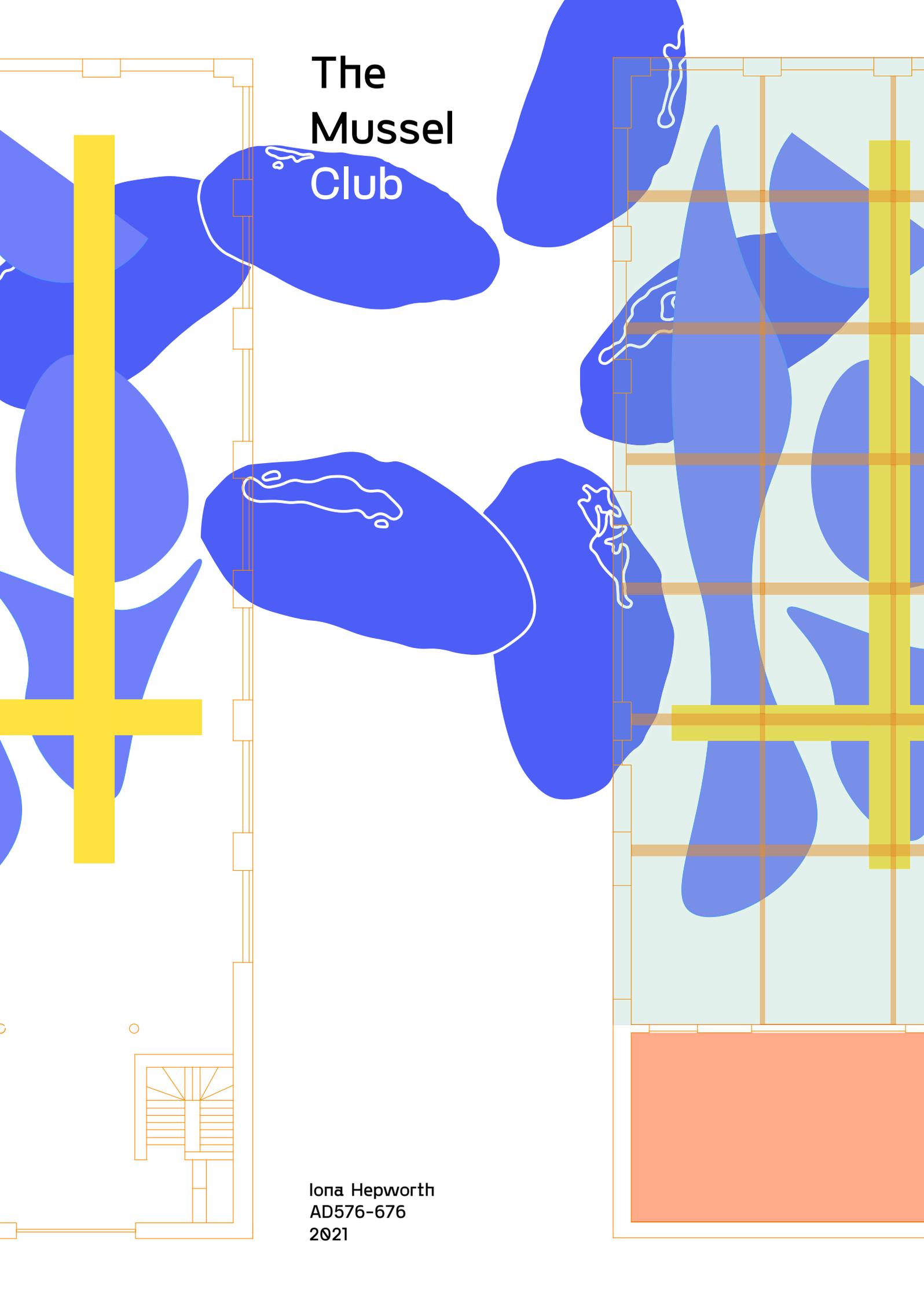


The Mussel Club



Iona Hepworth
AD576-676
2021

The Mussel Club is a pioneering freshwater mussel farm with its own Supper Club that aims destabilized the traditional format of dining by combining cultivation and eating in a shared space.

The project began with an exploration into two contrasting characters, who are described in detail in Chapter One. Through working out their personalities grew an interest in Supper Clubs and the community concept around them which in turn became the focus of the project. The production and cultivation of food for the Supper Club opened up research into aquaponics systems, then specifically into freshwater mussels.

Chapter One describes the characters and lays out research about their shared programme. In *1.0 The Characters* flatlays for each character give an insight into the characters personalities and backgrounds. *2.0, Supper Club* lays out the initial research into the history and social context of the supper club concept.

Chapter Two analyses the site through maps and existing drawings and images. *1.0 Mapping* includes 2 maps designed for each of the characters, these maps follow on from their flatlays and solidify their personalities. *2.0 Language* uses existing drawings and images to extract information of the site.

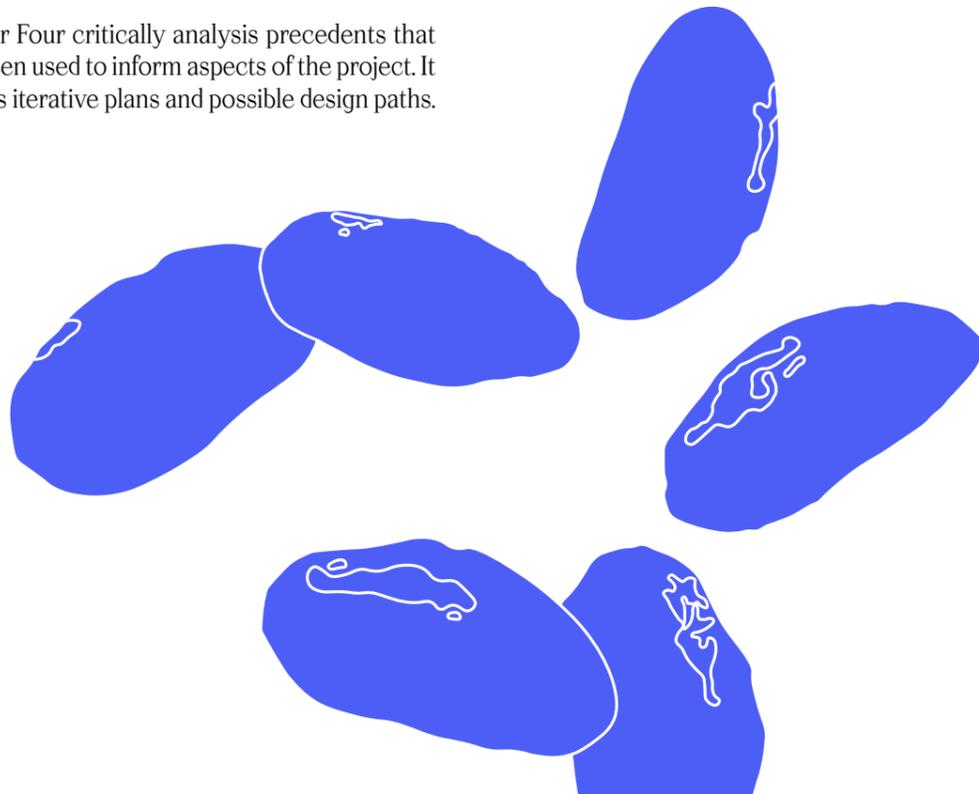
Chapter Three looks into agriculture and the different systems and technologies that have been developed to cultivate sustainably, namely Naturhus concept and aquaponics.

Chapter Four critically analysis precedents that have been used to inform aspects of the project. It includes iterative plans and possible design paths.



Fig. 1, Digital Nomad Collage, Author

Fig. 2, Agronomist Collage, Author



1 - 28 Chapter One
 3 - 22 1.0 Characters
 23 - 28 2.0 Supper Club

29 - 46 Chapter Two
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 37 - 46 2.0 Language

47 - 72 Chapter Three
 49 - 62 1.0 Agriculture
 63 - 72 2.0 Freshwater Mussels

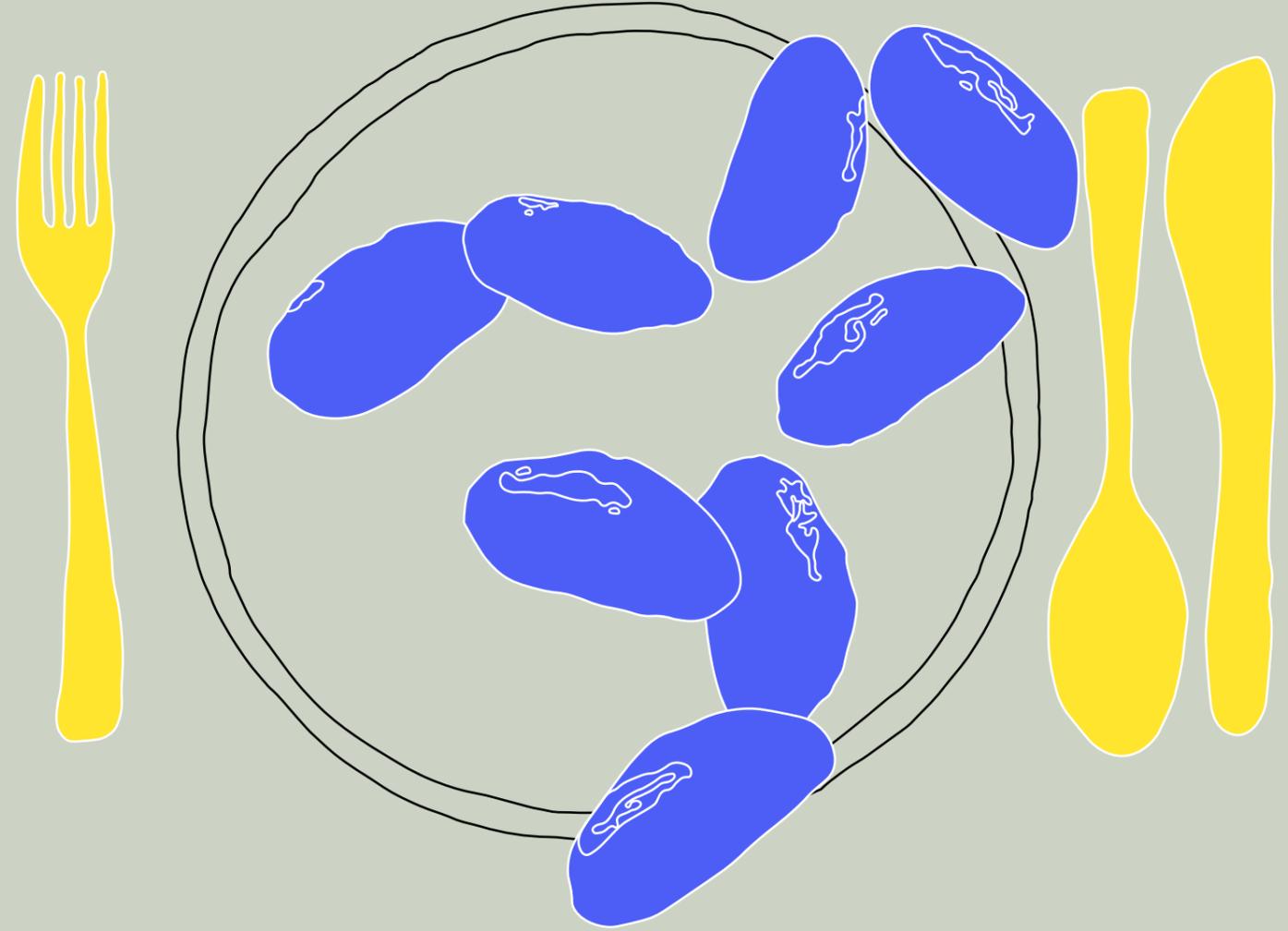
73 - 86 Chapter Four
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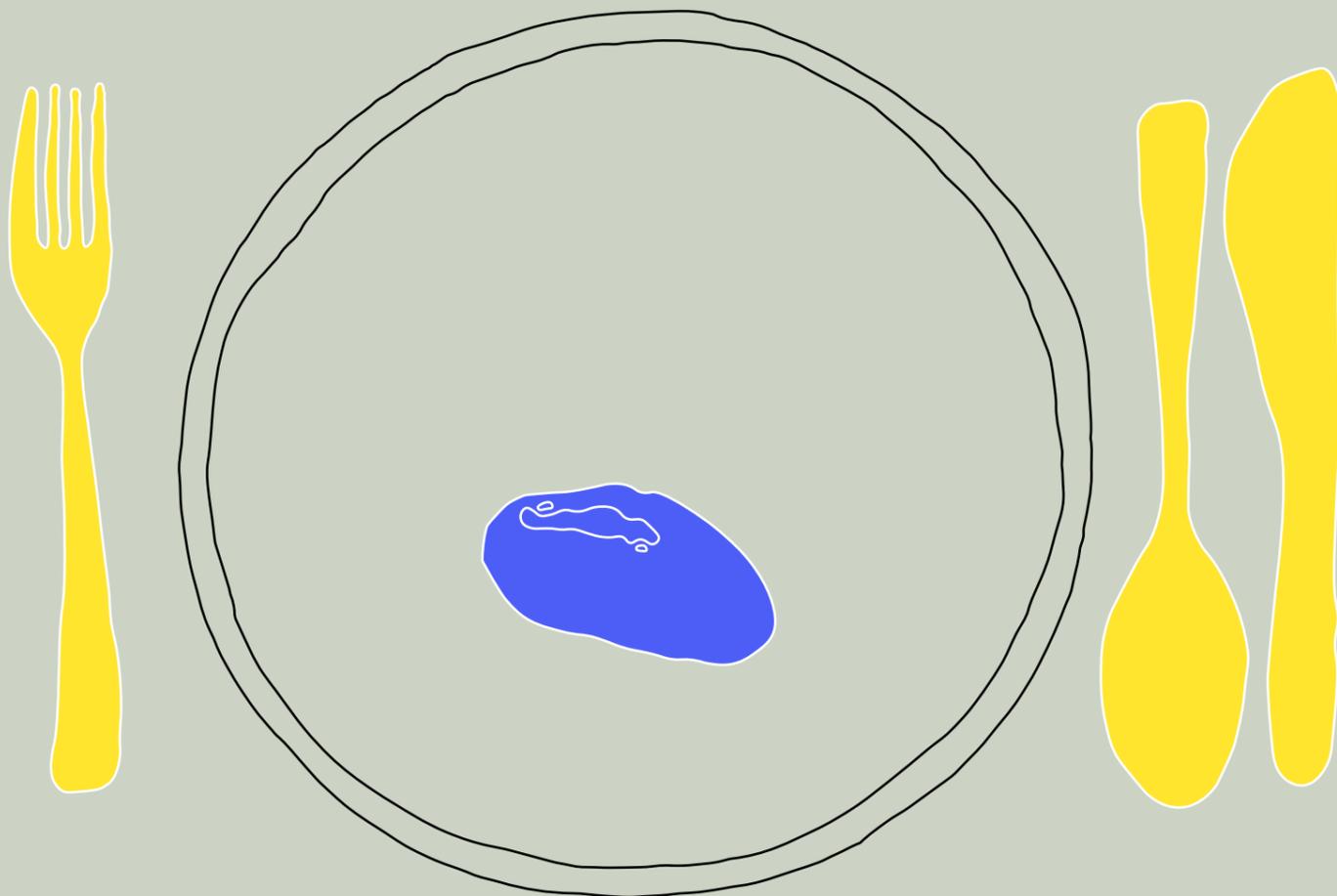


Contents



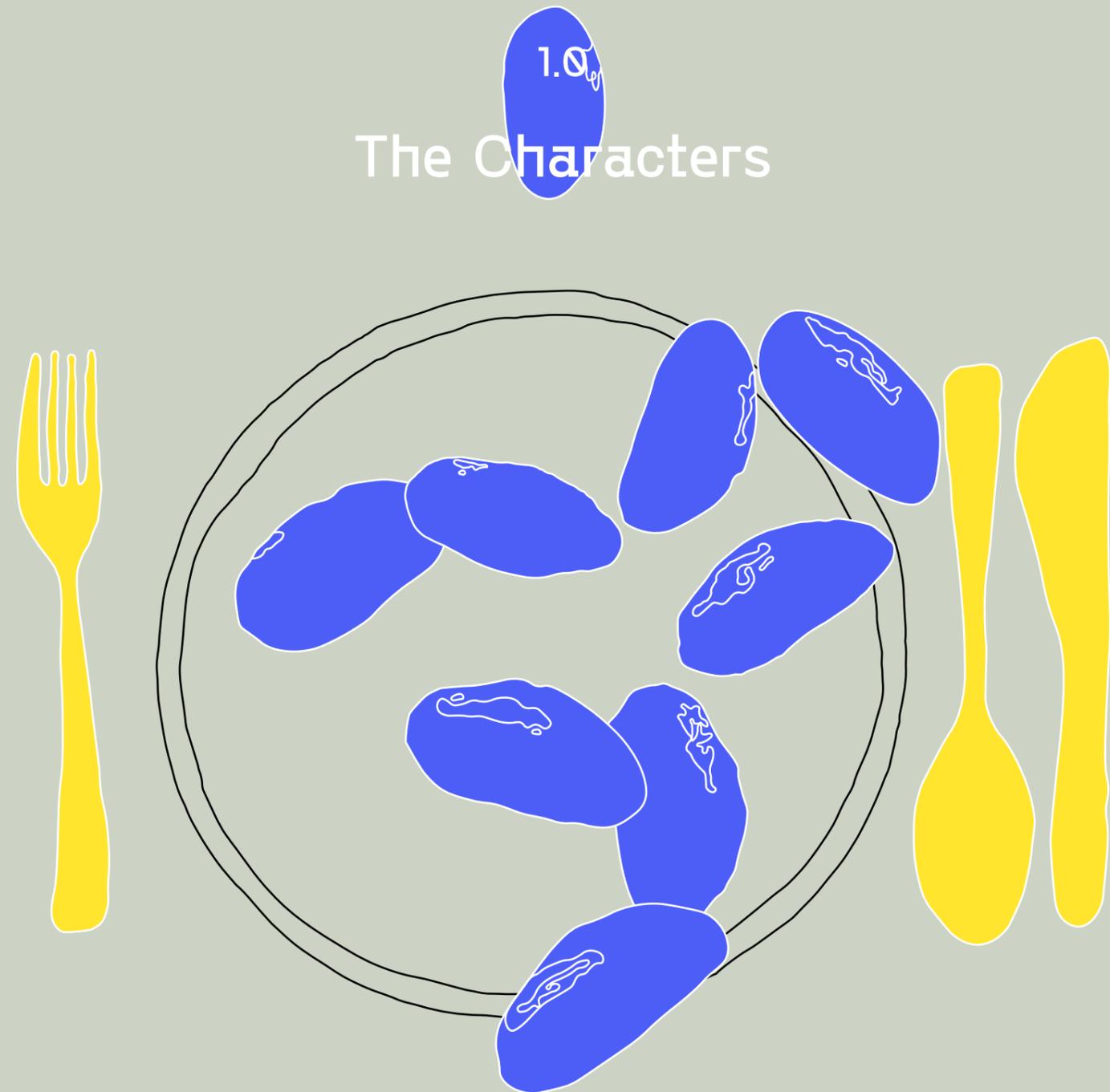
Chapter One

Introduces the characters and lays out the concept of Supper Clubs.



1.0, *The Characters* describes the two characters; the Digital Nomad, Aera and the Agronomist, Rebecca. A carefully choreographed Flatlay for each of the characters gives a detailed insight into their personalities and backgrounds. The Flatlay informs the reader of the character's careers which become integral to the development of the programme. Inasmuch that their careers; a digital nomad food blogger and an agronomist create the foundations of the central element of the programme; a supper club.

The Flatlay should be viewed as personal documents created by each of the characters. Imagine that they have chosen items that represent important aspects of their lives. Some things are sentimental to them whilst others are practical however everything is there to narrate the story of their lives as individuals.



Digital Nomad

Name: Aera Yamamoto
Age: 32



Fig. 3, Digital Nomad Collage, Author

Items for the Flatly have been carefully choreographed in order to provide the viewer an instant snapshot into the life of the Digital Nomad, Aera.

Specific items:

Passports show her dual nationality as well as her nomadic lifestyle.

Tech items indicate her digitally orientated career. It is important to note the camera as she is a food blogger.

Items from different countries; Korea, Japan and the USA provide evidence of her multicultural background.



Fig. 4, Notes, Author



Fig. 5, Digital Nomad Flatlay, Author

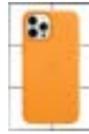


1

Mac Book Pro 13"

My life is spent on this laptop. It goes everywhere with me! It enables my nomadic lifestyle allowing me to work anywhere it want/need to.

Average Daily Usage: 499 mins



2

iPhone 11

This is my personal phone. I use it for keeping up with the friends I have made all around the world. My sister gave me the orange case <3 Has 20,000 photos on it!

Average Daily Usage: 215 mins



7

Notebook

Always got to have a notebook on the go. I am always scribbling and jotting things down. I can be very forgetful otherwise. MD Paper are my go to, they are the best!

