RAE2026

Designing Circularity: House of Dreams Zhoushan, Henan, China

Prof. Peter Hasdell

PolyU UoA38

Contents

1. Descriptor
Designing Circularity: House of Dreams, Zhoushan, Henan, China

Designing Circularity: House of Dreams builds on Hasdell's research in sustainable development, established through prior studies (Miaoxia Community RAE2020). The interdisciplinary collaboration between Liang Jun, Zhoushan Community Group (client), Dr Ku from Applied Social Sciences at PolyU, and Insitu Project (Kuo Jze Yi and Peter Hasdell) involved research on rural revitalisation resulting in the House of Dreams (2017~2022). The project was supported by various foundation awards and aimed to:

1. **Choreograph and design the physical infrastructure and social relationships to address community needs;**
2. **Utilise community-based circular material processes using zero-mile materials and placemaking principles for develop the House of Dreams;**
3. **Foster collaboration and sustainable development potential contributing to community resilience and capacity building.**

The research team developed and implemented bottom-up community design and construction capabilities, focusing on the use of recycled zero-mile materials sourced from construction waste to reconstruct an abandoned cave settlement and create a rural community training facility. The processes included asset mappings, local resource design frameworks, and devised training methods to develop new skills within the community and directly engaged over 150 individuals. The project reconstructed 22 caves, 4 new landscaped courtyards, and 4 new service buildings to create a rural training facility. 40% of the materials were sourced from construction waste representing a reduction of 68% material and 80% transport in carbon emissions compared to conventional methods. In 2022, the project was recognised with Human City Design Award / UNESCO, the UIA 2030 / UN Habitat Award, and an additional 7 awards.

2. Researcher Profile: Professor Peter Hasdell

Peter Hasdell, an architect and urbanist, is a full professor at the School of Design at Hong Kong Polytechnic University.

His research explores two interconnected fields: sustainable adaptation and co-evolution at the urban scale (considering the city as a life form and urban ecosystem), as well as human habitation and architecture at the community scale. His expertise encompasses participatory and co-design, sustainable design, ecosystem design, and community architecture.

Since his appointment in 2008, his research focus has been on developing live research-by-design proof-of-concept projects. Since 2017, this has been conducted through his research platform, **Insitu Project**, which he co-ran with Kuo Jze Yi*. The platform aims to integrate research and teaching while enabling cross-disciplinary, site-specific projects situated at the intersection of design and the social sciences, working with communities across China and Iraq. To date, 12 projects have been completed in different communities. For the House of Dreams collaboration, Insitu Project managed the overall design and architectural manifestation of the facilities in the first three stages and enabled design-oriented workshops.

***** Kuo Jze Yi worked as Prof Hasdell's research assistant 2015-2017, they co-founded Insitu Project in 2017, Kuo Jze Yi collaborated with Insitu Project from 2017 – 2022]

2. Research Platform: Insitu Project

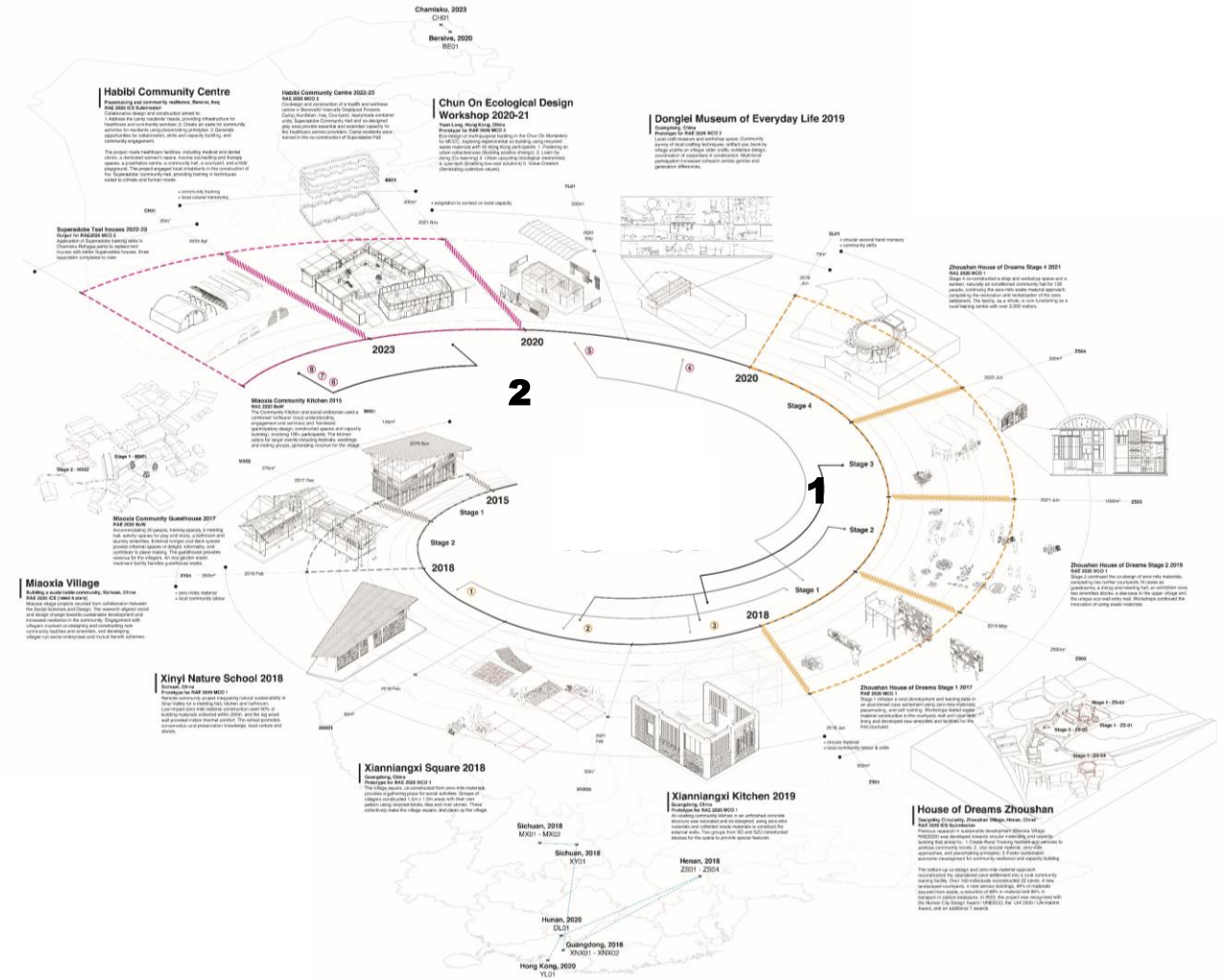
Insitu Project Overview:

Overview of key projects completed 2015-2023 including:

1. MCO 1: Designing Circularity: House of Dreams Zhoushan, Henan [This document]

2. MCO 2. Habibi Community Centre: placemaking and community resilience

ICS: Enabling Sustainable Community Development through Placemaking based on Material Circularity and Capacity Building in China and Iraq



Above: Project development spiral diagram 2015-2023 [Insitu Project 2025]

Drone view of House of Dreams 2023 showing village proximity. Photo: Insitu Project

3. Research Questions

The research questions guiding the House of Dreams were:

RQ 1. **Can collaborative placemaking methods be deployed to revitalise an abandoned and forgotten cave settlement into a resilient community-focused place?**

RQ 2. **How can external dependencies be reduced by utilising 'zero-mile' and circular material approaches to source local materials?**

RQ 3. **How can individual and community capabilities and capacities be developed and maintained in tangible ways (construction skills, expertise, and knowledge) and intangible ways (social cohesion, community pride)?**

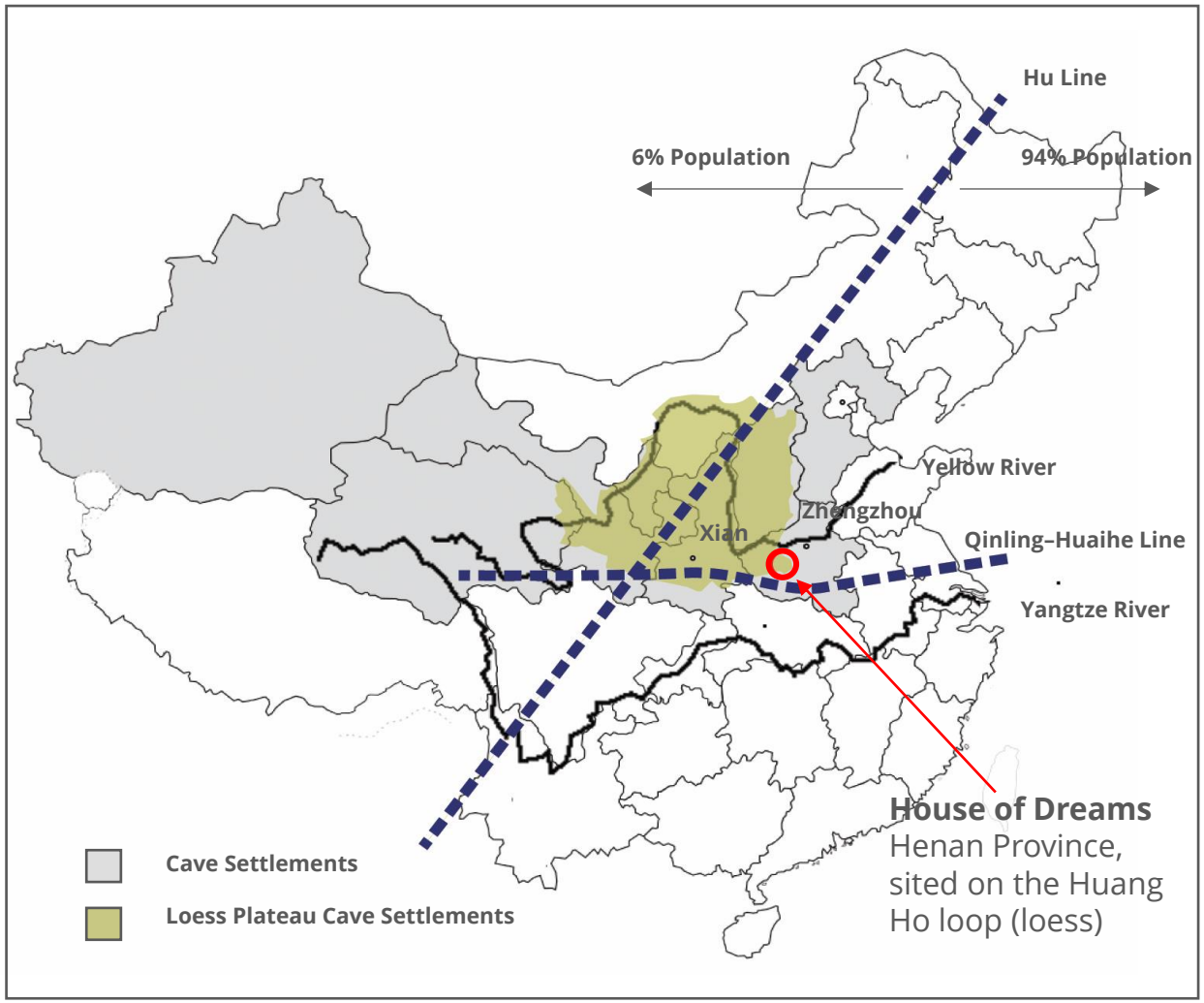
The project objectives were:

- To develop collaborative frameworks in live contexts using in-situ and localised approaches to circular materiality that can facilitate community sustainability;
- To instigate active processes that facilitate effective utilisation of local resources (zero-mile materials), collective community skills and capabilities that strengthen community betterment;
- To foster the continuous evolution of prototyping methods and methodologies – and proof of concept – evolve and transfer knowledge and methods between projects.

4. 1 Research Context

Critical issues:

- **Cave houses China:** Upto 30 million people live in cave houses in China. Most common in the Loess Plateau region, cave houses are climate appropriate; where earth and caves are used to insulate against seasonal extremes.
- **Loss of patrimony:** Cave settlements are becoming increasingly abandoned, resulting in a loss of culture, construction know-how and lifestyle. The decline is particularly notable since the opening up period in the 1990s. Zhoushan region exemplifies this change.

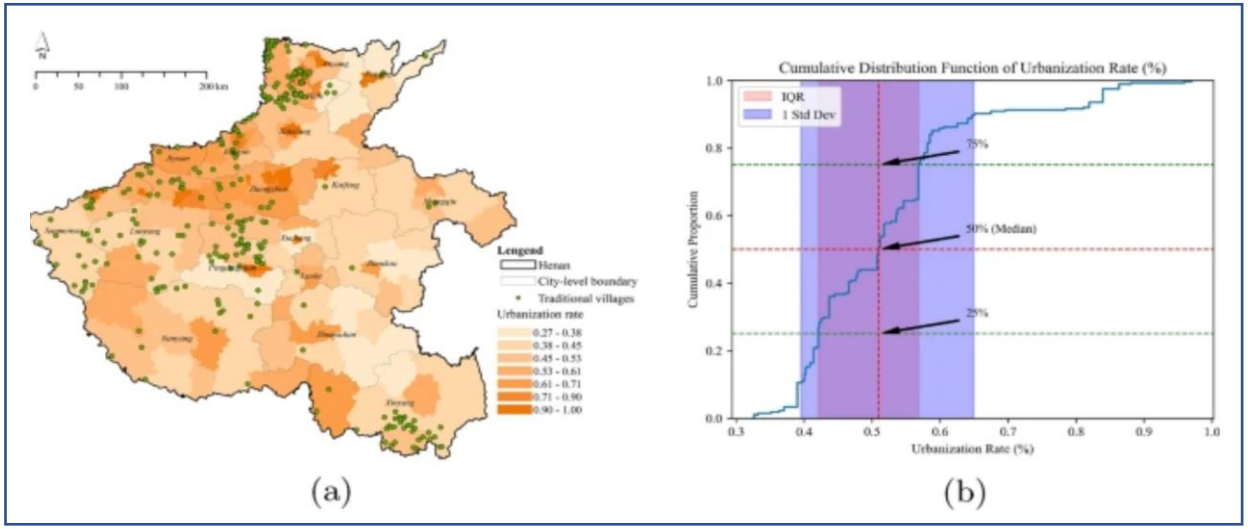


Above: Location of House of Dreams indicated in the Loess Plateau (yellow) with Henan province having over 10,000 active caves Across China cave areas are highlighted in grey and span 9 provinces: https://www.nature.com/articles/s40494-021-00591-4. [Image: Peter Hasdell / Insitu Project]

4.1 Research Context

Critical issues:

- **Loss of agrarian land:** Declining productive land arising from newly built areas on farmland, recent policies of rural revitalisation contribute to this. This results in a decline in community resilience.
- **Aging Community:** Community aging and external migration contribute to a loss of skills and knowledge of cave dwellings and local agrarian practices.

