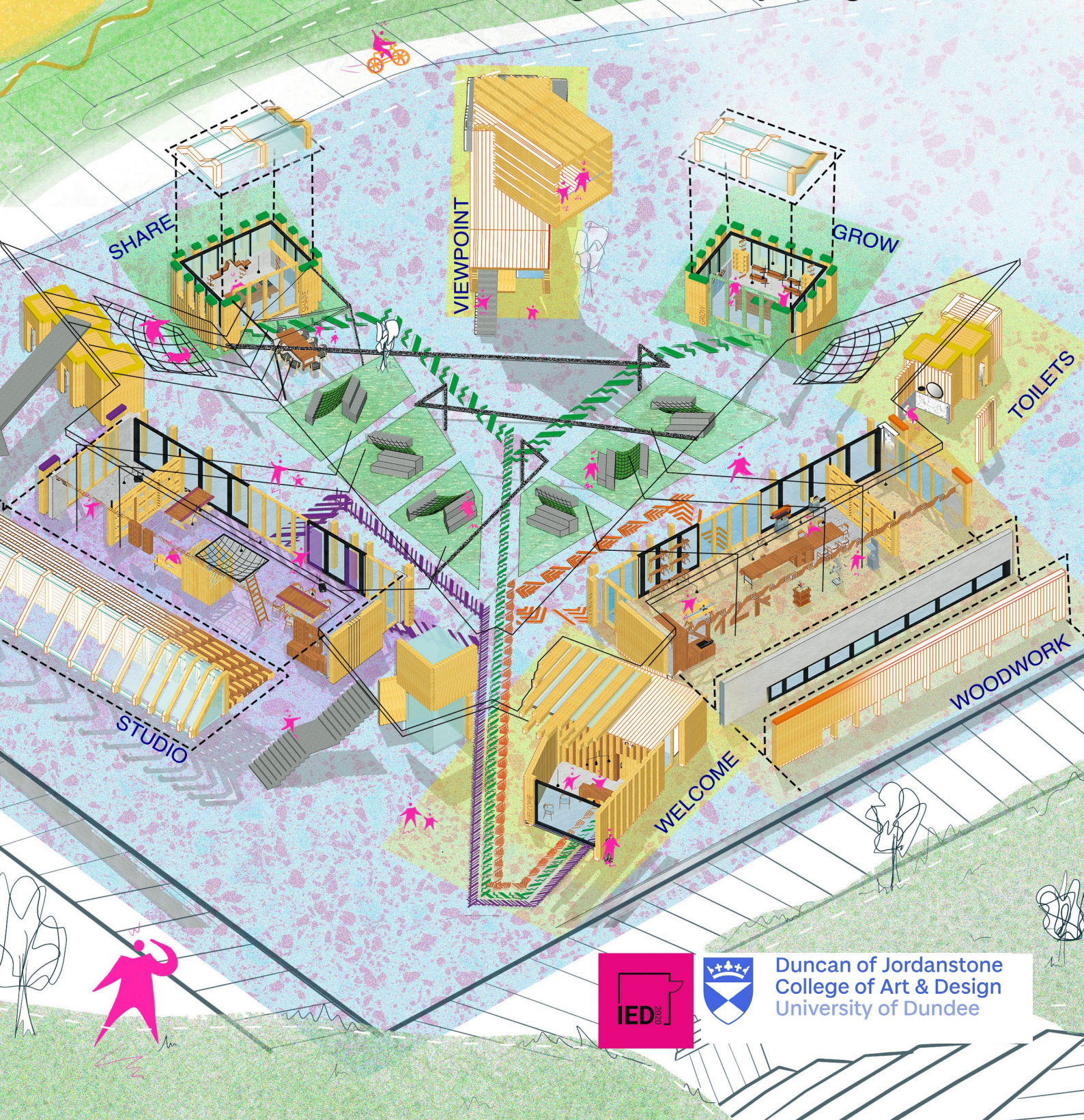


Rebecca Hackett. Interior & Environmental Design. Social Digital.
Duncan of Jordanstone College of Art and Design, Scotland.

5.2020

KIN

Holistic hands on skill exchange hub for young adults.



Duncan of Jordanstone
College of Art & Design
University of Dundee

Kinetic Interchange Network

Holistic hands on skill exchange hub for young adults.

Responding to a decreasing number of hours spent outdoors, KIN (Kinetic Interchange Network) is a social skill exchange hub that encourages young adults to get outdoors and become active in their learning. This new-build project near Dundee's waterfront is aimed mainly towards users aged 12-22. Through it's workshops and drop-ins the hub focuses on developing transferable life skills in three 'zones'; practicality, creativity, and nurture.

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CONTENTS

01: Meet The Designer.

p1

02: The Brief.

p3

03: Research.

p5

04: Inspiration.

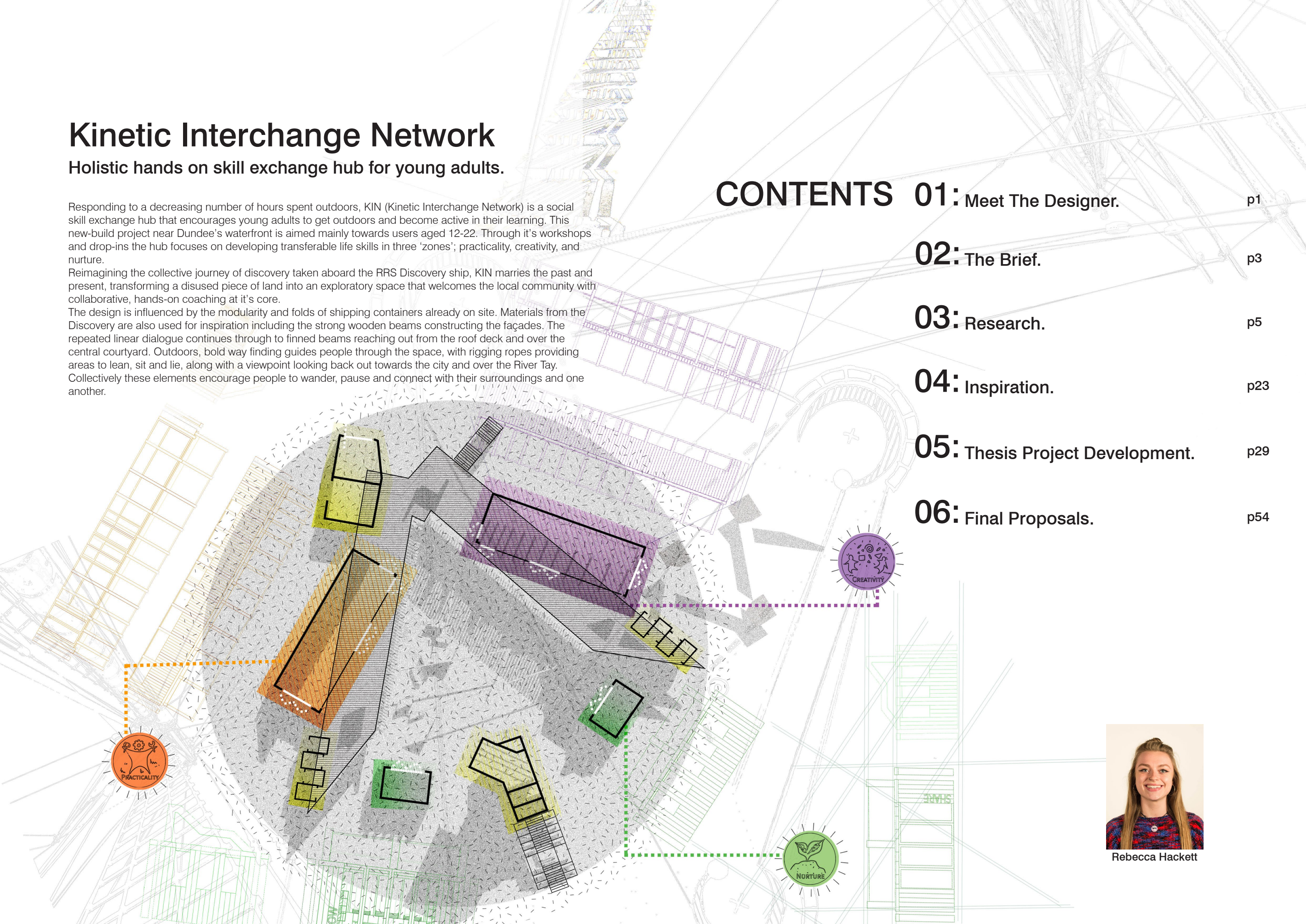
p23

05: Thesis Project Development.

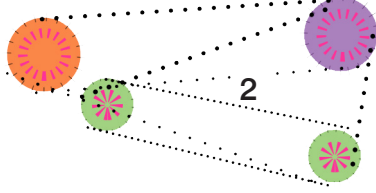
p29

06: Final Proposals.

p54



Rebecca Hackett



01: Meet The Designer



Hi there, I'm Rebecca Jane Hackett, an Interior and Environmental Design graduate from the University of Dundee, Duncan of Jordanstone College of Art and Design. Today I am mostly inspired by the stories of people and the personal impact a space can have on somebody. Main interests within my work are collaboration and hands-on making to engage communities in constructed playful and inspiring environments.

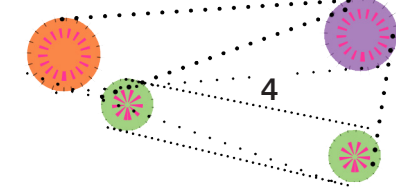
My creative education began in college with a fast paced Portfolio Preparation programme that introduced me to abstract thinking, and gave a taster from many different disciplines from fine art and design. Here I was also introduced to life drawing which would later become fundamental in my understanding of people in space.

After a year in college I came to DJCAD where I developed and fine tuned my skills within the Interior and Environmental Design department. In third year I spent a semester studying abroad as part of the erasmus programme at HKU in Utrecht, Netherlands. During this I was able to identify and work on my strengths and weaknesses, whilst learning a new language and experiencing new cultures. Throughout the course I have learned the significance of applying narrative and unique personality within spaces, and the impact the story you tell can have on others. As a spatial designer there comes a responsibility of being aware of the effects of design and space on people, therefore it is vital to get out and get to know the communities or people we are designing for, something that I have developed on throughout my final year.

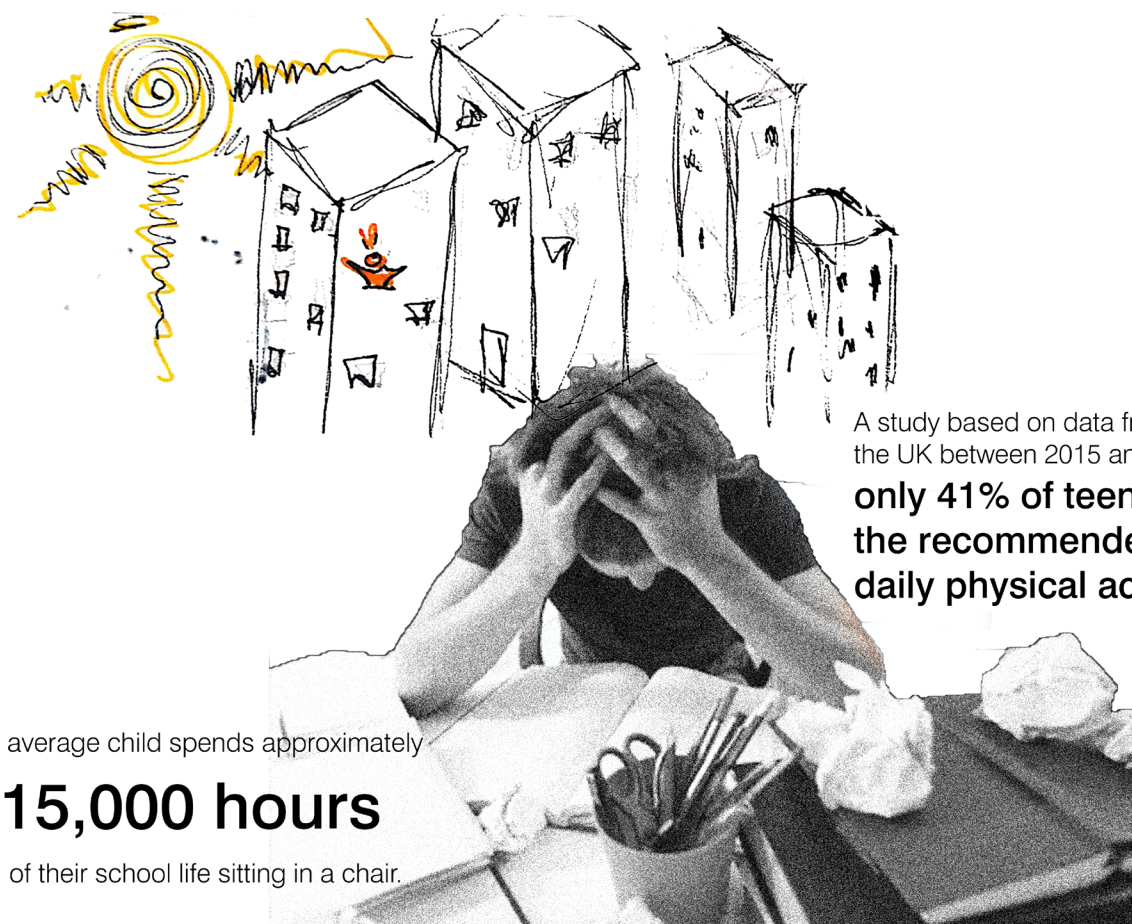
When working though a project I prefer to mainly use physical sketching, modelling, and experimenting using digital software to edit and refine towards the end. Sketchbook work helps me experiment with and develop my ideas as a base foundation, followed by 3d building to develop, manipulate and play with previously 2d ideas. To convey my final design ideas digitally, I use a variety of programmes. Building and materializing structures on software such as SketchUp, AutoCAD and 3DsMax, and editing on the Adobe Suite including Photoshop, Illustrator and InDesign.



Website - <https://rebeccajanedesigns.wixsite.com/rjhdesigns>
Instagram - <https://www.instagram.com/rebeccajanedesign/>



02: The Brief



The average child spends approximately

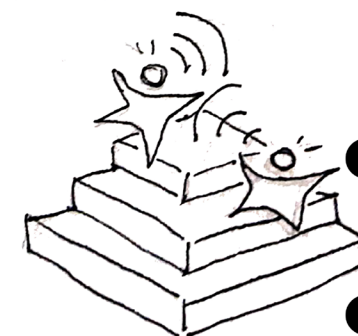
15,000 hours

of their school life sitting in a chair.

A study based on data from 14 year olds in the UK between 2015 and 2016 found that **only 41% of teenagers meet the recommended hour of daily physical activity.**

CONCERNS

- Decreasing number of hours spent active outdoors.
- Lack of stimulation within learning environments.
- Lack of creativity and collaborative learning opportunities.



- A playful hub that encourages collaboration and skill development.
- A hands-on, engaging and imaginative learning environment.

GOALS

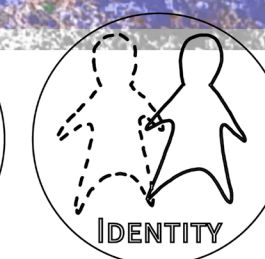
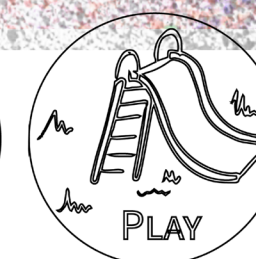
- Adaptable workspaces with a focus on getting outdoors to explore.

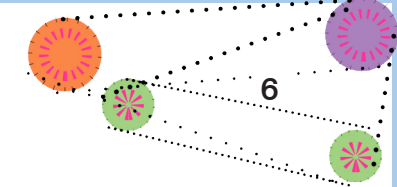


Research investigating the positive impact of learning outdoors found that **'teachers and students formed a co-learning relationship that most found to be a positive change and one that sparked creativity and collaborative learning.'**



THEMES

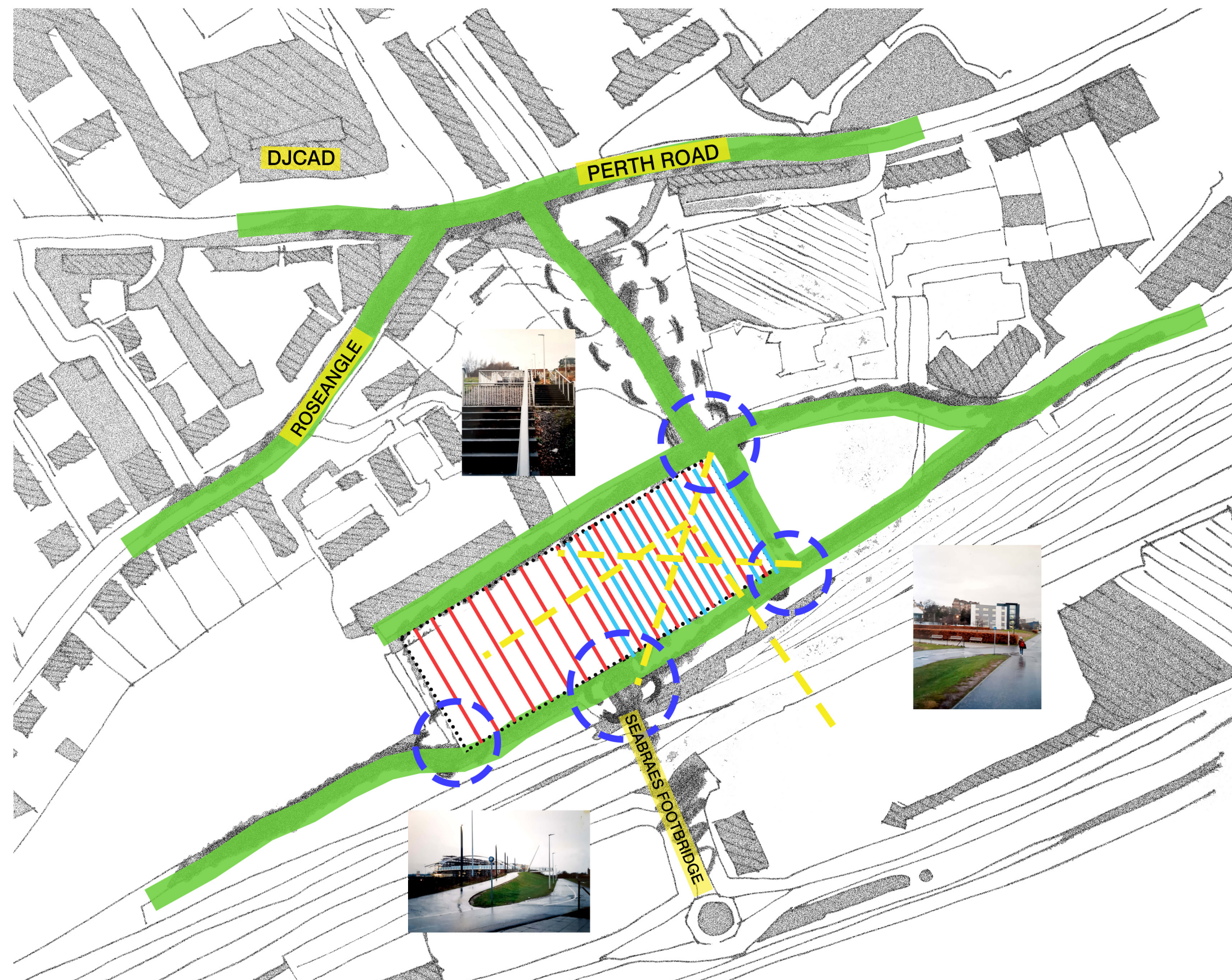
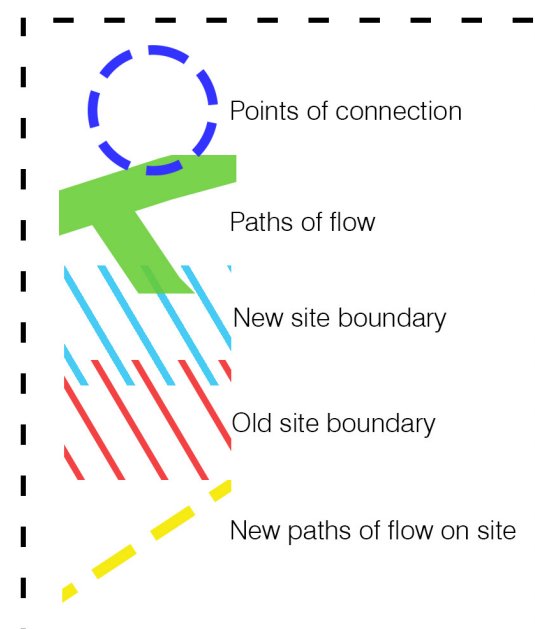




