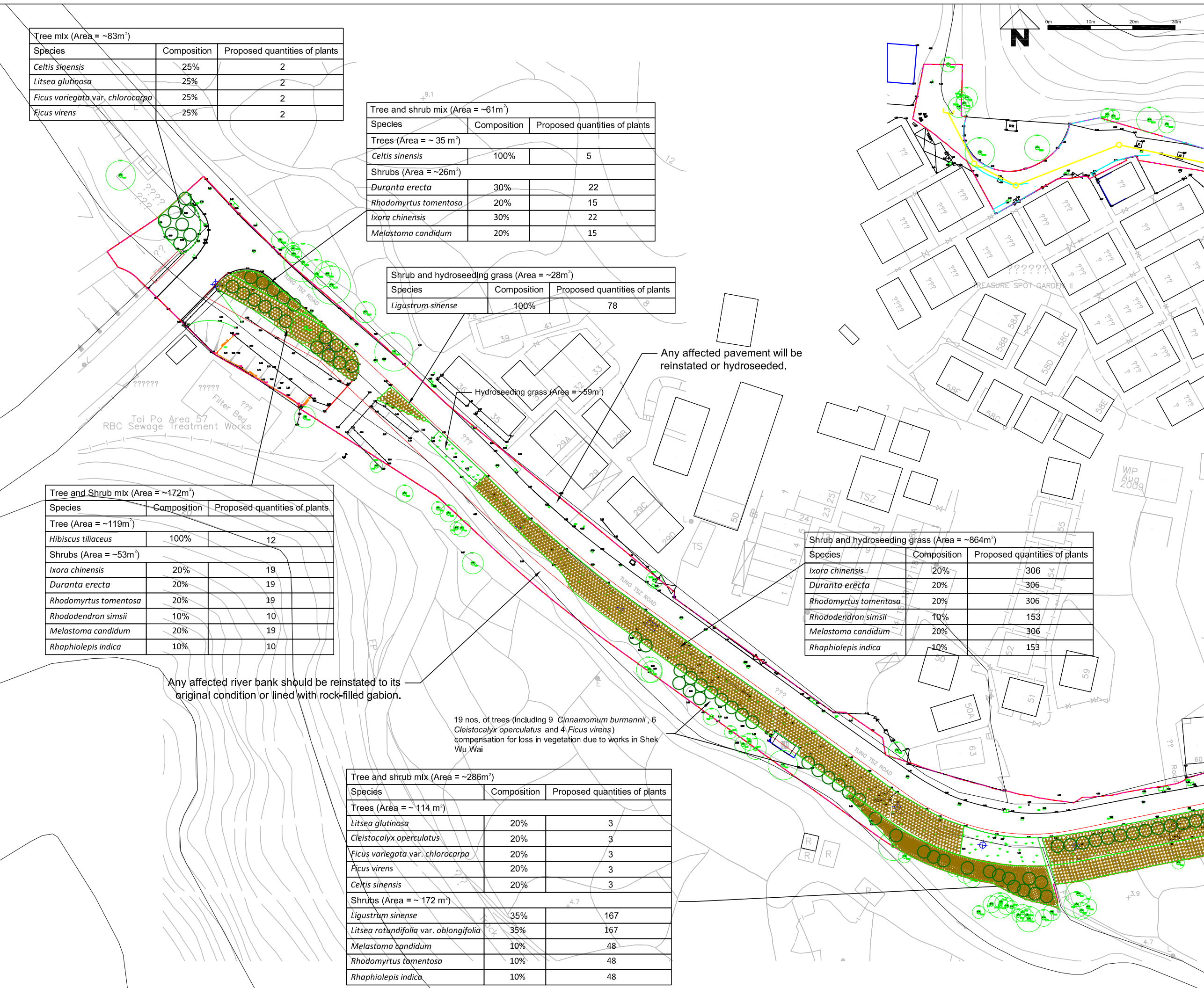
Shrub and hydroseeding grass (Area = ~864m <sup>2</sup> )		
Species	Composition	Proposed quantities of plants
<i>Ixora chinensis</i>	20%	306
<i>Duranta erecta</i>	20%	306
<i>Rhodomyrtus tomentosa</i>	20%	306
<i>Rhododendron simsii</i>	10%	153
<i>Melastoma candidum</i>	20%	306
<i>Rhaphiolepis indica</i>	10%	153

Tree and shrub mix (Area = ~286m <sup>2</sup> )		
Species	Composition	Proposed quantities of plants
Trees (Area = ~114 m <sup>2</sup> )		
<i>Litsea glutinosa</i>	20%	3
<i>Cleistocalyx operculatus</i>	20%	3
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	20%	3
<i>Ficus virens</i>	20%	3
<i>Celtis sinensis</i>	20%	3
Shrubs (Area = ~172 m <sup>2</sup> )		
<i>Ligustrum sinense</i>	35%	167
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	35%	167
<i>Melastoma candidum</i>	10%	48
<i>Rhodomyrtus tomentosa</i>	10%	48
<i>Rhaphiolepis indica</i>	10%	48

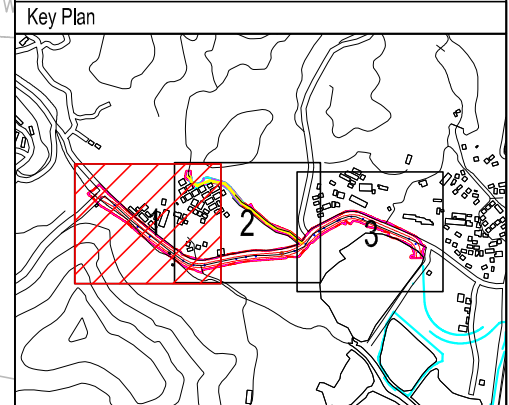
19 nos. of trees (including 9 *Cinnamomum burmannii*, 6 *Cleistocalyx operculatus* and 4 *Ficus virens*) compensation for loss in vegetation due to works in Shek Wu Wai

Any affected river bank should be reinstated to its original condition or lined with rock-filled gabion.

Any affected pavement will be reinstated or hydroseeded.



- Legend
- Site boundary
  - Proposed trees to be planted
  - Proposed shrubs to be planted
  - ⊗ Trees to be retained
  - ▨ Hydroseeded area



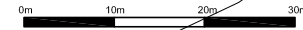
Job Title  
Contract No. DC/2009/22 -  
Drainage Improvement Works in Shuen Wan, Tai Po,  
Contract 1 -  
Preparation and Submission of Landscape Plan

Drawing Title  
Proposed Landscape Plan (Area under Contract 2)  
(Sheet 1)

Drawing No. Figure 13.1	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Checked by IY

群利 - 豐利 聯營  
Kwan Lee - Kuly Joint Venture





Legend

- Site Boundary
- Proposed trees to be planted
- Proposed shrubs to be planted
- Trees to be retained
- Hydroseeded Area

Shrub mix and hydroseeding grass (Area = ~991 m<sup>2</sup>)

Species	Composition	Proposed quantities of plants
<i>Melastoma sanguineum</i>	20%	571
<i>Ligustrum sinense</i>	20%	571
<i>Rhodomyrtus tomentosa</i>	20%	571
<i>Rhododendron simsii</i>	20%	571
<i>Duranta erecta</i>	20%	571

Tree and Shrub mix (Area = ~336 m<sup>2</sup>)

Species	Composition	Proposed quantities of plants
Tree mix (Area = ~112 m <sup>2</sup> )		
<i>Celtis sinensis</i>	30%	5
<i>Litsea glutinosa</i>	40%	6
<i>Cinnamomum burmannii</i>	30%	5
Shrub mix (Area = ~224 m <sup>2</sup> )		
<i>Melastoma sanguineum</i>	20%	124
<i>Ligustrum sinense</i>	20%	124
<i>Rhodomyrtus tomentosa</i>	20%	124
<i>Melastoma candidum</i>	20%	124
<i>Rhaphiolepis indica</i>	20%	124

Tree and shrub mix (Area = ~73 m<sup>2</sup>)

Species	Composition	Proposed quantities of plants
Trees (Area = ~ 58 m <sup>2</sup> )		
<i>Hibiscus tiliaceus</i>	100%	9
Shrubs (Area = ~ 15 m <sup>2</sup> )		
<i>Scaevola taccada</i>	50%	21
<i>Clerodendrum inerme</i>	50%	21

Tree and Shrub mix (Area = ~79 m<sup>2</sup>)

Species	Composition	Proposed quantities of plants
Tree (Area = ~49 m <sup>2</sup> )		
<i>Hibiscus tiliaceus</i>	100%	7
Shrub (Area = ~30 m <sup>2</sup> )		
<i>Kandelia obovata</i>	30%	25
<i>Aegiceras corniculatum</i>	30%	25
<i>scaevola taccada</i>	20%	17
<i>Clerodendrum inerme</i>	20%	17

Shrub mix and hydroseeding grass (Area = ~ 103 m<sup>2</sup>)

Species	Composition	Proposed quantities of plants
<i>Scaevola taccada</i>	40%	73
<i>Clerodendrum inerme</i>	40%	73
<i>Melastoma sanguineum</i>	20%	37

Tree and shrub mix (Area = ~188 m<sup>2</sup>)

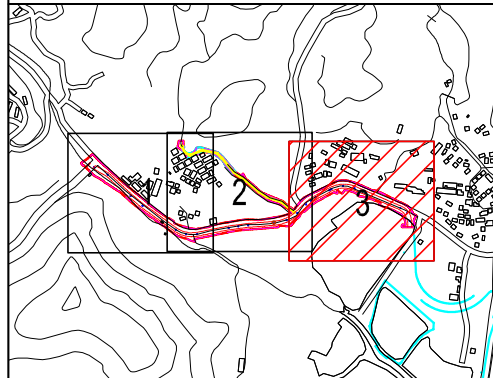
Species	Composition	Proposed quantities of plants
Trees (Area = ~ 94 m <sup>2</sup> )		
<i>Sapium sebiferum</i>	33%	4
<i>Celtis sinensis</i>	33%	4
<i>Hibiscus tiliaceus</i>	33%	4
Shrubs (Area = ~ 94 m <sup>2</sup> )		
<i>Ligustrum sinense</i>	30%	78
<i>Melastoma sanguineum</i>	30%	78
<i>Scaevola taccada</i>	40%	104

Vegetation (including mangrove and associated wetland vegetation) will be retained

The affected Tung Tsz Road will be reinstated.

PROPOSED BOX CULVERT

Key Plan



Job Title

Contract No. DC/2009/22 -  
Drainage Improvement Works in Shuen Wan, Tai Po,  
Contract 1 -  
Preparation and Submission of Landscape Plan

Drawing Title

Proposed Landscape Plan (Area under Contract 2)  
(Sheet 3)

Drawing No.

Figure 13.3

Project No.

10/370/167

Scale

As Shown

Date

Sep 2012

Rev

1

Drawn by

CH

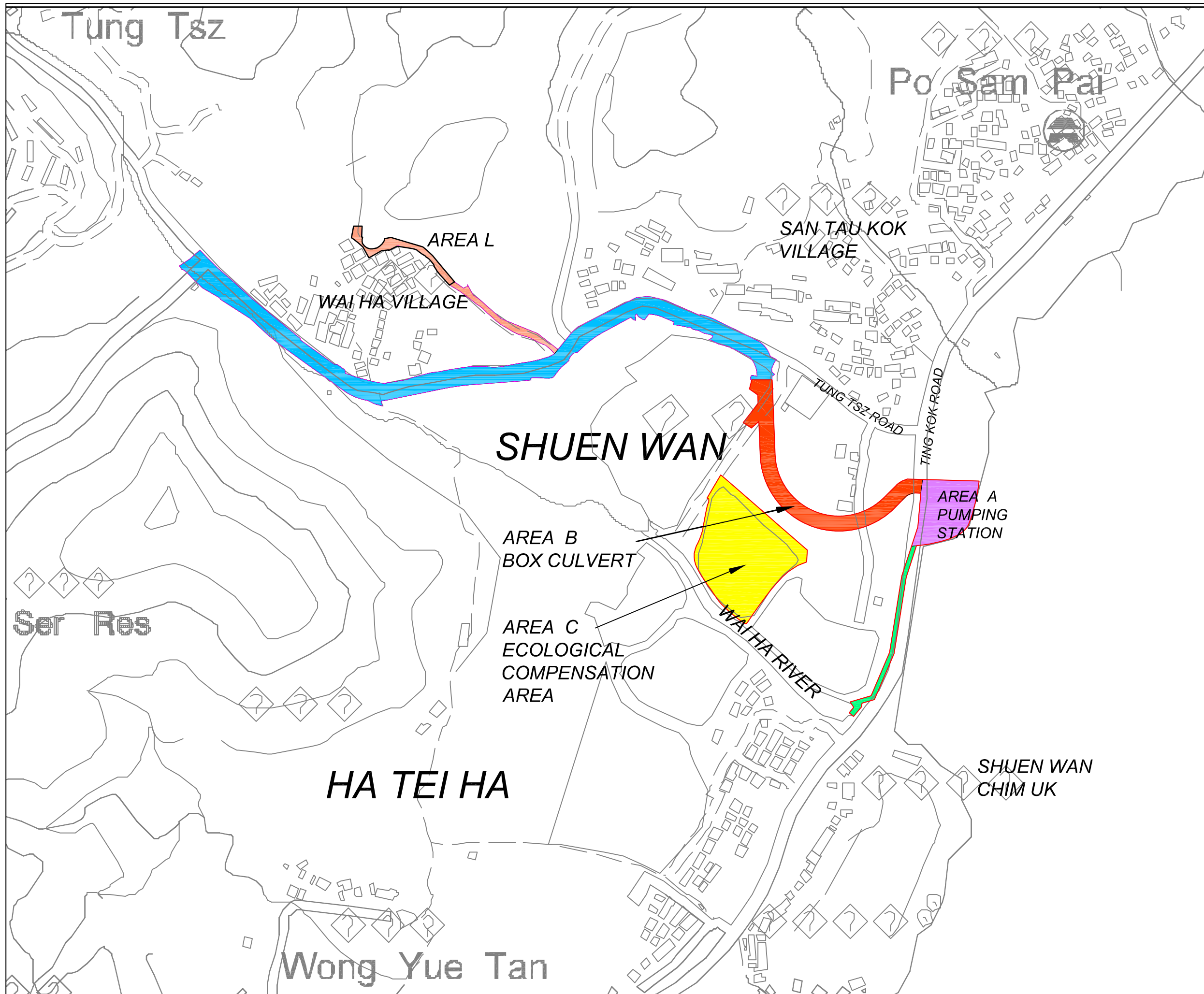
Checked by

IY



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Kwan Lee - Kuly Joint Venture





- Site Boundary (Contract 1)
- Site Boundary (Contract 2)
- Site Boundary (Contracts 1 & 2)

Mitigation measures to be read in conjunction with Section 4.1 of the Landscape Plan (Revision 3).

- CM-04, OM-01, OM-02A, OM-02B, OM-04A (together with OM-04B)
- OM-01, OM-03B, OM-05, OM-06
- CM-04, OM-03B, OM-04A (together with OM-04B), OM-05
- CM-04
- CM-04, OM-03A, OM-03B, OM-04A (together with OM-04B), OM-05
- CM-04, OM-03B, OM-05

Job Title  
DC/2009/22  
Drainage Improvement Works in Shuen Wan, Tai Po, Contract 1 - Preparation and Submission of Landscape Plan

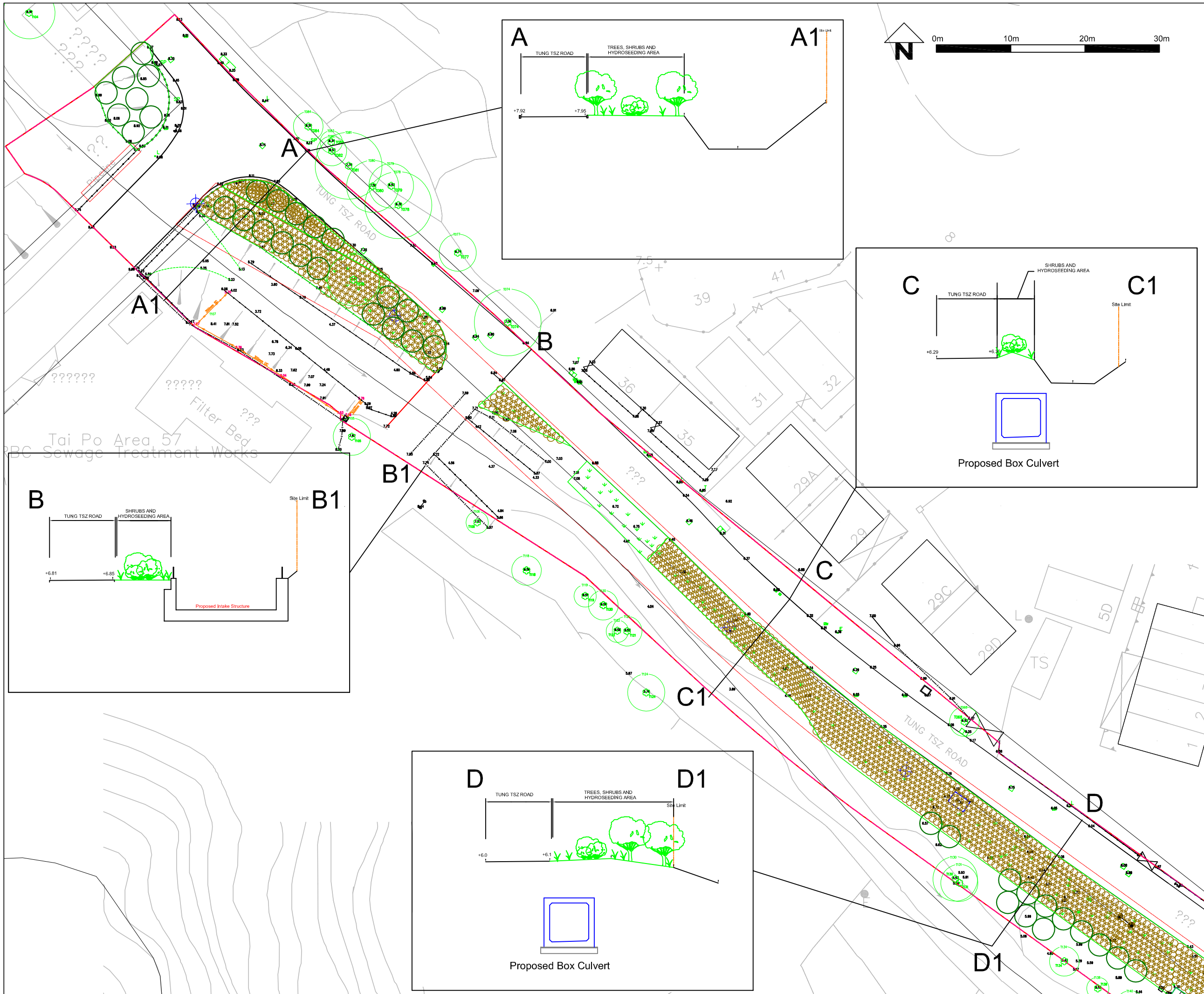
Drawing Title  
Proposed Landscape Plan with Mitigation Measures

Drawing No. Figure 14	Project No. 10/370/167
Scale 1:4000@A3	Date Sept 2012
Drawn by IY	Checked by MRL

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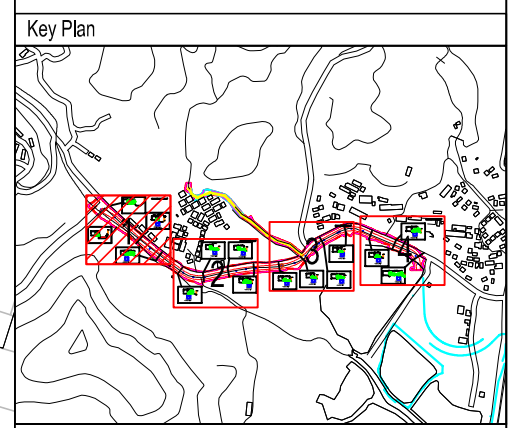






- Legend**
- Site boundary
  - Proposed trees to be planted
  - Proposed shrubs to be planted
  - Trees to be retained
  - ▼ Hydroseeded area

**Note:**  
 The cross-section drawings (provided by Kwan Lee - Kuly Joint Venture and modified by AEC Ltd.) are schematic only and show the general concept of the soft landscape works proposed along Tung Tsz Road for areas under Contract 2 of the Project.

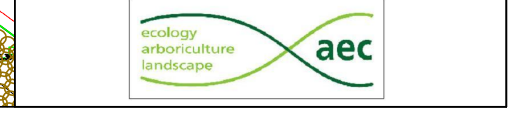


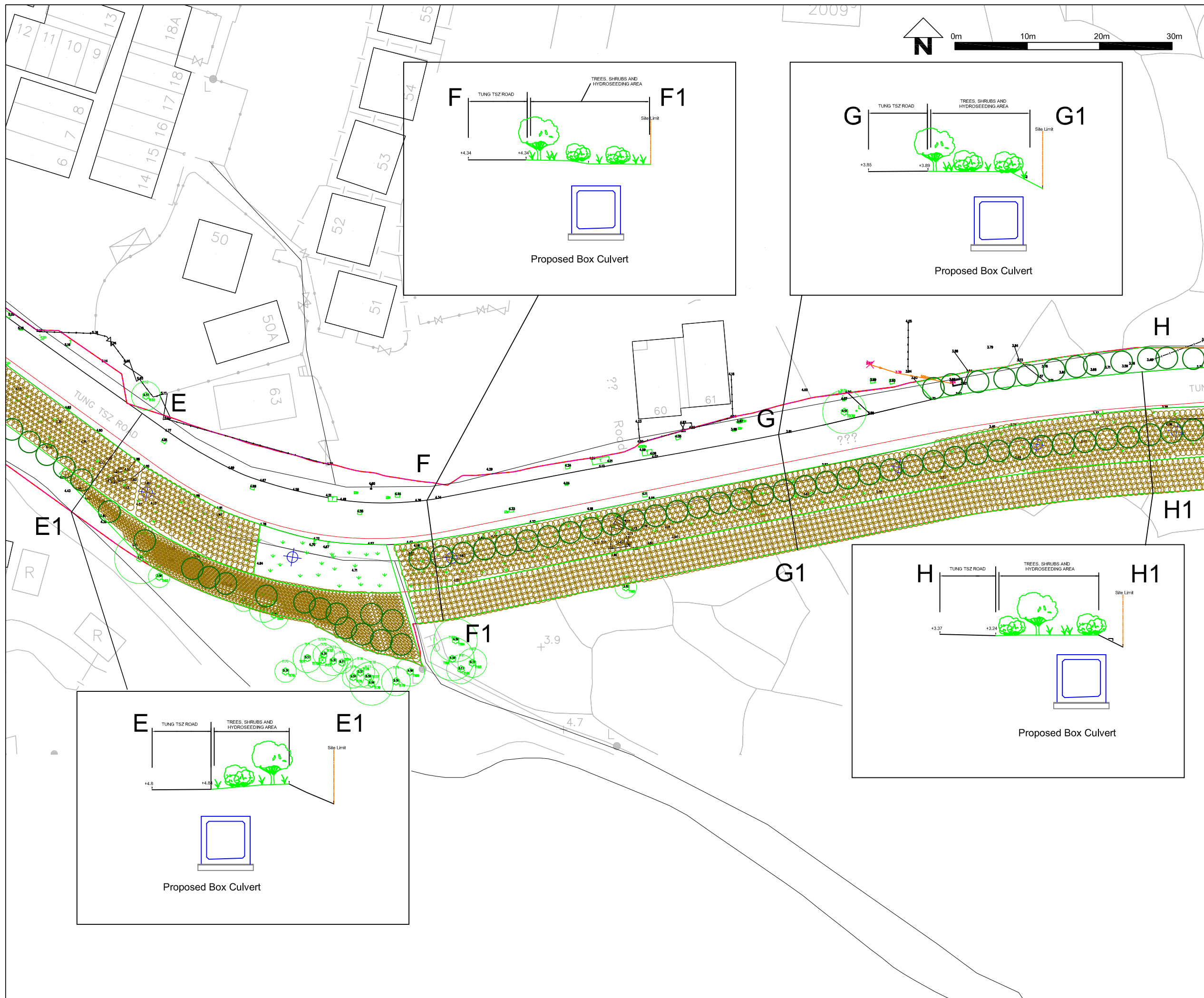
**Job Title**  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

**Drawing Title**  
 Proposed Landscape Plan - Schematic cross-section  
 drawings of soft landscape work (Areas under Contract 2)  
 (Sheet 1)

<b>Drawing No.</b> Figure 15.1	<b>Project No.</b> 10/370/167
<b>Scale</b> As Shown	<b>Date</b> Sep 2012
<b>Drawn by</b> CH	<b>Checked by</b> IY

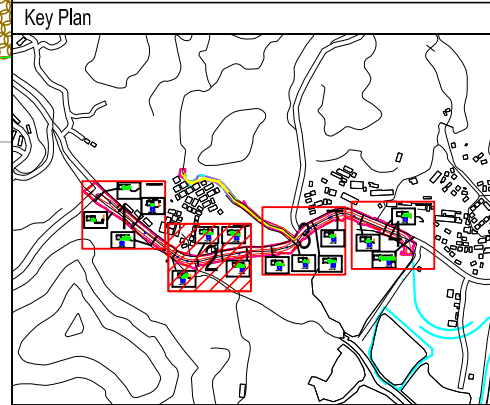
**群利 - 豐利聯營**  
 Kwan Lee - Kuly Joint Venture





- Legend**
- Site boundary
  - Proposed trees to be planted
  - Proposed shrubs to be planted
  - Trees to be retained
  - Hydroseeded area

**Note:**  
 The cross-section drawings (provided by Kwan Lee - Kuly Joint Venture and modified by AEC Ltd.) are schematic only and show the general concept of the soft landscape works proposed along Tung Tsz Road for areas under Contract 2 of the Project.



