

West New Territories (WENT) Landfill Extension

TRANSPLANTATION & MANAGEMENT PLAN

Sep 2025

PREPARED BY:

OTHERLAND LIMITED



Environmental Protection Department
2nd floor, West Wing
Island West Transfer Station
88 Victoria Road
Kennedy Town
Hong Kong

Your reference:

Our reference: HKEPD259/50/110787

Date: 29 September 2025

Attention: Ms Kins Lo

BY EMAIL & POST
(email: wklo@epd.gov.hk)

Dear Sirs

Quotation Ref. 23-02230
Provision of Independent Environmental Checker Consultancy Services for
West New Territories Landfill Extension
Transplantation and Management Plan (September 2025)

We refer to email of 29 September 2025 from Hong Kong Resources Recovery Park attaching the Transplantation and Management Plan (September 2025) of the captioned.

We have no comment and hereby verify the captioned plan in accordance with Clause 2.6 of the Environmental Permit (EP No.: EP-393/2010/A) and Further Environmental Permit (FEP No. FEP-01/393/2010/A).

Should you have any queries, please do not hesitate to contact the undersigned or our Mr Ricky Lau at 2618 2831.

Yours faithfully
ANewR CONSULTING LIMITED

James Choi
Independent Environmental Checker

CPSJ/LCCR/thy

Our Ref: TCS01325/23/300/L0144a

Hong Kong Resources Recovery Park
29/F China Overseas Building,
139 Hennessy Road, Hong Kong

Attn: Mr. Kenneth Lau

29 September 2025
By email

Dear Sir,

Re: Contract No. EP/SP/186/21
West New Territories Landfill Extension (WENTX)
ETL's Certification letter for Transplantation and Management Plan (September 2025)
(Condition 2.6 of EP-393/2010/A and FEP-01/393/2010/A)

With reference to the Transplantation and Management Plan (September 2025), we hereby certify this submission in accordance with Condition 2.6 of EP-393/2010/A and FEP-01/393/2010/A, as conforming to the information and recommendations contained in the approved EIA report (Register No.: AEIAR-147/2009).

Should you have any queries or require further information, please feel free to the undersigned at Tel: 2959-6059 or Fax: 2959-6079.

Yours sincerely,
For and on Behalf of
Action-United Environmental Services & Consulting



Tam Tak Wing
Environmental Team Leader

cc

ANewR (IEC)

Mr. James Choi

By e-mail

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1 Introduction

1.1 Background

- 1.1.1 The West New Territories Landfill Extension (WENTX) comprises the development of a municipal solid waste landfill that covers a landfilling area of about 94 ha with an estimated void space (landfill capacity) of 76M m³, including the site formation and phased development of the landfill; provision of landfill infrastructure and facilities for landfilling operation; provision of leachate management system; provision of LFG management system; restoration of the landfill, aftercare of the landfill facilities for a period of 30 years following the completion of restoration works.
- 1.1.2 Environmental Protection Department (EPD) commissioned Hong Kong Resources Recovery Park (HKRRP) in August 2023 to carry out design, construction and operation of Contract No. EP/SP/186/21 – West New Territories Landfill Extension (WENTX). Relevant background information and an organizational chart presenting the relationships between the roles in this project are provided in **Appendix H**.

1.2 Objective

- 1.2.1 WENTX is a designated project under the Environmental Impact Assessment Ordinance (EIAO). The Environmental Impact Assessment (EIA) Report (Registration. No. AEIAR-147/2009) was approved under the Environmental Impact Assessment Ordinance (EIAO) on 20th November 2009. The Environmental Permit (EP) for WENTX was granted on 3rd June 2010 (Permit No. EP-393/2010). Variation of an Environmental Permit (VEP) was applied under the EIAO on 8th July 2022 due to enhancement of the WENTX scheme recommended after the EIA stage. The VEP (EP No: EP-393/2010/A) was subsequently granted on 29th July 2022. The Further Environmental Permit (FEP) (FEP no.: FEP-01/393/2010/A) was granted to HKRRP on 6th October 2023.
- 1.2.2 The purpose of this Transplantation and Management Plan (TMP) is to fulfil the Condition 2.6 under the EP No: EP-393/2010/A (EP) and FEP-01/393/2010/A (FEP)., and shall be submitted for approval to the Director at least 1 month before the commencement of construction of the Project. The TMP shall contain at least the details of transplantation, including the transplanting location and procedures of plants of conservation interest to be affected by the Project shall be included.

1.3 Statutory and Technical Guidelines

- 1.3.1 In preparation of the Report, reference has been made to the following practice notes, publications, and technical circulars:
- Forests and Countryside Ordinance (Cap. 96);
 - Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586);
 - Development Bureau (DEVB) Technical Circular (Works) No. 6/2015 – Maintenance of Vegetation and Hand Landscape Features;
 - Agriculture, Fisheries & Conservation Department (AFCD) Nature Conservation Practice Note No. 02 (Rev. Jun 2006) – Measurement of Diameter at Breast Height (DBH);
 - Agriculture, Fisheries & Conservation Department (AFCD) Publication – 'Rare and Precious Plants of Hong Kong' (2004);

- Agriculture, Fisheries & Conservation Department (AFCD) Publication – 'Check List of Hong Kong Plants' (2004);
- General Guidelines on Tree Pruning, Dos and Don'ts in Pruning, Tree Care during construction, and other relevant information promulgated by DEVB;
- Guidelines for Tree Transplanting promulgated by DEVB;
- Guidelines for Tree Risk Assessment and Management promulgated by DEVB;
- Proper Planting Practices promulgated by DEVB;
- Standing Interdepartmental Landscape Technical Group (SILTECH) Publication – 'Tree Planting and Maintenance in Hong Kong' (Webb, 1991);
- General Specification for Civil Engineering Works, 2006 Edition, Environment, Transport and Works Bureau Technical Circular (Works) No. 11/2004 – Cyber Manual for Greening.

2 Methodology

2.1 General

- 2.1.1 As recommended in EM&A Manual Section 10.3, the feasibility and suitability of transplanting the affected plant species of conservation interest will be carefully studied and suitable receptor sites will be identified by the transplantation scheme, and the site selection and propagation and transplantation methods shall be reviewed and followed. The transplantation works shall be conducted by a qualified botanist/ecologist.

