

CRAFTING TABULA PLENA

A play with social and material ecologies





1 Artisan glass pane
 Locally hand made glass panes created from sands gathered on site and around London. Glass can be recycled and remade on site enabling a circular material flow.

2 Glazing
 Custom made modular aluminium frames
 1000x500mm Artisan glass
 Steel connection element
 170x70 wooden beam

3 Vent opener
 Automatic vent opener with expanding wax which opens the window when temperature rises over 25 C

4 Main construction
 Alternates between new glulam beams (300x120 mm) and reused steel truss collected from old shed on site

5 Green roof
 Extensive green roof with sedum turf incorporating local native grasses and herbs.

6 Roof
 140 mm Soil
 Root filter fabric
 70 mm Drainage layer
 Waterproof bitumen coating
 20 mm Plywood
 210 mm Thermacork insulation
 RC-6, framing: 210x70 mm h.o.h. 600 mm
 20 mm Plywood

7 Main construction
 The roof is supported by 550x140 mm glulam beams with 300x110 mm secondary beams

8 Wall
 300x500 mm concrete bond beam with rebar
 980-1000 mm thick wall made of prefabricated RRCA blocks (framed recycled concrete aggregate)

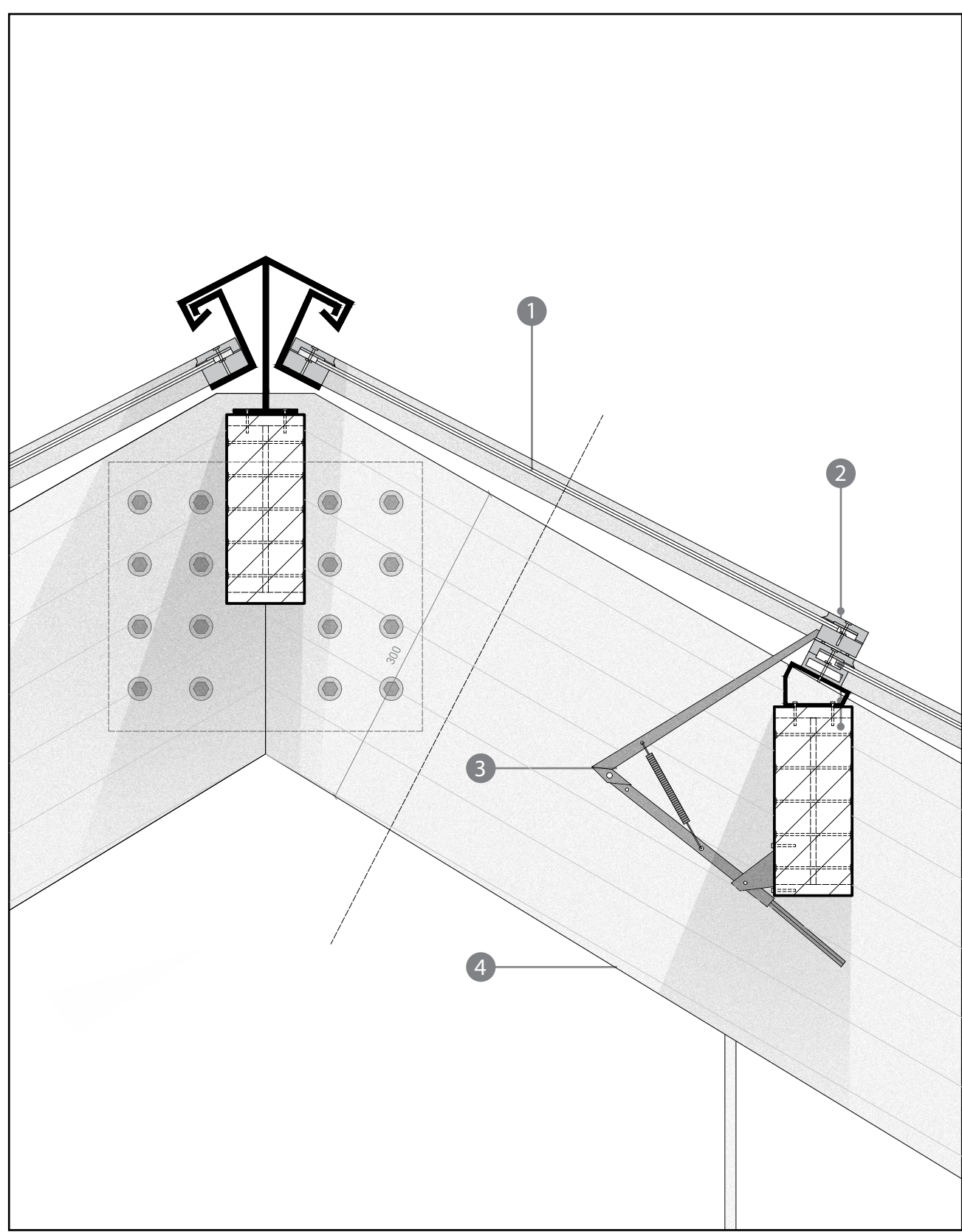
9 Erosion check
 20 mm high Trass-lime erosion check to control erosion in the period between the construction of the workshop and the greenhouse.

