



REBUILT C A P E T O W N

TRANSFORMATION LABS

COMMUNITY-LED
REGENERATION FOR CLIMATE,
CULTURE, AND EQUITY



“THE REBUILT PROJECT HAS TWO AVENUES OF RESEARCH: A GLOBAL STUDY AND FOUR REGIONAL CASE STUDIES.”

The aim of the four case studies is to work closely with local communities to identify opportunities and challenges in using natural and recycled building materials. To test these ideas through demonstration projects to promote positive change.

Transforming Cape Town and the Western Cape’s built environment faces significant challenges. However, by involving a variety of community members, creating a shared vision, and working together through guided discussions, the region can move towards a more sustainable and equitable future



nouahsark.com Globe Map of Bhutan (<https://www.nouahsark.com/en/infocenter/worldwide/asia/bhutan/index.php>)

Sharing knowledge and learning from each other will help improve the environment and build inclusive and resilient communities. The ReBuilt Project focuses on five interconnected transformation themes:

- 1. Shift to bio-based construction materials**
 - Promoting renewable, low-emission materials.
- 2. Circular building practices**
 - Reusing, recycling, and designing for minimal waste.
- 3. Polycentric and resource-efficient urban systems**
 - Developing decentralised, efficient infrastructures.
- 4. People-centred and inclusive approaches**
 - Embedding social equity and community participation in development.
- 1. Enabling environments for systems change**
 - Creating supportive policies and frameworks for transformation.

“THE GOAL IS TO CREATE A BUILT ENVIRONMENT THAT NOT ONLY REDUCES HARM BUT ACTIVELY CONTRIBUTES TO THE WELL-BEING OF PEOPLE AND THE PLANET.”

REGIONAL CASE STUDIES



Paro-Thimphu, **Bhutan**



Image from <https://www.nouahsark.com/en/infocenter/worldwide/asia/bhutan/index.php>
Accessed September 2025

Cape Town, **South Africa**



Denpasar, **Indonesia**

Berlin-Postdam, **Germany**



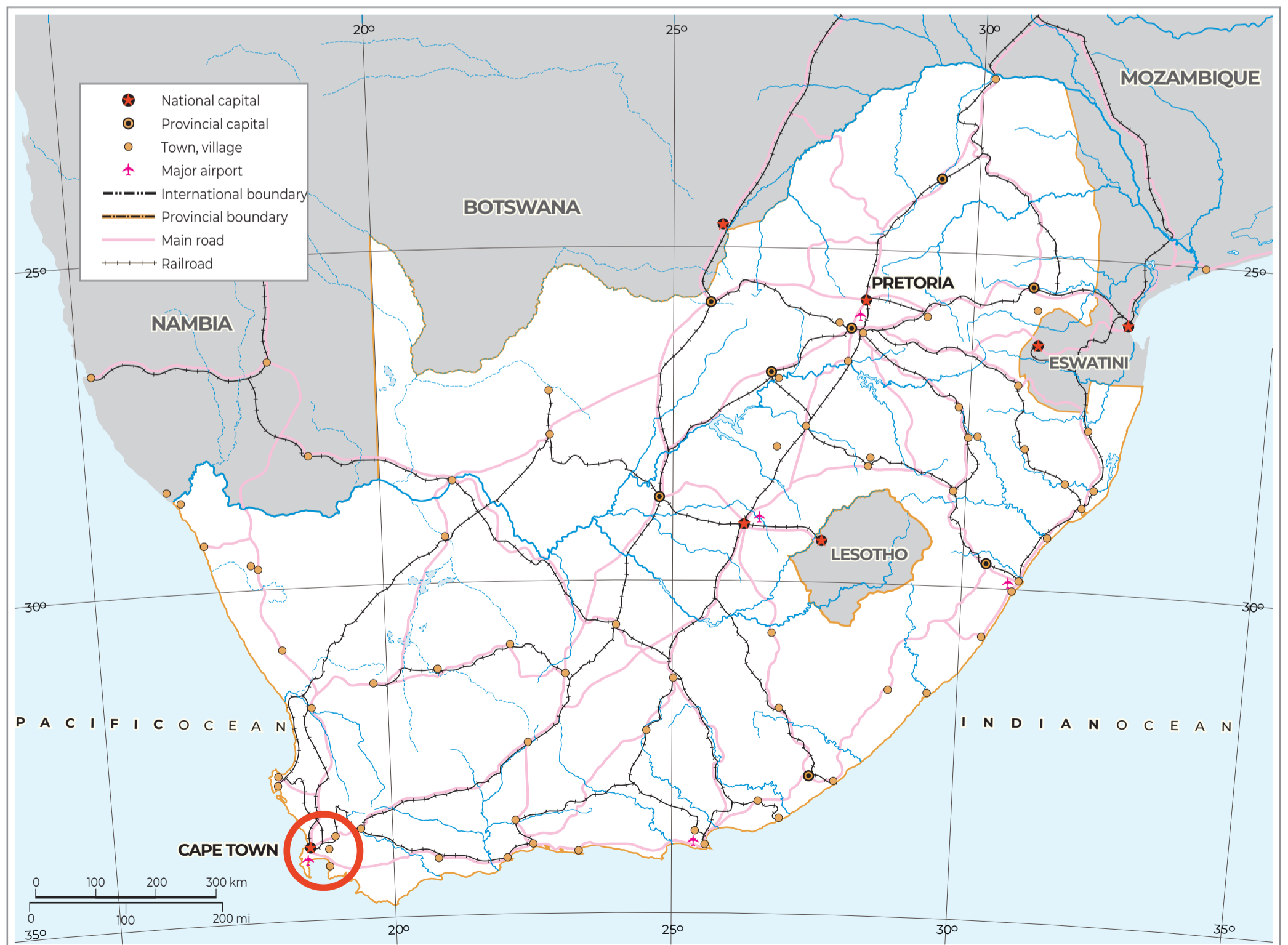


A TRANSFORMATION LAB FOR REGENERA- TIVE URBAN FUTURES IN LANGA, CAPE TOWN

At the heart of Langa, Cape Town's oldest township, a bold experiment is taking shape - one that aims to shift the built environment from a source of carbon emissions to a carbon sink.

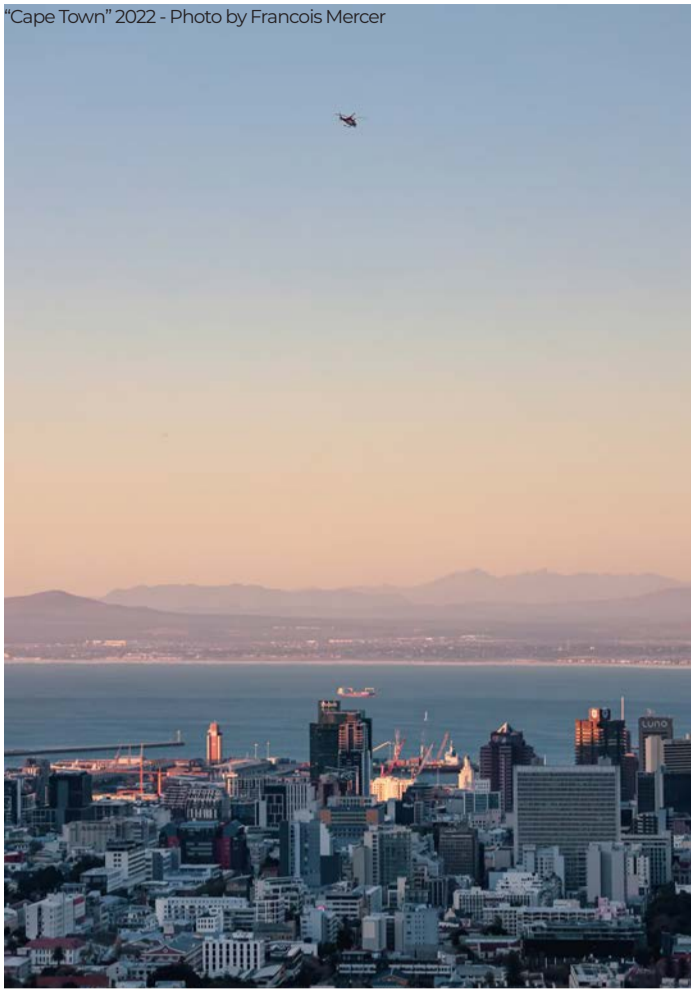
Map No. 3768 Rev. 6 UNITED NATIONS
February 2007

Department of Peacekeeping Operations
Cartographic Section



Map No. 3768 Rev. 6 UNITED NATIONS
February 2007

Department of Peacekeeping Operations
Cartographic Section



The 16 on Lerotholi Demonstrator is part of the international ReBuilt project, coordinated by Bauhaus Earth, a non-profit dedicated to transforming the built environment into a regenerative system that not only reduces harm but actively restores ecosystems, strengthens communities, and drives equitable urban transformation.

WHY LANGA?

- **Limited access** to safe, inclusive public space.
- **High unemployment** and restricted market access for local entrepreneurs and farmers.
- **Climate vulnerability** - heat stress, flooding, and resource scarcity.
- **Rich cultural heritage** and strong traditions of self-organisation and creativity.

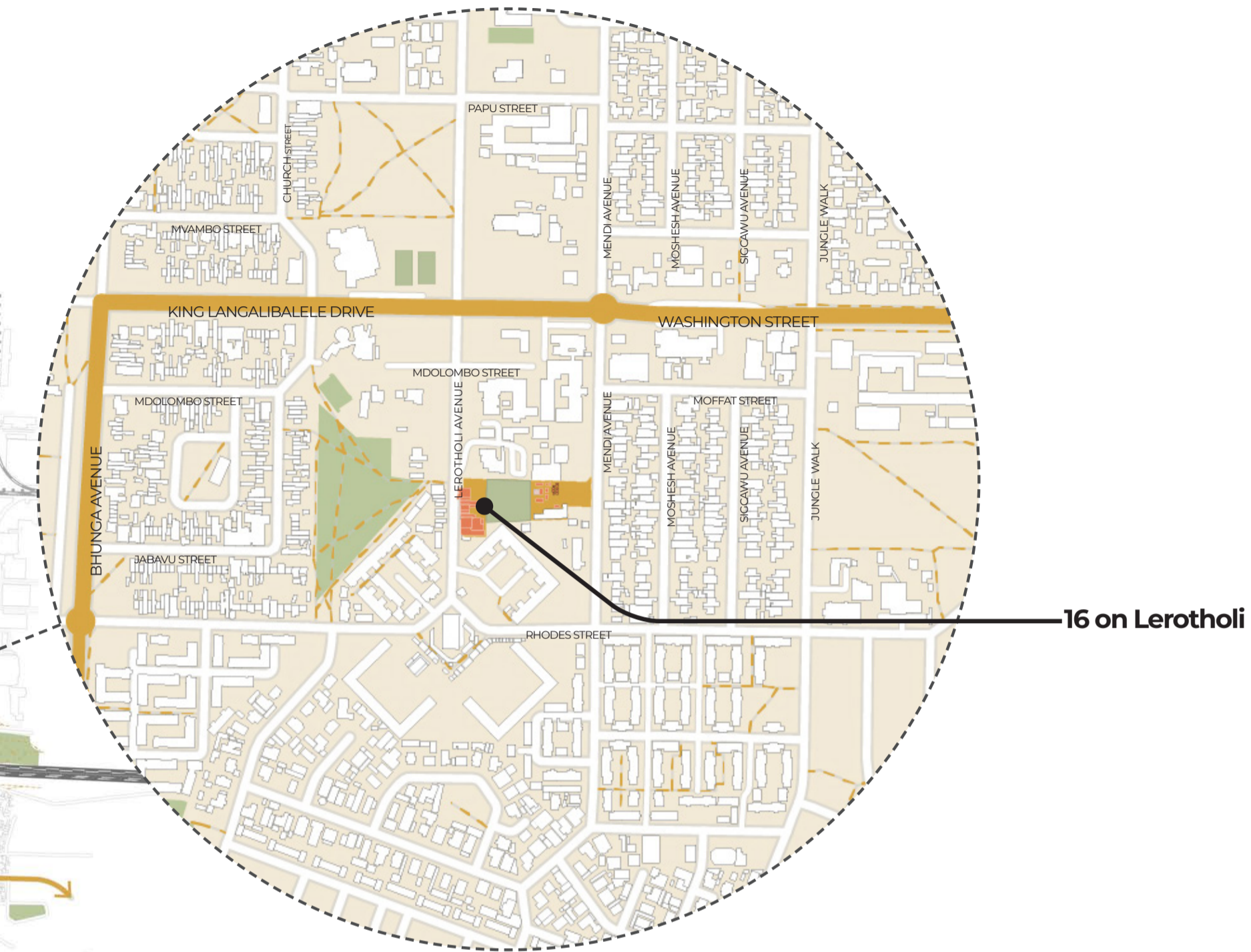
This combination makes Langa an ideal location to link climate action with social transformation, testing how regenerative design can address both environmental and socio-economic needs.



LOCALITY MAP

NOT TO SCALE

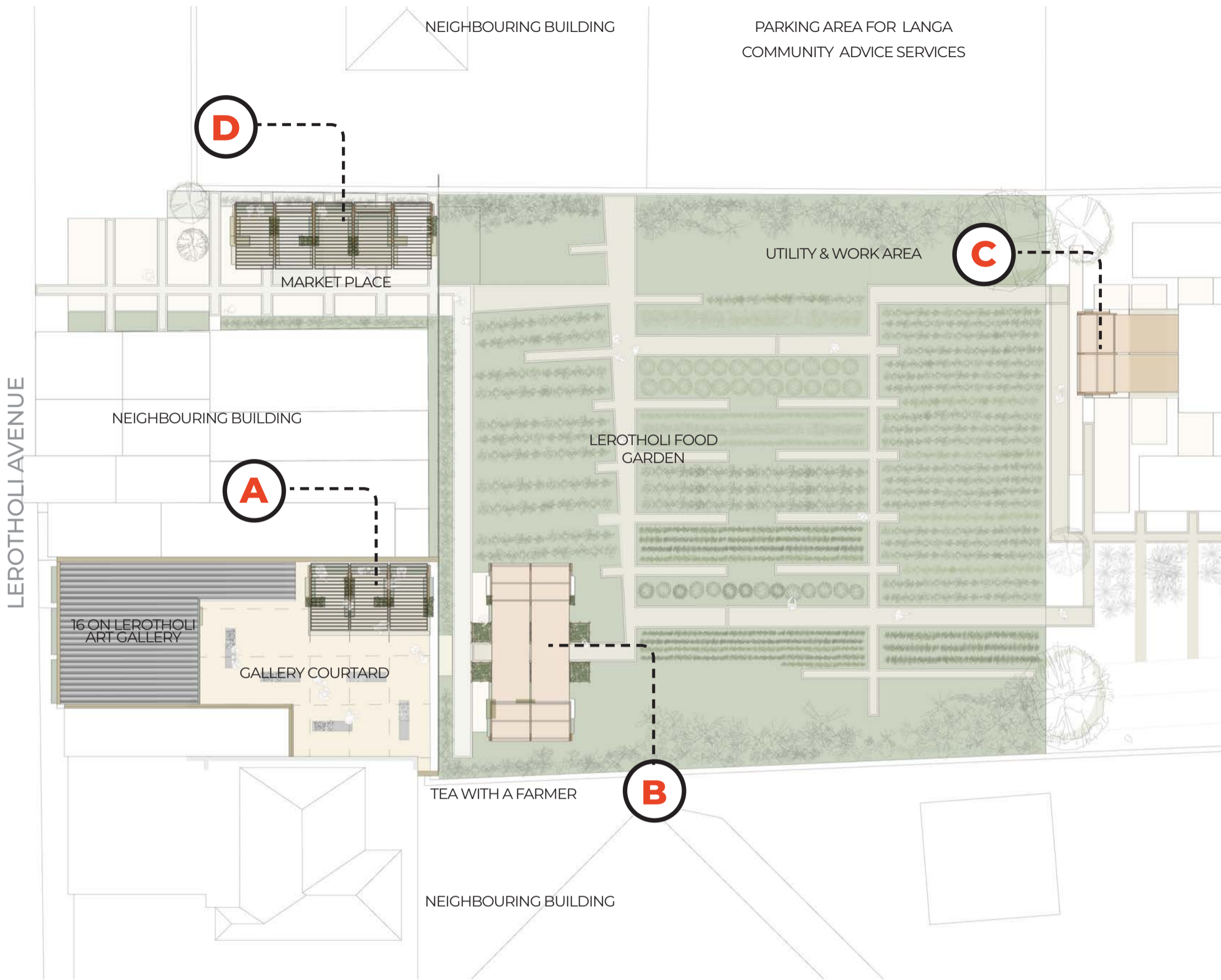




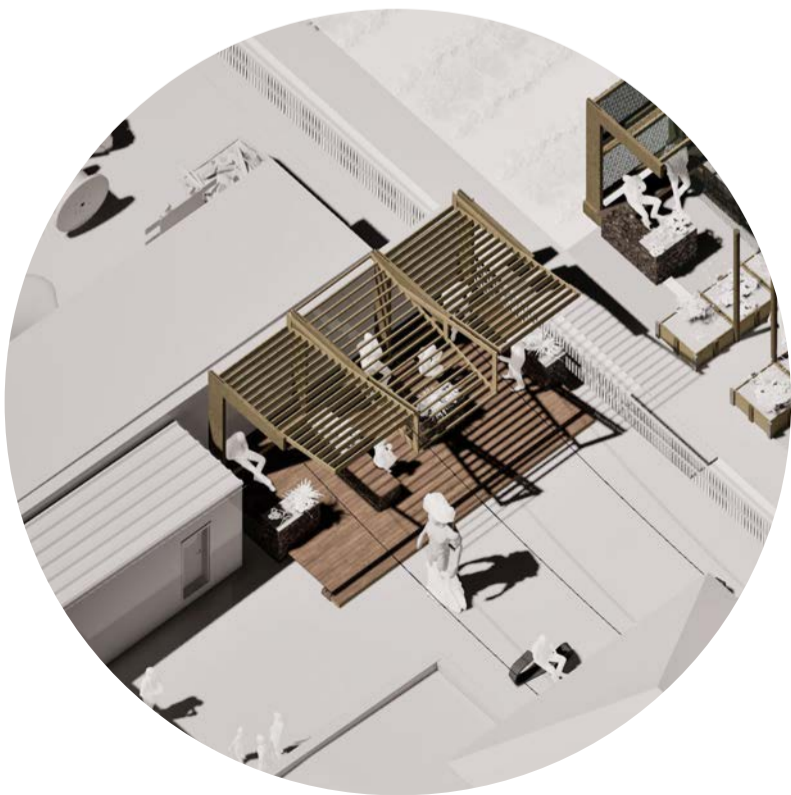
“LANGA EMBODIES BOTH DEEP-ROOTED CHALLENGES AND EXTRAORDINARY OPPORTUNITIES.”

FRAMING THE DEMONSTRATOR WITHIN REBUILT:

The 16 on Lerotholi Demonstrator is one of four showcase projects in the global ReBuilt initiative, coordinated by Bauhaus Earth, a non-profit organisation dedicated to transforming the built environment into a regenerative system - one that actively contributes to climate mitigation, social equity, and ecological restoration.



MASTER PLAN 



A. GALLERY/COURTYARD



B. TUNNEL/TEA GARDEN

NEIGHBOURING BUILDING



“ **THROUGH SHARED GARDENS AND COLLABORATIVE EFFORTS, THEY CULTIVATE NOT JUST FOOD, BUT A THRIVING, RESILIENT COMMUNITY** ”

16 ON LEROTHOLI ART GALLERY

Founded in 2019 to make art accessible and celebrate Langa’s cultural heritage, 16 on Lerotholi is a platform for African artists to exhibit their work, host performances, and engage the community.

LEROTHOLI FOOD GARDEN

A 2,000 m² urban agriculture project providing training in organic farming, nutrition, and environmental stewardship. The garden improves local food security while serving as a community education hub.

LANGA AGRIHUB AND MARKETPLACE

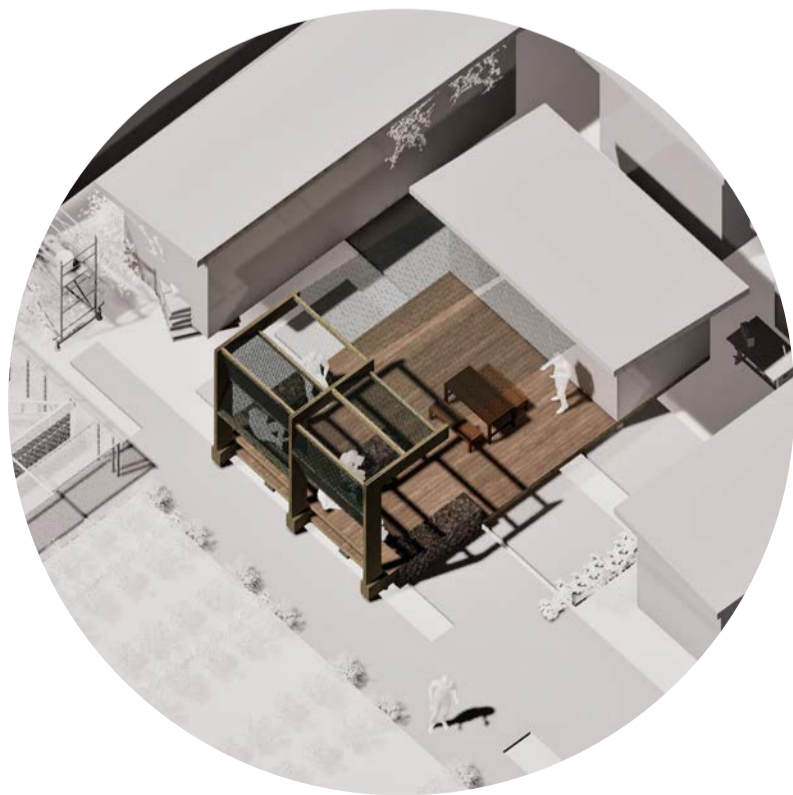
A market and training centre supporting over 300 small-scale farmers linked to 38 food gardens across Cape Town. The Agrihub provides seedlings, tools, and training, alongside facilities for washing, storage, and distribution.

