10th Anniversary Book Volume 1



ENGINEERS WITHOUT BORDERS HONG KONG

2008-2018



Engineers Without Borders Hong Kong 2008-2018

10th Anniversary Book

Volume 1

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Overseas Projects Committee (led by Sam Chan)

Young Members Group (led by Henry Ng)

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Foreword

The first ten years of EWB-HK is a rugged time path. At its inception in June 2008, EWB-HK appealed to the public and some 200 professionals responded. They volunteered services in Szechuan which was badly struck by earthquakes in May 2008. Teams of people were sent to the quake areas six times from June 2008 to April 2009, providing services in assessment of village house structures, planning for redevelopment of a demolished village, and transfer of skills in building stronger village houses to withstand earthquakes.

I was elected chairman in October 2010, at a time the organization was on the verge of disintegration. Since there was no longer room for us to work in Szechuan, people who joined EWB-HK at its inception started to drift away. With the determination of a few core members, we groped our way in different directions like donating to build village clinics, leading students to repair schools in rural China, providing engineering advice to other NGOs, etc. However, it did not help in building up an organization because there was no clear direction. Hence in July 2012, the Council (now the Board) of EWB-HK set up the Vision and Missions which work till now.

With the new direction in view, we immediately looked for projects to fulfil Mission no. 1 and established the Young Members Group in 2013 to fulfil Mission no. 2. However, our efforts in looking for projects in China led to nowhere. As for the Young Members Group, which rolled out well in the first two years, saw a shortage of young leaders to continue the work afterwards.

We gained mileage in 2017 when Edward took up the chairmanship. For projects, we started to serve local NGOs as well as to develop overseas projects which are focused mainly in Myanmar. Just join us as a volunteer and you will certainly feel the thriving vitality of both the Hong Kong Projects and Overseas Projects Teams.

Another landmark was made when EWB-HK partnered up with Universities to launch the Global Citizenship Program with a view to letting undergrad or postgrad engineering students broaden their outlook on their role as an engineer to serve different peoples in the world. It has been a successful undertaking for the two years running.

I was told that in Hong Kong, half of the NGOs do not last for more than five years after being established. So I am proud to present to you EWB-HK, which is now in its 11th year and going strong.

Ms. Susanna Tam Chairman of Engineers Without Borders Hong Kong 2010-2017

Foreword

It is my great pleasure to celebrate the 10th anniversary of EWB Hong Kong. Thanks to the contribution of our directors, committees, members, pro bono engineers, volunteers and friends of EWB. "To empower a world of disadvantaged communities by engineering solutions to achieve sustainable development" is not only a mission, but also a collective force of passionate individuals.

We are positioned as an engineering-based charitable organization in Hong Kong. Our operation is currently run by volunteers with different knowledge and skill competency. We are aiming at creating a platform between pro bono engineers and the beneficiaries. In view of this, the recruitment and development of a volunteer pool are one of the key factors to make EWB Hong Kong sustainable.

To tackle the growth of our organization, we have to chart the advancement of our NGO governance. In the 2017-18 term, membership and volunteer registration policies have been reviewed. Another immediate action to step up the governance is doing well in communication. Our Overseas Projects Committee issued the 2018 1st Quarter Newsletter as a pilot step of transparent reporting. We are looking for leaders for the public affairs team to manage the editing and publishing of regular newsletters that embrace all news and project reporting of all Committees.

In January 2018, the Board of Directors and Committee Heads conducted the Retreat 2018 Session 1. I would like to highlight the two conclusions and share them with our members, which are: "Project, is the driver of sustainability and growth"; and "Relationship, expectation management and openness are the success factors".

After the participation of the EWB-International Global Forum in 2017, we have stepped up the relationship development with suitable NGOs / social services organizations and tertiary education institutions in Hong Kong, and also extended it to those organizations in or serving Cambodia, Malaysia, Myanmar, Singapore and UK.