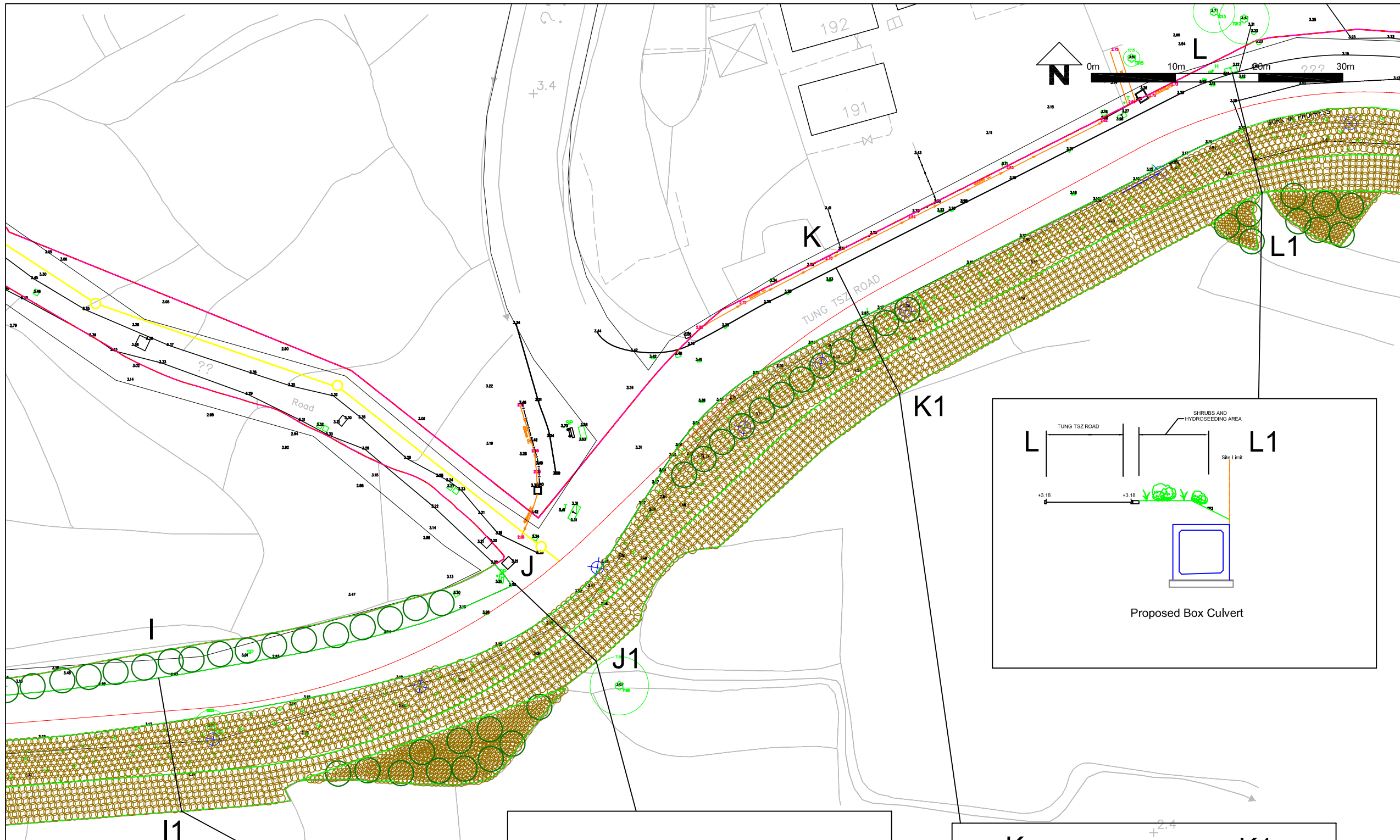
**Job Title**  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

**Drawing Title**  
 Proposed Landscape Plan - Schematic cross-section drawings  
 of soft landscape work (Areas under Contract 2)  
 (Sheet 2)

<b>Drawing No.</b> Figure 15.2	<b>Project No.</b> 10/370/167	
<b>Scale</b> As Shown	<b>Date</b> Sep 2012	<b>Rev</b> 1
<b>Drawn by</b> CH	<b>Checked by</b> IY	

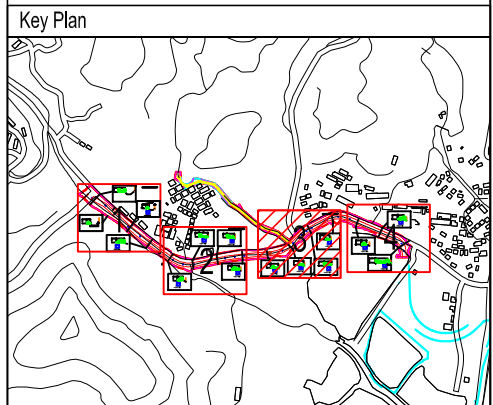
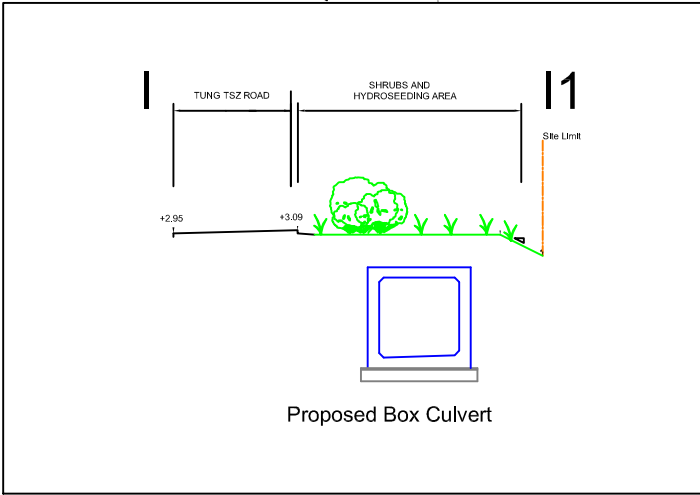
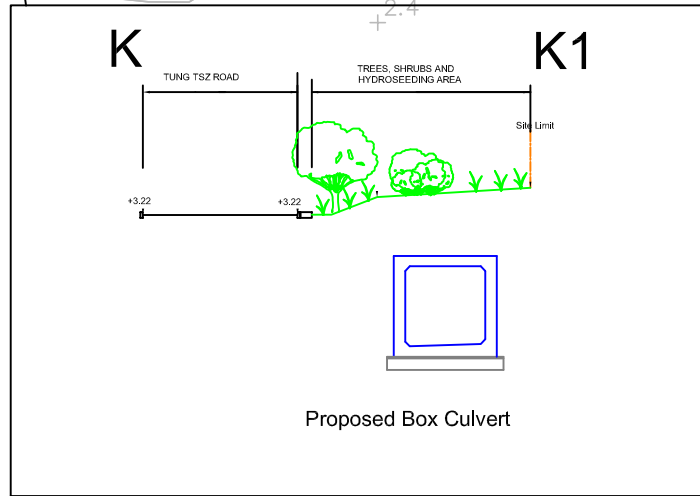
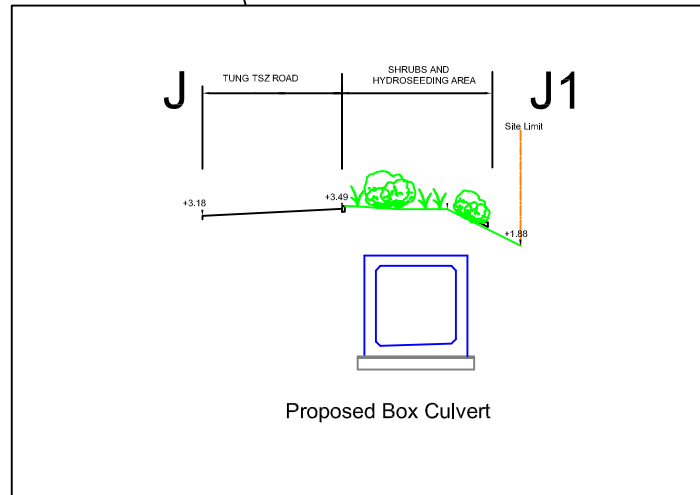
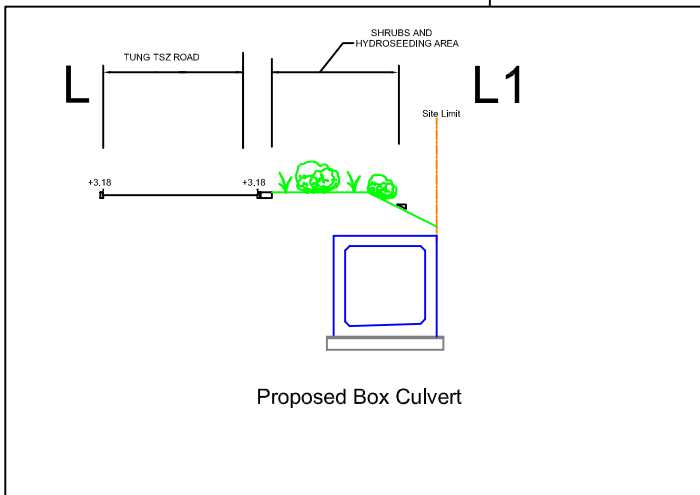
群利 - 豐利聯營  
 Kwan Lee - Kuly Joint Venture





- Legend
- Site boundary
  - Proposed trees to be planted
  - Proposed shrubs to be planted
  - Trees to be retained
  - Hydroseeded area

Note:  
The cross-section drawings (provided by Kwan Lee - Kuly Joint Venture and modified by AEC Ltd.) are schematic only and show the general concept of the soft landscape works proposed along Tung Tsz Road for areas under Contract 2 of the Project.



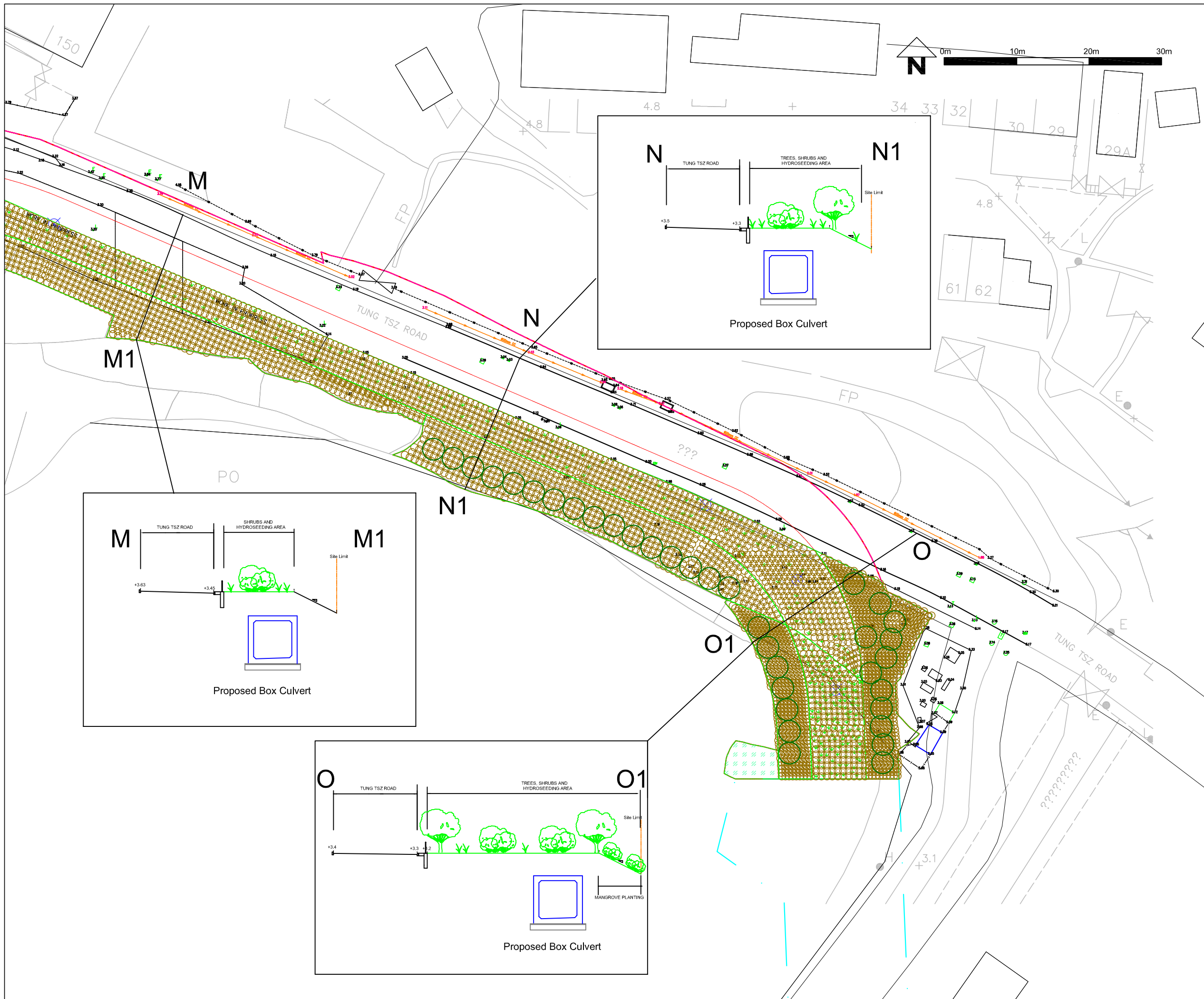
Job Title  
Contract No. DC/2009/22 -  
Drainage Improvement Works in Shuen Wan, Tai Po,  
Contract 1 -  
Preparation and Submission of Landscape Plan

Drawing Title  
Proposed Landscape Plan - Schematic cross-section drawings  
of soft landscape work (Area under Contract 2)  
(Sheet 3)

Drawing No. Figure 15.3	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
	Checked by IY

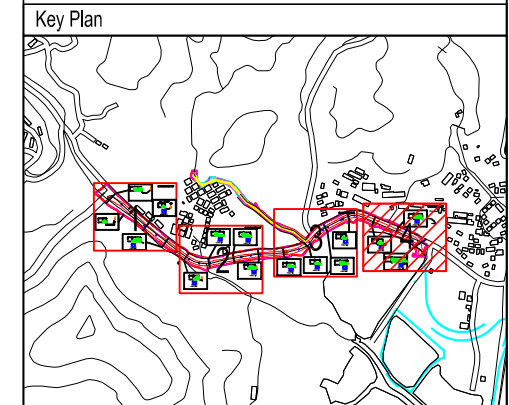
群利 - 豐利 聯營  
Kwan Lee - Kuly Joint Venture





- Legend
- Site boundary
  - Proposed trees to be planted
  - Proposed shrubs to be planted
  - ⊗ Trees to be retained
  - ∨ Hydroseeded area

Note:  
 The cross-section drawings (provided by Kwan Lee - Kuly Joint Venture and modified by AEC Ltd.) are schematic only and show the general concept of the soft landscape works proposed along Tung Tsz Road for areas under Contract 2 of the Project.



Job Title  
 Contract No. DC/2009/22 -  
 Drainage Improvement Works in Shuen Wan, Tai Po,  
 Contract 1 -  
 Preparation and Submission of Landscape Plan

Drawing Title  
 Proposed Landscape Plan - Schematic cross-section drawings  
 of soft landscape work (Area under Contract 2)  
 (Sheet 4)

Drawing No. Figure 15.4	Project No. 10/370/167
Scale As Shown	Date Sep 2012
Drawn by CH	Rev 1
Checked by IY	

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 Kwan Lee - Kuly Joint Venture



# **Annex 1**

## **Architectural and Chromatic Treatment of the Stormwater Pumping Station**

Note: Extract of “*Shuen Wan Storm Water Pumping Station Agreement No. CE50/2001 (DS) Architectural and Landscape Design Submission for ETWB TC 8/2005 Submission (October 2010)*”. Relevant pages were updated with the latest architectural design of the Stormwater Pumping Station.

Drainage Services Department

Shuen Wan Storm Water Pumping Station Agreement No. CE50/2001 (DS)

# Architectural and Landscape Design Submission

for ETWB TC 8/2005 Submission

October 2010

# Table of Contents

Introduction

Site/ Context

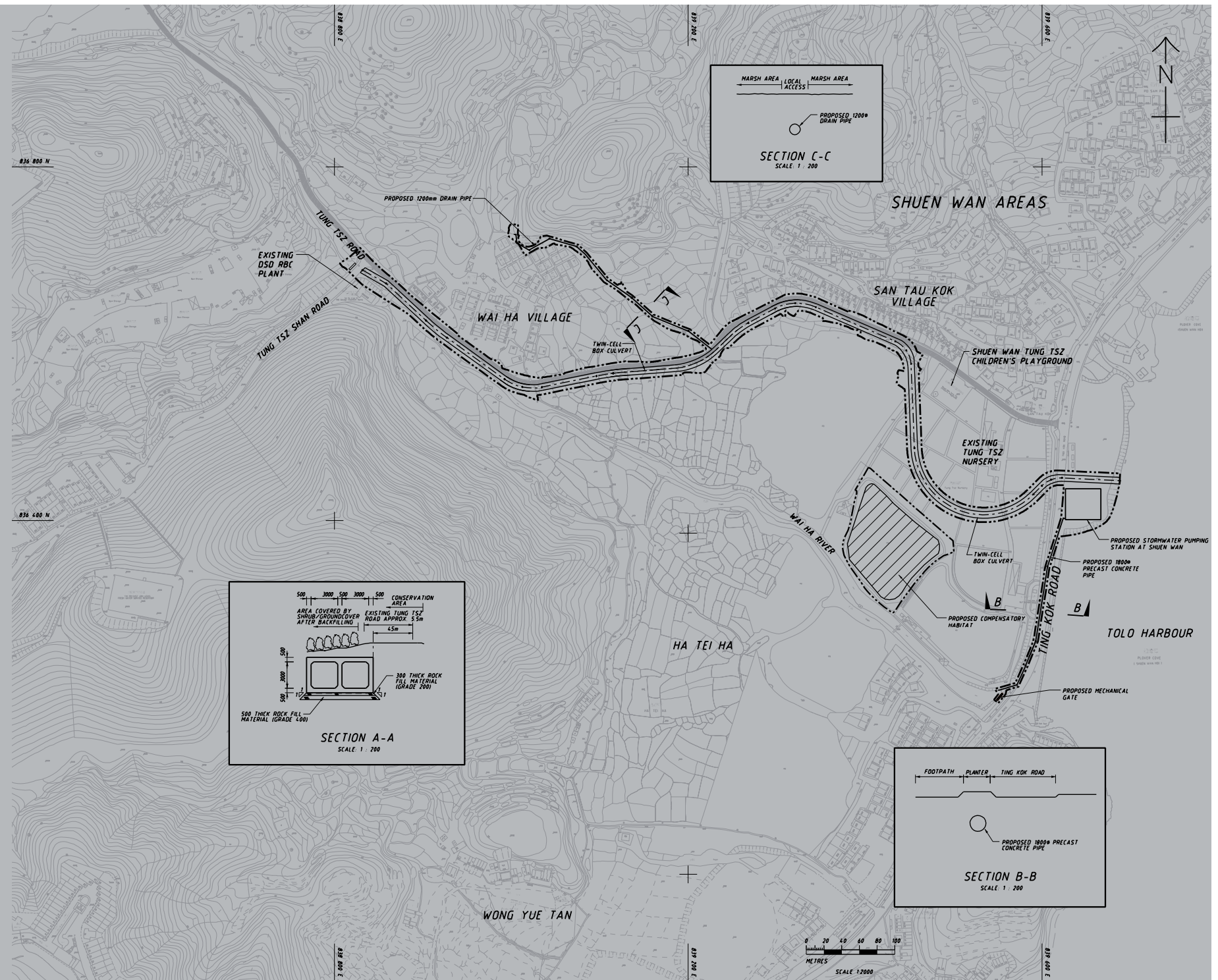
Design Statement

View

Drawing & Details

Material & Vegetation

# Introduction



## Background Information

- 1.1 The Sha Tin and Tai Po Drainage Master Plan (DMP) Study completed in October 1999 indicated that certain stormwater drains and natural rivers/streamcourses in the Sha Tin and Tai Po areas did not have the required hydraulic capacity to meet the flow requirements. To alleviate the risks of flooding and to cope with future developments as identified in the DMP Study, construction of river channels, upgrading of existing stormwater drains, construction of flood water pumping stations in the low-lying areas and other minor drainage facilities were recommended.
- 1.2 Upon completion of the DMP Study, Drainage Services Department (DSD) of Hong Kong SAR Government commissioned Maunsell Consultants Asia Ltd. (MCAL) to undertake Agreement No. CE50/2001 (DS) Drainage Improvement in Sha Tin and Tai Po — Design and Construction, for implementing the drainage improvement works as recommended by the DMP study.
- 1.3 During the design stage, four works packages have been proposed for the implementation of the drainage improvement works. Packages A & B involve the urban drainage improvement works in urban areas of Sha Tin and Tai Po respectively where Package C involves the river improvement works to Upper Lam Tsuen River, She Shan River and Upper Tai Po River and the construction of crossroad drains at Ping Long. The C&DMMP for these packages was already approved and these packages are already under construction stage.
- 1.4 This package, Package D which has been assigned with Contract no. DC/2009/22 covers the drainage improvement works in Shuen Wan, Tai Po and the corresponding waste management plan proposed for this package is detailed in this report.



# Site / Context



## Observation

The project site locates by the Ting Kok Road, abutting Plover Cove and it is currently a vacated lot with trees and wild plants.

Its northern and western sides are both heavily vegetated. On the opposite side of Ting Kok Road is the Tung Tsz Nursery which is visually protected heavily by rows of tree lining up along the road. On the north west is a village, San Tau Kok which does not have a strong visual connection to the site because of the shield of vegetation on the northern side of the site.

On the far south west side of the site is another village, Shuen Wan Chim Uk. This village spread over the two sides of Ting Kok Road. The western part of the village has a weak visual connection to the site because of the distance and vegetation along the road side and on the road divider. The eastern part of the village is almost directly on the southern side of the site, separated by a shallow bay.

The major concern of visual impact for the sensitive receiver is primarily on the east part of Chim UK where some village houses orient towards north, viewing the Pat Sin Leng Country Park.



Project site behind the trees

### View A

Standing next to an existing pumping station by Ting Kok Road. Heavy vegetation along the road side and road divider is observed.



View A



### View B

Looking from San Tau Kok village. A PCCW signal station is observed (the white part) and the project site is further back and visually blocked by some big trees.



Project site behind the trees



### View C

The right side is the Tung Tsz Nursery. The white part on the left is the PCCW signal station and the project site is visually blocked by some big trees.



Tung Tsz Nusery behind the trees



#### View D

Looking towards the Tung Tsz Nursery from the project site. Two layers of tree are blocking the visual connection. Thus the visual impact to the Nursery is negligible.



Project site



### View E

Looking towards the project site from south. The site is projecting into the cove and exposed to the south side, while its background is Pat Sin Leng Country Park.



# Design Statement

## “Green Carpet” - a Landscape + Topographic design strategy



1. Transform the architecture of this pumping station into into a piece of landscape.
2. Extend the ground, as a piece of green lawn, to become the roof of the pump house as if it is covered under the landscape.
3. Reinforces a garden perception by natural-look material for the boundary wall and entrance gate.
4. Maximize green surface on grade in order to blend with the green roof.

As a result, a landscape garden will become the main impression of this pumping station. Local residence and visitors will be visually benefical from the greenery of the station.

### Green roof provision:

1. Extensive Type
2. Soil depth: 150 - 200 mm for flat part, 100 -150 mm for pitched part
3. For view only, no recreational usage
4. Lightweight (80-150 kg/m<sup>2</sup>)
5. Low maintenance
6. Less capital costs compared to intensive type
7. No or little irrigation needed
8. Accessible only for periodic maintenance

# “Green Carpet” - Green Construction Concept

- Minimizing energy spent on transportation of excavated soil.
- Reducing landfill loading.
- + Pumping Station blends into local landscape.



Pumping Station + Landscape - Waste = Green Construction



concept diagram

Reusing excavated soil in garden on grade and on roof



# Views



Looking from Chim UK towards the project site with Pat Sin Leng Country Park as background.



## Merits

Visual Aesthetic Benefits of green roofs

1. Positive visual impact to the neighboring receivers. Greenery on pitched roof is more observable compared to a garden on grade.
2. Reduce adverse visual impact to the surroundings by blending the built environment into the context of natural mountain background.
3. Considerable public relations value in projecting an environmentally conscious image for DSD.



Pump Station is screened off by trees



Ting Kok Road

01

Looking from San Tau Kok:  
Pumping Station will be  
covered by vegetation.





Looking from Ting Kok Road:  
 Tree will be screening off the pump house as far as possible.  
 Natural granite will be used to finish the solid boundary wall, echoing to granite used on the road divider and projecting a landscape garden image.

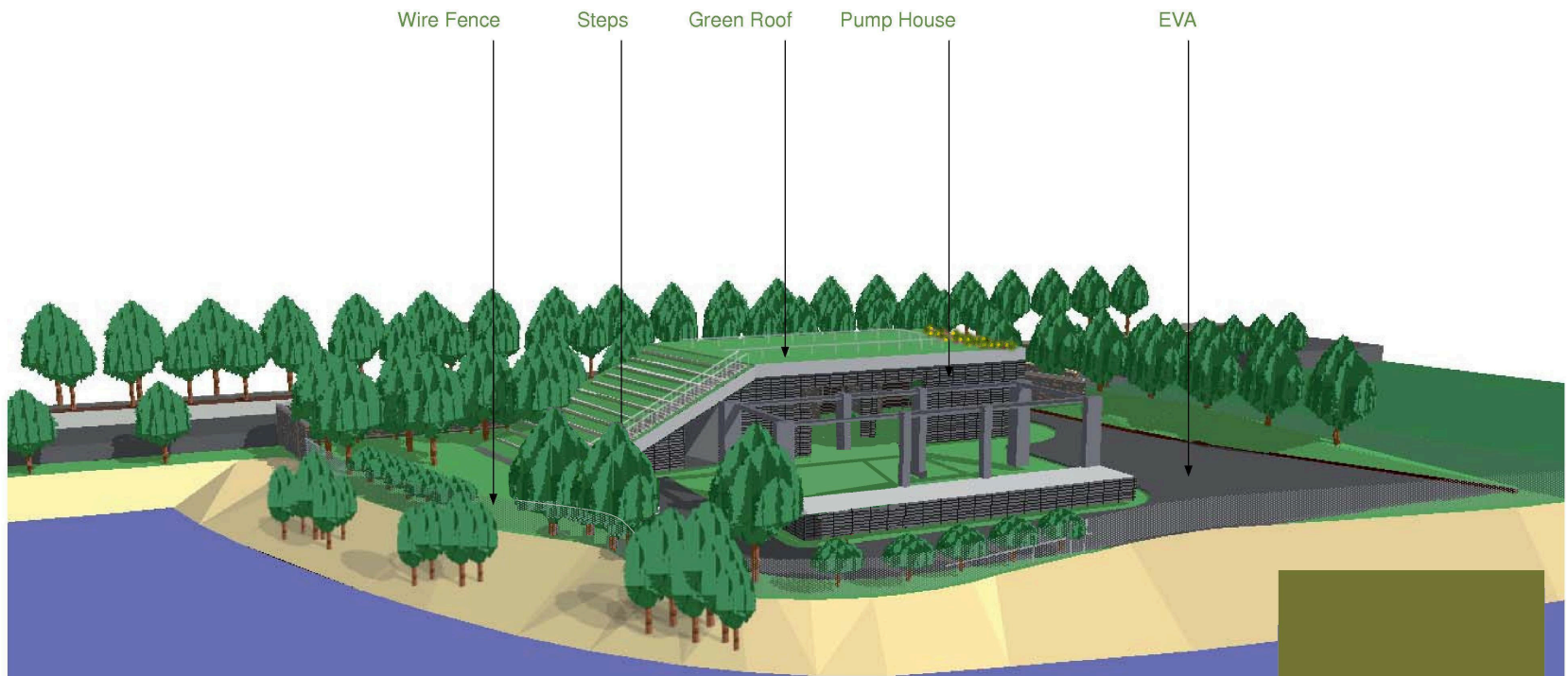


Pump Station is screened off by trees



Looking from south west side of the site:  
Most of the pump house will be covered by the proposed trees and the exposed part of the station will be the green garden roof.



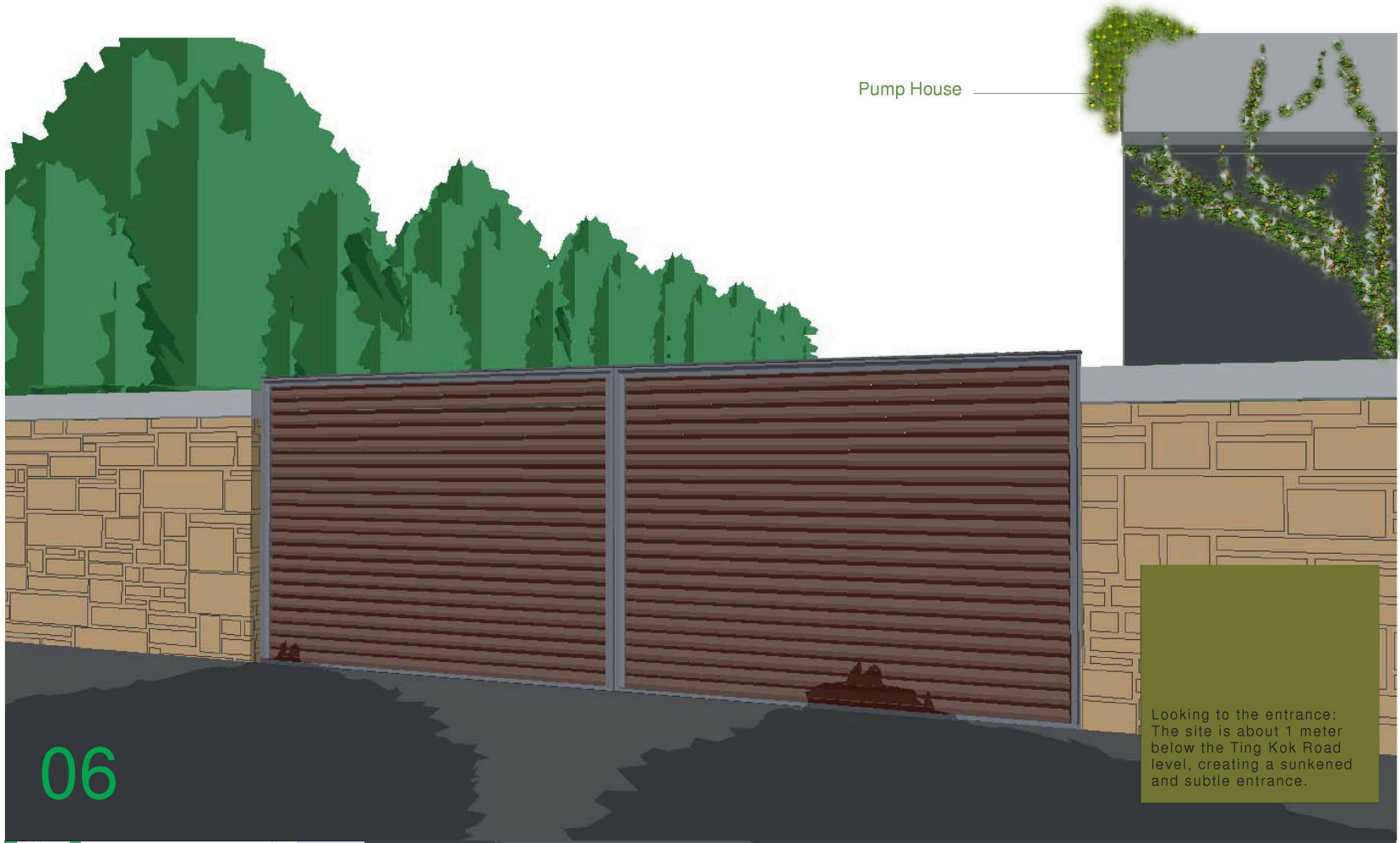


04

A semi-aerial view from Plover Cove:  
 Green surface is maximized.  
 All visually sensitive angles,  
 north, west and south are  
 covered by either vegetation  
 or roof garden.



