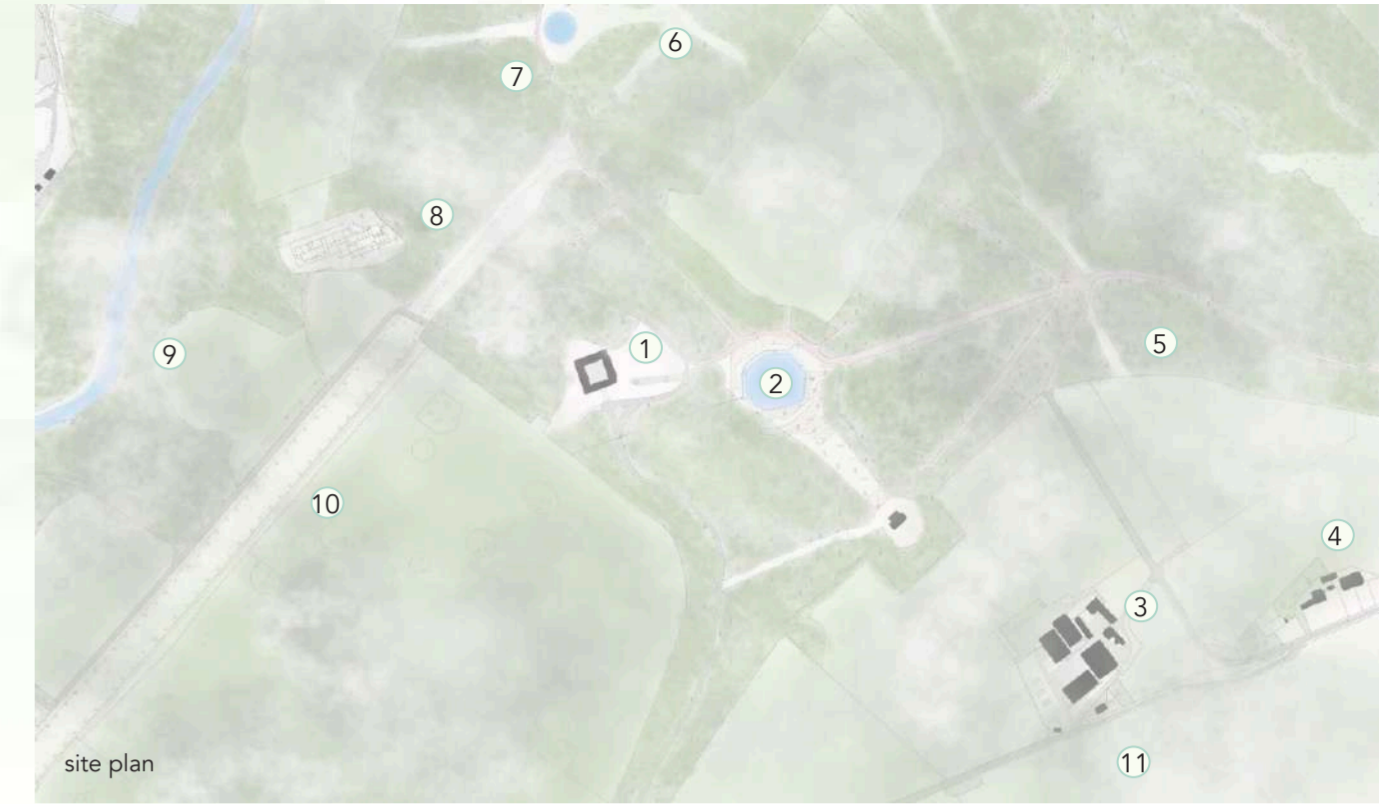


# revived by nature

The restoration of Gibside's stables will offer contemporary sustainable workshop spaces and zen gardens to the visitors of Gibside. A function that is created and balanced on the objective for the public to learn and encourage the cycle of reuse by reviving loved possessions or new recycled materials through the art of fabrics, stitching, printing, natural dyeing, woodwork and restoration.

The interiors 'spirit of place' will be driven by its construction and materiality used, formed by natural material in every aspect possible, repositioning architecture in a cycle that is good for people and the earth. Using Gibside's greater context of nature grown in the zen courtyard to create Gibside greenery species that can be recycled into printing and natural dyeing processes. Forming deeper understanding to the history of Mary Elinor's love for natural botany, all while the national trust site encouraging their own principles of restoration and reconstruction into a modern objective.

An environment that provides zen, relaxation therapy, a social hub and escapism for the community, accessible for all ages of the public that will leave with a new level of creativity and education all while successfully encouraging sustainability. The form of the space is designed for specific functionality within 4 sections that merge together through double height open spaces. Overall encouraging clubs, schools, families and individuals to feel inspired while enjoying the art of sustainability.



site context - adaptive potential

Gibside Stables is a ground 2\* listed building set within the historical Georgian pleasure grounds of the Gibside Estate, located along the Derwent River within the North East of England. Being a part of the national trust, it has become a heritage example that projects restoration and sustainable reuse. Something of which is very important within the world today and importantly the field of architecture with climate crisis and sustainable beginnings.

While viewing the existing conditions of the stables and courtyard an intervention of new purpose and life was needed. The process of constructing a scheme that not only added population, but deeper reasoning was issued; making the focal point of the restoration sustainability itself. Adding connections to the national trust, history of the site and importantly positive sustainable encouragement to the public during a process of restoration.

