

## Silo D, Silvertown, East London. Abandoned granary silo, transformed into a community led ceramics workshop focused on creating circular economies.

My intention for silo D is to create a space that celebrates the process of making through ceramics. The user will be encouraged to provocatively participate in the entire product's life-cycle from mixing the raw material, choosing a mould, forming its shape and finally decorating it with glaze. This will invoke a sense of sentimentality and connection with the pieces made within Silo D therefore reducing the users' need to acquire these items from less sustainable sources while teaching the local community about circular economy.

The design of the workshop will be created with the same values portrayed within its practice. A timber framework made from wooden pallets sourced locally from places such as London City Airport and The ExCel Centre will be used to extend the footprint of the site, weaving in and out of the building to create continuity and elevate the existing. The framework will also: provide clear markers for circulation as it develops into a ramp system, eventually lowering into floating pontoon to allow users to connect with the dock and housing a mould gallery to help guide users through the material process

I aspire for Silo D to become a symbol for rebirth and new life within the community as these ideologies are communicated through the activities and the site itself. Religious elements have been incorporated into the design to emphasise this. The original grain bins have been extracted inspired by the domes seen in Hagia Sophia and the Kiln uses Buddhist Stupa's as precedence. The Kiln has been placed in the centre of the site to represent the heart of the project due to the transformation that occurs within it. This placement also allows the space within the main tower to be interpreted as the negative between the kiln and the bins above, reinforcing the imagery of moulding form used within the workshop.