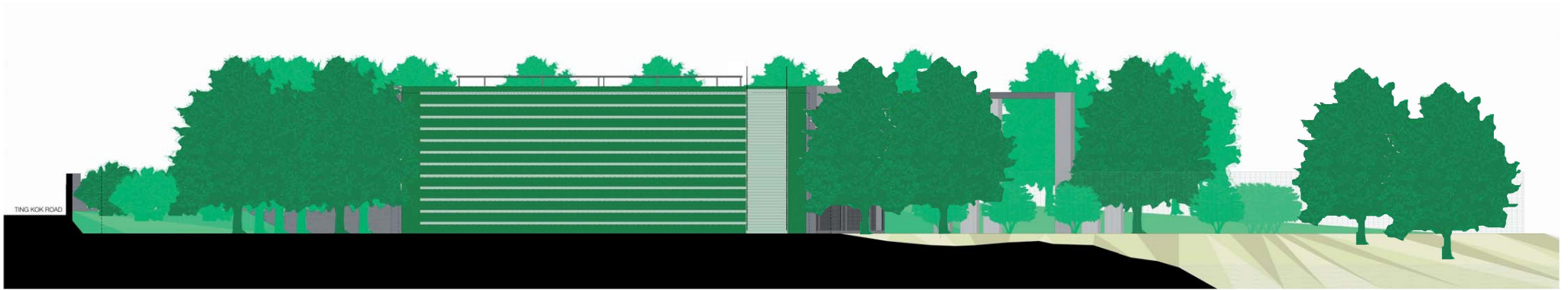




Looking to the entrance:  
 The site is about 1 meter  
 below the Ting Kok Road  
 level, creating a sunkened  
 and subtle entrance.







SOUTH ELEVATION

1:200



Site boundary for the proposed stormwater pumping station

KEY PLAN

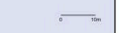


WEST ELEVATION

1200



Site boundary for the proposed stormwater pumping station



KEY PLAN

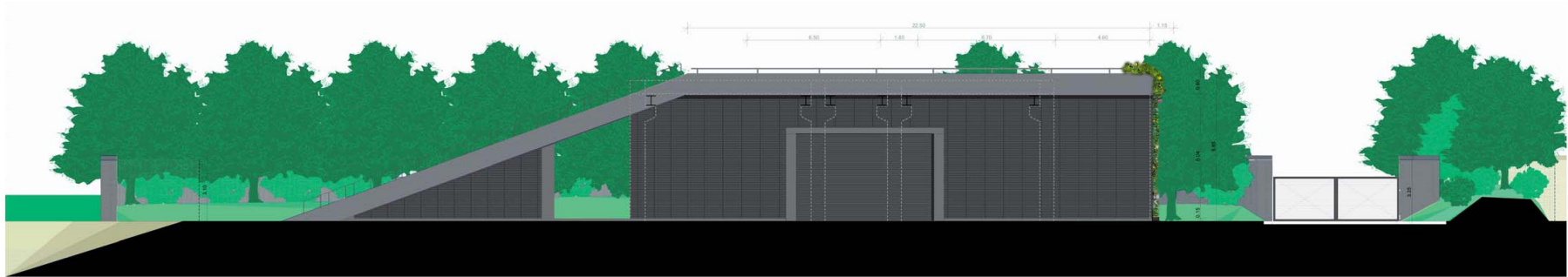


NORTH ELEVATION

1200



KEY PLAN



EAST ELEVATION

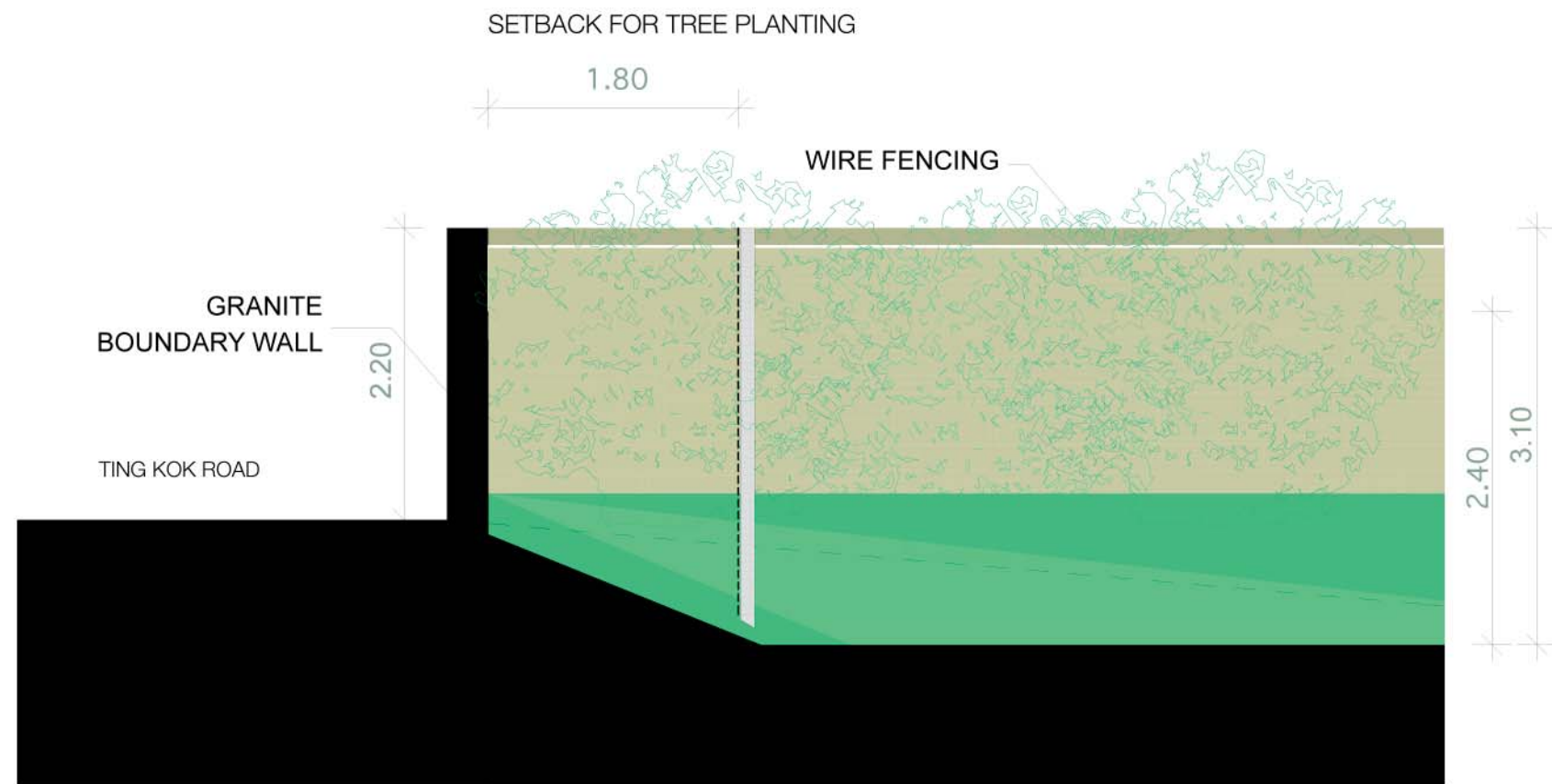
1200



KEY PLAN

# Details

## Boundary Wall



Typical boundary wall Section

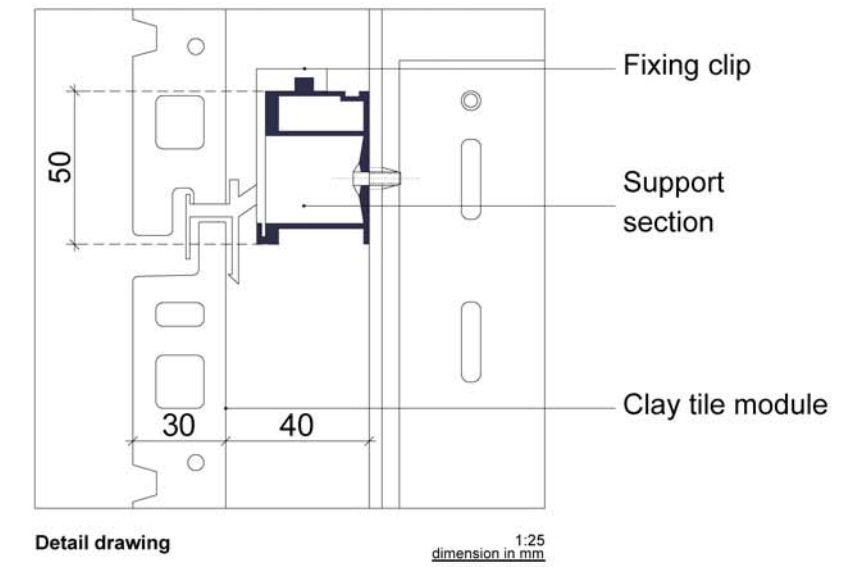
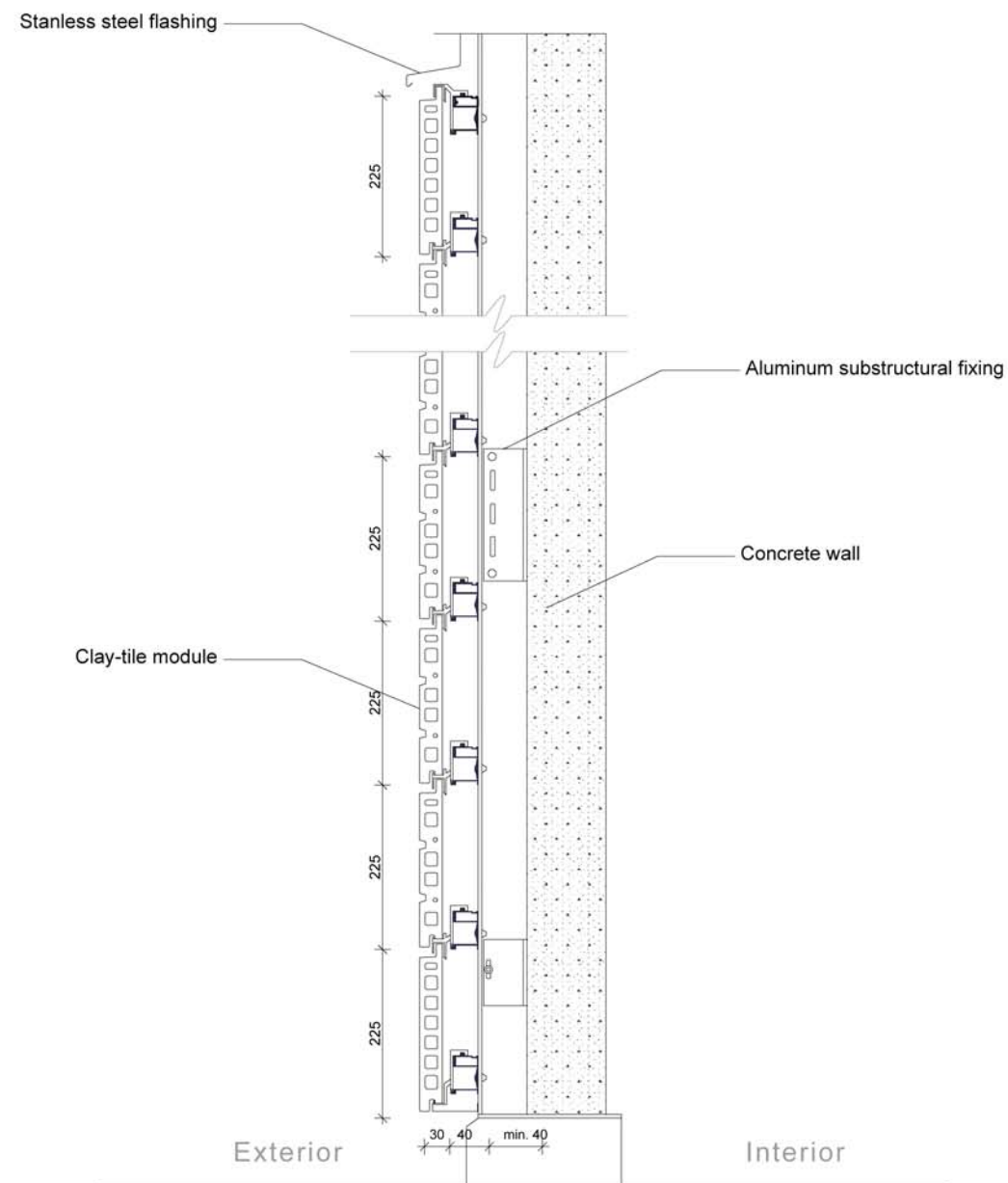


Granite wall



Wire fencing

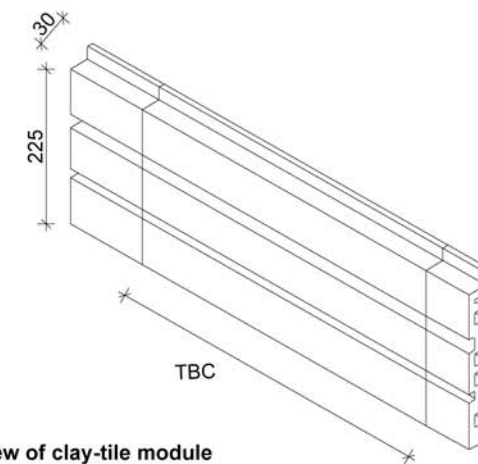
# Details Facade



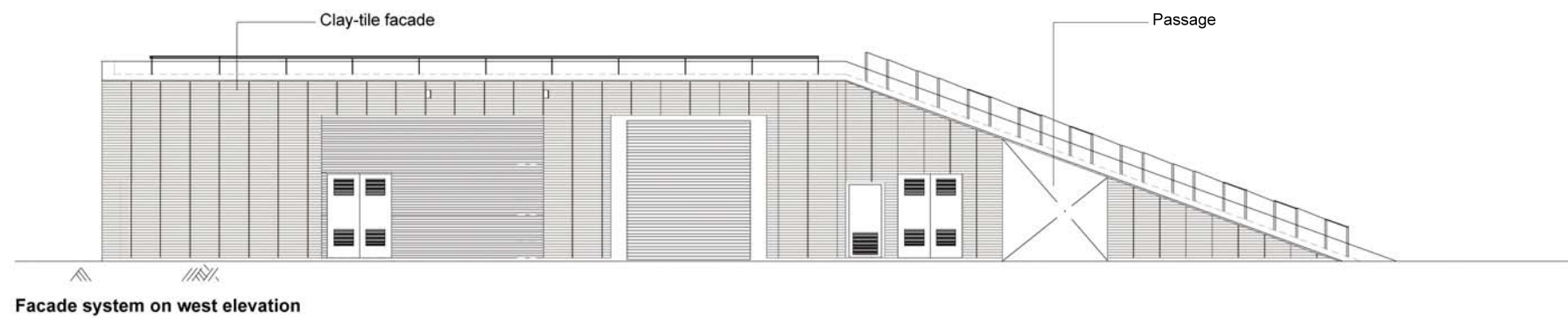
Sliding hook on rail Isometric View

N.T.S.  
dimension in mm

Isometric view of clay-tile module



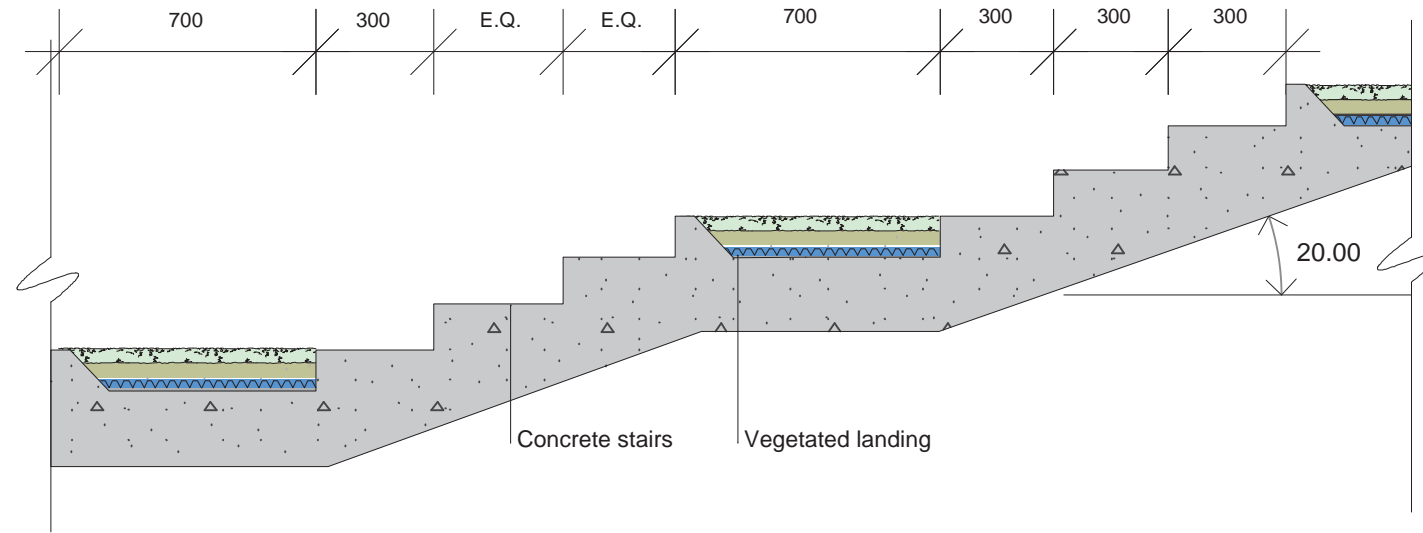
Facade system applied to all sides



Facade system on west elevation

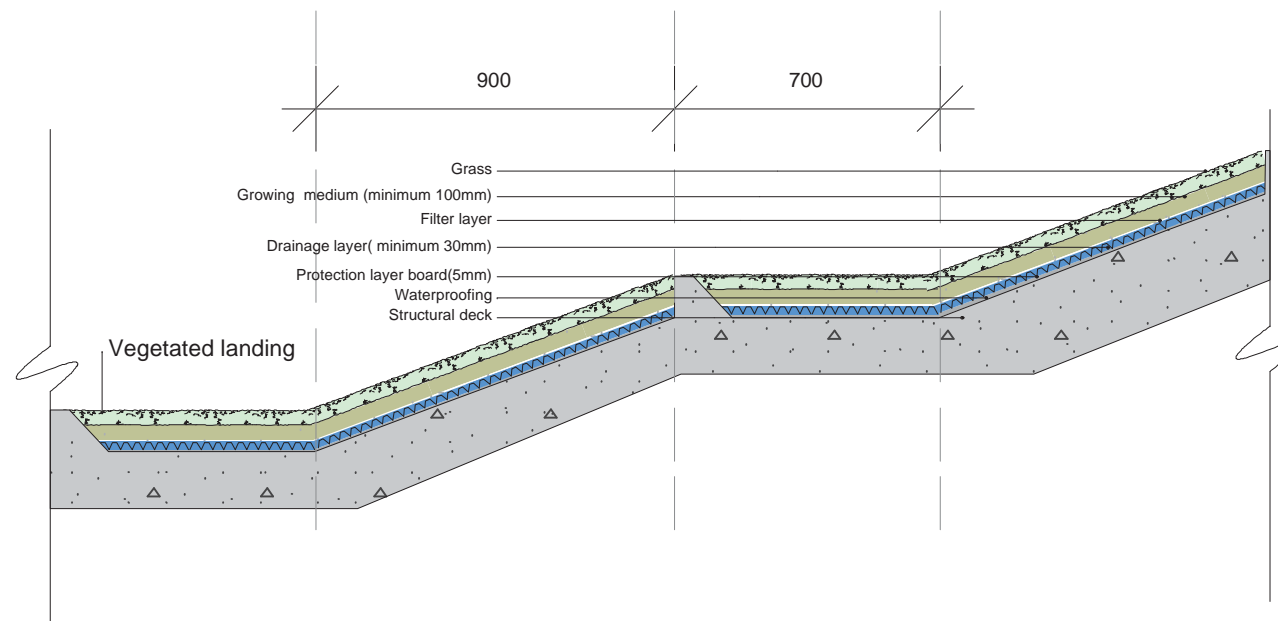
# Details

## Green Garden



SECTION A- Green pitch roof- stair section

1:20  
dimension in mm

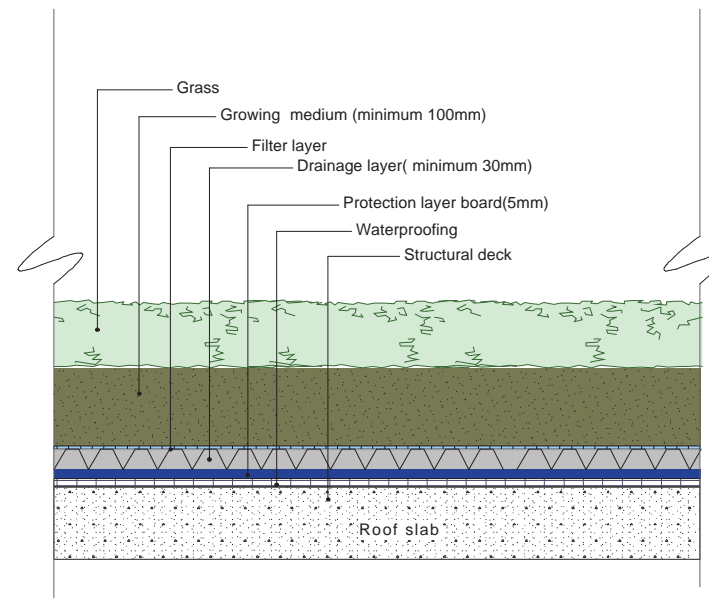


SECTION B - Green pitch roof- stair section

1:20  
dimension in mm

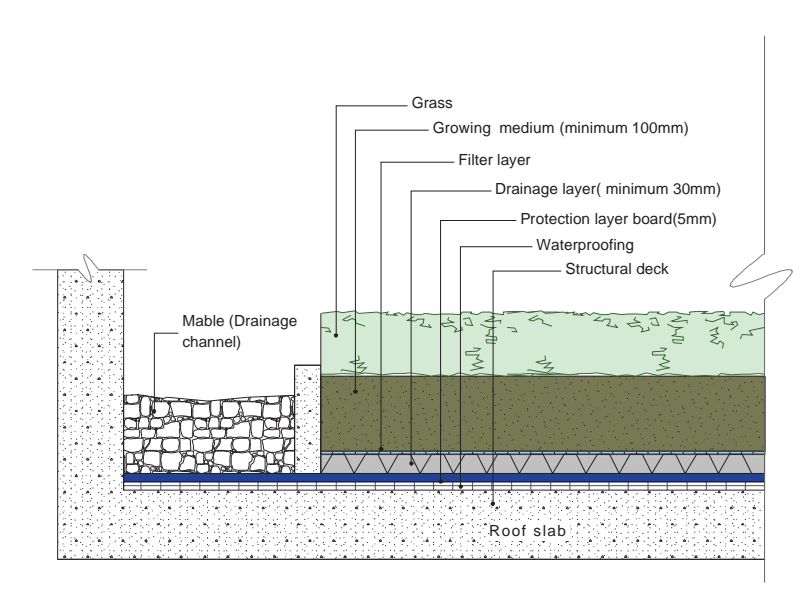


# Details Green Roof



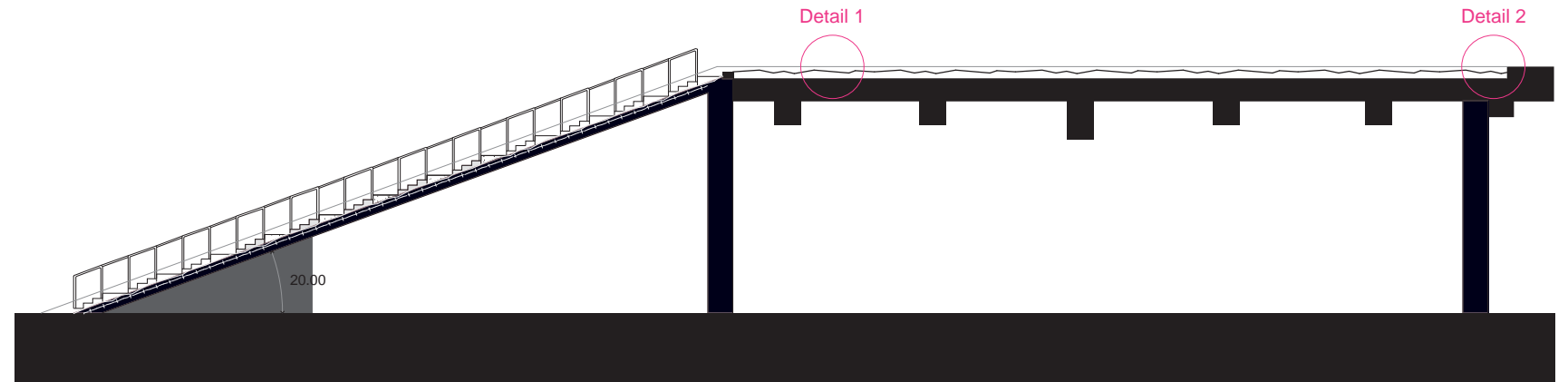
Detail 1: Typical roof section

N.T.S.  
 dimension in mm



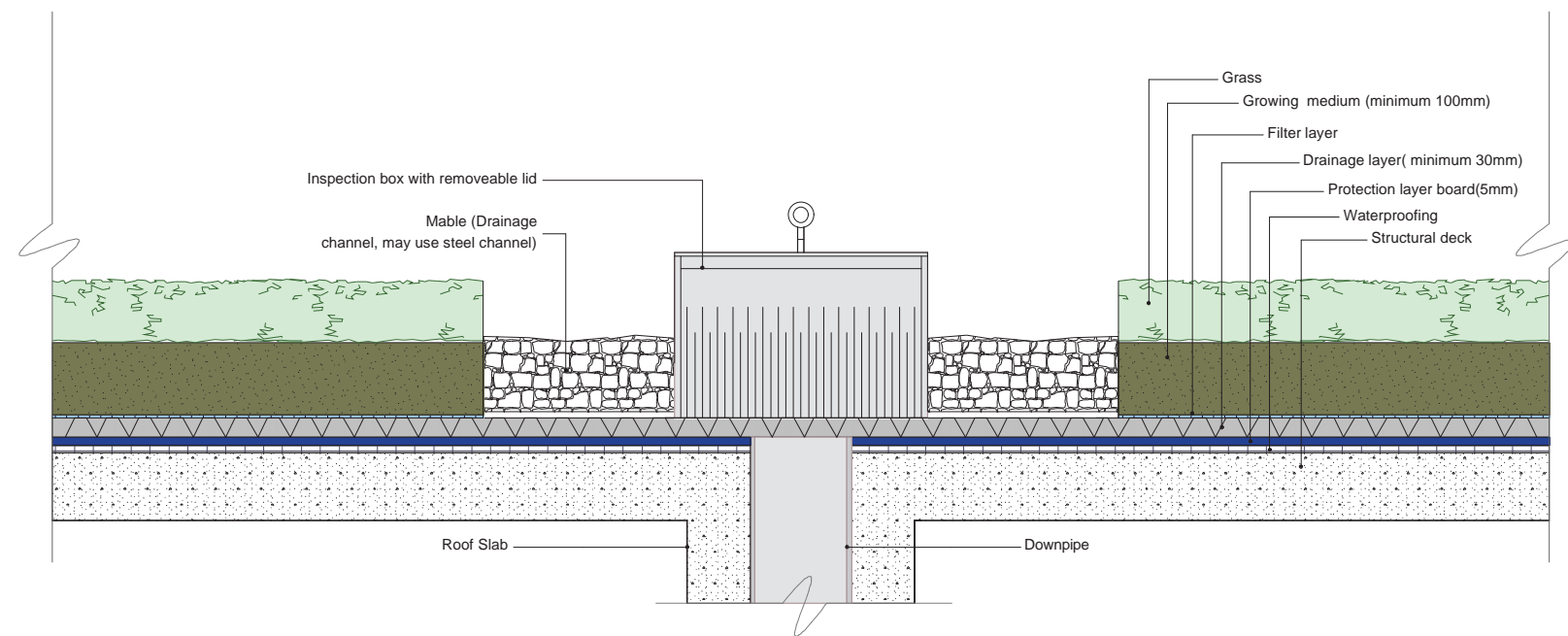
Detail 2: Typical edge treatment

N.T.S.  
 dimension in mm



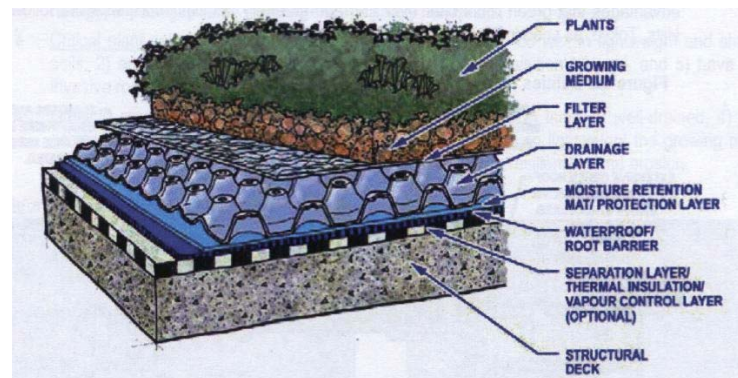
Schematic section

N.T.S.