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China's ageing rural peasants labour into their twilight years as pensions 'cover only oil and salt'

The lack of support for elderly rural residents has become a worsening socio-economic problem for China amid its rapid urbanisation push

Decades of aggressive family-planning measures mean one out of four residents in the countryside will be older than 60 by 2025

Reading Time: 4 minutes

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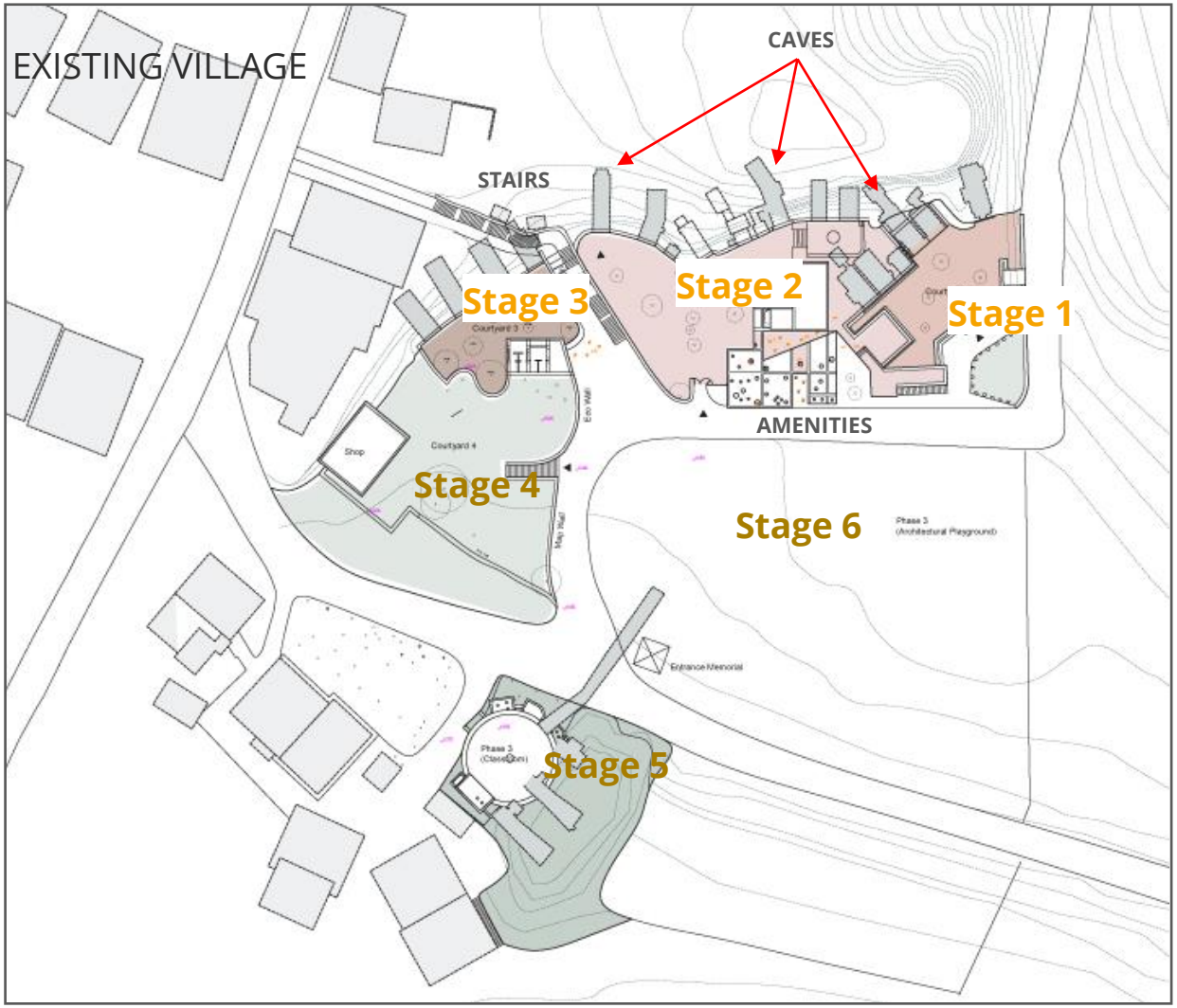
Top: Distribution of traditional villages influenced by urbanisation in Henan: Liu, W., Xue, Y. & Shang, C. Spatial distribution analysis and driving factors of traditional villages in Henan province: a comprehensive approach via geospatial techniques and statistical models. Herit Sci 11, 185 (2023). https://doi.org/10.1186/s40494-023-01038-8
Below: Research on aging rural society https://www.scmp.com/economy/china-economy/article/3098328/chinas-ageing-rural-peasants-labour-their-twilight-years Orange Wang 22 Aug 2020; and youth exodus from cave settlements in Henan https://www.caixinglobal.com/2018-02-02/youth-exodus-threatens-future-of-henans-ancient-underground-courtyards-101206830.html Chen Liang, Younghyun Jeon Feb 02, 2018.

4.1 Research Context

Overall plan and stages:

- **Stage 1:** 2018-19 Project initiation and testing through workshops.
- **Stage 2:** 2019-20 Project consolidation with community engagement.
- **Stage 3:** 2020-22 Rural Training Centre Facility initiation and launch.
- **Stage 4:** 2022 Community initiative and run projects [no Insitu Project input]
- **Stage 5:** 2023 - Community Hall project stage (Insitu Project input until 2022)
- **Stage 6:** 2025 - Future Rural School (conceptual input by Insitu Project)



Above: Stage plan of House of Dreams, stage 5 and stage 6 remain in progress. [Image: Peter Hasdell / Insitu Project]

Various completed revitalised caves in the House of Dreams 2023. Photos: Insitu Project

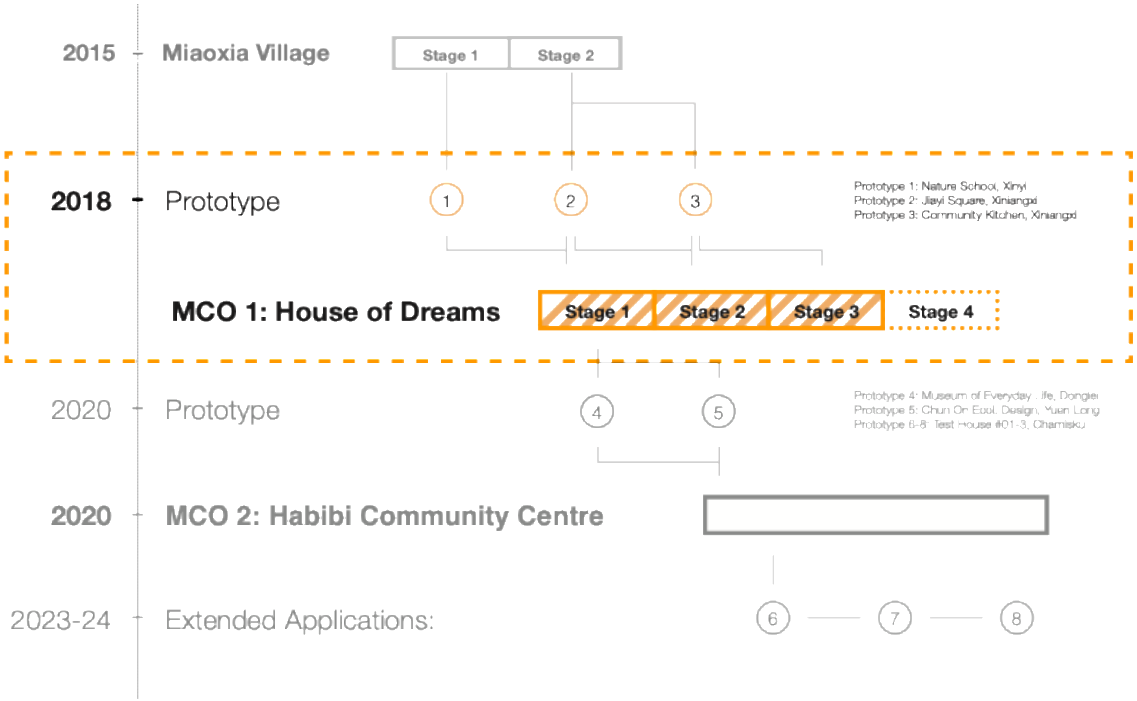
4.2 Research Outputs

Research framework overview

- MCO process:
  Proof-of-concept prototypes applied in multi-component-output (MCO) projects.

- **MCO 1. Designing Circularity: House of Dreams, Zhoushan, Henan, China, RAE2026 submission**
  [This document]

- MCO 2 Habibi Community Centre: placemaking and community resilience.



Above: Research project MCO framework showing primary research projects and prototype development timeline. [Image: Peter Hasdell / Insitu Project]

4.2 Research Outputs

The MCO "Designing Circularity: House of Dreams, Zhoushan, Henan, China" comprises the following:

The project's research outputs included:

- 11 new buildings and facilities;
- 25 refurbished buildings;
- 12 papers, book chapters, and catalogues;
- 1 self published project documentation (English and Simplified Chinese);
- 12 keynotes, public presentations, invited lectures and symposiums;
- 10 exhibitions;
- 2 videos produced;
- 9 design awards.

The project outcomes included:

1) increased circular materials use in the village from 0% to 40%, reducing costs and landfill waste;
2) Over 40 elderly community members trained in recycled material reuse;
3) Increased community resilience evidenced in qualitative interviews.

4.2 Research Outputs

House of Dreams: Research Artifact

Research Artifact:

- The research artifact House of Dreams is a revitalised abandoned cave settlement of 20 caves in an elderly rural community comprising 10 villages, 384 households, and 1544 residents. The collaborative community project resulted in a Rural Training Centre for sharing best practices with other rural villages, 80 guesthouse accommodations, and spaces for meetings and activities.
- Included in this are site and typological surveys, design documents, prototyping and testing through 15 workshops, co-construction, and the materialised outcome (shown right).

Above: Drone view of House of Dreams stage 1 2019 showing courtyard 1 and outcomes of workshops 1,2,3. [Photo: Insitu Project]

4.2 Research Outputs
House of Dreams: Video

Research Video:

Production of **House of Dreams** video, produced and edited by Insitu Project, include videotaping, interviews, scripting, editing, and production.

The video has been utilised for knowledge transfer uses, including the general public (YouTube), funding and award applications, lectures, keynotes, and exhibitions.