1. Gibside Stables
2. Fish Pond
3. Cut Thorn Farm
4. Gibside Hillhead
5. Snipes Dene Wood
6. Monument
7. Pond
8. Gibside Great Hall
9. River Derwent
10. The Long Walk
11. West Lane

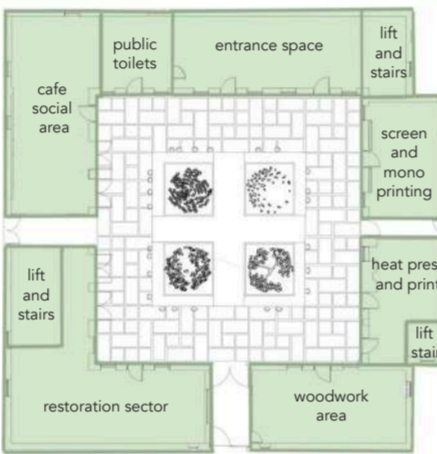


exploring functionality before designing

using Gibside's nature to print

fabric heat pressing with natural dye

stitching recycled materials



gibside entrance trail

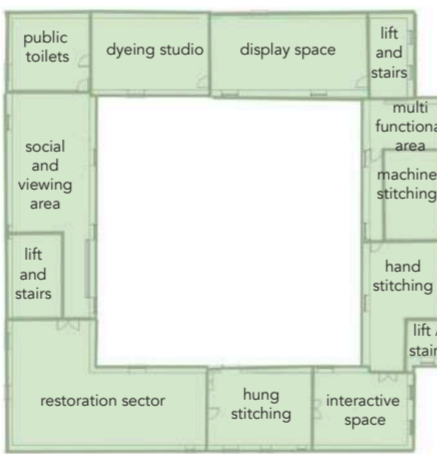


view of monument

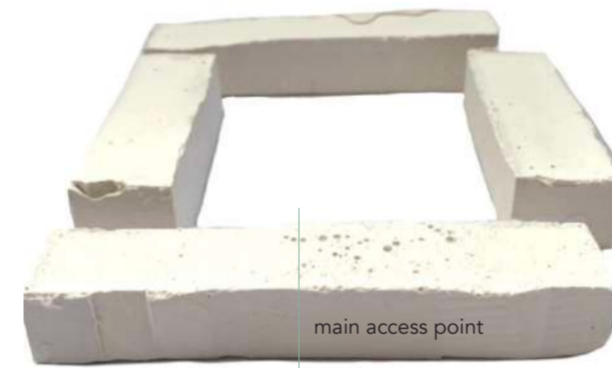


pathway direction around site

## space



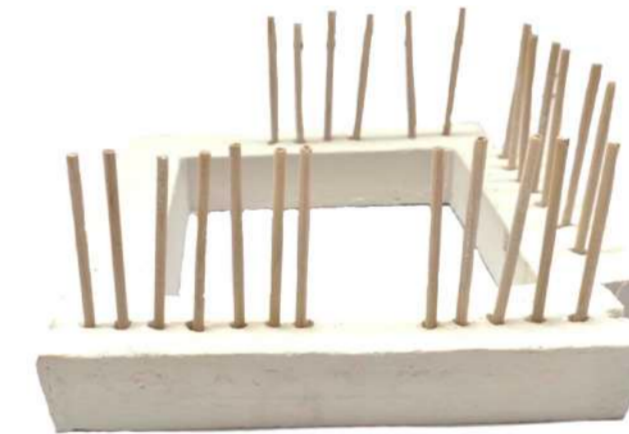
block diagrams



main access point

The proposed spaces are designed to match to the access and layout of the existing. An example, the restoration and woodwork section, using heavy materials has been designed as an advantage either side of the main entrance. The printing workshops work parallel to the ground floor for clear access while collecting surrounding nature.

