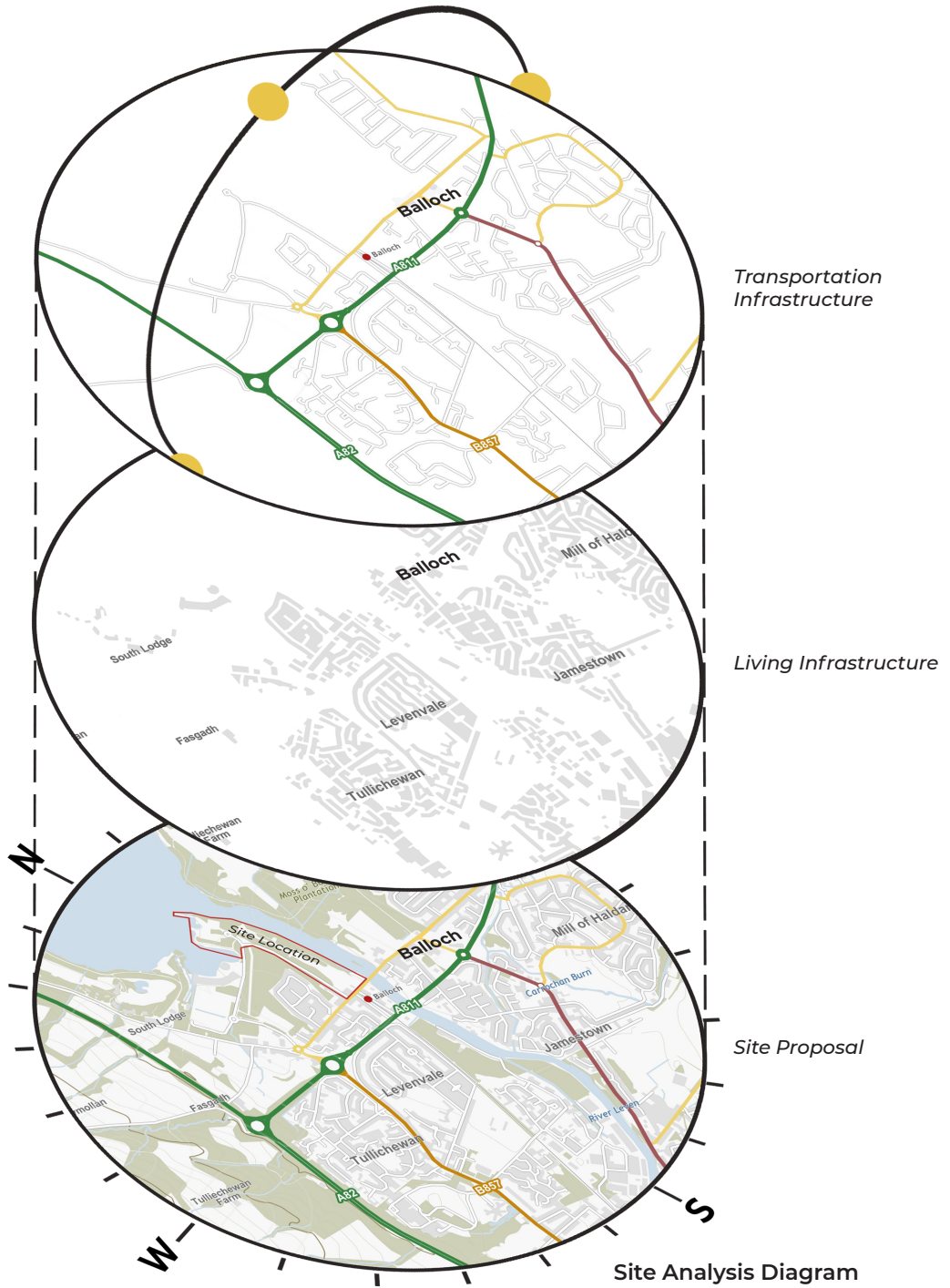


Portfolio | Michael Weir

Mackintosh School of Architecture
Part 1 Architectural Assistant



The project was located in a village in Scotland called Balloch. Placed in a remote area touching on the extraordinary sights of Loch Lomond and furthermore surrounded by an endless stretch of breathtaking landscape of forestry and mountains. Making the village a monumental transition between man-made and nature. Something that I would later aim to develop a harmony between. The brief requirements were to design both a residential area and music hall as part of the 'Sistema' charity. An organisation that aims to help deprived children and young adults to find an escape within music and what better place to be in. At the same time we were asked to have a consideration for the environment as climate change has become a fundamental problem, and an issue we must be conscious of.