Duration: 6’43”
Format: AVI
Date: 2022
Link:
https://ira.lib.polyu.edu.hk/video.jsp?id=115347

A scene from the video output presenting House of Dreams overview.
[Video and production: Insitu Project, 2022]

4.2 Research Outputs
Objective 1. Placemaking

Placemaking:

- **Sustainable Placemaking:** Use of zero-miles /circular material approaches reduced carbon footprint and reduced resource impacts.
- **Holistic Placemaking:** The House of Dreams approach to placemaking enabled the community to use the completed facility as an exemplar and 'Model' and to operate as a Rural Training Centre.
- **Community Placemaking:** The embedding of shared community values in co-constructed built spaces and buildings has increased community resilience

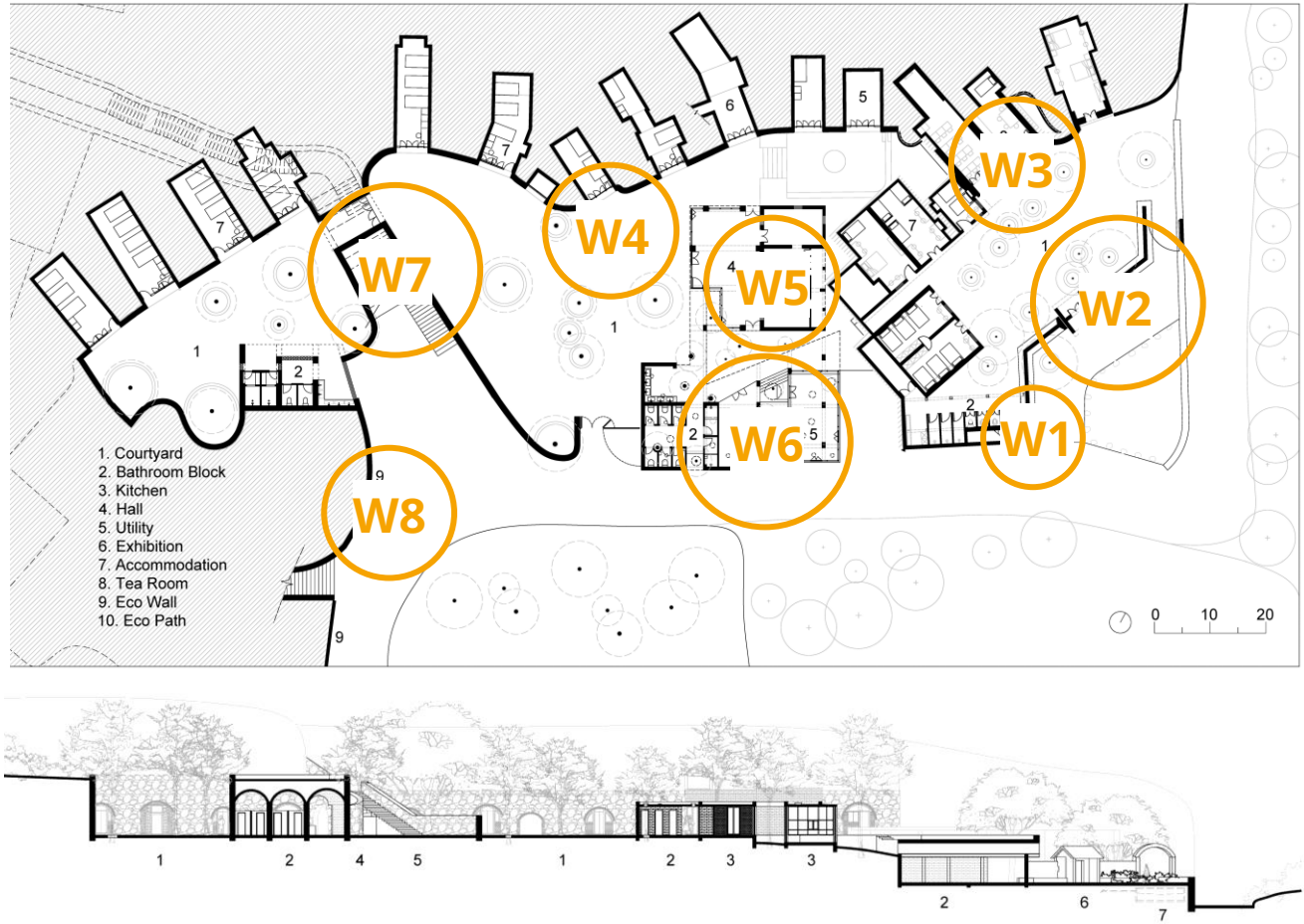
Above: Examples of House of Dreams placemaking from Staircase towards Courtyard #2 and Dining Hall [Image: Insitu Project]

4.2 Research Outputs

Objective 1. Placemaking

Placemaking Locations and key initiatives:

- **Design Conceptualisation:** Design process includes the development of pattern and process books
- **Assets Surveying:** Site assets, material resources, community and social capacities, and skills
- **Zero Mile Material Collection:** Gathering of recycled and waste construction materials (zero-miles materials)
- **Placemaking Workshops:** Co-construction workshops on placemaking with stakeholder participation (see p.17)



Above: Plan and section of House of Dreams indicating locations of 8 key Placemaking Workshops and initiatives, others not listed included surveying, test walls, social group formation, ecology and landscaping. [Image / drawings: Peter Hasdell / Insitu Project]

4.2 Research Outputs

Objective 1. Placemaking

Workshop / Initiative	Placemaking Action	Date	Aims	Participants	Materials
W1	Test wall Workshop Amenity Block #1	Mar 2018	Proof of concept for builders	6 builders, 6 villagers **Total 12**	Construction waste and discarded construction materials (bricks, concrete blocks, stones, roof tiles, general rubble) [all zero-mile materials]
W2	Paving Workshop Courtyard #1	Jul 2018 - Oct 2018	Proof of concept Community engagement	12 community groups (elderly, youth, woman, villagers, farmers etc.) **Total 110**	Construction waste; Discarded masonry construction materials; Donated masonry construction materials [all zero-mile materials]
W3	Vault and Cave Façade Workshop Double cave	Oct 2018 - Dec 2018	Proof of concept for builders and Zhoushan Community Group	6 builders, Zhoushan Community Group **Total 30**	Construction waste; Discarded masonry construction materials; Donated masonry construction materials [all zero-mile materials]
W4	Cave fitout and façade various caves	May 2019 - Oct 2019	Waste material construction training for community participants and builders, survey of caves on site, survey of local caves	builders, Zhoushan Community Group, SZU and UEL students **Total 54**	Construction waste; Discarded masonry construction materials; Donated masonry construction materials [all zero-mile materials]
W5	Façade initiative Dining Hall	Jul 2019 - Sep 2019	Proof of concept for community and builders	4 builders, Zhoushan Community Group **Total 28**	Discarded household waste (metal screens, old windows, shutters, grinding stones, bottles)
W6	Amenities block Walls, Fitout and Windows initiative	Sep 2019 - Jan 2020	Waste material construction training for community participants and builders	builders, Zhoushan Community Group **Total 28**	Mixed discarded waste (clay pots, grinding wheels, roofing tiles, old windows and doors), local ginger stones
W7	Access Stair Workshop	Nov 2019 - Apr 2020	Waste material construction training for community participants and builders	builders, Zhoushan Community Group **Total 23**	Mixed discarded waste (tyres, masonry, stones, glass bottles)
W8	Eco Wall: Entry Wall Workshop	May 2020 - Nov 2020	Waste material construction training for community participants and builders	builders, Zhoushan Community Group **Total 31**	Mixed discarded waste (tyres, masonry, stones, glass bottles, fans)

The table of key placemaking workshops and initatives led by the collaborators with House of Dreams stakeholders. Insitu Project's role focused on spatial design, architecture, materiality and technical construction where outcomes contributed to placemaking. A detailed table is at https://insituproj.wixsite.com/portfolio/zhoushan-2022-placemaking. Note that some initiatives were villager run due to the COVID time period: the dining hall and amenities building done 'remotely' with Insitu project sending drawings whilst on-site construction was done by small local teams through wechat communications.

4.2 Research Outputs

Objective 1. Placemaking

Workshop 2: Courtyard paving workshop

- Placemaking Courtyard #1 completion opening ceremony
- Public presentation and opening celebrates achievement. Co-created by community in Workshop #2.

Above: Courtyard #1 opening event after workshop 2 completion. [Image: Insitu Project]

4.2 Research Outputs

Objective 1. Placemaking

Workshop 5: Façade Workshop Dining Hall

- Placemaking for dining hall and meeting space
- Proof of concept for community and builders. Community involvement through donation of materials and co-construction using discarded household waste: metal screens, old windows, shutters, grinding stones, bottles.
- Façade system constructed from new timber frames infilled with recycled windows and donated household waste.

Above: Workshop 5: Façade constructed of donated household waste materials including pictures, window frames, bottles, and screens. [Image: Insitu Project]

4.2 Research Outputs
Objective 1. Placemaking

Workshop 7: Access Stair

- Access stair and cascading garden (linking upper village to House of Dreams) and tunnel to stage 3 guest caves and amenities block #3 (pictured behind stair).
- Proof of concept for community and builders, engagement of villagers in co-construction.
- Discarded construction waste, including tyres, various stones, masonry elements and bottles.

Above: Workshop 7 Access stair and cascading gardens with planting, serving to integrate upper village and House of Dreams. Placemaking arising from Workshop 8, Eco Wall, is shown in the middle left of the photograph. [Image: Insitu Project]

4.2 Research Outputs

Objective 1. Placemaking

Research Output: Stakeholder comments on Placemaking

- Selected excerpts of stakeholder comments related to **Placemaking** taken from Insitu Project interviews 2021-2022 with stakeholders after completion of stage 3 of House of Dreams.

"Villagers said this project has rebuilt community culture confidence, reactivated sense of local identity and strengthened the community development energy from within"

- Quote from House of Dreams community feedback

"In the past, people from Zhoushan didn't even say they were from Zhoushan when they went out to buy things in Daye Town.
I am so proud now that I am told to be from Zhoushan wherever I go.
This sense of identification with their hometown is a cohesion.
If he doesn't identify with his hometown at all, how can he create cohesion?"

- Quote from Liang Jun, House of Dreams Community Leader

"The collective courtyard paving process reinforced the collective spirit of Zhoushan"

- Quote from House of Dreams community feedback

Above: Selected quotes from stakeholders. From interviews conducted online and face-to-face in 2022 interviewer Research Assistant Chelsea Chan: Insitu Project

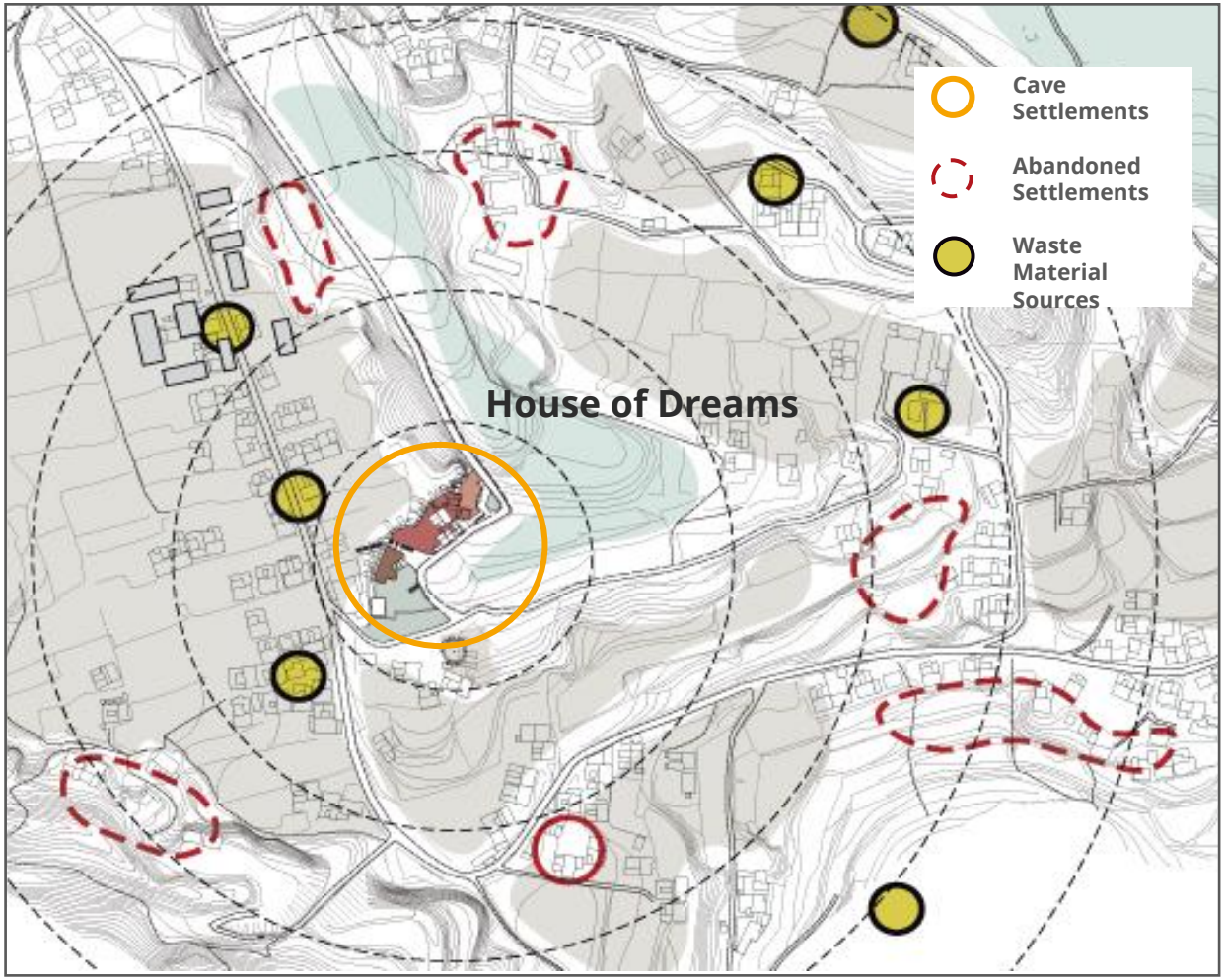
View of courtyard 2 from the staircase with the dining and amenities block 2 behind 2023. [Photo: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Local resources: Cave settlements and material harvesting

- Architectural surveys mapped 10 existing and 7 abandoned cave settlements within a 2 km radius of House of Dreams.
- Construction Waste sites (11 in total) from building demolitions and abandoned buildings provided materials for the construction of the House of Dreams. These provided 40% of all materials used.
- Additional materials from individual donors are not shown.



Above: Map of existing and abandoned caves and circular material sources for zero mile material gathering within 500m of House of Dreams. Image: [Peter Hasdell / Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Material use: Community Collection

- Collection of construction waste materials by community groups.
- Materials collected from 11 local places including recent demolitions, abandoned buildings, ruins, discarded materials and disused material stockpiles.

