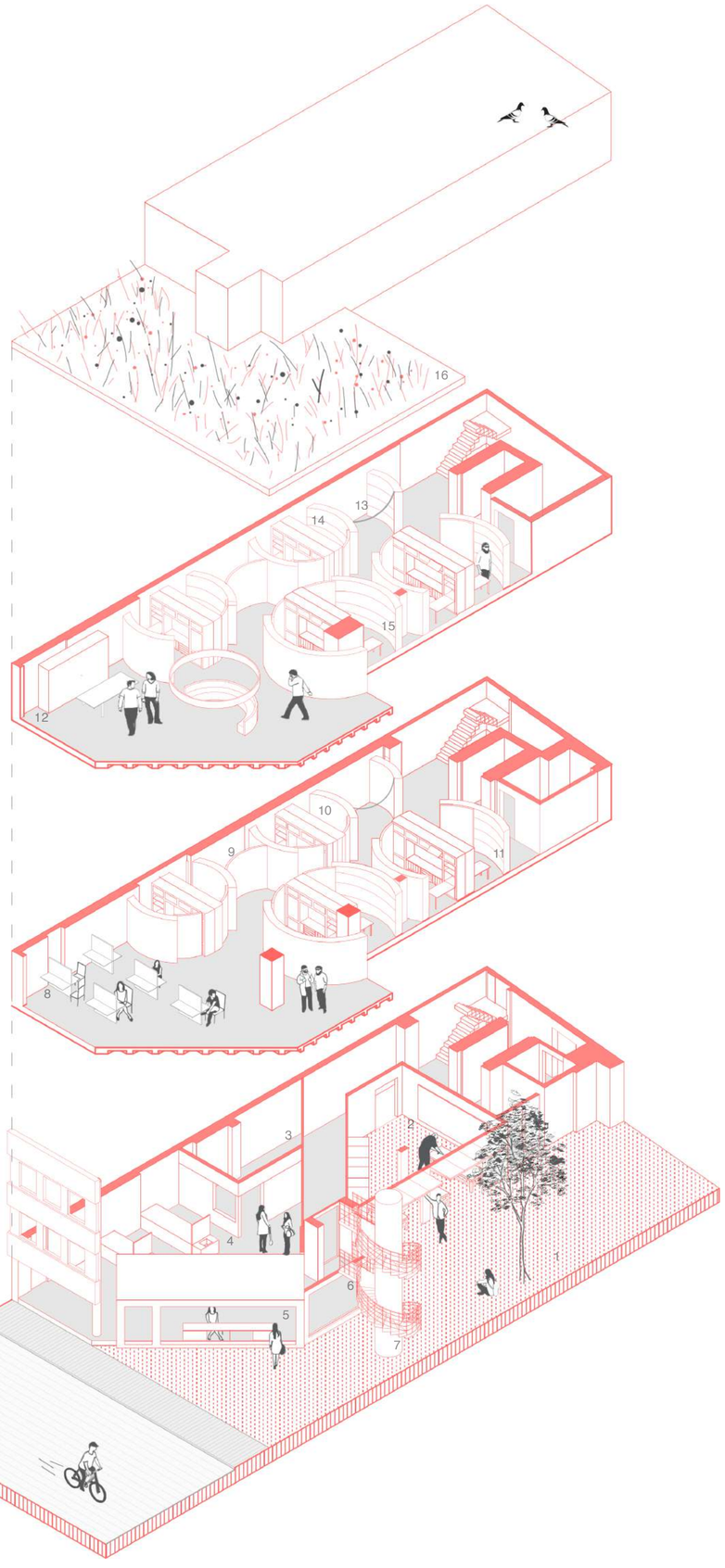
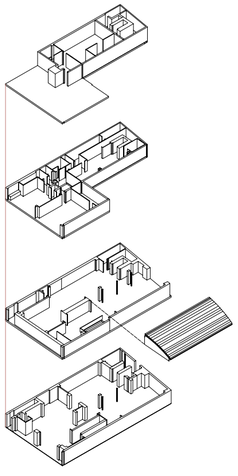
Shared Biotech laboratories and Workshop for Sustainable Material Generation

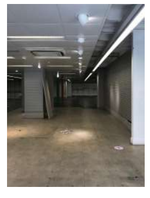
In order to transition to a circular economy, sustainable material alternatives need to be integrated into our everyday. This design incorporates shared biolab and 3D workshop on the ground floor putting often hidden scientific research on display for use by the studio and short term renters on the floors above. The space is a melting pot for inquisitive individuals and groups from diverse backgrounds to collaborate and learn.