10 Furnace
 Electric glass blowing furnace running on site generated electricity. The waste heat is transported to the greenhouse through the thermal mass of the wall and hypocaust floor system. The heat is transported to the rest of the building via a radiant floor heating system.

11 Earthen floor
 20 mm tile
 8 mm tile mortar
 125 mm rammed earth
 Clay mortar covering radiant pipes
 160 radiant floor heating
 Foil
 160 mm insulation: Therma Cork RC-4.5 Made from bark: negative carbon footprint
 Vapour barrier
 100 mm gravel
 (relatively) Undisturbed earth

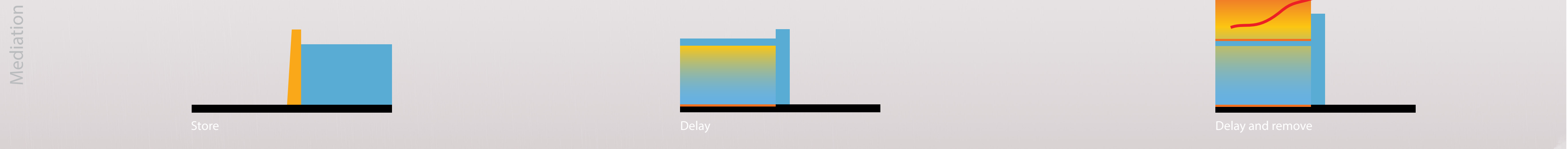
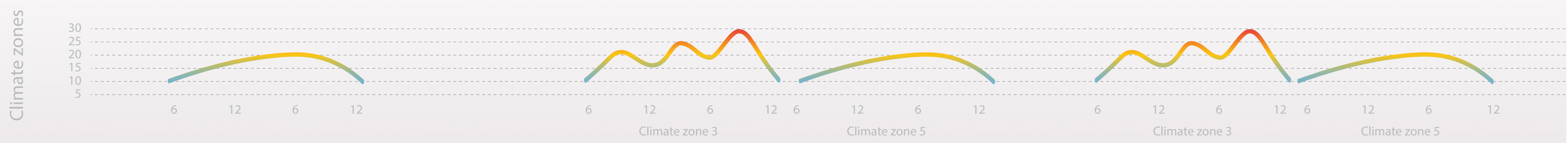
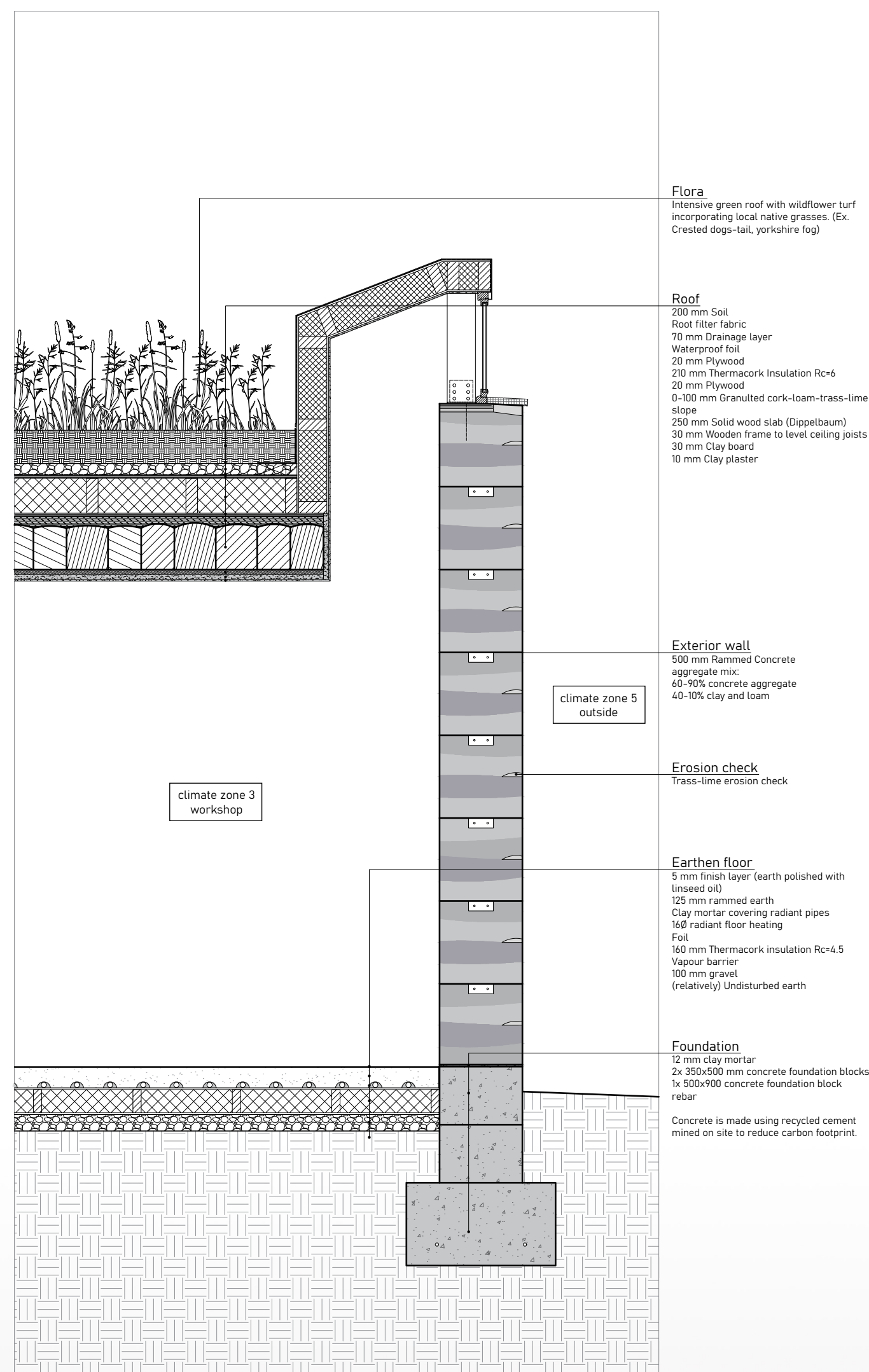
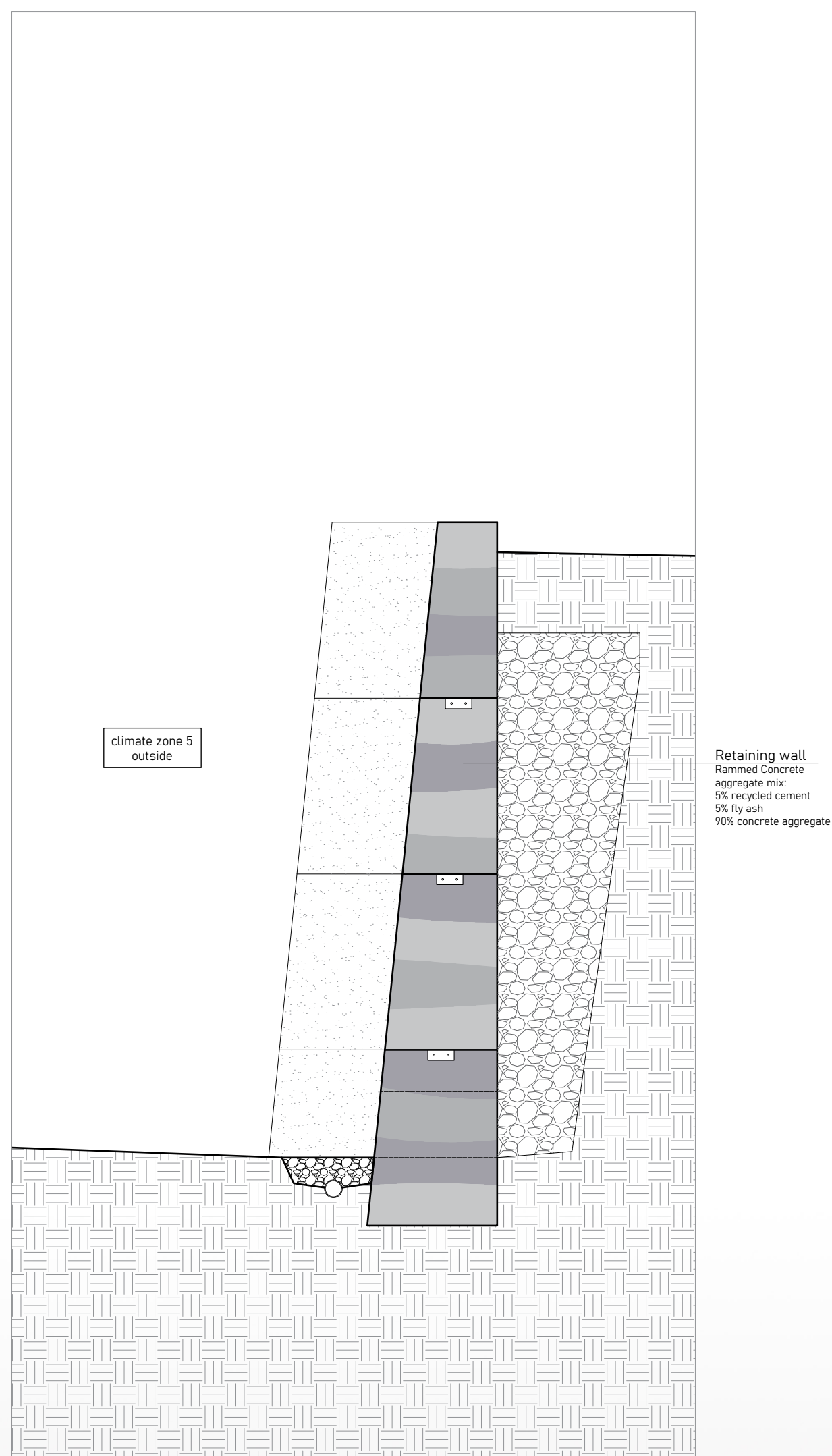
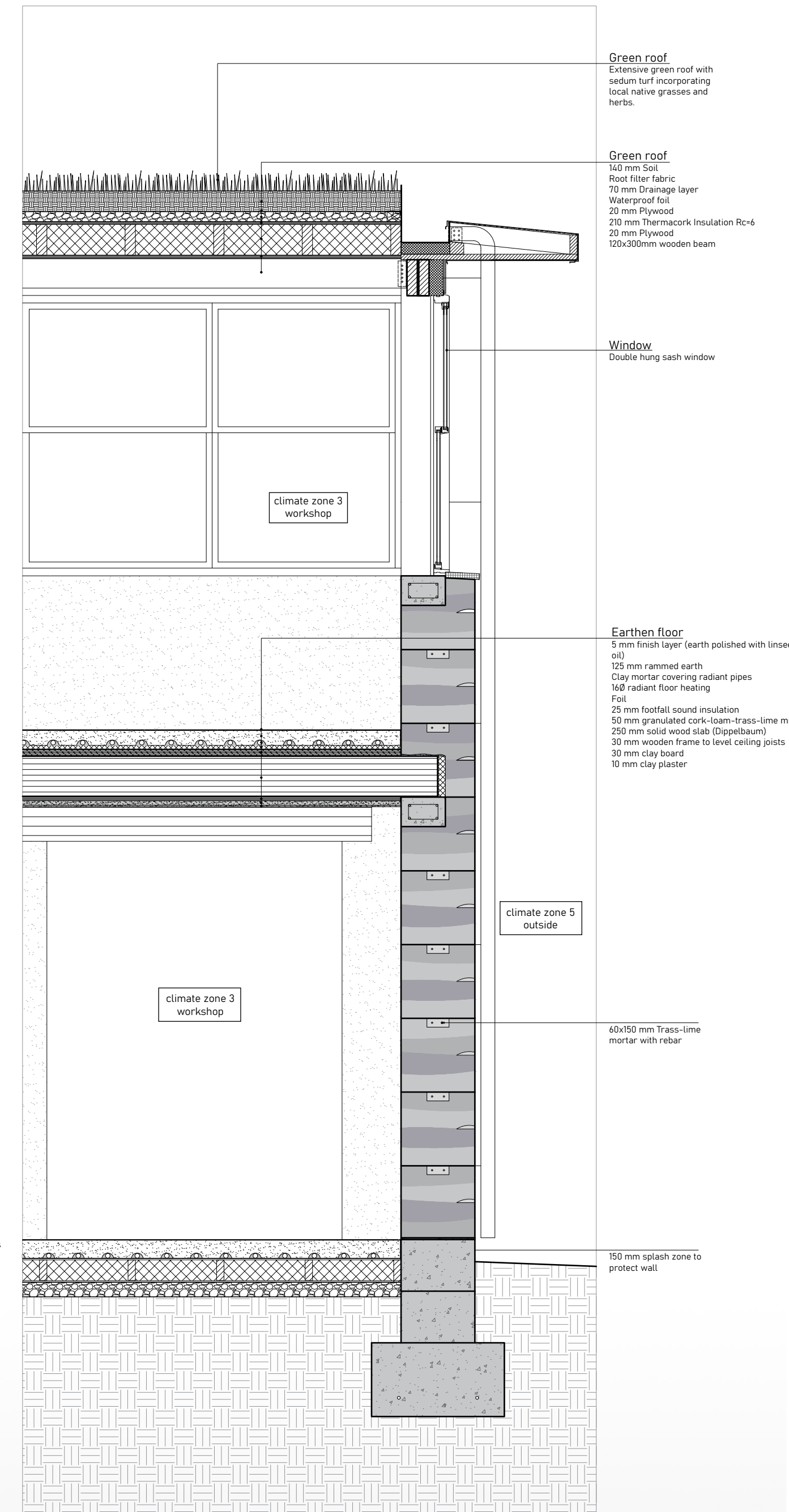