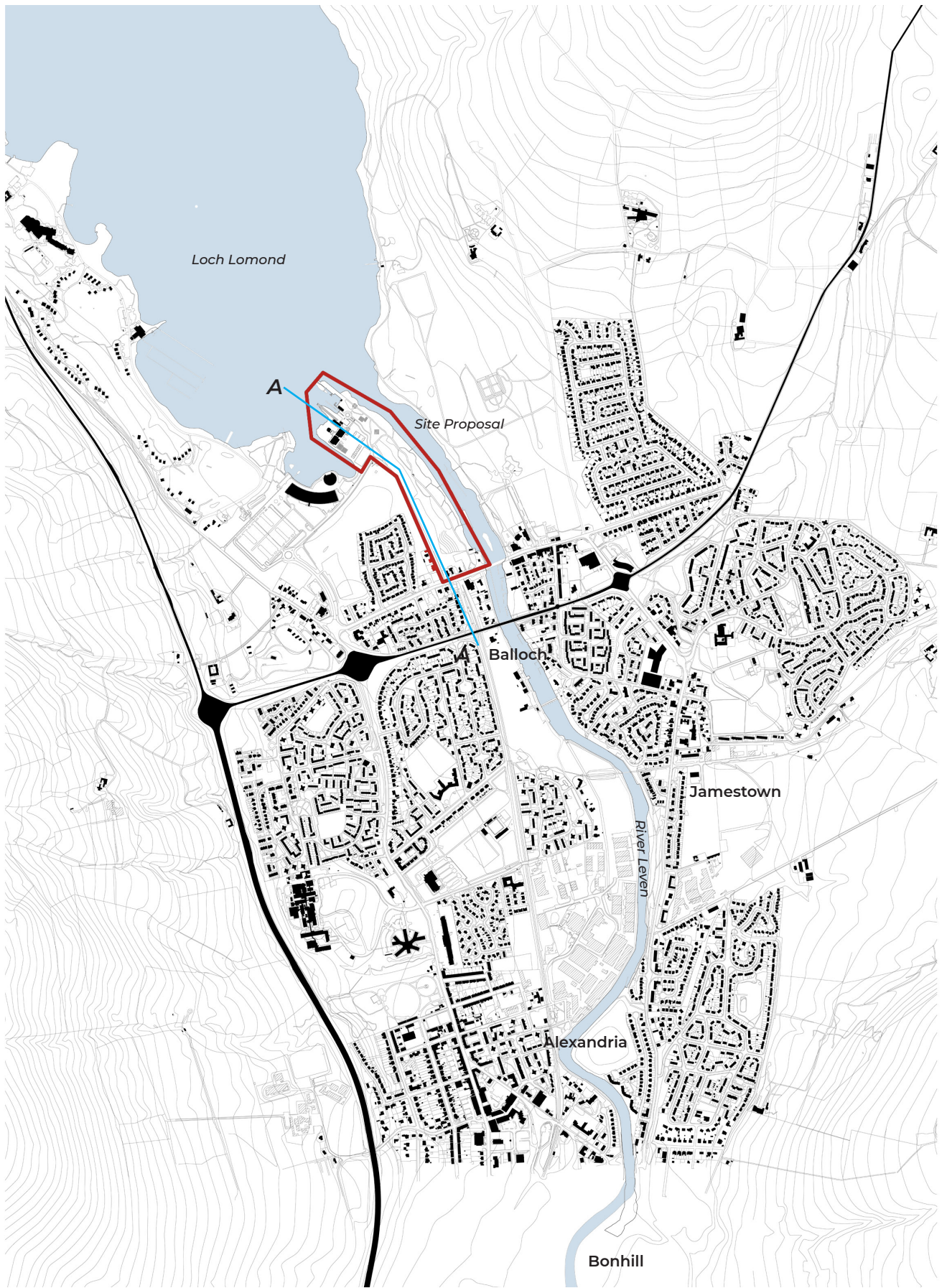
Collages



The first collage represents the direction of the design. Next we have a view where my aim with the design was to create a window that compliments the landscape by framing it. And the final collage speaks for the intentions of the final outcome.