03: Research

SITE ANALYSIS

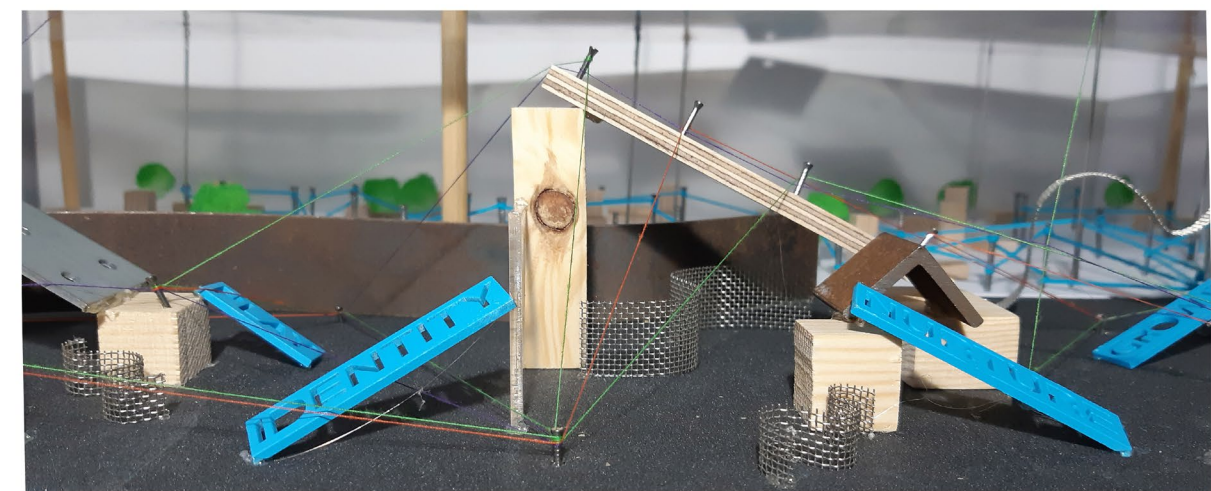
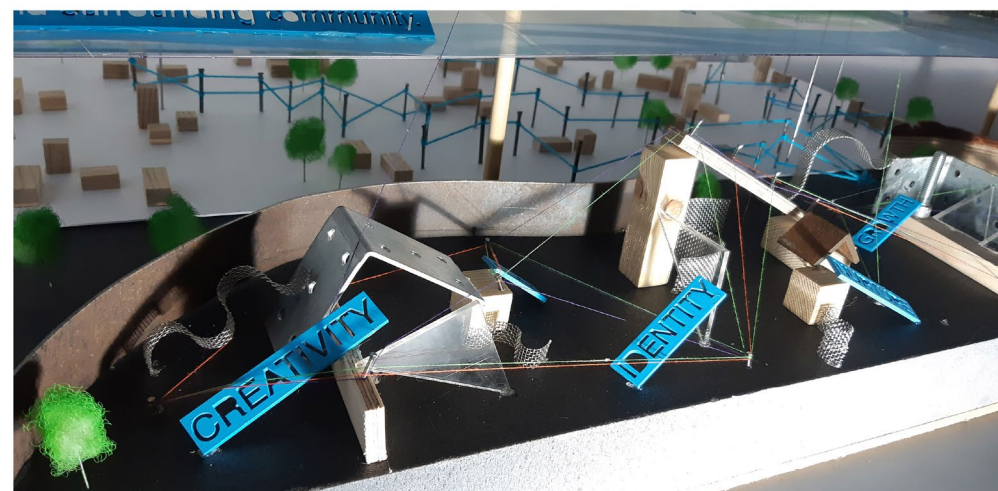
Sitting in between Perth Road and the Riverside, the site is mainly used as a through route. This new-build design aims to construct a busy creative hub whilst introducing more opportunities for passers by to wander and pause for a moment on their commute.

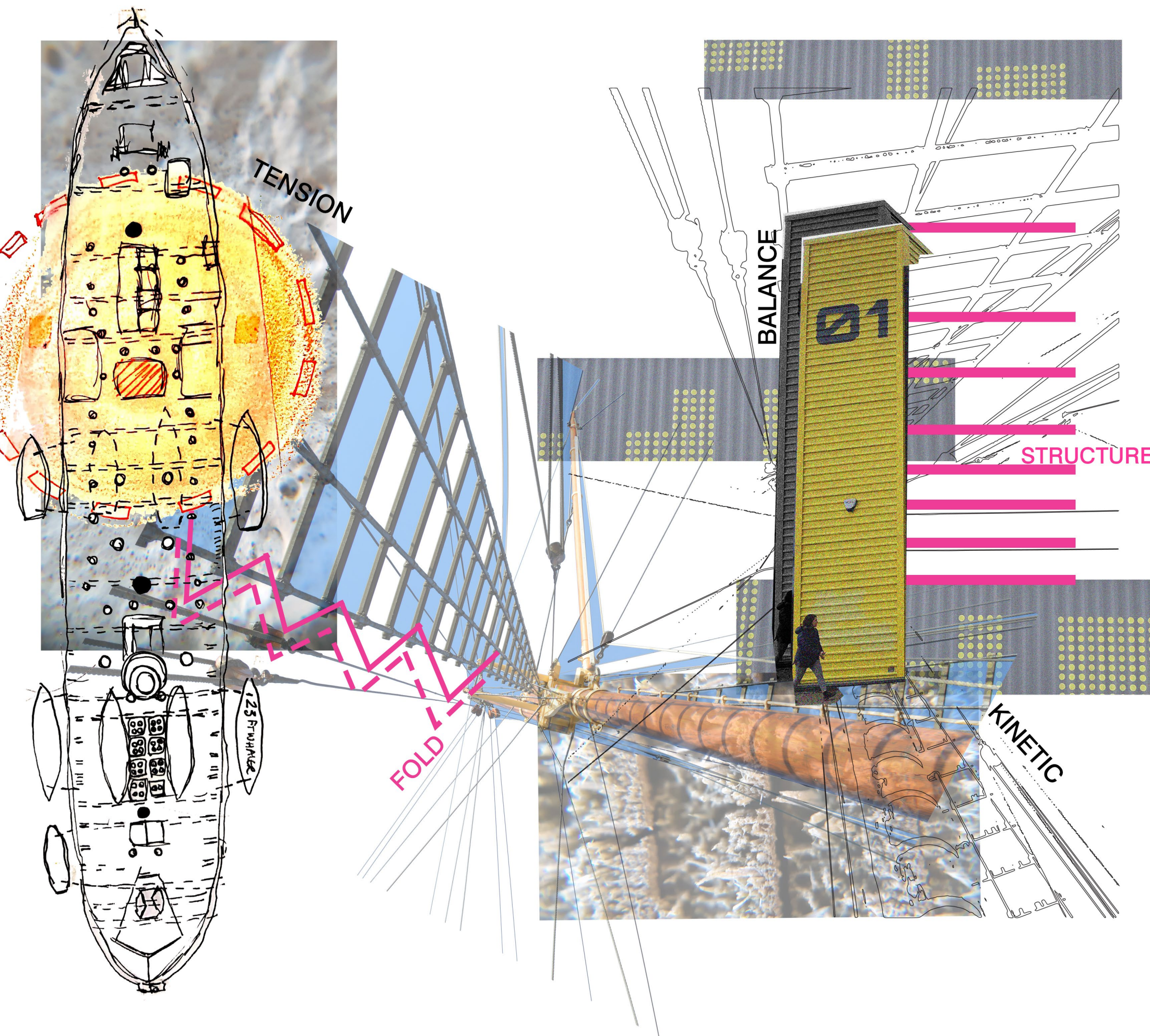


SITE ANALYSIS MODEL

Looking into the projects, services, spaces and events that already exist in the local community, and the values and impact they have.

This begins the conversation of how themes such as play, growth and identity can be experimented with in the design, whilst maintaining and re-enforcing the positive values of existing projects.



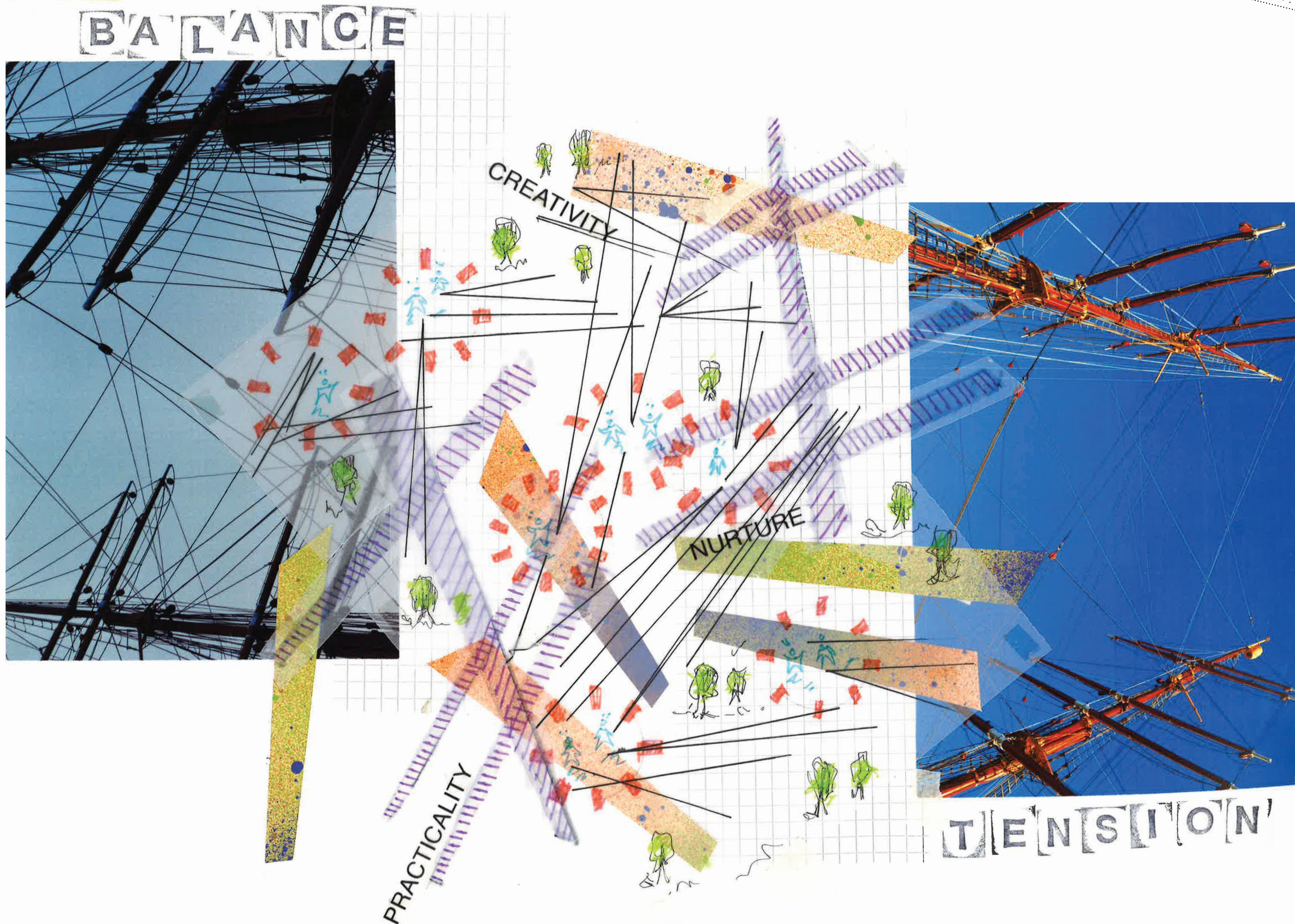


CONCEPT INSPIRATION

Initial design influence came from the modularity, folds and linear structure of the shipping containers on site.

This was paired with inspiration taken from the narrative of the collective expedition taken aboard Dundee's RRS Discovery ship. From geologists, to surgeons, to artists, everyone on the journey of discovery was working together towards the same goal of gathering scientific research.

KIN reimagines this narrative towards the collective goal of collaboration and skill development within young adults in Dundee.



INTERVIEW 1

GEORGE - LOCHEE
COMMUNITY SHED

Chatting with George in his workshop gave useful insights into the positive impact community sheds have on surrounding residents. He also highlighted the need for drop-in services and not strictly programmed work approach.



TRADING SKILLS

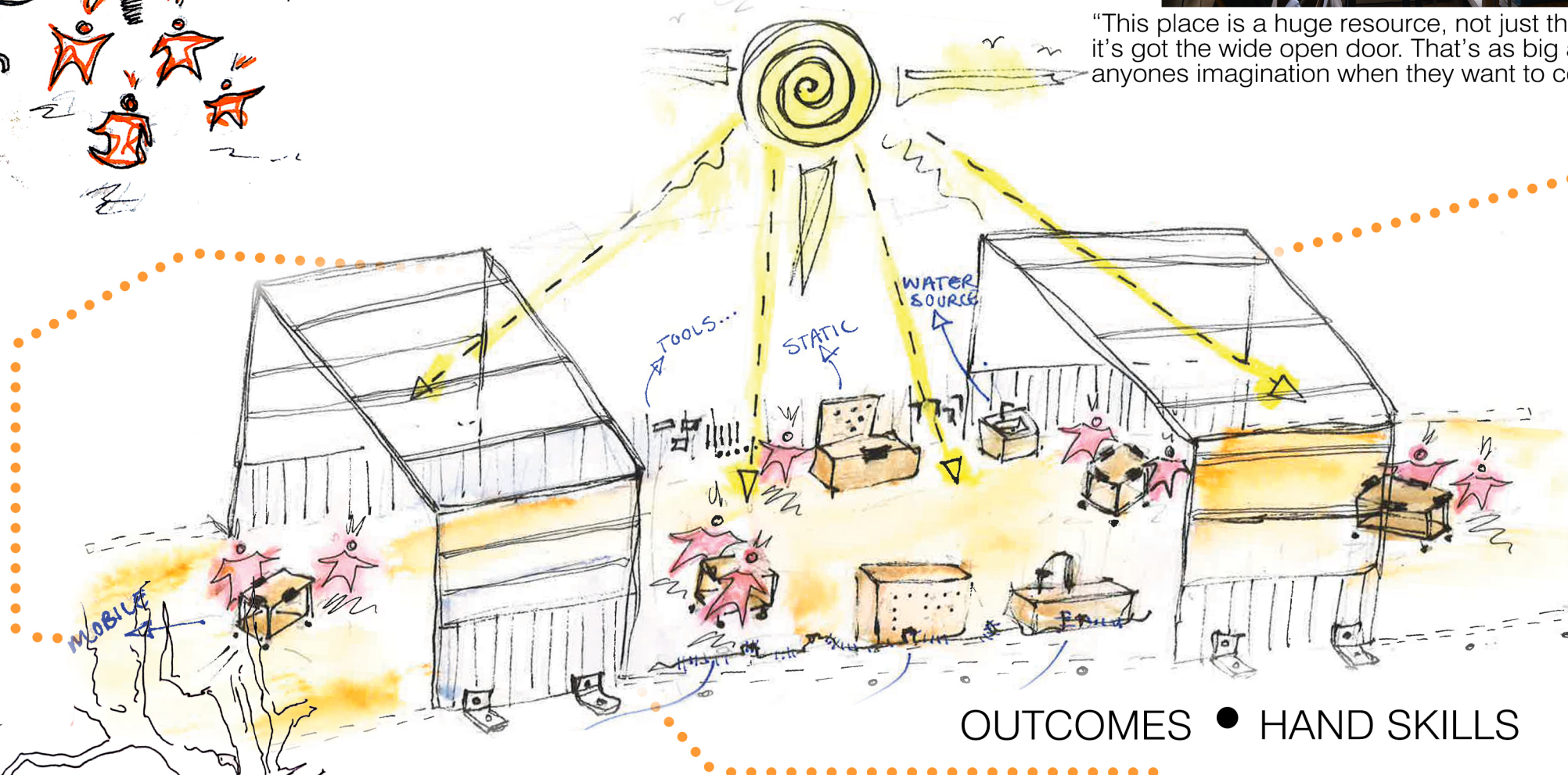


WELCOMING

"This place is a huge resource, not just the tools, it's got the wide open door. That's as big as anyones imagination when they want to come in."



"I'd like a classroom type space. I'd like a space where people can come in and see the table and the cup of coffee."



- OUTCOMES
- HAND SKILLS
 - DROP - IN SERVICE
 - PROBLEM SOLVING



INTERVIEW 2

CHARIS - HOT CHOCOLATE TRUST

Charis provided useful insights into the structure, or anti-structure approach to coaching young adults. By prioritising the needs and story of each individual, more specialised and meaningful development can take place.

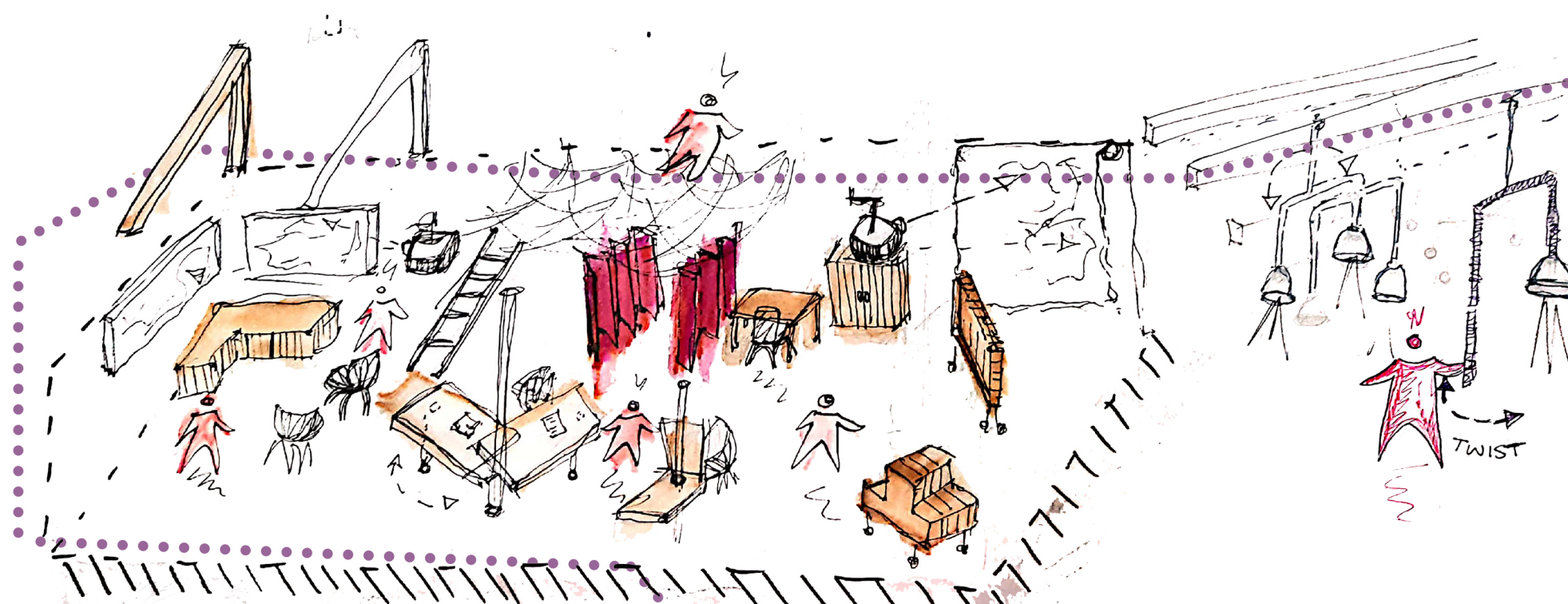


The principles to this day are who are you and what are stories? What do you want to do? And how do we support you in that? The relationship is the main focus."