19-23 Fife Rd, Kingston upon Thames KT1 1SB.
Adjacent to the pedestrian high street on a diverse street with high foot fall.
1970s concrete structure building with coffered ceiling with deep, dark plan only offering little natural light and ventilation from the front. Later addition of steel first floor plate and curved roof to create more floor space, part of old fashioned pre COVID-19 mentality where more = more stock = more money.

EXISTING BUILDING



16. Wild flower sedum roof

ROOF

15. Four large studios
14. Four regular studios
13. Private meeting room
12. Communal space including lounge area, kitchen and dining table

SECOND FLOOR

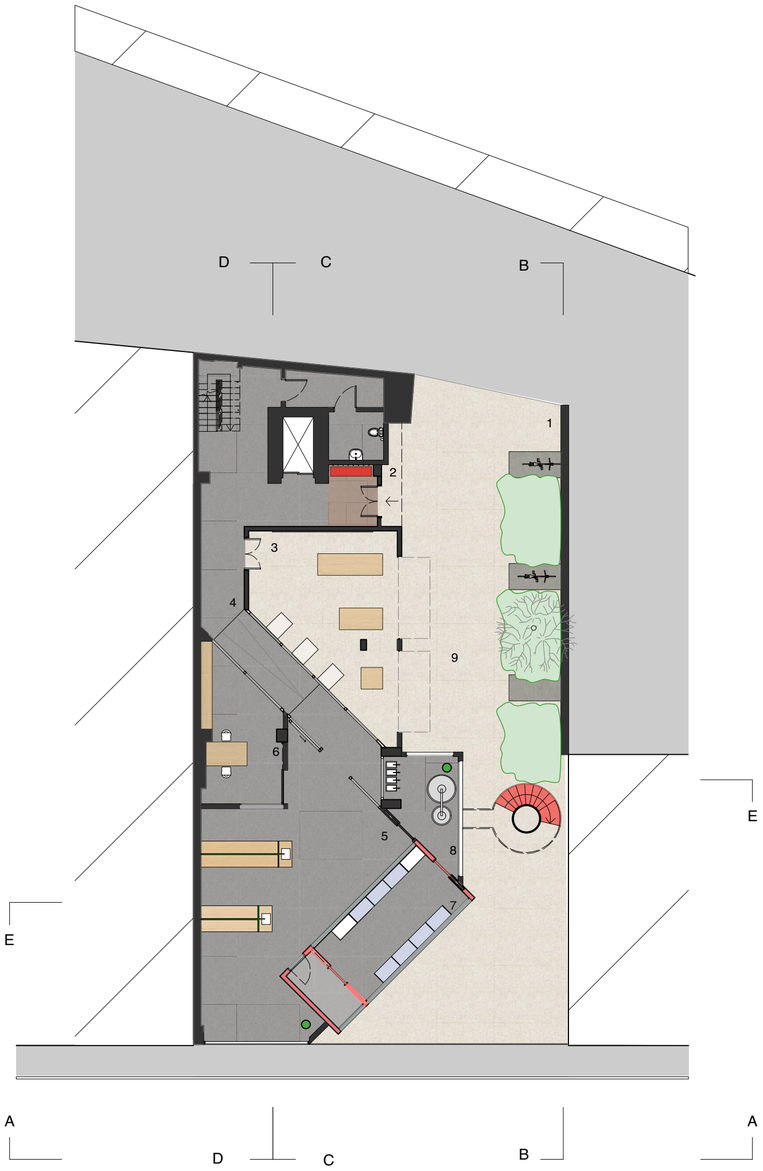
11. Four large studios
10. Four regular studios
9. Kitchenette
8. Short term rent able work space