## architecture

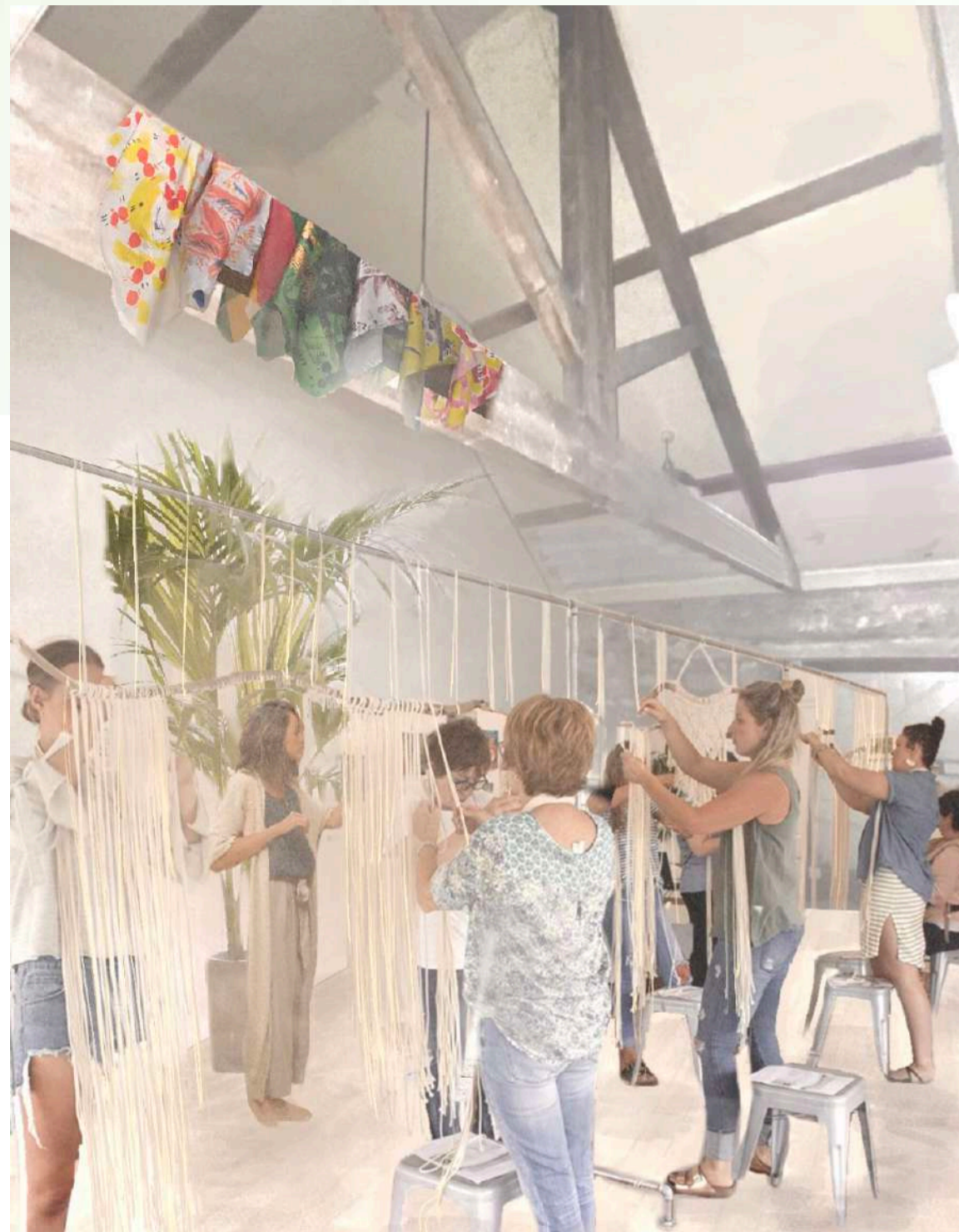


The existing structural poles are the prime design strategy, the full interiors form is based around maximising the symmetry and spatial control of these existing conditions. Furthering the design principles by constructing connections with scaffolding structures.

## function



Overall, the basis of the design strategy is effectively understanding the proposed building usage. Recreated life into the sites shell and existing building grid, working within each other to balance and utilise the individuality of each proposed function.



concept development - interior perspective



restoration desks, maximising space



group stitching, using larger table



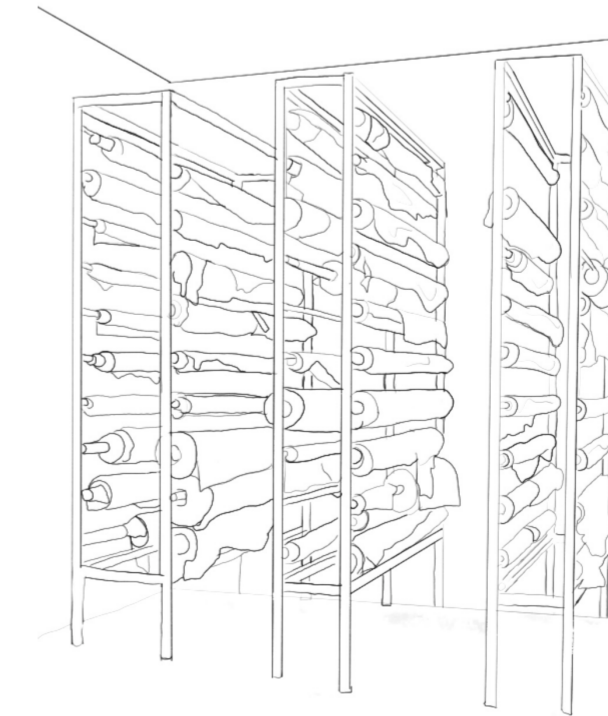
monoprinting



screenprinting



sustainable shop layout



scaffolding, reconstructive units

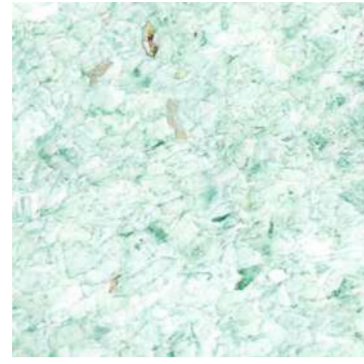


fabric / testing storage methods

# sustainable materiality and environmentally friendly interior fit out



recycled glass tiles in 'andromeda green'



smile plastics, 'alba style' recycled wood shavings and plastic



'well proven chair' formed by waste shavings and bio resin, foam layer



sustainable bamboo wood, base of all bespoke furniture / units



recycled scaffolding used for the whole interior structure



sustainable white cork, used for full wall fit out, installation method



utilizing recycled food and plants for a natural dyeing process



using sustainable mdf boards as table top surfaces

## A

1. Live green wall, grown with nature species from Gibside Gardens
2. Stack ventilation- using existing door openings to create an internal air flow and temperature control.
3. Plant wall climbers, enhancing small spaces and habitats while encouraging natural growth as a design advantage.
4. Gibside tree species, using the leaves for printing within the scheme
5. Roof windows / skylights between trusses, maximise natural sunlight and open ventilation.
6. Using the existing windows to balance existing vs artificial light. 'Fingo' glazing for sound proofing.
7. Using natural tones for the exterior of the courtyard and roof structure.
8. Within the machine stitching area, recycled materials and offcuts are mainly used.
9. The existing support structures are used as a feature and advantage to the overall scheme.
10. Recycled wood shavings and plastic planters are placed within the full fitout, added a zen feel while being environmentally friendly.