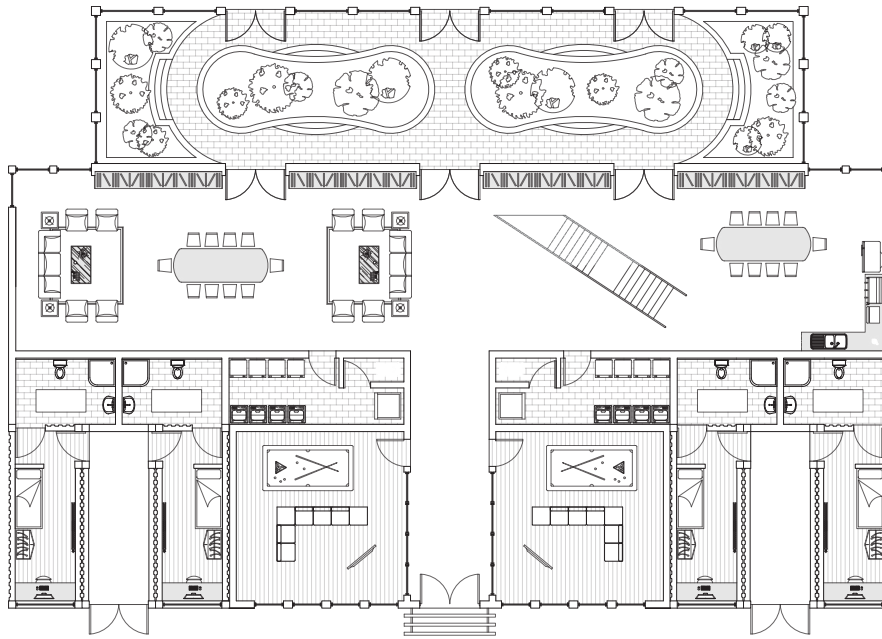


Long Site Section - AA

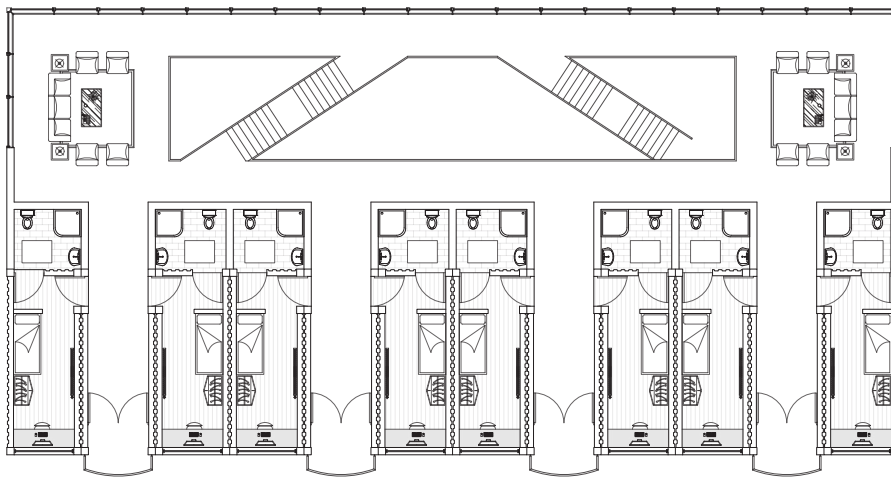


Site Plan - Balloch, Scotland