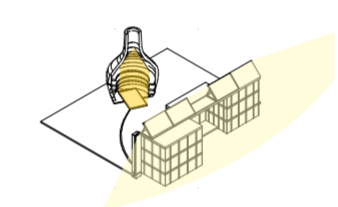
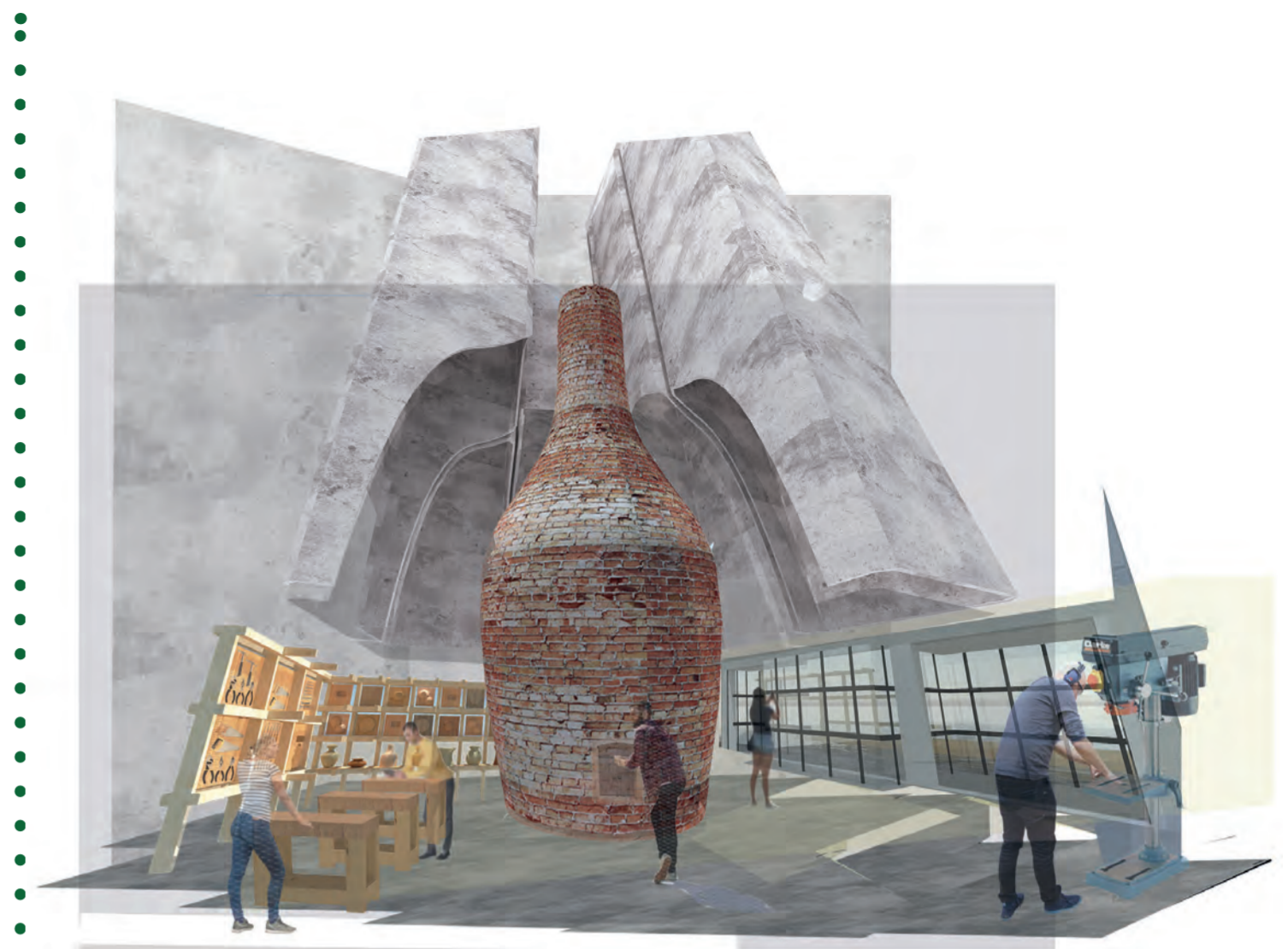
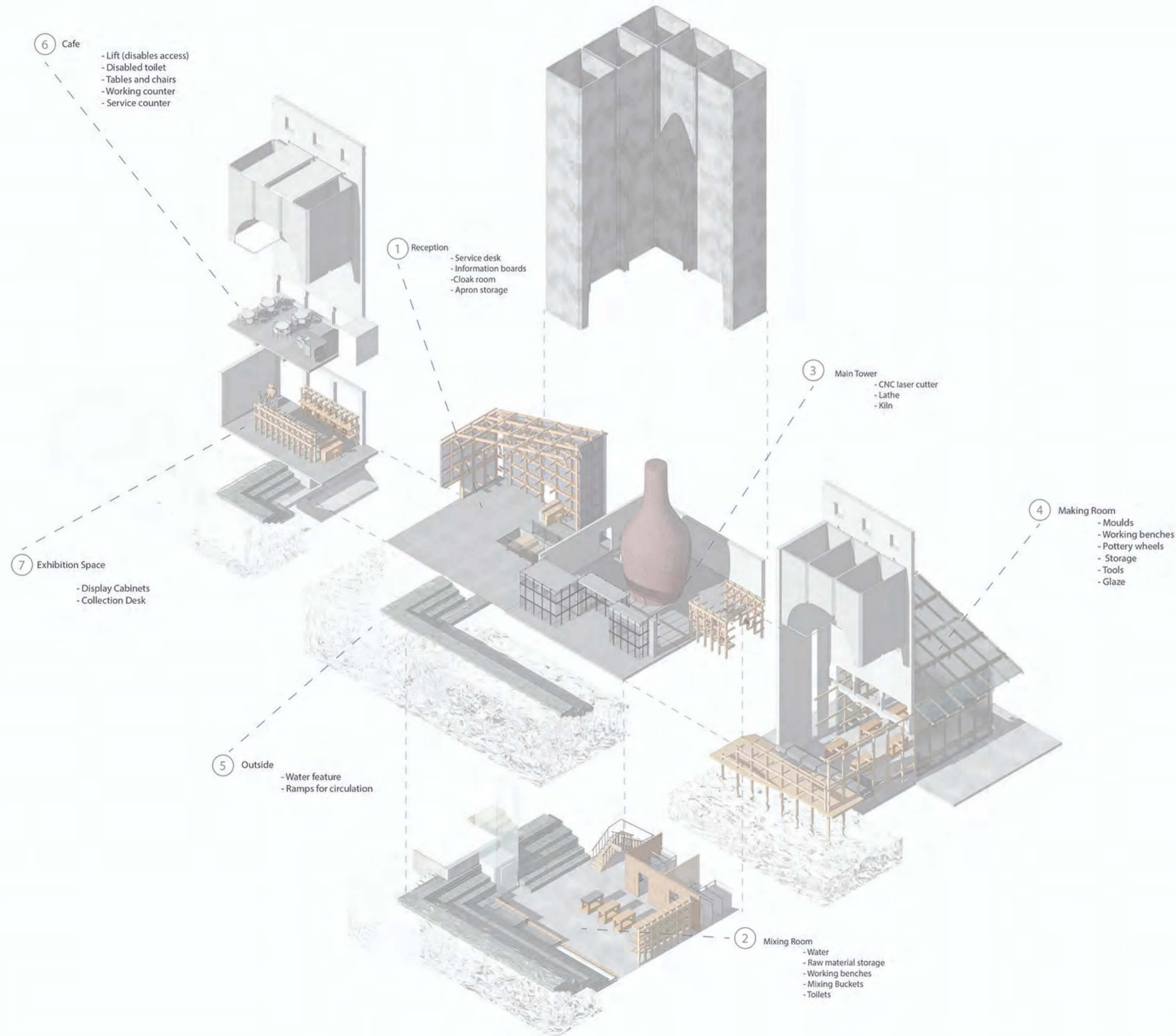
The activities within the workshop will be aimed at Newham large Muslim demographic, predominantly the women of the family, as ceramics hold significant importance within the culture. Often families will buy whole tableware sets in preparation for weddings. Silo D can play a role in reducing the environmental impact and bring a larger sense of importance, sentiment and meaning to the tradition.