Above: Material harvesting process of waste and reused construction materials, sources for zero mile material gathering within 500m of House of Dreams. [Image: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Workshop 5: Façade Workshop Dining Hall

- Proof of concept for community and builders, engaging villagers in co-construction for a public facility, community dining hall and meeting space
- Discarded materials palette changed to donated household waste, including windows, doors, screens, paintings, discarded electronics, and old furniture
- Façade infill and pattern making with new window frames (lighter coloured wood)

Above: Workshop 5 Façade Workshop for Dining Hall (and other buildings such as the laundry space: not shown). Donated domestic and household materials were used to make the façade for the Dining Hall. [Image: Insitu Project]

4.2 Research Outputs

Objective 1. Placemaking

Workshop 6: Amenities block #2 Walls

- Proof of concept for community and builders, engaging villagers in co-construction
- Discarded construction waste, including stones, bricks, pots, roof tiles, grinding stones, and bottles
- Wall infill and pattern making

Above: Workshop 6 Wall construction for Amenities block #2. A mix of masonry materials used, including ceramic pots and grinding wheels. [Image: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Material use: Domestic and Construction waste

- Domestic and construction waste material use in the Eco Wall, the House of Dreams Entry wall. The completed wall conveys an ecological message of materials
- Community donated waste materials included clocks, pots, fans, bottles, crockery and domestic artefacts.
- Community members co-constructed the wall with builders.

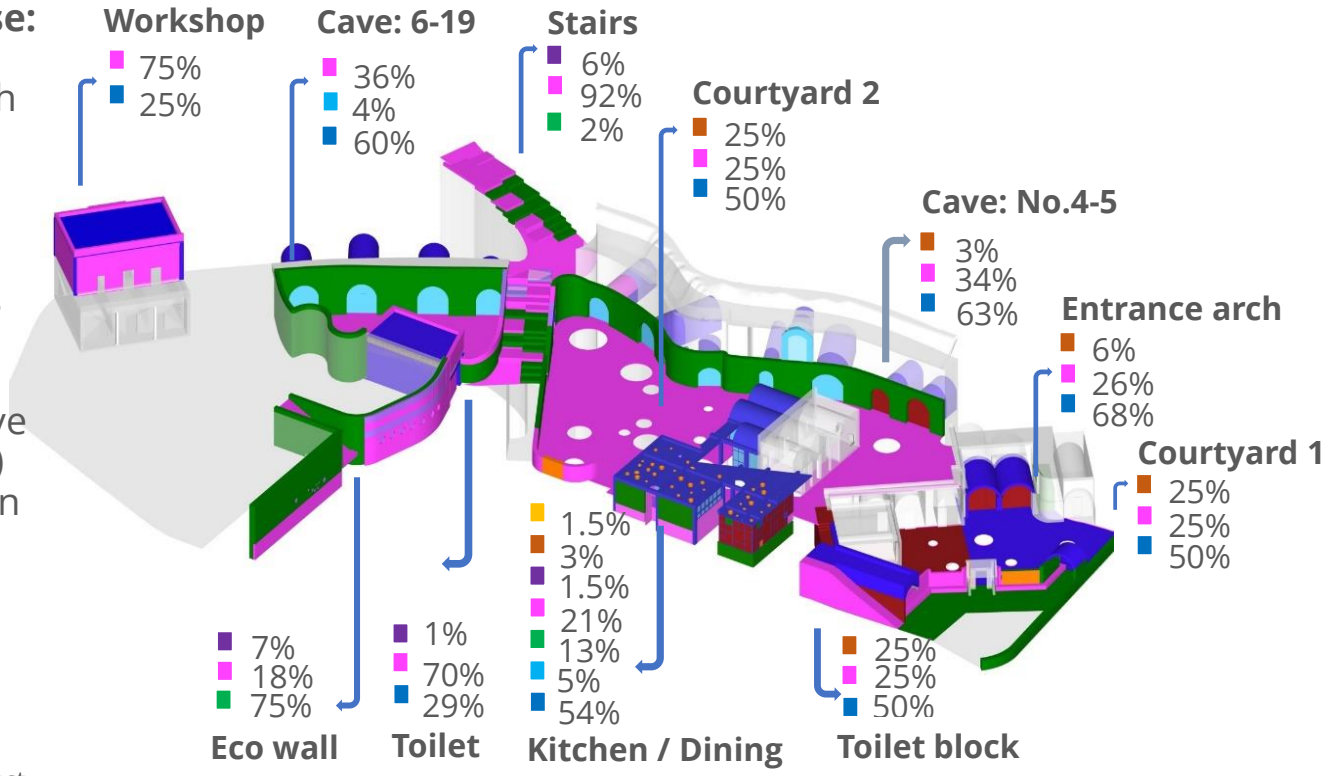
Above: The Zhoushan village entry wall designed with recycled domestic and construction waste materials. [Image: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Evaluation of Material Use:

Funded evaluation research (PI Hasdell: SD research excellence 2021) on the percentage of recycled construction waste and household waste materials used in Stages 1-3 construction. Qualitative (interviews) and quantitative (material utilisation survey) data. Calculations based on post-construction survey reveal a 40% reduction in masonry use:

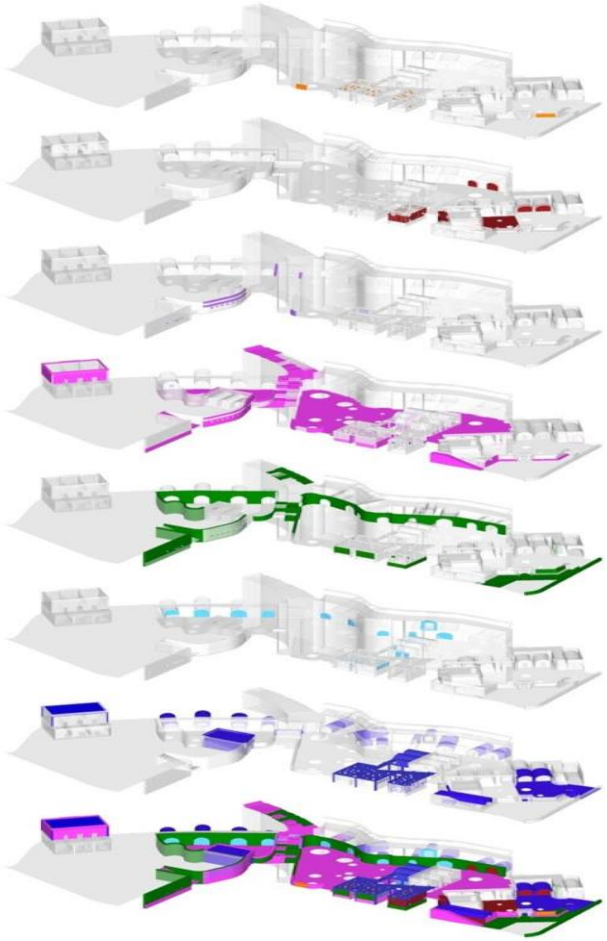


Evaluation of Material Use: Volume of recycled construction waste and household waste materials used in Stages 1-3 construction: [Diagram: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

0.5% (4m^3)	Local cultural product
3% (35m^3)	Local donated material
1.5% (15m^3)	Local household waste
37% (416m^3)	Local Demolished building
31% (349m^3)	Local Natural Material
1% (11m^3)	Local low cost/ second-hand material
26% (295m^3)	Industrial material
1125m^3	**Total constructed volume of zero-mile materials by type**



Evaluation of Material Use: Volume of recycled construction waste and household waste materials used in Stages 1-3 construction: [Diagram: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Category	Item	**House of Dreams:** Whole project analysis Asset based approach: as built:			**Industrial approach:** Conventional construction:	**Comparison:** House of Dreams versus Conventional
Economic Capital	**Cost (RMB): new material**			476,000.00	745,000.00	24% lower
	Cost (RMB): old material			90,000.00	0.00	
	Cost (RMB): interior			150,000.00	314,000.00	52% lower
	Cost (RMB): labor			1,041,000.00	1,050,000.00	1% lower
	Others (tool, machine)			171,000.00	171,000.00	n/a
	Total Cost (RMB)			1,928,000.00	2,310,000.00	**17% lower**
	Carbon emission (produced) kg Co_2e		55,500 kg		152,000 kg	63% lower
Natural Capital	**Carbon emission (transport) kgCo_2e**	Method A (3.5km)	314m^3		575m^3	**45% lower**
		Method B (500km)		18,900.00	78,000.00	**76% lower**
	Material transport distance (km)	Method A (3.5km)	422m^3		774m^3	**45% lower**
		Method B (500km)		30,708.00	110,500.00	**72% lower**
Built Capital	**Time for project (construction)**		Stage 1 2018.4 ~ 2018.10 : 6 months Stage 2 : 2020.3~2021.6 :16 months Total : 22 months		Stage 1 : 3 months Stage 2 : 8 months Total 11 months	**100% higher**
	Building material innovation	Cultural product	4m^3	0.50%	0m3 (0%)	**40% higher**
		Waste material	15m^3	1.50%		
		Demolished material	416m^3	37%		
		Second hand furniture wall	11m^3	1%		
Cultural Capital	**Cultural elements**	Cultural product	4m^3	0.50%	0m3 (0%)	25% higher
		Cultural architectural form	236m^3	21%		
		Cultural decoration	<1m^3	<.1%		
		Objectified memory	35m^3	3%		

Evaluation of Material Use: Comparative cost of construction: Analysis shows 17% lower material costs (excluding labour) and a 60% average reduction in carbon emissions, and 40% increase in circular material construction innovation, this is offset against an 100% increase in construction time. [Table: Insitu Project]

4.2 Research Outputs

Objective 2. Circular Materiality

Research Output: Stakeholder comments on Circular Materiality:

- Selected excerpts of stakeholder comments related to **Circular Materiality** taken from Insitu Project interviews 2021-2022 with stakeholders after completion of stage 3 of House of Dreams.

"House of Dreams has changed everyone's awareness of waste. Bricks and tiles used to be thrown everywhere, but now people feel like they have discovered a treasure when they see a bit of garbage. Not only has the construction team changed, but the handicraft association has also begun transforming old clothes, turning plastic sheets, non-woven fabrics, and fruit nets into flowers"

- Quote from Liang Jun, House of Dreams Community Leader

"House of Dreams used waste to build, and this process has developed a sense of environmental consciousness locally. Villagers said they used to think 'new' things were better, but now they see the value in 'waste'. Local masters transformed the waste into pleasant and artistic masonry patterns. Villagers said, 'When the waste is located in the wrong place, it becomes a disaster, but if it is located in the right place, it becomes a resource' "

- Quote from a community feedback

Above: Selected quotes from stakeholders. From interviews conducted online and face-to-face in 2022 interviewer Research Assistant Chelsea Chan: Insitu Project

Community meeting in courtyard (workshop 2) 1 2019 showing outcome of workshop 3 behind. Photo: Insitu Project

4.2 Research Outputs

Objective 3. Capacity Building

Capacity Building overview

- Capacity Building occurred on three levels: Individual, Community, and Institutional.
- Tangible capacity building outputs include practical skills in areas includingco-design construction, material harvesting; project management.

Above: Capacity building in Zhoushan Community Group meeting discussing overall House of Dreams development over model made by Insitu Project. Note that the majority of members are women and most are over retirement age. [Image: Insitu Project]

4.2 Research Outputs

Objective 3. Capacity Building

		Individual Capacity Tangible and intangible skill-building and participation in the House of Dreams, including hard and soft skills in organisation, co-design processes (co-led by Insitu Project), co-construction in various workshops, resource gathering, and donations of circular materials (construction waste and household waste materials)					**Community Group Capacity** Intra-organisational community-based capacity building encompasses collective skills and abilities within the organisation, including problem definition, analytical capability, group identity formation (Zhoushan Community Group and others), collaborative capabilities, organisational capacity, decision-making, action planning, specialised training workshops, social enterprise, mutual benefit sharing systems, event management, and operational capacity					**Organisational + Institutional Capacity** Inter-organisational capacity including formation (Rural School), network formation and building, communities of practice initiatives, forming external collaborations, knowledge sharing and transfer, development of ecological and sustainable policies and protocols (aligning with SDGs)			
Workshop / initiative	**Workshop / initiative name**	**Participation in workshops groups**	**Co-design skills with construction waste materials**	**Co-construction skills with construction waste materials**	**Resource identification and harvesting skills**	**Organisation skills, hard and soft capacities and knowledge**	**Formation and initiation of group**	**Collaboration with community, stakeholders, other groups including NGO and external**	**Development of skills and abilities (hard & soft skills)**	**Workshop and event management**	**Leadership, strategic, operational capacity, capacity for autonomy**	**Insititutionalisation and identity**	**Identification of agency and potentials**	**Development of network (community of practice)**	**Initiation of knowledge transfer (sharing) and expertise base**
W1	**Test wall Workshop** Amenity Block #1														
W2	**Paving Workshop** Courtyard #1														
W3	**Vault and Cave Façade Workshop** Double cave														
W4	**Cave fitout and façade Workshop** various caves														
W5	**Façade Workshop** Dining Hall														
W6	**Amenities block Walls, Fitout and Windows Workshop**														
W7	**Access Stair Workshop**														
W8	**Eco Wall: Entry Wall Workshop**														

Capacity Building mapping highlighting three primary House of Dreams domains: individual, community and institutional. Insitu Project roles in this focused primarily on the spatial and architectural realisation through co-design and co-construction helping to facilitate zero-mile material construction capacities [Diagram: Insitu Project]