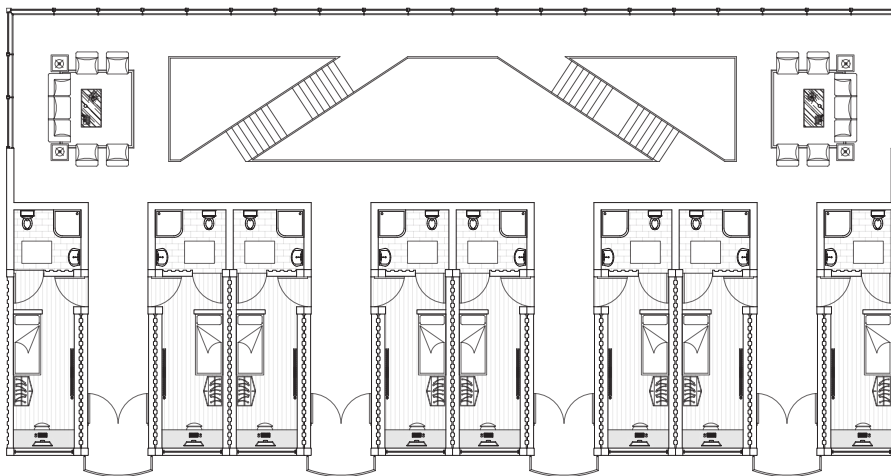




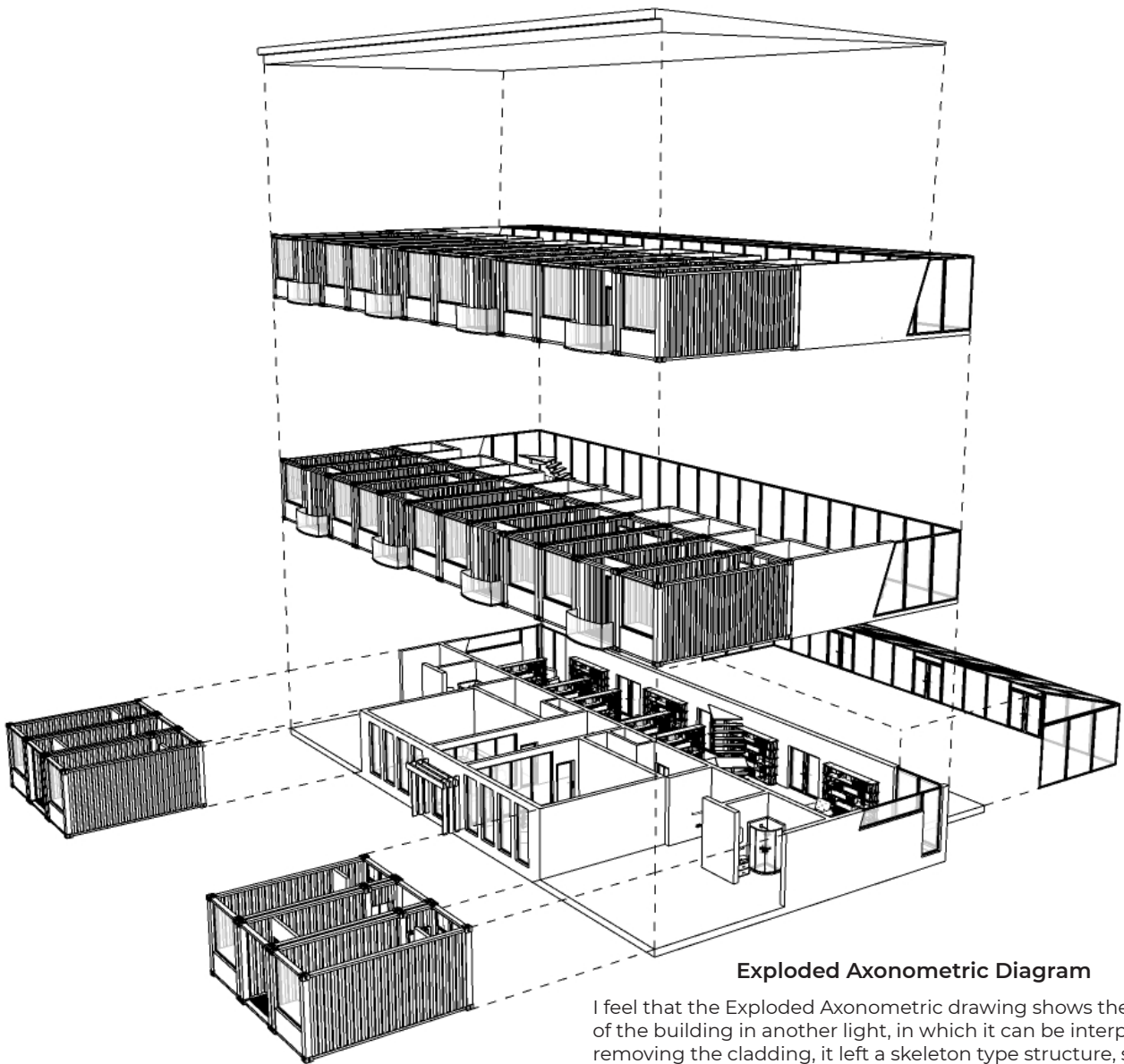
Ground Floor Plans



First Floor Plans

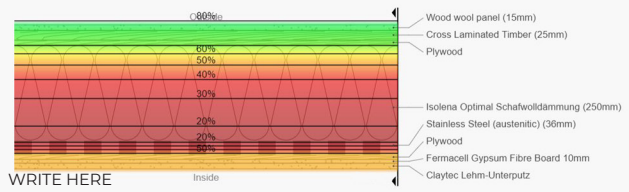