2.2 Existing Location of Plant Species of Conservation Interest to be Transplanted

- 2.2.1 According to the EIA Report, four plant species of conservation interest within the Project were found and directly impacted by the WENT Landfill Extension in June 2009. However, during the latest field survey in January 2024, only three groups of *Nepenthes mirabilis* (Pitcher Plant) could be found, and the remaining mentioned plants were not located. The locations of the plant clusters of Pitcher Plant are demonstrated in **Appendix A1**. The photo records are shown in **Appendix B**. Plant schedule for each tagged plant is found in **Appendix D**. For *Ixonanthes reticulata* recorded at Tsang Kok Stream from the above mentioned VEP were not found during the survey in Jan 2024. . If *Ixonanthes reticulata* is found in the future / other plants of conservation interest will be identified during the landscape survey to be conducted for the separate Landscape Plan and will be affected by the Project, further assessment will be carried out to review the feasibility of transplantation.

Nepenthes mirabilis					
Location	Tag No.	Spread (m)	Health condition	Suitability for transplantation	Note
			Good/Average/Poor	High/Medium/Low	
Bunch 1	PP01	0.5	Average	Medium	at/near permanent watershed
	PP02	0.5	Average	Medium	at/near permanent watershed
	PP03	0.5	Average	Medium	at/near permanent watershed
	PP04	0.5	Average	Medium	at/near permanent watershed
	PP05	0.5	Average	Medium	at/near permanent watershed
	PP06	0.5	Average	Medium	at/near permanent watershed
	PP07	0.5	Average	Medium	at/near permanent watershed
	PP08	0.5	Average	Medium	at/near permanent watershed
	PP09	0.5	Average	Medium	at/near permanent watershed
	PP10	0.5	Average	Medium	at/near permanent watershed
	PP11	0.5	Average	Medium	at/near permanent watershed
	PP12	0.5	Average	Medium	at/near permanent watershed
	PP13	0.5	Average	Medium	at/near permanent watershed
	PP14	0.5	Average	Medium	at/near permanent watershed
	PP15	0.5	Average	Medium	at/near permanent watershed
	PP16	0.5	Average	Medium	at/near permanent watershed
	PP17	0.5	Average	Medium	at/near permanent watershed
Bunch 2	PP18	1.0	Average	Medium	at/near permanent watershed
	PP19	1.0	Average	Medium	at/near permanent watershed
	PP20	1.5	Average	Medium	at/near permanent watershed
	PP21	1.0	Average	Medium	at/near permanent watershed
Bunch 3	PP22	3.0	Average	Medium	Located in mixed shrubland, at/near permanent watershed
	PP23	3.0	Average	Medium	Located in mixed shrubland, at/near permanent watershed
	PP24	2.0	Average	Medium	Located in mixed shrubland, at/near permanent watershed
	PP25	2.5	Average	Medium	Located in mixed shrubland, at/near permanent watershed
	PP26	2.5	Average	Medium	Located in mixed shrubland, at/near permanent watershed
	PP27	2.5	Average	Medium	Located in mixed shrubland, at/near permanent watershed

2.2.2 Meanwhile, according to the VEP document, *Aquilaria sinensis* and Bamboo Orchid were no longer found within the Enhanced Scheme. *Gnetum luofuense* and *Diospyros vaccinioides* were newly recorded in the current review. However, *Gnetum luofuense* is a woody climber that is not feasible for transplantation. Regarding *Diospyros vaccinioides*, based on the subsequent site inspection, it was observed that these shrubs grow among the boulders of the stream, making it impractical to form a proper root ball for transplanting. Therefore, it is recommended not to transplant both *Gnetum luofuense* and *Diospyros vaccinioides*. Regarding the loss of *Gnetum luofuense* and *Diospyros vaccinioides* which had been surveyed in Tsang Kok Stream, additional whips will be planted to compensate the loss. 20 nos. of *D. vaccinioides* whips will be planted at Stream B next to the receptor site of *Nepenthes mirabilis*.

2.2.3 Since only the Pitcher Plant could be found and feasible to be transplanted, the report only includes the transplantation method for the Pitcher Plant.

2.3 Transplantation Method of Pitcher Plant

- 2.3.1 Local successful experience of *Nepenthes mirabilis* (Weatherhead, undated), including site selection and propagation and transplantation methods were reviewed and shall be followed. A suitably qualified botanist/ecologist with at least 3 years of experience in successful transplanting of rare, protected species, shall supervise the whole transplanting process. Their qualification and prior project experiences will be submitted to AFCD for review and comments and to EPD for approval before the commencement of the transplanting works.
- 2.3.2 Monthly monitoring reports shall be prepared by the appointed qualified botanist/ecologist for the Pitcher Plants at the temporary nursery and receptor site and submitted to AFCD for record. The reports shall include but not be limited to the general weather and nursery condition, physical (height & spread) and health conditions (e.g. vigour of foliage, any pest & disease etc.) of the Pitcher Plants, maintenance records, and recommendations/ contingency measures implemented/to be implemented (if any). All maintenance activities, site conditions and all individual plants shall be photographed and recorded in the monitoring reports. The tentative transplantation programme is shown in **Appendix C**.
- 2.3.3 The recipient site chosen for the transplantation shall closely resemble the original habitat in terms of its range and nature, which includes being in the NWNT (Natural Woodland and Grassland Type), characterised by granitic rock formations and proximity to a permanent stream. It is important to ensure that the associated plant species present in the shrubland and grassland of the recipient site are similar to those found in the original habitat. There is also an existing colony of Pitcher Plants adjacent to the receptor site, indicating the site conditions are likely suitable for Pitcher Plants. One potential location identified for the transplantation is indicated in **Appendix A1 and Appendix A2**. The three bunches of *Nepenthes mirabilis* were located in open areas which were generally flat and near the watershed. The identified receptor site at Stream B demonstrated similar characteristics as the donor sites in terms of sun exposure, landform, altitude, and vicinity to all-season water bodies. In addition, next to the proposed receptor site, another existing colony of *Nepenthes mirabilis* was found which proved the area was suitable for the natural growth of *Nepenthes mirabilis* without the need for artificial maintenance. The photo references of *Nepenthes mirabilis* next to the proposed receptor site along stream B is shown in **Appendix A3**.
- 2.3.4 The Pitcher Plants will be transplanted through root ball transplantation. Node cutting method will only be adapted as contingency plan.
- 2.3.5 Prior to commencing transplantation activities, it is necessary to obtain permission from the AFCD in accordance with the Forestry Countryside Ordinance (Cap. 96). Cutting and shaping the rootball shall be performed manually. As part of the process, a trial planting of approximately 5-10% of the total number of Pitcher Plants to be transplanted will be carried out to assess the survival rate in the receptor site before proceeding with planting the remaining individuals. It is recommended that the monitoring period for the trials shall be about 6 months, which covers / partly covers both the wet and dry seasons. During the trial planting, monthly inspection by a qualified botanist/ ecologist shall be conducted to monitor the health condition of the trial planting and its adaptation to the receptor site.
- 2.3.6 Care shall be taken when moving the plants to the final location. The ideal timeframe for conducting the transplantation to the plant receptor site is between March and July. Measures, such as carefully wrapping the foliage and branches, shall be considered to minimise potential drying and wind damage during the transportation process. Pitcher plants will be watered one day prior to transplanting.
- 2.3.7 Prior to the transplantation process, it is essential to prepare the receptor site in advance. To minimise