In the coming future, let's take action and enjoy the forthcoming ventures hosted by EWB-HK. Meanwhile, we shall better equip our pro bono engineers and volunteers with capacity and experience, together with a pragmatic and win-win attitude, to tackle the sustainable development challenges ahead, and to serve the communities in need.

Ir Edward CW Chan Chairman of Engineers Without Borders Hong Kong 2017-2019

Engineering Solutions 工程知識

Vision of EWB-HK

Disadvantaged Communities 弱勢社群 A World of disadvantaged communities empowered by engineering solutions to achieve sustainable development.

Sustainable Development 可持續發展

運用工程知識,給弱勢社群增能,達致可持續發展

founded in 2008

engineering-based social services
Organization

an independent, non-political and non-religious organization

approved charitable institution in Hong Kong (IRD File No. 91/9757) Engineers
Without
Borders
Hong Kong

Member organization of EWB-International

nongovernmental organization (NGO)

volunteerbased organization members & volunteers from engineering & non-engineering backgrounds

Engineers Without Borders (EWB-HK) was founded in 2008, is an approved charitable institution and exempt from tax under Section 88 of the Inland Revenue Ordinance (IRD File No. 91/9757) under the Laws of Hong Kong. EWB-HK is a volunteer-based organization and supported by members & volunteers from engineering & non-engineering backgrounds. EWB-HK is an independent organization, a non-governmental organization (NGO), a non-profit-making organization (NPO) as well as non-political and non-religious organization. Engineers Without Borders (Hong Kong) is now a member organization of EWB-International.

Pro bono engineers

who have passion to serve



Bridging with capacity, competency and quality

Beneficiaries

in both organizational and individual basis

Objectives of EWB-HK

Empower

disadvantaged communities by engineering solutions

Partnership with other organizations,

education institutions and private sector

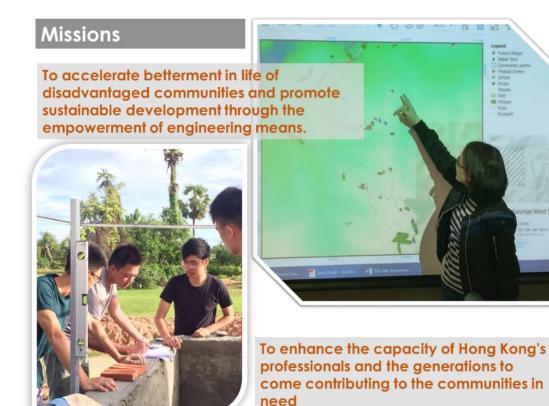
Support charitable organizations / NGOs with similar objectives

Opportunities

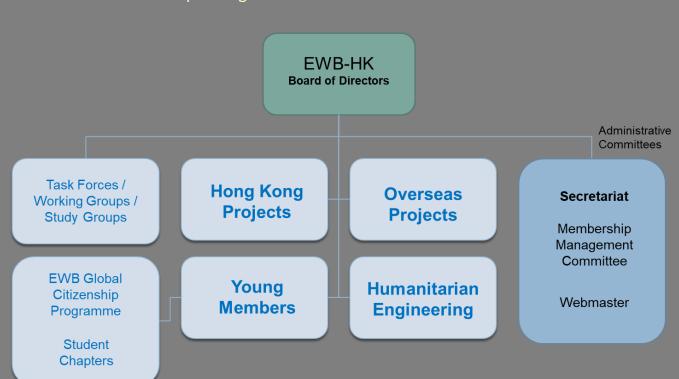
and Capacity building for volunteers and young persons

Promote

sustainable development

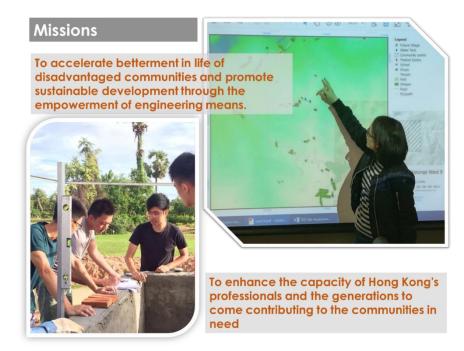


Engineers Without Borders (Hong Kong) is an engineering-based charitable organization in Hong Kong. We aim at bridging pro bono engineers who have passion to serve, with those beneficiaries in both organizational and individual basis. We value the professional uniqueness of our missions in Hong Kong and, the collective and expanding intentions of our volunteers.