Average Daily Usage: 189 mins

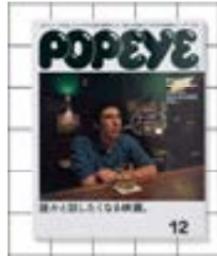


8

Film

I love using film. The purist form of photography now! The process of developing film is so methodical as well as exciting.

Average Daily Usage: ~138 mins



3

Popeye Magazine

Favourite magazine, its Japanese which is nice for me to keep reading Japanese. The clothes in it are amazing. It makes me want to go back and live in Japan so much!

Average Daily Usage: 22 mins



4

Metal Korean Chopsticks

Always have these in my bag somewhere. They are my favourite!

Average Daily Usage: 31 mins



9

Aero Press

I love my coffee and this is so handy for travelling. Always can make a great coffee wherever I am.

Average Daily Usage: 23 mins



10

Headphones

Have to have these especially when I am travelling. I can switch off listening to my music. I am really into podcasts at the moment, The Receipts is my current favourite. Also they're pink which I love!

Average Daily Usage: 300 mins



5

Canon AE-1

One of my most pride possessions. I have used this camera some much both for the food blog and also general life.

Average Daily Usage: 232 mins



6

Cook Korean! Cookbook

I got given this cookbook 5 years ago and I have almost cooked everything in it. Growing up in the US and travelling around the world has made me want to stay close with my Korean culture. In my opinion the best way is through food.

Average Daily Usage: ~75 mins



11

Korean Passport

This is so important to me. Obviously it allows me to travel but it also a big part of my identity having dual nationality. I know having it doesn't define my but in some ways I love knowing that I have it.

Average Daily Usage: ~30 mins



12

USA Passport

This is the one that allows me to get places, without visas a lot of the time.

Average Daily Usage: ~30 mins

Fig. 6, MacBook Pro, Author
Fig. 7, iPhone, Apple
Fig. 8, Popeye, Norse Store
Fig. 9, Chopsticks, Shutterstock
Fig. 10, Canon, Amazon
Fig. 11, Cook Korean, Amazon

Fig. 12, Notebook, Author
Fig. 13, Kodak Film, Digital Camera
Fig. 14, Aero Press, Aero Press
Fig. 15, Headphones, Apple
Fig. 16, Korean Passport, Wiki
Fig. 17, USA Passport, Wiki

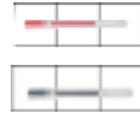


13

Hershey

Guilty pleasure!
I love chocolate, I know Hershey isn't as good as
Cadbury's but come on let me enjoy it!

Average Daily Usage: ~7.5 mins



14

Red + Blue Pen

Muji pens are my favourite, always have a red and a
blue on my bag!

Average Daily Usage: ~174 mins



19

Apple Watch

Got this with my laptop upgrade.
Not too sure about it to be honest but its great for
me to track my exercise. I spend a lot of time sat on
my laptop so it gets me out the house to workout.

Average Daily Usage: ~720 mins



20

Mouse

Very important to have my mouse seeing as I work
on my computer so much. Otherwise I get hand
cramps ha!

Average Daily Usage: 487 mins



15

Mintia

The best Japanese mints. Always have a pack of
these somewhere in my bag.

Average Daily Usage: ~5 mins



16

Ramen Key Ring

Its cute right, my little brother got it for me when
we went to Osaka.
Keep it on my backpack!

Average Daily Usage: ~297 mins



21

Omamori

This is my travelling omamori. They are lucky in
Japan. I got it in the Kyoto Shinto shrine 7 years
ago, its been in my backpack ever since.

Average Daily Usage: ~324 mins



22

Screenshot

Screenshot of my food blog page. Little snapshot
into my blogging world.

Average Daily Usage: ~260 mins



17

Laptop Charger

Cannot go anywhere without my charger. God forbid
my laptop dies whilst I'm out working!

Average Daily Usage: ~355 mins



18

My Pill

Been on the pill for years. Got to stay safe also
helped my boobs grow haha!

Average Daily Usage: ~2 mins

Fig. 18, Hershey's, Biago
Fig. 19, Pens, Muji
Fig. 20, Mintia, Blippo
Fig. 21, Key Ring, Foundland
Fig. 22, Charger, Apple
Fig. 23, Pill, Spunout

Fig. 24, Apple Watch, Apple
Fig. 25, Mouse, Curry's
Fig. 26, Omamori, Sparkling
Fig. 27, Screenshot, Instagram

Agronomist

Name: Rebecca Willow
Age: 32



Fig. 28, Agronomist Collage, Author

Items for the flatly have been carefully choreographed in order to provide the viewer an instant snapshot into the life of the Agronomist, Rebecca.

Specific items:

Gardening tools show her dedication to her career and her outdoors lifestyle.

Personal items, including the pendant and gardening manual show her strong family connection.

Orange and lemon depict how she is health conscious.



Fig. 29, Notes, Author



Fig. 30, Agronomist Flatlay, Author



1

Basil Seeds

Love growing herbs from seed. Its so satisfying when the start shooting. Then you get to eat them. I am really into basil at the moment, finding any excuse to make pesto and put it on everything!

Average Daily Usage: ~32 mins



2

Pruning scissors

My Grandpa gave me these for my 21st birthday which was so nice of him. They are super hard wearing but also very delicate when cutting.

Average Daily Usage: 164 mins



7

Nokia

My friends laugh that I still use this but I am not bothered by tech. Don't really have time for apps anyway. I love the simplicity of my phone and its nice not to worry about dropping and breaking it!

Average Daily Usage: 60 mins



8

Manual of Gardening

This book has been in my family for generations. It is what got me into gardening and I have read it cover to cover at least 10 times.

Average Daily Usage: ~85 mins



3

Dibber

Had this dipper for years now, they are so handy for re-potting little saplings.

Average Daily Usage: ~99 mins



4

Cult Collection Gardeners Hand Cream

This is a must have for me! My hands get so dry and chapped when I've been gardening all day. Also it smells so great :)

Average Daily Usage: ~17 mins



9

Porcini Mushroom

I love going mushroom foraging in the autumn. I used to go with my Grandparents who taught me everything I know. Also they are so delicious!

Average Daily Usage: ~120 mins



10

Tomato Seeds

Growing tomatoes from seed is so satisfying. They taste so sweet and are so juicy.

Average Daily Usage: ~18 mins



5

Grandma's Bread Bowl

My Grandmas passed this down to me before she passed away. I love using it to make bread like she used to show me. Its funny how something so simple can make you feel so connected to a time or a place.

Average Daily Usage: ~158 mins

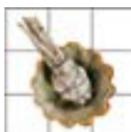


6

Bunch of fennel

I picked this earlier this morning. Its my first harvest of it this year. I am obsessed with fennel at the moment, can't wait to chuck it on everything.

Average Daily Usage: ~14 mins



11

Sage and ashtray

Call me crazy but I am addicted to burning sage. It smells so good and also of course cleanses the room from spirits and such.

Average Daily Usage: 27 mins



12

Dad's old pencil

Somehow this pencil has been around for along time. Can you be sentimental about a pencil..? Well I am!

Average Daily Usage: ~46 mins

Fig. 31, Basil Seeds, Ebay
 Fig. 32, Pruning Scissor, Niwaki
 Fig. 33, Dibber, Wood and Meadow
 Fig. 34, Hand Cream, Crabtree
 Fig. 35, Bread Bowl, 1stDibs
 Fig. 36, Fennel, Amazon

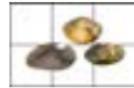
Fig. 37, Nokia, BuzzFeed
 Fig. 38, Gardening Book, Pintrest
 Fig. 39, Mushrooms, GB Chefs
 Fig. 40, Tomato Seeds, Amazon
 Fig. 41, Sage, Author
 Fig. 42, Pencil, Author



Cut resistant gloves

These gloves are so important when mussel harvesting as the most sustainable way to collect mussels is simply by pulling them from their rock. Gloves are 100% necessary as they can be very sharp!

Average Daily Usage: 359 mins



Freshwater Mussels

I love foraging for freshwater mussels. They are so tasty and delicious to cook with. A very underrated food!

Average Daily Usage: 366 mins



19

Gardeners String

String is so important when in the garden. Always got to tie something up. Get through it like nothing!

Average Daily Usage: ~66 mins



20

HAY Peeler

This peeler is the best! Like my kitchen knife it makes cooking a pleasure. Will purposefully find things to peel (call me crazy).

Average Daily Usage: ~39 mins



Orange

I always have a glass of orange juice in the morning, got to get that Vitamin C.

Average Daily Usage: 23 mins



Opinel Pocket Knife

I think every gardener needs an opinel pocket knife, they are so useful! Never know when you're going to need to chop something.

Average Daily Usage: 39 mins



21

Mother's Pendant

This is so sentimental to me as it was my Mother's. It is a pendant of Saint Christopher, the Patron Saint of Travels. She got given it when she went travelling in the 70s. Always wear it!

Average Daily Usage: ~ 1,440 mins



22

Sprouting Onion

Onions are my favourite things to grow, they are so much tastier compared to supermarket ones. Also cook with them pretty much everyday!

Average Daily Usage: ~45 mins



Niwaki Secateurs

These are the best secateurs I have ever owned. They have lasted 5 years already and are still looking sharp. So comfy to hold and are such a pleasure to use.

Average Daily Usage: ~179 mins



Kitchen Knife

I love cooking and this knife makes it even better! Its so sharp and has a nice weight to it.

Average Daily Usage: ~99 mins



23

Lemon

Using lemons in my cooking a lot at the moment.

Average Daily Usage: ~27 mins



24

Hori Hori

I have only recently discovered the hori hori they are such a great tool. Now couldn't imagine not having it my life!

Average Daily Usage: ~68 mins

Fig. 43, Gloves, Parris
 Fig. 44, Freshwater Mussels, Wamp
 Fig. 45, Orange, Innocent
 Fig. 46, Opinel Kife, Opinel
 Fig. 47, Secateurs, Niwaki
 Fig. 48, Knife, Conran Shop

Fig. 49, String, Forest School Shop
 Fig. 50, Peeler, Conran Shop
 Fig. 51, Pendant, Sayers
 Fig. 52, Onion, Practicle Self
 Fig. 53, Lemon, Kathleen DiChiara
 Fig. 54, Hori Hori, Niwaki



25

Trug

So useful for carrying things around the garden or for collecting things when I go out foraging.

Average Daily Usage: ~102 mins



26

Wooden Spoon

A good wooden spoon when cooking is essential. Especially when you're like me and love cooking lots of soups and stews.

Average Daily Usage: ~120 mins



27

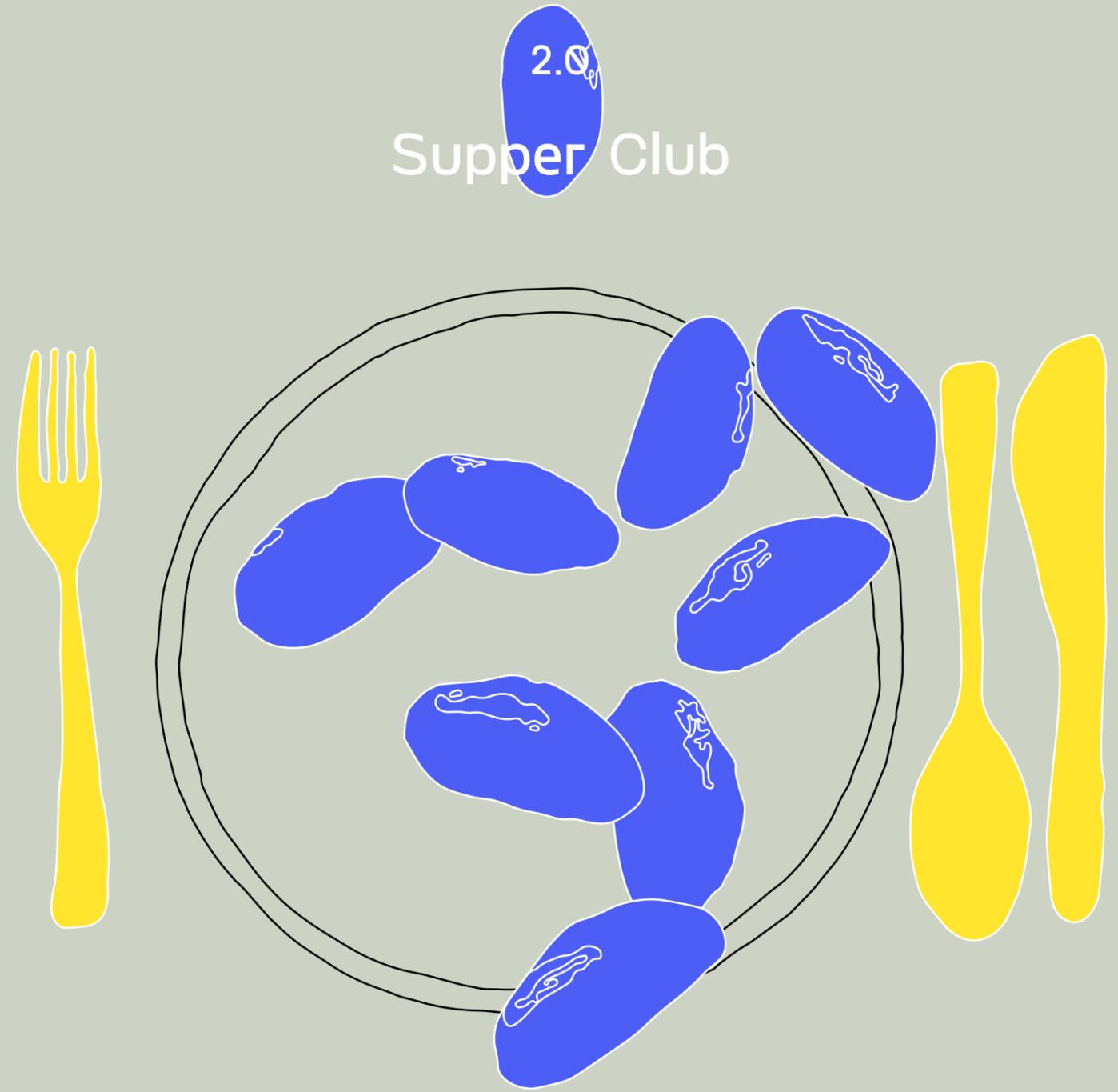
Spade

This is the first spade I ever brought and I am still using it today.

Average Daily Usage: ~120 mins

Fig. 55, Trug, Labour and Wait
 Fig. 56, Spoon, Goodfellows
 Fig. 57, Spade, Highway Garden

2.0, *Supper Club*, describes the concept of a Supper Club and how it is an important part of the programme. Research into Brighton Supper Clubs revealed that they are few and far between with only a handful operating within the Brighton despite it being such a bustling and vibrant city. Supper Clubs are becoming a more common feature of cities restaurant scenes and there is room for more to develop in Brighton as the ones that are held are so popular and spaces are sort after.



Eating and drinking

Despite the characters differences they both share a love of food. Aera is a food blogger who has travelled the world tasting different cuisines whilst Rebecca has come from a long line of agronomists who have mastered the art of food growing. Together they share this passion and combine their talents to create a Supper Club.

The Supper Club becomes the primary focus of the programme, allowing both of the characters to harness their culinary skills and share it with the Brighton public at the same time.

The collage on the right is created by the author and depicts an imagined supper club scene. Using first hand images and collage it provides the viewer with a visual representation of the theme and style of the supper clubs. It is designed as if Aera (the food blogger) is taking a photo of her table setting mid way through supper.



Fig. 58, Supper Club Collage, Author

Supper Club

Supper Clubs are independently owned restaurants, where they have a reduced or single menu. They became popular in the 1930s and 1940s in the United States. Traditionally supper clubs were a destination where guests would spend the whole evening in a relaxed and casual manner.

Today Supper Clubs often refer to underground restaurants and are also known as home bistros, guerilla diners, secret restaurants and pop-up restaurants.

They often feature a paired back menu and intimate dining setting that create an experience beyond just food. In general there is a set price which covers food and drinks. In many cases Supper Clubs follow a theme or are designed for a specific group of people for example The Sisters Table based in London which is for women only.

Unlike normal restaurants Supper Clubs are designed to allow the guests to meet each other creating a community, therefore the space in which they are held becomes very important. Large dining tables are often used to fabricate a home dining setting making guests feel relaxed.



Bookish Supper Salon

Hosted by Laura Lockington the Bookish Supper Salon combines a literary salon with a pop up supper club.

*"Wine. Supper. Conversation.
Best selling authors, local sourced, seasonal suppers.
Anyone and everyone can be part of the Bookish
Supper Society."*



canTina Brighton

Tina Horvath is the chef behind Brighton's most successful pop up canTina. Events are often bespoke and focus on food that is prepared with love and a desire to create uncomplicated and delicious dishes. Supper clubs have been taking place since 2011 and have received national praise in the media.



One Supper Club

Henry and Libby have been hosting One Supper Club since 2015 which stemmed from a desire to become more connected with the community and give back to Brighton. They are passionate about using fresh, locally sourced ingredients and often hold a Five-Mile Feast.

*"An attempt to challenge the increasingly frantic
pace of modern living." - Henry*

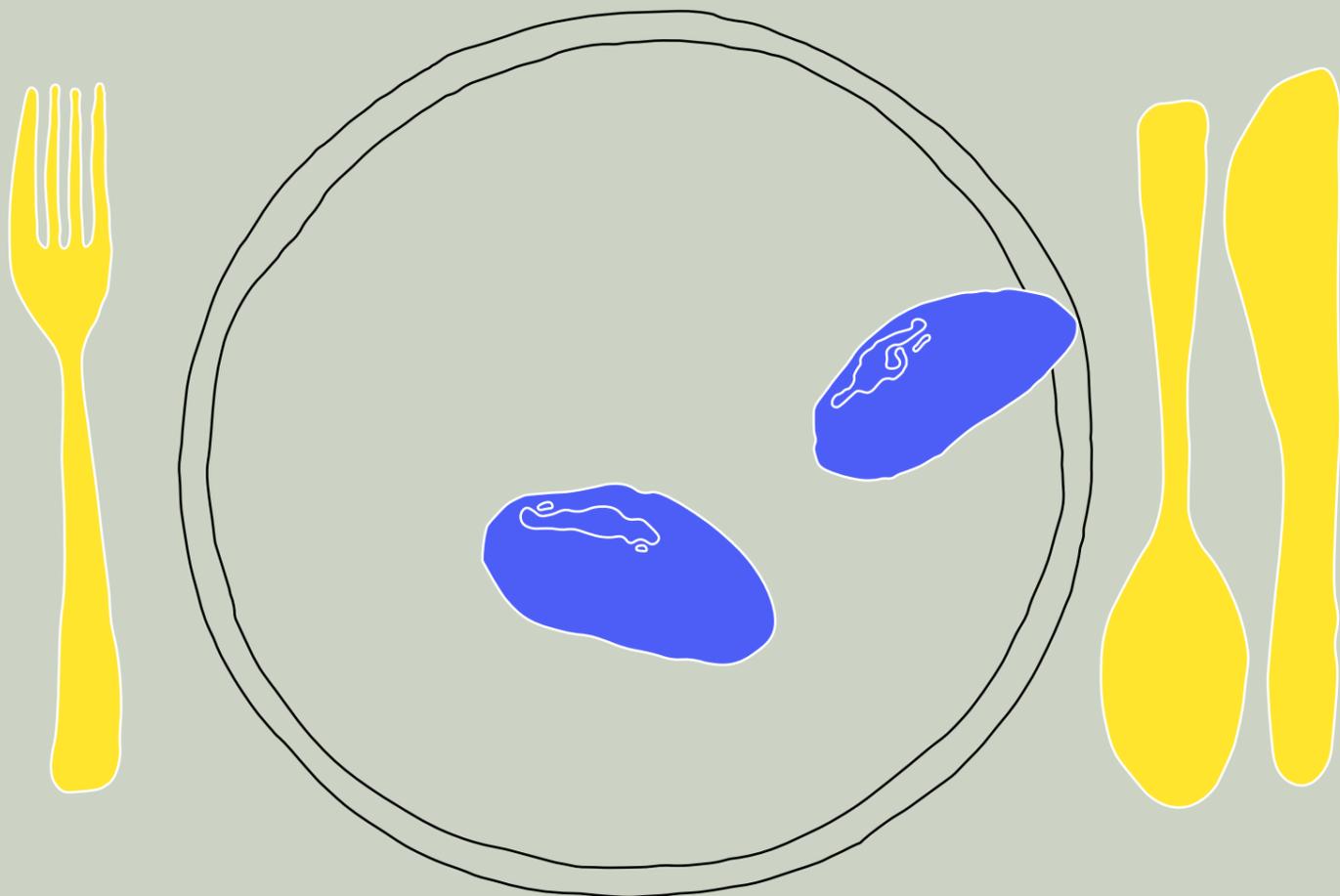


Four.

Four consists of a series of pop up supper clubs run out of restaurants around Brighton and Hove. It is hosted by acclaimed chef Aaron Dalton who trained in a number of London's Michelin Star restaurants but decided to bring it home to Brighton and share his talent with the community.

Chapter Two

Describes the site through location maps and analysis of the building language.



1.0 Mapping, includes maps that have been designed to inform the viewer of the sites location within Brighton with different maps made to highlight specific aspects of the programme.

Restaurant Map

The restaurant map is designed specifically for Aera, the digital nomad to show restaurants within a 10 minute walk from the site which she could use for her food blog.