Lastly the proposed been designed to benefit the local wildlife inhabiting the dock, while allowing users of Silo D to engage with resident birds and utilise the same water feature to encourage people to focus on the sustainability lessons taught without the workshop.



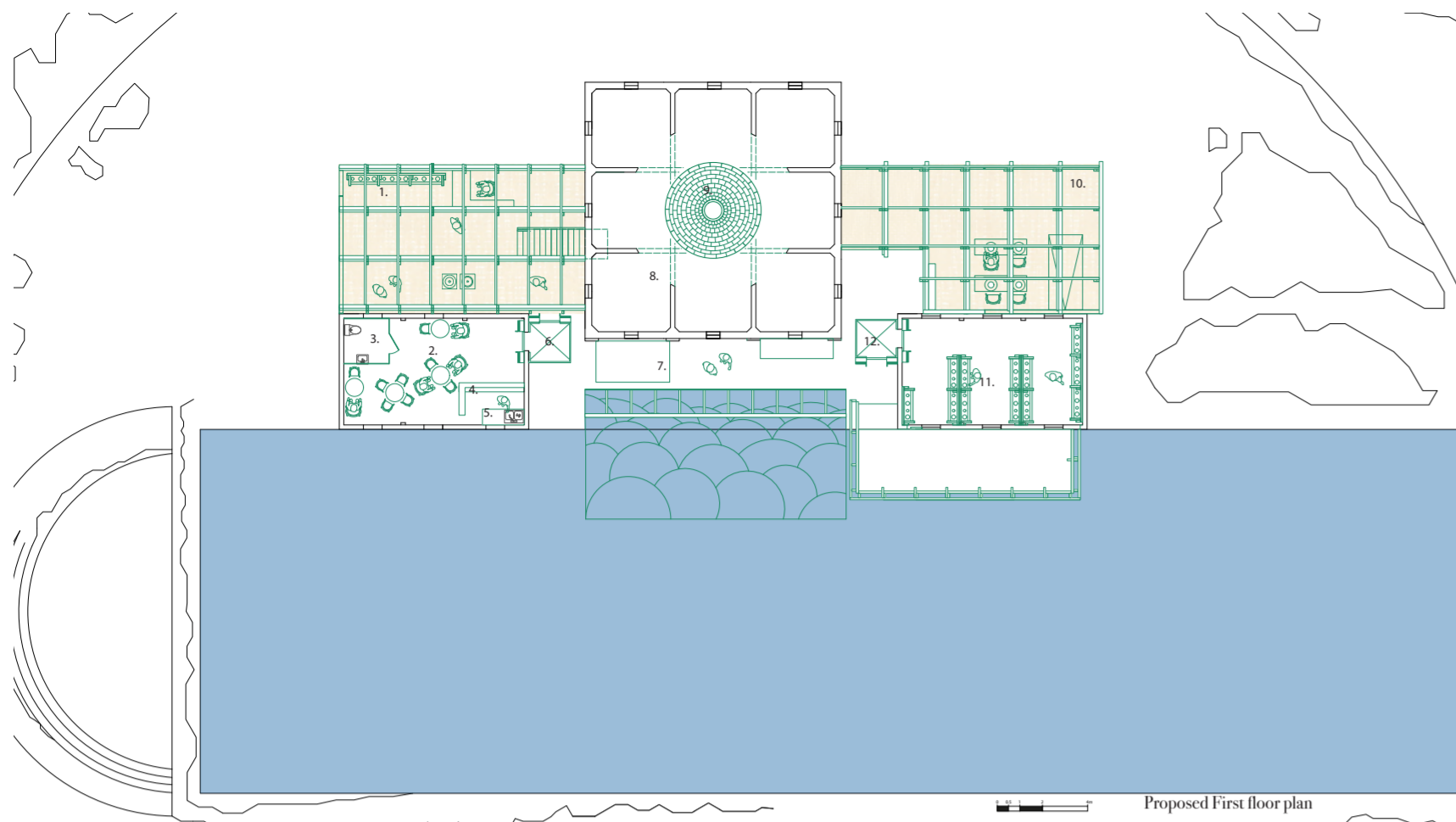
# Silo D, Silvertown, East London.

Exploded diagram demonstrating where the main elements of the intervention within the existing space. Ensuring the user journey reflects the material journey to make the activities easy to understand for the user. Basic requirements of each space has been added so that the proposal is equipped adequately. The granary bins within the main tower have been excavated to mimic the shape of the electric powered kiln (supplied by solar panels placed on the south side of the building) to create imagery of a piece of ceramic being released from a mould.