PURPOSE

- Test **alternative building materials and methodologies (ABMs)**.
- Provide a **functional, inclusive public space**.
- Build **local skills** in regenerative construction.
- Create a **replicable model** for other communities facing similar challenges.

The design aims to minimise reliance on carbon-heavy construction by using materials and methods that support local economies, honour cultural traditions, and significantly reduce environmental impact

“ **THE COURTYARD BETWEEN THE GALLERY AND FOOD GARDEN BECOMES A “THIRD SPACE”—A SHARED PLACE WHERE ART, FOOD, AND ENTERPRISE MEET.** ”



C. UTILITY/WORK AREA



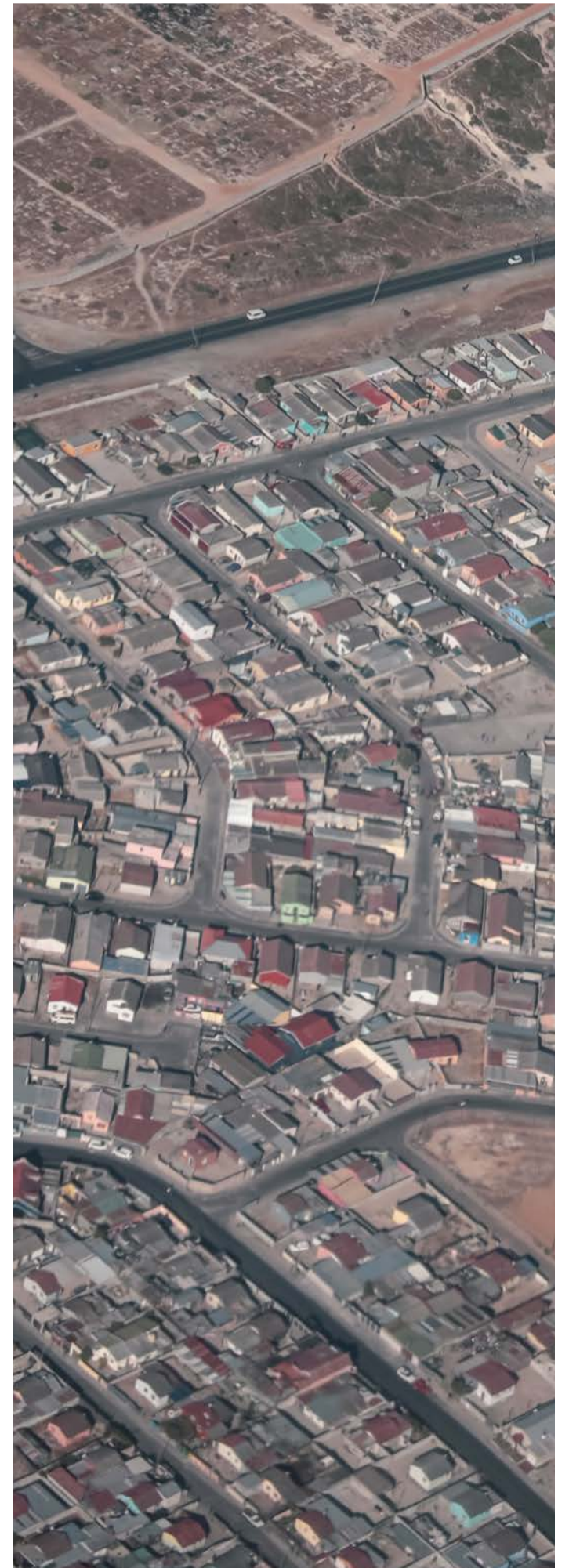
D. ARRIVAL/MARKET

"Informality" 2022 - Photo by Francois Mercer



“ TRADITIONAL CONSTRUCTION RELIES ON CARBON-INTENSIVE, NON-RENEWABLE MATERIALS. ”

"Langa" 2025 - Photo by Francois Mercer



"Aerial" 2022 - Photo by Francois Mercer



"Langa" 2025 - Photo by Francois Mercer

EXISTING PALETTE

Climate change intensifies resource scarcity and urban vulnerability. Traditional construction relies on carbon-intensive, non-renewable materials. Social inequality remains deeply rooted in spatial planning and access to opportunities. Marginalized communities often lack inclusive infrastructure, market access, and cultural recognition.

MATERIALS FOR A REGENERATIVE FUTURE

Cross-Laminated Timber (CLT):

Lightweight, renewable, and prefabricated, CLT stores carbon and reduces construction waste. The Demonstrator's CLT 'kit-of-parts' speeds up assembly and allows for replication in other informal urban contexts.

Gabion Walls:

Wire mesh cages filled with stones or recycled rubble—durable, flood-resilient, and easy to assemble using community labour. They reuse construction waste and improve thermal comfort.

Ground Screws:

A low-impact foundation solution ideal for Langa's soft, waterlogged soil. Installed without concrete, they are fully reversible and align with regenerative, adaptable design.



ANTICIPATED IMPACTS

Climate & Environment:

- Reduced embodied carbon footprint.
- Increased greenery and biodiversity in the urban core.

Social & Economic:

- Strengthened **community pride** and ownership.
- New income streams for farmers and artists.
- Skills in **regenerative construction and sustainable farming**.

“ BY CHOOSING MATERIALS LIKE CLT, GROUND SCREWS, AND GABION WALLS, WE DRASTICALLY REDUCE CARBON EMISSIONS WHILE SUPPORTING LOCAL EMPLOYMENT AND KEEPING MATERIAL CYCLES REGIONAL.”



FOUR INTERLINKED ZONES

A. Gallery Courtyard

exhibitions, gatherings, and cultural events.

B. Tunnel / Tea Garden

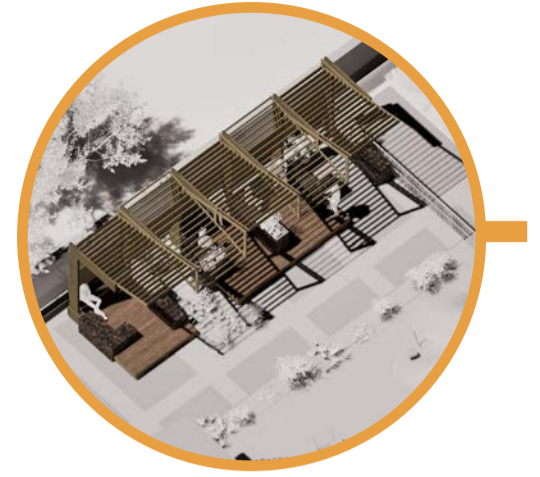
shaded walkway with herbal tea crops.

C. Utility / Work Area

workspace for farmers and artisans.

D. Arrival / Market

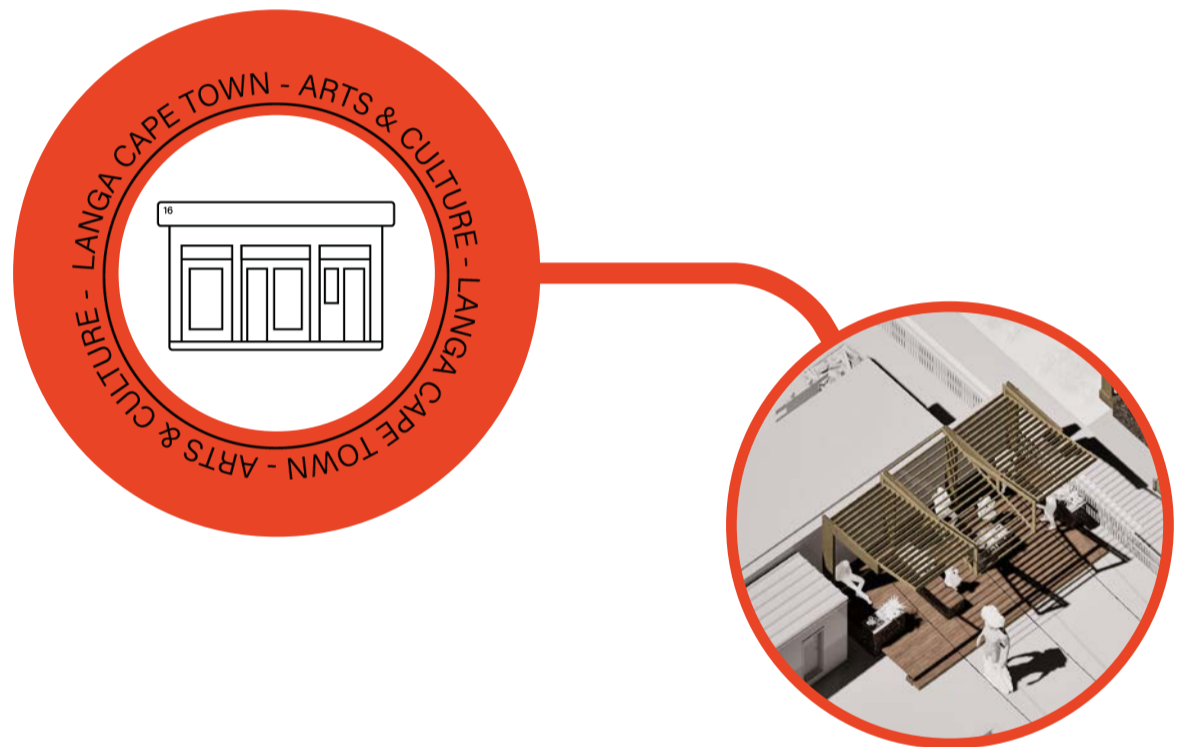
trading space for fresh produce and crafts.



D. ARRIVAL//MARKET

The Demonstrator is co-created with local residents through:

- Workshops – defining community priorities for the space.
- Skills training – in regenerative building and urban agriculture.
- Live prototyping – testing planter boxes, seating, and shading before final construction.



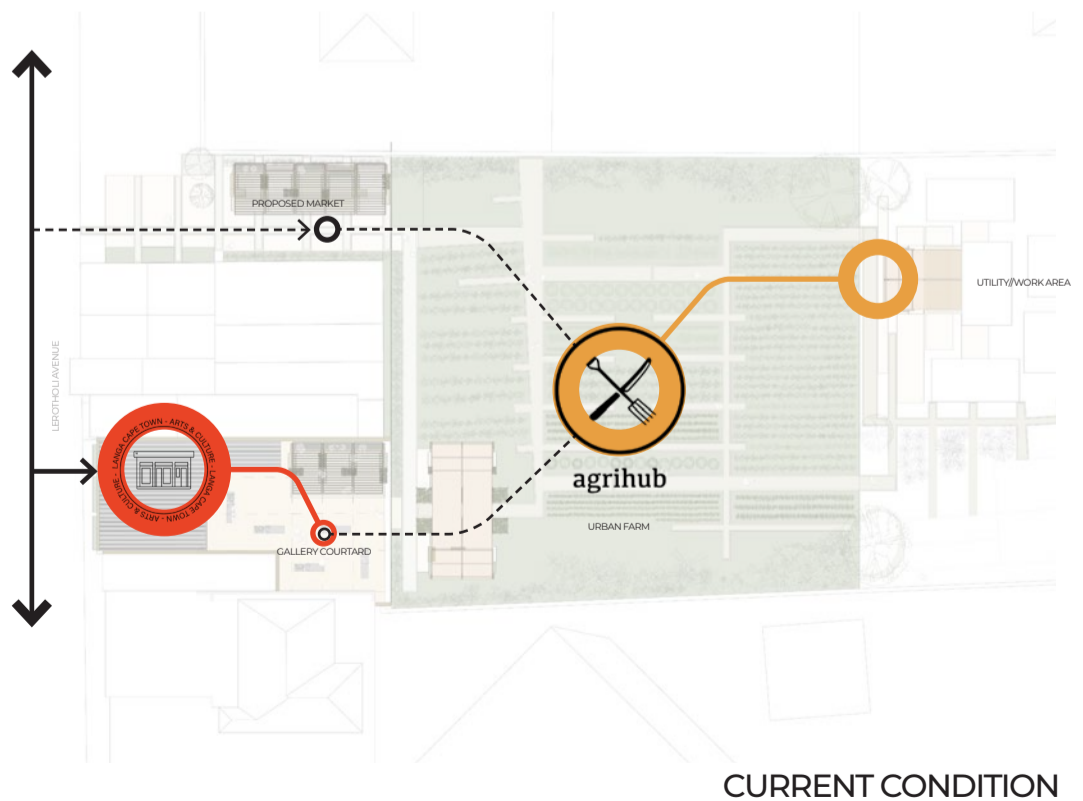
A. GALLERY//COURTYARD

LOOKING FORWARD

When complete, the **16 on Lerotholi Demonstrator** will be:

- A **public space** bridging culture, food, and local enterprise.
- A **live example** of low-carbon, locally adapted construction.
- A **catalyst for regeneration** in Cape Town and beyond.

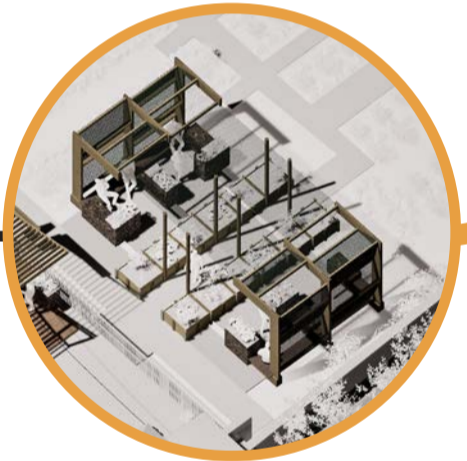
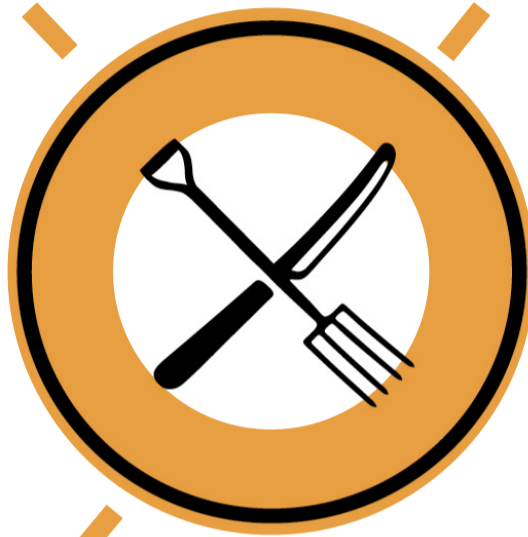
Its lessons will join the **global ReBuilt network**, offering a **replicable pathway for communities worldwide** facing the twin challenges of **climate change and inequality**.



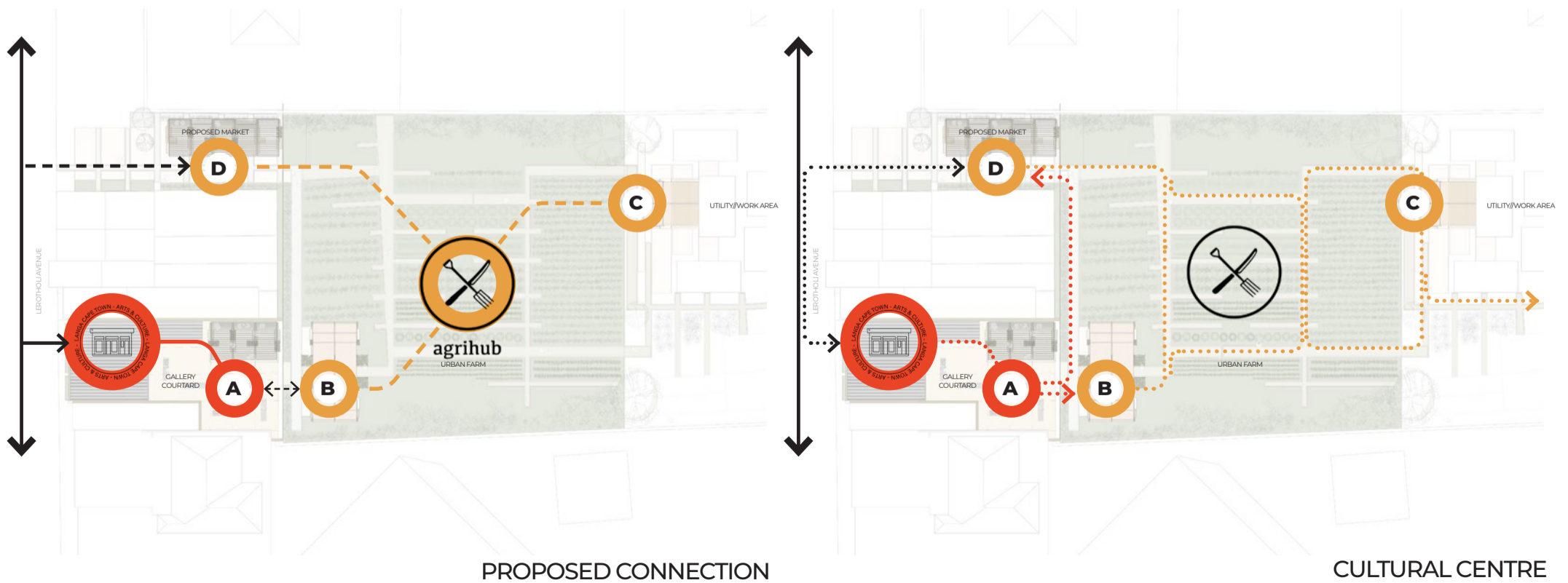
CURRENT CONDITION

“TRUE TRANSFORMATION BEGINS WITH LISTENING... EVERY VOICE SHAPES THE VISION, AND REBUILDING MEANS RECLAIMING SPACE, IDENTITY, AND PRIDE TOGETHER.”

C. UTILITY//WORK AREA



B. TUNNEL//TEA GARDEN



“AT THE HEART OF LANGA, 16 ON LEROTHOLI GALLERY AND THE LEROTHOLI URBAN FOOD FARM ARE CULTIVATING MORE THAN ART AND FOOD—THEY’RE GROWING COMMUNITY.”

A. 16 ON LEROTHOLI

Established in 2019 by childhood friends Mpilo Ngcukana, Thulani Fesi, Khanyo Ngcukana, and Shaun Williams, 16 on Lerotholi was created to make art accessible to the local community and to celebrate the rich cultural heritage of Langa.

The gallery serves as a platform for African artists, offering a space to showcase their work and engage with the community. It aims to foster understanding, empathy, and solidarity within the Langa community and beyond, using art as a tool for social changes.

Adjacent to the gallery is Café Lerotholi, offering a selection of healthy food options such as freshly squeezed juices, smoothies, breakfast bowls, and salads. The café sources its ingredients from the Lerotholi Food Garden, a community initiative aimed at promoting urban farming and sustainable living.



B. TEA WITH A FARMER

Tea with a Farmer is an immersive urban farming experience hosted at the Lerotholi Food Garden in Langa, Cape Town. First organised in 2024 by the Food Indaba, this event offers participants a unique opportunity year-round to engage with local farmers and learn about sustainable agriculture practices.

The tour begins in the courtyard of the 16 on Lerotholi Art Gallery, where guests are welcomed with a cup of farm-grown herbal tea. Led by farmer Mzi Mashicila, attendees are then guided through the urban farm, learning about its history, sustainable farming practices, and the significance of urban agriculture in the community.

The tour also highlights the SA Urban Food & Farming Trust (SAUFFT) Agrihub Initiative, supporting in Langa and three other marginalised communities over 1500 farmers to grow more food and improve their livelihoods.

After the tour, guests are encouraged to return to the gallery and explore the exhibition. This provides an opportunity to appreciate local art and further immerse oneself in the cultural richness of Langa.



“ROOTED IN TIMBER AND TIME, THE TEA WITH A FARMER STRUCTURE STANDS—NOT JUST AS SHELTER, BUT AS STORY.”



south african
urban food and
farming trust

C. SOUTH AFRICAN URBAN FOOD & FARMING TRUST

“BY WORKING TOGETHER,
WE CAN DESIGN SPACES
THAT ARE RESILIENT,
SUSTAINABLE, AND DEEPLY
ROOTED IN COMMUNITY
PRIDE.”

Kurt Ackermann



The Lerotholi Food Garden is a vibrant community-driven urban agriculture project located in the heart of Langa, Cape Town. Established through a partnership between the SA Urban Food & Farming Trust (SAUFFT) and the Masakhe Foundation, the garden occupies a 2,000 m² plot within the Langa Cultural Heritage Precinct. It serves as both a food production site and an educational space, aiming to promote sustainable agriculture, improve nutrition, and foster community engagement.

Mahlubi Zibi



The garden was initiated to support local residents, particularly women, in accessing fresh produce and learning about sustainable farming practices. It offers workshops, training sessions, and hands-on gardening opportunities for community members, school children, and visitors. Through these initiatives, participants gain skills in organic farming, food security, and environmental stewardship.

Paul Moletsane



D. LANGA AGRIHUB & MARKETPLACE

WITH THE SAUFFT

In January 2022, SAUFFT initiated the Langa Agrihub on the land behind 16 on Lerotholi. The Langa Agrihub and Marketplace is designed to empower farmers by providing them with farming inputs like seedlings and compost as well as tools and training, alongside a platform to showcase and sell their fresh produce. It increases visibility and inspires farmers to boost production and embrace entrepreneurship, addressing the shortage of market spaces for local produce.