FIRST FLOOR

7. External spiral staircase
6. Plant room
5. Self contained Bio Safety Level (BSL) 2 Lab
4. Bio Safety Level (BSL) 1 Lab
3. Technician Laboratory
2. 3D Workshop Space
1. Public realm and courtyard and green space

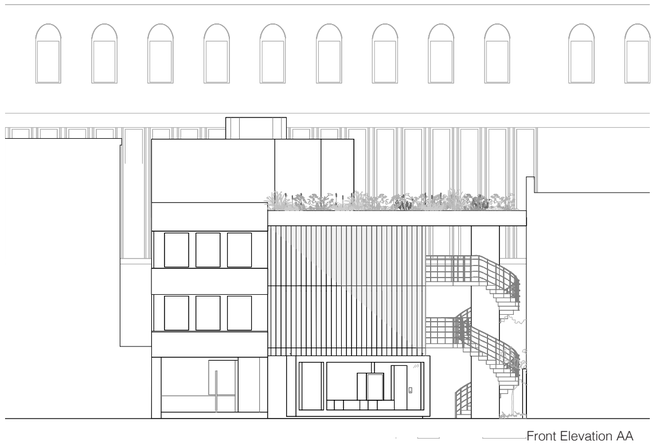
GROUND FLOOR

Key
1. Courtyard and public realm
2. Main entrance
3. 3D workshop
4. Central glass corridor
5. Bio Safety Level 1 Laboratory
6. Technicians laboratory
7. Bio Safety Level 2 Laboratory
8. Plant room
9. Floding grarge style doors
10. Private meeting room
11. Small studio
12. Large studio
13. Kitchenette
14. Short term workspace
15. Partially obscure channel glass facade
16. Studio common area with sofa, table and kitchen



Rendered Plans
Scale 1:200 @A2

View from courtyard with 3D workshop garage doors, channel glass first and second floor facade, external staircase and plant room.