INCLUSIVE



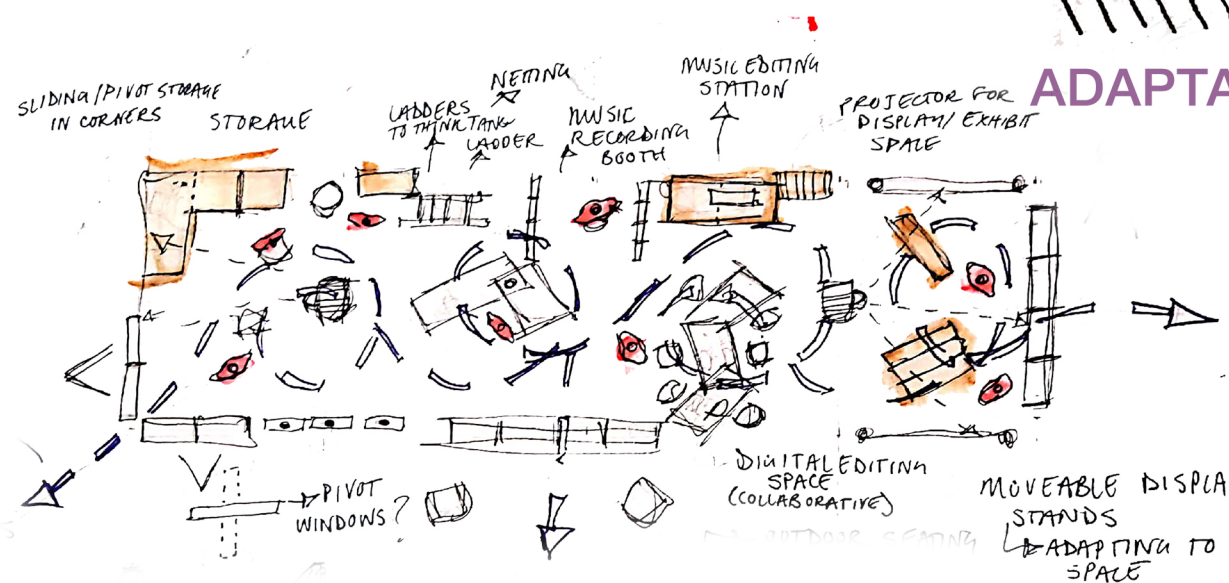
Mapping the opportunities in Dundee for young people, and trying to be that bridge to plug young people into those experiences."



ADAPTABLE

OUTCOMES

- NETWORKING
- EXPLORATION
- EXPRESSION



INTERVIEW 3

CLAIRE AND WARRYN-MENZIESHILL
COMMUNITY GARDEN

Claire, a community safety worker explained along with Warryn the need for providing opportunities for young adults to get their hands dirty and get to know more about food and most importantly, nature.



"I think there should be a lot more intergenerational projects between young people and older people."



GATHERING



"It's finding the opportunities, and where you can go to find them when you have an idea."

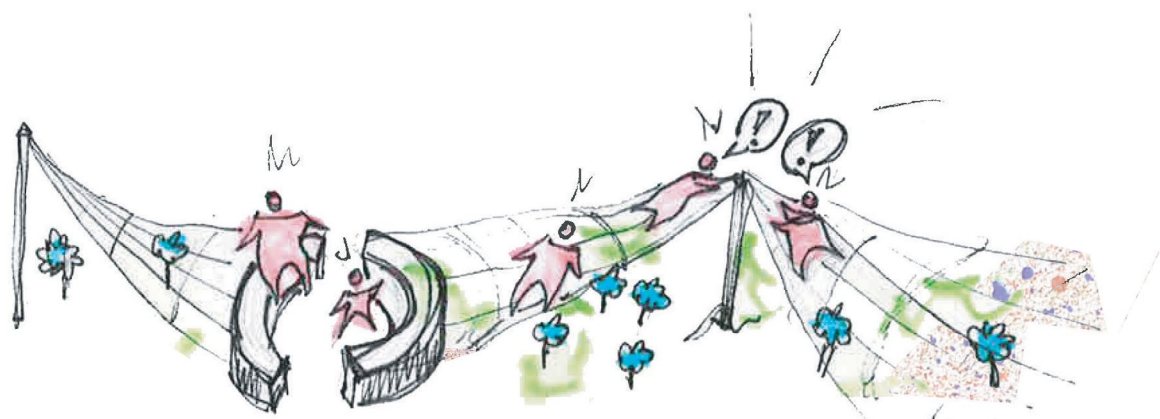


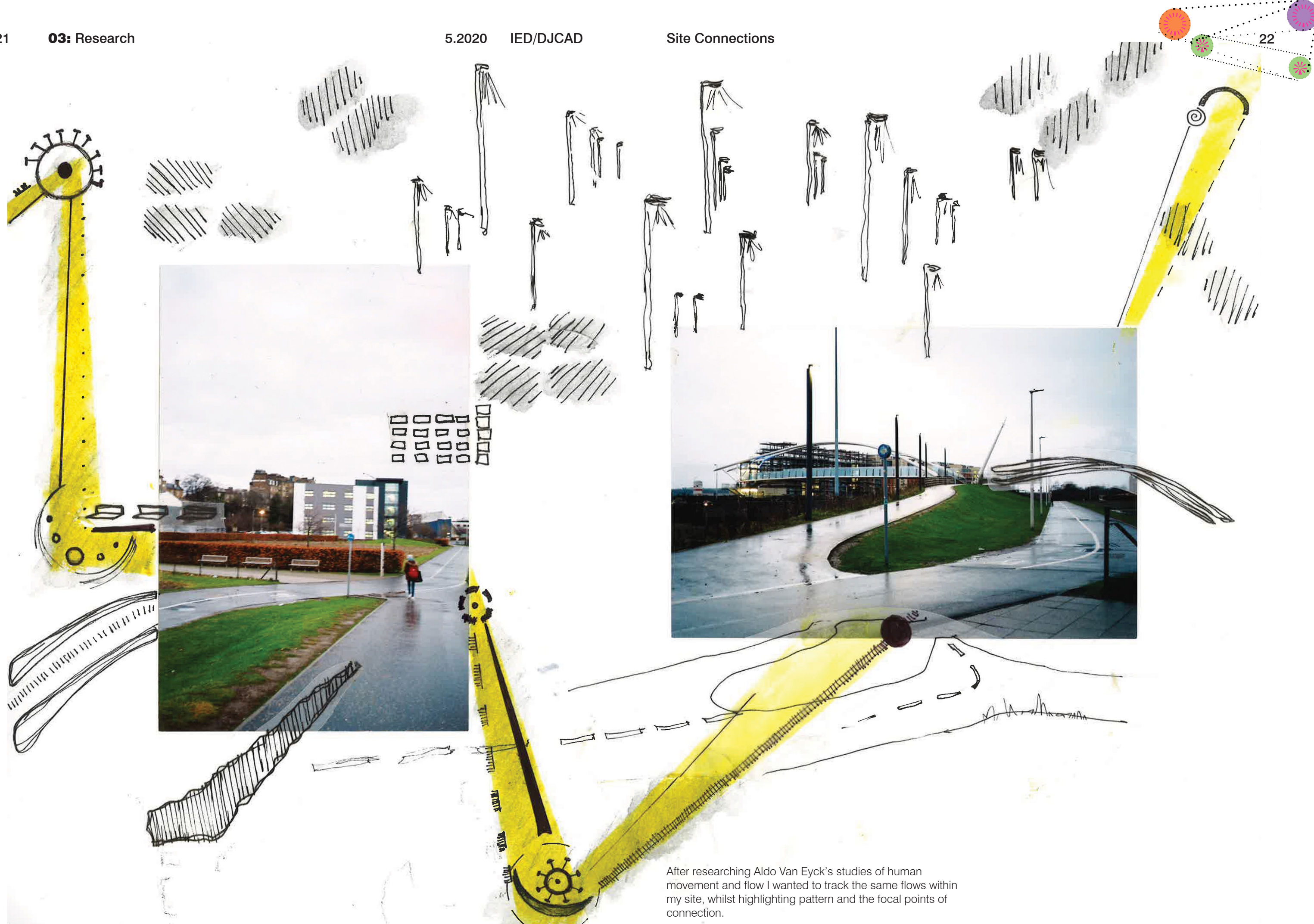
INTERGENERATIONAL



OUTCOMES

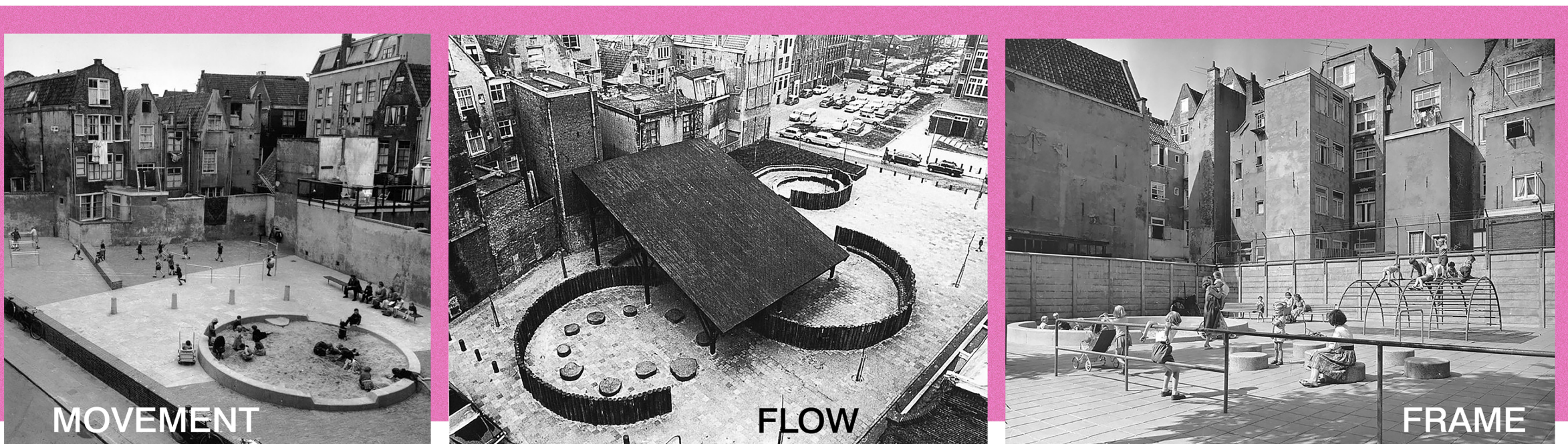
- TACTILITY
- SUPPORT
- REFUGE



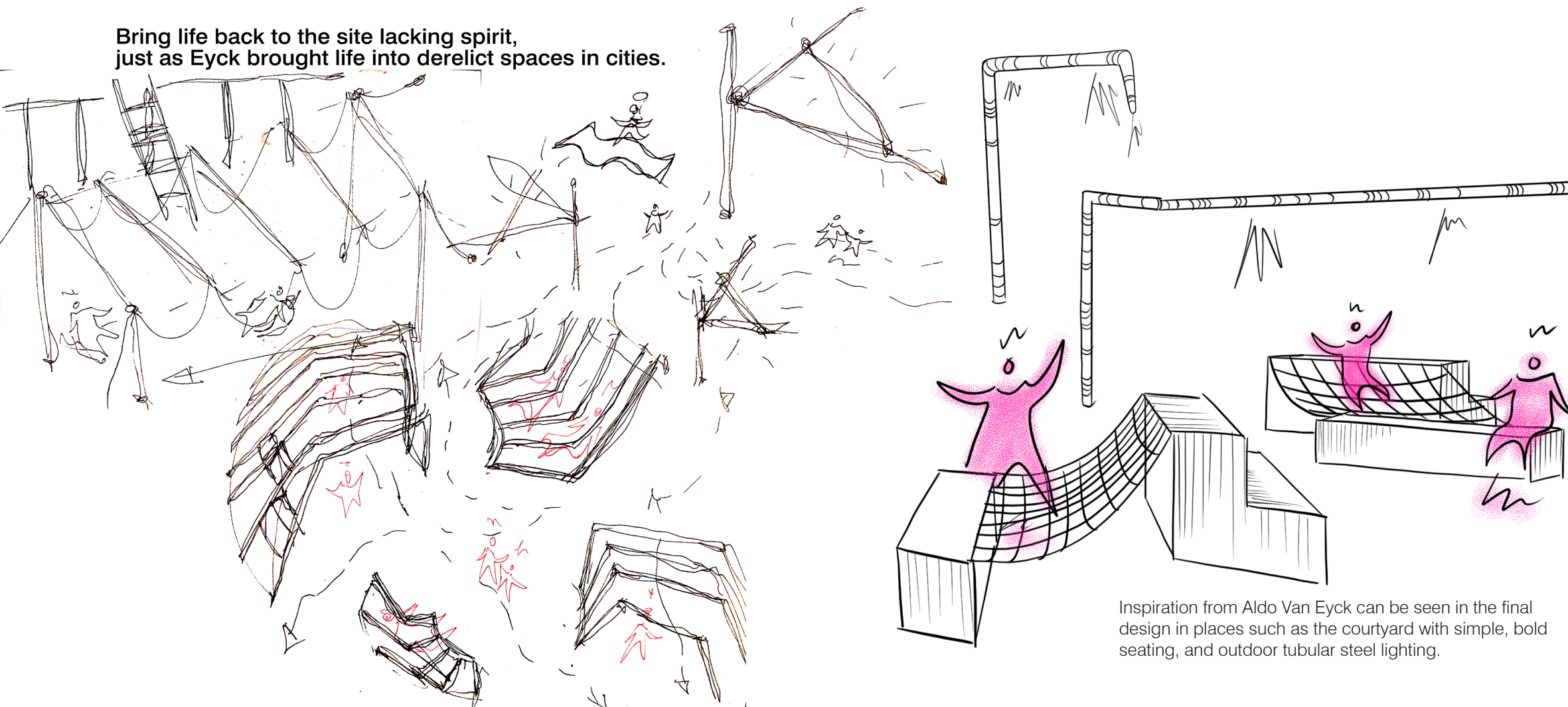


After researching Aldo Van Eyck's studies of human movement and flow I wanted to track the same flows within my site, whilst highlighting pattern and the focal points of connection.

04: Inspiration



Bring life back to the site lacking spirit,
just as Eyck brought life into derelict spaces in cities.



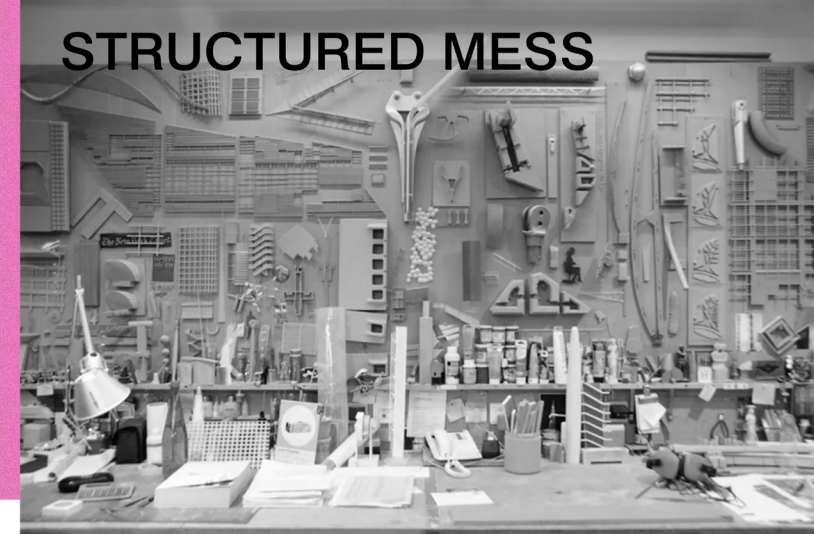
Inspiration from Aldo Van Eyck can be seen in the final design in places such as the courtyard with simple, bold seating, and outdoor tubular steel lighting.

DESIGN INSPIRATION ALDO VAN EYCK

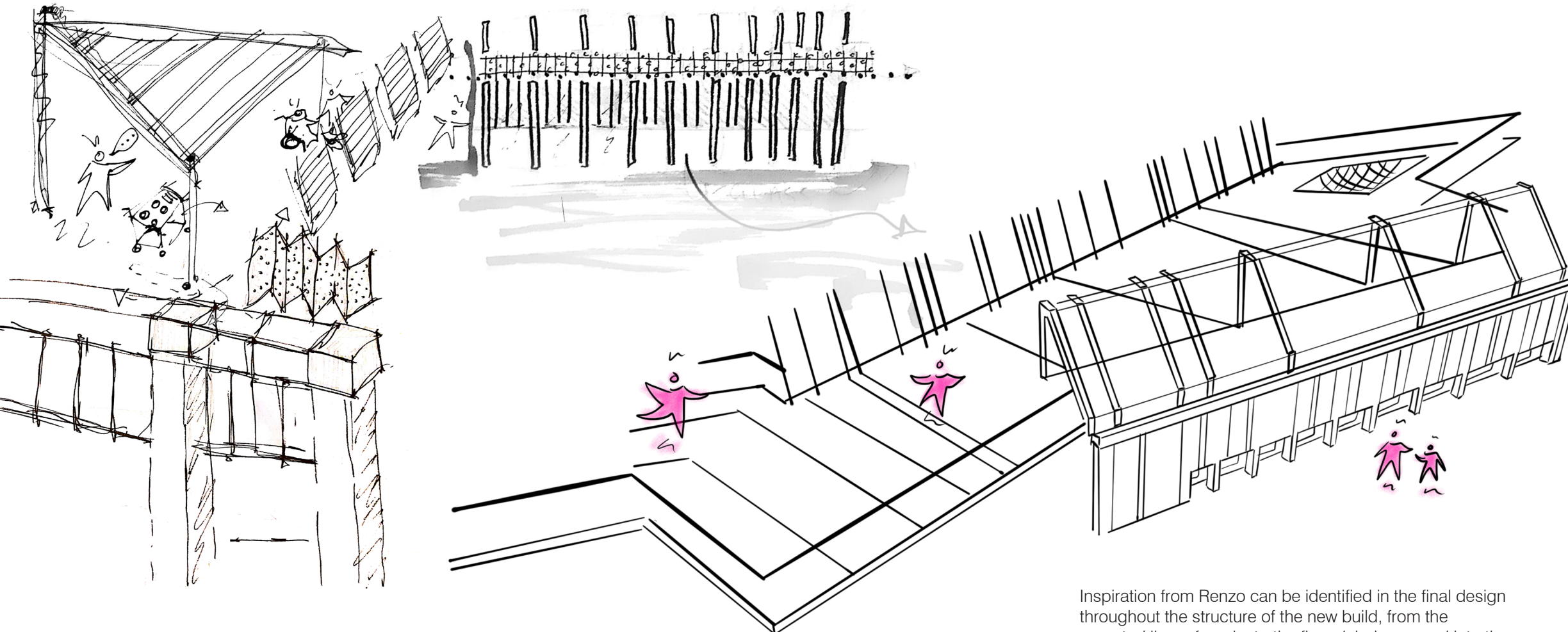
Inspired by Aldo Van Eyck's research of flow and movement of people, and his use of non-hierarchical balanced design, the site has been studied in similar ways.