Detail of typical drainage inspection chamber

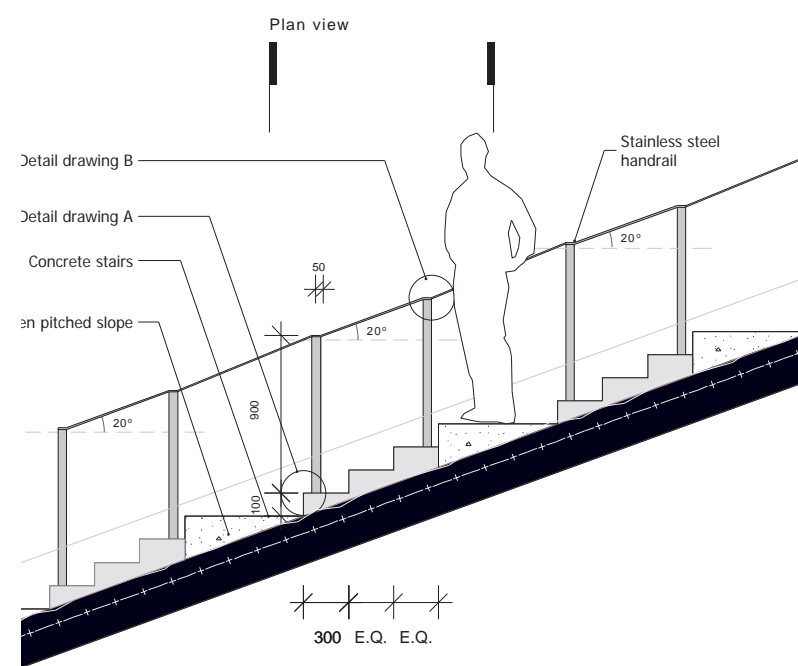
N.T.S.



Components of garden roof construction

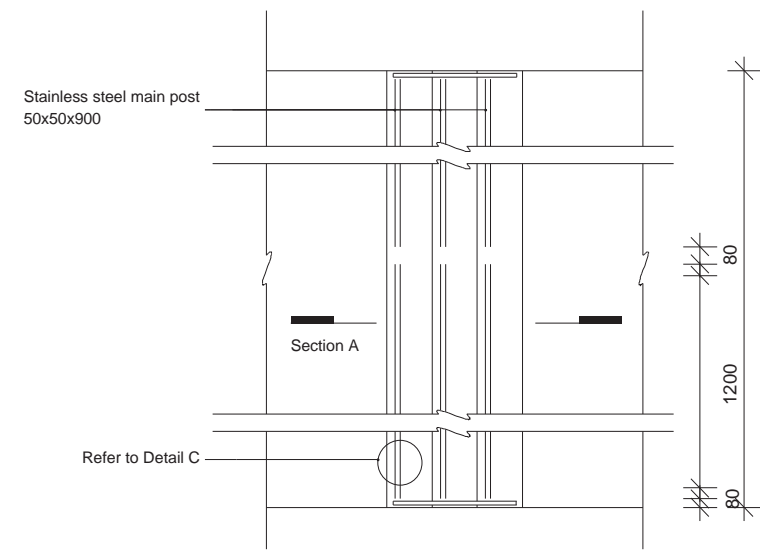


# Details Handrail for Roof Garden



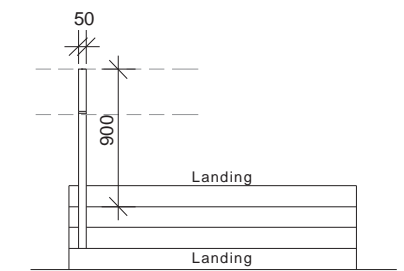
Detail on green pitch roof section

1:50  
dimension in mm



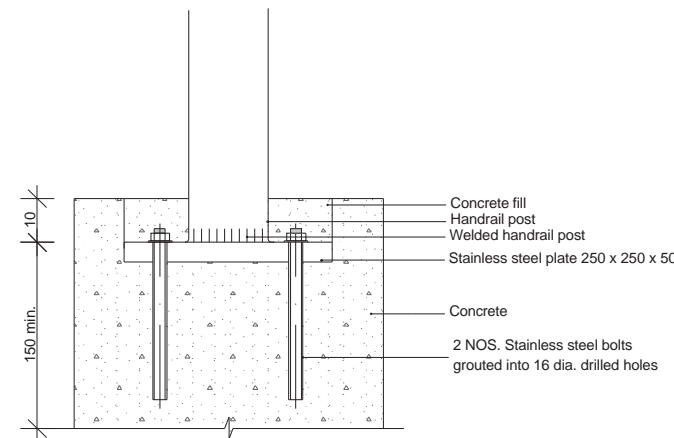
Plan view of stair and handrail

1:50  
dimension in mm



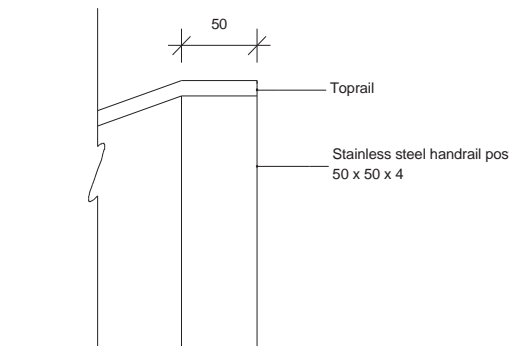
Elevation

1:50  
dimension in mm



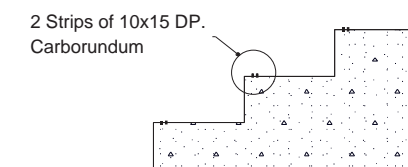
Detail A- Base Post

N.T.S.  
dimension in mm



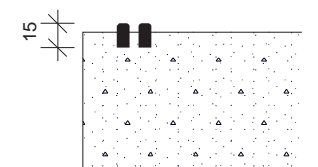
Detail B- Toprail

N.T.S.  
dimension in mm



SECTION A

N.T.S.



DETAIL C

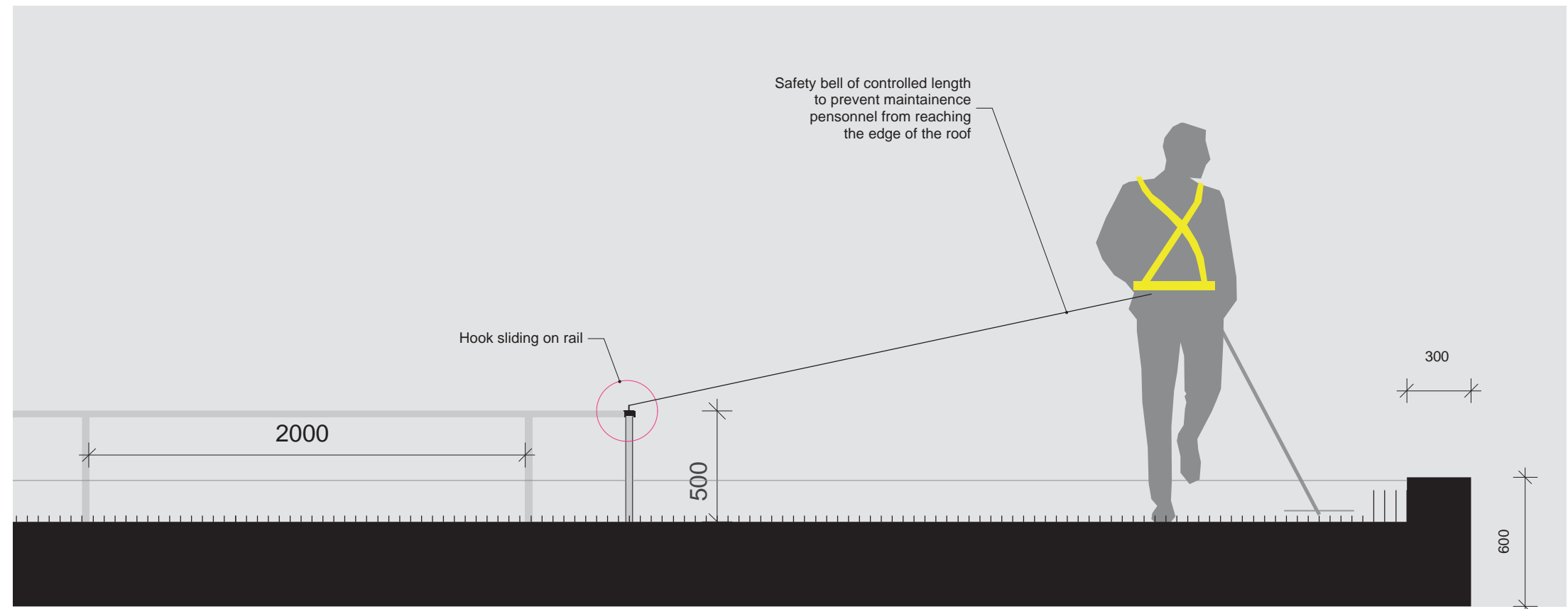
N.T.S.



Handrail on pitch  
roof landing

# Details

## Safety Measure for Roof Garden



g hook on rail Isometric View

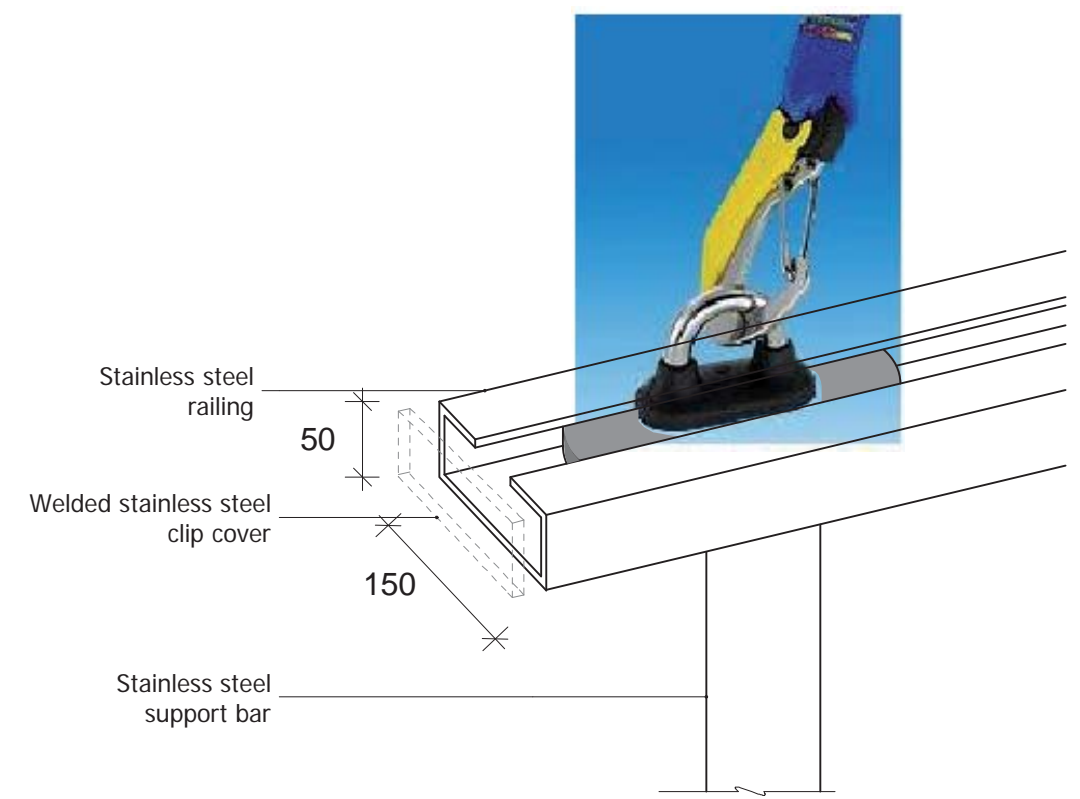
1:25  
dimension in mm



Sample reference of safety bell

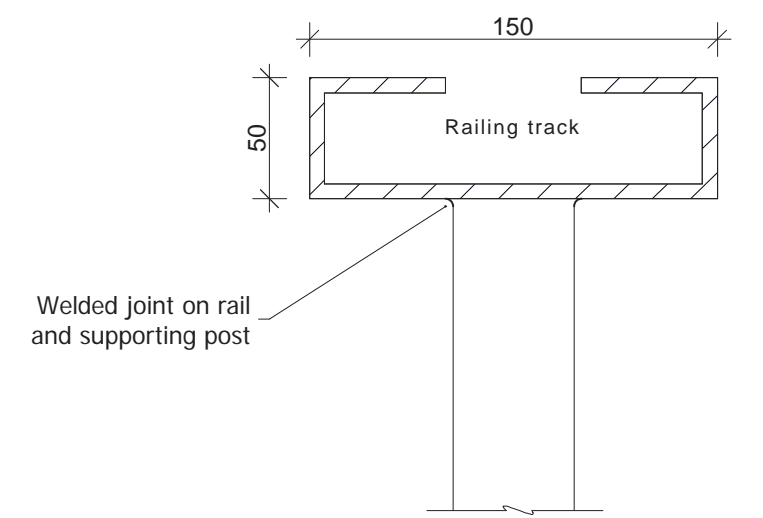


Safety railing on roof garden



ding hook on rail Isometric View

1:20  
dimension in mm

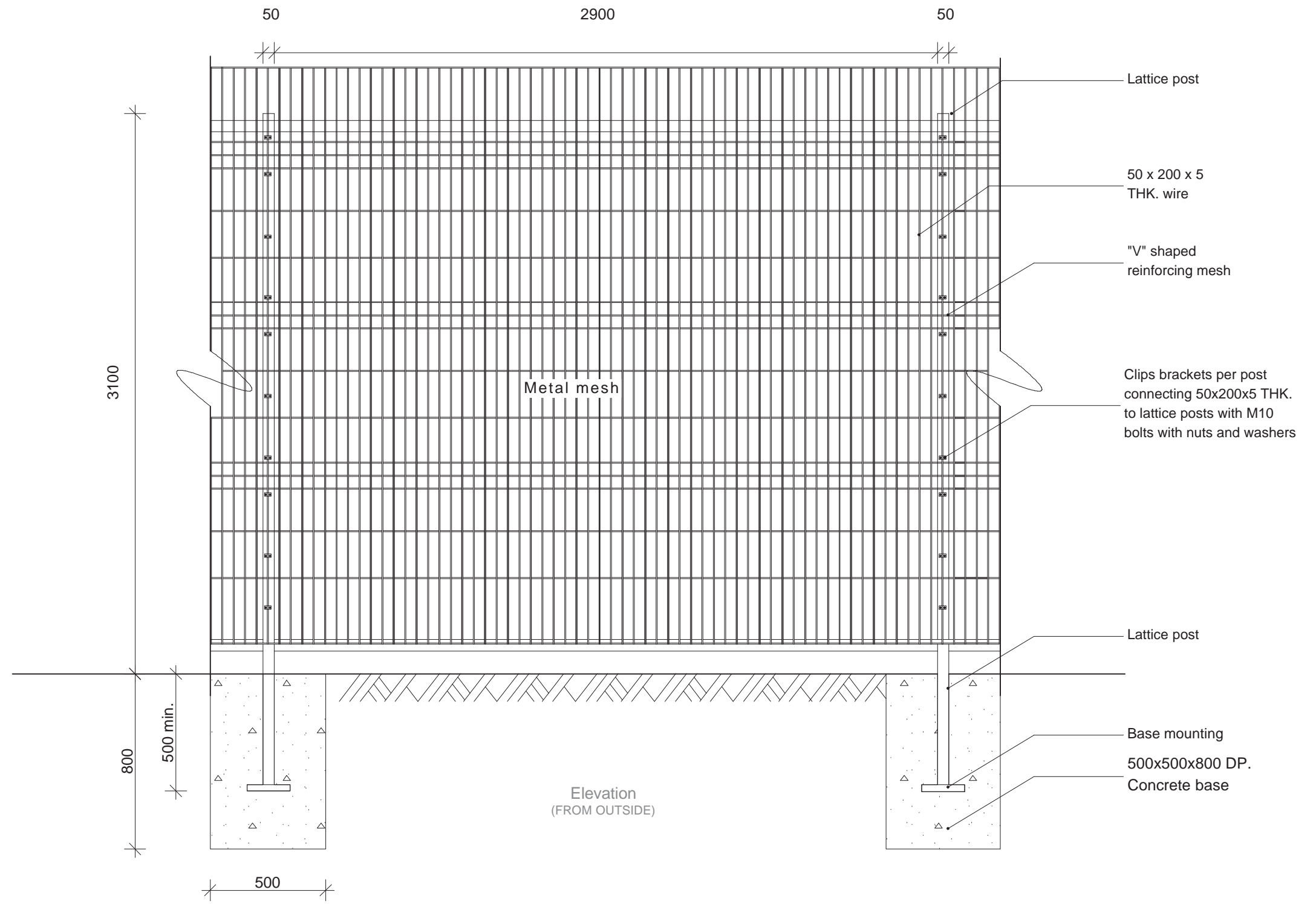


Safety railing section

Not to Scale  
dimension in mm

# Details

## Boundary Wire Fencing



Typical wire fencing elevation

1:20  
dimension in mm



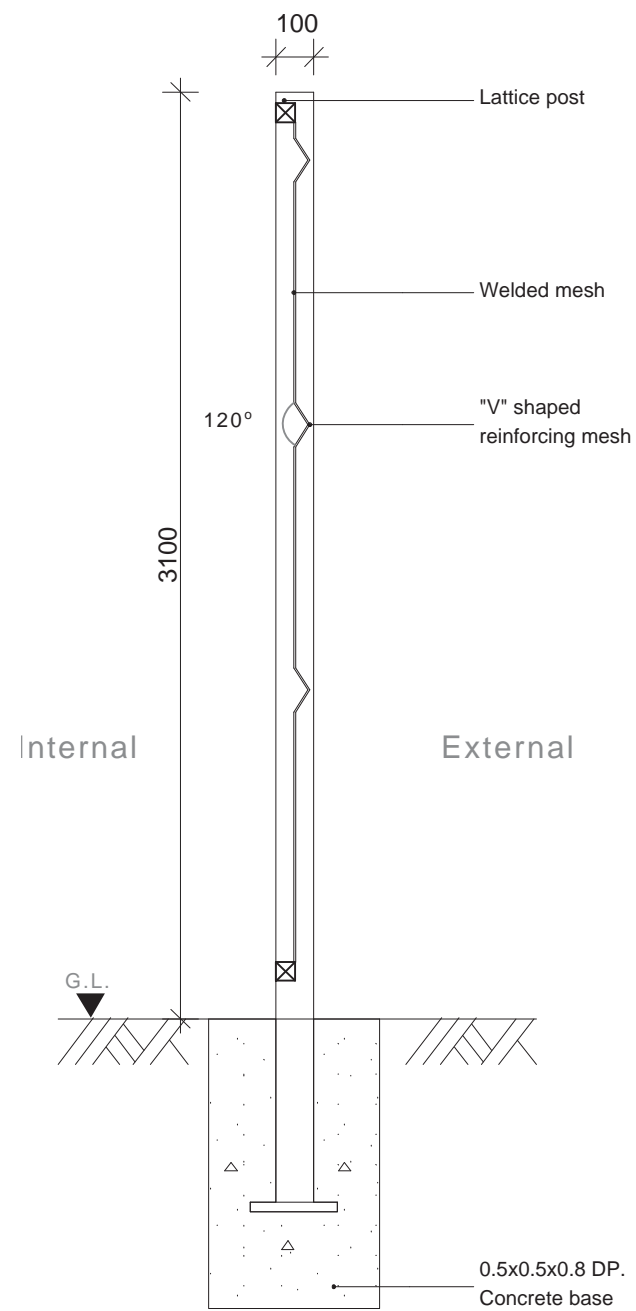
Boundary Wire fencing facing Ting Kok Road

# Details

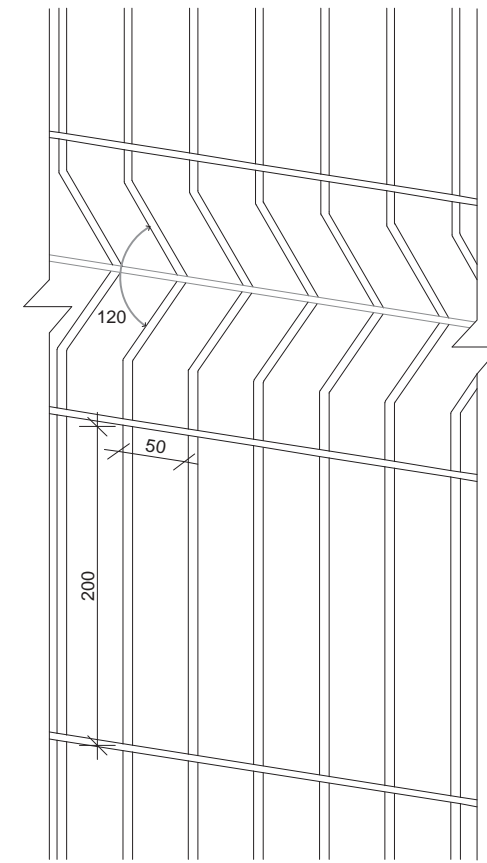
## Boundary Wire Fencing



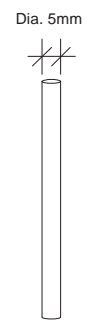
Boundary Wire fencing facing Ting Kok Road



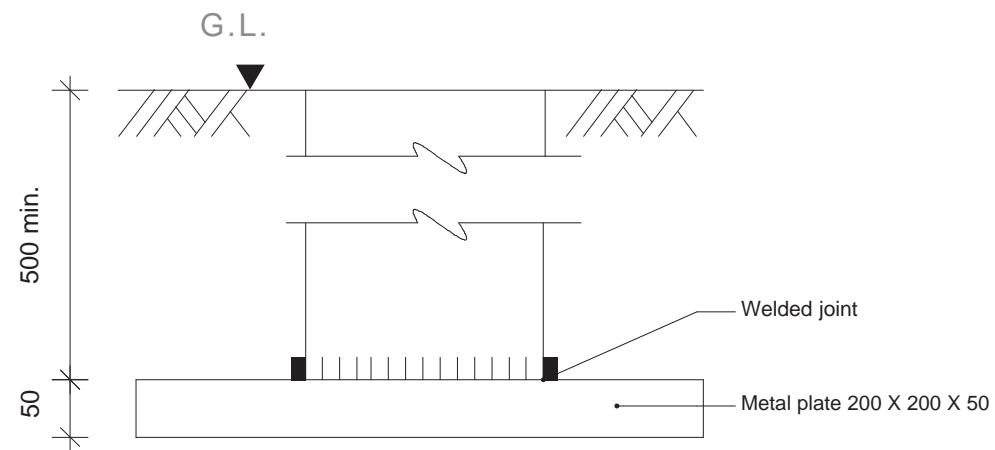
Typical wire fencing section  
1:20  
dimension in mm



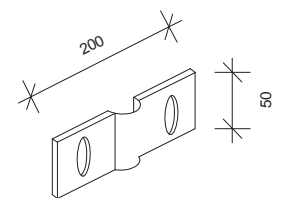
Isometric view of typical "V" shaped reinforcing mesh  
N.T.S.  
dimension in mm



Isometric view of typical reinforcing mesh wire  
N.T.S.  
dimension in mm



Elevation of typical base mounting  
N.T.S.  
dimension in mm



Isometric view of typical clips brackets  
N.T.S.  
dimension in mm

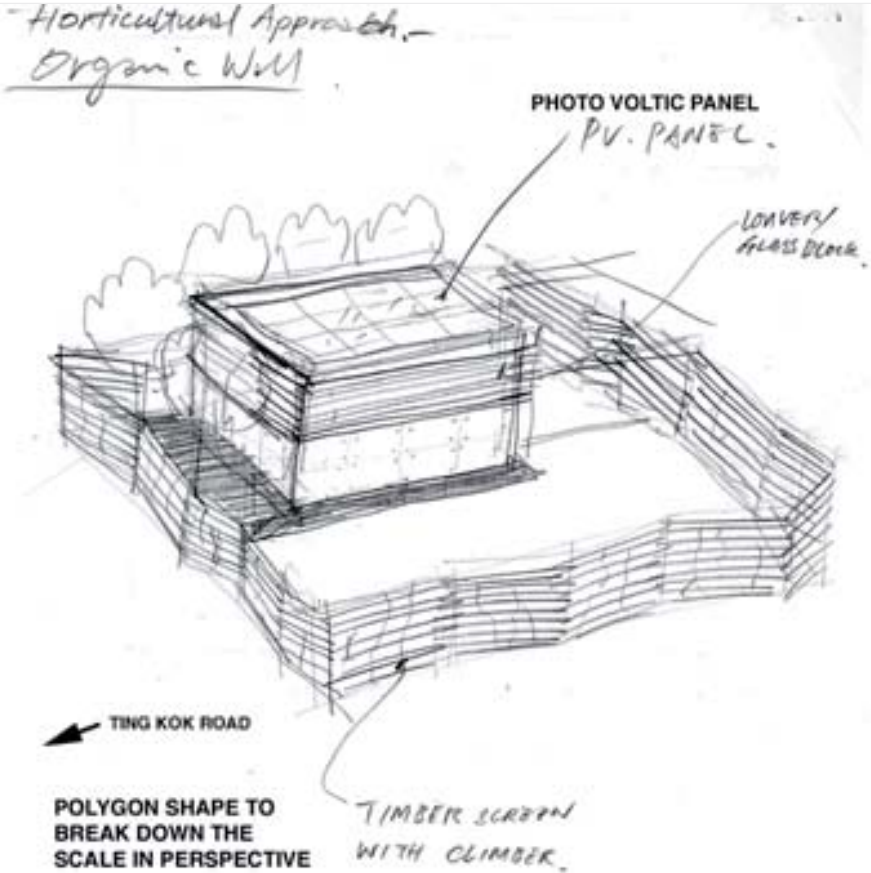
# Material & Vegetation



1	2	4	5
	3	6	

1. A close-up view of the clay cladding tile : deep groove, deep grey color.
2. A wall of clay cladding for the pump house wall surface: subtle and low key, support well the surrounding green vegetations.
3. Random granite wall for the boundary wall: reinforces the perception of a landscape garden.
4. Bermuda grass; 5. Bahia grass; 6. Wedelia trilobata. Bermuda and Bahia will provide the initial green effect to the roof garden and improve the micro-environment on the slope, and the climber Wedelia trilobata will be planted by sprigging on soil to provide a pleasant visual impact with yellow flowers all year round.

# Earlier Option



## **Annex 2**

### **Tree survey schedules of Areas A, B, C (Contract 1) and Areas under Contract 2**

- (a) Tree survey schedule of Area A**
- (b) Tree survey schedule of Area B**
- (c) Tree survey schedule of Area C**
- (d) Tree survey schedule of Areas under  
Contract 2**

Note: Tree survey and the according topographic survey (include locating and mapping the tree positions, and recording data on ground levels, existing general ground features, tree dimension data of overall height, trunk diameter and average crown spread) for Areas A, B and C (Contract 1) were conducted by Kwan Lee – July Joint Venture (i.e. the main Contractor of Contract 1 of the Project).