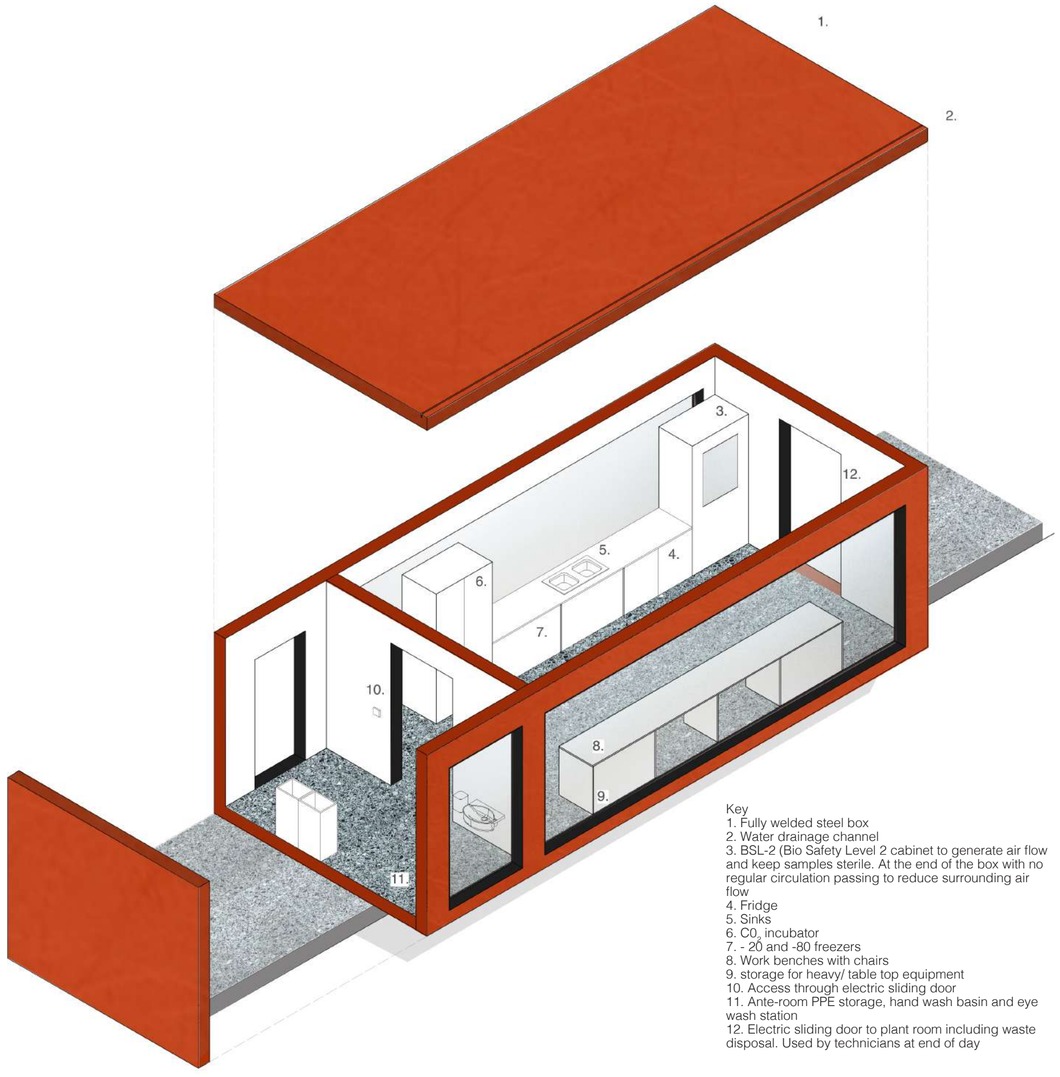
Front Elevation AA
Scale 1:200 @A2

Section EE
Scale 1:200 @A2

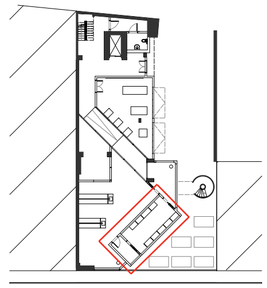
Side Elevation BB
Scale 1:200 @A2

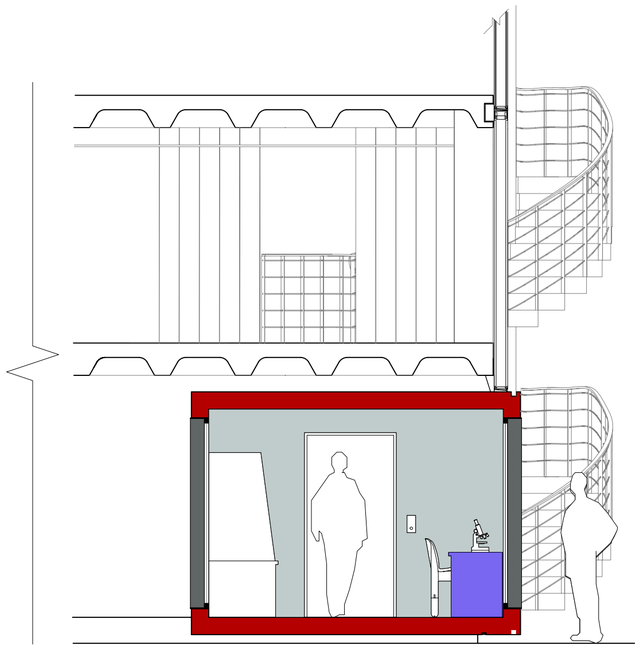
Bio Safety Level 2 Laboratory Box

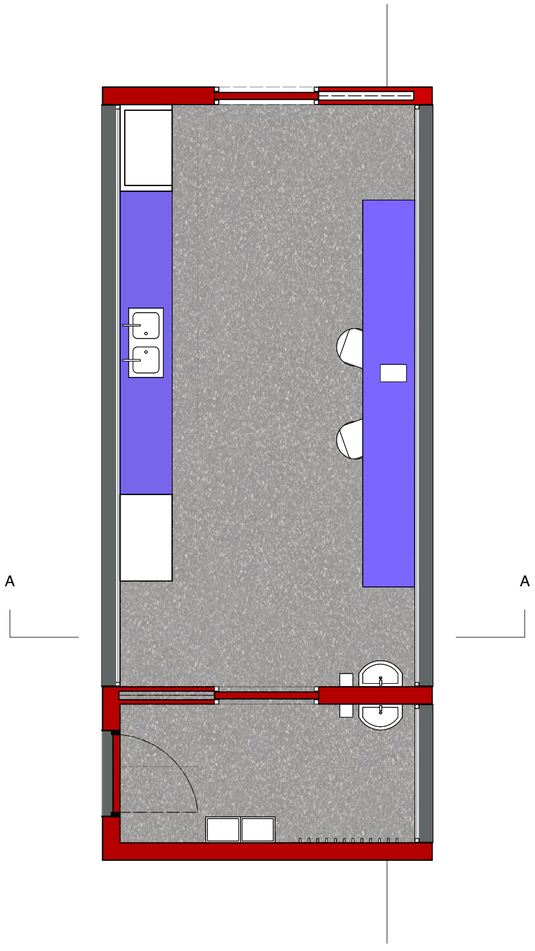
Movable self contained steel BSL-2 ban box protruding from new facade with large windows on both long sides. This puts the research on display like a shop window with thick frame, recessed glass and contrast window recess.



Key
1. Fully welded steel box
2. Water drainage channel
3. BSL-2 (Bio Safety Level 2 cabinet to generate air flow and keep samples sterile. At the end of the box with no regular circulation passing to reduce surrounding air flow
4. Fridge
5. Sinks
6. CO_2 incubator
7. - 20 and -80 freezers
8. Work benches with chairs
9. storage for heavy/ table top equipment
10. Access through electric sliding door
11. Ante-room PPE storage, hand wash basin and eye wash station
12. Electric sliding door to plant room including waste disposal. Used by technicians at end of day