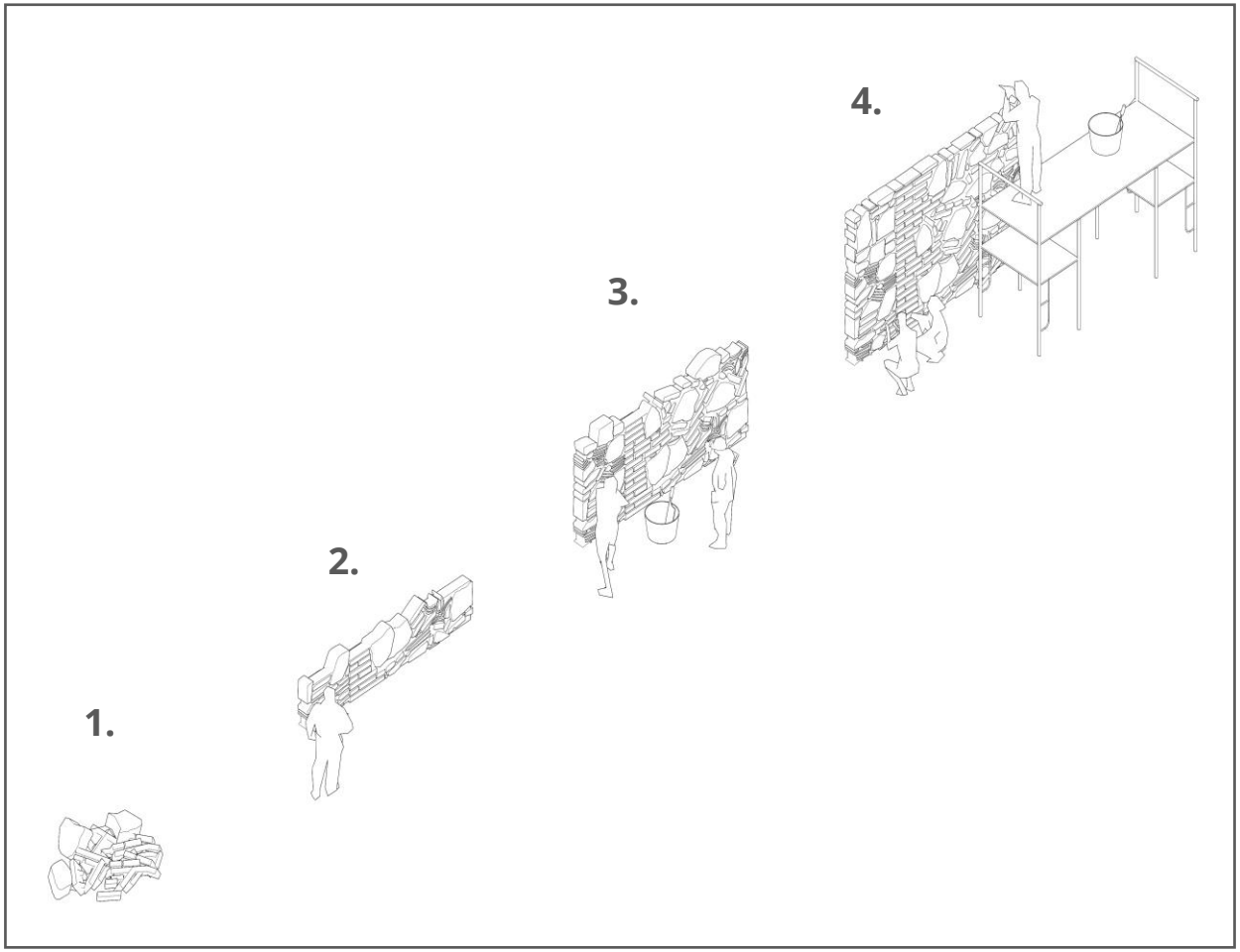
4.2 Research Outputs

Objective 3. Capacity Building

Capacity Building through proof-of-concept workshops

Process to test community capacity with zero-mile and construction waste material and capabilities in workshop 1

1. Material gathering skills and exploration through small-scale tests (not shown)
2. Fostering construction innovation and skills
3. Integration with existing structures
4. Evaluation of ecological and circular material potential as a finished element and skills



Above: Workshop 1 Test wall construction process using bricks, stones, roofing tiles and other masonry elements. [Diagram: Insitu Project 2025]

4.2 Research Outputs

Objective 3. Capacity Building

Workshop 1: Test Wall

- Adaptation of conventional building processes using construction waste materials and zero mile materials including bricks, concrete blocks, stones, roof tiles, masonry rubble.
- Testing of techniques and review by builders and community builds capacity.

Above: Workshop 1 Test wall construction by builders for Amenities block #1. A mix of bricks, stones, and roofing tiles was tested. Construction time took longer, but the community agreed the outcome was positive. [Image: Insitu Project]

4.2 Research Outputs

Objective 3. Capacity Building

Workshop 2: Courtyard paving workshop

- Courtyard #1 paving workshop to co-create a place for gathering. Proof of concept and community engagement.
- 12 community groups (elderly, youths, women, villagers, farmers etc.), a total of 110 persons, used zero-mile materials: bricks, concrete blocks, stones, roof tiles, and masonry.
- Workshop increases individual and community involvement and capacity, increasing a sense of authorship and ownership.

Above: Workshop 2 Courtyard #1 paving with 12 community groups, a total of 110 people. The workshop allocated 12 zones and groups we able to construct patterns using construction waste materials gathered from nearby. [Image: Insitu Project]

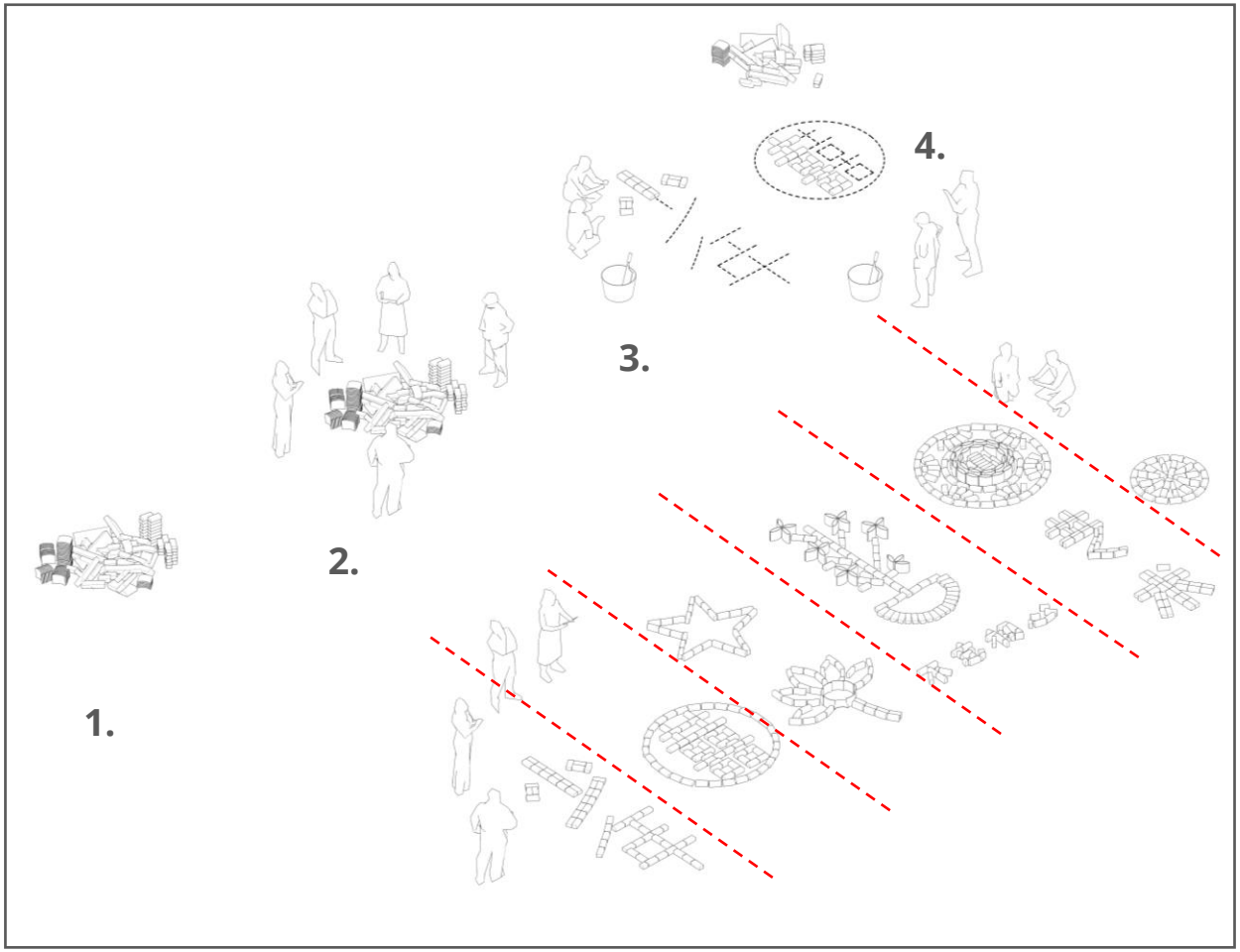
4.2 Research Outputs

Objective 3. Capacity Building

Process diagram for Workshop 2: Courtyard paving

Establish community group and allocated area:

1. Gather and share zero-mile materials with each group
2. Initiate co-creation process in groups
3. Enable groups to develop thematic design, test and modify this as needed
4. Fix in place complete pattern



Above: Workshop 2 Courtyard #1 paving. The workshop allocated 12 zones and groups we able to construct patterns using construction waste materials gathered from nearby. [Image: Insitu Project 2025]

4.2 Research Outputs

Objective 3. Capacity Building

Zero-mile Material harvesting

- Community involvement in zero-mile, waste materials and material donation enabled, through over 6 gathering workshops involving identification and recycling potential, gathering and testing (prototyping).
- Initiatives resulted in the comprehensive cleaning the wider environment and reduction in landfill.
- Individual and community participation developed ecological mindsets and circular materiality skills used in House of Dreams construction.

Above: Material harvesting workshop, over six of these occurred seeking materials within 5km of the House of Dreams. [Image: Insitu Project]

4.2 Research Outputs

Objective 3. Capacity Building

Community and institutional capacity skills facilitation

Community capacity and increasing community capacities in practical skills, self-initiated **design capabilities and construction skills.**

Above: Material harvesting workshop, over six of these occurred seeking materials within 5km of the House of Dreams. [Image: Insitu Project]

4.2 Research Outputs

Objective 3. Capacity Building

Equity and Inclusivity in Community Co-creation

Co-creation and construction of Eco-wall (Workshop 8) involving:

Co-creation involving capacity building of tangible organisational skills, construction and social/community building skills to stimulate collective memory and identity.

Above: Elderly women's group (gender equality and active aging) who contributed to the co-creation of the House of Dreams Workshop 8 Eco-wall / Entry wall. [Image: Insitu Project]

4.2 Research Outputs

Objective 3. Capacity Building

Research Output: Stakeholder comments on Capacity Building:

- Selected excerpts of stakeholder comments related to **Capacity Building** taken from Insitu Project interviews 2021-2022 with stakeholders after completion of stage 3 of House of Dreams.

"Local Building Team feels that they have developed new masonry skills. In the past, they emphasized vertical and horizontal construction, but with the vast material shapes and resources, they developed "sculpting" skills, every wall becomes a scenery."

- Quote from House of Dreams community feedback

"Villagers said this project has rebuilt community culture confidence, reactivated sense of local identity and strengthened the community development energy from within."

- Quote from House of Dreams community feedback

"What impressed me most about my hometown in the dream was the growth of the construction team. Villagers participated particularly heavily, donating materials, paving the ground, and going up the mountain to quarry stones."

- Quote from Liang Jun, House of Dreams Community Leader

Above: Selected quotes from stakeholders. From interviews conducted online and face-to-face in 2022, interviewer Research Assistant Chelsea Chan: Insitu Project

Workshop #1 construction prototyping process. Photo: Insitu Project

5. Research Field & Key References

Research Fields

Insitu Project: **Social Design: Sustainable Community Development** and **Community Resilience**

House of Dreams: **Placemaking / Circular Materiality / Co-creation**

The principal framework for 'Insitu Project' was developed by Hasdell (2015-) and Kuo (2017-2022) is situated at the intersection of Social Design and Sustainable Community Development to develop community resilience. Within this umbra specific projects employ design-oriented research fields to frame the development of processes that address complex local issues, and test applicability through proof-of-concept projects through sustainable forms of community development. For this MCO these are Placemaking and Material Circularity using zero-mile materials and co-creation to build capability and capacity.

As a cross-disciplinary field, **Social Design** derives from Ivan Illich's (1973) seminal critique of institutionalised knowledge and the necessity to develop practical concepts of conviviality within an educational and knowledge framework that enhances social and community capacity. The importance of "now-ness and here-ness" are emphasised, positioning social and community contexts as lived forms of knowledge, understood as *theoria* – or contemplative and lived practice.

Victor Papanek (2019) extends Illich's ideas into design knowledge, critiquing the design discipline's aesthetic and functional paradigm while advocating for greater consideration of social and ecological contexts. Papanek's theories acknowledged the essential need for developing approaches that symbiotically integrate the social into design as a moral, ethical, and just process. He posits that the designer must evolve from being an executor to becoming an innovator and facilitator, enabling others to become designers.

5. Research Field & Key References

These ideas are further developed by Victor Margolin (2002). He advocates for the participatory and shared narrative aspects of design as fostering innovation, essential to discovering more suitable social-design relationships that address linear, single-use, or consumption-oriented design processes. A vital component of this is recognising and valuing social capital as crucial stakeholders in the social design process. Further theoretical frameworks are explored in the writings of Bruno Latour (1999). These discuss the complex social and materialisation processes, where design outcomes manifest as the formation of socio-material assemblies.

More recent research associates it with socio-technical systems (Ropohl, 1999; Emery, 1993), focusing on the interdependency of social and technical systems. Social design is then recognised as a means to address issues of social wellbeing, community development, and community sustainability through the deployment of co-creation and design processes that embed these in the social context that best serves the interests of that community, albeit within a specific time frame.