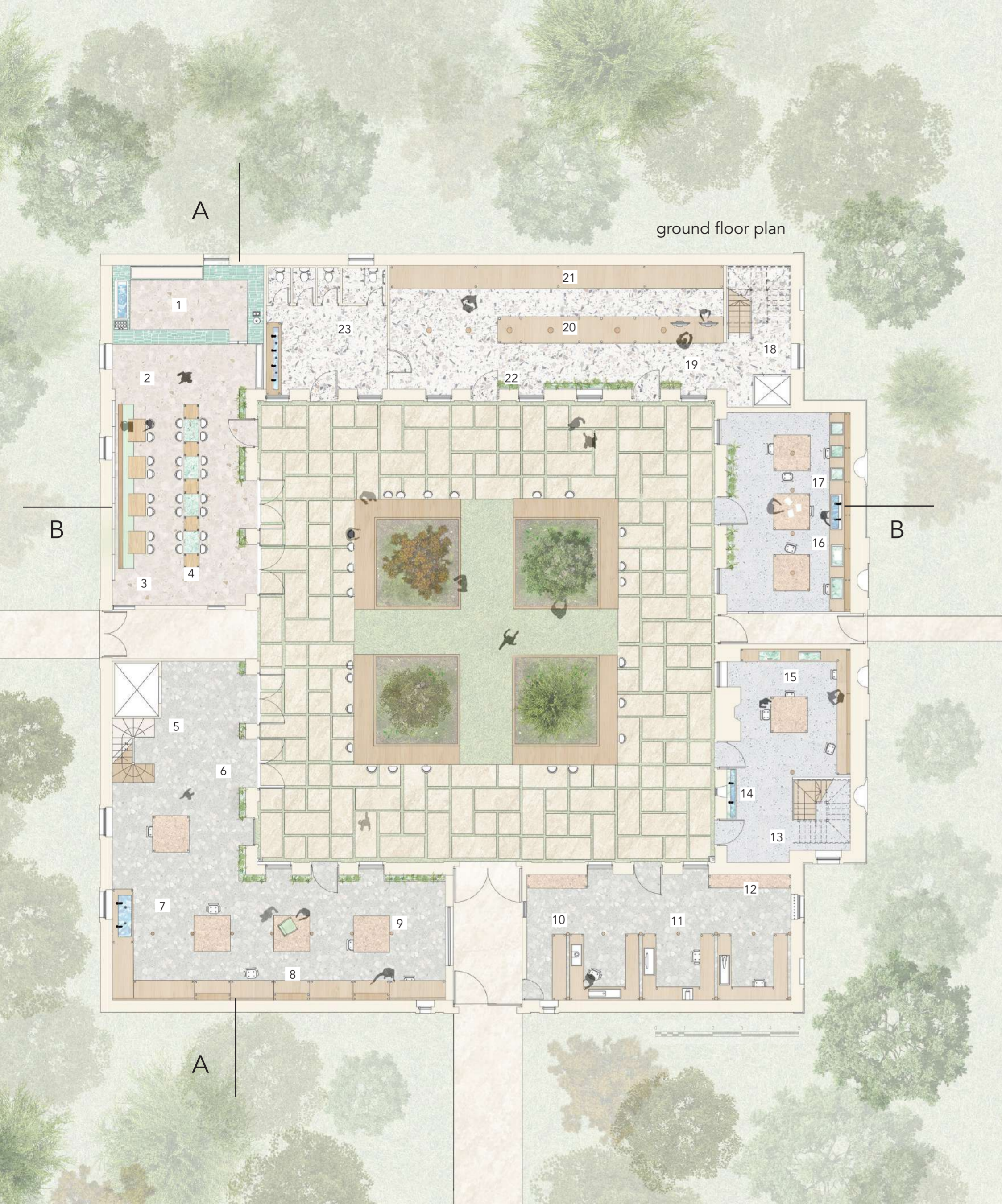
A - long section

## B

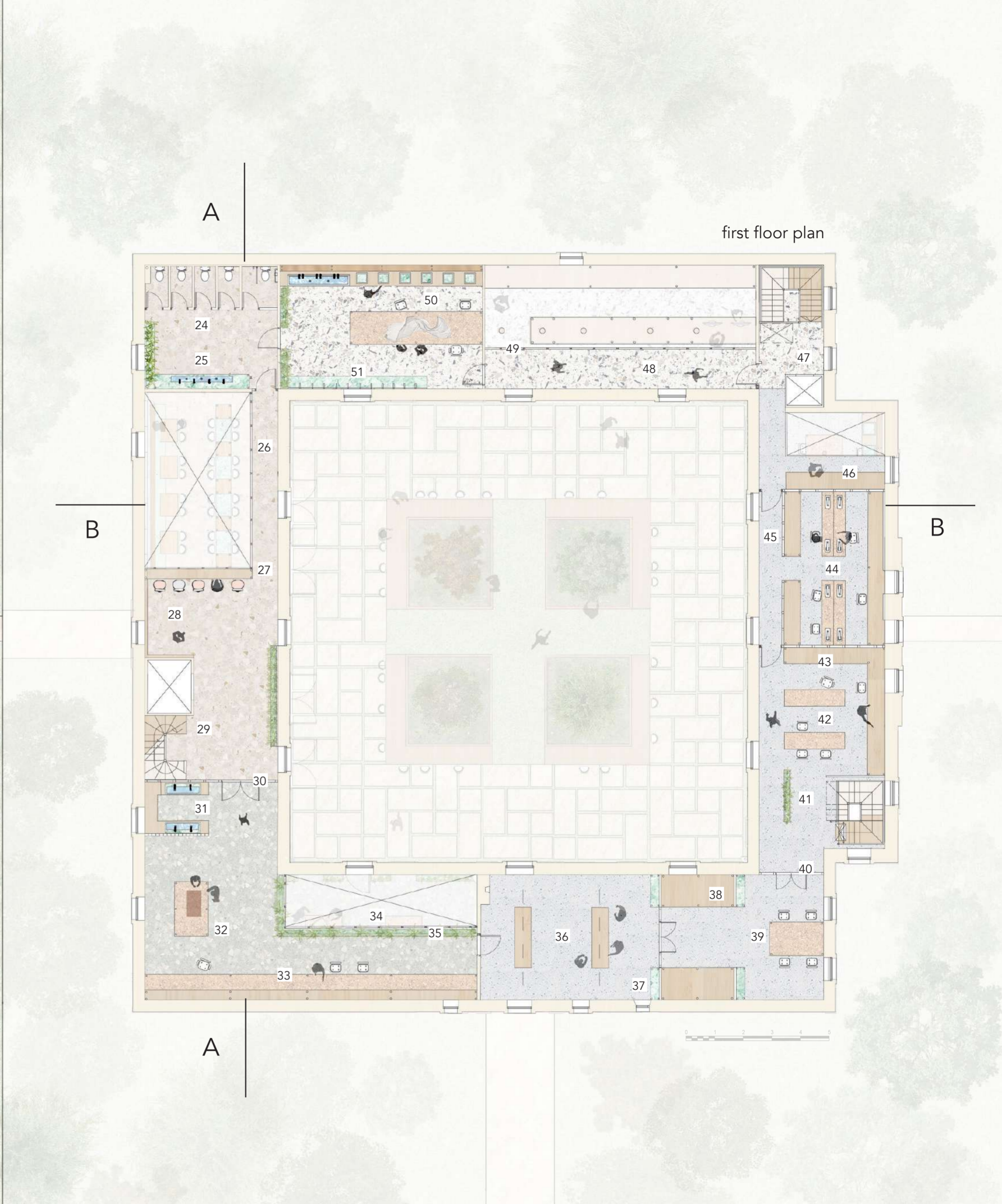
1. Adding Philips LED lighting to project warmth between the trusses within the first floor. Using 90% less energy, lasting up to 22 years.
2. During the restoration process, recycled and collective wood is used from the woodwork sector.
3. Bamboo wood is treated and varnished to be water resistant around sink areas.
4. Prints and fabrics that are designed within the scheme are used for furniture restoration.
5. Bamboo is used on some walls, for positive thermal performance while adding warmth to the cork fit out.
6. The live green walls uses a 'Biotope BioPanel' living wall system with recycled water.
7. Recycled scaffolding units are constructed within the table fit out, to maximise space and displays.
8. Fabrics from Live projects hang above as a design feature.
9. Using a recycled water system, linked all water sources.
10. Food waste is used within the natural dyeing process of the scheme.