Dividing the space from current direct paths to new intended routes of flow, the site is broken into and cut through to allow people to meander through as they wish, breaking up the normal journey.

Inspiration has also been taken from Eyck's use of simple linear design through his playgrounds using concrete and tubular steel, materials that are carried into the final design.



Exploring repetition and the balance between structure and creative mess within the space.



Inspiration from Renzo can be identified in the final design throughout the structure of the new build, from the repeated linear facade, to the finned balcony, and into the busy interiors.

DESIGN INSPIRATION

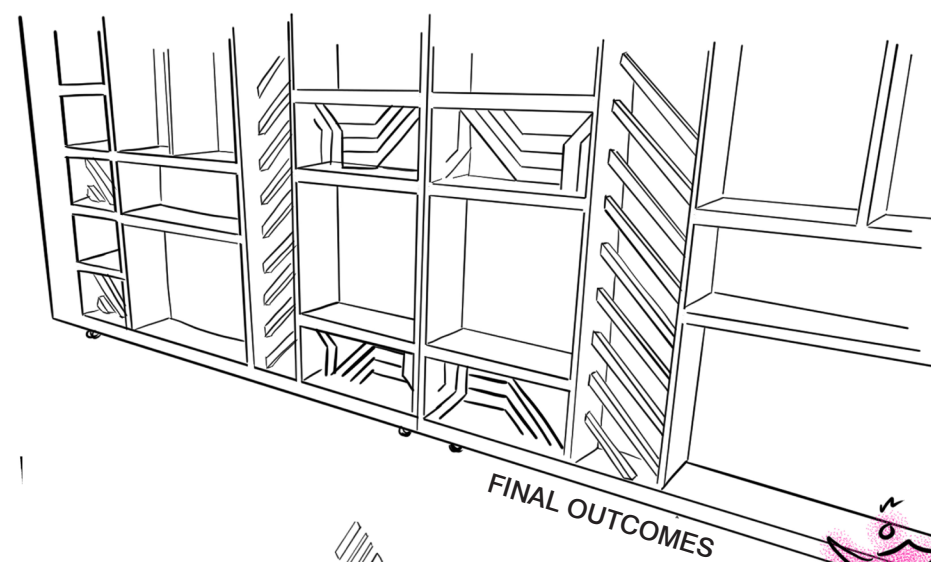
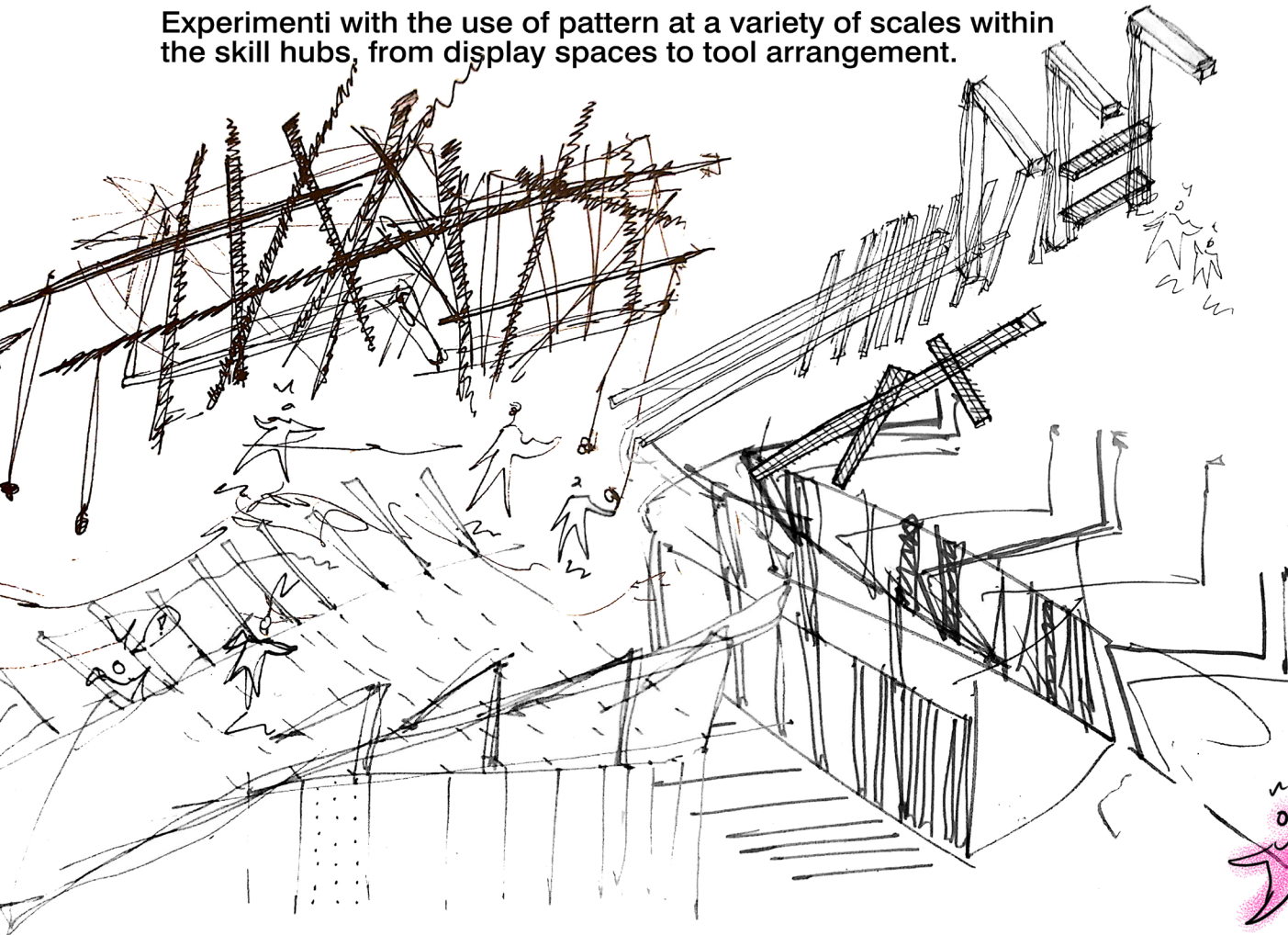
RENZO PIANO BUILDING WORKSHOP

Carrying forward the themes of modularity and structure, balanced with creative chaos, inspiration is taken from from the Paris based studio. Busy open table space and tools lining the walls provide a favourable space for collaboration and innovation.

The repeated pattern in the facade spark curiosity in passers by as they are able to peek into the workshop and get a glimpse of the work happening inside.



Experimenti with the use of pattern at a variety of scales within the skill hubs, from display spaces to tool arrangement.



DESIGN INSPIRATION

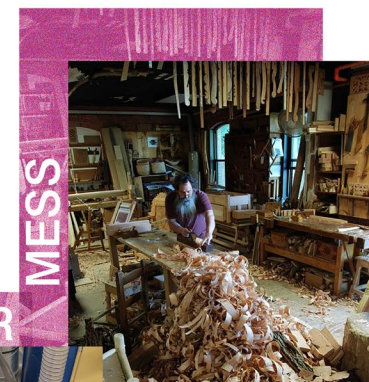
ARCHITECTS WORKSHOP RUETEMPLE

An adaptive reuse project redesigning a former garage into a studio and social space.

Strong beams reaching across the expansive ceiling to allow ample light to fill the room, and the design carries a successful use of minimal materials, pattern, repetition, and scale.

By providing multiple spaces to work and rest, the studio stands as a clean slate for the needs of each user.

Inspiration from Ruetemple can be found in the final design from the bold wayfinding floor print, to interior display shelves and workshop tool arrangements.



MESS

FOR

SPACE

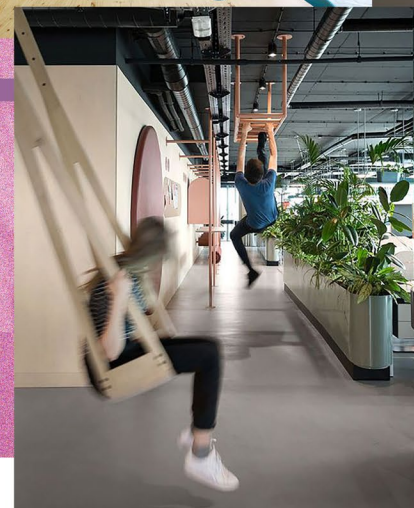


PEEK

INSIDE



VIEWS



SENSORY



ACTIVE INTERACTION



SOCIAL PLAY



REFUGE

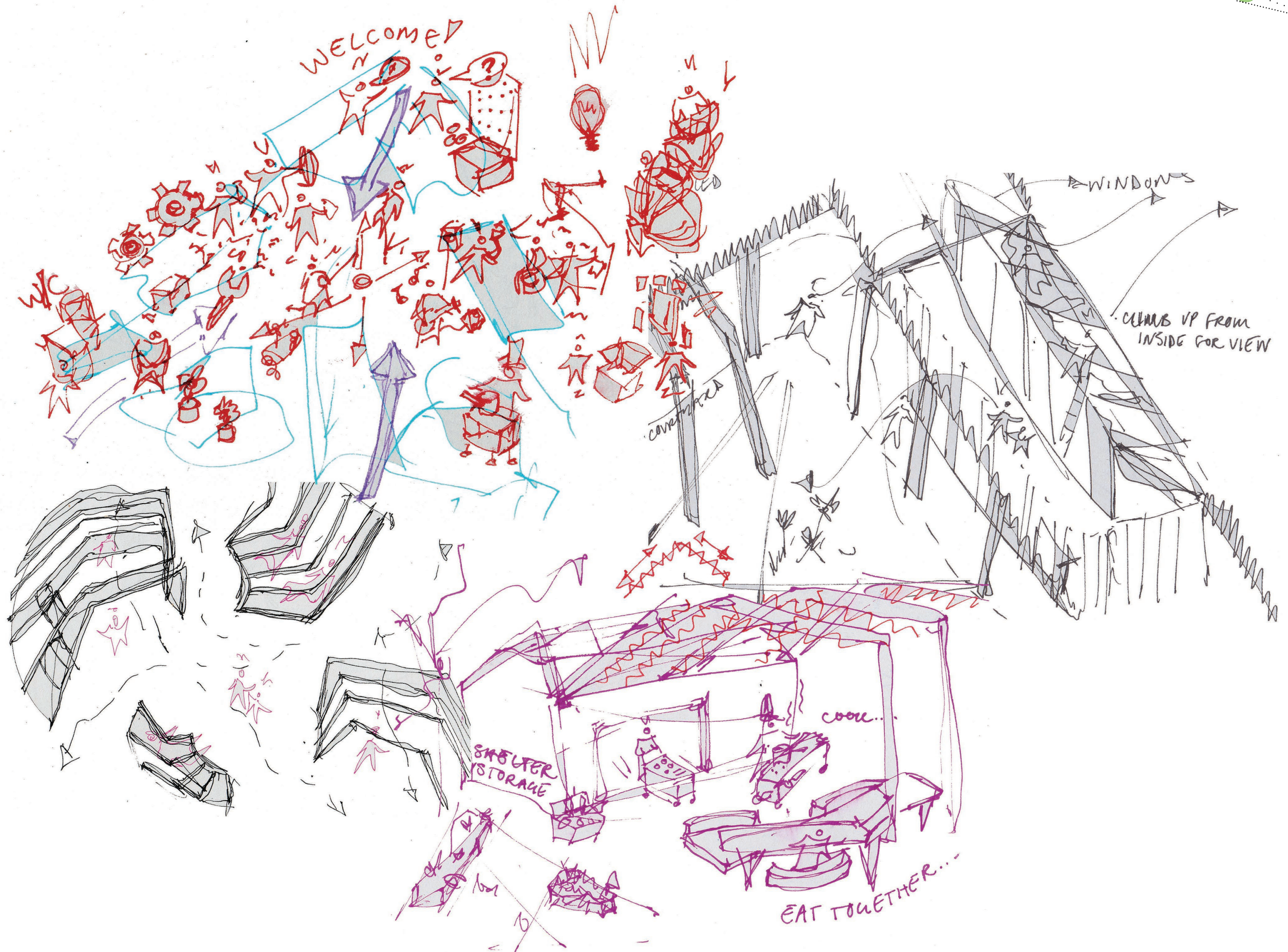


05: Project Development

ZONING 1

The first zoning diagram focused on themes, abstract hubs and connections between the existing site and new potential routes.



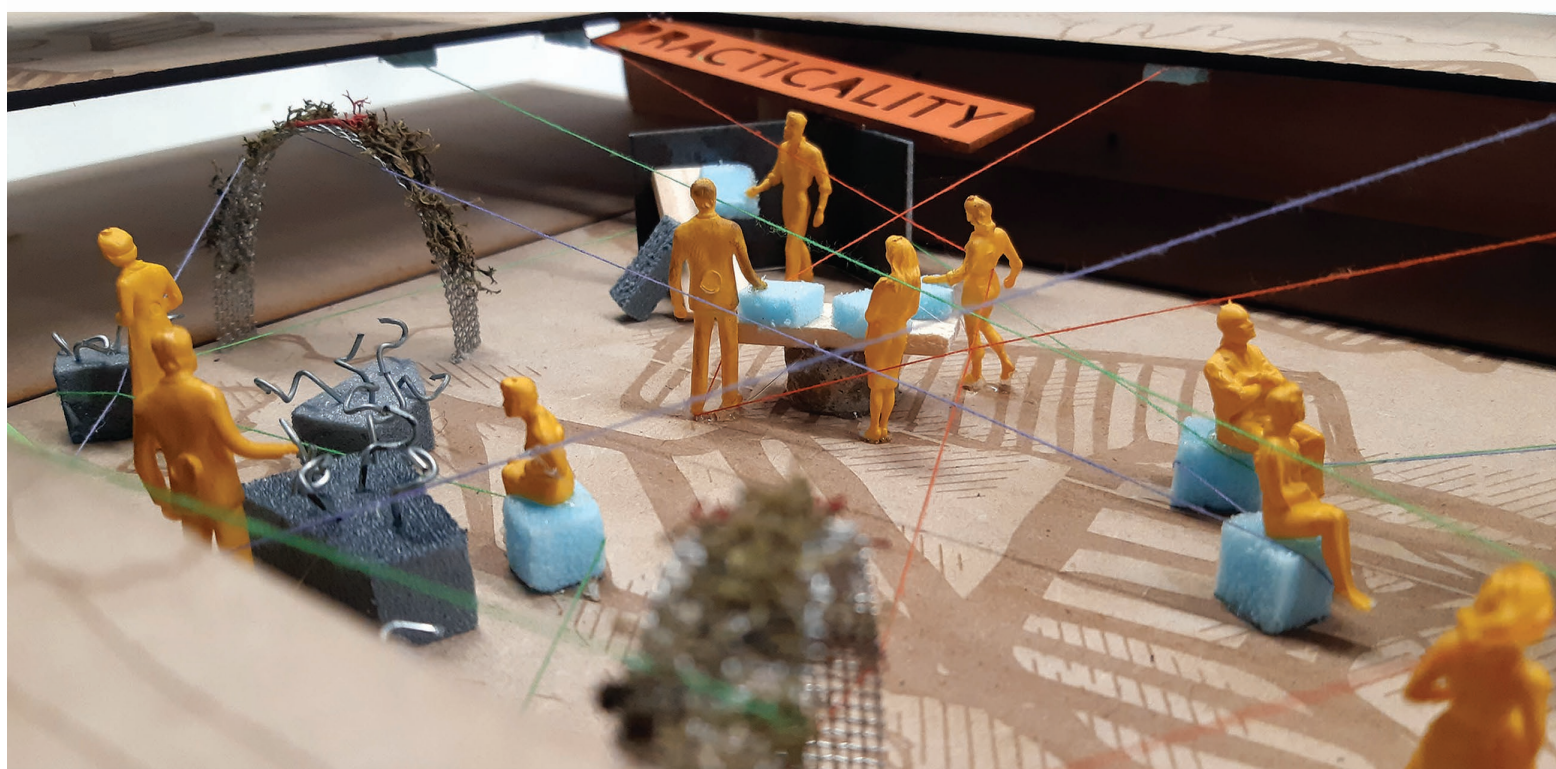
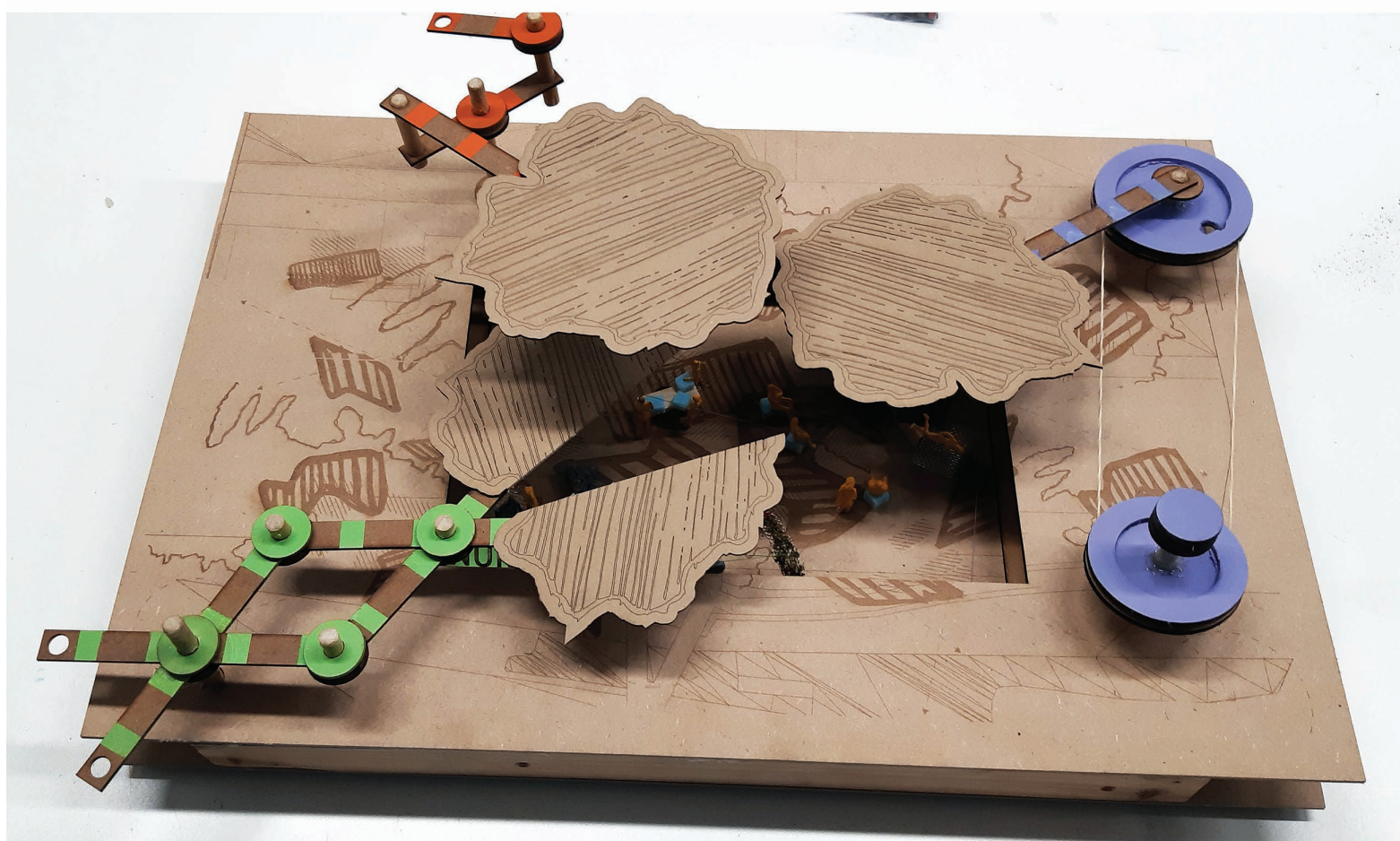


ZONING MODEL

Movement was able to be explored through making this conceptual zoning model. Three main zones of creativity, practicality and nurture were paired with a kinetic elements that hide and reveal areas of each zone: pivot, push/pull, and twist.