Sustainable Community Development aims to create communities that are able to moderate social equity, economic growth, and environmental management. This aims to enable existing communities to prosper without negatively impacting future generations. This approach has significant overlap with the UN Sustainable Development Goals (2012, 2025). The intersection and integration of social, economic, and environmental considerations are key to social design as deployed in the House of Dreams. The necessity to assure sufficient community capacity and its development is an indicator of Community Resilience (Norris et al., 2008) and encourages adaptability, enables cohesion, and seeks to minimise negative impacts.

5. Research Field & Key References

Key Design Research fields and processes

Placemaking: Enabling resilience aims to strengthen a community's ability to manage unforeseen factors or adversity. As developed by Greene (2004, 2016) and others, the concept of 'resilience' includes risk mitigation alongside capacity building, which together strengthen community cohesion and a sense of place, understood through access to resources and potential agency. Placemaking potential in this context, therefore, focused on stimulating environmental well-being, collective community capabilities, and spatial relations (Ellery & Ellery, 2019). However, it is often misunderstood as an aesthetic aspect of civic and public space (Gehl, 2013) used to justify gentrification.

Placemaking is integral to social sustainability and wellbeing as well as being an accessible singular locale for shared and collective values, in which users and residents are invested (Balkoski & Rustemoska, 2024). As others have identified, there are two critical aspects to placemaking; firstly that it is not the exclusive domain of the city, district or institution of governance, but may equally arise from bottom-up community initiatives, that may also construct places as a part of 'urban guerrilla' activities of resistance, or collaborative initiatives that are officially sanctioned. Secondly, that participatory community engagement aligns placemaking values with community values.

Circular Materiality: Circular Material Economy (CME) aims to increase sustainability in the built environment and implicates all aspects of a building's lifecycle; resource chains prior to construction, during construction and use, and at the end of a building's useful life. The construction industry. 37% of global material resources account for 40% of GHG emissions, and 35% of landfill waste (Souza, 2019). Global implementation of CME could bring economic benefits exceeding USD 1 trillion per year. Currently, the good practice for recycling construction material is approximately 15%. However, embodied energy and carbon content for conventional approaches are inappropriate for the developing world, due to limitations in high-level organisational capability and access to technology.

5. Research Field & Key References

Over 60% of the global population is resource-poor. As closed-loop strategies promote waste and ‘regenerative design’ as circular resources, ‘zero miles’ materials have stimulated concepts of ‘urban mining’ and localised materiality, reducing embodied energy.

In architecture, the concept of cradle-to-cradle (Braungart & McDonough, 2009) erases the concept of waste and reformulates an understanding of the built environment as a closed-loop system (Rahla et al., 2021), so as to minimise resource depletion and environmental impact (Macarthur, 2013). Ultimately, this focuses on constructing a restorative framework, benefiting the sustainability of both the environment and society. Zero-mile material approaches reduce carbon footprints by establishing a local resource paradigm that eliminates transport and other costs, contributing to more considered local approaches and to circularity. These factors can equally be integrated locally in communities, as the House of Dreams demonstrates.

Co-creation: Co-creation (Hubbert, 1995; Prahalad & Ramaswamy, 2004), along with co-design and previously participatory design (Sanders & Stappers, 2008), engages users and stakeholders in the design process. By aligning co-designers and end-users, the approach lends itself to active community engagement. This field of research originates from the applied social sciences, particularly participatory action research (Ehns 2008, 2018; Freire 1970), and urban design/planning (Smith, 1973). It prioritises collaborative design processes and procedures over outcomes, enabling broad participation from stakeholders, who can potentially represent an entire community. As a research methodology, its recursive feedback facilitates continuous adjustments to the design in question and enables an evolutionary approach that is open-ended, fostering inclusivity and shared value creation, which, in the best of outcomes, results in enhanced community cohesion and collective/community ownership.

Drone view of amenities block 2 in 2020 showing tree preservation strategy with concrete roof. Photo: Insitu Project

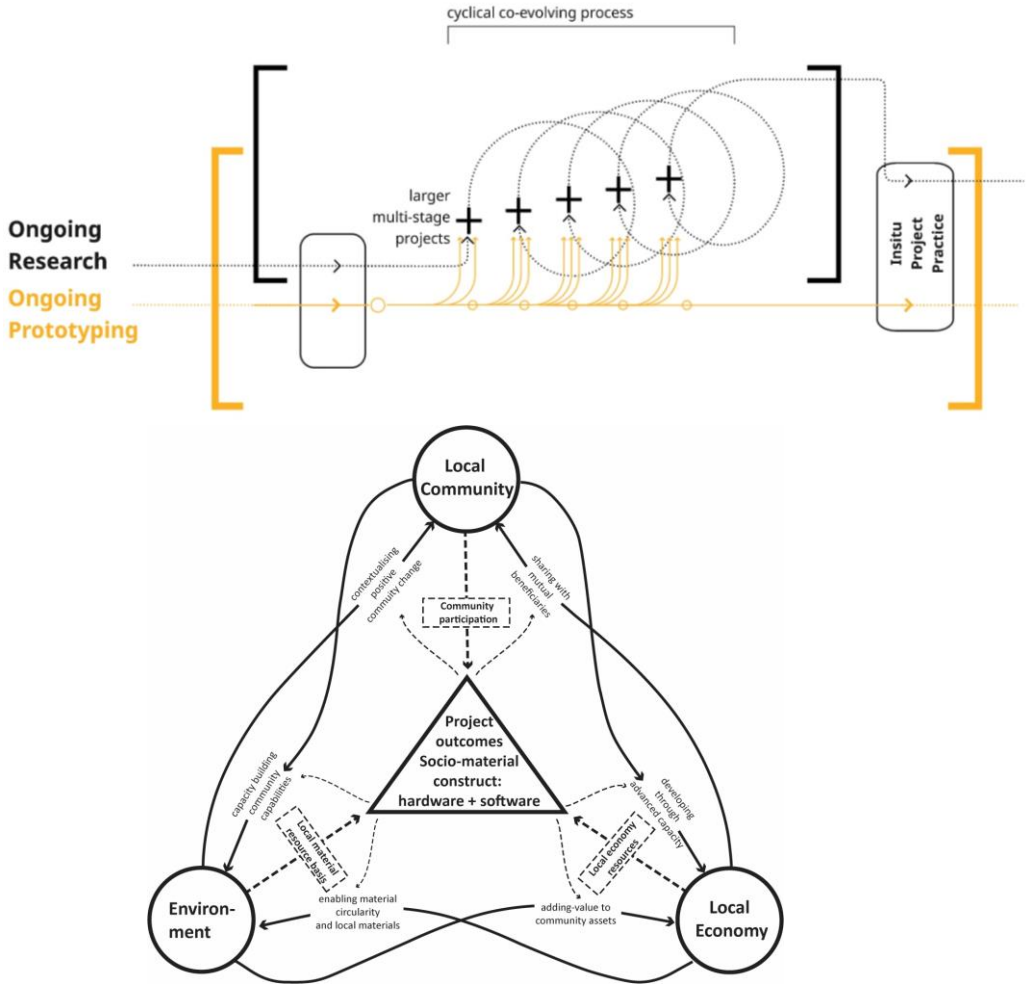
6. Research Methods, Prototypes & Materials

Methodological Framework

The primary research methodology is the process of ongoing prototyping developed through a series of workshops. This has been developed by Insitu Project as a research-by-design framework for social design-oriented projects. The methodology is coupled with co-design methods, focusing on enabling local synergies of community abilities and material circularity, which work towards increasing sustainability and resilience in the community.

This has been conducted for the House of Dreams in the following manner:

As a cyclical process, the relevant prototype projects emerged from the previous full-fledged project, Miaoxia Village Project. Prototype projects identified key transitions and critical points and enabled the development of co-evolving processes and methods. These prototypical projects served as proof-of-concept and were integrated into larger, multi-stage projects.



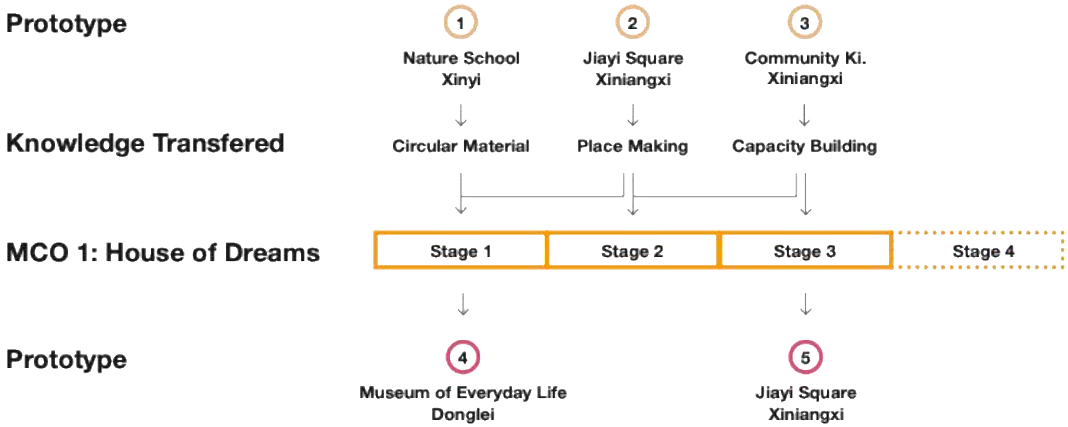
Top: Recursive prototyping methodology used in Insitu Project works.
Bottom: Cyclical tripartite process for generating sustainable project outcomes.
[Diagrams: Hasdell / Insitu Project 2025]

6. Research Methods, Prototypes & Materials

Prototyping

Prototype 01 (Nature School: Xinyi Village, Sichuan, China) explored local materiality sourced from nearby forests and building local capability in a remote context. Prototypes 02 and 03 (Jiayi Square and Community Kitchen Xiniangxi Village, Guangdong, China) explored the utilisation of zero-miles and villager-donated materials, material innovation with construction waste, and community grouping.

The prototyping methodology in practice consists of workshops fostering collaboration and organisation of groups, gathering of resources and skills, adaptation of existing paradigms, community skill development training, public review and more as repeatable cycles.



Above: Diagram of prototypes leading to the House of Dreams and further prototypes arising from the House of Dreams: [Diagram: Insitu Project]

6. Research Methods, Prototypes & Materials

The same development process was undertaken within the full-fledged project ***House of Dreams***.

A cyclical and evolving prototypical process was developed through a series of workshops led by the collaborators with the Zhoushan community. These served as platforms to test concepts and develop skills that fed into innovating the construction process with circular materiality. Various materials and supporting outputs enabled this process, including 'straw-man' design ideas, design handbooks, model prototypes, test walls and on-site tests of viability. This prototype process enabled step-by-step changes from single-use materiality to a circular materiality mindset in the community. The research-by-design processes involved engagements shaped accordingly to the research contexts for both prototypes and more fully-fledged projects.

1. Collaboration and Participation

The projects became possible through collaboration between the concerned communities, designers, and academic research partners. For House of Dreams, 3 main partner organisations, 5 local builders, and over 120 village residents were involved. The community formed 6 groups to co-organise, and workshops were conducted with the active participation of the groups. Community participation in design and construction processes involved asset mapping, community context, and available resources. This occurred on an individual participatory level and through the 6 community groups formed around different responsibilities, for instance, material harvesting, craft development, construction, and cultural events. The participatory process enabled contextualisation of the project development. It also helped the community to expand capacity by learning foundational skills for construction and resource pairing. On the wider level, the establishment of the Rural Training Centre institutionalised participation and engagement with villagers from different locations.

6. Research Methods, Prototypes & Materials

2. Adaptation

Approaches require local sensitivity to identify capabilities that can realise tangible design-related outcomes. For the House of Dreams, this focused on identifying and testing zero-mile recycled construction and household waste material resources, and adapting these for placemaking. This approach was informed by prototypes that tested concepts of community participation and co-construction. On a broader community level the adaptation requires methods that develop community willingness to change and adapt provided by the reflexive workshops that engaged and provided ways that the community could reach consensus about the tangible and intangible outcomes.

3. Innovation

Changing embedded preconceptions of single-use materiality to circularity requires aligning changing awareness with local capabilities and resources. Innovation in the possibilities of circular materiality used the prototype processes as well as social, spatial, technical and material engagement. These processes were continually reviewed and discussed by the community allowing continual innovation and evolution of the process. The innovations were facilitated by a series of design guidelines and frameworks from Insitu Project that helped guide outcomes. The placemaking outcomes reinforced the potential of the material circularity.