**Tree Survey Schedule**

Contract No.: DC/2009/22  
 Project Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1  
 Location: Area A at Shuen Wan

No.	Figure No.	Tree No.	Botanical Name	Chinese Name	Overall Height (m)	Trunk Diameter (mm)	Average Crown Spread (m)	Condition (Good, Fair, Poor, Dead)	Form (Good, Fair, Poor)	Survival of Transplantation (High, Medium, Low)	Amenity, Value (High, Medium, Low)	Recommendation (Retain, Transplant, Fell)	Justification for tree felling	Tree Maintenance Department <sup>1</sup>	Department(s) to Provide Expert Advice on Tree Removal <sup>2</sup>	Remark
1	2	T149	<i>Bombax ceiba</i>	木棉	7.0	140	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
2	2	T150	<i>Bombax ceiba</i>	木棉	7.5	140	3.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
3	2	T151	<i>Bombax ceiba</i>	木棉	5.0	120	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
4	2	T152	<i>Bombax ceiba</i>	木棉	6.0	130	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
5	2	T153	<i>Bombax ceiba</i>	木棉	7.0	120	3.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
6	2	T154	<i>Bombax ceiba</i>	木棉	8.0	150	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
7	2	T155	<i>Bombax ceiba</i>	木棉	8.5	155	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
8	2	T156	<i>Bombax ceiba</i>	木棉	8.0	145	3.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
9	2	T157	<i>Bombax ceiba</i>	木棉	9.5	202	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
10	2	T158	<i>Bombax ceiba</i>	木棉	8	160	3.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
11	2	T159	<i>Bombax ceiba</i>	木棉	7.5	165	4.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
12	2	T160	<i>Bombax ceiba</i>	木棉	8.0	150	5.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
13	2	T161	<i>Bombax ceiba</i>	木棉	8.5	140	3.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
14	2	T162	<i>Bombax ceiba</i>	木棉	9.5	215	4.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
15	2	T163	<i>Bombax ceiba</i>	木棉	8.0	200	3.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
16	2	E16	<i>Bombax ceiba</i>	木棉	4.0	105	3.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
17	2	E17	<i>Bombax ceiba</i>	木棉	6.5	140	3.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
18	2	E18	<i>Melaleuca quinquenervia</i>	白千層	7.0	130	2.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
19	2	E19	<i>Melaleuca quinquenervia</i>	白千層	5.5	100	2.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
20	2	E20	<i>Melaleuca quinquenervia</i>	白千層	7.0	130	2.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
21	2	E21	<i>Melaleuca quinquenervia</i>	白千層	8.0	145	2.5	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
22	2	E22	<i>Melaleuca quinquenervia</i>	白千層	6.5	110	2.0	Fair	Fair	Medium	Low	Transplant		LCSD	LCSD	
23	2	E23	<i>Melaleuca quinquenervia</i>	白千層	6.0	140	2.5	Fair	Fair	Medium	Low	Retain		LCSD	LCSD	
24	2	E24	<i>Melaleuca quinquenervia</i>	白千層	7.0	100	2.5	Fair	Fair	Medium	Low	Retain		LCSD	LCSD	
25	2	E25	<i>Melaleuca quinquenervia</i>	白千層	7.5	155	3.0	Fair	Fair	Medium	Low	Retain		LCSD	LCSD	
26	2	E27	<i>Melaleuca quinquenervia</i>	白千層	7.5	235	4.0	Fair	Fair	Medium	Low	Retain		LandsD	LCSD	
27	2	E28	<i>Melaleuca quinquenervia</i>	白千層	6.5	135	2.0	Fair	Fair	Medium	Low	Transplant		LandsD	LCSD	
28	2	E29	<i>Melaleuca quinquenervia</i>	白千層	7.0	145	3.0	Fair	Fair	Medium	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
29	2	T168	<i>Melaleuca quinquenervia</i>	白千層	9.0	295	4.0	Fair	Fair	Low	Low	Transplant		LandsD	LCSD	Recommend to "Transplant" in previous EIA
30	2	T167	<i>Albizia lebbek</i>	大葉合歡	7.5	260	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Recommend to "Fell" in previous EIA
31	2	E32	<i>Melaleuca quinquenervia</i>	白千層	8.0	200	4.5	Fair	Fair	Medium	Low	Transplant		LandsD	LCSD	
32	2	E33	<i>Melaleuca quinquenervia</i>	白千層	5.5	100	2.0	Fair	Fair	Medium	Low	Transplant		LandsD	LCSD	
33	2	E34	<i>Melaleuca quinquenervia</i>	白千層	7.0	125	2.0	Fair	Fair	Medium	Low	Fell	Direct conflict with work boundary, tree and tree base develops among groups of <i>Macaranga tanarius</i> and difficult to form proper root ball	LandsD	LCSD	
34	2	T165	<i>Melaleuca quinquenervia</i>	白千層	8.0	210	4.5	Fair	Fair	Medium	Low	Transplant		LandsD	LCSD	Recommend to "Transplant" in previous EIA
35	2	E36	<i>Bombax ceiba</i>	木棉	9.0	305	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to T164 that in turn not able to form a proper root ball for transplant	LandsD	LCSD	
36	2	T164	<i>Bombax ceiba</i>	木棉	6.0	215	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to E36 that in turn not able to form a proper root ball for transplant	LandsD	LCSD	Recommend to "Transplant" in previous EIA
37	2	E38	<i>Melaleuca quinquenervia</i>	白千層	7.0	160	2.0	Fair	Fair	Medium	Low	Transplant		LandsD	LCSD	
38	2	E39	<i>Ficus superba var. japonica</i>	筆管榕	5.0	95	4.0	Fair	Fair	Low	Low	Retain		LandsD	LCSD	Leaning
39	2	E40	<i>Dead Tree</i>	死樹	5.0	320	3.0	Dead	Poor	Low	Low	Remove		LandsD	LCSD	



41	2	E43	<i>Macaranga tanarius</i>	血桐	8.0	275	9.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, lower trunk is close to E44 and unable to form a proper root ball for transplant	LandsD	LCSD	
42	2	E44	<i>Celtis sinensis</i>	朴樹	11.0	360	9.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, lower trunk is close to E43 and unable to form a proper root ball for transplant	LandsD	LCSD	
43	2	E45	<i>Thespesia populnea</i>	恆春黃槿	3.5	95	3.5	Fair	Fair	Low	Low	Retain		LandsD	LCSD	
44	2	E46	<i>Thespesia populnea</i>	恆春黃槿	7.0	130	6.0	Poor	Poor	Low	Low	Retain		LandsD	LCSD	
45	2	E47	<i>Thespesia populnea</i>	恆春黃槿	7.0	95	3.0	Poor	Poor	Low	Low	Retain		LandsD	LCSD	
46	2	E48	<i>Scolopia chinensis</i>	刺柃	7.0	165	3.0	Fair	Fair	Low	Low	Retain		LandsD	LCSD	
47	2	E49	<i>Hibiscus tiliaceus</i>	黃槿	6.0	145	3.0	Poor	Poor	Low	Low	Retain		LandsD	LCSD	
48	2	E50	<i>Hibiscus tiliaceus</i>	黃槿	5.0	105	4.0	Poor	Poor	Low	Low	Retain		LandsD	LCSD	Leaning
49	2	E51	<i>Lumnitzera racemosa</i>	欖李	4.0	130	6.0	Poor	Poor	Low	Low	Retain		LandsD	AFC	
50	2	E52	<i>Hibiscus tiliaceus</i>	黃槿	5.0	125	6.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
51	2	E53	<i>Lumnitzera racemosa</i>	欖李	2.5	120	5.0	Poor	Poor	Low	Low	Retain		LandsD	AFC	
52	2	E54	<i>Hibiscus tiliaceus</i>	黃槿	3.5	95	4.0	Poor	Poor	Low	Low	Retain		LandsD	AFC	
53	2	E55	<i>Macaranga tanarius</i>	血桐	4.5	175	6.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
54	2	E56	<i>Hibiscus tiliaceus</i>	黃槿	5.0	100	5.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health	LandsD	AFC	
55	2	E57	<i>Hibiscus tiliaceus</i>	黃槿	4.5	105	3.5	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health	LandsD	AFC	
56	2	E59	<i>Excoecaria agallocha</i>	海漆	4.0	150	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, species unsuitable to transplant	LandsD	AFC	
57	2	E61	<i>Macaranga tanarius</i>	血桐	3.5	95	3.5	Poor	Poor	Low	Low	Retain		LandsD	AFC	Leaning
58	2	E62	<i>Thespesia populnea</i>	恆春黃槿	3.0	120	4.5	Fair	Fair	Low	Low	Retain		LandsD	AFC	
59	2	E63	<i>Celtis sinensis</i>	朴樹	9.0	530	8.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
60	2	T253	<i>Bridelia tomentosa</i>	土蜜樹	8.0	170	6.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	Recommend to "Fell" in previous EIA
61	2	E65	<i>Litsea glutinosa</i>	潺槁	2.8	105	3.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health	LandsD	AFC	Leaning
62	2	E66	<i>Hibiscus tiliaceus</i>	黃槿	4.5	160	5.0	Poor	Poor	Low	Low	Retain		LandsD	AFC	Leaning
63	2	E67	<i>Scolopia chinensis</i>	刺柃	5.0	180	3.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
64	2	E68	<i>Macaranga tanarius</i>	血桐	4.0	200	2.5	Poor	Poor	Low	Low	Retain		LandsD	AFC	
65	2	E69	<i>Thespesia populnea</i>	恆春黃槿	7.0	120	2.5	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health	LandsD	AFC	Leaning
66	2	E70	<i>Thespesia populnea</i>	恆春黃槿	7.0	155	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFC	
67	2	E71	<i>Thespesia populnea</i>	恆春黃槿	7.0	100	5.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFC	
68	2	E72	<i>Thespesia populnea</i>	恆春黃槿	7.0	205	6.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health	LandsD	AFC	
69	2	E73	<i>Macaranga tanarius</i>	血桐	6.0	110	5.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
70	2	E75	<i>Celtis sinensis</i>	朴樹	9.0	280	4.5	Fair	Fair	Low	Low	Retain		LandsD	AFC	
71	2	E76	<i>Macaranga tanarius</i>	血桐	6.0	125	4.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
72	2	E77	<i>Macaranga tanarius</i>	血桐	6.0	130	5.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
73	2	T244	<i>Macaranga tanarius</i>	血桐	6.0	155	8.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	Recommend to "Fell" in previous EIA
74	2	E79	<i>Excoecaria agallocha</i>	海漆	5.0	310	6.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
75	2	E80	<i>Thespesia populnea</i>	恆春黃槿	6.0	120	4.0	Fair	Fair	Low	Low	Retain		LandsD	AFC	
76	2	E81	<i>Thespesia populnea</i>	恆春黃槿	7.0	145	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
77	2	E82	<i>Celtis sinensis</i>	朴樹	9.0	340	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning trunk and tree form unsuitable for transplant	LandsD	AFC	
78	2	E83	<i>Thespesia populnea</i>	恆春黃槿	7.0	155	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
79	2	E84	<i>Hibiscus tiliaceus</i>	黃槿	6.0	120	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
80	2	E85	<i>Hibiscus tiliaceus</i>	黃槿	3.5	140	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
81	2	E86	<i>Hibiscus tiliaceus</i>	黃槿	5.0	96	7.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
82	2	E87	<i>Macaranga tanarius</i>	血桐	6.0	97	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
83	2	E88	<i>Macaranga tanarius</i>	血桐	7.0	120	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	
84	2	T281	<i>Bridelia tomentosa</i>	土蜜樹	6.0	150	5.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	Recommend to "Fell" in previous EIA; Leaning
85	2	T282	<i>Celtis sinensis</i>	朴樹	8.0	200	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	Recommend to "Fell" in previous EIA
86	2	E91	<i>Celtis sinensis</i>	朴樹	6.0	96	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	AFC	Double trunk

87	2	T247	<i>Macaranga tanarius</i>	血桐	7.0	360	10.0	Fair	Fair	Low	Low	Retain		LandsD	AFCD	Recommend to "Fell" in previous EIA: Multi-trunk
88	2	T246	<i>Macaranga tanarius</i>	血桐	7.0	180	7.0	Fair	Fair	Low	Low	Retain		LandsD	LCSD	Recommend to "Fell" in previous EIA
89	2	E94	<i>Macaranga tanarius</i>	血桐	7.0	205	7.0	Fair	Fair	Low	Low	Retain		LandsD	AFCD	
90	2	E95	<i>Bridelia tomentosa</i>	土蜜樹	8.0	120	5.5	Fair	Fair	Low	Low	Retain		LandsD	AFCD	
91	2	E97	<i>Celtis sinensis</i>	朴樹	8.5	175	7.0	Fair	Fair	Low	Low	Retain		LandsD	AFCD	
92	2	E98	<i>Celtis sinensis</i>	朴樹	6.0	105	4.0	Fair	Fair	Low	Low	Retain		LandsD	AFCD	
93	2	E99	<i>Macaranga tanarius</i>	血桐	6.0	220	8.0	Fair	Fair	Low	Low	Retain		LandsD	AFCD	Multi-trunk
94	2	E100	<i>Macaranga tanarius</i>	血桐	6.0	175	7.0	Poor	Poor	Low	Low	Retain		LandsD	AFCD	Leaning
95	2	T250	<i>Celtis sinensis</i>	朴樹	9.0	170	6.0	Fair	Fair	Low	Low	Transplant		LandsD	AFCD	Recommend to "Transplant" in previous EIA
96	2	E102	<i>Macaranga tanarius</i>	血桐	5.5	95	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
97	2	E103	<i>Macaranga tanarius</i>	血桐	6.0	98	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
98	2	E104	<i>Macaranga tanarius</i>	血桐	6.0	120	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, damaged root	LandsD	AFCD	
99	2	E105	<i>Celtis sinensis</i>	朴樹	8.0	190	5.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, damaged root	LandsD	AFCD	
100	2	E106	<i>Macaranga tanarius</i>	血桐	6.0	125	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	Multi-trunk
101	2	E107	<i>Celtis sinensis</i>	朴樹	6.0	110	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree with multiple trunks unsuitable for transplant	LandsD	AFCD	Multi-trunk
102	2	E111	<i>Macaranga tanarius</i>	血桐	5.0	95	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
103	2	E112	<i>Macaranga tanarius</i>	血桐	6.0	110	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
104	2	E113	<i>Macaranga tanarius</i>	血桐	4.0	145	6.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
105	2	T252	<i>Macaranga tanarius</i>	血桐	5.0	185	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Recommend to "Fell" in previous EIA
106	2	T251	<i>Macaranga tanarius</i>	血桐	6.0	225	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Recommend to "Fell" in previous EIA
107	2	E120	<i>Celtis sinensis</i>	朴樹	6.0	110	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
108	2	T286	<i>Macaranga tanarius</i>	血桐	4.0	165	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Recommend to "Fell" in previous EIA
109	2	E122	<i>Celtis sinensis</i>	朴樹	4.0	96	2.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	
110	2	E123	<i>Celtis sinensis</i>	朴樹	5.0	95	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, broken roots	LandsD	AFCD	
111	2	E124	<i>Bridelia tomentosa</i>	土蜜樹	5.0	110	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	Multi-trunk
112	2	E125	<i>Celtis sinensis</i>	朴樹	6.0	120	5.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, leaning tree lays on the ground and tree form unsuitable for transplant	LandsD	AFCD	
113	2	E126	<i>Bridelia tomentosa</i>	土蜜樹	5.5	98	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	Multi-trunk
114	2	E128	<i>Macaranga tanarius</i>	血桐	4.0	100	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
115	2	E129	<i>Celtis sinensis</i>	朴樹	6.5	145	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
116	2	E130	<i>Viburnum odoratissimum</i>	珊瑚樹	6.0	120	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	Multi-trunk
117	2	E131	<i>Celtis sinensis</i>	朴樹	6.0	95	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
118	2	T254	<i>Celtis sinensis</i>	朴樹	8.0	175	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Recommend to "Transplant" in previous EIA
119	2	E134	<i>Celtis sinensis</i>	朴樹	8.0	240	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form is too large to be transplanted	LandsD	LCSD	
120	2	E135	<i>Macaranga tanarius</i>	血桐	7.0	125	6.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
121	2	T288	<i>Bridelia tomentosa</i>	土蜜樹	6.5	160	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, poor health for transplant	LandsD	LCSD	Recommend to "Fell" in previous EIA
122	2	E137	<i>Celtis sinensis</i>	朴樹	8.0	115	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
123	2	E138	<i>Macaranga tanarius</i>	血桐	4.5	115	5.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Multiple-trunk, leaning tree
124	2	E140	<i>Celtis sinensis</i>	朴樹	4.5	95	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare close to undersized small tree <i>Bridelia tomentosa</i> and tree form is unsuitable to transplant	LandsD	LCSD	
125	2	E141	<i>Celtis sinensis</i>	朴樹	5.5	96	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare close to undersized small tree <i>Bridelia tomentosa</i> and tree form is unsuitable to transplant	LandsD	LCSD	
126	2	E142	<i>Celtis sinensis</i>	朴樹	7.0	175	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
127	2	E144	<i>Celtis sinensis</i>	朴樹	5.0	102	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
128	2	E145	<i>Celtis sinensis</i>	朴樹	7.0	120	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning tree
129	2	E146	<i>Macaranga tanarius</i>	血桐	5.0	160	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
130	2	E147	<i>Macaranga tanarius</i>	血桐	4.0	115	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning tree

131	2	E148	<i>Sapium sebiferum</i>	烏白	7.0	140	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning tree
132	2	E149	<i>Litsea glutinosa</i>	潺槁	4.0	105	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
133	2	E151	<i>Macaranga tanarius</i>	血桐	4.0	110	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	
134	2	E154	<i>Macaranga tanarius</i>	血桐	6.0	102	5.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	Double trunk
135	2	E155	<i>Macaranga tanarius</i>	血桐	6.0	120	4	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	Multiple-trunk
136	2	T262	<i>Macaranga tanarius</i>	血桐	8.0	255	8	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Recommend to "Fell" in previous EIA; leaning
137	2	E157	<i>Macaranga tanarius</i>	血桐	9.0	180	7.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning tree
138	2	E158	<i>Macaranga tanarius</i>	血桐	9.0	185	6	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning tree
139	2	E159	<i>Macaranga tanarius</i>	血桐	8.0	105	4	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
140	2	E160	<i>Macaranga tanarius</i>	血桐	8.0	120	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning tree
141	2	T264	<i>Macaranga tanarius</i>	血桐	9.0	295	10	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Recommend to "Fell" in previous EIA
142	2	E162	<i>Macaranga tanarius</i>	血桐	8.0	115	1.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
143	2	E163	<i>Macaranga tanarius</i>	血桐	7.5	170	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	
144	2	E164	<i>Macaranga tanarius</i>	血桐	8.0	130	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	Leaning
145	2	E165	<i>Macaranga tanarius</i>	血桐	7.5	102	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
146	2	E166	<i>Macaranga tanarius</i>	血桐	5.0	98	6.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning
147	2	E167	<i>Macaranga tanarius</i>	血桐	8.5	130	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	
148	2	E168	<i>Celtis sinensis</i>	朴樹	9.0	115	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to E169 and tree form unsuitable for transplant	LandsD	LCSD	
149	2	E169	<i>Macaranga tanarius</i>	血桐	7.0	105	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to E168 and tree form unsuitable for transplant	LandsD	LCSD	Leaning
150	2	T269	<i>Celtis sinensis</i>	朴樹	10.0	190	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	Recommend to "Transplant" in previous EIA
151	2	T255	<i>Celtis sinensis</i>	朴樹	11.0	335	9.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree is too large and have 2 co-dominant trunks that are difficult for transplant	LandsD	LCSD	Recommend to "Transplant" in previous EIA
152	2	E176	<i>Macaranga tanarius</i>	血桐	6.0	95	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
153	2	E177	<i>Macaranga tanarius</i>	血桐	5.5	110	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	Leaning
154	2	T265	<i>Macaranga tanarius</i>	血桐	8.0	250	10.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Recommend to "Fell" in previous EIA; leaning
155	2	T266	<i>Macaranga tanarius</i>	血桐	7.0	230	9.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Recommend to "Fell" in previous EIA; leaning
156	2	T267	<i>Macaranga tanarius</i>	血桐	4.0	180	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Recommend to "Fell" in previous EIA; leaning
157	2	E183	<i>Macaranga tanarius</i>	血桐	4.0	95	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning
158	2	E184	<i>Macaranga tanarius</i>	血桐	8.0	190	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
159	2	T268	<i>Macaranga tanarius</i>	血桐	8.0	181	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Recommend to "Fell" in previous EIA; leaning
160	2	E186	<i>Macaranga tanarius</i>	血桐	6.5	98	3.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
161	2	E187	<i>Macaranga tanarius</i>	血桐	4.0	143	6.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Double trunk, leaning
162	2	E190	<i>Macaranga tanarius</i>	血桐	6.0	140	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
163	2	E191	<i>Macaranga tanarius</i>	血桐	5.0	95	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
164	2	E192	<i>Macaranga tanarius</i>	血桐	6.0	102	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
165	2	E197	<i>Macaranga tanarius</i>	血桐	6.0	97	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	Leaning
166	2	E199	<i>Macaranga tanarius</i>	血桐	6.0	120	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
167	2	E200	<i>Macaranga tanarius</i>	血桐	6.0	115	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	

168	2	E201	<i>Macaranga tanarius</i>	血桐	6.0	140	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
169	2	E202	<i>Macaranga tanarius</i>	血桐	6.5	102	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
170	2	E204	<i>Macaranga tanarius</i>	血桐	7.0	118	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
171	2	E206	<i>Macaranga tanarius</i>	血桐	6.0	105	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
172	2	E207	<i>Macaranga tanarius</i>	血桐	5.0	135	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
173	2	T256	<i>Macaranga tanarius</i>	血桐	6.0	296	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	Recommend to "Fell" in previous EIA; leaning
174	2	E209	<i>Macaranga tanarius</i>	血桐	5.5	153	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
175	2	E210	<i>Macaranga tanarius</i>	血桐	5.5	115	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
176	2	E211	<i>Macaranga tanarius</i>	血桐	5.5	153	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
177	2	E213	<i>Macaranga tanarius</i>	血桐	6.0	127	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
178	2	E215	<i>Macaranga tanarius</i>	血桐	8	95	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
179	2	E216	<i>Macaranga tanarius</i>	血桐	8	127	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
180	2	E217	<i>Macaranga tanarius</i>	血桐	7	100	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
181	2	E218	<i>Macaranga tanarius</i>	血桐	7	102	1.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
182	2	E220	<i>Macaranga tanarius</i>	血桐	7.0	98	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
183	2	E228	<i>Macaranga tanarius</i>	血桐	7.0	96	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
184	2	E234	<i>Macaranga tanarius</i>	血桐	8.0	118	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
185	2	E235	<i>Macaranga tanarius</i>	血桐	8.5	97	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
186	2	E239	<i>Macaranga tanarius</i>	血桐	4	96	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning
187	2	E242	<i>Macaranga tanarius</i>	血桐	6.5	98	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
188	2	E243	<i>Macaranga tanarius</i>	血桐	6.5	95	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
189	2	E247	<i>Macaranga tanarius</i>	血桐	9.0	98	1.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
190	2	E248	<i>Macaranga tanarius</i>	血桐	8.0	108	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
191	2	E249	<i>Macaranga tanarius</i>	血桐	8.0	100	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
192	2	E252	<i>Macaranga tanarius</i>	血桐	7	95	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
193	2	E253	<i>Macaranga tanarius</i>	血桐	7	96	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	LandsD	LCSD	Multiple-trunk
194	2	E255	<i>Macaranga tanarius</i>	血桐	7.0	111	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
195	2	E256	<i>Macaranga tanarius</i>	血桐	7.0	97	1.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
196	2	E257	<i>Macaranga tanarius</i>	血桐	7.5	95	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
197	2	E258	<i>Macaranga tanarius</i>	血桐	7.0	102	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
198	2	E260	<i>Macaranga tanarius</i>	血桐	7.5	100	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
199	2	E266	<i>Macaranga tanarius</i>	血桐	8.0	96	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	Leaning
200	2	E267	<i>Macaranga tanarius</i>	血桐	8.0	111	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
201	2	E268	<i>Macaranga tanarius</i>	血桐	8.0	134	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
202	2	E269	<i>Macaranga tanarius</i>	血桐	6.0	113	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
203	2	E270	<i>Macaranga tanarius</i>	血桐	4.0	95	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
204	2	E271	<i>Macaranga tanarius</i>	血桐	8.5	100	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
205	2	E272	<i>Macaranga tanarius</i>	血桐	8.5	98	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	LCSD	Leaning
206	2	E273	<i>Macaranga tanarius</i>	血桐	8.0	125	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
207	2	E274	<i>Macaranga tanarius</i>	血桐	8.0	110	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
208	2	E283	<i>Macaranga tanarius</i>	血桐	7.0	97	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
209	2	E284	<i>Macaranga tanarius</i>	血桐	7.0	125	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	LCSD	
210	2	E288	<i>Macaranga tanarius</i>	血桐	4.0	115	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	On slope
211	2	E289	<i>Macaranga tanarius</i>	血桐	5.5	110	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning

212	2	E290	<i>Macaranga tanarius</i>	血桐	6.0	105	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
213	2	E291	<i>Macaranga tanarius</i>	血桐	5.0	125	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
214	2	E292	<i>Macaranga tanarius</i>	血桐	5.0	100	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
215	2	E293	<i>Macaranga tanarius</i>	血桐	5.0	140	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
216	2	E294	<i>Celtis sinensis</i>	朴樹	6.0	100	2.5	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health for transplant	LandsD	AFCD	
217	2	E295	<i>Celtis sinensis</i>	朴樹	6.0	105	2.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, poor form and health for transplant	LandsD	AFCD	
218	2	E296	<i>Celtis sinensis</i>	朴樹	5.5	115	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
219	2	E297	<i>Macaranga tanarius</i>	血桐	4.0	200	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	
220	2	E298	<i>Macaranga tanarius</i>	血桐	4.0	140	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, leaning tree unsuitable for transplant	LandsD	AFCD	Leaning
221	2	E299	<i>Celtis sinensis</i>	朴樹	8.0	265	6.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form is too large to be transplanted	LandsD	AFCD	
222	2	E300	<i>Macaranga tanarius</i>	血桐	5.0	110	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LandsD	AFCD	

Note:

**1. Tree Maintenance Department**

Tree Maintenance Department is summarized in accordance with ETWB TCW No.2/2004 Maintenance of Vegetation and Hard Landscape Feature

**2. Department(s) to Provide Expert Advice on Tree Removal**

Department(s) to provide expert advice on tree removal is summarized in accordance with ETWB TCW No.3/2006 Tree Preservation

\* This tree survey and the according topographic survey (include locating and mapping the tree positions, and record data on ground levels, existing general ground features, tree dimension data of overall height, trunk diameter and average crown spread) were conducted by Kwan Lee - I Joint Venture.