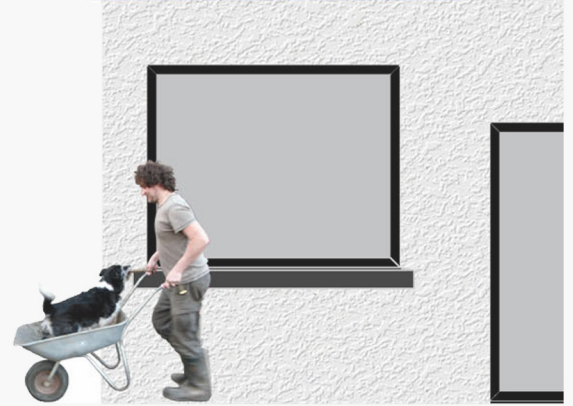
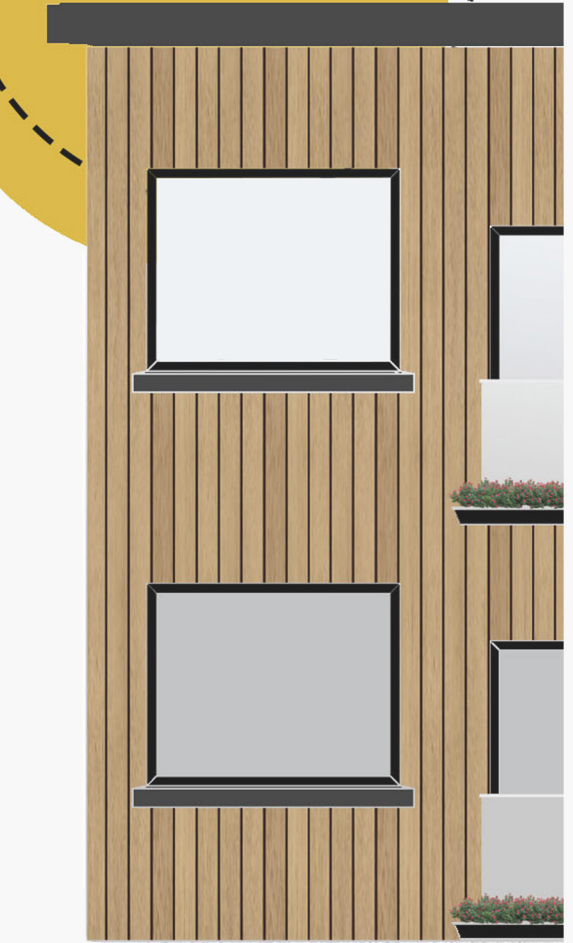
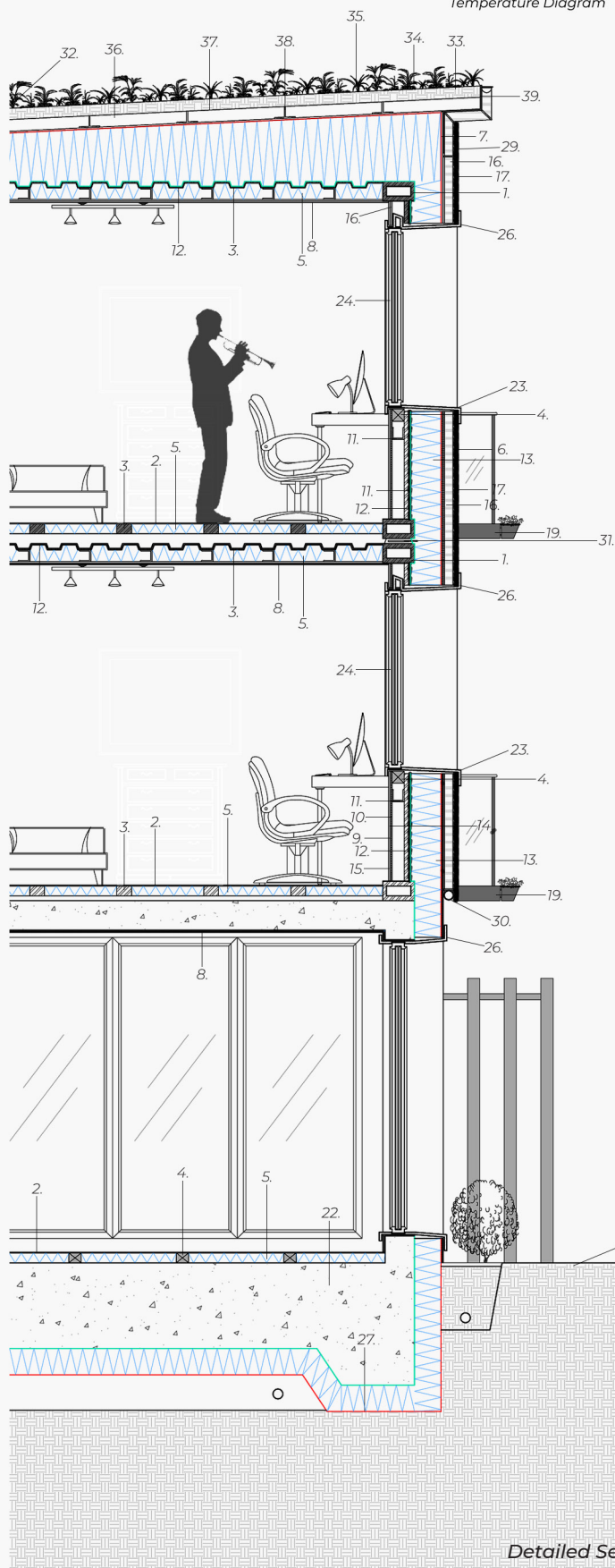
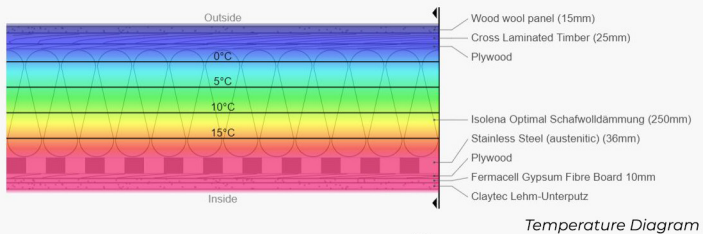


