From Valley to Plain II: Architectural Rehabilitation for Integrated, Co-creative Eco-living Experience in Tin Sum Village, Kuk Po

Prototype & Guidelines on Eco-living & Cultural Experiences

Contents

1.0 Background

Kuk Po, nestled in a valley overlooking Starling Inlet, boasts a rich Hakka heritage. Its historical narrative intertwines early settlement, agricultural endeavors, commercial activities, and trade. Notably, the village gained prominence in the mid-19th century for pioneering sea reclamation techniques, which expanded agricultural lands, increased crop yields, and fueled economic growth.

However, since the 1960s, a substantial emigration of villagers has left much of the village in disrepair. Yet, in recent years, a resurgence of interest has seen former inhabitants returning, aiming to rejuvenate both the village's infrastructure and its living cultural fabric.

In 2021, the CUHK School of Architecture embarked on a multidisciplinary research, education, and restoration project commissioned by the Countryside Conservation Funding Scheme. This pioneering initiative seeks to revitalize Kuk Po through a collaborative village-institution model, marking a groundbreaking endeavor in Hong Kong.

Phase II of the project centers on the Lee family's 90-plus-year-old historic hybrid mansion with its ancillary farm shed and adjacent farmlands. The project site *(fig. 1)* is located in Tin Sum village of the Kuk Po plains which spans approximately 650m². It includes a stand-alone mansion, a chicken coop, a pigsty, a cow shed and adjacent farmlands, comprising one of the village's largest residential compounds. Through restoring and rehabilitating this architectural cluster, the project investigates the cultural heritage, rediscovers living village traditions, reuses and enhances its sustainable built features, introduces sustainable amenities with growing practices, and cocreates eco-living experiences with stakeholders.

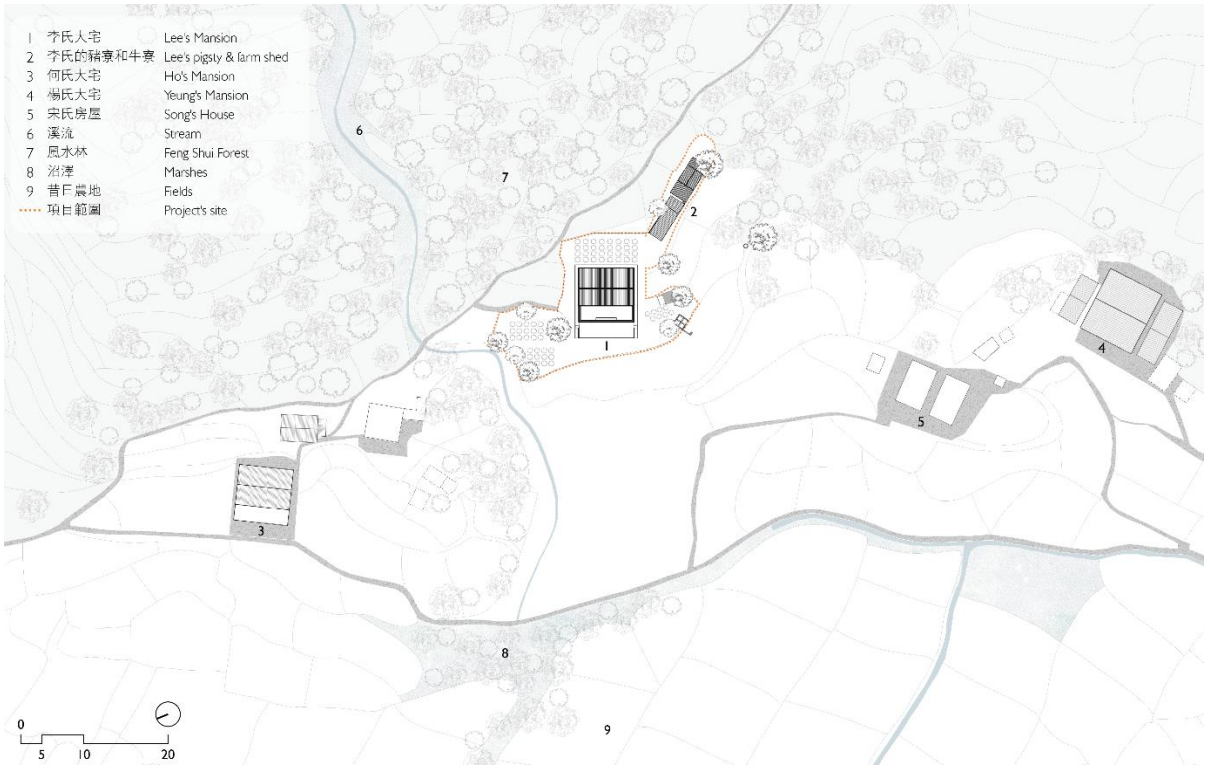


Fig. 1 Site Plan showing the Lee's residential compound and its surrounding

2.0 Introduct and Objective

This report outlines the tasks of the sustainable growing consultancy service ("The Service") during the period from Dec 2023 to May 2025.

The tasks and suggested quantifiable of The Service are:

	Task	**Suggested report protocol**
1.0	**Preliminaries**	
	1.0A Site studies 1.0B Site Clearance & landscaping	-Qualitative and quantitative report of baseline site studies -Qualitative review upon completion *(table 1-3)*
2.0	**Growing and eco-farming practices**	
2.1	2.1A Recommendation of local crops with ecological and cultural benefits 2.1B Sourcing of seeds/ seedlings of crops 2.1C Provision of related farming tools, fertilizers and other necessary equipment	-A proposed plant list of at least 8 local crops -at least 8 suggested crops successfully grown -At least 25% increase in arable land area -Monthly record of growing condition
2.2	2.2A Recommendation on making crops into marketable products 2.2B Provision of related product making tools, packaging and other necessary equipment	-at least 5 products with market value developed
3.0	**Eco-living & Cultural Experiences**	
3.1	3.1A 1 X design workshop with 8-12 stakeholders 3.1B 1 X primary school with 20 students 1 X secondary school with 20 students; 1 X departments/units in university with 20 students and/or staff each; 1 X 20 young kids (with parents/ guardians) 3.1C 3 X thematic events for at least 150 members of the general public in total	-Development of survey questionnaire *(table 6)* -discussion of survey review -Qualitative and quantitative review of workshop upon completion
3.2	Liability Insurance pf 3.1A, B and C	-Confirmation upon completion

The objective of the Service is to:

1. Co-creating a sustainable farming practice at the project site with the residents of Lee's House as well as other Kuk Po villagers
2. Increase the awareness towards a more eco-living lifestyle of the Kuk Po community
3. Engage the villagers and visitors to foster a sense of wider community to appreciate Hong Kong's rich cultural heritage and biodiversity resources

3.0 Approach and methodology

3.1 Approach

A 4-staged, systematic approach was adopted to evaluate the methodology that best suits the project's needs. The approach involves:

1. Baseline studies: assess the ecological and cultural diversity of the fauna and flora and the linkage of these elements to the local villagers. A Baseline survey *(table 1, 2 & 3)* was conducted in Dec 2023.
2. Stakeholder engagement and SWOT analysis *(table 4)*: Interview sessions with different stakeholders including the villagers, the experts of CUHK School of Architecture were conducted to understand the Strength (benefits), Weakness (disadvantages), Opportunities and Threats with respect to the project.
3. Alignment: A proposal of recommendations was created to seek alignment with different stakeholders
4. Implementation and evaluation: Field work, engagement and workshop sessions will be conducted continuously to review the best practices for achieving the objectives.

Table 1: Quantitative summary of the baseline survey of plants species recorded in project site and adjacent areas

Scientific name	English common name	Chinese common name	Flowering season	Features/ properties
果園區				
Momordica cochinchinensis	Ackee	木鱉果	6 月-8 月	未成熟的果實含有毒性
Annona squamosa	Sugar Apple	釋迦	5 月-6 月	需要更多的人體研究確保其益處
Psidium guajava	Guava	番石榴（芭樂）	8 月-9 月	外觀因應品種而有所變化
種植區				
Calendula officinalis	Calendula	金盞花	2 月-10 月	適應能力強，食用後有過敏風險
Petroselinum crispum	Parsley	歐芹 洋芫荽		直立生長，高度可達 30-60cm
Brassica oleracea var. sabellica L	Kale	羽衣甘藍	3 月-6 月	葉片捲曲/波浪形，表面粗糙及質地較硬
Ficus carica	Fig	無花果	5 月-11 月	掌形葉片，外表有皺紋
Phyllanthus emblica	Phyllanthus emblica	油柑子	4 月-6 月	外皮光滑，比較細小
Paederia foetida	Paederia foetida	雞屎藤		對水份要求較高，需要光照
Artocarpus heterophyllus	Jackfruit	大樹菠蘿（波羅蜜）	3 月-8 月	對陽光需求較高，適應力強
Ficus hederacea	Climbing fig	薜荔(藤榕)	2 月-7 月	需在溫暖的氣候及充足陽光的環境生長
Plinia cauliflora	Jabuticaba	家寶果	3 月-4 月，8 月-10 月	喜好溫暖，排水良好，偏酸的土壤