potential disruptions to the receptor site, appropriate fencing shall be installed to prevent unnecessary human interference or damage at least one month before transplantation. Qualified ecologists/botanists shall inspect the receptor sites before any clearance activities. If flora species of conservation importance are identified at the receptor site, they shall be clearly labelled and fenced off to ensure their protection before any site clearance takes place. Vegetation clearance shall only be carried out to the bare minimum if deemed necessary. It is crucial to avoid the use of heavy machinery during the removal of detrimental materials and vegetation to prevent disturbances to the natural environment. Any existing topsoil that is ploughed during the digging process shall be carefully stripped and set aside for potential reuse. This helps prevent a distinct boundary between the planting pit and the surrounding soil.

- 2.3.8 The width and depth of the planting hole shall be determined by the depth and firmness of the rootball and other characteristics of the receptor site. The depth of the planting hole shall not exceed the depth of the rootball. The width of the planting hole shall be two to three times the width of the rootball at the surface. The soil directly beneath the rootball shall be undistributed or prepared to prevent settling. In addition, soil must be kept as much as possible to avoid damaging the roots as far as practicable when digging out the Pitcher plants from the donor site.
- 2.3.9 The plant shall be placed in the same orientation from which it originated. All rootball supporting materials shall be removed from the planting hole before final backfilling. Any branches damaged during transit shall be properly pruned back to the nearest branch bark ridge.
- 2.3.10 When the rootball is set into the planting pit, the top surface of the rootball shall not be below the surrounding soil. The backfill soil shall be reinstated and settled in layered sections to limit future settling and prevent air pockets. It shall not be compacted to a density that inhibits root growth.
- 2.3.11 The backfill soil shall be tamped lightly. Water shall be added to the rootball and the backfill to bring the rootball to field capacity. Where appropriate, a soil saucer can be formed on the soil surface around the edge of the rootball circumference to permit rain and irrigation water to be retained and slowly infiltrate into the rootball perimeter.
- 2.3.12 The disposal method for green waste generated during transplantation operations shall be referred to **Appendix G**.
- 2.3.13 The transplantation process shall be completed before next May, within the same wet season, to maximize the chances of plant survival. The tentative transplantation programme is shown in **Appendix C**.
- 2.3.14 The following are the pre-planting preparation works that shall be conducted:
 - a. All tools for cutting the plant / root ball shall be sharp and be cleaned and sterilised before use.
 - b. On-site temporary nursery shall be set up before transplantation as shown in **Appendix A**. Sufficient area shall be provided to accommodate the individual plants. Suitable temperature, moist content, air flow and light intensity shall be provided whenever necessary by the use of sun screening, lighting, fan, humidifier or air-conditioner. Basic information of these equipment and facilities can be found in Appendix F. The Pitcher Plants transplanted from the donor site will be kept and properly maintained in the temporary nursey for at least one month or until their auxiliary roots have been established before transplanting to the receptor site. The maintenance schedule for the temporary nursery is shown in **Appendix E**.

- c. Location of the receptor for each transplanted individual shall be identified and marked before transplantation. Sufficient spacing between transplanted individuals shall be provided to allow healthy growth of the plants. Receptor sites with similar content to the donor site in terms of sun exposure, soil moist content and soil texture shall be selected.
- d. Weeds, rubbish, litter and all deleterious material shall be removed from the surface of the ground in the destined receptors. Vegetation that will shade the transplanted individuals might be cleared without using herbicide. Vegetation clearance will be kept to the bare minimum when deemed necessary. To preserve the natural environment, the use of heavy machinery shall be avoided when removing harmful materials and conducting vegetation clearance.
- e. Existing soil in the donor / receptor site shall be used directly for transplanted individuals if it is not contaminated. Compost or organic mulching shall be added when considering the existing soil has low organic content.
- f. Ground that is contaminated by oil, chemicals or other substances, which may affect plant growth adversely, shall not be deemed an appropriate receptor site. A suitable alternative receptor site shall be found.
- g. Scarifying shall be carried out by loosening the soil to a depth of between 10 mm and 20 mm using a pronged implement such as a rake but without turning the soil.
- h. Prepared ground shall be protected from compaction, erosion and siltation and shall not be used by construction plants, other vehicles or pedestrian traffic. The area shall be cordoned off to restrict unnecessary access and construction activities. Signage boards shall be erected to notify any by-passer or workers for site protection. If soil erosion or siltation is noted, mitigation measures shall be conducted as assessed and suggested by the engineer.
- i. For root ball digging method, only hand tools such as hand trowel and spades will be used for digging out the individual root ball of each Pitcher Plant. The root ball shall contain the root system of each plant as much as possible. To avoid drying of the root ball soil, all the individuals will be uplifted and transported to the temporary nursery on the same day, and the newly created root ball shall be kept moist and shaded during the entire transplanting process.
- j. In the temporary nursery, each uplifted plant shall be planted in a container pot of not less than 200mm depth and 200mm diameter. Existing soil from the donor/receptor site shall be used as far as possible.
- k. The potted plants will be transplanted to the permanent receptor site only when the supervising qualified botanist/ecologist considers that the plant health and root system are in good condition. 5-10% of individuals in good condition will be selected for trial transplantation to the permanent receptor site to review the adaptability to the new environment.
- l. A new hole 2-3 times wider than the root ball shall be prepared at the receptor site before transplanting the Pitcher Plants from the temporary nursery. The plants shall be placed in the hole properly and backfilled with the original soil, tamping down gently to remove air pockets, and lastly, water thoroughly and monitor the health as scheduled.

2.3.15 The location of the temporary nursery is shown in **Appendix A1 & Appendix A2**.

- 2.3.16 In the temporary nursery, the potted Pitcher Plants from the donor site shall have a proper watering programme as part of the daily maintenance work. Care shall be taken to ensure that roots will not grow kinked or girdled. The nursery shall be properly fenced off with appropriate signage at clear locations to ensure minimal disturbance at the nursery. The Pitcher plants kept at the temporary nursery will be monitored monthly by the qualified botanist/ ecologist and monitoring reports will be submitted to AFCD for record.