6. Research Methods, Prototypes & Materials

Prototype Context

House of Dreams

2017-22 **House of Dreams**
Zhoushan, Henan

Prototypes: informed *House of Dreams*

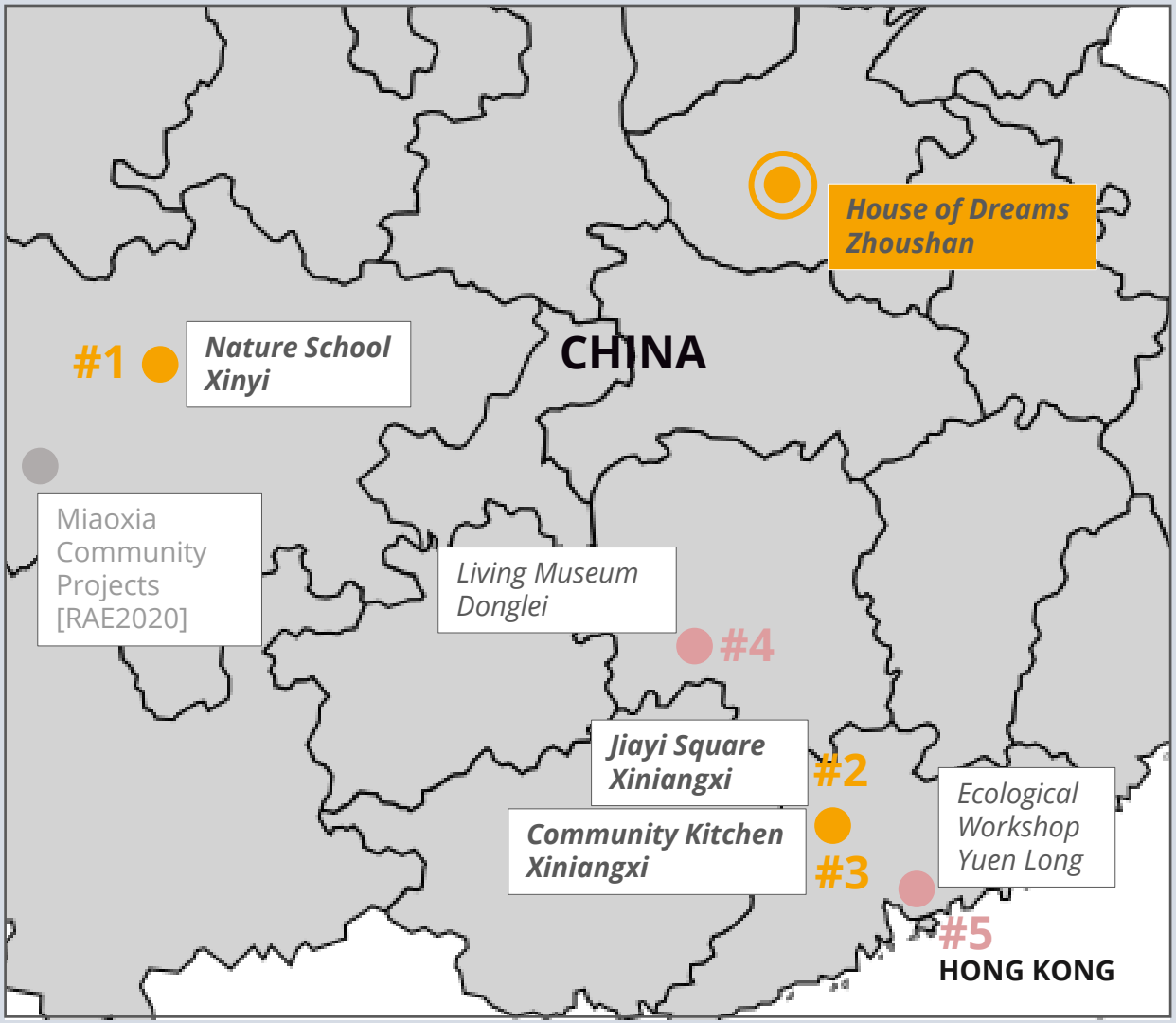
2018-19 **Prototype #1**
Nature School
Xinyi, Sichuan

2018-21 **Prototype #2, #3**
Jiayi Square, and Community Kitchen
Xiniangxi, Guangdong

Prototypes arising from *House of Dreams*

2019 **Prototype #4**
Living Museum
Donglei, Henan

2020 **Prototype #5**
Chun-On Ecological Design Workshop
Yuen Long, Hong Kong



Above: Location of House of Dreams and additional supporting prototypes in 5 different provinces and geographical regions in China. [Image: Insitu Project]

6. Research Methods, Prototypes & Materials

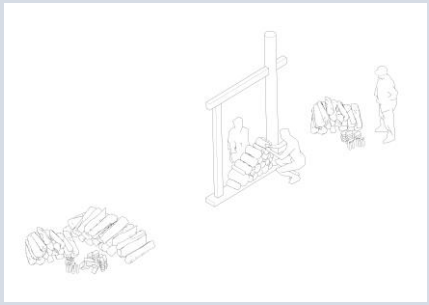
Prototype #1

Nature School Guesthouse *Xinyi, Sichuan, China 2018-19*

This prototype project explored the utilisation of locally available natural materials for a Nature School in a remote part of Sichuan. The school served as a prototype for a series of nature schools to be built near the 5 nature reserves established across China for the Paradise Foundation (Ant Group / Alibaba).

A small rural community of former hunters helped construct a nature school by using trees harvested on-site and stack wall techniques. The prototype building process used about 60% local capacity and materials for its realisation.

Credits Insitu Project (Peter Hasdell, Tan Ming, and Zhi Zi Hao)



Top: Zero-mile co-creation process
Middle: Completed prototype
Bottom: Detail drawing of process
[Image: Insitu Project]

6. Research Methods, Prototypes & Materials

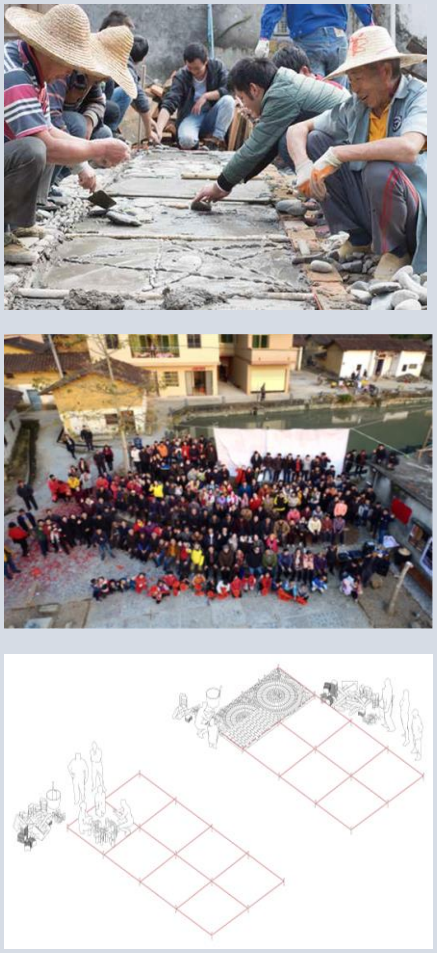
Prototype #2

Jiayi Public Square *Xianniangxi, Guangdong, China 2018-19*

This prototype project explored a participatory construction process to create a village square for dancing. Using zero-mile materials and incorporating locally sourced natural elements such as river stones and construction waste, the entire village was divided into small groups of 3-4 people, with each group responsible for building a 1m^2 section of the square.

Credits Insitu Project (Kuo Jze Yi, Zhi Zi Hao, Peter Hasdell)

Lvgeng Social Work Development Center



Top: Zero-mile co-creation process
MIddle: Finished square with participants
Bottom: Workshop process
[Image: Insitu Project]

6. Research Methods, Prototypes & Materials

Prototype #3

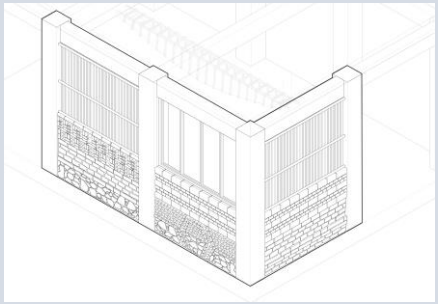
Community Kitchen *Xianniangxi, Guangdong, China 2019-21*

This prototype project explored building community capacity by incorporating locally sourced, recycled, and donated materials into a participatory construction process, resulting in a community kitchen. The resource and financial limits required the use of community resources through donations and labor. A series of workshops was held, initiating the processes that enabled the community to complete the construction of a community kitchen successfully.

Innovative techniques combining recycled materials were explored, developing appropriate techniques and technical skills for construction.

Credits Insitu Project (Kuo Jze Yi, Zhi Zi Hao, Peter Hasdell)

Lvgeng Social Work Development Center



Top: Finished kitchen with participants
Middle: Zero-mile co-creation process
Bottom: Detail drawing completed kitchen
[Image: Insitu Project]

View of amenity block and laundry room 2022 (Workshop 5). Photo: Insitu Project

7. Research Outcomes, Findings & Further Research

Findings

The research conducted through *Designing Circularity: House of Dreams* indicates that applicable solutions for material circularity need to be local, co-established, socially driven, and bottom-up to effect significant, sustainable impacts. As a case study, the integrated collaborative approach generated a project that continues to operate as collaboratively agreed and that has become a regional exemplar for other similar communities. Research findings gained through the prototyping processes of the project outline the following factors:

Placemaking: 10 workshops produced the design guidelines and physical outcomes that shaped the placemaking and the diverse constituent parts and physical realisation of the House of Dreams. This included the self-initiation (workshop 10) and completion of the community craft shop and workshop space. The quality of the outcomes is an integral part of the placemaking, understood as adding not only aesthetic value but also ecological and sustainable values that represent the community as a whole. The strengthening of locally based skills and re-establishing craft traditions (building construction, material utilisation) also enhanced place-making and community self-organisation.

Capacity: Community capacity is demonstrated through 1) an increase in local resource capacity; 2) utilisation of zero-miles construction waste; 3) enhanced material innovation through building skills acquisition with re-used construction materials and house-hold waste; 4) increase in self-organisation; 5) social enterprise formation and sharing mutual community benefit; 6) improved confidence, capability and capacity to operate the House of Dreams as the Rural Training Centre and supplement the agrarian economy. Collectively, these initiatives embrace multi-lateral knowledge transfer involving different knowledge domains (Circularity, sustainability and ecology, co-design, local knowledge and skills).

7. Research Outcomes, Findings & Further Research

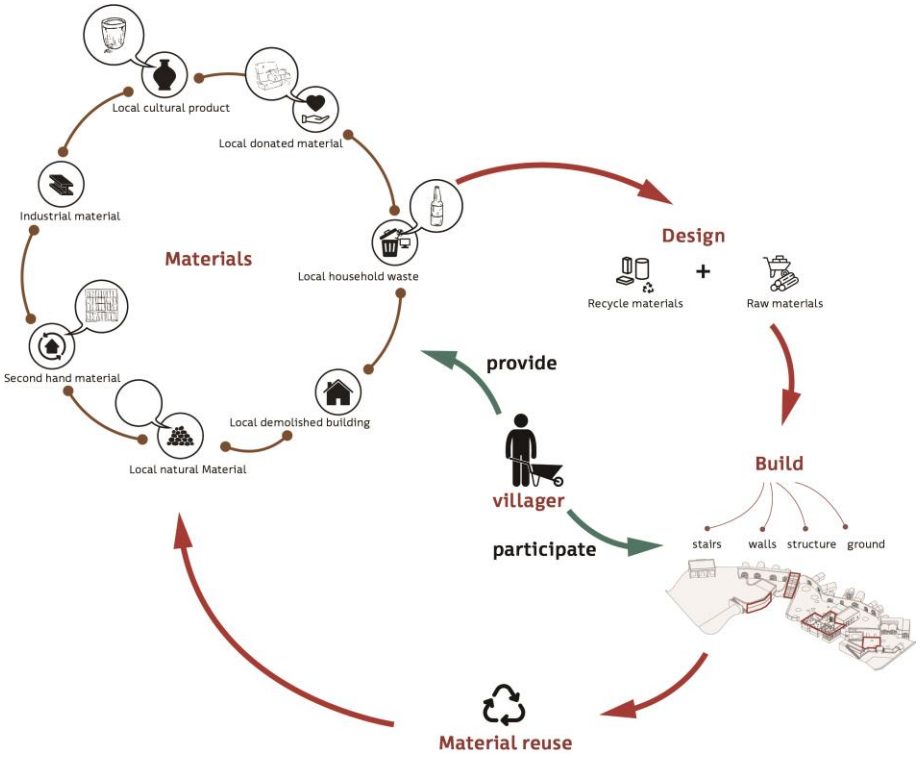
Sustainable development was evidenced through:

1) the capacity to generate bottom-up initiatives that clean up the environment and reduce landfills;

2) developing new environmental and ecological rules for the facility (including no tree felling);

3) increased understanding of the micro-climate and thermal comfort aspects of traditional cave dwellings and the ability to innovate earth-based air-conditioning systems for a planned community hall;

4) developing an understanding of integrated non-gender oriented, non-discriminatory practices that foster participation irrespective of age, gender, or circumstance, and qualitative understandings of patrimony, cultural patterns, collective memory, and community story-telling are contributory factors; many of which are aligned with UN SDGs.



Above: Recursive prototyping methodology used in Insitu Project works. [Diagram: Insitu Project]

7. Research Outcomes, Findings & Further Research

Outcomes

Community resilience and **cohesion** have increased, and this has contributed to an alignment of the UN's sustainable development goals with socio-technical development (see the link for the detailed UN SDG mapping: https://insituproj.wixsite.com/portfolio/zhoushan-2022-sdg). The intersection of design with sustainability enhances resilience and self-sufficiency. This interdisciplinary project as a whole, has directly benefited over 1000 beneficiaries (across three villages). Visitors to these projects, in particular the House of Dreams, have reached over 2500, including community groups, elderly rural resident groups, disaster management groups, design-related groups, NGOs educational and study groups, and visiting academic groups

Further quantitative research conducted after stage 3 evaluated **circular material use** in the House of Dreams (see p.28-30 of this document). This research showed that 40% of all materials used in the construction were comprised of recycled and reused materials that come from local sources including demolished houses and buildings, disused masonry such as old bricks, roof tiles, stones, found natural rocks, ceramic pots and vases, bathroom tiles, glass bottles, old windows and doors, household waste, plastic bottles, tyres and more. This is a high figure for reused masonry materials; re-used masonry building practice conventionally has 15-25% reused elements typically. The House of Dreams, therefore, has a higher than normal utilisation of circular materiality enabled through the alignment of community human capital and capacity.