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Global Engineer



EWB HK Engineers Without Borders

Humanitarian Engineering





Join us as Volunteer



Hong Kong Service Projects

Overseas Service Projects

Young Volunteers

Humanitarian Engineering Training

Volunteer Registration



Engineers Without Borders (Hong Kong)

Inter-committees
Collaborations





EWB-Salon 2018

New Transformation to EWB Community Service

Date: 28.OCT 10am-1pm

The year 2018 marks our big growth to EWB-Hong Kong on Hong Kong Projects and Overseas Projects. We would like to invite you to brainstorm new idea for our future projects and service quality improvement. Your innovative idea will bring synergy and positive energy to us. Let's focus to our roadmap to 2019



KNOW MORE ABOUT US AND MEET OUR PASSIONATE VOLUNTEERS!

EWB Volunteers Empowerment Workshop Series One:
Project Management

Date: 18.NOV 3pm-5pm

We have carried out social service project in Hong Kong and overseas and our passionate volunteers take part on project coordination and engineering design. We care our service, we also care about walking with our HK and overseas projects partner. Let's empower to run our projects on time, within budget and achieve objectives & goals together.



ENGINEERS WITHOUT BORDERS INTERNATIONAL

ENGINEERS WITHOUT BORDERS INTERNATIONAL



Engineers Without Borders (EWB) is an international solidarity organization for engineering and technology. It is made up mostly of national groups of engineers and engineering students.

These groups work on engineering projects throughout the world to assist disadvantaged communities.

EWB groups were established independently in each country and the degree of collaboration and organizational development varies.

There are 65 Engineers Without Borders organizations throughout the world that are part of the EWB-I network.



EWB-International Global Forum 2017, London



EWB Chile, EWB Hong Kong



EWB Honduras, EWB Hong Kong

ENGINEERS WITHOUT BORDERS INTERNATIONAL











































VISION

"A sustainable world where engineering enables longterm positive social and global development for the benefit of people and the environment everywhere."

MISSION

EWB-I seeks to promote collaboration so that collectively we can achieve more than the sum of our parts and fulfill our mission

"To be the beating heart of the engineering movement for sustainable global development, building and evolving engineering capacity throughout the world."

Roles of HKPC **Beneficiaries** Resources EWB-HK Individual local Members / disadvantaged Volunteers community **EWB-HK HK Projects** Committee Local NGOs / Charities Other possible on humanitarian or local supports betterment of disadvantaged (primarily in communities engineering related)

Objectives of the "Hong Kong Projects Committee:

- 1. To set up a **platform to bridge** the beneficiaries and competent volunteers;
- 2. To provide direct and indirect engineering supports to the beneficiaries; and
- 3. To provide engineering support to the communities with emergency technical needs

The Hong Kong Projects Committee (HKPC) was officially formed in February 2017. The Committee aims to provide a service project platform in Hong Kong and to fill up the technical gaps in the local social services sector. The extent of beneficiaries through our service projects ranges from the local communities in need, social services organizations to individual disadvantaged people.