Strobilanthes cusia	Pink Strobilanthes	馬藍	11 月-2 月	適應能力強，喜好溫暖及濕潤的氣候
Eupatorium capillifolium	Dog fennel	假蒿		適合溫暖濕潤氣候，常作觀賞與藥用
Houttuynia cordata		蕺菜 (魚腥草)	3-11 月	固砂的地被植物，花蜜源植物
谷埔範圍內				
Morus alba	Morus	桑	2 月-8 月	圓柱狀，顏色紫色至黑色
Dioscorea cirrhosa	Dyeing Yam	薯莨	4 月-6 月	攀緣藤本，具高單寧含量，染料用
Pandanus tectorius	Screw Pine	露兜樹	5 月-8 月	有氣根，耐鹽，沿海環境常見
Musa × paradisiaca	Banana	香蕉樹	1 月-12 月	大果實，高澱粉作物，熱帶主食
Dendrocalamus latiflorus	Sweet Bamboo	竹 (麻竹)		生長快，竹材硬，節間長，熱帶造林用
Amomum subulatum	Black cardamom	草豆蔻/香豆蔻		芳香種子，用於香料和藥材
其他區域				
Kalanchoe pinnata	cathedral bells	落地生根	5 月-11 月	空中花，葉片萌芽產新植株
Pyrostegia venusta	Flame Vine	炮仗花	1 月-6 月	藤本攀爬，冬季花期長
Clausena lansium	Wampee	黃皮	4 月-5 月	果皮香氣濃，耐熱常綠果樹
Litchi chinensis	Lychee	荔枝	2 月-4 月	熱帶水果，甜美多汁，花果季分明
Jatropha podagrica	Gout Stalk	佛肚海棠	1 月-12 月	耐旱多刺，醫藥用途
Lemmaphyllum microphyllum	Lemmaphyllum microphyllum	伏石蕨		葉細小，生長於樹幹或岩石
Curcuma longa	Turmeric	薑黃	8 月	根莖顏色鮮黃，藥用與調料
Nasturtium officinale	Watercress	紅西洋菜	4 月-5 月	水生植物，食用與藥用
Hylocereus undatus	Costa Rican pitahaya	量天尺	6 月-8 月	果實鮮艷，夜間花開
impatiens balsamina	Garden Balsam	水仙花	6 月-11 月	花色豔麗，喜濕潤環境
cardiospermum halicacabum	Balloon vine	包袱草	5 月-11 月	攀援藤本，種子形似心臟，治病用途

Table 2: List of Avifauna recorded in project site and adjacent area

1. Magpie Robin
2. Common tailorbird
3. Japanese White-eye
4. Fork-tailed Sunbird
5. White Wagtail
6. Black kite
7. Chinese bulbul
8. Little Egret
9. Great Egret
10. Cattle Egret
11. Greater coucal

Table 3: Qualitative summary of the baseline survey and 1st stakeholder engagement session

Geographical and ecological observation:
• Project site has different highly modified, mixed-purposed habitats with frequent human activities • Frequent access of animals caused high disturbance to all types of terrains • Topsoil of current arable land of project site, including the practice area, is mostly thin, sandy, with little organic matter and low water retention ability. • Pristine environmental with presence of pollutant sensitive species found in the heritage building, e.g. lichens, Chinese Eurya *(Lepisorus microphyllus)*
Farming practice observation:
• Site owner adopts a hobbyist gardening approach, with little account in ecological, or energy/efficiency factors • Adopts little bioecological enhancement measures, e.g. applying munching to reduce water loss, applying enzyme to enhancing soil microbe activities • Local community has high affinity to cultural and heritage material subjects, and has high interest in understanding local fauna

Table 4: Stakeholders engage and SWOT analysis

	Project site owner (Lee's)	**CUHK School of Architecture**	**Villagers of Kuk Po**
S	● easy accessible to local and nearby resources ● organic source of visitors ● rich local resources	● access to high level information ● a neutral stand to facilitate and mobilize other stakeholder ● an authoritative image	● easy accessible to local and nearby resources
W	● power shortage ● unstable water source ● infertile sandy soil ● low infrastructure readiness for farming ● Lack of systemic farming training	● data rely on villagers' memories ● high logistic cost	● Lack of systemic farming training
O	● a board range of activities could be executed	● advertise to wide range of communication channels	● be inspired and elevate the scale of impact
T	● unpredictable issue that hinders event rundown ● low credibility on sharing farming best practice	● Delay of project timeline due to unforeseeable stakeholder request	● over involvement with unclear R&R creates pressure

3.2 Methodology

Measures	**Justification**	**corresponding task**
Introducing 11 new plants to the focus location	These crops 1. require less intensive care, and withstand harsh physical environment 2. enhance biodiversity particularly on insect species 3. bring in bio-control effect and reduce reliance on chemicals 4. revoke or highlight cultural linkage	2.1A 2.2
Site clearance and strengthening growing ridge	Effectively increase arable area and crop yield. This could also showcase best practice of eco-gardening and sustainable agriculture	1.0B 2.1B 2.1C
Install drip irrigation system and leveled water tank	to reduce reliance on manpower, increasing efficiency and successful rate of growing plants	2.1
Apply munching	Protecting topsoil from direct sunlight, reducing nutrient loss and fostering a better soil health	2.1
Apply enzyme	Introducing concept of circularity and regenerative farming principle, increasing soil microorganism and fostering a better soil health	2.1 2.2
Install solitary beehive	As an ecological tool on-site to maintain and enhance biodiversity for creating an efficient pollination network that supports ecosystem resilience	2.2 3.0

4.0 Progress and results

4.1 Sustainable growing practices

4.1.1 Identifying the practice area

The arable area situated in the southwest of Lee's Mansion, measuring 55m² *(fig. 2)*, has been designated as the "growing practice area" (referred to as the Practice Area) for conducting sustainable growing and farming initiatives. This area is subdivided into lower and upper confinements, each serving distinct purposes as determined by the Lee family.

The lower confinement functions as a fruit tree garden, where the Lee family has cultivated over 10 types of fruit-bearing trees and shrubs. Conversely, the upper confinement serves as a vegetable garden, where the Lees engage in the cultivation of vegetables alongside ornamental and/or edible herbaceous plants.

Characteristics define the Practice Area:

1. It offers immediate accessibility and is aesthetically pleasing to all stakeholders.

2. Pre-installed fences are adorned with a variety of plants, creating a vertical blend with Lee's House and forming a cohesive eco-system.

3. Its orientation is East and North-east facing, allowing for moderate daylight exposure.

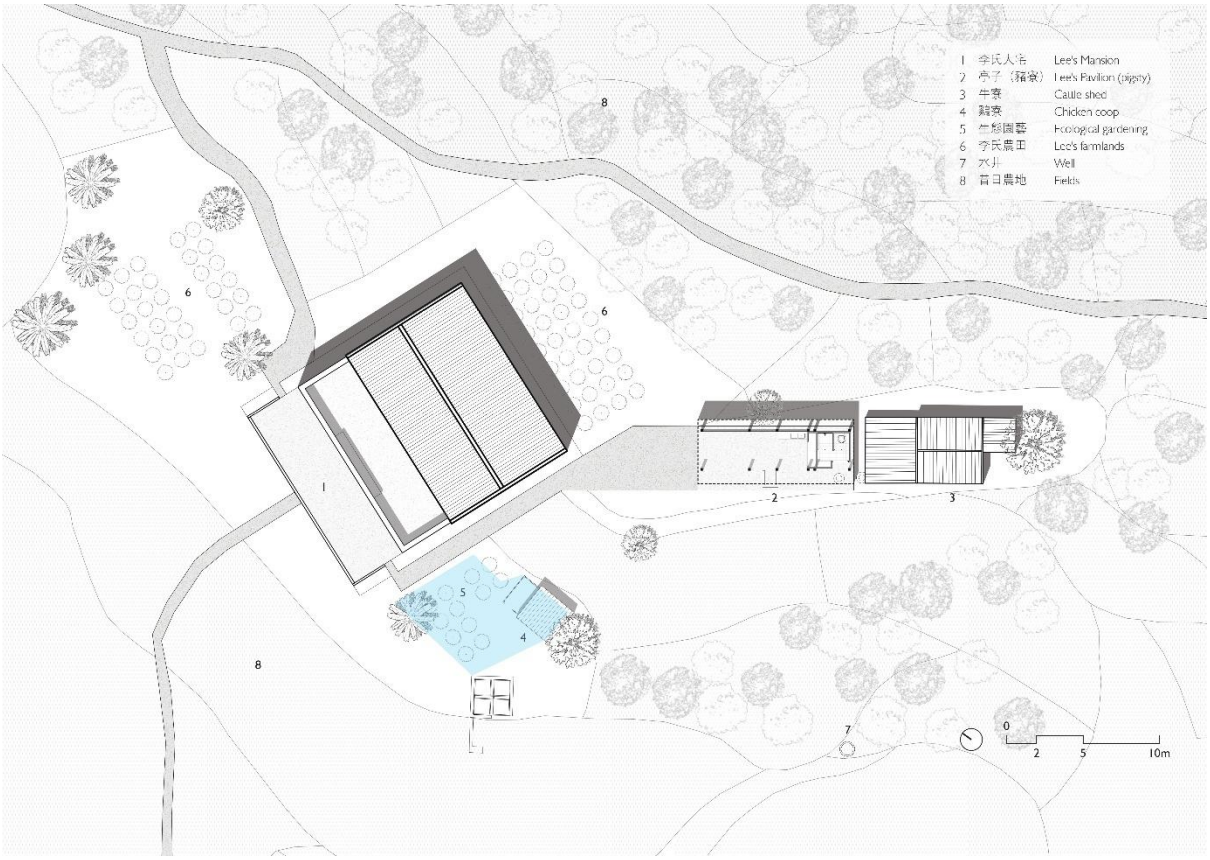
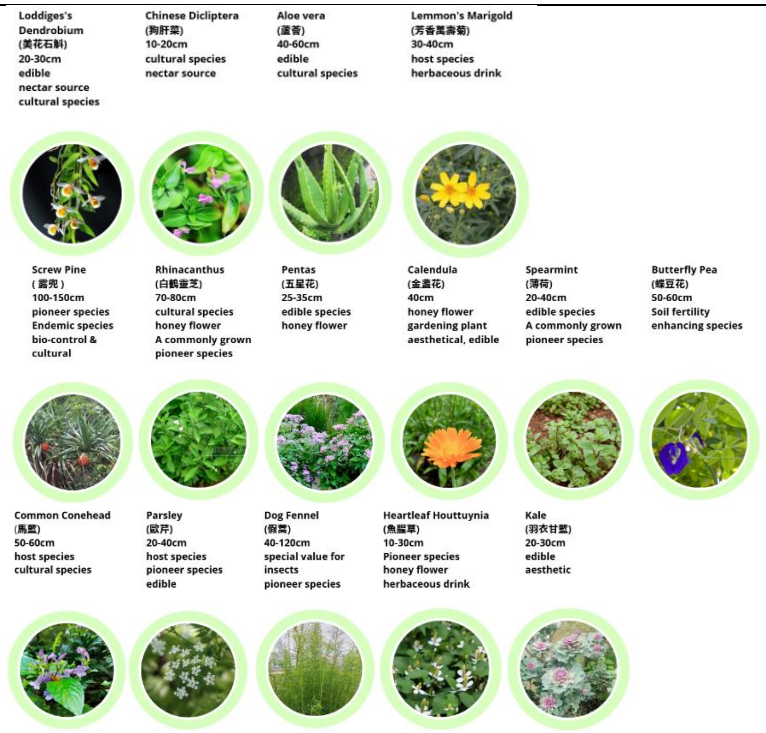