\* The topographic survey data and tree dimension data of the assessed trees follow the tree survey schedules received on 24 April 201

### Tree Survey Schedule

Contract No.: DC/2009/22  
 Project Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract  
 Location: Area B at Shuen Wan

No.	Figure No.	Tree No.	Botanical Name	Chinese Name	Overall Height (m)	Trunk Diameter (mm)	Average Crown Spread (m)	Condition (Good, Fair, Poor, Dead)	Form (Good, Fair, Poor)	Survival of Transplantation (High, Medium, Low)	Amenity, Value (High, Medium, Low)	Recommendation (Retain, Transplant, Fell)	Justification for tree felling	Tree Maintenance Department	Department(s) to Provide Expert Advice on Tree Removal	Remark
1	3	U1	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.5	110	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	AFCD	AFCD	
2	3	U3	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.5	170	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	AFCD	AFCD	
3	3	U4	<i>Bauhinia purpurea</i>	紅花羊蹄甲	4.5	140	3.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	
4	3	U5	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.0	115	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	AFCD	AFCD	
5	3	U6	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.0	140	3.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	
6	3	U7	<i>Bauhinia purpurea</i>	紅花羊蹄甲	2.5	140	2.5	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	Leaning
7	3	U8	<i>Bauhinia purpurea</i>	紅花羊蹄甲	2.5	95	2.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	Leaning
8	3	U9	<i>Bauhinia purpurea</i>	紅花羊蹄甲	2.5	100	3.5	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	Leaning
9	3	U10	<i>Bauhinia purpurea</i>	紅花羊蹄甲	2.5	140	4.0	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
10	3	U11	<i>Bauhinia purpurea</i>	紅花羊蹄甲	4.0	170	3.5	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
11	3	U12	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.0	125	3.0	Poor	Poor	Low	Low	Retain		AFCD	AFCD	
12	3	U13	<i>Bauhinia purpurea</i>	紅花羊蹄甲	4.0	150	3.0	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
13	3	U14	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.5	100	2.0	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
14	3	U15	<i>Bauhinia purpurea</i>	紅花羊蹄甲	3.5	95	2.5	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
15	3	U16	<i>Bauhinia purpurea</i>	紅花羊蹄甲	4.0	145	3.0	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
16	3	U17	<i>Bauhinia purpurea</i>	紅花羊蹄甲	2.6	95	2.5	Poor	Poor	Low	Low	Retain		AFCD	AFCD	Leaning
17	3	U18	<i>Bauhinia purpurea</i>	紅花羊蹄甲	5.5	190	4.5	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
18	3	U19	<i>Bauhinia purpurea</i>	紅花羊蹄甲	5.5	170	6.0	Fair	Fair	Low	Low	Retain		AFCD	AFCD	Double trunk
19	3	U20	<i>Bauhinia purpurea</i>	紅花羊蹄甲	5.5	120	3.0	Fair	Fair	Low	Low	Retain		AFCD	AFCD	
20	3	A7	<i>Celtis sinensis</i>	朴樹	4.0	100	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to U22 and tree form unsuitable for transplant	AFCD	AFCD	Recommend to "Retain" in previous EIA; on slope
21	3	U22	<i>Celtis sinensis</i>	朴樹	4.0	98	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to A7 and tree form unsuitable for transplant	AFCD	AFCD	
22	3	U24	<i>Macaranga tanarius</i>	血桐	4.0	135	3.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, canopy is fully covered by climber and leaning tree form unsuitable for transplant	AFCD	AFCD	
23	3	U25	<i>Schefflera heptaphylla</i>	鵝掌柴	4.0	98	2.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to U26 and tree form unsuitable for transplant	AFCD	AFCD	
24	3	U26	<i>Celtis sinensis</i>	朴樹	4.5	95	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, root flare is very close to U25 and tree form unsuitable for transplant	AFCD	AFCD	
25	3	A9	<i>Macaranga tanarius</i>	血桐	4.5	285	5.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, tree form unsuitable for transplant	AFCD	AFCD	Recommend to "Transplant" in previous EIA

26	3	U27	<i>Bauhinia purpurea</i>	紅花羊蹄甲	4.0	185	3.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	
27	3	U28	<i>Bauhinia purpurea</i>	紅花羊蹄甲	5.0	140	4.0	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health and form for transplant	AFCD	AFCD	
28	3	A10	<i>Aleurites moluccana</i>	石栗	5.0	130	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	AFCD	AFCD	Recommend to "Transplant" in previous EIA
29	3	A11	<i>Aleurites moluccana</i>	石栗	10.0	380	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	AFCD	AFCD	Recommend to "Transplant" in previous EIA
30	3	A12	<i>Macaranga tanarius</i>	血桐	5.0	115	0.5	Fair	Fair	Low	Low	Retain		AFCD	AFCD	Recommend to "Retain" in previous EIA
31	3	U29	Dead Tree	死樹	3.5	140	1.5	Dead				Remove		AFCD	AFCD	
32	3	U30	<i>Bauhinia variegata</i>	宮粉羊蹄甲	7.0	200	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
33	3	U31	<i>Bauhinia blakeana</i>	洋紫荆	8.5	200	6.0	Poor	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value, poor health for transplant	LCSD	LCSD	
34	3	U34	<i>Terminalia catappa</i>	欖仁樹	6.0	95	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
35	3	U35	<i>Terminalia catappa</i>	欖仁樹	3.5	95	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
36	3	U36	<i>Terminalia catappa</i>	欖仁樹	6.0	135	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
37	3	U37	<i>Terminalia catappa</i>	欖仁樹	4.5	95	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
38	3	U39	<i>Aleurites moluccana</i>	石栗	9.0	400	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	
39	3	U40	<i>Aleurites moluccana</i>	石栗	9.0	370	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	
40	3	U41	<i>Aleurites moluccana</i>	石栗	9.0	330	4.6	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	
41	3	U42	<i>Terminalia catappa</i>	欖仁樹	3.5	98	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
42	3	U43	<i>Terminalia catappa</i>	欖仁樹	4.0	96	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
43	3	U44	<i>Lagerstroemia indica</i>	大葉紫薇	0.6	175	3.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
44	3	U45	<i>Terminalia catappa</i>	欖仁樹	4.0	105	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
45	3	U46	<i>Terminalia catappa</i>	欖仁樹	6.0	200	7.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
46	3	U47	<i>Terminalia catappa</i>	欖仁樹	7.5	190	7.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
47	3	U48	<i>Terminalia catappa</i>	欖仁樹	6.5	205	7.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
48	3	U49	<i>Melia azedarach</i>	苦楝	7.0	260	6.0	Fair	Fair	Medium	Medium	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	in Nursery
49	3	U50	<i>Ficus elastica</i>	印度橡樹	11.0	395	15.0	Fair	Fair	Medium	Medium	Retain		LCSD	LCSD	in Nursery
50	3	U51	<i>Terminalia catappa</i>	欖仁樹	5.0	120	5.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
51	3	U52	<i>Terminalia catappa</i>	欖仁樹	5.5	100	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
52	3	U53	<i>Terminalia catappa</i>	欖仁樹	5.0	160	5.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
53	3	U54	<i>Terminalia catappa</i>	欖仁樹	5.5	165	8.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
54	3	U55	<i>Pterocarpus indicus</i>	紫壇	6.0	120	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
55	3	U57	<i>Terminalia mantaly</i>	細葉欖仁	7.0	190	6.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
56	3	U58	<i>Grevillea robusta</i>	銀樟	5.0	140	3.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
57	3	U59	<i>Jacaranda mimosifolia</i>	藍楹	4.0	96	2.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
58	3	U60	<i>Sterculia lanceolata</i>	假蒺藜	4.5	105	2.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
59	3	U61	<i>Lysidice rhodostegia</i>	儀花	5.2	120	2.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
60	3	U62	<i>Archontophoenix alexandrae</i>	假檳榔	7.0	190	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
61	3	U63	<i>Jacaranda mimosifolia</i>	藍楹	5.8	96	2.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
62	3	U64	<i>Bauhinia purpurea</i>	紅花羊蹄甲	5.0	110	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
63	3	U66	<i>Bauhinia purpurea</i>	紅花羊蹄甲	5.0	110	3.5	Fair	Fair	Medium	Medium	Retain		LCSD	LCSD	in Nursery
64	3	U67	<i>Cassia fistula</i>	豬腸豆	5.7	120	4.5	Fair	Fair	Medium	Medium	Retain		LCSD	LCSD	in Nursery
65	3	U68	<i>Gmelina arborea</i>	雲南石梓	4.0	98	4.0	Fair	Fair	Medium	Medium	Retain		LCSD	LCSD	in Nursery
66	3	U69	<i>Alstonia scholaris</i>	黑板木	4.0	145	2.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
67	3	U70	<i>Spathodea campanulata</i>	火焰木	1.5	210	1.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
68	3	U72	<i>Tabebuia chrysantha</i>	黃花風鈴木	4.0	95	2.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
69	3	U74	<i>Delonix regia</i>	鳳凰木	5.0	110	2.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
70	3	U75	<i>Dolichandrone cauda-felina</i>	貓尾木	4.0	125	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
71	3	U76	<i>Terminalia catappa</i>	欖仁樹	5.0	98	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
72	3	U77	<i>Terminalia catappa</i>	欖仁樹	4.5	115	3.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery

73	3	U78	<i>Terminalia catappa</i>	欖仁樹	3.5	105	2.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
74	3	U79	<i>Terminalia catappa</i>	欖仁樹	5.0	170	4.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	in Nursery
75	3	A22	<i>Terminalia catappa</i>	欖仁樹	5.0	140	6.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
76	3	A23	<i>Tectona grandis</i>	柚木	6.5	115	3.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
77	3	A36	<i>Roystonea regia</i>	王棕	4.5	210	3.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
78	3	A38	<i>Terminalia catappa</i>	欖仁樹	5.0	201	5.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
79	3	A40	<i>Terminalia catappa</i>	欖仁樹	7.0	200	5.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
80	3	A41	<i>Terminalia catappa</i>	欖仁樹	6.0	160	5.0	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
81	3	A42	<i>Terminalia catappa</i>	欖仁樹	4.5	105	2.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA; in Nursery
82	3	A43	<i>Terminalia catappa</i>	欖仁樹	5.0	135	4.5	Fair	Fair	Medium	Medium	Transplant		LCSD	LCSD	Recommend to "Retain" in previous EIA; in Nursery
83	3	T94	<i>Casuarina equisetifolia</i>	木麻黃	13.0	320	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Retain" in previous EIA; in Nursery
84	3	T95	<i>Casuarina equisetifolia</i>	木麻黃	12.0	230	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
85	3	T96	<i>Casuarina equisetifolia</i>	木麻黃	12.0	207	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
86	3	T97	<i>Lagerstroemia indica</i>	大葉紫薇	4.0	102	2.5	Fair	Fair	Poor	Poor	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
87	3	T98	<i>Casuarina equisetifolia</i>	木麻黃	11.0	255	8.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
88	3	T99	<i>Casuarina equisetifolia</i>	木麻黃	9.0	207	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
89	3	T100	<i>Casuarina equisetifolia</i>	木麻黃	10.0	223	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
90	3	T101	<i>Casuarina equisetifolia</i>	木麻黃	14.0	407	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
91	3	T102	<i>Melaleuca quinquenervia</i>	白千層	7.0	169	2.0	Fair	Fair	Low	Low	Transplant		LCSD	LCSD	Recommend to "Transplant" in previous EIA
92	3	T103	<i>Casuarina equisetifolia</i>	木麻黃	9.0	160	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Transplant" in previous EIA
93	3	T104	<i>Casuarina equisetifolia</i>	木麻黃	14.0	510	7.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary; tree size and form unsuitable for transplant	LCSD	LCSD	Recommend to "Retain" in previous EIA

Note:

**1. Tree Maintenance Department**

Tree Maintenance Department is summarized in accordance with ETWB TCW No.2/2004 Maintenance of Vegetation and Hard Landscape Feature

**2. Department(s) to Provide Expert Advice on Tree Removal**

Department(s) to provide expert advice on tree removal is summarized in accordance with ETWB TCW No.3/2006 Tree Preservation

\* This tree survey and the according topographic survey (include locating and mapping the tree positions, and record data on ground levels, existing general ground features, tree dimension data of overall height, trunk diameter and average crown spread) were conducted by Kwan Lee - Joint Venture.

\* The topographic survey data and tree dimension data of the assessed trees follow the tree survey schedules received on 24 April 201



### Tree Survey Schedule

Contract No.: DC/2009/22

Project Title: Drainage Improvement Works in Shuen Wan, Tai Po - Contract 1

Location: Area C at Shuen Wan

No.	Figure No.	Tree No.	Botanical Name	Chinese Name	Overall Height (m)	Trunk Diameter (mm)	Average Crown Spread (m)	Condition (Good, Fair, Poor, Dead)	Form (Good, Fair, Poor)	Survival of Transplantation (High, Medium, Low)	Amenity, Value (High, Medium, Low)	Recommendation (Retain, Transplant, Fell)	Justification for tree felling	Tree Maintenance Department <sup>1</sup>	Department(s) to Provide Expert Advice on Tree Removal <sup>2</sup>	Remark
1	3	C1	<i>Melia azedarach</i>	楝	5.0	305	6.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
2	3	C2	<i>Macaranga tanarius</i>	血桐	3.0	255	6.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
3	3	C3	<i>Mangifera indica</i>	芒果	2.2	95	2.2	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
4	3	C4	<i>Mangifera indica</i>	芒果	2.5	160	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
5	3	C5	<i>Citrus maxima</i>	柚	3.0	120	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
6	3	C6	<i>Macaranga tanarius</i>	血桐	3.5	190	11.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary	LCSD	LCSD	Double trunk
7	3	C7	<i>Dimocarpus longan</i>	龍眼	4.0	180	4.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
8	3	C8	<i>Mangifera indica</i>	芒果	4.0	175	4.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
9	3	C11	<i>Mangifera indica</i>	芒果	2.5	95	2.3	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
10	3	C13	<i>Albizia lebbek</i>	大葉合歡	6.0	285	6.8	Poor	Poor	Low	Low	Retain		LCSD	LCSD	
11	3	C14	<i>Albizia lebbek</i>	大葉合歡	6.0	320	8.0	Poor	Poor	Low	Low	Retain		LCSD	LCSD	
12	3	C15	<i>Macaranga tanarius</i>	血桐	3.5	255	8.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
13	3	C16	<i>Prunus persica</i>	桃	2.0	95	2.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
14	3	C17	<i>Prunus persica</i>	桃	1.5	110	1.2	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
15	3	C18	<i>Prunus persica</i>	桃	2.5	110	3.3	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
16	3	C20	<i>Macaranga tanarius</i>	血桐	3.0	135	4.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
17	3	C21	<i>Macaranga tanarius</i>	血桐	3.0	160	4.5	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
18	3	C25	<i>Dimocarpus longan</i>	龍眼	2.0	110	2.5	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
19	3	C26	<i>Mangifera indica</i>	芒果	3.0	155	2.3	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
20	3	C27	<i>Litchi chinensis</i>	荔枝	2.5	95	2.3	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
21	3	C28	<i>Litchi chinensis</i>	荔枝	2.5	95	2.3	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
22	3	C29	<i>Punica granatum</i>	安石榴	2.5	160	2.1	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
23	3	C30	<i>Mangifera indica</i>	芒果	3.0	145	2.9	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
24	3	C31	<i>Macaranga tanarius</i>	血桐	5.0	230	4.4	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
25	3	C33	<i>Mangifera indica</i>	芒果	3.0	130	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
26	3	C37	<i>Celtis sinensis</i>	朴樹	4.5	240	5.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
27	3	C39	<i>Mangifera indica</i>	芒果	3.7	130	3.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
28	3	C41	<i>Mangifera indica</i>	芒果	3.5	130	2.7	Poor	Poor	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
29	3	C42	<i>Michelia x alba</i>	白蘭	7.0	175	4.6	Good	Good	Medium	Medium	Retain		LCSD	LCSD	
30	3	C43	<i>Michelia x alba</i>	白蘭	7.0	160	3.3	Good	Good	Medium	Medium	Retain		LCSD	LCSD	
31	3	C44	<i>Dimocarpus longan</i>	龍眼	3.0	95	3.4	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
32	3	C47	<i>Melia azedarach</i>	楝	7.0	175	6.7	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
33	3	C48	<i>Macaranga tanarius</i>	血桐	6.0	190	7.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	

34	3	C49	<i>Litsea monopetala</i>	假柿木薑 子	7.0	225	6.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
35	3	C50	<i>Macaranga tanarius</i>	血桐	5.0	145	6.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
36	3	C51	<i>Macaranga tanarius</i>	血桐	4.0	105	3.0	Poor	Poor	Low	Low	Retain		LCSD	LCSD	
37	3	C53	<i>Macaranga tanarius</i>	血桐	3.5	160	3.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
38	3	C54	<i>Celtis sinensis</i>	朴樹	7.0	410	6.0	Fair	Fair	Low	Medium	Retain		LCSD	LCSD	
39	3	C55	<i>Macaranga tanarius</i>	血桐	5.0	135	4.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
40	3	C56	<i>Macaranga tanarius</i>	血桐	5.0	180	4.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
41	3	C57	<i>Macaranga tanarius</i>	血桐	4.0	115	4.5	Poor	Poor	Low	Low	Retain		LCSD	LCSD	
42	3	C59	<i>Macaranga tanarius</i>	血桐	4.5	130	4.5	Poor	Poor	Low	Low	Retain		LCSD	LCSD	
43	3	C60	<i>Macaranga tanarius</i>	血桐	5.0	190	4.5	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
44	3	C61	<i>Dimocarpus longan</i>	龍眼	2.5	130	4.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
45	3	C62	<i>Dimocarpus longan</i>	龍眼	4.0	135	4.4	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
46	3	C64	<i>Dimocarpus longan</i>	龍眼	2.0	115	3.8	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
47	3	C66	<i>Dimocarpus longan</i>	龍眼	3.0	145	5.0	Fair	Fair	Low	Low	Fell	Direct conflict with work boundary, low ecological and amenity value	LCSD	LCSD	
48	3	C67	<i>Cerbera manghas</i>	海杧果	3.5	160	3.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
49	3	C68	<i>Cinnamomum camphora</i>	樟	7.0	320	6.0	Fair	Fair	Low	Medium	Retain		LCSD	LCSD	
50	3	C69	<i>Cerbera manghas</i>	海杧果	3.5	100	2.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
51	3	C70	<i>Macaranga tanarius</i>	血桐	6.0	225	7.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
52	3	C71	<i>Macaranga tanarius</i>	血桐	6.0	135	6.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
53	3	C72	<i>Celtis sinensis</i>	朴樹	7.0	235	6.0	Fair	Fair	Low	Medium	Retain		LCSD	LCSD	
54	3	C73	<i>Terminalia catappa</i>	欖仁樹	4.0	130	4.5	Fair	Fair	Low	Medium	Retain		LCSD	LCSD	
55	3	C74	<i>Bridelia tomentosa</i>	土蜜樹	6.0	370	7.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
56	3	C75	<i>Celtis sinensis</i>	朴樹	6.0	280	6.0	Fair	Fair	Low	Medium	Retain		LCSD	LCSD	
57	3	C76	<i>Macaranga tanarius</i>	血桐	3.5	180	5.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
58	3	C77	<i>Bischofia javanica</i>	秋楓	6.0	385	5.0	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
59	3	C78	<i>Macaranga tanarius</i>	血桐	3.0	95	3.5	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
60	3	C79	<i>Macaranga tanarius</i>	血桐	3.0	110	3.5	Fair	Fair	Low	Low	Retain		LCSD	LCSD	
61	3	C80	<i>Ficus variegata</i>	青果榕	3.5	120	2.5	Fair	Fair	Low	Low	Retain		LCSD	LCSD	

Note:

**1. Tree Maintenance Department**

Tree Maintenance Department is summarized in accordance with ETWB TCW No.2/2004 Maintenance of Vegetation and Hard Landscape Features

**2. Department(s) to Provide Expert Advice on Tree Removal**

Department(s) to provide expert advice on tree removal is summarized in accordance with ETWB TCW No.3/2006 Tree Preservation.

\* This tree survey and the according topographic survey (include locating and mapping the tree positions, and record data on ground levels, existing general ground features, tree dimension data of overall height, trunk diameter and average crown spread) were conducted by Kwan Lee - Kuly Joint Venture

\* The topographic survey data and tree dimension data of the assessed trees follow the tree survey schedules received on 24 April 2010.

Tree (Photo) No.	Scientific name	Chinese Common Name	Tree Maintenance Department <sup>1</sup>	Coordinates			Species Origin	Size			Form (Good/Fair/Poor)	Health (Good/Fair/Poor)	Particular Value <sup>3</sup>					Location <sup>4</sup>	Survival Rate after Transplanting (High/Medium/Low)	Recommendation (Retain/Transplant/Fell/Remove)	Justification for							Department(s) to Provide Expert Advice on Tree Removal <sup>6</sup>	Remarks				
				Northing	Easting	Elevation (m)		Overall Height (m)	Trunk Diameter (mm) <sup>2</sup>	Crown Spread (m)			A	C	E	H	O				P	1	2	3	4	5	6			7			
T001	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836586.141	839417.217	2.744	Exotic	6.0	150	5.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Slightly leaning trunk, dieback branches	
T002	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.862	839412.602	3.082	Exotic	6.0	150	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Leaning trunk	
T003	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836593.639	839410.205	3.108	Exotic	8.0	250	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Co-dominant trunk with broken branches, unbalanced tree form	
T004	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836586.819	839417.532	3.302	Exotic	6.0	200	5.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Seriously leaning, canopy covered by climbers	
T005	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.489	839406.020	2.998	Exotic	8.0	230	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Minor decayed wood on branches	
T006	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.095	839404.958	2.962	Exotic	8.0	230	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Slightly leaning trunk	
T007	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.093	839404.053	2.655	Exotic	2.0	95	1.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Broken middle trunk, numerous watersprouts	
T008	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836593.071	839403.171	2.940	Exotic	5.0	130	3.5	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Seriously leaning, numerous watersprouts on leaning plane, leaning trunk close to T008A	
T008A	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.945	839402.501	2.940	Exotic	7.0	95	4.0	Fair	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS		
T009	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836594.090	839400.703	3.154	Exotic	9.0	150	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Leaning trunk with broken branches	
T010	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836595.636	839394.252	2.933	Exotic	8.0	370	6.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Multiple stems with leaning trunk	
T011	<i>Hibiscus tiliaceus</i>	黃槿	LandsD	836612.094	839359.636	2.358	Native	5.0	150	6.0	Poor	Fair	L	N	L	N	N	N	R	Low	Fell	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Multiple stems with leaning and twisting trunks	
T011A	<i>Hibiscus tiliaceus</i>	黃槿	LandsD	836611.518	839358.758	2.358	Native	4.0	296	6.0	Poor	Fair	L	N	L	N	N	N	R	Low	Fell	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Multiple stems with leaning and twisting trunks	
T011B	<i>Hibiscus tiliaceus</i>	黃槿	LandsD	836610.702	839358.279	2.358	Native	4.0	131	6.0	Poor	Fair	L	N	L	N	N	N	R	Low	Fell	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Multiple stems with leaning and twisting trunks	
T011C	<i>Hibiscus tiliaceus</i>	黃槿	LandsD	836611.068	839360.024	2.358	Native	4.0	164	6.0	Poor	Fair	L	N	L	N	N	N	R	Low	Fell	Y	Y	Y	Y	Y	Y	Y	Y	Y	LCS	Multiple stems with leaning and twisting trunks	
T012	<i>Spathodea campanulata</i>	火焰樹/ 火焰木	Private	836658.335	839264.340	3.433	Exotic	7.0	350	6.0	Fair	Fair	H	N	L	N	N	N	F, P	Med	Retain										N/A	Seriously paved at trunk base	
T013	<i>Ficus variegata</i> var. <i>chlorocarpa</i>	青果榕	Private	836659.196	839260.743	3.775	Native	6.0	250	5.0	Fair	Fair	M	N	M	N	N	N	F, P	Med	Retain											N/A	Seriously paved at trunk base
T014	<i>Carica papaya</i>	番木瓜/ 萬壽果	Private	836651.030	839251.766	3.340	Exotic	3.0	75	2.0	Fair	Fair	L	N	L	N	N	N	F	Low	Retain											N/A	Undersized,
T015	<i>Ficus virens</i>	黃葛樹/ 大葉榕	Private	836653.658	839250.917	3.624	Native	3.0	165	2.0	Fair	Fair	L	N	M	N	N	N	F	Med	Retain											LCS	Multiple stems
T016	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836580.113	839123.725	3.475	Exotic	6.0	150	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Leaning trunk covered by climbers
T017	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836580.711	839122.353	3.176	Exotic	6.0	150	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Seriously leaning; trunk covered by climbers
T018	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836579.123	839118.035	3.098	Exotic	5.0	95	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Dieback branches, bending trunk
T019	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836579.579	839116.360	3.132	Exotic	6.0	100	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Bending trunk with seriously forked trunks
T020	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836579.161	839115.141	2.246	Exotic	6.0	100	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Bending trunk with climbers
T021	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836580.121	839107.552	3.035	Exotic	6.0	100	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Retain											N/A	Seriously covered by climbers
T022	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836579.224	839106.471	3.266	Exotic	5.0	100	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Leaning trunk, seriously covered by climbers
T023	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836580.975	839102.215	3.281	Exotic	7.0	150	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain											LCS	Seriously covered by climbers, co-dominant trunk
T024	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836579.271	839170.869	2.995	Exotic	4.0	100	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Leaning trunk, covered by climbers
T025	<i>Celtis sinensis</i>	朴樹	LandsD	836573.859	839140.973	2.706	Native	4.0	150	4.0	Fair	Fair	M	N	M	N	N	N	F	Med	Retain											LCS	Climbers on lower trunk and at trunk base
T026	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836582.141	839100.399	3.520	Exotic	6.0	100	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain											LCS	Multiple stems
T027	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836579.221	839099.692	3.272	Exotic	7.0	180	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove					Y	Y					LCS	Co-dominant trunks, leaning trunk
T028	<i>Sapium sebiferum</i>	烏柏	LandsD	836571.843	839108.779	3.300	Native	5.5	300	4.0	Poor	Poor	L	N	M	N	N	N	S	Low	Fell	Y	Y	Y	Y							LCS	Slightly leaning trunk
T029	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836578.759	839096.791	3.364	Exotic	4.0	95	3.0	Poor	Poor	L	N	L	N	N	N	F, C	Low	Remove					Y	Y					LCS	Seriously covered by climbers, slightly leaning trunk
T030	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836576.796	839078.849	3.680	Exotic	6.0	158	5.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Multiple stems, covered by climbers
T031	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836577.656	839084.178	3.559	Exotic	4.0	100	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Seriously covered by climbers, leaning trunk
T032	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836577.284	839083.205	3.594	Exotic	4.0	150	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Leaning trunk, numerous watersprouts
T033	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836577.106	839080.854	3.714	Exotic	3.0	95	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Dieback branches, covered by climbers
T034	Not used	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
T035	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836576.419	839074.548	3.679	Exotic	7.0	150	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Leaning, dieback branches
T036	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836577.252	839072.124	3.779	Exotic	7.0	210	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y					LCS	Co-dominant trunks, leaning trunk
T037	<i>Cleistocalyx operculatus</i>	水翁	LandsD	836569.004	839108.702	2.479	Native	5.0	360	6.0	Poor	Fair	L	N	M	N	N	N	S	Low	Fell	Y	Y	Y	Y							LCS	Minor cracked trunk, twisting co-dominant trunks
T038	<i>Macaranga tanarius</i>	血桐	LandsD	836570.296	839103.153	3.175	Native	4.0	210	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Fell	Y	Y	Y	Y							LCS	Leaning tree form, covered by climbers
T038A	<i>Macaranga tanarius</i>	血桐	LandsD	83656.968	839104.897	3.175	Native	3.0	150	2.0	Poor	Poor	L	N	L	N	N	N	R	Low	Fell	Y	Y	Y	Y							LCS	Bending tree trunks, canopy covered by climbers
T039	<i>Bischofia javanica</i>	秋楓	LandsD																														