By encouraging users to engage and get hands on with elements in their space, a more stimulating atmosphere can be created.

Originally the aim was to design movements with larger scale areas of wall and building, however the smaller more intimate gestures of a light fixture or display space make for more personal adaptations.



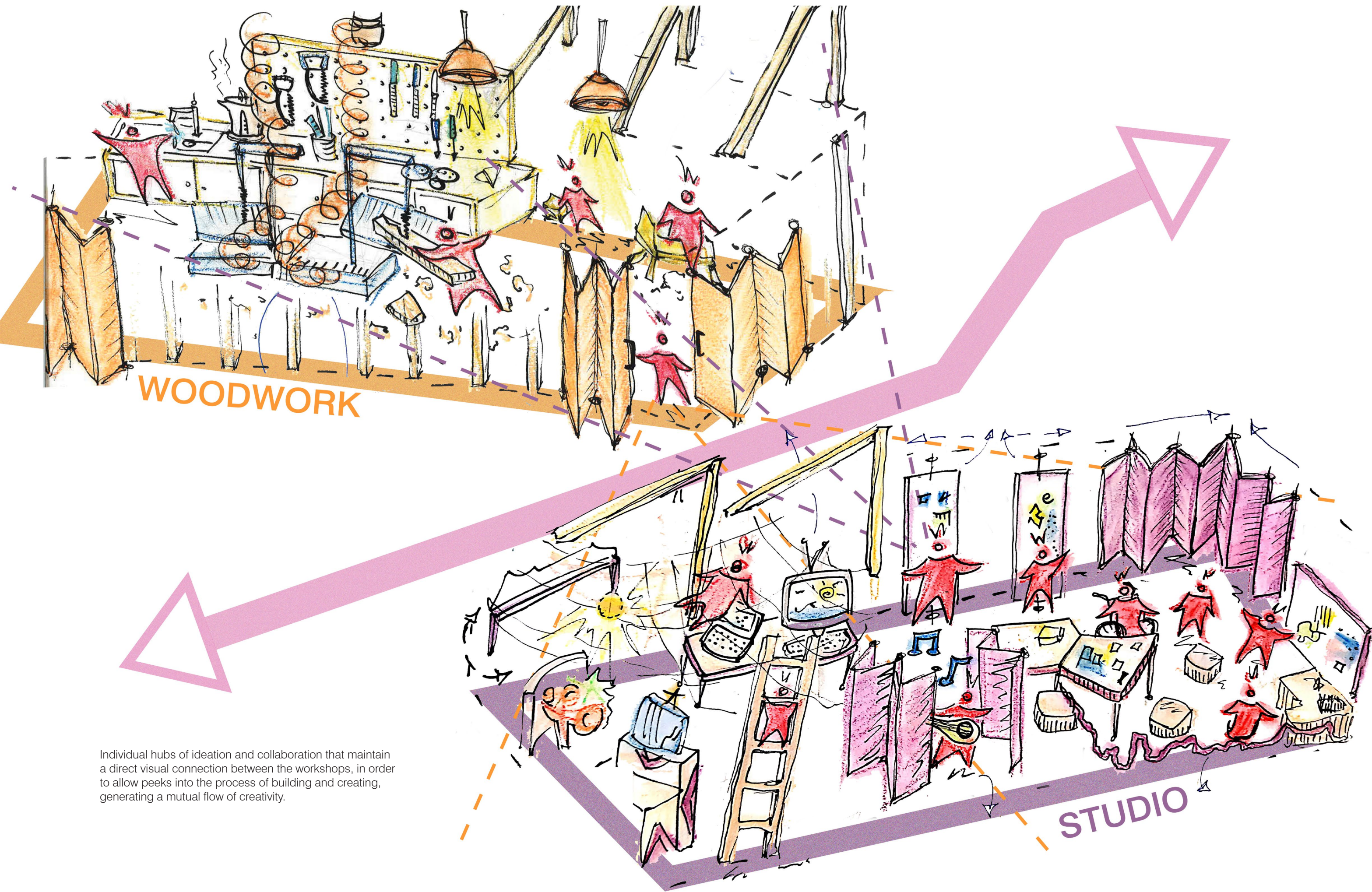
PIVOT



PUSH//PULL



TWIST



Individual hubs of ideation and collaboration that maintain a direct visual connection between the workshops, in order to allow peeks into the process of building and creating, generating a mutual flow of creativity.

WAYFINDING

Experimenting with shadow patterns found on site to create a bold wayfinding print for the grounds, helping visitors navigate their way through the space.

PURPLE - STUDIO

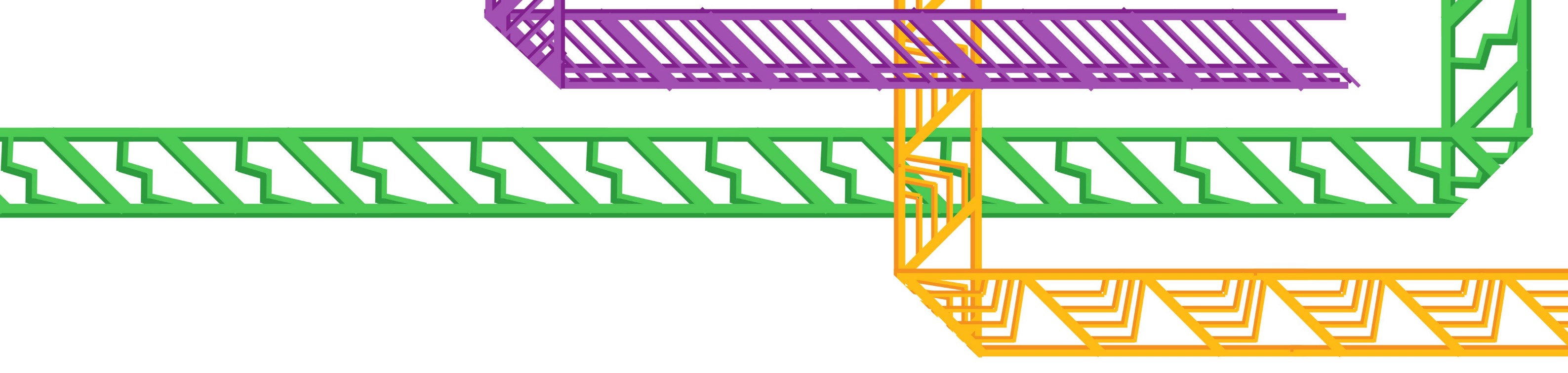
An energetic and engaging studio space that encourages playful collaboration and independent thinking at all times.

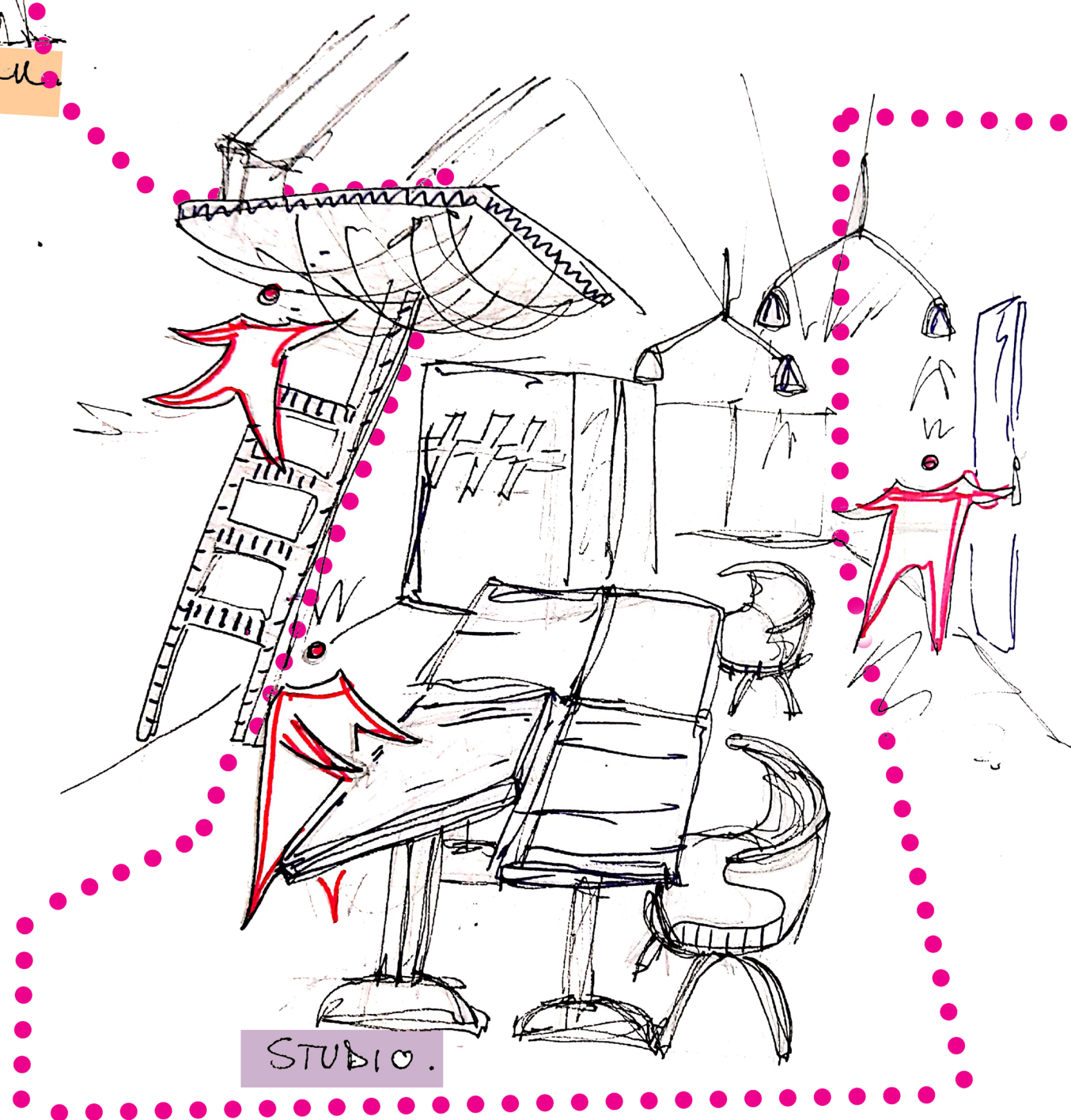
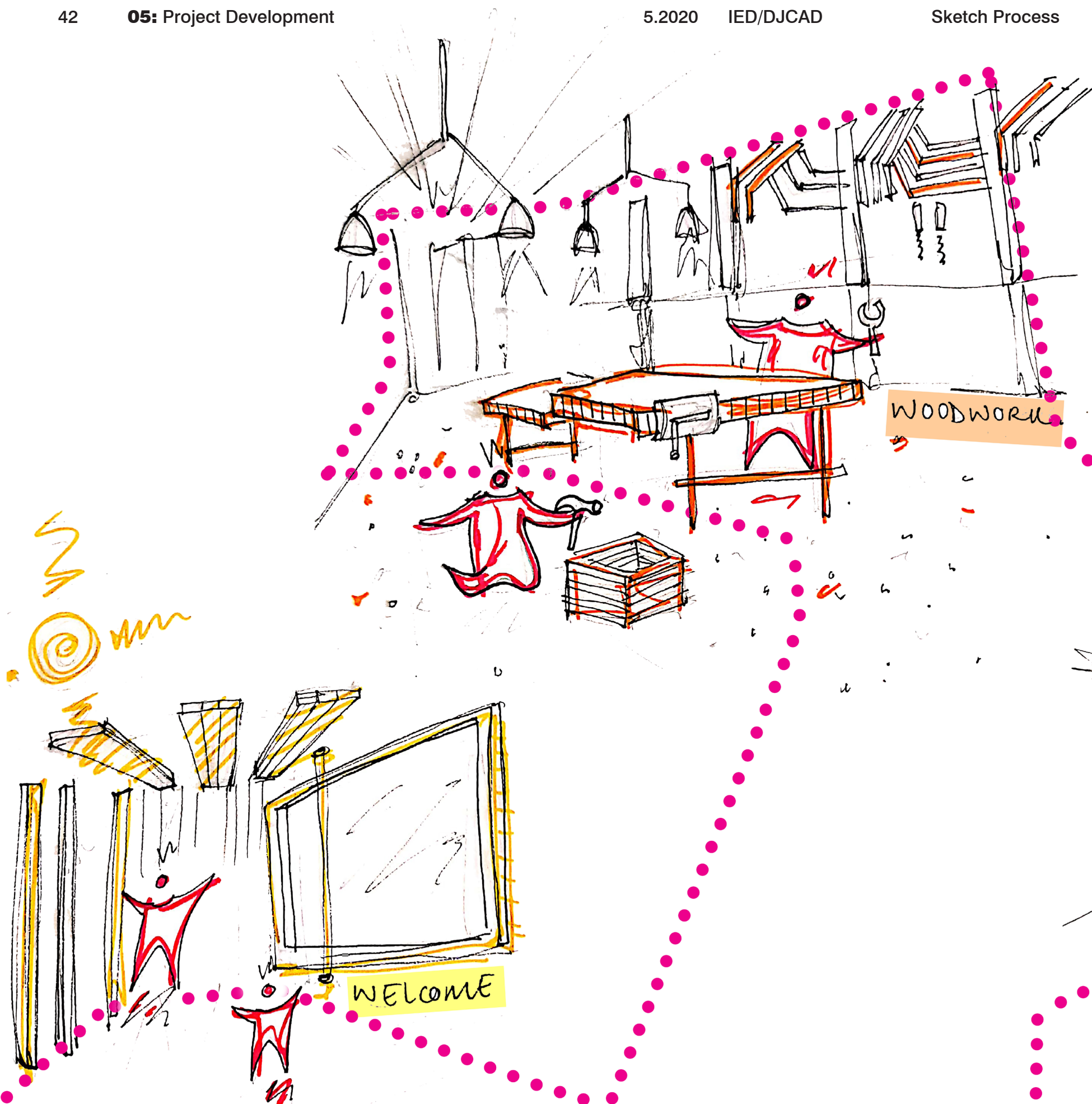
GREEN - NURTURE

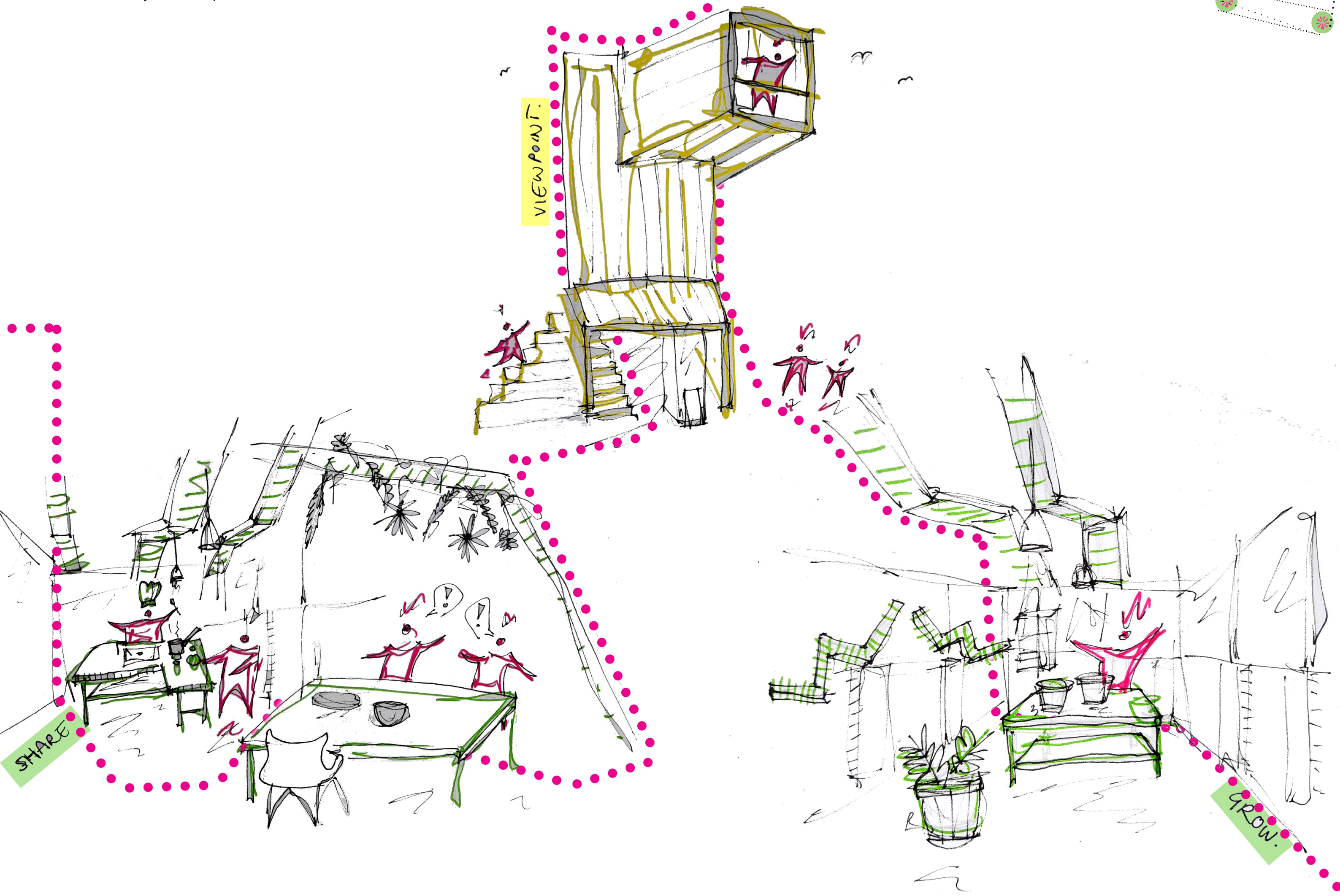
A space to gather and socialise whilst developing skills of growing, maintaining and sharing produce from the sheds.

ORANGE - WOODWORK

Hands-on skill sharing, developing a problem solving mindset with craft techniques and natural materials.