B - scattered section



ground floor plan

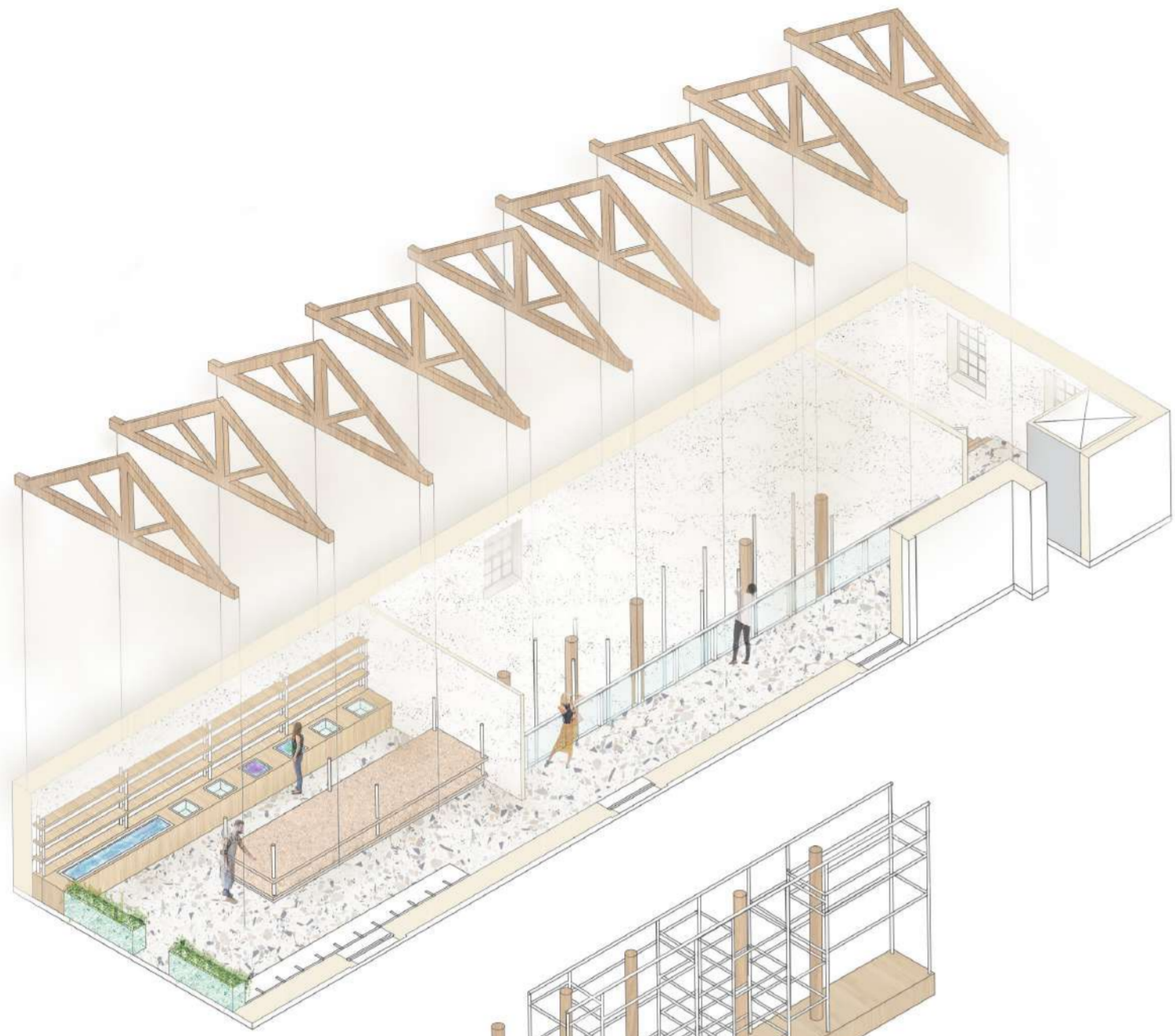


first floor plan

- 1. kitchen / cafe space
- 2. circulation and order area
- 3. green wall booth surroundings
- 4. bespoke scaffolding and oak shelving slotted within tables
- 5. restoration / social stairs and large lift
- 6. open plan for circulation
- 7. sink / 'paint' area
- 8. bespoke bamboo units, shelf and desks
- 9. cork and scaffolding adjustable tables 1mx1m
- 10. wood storage, with access from side door
- 11. woodwork tool spaces inserted into existing connections
- 12. cork preparation desks
- 13. fabric and stitching stairs
- 14. fitted bespoke wash area
- 15. natural print room
- 16. screen-printing section and pin up
- 17. mono-printing section and pin up
- 18. stairs and lift to dyeing, fabric studio
- 19. main access / entrance desk
- 20. multifunctional bamboo and scaffolding structure
- 21. oak display block, scaffolding pin up sections
- 22. reoccurring natural planters, species within Gibside
- 23. public toilets