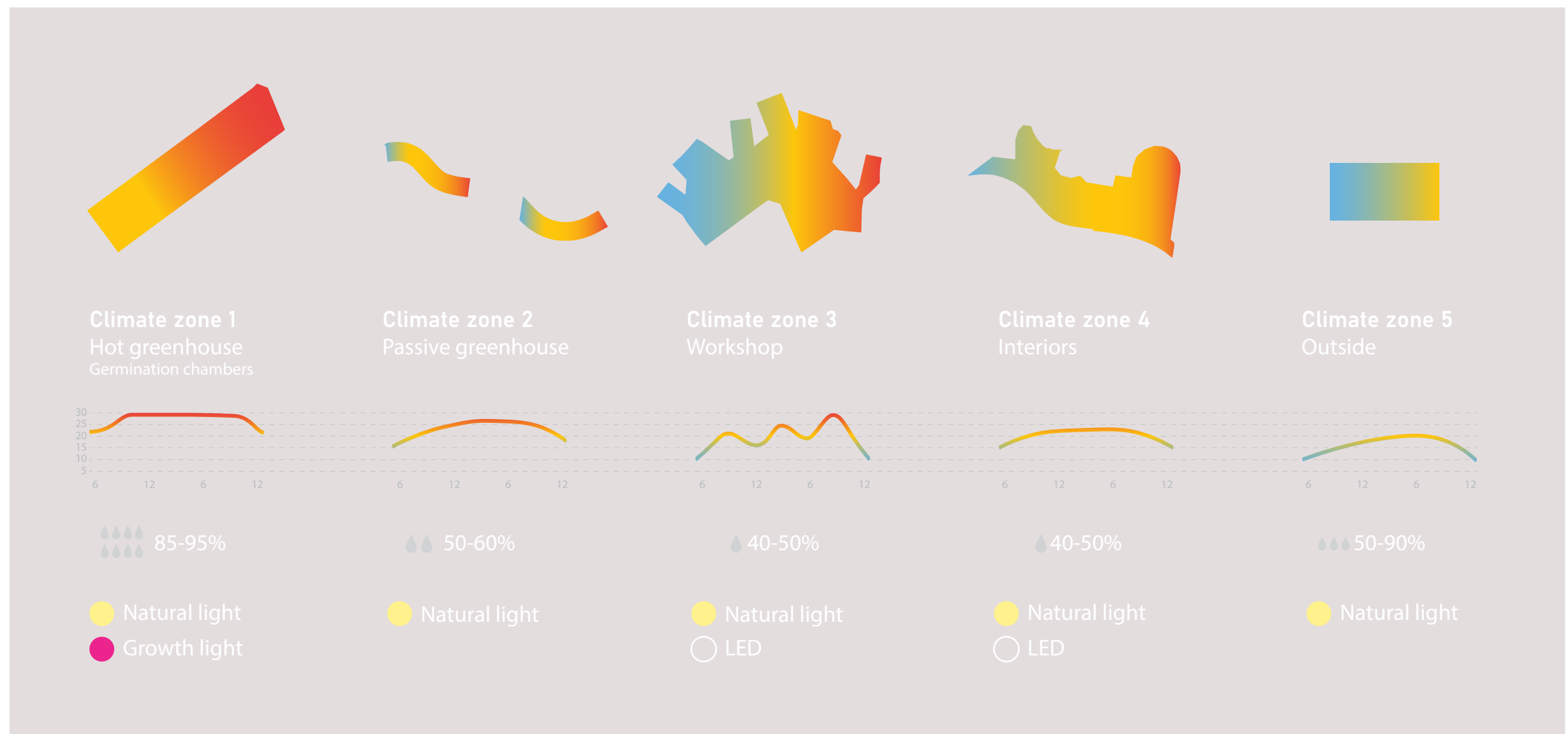
12 Hypocaust
 Cavity under greenhouse where hot air can circulate. Air can also be let into the greenhouse directly through vents.