Fig.2 The Practice Area (55m²) is highlighted in blue

4.1.2 Suggested plants

The plants grown on site are recorded in 3 stages according to reporting period. There were slight changes in each stage in response to the physical environment and the seasonal climate.

Duration	Plants grown on site	Evaluation
Stage 1: Jan-June 2024		10 plants with the purpose of enhancing ecological and cultural value.
Stage 2: July-Dec 2024		1 proposed plant species was revised: Japanese Honeysuckle (金銀花) was replaced by the seasonal crop Calendula (金盞花) to align with favourable growing conditions. 5 additional species were introduced: Rhinacanthus (*Rhinacanthus nasutus (L.) Kurz*, 白鶴靈芝), Pentas (*Pentas lanceolata*, 五星花), Spearmint (*Mentha spicata*, 薄荷), Butterfly Pea (*Clitoria ternatea*, 蝶豆花), and Screw Pine (*Pandanus utilis*, 露兜). These included improving soil fertility, providing a food source for wildlife, serving as cultural food and herbal ingredients, and acting as biocontrol species by forming physical barriers.

Stage 3: Jan-May 2025		1 plant, Calendula (金盞花), wilted during the summer and will be replanted in Jan 2025. While most Chinese Dicliptera (狗肝菜) and Heartleaf Houttuynia (魚腥草) were consumed by roaming cows in December, the remaining plants have been growing under typical seasonal conditions. The homeowner, Lees, opted to minimize the planting of thorny species in close proximity to the residence. Consequently, Bougainvillea glabra (Brazil Bougainvillea) was excluded from the planting list.

Products derived from plants cultivated at the farm site were showcased during the workshops, promoting awareness of eco-living and creating additional opportunities for the house owner.

To improve communication and accessibility of plant information, 43 plant tags with QR codes were installed throughout the farm and other areas where the house owner has cultivated plants and fruit trees. These tags, placed near key plants, facilitate identification and enhance guided tours. Each tag includes a QR code that links to a PDF containing detailed plant information.

Appendix 4.1 of 3rd progress report (20250407 KP2 PR03 APP04.1 (43 plants): PDF containing photo guide of 43 plant species transplanted or grown in Lee's House. Background biogeographical information, flowering period and brief introduction of human usage are introduced:

Gp1 谷埔植物 _洋紫蘇 _朱頂蘭 _鳳仙花 _神秘果 _龍骨	Gp2 谷埔植物 _長春花 _椰子 _海金沙 _佛肚海棠 _黑面將軍 _白鶴靈芝 _露兜樹 _無花果	Gp3 谷埔植物 _五星花 _金盞菊 _旱金蓮 _艾草 _薑黃	Gp4 谷埔植物 _薜荔 _雞屎藤 _假蒿 _芳香萬壽菊	Gp5 谷埔植物 _魚腥草 _狗肝菜 _馬藍 _香蕉 _鯽魚膽	Gp6 谷埔植物 _美花石斛 _杧果 _炮仗花 _蘆薈 _菠蘿	Gp7 谷埔植物 _嘉寶果 _黎檬 _番荔枝 _桑椹 _天堂果	Gp8 谷埔植物 _番石榴 _油甘子 _黃皮 _桑寄生 _草豆蔻

4.1.3 Progress (photos refer to table 5)

Date	Details	Corresponding task
Dec 2023	• Baseline survey • 1st stakeholder engagement session with site owner	1.0A
Jan 2024	Site Clearance work (**Eco-landscaping workshop#1** - 5 volunteers from both CUHK and public sector were recruited) • Site clearance conducted with equipment usage sharing with site owner and participants • strengthening growing ridge of the practice area completed • 120L water tank installed • Drip irrigation system installed • Pruning of plants at fencing and fruit garden • 25 seedlings of kales and 27 seedings of Parsley are transplanted to the practice area	1.0B 2.1B 2.1C
Feb 2024	Growing implementation (**Eco-landscaping workshop#2** - 15 volunteers from both CUHK and public sector were recruited) • Enzyme application completed • Water tank stand reinforcement work completed • Growing net reinforcement work completed • Pruning of plants at the practice area 2nd stakeholder engagement session with site owner Re-aligning plant list based on growing condition and owner preference Growing implementation, (**Eco-landscaping workshop#3** - 36 volunteers from both CUHK and public sector were recruited) • Installation of solitary beehives • Seedings of lettuce and Chinese mugwort (*Artemisia argyi*) are transplanted as cover crops for soil management	2.1B 2.1C
Mar- May 2024	• Site inspection to discuss fixing water pump • On-site discussion of design element aiming at preventing rodent or wildlife from entering the farmland or damaging the crops • Reinforcement of insect prevention net • Realignment of new plant list Site clearance – removing lettuce and triming of Chinese mugwort	1.0A
Jun 2024	• Transplanted 7 types of crops with ecological or cultural value into the farmland for enhancing the overall eco-living elements in accordance to the proposal Loddiges's Dendrobium (美花石斛) Chinese Dicliptera (狗肝菜) Aloe vera (蘆薈) Calendula (金盞花) Lemmon's Marigold (芳香萬壽菊) Common Conehead (馬藍) Heartleaf Houttuynia (魚腥草) Site clearance to highlight a particular Euphorbia trigona (龍骨) as a cultural iconic species (**Eco-landscaping workshop #4**- 12 volunteers from both CUHK and public sector were recruited) • Shelter set up for plant protection from sunburn and for better water retention • Provided technical advice on reinstalling water pump	2.1B 2.1C

Jul 2024	• Weed clearance • Pruning of key crops • Pathing farmland trial with dried pine bark as a weed control measure as well as for aesthetic enhancement • Transplant of additional crops: Dog fennel (假蒿) , Aloe vera (蘆薈), Heartleaf Houttuynia (魚腥草), Lemmon's Marigold (芳香萬壽菊)	1.0A 2.1B 2.1C
Aug 2024	• (Second phase) Pathing farmland trail with dried pine bark as a weed control measure as well as for aesthetic enhancement • Adding 20 species tag for education purpose • Transplant of additional crops: 1. Screw Pine (*Pandanus utilis* 露兜) – A native species that serves as functional plant for villagers to produce food, tools, but also as a bio-control to fence off large animals like cows and wild boars. 2. Rhinacanthus (*Rhinacanthus nasutus* (L.) Kurz 白鶴靈芝) - A native species commonly used by villagers as ingredients of herbal tea for medical purpose. 3. Pentas (*Pentas lanceolata* 五星花) - a multi-purpose plant that serve as source of nectar and for direct consumption as edible flower. Pentas could sustain summer heat to stabilize soil. It is also an ornamental plan commonly found in Hong Kong parks and gardens. • **Ecocultural & Living Experience Workshop #1**	1.0A 2.1B 2.1C 2.2 3.0
Sep 2024	• Site clearance for weed control purpose • Additional 23 species tags were added to cover more plant species in the Lee's premises, making the total number of species tag to 43 • QR code was added to for education purpose. Visitors could scan the QR code and access to a PDF containing information of the 43 species grown • Transplanted additional crop - Dog fennel as additional in-season crop. • **Ecocultural & Living Experience Workshop #2**	1.0A 2.1B 2.1C 2.2 3.0
Oct 2024	• Weed clearance Reinforcing structure of the solitary bee hotel	1.0A
Nov 2024	• Pruning and weed control • **Ecocultural & Living Experience Workshop #3**	1.0A 3.0
Dec 2024	• reinstallation of drip irrigation system • Additional plantation of : Lemmon's Marigold (芳香萬壽菊), Pentas Lanceolata (五星花), Dog fennel (假蒿), Common Conehead (馬藍), Calendula (金盞花) • **Opening Ceremony (thematic festival #1)**	1.0A 2.1B 2.1C 2.2 3.0
Jan 2025	• Transplant of additional crops: 1) Butterfly Pea (*Clitoria ternatea* 蝶豆花) – a species commonly used for revegetation or ornamental purpose due to its ability to withstand rather harsh environment and require little care. As a legume, its root system could form a symbiotic association with soil bacteria to fix atmospheric nitrogen into the soil to improve soil quality. The flower is also commonly used in food and product development due to the valve purplish blue color of the petals. 2) Spearmint (*Mentha spicata* 薄荷) – a common herb species which could withstand harsh environment and require little care during the favorable season.	2.1B 2.1C 2.2
Feb 2025	• Weed control • Watering of farm area • Ecological survey on birds and large mammals • On-site communications with house owner Mr Lee on understanding further plan of farm product usage	2.1B 2.1C 2.2