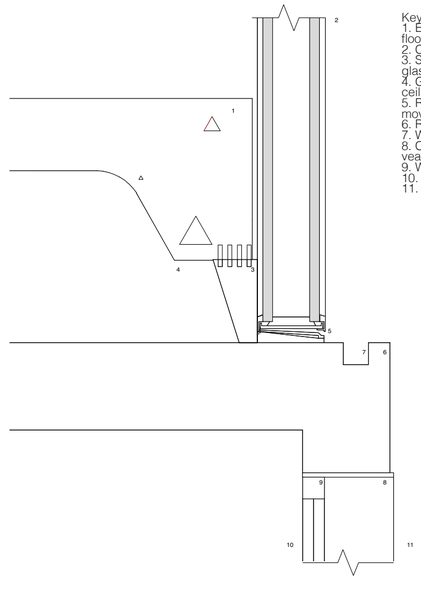




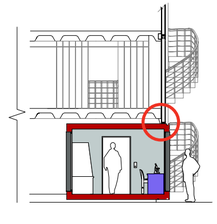


Section AA
Scale 1:50 @A2

Rendered Section CC
Not to Scale

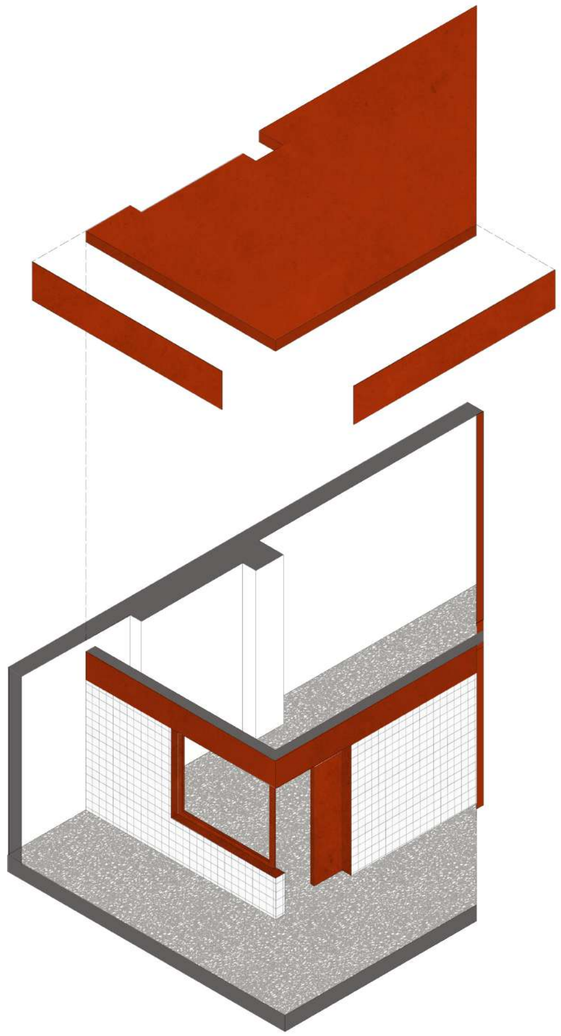


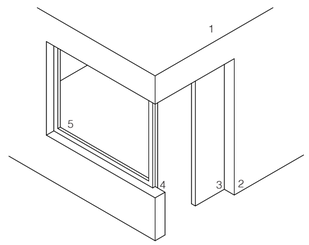
Key
1. Existing coffered ceiling concrete first floor plate
2. Channel glass facade - translucent
3. Steel fin preventing flex in channel glass over hang
4. Gap allowing light between box and ceiling
5. Rubber seal allowing box to be removed and taken to a new location.
6. Red fully sealed steel BSL-2 laboratory
7. Water channel
8. Contrasting black exterior window reveal aiding shop window effect
9. Window frame
10. Internal BSL-2 laboratory
11. External public realm



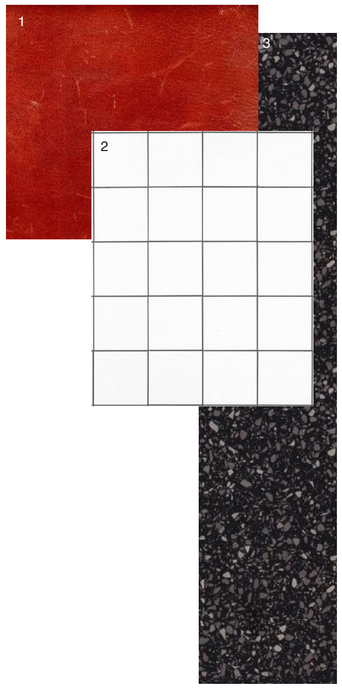
Technicians Laboratory

Big enough for 2/3 technicians to work full time to support and guide lab and workshop users. Large window and glass corridor allow technicians to see into both spaces. Recessed corner window / sliding door junction with over hang and windowsill.