Contingency Plan for Unsuccessful Rootball Preparation

- 2.3.17 The Pitcher Plants will be transplanted from the donor site to the temporary nursery using root ball transplantation. However, if any plants are entangled with other vegetation, rocks, or if unforeseen underground conditions make root ball digging impractical, the nodal cutting method will be used instead subject to the site conditions. The transplantation method must be conducted under the supervision of a qualified botanist or ecologist.

Contingency Plan for Low Survival Rate in Trial Transplantation

- 2.3.18 If the trial transplantation in the permanent receptor is observed to have a low survival rate due to uncontrollable factors such as extreme weather conditions etc., the contingency plan will be implemented. This contingency plan aims to adopt the node cutting method to the multi-stemmed Pitcher Plants to increase the number of Pitcher Plants individuals to be transplanted and hence to increase the general amount of surviving individuals. The selection of plants for node cutting will depend on their condition while in the temporary nursery and will be guided by the recommendations of a botanist or ecologist. Each multi-stemmed Pitcher Plant can produce two to three new individuals through this method, which increases the base number of individuals available for planting at the receptor site. Additionally, to enhance survival rates during their time in the transit nursery, it is recommended that only the leader stem of Pitcher Plants with at least three stems be preserved, while the other stems shall be cut to create new individuals.

Nodal Cutting Method in Contingency Plans

- 2.3.19 Each cutting shall have at least three nodes, with leaves and pitchers trimmed. The cuttings shall be placed immediately into moist peat moss or soil conditioner inside polythene bags. For node-cutting individuals, the Pitcher Plants shall be planted in the pot which is placed in the temporary nursery, for a minimum of 3 months to allow root re-growth. They shall have a proper watering programme as part of the daily maintenance work. Care shall be taken to ensure that roots will not grow kinked or girdled. The nursery shall be properly fenced off with appropriate signage at clear locations to ensure minimal disturbance at the nursery. The Pitcher Plants kept at the temporary nursery will be monitored monthly by the qualified botanist/ ecologist and monitoring reports will be submitted to AFCD for record.
- 2.3.20 It is crucial to maintain a consistently moist environment for the cuttings during the initial two to three weeks, until at least two leaves have developed, and auxiliary roots have established. If necessary, a fungicide shall be applied to the cutting surfaces to prevent decay, and rooting hormone may be used as needed to stimulate root growth (*Pietropaolo and Pietropaolo 1986*). These cuttings will then be transplanted into the receptor site.
- 2.3.21 A qualified botanist/ecologist shall also carefully review the soil condition, maintenance plan, planting location, plant health and condition, etc., to determine the causes of the transplanting failure. The botanist/ecologist shall submit a summary statement regarding the plant survival rate and individual plant size, and with a detailed contingency plan, if required, to AFCD for consideration before the transplantation of the remaining Pitcher Plants to a permanent receptor.

2.4 Post -transplantation Maintenance

Monitoring

- 2.4.1 Upon completion of transplantation, monitoring shall be implemented for 2 years and shall be conducted monthly during the first 12 months, and bi-monthly in the next 12 months to ensure survival. The monitoring report shall include all measures necessary to establish and maintain the transplanted pitcher plants in an acceptable vigorous and healthy growing condition and shall be prepared by a qualified ecologist/botanist and submitted to AFCD for record. Inspections and reporting by the appointed qualified botanist/ecologist will be conducted after adverse weather (e.g. typhoon signal no. 8 or above, black rainstorm signal) to check any damage to the transplanted Pitcher Plants with appropriate remedial actions proposed.

Watering

- 2.4.2 After planting, it is essential to ensure that the receptor sites are adequately watered. During the establishment period, diligent monitoring of the soil moisture levels is necessary to prevent excessive drying out. Watering shall be conducted in the early morning or late afternoon. The transplanted individuals shall receive appropriate and sufficient watering, and if necessary, daily watering may be required during the initial three months and the first dry season following transplantation.
- 2.4.3 Subsequently, the frequency of watering shall be reduced to at least twice a week until the end of the establishment period. It is crucial to adjust the watering frequency as needed to maintain a moist soil environment while avoiding saturation. While keeping the soil consistently moist without overwatering the plants.

Mulching

- 2.4.4 The use of mulches aids in moisture conservation, moderates soil temperature and assists in weed control around plants. For this purpose, it is recommended to apply organic mulches like thoroughly dried grass clippings or small wood chips directly onto the soil surface, specifically covering the area above the plant's root system.

Not recommended to be Pruned

- 2.4.5 Given that die-back of the current year's growth is a common occurrence, any new stems, leaves, or flowers that emerge from the cuttings in subsequent years shall be noted separately but still considered as surviving individuals if observed in the following season. These regrowth instances shall be marked individually and included in the overall count of surviving individuals.

Integrated Pest Management (IPM)

- 2.4.6 Apply a holistic IPM approach to pest control that aims to minimize the use of chemical pesticides while effectively managing pest populations. Pests shall be identified and appropriate mitigation measures recommendations shall be recorded in the monthly monitoring report. Consider biological control or mechanical control to manage pests first before using targeted pesticides as a last resort. Using pesticides with low toxicity to non-target organisms, natural and biodegradable is recommended. They shall be applied selectively, following the manufacturer's instructions.

Firming Up

- 2.4.7 After the weekly inspection and after heavy rain or wind, plants shall be firmed up if necessary.

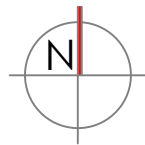
Forking

- 2.4.8 Forking shall be conducted immediately after fertilizing and prior to the application of mulch. This shall be conducted manually to a depth of 100mm to aerate the soil.

Implementation during Construction / Operation / Restoration / Aftercare Phases

- 2.4.9 In accordance with EM&A Manual Section 10.3, during construction, operation, restoration and aftercare phases, routine site inspection shall be conducted on a weekly basis to audit the mitigation measures for disturbance on habitats adjacent to the work areas. Monitoring of transplantation shall be audited as part of the site audit programme.
- 2.4.10 A temporary shelter shall be provided to maintain the moisture and temperature as necessary if the receptor site is found to be too windy during the dry season. Therefore, to provide the most suitable environment for the Pitcher plants to survive.