Mar 2025	• Weed control • Watering of farm area • Ecological survey (outside project scope) • **Ecocultural & Living Experience Workshop #4**	2.1B, 2.1C 2.2 3.0
Apr 2025	• Weed control • Watering of farm area • **Ecocultural & Living Experience Workshop #5** • **Easter workshop (thematic festival #2)**	2.1B, 2.1C 2.2 3.0
May 2025	• Weed control • Watering of farm area	2.1B, 2.1C 2.2

Table 5. Photo record of monthly progress

<table>
<tr><th colspan="2">Jan-April 2024:</th></tr>
<tr><td>Site clearance with appropriate machinery aid
  </td><td>Lichen is an ecological sensitive species observed on building elements
  </td></tr>
<tr><td>Upper confinement before site clearance
  </td><td>Upper confinement after site clearance and strengthening growing ridge
  </td></tr>
<tr><td>Installing drip irrigation system and transplanting seedlings
  </td><td>Installing Solitary beehives as one of the ecological enhancement measures
  </td></tr>
</table>

May 2024:

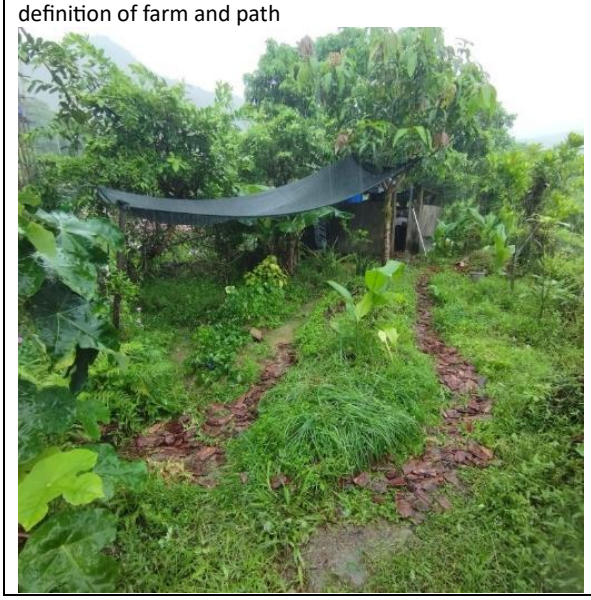
Site observation

June 2024:

Pruning of Euphorbia trigona (龍骨) as a cultural iconic species, as confirmed by Mrs Lee on it's cultural value

Erection of net shading against strong sunshine

Footpaths have been paved with pine bark for clearer definition of farm and path



Pine bark paving as footpaths

July 2024

Metal tags are installed to identify plants and crops

Metal tags

Introducing grown crops to Mr. Lee, the house owner

Engaging with house owners about the products

AUG 2024

Weed clearance

Installation of 20 species tags

SEPT 2024	
Site enhancement and maintenance   	Site enhancement and maintenance  
QR code was added to for education purpose. Visitors could scan the QR code and access to a PDF containing information of the 43 species grown  	

OCT 2024

A “before” and “after” comparison of the farm area after weed clearance, pruning and general maintenance

Reinforcing the structure of the solitary bee hotel. It is observed that there were 2 sealed chambers suggesting this ecological device was “in use” by possibly 2 insects.

NOV – DEC 2024

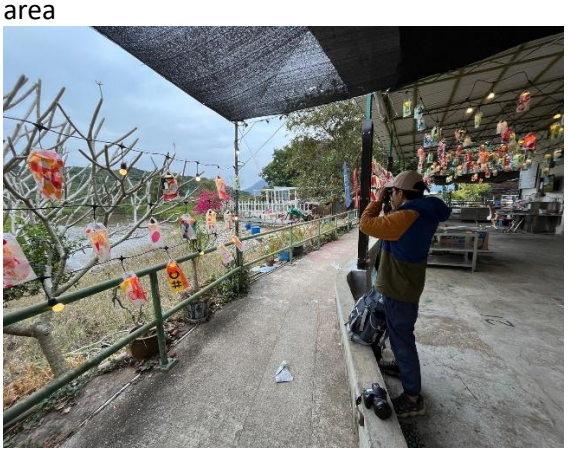
Reinstalling drip irrigation system

Pruning, weed control and maintenance

JAN – MAR 2025

Enzyme made from houseowner’s fermenting citrus peels was applied to enhance microbe activity.

Ecological Survey in Lee House and in Kuk Po area



APR 2025	
Stakeholder engagement: Dried flowers were made into tea bag products, integrating into the existing lineup of traditional goods to enhance their value proposition 	
MAY 2025	
Ecological survey observing species of bats and birds 	

4.1.4 Monthly Growing Report (photos refer to table 6)

Date	Details	Shoot height
JAN 2024	Kale Parsley 20 of each healthy seedlings transplanted with strong green leaves and developing roots.	~12cm ~10cm
FEB 2024	90% of Kale seedling and 100% of Parsley seedling has been severely damaged. Site owner suggested the damage was due to rodents which caused same level of disturbance to their previous growing practice. The damage is unrecoverable.	~2-3cm
MAR 2024	Remaining Kale and Parsley are physically damaged with shoots beaten by rodents.	Lost
MAY 2024	Preparing seedlings of new heat-tolerant plant list: Chinese Dicliptera (狗肝菜) Lemmon's Marigold (芳香萬壽菊) Heartleaf Houttuynia (魚腥草)	Seedling preparation
JUN 2024	Loddiges's Dendrobium (美花石斛) Chinese Dicliptera (狗肝菜) Aloe vera (蘆薈) Calendula (金盞花) Lemmon's Marigold (芳香萬壽菊) Common Conehead (馬藍) Heartleaf Houttuynia (魚腥草)	13-15cm 22-25cm 31-35cm 20-25cm 41-42cm 30-35cm 12-15cm
JUL 2024	Loddiges's Dendrobium (美花石斛) Chinese Dicliptera (狗肝菜) Aloe vera (蘆薈) Calendula (金盞花) Lemmon's Marigold (芳香萬壽菊) Common Conehead (馬藍) Heartleaf Houttuynia (魚腥草) Dog fennel (假蒿) Screw pine（露兜樹）	14-16cm 27-29cm 31-35cm 15-18cm 41-42cm 35-40cm 17-24cm 14-18cm 25-30cm
AUG 2024	Loddiges's Dendrobium (美花石斛) Chinese Dicliptera (狗肝菜) Aloe vera (蘆薈) Calendula (金盞花)* Lemmon's Marigold (芳香萬壽菊) Common Conehead (馬藍) Heartleaf Houttuynia (魚腥草) Dog fennel (假蒿) Screw Pine（露兜) Rhinacanthus（白鶴靈芝) - Pentas (五星花) * wilted during summer and will be re-transplant in fall or favorable season.	15-17 30-40 31-36 0 41-42 35-40 17-24 14-18 35-45 25-33 18-23
SEP 2024	Loddiges's Dendrobium (美花石斛) Chinese Dicliptera (狗肝菜) Aloe vera (蘆薈)	16-20 38-45 31-36

	Lemmon's Marigold (芳香萬壽菊)	43-47
	Common Conehead (馬藍)	38-44
	Heartleaf Houttuynia (魚腥草)	25-38
	Dog fennel (假蒿)	22-45
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	25-35
	Pentas (五星花)	19-25
OCT 2024	Loddiges's Dendrobium (美花石斛)	16-20
	Chinese Dicliptera (狗肝菜)	25-30
	Aloe vera (蘆薈)	32-37
	Lemmon's Marigold (芳香萬壽菊)	50-65
	Common Conehead (馬藍)	35-40
	Heartleaf Houttuynia (魚腥草)	25-38
	Dog fennel (假蒿)	30-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	35-45
	Pentas (五星花)	20-30
NOV 2024	Loddiges's Dendrobium (美花石斛)	16-20
	Chinese Dicliptera (狗肝菜)	15-25
	Aloe vera (蘆薈)	32-37
	Lemmon's Marigold (芳香萬壽菊)	60-80
	Common Conehead (馬藍)	35-40
	Heartleaf Houttuynia (魚腥草)	25-38
	Dog fennel (假蒿)	40-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	40-50
	Pentas (五星花)	20-30
DEC 2024	Loddiges's Dendrobium (美花石斛)	17-21
	Chinese Dicliptera (狗肝菜)	15-25
	Aloe vera (蘆薈)	32-37
	Lemmon's Marigold (芳香萬壽菊)	70-90
	Common Conehead (馬藍)	25-35
	Heartleaf Houttuynia (魚腥草)*	10-15*
	Dog fennel (假蒿)	40-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	40-50
	Pentas (五星花)	20-30
	A large patch of Heartleaf Houttuynia was believed to be eaten by cow which entered the farming area	
JAN 2025	Loddiges's Dendrobium (美花石斛)	16-20
	Chinese Dicliptera (狗肝菜)	15-25
	Aloe vera (蘆薈)	32-37
	Lemmon's Marigold (芳香萬壽菊)	70-90
	Common Conehead (馬藍)	25-35
	Heartleaf Houttuynia (魚腥草)	10-15
	Dog fennel (假蒿)	40-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	40-50
	Pentas (五星花)	20-30