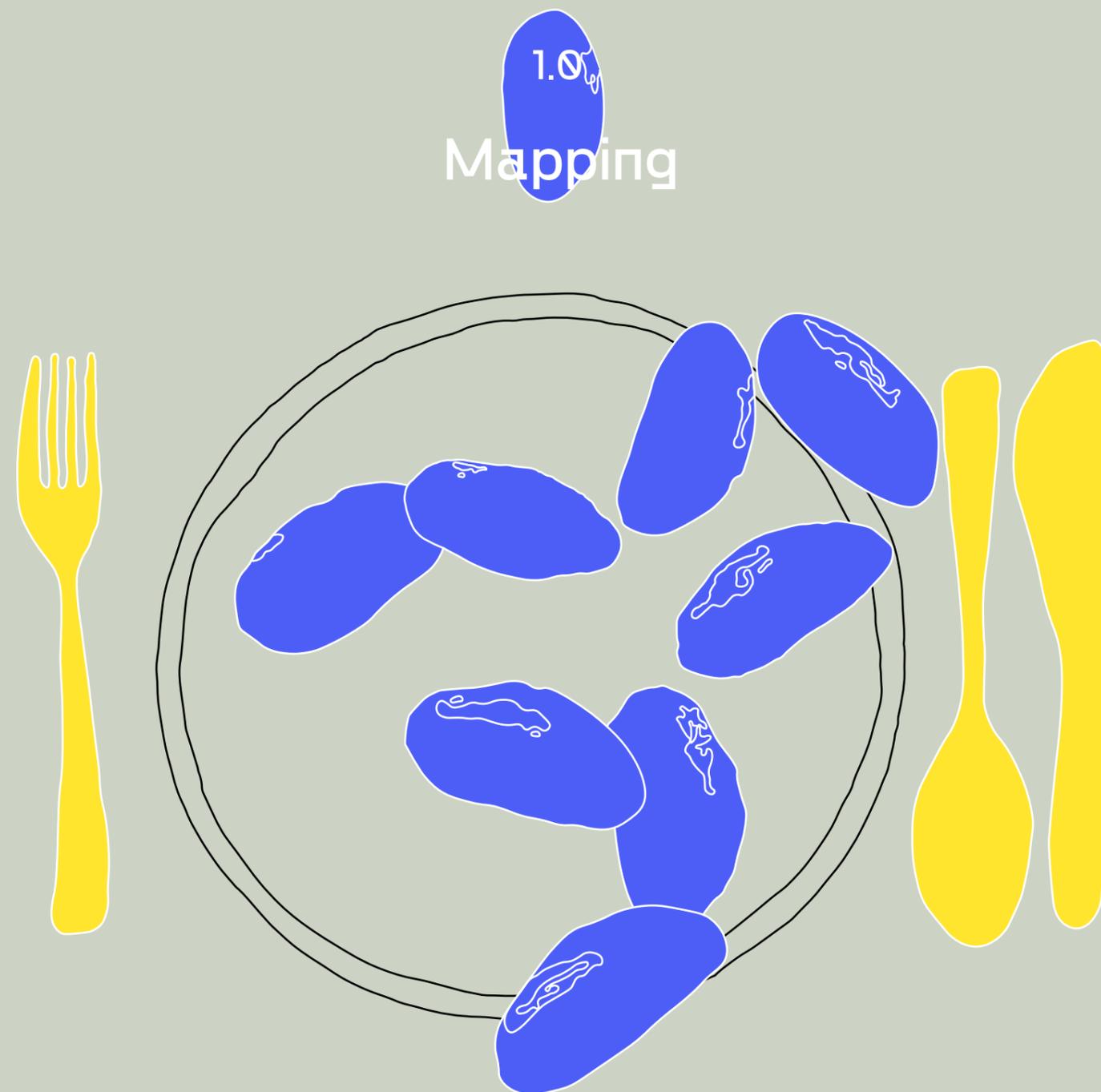
It follows a collage style which is threaded throughout the project. Using cut out streets from Google Maps. The images are taken from the restaurants websites and cut out in the collage style.

Green Space Map

The green spaces map was designed at the beginning of the project to show green spaces within a 10 minute walk of the site.

It is important to note the differences between the public and private spaces. The level runs as a green channel through the centre of Brighton and is the largest public green space in the vicinity.

The site, located in the North Laines is largely surrounded by private green space. These private green spaces take the form of small gardens which run the length of the terraced houses.



Map showing restaurants within a 1km radius of Gloucester Mews Car Park



Fig. 63, Restaurant Map,

Map showing green spaces within 1km of Gloucester Mews Car Park



Private green space

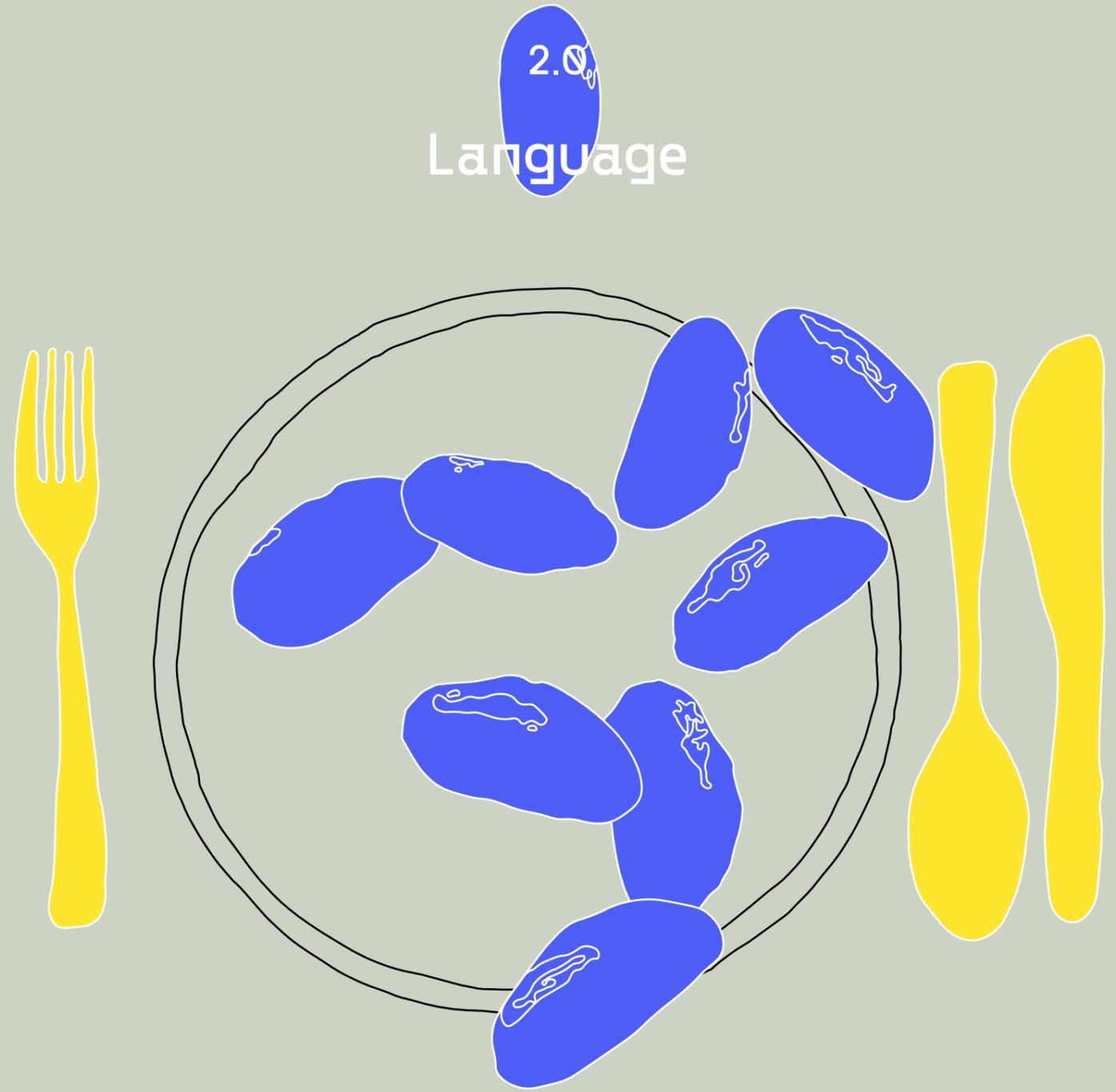


Public green space



Fig. 64, Green Spaces Map, Author

2.0, *Language* analysis the existing building which will host the programme. Through this analysis an understanding of the existing structure is formed allowing design iterations and conscious interventions to be tested.



Existing Site

The host site is Gloucester Mews Car Park which is located in the North Laines in Brighton city centre. The building was built around 1870 as the headquarters of the Royal Artillery Volunteers. It was used by the military until 1949 then becoming a newsagents' warehouse. Prior to this the site was the Eagle Iron Foundry, however there is little historical information about this. Today it has been converted into a private car park.

The building is a large open space with much potential. The repetitive arches give off a cathedral like atmosphere. Above the entrance there is a 2 bedroom apartment which is self contained. It remains in good condition.

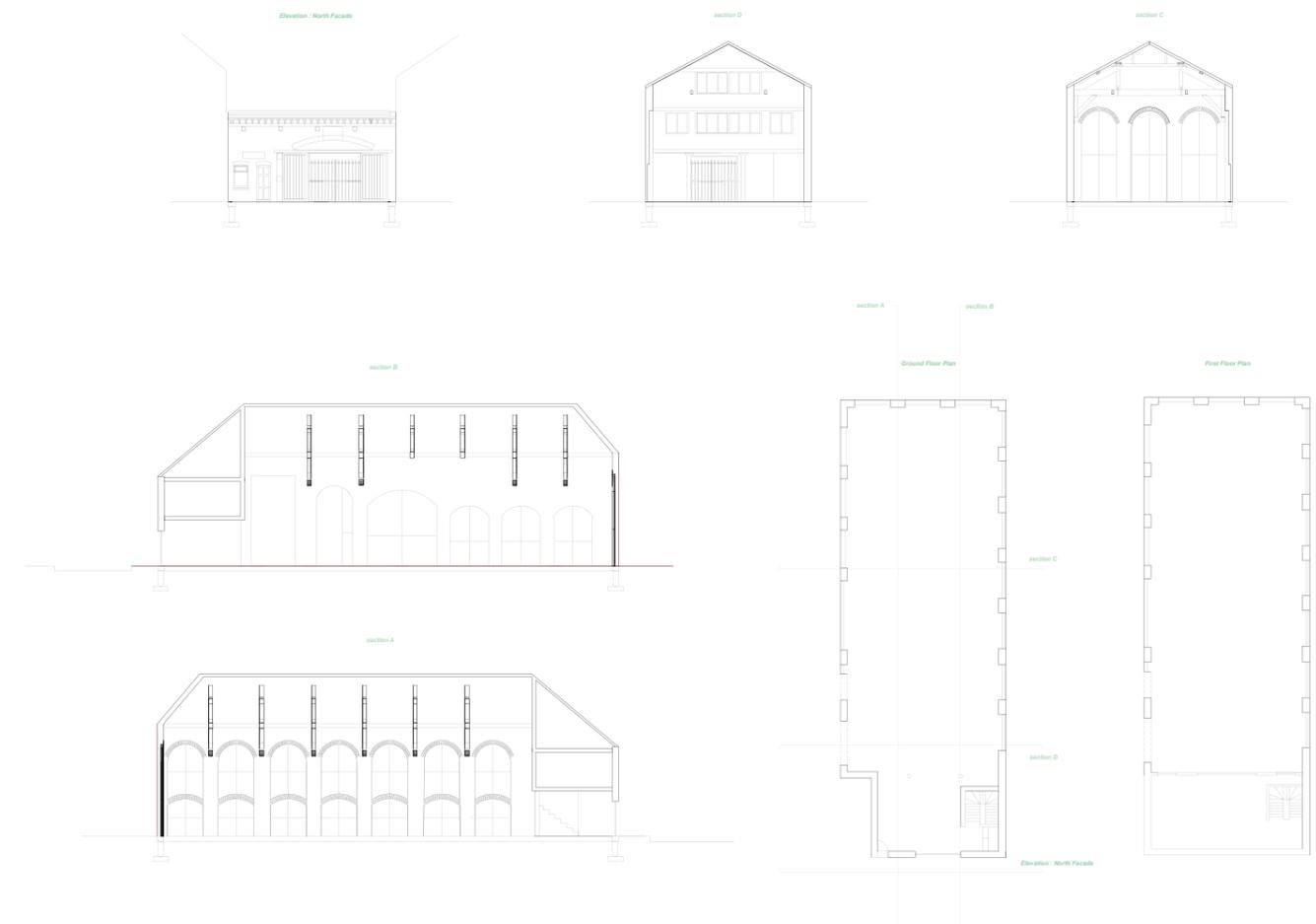


Fig. 65, Existing Site Drawings, Author

Existing Materials

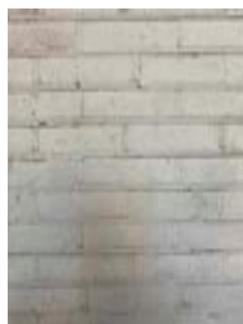
The existing materials will remain in the new programme. The historical context of the building is based around military action which the building still echoes as it is obviously built with functionality at the core. The brick work is primarily original and is texturally intriguing with layers of paint showing. Overall the palette is paired back; whites, blacks, browns and concrete grey make it an exciting blank canvas to work with.



Old Brick

Layers of paint have been exposed over time. Highlighting the history of the building along with its possible programmes.

The layers of paint create a new texture different to bare brick work.



New Brick 1.0

The new brick informs how the building has undergone transformation and restoration.

It has been painted white in order to blend with the rest of the brick work.



New Brick 2.0

Different bricks have been used in this case. Less care has been taken to match these bricks to the existing. Possibly a financial saving tack.

Fig. 66, Old Brick, Author
Fig. 67, New Brick 1.0, Author
Fig. 68, New Brick 2.0, Author



Rusting Gates

It is not possible to tell if these are the original gates. How ever despite this you can see very visible rusting and weathering occurring to the steel.



Floor Threshold

The entrance threshold is divided into 3 different materials:

Cobbles: are probably the original floor that would have run throughout the structure but are now only visible at the entrance. It gives an insight into the history of the building.

Iron run: old, weathered iron runner is for the sliding barn doors. Moss growth is evidence of infrequent usage.

Concrete: modern addition of a concrete floor which presumably covers the remaining cobbles.



Sliding door and Gate

The three layers of the entrance are visible in this image. The white wooden barn door hangs away from the brick wall.

The gate connection is simple and functional. The addition of electric gate technologies are visible too.

Fig. 69, Rusting Gates, Author
Fig. 70, Floor Threshold, Author
Fig. 71, Sliding door + gate, Author

Elevation of East wall of the site.

Existing Language 1.0

The arches are a focal point, their repetitive nature and great scale set a cathedral like tone for the interior of the site. In total there are 22 arches 11 round arches and 11 segmented arches. Only 1 arch is partially open the rest are all recessed.

It is important to note that the site is gated and private therefore making a model of the site creates an opportunity to take a detailed series of photographs. It allows opportunities such as testing light conditions. Understanding how light penetrates the space has defined the following project and informed the programme.



Fig. 72, Model Image, Author
Fig. 73, Model Image, Author
Fig. 74, Model Image, Author
Fig. 75, Model Image, Author

Fig. 76, Gloucester Mews Image, Author
Fig. 77, Vector Drawing, Author

Detailed drawing of beams

Existing Language 2.0

There are 6 sets of beams that run the length of the site and support the existing roof. They are wooden beams joined with pegs and steel braces. It is unsure if these are the original beams however they are all uniform and follow the same language.

Similar to the arches it was fundamental to make a model in order to assess the beams and their relationship between each other as well as the remaining site. Being able to photograph amongst the rafters enables you to see the linear form they create as group which pushed the project to design the new roof structure.

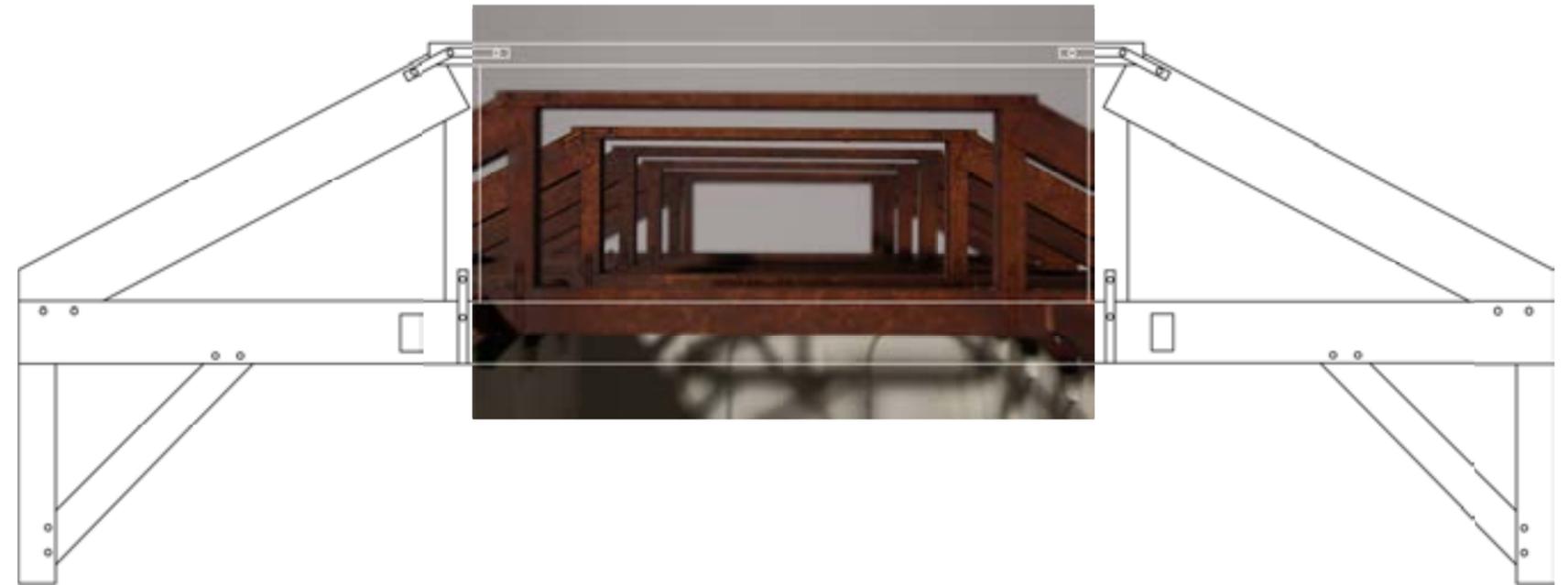
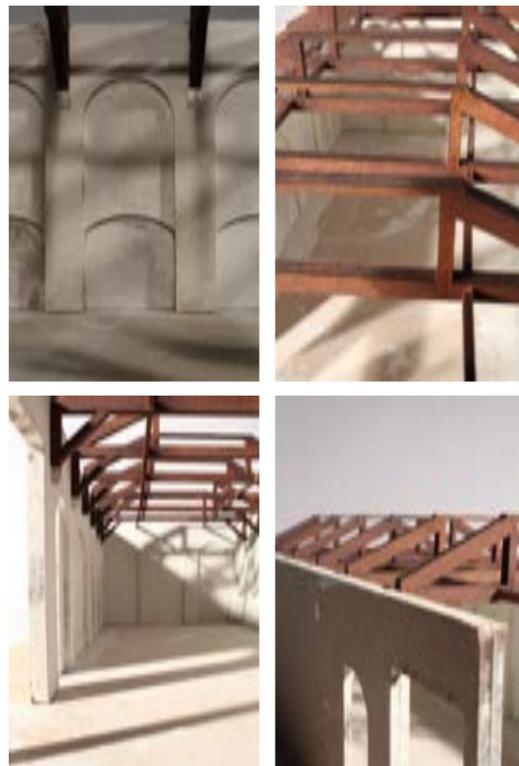
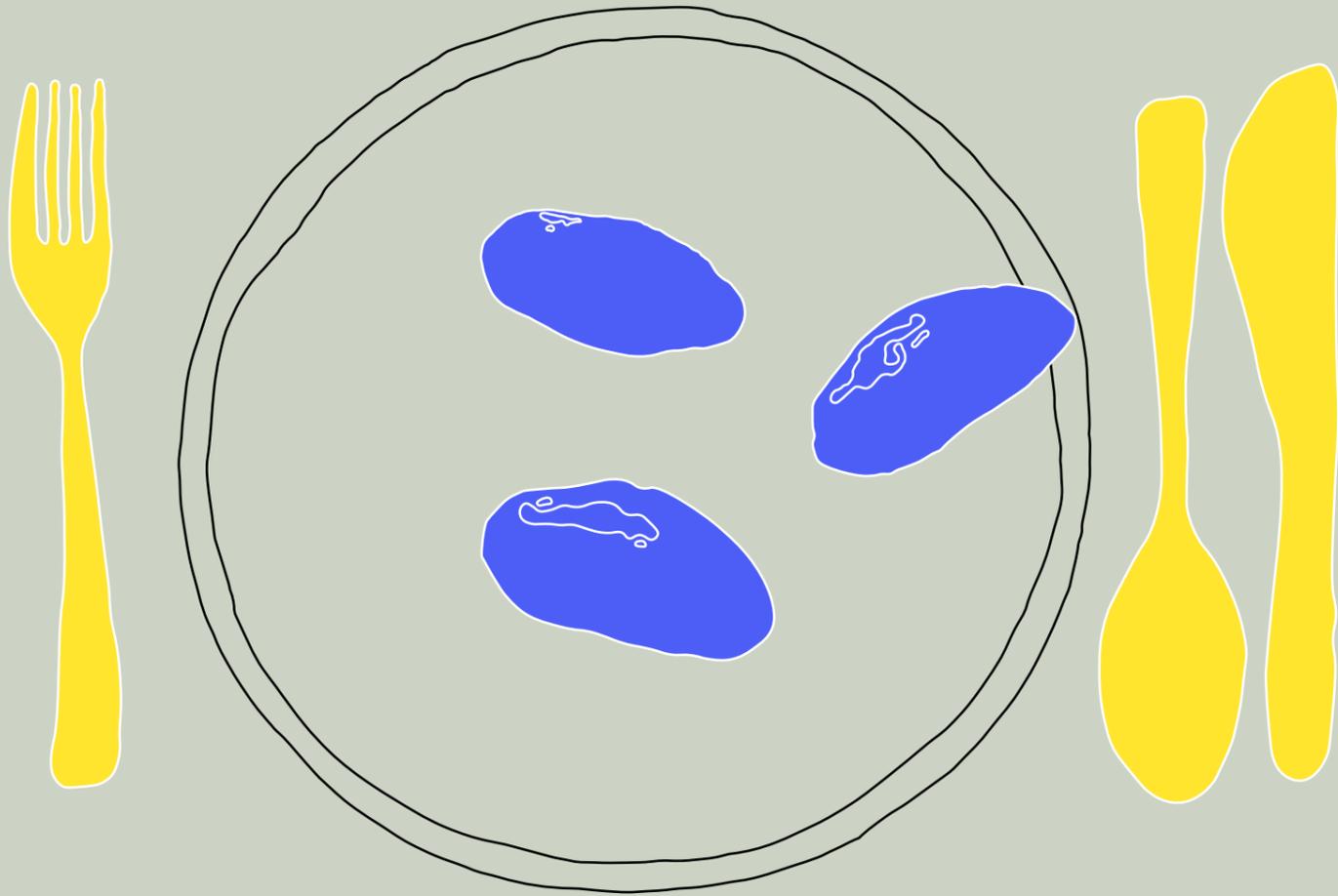