ROOF STRUCTURE
EXPERIMENT -
SKETCH MODEL

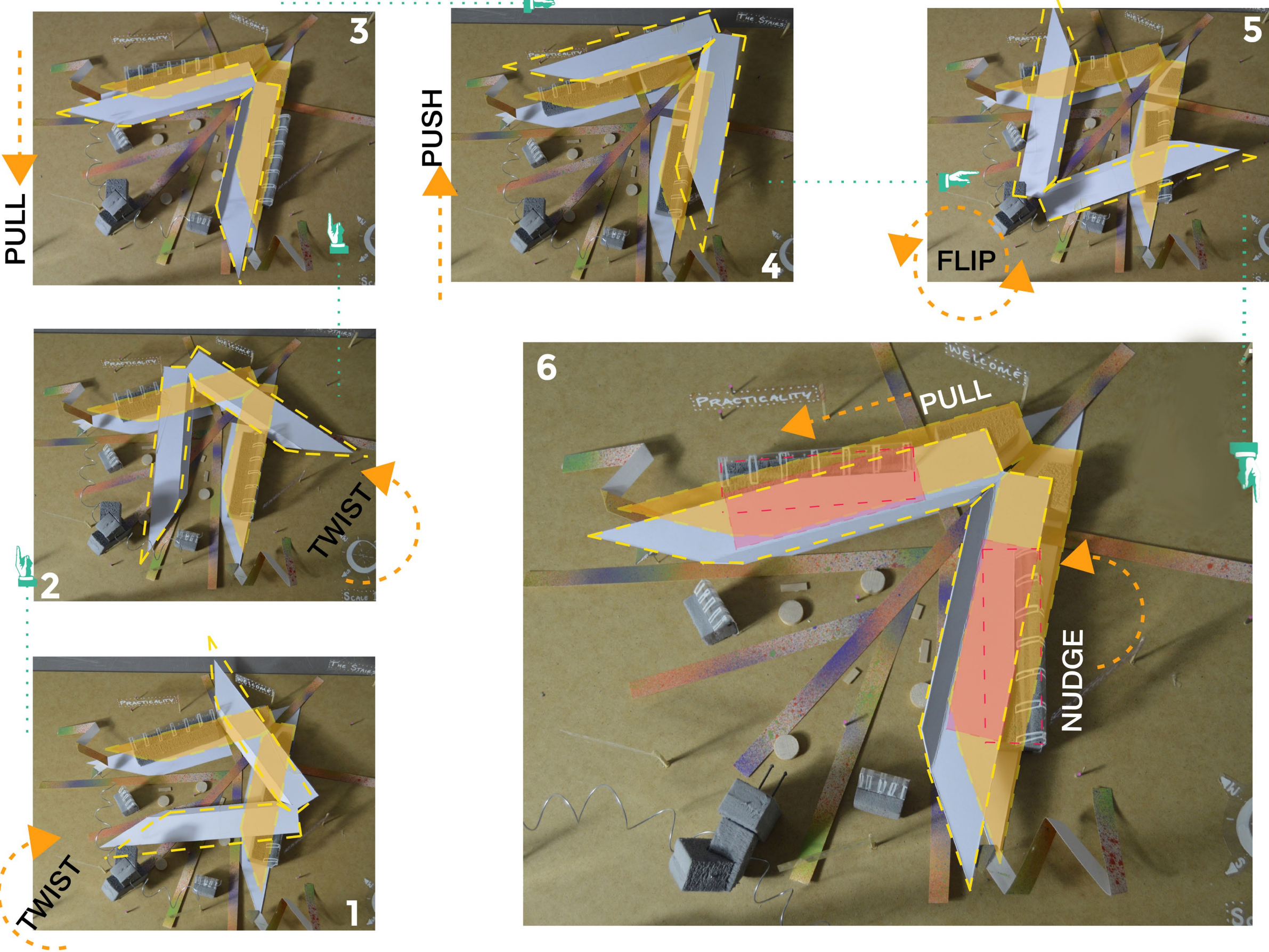
By applying the same kinetic movements from the zoning model when experimenting with the roof structure, it opened the form to create drastic and subtle changes to the overall structure.

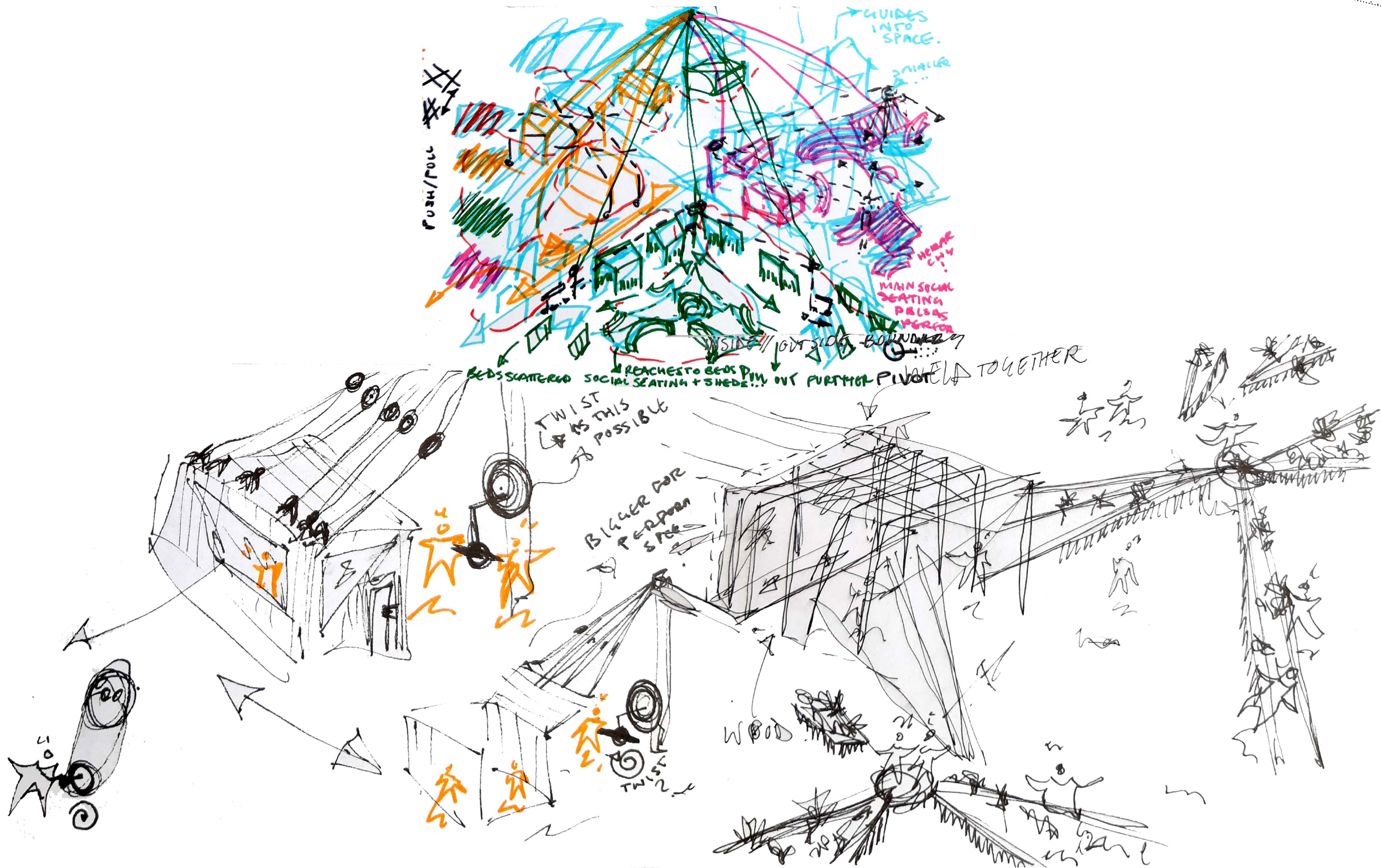
By adding a slight nudge inwards to the two main workshops, a slight exposure is created on the outer facades, whilst focusing interior views towards the courtyard and opposite skill hubs.

Pulling the roof back slightly unmasks the main structures, allowing optimum light exposure in the early morning and evening time at opposite ends of the north east facing site. Pulling the structure back also creates space for tall roofs that stretch across the longest elevation of each zone, intensifying the light that spills inside.

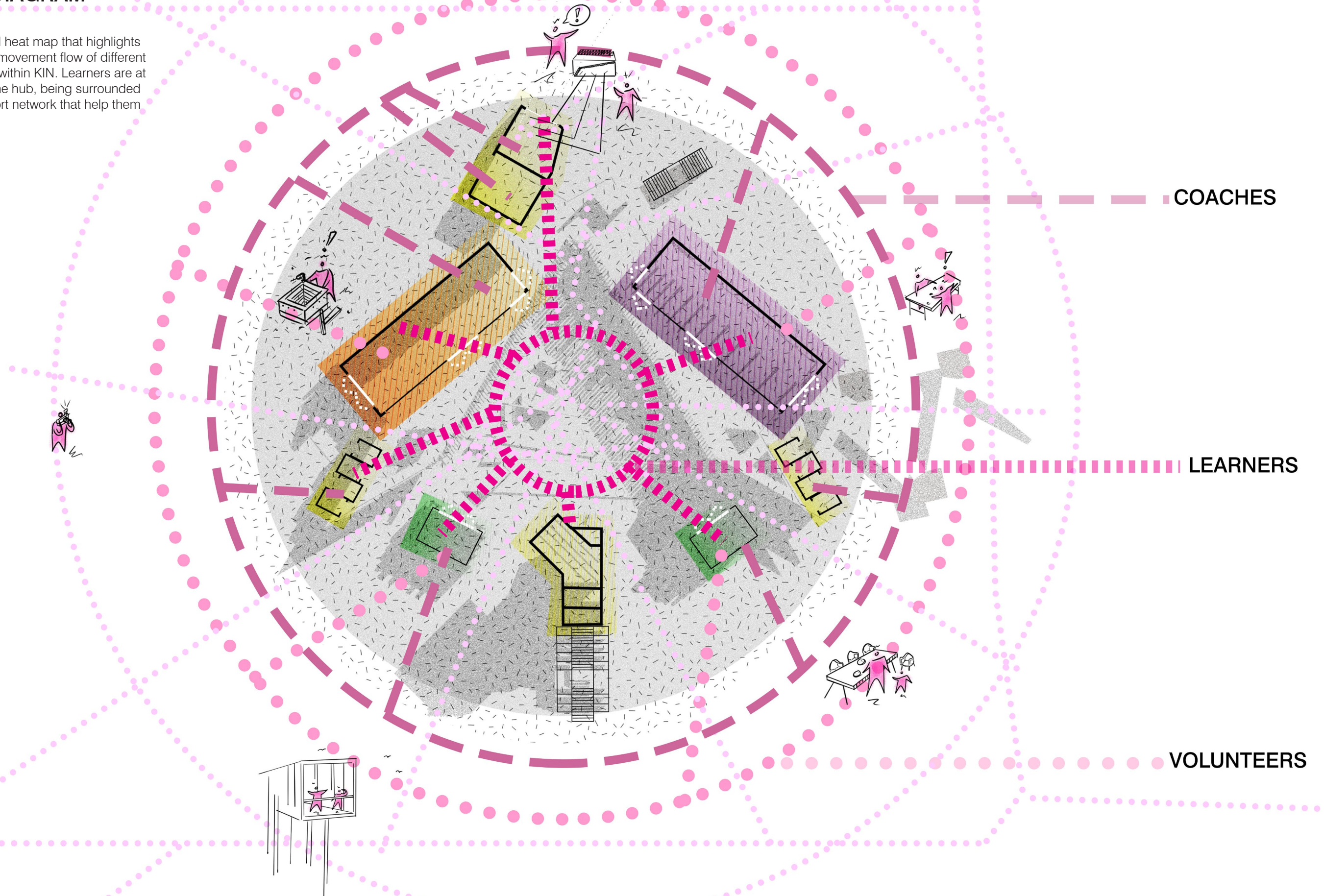
KEY

-  Twist & pivot
-  Linear push / pull
-  Previous roof position
-  Current roof position



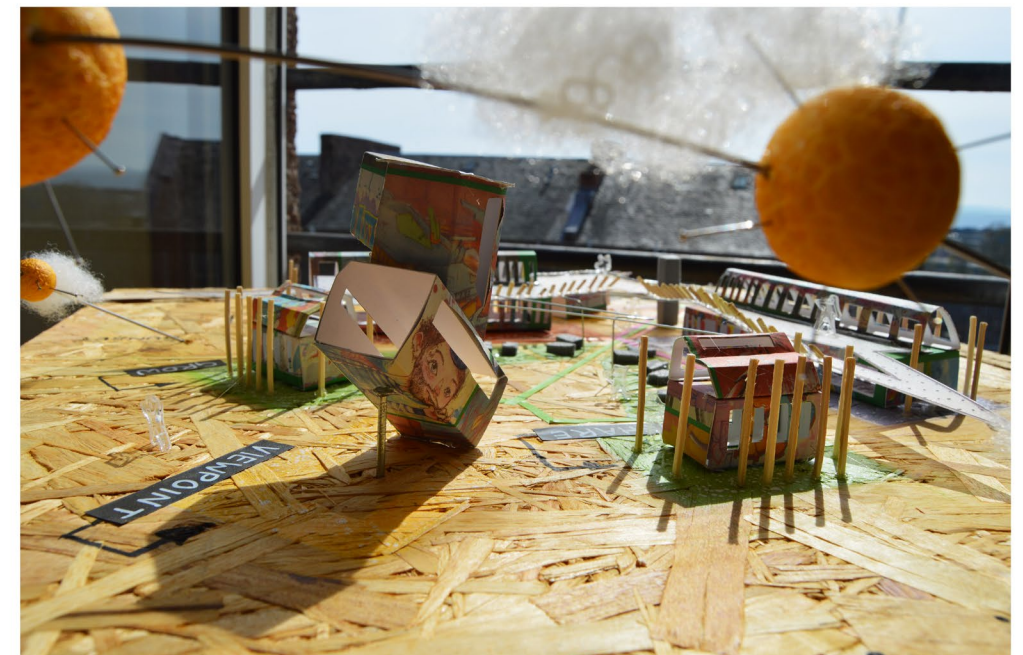
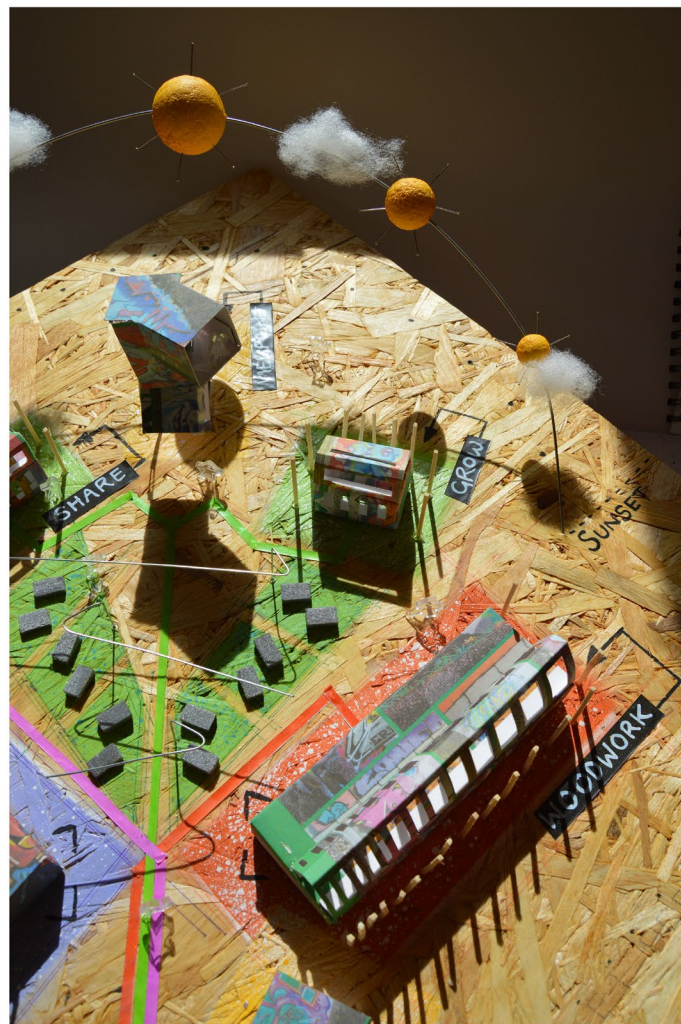
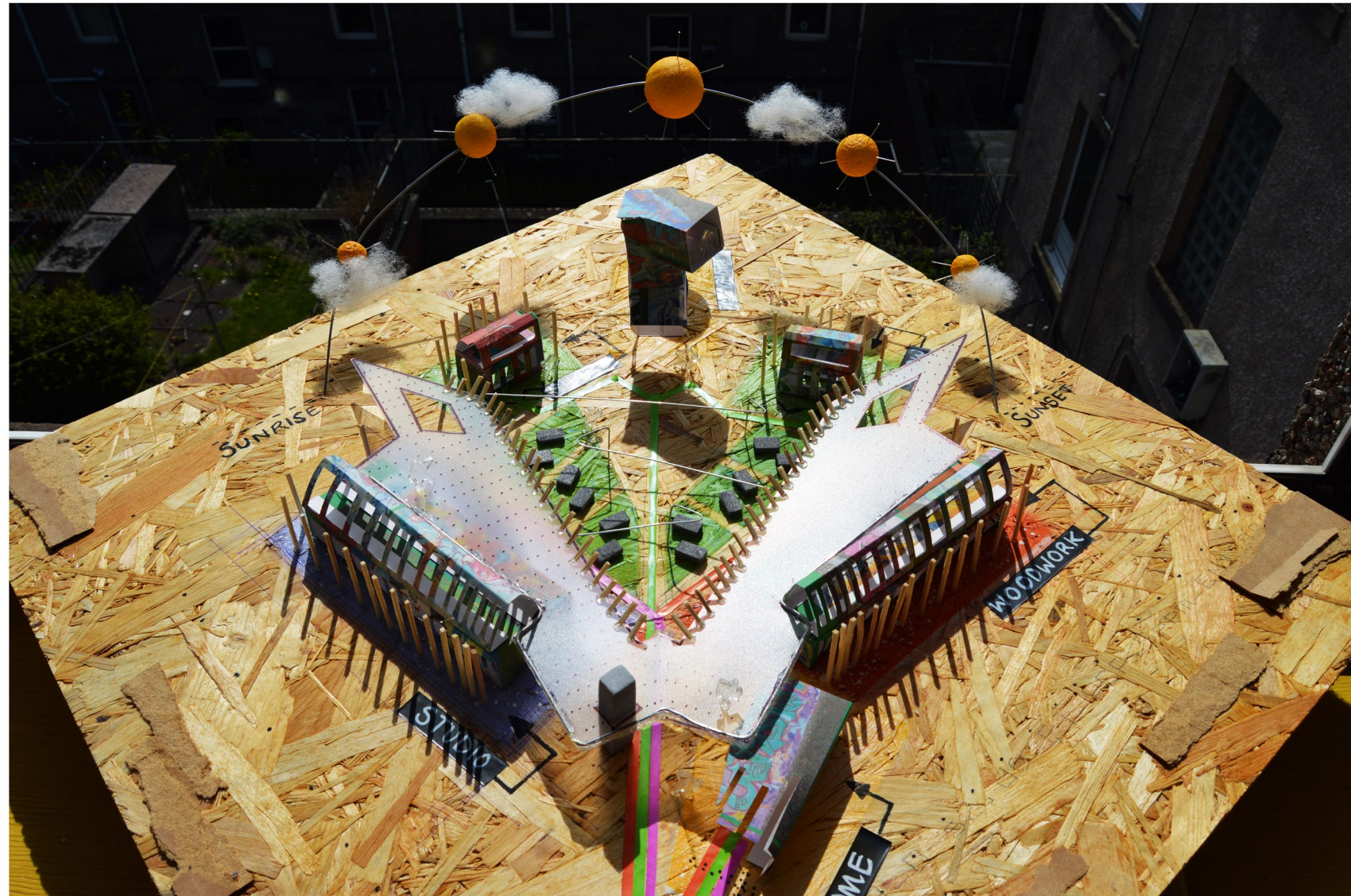


A conceptual heat map that highlights the use and movement flow of different user groups within KIN. Learners are at the core of the hub, being surrounded by the support network that help them develop



FINAL MODEL

Due to limited resources and materials during lockdown, my final model was made out of whatever materials I had around me. This included some white card, old graffiti magazine pages, little wooden sticks, and scraps of foam amongst other bits.