	Peppermint (薄荷) Butterfly Pea (蝶豆花)	20-25 15-25
FEB 2025	Chinese Dicliptera (狗肝菜)	30-45
	Aloe vera (蘆薈)	31-36
	Lemmon's Marigold (芳香萬壽菊)	70-85
	Common Conehead (馬藍)	25-35
	Heartleaf Houttuynia (魚腥草)	10-15
	Dog fennel (假蒿)	20-45
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	40-50
	Pentas (五星花)	20-25
	Peppermint (薄荷)	23-30
	Butterfly Pea (蝶豆花)	21-25
MAR 2025	Chinese Dicliptera (狗肝菜)	30-40
	Aloe vera (蘆薈)	35-38
	Lemmon's Marigold (芳香萬壽菊)	70-85
	Common Conehead (馬藍)	28-40
	Heartleaf Houttuynia (魚腥草)	15-18
	Dog fennel (假蒿)	20-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	45-50
	Pentas (五星花)	20-25
	Peppermint (薄荷)	23-30
	Butterfly Pea (蝶豆花)	25-28
APR 2025	Loddiges's Dendrobium (美花石斛)	25-28
	Chinese Dicliptera (狗肝菜)	33-38
	Aloe vera (蘆薈)	35-45
	Lemmon's Marigold (芳香萬壽菊)	60-80
	Common Conehead (馬藍)	30-45
	Heartleaf Houttuynia (魚腥草)	18-25
	Dog fennel (假蒿)	25-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	40-48
	Pentas (五星花)	25-30
	Peppermint (薄荷)	23-28
	Butterfly Pea (蝶豆花)	20-25
MAY 2025	Loddiges's Dendrobium (美花石斛)	25-28
	Chinese Dicliptera (狗肝菜)	35-45
	Aloe vera (蘆薈)	40-50
	Lemmon's Marigold (芳香萬壽菊)	50-60
	Common Conehead (馬藍)	35-50
	Heartleaf Houttuynia (魚腥草)	22-30
	Dog fennel (假蒿)	35-50
	Screw Pine (露兜)	35-45
	Rhinacanthus (白鶴靈芝)	35-45
	Pentas (五星花)	25-30
	Peppermint (薄荷)	25-30
	Butterfly Pea (蝶豆花)	20-25

Table 6. Photo record of crops grown in project site in Jan 2025- May 2025

Loddiges's Dendrobium (美花石斛) 	Chinese Dicliptera (狗肝菜) 
Aloe vera (蘆薈) 	Heartleaf Houttuynia (魚腥草) 
Lemmon's Marigold (芳香萬壽菊) 	Common Conehead (馬藍) 

Dog fennel (假蒿) 	Screw pine（露兜樹） 
Pentas (五星花) 	Rhinacanthus (白鶴靈芝) 
Peppermint (薄荷) 	Butterfly Pea (蝶豆花) 

4.2 Result of sustainable growing practices in the practice area

In July 2024, Lees was provided with a "Guideline for Sustainable Eco-living Prototype," detailing sustainable farming practices implemented in the practice area to enhance soil health, increase resilience to environmental stressors, and improve productivity. A minimum of six measures were proposed and subsequently adopted, as outlined below:

1. Pioneer Species Introduction: Selected plant species were introduced as a pioneer community to stabilize soil, retain moisture, and enhance fertility, thereby supporting long-term agricultural sustainability.
2. Site Maintenance: Regular clearance of unhealthy branches was conducted to improve airflow and sunlight penetration, optimizing conditions for plant growth.
3. Water Management: A drip irrigation system and leveled water tank were installed to maximize water-use efficiency, reducing consumption compared to traditional sprinkler systems and suppressing weed proliferation.
4. Mulching Application: Existing crops were managed as living mulch to protect topsoil from desiccation and minimize compaction, preserving soil structure.
5. Enzyme Supplementation: An enzyme derived from houseowner's fermented citrus peels was applied to stimulate microbial activity and release bound nutrients. Lees was advised to minimize tillage to foster a robust microbial ecosystem.
6. Biodiversity Enhancement: A solitary beehive was installed to establish a microhabitat, promoting biodiversity. Lees was encouraged to utilize biocontrol agents, such as recognizing mantises as beneficial insects rather than pests.

The efficacy of these sustainable farming measures was evaluated by assessing soil organic matter (SOM) content and, at a preliminary level, observing topsoil color—an established indicator for characterizing, classifying, and differentiating soils (Fan et al., 2017). Loss-on-ignition (LOI) analysis, submitted by the Life Science Department of The Chinese University of Hong Kong (

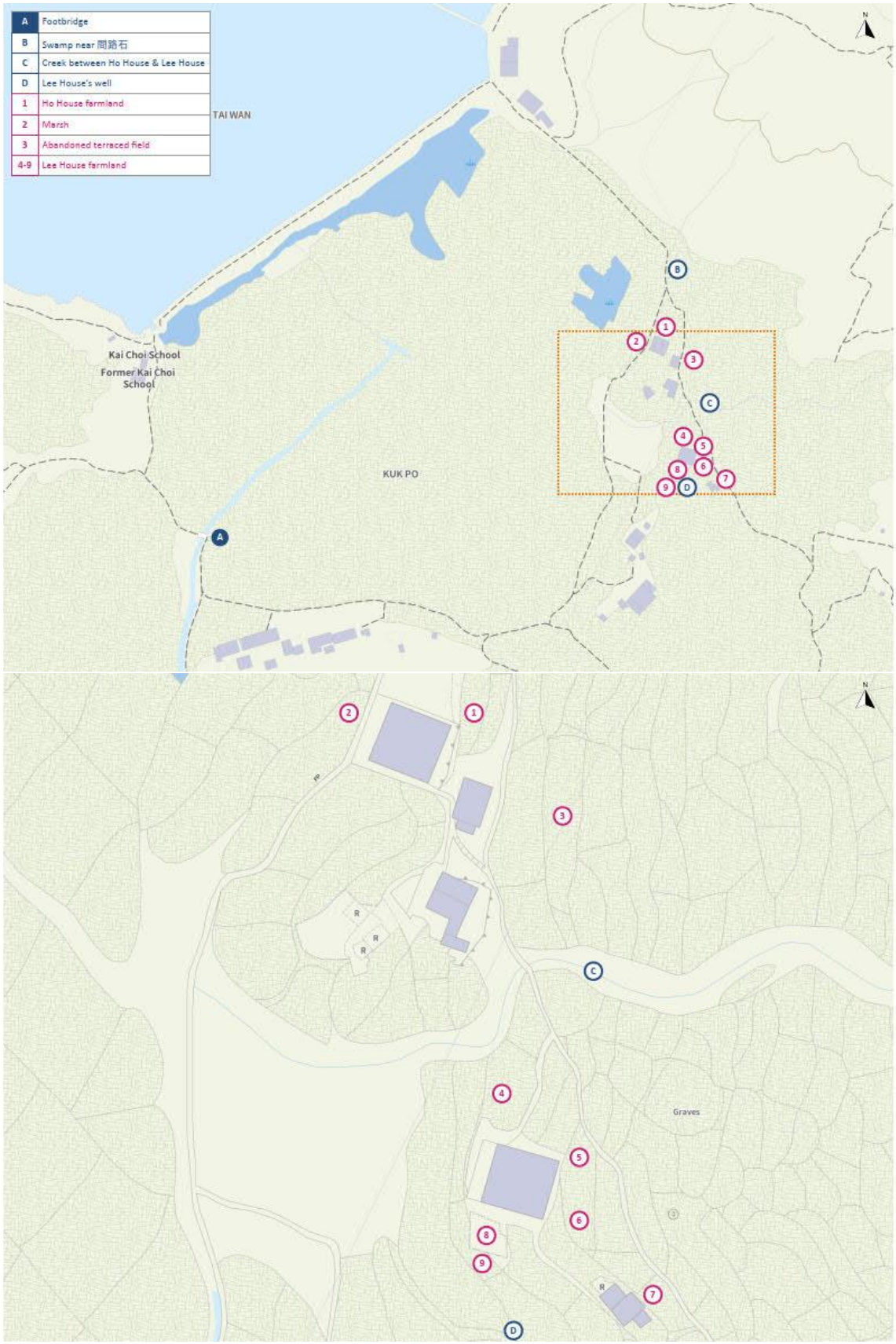
), revealed that the practice area (Point 8) exhibited consistently higher SOM levels compared to adjacent farming sites (Points 4–6), including Point 4, an active farm area managed by Lees outside the practice area. This suggests that the implemented measures positively influenced soil health, with the effect being particularly pronounced during dry winter periods. Corroborating these findings, the topsoil in the practice area displayed a higher Munsell Soil Colour Value (indicating a darker hue) relative to comparative sites at Lees' property.