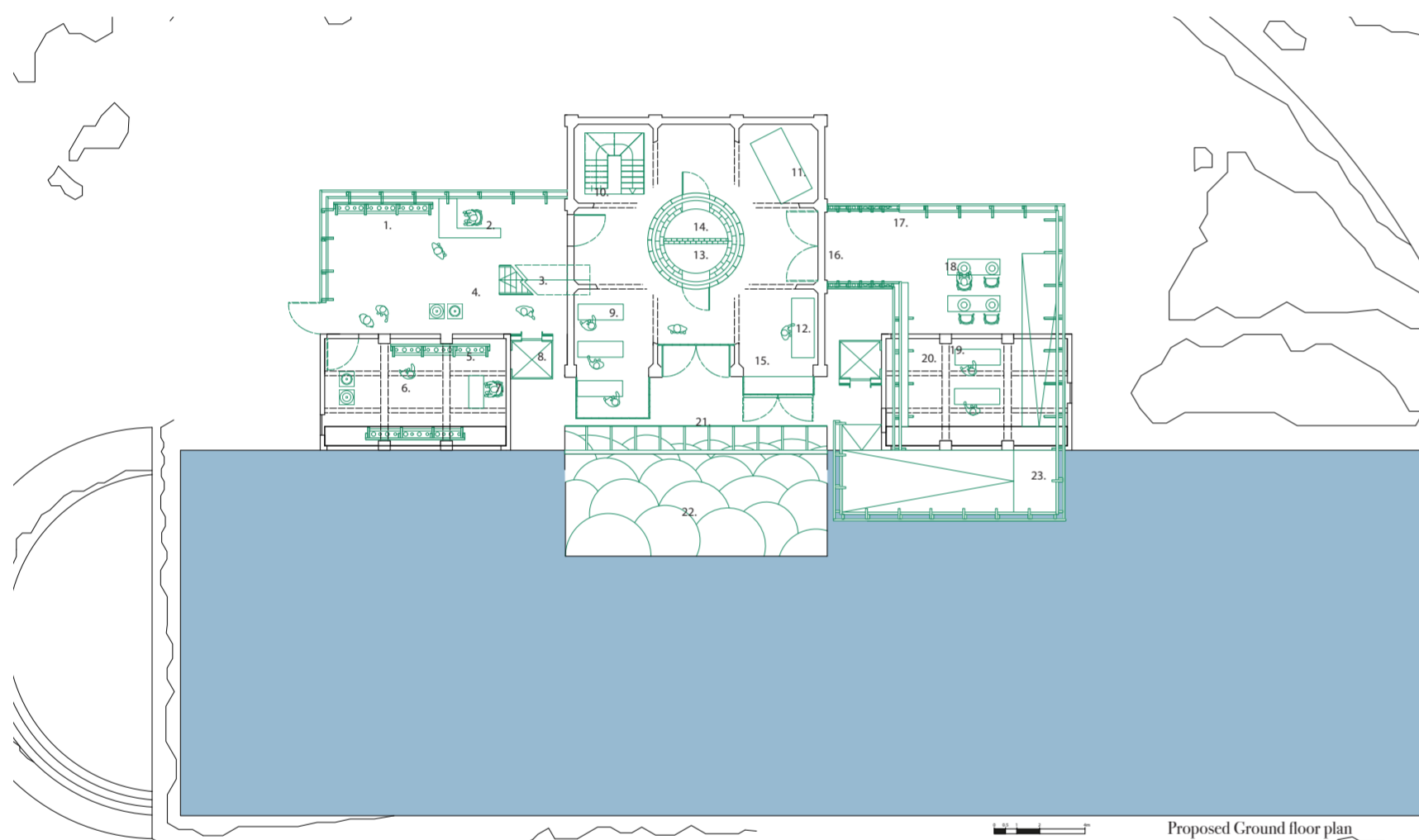


1. Door into kiln
2. ceramic shelves
3. Steel rods used to contact heat within the kiln.
4. Workshop storage room
5. Interior room to reduce energy consumption by heating a smaller space
6. Double walls to create vacuum to retain heat.
7. Downdraught system to retain some heat generated by the kiln to heat the workshops and basement.