-End-



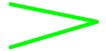
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LEGEND

-  FEP/EP WENTX PROJECT BOUNDARY
-  PITCHER PLANT
-  STREAM B
-  RECEPTOR SITE FOR PITCHER PLANT (~254sqm)
-  ON-SITE TRANSIT NURSERY
-  PHOTO TAKING ANGLE (REFER TO APPENDIX A2)

Rev	Description	By	Date
Employer			
 環境保護署 Environmental Protection Department			
Service Manager's Representative			
			
Design Checker			
			
Contractor			
 HK RESOURCES RECOVERY PARK			
Designer			
 In Association With Member of the SNC-Lavalin Group			
Project title			
CONTRACT NO. EP/SP/186/21 WEST NEW TERRITORIES LANDFILL EXTENSION			
Drawing title			
APPENDIX A1 – LOCATION OF PLANT SPECIES OF CONSERVATION INTEREST TO BE TRANSPLANTED & LOCATION OF RECEPTOR SITE FOR PITCHER PLANT			
Drawing no.			Rev.
APPENDIX A1			A
Author	Date	Checker	Approver
OY	July 25		
Scale	1:10,000 @ A3	Status	
			DETAIL DESIGN SUBMISSION
© COPYRIGHT RESERVED			

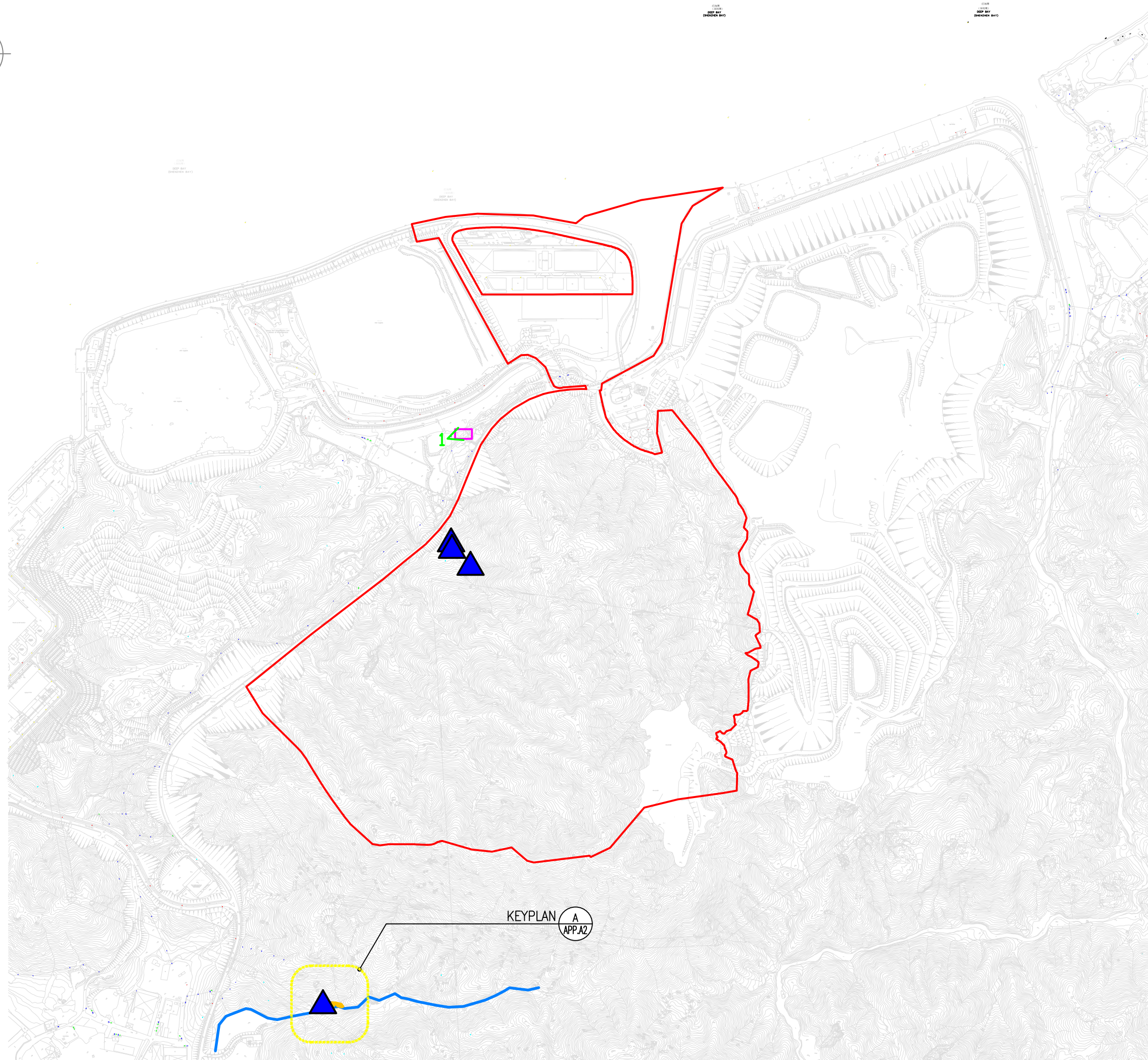




PHOTO 1 - TEMPORARY NURSERY



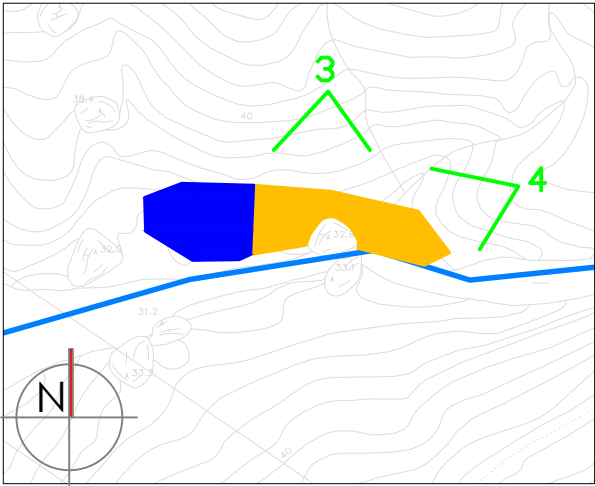
PHOTO 3 - PHOTO OF RECEPTOR SITE



PHOTO 2 - AERIAL PHOTO OF RECEPTOR SITE



PHOTO 4 - PHOTO OF RECEPTOR SITE



A KEYPLAN
- SCALE: NTS

- LEGEND
- PHOTO TAKING ANGLE
 - PITCHER PLANT
 - STREAM B
 - RECEPTOR SITE FOR PITCHER PLANT (~254sqm)