Table 7. Data extracted from "Environmental & Ecological Assessment of Tin Sum" submitted by the Life Science Department

Date	Point	LOI (%)	Growth
6/8/2024	4	6.195547	
6/8/2024	**8**	**6.771344**	**+9.3%**
20/9/2024	4	-	
20/9/2024	**8**	**6.908463**	**-**
22/10/2024	4	5.353902	
22/10/2024	**8**	**7.067813**	**+32.0%**
25/11/2024	4	3.10219	
25/11/2024	**8**	**4.483074**	**+44.5%**
18/12/2024	4	3.454086	
18/12/2024	**8**	**6.103679**	**+76.7%**

* 1. Fan et al, 2017. Measurement of Soil Color: A Comparison Between Smartphone Camera and the Munsell Color Charts. Soil Sci. Soc. Am. J. 81:1139–1146

Fig 8 Map showing sampling points of "Environmental & Ecological Assessment of Tin Sum" submitted by the Life Science Department



4.3 Challenges of sustainable growing practices and follow-up actions

4.3.1 Wildlife disturbance

The presence of rodents was not identified as a disturbance until after the transplantation process was completed and subsequently confirmed by the site owner, Lee, as a persistent adverse factor. Despite Lee's efforts to experiment with various control methods, rodents could not be successfully eliminated. While other roaming animals such as cows, wild boars, and porcupines may also cause damage, Lee confirmed that rodent disturbances were particularly prevalent and posed a significant risk of crop loss.

In response to this challenge, a revision of plant options was undertaken as stated in part 4.1.2 of this report, with a focus on adding Orchidaceae, a family of plants typically grown on tree trunks and elevated from the ground. This strategic adjustment aims to mitigate the risk of physical damage caused by rodents and other terrestrial animals.

4.3.2 Water shortage

The Lees have always preferred using the natural water extracted from their well by a water pump originally installed at Lee House, steering clear of tap water to keep costs down due to economic concerns. However, it malfunctioned in early 2024, halting the flow of well water the Lees depended on, leaving the water access cut off most of 2024. In December 2024, a new sink was constructed outside Lee House, adjacent to the farm area, allowing an irrigation hose to be connected to assessing tap water, establishing a functional drip irrigation system that delivers consistent but controlled watering to the practice area. In May 2025, the construction of the Farmshed behind the Practice Area has been completed, its design includes a rainwater collection system which allows the Lees to use the collected water to irrigate primarily. Tap water becomes a backup water source during dry seasons.

4.3.3 Communications on eco-living elements

Lee’s premises has various ornamental plants, food plants, herbs, and fruit trees planted around the property, which may lead to confusion when visitors inquire about species information or the overall planting plan.

To streamline the guided tours and make the information more accessible, 43 species tags were added with two main purposes. First, these tags assist the house owner in effectively communicating with visitors about the plant species, thereby enhancing the visitor experience. Second, the tags align with the aesthetic elements of the project site. Each species tag is equipped with a QR code to further increase engagement. By scanning the QR code, visitors can access a PDF document that provides detailed descriptions of each species.

4.4 Workshops and events (photos refer to Appendix 05 of 4th progress report)

25 Aug 2024	**CUHK x WZQ: Eco-cultural & Living Experience Workshop** • A workshop successfully engaged 22 participants from Wu Zhi Qiao Charitable Foundation, comprising staff and students from local higher education institutions. • The key elements of the workshop included: ■ A guided tour of Kuk Po, introducing its history, culture, ecology and architecture ■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Introducing the concept of eco-living and the activities involved in farmland work. ■ Teaching participants how to use Screw Pine to create sustainable food containers.	3.0 3.1 (KPI 2C iii)
29 Sep 2024	**National Ecology Day: Eco-cultural & Living Experience Workshop** • A workshop was conducted for 45 participants, including staff and students from both local and overseas higher education institutions. The workshop covered: ■ A guided tour of Kuk Po and Yung Shue Au, introducing its history, culture, ecology and architecture ■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Introducing the concept of eco-living and the activities involved in farmland work. ■ Teaching participants how to use Screw Pine to create sustainable food containers. **Stakeholders as Operators Workshop** • A stakeholder workshop was held with key project stakeholders. During the session, the following elements were presented: ■ Restoration highlights that emphasise the cultural value of Lee's heritage. ■ Ecological practices implemented in managing the farmland, integrating eco-living principles into Lee's daily activities. ■ Ideas and prototypes of products developed from farm resources. ■ Stakeholders are trained to be operators and docents of the restored Mansion	3.0 3.1 (KPI 2C iii)
24 Nov 2024	**Family Fun Day: Eco-cultural & Living Experience Workshop** • A workshop, successfully engaging 21 participants, was conducted for a group of children (ages 4 to 7) and their parents. ■ A guided tour of Kuk Po, introducing its history, culture, ecology and architecture ■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Participants learned how to use Screw Pine to create sustainable food containers. ■ The workshop included a demonstration of indigo dyeing, with an explanation of the theory behind natural dye extraction, referencing the indigo plants cultivated at Lee's House.	3.0 3.1 (KPI 2C iv)
27 Dec 2024	**Opening Ceremony of Lee's Mansion** • A thematic workshop, successfully engaging 120 participants, was conducted as part of the opening ceremony. The attendees included university students, teachers, Kuk Po villagers, various related stakeholders, and journalists. Key elements of the workshop included:	3.0 3.1 (KPI 2D i)

	■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Teaching participants how to use Screw Pine to create sustainable food containers. ■ Demonstrating indigo dyeing, with an explanation of the theory behind natural dye extraction, referencing the indigo plants cultivated at Lee's House. ■ Showcasing the use of herbs from the eco-garden to create herbal drinks.	
5 Mar 2025	**CUHK x HKSC: Eco-cultural Living Experience Workshop** • A workshop, successfully engaging 20 participants, was conducted for a group of secondary school students from HKICC Lee Shau Kee School of Creativity. ■ A guided tour of Kuk Po Tin Sum, introducing its history of agro-reclamation, culture, ecology and architecture ■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Participants learned how to use Screw Pine to create sustainable food containers. ■ The workshop included a demonstration of indigo dyeing, with an explanation of the theory behind natural dye extraction, referencing the indigo plants cultivated at Lee's House.	3.0 3.1 (KPI 2C ii)
5 Apr 2025	**CUHK x St. Hilary's Primary School: Eco-cultural Living Experience Workshop** • A workshop, successfully engaging 28 participants, was conducted for a group of primary school students from St. Hilary's Primary School. ■ A guided tour of Kuk Po Tin Sum, introducing its history of agro-reclamation, culture, ecology and architecture ■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Participants learned how to use Screw Pine to create sustainable food containers.	3.0 3.1 (KPI 2C i)
13 Apr 2025	**CUHK x St. Hilary's Kindergarten: Easter in Kuk Po** • A thematic workshop, successfully engaging 60 participants, was conducted, including kindergarten students and their parents or guardians. Key elements of the workshop included: ■ A guided tour of Kuk Po Tin Sum, introducing its history of agro-reclamation, culture, ecology and architecture ■ Exploring traces of wild boars, educating participants what to do when encountering wild animals. ■ Collecting shells from the beach as primary materials of indigo-dyeing workshop. ■ Highlighting the architectural features and key aspects of restoring Lee's Mansion. ■ Teaching participants how to use Screw Pine to create sustainable food containers. ■ Demonstrating indigo dyeing, with an explanation of the theory behind natural dye extraction, referencing the indigo plants cultivated at Lee's House.	3.0 3.1 (KPI 2D i)

Table 8. Photo record of products with market value (KPI 2F)

1.金盞花茶包 (raw material) 	1.金盞花香茅檸檬茶 (product) 
2.露兜葉 (raw material) 	2.露兜葉盒子的大蕉糕 (product) 
3.假蒿小盆栽紀念品 (raw material as product) 	

4.芳香萬壽菊乾品 (raw material) 	4.萬壽菊香茅檸檬茶 (product) 
5.馬藍紮染 (raw material partially purchase from market) 	5.馬藍紮染 (product) 

	Product/Workshop	**Crops used/demonstrated**
1	Herbal tea bag (retail goods), or Herbal tea (served during workshop)	Lemmon's Marigold
2	Herbal tea bag (retail goods), or Herbal tea (served during workshop)	Calendula
3	Favoured cake using Screw Pine leaves as container (serve during workshop)	Screw Pine
4	Herb pot (retail goods)	Dog fennel
5	Indigo dyeing workshop (workshop experience)	Common Conehead

5.0 Questionnaire results

This questionnaire records the responses of participants of the “Kuk Po- Eco-living and Cultural Experiences Workshop”, investigating whether there is an increase in public awareness towards countryside conservation after participating the workshop. It acts as an analysing tool of this prototype for eco-living and cultural experiences, providing quantitative and qualitative results to improve countryside conservation and guiding interested parties with conservation initiatives.

A total of 90 questionnaire responses were collected, with 71% of respondents being first-time visitors to Kuk Po. Among the respondents, 12% were aged under 18 years old, 54% were aged 18–30, 26% were aged 31-40, while the remaining 8% were aged 40–65.

Additionally, 88% of respondents indicated that the tour duration was appropriate. All respondents (100%) stated they would recommend the guided visit to others, reflecting their satisfaction with the overall experience.

During the first part of the workshop, participants enjoyed a guided tour of Kuk Po and Lee’s Mansion. In Section 2, we evaluated four core components of the guided tours to assess satisfaction levels, using a scale from 1 to 6 (where 1 indicates no growth and 6 signifies significant growth). The results demonstrated a high level of satisfaction regarding the countryside conservation initiative that the project aims to support.

	Scale 1	2	3	4	5	Scale 6
Introduction of the history of Kuk Po	0	0	1 (1.1%)	8 (8.9%)	40 (44.4%)	41 (45.6%)
Introduction of restoration concept	0	0	2 (2.2%)	5 (5.6%)	37 (41.1%)	46 (51.1%)
Introduction of growing elements	0	0	1 (1.1%)	7 (7.8%)	43 (47.8%)	39 (43.3%)
Traditional food tasting	0	0	0	7 (7.8%)	21 (23.3%)	62 (68.9%)

In section 3, participants rated their perceived growth in knowledge of the project in three key areas of countryside conservation. This was evaluated on a scale of 1 to 6, where 1 represented no growth and 6 represented significant growth. The results showed a significant increase in participants' awareness of countryside conservation following their participation in designed educational activities.