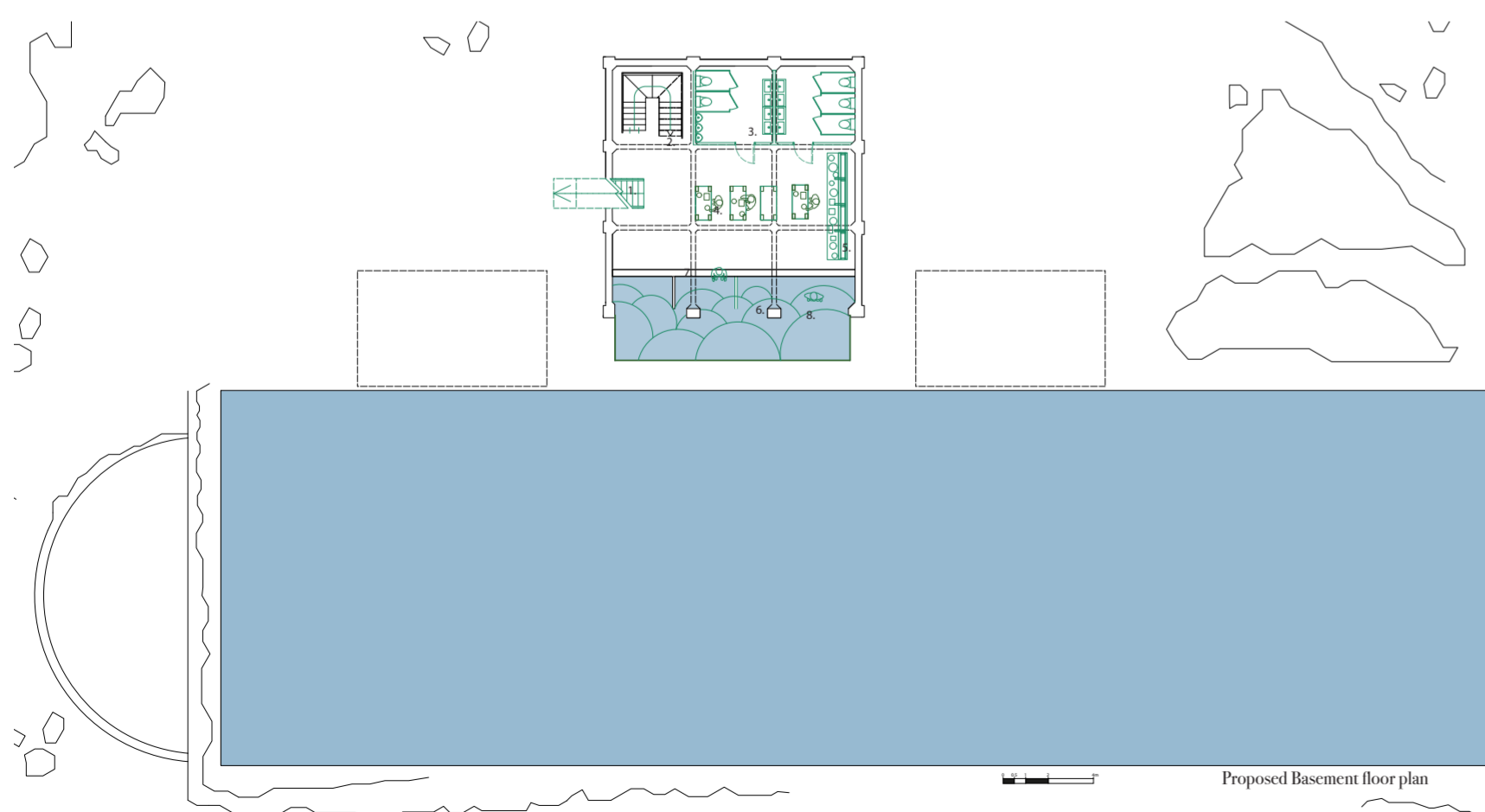




1. Roof structure housing reception
2. Refreshment / Bar area used as a waiting area while products are in drying process
3. Disabled access toilets
4. Serving counter
5. Back/ working counter
6. Lift for access to second level
7. Solar panels (south facing for optimum sun, used to power the kiln)
8. Excavated existing grain bins
9. Top of the kiln
10. Roof of the ceramic workshop
11. Private storage area
12. Lift for access to storage room