Rev	Description	By	Date
Employer			
 環境保護署 Environmental Protection Department			
Service Manager's Representative			
ARUP			
Design Checker			
wsp			
Contractor			
			
HK RESOURCES RECOVERY PARK			
Designer			
 binnies In Association With ATKINS Member of the SNC-Lavalin Group			
Project title			
CONTRACT NO. EP/SP/186/21 WEST NEW TERRITORIES LANDFILL EXTENSION			
Drawing title			
APPENDIX A2 – PHOTOS OF LOCATION OF RECEPTOR SITE FOR PITCHER PLANT & TEMPORARY NURSERY AREA			
Drawing no.			Rev.
APPENDIX A2			–
Author	Date	Checker	Approver
OY	MAR 24		
Scale		Status	
1:10,000 @ A3		DETAIL DESIGN SUBMISSION	
© COPYRIGHT RESERVED			

Appendix A3 - Photos of *Nepenthes mirabilis* next to the Proposed Receptor Site along Stream B



Receptor Site Overview - Existing Stream next to Pitcher Plants



Close-Up View (A) - Existing Pitcher Plants and Existing Vegetation



Close-Up View (B) - Existing Pitcher Plants and Existing Vegetation



Bunch 1 - Overall



Bunch 1 (left) & 2 (right) Aerial Photo



Bunch 1 PP01 (1)



Bunch 1 PP01 (2)



Bunch 1 PP02 (1)



Bunch 1 PP02 (2)



Bunch 1 PP03 (1)



Bunch 1 PP03 (2)



Bunch 1 PP04 (1)



Bunch 1 PP04 (2)



Bunch 1 PP05 (1)



Bunch 1 PP05 (2)



Bunch 1 PP06 (1)



Bunch 1 PP06 (2)



Bunch 1 PP07 (1)



Bunch 1 PP07 (2)



Bunch 1 PP08 (1)



Bunch 1 PP08 (2)



Bunch 1 PP09 (1)



Bunch 1 PP09 (2)



Bunch 1 PP10 (1)



Bunch 1 PP10 (2)



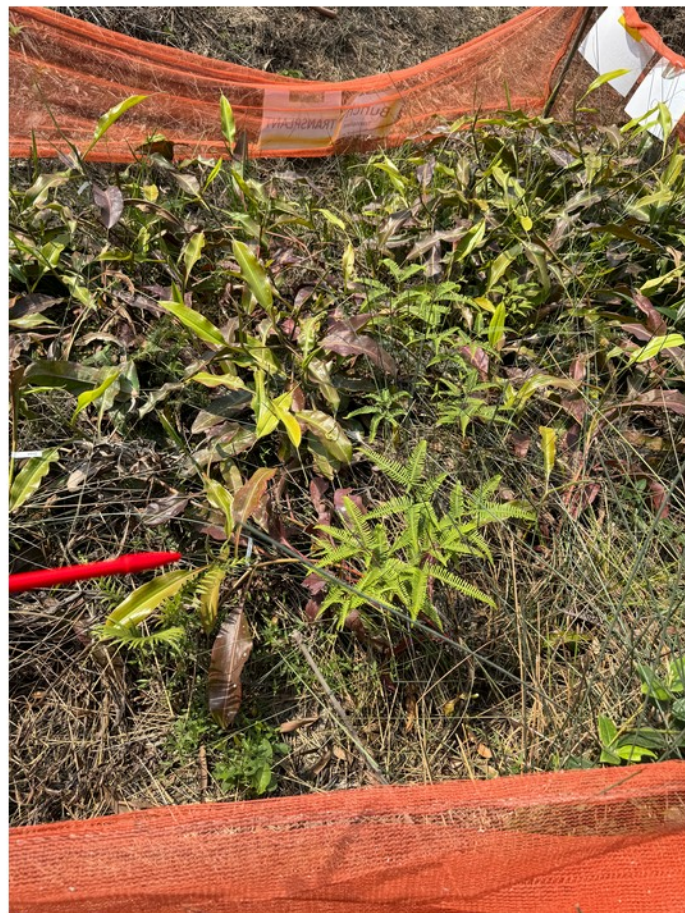
Bunch 1 PP11 (1)



Bunch 1 PP11 (2)



Bunch 1 PP12 (1)



Bunch 1 PP12 (2)



Bunch 1 PP13 (1)



Bunch 1 PP13 (2)



Bunch 1 PP14 (1)



Bunch 1 PP14 (2)



Bunch 1 PP15 (1)



Bunch 1 PP15 (2)



Bunch 1 PP16 (1)



Bunch 1 PP16 (2)



Bunch 1 PP17 (1)



Bunch 1 PP17 (2)



Bunch 2 - Overall



Bunch 2 PP18 (1)



Bunch 2 PP18 (2)



Bunch 2 PP19 (1)



Bunch 2 PP19 (2)



Bunch 2 PP20 (1)



Bunch 2 PP20 (2)



Bunch 2 PP21 (1)



Bunch 2 PP21 (2)



Bunch 3 Aerial Photo



Bunch 3 PP22 (1)



Bunch 3 PP22 (2)



Bunch 3 PP23 (1)



Bunch 3 PP23 (2)



Bunch 3 PP24 (1)



Bunch 3 PP24 (3)



Bunch 3 PP24 (4)



Bunch 3 PP25 (1)



Bunch 3 PP25 (2)



Bunch 3 PP26 (1)



Bunch 3 PP26 (2)



Bunch 3 PP27 (1)



Bunch 3 PP27 (2)

APPENDIX C - TENTATIVE TRANSPLANTATION PROGRAMME

[illegible]

Remarks: O - Once a month, BO - Bi-monthly, D - Daily, W - Weekly, BW - Bi-weekly, IN - Only if necessary

Appendix D - Plant Schedule

<i>Aquilaria sinensis</i>						
Location	No.		Health	Suitability for transplantation		Note
			Good/Average/ Poor	High/Medium/Low	Remark	
Near brackish water	-		-	-	-	located near brackish water, the subject individual was not found and considered to be lost due to natural cost

<i>Arundina graminifolia</i>						
Location	No.		Health condition	Suitability for transplantation		Note
			Good/Average/ Poor	High/Medium/Low	Remark	
Near Tsang Kok Stream	-		-	-	-	the original location was occupied by invasive climber(<i>Mikania micrantha</i>), the subject individual was not found and considered to be lost due to natural cost