Possible technical supports to social services organizations, on case-by-case basis:

Technical support to organization:

- Advisory support to NGO on those common difficulties encountered by social services practitioners;
- Training services to NGO staff;
- Hands-on technical supports to NGO;

Non-technical services

Social services on accelerating betterment in life of disadvantaged communities and promote sustainable development

Front line technical supports

Core Values in Hong Kong Projects

Quality

Connecting with Stakeholders

Teamwork

Social Bonding











圖片 2- 家訪了解長者需要



圖片 4- 向長者解釋初步檢查結果

長者家居環境改善計劃 - 室內勘察表

住戶姓名 無國界工程師 康東樓



圖片 1- 義工事前會議



圖片 3 - 視察居住環境

鰂魚涌 Quarry Bay HONG KONG

2008-2011

Building safety and environmental survey

4 years project for household investigation
Partnered with YWCA Project terminated because of discontinued Govt. funding

長者家居環境改善計劃

長者家居環境改善計劃 - 室內裝

基督教女青年會明儒松柏社區服務中心

屋邨		樓	層	14	
座 號	太安樓	單	位	1410	
住戶姓名		住戶	○電話		
無國界工程師	潘子瑩/冼振華				
勘察日期	18/06/2011				





浴屋天花批盪剝落, 建議爲浴屋做假天 花,保持衛生。



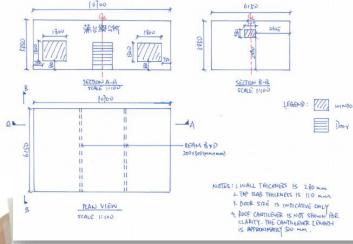
蒲台 Po Toi Island HONG KONG

2016

Building safety and environmental survey

Through multiple visits and survey, the feasibility study team learned more about the situations and concerns of people related to Po Toi Island as well as the steps needed to engage in engineering projects of this nature.





CLEAN STOVE ROCKET STOVE







東涌, 梅窩 Tung Chung, Silvermine Bay, HONG KONG

2017

Building
Engineering
survey
(building structure,
civil, E&M)

Young Person

July 2017, a team of 8 EWB-HK pro bono engineers and 2 engineering students coming across civil, geotechnical, electrical, mechanical, building services and project management disciplines conducted technical survey at the two HKPA campsites in Silvermine Bay and Tung Chung of Lantau Island, as well as conducted engineering workshop to the social workers and sport development staff.















油麻地 Yau Ma Tei HONG KONG

2017 ~

Building Engineering survey & advisory (building structure, E&M)



黄大仙 Wong Tai Sin HONG KONG

2018 ~

Building safety and environmental survey (building structure)



Our pro bono engineers conducted building safety and environmental survey to a Children's Home in Wong Tai Sin district. Various engineering items had been inspected, then followed up with engineering advices to the children center.



荔枝窩 Lai Chi Wo HONG KONG

2017 ~

Building
Engineering survey
& Engineering
advisory
(civil, building
structure, E&M)

Our pro bono engineers conducted site investigations and advisory service to the Sustainable Lei Chi Woo heritage village revitalization project, for the 300 years old village in the NE New Territories.











Cultural Heritage

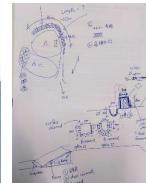
Sept 2018, our engineering team supported the site investigation of farmland flooding problem and advised a flood mitigation scheme for the Lei Chi Woo farmland area. Both projects are working with the partner Hong Kong Countryside Foundation. These projects are in progress.

荔枝窩 Lai Chi Wo **HONG KONG**

2017 ~

Farmland Flooding Prevention Investigation (civil engineering)

> Restoration of rainwater discharge channel 重建水坑



Suggested Improvement Works to divert rainwater to sea and reduce the risk of flooding in Site A Lai Chi Wo Village Rainwater from high level Gabion Wall Flooding on farmland construction 建造石牆

Visit to Farmland and existing drainage network



Visit to the existing natural water body



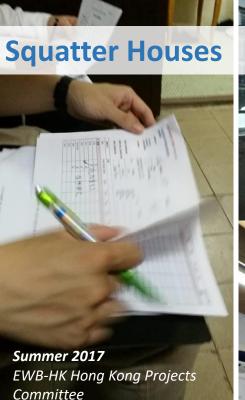


Site Investigation to Lai Chi Wo

Restoration of rainwater discharge channel 重建水坑 Suggested ramp access up to gabion wall for small excavator