Second Floor Plans



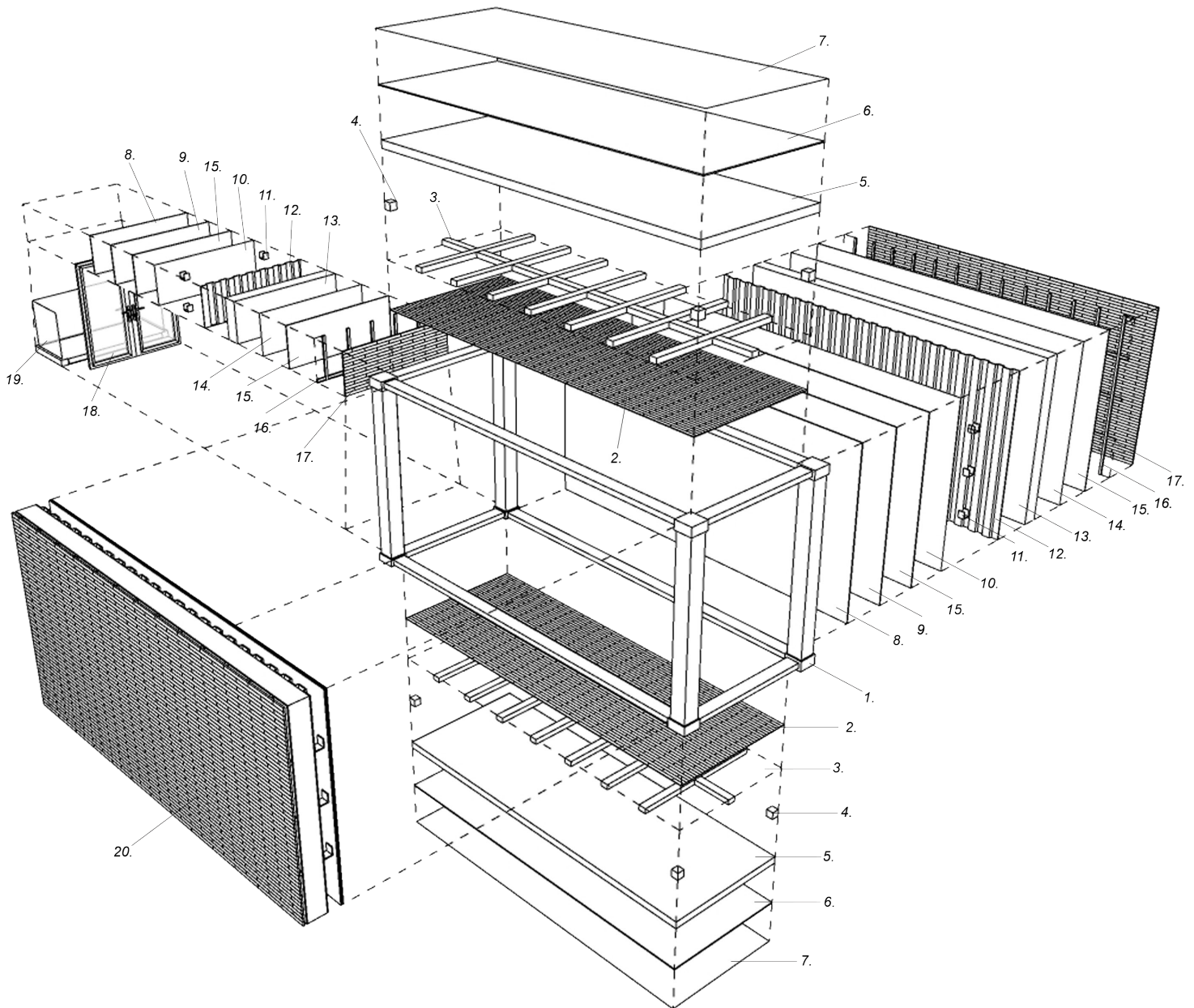
Exploded Axonometric Diagram

I feel that the Exploded Axonometric drawing shows the design of the building in another light, in which it can be interpreted. By removing the cladding, it left a skeleton type structure, showing off the true essence of its character by exhibiting the form of the containers and how they are intergrated alongside the rest of the build.



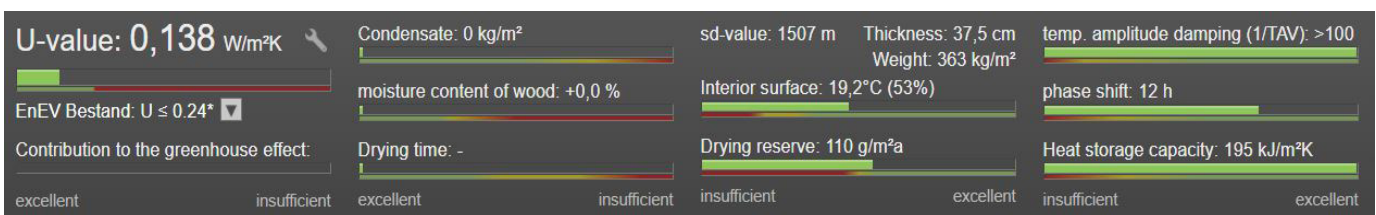
WRITE HERE
TALK ABOUT:
- how my research on the history affected my design
- the building would create its own type of experience without