Nomnikelo Sukwana



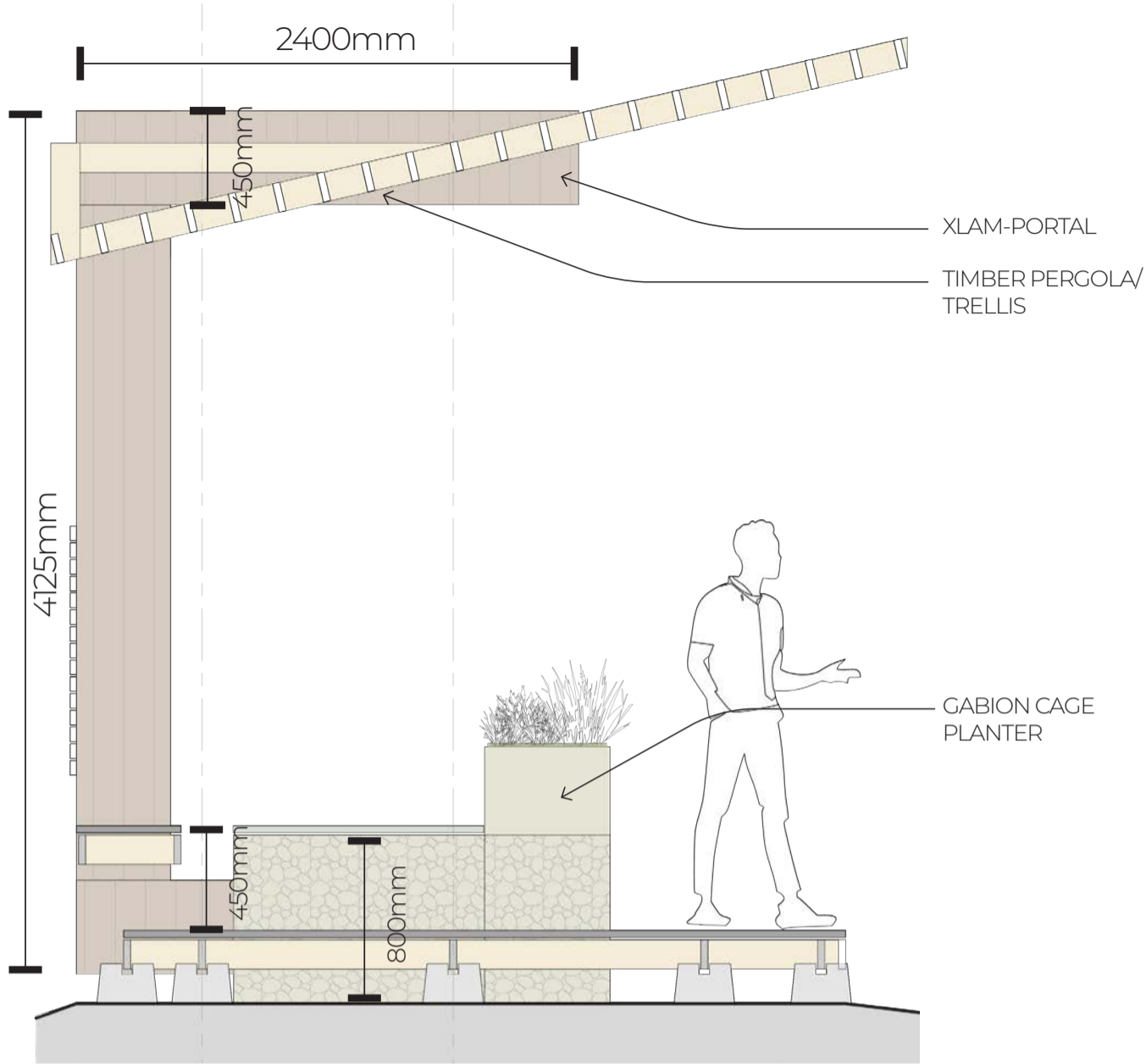
The Agrihub provides essential facilities—washing, storage, kitchens, and cooling units—to help farmers process, pack, and store produce efficiently, supporting 38 local food gardens. It serves as a vital resource for over 300 local small-scale farmers, providing them with the tools, training, and market access needed to thrive.

The Agrihub offers workshops on agroecology, agro-processing, business skills and other topics, equipping farmers to manage sustainable and profitable operations. Governed by the participating farmers, the Langa Agrihub exemplifies a holistic approach to urban agriculture, combining infrastructure development, education, market access, and community engagement to build resilience in one of Cape Town's marginalised communities.

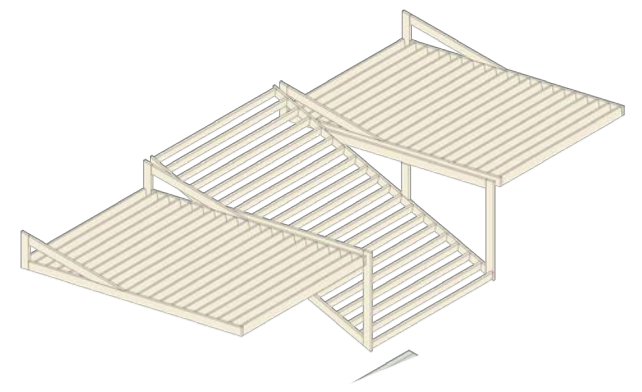


agrihub

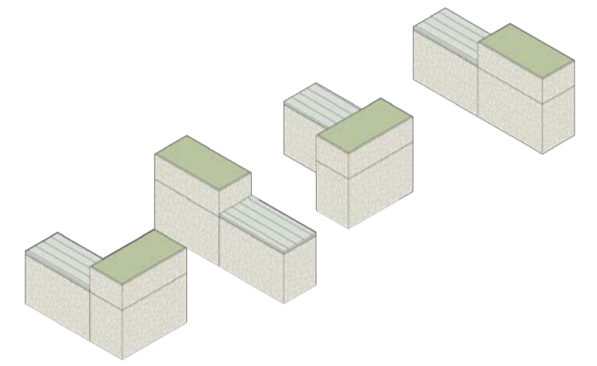
ENTERTAIN TYPE SHADE/THRESHOLD



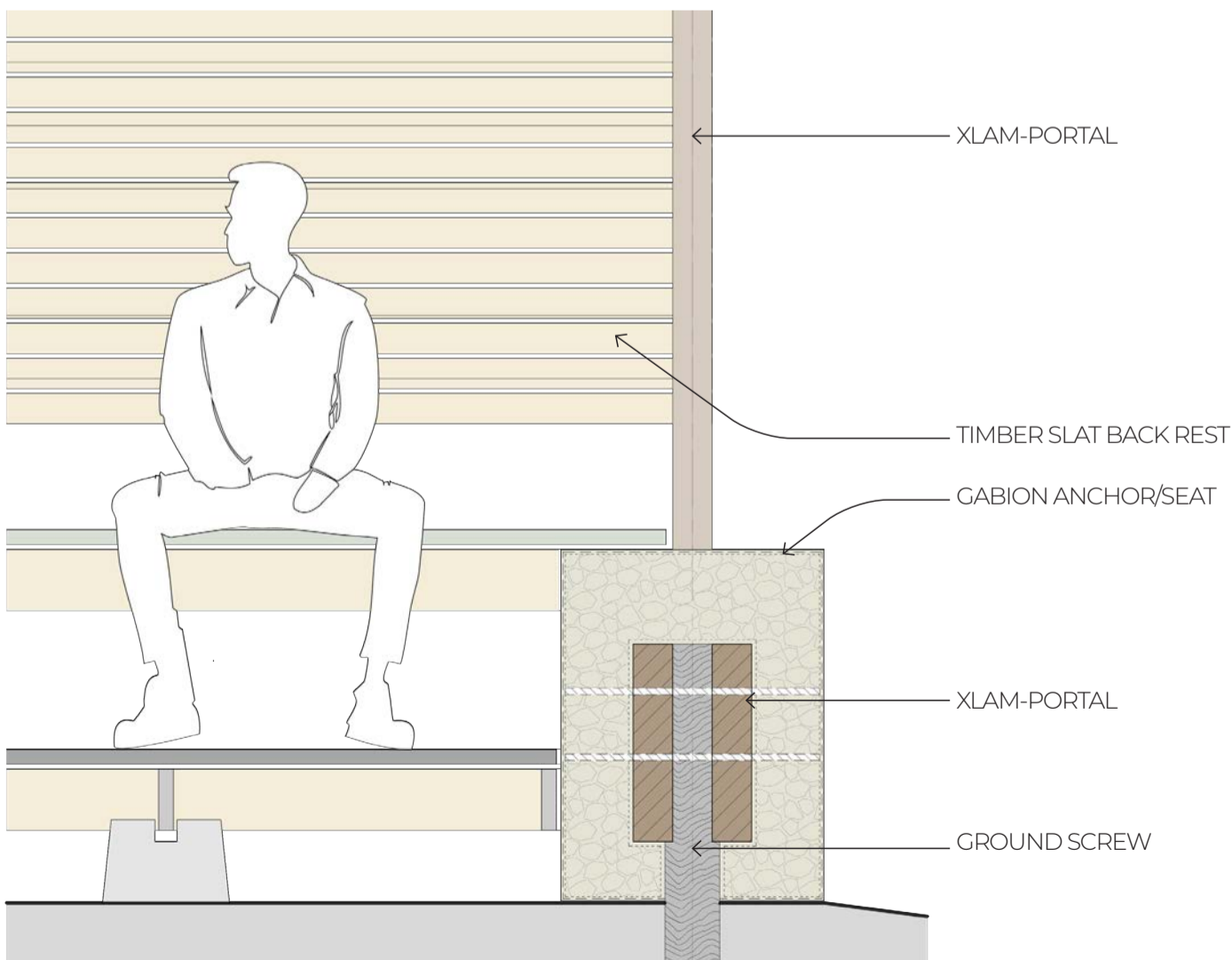
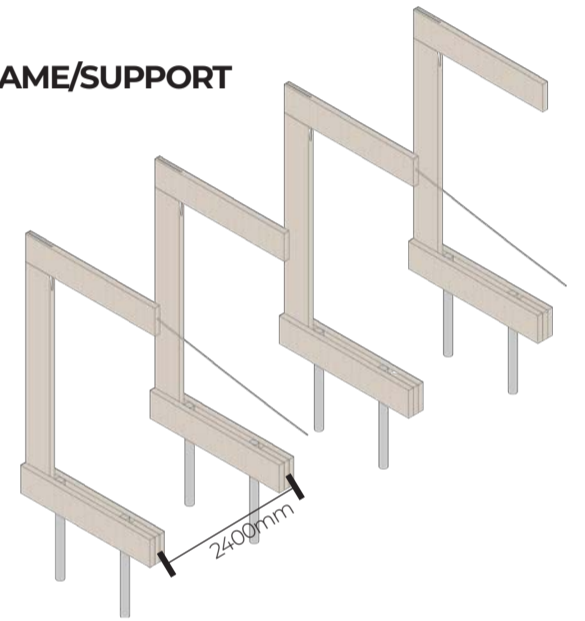
TYPICAL SECTION



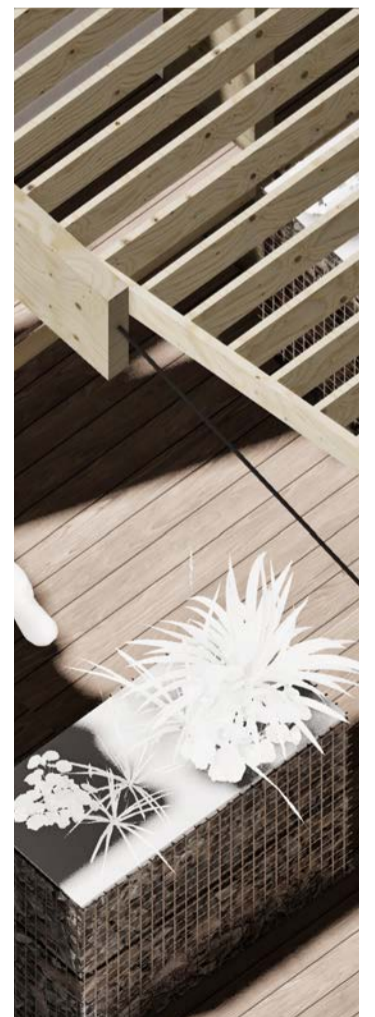
SEATING/ANCHOR



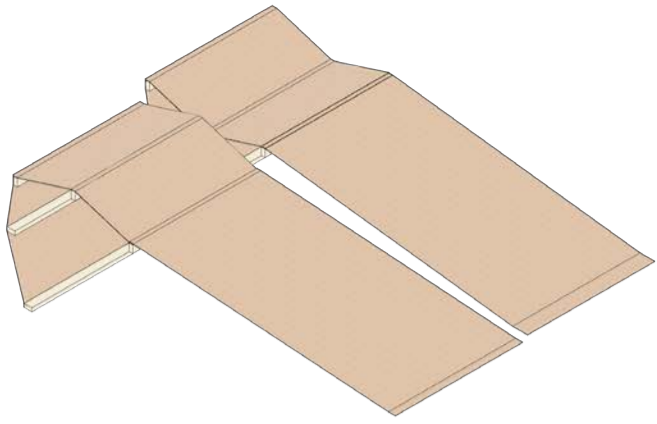
FRAME/SUPPORT



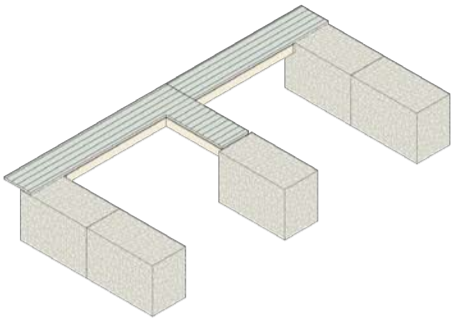
DETAIL SECTION



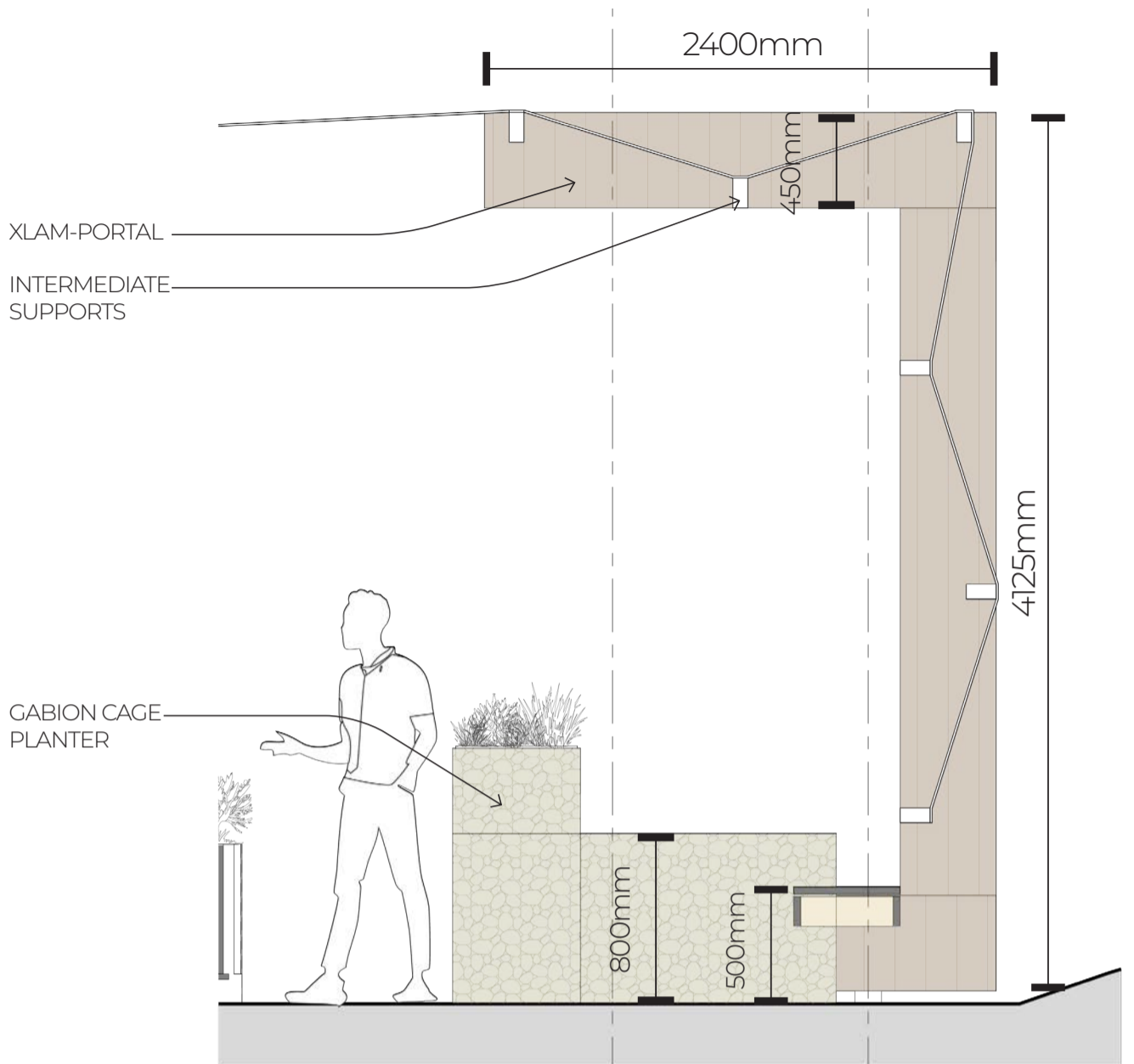
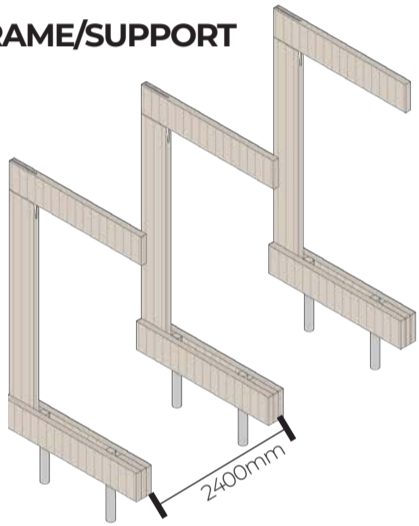
PERFORM TYPE
SHADE/THRESHOLD