<i>Nepenthes mirabilis</i>						
Location	Tag No.	Spread (m)	Health condition	Suitability for transplantation		Note
			Good/Average/ Poor	High/Medium/Low	Remark	
Bunch 1	PP01	0.5	Average	Medium	-	at/near permanent watershed
	PP02	0.5	Average	Medium	-	at/near permanent watershed
	PP03	0.5	Average	Medium	-	at/near permanent watershed
	PP04	0.5	Average	Medium	-	at/near permanent watershed
	PP05	0.5	Average	Medium	-	at/near permanent watershed
	PP06	0.5	Average	Medium	-	at/near permanent watershed
	PP07	0.5	Average	Medium	-	at/near permanent watershed
	PP08	0.5	Average	Medium	-	at/near permanent watershed
	PP09	0.5	Average	Medium	-	at/near permanent watershed
	PP10	0.5	Average	Medium	-	at/near permanent watershed
	PP11	0.5	Average	Medium	-	at/near permanent watershed
	PP12	0.5	Average	Medium	-	at/near permanent watershed
	PP13	0.5	Average	Medium	-	at/near permanent watershed
	PP14	0.5	Average	Medium	-	at/near permanent watershed
	PP15	0.5	Average	Medium	-	at/near permanent watershed
	PP16	0.5	Average	Medium	-	at/near permanent watershed
	PP17	0.5	Average	Medium	-	at/near permanent watershed
Bunch 2	PP18	1.0	Average	Medium	-	at/near permanent watershed
	PP19	1.0	Average	Medium	-	at/near permanent watershed
	PP20	1.5	Average	Medium	-	at/near permanent watershed
	PP21	1.0	Average	Medium	-	at/near permanent watershed
Bunch 3	PP22	3.0	Average	Medium	-	Located in mixed shrubland, at/near permanent watershed
	PP23	3.0	Average	Medium	-	Located in mixed shrubland, at/near permanent watershed
	PP24	2.0	Average	Medium	-	Located in mixed shrubland, at/near permanent watershed
	PP25	2.5	Average	Medium	-	Located in mixed shrubland, at/near permanent watershed
	PP26	2.5	Average	Medium	-	Located in mixed shrubland, at/near permanent watershed
	PP27	2.5	Average	Medium	-	Located in mixed shrubland, at/near permanent watershed

Appendix E – Maintenance Schedule

The proposed maintenance schedule at the temporary nurseery is as follow :

Maintenance Works	Sep 2025*	Remarks
Support Inspection & Adjustment	W	If necessary
Fertilization	As necessary	
Watering	D	The watering amount depends on the daily weather
Mulch Topping-up	As necessary	Visual inspection is to be conducted weekly at the temporary nurseery to decide if topping up is necessary
Pruning	As necessary	
Thinning	As necessary	
Litter Collection	W	
Weeding	As necessary	
Inspection after Exceptional Weather (E.g. Typhoon)	As necessary	
Maintenance Inspection	W	

*Note :

D – Daily

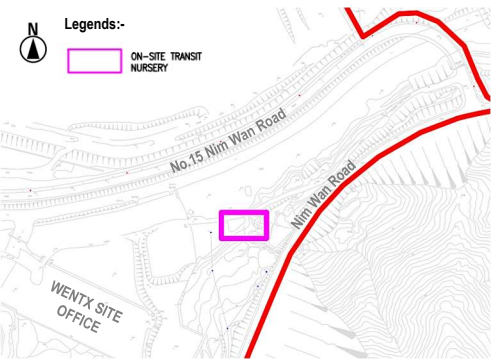
W – Weekly

O – Once a year

M – Monthly

The schedule of maintenance shall be reviewed and revised as necessary.

Appendix F -Basic Information on Equipment and Facilities of Temporary Nursery



Location Plan of Temporary Nursery
(KEY PLAN Refers to Appendix A1)



Horticultural Tools



Lighting Facility (or equivalent)



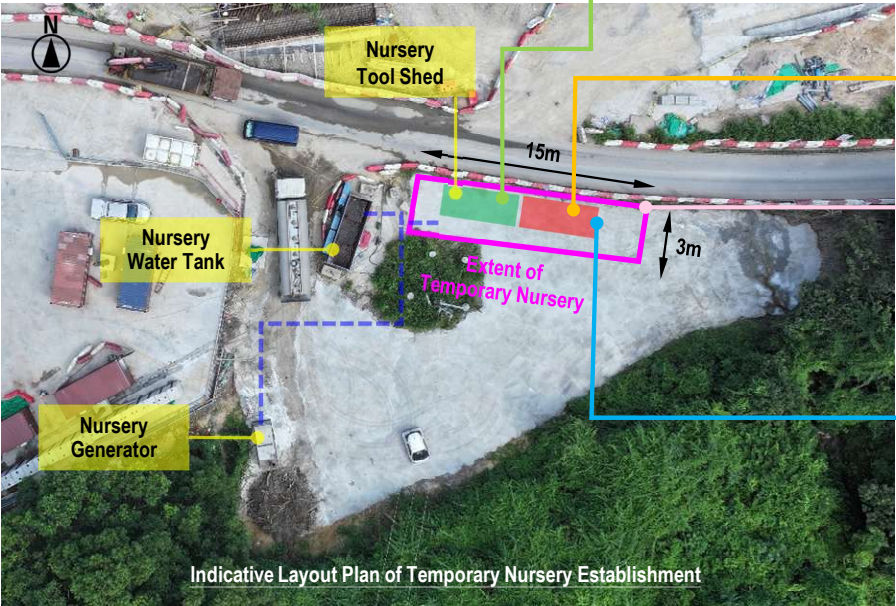
Fan Facility (or equivalent)



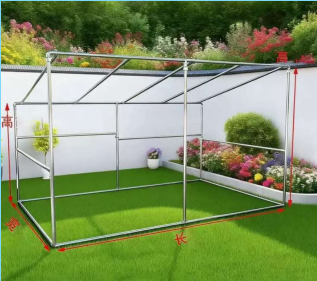
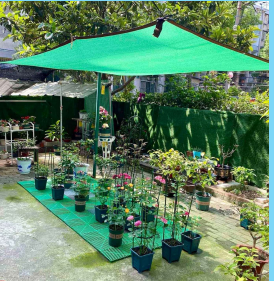
Thermometer and Hygrometer



Planting Pot



Indicative Layout Plan of Temporary Nursery Establishment



~2.1m(H) x 2.1m(W) x 4.6m(L)
Sun Screening mounted at Metal Scaffolding (or equivalent)



Fencing Off Nursery Area by 1.8m High Water Filled Barrier with Lockable Entry to Protect Pitcher Plant and Prohibit Unauthorized Access

Appendix G - Disposal Method for Green Waste Generated during Transplantation Operations