06: Final Proposals

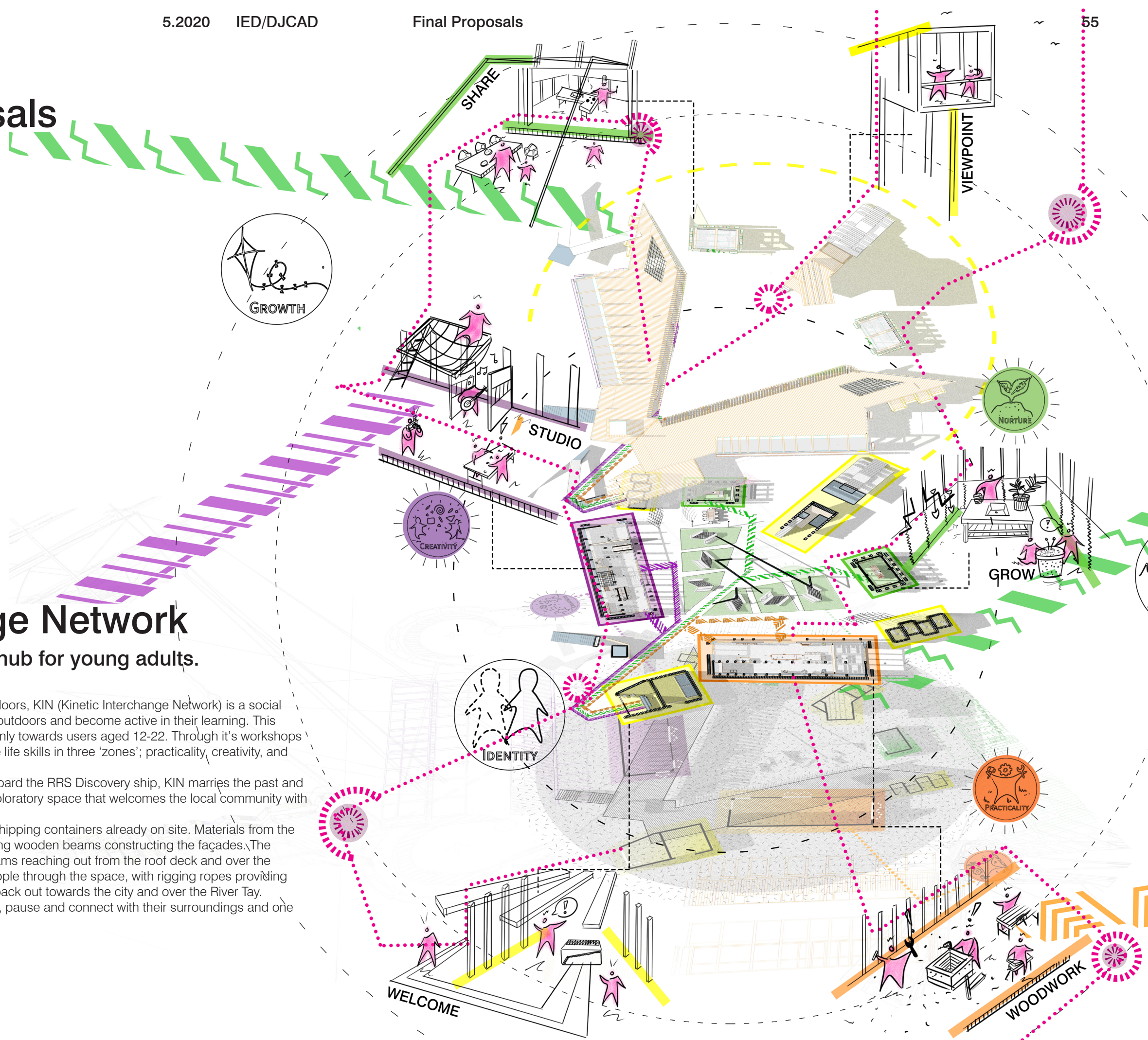
Kinetic Interchange Network

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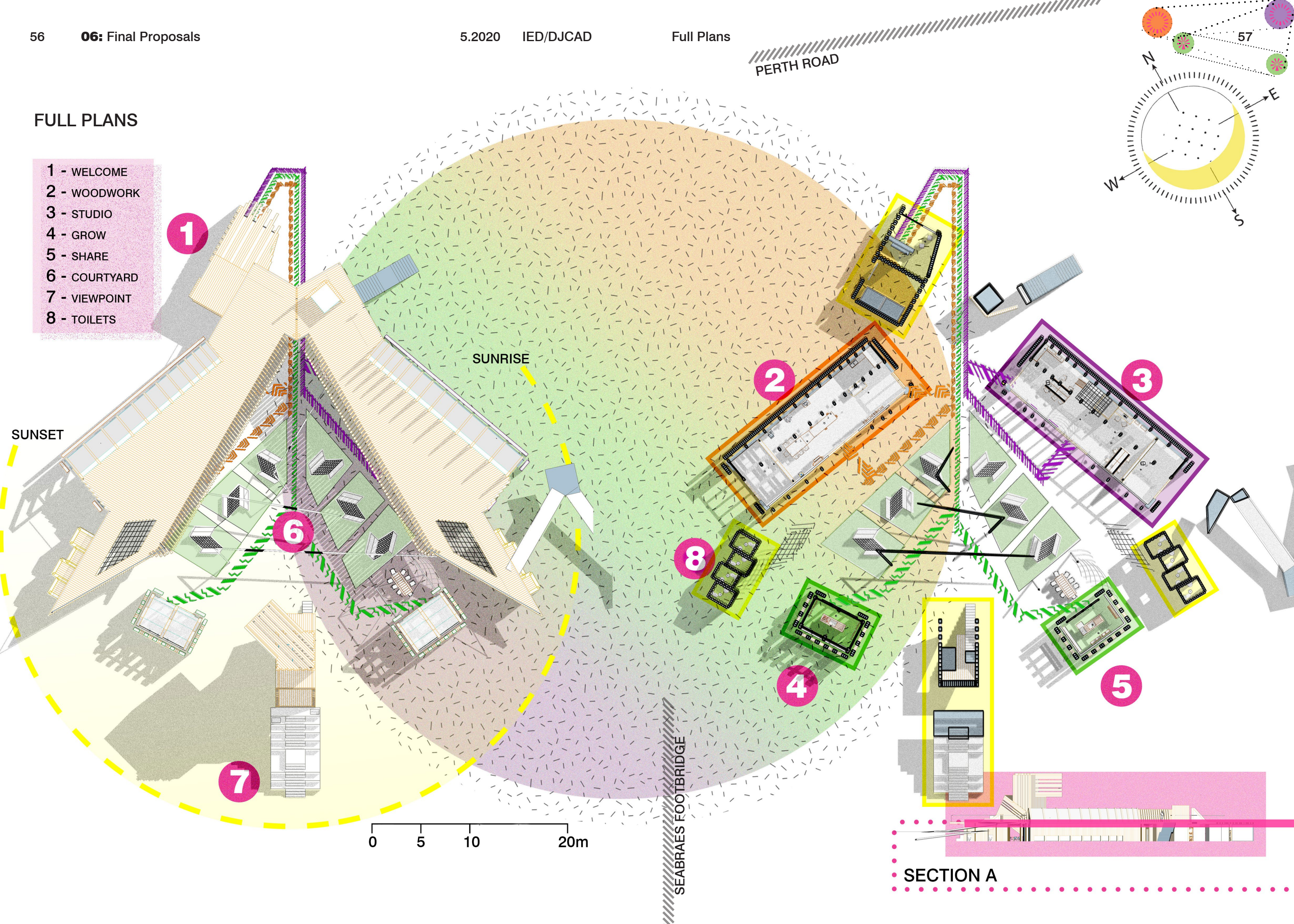
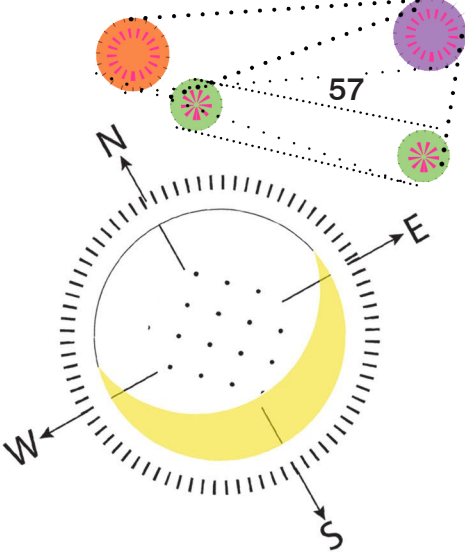
Reimagining the collective journey of discovery taken aboard the RRS Discovery ship, KIN marries the past and present, transforming a disused piece of land into an exploratory space that welcomes the local community with collaborative, hands-on coaching at it's core.

The design is influenced by the modularity and folds of shipping containers already on site. Materials from the Discovery are also used for inspiration including the strong wooden beams constructing the façades. The repeated linear dialogue continues through to finned beams reaching out from the roof deck and over the central courtyard. Outdoors, bold way finding guides people through the space, with rigging ropes providing areas to lean, sit and lie, along with a viewpoint looking back out towards the city and over the River Tay. Collectively these elements encourage people to wander, pause and connect with their surroundings and one another.

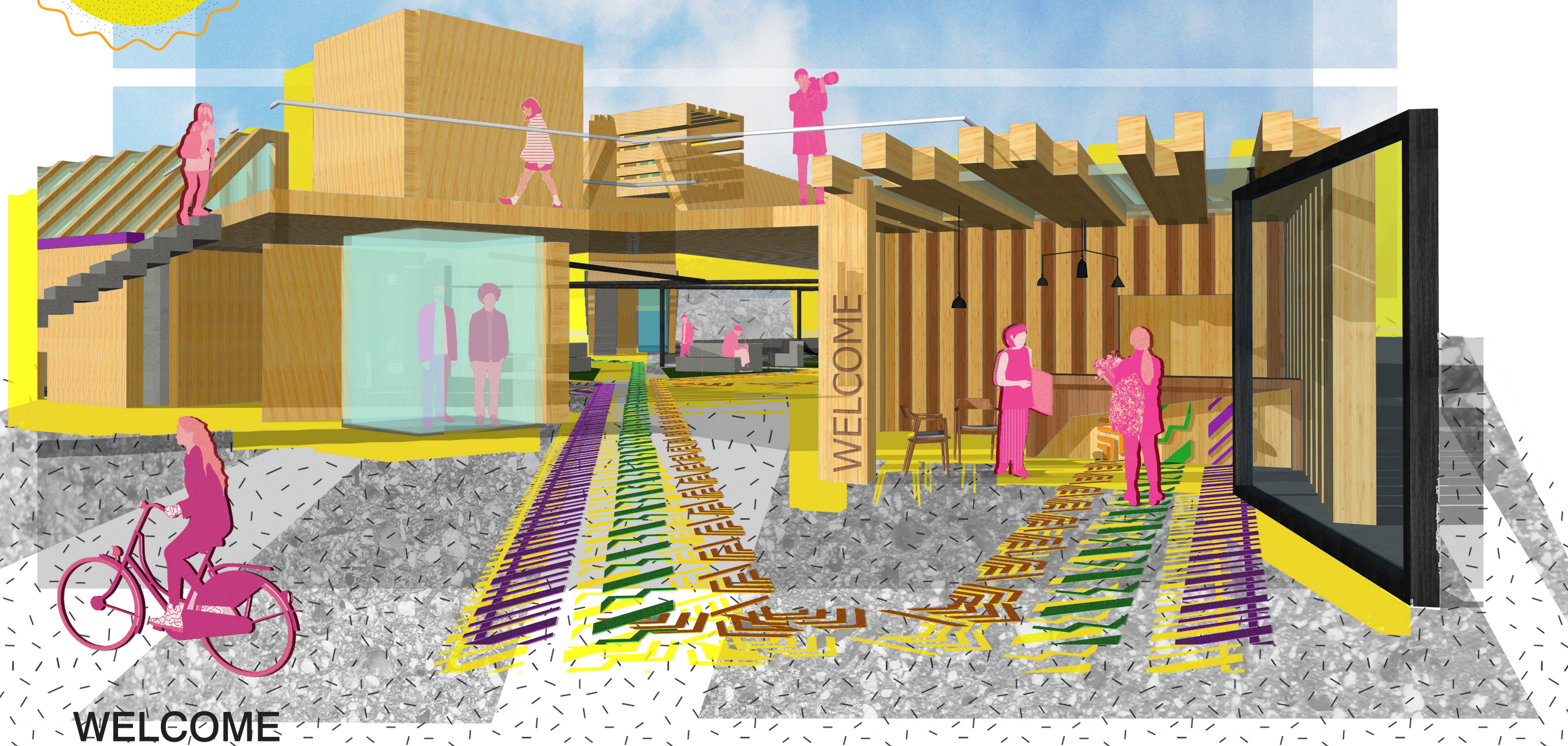
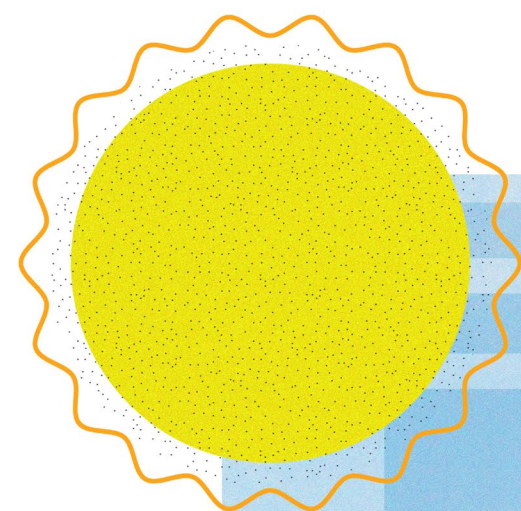


FULL PLANS

- 1 - WELCOME
- 2 - WOODWORK
- 3 - STUDIO
- 4 - GROW
- 5 - SHARE
- 6 - COURTYARD
- 7 - VIEWPOINT
- 8 - TOILETS



SECTION A



WELCOME

WELCOME DRAWINGS

As the first point of contact the welcome space stands as an open and accessible environment, that invites the community to explore the opportunities and events at KIN.

Just like the rest of KIN's structure, the welcome space has a repeated linear structure with openings that allow fins of light to filter through the interior.

PLAN

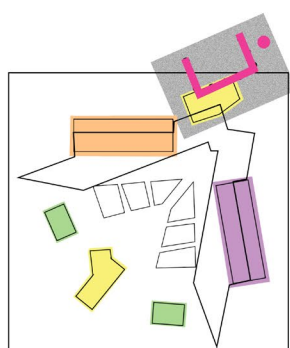
NORTH ELEVATION

WEST SECTION

Cast pendant light, 2017.
Designed by Thomas Chung & Jordan Murphy.



Hiroshima armchair, 2008.
Designed by Naoto Fukasawa.



0 5 10 20m

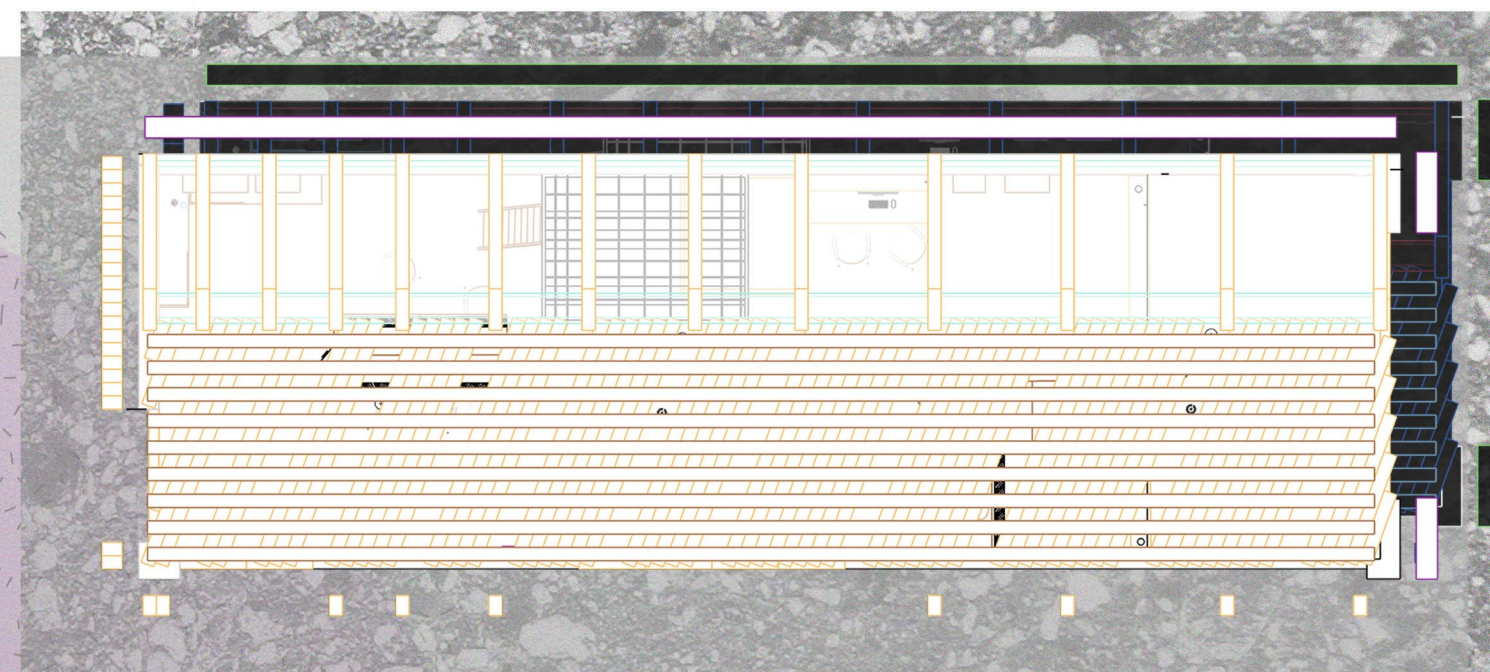


STUDIO

STUDIO DRAWINGS

Inside the studio hub, creativity, collaboration, and expression are at the core of the coaching experience.

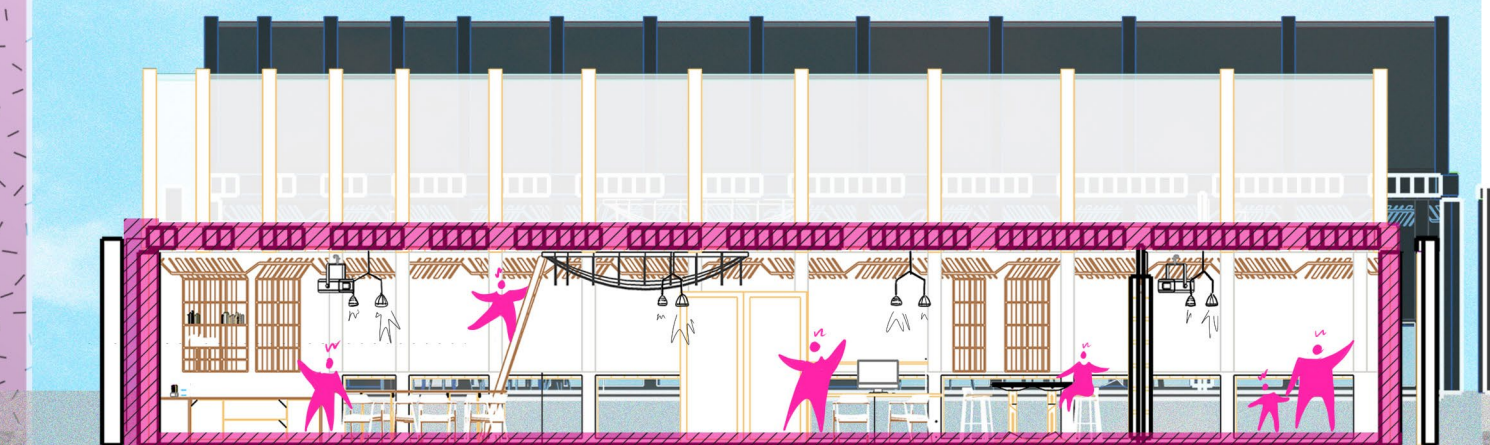
Catering to this is an adaptable floorplan providing multiple workspaces for learners to create at, ranging from relaxed social spaces to refining desk workstations. The main layout follows an inspire, experiment, refine and display flow. This allows users to develop their skills or projects collaboratively over large adjustable table tops, to spending some time working or hanging out in the net seating in the roof.