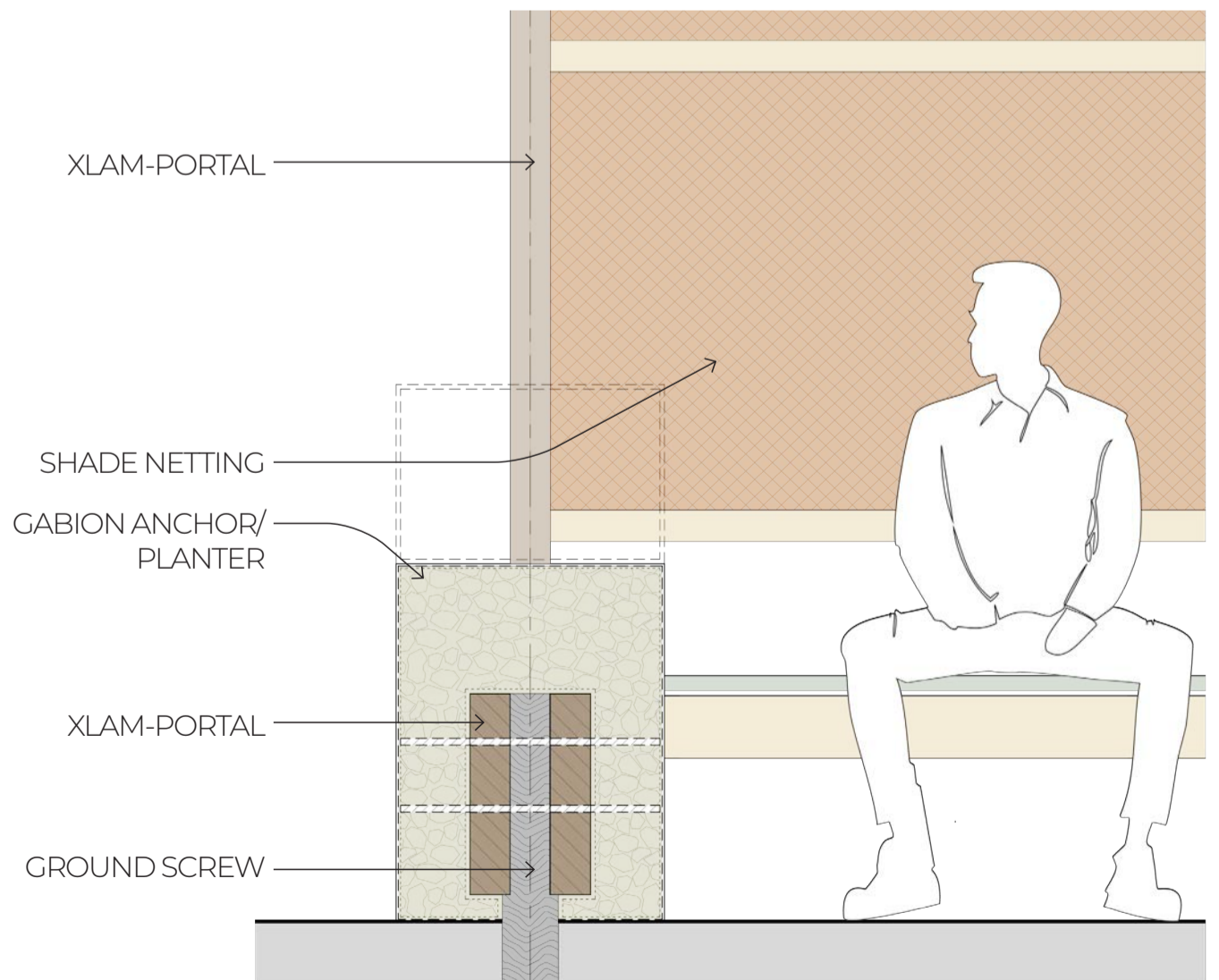
SEATING/ANCHOR



FRAME/SUPPORT



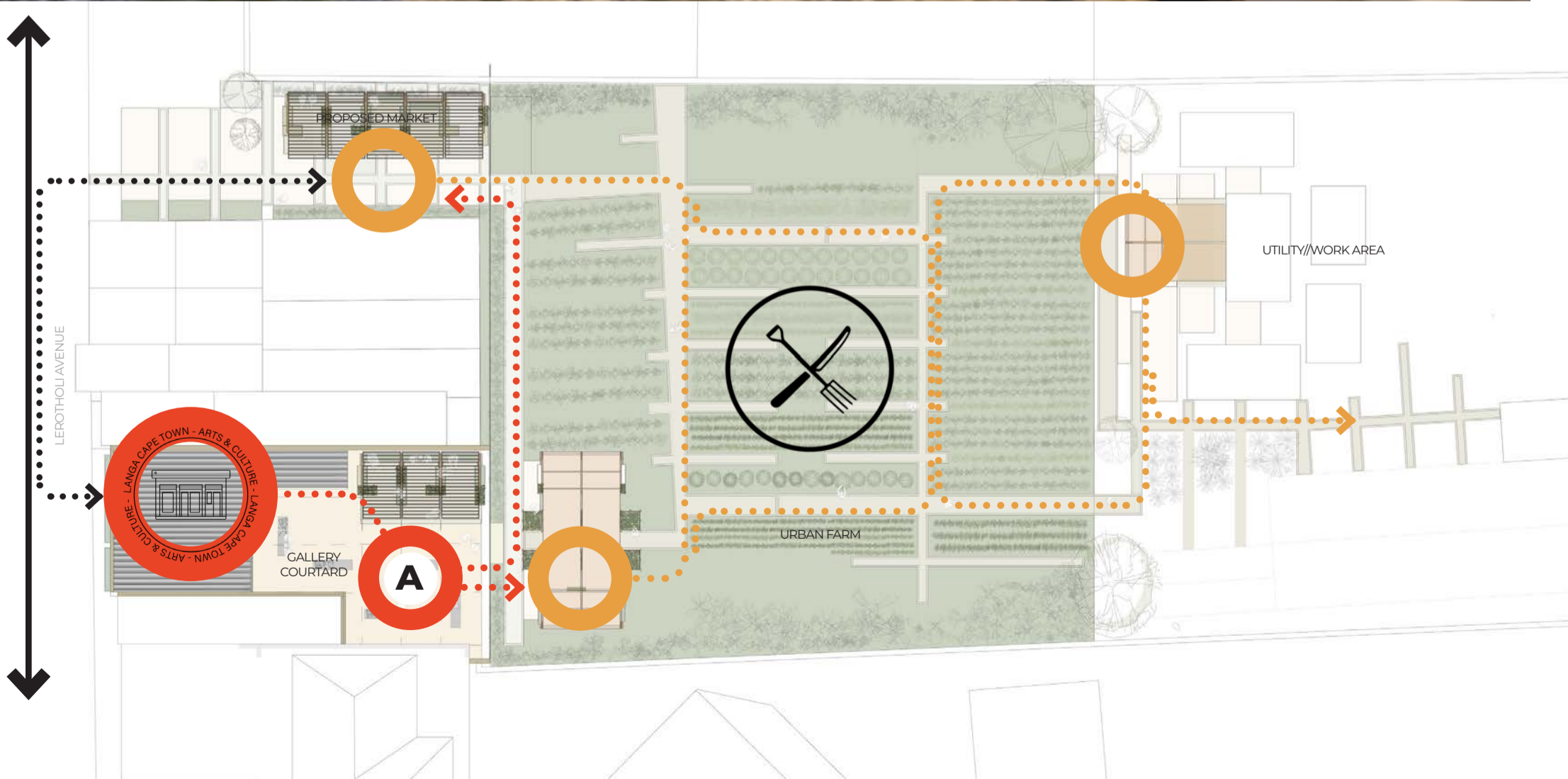
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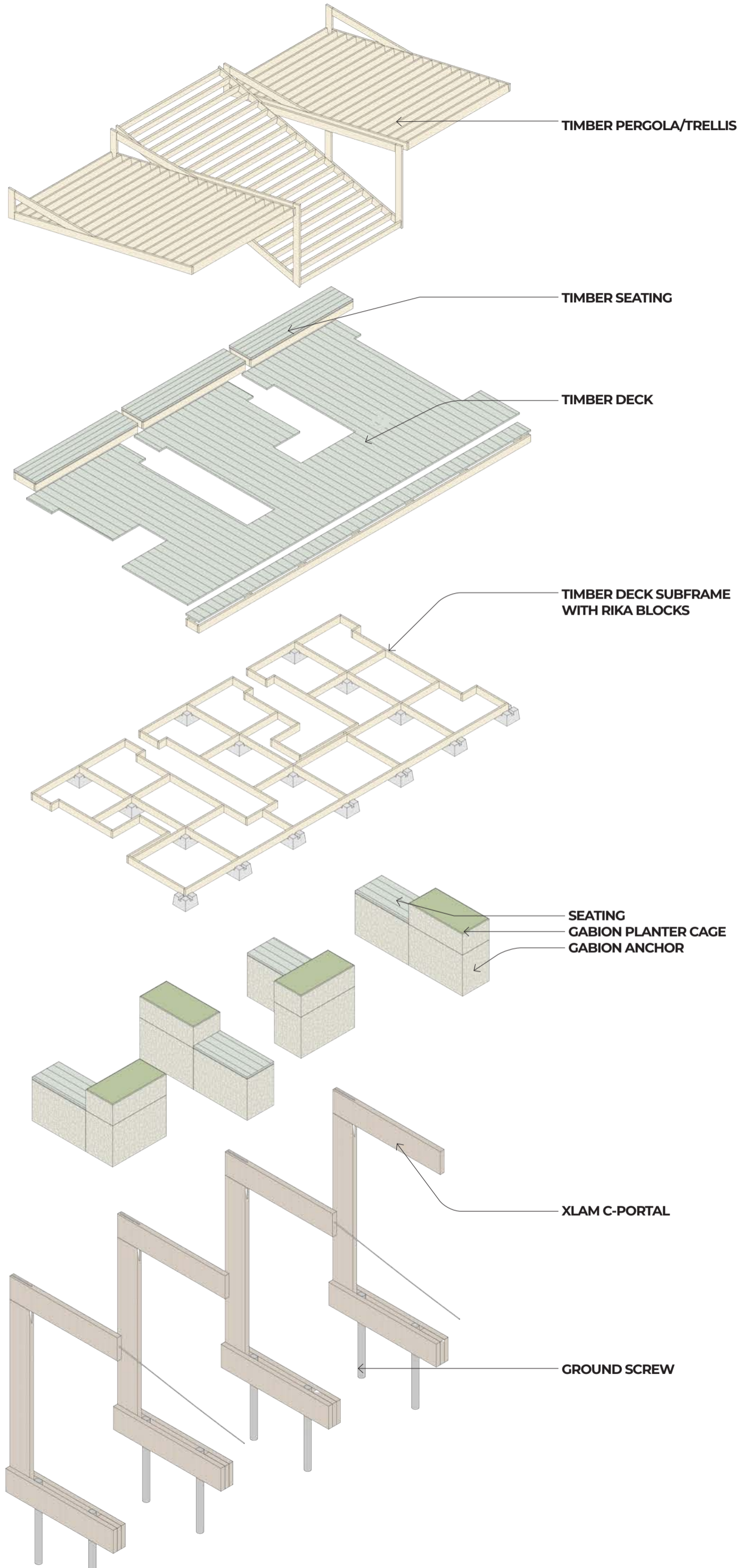


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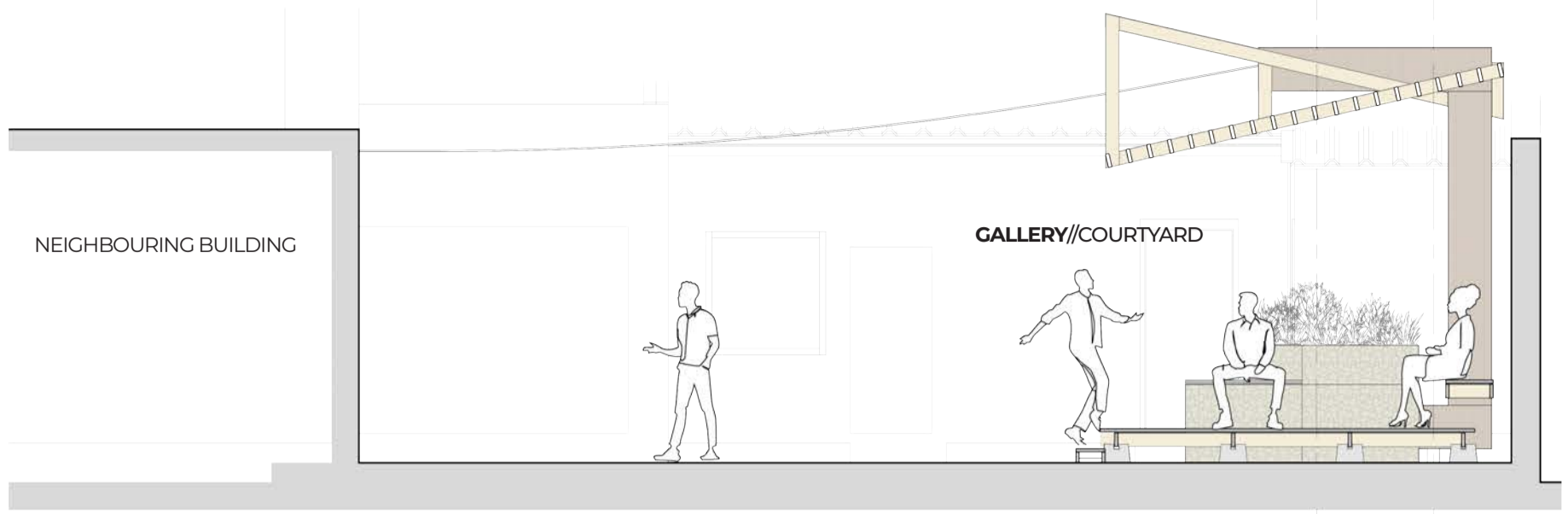


GALLERY/COURTYARD
PARCEL A.