Technical Advisory Services to Social Workers for Public Drainage Infrastructure Serving Squatter Area 2017

鯉魚門 Lei Yue Mun HONG KONG

2017 ~

Drainage infrastructure advisory to communities

Community

Summer 2017, volunteers participated in a series of demographic, household safety and environmental survey in Lei Yue Mun squatter area. In the 5 survey sessions, a total of 25 volunteers from EWB-HK together with the social workers from Christian Family Service Centre (CFSC) and other participating volunteers visited local residents' homes. Apart from the survey, our volunteers also conducted preliminary investigation on the risk and damage in the building interior and exterior, as well as the public area and municipal facilities that serve the local people.











EWB Engineers Without Borders Hong Kong 香港 無國界工程師 added 13 new photos.

Published by Edward Chan [?] - Yesterday at 2:49am - @

2 September 2017

Post-typhoon technical survey to squatter areas in Hong Kong and technical advisory services to the local community center

Damaged squatter houses whilst their household facilities and appliances scattered on outdoor; destroyed communal refuge collection facilities; damaged fence and handrails along seashore; damaged public footpath and drainage infrastructure; blocked drainage channels and household drainage pipes, were identified in various locations ... See More





HONG KONG

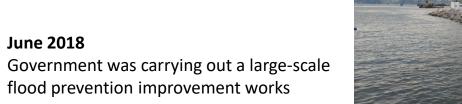
鯉魚門 Lei Yue Mun

2017

Post-typhoon Investigation and meeting with local

residents 出席居民大會,協助 社工選寫技術性意見轉交之後,向區 議會及民政署反映,最終令政府快速 進行大型海堤工程











新界古洞貧困社區家居安全調查及計劃工程援助個案 個室編號 · 20180630 - 03

Squatter Houses

HK 房屋及家居安調查隊到此檢查,此工程隊成員有結構工程師

- 整體結構不稳、入屋樓梯有隨時倒下危險、需立即臨時加固支撐樓梯部份。(圖1)
- 史屋頂有多處漏水・建議在颱風前修補屋頂及外牆漏水處。(■2)
- 多處加設施板及不合安全規格萬能插蘇·用户電力安全意識較低

古洞 Kwu Tung **HONG KONG**

2018

Building safety, environmental survey [Improved model for survey and engineering supports











割房 Sub-divided Flats

Kowloon East HONG KONG

2018

Stage 0: Briefing, Training

Stage 1: Build up relationship with local people

Stage 2A: Household survey

Stage 2B: Analysis and network supporting

resources

Stage 3: Education, Improvement works,

Engineering supports







目的: 讓劏房戶能夠與社區接軌,被接觸和關心,以社會服務和福利的切入點與他們在溝通

行動 : 洗樓訪問、家訪

Stage 0 : 簡報會、訓練課程 (提昇義工對探訪上的認知,並提供重要的社會服務和福利知識,以便更容易和對象打開話題)

Stage 1:接觸、關心、 洗樓、家訪

Stage 2: 歸納觀察、需要、共同整理和分析下一步計劃,以及工程角度上可以支援的部分

Stage 3: 與社工合作並 提供適切支援·及至倡議改 善社區的工程

Mainland China Projects













20082009

於中港城、時代廣場舉行展覧, 其中包括考察圖片、四川省 5.12地震展覧及抗震房屋模型。











2009

貴州省遵義地區考察









Mainland Projects











Mainland Projects

2010 貴州省遵義地區正安縣 的三所村級衛生室項目







紅岩村重建衛生室 (慈恩)