Fig. 78, Model Image, Author
 Fig. 79, Model Image, Author
 Fig. 80, Model Image, Author
 Fig. 81, Model Image, Author

Fig. 82, Model Image, Author
 Fig. 83, Vector Drawing, Author

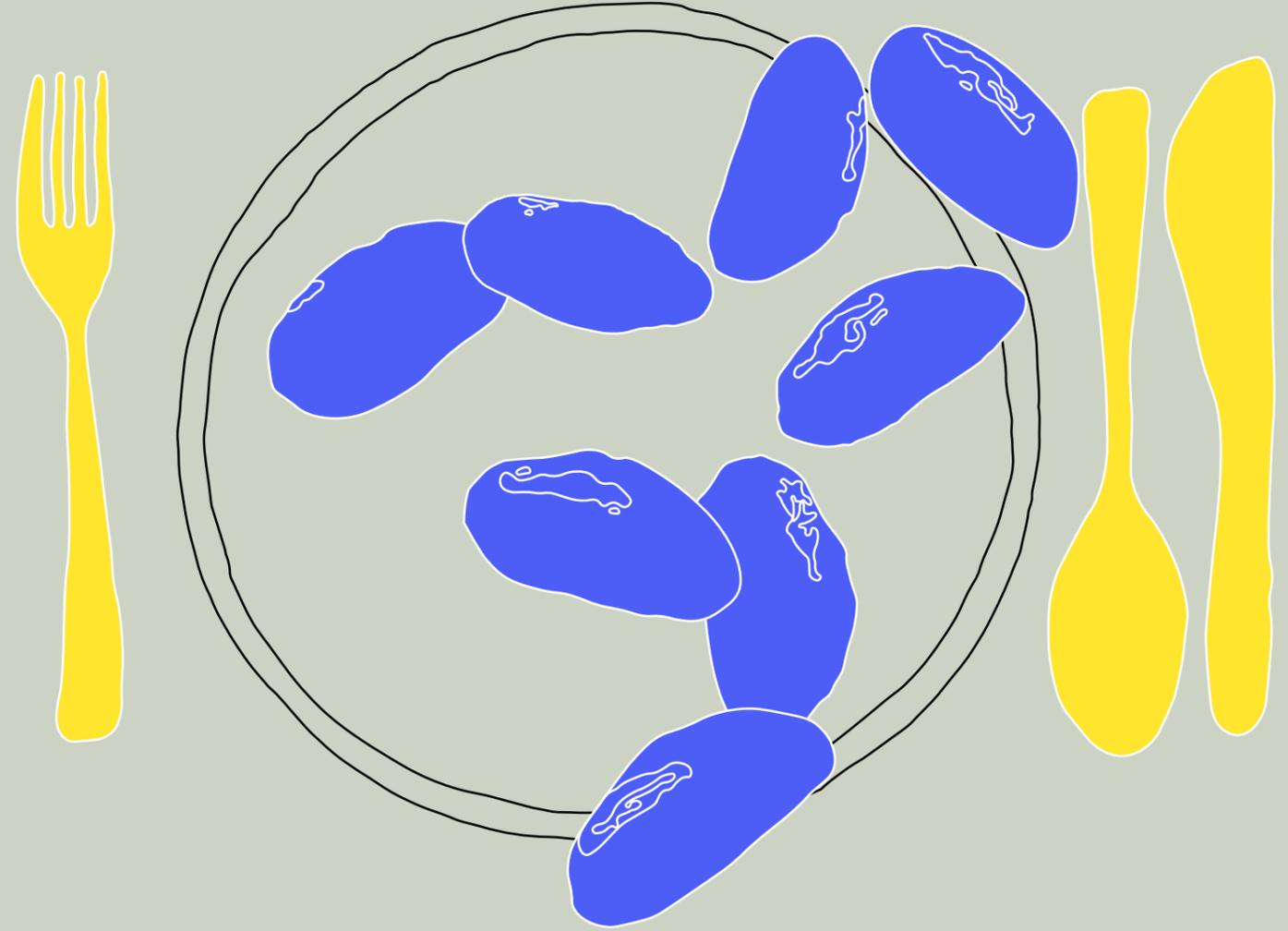
Chapter Three

Provides research into agriculture and shows how the project focuses on the cultivation of freshwater mussels.



1.0, *Agriculture* sub-chapter opens up doors into sustainable ways of food production namely the Naturhus concept and the importance of rainwater harvesting. A map of Brighton plotted with the allotments furthers the research into local food production. This sub-chapter is where the main project intervention is developed and explored, the roof.

1.0
Agriculture



Naturhus

Bengt Warner designed the first Naturhus in Sweden in 1974. It was designed to tackle the harsh winters in Sweden and allow residents to reduce heating cost as well as be more self sufficient. It enabling owners to growing produce as they could harness heat from the sun and collect rain water.

The concept has become popular across Scandinavia, their long winters make it extremely desirable to extend the growing season.

The Naturhus diagram shows the cycle of water throughout the green house. How the water flows through the building and links all of the spaces. This idea of water collection and flow has inspired the main body of the project.



Fig. 84, Naturhus, Bengt Warner, 1974, Sweden
 Fig. 85, Naturhus, Bengt Warner, 1974, Sweden
 Fig. 86, Uppgrena Nature House, Tailor Made Arkitekter, 2015, Sweden
 Fig. 87, Uppgrena Nature House, Tailor Made Arkitekter, 2015, Sweden
 Fig. 88, Uppgrena Nature House, Tailor Made Arkitekter, 2015, Sweden
 Fig. 89, Uppgrena Nature House, Tailor Made Arkitekter, 2015, Sweden

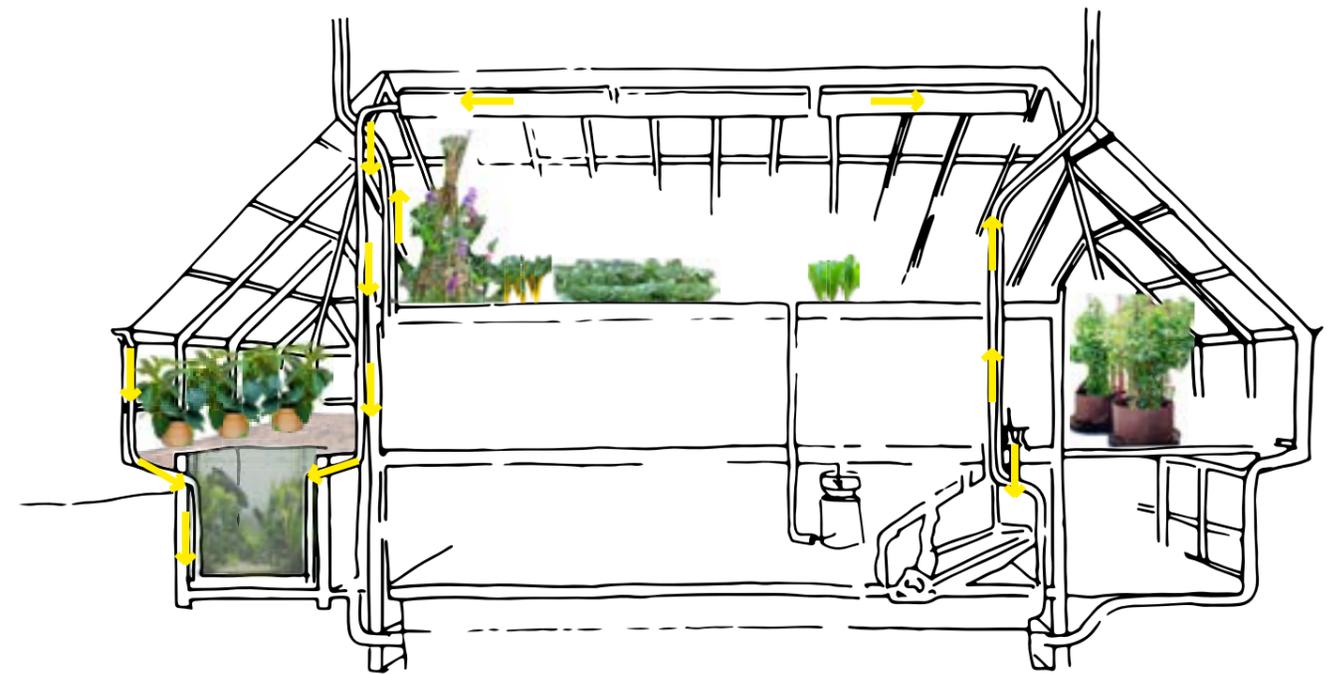


Fig. 90, Naturhus Diagram, Author

Map showing the allotments and food banks in Brighton and Hove

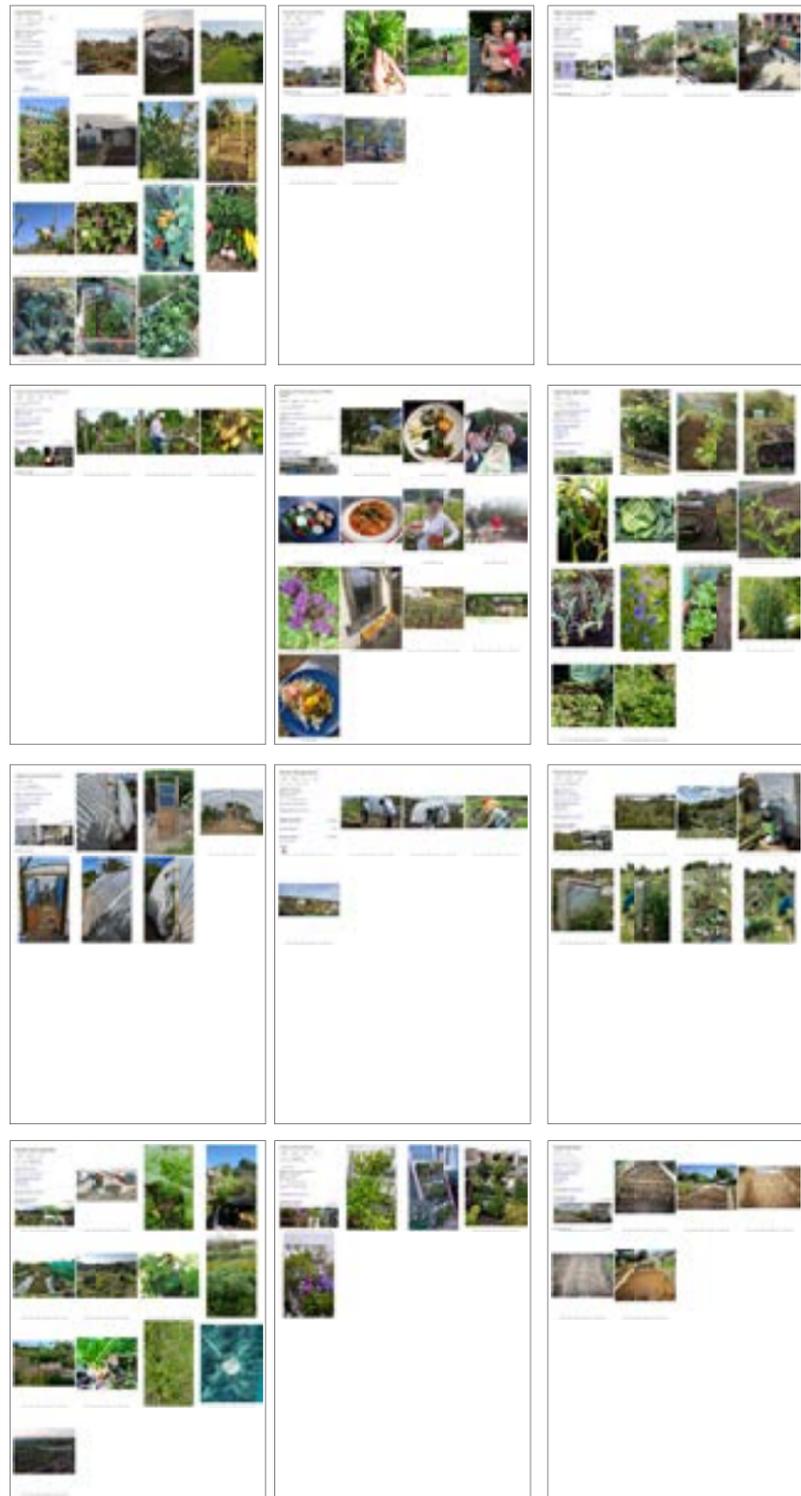


Fig. 91, Hove Allotments, Google Images Screenshot
Fig. 92, Bevendean Community Garden, Google Images Screenshot
Fig. 93, Albion Community Garden, Google Images Screenshot
Fig. 94, Lewes Community Allotments Project, Google Images Screenshot
Fig. 95, Moulscob Forest Garden and Wildlife Project, Google Images Screenshot
Fig. 96, Natal Road Allotments, Google Images Screenshot
Fig. 97, Whitehawk Community Food Project, Google Images Screenshot
Fig. 98, Nurture Through Nature, Google Images Screenshot
Fig. 99, Roedale Allotments, Google Images Screenshot
Fig. 100, Tennyson Down Allotment, Google Images Screenshot
Fig. 101, Vertigro Vertical Allotments, Google Images Screenshot
Fig. 102, Weald Allotments, Google Images Screenshot

Fig. 103, Brighton Allotments Map, Author

Allotment Materials

The allotment map locates the allotments within the Brighton area. The start of the project looked at designing a Naturhus hence the interest in allotments. However with the UK climate it is not totally necessary, despite it not being Mediterranean warm the climate is temperate in comparison to Sweden.

However this research sparked an interest in agricultural materials and how they could be adapted. The images on the right highlight the different infrastructure that appear in the allotments; poly tunnels and makeshift sheds. These are made from hard wearing materials, polythene is especially interesting as it can be pulled and shaped into anything.



Hove Allotment

Traditional pitched greenhouse.

Metal frame and glass

Allows plants that require regulated climate conditions to grow. Ventilation is provided through windows in the roof.



Roedale Valley Allotment

Free standing makeshift shed.

Wooden structure and polythene roof

Using recycled materials to build a small garden shed is a useful way to re-purpose materials. It is good for storing tools.



Whitehawk Community Food Project



Poly-tunnel.

Wooden frame and polythene

Poly-tunnels offer a better control over air circulation compared to a greenhouse. Large doors at either end of the tunnel provide sufficient airflow. Polythene is a hard wearing and malleable material that can be stretched to the desired form.

Fig. 104, Greenhouse @ Hove Allotment, Google Images Screenshot

Fig. 105, Shed Roedale @ Valley Allotment, Google Images Screenshot

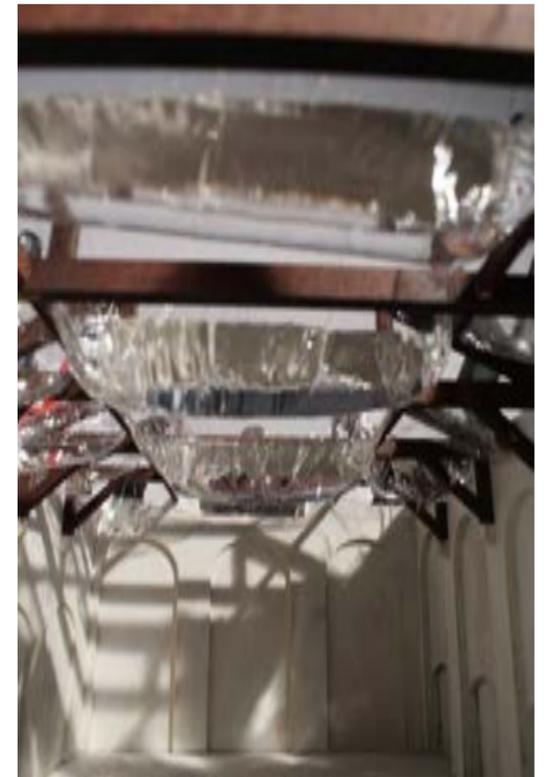
Fig. 106, 107, 108, Poly tunnel @ Whitehawk Community Food Project, Google Images Screenshot

Rainwater Harvesting

Through studying the allotments it became clear that the collection and storage of water is an integral part of growing. Harvesting water in a sustainable way is important and the most effective way to do this is rainwater harvesting.

This understanding led to the roof intervention. Removing the existing wooden roof and replacing it with polythene. Laying the polythene over the existing beams and allowing it to sag with water creates a solution to rainwater harvesting and storing.

The use of polythene is inspired by agricultural poly tunnels and therefore is in keeping with the agriculture based programme.



From Roof To Pools

The system by which the water is collected from the roof and used in the rest of the programme is still in the development stages. The images and drawings on the right show the possible use of chains which can hang from the polythene roof and direct the water into the pools. These chains could become multifunctional, dangling into the pools the mussels would cling onto them whilst growing. The chains could then be pulled out of the pools when the mussels need to be harvested.