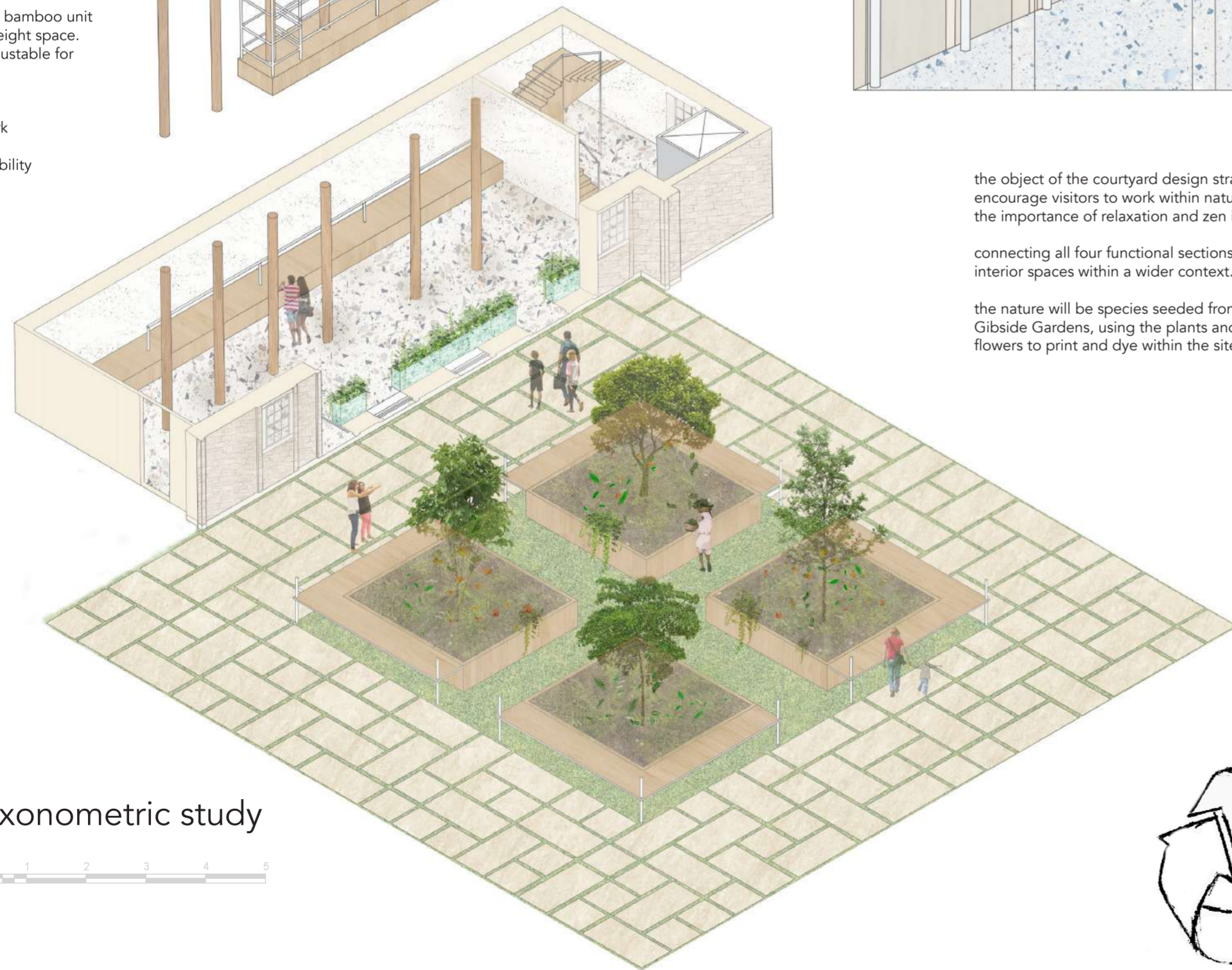
|  |  |  |   |
|--|--|--|---|
| <p>north</p>  <p>porcelain floor tiles,<br/>recycled plastic and glass,<br/>'ravello terrazzo'</p> | <p>east</p>  <p>terrazzo nouveau,<br/>cobalt matt porcelain,<br/>recycled bottles</p> | <p>south</p>  <p>'chunk hunk moss terrazzo',<br/>recycled ceramics,<br/>plastic offcuts</p> | <p>west</p>  <p>'chunk hunk sand terrazzo',<br/>recycled concrete and glass<br/>layering</p> |
|--|--|--|---|

- 24. public toilets
- 25. bespoke recycled plastic sink unit
- 26. balustrade walkway
- 27. oak bench and seating overlooking green wall
- 28. open plan display space
- 29. restoration and social stairs
- 30. glass partition, separating spaces
- 31. 'wet' area within restoration space
- 32. large 2m x 1m cork scaffolding table
- 33. open desk space, shelving, storage
- 34. void into restoration ground level
- 35. recycled planters, using Gibside nature
- 36. organic hanging stitching
- 37. recycled shelving partitions
- 38. oak wood fabric storage
- 39. social circulation space
- 40. glass partitions, distinguishing sound control
- 41. stairs to printing
- 42. hand stitching area
- 43. bamboo wood unit, following through glass partition
- 44. sewing machine stitching, controlled area
- 45. glass surrounding, with white steel metal frame
- 46. developing quiet space
- 47. oak stairs and lift area
- 48. double height space, pin up and display area
- 49. large void space merging functions
- 50. dyeing process, dividing sinks
- 51. fabric drying and pin up space



scaffolding and natural bamboo unit inserted into double height space. multifunctional and adjustable for