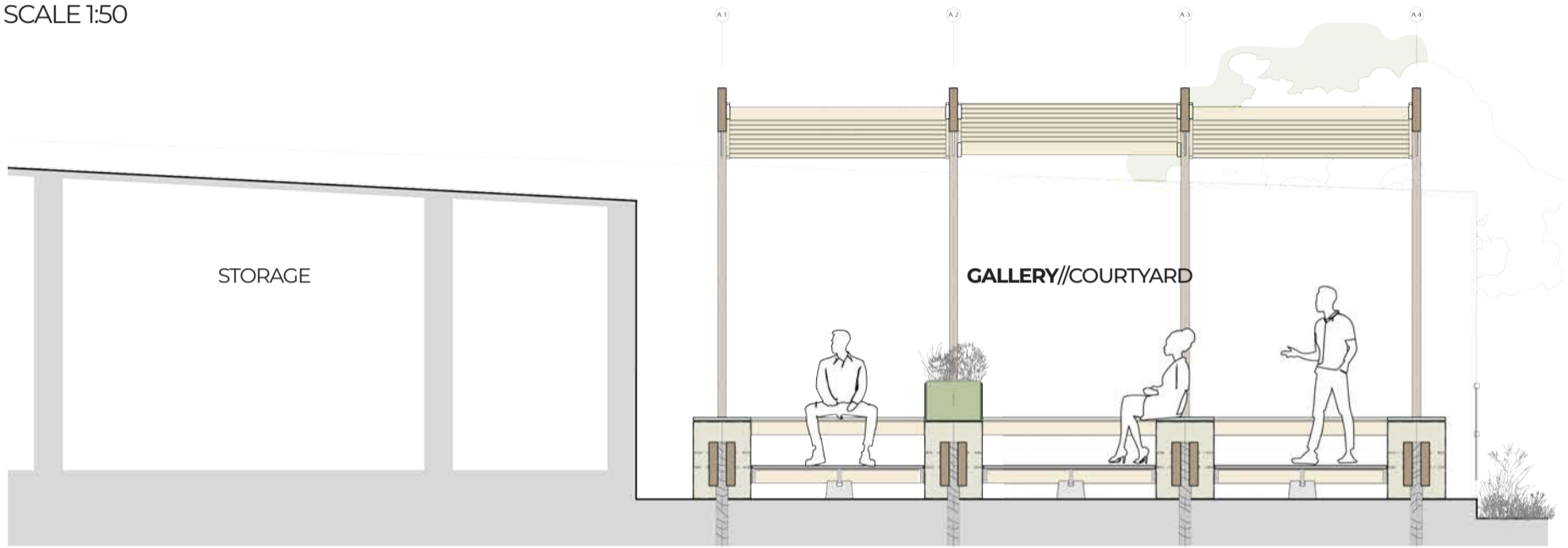




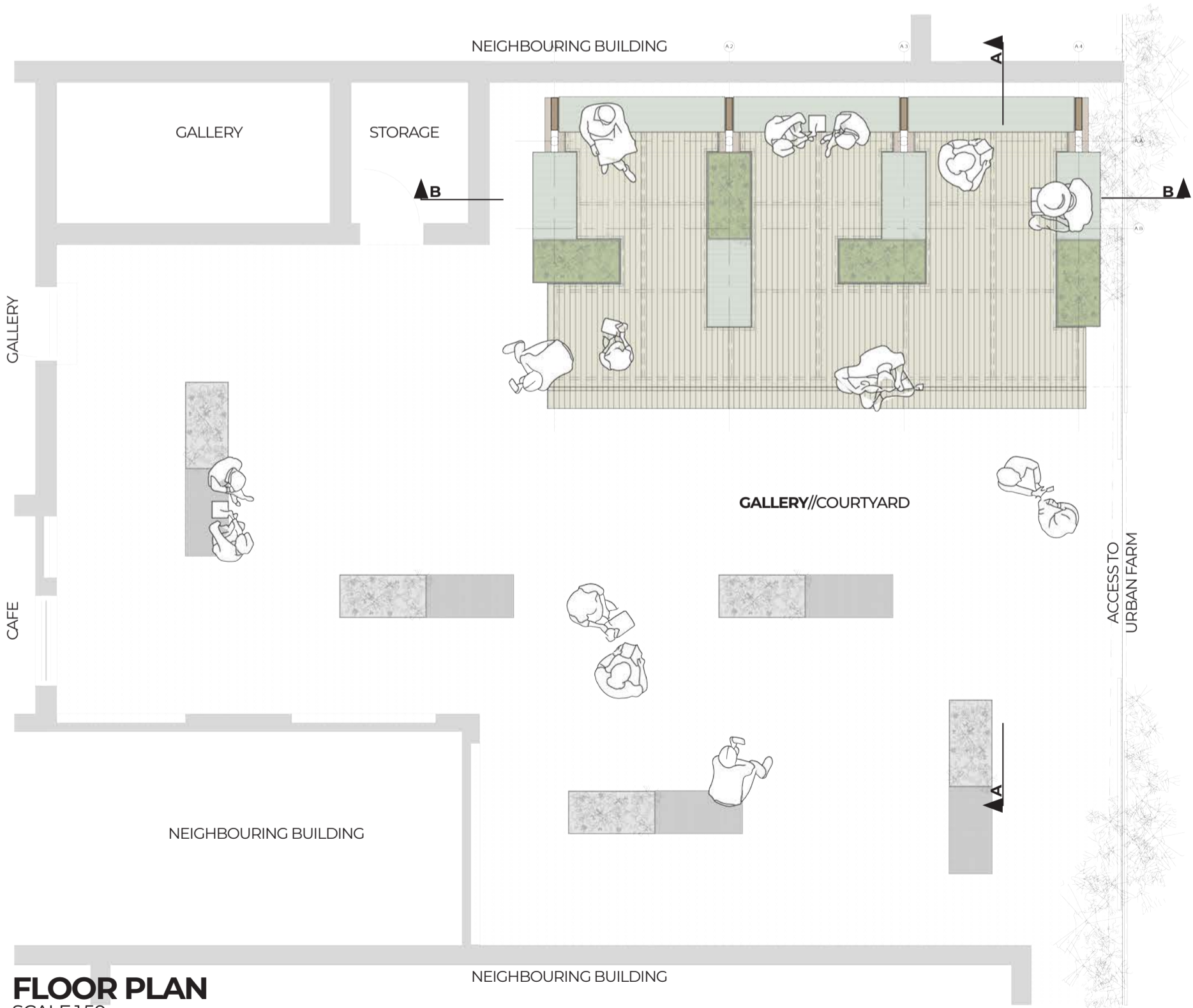
PARTS/ASSEMBLY



SECTION A-A
SCALE 1:50



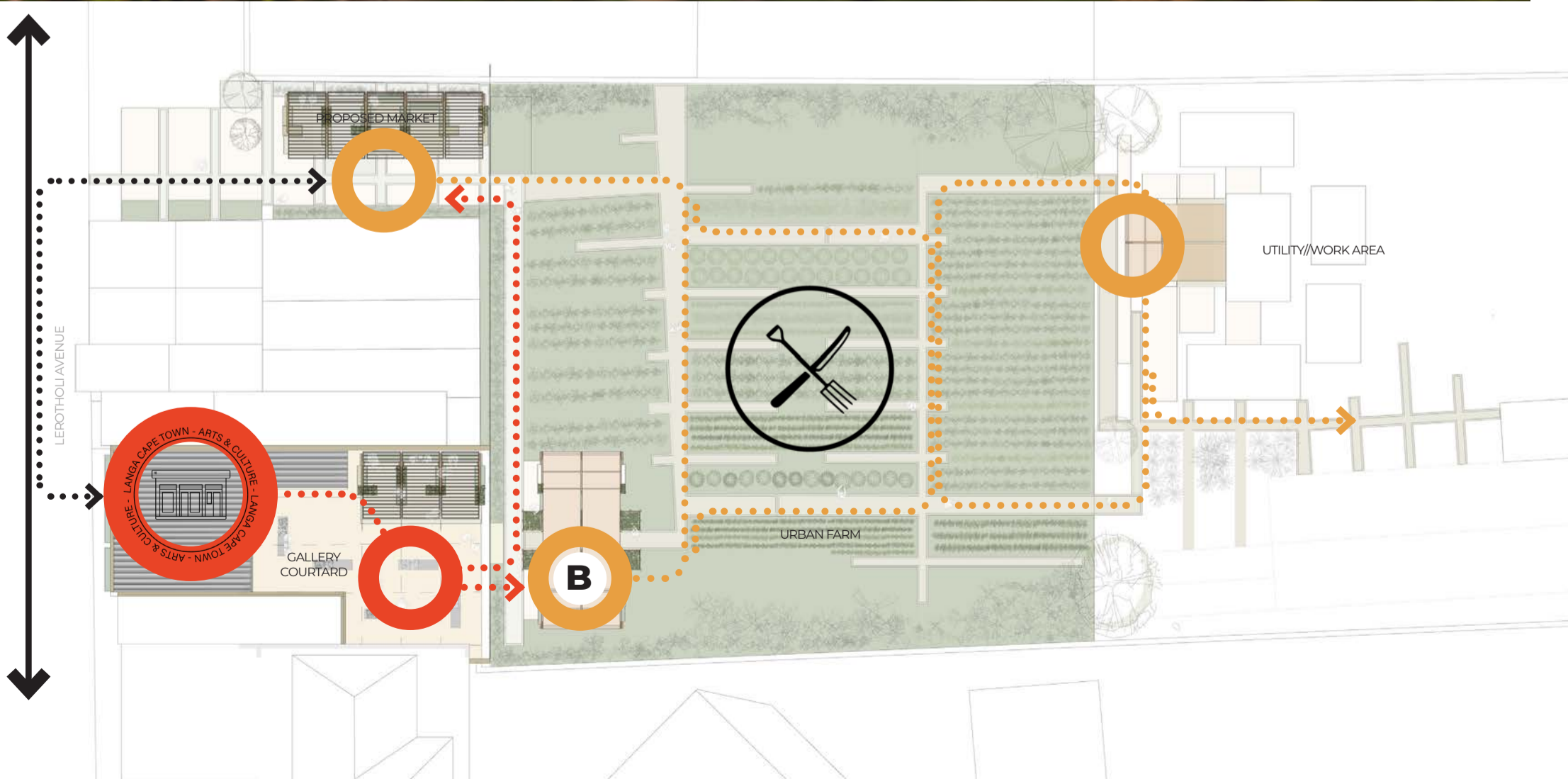
SECTION B-B
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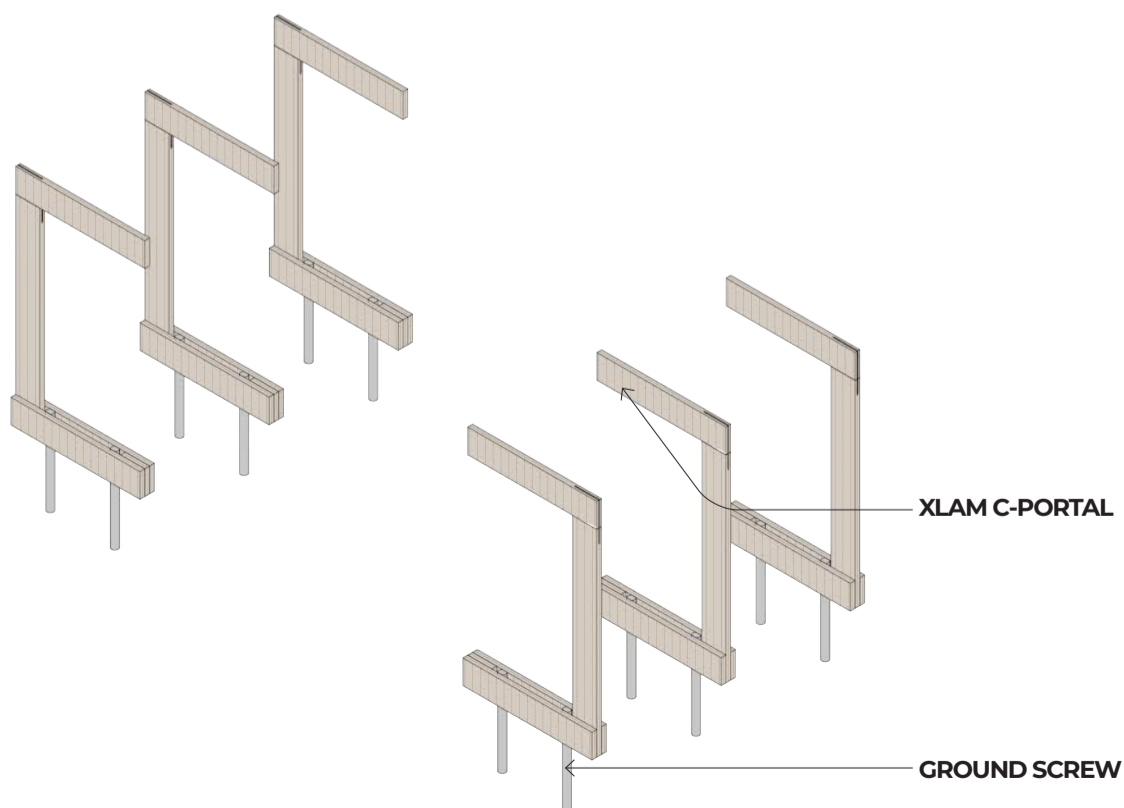
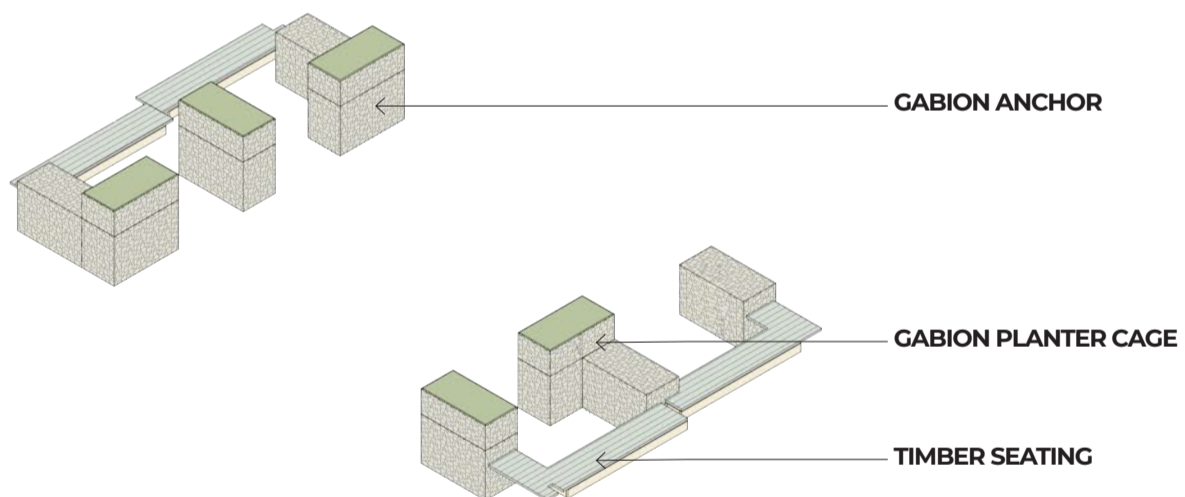
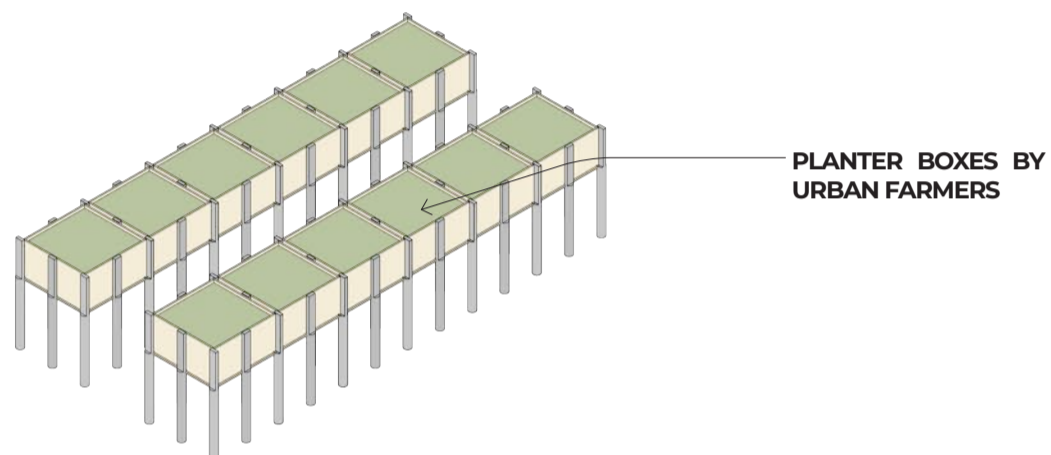
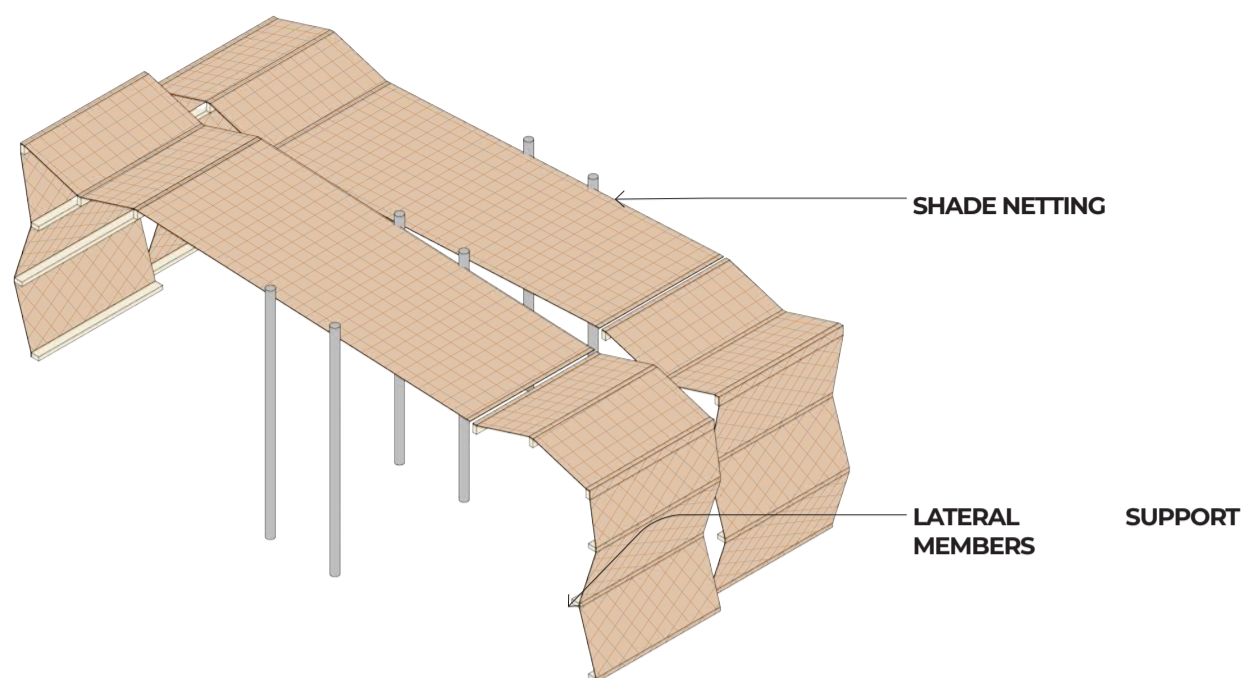


FLOOR PLAN
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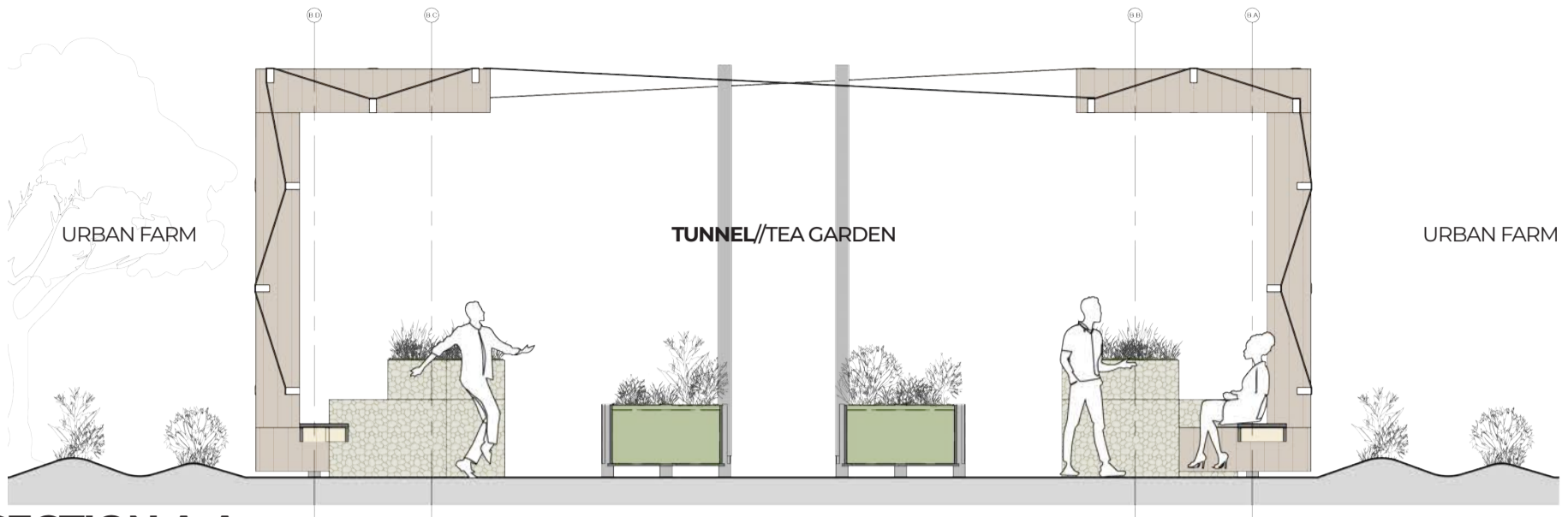


TUNNEL/TEA GARDEN
PARCEL B.