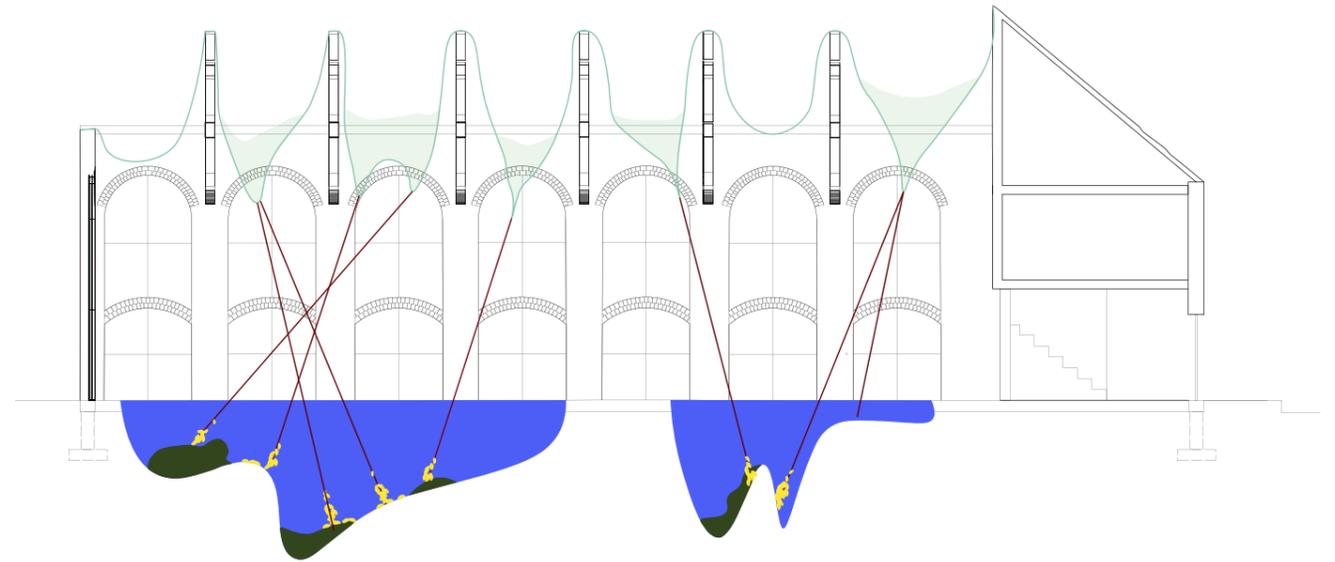
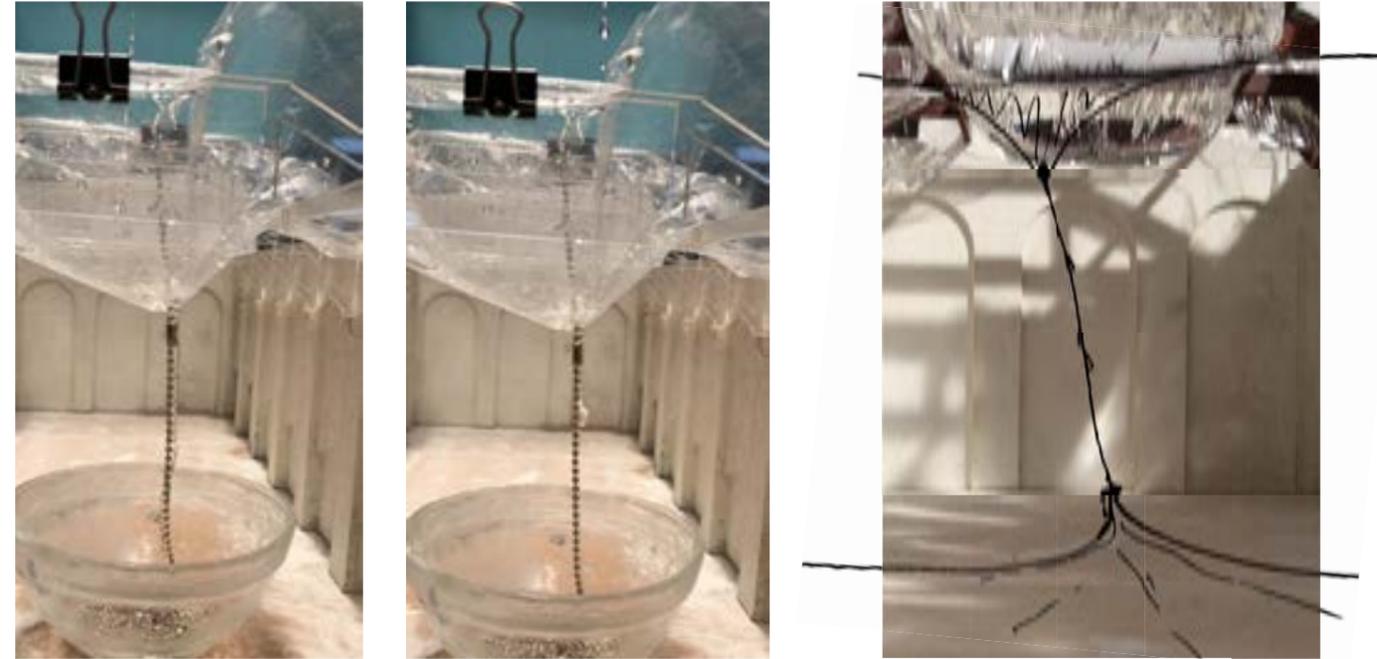


Fig. 113, Model + Water + Chain Image, Author
 Fig. 114, Model + Water + Chain Image, Author
 Fig. 115, Model + Water Image, Author
 Fig. 116, Sketch, Author
 Fig. 117, Design Iteration, Author

Caustic Reflection

Collecting water visibly in the roof creates an interesting light atmosphere within the interior space. The phenomenon is called caustic reflections which is the process by which an envelope of light rays are reflected or refracted by a curved surface or object.



Fig. 118, Caustic Reflection Up, You-tube

Fig. 119, Secret Garden House, Wallflower Architecture + Design

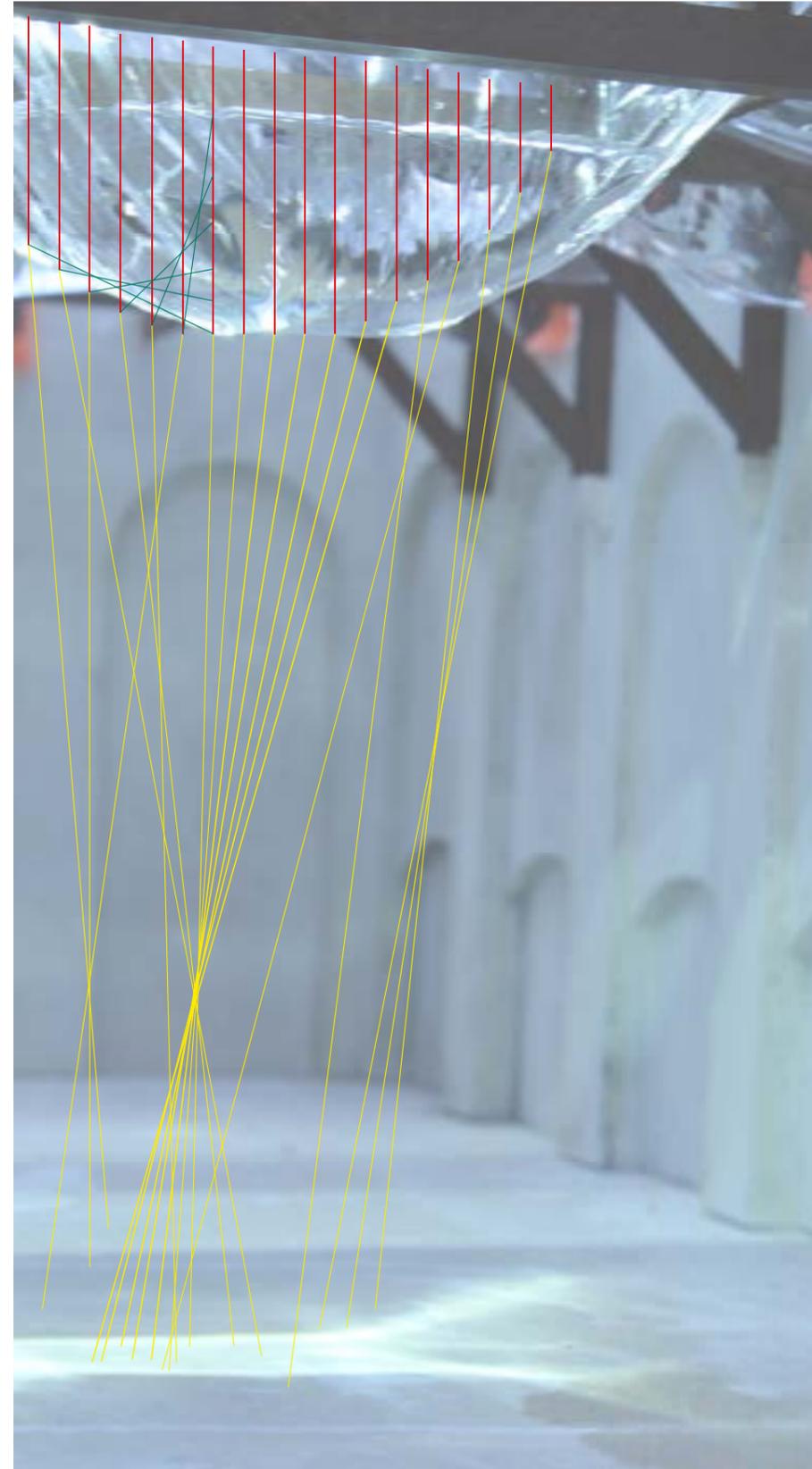
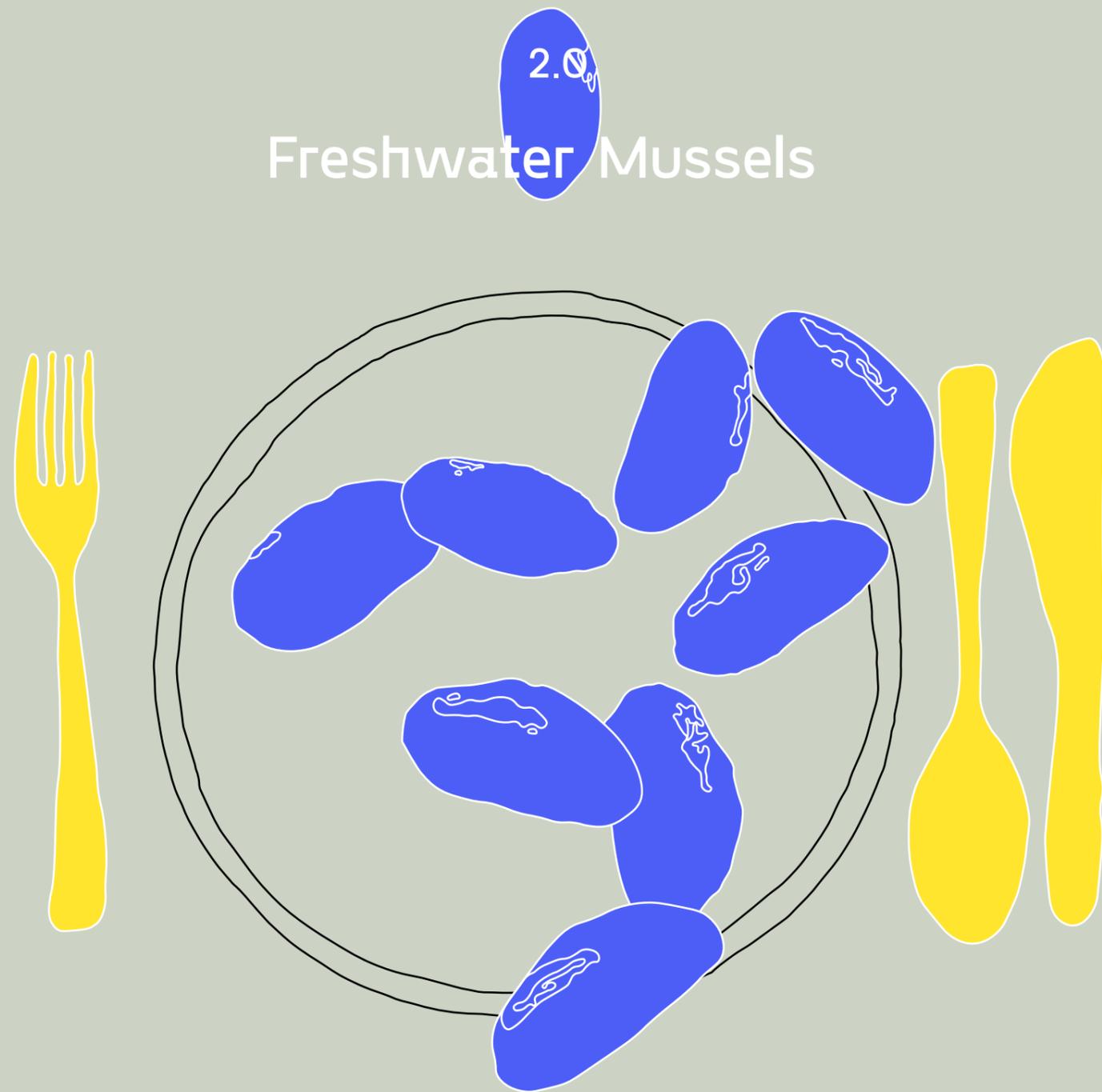


Fig. 120, Model Image Caustic Reflection, Author

2.0, *Freshwater Mussels*, once the design of the rainwater harvesting system came to fruition it became clear that the flow of water should be central to the design of the project and the programme should reflect this. Research into aquaponics systems developed this idea of water and agriculture, it grounded it in a solid scientific and sustainable way to produce food. This led further into research into freshwater mussels which have sadly become an endangered species in the UK something that this programme aims to change.



Aquaponics

The rainwater harvesting system became a central feature in the design intervention opening up research into water based agriculture. The most obvious of these are aquaponics systems.

Aquaponics refers to the production of food in a system which combines aquaculture, the raising of aquatic animals such as fish and molluscs, with hydroponics, cultivating plants in water. The system works by the nutrient rich aquaculture water feeding the hydroponic plants. It creates a closed ecosystem that can be controlled and monitored.

The fish eat and produce ammonia, then beneficial bacteria convert the ammonia into nutrients. Plants absorb the natural fertilizer and grow. Meanwhile the water is continuously recirculated through the system.

Various species thrive in aquaponics and are able to grow in a low carbon and waste system that is beneficial to the growing species and the surrounding ecosystems. See next page for examples of aquaponics thriving plants and aquatic animals.





Veg

Cauliflower

The cauliflower is water-based plant that flourishes in an aquaponics system.

These plants are very hardy and need very little maintenance. They are also generally resistance to bugs and diseases, making it one of the best plants for aquaponics.



Veg

Pepper

Peppers can be extremely difficult to grow via the standard approach to gardening. This is because they are particular about the water they consume and require plenty of sunshine.

Growing them in a small aquaponics system makes sense. Being able to monitor the temperature of the set up and make sure the nutrient levels in the water are optimized.



Veg

Cabbage

In general, this plant needs very little maintenance. For optimum growth it needs a pH range between 6.2 and 6.6 with a temperature of between 60 and 70°F.



Veg

Watercress

Watercress is a very tough vegetable and is one of the best plants for aquaponics because it grows so quickly. You can plant one single small plant, and it will multiply at an astonishing rate.



Veg

Cucumber

Cucumbers thrive in aquaponics systems as it gives them everything they need to flourish, not just survive. They are good at hoarding nitrogen, potentially depriving other plants in the system. For this reason, it is a good idea to give a space of between 30 and 60cm between the plants and avoid over planting.



Veg

Lettuce

Lettuce that is grown in aquaponics is one of the most productive leafy green in an aquaponics system. Leafy lettuce will thrive in water, which has a temperature of between 70 and 74.

Fig. 123, Cauliflower Sketch, Author
 Fig. 124, Pepper Sketch, Author
 Fig. 125, Cabbage Sketch, Author
 Fig. 126, Watercress Sketch, Author
 Fig. 127 Cucumber Sketch, Author
 Fig. 128, Lettuce Sketch, Author



Aqua

Trout

Using trout in an aquaponics system is great because the growth rate is excellent. Trout prefer colder water, which makes it easier to maintain the system. Whatever you else you are growing have to be able to thrive in cold water too. Optimum temperature is between 45°F and 65°F.



Aqua

Sea Bass

Sea bass are a hardy fish that can cope with low water temperatures, making them a great option if you live in a colder climate. Water temperatures will need to be between 65°F and 80°F. Your pH will need to stay within the 6.5 to 8.5 zone.



Aqua

Freshwater Mussels

Mussels are very popular aquaponics crustacean because they are able to grow within grow beds as well as inside fish tanks. They are filter feeders naturally helping to keep the tank water clean. Do not use fresh water mussels because they when they are in there larval stage live parasitically on the gills of fish.



Aqua

Prawn

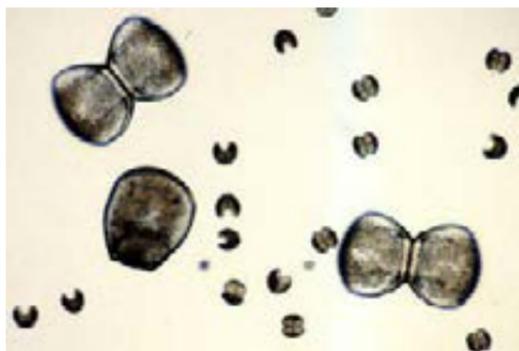
Prawn are an excellent choice as they provide nutrition for your plants and food for you. They can tolerate a pH range of 6.5-8 but are not good at coping with temperature changes.

Fig. 129, Trout Sketch, Author
 Fig. 130, Sea Bass Sketch, Author
 Fig. 131, Freshwater Mussels, Author
 Fig. 132, Prawn Sketch, Author

Freshwater Mussels

Freshwater mussels are one of the most endangered species of mollusc. While the core of the project is a Supper Club and some of the mussels would be consumed for many it would be a sanctuary to grow and be reintroduced into the wild. It is important that through this project awareness of this is brought to public attention as it through human interference that this is the case. Freshwater mussels breed poorly because our rivers are in a poor state. Nutrient pollution from agriculture and sediment wash off land making the rivers uninhabitable for many species. Fish numbers have fallen too meaning baby mussels cannot survive and mussel beds are choked with silt and algae causing the adult mussels to die.

In the UK they are found in Cumbria and in some areas of Wales. The largest populations in the UK are in Scotland thanks to its clean water systems. They are found in clean, nutrient poor low calcium rivers. Their larvae attach to the gills of salmonid fish where they stay for 10 months. When they are ready, they need to drop off in to a pristine river habitat where they will use their muscular foot to rasp algae and bacteria from the gravel. At around 3-5 years they will have developed gills and will be able to filter free-flowing river water. The mussels do not mature sexually until the age of 12-15 years or about 65mm long. Each female can produce up to 4 million larvae which are released into the water column every May/June.