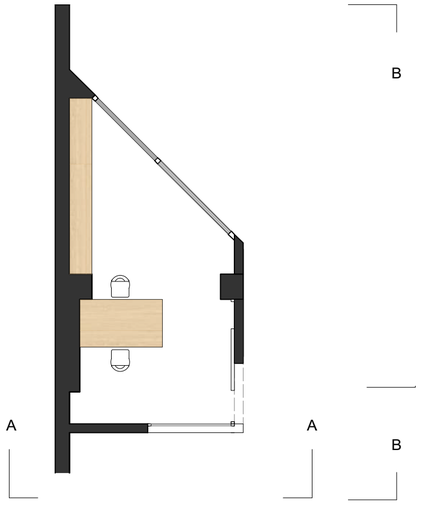


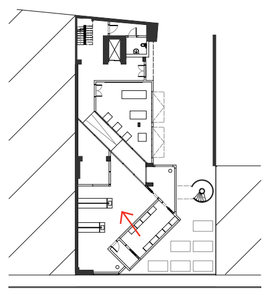


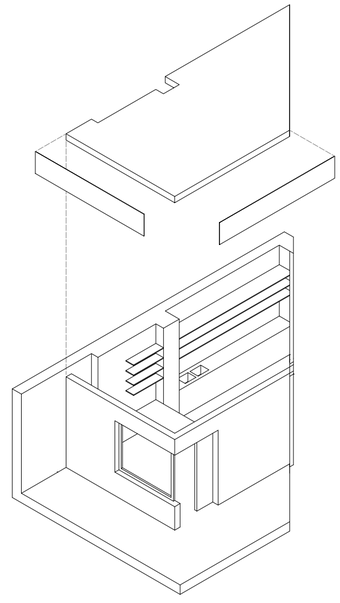
Key
1. Red powder coated steel 'lid' roof
2. Square tiles walls
3. Internal sliding door
4. Door frame
5. Recessed window frame

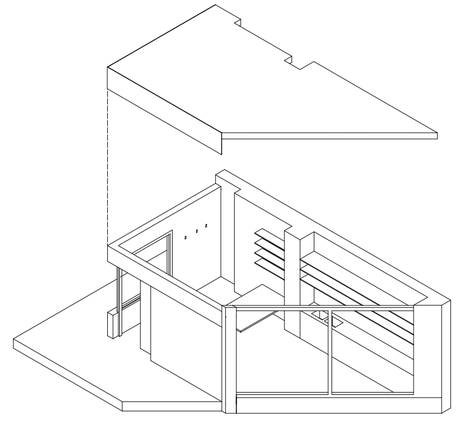


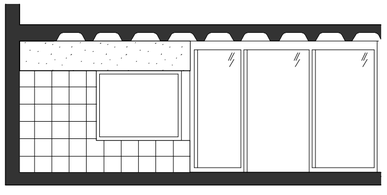
Key
1. Red powder coated steel
2. Square white ceramic tile
3. Black recycled plastic terrazzo linoleum