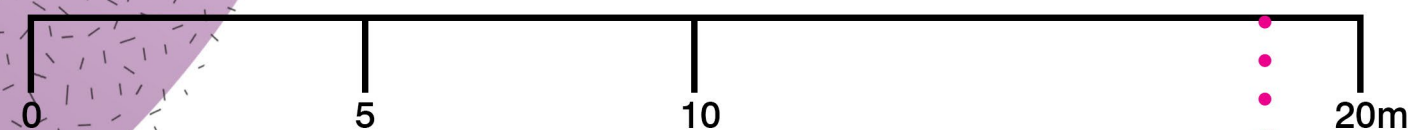
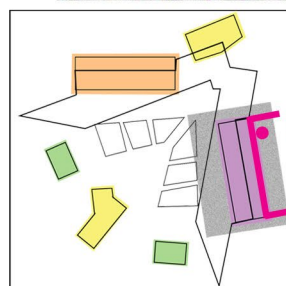
PLAN



EAST ELEVATION



WEST ELEVATION SECTION





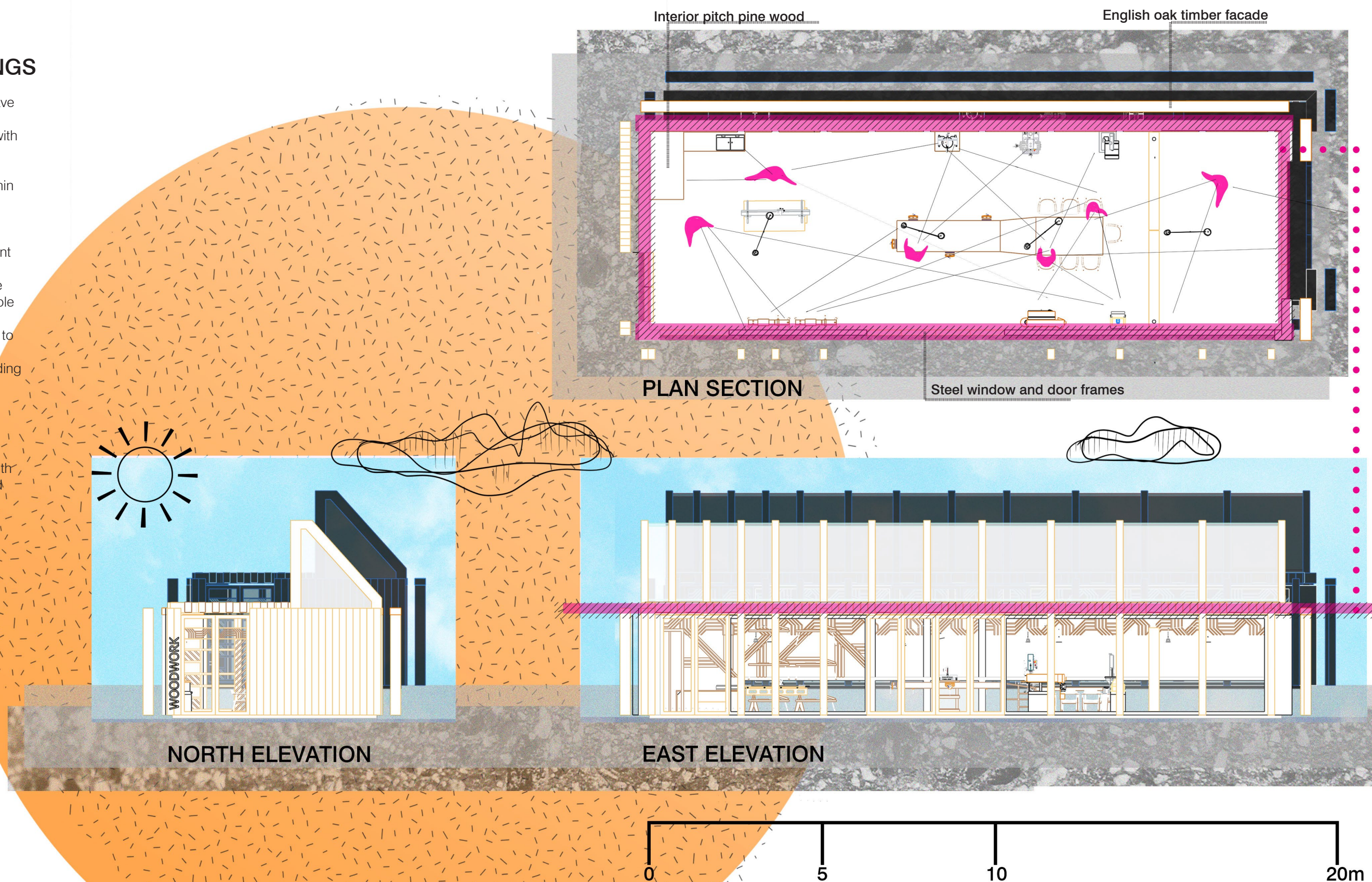
WOODWORK

WORKSHOP DRAWINGS

Inside the woodwork hub learners have the opportunity to develop their practical hand skills. When working with natural materials, hand tools and machinery, risk assessment and problem solving are focal factors within this skills space.

Learning through doing offers an engaging and exploratory environment and the woodwork hub has plenty of space for mess and working on large scale projects. A generous centre table stretches through the space with lowered vice workbenches, reaching to the raised end space providing a seating area for refinement. Surrounding the main workstation is the essential tools from drills and saws to sanders.

Just as in the studio space, the workshop holds an exhibition area with adjustable display cases that expand and retract depending on the event.



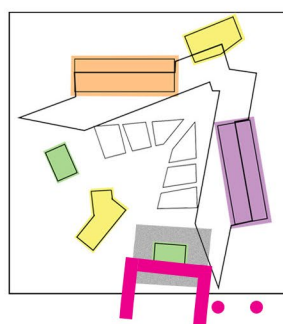
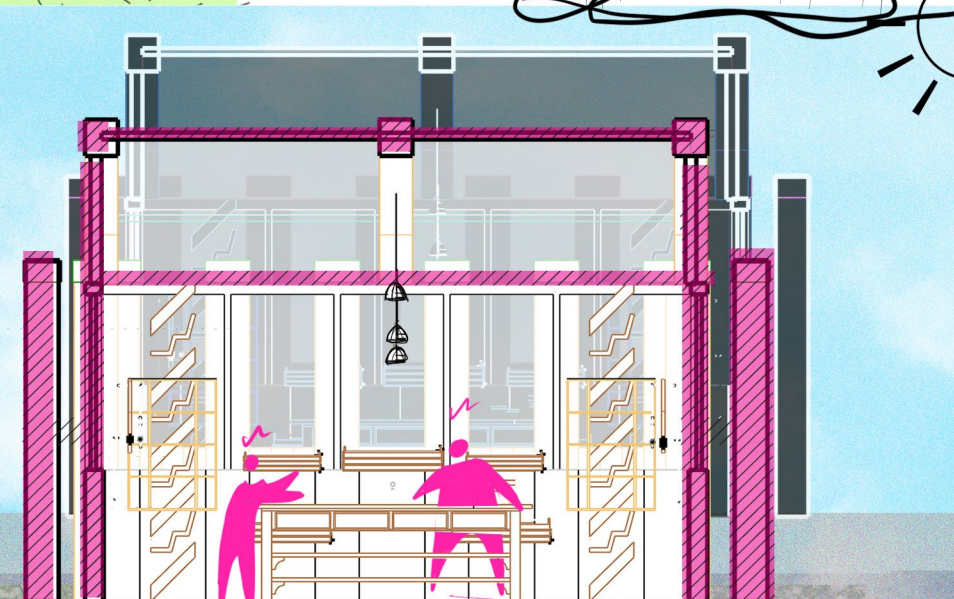
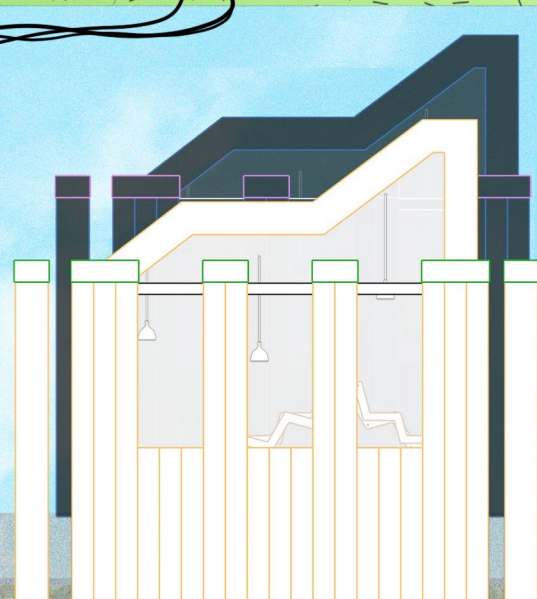
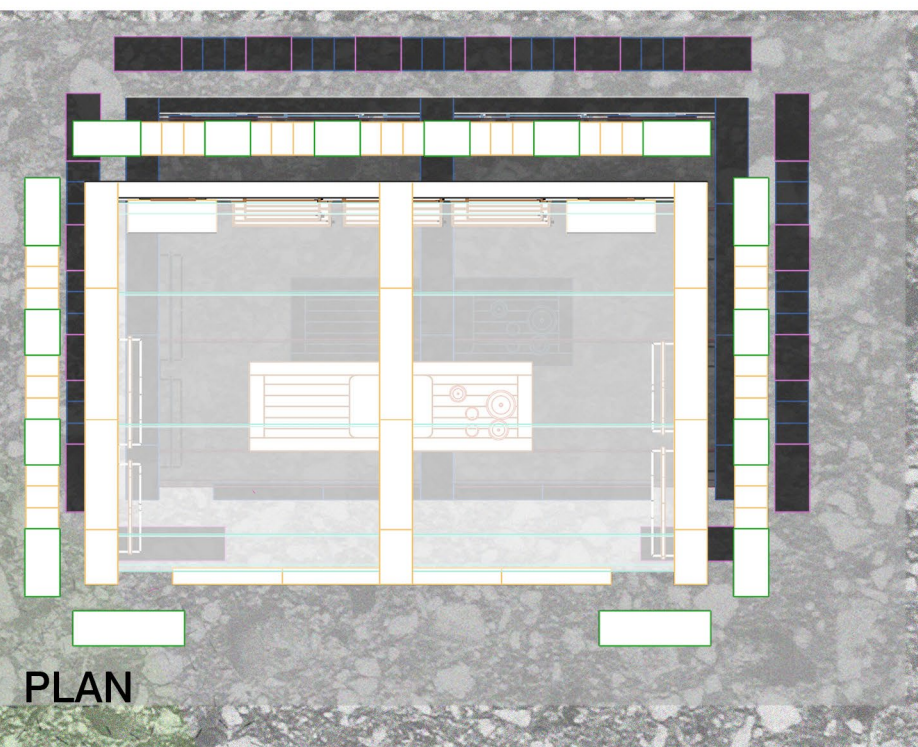


GROW

GROW DRAWINGS

The grow shed allows learners to experience a more hands on and intimate relationship with food. Here, nurture and refuge are the most important, helping people learn about prepping, and maintaining plants from fruit and veg to flowers in a peaceful environment.

Wayfinding pattern finds it's way inside just as the other zones, through tool hangings on the walls, internal facade impressions, and storage spaces.



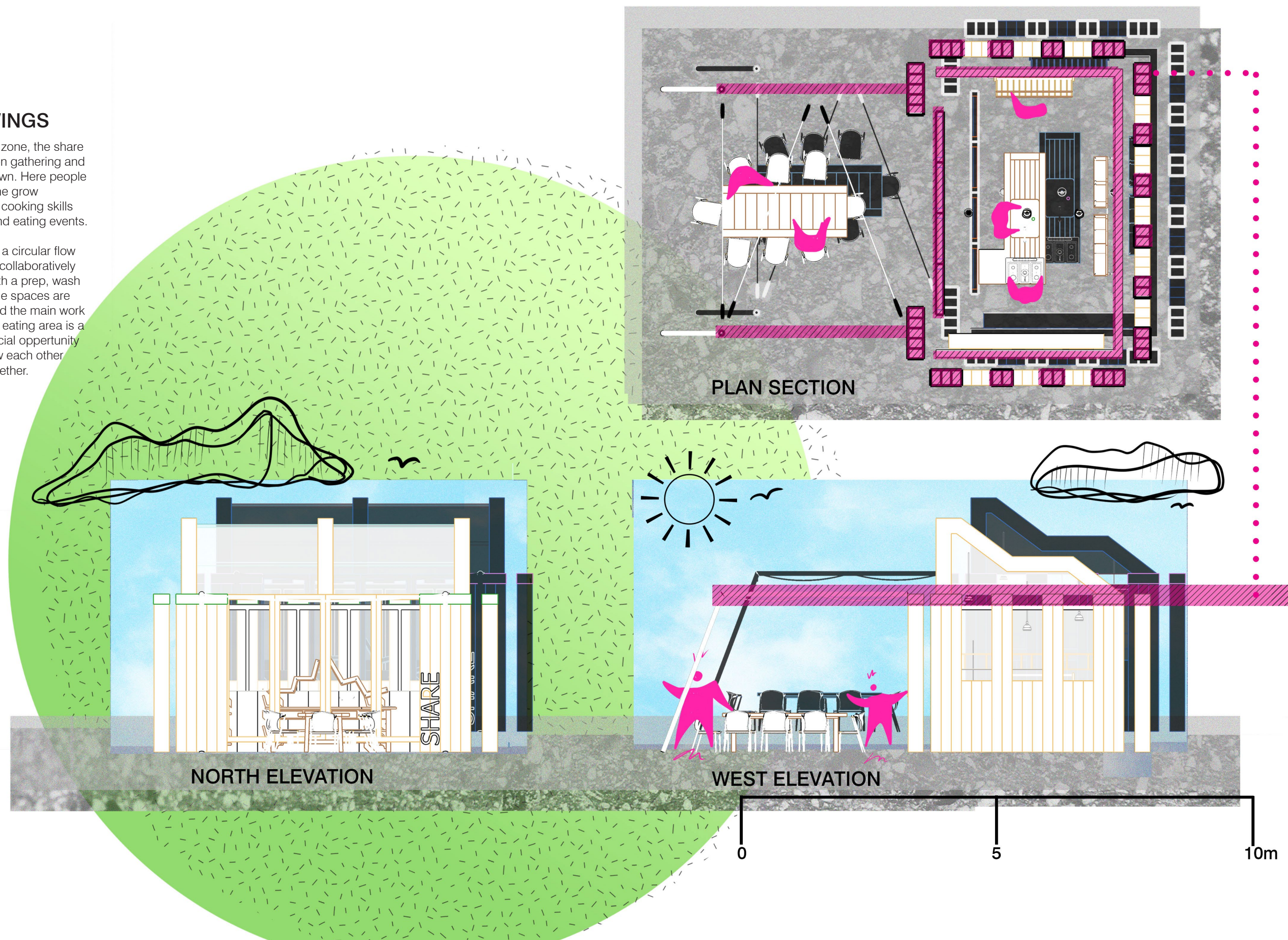
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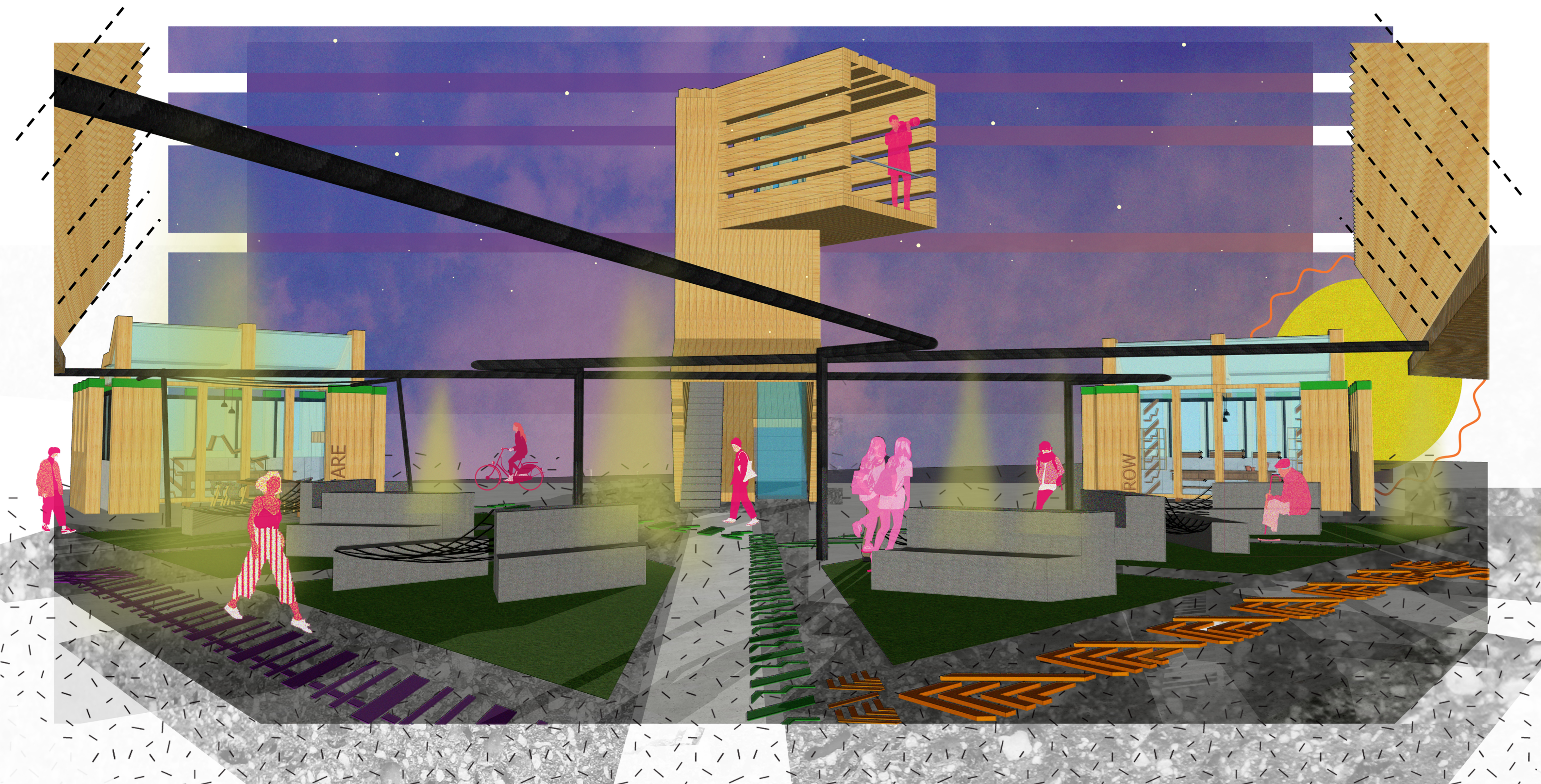


SHARE DRAWINGS

Following from the grow zone, the share shed focuses primarily on gathering and sharing the produce grown. Here people learn how to complete the grow process by developing cooking skills and hosting collective and eating events.

The light open shed has a circular flow allowing people to work collaboratively over a large table top with a prep, wash and cook station. Storage spaces are within close reach around the main work surface, and the outside eating area is a relaxing and informal social opportunity for people to get to know each other better whilst working together.





COURTYARD

I would like to take the opportunity to thank the variety of people that helped along the way with my project, including but exclusive to:

- Everyone that I interviewed and gained site access from
- IED staff members Gary, Linsey and Andy
- DJCAD Make Space technicians Rob and Ali
- DJCAD Woodwork team
- DJCAD Metalwork technician Jason
- Dovetail



KIN

**Holistic hands on skill exchange
hub for young adults.**