The project has gained international recognition with six awards and three shortlists, notably for sustainable development and local waste use, exemplified by the 2022 Union of International Architects / UN Habitat 2030 award (see https://insituproj.wixsite.com/portfolio/zhoushan-2022-awards for details).

7. Research Outcomes, Findings & Further Research

Further Research

The House of Dreams approach aided in the development of further local prototypes as proof of concept for circularity that leads to sustainable community development.

1. The Museum of Everyday Life in Donglei, Hunan province, China, explored cultural approaches to placemaking through integration across gender and age groups in the community.
2. The Ecological Design Workshop in Yuen Long, Hong Kong, collaborated with Chun-On Monastery on managing urban construction waste. The project focused on engaging unskilled individuals in collecting and repurposing tyres and pallets to construct a meeting space.

The concept of circularity was extended through these follow-up prototypes.

The prototype project in Donglei expanded the concept by exploring the capacity for circular integration across different ages, gender roles, and skill domains. This was achieved through the establishment of connective linkages within a socio-material circularity that led to two or more outcomes (books, skill mapping, crafting abilities, domestic items, or spatial facilities).

The prototype project in Yuen Long tested how the use of circular materiality and placemaking enables connections between place, workshop participants, and found materials.

7. Research Outcomes, Findings & Further Research

Prototype #4

Museum of Everyday Life *Donglei Village, Hunan, China 2019-20*

This prototype project explored cultural approaches to enhancing community resilience.

The participatory design process involved village youths and the elderly womenfolk. The youths interviewed and recorded the local crafting techniques of the elderly women and created a book. This book set the foundation for the exhibition archive and workshop space. The structure was constructed with donated timber and the coordination of elder village men.

The approach to encourage villagers' participation at different levels, enhancing village cohesion and integration across genders and generations was the particular aspect of investigation. The development of locally run programs for the Community Cultural Classroom followed after the completion of the museum facility, enabling villagers to strengthen their local culture and the uniqueness of Donglei village.

Credits Insitu Project (Kuo Jze Yi and Peter Hasdell), Xing Xiao Bao, Liang Cheng Quan (SZU), Lvgeng Social Work Development Center

https://insitu-project.com/2020/04/04/dl02-donglei-museum-of-everyday-life-2019/

Top: Cultural asset archiving
Middle: Co-creation with youth participants
Bottom: Final designed museum
[Image: Insitu Project]

7. Research Outcomes, Findings & Further Research

Prototype #5

Chun On Ecological Design Workshop *Yuen Long, Hong Kong 2020-21*

This prototype project explored ways of conducting material research of the locally available materials and co-constructing with the unskilled participants.

The integrated Ecological Design and Building Experiments Workshop was a research and education initiative to revitalise a derelict rural building for the Chun On Monastery. It explored locating and utilising recycled construction waste and everyday waste materials found in the city, resulting in a temporary building following environmentally friendly and passive design principles. The series of workshops engaged 12 participants with no prior construction experience from diverse backgrounds and experiences across Hong Kong.

Credits Insitu Project (Peter Hasdell and Kuo Jze Yi), Iron Chan Yat Yin, Wing Chun Cheng, and Stone Law

https://insituproj.wixsite.com/portfolio/yuenlong2021

Top: Material harvesting
Middle: Co-creation with participants
Bottom: Drawing of finished project

[Image: Insitu Project]

Drone photo of House of Dreams, covering 3200m² includes 20 reconstructed caves, three courtyards and numerous amenities. Image: Insitu Project

8. Research Dissemination

Book Chapters and Journal Articles

Year	Publication
2020-21	Published in 12 book chapters, journal articles, award catalogues / online media as part of awards received
Jul 2021	Hasdell, P., / Insitu Project, “House of Dreams,” Documentation of the collaborative process of designing, co-constructing and realising the House of Dreams: 89 pages, self published, PDF and print on demand. Author Peter Hasdell/Insitu Project. https://ira.lib.polyu.edu.hk/handle/10397/115467 (Author Hasdell 2021. Kuo later developed a Chinese language version in 2022)
Aug 2022	Insitu Project research presentation for SD’s Qualitative DOKPI 2.8 application, SD (on request)
Apr 2023	Hasdell, P., / Insitu Project, Xinyi Nature School referenced in “Colonial constructs,“ by Toma Berlanda The Architecture Review, April 2023 special 1,500th issue, London, https://www.architectural-review.com/essays/colonial-constructs
Jul 2023	Hasdell, P., “Insitu Project, House of Dreams, Zhoushan Village in Henan Province,” in China in UN SDGs – Hong Kong Architects in Action, Eds: Thilakaratne R, Chau A, Hong Kong Institute of Architects, Vision Plus Ltd, published as part of HKIA celebration of the UIA Union of International Architects SDG awards 2022, July 2023, HK, ISBN 978-962-7732-47-1, pp60-71.
Fall 2023	Hasdell, P., “Insitu Project: relearning timber construction through participatory design,” chapter in Practising Wood in Architecture: connecting design, construction and sustainability, eds Brown, J.B. & Camilli, F., Abingdon: Routledge London, forthcoming fall 2023, ISBN 9781032550817 HB, 9781032550794 PB, 9781003428930 EB
Fall 2024	Bang, I. (2019). 'Relating to current society: Community Design', In Considerate Design. Goyang-si, South Korea: Misulmunhwa Publisher, 184-189.
May 2025	Mollard, M., Beaumont, E., & Rapacki, K. Circularity. The Architectural Review Issue 1521. https://www.architectural-review.com/essays/letters-from-the-editor/ar-may-2025-circularity

8. Research Dissemination

Keynotes & Public Presentations

Year	Presentation
Jul 2021	SZ OCAT Gallery Symposia Keynote: livestreamed verified audience 2200 (online).
Jan 2022	2nd China Design Research Forum: Keynote: livestreamed verified audience of 12000 (online). https://www.sd.polyu.edu.hk/en/event/cdrf2021
Jul 2022	Arch Daily interview as one of 6 winners of the UIA2030 award recipients (Arch Daily worldwide: 11 million followers)(online) Hasdell and Kuo. https://www.archdaily.com/977536/uia-and-un-habitat-announce-2030-award-regional-finalists?ad_source=search&ad_medium=projects_tab&ad_source=search&ad_medium=search_result_all
7 Oct 2022	“Insitu Project: towards a trans-disciplinary social design research platform,” presented as keynote for Platform #2 innovation in research public forum University of Tasmania, attendees 50 (f2f).
20 Oct 2022	“Insitu Project” invited presentation to Poly U Senior Management as part of President’s shortlisted research awards aligned with Knowledge Transfer DOKPI for SD, HK Poly U (online).
23 Nov 2022	“House of Dreams and on circular material economy” keynote for CPD and Open house Hobart public events for the Australian Institute of Architects Tasmania Chapter (AIA), attendees 100+, AIA Hobart (f2f).
15 Dec 2022	UIA Award Winners Webinar, HKIA Hong Kong Institute of Architects CPD official event on circular material economy and UN SDG impacts on Architecture: Hasdell and Kuo (online https://www.archdaily.com/984286/winners-of-the-uia-2030-award-announced-acknowledging-architects-contributions-to-the-sustainable-development-goals
09 Jun 2023	“Circular Material Economy: Insitu Project: House of Dreams” public presentation keynote for the Designing Circularity Exhibition https://designingcircularity.org/en/ in Central Market June 3-28 (f2f). Kuo and Hasdell.
13 Jun 2023	“Circular Material Economy: Insitu Project” invited presentation to visiting Dutch experts on Circular Economy as part of KODW Dutch Design Week, Living Lab SD (f2f).
27 Nov 2024	“Multi-faceted research + research by design” Fall School keynote, PhD School, School of Design HK Poly U. (f2f).
06 Mar 2025	“In-site, In-situation + In-sight Some works by Insitu Project” invited lecture by School of Architecture and Design, College of Sciences and Engineering, University of Tasmania, Australia (f2f).
18 June 2025	“House of Dreams and Habibi Community Centre” invited for 'Contextual Design Challenges’ keynote podcast presentation invited by CAUKIN Studio (online)

8. Research Dissemination

International Awards & Recognitions

Year	Award
Aug 2021	Dezeen magazine 2021 award (NL: high profile design magazine) shortlisted, awardees: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB (APSS). https://www.dezeen.com/awards/2021/longlists/house-of-dreams/
Aug 2021	Architecture in Development Award 2021 (London UK) shortlisted: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB (APSS). https://architectureindevelopment.org/project/1177
Oct 2021	Architecture Master Prize (AMP) 2021: First Prize for category Sustainable Development: "House of Dreams," awardees: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB., (APSS). 1700 entries from 65 countries. https://architectureprize.com/winners/winner.php?id=5331
Nov 2021	Taiwan International Design Award: First Prize / gold medal winner "House of Dreams," awardees: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB., (APSS). 5545 submissions from 72 countries, two round competition. https://www.taipeidaward.taipei/
Mar 2022	Human City Design Award 2022: Seoul City and Unesco: Grand Prize for "House of Dreams," awardees: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB., (APSS). 99 entries from 42 countries, three stage competition, 10 shortlisted, grand prize winner. http://seouldesignaward.or.kr/en/winners/2021/house-of-dreams
May 2022	Union of International Architects 2030 Award (Paris France, UIA2030 Award and UN Habitat): First Prize: Sustainable Development Goal 11.6 category Utilizing Local Materials: awardees: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB., (APSS). Three round competition, 500 entries, second round 125 entries 40 countries / 43 finalist / one of six winners. High level award. https://www.uia-architectes.org/en/prizes/uia-2030-awards/uia-2030-award-2021-2022/ https://www.uia-architectes.org/en/award/uia-2030-award/
Jul 2022	Azure Magazine Awards 2022: Double First Prize: "House of Dreams" Winner for the Social Good Award, AND Peoples Choice: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB., (APSS). 1200 entries 57 countries, https://www.azuremagazine.com/article/az-awards-2022-meet-the-finalists/
Jul 2022	Design Educates Award 2022 (Germany) organised by Laka Foundation and Arch Daily, Third prize for architectural design awarded to "House of Dreams" awardees: InSitu Project: Hasdell, P., & Kuo JY, Lian J., Zhoushan Community Group and Dr. Ku HB., (APSS). https://gallery.designeducates.com/projects/67

8. Research Dissemination

Exhibitions & Other Media

Year	Presentation
2021-2023	House of Dreams exhibited in 8 online showcases and 3 physical exhibitions as part of the awards won including Taipei, Seoul, Poland, USA, Canada and Germany: UIA2030 award https://www.uia-architectes.org/en/competitions-and-prizes/uia-2030-award/uia-2030-award-2021-2022/ ; HCDA Award follow up, Design Educates https://gallery.designeducates.com/projects/67 Azure Magazine winners awards https://www.azuremagazine.com/article/az-awards-2022-meet-the-finalists/
Jul-Oct 2022	House of Dreams exhibition of Research by Design by Insitu Project School of Design, HK Poly U: https://www.polyu.edu.hk/en/85anniversary/events/2022/7/0701_house-of-dreams-exhibition/
Jun 2023	House of Dreams exhibited in the Designing Circularity Exhibition, celebrating innovation in Circular Material Economy in Design curated by Sjoerd Hoekstra, Hoi Chi Ng and Simone de Waart, Central Market, HK; supported by Consulate General of the Kingdom of the Netherlands, ChinaChem Group, HKDC. Integrated public symposium presentations (9 June): https://designingcircularity.org/en/

Insitu Project Video: House of Dreams https://www.youtube.com/watch?v=evoMA95CrDA&t=2s

Webpage http://insitu-project.com/ https://insituproj.wixsite.com/portfolio
Instagram Archive https://www.instagram.com/insitu__project/
Instagram Highlights https://www.instagram.com/insitu.prj/
Linked in https://www.linkedin.com/company/insitu-project/
Youtube https://www.youtube.com/channel/UC12eviOW832hBgUE2D-2w5g
Vimeo www.vimeo.com/insituproject
Issuu https://issuu.com/insitu-project
Link Tree https://linktr.ee/insitu.prj

9. Collaborators
House of Dreams

Role	Name
Client	Zhoushan Community Group
Investigators	Dr Ku Hok Bun [Department of Applied Social Science, PolyU] Liang Jun [Zhoushan Community Group] Kuo Jze Yi and Peter Hasdell [Insitu Project]
Researchers	Kuo Jze Yi, Peter Hasdell, Zhi Zi Hao, Tan Ming [Insitu Project]
Collaborating Institutions	School of Design, The Hong Kong Polytechnic University, HK Department of Applied Social Science, The Hong Kong Polytechnic University, HK Shenzhen University Architecture and Planning (SAUP), China University of East London Architecture School, UEL London
Project Team	**Community organisation and client:** Liang Jun, Ou Yang Xiu Zhen, Dong Lin, Jin Dou Dou **Solidarity Economy:** Ku Hok Bun (APSS) **Rural Building Team:** Yi Rong Liang, Zhou Hai Shan, Chen Guo Bin, Zhou Bao Liang, Wang Zhen Shan, Wang Zhong Shuan, Wang Jin Ping, Zhou Yin Mu, Wang Dong Biao, Sun Huan Ling **Building Management:** Feng Rui Fen, Wu Huai Zhen, Jing Qiu Feng, Hao Yu Zhi **Community Association:** Zhou Xi Chuan, Jing Xiu Fang, Zhou Xi En **Material Donation Representative:** Yi Fang, Zhou Zi Yun **Interior Decoration:** Evelyna Liang Yi Hu **Volunteers:** Wu Jun Ping, Keita Tajima, Tan Min, Li Dong Min, Aubrey Au, Chelsea Chan