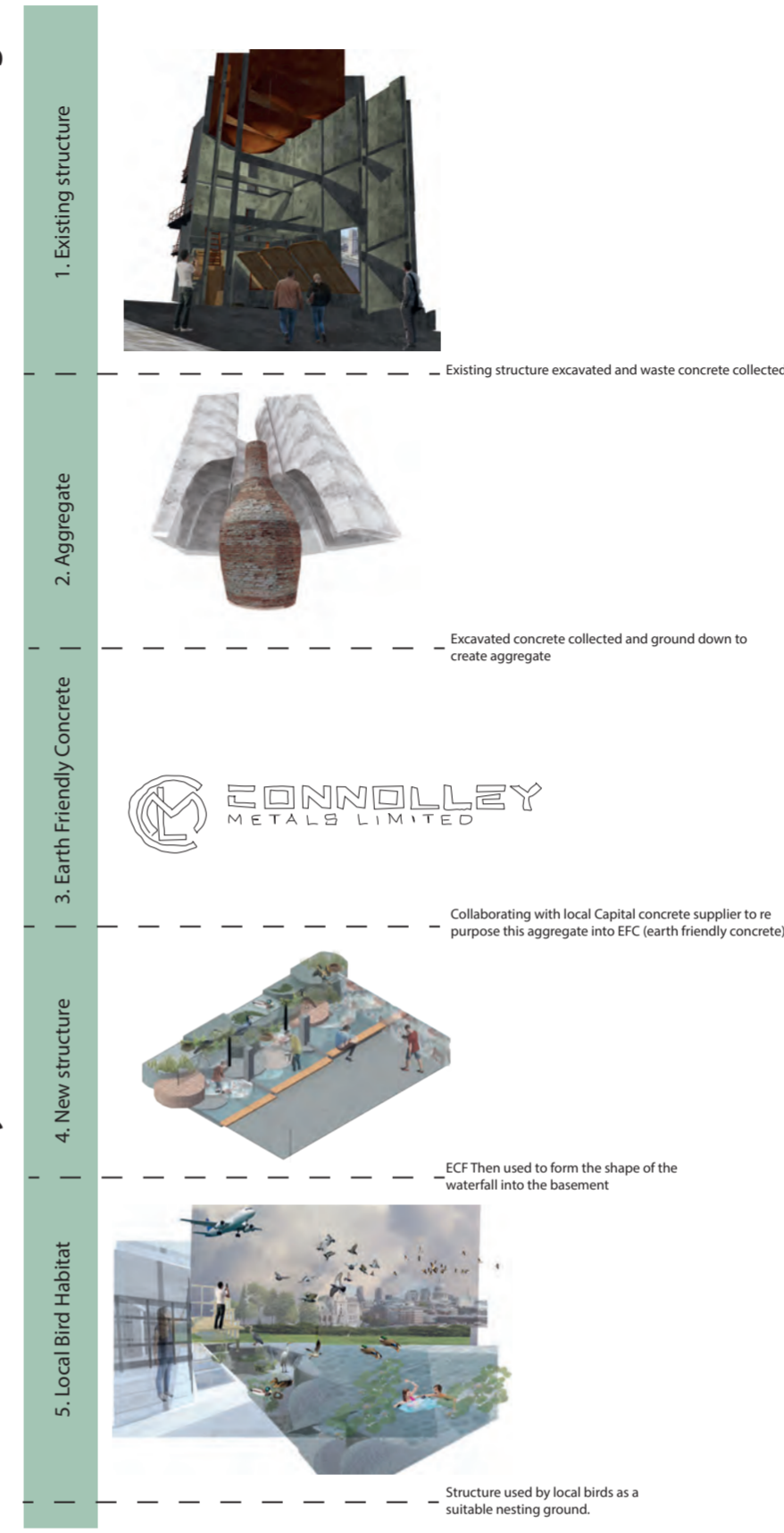


1. Apron storage and display cabinet
2. Reception desk
3. Stairs leading to basement (mixing room)
4. Display cases
5. Exhibition / collection space
6. Display cabinets
7. Service desk
8. Lift to access cafe
9. Work benches
10. Stairs leading from basement (mixing room)
11. Laser cutter
12. Lathe
13. Material storage
14. Kiln
15. Glass doors using reclaimed panels from within millennium mills
16. Entrance to ceramic workshop
17. Mould wall and storage so users can choose their design
18. Pottery spinning wheels
19. Ceramic work benches
20. Shelving and storage for slip and glaze
21. Glass panels to allow more light into basement level
22. Descending water fall element supplying the basement with water.
23. Ramp for improved circulation and connection to the dock



1. Entrance to basement from Reception
2. Entrance to main tower workshop
3. WC using grey water supplied from water-fall to increase sustainability
4. Work benches
5. Shelving and storage
6. Stepping stones to allow users to engage and connect with the building and dock
7. Timber ledge and varying heights for sitting
8. Existing columns for structural support.

Life cycle of the Waste concrete from the excavation of the Existing



**A. Reclaimed brick**  
Reclaimed brick from pavements and construction development around local area. Silvertown is undergoing significant development such as the underground walking tunnel. This will increase foot traffic meaning pavements will need to be updated. The waste material can contribute to the construction of silo D.

**B. Aluminum**  
Local scrap metal company. Can be used to source scrap aluminum to line the kiln, conducting the heat required to fire an electrically solar powered kiln of this size.

**C. Pine wood**  
Wooden palette used in exports around the dock, airport and excel center to be dismantled, sanded, varnished and constructed to make framework for extensions to Silo D.

**D. Ceramic tile**  
Tiles can be press molded or slip casted on site. Silo D will contain the correct equipment to produce its own tiles, and could be used in the training process for its staff.

**E. Glass**

**F. Reclaimed glass**  
Millennium mills, located within walking distance contains a lot of old window pains which could be transported and reused within silo D.

**G. Existing concrete**

**H. Sugarcane byproduct fiber insulation**  
The byproduct fiber can be taken from local Tate & Lyle Factory processed and woven to create a translucent, insulating layer. This will then be sandwiched between recycled plastic layers taken from the local plastic recycling factory.