	Scale 1	2	3	4	5	Scale 6
History & evolution of Kuk Po	0	1 (1.1%)	3 (3.3%)	9 (10%)	40 (44.4%)	37 (41.1%)
Restoration concept of Lee’s Mansion	0	0	1 (1.1%)	14 (15.6%)	33 (36.7%)	42 (46.7%)
Sustainable growing activities carried out by the Lees	0	0	1 (1.1%)	6 (6.7%)	33 (36.7%)	50 (55.6%)

The top three qualitative feedback themes were as follows: "A more flexible event schedule“, “increasing the variety of activities”, and “enhancing the level of interaction“. In response to this feedback, the workshops were adjusted to improve the overall user experience, including the following changes:

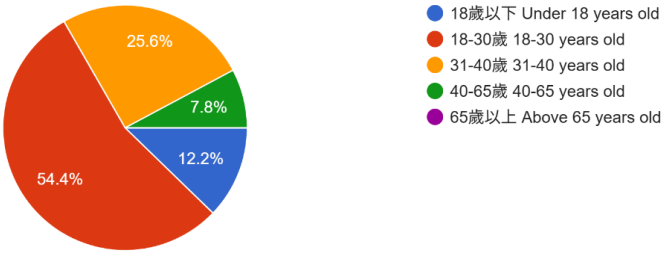
1. Participants were grouped into smaller groups to receive guided tours at different locations, enhancing time management and interaction with participants
2. The duration of the cultural workshop was extended to allow for a more interactive session.
3. Indigo dyeing workshop, wild boar story and shells collection will be incorporated into upcoming sessions if suitable.
4. The duration of the interactive session with Lee House owner, Mrs. Lee, was increased to provide a richer experience.

Table 8: Survey result in detail (n=90)

Section 1. General information of respondents

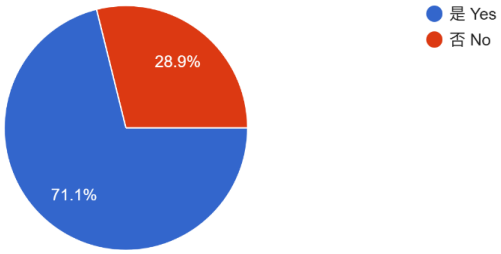
1. 受訪者的年齡範圍是 The age range of the respondents is

90 responses



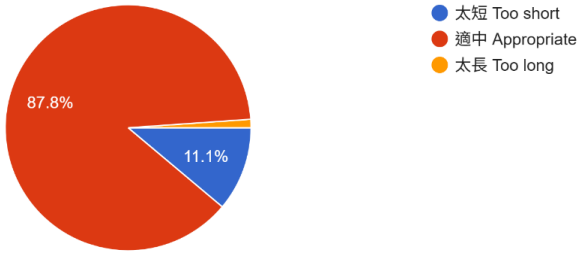
2. 你是否第一次到訪谷埔？ Is this your first time visiting Kuk Po?

90 responses



5. 導覽時間是否合適？ Is the duration of the guided tour appropriate?

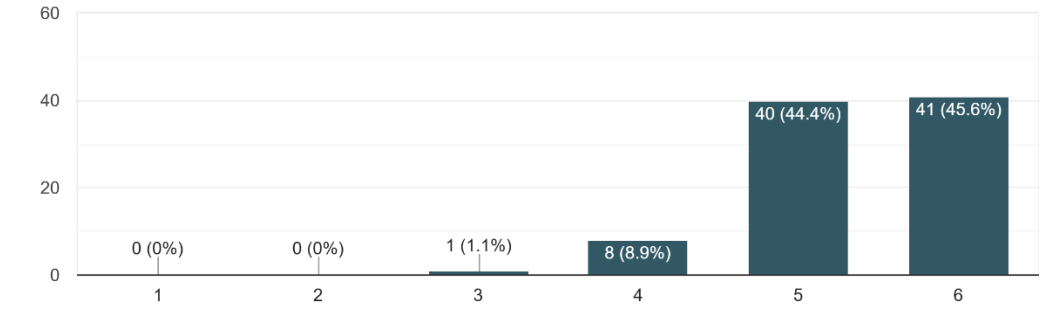
90 responses



Section 2. Satisfactory levels of guided tour and activities (1- very dissatisfied, 6- very satisfied)

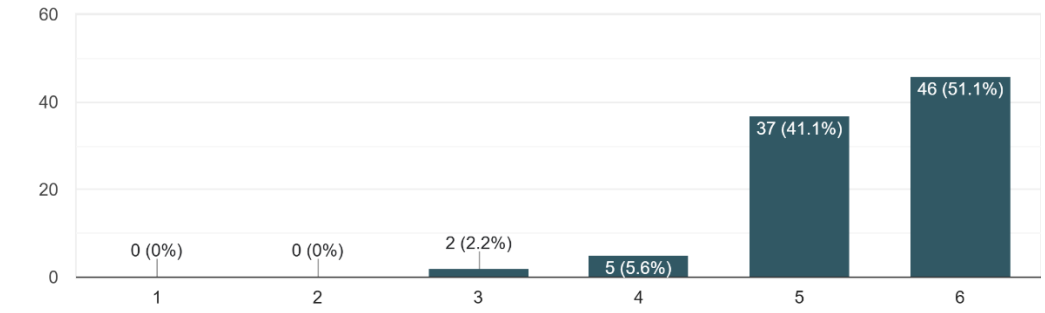
谷埔歷史講解 ： Introduction of the history of Kuk Po:

90 responses



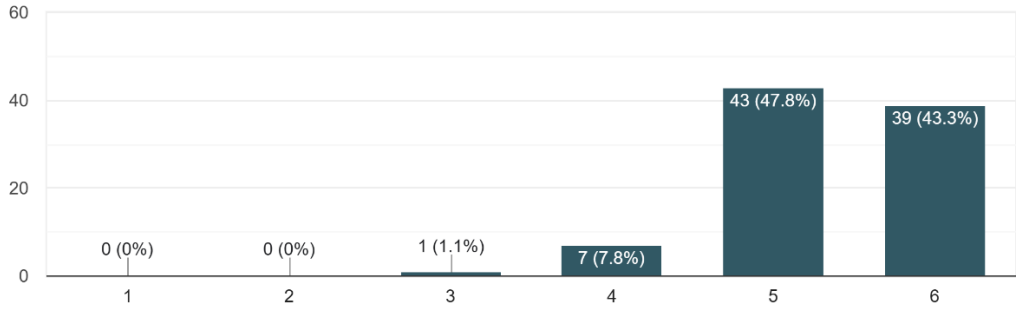
復修理念講解： Introduction of restoration concept:

90 responses



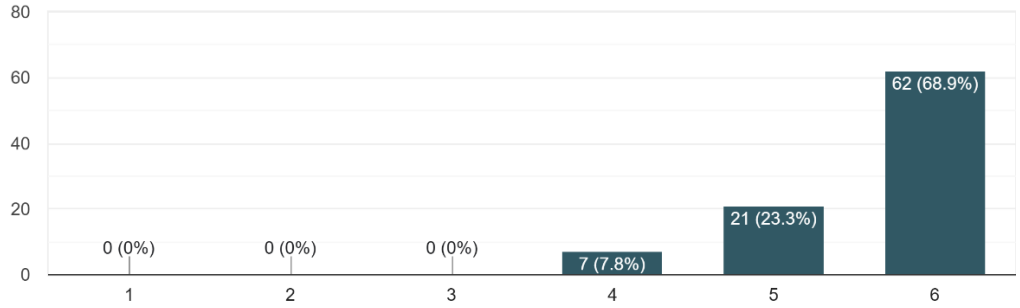
耕作元素講解： Introduction of growing elements:

90 responses



傳統美食品嚐或展示： Traditional food tasting:

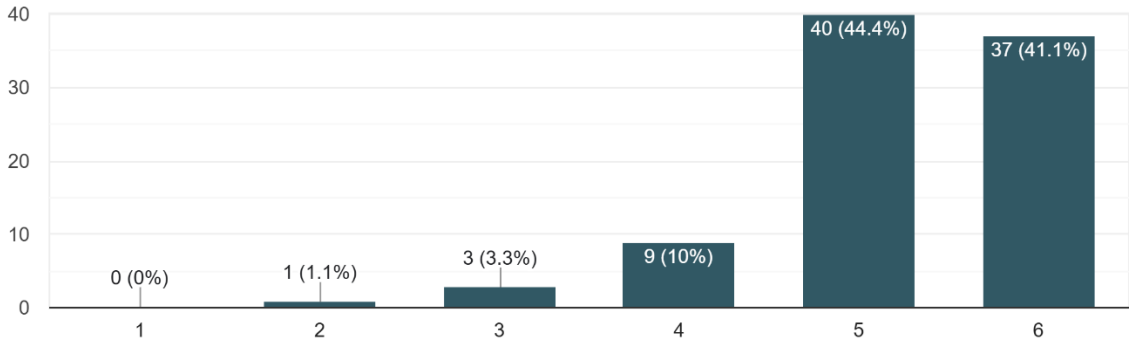
90 responses



Section 3. Increase of knowledge after participating (1- no growth, 6- great growth)