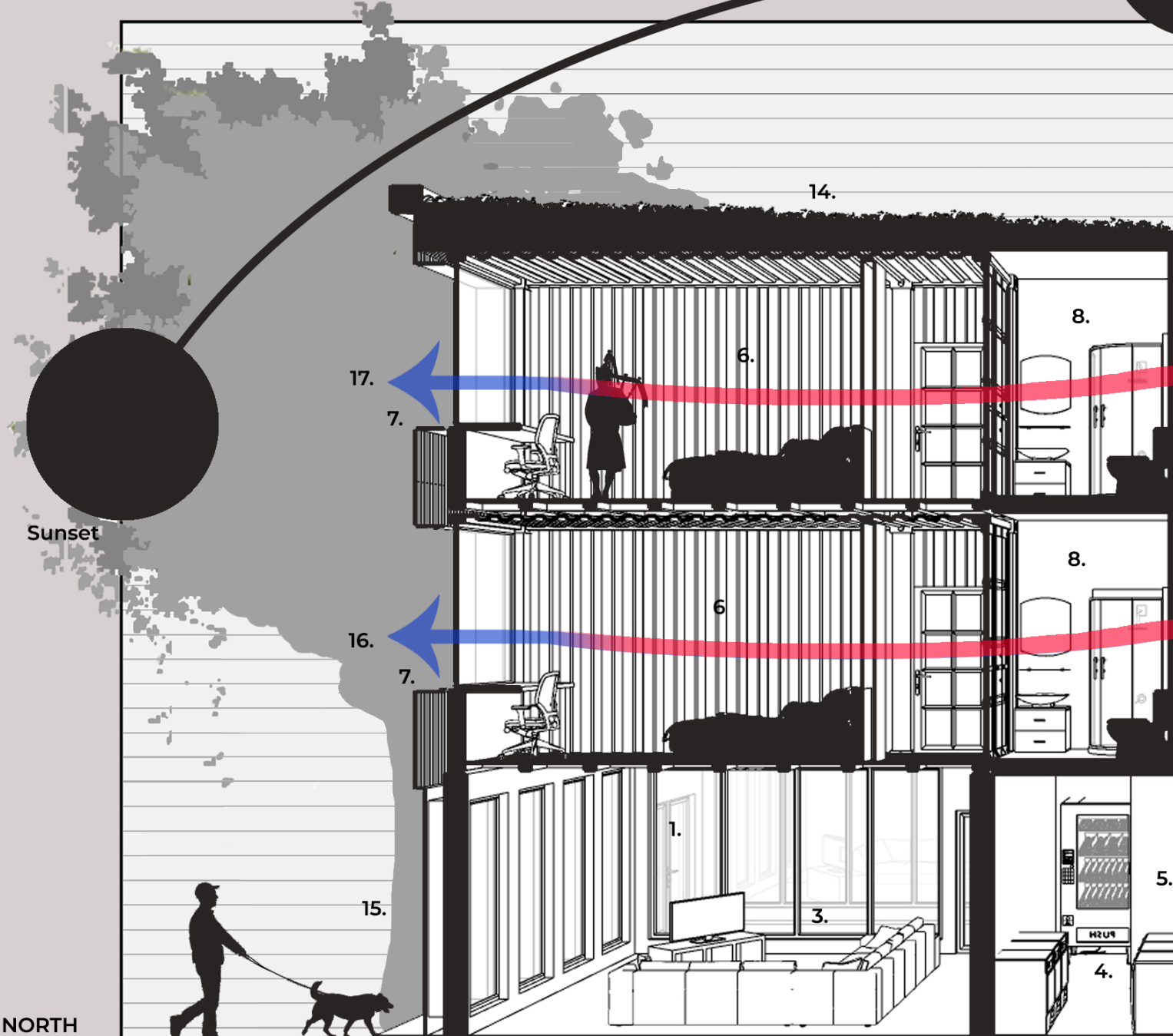
This section of the project was by far the most challenging. However, with that being said it was also the most rewarding. Detailing shipping containers was not easy with the lack of information online. But through trial and error with constant research, I found a method where by insulating on the exterior, it then meant I could create an overall envelope improving the overall U-Value of the design, whilst also maximising the existing space inside each container for living.