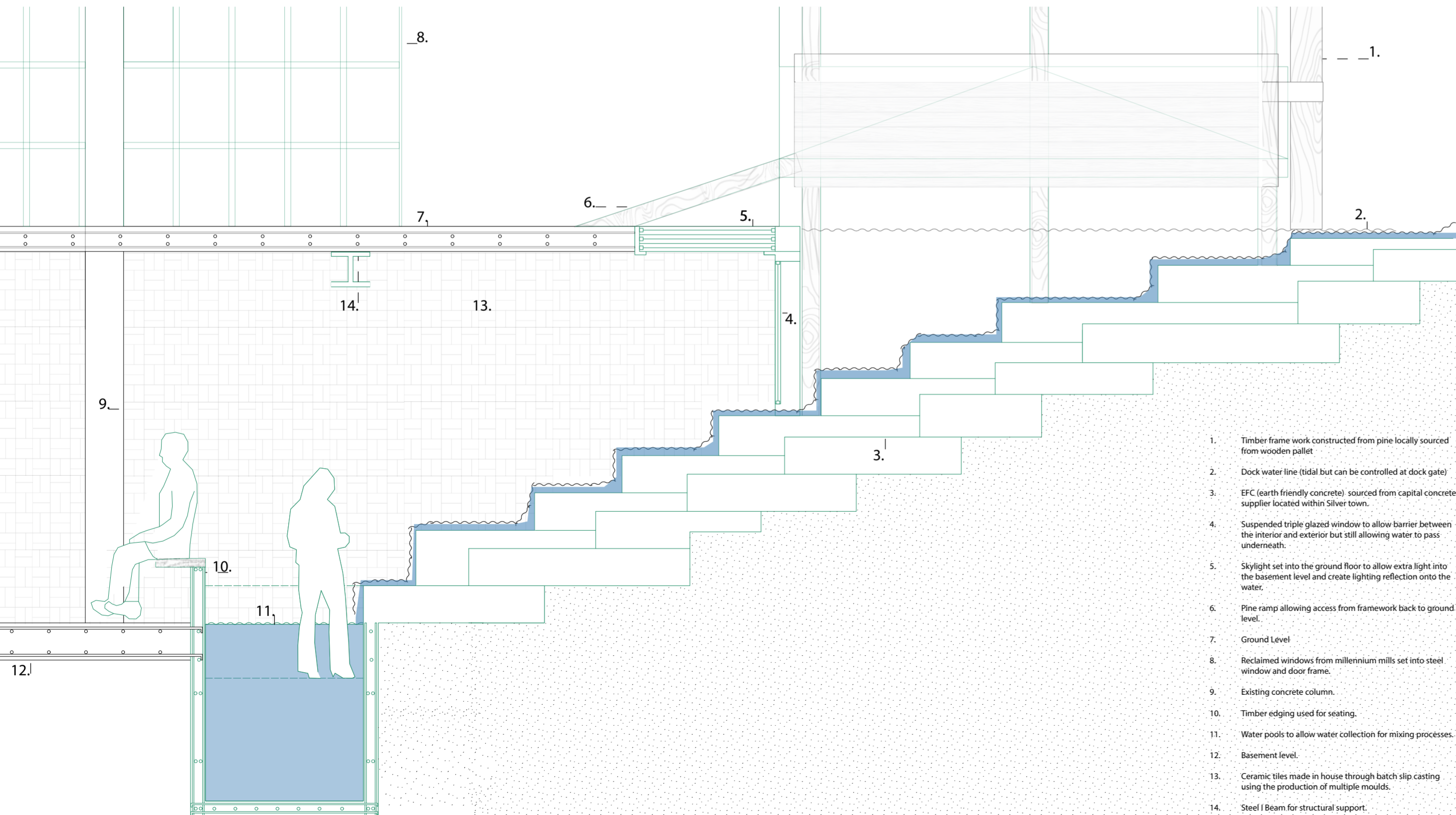
Proposed Interior view of the basement level converted into a mixing room for plaster and slip. Casting will also take place in here before users move back into the ceramic workshop to work on finishing their pottery.

Fig 1: Isometric drawing of the waterfall basement detail, showing the interior half used within the slip casting and mould making process and also for play while the moulds and slip is drying. The exterior half will be converted into a bird habitat for local birds within the royal docklands.

1. Exterior stepping stones to be used by local wildlife, particularly birds as structure makes suitable nesting grounds.
2. Suspended glass pane to create invisible barrier between interior and exterior. Approx 20mm gap at the bottom to allow water to pass through
3. Interior stepping stones, used for play and exploration. Connecting users of Silo D with the dock while drying takes place.
4. Pools to hold water for collection to use in the mixing process
5. Timber ledge detail for sitting and connecting with the water feature
6. Tiled walls, tiles made on site through press mould production.



Bird Species within Royal Docks



1. Timber frame work constructed from pine locally sourced from wooden pallet
2. Dock water line (tidal but can be controlled at dock gate)
3. EFC (earth friendly concrete) sourced from capital concrete supplier located within Silver town.
4. Suspended triple glazed window to allow barrier between the interior and exterior but still allowing water to pass underneath.
5. Skylight set into the ground floor to allow extra light into the basement level and create lighting reflection onto the water.
6. Pine ramp allowing access from framework back to ground level.
7. Ground Level
8. Reclaimed windows from millennium mills set into steel window and door frame.
9. Existing concrete column.
10. Timber edging used for seating.
11. Water pools to allow water collection for mixing processes.
12. Basement level.
13. Ceramic tiles made in house through batch slip casting using the production of multiple moulds.
14. Steel I Beam for structural support.