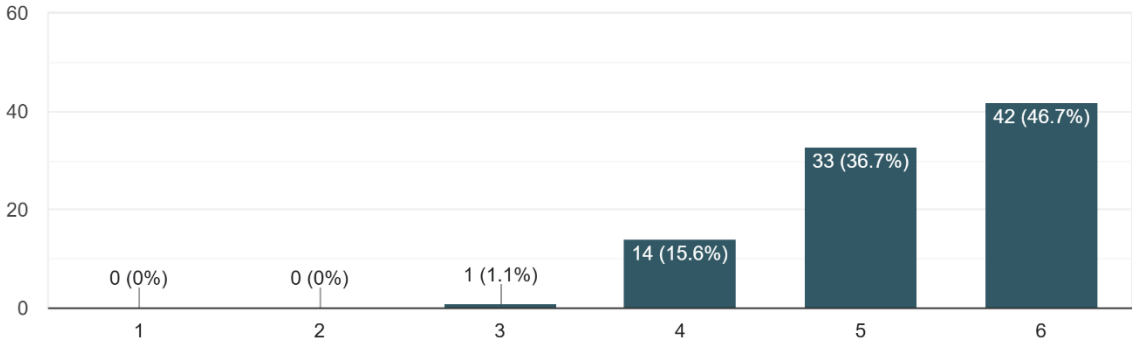
谷埔的歷史及轉變： The history & evolution of Kuk Po:

90 responses



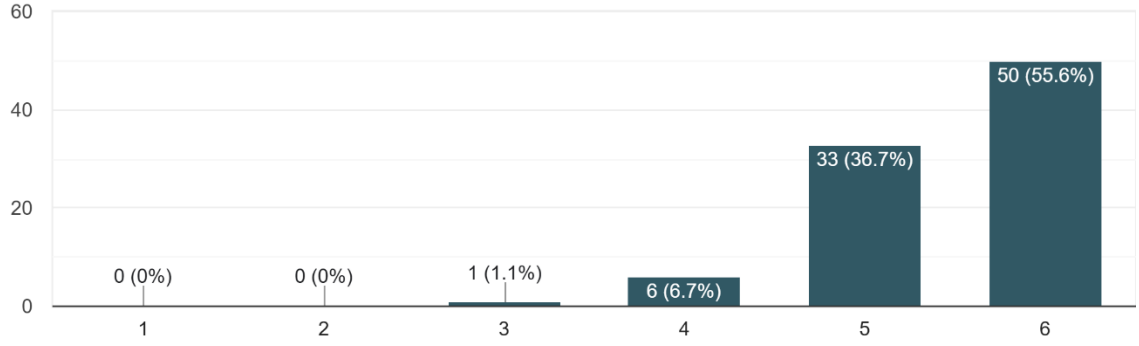
復修李宅的概念： The restoration concept of Lee's Mansion:

90 responses



李家進行的可持續種植活動： Sustainable growing activities carried out by the Lees:

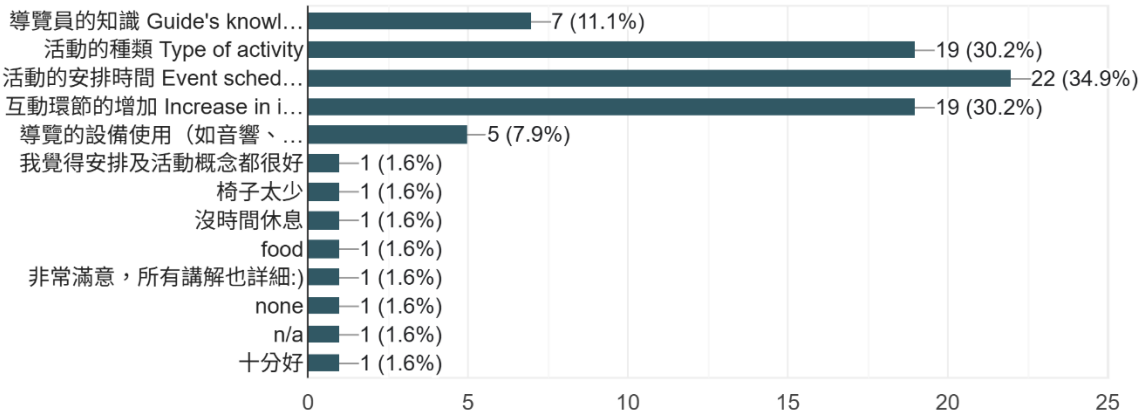
90 responses



Section 4. Improvement suggestions

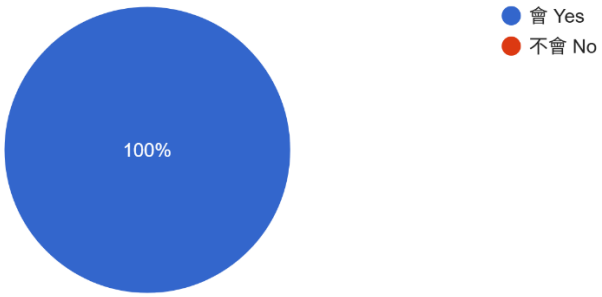
7. 你認為哪些方面需要改進？（可選擇多項） Which areas do you think need improvement? (You can select multiple items)

63 responses



9. 你會推介其他朋友來遊覽谷埔嗎？ Would you recommend other friends to visit Kuk Po?

90 responses



8. **你是否有其他建議或意見?**

Do you have any other suggestions or comments?

增加互動
初嚐耕作，好玩！
Great workshop. 有助了解更多谷埔歷史和居民生活
activity was meaningful. thank you!
Workshop was fun with souvenirs to take away
可以增加分組的細節
schedule is too packed
nope，it's great！
飲用水的預備
建涼亭，休息的地方
it would be nice to have a bigger boat that can take all participants with just 1 boat
客家耕作可以做庭院生態系統進行講解
It was a very meaningful event and my children enjoyed it a lot! Keep it up
多增加美食相關項目
美食佳餚，享受同居民傾計，狗仔好友善，愉快的一天。
可以增加指示牌/講解歷史的內容
ChungKee tastes very good!
The workshop is insightful. Staffs are knowledgeable and residences are friendly. Looking forward to seeing more of these type of work done in these parts of HK.
感謝職員和居民用心分享
Want to know more about restoration
復修設計有意思和美觀，把往日居民生活重現和保留特色。謝謝。
十分好 希望有機會再來
希望更多資源分配到復修發展計劃 讓更多人認識

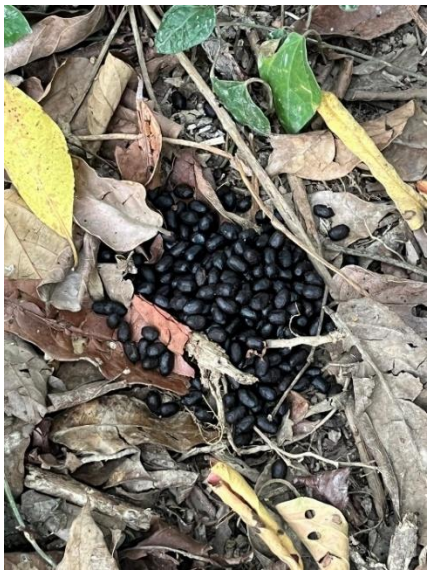
6.0 Ecological survey

Surveys for identifying avifauna and large mammal were conducted. A total of 35 species was recorded including most of the commonly seen local residents and winter migrants, and several relatively uncommon species including Oriental Greenfinch. A potential animal path was identified on which faeces potentially of Barking deer were observed in over 4 locations. Barking deer was also spotted through camera trap, showing that they still inhabit in Kuk Po.

Date	Time	**Task**
04 Jan 2025	Full-day	Ecological survey
07 Feb 2025	Full-day	Ecological survey
04 May 2025	Half-day	Bat survey, set camera trap
11 May 2025	Full-day	Bird survey, retrieve camera trap

Oriental Greenfinch

Sooty-headed Bulbul



Faeces potentially of Barking deer were observed in over 4 locations, indicating an animal path has been established and used by large mammals.

Muntiacus vaginalis was spotted on camera trap

 A carcass believed to be a male *Muntiacus vaginalis* was found around 100m from Lee House.	

7.0 Conclusion

From Valley to Plain II: Architectural Rehabilitation for Integrated, Co-creative Eco-living Experience in Tin Sum Village, Kuk Po successfully delivered a community-driven model for sustainable farming and eco-living.

Sustainable Farming Practices
55m² of farmland was rehabilitated with measurable improvements in soil health—soil organic matter increased by up to **76.7%**. Key strategies included:

- Pioneer species introduction to stabilize soil and enhance fertility
- Drip irrigation and water tank installation for efficient water use
- Living mulch and enzyme application to enrich topsoil and boost microbial activity
- Biodiversity enhancement through solitary beehives and biocontrol awareness

Product Development
Five marketable products—including herbal teas, Herb pots and indigo-dyeing experience —were created from farm produce, demonstrating the viability of eco-living applications.

Community Engagement
Over **90 volunteers** participated, and **three villagers** were trained as guides, strengthening local capacity and stewardship.

Eco-living & Cultural Experiences
Six workshops and two thematic festivals engaged **over 200 participants** across age groups—from kindergarten children to university students, raising awareness of rural heritage, biodiversity, and sustainable living.

Ecological & Educational Impact
Ecological surveys recorded **35 species** of birds and mammals, including rare sightings such as Barking Deer and Oriental Greenfinch. Educational tools, including **43 plant tags with QR codes**, were installed throughout the farm and surrounding areas to support guided tours and improve species identification. Questionnaire results showed high satisfaction and increased awareness of countryside conservation.

This prototype offers a replicable model for integrating heritage conservation, ecological farming, and cultural education, thereby making a meaningful contribution to Hong Kong's rural revitalization and sustainability goals.