T071	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836648.738	838836.404	7.027	Exotic	6.0	200	4.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove	Y	Y	Y	Y	Y	Y	LCSD	Self-corrected tree trunk
T072	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836652.406	838830.232	7.059	Exotic	8.0	461	6.0	Poor	Fair	L	N	L	N	N	N	F, C	Low	Remove	Y	Y	Y	Y	Y	Y	LCSD	Multiple trunks, dieback branches, broken branches
T073	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836654.013	838829.233	6.954	Exotic	9.0	200	4.0	Poor	Fair	L	N	L	N	N	N	F, C	Low	Remove	Y	Y	Y	Y	Y	Y	LCSD	Leaning, dieback branches
T074	<i>Bischofia javanica</i>	秋楓	LandsD	836667.193	838829.542	7.062	Native	9.0	600	9.0	Fair	Fair	M	N	M	N	N	N	F, P	Low	Retain							LCSD	
T075	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836669.195	838812.320	7.479	Exotic	5.0	100	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	Y	LCSD	Seriously leaning trunk, broken branches
T076	<i>Macaranga tanarius</i>	血桐	LandsD	836672.923	838808.791	7.472	Native	6.0	180	7.0	Poor	Fair	L	N	L	N	N	N	F	Low	Retain	Y	Y	Y	Y	Y	Y	LCSD	Co-dominant trunks, broken scaffold trunks and branches
T077	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836676.576	838822.818	6.741	Exotic	5.0	150	5.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							LCSD	Co-dominant trunks, bending tree form, numerous watersprouts, covered by climbers
T078	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836682.966	838814.829	6.389	Exotic	4.0	400	9.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							LCSD	Uprooted tree with trunk lay on ground, many decayed tree parts, covered by climbers
T079	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836685.561	838813.877	6.519	Exotic	7.0	250	6.0	Poor	Poor	L	N	L	N	N	N	S	Low	Retain							LCSD	Leaning, climbers covered the whole tree
T080	<i>Macaranga tanarius</i>	血桐	LandsD	836685.492	838811.371	7.588	Native	7.0	300	7.0	Fair	Fair	L	N	L	N	N	N	S	Med	Retain							LCSD	Co-dominant trunk, cracked tree bark with watersprouts, slightly leaning tree form
T081	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836688.257	838808.141	7.778	Exotic	8.0	850	9.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							LCSD	Co-dominant trunk, broken branches, decayed wood at base
T082	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836690.242	838805.885	8.031	Exotic	8.0	150	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Retain							LCSD	Broken branches
T083	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836691.478	838805.810	8.339	Exotic	8.0	150	3.0	Poor	Fair	L	N	L	N	N	N	F	Low	Retain							LCSD	Seriously leaning trunk
T084	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836693.545	838802.717	8.196	Exotic	6.0	200	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Retain							LCSD	Seriously leaning trunk, co-dominant trunks
T085	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836699.815	838780.488	8.851	Exotic	9.0	620	9.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y	LCSD	
T085A	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836700.666	838781.376	8.851	Exotic	8.0	500	7.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove					Y	Y	LCSD	Multiple trunks, leaning tree form
T085B	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836700.486	838779.861	8.851	Exotic	10.0	500	9.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y	LCSD	Multiple trunks with seriously decayed tree parts
T086	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836694.489	838776.886	8.058	Exotic	9.0	300	6.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove					Y	Y	LCSD	Leaning seriously
T087	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836693.487	838779.601	8.923	Exotic	10.0	500	7.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove					Y	Y	LCSD	
T088	<i>Leucaena leucocephala</i>	銀合歡	Private	836631.634	839101.434	3.493	Exotic	9.0	200	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							N/A	Unhealthy, seriously covered by climbers
T089	<i>Leucaena leucocephala</i>	銀合歡	Private	836634.777	839095.238	3.492	Exotic	3.5	150	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							N/A	Seriously covered by climbers
T090	<i>Leucaena leucocephala</i>	銀合歡	Private	836632.967	839089.075	3.752	Exotic	7.0	150	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							N/A	Co-dominant trunks, seriously leaning tree trunk, covered by climbers
T091	<i>Leucaena leucocephala</i>	銀合歡	Private	836633.668	839089.843	3.553	Exotic	7.0	177	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							N/A	Co-dominant trunks, covered by climbers
T092	<i>Leucaena leucocephala</i>	銀合歡	Private	836646.579	839085.183	3.712	Exotic	4.0	200	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							N/A	Forked trunks, covered by climbers
T093	<i>Litsea cubeba</i>	木薑子/山蒼樹	AFCD	836720.793	839011.627	5.108	Native	6.0	150	4.0	Fair	Fair	L	N	M	N	N	N	F	Med	Retain							AFCD	
T094	<i>Litsea cubeba</i>	木薑子/山蒼樹	AFCD	836721.884	839007.514	5.438	Native	7.0	308	6.0	Fair	Fair	L	N	M	N	N	N	F	Med	Retain							AFCD	Multiple trunks
T095	<i>Antidesma bunius</i>	五月茶	Private	836715.307	838981.122	4.204	Native	6.0	300	6.0	Fair	Fair	L	Y	M	N	N	N	F, C, P	Low	Retain							N/A	In a concreted raised planter, slightly leaning tree trunk developed against the planter
T096	<i>Sapium sebiferum</i>	烏柏	AFCD	836714.221	838967.584	4.217	Native	7.0	280	7.0	Fair	Fair	L	Y	M	N	N	N	F, C, P	Low	Retain							AFCD	In a concreted raised planter, with minor decayed wood and wound on trunk, pruned wound
T097	<i>Schefflera heptaphylla</i>	鵝掌柴/鴨腳木	AFCD	836722.735	838999.016	5.755	Native	4.0	150	3.0	Poor	Poor	L	N	M	N	N	N	S	Low	Retain							AFCD	Canopy is seriously covered by climbers
T098	<i>Aquilaria sinensis</i>	土沉香	AFCD	836723.088	838997.586	6.905	Native	4.0	150	3.0	Poor	Poor	L	N	M	N	N	Y	S	Low	Retain							AFCD	Protected by Cap. 96, canopy is seriously covered by climbers
T099	<i>Antidesma bunius</i>	五月茶	AFCD	836724.916	838962.647	4.986	Native	7.0	300	5.0	Poor	Poor	L	N	M	N	N	N	S	Low	Retain							AFCD	Covered by climbers, co-dominant trunks, some decayed branches
T100	<i>Aporosa dioica</i>	銀柴/大沙葉	AFCD	836725.732	838963.923	5.510	Native	6.0	95	4.0	Poor	Poor	L	N	M	N	N	N	S	Low	Retain							AFCD	Dieback branches, seriously leaning tree trunk
T101	<i>Microcos paniculata</i>	破布葉/布渣葉	AFCD	836727.084	838964.517	6.148	Native	7.0	100	5.0	Poor	Poor	L	N	M	N	N	N	S	Low	Retain							AFCD	Seriously leaning trunk, numerous watersprouts developed on the plane of decay
T102	<i>Alangium chinense</i>	八角楓	AFCD	836727.630	838963.185	5.630	Native	3.0	150	2.0	Poor	Fair	L	N	M	N	N	N	S	Low	Retain							AFCD	Unbalanced tree form, seriously leaning trunk
T103	<i>Litchi chinensis</i>	荔枝	AFCD	836734.917	838960.115	5.396	Exotic	7.0	100	3.5	Fair	Fair	L	N	L	N	N	N	S	Low	Retain							AFCD	Trunk covered by climbers
T104	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836708.823	838765.169	8.165	Exotic	12.0	400	7.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							LCSD	Small cavity at tree base
T105	<i>Leucaena leucocephala</i>	銀合歡	DSD	836651.818	838808.579	7.865	Exotic	5.0	210	5.0	Poor	Poor	L	N	L	N	N	N	S	Low	Retain							LCSD	Slightly leaning trunk, dieback branches
T106	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836640.302	838825.430	7.029	Exotic	5.0	95	3.0	Fair	Fair	L	N	L	N	N	N	F, C	Low	Retain							LCSD	Covered by climbers
T107	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836666.863	838789.943	8.414	Exotic	5.0	100	3.0	Fair	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Slightly leaning trunk
T108	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836666.843	838791.736	7.811	Exotic	5.0	200	4.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Co-dominant trunks, dieback branches
T109	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836666.813	838792.851	7.522	Exotic	6.0	100	4.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Broken branches
T110	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836662.830	838797.715	7.734	Exotic	5.0	100	4.0	Fair	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Broken branches, dieback branches, watersprouts on trunk
T111	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836664.458	838798.182	6.783	Exotic	6.0	100	4.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Co-dominant trunks
T112	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836663.663	838800.011	6.339	Exotic	6.0	100	4.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Broken branches, numerous watersprouts at scaffold trunk
T113	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836660.642	838800.702	7.619	Exotic	6.0	100	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove							LCSD	Covered by climbers
T114	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836658.631	838802.499	7.992	Exotic	6.0	140	3.0	Fair	Fair	L	N	L	N	N	N	S	Low	Remove							LCSD	Broken branches, covered by climbers
T115	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836659.745	838803.045	7.070	Exotic	7.0	150	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove							LCSD	Co-dominant trunks, many dieback branches
T116	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836658.654	838804.573	7.235	Exotic	7.0	200	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove							LCSD	Dieback branches
T117	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836656.878	838804.642	7.913	Exotic	5.0	100	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove							LCSD	Forked branches, climbers on trunk
T118	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836633.844	838832.066	6.559	Exotic	7.0	200	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Retain							LCSD	Climbers on trunk
T119	<i>Citrus maxima</i>	柚	LandsD	836630.412	838839.952	6.014	Exotic	6.0	200	3.0	Poor	Poor	L	N	L	N	N	N	S	Low	Retain							LCSD	Numerous dieback branches, broken branches
T120	<i>Citrus maxima</i>	柚	LandsD	836629.171	838842.397	6.089	Exotic	6.0	200	4.0	Fair	Fair	L	N	L	N	N	N	S	Med	Retain							LCSD	Diseased leaves
T121	<i>Citrus maxima</i>	柚	LandsD	836625.672	838845.588	5.924	Exotic	7.0	150	4.0	Fair	Fair	L	N	L	N	N	N	F	Med	Retain							LCSD	Forked trunks
T122	<i>Citrus maxima</i>	柚	LandsD	836625.734	838844.271	6.019	Exotic	6.0	172	3.0	Fair	Fair	L	N	L	N	N	N	F	Med	Retain							LCSD	Multiple trunks
T123	Dead tree	死樹	-	836619.859	838845.759	5.867	-	7.0	400	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove							-	Dead
T124	<i>Cleistocalyx operculatus</i>	水翁	Private	836617.431	838848.163	5.784	Native	10.0	500	5.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain							N/A	Dieback branches, climbers covered the tree
T125	<i>Ficus virans</i>	黃葛樹/大葉榕	LandsD	836601.858	838887.046	6.718	Native	7.0	400	6.																			

T155	<i>Sterculia lanceolata</i>	假蒟蒻/七姐果	LandsD	836560.365	838938.639	4.949	Native	9.0	522	7.0	Poor	Fair	L	N	M	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Multiple trunks
T156	Dead tree	死樹	-	836558.998	838939.914	4.917	-	9.0	500	7.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove	Y				Y	-	Dead tree, seriously covered by climbers
T157	<i>Dimocarpus longan</i>	龍眼/桂圓	LandsD	836558.661	838941.825	5.234	Exotic	6.0	250	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Numerous dieback branches and decayed branches with fungal fruiting bodies, many watersprouts
T158	<i>Dimocarpus longan</i>	龍眼/桂圓	LandsD	836552.583	838946.478	4.765	Exotic	5.0	200	3.0	Poor	Poor	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Dieback branches, broken branches
T159	<i>Syzygium jambos</i>	蒲桃	LandsD	836550.876	838947.196	3.975	Exotic	8.0	673	7.0	Poor	Poor	L	N	L	N	N	N	S	Low	Retain						LCS	Multiple trunks
T160	<i>Dimocarpus longan</i>	龍眼/桂圓	LandsD	836550.691	838950.792	5.339	Exotic	10.0	610	7.0	Poor	Fair	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Multiple trunks
T161	<i>Ficus variegata</i> var. <i>chlorocarpa</i>	青果榕	LandsD	836552.075	838951.570	5.236	Native	5.0	150	3.0	Poor	Poor	L	N	M	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	
T162	<i>Ficus hispida</i>	對葉榕/牛乳樹	LandsD	836548.334	838949.854	3.954	Native	5.0	180	3.0	Poor	Poor	L	N	L	N	N	N	S	Low	Retain						LCS	Leaning towards stream
T163	<i>Ficus hispida</i>	對葉榕/牛乳樹	LandsD	836551.050	838955.008	3.995	Native	4.0	150	3.0	Poor	Poor	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Covered by climbers
T164	<i>Sterculia lanceolata</i>	假蒟蒻/七姐果	LandsD	836550.478	838951.486	5.455	Native	4.0	95	2.0	Poor	Poor	L	N	M	N	N	N	F	Low	Fell	Y	Y	Y	Y	Y	LCS	Co-dominant trunks
T165	<i>Litsea monopetala</i>	假柿木薑子/假柿樹	LandsD	836547.006	838959.432	4.875	Native	6.0	200	3.0	Poor	Poor	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Covered by climbers
T166	<i>Alangium chinense</i>	八角楓	LandsD	836547.278	838958.871	5.210	Native	4.0	150	3.0	Poor	Poor	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Covered by climbers
T167	<i>Litsea monopetala</i>	假柿木薑子/假柿樹	LandsD	836545.032	838961.556	5.267	Native	7.0	200	3.0	Poor	Poor	L	N	L	N	N	N	R, S	Low	Retain						LCS	Co-dominant trunks, covered by climbers, slightly leaning trunk
T168	<i>Celtis sinensis</i>	朴樹	LandsD	836544.039	838964.290	4.791	Native	4.0	150	4.0	Poor	Poor	L	N	L	N	N	N	R, S	Low	Retain						LCS	Canopy seriously covered by climbers
T169	<i>Ficus hispida</i>	對葉榕/牛乳樹	LandsD	836543.089	838965.770	4.879	Native	4.0	200	4.0	Poor	Poor	L	N	L	N	N	N	R, S	Low	Retain						LCS	Leaning scaffold trunk
T170	<i>Dimocarpus longan</i>	龍眼/桂圓	LandsD	836536.251	838967.319	5.297	Exotic	7.0	150	3.0	Poor	Fair	L	N	L	N	N	N	S	Med	Retain						LCS	Slightly leaning upper trunk
T171	<i>Bischofia javanica</i>	秋楓	LandsD	836537.098	838970.335	5.128	Native	10.0	300	4.0	Fair	Fair	L	N	M	N	N	N	S	Low	Retain						LCS	Upper tree part covered by climber
T172	<i>Sterculia lanceolata</i>	假蒟蒻/七姐果	LandsD	836537.564	838972.599	5.307	Native	8.0	120	3.0	Poor	Fair	L	N	M	N	N	N	S	Low	Retain						LCS	Tree base close to T172A, bending branches, canopy covered by climbers
T172A	<i>Ficus s</i> pp.	榕屬	LandsD	836536.823	838972.437	5.307	Native	10.0	450	6.0	Fair	Fair	L	N	M	N	N	N	S	Low	Retain						LCS	Tree base close to T172, some bending lower trunk
T173	<i>Celtis sinensis</i>	朴樹	LandsD	836536.683	838973.889	5.321	Native	6.0	150	4.0	Poor	Poor	L	N	M	N	N	N	S	Low	Retain						LCS	Leaning trunk, canopy covered by climbers
T174	<i>Ficus spp.</i>	榕屬	LandsD	836536.468	838975.124	5.105	Native	6.0	220	3.0	Poor	Fair	L	N	M	N	N	N	F	Low	Retain						LCS	Unbalanced tree form, climber at lower tree part
T175	<i>Bischofia javanica</i>	秋楓	LandsD	836534.455	838976.656	5.035	Native	6.0	95	3.0	Poor	Fair	L	N	M	N	N	N	F	Med	Retain						LCS	Twisting tree form, many watersprouts
T176	<i>Litsea monopetala</i>	假柿木薑子/假柿樹	LandsD	836535.094	838977.635	5.214	Native	7.0	400	4.0	Poor	Fair	L	N	M	N	N	N	F	Low	Retain						LCS	Seriously leaning trunk, canopy seriously covered by climbers
T177	<i>Sterculia lanceolata</i>	假蒟蒻/七姐果	LandsD	836534.458	838978.722	5.063	Native	6.0	200	3.0	Poor	Fair	L	N	M	N	N	N	F	Low	Retain						LCS	Leaning branches and canopy
T178	<i>Tetradium glabrifolium</i>	棟葉吳茱萸	LandsD	836533.584	838979.167	5.156	Native	9.0	350	6.0	Poor	Poor	L	N	M	N	N	N	F	Low	Retain						LCS	Co-dominant trunks, 1 co-dominant trunk was seriously decayed
T179	<i>Bischofia javanica</i>	秋楓	LandsD	836533.875	838982.574	5.003	Native	6.0	150	4.0	Poor	Fair	L	N	M	N	N	N	F	Med	Retain						LCS	Some dieback branches, leaning upper trunk
T180	<i>Ficus hispida</i>	對葉榕/牛乳樹	LandsD	836535.234	838984.531	4.885	Native	4.0	300	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Retain						LCS	Co-dominant trunks, seriously leaning tree form, canopy covered by climbers
T181	<i>Cleistocalyx operculatus</i>	水翁	Private	836535.558	838991.565	5.171	Native	6.0	200	4.0	Poor	Fair	L	N	M	N	N	N	F, P	Med	Retain						N/A	Cracked tree bark, bending trunk
T182	<i>Cleistocalyx operculatus</i>	水翁	Private	836536.999	838990.357	4.690	Native	6.0	300	6.0	Poor	Fair	L	N	M	N	N	N	F, P	Med	Retain						N/A	Co-dominant trunks with included bark, leaning tree form
T183	<i>Ficus hispida</i>	對葉榕/牛乳樹	Private	836536.427	838993.134	5.147	Native	5.0	300	4.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain						N/A	Co-dominant trunks with included bark, leaning upper trunk, covered by climbers
T184	<i>Ficus hispida</i>	對葉榕/牛乳樹	Private	836539.565	838990.806	4.560	Native	5.0	300	6.0	Fair	Fair	L	N	L	N	N	N	F	Med	Retain						N/A	Canopy covered by climbers, co-dominant runks
T185	<i>Sterculia lanceolata</i>	假蒟蒻/七姐果	LandsD	836555.189	839016.763	3.792	Native	5.0	100	2.0	Fair	Fair	L	N	M	N	N	N	F	Low	Fell	Y	Y	Y	Y	Y	LCS	Developed underneath tall trees, leaning trunks
T186	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836591.288	839399.367	2.756	Exotic	8.0	150	4.0	Poor	Fair	L	N	L	N	N	N	R	Low	Remove	Y	Y	Y	Y	Y	LCS	Minor decayed tree base, leaning tree form
T187	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.141	839395.417	3.130	Exotic	9.0	200	5.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Seriously leaning trunk, minor decayed wood at base
T188	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836591.857	839393.886	3.189	Exotic	9.0	310	8.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Multiple trunks
T189	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836592.838	839391.933	3.149	Exotic	9.0	228	4.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Twisting multiple trunks, covered by climbers
T190	<i>Ficus hispida</i>	對葉榕/牛乳樹	Private	836546.862	839014.324	3.915	Native	3.0	210	3.0	Poor	Poor	L	N	L	N	N	N	F	Low	Retain						N/A	Unhealthy, leaning tree form, seriously covered by climbers
T191	<i>Syzygium jambos</i>	蒲桃	LandsD	836552.811	839017.629	3.577	Exotic	4.0	139	4.0	Poor	Poor	L	N	L	N	N	N	S	Low	Fell	Y	Y	Y	Y	Y	LCS	Twisting multiple trunks, covered by climbers
T192	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836591.787	839391.977	2.958	Exotic	9.0	182	6.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Multiple trunks, leaning tree form, covered by climbers
T193	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836591.001	839391.946	2.883	Exotic	7.0	212	4.0	Poor	Fair	L	N	L	N	N	N	S	Low	Remove	Y	Y	Y	Y	Y	LCS	Multiple trunks
T194	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836593.370	839388.517	3.104	Exotic	9.0	180	5.0	Poor	Poor	L	N	L	N	N	N	S	Low	Remove	Y	Y	Y	Y	Y	LCS	Co-dominant trunks, leaning tree form, covered by climbers
T195	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836594.174	839387.829	3.071	Exotic	8.0	103	5.0	Poor	Poor	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Multiple trunks, covered by climbers
T196	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836595.783	839386.076	3.245	Exotic	7.0	150	5.0	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Dieback branches, covered by climbers
T197	<i>Leucaena leucocephala</i>	銀合歡	LandsD	836571.420	839413.385	2.748	Exotic	5.5	95	2.5	Poor	Fair	L	N	L	N	N	N	F	Low	Remove	Y	Y	Y	Y	Y	LCS	Covered by climbers
T198	<i>Macaranga tanarius</i>	血桐	Private	836578.722	839189.729	3.073	Native	6.0	300	7.0	Fair	Fair	L	N	L	N	N	N	S	Med	Retain						N/A	Multiple trunks, next to stream

**Notes:**

**Notes:**

**1. Tree Maintenance Department**

Tree Maintenance Department is summarized in accordance with ETWB TCW No.2/2004 Maintenance of Vegetation and Hard Landscape Features.

**2. Trunk Diameter Measurement:**

Tree trunks were measured in accordance with the Nature Conservation Practice Note No. 02/2003 "Measurement of Diameter at Breast Height (DBH)" by Conservation Branch, Agriculture, Fisheries and Conservation Department.

**3. Particular Value**

- A Amenity value: H - High; M - Medium; L - Low
- C Cultural / Commemorative Value (Y - Yes; N - No)
- E Ecological Value (H - High; M - Medium; L - Low)
- H Historical / heritage value (Y - Yes; N - No)
- O Registered Old & Valuable Tree (Y - Yes; N - No)
- P Protected species under Forests and Countryside Ordinance (Cap. 96) (Y - Yes; N - No)

**4. Location**

- C On concrete
- F On flat land
- P Root zone largely paved
- R On rocks
- S On slopes
- TOE On slope or wall toes
- TOP On top of wall or slopes
- W On wall

**5. Justification for Tree Felling:**

- 1 Trees in direct conflict with the proposed works
- 2 Poor health and/or form does not support transplanting
- 3 Significant access constraints preclude transplanting
- 4 Species of low post-transplanting survival rate anticipated
- 5 Not practical to prepare root ball for tree transplanting due to the topography (e.g. trees growing on rocks, steep slopes or other structures)
- 6 Species of low landscape and/or ecological value, can be easily compensated
- 7 Dead, hazardous and/or undesirable specimens (e.g. self-seeded, invasive weedy species) which should be removed for site maintenance purposes

**6. Department(s) to Provide Expert Advice on Tree Removal:**

Department(s) to provide expert advice on tree removal is summarized in accordance with ETWB TCW No.3/2006 Tree Preservation.

## **Annex 3**

# **Proposed planting list and planting schedule in Areas A, B and C (Contract 1) and Areas under Contract 2**

### Annex 3. Proposed planting lists and planting schedules in Areas A, B and C (Contract 1) and Areas under Contract 2.

#### Area A

Species	Form	Proposed no. of plants in Area A
<i>Cinnamomum burmannii</i>	Tree	4
<i>Duranta erecta</i> *	Shrub	329
<i>Ficus microcarpa</i> (Golden Leaf)*	Shrub	525
<i>Cynodon dactylon</i>	Herb (Grass)	Total area of ~1,105 m <sup>2</sup> will be hydroseeded
<i>Paspalum notatum</i> *	Herb (Grass)	
<i>Arachis duranensis</i> *	Climber	158
<i>Epipremnum aureum</i> *	Climber	163
<i>Lonicera japonica</i>	Climber	95

Notes:

1. "\*" – Exotic species
2. The sizes of all proposed plant species follow planting material requirement as specified in **Annex 4**.
3. The proposed tree species and numbers are for the compensation of tree loss under Contract 1 of the Project.

#### Area B

Species	Form	Proposed no. of plants in Area B
<i>Aegiceras corniculatum</i>	Shrub (mangrove)	110
<i>Clerodendrum inerme</i>	Shrub	185
<i>Kandelia obovata</i>	Shrub (mangrove)	110
<i>Ligustrum sinense</i>	Shrub	84
<i>Melastoma sanguineum</i>	Shrub	184
<i>Scaevola taccada</i>	Shrub	248
<i>Cynodon dactylon</i>	Herb (Grass)	Total area of ~332m <sup>2</sup> will be hydroseeded
<i>Paspalum notatum</i> *	Herb (Grass)	

Notes:

1. "\*" – Exotic species
2. The sizes of all proposed plant species follow planting material requirement as specified in **Annex 4**.
3. The proposed tree species and number are for the compensation of tree loss under Contract 1 of the Project.

#### Area C

Species	Form	Proposed no. of plants in Area C
<i>Aegiceras corniculatum</i>	Shrub (mangrove)	618
<i>Avicennia marina</i>	Shrub (mangrove)	255
<i>Bacopa monnieri</i>	Herb	2245
<i>Bridelia tomentosa</i>	Shrub	80
<i>Celtis sinensis</i>	Tree	91
<i>Commelina diffusa</i>	Herb	1369
<i>Cynodon dactylon</i>	Herb (grass)	Total area of ~97m <sup>2</sup> will be hydroseeded
<i>Cyperus malaccensis</i>	Herb	2188
<i>Eleocharis dulcis</i>	Herb	2184
<i>Ficus superba</i> var. <i>japonica</i>	Tree	38
<i>Hibiscus tiliaceus</i>	Tree	119
<i>Kandelia obovata</i>	Shrub (mangrove)	672
<i>Lindernia crustacea</i>	Herb	1319

Species	Form	Proposed no. of plants in Area C
<i>Macaranga tanarius</i>	Tree	51
<i>Melastoma sanguineum</i>	Shrub	96
<i>Philydrum lanuginosum</i>	Herb	1149
<i>Scaevola taccada</i>	Shrub	143
<i>Scirpus mucronatus</i>	Herb	1769
<i>Viburnum odoratissimum</i>	Tree	81

Notes:

1. This table includes the proposed plant list for the design of wetland and woodland habitats in Area C. The proposed tree species and numbers include both for the compensation of tree loss and the designed woodland habitat in Area C.
2. The sizes of all proposed plant species follow planting material requirement as specified in **Annex 4**.
3. The proposed tree species and number are for the compensation of tree loss under Contract 1 of the Project.
4. Tree *Macaranga tanarius* to be planted in higher area (as this species is less tolerant of flooding).

## Areas under Contract 2

Species	Form	Proposed no. of plants in areas under Contract 2
<i>Aegiceras corniculatum</i>	Shrub (mangrove)	25
<i>Celtis sinensis</i>	Tree	45
<i>Cinnamomum burmannii</i>	Tree	23 (including 9 trees for compensation for loss in vegetation due to works in Shek Wu Wai)
<i>Cleistocalyx operculatus</i>	Tree	20 (including 6 trees for compensation for loss in vegetation due to works in Shek Wu Wai)
<i>Clerodendrum inerme</i>	Shrub	1899
<i>Duranta erecta</i> *	Shrub	918
<i>Ficus variegata</i> var. <i>chlorocarpa</i>	Tree	14
<i>Ficus virens</i>	Tree	9 (including 4 trees for compensation for loss in vegetation due to works in Shek Wu Wai)
<i>Hibiscus tiliaceus</i>	Tree	60
<i>Ixora chinensis</i>	Shrub	347
<i>Kandelia obovata</i>	Shrub (mangrove)	25
<i>Ligustrum sinense</i>	Shrub	1018
<i>Litsea glutinosa</i>	Tree	19
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	Shrub	167
<i>Melastoma candidum</i>	Shrub	512
<i>Melastoma sanguineum</i>	Shrub	1965
<i>Rhaphiolepis indica</i>	Shrub	335
<i>Rhododendron simsii</i>	Shrub	734
<i>Rhodomyrtus tomentosa</i>	Shrub	2238
<i>Sapium sebiferum</i>	Tree	15
<i>Scaevola taccada</i>	Shrub	2003



Species	Form	Proposed no. of plants in areas under Contract 2
<i>Cynodon dactylon</i>	Herb (Grass)	Total area of at least 3809 m <sup>2</sup> will be hydroseeded
<i>Paspalum notatum</i> *	Herb (Grass)	

## Notes:

1. "\*" – Exotic species
2. The proposed tree species and number are for the compensation of tree loss under Contract 2 and 19 trees of which are compensation for the loss in vegetation due to works in Shek Wu Wai of the Project.
3. The newly planted compensatory tree individuals of the proposed tree species cannot be inundated under water for a prolonged period as their roots are less tolerate of flooding after the planting (e.g. to be planted at +3.0 or above).

## **Annex 4**

# **Landscape Softworks & Establishment Works (Areas A, B and C (Contract 1) and Areas under Contract 2): Specification**

## **Annex 4. Landscape Softworks & Establishment Works (Areas A, B and C (Contract 1) and Areas under Contract 2): Specification**

### **1 MATERIALS**

#### **1.1.1 Trees shall have the following characteristics:**

- a. Well-balanced branching head or well-defined straight and upright leader with branches growing out from the reasonable symmetric stem according to species;
- b. Well-developed vigorous root system;
- c. Stem diameter exceeding 75mm but not exceeding 150mm measured at a height of 1m from the root collar;
- d. Total height above the root collar exceeding 3500mm but not exceeding 6000mm;
- e. A rootball of at least 750mm in diameter and 400mm deep;
- f. Grown and supplied in a container at least 750mm in diameter and 600mm deep;
- g. Free of any pest, fungi and disease.

#### **1.1.2 Shrubs shall have the following characteristics:**

- a. Well-developed vigorous root system;
- b. Height above soil level not less than 300mm;
- c. Grown and supplied in a container at least 125mm in diameter and 150mm deep;

#### **1.1.3 Herbaceous plants shall have the following characteristics:**

- a. Well-developed vigorous shoots;
- b. Well-developed vigorous root system;
- c. Healthy and well-developed bulbs, corms, rhizomes or tubers,
- d. Grown by propagation or as seedlings and supplied in a container at least 125mm in diameter and 150mm deep;

#### **1.1.4 Grass seed**

- a. Supplied true to species and variety and shall not contain impurities except as stated in (b) below. The origin of all the seed and the supplier shall be stated on the containers;
- b. the quality of the grass seed shall be gauged by purity, germination percentage and freedom from weeds. The total weed seed content shall not exceed 0.5% by mass and the total content of other seeds shall not exceed 1% by mass. The germination capacity of each constituent of the mixture over a 7-day test period shall not be less than 80%, and the purity of the mixture shall not be less than 90%.

#### **1.1.5 Soil mix**

- a. Any additional soil mix shall be ready and evenly mixed before delivery onto the Site.
- b. Topsoil mix shall consist of friable, completely decomposed granite and soil conditioner in the proportions of 3:1 by volume. Soil-mix shall be free from grass or

weed growth, sticky clays, salt, stones exceeding 50mm in diameter, waste and other deleterious material.

- c. Any additional soil mix delivered and installed on the Site shall be tested for Nitrogen, Phosphorus and Potassium (N.P.K.) value, organic matter content, cation exchange capacity ratio, organic carbon, pH value, physical content of sand, silt and clay, and water content.

#### 1.1.6 **Soil Conditioner**

Soil conditioner shall be organic material and shall be free from impurities and substances injurious to plants. Soil conditioner shall have the following properties:

- a. pH value between 5.0 and 7.5;
- b. moisture content between 30% and 50%;
- c. fine and freely flowing consistency;
- d. carbon/nitrogen ratio between 25 and 70;
- e. organic matter content not less than 85% (dry matter);
- f. comprise stable composted material not liable to decompose further generating heat, or peat moss from a specified sustainable source to be approved by the Engineer.

#### 1.1.7 **Mulch**

Mulch is mainly used in the wooded area (including area of tree and shrub mixture and area of retained and (trans)planted trees). Mulch shall be a mixture of shredded bark and wood chips that are free from impurities and be heavy enough not to be blown or washed away.