Microscopic image of mussel larvae

Scientific name:
Margaritifera margaritifera

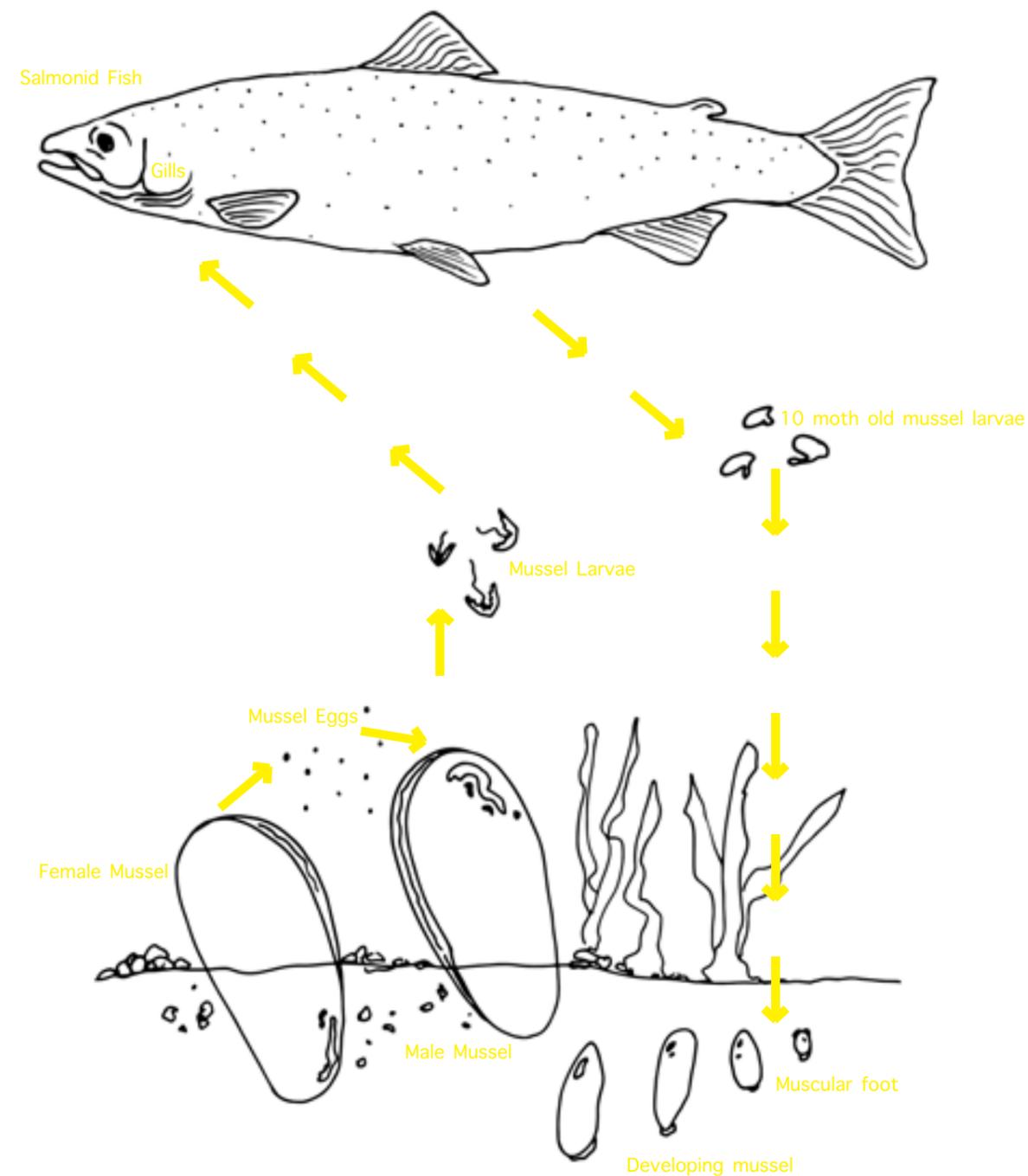


Fig. 134, Mussel Growth Diagram, Author

Fig. 133, Mussel Larvae, Molluscs

Harvesting Mussels

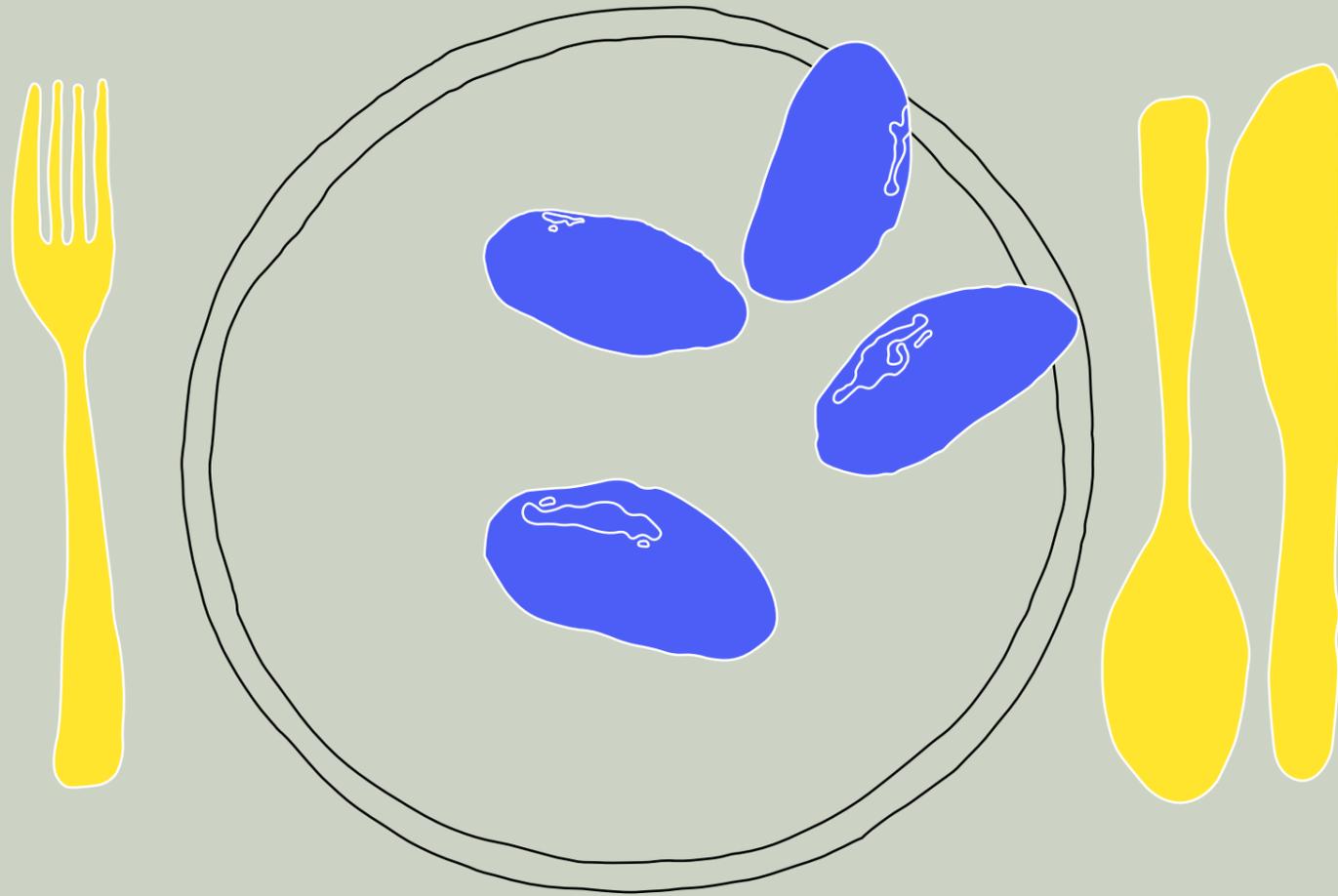
1. For best results constant immersion is key because it allows the mussels to feed for 24hrs a day. This means they will reach optimum harvesting size quickly, as well as the meat yield being exceptional.
2. Hand harvesting is the most sustainable way to collect mussels as you only take as much as you need.
3. Cleaning the mussels by hand reduces the shock to the mussels meaning less unnecessary death and it gives them a longer shelf life.
4. Many farmers suggest after cleaning to leave them in a tank for 42hrs with water pumping over them and an ultraviolet light filter which kills any bacteria.

This research has shown that specific harvesting areas need to be incorporated into the final design. Especially for step 4, a small tanked area with ultraviolet light needs to be added.

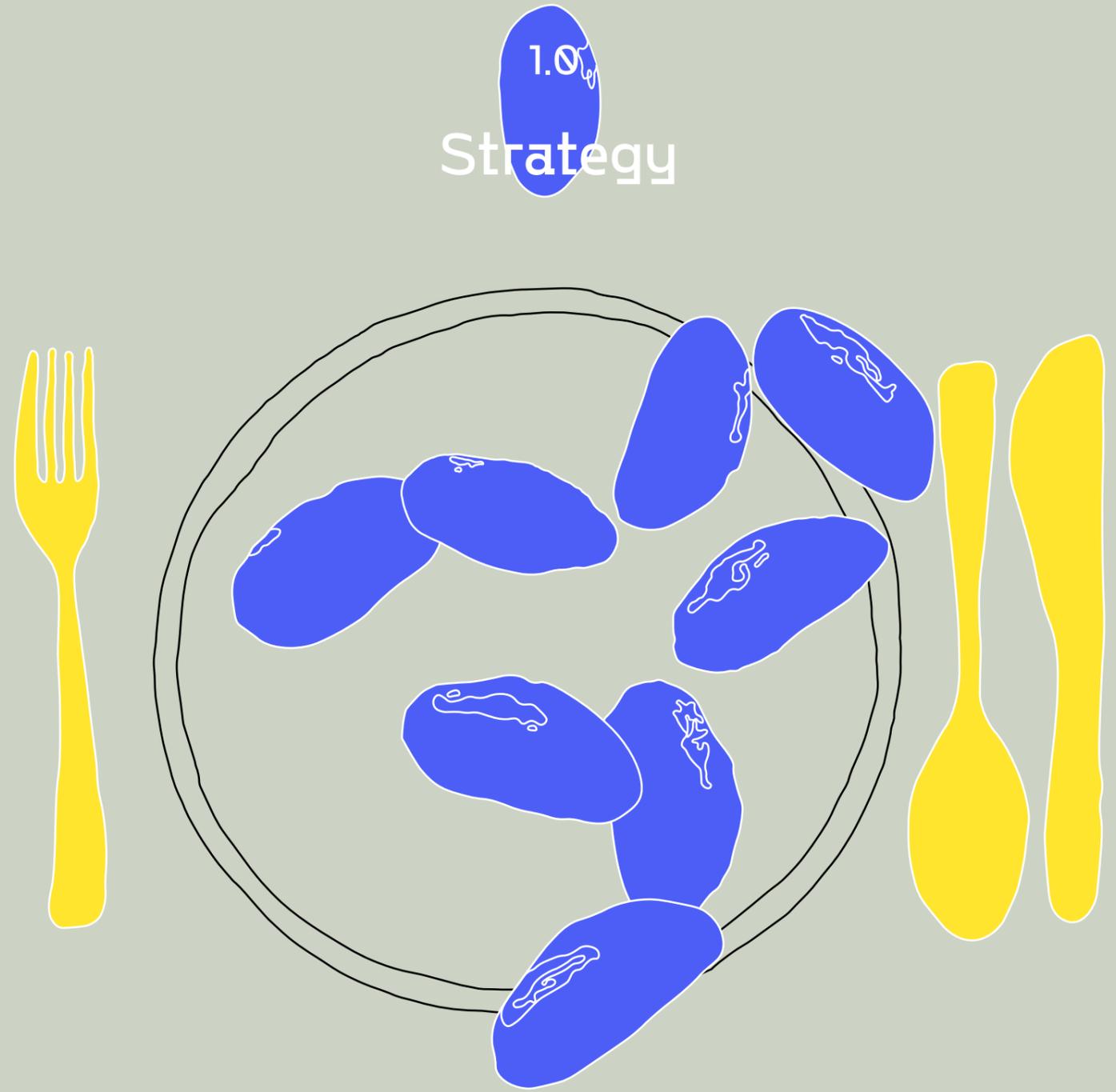
Research into freshwater mussels has allowed the programme to focus on the needs and design aesthetic of one specific species rather than an allotment of vegetables.

Chapter Four

Research into precedent projects and how these have and will influence the project.



1.0 Strategy uses some precedents as tools to describe the designs that have not been solidified in the project.



architecten de vylder vinck taillieuv

CP Caritas is a project that uses the shell and form of an existing building and turns it into 3 dimensional park. The architects have cleverly used split levels on the ground floor to generate these small courtyards and dived the open space. There is a sense of multiple thresholds whilst greenhouses are used to create private spaces within the wider public space. Using glass means that they are still part of the public space at the same time.

The project takes inspiration from the interventions seen in this building. It is great example of preserving historical buildings whilst modernising them and transforming them into public spaces.

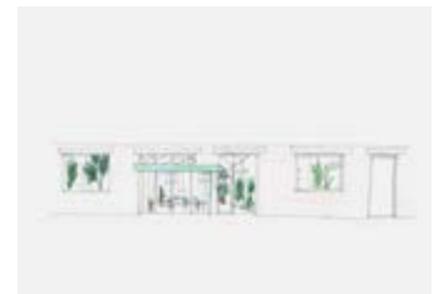


Fig. 135 - Fig. 140, CP Caritas, Melle, Belgium, Inge Vinck
Fig. 141 - Fig. 144, Sketches of CP Caritas, Belgium, Inge Vinck

Ridley's

Ridley's was a project by The Decorators in collaboration with Atelier Chan Chan. It was a public realm intervention that combined food and architecture, featuring a food-for-food exchange organism. Which encouraged guests to give back to the community through shopping at the Ridely Road Market, see figure 145. Using local chefs and locally sourced produce the restaurant brought attention to a talented community. Ridley's demonstrated that architecture can be more than a commodity, socially engaged and influential. The project allowed strangers to gather and socialise, much like the supper club concept.

The suspended dining area and mechanical table are of interest to the project. Altering the way people expect to dine allows them to be more open minded socially. Not yet designed but something that takes cues from the Ridley's project will sit within the mussel pools and be the host area of the supper club.



Four Steps to Dinner:

- 1 Come visit us at Ridley's and ask for Caroline who will book your place.
- 2 Dinner will be served at 8pm but arrive for 7.30pm. We want you to get settled and acquainted with your fellow diners.
- 3 Take your place at the communal table, break bread and share your wine.
- 4 At the end of the evening, pay £15 for your dinner which includes a £5 market voucher for you to use at one of the market stalls any time over the next month.

RIDLEY'S

Six Steps to Lunch:

- 1 Run your eye down the board. There you will find your shopping list.
- 2 Choose an item from the list to buy in the market. This will be your currency at Ridley's.
- 3 Go shopping! Don't buy the first thing you see, explore. (See map opposite)
- 4 Bring your purchase back to Ridley's. We need you to barter for your lunch.
- 5 Lunch will be served between 1pm and 2pm.
- 6 Sit down and enjoy the view!

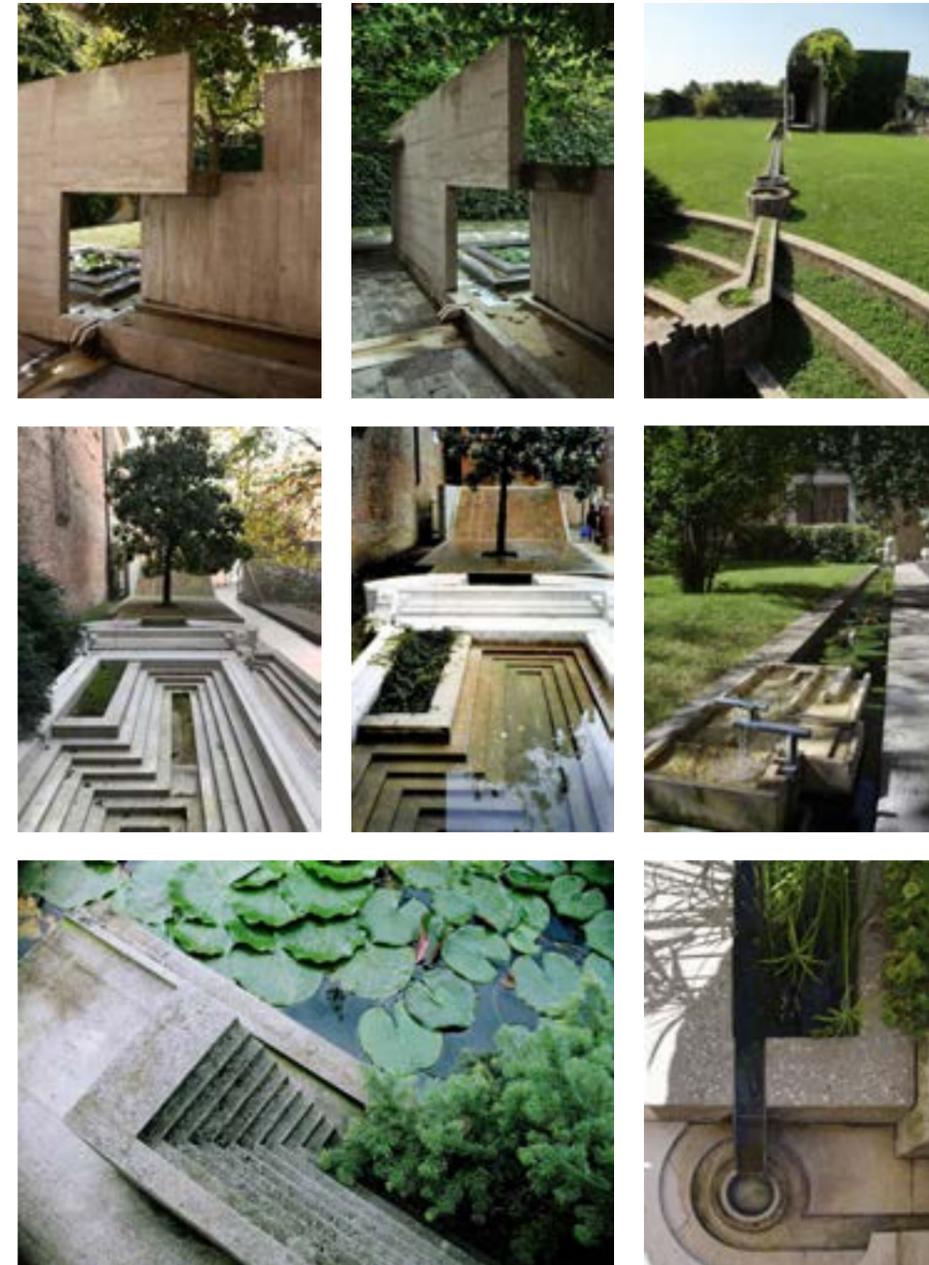
Fig. 145, Ridley's Dinner Steps, Graphics, Guglielmo Rossi

Fig. 146 - Fig. 150, Ridley's Images, Dosfotos, Rachel Ferriman, Jessie Levene

Carlo Scarpa

The garden at the Querini Stampalia celebrates the flow of water. Scarpa used small channels and systems to dictate the direction of the water. Allowing pools to dry up at times creates an idea of the natural, as a river bed would dry up in the summer.

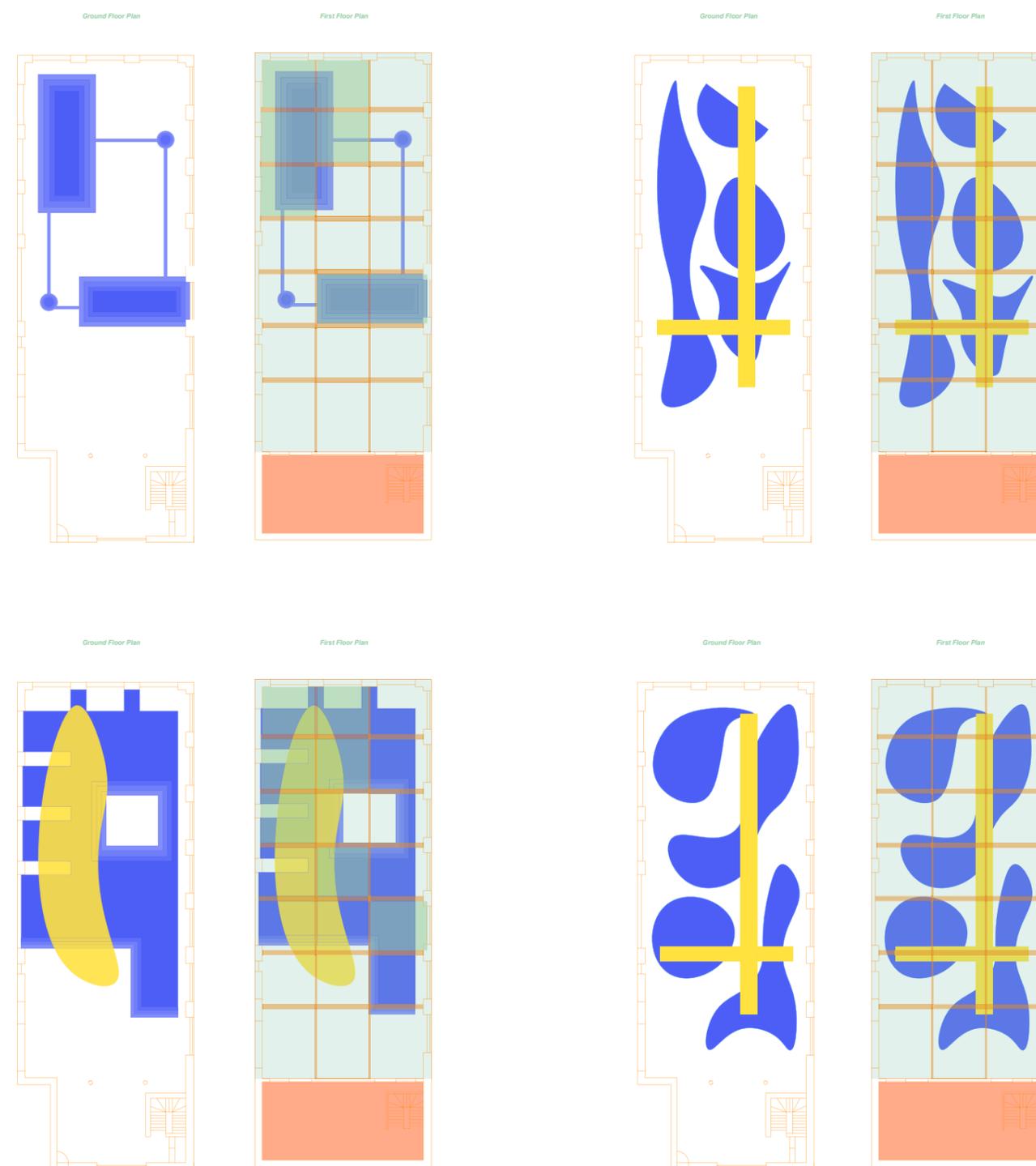
With the project forming around the flow of water this precedent provides an interesting in site into how water and architecture can work in harmony. See page over for examples of pool iteration.



Pool Iterations

Inspired by Scarpa's pools at the Querini Stampalia these iterations are designed to show how the pools (in blue) will work within the existing site (in orange). The harvested rainwater from the roof (in light green) will run into these pools where the freshwater mussels will live. They also show potential designs for the platforms (in yellow) that will allow access to the pools when they are full. It is important for the pools to be accessible at all times for Rebecca and Aera can make sure they are clean and flowing correctly as well as being able to harvest the mussels.

Further design development will allow the roof system, pools, platform and dining spaces to work together seamlessly.



Platform Iterations

The platforms allow the pools to be accessed and also create a 'land' element to potentially use as a food preparation and dining area. It will act as bridge or a floating pontoon suspended in the air. The platforms will be able to move via a mechanical system over the mussel pools to ensure full accessibility. The movement of the platforms will create ever changing spaces that suit the needs of the users.

The illustrations below and to the right illustrate how the platforms could move depending on the desired function. These are only iterative concepts, further research needs to go into the mechanisms needs.