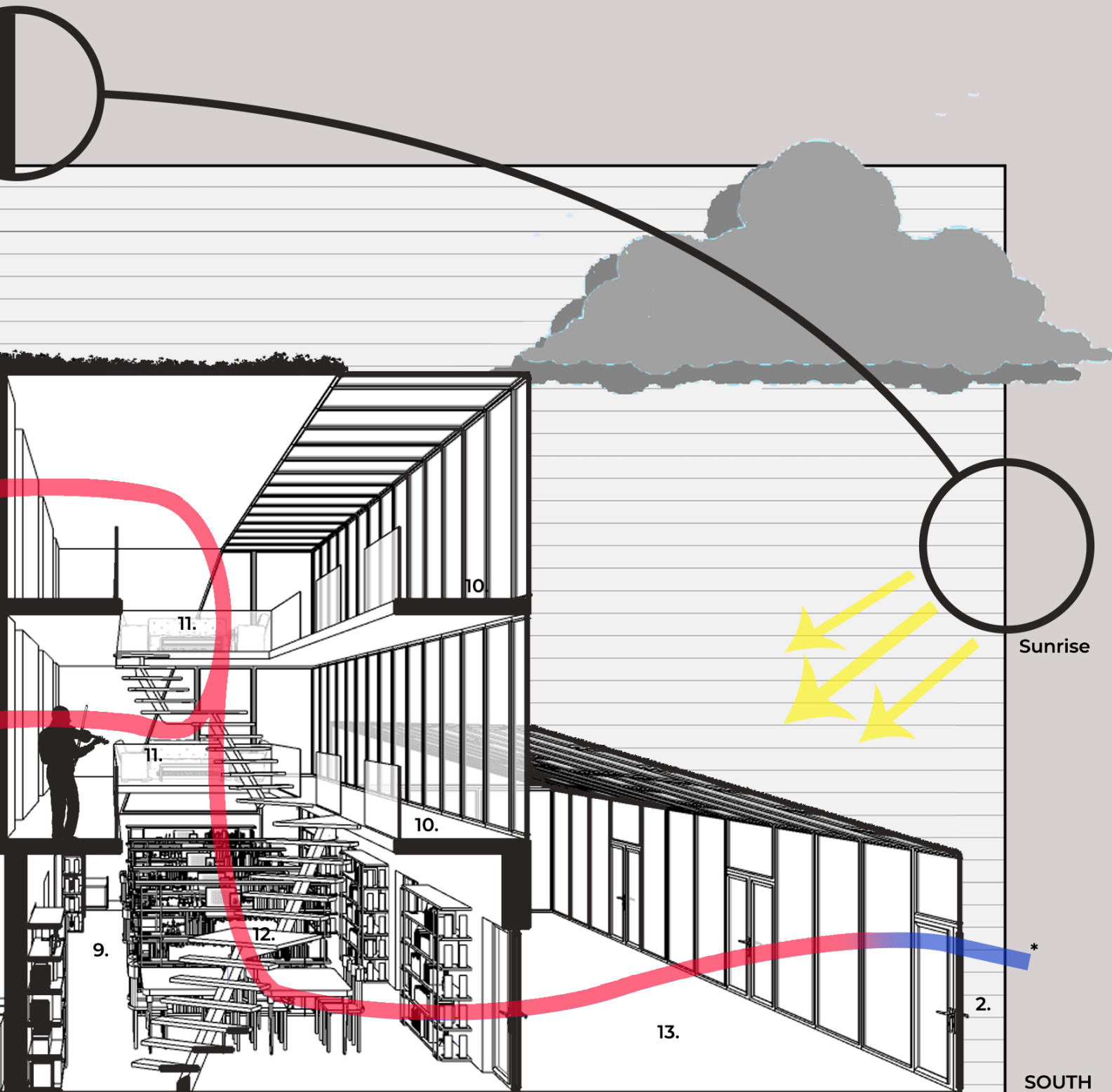
Key:

1. Existing Container Structure 2. Wooden Flooring (7mm) 3. Existing Container Floor/Roof Structure 4. Cavity blockers (115x115x115mm) 5. Floor/Roof Insulation (135mm) 6. Oriented Strand Board (15mm) 7. Damp Proof Membrane 8. Skim Coat 9. Gypsum Board (12mm) 10. Vapour Barrier 11. Wall ties/Brackets (100mm apart) 12. Existing Corrugated Container Panels 13. Wool Insulation (250mm) 14. Breather Membrane 15. Plywood (12mm) 16. Wooden Battens (40x25mm) 17. Wooden Cladding (440x50x20mm) 18. Doors 19. Balcony 20. Constructed Wall 21. Earth Soil 22. Timbercrete 23. Steel window sill 24. PVC Window 25. Timber cladding 26. Steel window lenticil 27. Waterproofing membrane (foundation) 28. Gypsum Board/plasterboard (10mm) 29. Cross laminated timber (25mm) 30. Self watering drainage 31. Shipping container connector 32. Roof water collector 33. Soil 34. Grass 35. Green roof 36. Water collecting system 37. Filter plate 38. Spacers (for filtering system) 39. Welded steel drip





* - These arrows which travel through the building represent how the building manages to heat itself. The blue areas of the arrow serve as the cold outside air. Whereas the red sections speak for warm air. As you can see the cold air from the exterior enters towards the rear of the building from the greenhouse where the air is naturally heated, and then enters the shared free space (9.). The heat then rises towards floor 1 and 2 heating the bedrooms. This diagram also explains how natural ventilation within the design functions to maintain a continuous flow of fresh cool air.



Perspective Section

Key:

1. Front entrance
2. Back entrance
3. Shared living area
4. Laundry room
5. Boiler room
6. Bedroom
7. Balcony
8. Bath room
9. Shared free space (currently library)
10. Landing Area
11. Seating area on the landing
12. Stairway
13. Green house
14. Green roof
15. Ground floor
16. First floor
17. Second floor
18. Light path