Mulch for hydroseeding shall be a proprietary type approved by the Engineer and shall be a hydroseeding mulch manufactured from cellulose or paper-based materials.

#### 1.1.8 **Fertilizer**

Pre-planting fertilizer shall be 15:9:15:2 (nitrogen/phosphorus/potassium/ magnesium) slow-release granular fertilizer or an equivalent approved by the Engineer.

Post-planting fertilizer shall be 12:17:17 (nitrogen/phosphorus/potassium) granular fertilizer or an equivalent approved by the Engineer.

Hydroseeding fertilizer shall be 15:15:15 (nitrogen/phosphorus/potassium) or an equivalent approved by the Engineer.

Fertilizers shall be supplied in sealed waterproof bags under shelter away from water and direct sunlight.

#### 1.1.9 **Soil binder**

Soil binder shall be a proprietary type approved by the Engineer and shall consist of a binding medium applied in aqueous suspension by spraying onto the surface of the soil. The binding agent shall not be injurious to plant health.

#### 1.1.10 **Stakes and ties**

Bamboo tripod staking shall be used as a supplemental measures in soft planting areas for planted and (trans)planted trees. The staking shall comprise three nos. of 25mm diameter x 1800mm long bamboo poles secured to the tree as not to cause any chafing, running or abrasion of the tree or restrict its growth. No excess water shall be stored in the hollow of the bamboo tripod.

The bamboo tripod stakes shall be driven into the ground before planting as not to damage the rootball or aerial parts of the tree. The method of staking shall be subject to approval by the Engineer.

Ties shall be of dark colour and shall be of one of the following materials capable of adjustment after fixing. The ties shall be fitted with flexible rubber or plastic sleeves to prevent chafing, rubbing and abrasion of the plant.

- a. 5mm diameter rot-proof rope,
- b. 3mm overall diameter plastic coated wire, or
- c. 3mm diameter stainless steel braided wire with 20mm adjustable stainless steel screw clamp.

#### 1.1.11 **Protective fabric material (for hydroseeded areas)**

Protective fabric material for hydroseeded areas shall be a proprietary type of degradable fabric approved by the Engineer. The fabric shall not degrade within 100 days after application.

#### 1.1.12 **Notices and instruction**

In respect to the Landscape Work, the Contractor shall give forty-eight hours notice to the Engineer's Representative, of his intention to commence anyone of the following landscape works: soiling, setting out, planting, hydroseeding, fertilizing, visits to carry out Establishment Works.

The Contractor shall undertake any remedial Landscape Works within twenty-four hours of notice by the Engineer's Representative.

#### 1.1.13 **Materials Submissions**

The following particulars of the materials for landscape softworks and establishment works shall be submitted to the Engineer at least 14 days before the relevant work commences or before the materials are delivered to site, as agreed by the Engineer:

- a. origin of trees, shrubs and other plant materials;
- b. details of nurseries, together with access to nurseries to permit inspection of plant material prior to transfer to site;
- c. a certificate or a numbered seed analysis report for each grass seed mixture issued within 6 months before the date of use of the seed showing the species and variety of the seed, the date of testing and including results of tests for:

- percentage germination of pure seed in a fixed time under standard laboratory conditions;
  - percentage composition by weight including details of impurities.
- d. particulars of the proposed methods and materials for hydroseeding including:
- species and rate of application of grass seed;
  - type and rate of application of fertilizer, mulch and soil binder;
  - type and colour of dye;
  - type of protective fabric material;
  - details of the equipment to be used.
- e. a certificate of analysis for soil conditioner including details of the composition and results of tests for:
- pH value;
  - moisture content;
  - carbon/nitrogen ratio
- f. source of water for watering (except rainwater retained and re-used on site);
- g. a sample of mulch for inspection.

#### 1.1.14 **Samples of materials**

Samples of the following proposed materials shall be submitted to the Engineer at the same time as particulars of the materials are submitted:

- a. each seed mixture;
- b. individuals of each plant species;
- c. soil mix;
- d. soil conditioner;
- e. mulch;
- f. fertilizer; and
- g. tree stake, tie, tree guy or guying stake.

## **2 HANDLING, STORAGE AND TRANSPORT**

### 2.1.1 **Site nursery area**

A site nursery area shall be prepared within works areas of the Project or arranged outside the works area. The actual location of the site nursery depends on the construction programme and the space availability within the works area of the Project prior to the time of planting or transplanting, and this should be approved by the Engineer prior to any plant material being delivered to site. The site nursery area will comprise:

- a. a flat area with sufficient space to contain 10% of the container-grown/containerised stock at any one time;
- b. shade cloth or other cover to reduce exposure of plants to direct sunlight and wind;
- c. irrigation system; and
- d. other requirements as stated in the PS Clause 3.101.

Nursery area shall be kept free of weeds and any materials liable to be injurious to plant health.

#### 2.1.2 **Handling and transport of container-grown and containerised stock**

Container grown and containerised stock shall be well watered before despatch from the nursery and shall remain in the containers until required for planting.

Plants shall be wrapped and protected to prevent mechanical damage during lifting and transportation. The trunks from soil level to the lower branches of trees in the heavy standard category shall be securely wrapped to prevent moisture loss using hessian, straw or other material agreed by the Engineer. All plant material which is to be moved while in leaf shall be suitably covered and protected during transport to reduce transpiration.

#### 2.1.3 **Storage of container-grown and containerised stock**

Container-grown and containerised shall be stored upright in the nursery area in their containers until required for planting and regularly watered and checked for presence of parasites or disease.

#### 2.1.4 **Storage of trees and shrubs**

Trees and shrubs which are not immediately planted in their permanent positions shall be supported upright on the level ground. They shall be maintained with regular watering and in good condition.

#### 2.1.5 **Storage of grass seed, peanut residue and fertilizer**

Grass seed and peanut residue shall be stored in bags off the ground in a clean, dry, well-ventilated location free from vermin. Prolonged storage shall be carried out under controlled conditions of temperature and humidity.

Fertilizer shall be stored off the ground in sealed waterproof bags and shall be protected from exposure to conditions which may adversely affect the fertilizer.

### **3 PRE-PLANTING WORKS**

#### 3.1.1 **Preparatory works**

Before planting for landscape softworks and establishment works starts, preparatory works shall be carried out by the following methods:

- a. Weeds, rubbish, litter, stones exceeding 50mm diameter and all deleterious material shall be removed from the surface of the ground. Vegetation shall be removed without using herbicide unless permitted by the Engineer. If permitted, the herbicide shall be a proprietary type approved by the Engineer and shall be applied in accordance with the manufacturer's recommendations;
- b. Ground which is contaminated by oil, chemicals or other substances which in the opinion of the Engineer may affect plant growth adversely shall be excavated to 500mm below the contaminated depth and beyond the extent of the contamination. Voids left by excavation shall be filled with uncontaminated soil of the same type as existing.
- c. Soil mix shall be spread and levelled in planting areas of the ECA as follows:
  - Mix1: retaining the existing wetland soil;
  - Mix 2: a depth of < 500mm additional stockpiled wetland soil
  - Mix 3: subsoil and a depth of 500mm stockpiled wetland soil
  - Mix 4: soil mix to a depth of 500mm topsoil
  - Mix 5: subsoil and soil mix to a depth of 500mm topsoil
  - Mix 6: rubble stone lining
- d. The depth of uncompacted soil mix shall be sufficient to allow the level of the area to comply with finished levels after natural settlement has taken place.
- e. All soiled areas shall be cultivated to a minimum depth of 150mm. Pre-planting fertilizer or soil conditioner shall be spread to a thickness of 50mm over the surface before cultivation;
- f. Stones exceeding 50mm diameter shall be removed from the surface of the soil after cultivation;
- g. Placing and spreading of soil mix shall not take place during periods of heavy rains, nor when the soil mix is saturated. The Contractor shall be responsible for ensuring that the soil mix maintains its specified quality between the time after deposition and the planting operations;
- h. Any excess soil generated from planting pits and not used as backfill, water basins, or in establishing final grades shall be removed by the Contractor from the Site;
- i. Prepared ground shall be protected from compaction, erosion and siltation and shall not be used by construction plant and other vehicular and pedestrian traffic.
- j. Prepared ground which becomes compacted, eroded, silted or otherwise damaged shall be replaced or restored in accordance with methods agreed by the Engineer.
- k. Weeds, rubbish, litter, stones exceeding 50mm and other deleterious material shall be disposed of by the Contractor by methods agreed by the Engineer.

#### 4 PLANTING

Planting for landscape softworks and establishment shall be carried out as stated below.



#### 4.1.1 **Timing of Planting**

Unless otherwise permitted by the Engineer, planting shall be carried out during the wet season between March to October (wetland vegetation should be planted within March to August for ensuring their survival or the contractor should provide adequate watering to the vegetation if planted in late wet season) of the construction phase of the Project. During the period between planting and the commencement of establishment work, the Contractor shall perform all works for the healthy establishment of plants in accordance with the requirement of the specifications.

#### 4.1.2 **Use of Excavated Material**

Material excavated from planting pits which complies with the specified requirements for decomposed granite may be used for soil mix. Material excavated from planting pits which does not comply with the specified requirements for decomposed granite shall be disposed of by the Contractor and shall be replaced by material which complies with the specified requirements for decomposed granite.

#### 4.1.3 **Planting Pits**

Diameter of planting pits for heavy standard trees and shrubs should be respectively 200mm and 300mm greater than the rootball or container diameter. 150g and 50g of pre-planting fertiliser shall be mixed into the soil mix for planting heavy standard trees and shrubs respectively.

The planting pit size for herbaceous plants shall be 100mm greater than the plant's rootball or container diameter and 50mm deeper than their rootballs and containers.

Pits excavated for planting on or adjacent to slopes shall not be left open during wet weather.

#### 4.1.4 **Planting**

Plants shall be well watered and rootballs of heavy standard trees shall be thoroughly soaked with water for several hours before planting; the soil in the container rootball shall be moist and cohesive. Containers shall not be removed until the time of planting and the rootball shall not be disturbed by loosening or breaking. Planting time for the transplanted and planted trees, shrubs and herbs should be carefully programmed. The final dispatch of the aquatic plants should be arranged to coincide as closely as possible with the scheduled planting time for the aquatic vegetation, and they should be planted within two days of receipt.

Planting areas and planting pits for trees, shrubs and herbs should be accurately marked out before the actual planting work. At the time of planting aquatic herbs, water levels should be at or near the soil surface to facilitate the planting and avoid desiccation damage during the planting process.

Each plant shall be placed upright in the pit and set at the same level as planted in the container.

Soil mix shall be deposited and compacted in layers around the rootball until level with the surrounding ground in such a manner that the rootball is not disturbed. Aquatic plants should be planted and well firmed in the substrate so they are not prone to uprooting and do not float out when water levels are raised. All planted vegetation, especially for aquatic vegetation, shall be well watered to soak the rootball and soil mix immediately after planting.

Staking is not generally required but where, in the opinion of the Engineer, bamboo tripod staking is required for any planted or (trans)planted trees.

#### 4.1.5 **Mulching**

After planting and watering, mulch shall be spread to a consolidated thickness of at least 50mm on areas of bare ground except in Mix 1, 2 and 3 areas for the ECA where mulching is not required in the wetland habitats (i.e. open water, intertidal mudflat and brackish marsh) in the ECA.

### **5 HYDROSEEDING**

Hydroseeding for landscape softworks and establishment shall be carried out as stated below.

#### 5.1.1 **Timing of Hydroseeding**

Unless otherwise permitted by the Engineer, hydroseeding shall be carried out between March to October during the construction phase of the Project. If hydroseeding is permitted at other times, changes to the materials and methods of hydroseeding may be required and shall be submitted to the Engineer for approval.

#### 5.1.2 **Hydroseeding Cover**

Hydroseeding shall achieve a cover by grass species of at least 90% of the surface area of each 10 m<sup>2</sup> of the area to be hydroseeded within 100 days from the date of hydroseeding. The grass cover shall be healthy and vigorous and free from perennial and other weeds.

Tests to determine the grass cover shall be carried out 100 days after grassing and at the end of the period for establishment works. The grass shall be cut to a height of 300mm if necessary over the parts of the area to be tested.

The number of tests shall be as instructed by the Engineer, who will conduct the tests.

Tests shall be carried out at locations which in the opinion of the Engineer are representative of the grassed area as a whole. At each test location, an area of 10m<sup>2</sup> shall be marked.

The percentage of bare ground in each of the test area shall be measured and at least 90% of the test area shall be covered with grass.

If the result of any test for grass cover of landscape softworks and establishment works does not comply with the specified requirements for grass cover, the area shall be hydroseeded or broadcast seeded, depending upon the size and accessibility of the defective area.

#### 5.1.3 **Surface conditions for hydroseeding**

The surface to be hydroseeded shall be finished to a coarse open textured surface and shall not be smooth or glazed. Finishing work on slopes by machines shall be carried out across the slope. Vehicle track marks or other marks caused by construction machinery shall not be left parallel to the line of maximum gradient of the slope.

#### 5.1.4 **Application of hydroseeding**

Hydroseeding shall be carried out using a proprietary type of hydroseeding equipment to be approved by the Engineer.

Materials for hydroseeding shall be well mixed on the site in the hydroseeding equipment immediately before spraying, ensuring that the seed is not damaged.

Soil binders shall be applied at the rate recommended by the manufacturer, modified as necessary to suit conditions on site. Dye shall be used to demonstrate that adequate cover has been achieved, unless in the opinion of the Engineer runoff may result in watercourses becoming coloured to an unacceptable level.

The hydroseeding mixture shall be constantly agitated during spraying to keep it homogeneous and avoid blockage to pipes. Measures shall be taken during application to ensure that material is not lost due to runoff.

Walking on hydroseeded areas shall be restricted to access for fixing protective material and for patching up.

The area to be treated shall be moistened immediately prior to hydroseeding. After spraying the seeds, the Contractor shall water the hydro seeded areas as often as is required to keep the ground evenly moist.

#### 5.1.5 **Protective material**

Areas which have been hydroseeded shall be covered with protective material within two days after hydroseeding. The material shall be spiked or stapled to the soil surface with a minimum 150mm overlap.

#### 5.1.6 **Patching up**

Immediately after germination and a general greening is apparent, areas where in the opinion of the Engineer germination has been unsuccessful shall be resprayed. Areas affected by repairs to washout and gullies and other erosion on slopes shall be resprayed.

Areas which in the opinion of the Engineer are not accessible or are too small for the use of a hydroseeder may be patched up by broadcasting seed. The area shall be lightly scarified with a rake or similar implement and the seed and fertilizer shall be broadcast over the area at a rate of not less than 75g/m<sup>2</sup>. The seed shall be covered by lightly working into the surface or by spreading sufficient soil just to cover the seed. Broadcast seeding shall be carried out using *Cynodon dactylon* in Areas "Marsh BM/D" and "Marsh BM/E" in the ECA.

#### 5.1.7 **Post-planting fertilizer**

Post-planting fertilizer shall be applied between 1 and 5 months after application of hydroseed and, unless otherwise permitted by the Engineer.

### **6 ESTABLISHMENT WORKS**

Establishment works shall be carried out for the period specified in the Contract and as stated below. All necessary measures shall be taken to ensure that grass, trees and other plants become established and to keep the landscape softworks tidy and free from litter and rubbish.

#### 6.1.1 **Inspection of establishment works**

An inspection of landscape softworks and establishment works shall be carried out jointly by the Contractor and the Engineer at monthly intervals to determine the establishment works which are required. The Engineer shall instruct the Contractor to carry out establishment works which in the opinion of the Engineer are necessary; the work instructed shall be completed within 14 days of the Engineer's instruction unless otherwise agreed by the Engineer.

#### 6.1.2 **Replacement of plants and grass**

Plants which in the opinion of the Engineer are dead, dying or otherwise unsatisfactory shall be replaced. Replacement planting shall be carried out in the wet season and regular monitoring on the survival and establishment rates of these replaced plants shall be carried out in early planting period. Plant material should be of a similar size to that already established. Measures shall be taken to ensure satisfactory establishment of the replacement plants before the end of the period for establishment works.

90% cover of the grass area shall be maintained throughout the period for establishment works and the grass shall provide effective cover of 90% of the area at the end of the period for establishment works. The grass shall be healthy, vigorous and free from perennial and other weeds. Areas which in the opinion of the Engineer are unsatisfactory shall be reseeded by hydroseeding or broadcasting. Measures shall be taken to ensure satisfactory establishment of the replacement grass before the end of the period for establishment works.

#### 6.1.3 **Stakes and ties**

The Contractor shall be responsible for the security of any stakes and ties throughout the establishment period. An inspection of stakes and ties shall be carried out each month by the Contractor; broken, damaged and other unsatisfactory stakes and ties shall be replaced; ties which are causing chafing or abrasion to the plant shall be adjusted; ties and stakes which are no longer required shall be removed.

#### 6.1.4 **Firming up plants**

Plants which become loose as a result of wind rock, soil erosion or activity of water shall be firmed up. The Contractor shall inspect the Site regularly for this purpose and after each storm or typhoon, to assess damage, which shall be reported to the Engineer. Any damaged branches shall be carefully pruned or as required by the Engineer.

#### 6.1.5 **Watering**

Fresh water shall be used for watering landscape softworks (i.e. woodland of tree and shrub planting and wooded area of retained and (trans)planted trees). Water shall be applied using a rose or a sprinkler of a type agreed by the Engineer and in such a manner that compaction, washout of soil and loosening of plants will not arise; any damage resulting shall be made good immediately.

All planted areas shall be watered as required to ensure successful establishment of the plants. Plants reaching permanent wilting point shall be watered immediately.

Grass areas shall not be watered.

#### 6.1.6 **Weeding**

All grassed and planted areas shall be kept free from weeds throughout the period for establishment works. Any unwanted plants including *Mikania micrantha* found within the Site is considered as weeds and shall be removed by the Contractor once it is identified or when instructed by the Engineer throughout the period for establishment works.

Weeding shall be carried out by hand or by mechanical methods agreed by the Engineer in such a manner that damage to the grass and planted areas will not be caused. All weeds, litter and other rubbish resulting from the weeding operation shall be disposed of by the Contractor.

Planted areas in bare ground shall be weeded to remove all unwanted vegetative growth, including both aerial parts and roots, over the complete area. Planted areas other than in bare ground shall be weeded to remove all competing and overhanging vegetative growth by cutting the growth down to 50mm above soil level.

#### 6.1.7 **Pruning**

Pruning will generally be required only in order to remove dead, dying or damaged stems or to keep open paths.

Pruning and removal of branches shall be carried out using sharp, clean implements. Pruning shall be carried out with the cut just above and sloping away from an outward facing healthy bud. Removal of branches shall be carried out by cutting outside of a line drawn between the branch bark ridge and the branch collar in such a way that no part of the stem is damaged or torn, leaving no snags or stumps. All cuts shall be made to avoid splintering or tearing of bark that would catch water and encourage rot, and cracks, cavities or rotten wood shall be cut back with a clean, sharp implement to remove the dead, damaged and decayed tissue without damaging the living tissues. Topping shall not be carried out in any circumstances.

#### 6.1.8 **Grass cutting**

Grassed areas close to and within the proposed wooded area shall be cut by manual or mechanical methods agreed by the Engineer and in a manner that does not cause pulling of roots or damage to planting in or near the grassed area. All cuttings shall be raked off and disposed of within 24 hours after cutting.

All litter exposed by grass cutting shall be gathered up and disposed of within 24 hours. Care must be taken to ensure that grass cuttings placed in open water areas of the ECA do not contain any litter.

#### 6.1.9 **Post-planting fertilizer**

Post-planting fertilizer shall be applied in the proposed wooded area, as instructed by the Engineer. The fertilizer shall be applied at a rate of:

- a. 100g for each heavy standard tree;
- b. 50g for each shrub;
- c. 40g/m<sup>2</sup> on grassed areas.

#### 6.1.10 **Control of pests and diseases**

The Contractor shall regularly check for any insect attack or fungal infestation particularly during known period of activity. The Contractor should bring to the attention of Engineer any incidents of pests and diseases damaging or threatening planting areas. The Engineer will instruct appropriate treatment, including use of pesticide and fungicide to be applied in accordance with manufacturer's recommendations, at his discretion. The Contractor shall not utilize any herbicide, pesticide or fungicide without the express approval of the Engineer.

#### 6.1.11 **Mulching**

All mulch which is disturbed by replacement planting, weeding and watering shall be made good. Additional mulching shall be carried out if instructed by the engineer.

#### 6.1.12 **Completion of work**

Immediately before the end of the establishment works:

- a. All tree, shrub and herb planting shall be free of weeds;
- b. All areas shall be free of litter;
- c. All replacement planting and patching up of grass shall be completed;
- d. All unnecessary stakes and ties shall have been removed and any remaining shall be secure; and
- e. All grassed areas shall be cut.

### **7 TREE TRANSPLANTING**

In any cases where in-situ preservation of existing trees are not feasible due to engineering / construction design concerns, existing trees should be relocated / transplanted to other permanent locations (on site or off site) as far as practicable. Tree transplanting work shall be carried out as specified in the Contract and as stated below (*Note: the following specification of tree transplanting work is established based on local horticultural practices. Implementation of any different preparation and transplanting work from the following specification with that specified in other specification or guidelines under this Contract should require further agreement and approval by the Engineer or a qualified person (such as a Certified Arborist) prior to the commencement of the transplanting work*) :

#### 7.1.1 **Tree Preparation Before Transplanting**

- a. Before transplanting, crown cleaning shall be performed to remove any dead, diseased or damaged branches in the presence of a Certified Arborist.
- b. Root pruning shall be performed in spring or the growing season to allow rapid regeneration of new roots from the cuts. The idea of root pruning is to dig a small trench (to a size of 200 – 300mm wide) around the tree to be transplanted at a radius smaller than the radius of the final root ball. Roots shall be pruned using a sharp spade or knife or similar sharp implement to prevent tearing or breaking of the roots.
- c. The tree then produces many new roots from the cuts, producing a more densely rooted ball. Sometimes the procedure (trenching) has to be done more than once to

maximise root density, in such case the second cut would be out farther than the first, and the final ball would be out farther yet.

- d. Root pruning shall be performed at least 4 months prior to lifting the trees to allow time for new root growth.
- e. The diameter of the root ball to be prepared shall be 7 times the trunk diameter at breast height, and not less than 1,500mm diameter, and 600 – 750mm deep. However, the actual root ball should be adjusted by the sizes and species of the subject trees, and the actual site condition.
- f. Crown thinning should be performed as instructed by the Engineer or a qualified person (e.g. a Certified Arborist) to reduce water loss due to transpiration. The overall form and natural shape of the tree crown shall be kept to preserve a balanced tree form and the character of the tree species.
- g. The tree should be secured with guying and/or stakes as specified in this Annex prior to each root pruning/trenching.
- h. After root pruning, the trench shall be backfilled with top soil or peat moss and the root ball shall be watered thoroughly to encourage new growth of root tips.
- i. After performing root pruning, the tree shall be inspected at least monthly to monitor the health condition of the tree.

#### 7.1.2 **Uplifting/Moving**

- a. Before moving, lower branches of the tree should be tied to prevent injury or breaking. The branches should not be tied so tightly that a sharp bend is created that could compress the tissues or break the limbs.
- b. Cut a new trench outside the first (or the latest one) to free the soil ball as well as the roots.
- c. While digging the trench, avoid standing on the root ball as the edge of the ball could break down and damage the roots.
- d. Once the ball has been dug to the desired depth, it can be shaped; the ball should taper on the sides, slanting inwards toward the base.
- e. The ball should stand on a pedestal of soil for shaping and burlapping before it is undercut. The tree should be additionally protected if it has to be transported for a distance. The trunk should be well padded to protect from injury. The crown of the tree should be loosely wrapped with a tarp or burlap to minimize drying and wind damage. The supporting guys/stakes shall be removed from the tree after burlapping.
- f. Any trees uplifted shall be transplanted and watered the same day. Lifting and transplanting operations shall be carried out only following a period of consistent rainfall which has thoroughly watered the trees or a thorough watering by the Contractor.

#### 7.1.3 **Replanting**

- a. Trees transplanted directly to the receptor sites are to be planted in accordance with the CEDD General Specifications and Section 4 of this Annex.
- b. Trees transplanted to holding nursery shall be containerized prior to transporting using root ball containers.

#### 7.1.4 **Inspection and Maintenance**

- a. The Contractor shall maintain a complete photographic record of the entire transplanting operations at various stages of work.
- b. The transplanted trees shall be inspected at least monthly for at least a period of 12-month of the post-transplanting/establishment period to monitoring the growth and health condition of the tree. Unsuccessful transplanting shall be compensated by replacement planting in accordance with Clause 6.2 of this Annex.

### **8 TREE PROTECTION**

All existing trees within the construction site should be protected in accordance with the General Specification with measures as summarized below:

#### 8.1.1 **Preparation and Survey**

- a. Limits of site clearance shall be agreed with the Project Engineer.
- b. Tree surveys shall be carried out to cover all existing trees within the site, or within 2m from the site boundary and other trees likely to be affected, with records submitted to the Engineer for application of tree felling (if necessary) to LandsD.
- c. The Site shall be marked with labelling or marking system to identify trees of different status / proposed treatment (fell/ retain/ transplant).

#### 8.1.2 **Protection Measures for Trees to be Retained In-situ**

- a. A Tree Protection Zones (TPZ) should be set up for all existing trees to be retained at their original locations as far as possible. The TPZ should include an area of a perimeter defined by the dripline (the imaginary vertical plumb line that extends downward from the tips of the outermost tree branches and intersects the ground) of the tree.
- b. For a tree growing on a retaining structure/ wall, the tree protection zone should encompass the body of the tree itself and 2m above the tree crown as well as the vertical and horizontal surfaces of the retaining structure/ wall, covered by the tree roots together with the space up to 2m behind those surfaces.
- c. Protective fencing should be erected around the TPZ of all retained/preserved trees as far as possible during construction.
- d. Provide temporary protective Hessian armoring around the tree trunks to protect the preserved trees if erection of protective fencing is not practicable.
- e. Provide additional protection including laying on top of the temporary protective mulching of double, overlapping, thick metal sheet coverings, wood chips, or other



materials to protect from soil compaction due to passage or parking of vehicles or operation of equipment or machinery.

#### 8.1.3 **Protection of Trees from Machinery Damage**

- a. No fencing, services, or signs other than the identification labels or markings required shall be attached to any part of the trees.
- b. No trees shall be used as anchorages for ropes or chains used as guying or pulling, or for any other purposes.

#### 8.1.4 **Protection of Trees from Damage by Waterlogging**

- a. Excessive water shall be drained away from the TPZs to prevent damage to tree roots by asphyxiation.

#### 8.1.5 **Protection of Trees from Chemical Damage/Poisoning**

- a. Petrol, oil, bitumen, creosote, cement and other materials likely to be injurious to the trees shall be kept away from the TPZs, and any accidental spills of these materials shall be cleaned up immediately.
- b. Herbicides containing injurious ingredients such as sodium chlorate that can leach through soil shall not be used.
- c. For the slope of the ground, allowance shall be made to prevent damaging materials such as concrete washings and diesel oil from running towards the preserved trees.
- d. Alkaline clay or limestone shall not be used for filling or paving; concrete shall be mixed on a thick plastic tarpaulin, and mixing trunks shall not be rinsed out on site, so as not to change / not to increase the soil pH.
- e. All building debris and chemical wastes shall be hauled away from proper disposal, and shall not be burned on site or be disposed of by pouring them on the soil within the site.

#### 8.1.6 **Prohibition of Activities within Tree Protection Zones (TPZs)**

- a. No passage or parking of vehicles and no operation of equipment or machinery shall take place within the TPZs.
- b. No stripping of surface vegetation or top layer of soil and no paving or earth filling shall be carried out within the TPZs.
- c. No fires shall be lit within the TPZs or in a position where the flames will likely extend to the foliage, branches or trunks of the trees.
- d. No concrete mixing, gas tank filling, paintbrush and tool cleaning, or equipment maintenance shall be carried out within the TPZs.
- e. Align all routes of the overhead services within the site and all access routes to the site or within the site away from the preserved trees as far as possible.

- f. No soil, materials, equipment or machinery shall be stockpiled or stored within the TPZs.
- g. Altering of ground levels within the spread of the preserved trees shall be avoided.

#### 8.1.7 **Site Inspection and Tree Maintenance**

- a. Conduct regular site monitoring by certified arborist(s) to identify any preserved trees suffering from structural defects or having decaying symptoms.
- b. Remove dangerous parts of the trees that may potentially fall down.
- c. Provide routine care including watering and/or pruning.
- d. Remove creepers, parasitic plants and foreign objects (e.g. posters) from the trees.

**Schematic drawing of the Tree Protection Zone (TPZ) for protecting existing trees or tree to be transplanted. Depends on the actual construction site conditions, TPZ will be erected for individual trees or groups of trees.**