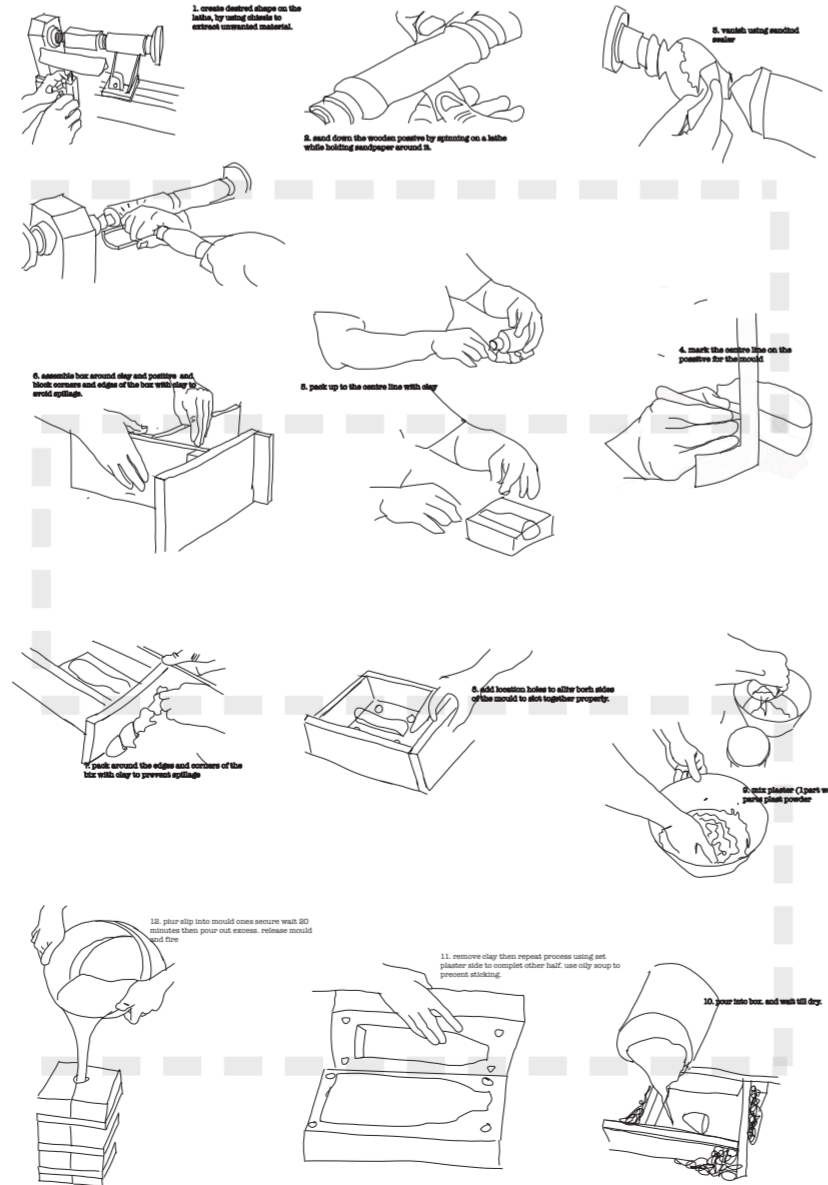
- **Mixing room**
- **Mixing, Casting, pouring**
- The Basement of Silo D was converted into a mixing room for slip and plaster casting. Both of these processes require a lot of water, which is supplied via a waterfall feature allowing water from the dock to descend into the basement and in turn provides a suitable environment for water birds to inhabit. This structure is interactive and users will be encouraged to either observe the wildlife or play within the pools during the waiting times when the plaster is drying.
- The mixing room the juxtaposition between the interior and exterior. The Sheet of glass acts like an invisible barrier to allow the wildlife and users of the workshop to work in harmony side by side, utilising the docks water for different activities. The top of the visual shows the pool that the water falls into which is where it will be collected for the mixing process. a ledge has been added to create a seat so people are encouraged to engage with the feature.

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Extensions to the existing building were included within the proposal to allow for easier circulation. These extensions were made using a modular framework consisting of half lap, mortice and tenon joints to reduce the materials required, and built from wooden pallets sourced from around the local area (ExCel centre, London City Airport, o2 Arena). An insulative and waterproof wrap covers them, made from bi-product sugar cane fibres sourced from the local Tate and Lyle Factory.



Interior view of the reception and exhibition space. An extension of the existing left side tower was incorporated made from a modular timber frame work and sugar cane fibre (bi product from the sugar refinery process) sourced locally from the Tate and Lyle sugar factory.



Experimentation and flow diagram describing the material process.

## Estimated Life cycle of Modular framework.