- storage
- shelving
- hanging fabrics
- pinning up project work
- showcasing products
- encouraging sustainability
- plant growth



axonometric study

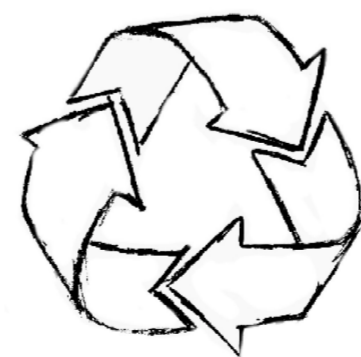


sewing machine / stitching area

the object of the courtyard design strategy is to encourage visitors to work within nature and feel the importance of relaxation and zen it brings.

connecting all four functional sections of the interior spaces within a wider context.

the nature will be species seeded from Gibside Gardens, using the plants and flowers to print and dye within the site itself.



courtyard - collecting plants for printing

## Environmental Strategy

installation- sheep's wool fitted into the existing roof form 150mm x 570mm.

acoustics- adding acoustic foam between stud walls to control sound. the full interior fit out is constructed with sound absorbing materials, wood and glass panels- creating light acoustic barriers.

thermal- using a geothermal heat pump underground around the site, a recycled water heating source.

ventilation- natural and stack ventilation are used for the main air flow strategy. The double height spaces per sector were also constructed to encourage cross ventilation.

lighting- led and concentrated lighting is used within the full interior. Maximising natural day light via skylights and existing windows.

heating- adding underfloor heating to have a controlled overall internal temperature.

water- reusing water solutions via a 'aquaco' grey water system.



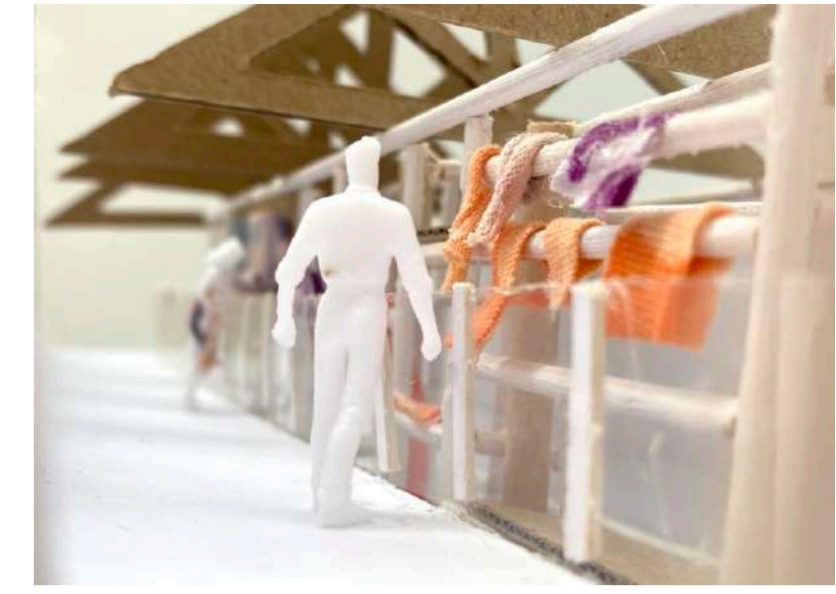
entrance space - between scaffolding and planters



entrance space- connections of the scaffolding unit

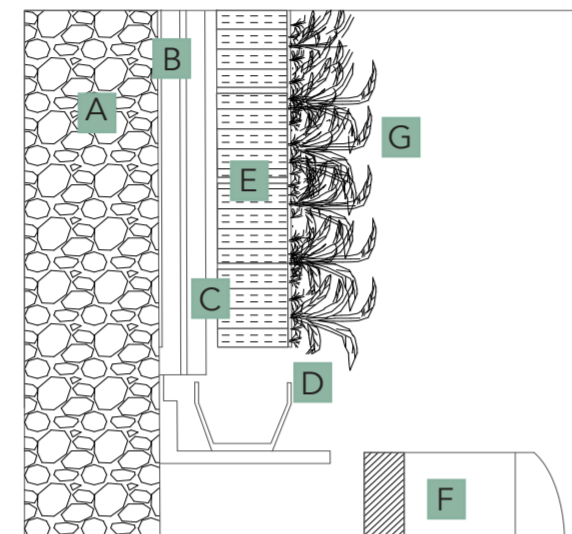


courtyard - socialising while fabric making



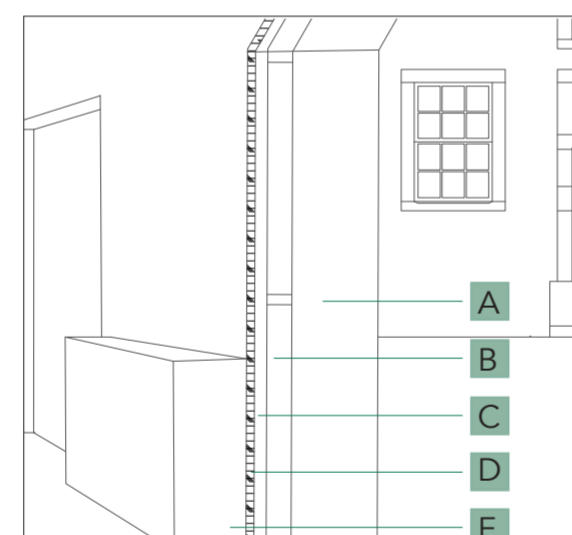
display space - hanging fabric from dyeing studio

### green wall



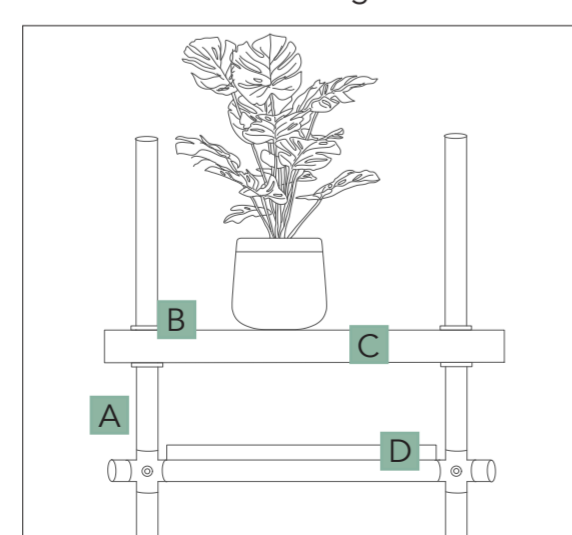
- A - 370mm existing stone wall
- B - steel framing base structure with 12 mm backing board
- C - 80mm geotextile rear drainage layer over water run off bracket
- D - base gutter attached to existing, sitting under
- E - 300mm bio panel layer, separate boxes
- F - material and sponge bonded to plywood
- G - natural plant species growing from Gibside