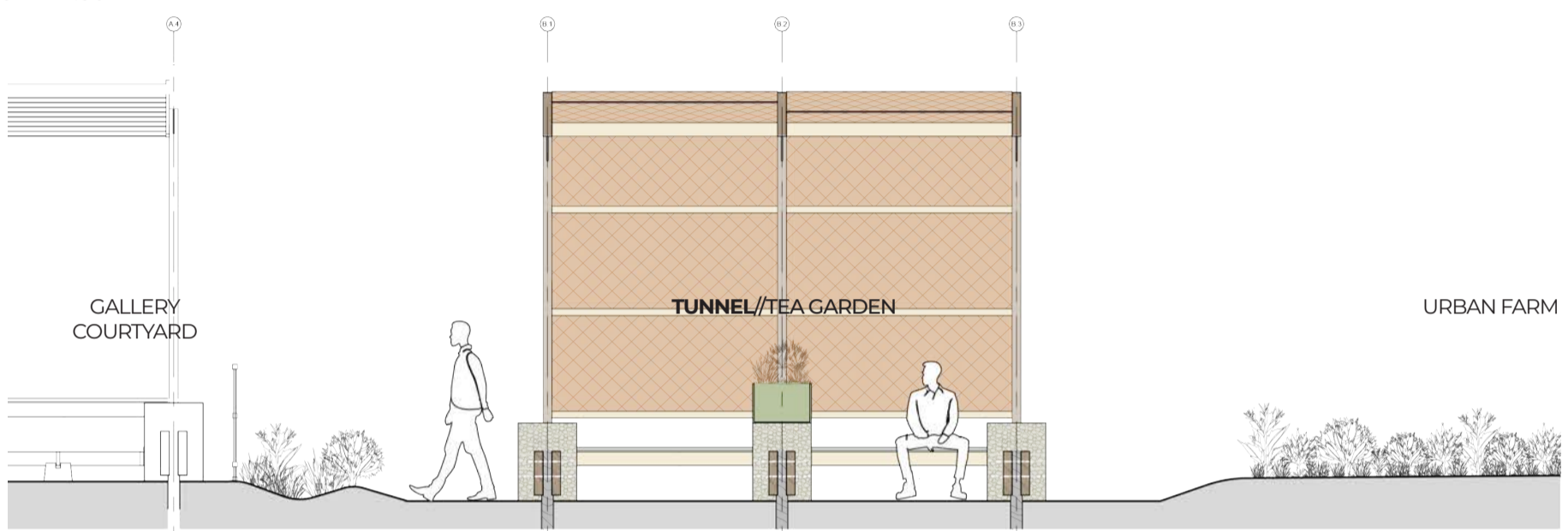




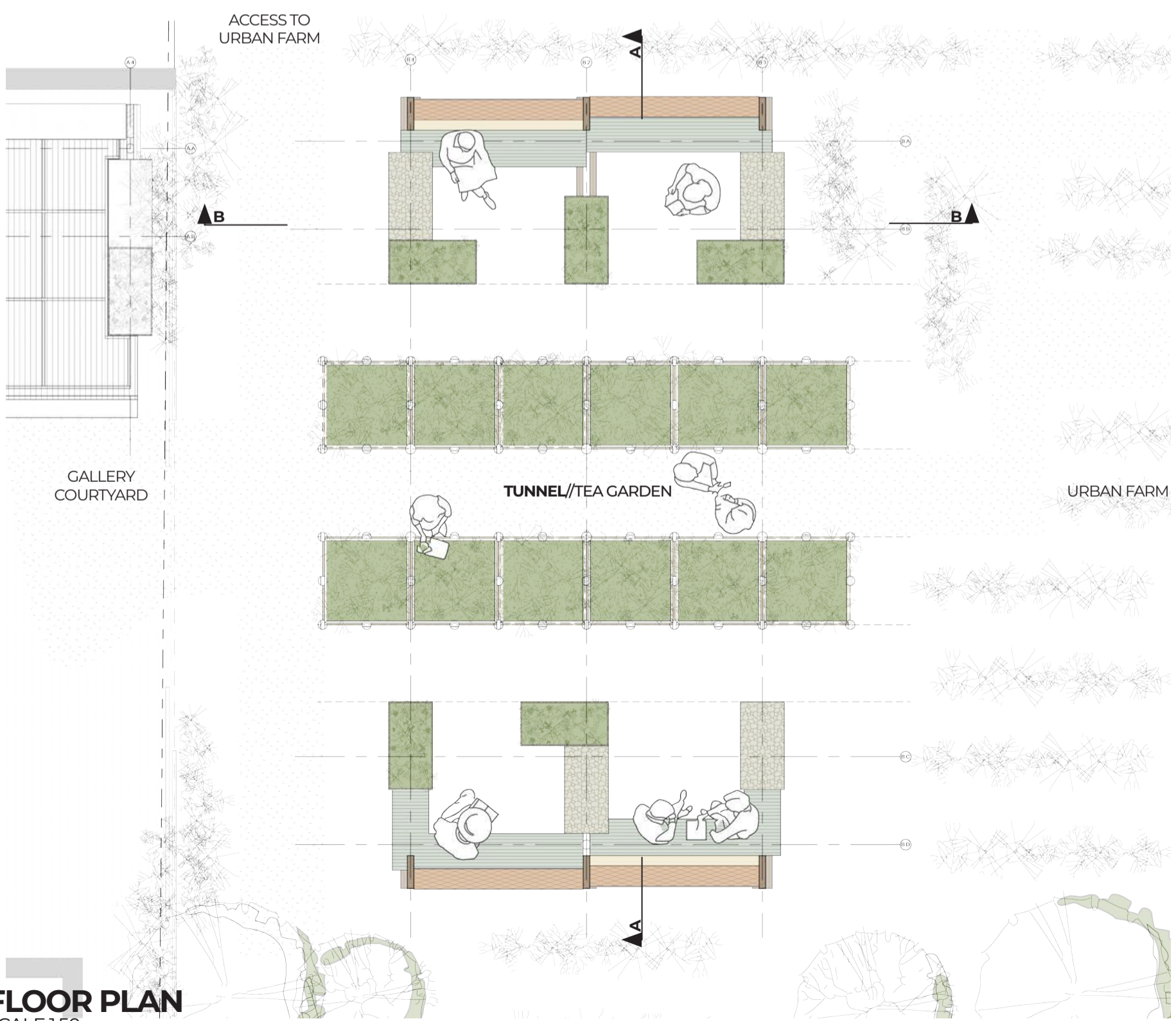
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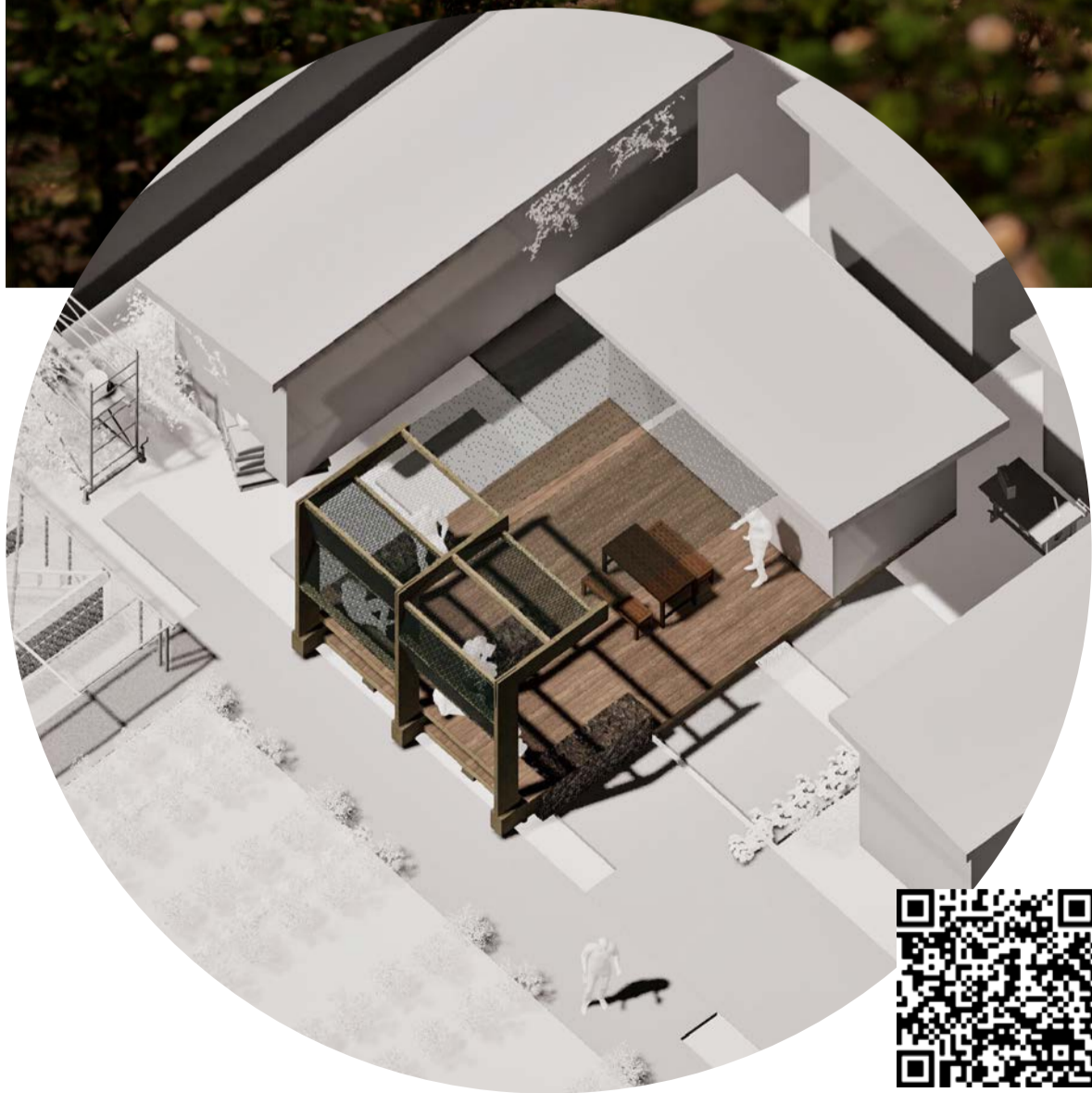
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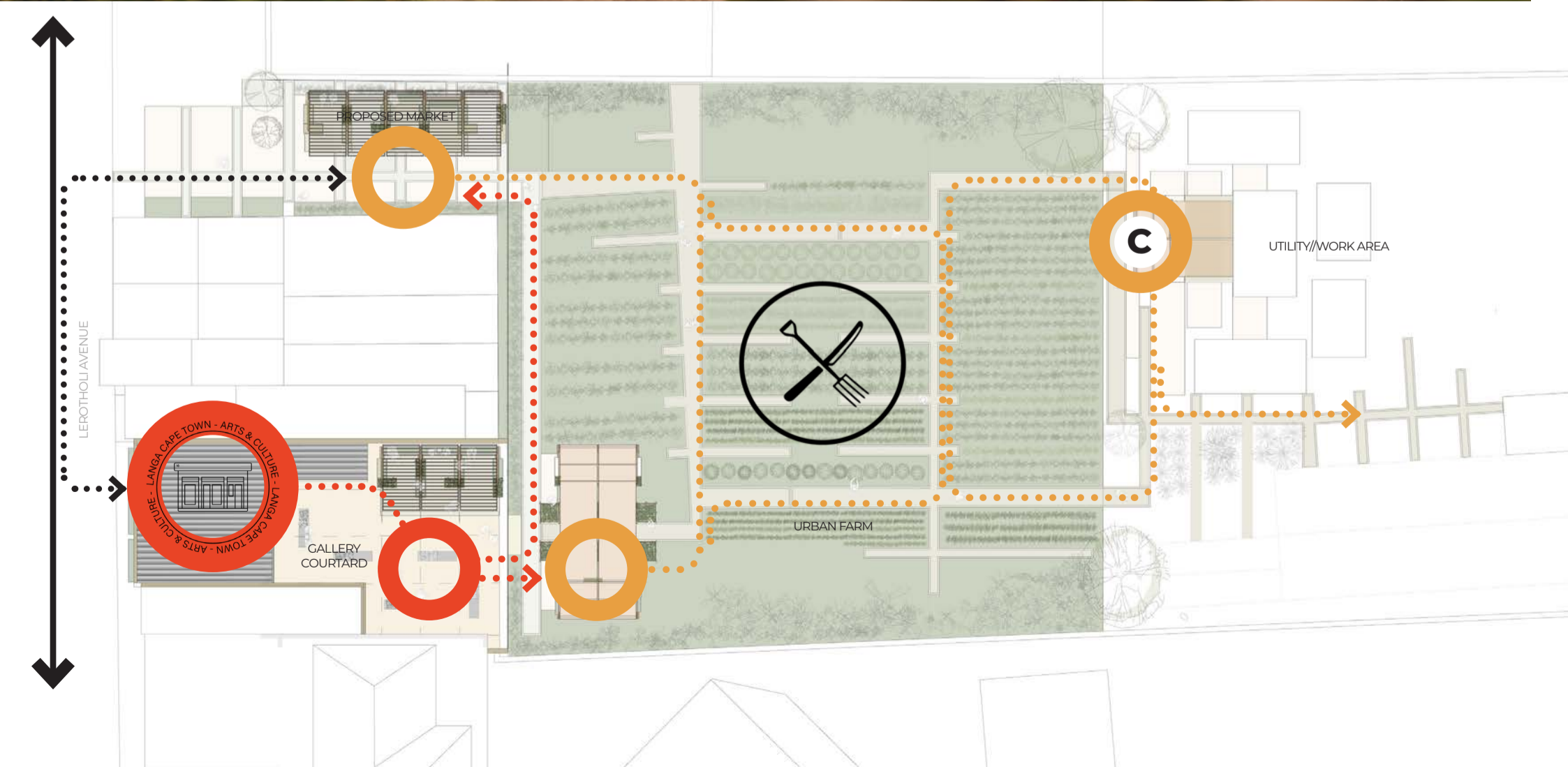
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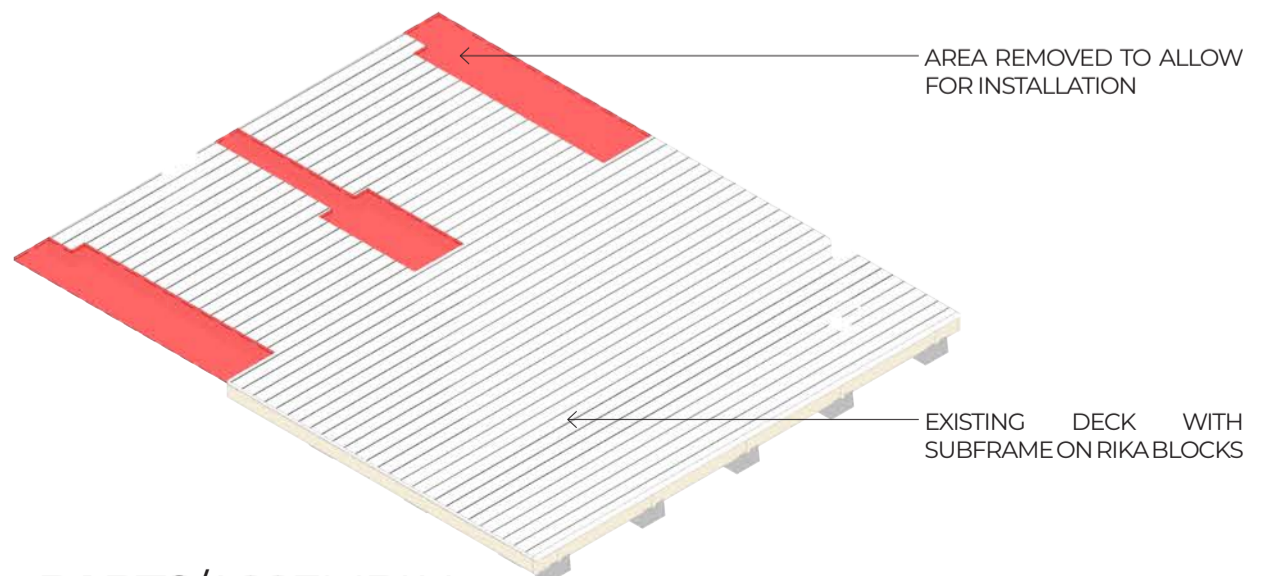
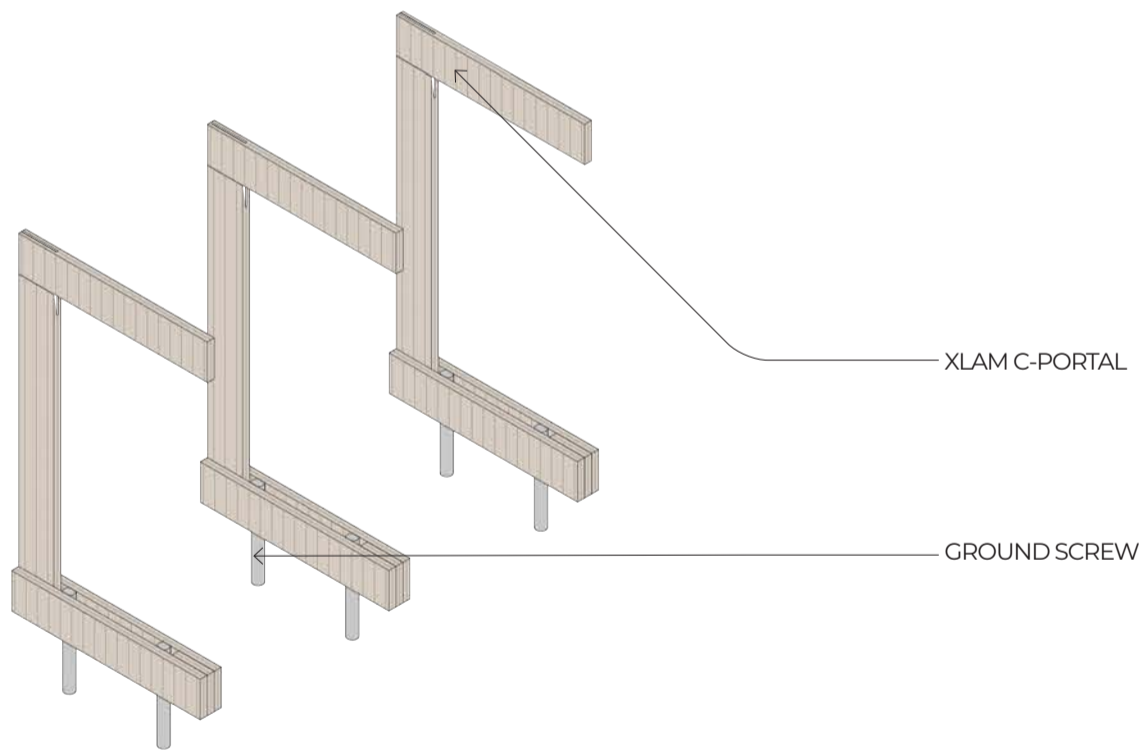
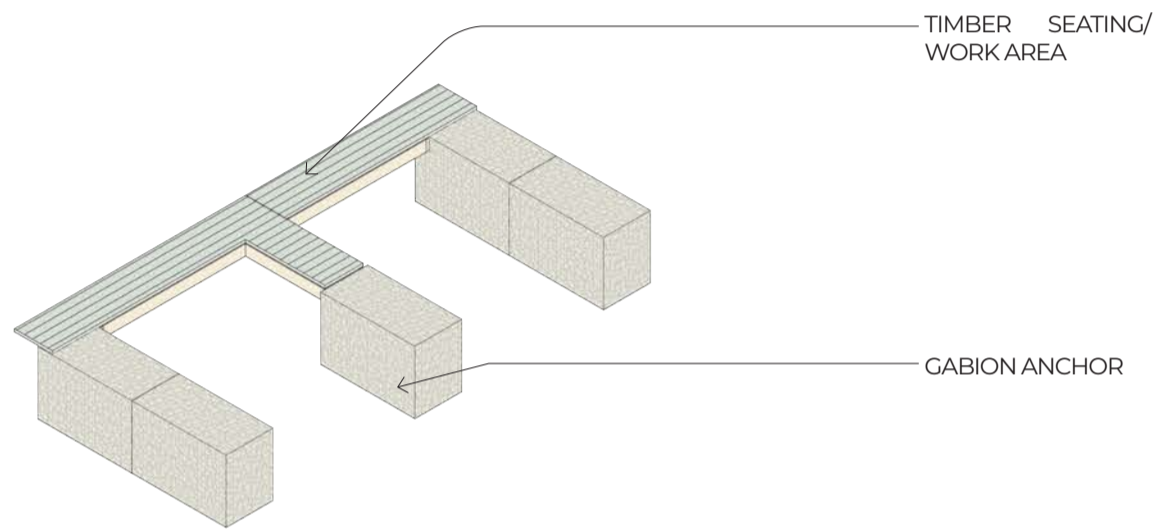
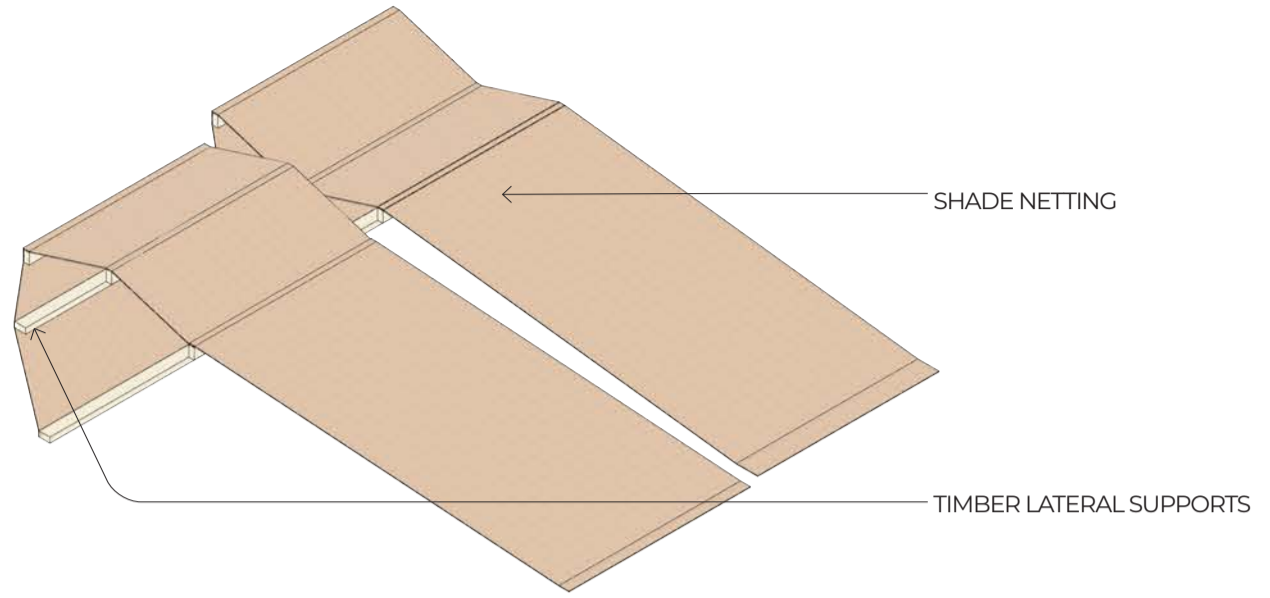


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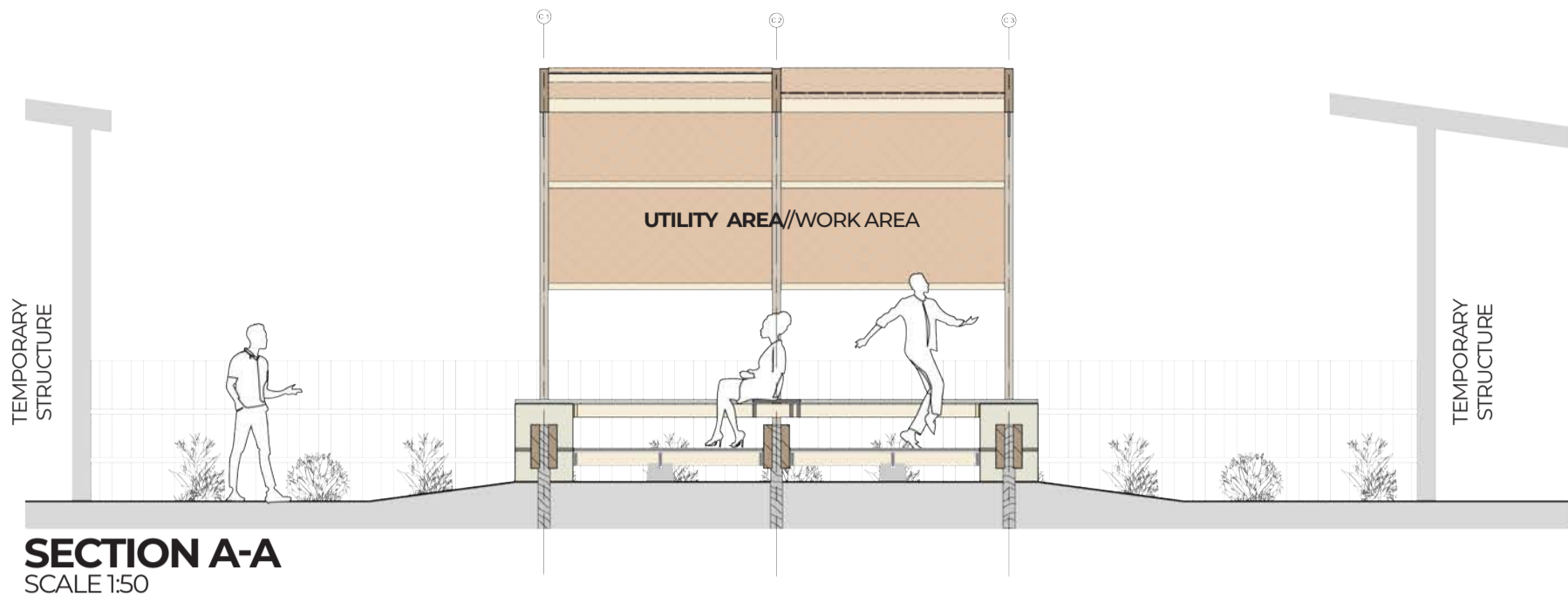


UTILITY/WORK AREA
PARCEL C.