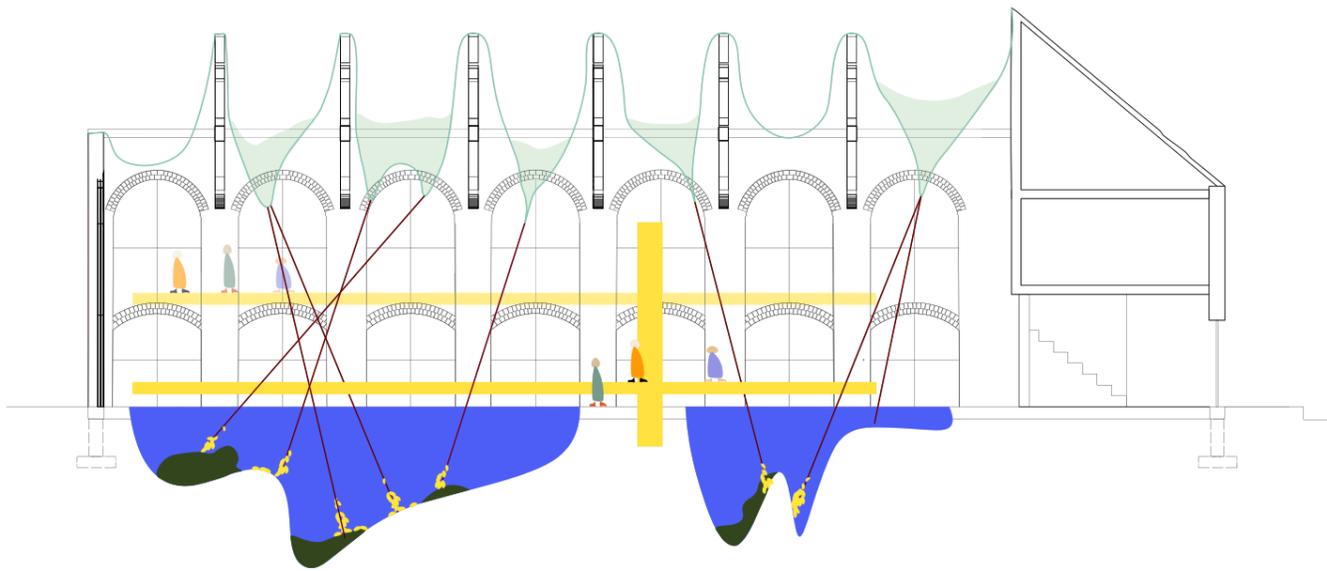


Fig. 163, Pool + Platform Design Iteration, Author

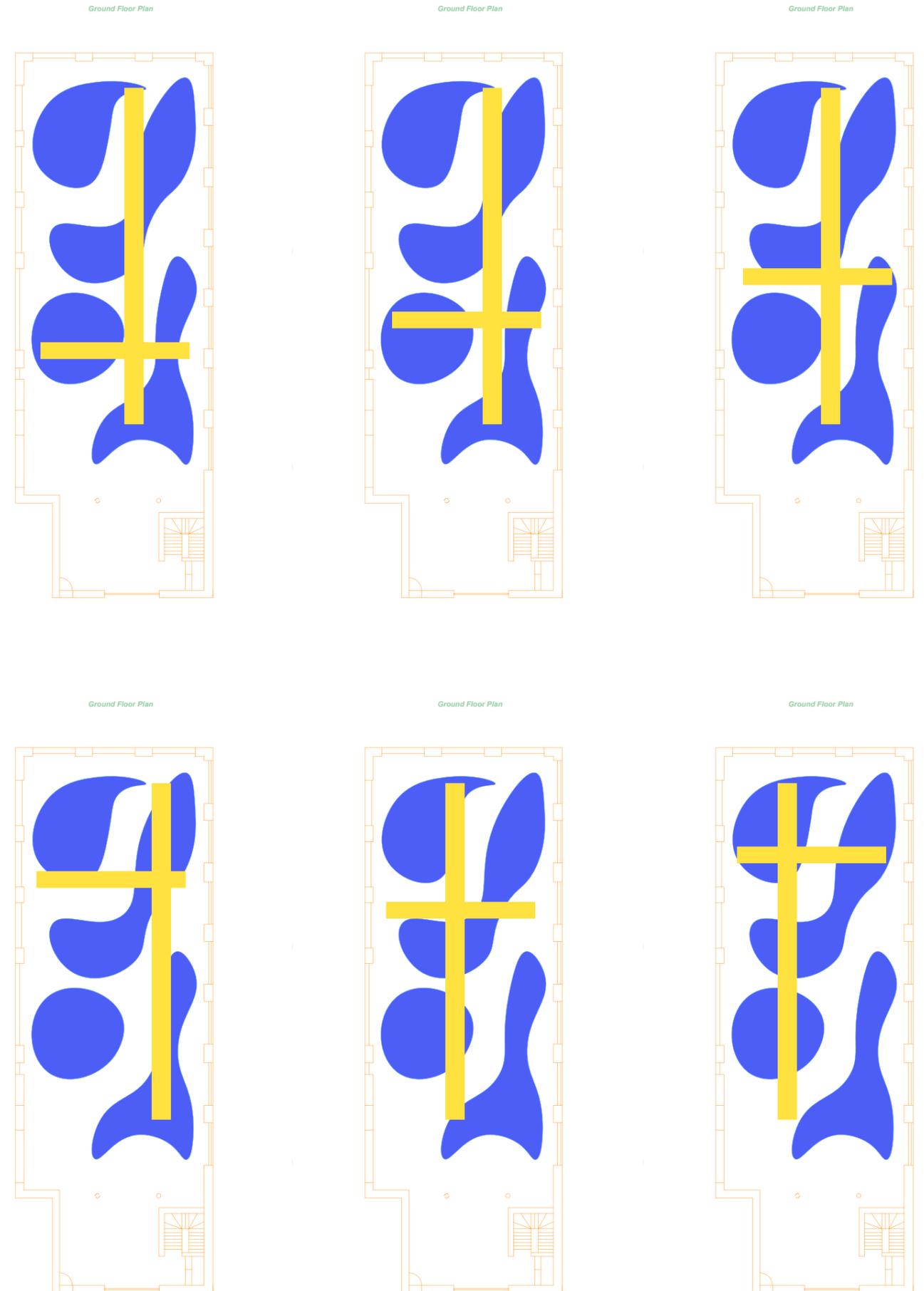
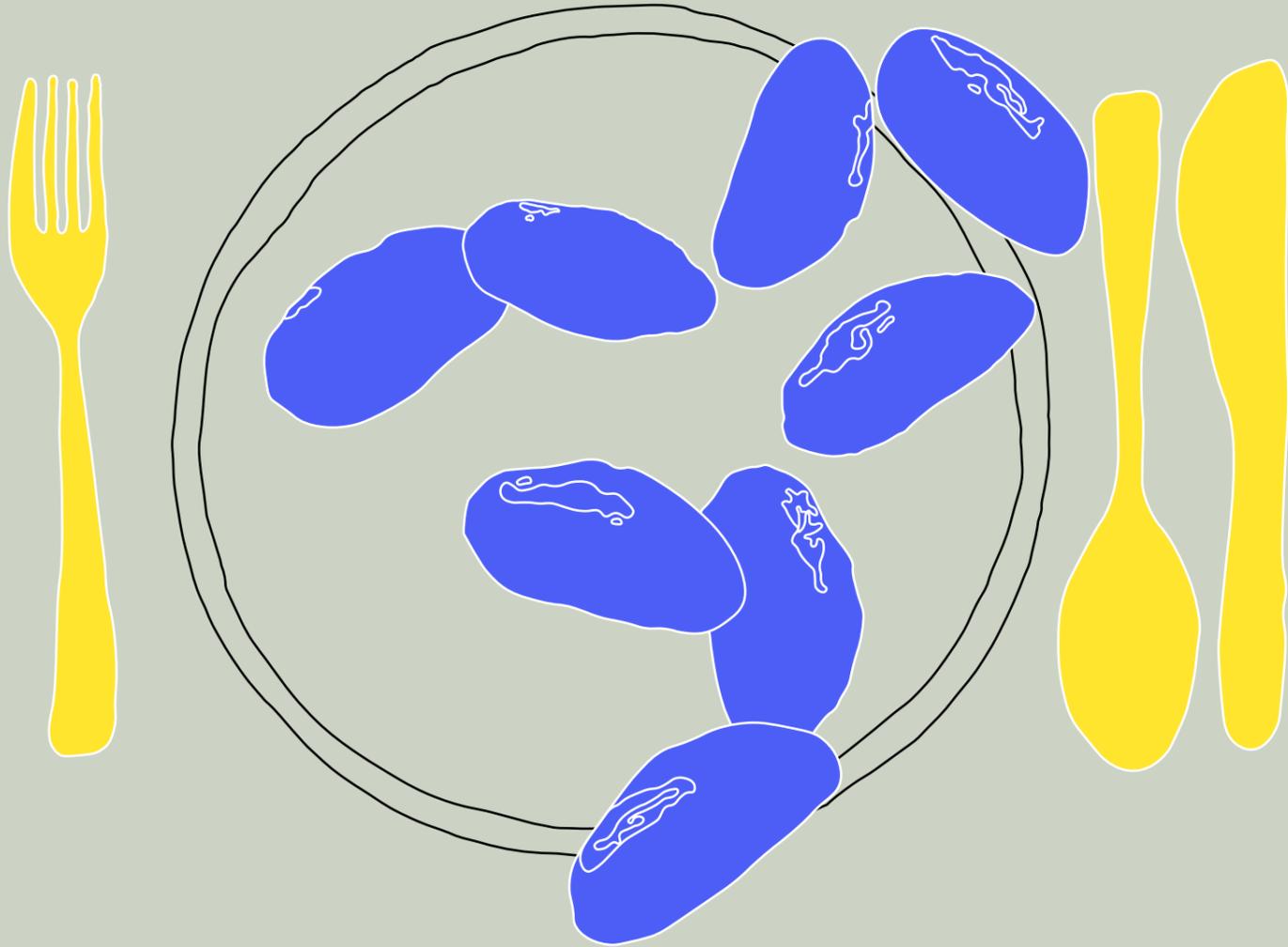


Fig. 164, Platform Design Iterations, Author

Conclusion

Lays out the next steps that need to be taken to finalise the project.



Areas that need attention

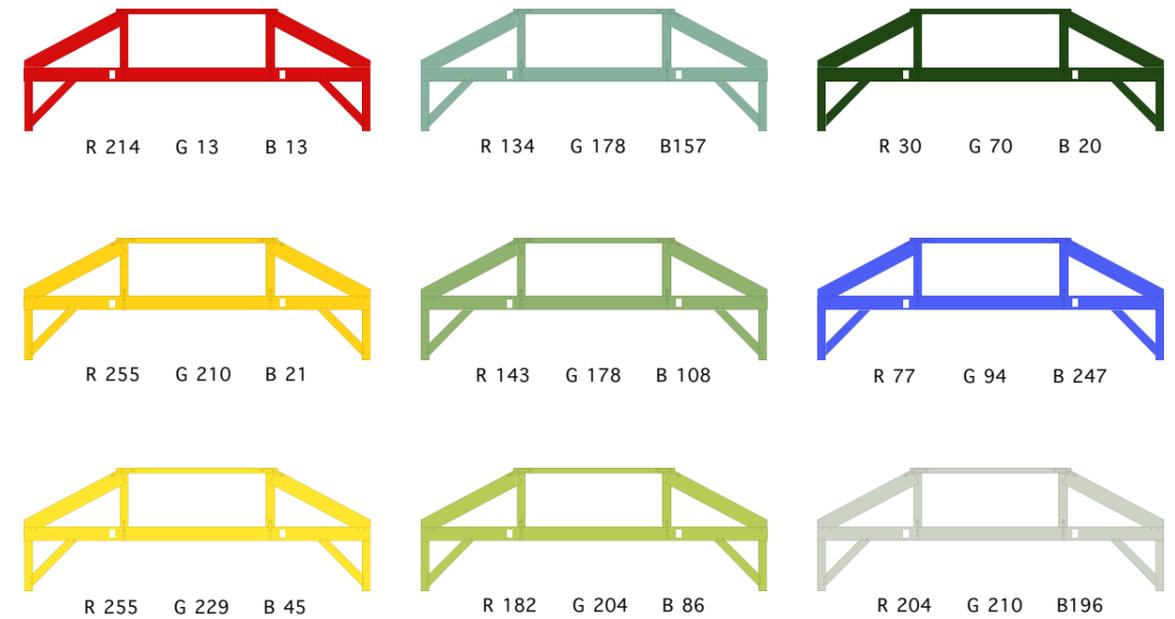
Although the new roof is certain the technologies for how the roof will connect to the existing structure still need to be devised. Further more how the water runs between the roof and the pools needs to be clarified and designed.

The the pools need to be finalised and designed so that they work in harmony with the water roof as well as the moving platforms. Channels between the pools need to be designed, it is possible that these will be visible and incorporated into the visual design however they could be hidden underground to allow the pools and platform to the be the main feature.

As with CP Caritas there is a desire seamlessly stitch new and old together, installing new materials that are sensitive to the existing is a priority. The use of colour is an interesting way to bring to life the old. The rows of existing beams will be shrouded with the polythene roof making them less visible. However painting them a vibrant colour would draw the viewers eye to them and give them a second life. Possible colours are seen in figure 165.

The characters living areas need to be designed and incorporated into the new and existing structures. Sleeping, washing, living and eating pods could be the solution to this. See figure 166 and 167.

A focus on food preparation and dining for the supper club are crucial to the programme and are yet to be finalised. The idea of a multifunctional moving platform could create an interesting and dynamic element to the project.