流渡鎮和平村衛生室











Mainland Projects



2011

甘肅省兩所小學校 舍驗收及一所舊校 舍的結構狀況查驗 項目

應香港慈善團體《黃土地基金會》的邀請,前往甘肅省,查驗正在興建的兩所小學校舍,並且評估了一所舊校舍的結構狀況。 該等校舍為上述基金會捐建的。









Resources

EWB-HK Members / Volunteers with Overseas Services Mission

Other possible local supports (engineering technical and management expertise) EWB-HK Overseas Projects Committee

Beneficiaries

Individual overseas disadvantaged community

Overseas NGOs /
Academia / Charities
on humanitarian or
betterment of disadvantaged
communities

Objectives of the "Overseas Projects Committee:

- 1. To provide engineering support to the disadvantage beneficiaries in oversea locations;
- 2. To build up the capacity of the beneficiaries leading to the improvement of livelihood.

Overseas Projects Committee (OPC) was officially formed on 6 January 2018. The Committee aims to provide engineering services to disadvantaged communities and social services organizations outside Hong Kong. The UN Sustainability Development Goals are the foundation of the engineering supports to the overseas disadvantaged communities, NGOs, academia or charities. The goal of the Committee is to work handin-hand with the local communities, and to enhance the overall livability in the developing regions.

Core Values

- Supportive and partnership;
- Skill transfer oriented;
- Attaining UN SDGs;
- Build up with the communities;
- Cultural Understanding



Engineers Without Borders (Hong Kong)

Myanmar

Consulate General of the Republic of the Union of Myanmar in Hong Kong and Macau SAR

Meeting with the President and General Secretary of Myanmar Engineering Society





EWB Singapore

Engineers Without Borders (Hong Kong)



Cambodia





Children

Cambodia

2016 ~

School Building; Community Center

Krangyow Commune, Kandal Province, South-East of Cambodia







Pro bono engineers from EWB Hong Kong are providing engineering (structural, building services) and interior design supports to the AEA iLEAD Community Center Facility Enhancement and Temple School Construction project, in Krangyow Commune, Kandal Province of Cambodia.

The project team is supporting the project in technical basis throughout the design and construction timelines, and also support the fundraising tasks. Project partners are Aide et Action Hong Kong, Aide et Action Cambodia and EWB Hong Kong



- School Building Design
- Water collection and Sanitation System design
- Building services design
- Construction quality review

Aide et Action Hong Kong

Aide et Action Hong Kong is a registered charitable organization recognized by the Hong Kong Government under the registered name of "Aide et Action Education Foundation" (IRD no. 91/9502).

http://www.aide-et-action.org.hk





Yangon Myanmar 2018 ~

June 2018 - 1st site visit

Children Center

28 types of problems identified in 3 post-trip evaluation workshops



Our pro bono engineers and EWB Global Citizenship Programme participants conducted field investigation and building condition inspection at the Fullmoon Children Center, in Yangon Region, Myanmar, in June 2018. The needs of campus buildings thermal insulation, rain ingress prevention, air ventilation, environmental hygiene improvement works had been identified. The project team shall be aiming to provide engineering supports to the design assignments, probably construction quality supervision too, for the children center. This project is now in the inception stage.



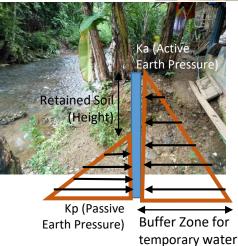
Our pro bono engineers and EWB Global Citizenship Programme participants conducted field investigation in an urban slum, in Hlaing Tharyar Township, Yangon Region, Myanmar, in June 2018 and Dec 2018. During the investigation, desktop study of the community conditions, interview to local community service provider, local community leaders and local urban slum inhabitants, were conducted. Various challenges relating to engineering, environmental, social, economic and education, had been identified.