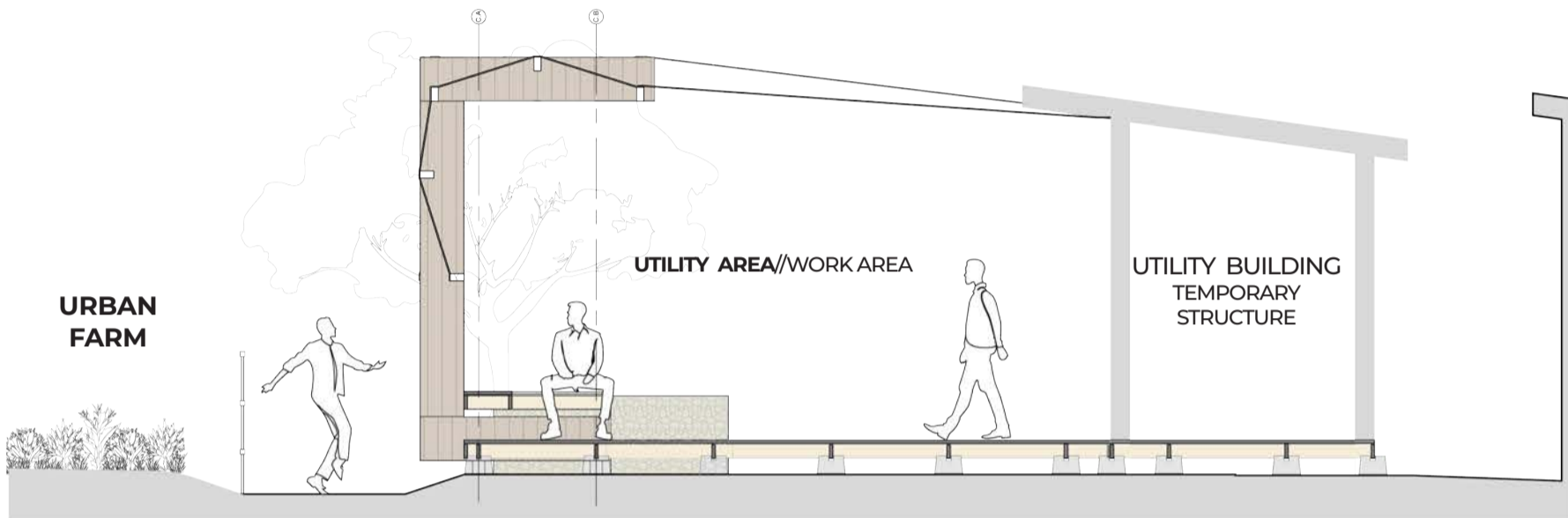




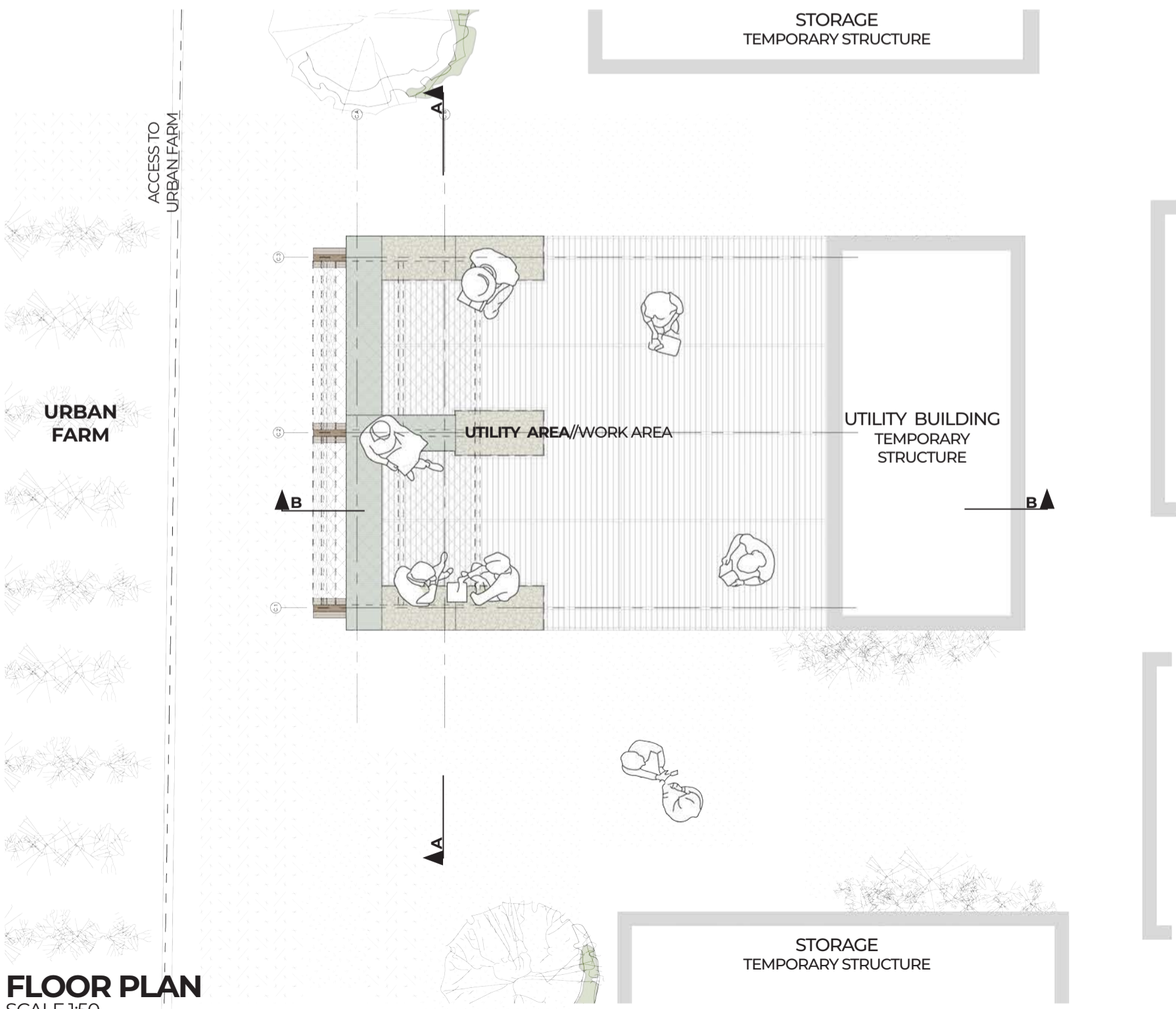
PARTS/ASSEMBLY



SECTION A-A
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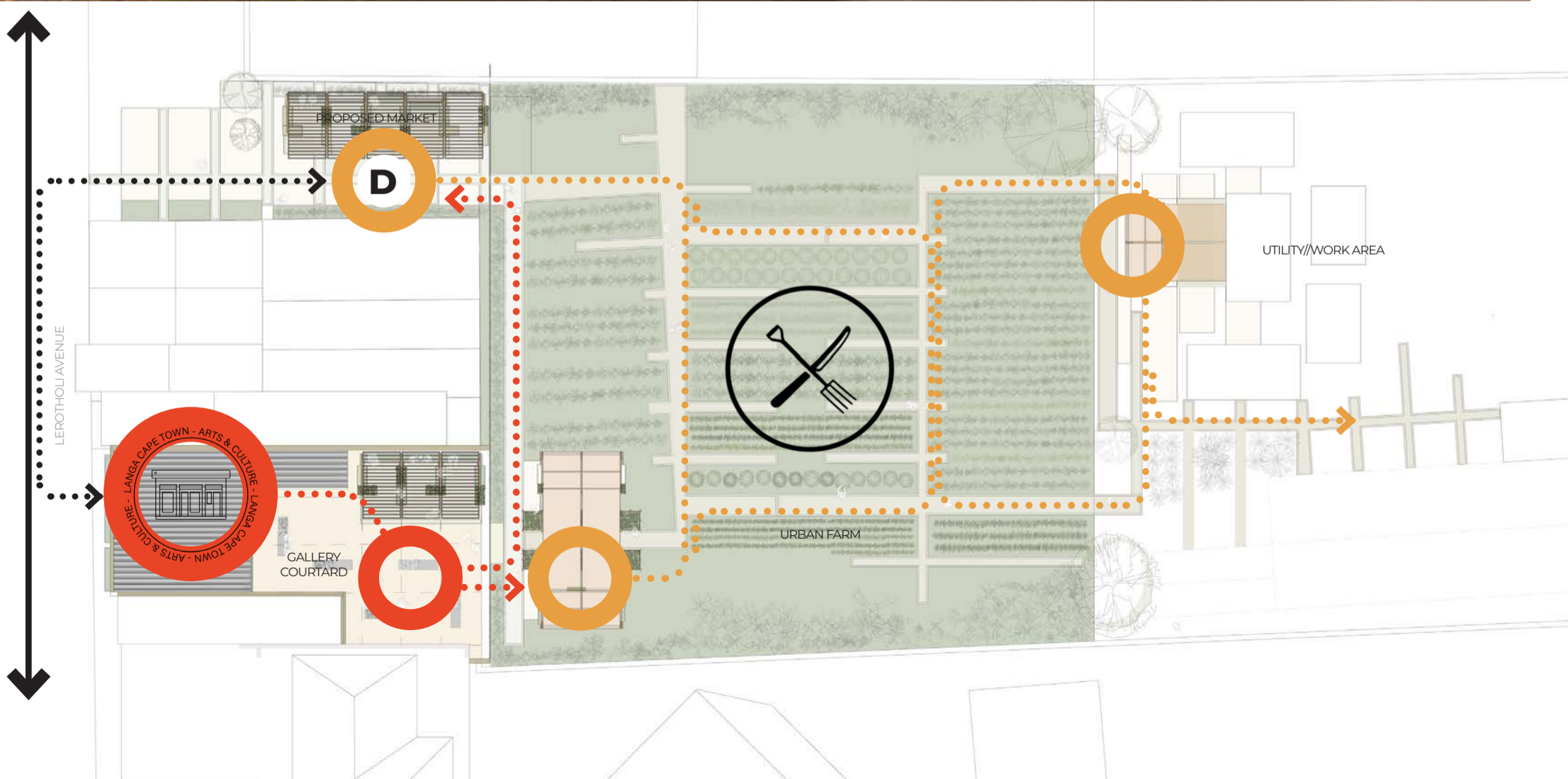
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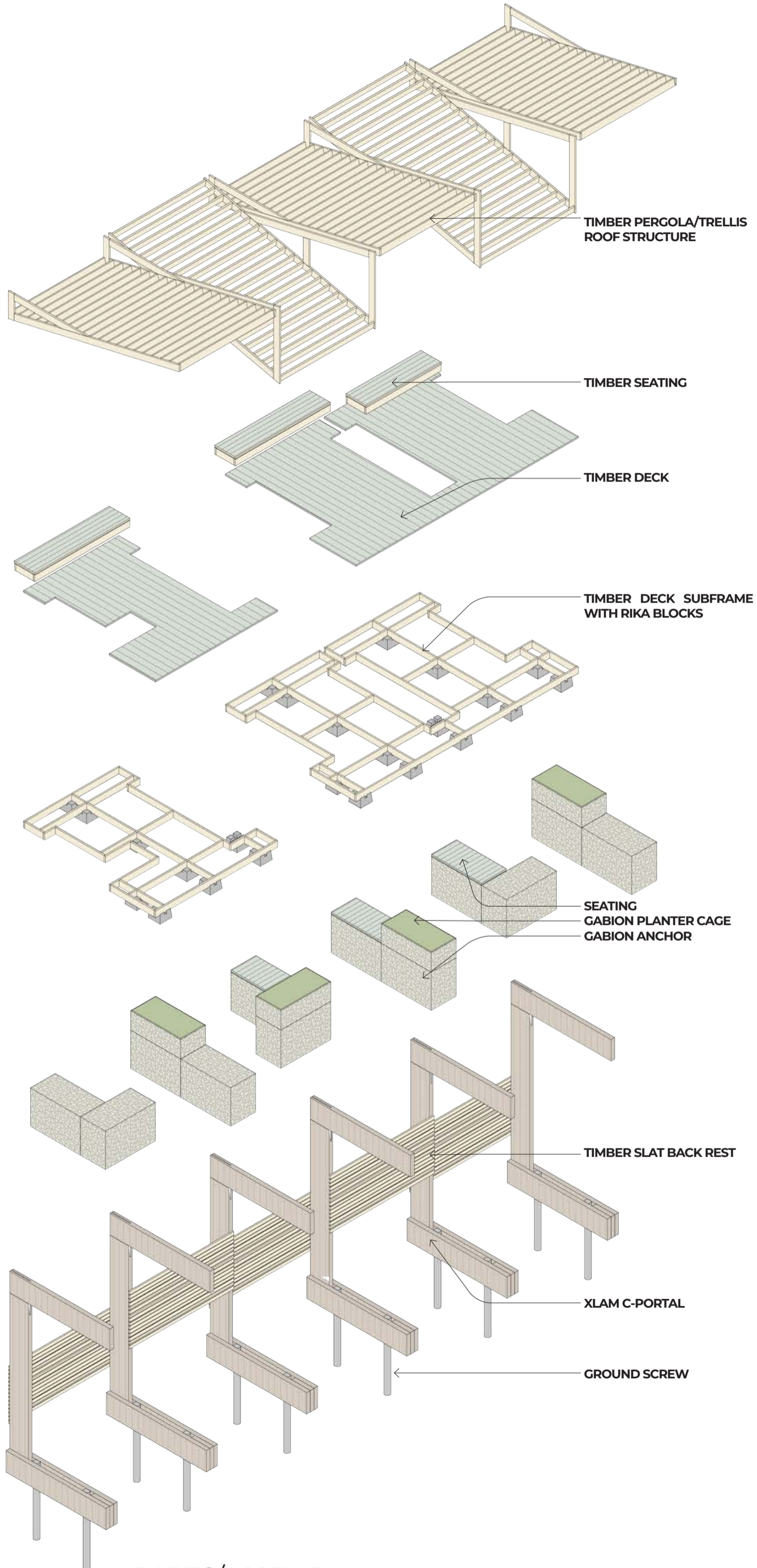


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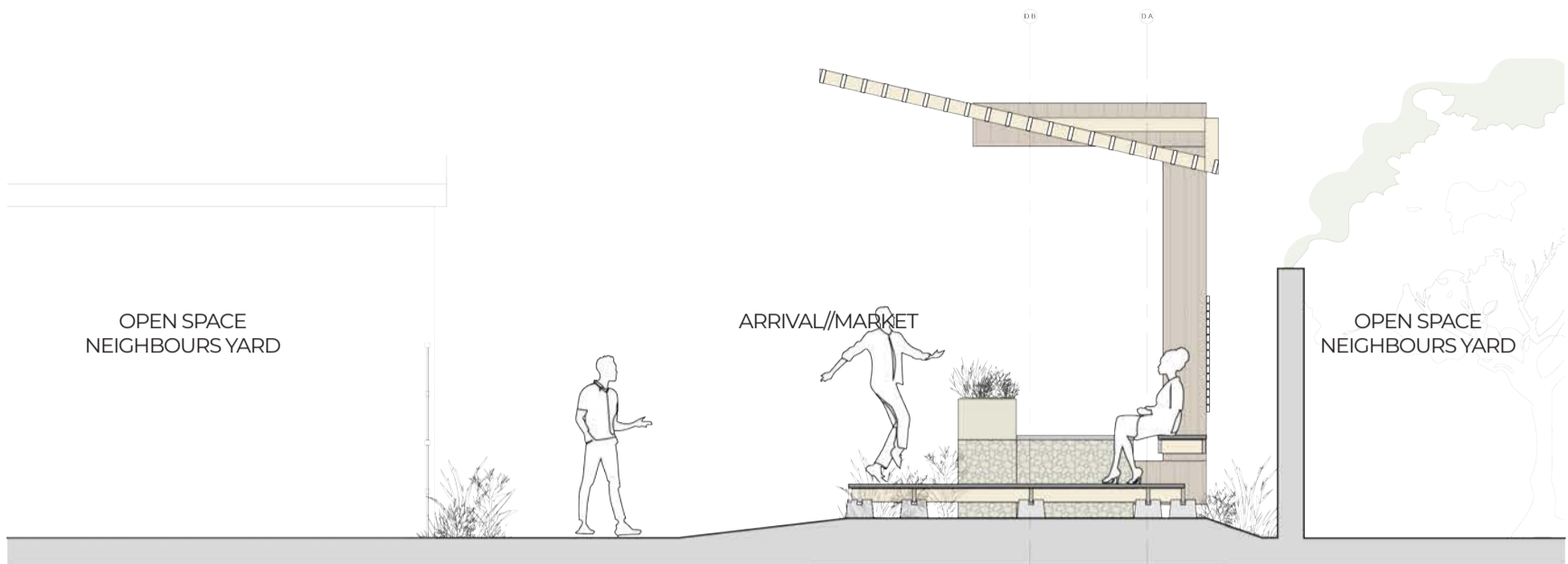


ARRIVAL/MARKET
PARCEL D.

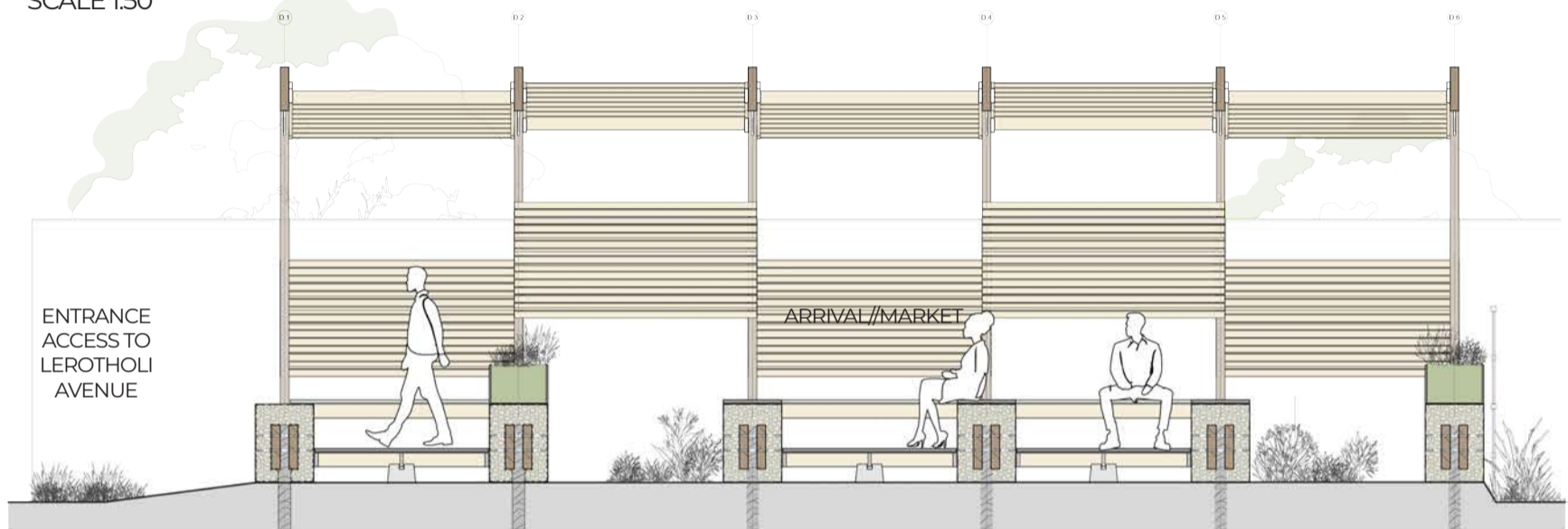




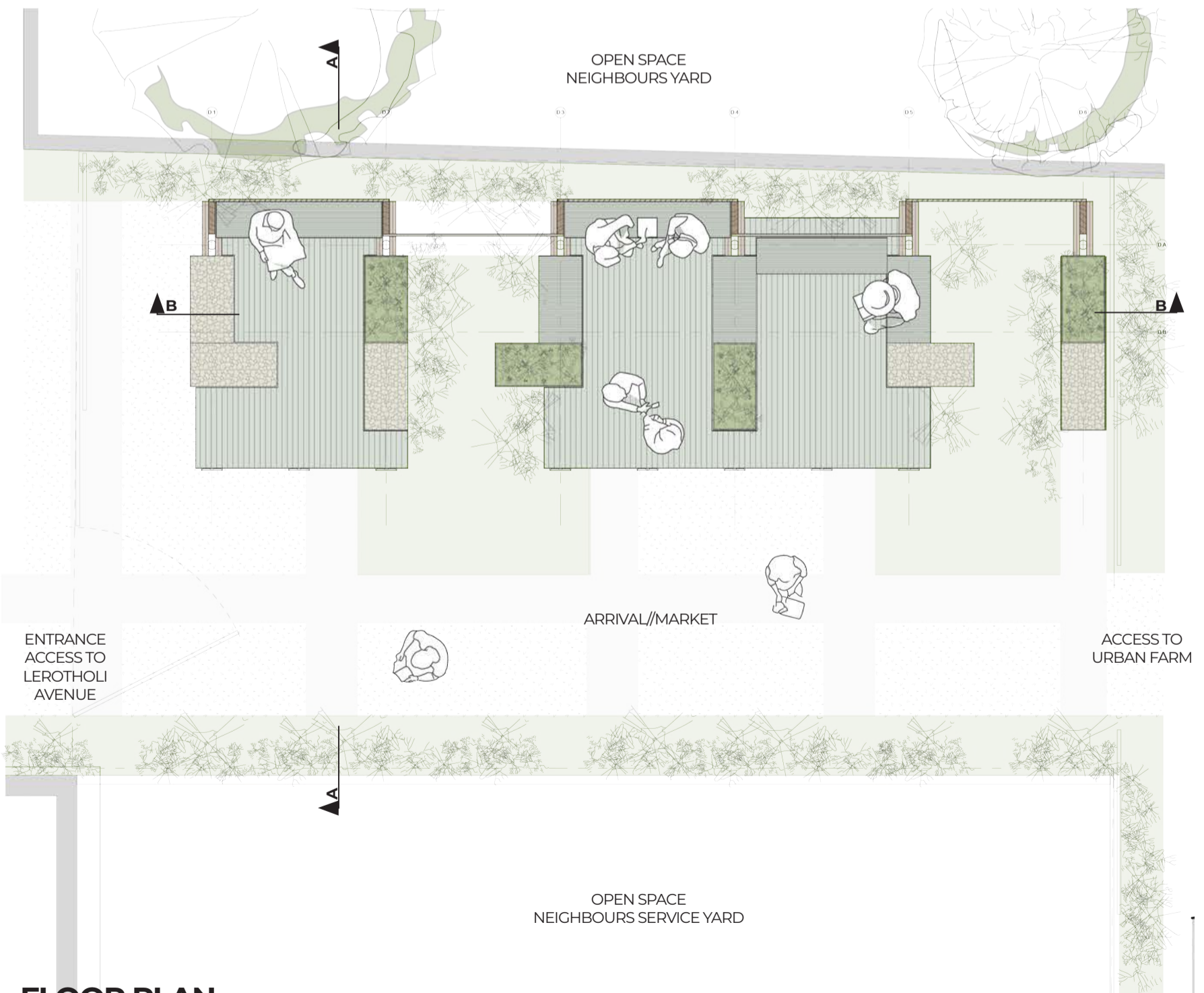
PARTS/ASSEMBLY



SECTION A-A
SCALE 1:50



SECTION B-B
SCALE 1:50



FLOOR PLAN
SCALE 1:50

PROGRESS TIMELINE



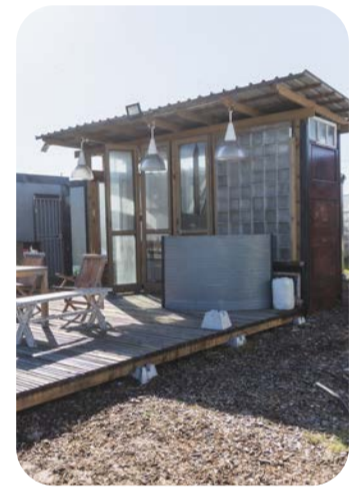
29th of March 2025
SITE VISIT



DESIGN DEVELOPMENT



15th of May 2025
**COMMUNITY
APPROVAL**



APPROVAL



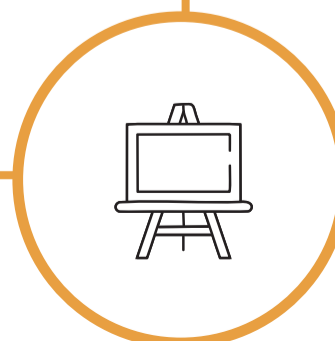
DESIGN DEVELOPMENT

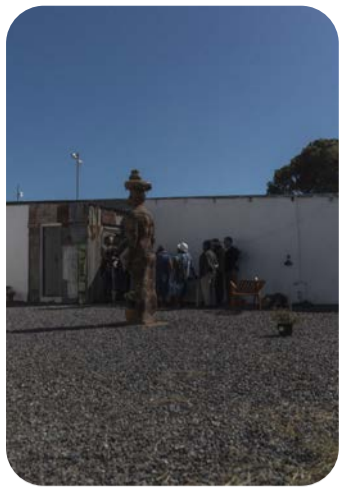


26th-29th of May 2025
**RISE AFRICA
2025**

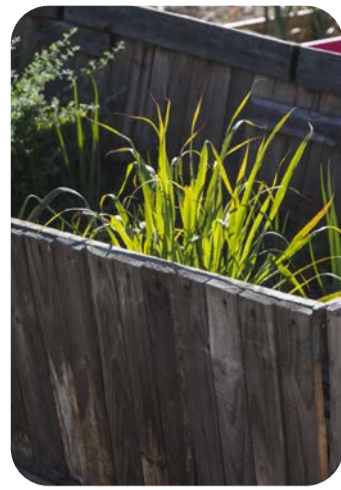


VALUE ENGINEERING

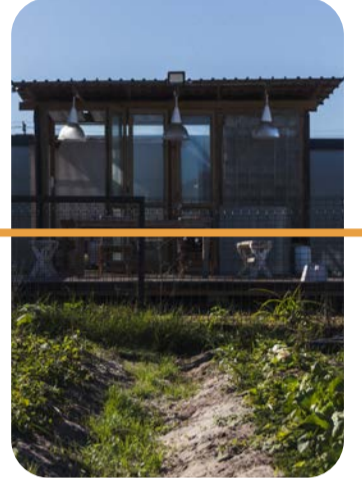




3rd of April 2025
**COMMUNITY
ENGAGEMENT**



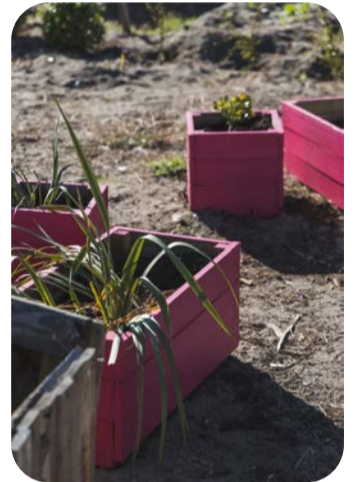
**DESIGN
DEVELOPMENT**



5th of May 2025
**COMMUNITY
ENGAGEMENT**



DESIGN DEVELOPMENT



The strategy to 'build' within the budget limitations. We start with Parcel B (Tunnel/Tea Garden) as Phase 1.
The rationale, beyond budgetary constraints, Phase 1 is a 'test' for the processes that are required for the construction/installation of the portals & gabions as alternatives to the common-place/sensical construction with concrete and bricks. We document these, we learn from them, we apply in the next Phase.

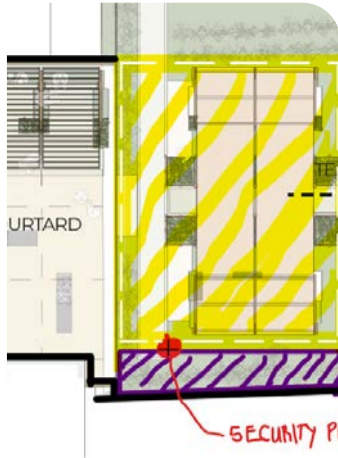
June 2025
**CONSTRUCTION
PARCEL A & B
(PHASE 1)**

Following the outcome of the Phase 1: Parcel B, we will start with a start-completion relay for Parcel A and C. These two because, in consultation with the community, the agreement is that should we not secure additional funding and or make sufficient savings, the plan is 'scrap' Parcel D.