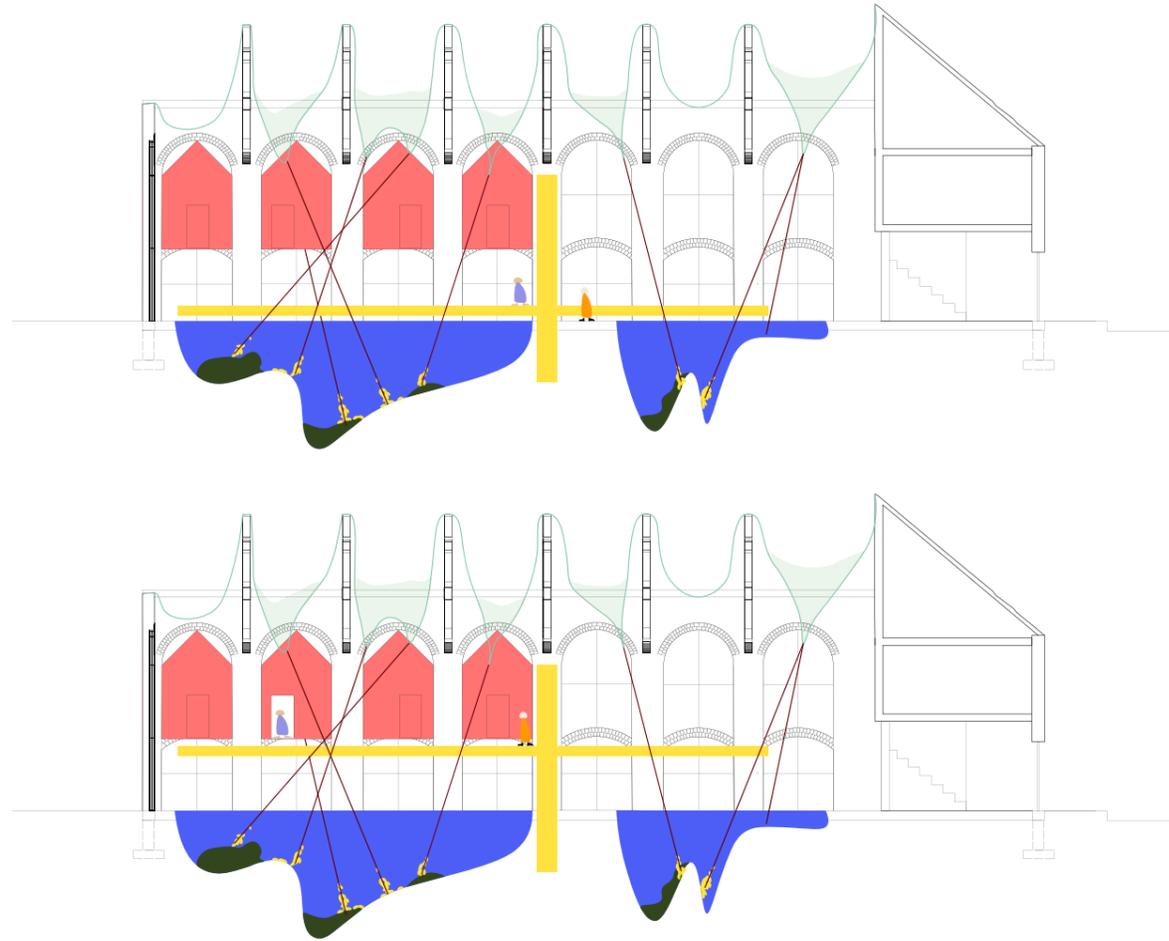


Fig. 166, Living Pod Design 1, Author

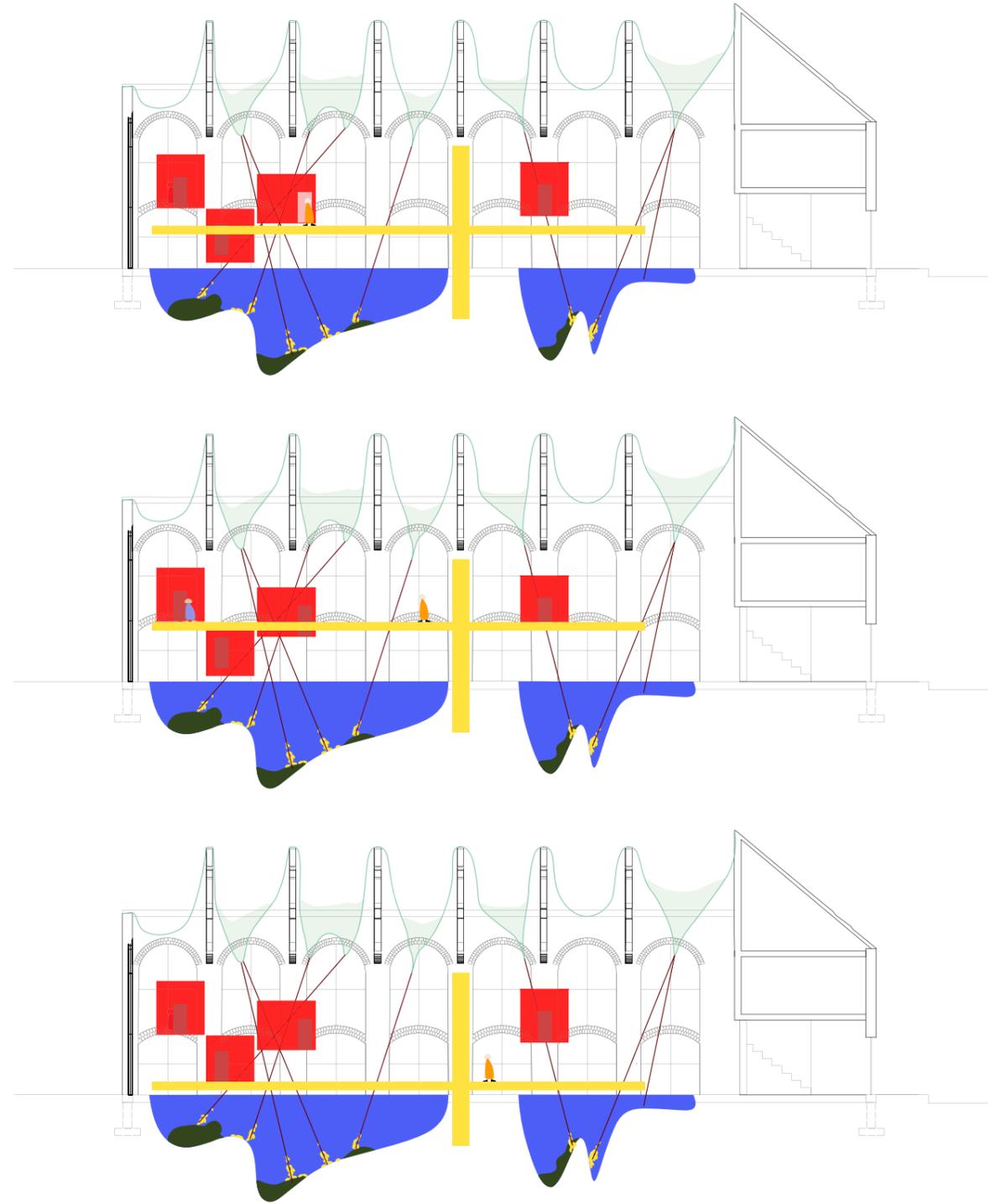


Fig. 167, Living Pod Design 2, Author

References

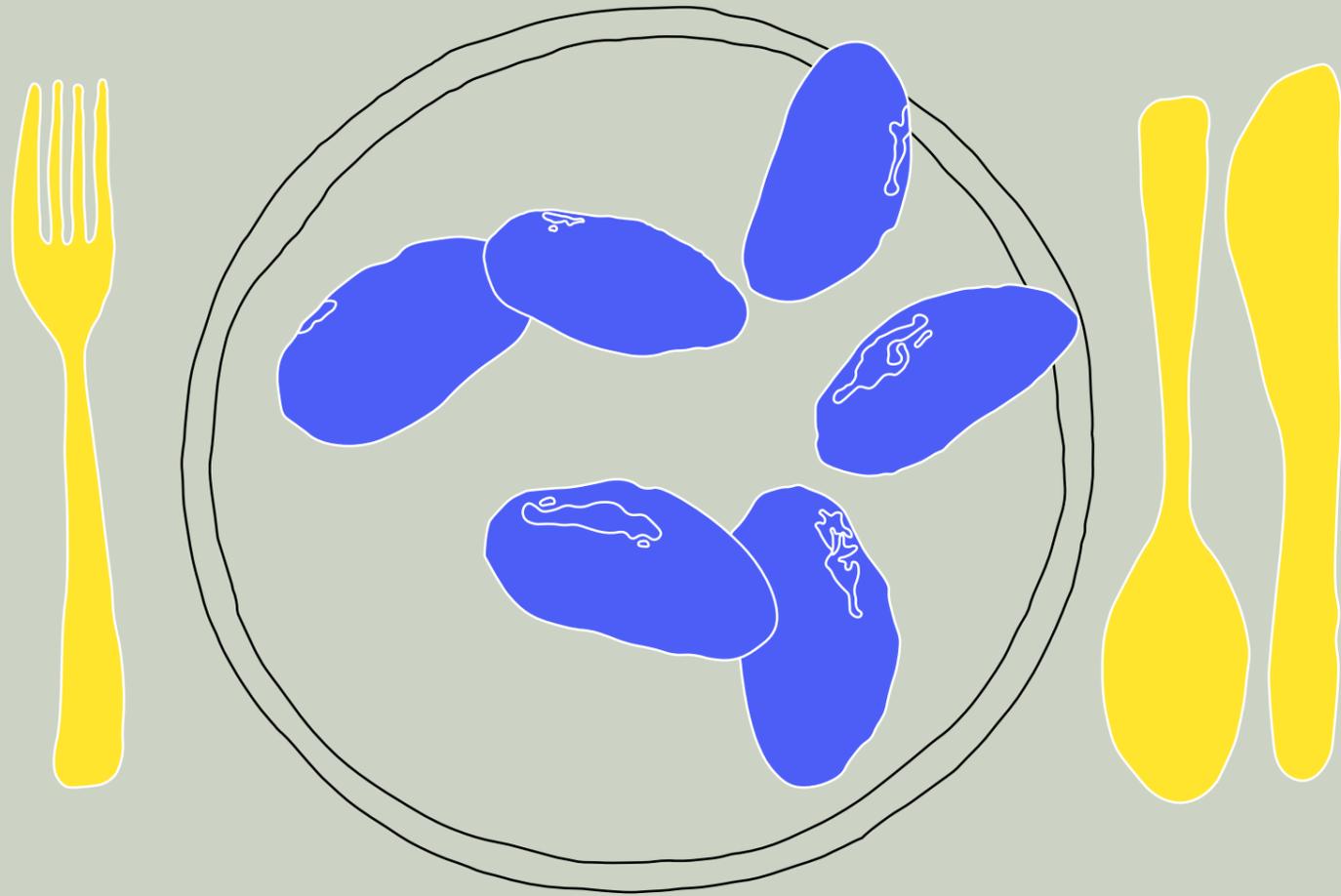


Image References

Fig	Subject	Name	Year	Location	Source
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2	Agronomist Collage	Author	2021	Photoshop	
3	Digital Nomad Collage	Author	2021	Photoshop	
4	Notes	Author	2021	Sktechbook	
5	Digital Nomad Flatlay	Author	2021	Photoshop	
6	MacBook Pro	Author	2021		
7	iPhone	Apple	2021		https://www.apple.com/uk/shop/product/MHKH3ZM/A/iphone-12-pro-max-leather-case-with-magsafe-california-poppy?fnode=dc4b97875bd2ddec6c30dcbd9ba3edbc3d42ebd2a79a9653fbf372062ef1dfdd4c7d832157673
8	Popeye	Norse Store	2021		https://www.norsestore.com/commodity/32105-popeye-popeye-magazine-n884
9	Chopsticks	Shutterstock	2021		https://www.shutterstock.com/image-photo/metal-chopsticks-isolated-on-white-background-733752481
10	Canon Camera	Amazon	2021		https://www.amazon.co.uk/Flowers-Camera-Universal-Shoulder-Fujifilm-Roses-Cotton/dp/B07L96S29B
11	Cook Korean	Amazon	2021		https://www.amazon.co.uk/Cook-Korean-Robin-Ha/dp/1607748878
12	Notebook	Author	2021		
13	Kodak Film	Digital Camera	2021		https://www.digitalcamerawarehouse.com.au/kodak-assorted-35mm-film-3-pack
14	AeroPress	AeroPress	2021		https://www.aeropress.co.uk/collections/aeropress-coffee-makers/products/aeropress-coffee-maker
15	Headphones	Apple	2021		https://www.apple.com/uk/shop/buy-airpods/airpods-max/pink
16	Korean Passport	Wiki	2021		https://en.wikipedia.org/wiki/Visa_requirements_for_South_Korean_citizens
17	USA Passport	Wiki	2021		https://en.wikipedia.org/wiki/United_States_passport
18	Hershey's	Biago	2021		https://www.biagiowineandspirits.com/product/hersheys-milk-chocolate-with-almonds-1-45oz/
19	Pens	Muji	2021		https://www.mujionline.eu/uk/stationery/pens-and-pencils/gel-ink-pens
20	Mintia	Blippo	2021		https://www.blippo.com/asahi-mintia-mints-cold-smash
21	Key Ring	Foundland	2021		https://foundland.com/wearing/all/udon-keychain/
22	Charger	Apple	2021		https://www.apple.com/uk/shop/product/MX0J2B/A/96w-usb-c-power-adapter
23	Pill	Spunout	2021		https://spunout.ie/sex-relationships/contraception/contraceptive-pill-combined
24	Apple Watch	Apple	2021		https://www.apple.com/uk/shop/product/MY9D2ZM/A/40mm-california-poppy-leather-link-s-m7fnode=08b1b78d0fd6521652dc1dc5d93f32bddf56bba324ddf46f6c4fcte041ae5a7750d1b5b66078bf4c5e91eba2ad6aada43e96ab182a4196fbcde9c5cf387d10b4cc82278f0b0293d38d8274e39602181f
25	Mouse	Curry's	2021		https://www.currys.co.uk/gbuk/computing-accessories/computer-accessories/mice-and-keyboards/mice/logitech-m220-silent-wireless-optical-mouse-charcoal-10157563-pdt.html
26	Omamori	Sparkling	2021		https://sparkling.one/inspiration/japanese-omamori/
27	Screenshot	Instagram	2021		n/a
28	Agronomist Collage	Author	2021	Photoshop	
29	Notes	Author	2021	Sketchbook	
30	Agronomist Flatlay	Author	2021	Photoshop	
31	Basil Seeds	Ebay	2021		https://www.ebay.co.uk/itm/Mr-Fothergills-Pictorial-Packet-Herb-Basil-Lemon-300-Seeds-/331076694689
32	Pruning Scissors	Niwaki	2021		https://www.niwaki.com/store/sentei-garden-scissors/
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35	Bread Bowl	1st Dibs	2021		https://www.1stdibs.co.uk/furniture/dining-entertaining/pottery/large-19th-century-spanish-dairy-bowl-granada-lebrillo-earthenware/id-f_15413432/
36	Fennel	Amazon	2021		https://www.amazon.com/Dill-Mammoth-Long-Island-Seeds/dp/B009Z0LUZ0
37	Nokia	Buzzfeed	2021		https://www.buzzfeednews.com/article/talalansari/nokia-3130-is-back
38	Gardening Book	Pintrest	2021		https://www.pinterest.co.uk/pin/543246773783515640/
39	Mushrooms	GB Chefs	2021		https://www.greatbritishchefs.com/how-to-cook/how-to-cook-king-oyster-mushrooms
40	Tomato Seeds	Amazon	2021		https://www.amazon.co.uk/Mr-Fothergills-Pictorial-Vegetable-Ferline/dp/B00H1CJAJ2
41	Sage	Author	2021		
42	Pencil	Author	2021		
43	Gloves	Parrs	2021		https://www.parrs.co.uk/safehandler-cut-puncture-resistant-gloves-one-size-p1004
44	Freshwater Mussels	Wamp	2021		https://wmap.blogs.delaware.gov/2018/09/11/just-how-shellfish-are-freshwater-mussels/
45	Orange	Innocent	2021		https://www.innocentdrinks.co.uk/things-we-make/juices/juice/orange-juice-with-bits
46	Opinel Knife	Opinel	2021		https://www.opinel.com/en/tradition/stainless-steel/n8-stainless-steel
47	Secateurs	Niwaki	2021		https://www.niwaki.com/store/mainichi-secateurs/
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Fig	Subject	Name	Year	Location	Source
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51	Pendant	Sayers	2021		https://www.sayerslondon.com/category/pendant-st-christ/faith-jewellery/St-Christopher-Pendants.html
52	Onion	Practicle Self	2021		https://practicalselfreliance.com/planting-sprouted-onions/
53	Lemon	Kathleen DiChiara	2021		https://kathleendichiara.com/3802-2/
54	Hori Hori	Niwaki	2021		https://www.niwaki.com/store/hori-hori/
55	Trug	Larbour and Wait	2021		https://www.labourandwait.co.uk/products/garden-trug
56	Spoon	Goodfellows	2021		https://www.goodf.co.uk/buffet-c39/service-utensils-c124/olive-wood-c244/olive-wood-spoon-30cm-p2429
57	Spade	Highway Garden	2021		https://www.highwaygardencentre.co.uk/spear-and-jackson-stainless-steel-digging-spade
58	Supper Club Collage	Author	2021	Photoshop	
59	Bookish Logo	Facebook	2021		https://www.facebook.com/TheBookishSupperSociety/photos/a.348994318561858/754691817992104
60	canTina Logo	canTina	2021		http://cantinabrighton.com/what-i-do/
61	One Supper Club Logo	One Supper Club	2021		https://www.onesupperclub.co.uk/
62	Four Image	Four	2021		https://www.fourrestaurant.co.uk/
63	Resturant Map	Author	2021	Photoshop	
64	Green Spaces Map	Author	2021	Photoshop	
65	Exisitng Site Drawings	Author	2021	Vectorworks	
66	Old Brick	Author	2021	Gloucester Mews	
67	New Brick 1.0	Author	2021	Gloucester Mews	
68	New Brick 2.0	Author	2021	Gloucester Mews	
69	Rusting Gates	Author	2021	Gloucester Mews	
70	Floor Threshold	Author	2021	Gloucester Mews	
71	Sliding door + gate	Author	2021	Gloucester Mews	
72	Model Image	Author	2021	Studio	
73	Model Image	Author	2021	Studio	
74	Model Image	Author	2021	Studio	
75	Model Image	Author	2021	Studio	
76	Gloucester Mews Image	Author	2021	Gloucester Mews	
77	Vector Drawing	Author	2021	Vectorworks	
78	Model Image	Author	2021	Studio	
79	Model Image	Author	2021	Studio	
80	Model Image	Author	2021	Studio	
81	Model Image	Author	2021	Studio	
82	Model Image	Author	2021	Studio	
83	Vector Drawing	Author	2021	Vectorworks	
84	Naturhus	Bengt Warner	1974	Sweden	https://meccinteriors.com/designbites/living-in-a-greenhouse-like-dome/
85	Naturhus	Bengt Warner	1974	Sweden	https://meccinteriors.com/designbites/living-in-a-greenhouse-like-dome/
86	Uppgrenna Nature House	Tailor Made Arkitekter	2015	Sweden	https://www.dezeen.com/2015/10/09/tailor-made-arkitekter-archetypal-barn-glasshouse-architecture-uppgrenna-nature-house-sweden/
87	Uppgrenna Nature House	Tailor Made Arkitekter	2015	Sweden	https://www.dezeen.com/2015/10/09/tailor-made-arkitekter-archetypal-barn-glasshouse-architecture-uppgrenna-nature-house-sweden/
88	Uppgrenna Nature House	Tailor Made Arkitekter	2015	Sweden	https://www.dezeen.com/2015/10/09/tailor-made-arkitekter-archetypal-barn-glasshouse-architecture-uppgrenna-nature-house-sweden/
89	Uppgrenna Nature House	Tailor Made Arkitekter	2015	Sweden	https://www.dezeen.com/2015/10/09/tailor-made-arkitekter-archetypal-barn-glasshouse-architecture-uppgrenna-nature-house-sweden/
90	Naturhus Diagram	Author	2021	Photoshop	
91	Hove Allotments	Google Images Screenshot	2021		https://www.google.com/maps/place/Hove+Allotments/@50.8399024,-0.1844505,17z/data=!4m1!1m2!1s0x48759aacb1b56765:0x91356549c8c1424!2sHove+Allotments!8m2!3d50.8399024!4d-0.1844505
92	Bevendean Community G	Google Images Screenshot	2021		https://www.google.com/maps/place/Bevendean+Community+Garden/@50.8425163,-0.1031155,17z/data=!3m1!4b1!4m5!3m4!1s0x487585f9ae4a4fed:0x1df2f0c39d87d369!8m2!3d50.8425129!4d-0.1009268
93	Albion Communtiy G	Google Images Screenshot	2021		https://www.google.com/maps/place/Albion+Community+Garden/@50.8276676,-0.1359673,17z/data=!3m1!4b1!4m5!3m4!1s0x48758584ff31984d:0x4dc29e0ce8b18719!8m2!3d50.8276642!4d-0.1337786
94	Lewes Community G	Google Images Screenshot	2021		https://www.google.com/maps/place/Lewes+Community+Allotment+Project+LCA/@50.882172,-0.0128317,17z/data=!3m1!4b1!4m5!3m4!1s0x4875882e0784fa77:0xb438bb9ab7468be1!8m2!3d50.8821686!4d-0.010643
95	Moulescoomb Forest G	Google Images Screenshot	2021		https://www.google.com/maps/place/Moulescoomb+Forest+Garden+and+Wildlife+Project/@50.8258484,-0.1445125,17z/data=!3m1!4b1!4m5!3m4!1s0x48758574bc474d3b:0x93f2c1646afb4d88!8m2!3d50.8258425!4d-0.1423111
96	Natal Road Allotments	Google Images Screenshot	2021		https://www.google.com/maps/place/Natal+Road+allotments/@50.8421899,-0.1202819,17z/data=!3m1!4b1!4m5!3m4!1s0x4875858b035b8dfd:0x442a3827d2d4b59b!8m2!3d50.8421865!4d-0.1180932

Fig	Subject	Name	Year	Location	Source
97	Whitehawk Community	Google Images Screenshot	2021		https://www.google.com/maps/place/Whitehawk+Community+Food+Project/@50.8242069,-0.1144767,17z/data=!3m1!4b1!4m5!3m4!1s0x487585c02fc82bf9:0x6195fe559a79b8dd!8m2!3d50.8242035!4d-0.112288
98	Nurture Through Nature	Google Images Screenshot	2021		https://www.google.com/maps/place/Nurture+Through+Nature/@50.8428842,-0.1179473,17z/data=!3m1!4b1!4m5!3m4!1s0x4875858b20c970e3:0x4c88bde9a249c5f!8m2!3d50.8428808!4d-0.1157586
99	Roedale Allotments	Google Images Screenshot	2021		https://www.google.com/maps/place/Roedale+Valley+Allotments/@50.8523992,-0.1332951,17z/data=!3m1!4b1!4m5!3m4!1s0x48758f7bc49fae9b:0x34ae1394344cc9d7!8m2!3d50.8523958!4d-0.1311064
100	Tennantry Down Allot	Google Images Screenshot	2021		https://www.google.com/maps/place/Tenantry+Down+Allotment/@50.8335969,-0.1125788,17z/data=!3m1!4b1!4m5!3m4!1s0x487585edbf4624fb:0xd804cc7569bd7f74!8m2!3d50.8335935!4d-0.1103901
101	Vertigo Verticle Allot	Google Images Screenshot	2021		https://www.google.com/maps/place/Vertigro+Vertical+Allotments/@50.8288555,-0.1320406,17z/data=!3m1!4b1!4m5!3m4!1s0x487585995b8e1edf:0x81282b0921f1fe48!8m2!3d50.8288451!4d-0.1298624
102	Weald Allotments	Google Images Screenshot	2021		https://www.google.com/maps/place/Weald+Allotments/@50.8409771,-0.1869392,17z/data=!3m1!4b1!4m5!3m4!1s0x48759aab435472ff:0x712df5b468303bc7!8m2!3d50.8409353!4d-0.1842905
103	Brighton Allotment Map	Author	2021	Photoshop	
104	Greenhouse	Google Images Screenshot	2021		
105	Shed	Google Images Screenshot	2021		
106	Polytunnel	Google Images Screenshot	2021		
107	Polytunnel	Google Images Screenshot	2021		
108	Polytunnel	Google Images Screenshot	2021		
109	Model + Water Image	Author	2021	Studio	
110	Model + Water Image	Author	2021	Studio	
111	Model + Water Image	Author	2021	Studio	
112	Model + Water Image	Author	2021	Studio	
113	Model + Water + Chain	Author	2021	Studio	
114	Model + Water + Chain	Author	2021	Studio	
115	Model + Water Image	Author	2021	Studio	
116	Sketch	Author	2021	Sketchbook	
117	Design Iteration	Author	2021	Illustrator	
118	Caustic Reflection Up	n/a	2017	Youtube	https://www.youtube.com/watch?v=xtj6tRCI2Zw
119	Secret Garden House	Wallflower Architecture + Design	2015	ArchDaily MarcTey	https://www.archdaily.com/797754/secret-garden-house-wallflower-architecture-plus-design?ad_medium=gallery
120	Model Image	Author	2021	Studio	
121	Aquaponics	Modern Farmer	2021	Springworks Farm	https://modernfarmer.com/2019/08/this-farmers-childhood-passion-grew-into-one-of-the-largest-aquaponics-farms-in-the-country/
122	Tomato Aquaponics	Veolia	2019	Sketchbook	https://www.planet.veolia.com/en/aquaponics-budding-solution-feed-cities
123	Cauliflower Sketch	Author	2021	Sketchbook	
124	Pepper Sketch	Author	2021	Sketchbook	
125	Cabbage Sketch	Author	2021	Sketchbook	
126	Watercress Sketch	Author	2021	Sketchbook	
127	Cucumber Sketch	Author	2021	Sketchbook	
128	Lettuce Sketch	Author	2021	Sketchbook	
129	Trout Sketch	Author	2021	Sketchbook	
130	Sea Bass Sketch	Author	2021	Sketchbook	
131	Freshwater Mussel Sketch	Author	2021	Sketchbook	
132	Prawn Sketch	Author	2021	Sketchbook	
133	Mussel Larva	Molluscs.com	2021	Website	http://www.molluscs.at/bivalvia/index.html?/bivalvia/glochidia.html
134	Mussel Growth Digram	Author	2021	Sketchbook	
135	CP Caritas	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/033-Caritas-Melle-scaled.jpghttps://architectenjdvviv.com/projects/pc-caritas/
136	CP Caritas	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/025-Caritas-Melle-scaled.jpg
137	CP Caritas	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/042-Caritas-Melle-scaled.jpg
138	CP Caritas	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/021-Caritas-Melle-scaled.jpg
139	CP Caritas	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/059-Caritas-Melle-scaled.jpg
140	CP Caritas	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/079-Caritas-Melle-scaled.jpg
141	Sketches	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/12-scaled.jpg
142	Sketches	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/14-scaled.jpg
143	Sketches	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/16-scaled.jpg
144	Sketches	Inge Vinck	2018	Melle, Belgium	https://architectenjdvviv.com/wordpress/wp-content/uploads/2020/08/15-scaled.jpg

Fig	Subject	Name	Year	Location	Source
145	Ridley's Dinner Steps	Guglielmo Rossi	2011		http://the-decorators.net/Ridley-s-Temporary-Restaurant
146	Ridley's Image 1	<small>Dosfotos, Rachel Ferriman, Jessie Levene</small>	2011		http://the-decorators.net/Ridley-s-Temporary-Restaurant
147	Ridley's Image 2	<small>Dosfotos, Rachel Ferriman, Jessie Levene</small>	2011		http://the-decorators.net/Ridley-s-Temporary-Restaurant
148	Ridley's Image 3	<small>Dosfotos, Rachel Ferriman, Jessie Levene</small>	2011		http://the-decorators.net/Ridley-s-Temporary-Restaurant
149	Ridley's Image 4	<small>Dosfotos, Rachel Ferriman, Jessie Levene</small>	2011		http://the-decorators.net/Ridley-s-Temporary-Restaurant
150	Ridley's Image 5	<small>Dosfotos, Rachel Ferriman, Jessie Levene</small>	2021		http://the-decorators.net/Ridley-s-Temporary-Restaurant
151	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
152	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
153	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
154	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
155	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
156	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
157	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
158	Querini Stampalia	Carlo Scarpa	1972	San Vito d'Altivole, Italy	https://thegardenedit.com/blogs/journal/15789516-carlo-scarpa
159	Pool Design Iteration 1	Author	2021	Vectorworks + Illustrator	
160	Pool Design Iteration 2	Author	2021	Vectorworks + Illustrator	
161	Pool Design Iteration 3	Author	2021	Vectorworks + Illustrator	
162	Pool Design Iteration 4	Author	2021	Vectorworks + Illustrator	
163	Pool + Platform Design Iterations	Author	2021	Vectorworks + Illustrator	
164	Platform Design Iteration 1	Author	2021	Vectorworks + Illustrator	
165	Beam Colours	Author	2021	Vectorworks + Illustrator	
166	Living Pod Design 1	Author	2021	Vectorworks + Illustrator	
167	Living Pod Design 2	Author	2021	Vectorworks + Illustrator	