### wall structure

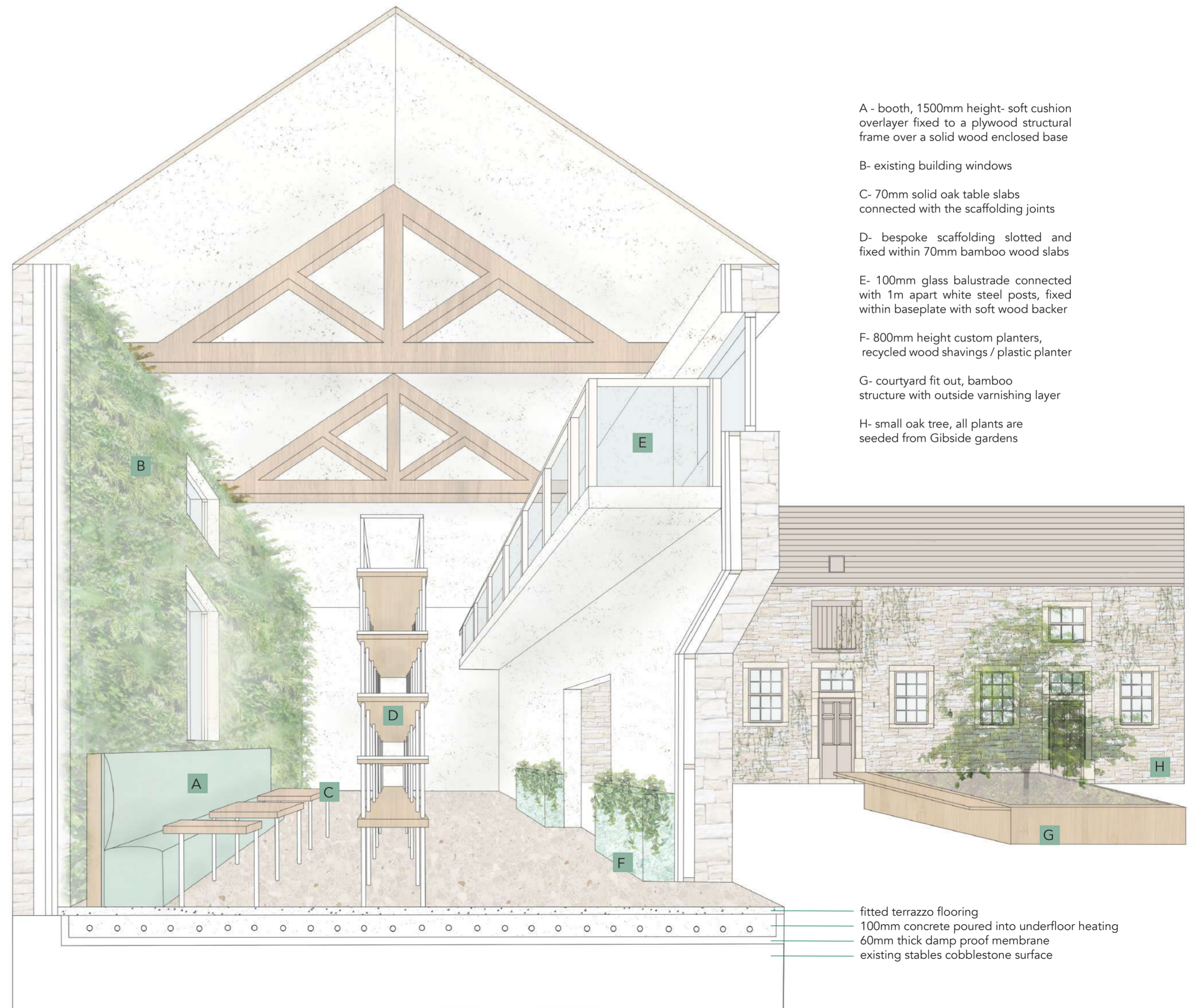


- A - 370mm existing wall
- B - 90mm insulated timber stud wall
- C - 50mm plywood structure
- D - 30mm interior cork layer, fixed to plywood
- E - 1500mm x 300mm recycled wood shavings / plastic planter

### scaffolding unit



- A - white scaffolding in connected component
- B - 60mm width bolted steel base plate
- C - 80mm bamboo layer, varnish finish
- D - 30mm oak shelf, sitting over scaffolding



- A - booth, 1500mm height- soft cushion overlayer fixed to a plywood structural frame over a solid wood enclosed base
- B- existing building windows
- C- 70mm solid oak table slabs connected with the scaffolding joints
- D- bespoke scaffolding slotted and fixed within 70mm bamboo wood slabs
- E- 100mm glass balustrade connected with 1m apart white steel posts, fixed within baseplate with soft wood backer
- F- 800mm height custom planters, recycled wood shavings / plastic planter
- G- courtyard fit out, bamboo structure with outside varnishing layer
- H- small oak tree, all plants are seeded from Gibside gardens

- fitted terrazzo flooring
- 100mm concrete poured into underfloor heating
- 60mm thick damp proof membrane
- existing stables cobblestone surface

## communications model - restoring function



before



I reconstructed and restored an old chair and stool into new purpose and life. Projecting and communicating the primary function and objective of the scheme. Understanding the process and importance of sustainability while using environmental materials.



- recycled chalk paint
- 'hello fresh' installation as inside cushion
- recycled off cut printed material as the final pattern