Children

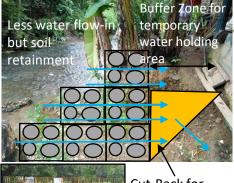
Akha Doves
Hostel &
Children
Center







holding area





River



Tree roots will hold the soil along the river banks to prevent erosion.

Hostel

Tachileik, Shan State, Myanmar

2018 ~

Flood prevention

Civil & Geotechnical







Project Partner: **Sowers Action** 苗圃行動

https://www.sowers.hk/

Our pro bono engineers are now providing engineering (civil and geotechnical) design supports to the Doves Student Hostel, in Akha Village, Shan State, Myanmar. Our project team is supporting the project in technical basis throughout the design and construction timelines. Our site investigation team conducted a field investigation in the subject site in August 2018. The needs of flood mitigation and landslide prevention at the new hostel site had been identified. The project partners are Sowers Action (NGO partner in Hong Kong) and Doves Hostel (NGO partner in Myanmar). This project is in progress and now in the design stage.

Community

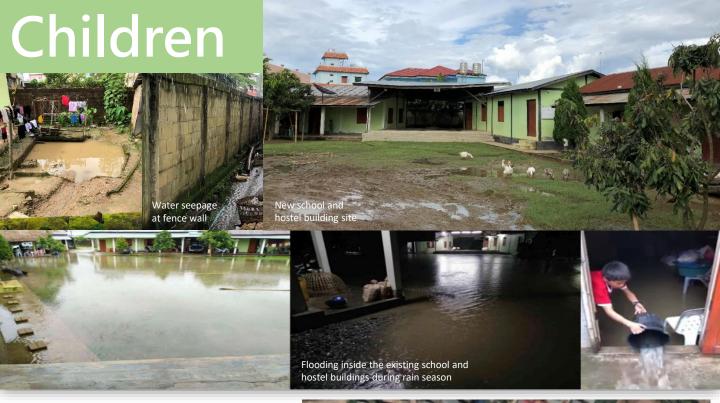
Now extend to the

Hong Kong

possible application in



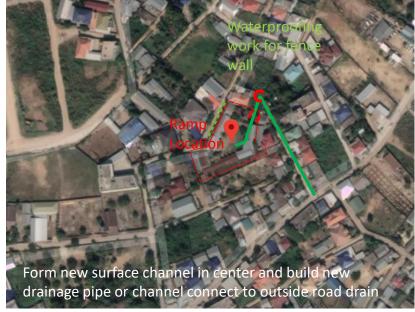
Our pro bono engineers provided engineering (electrical, mechanical and structural) design services to the children center in Masihumelele Township, South Africa. The project partners are Cybertecture For Humanity (Architect partner) and You2Africa (NGO Partner in South Africa). The prototype of a low-cost house originally designed for urban slum, namely "O Pod", had been constructed and displayed in various Hong Kong locations. The project is now in stage completion.



Tachileik is a city of Myanmar Shan State immediately next to the Thailand - Myanmar border, nearby of Thailand Chiang Rai City and Golden Triangle. Community services taking care migrants and children are offering by some local NGOs. The Children Center is now serving orphans and migrants' children with food, accommodation and education such that the kids can grow in love and care. In the recent years, their dormitories and learning houses are suffering from flooding and house structure deterioration. Its farmland, classroom and food storage were also damaged by flooding too.

Tachileik, Shan State, Myanmar

2018 ~



Flood prevention

School and hostel building construction

Water drainage

Environmental Hygiene Our pro bono engineers are providing engineering (structural, civil, geotechnical, building services) design and quantity surveying supports to the Tachileik Children Center in Shan State, Myanmar. Our project team is supporting the project in technical basis throughout the design and construction timelines. Our site investigation team conducted a field investigation in Myanmar in August 2018. The needs of flood prevention in the school campus and the supply of fresh water for students had been identified. EWB Hong Kong provides engineering supports to the design and construction stages. The project partners are Huge Business School (NGO partner in Hong Kong) and a local church (NGO partner in Myanmar).