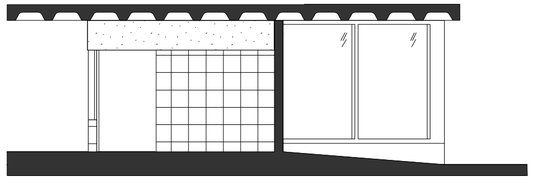








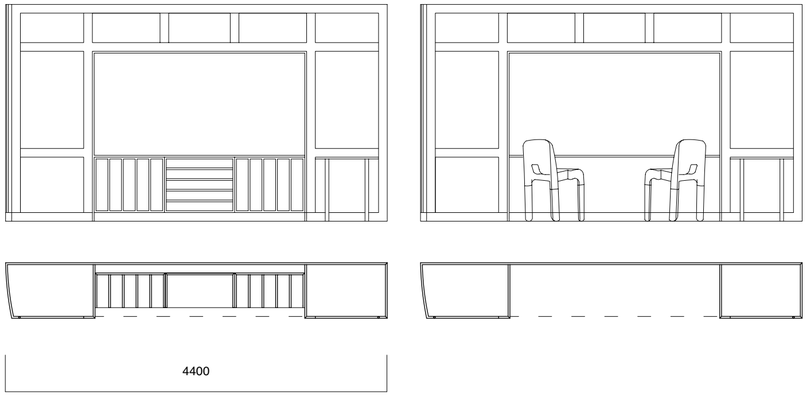
Section AA

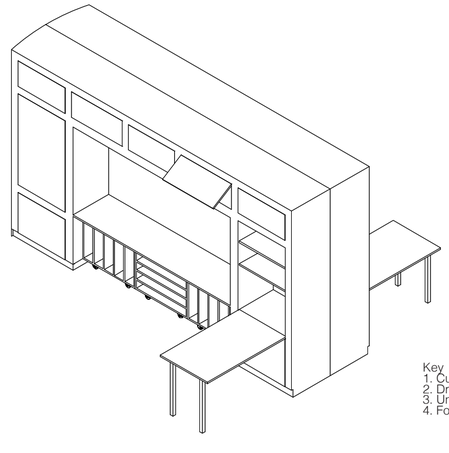


Section BB

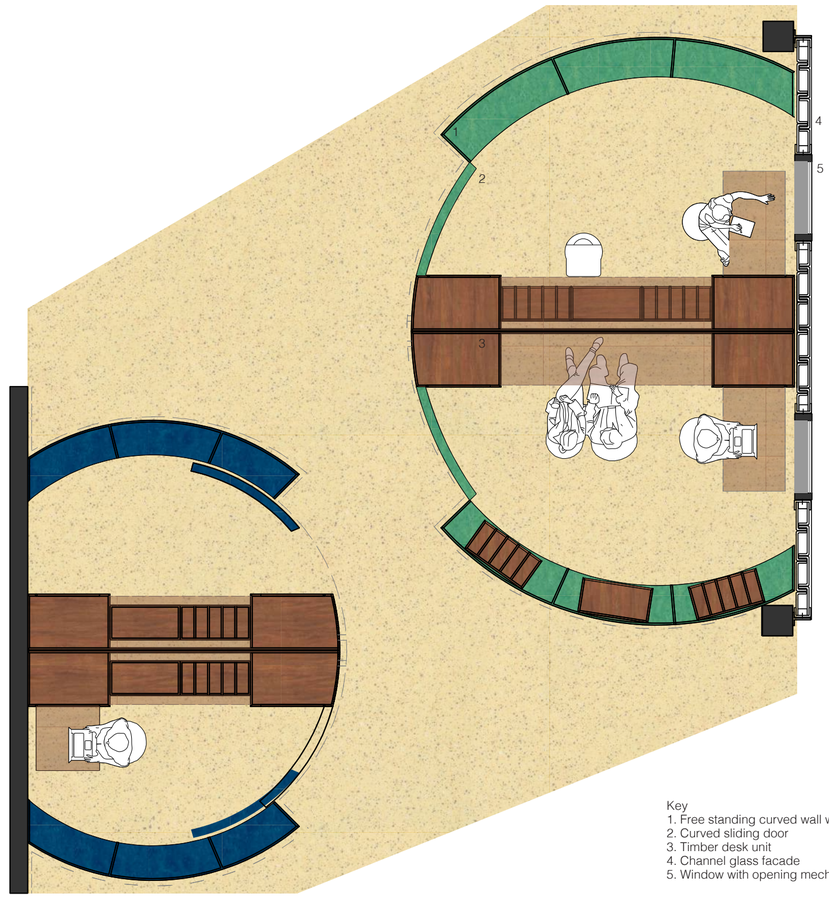
Studios

Eight larger and eight smaller studios are spread across the first and secons floors. 3 people can comfortably work in a large studio and 1/2 in a small studio. Both sizes are crated with a Parblex Plastic curved shelving wall and a timber work unit. The unit includes fold down desk and dresser space with either two or three shelves on castors which can be stored in the curved wall so the space can be used as further work space for additional people.





Key
1. Cupboards
2. Dresser / desk space
3. Units on castors
4. Fold out table



Key
1. Free standing curved wall with shelving
2. Curved sliding door
3. Timber desk unit
4. Channel glass facade
5. Window with opening mechanism

First and second floor

CHANNEL GLASS FACADE 'SKIN'

Dropped ceiling (not in studios)
Biodegradable panel made from plant based waste. Neutral colour to merge in with concrete ceiling as head heights are low

BAUX ACOUSTIC PANEL DROP CEILING

Curved studio walls and shelving
Reinforced bioplastics with incredible surface finish and durability. Compatible with injection moulding, 3D printing, milling and other industrial processing techniques to obtain curved shape. Other colours available

CHIP[S] BOARD PARBLEX PLASTICS

Work unit

DARK TIMBER

First and second floors

CHANNEL GLASS FACADE 'SKIN'