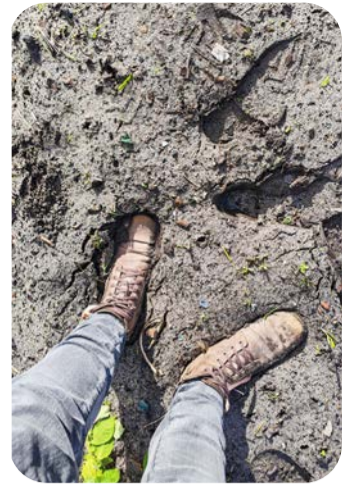
GAME PLAN



18th of June 2025
SITE SETTING
OUT



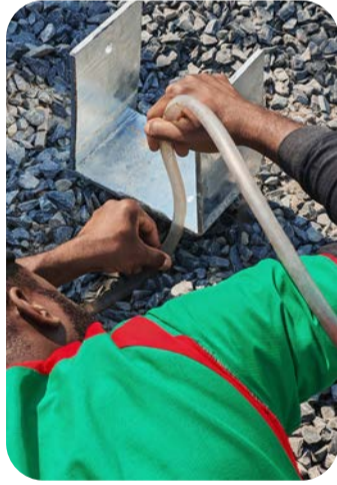
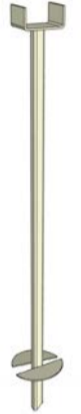
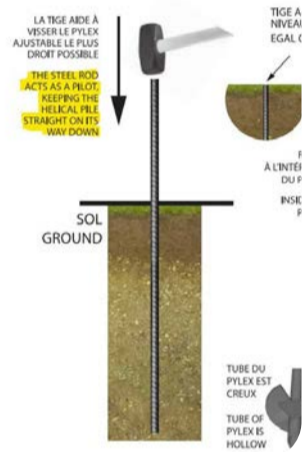
30th of June 2025
HEAVY RAINS
SITE FLOODED



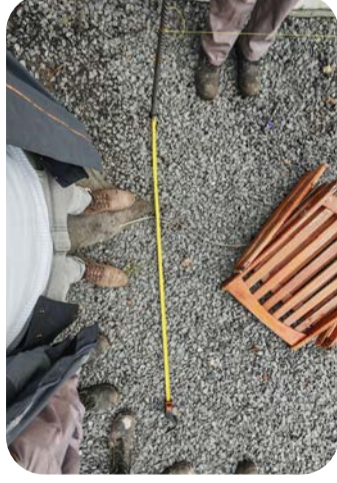
SITE CONDITIONS



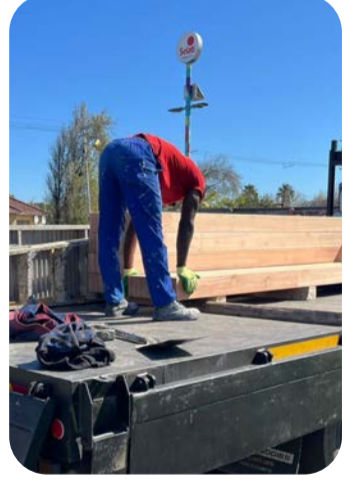
22nd of August 2025
GROUND
SCREW
TESTING &
INSTALLATION
ON SITE



RESEARCH & DEVELOPMENT



1st of September 2025
MATERIALS
DELIVERED TO
SITE



INSTALLATION





30th of June 2025
**SAMPLE
REVIEW &
APPROVAL**

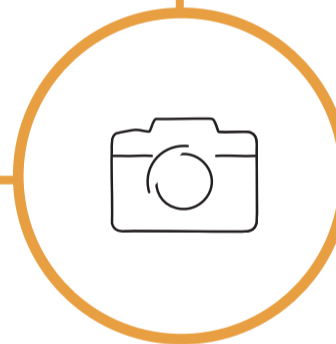


16th of July 2025
**GROUND
SCREWS
RESEARCH &
DEVELOPMENT**



2nd of July 2025
**SITE
CONDITIONS
FLOODED**

SAMPLE APPROVAL



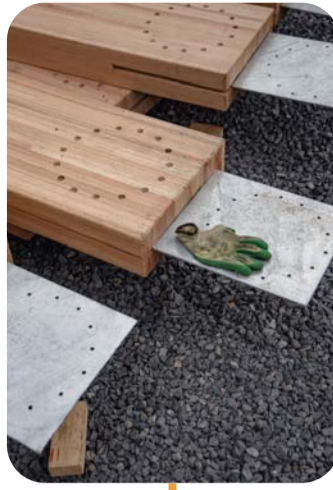
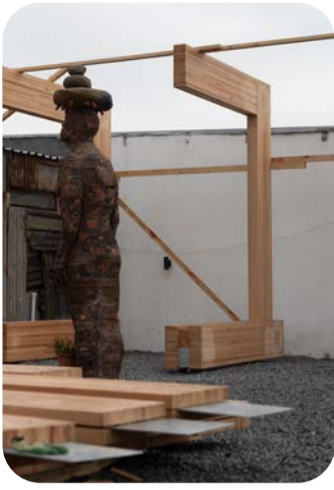
16th of July 2025
**COURTYARD
PORTAL
ASSEMBLY**



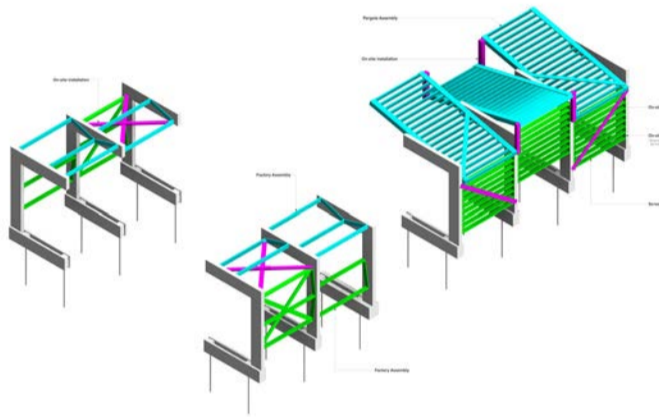
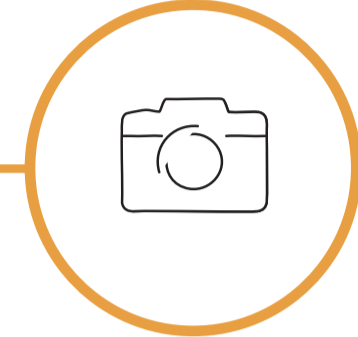
PORTAL ASSEMBLY



5th of September 2025
**COURTYARD
PORTALS
ASSEMBLY
COMPLETE**



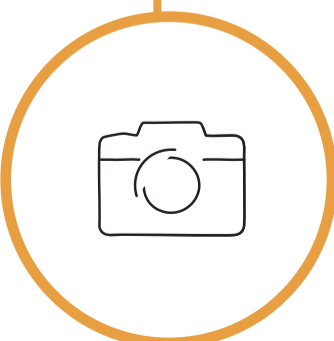
11th of September 2025
**SITE PROGRESS
& TEA GARDEN
ASSEMBLY
PROGRESS**



18th of September 2025
**BRACING
LAYOUTS
ISSUED BY
STRUCTURAL
ENGINEER**

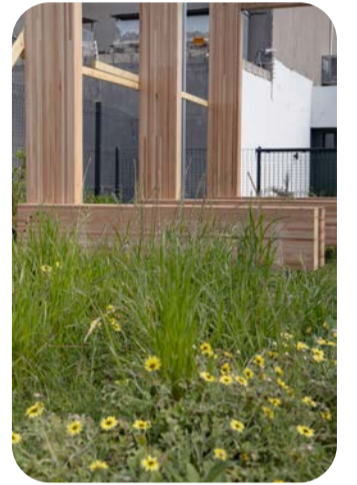


October 2025
**ROOF
STRUCTURE
GABIONS &
DECKING TO BE
INSTALLED**

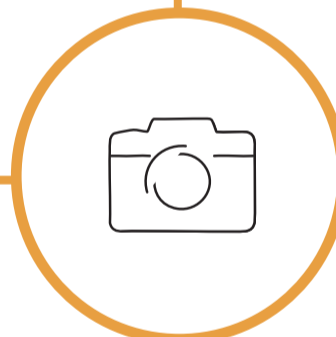




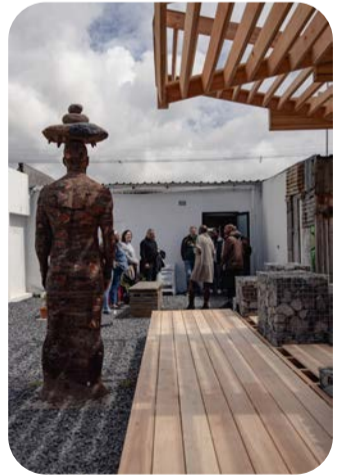
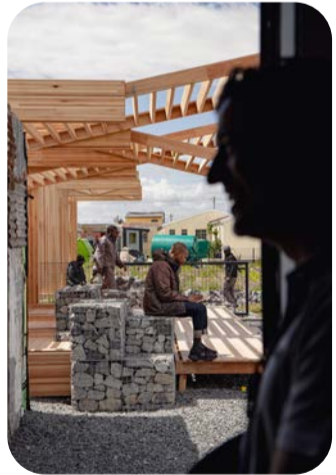
18th of September 2025
**SITE PROGRESS
PARCEL A &
B PORTAL
ASSEMBLY
COMPLETE**



COURTYARD & TEA GARDEN



6th October 2025
**REBUILT
ACTIVATION**

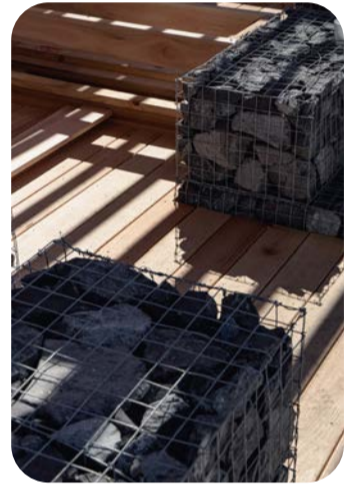


REBUILT ACTIVATION

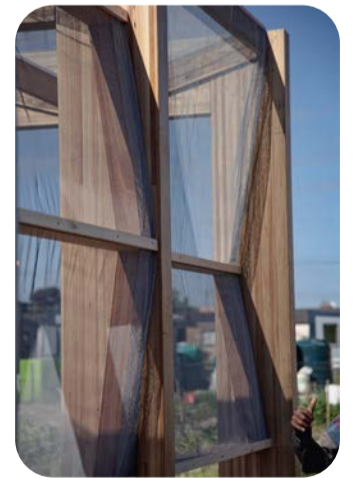
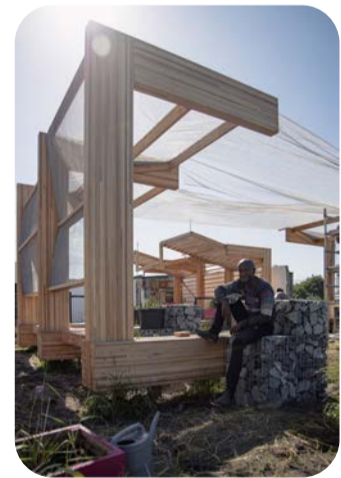




REBUILT ACTIVATION



COURTYARD & TEA GARDEN

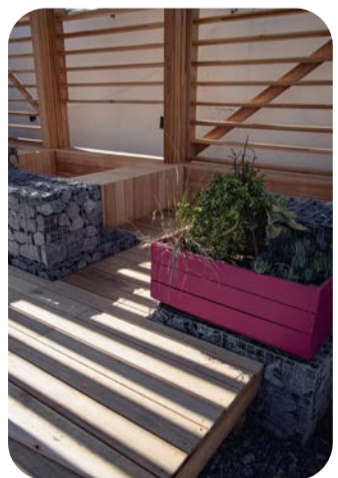
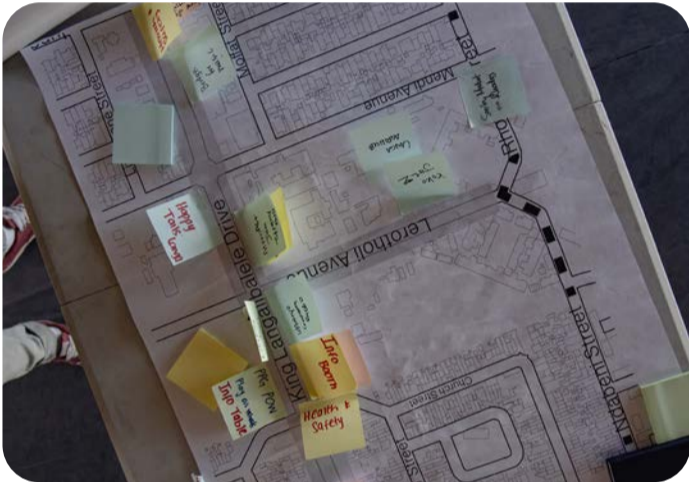




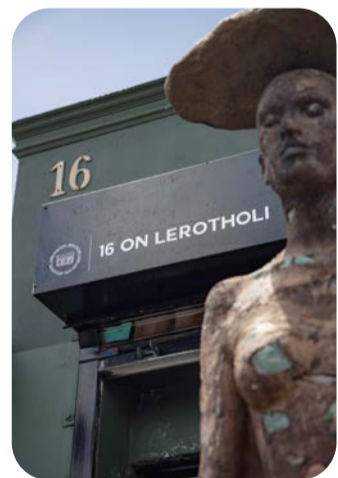
9th of October 2025
**OPEN STREETS
ORGANISERS
MEETING**



9th of October 2025
**PORTION B
GABION & DECK
INSTALLATION**



26th October 2025
**REBUILT
ACTIVATION &
OPEN STREETS
LANGA EVENT**

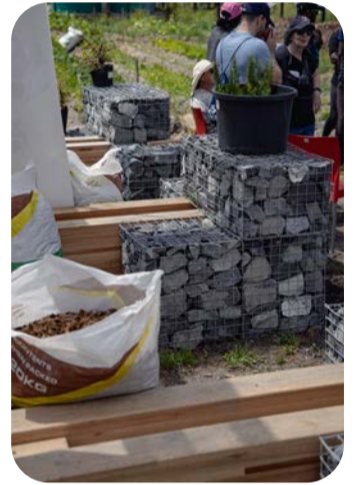
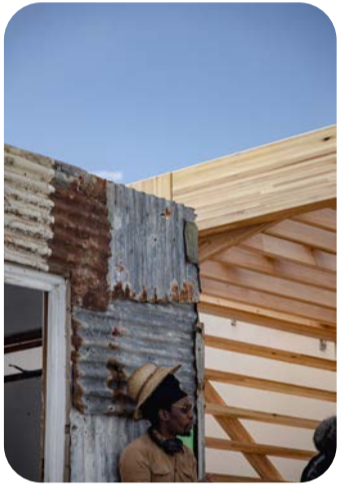


PREPARING FOR OPEN STREETS LANGA





OPEN STREETS LANGA



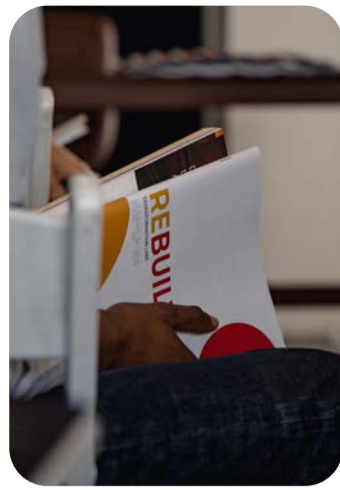
17th November 2025
**REBUILT ROAD
MAP LAUNCH**

REBUILT ACTIVATION & COMMUNITY



Immediate Outcomes and Next Steps
Agreement in principle to use the Demonstrator as an ongoing convening and testing site. Commitment to identify near-term pilot opportunities and priority regulatory bottlenecks for joint follow-up.

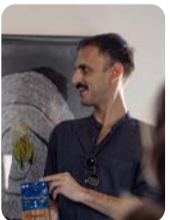
REBUILT ROAD MAP LAUNCH



REBUILT ACTIVATION



COMMUNITY ENGAGEMENT



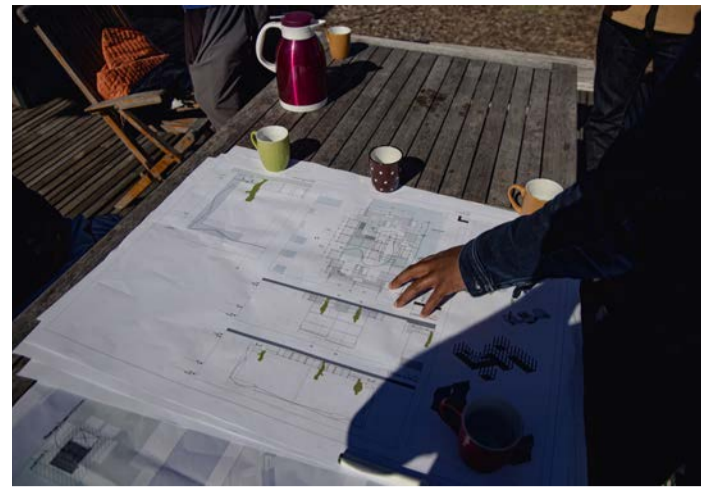




MONTAGE

COLLECTIVE MOMENTS

COMMUNITY ENGAGEMENT + WORKSHOP
DEMONSTRATOR PRESENTATION
SITE VISITS

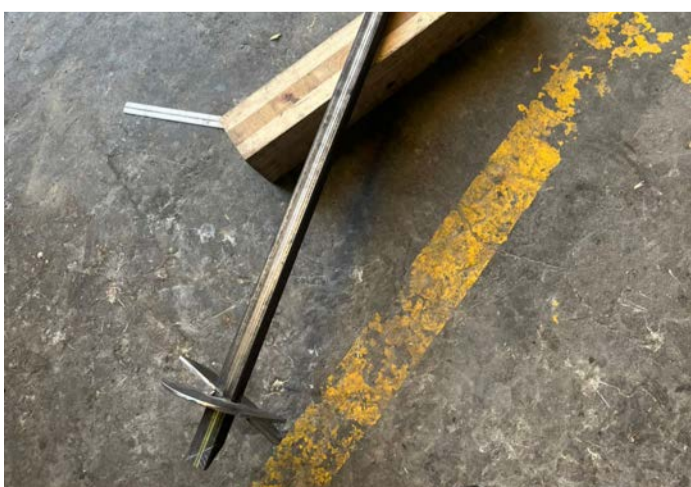
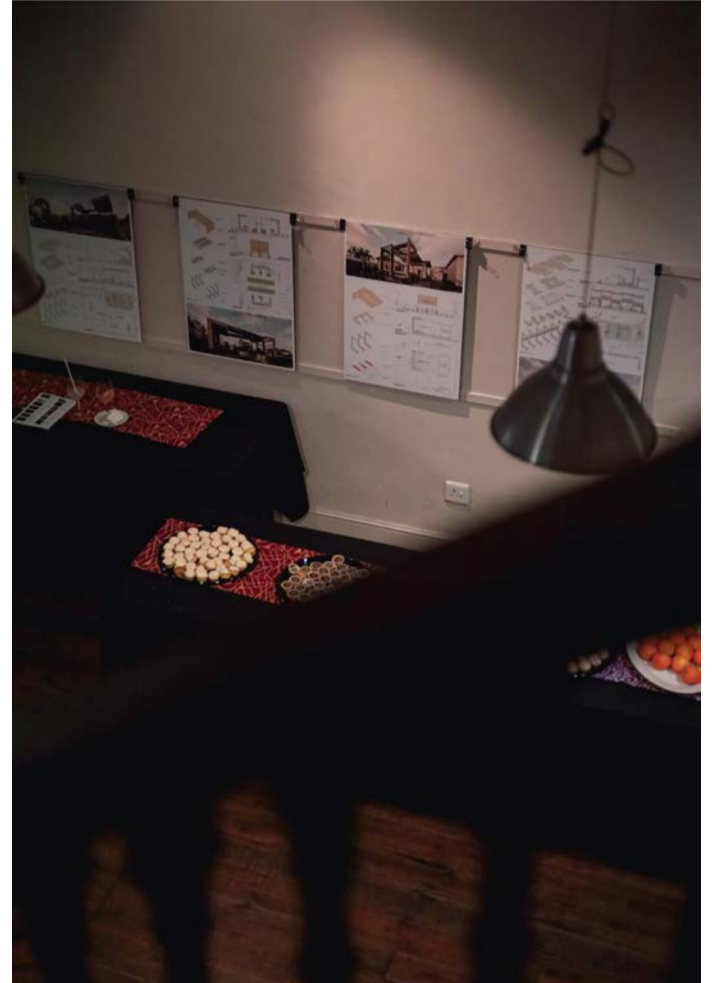




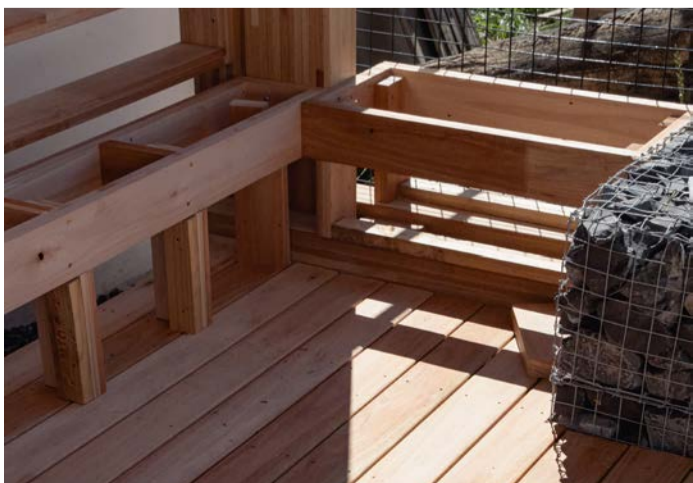
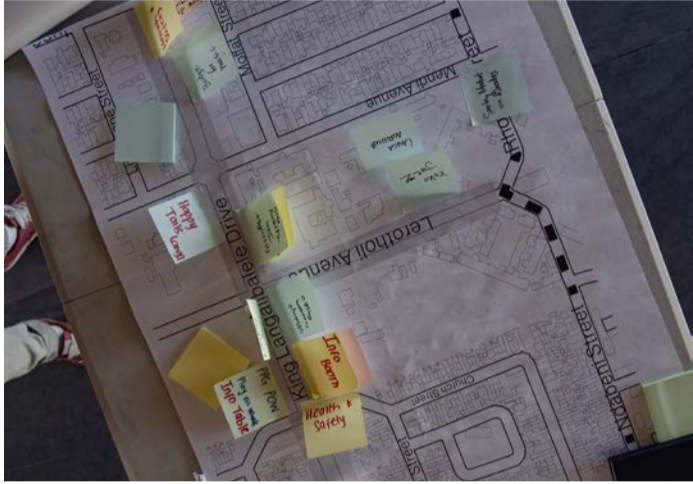
MONTAGE

COLLECTIVE MOMENTS

RISE AFRICA EXPO
FLOODED SITE + GROUND SCREWS
SAMPLE APPROVAL
PORTAL ASSEMBLY
SITE VISITS









MONTAGE COLLECTIVE MOMENTS

REBUILT ACTIVATION
COURTYARD & TEA GARDEN ASSEMBLY
GABIIONS & DECK INSTALLATION
OPEN STREETS ORGANISERS WORKSHOP







MONTAGE

COLLECTIVE MOMENTS

REBUILT ACTIVATION &
LANGA OPEN STREETS EVENT

PHOTO CREDIT: SANDISWA TSHEFU