1. Green waste generated from the transplantation works shall be collected and disposed off site. However, in accordance with the contract requirements for yard waste reduction and treatment specified in the contractual specification, green waste shall be also collected and sorted for 3-Bin Composting System on Site as shown in Figure 1. The compost produced shall be used on site.
2. Pursuant to the contract requirements for yard waste reduction and treatment outlined in the contractual specification, yard waste is recyclable materials which shall be sorted on site for the purpose of recycling and shall not be considered as waste for disposal except for the diseased parts of plants. Thereby, green wastes generated from the transplantation works are requested for disposal at designated upcycling facilities, Eco Park and Y-PARK as priority. The upcycling requirements shall be followed and indicated in Figure 2.
3. If unaccepted by upcycling facilities, the final disposal of green waste shall be directed at designated sites for dumping, such as designated landfill sites, site for organic waste conversion.
4. Yard waste reduction and treatment shall be referred to in the DEVB's "Guidelines on Yard Waste Reduction and Treatment".

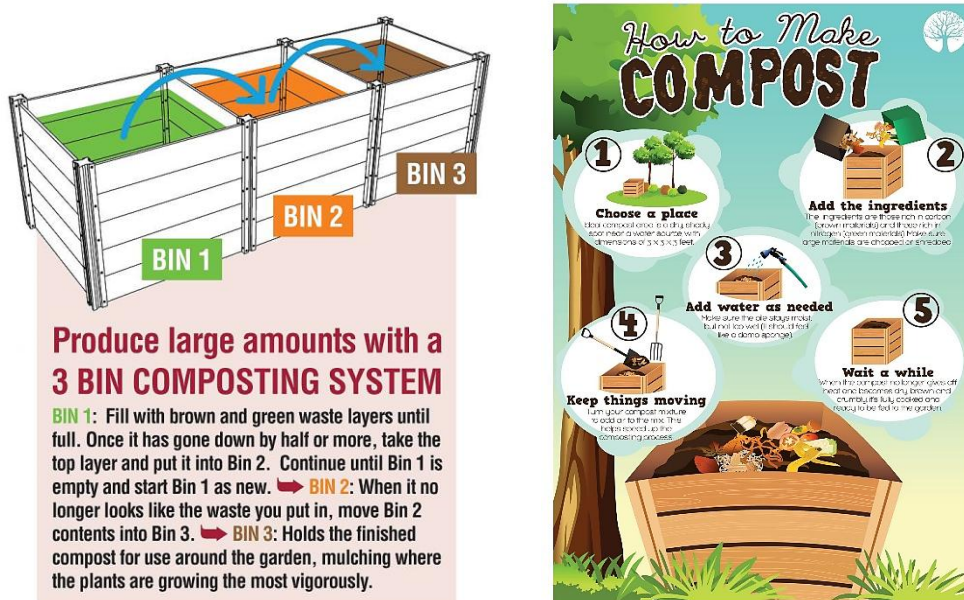


Figure 1. 3-Bin Composting System and Operation on Site



Figure 2. Disposal Requirements of Green Waste



Environmental Protection Department
The Government of the Hong Kong Special Administrative Region

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West New Territories Landfill Extension (Awarded in August 2023)

Award of Contract

West New Territories Landfill Extension (Awarded in August 2023)

Contract Number	Tendering Procedure	Subject	Contractor(s) and Address(es)	Awarded Quantity	Awarded Sum (HK\$)
EP/SP/186/21	Selective	West New Territories Landfill Extension	Hong Kong Resources Recovery Park 29/F, China Overseas Building, 139 Hennessy Road, Wan Chai, Hong Kong	Not applicable	\$61,100,000,000.00

Remark: As this contract adopts the New Engineering Contract (NEC) form, the awarded sum refers to "Forecast Total of the Prices".



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2025 © Environmental Protection Department Last revision date : 25 August 2023

EPD signs WENT Landfill Extension Contract (with photos) GO

EPD signs WENT Landfill Extension Contract (with photos)

The Environmental Protection Department (EPD) today (September 26) signed the West New Territories (WENT) Landfill Extension contract with Hong Kong Resources Recovery Park (joint venture).

Hong Kong Resources Recovery Park (joint venture) will be responsible for carrying out the design, build and operation of the WENT Landfill Extension. Led by Alchmex International Construction Limited, Hong Kong Resources Recovery Park (joint venture) is also formed with China State Construction Engineering (Hong Kong) Limited and Veolia Hong Kong Holdings Limited. Both Alchmex International Construction Limited and China State Construction Engineering (Hong Kong) Limited are wholly owned subsidiaries of China State Construction International Holdings Limited.

"The joint venture has a strong team for the multidisciplinary expertise required for the landfill project and also possesses rich experience in infrastructure construction. We expect that this contract could bring new technologies to the landfill extension and provide a safe and reliable waste disposal service. At the same time, it could provide the necessary landfill capacity for Hong Kong during the transition period before the completion of developing sufficient modern waste-to-energy incinerators to fully handle the municipal solid waste, and also for disposal of the waste that is non-combustible and cannot be recycled," the Director of Environmental Protection, Dr Samuel Chui, said at the contract signing ceremony.

The New Engineering Contract (NEC) form has been adopted in the contract to design, build and operate the WENT Landfill Extension, making it the first landfill contract in Hong Kong adopting the NEC form. The NEC form embraces a collaborative culture and, through contractual mechanisms, fosters the development of a mutual assistance and trust partnering relationship between the contracting parties. It also facilitates joint risk management, thereby enhancing project management performance and cost-effectiveness.

Ends/Tuesday, September 26, 2023
Issued at HKT 15:35

NNNN

Photo



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[Today's Press Releases](#)

Contract No. EP/SP/186/21
West New Territories (WENT) Landfill Extension

Client
The Environmental Protection Department



Service Manager
Ove Arup & Partners Hong Kong Ltd



HKRRP Management Board



JV Leader

China State Construction
Engineering (Hong Kong)
Limited



Alchmex International
Construction Limited



Veolia Hong Kong
Holding Limited



HKRRP Joint Venture Structure

Hong Kong Resources Recovery Park is an unincorporated integrated joint venture, with Alchmex International Construction Limited acting as the lead participant and China State Construction Engineering (Hong Kong) Ltd being a participant. The parent company of both is China State Construction International Holdings Limited.

Veolia Hong Kong Holding Limited - an industry leading international environmental services and waste management specialist – is also a participant of this joint venture.

Organizational Chart of Main Contractor
(Works Team for Pitcher Plant Transplantation)