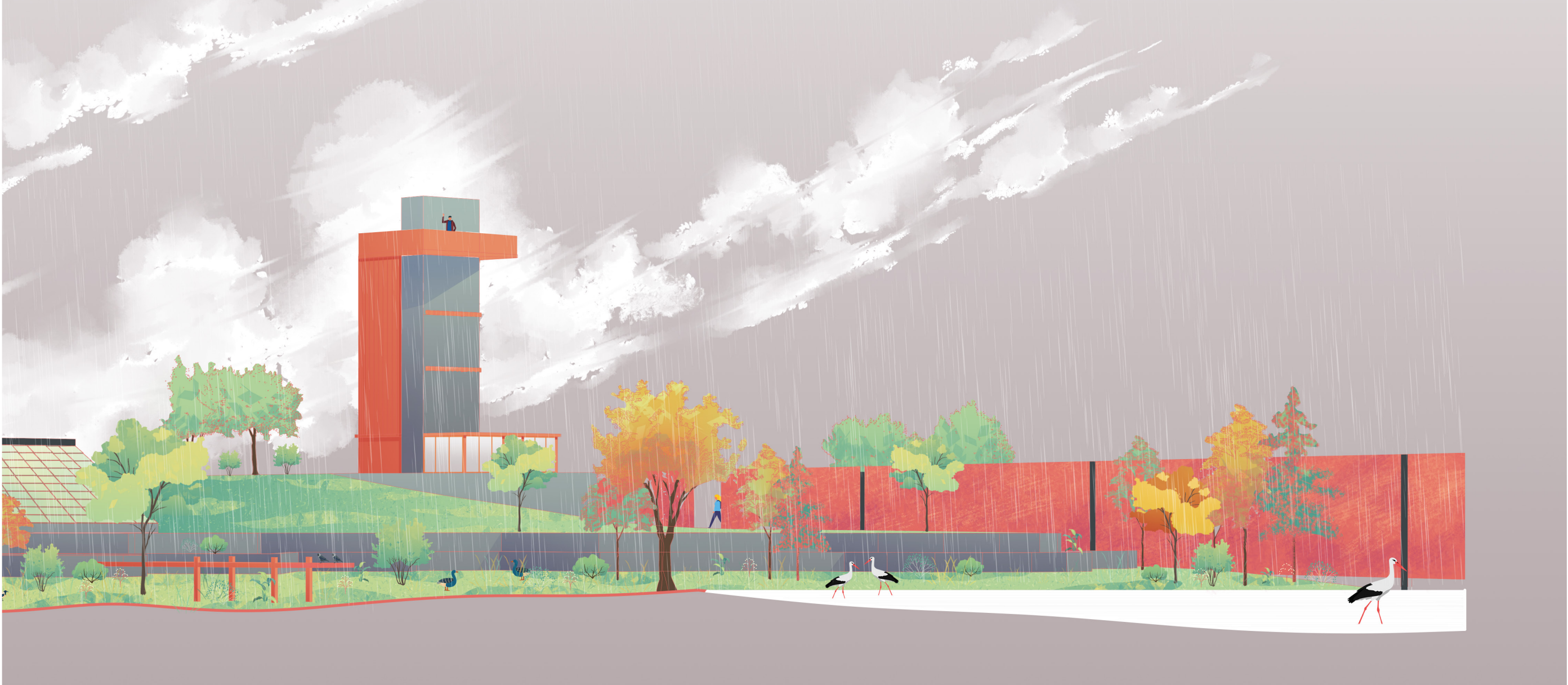
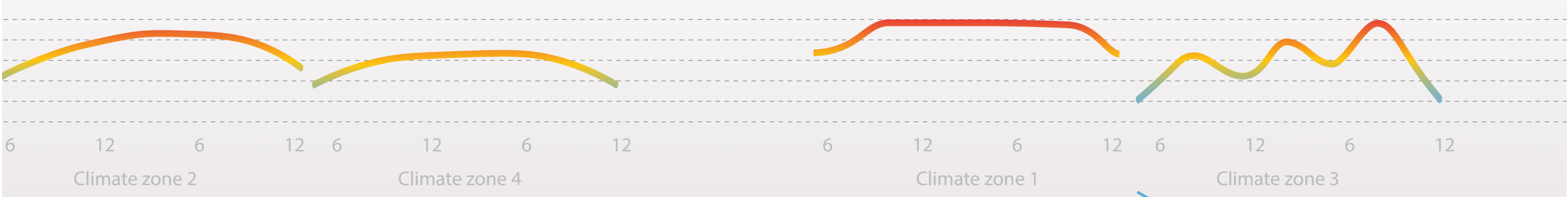
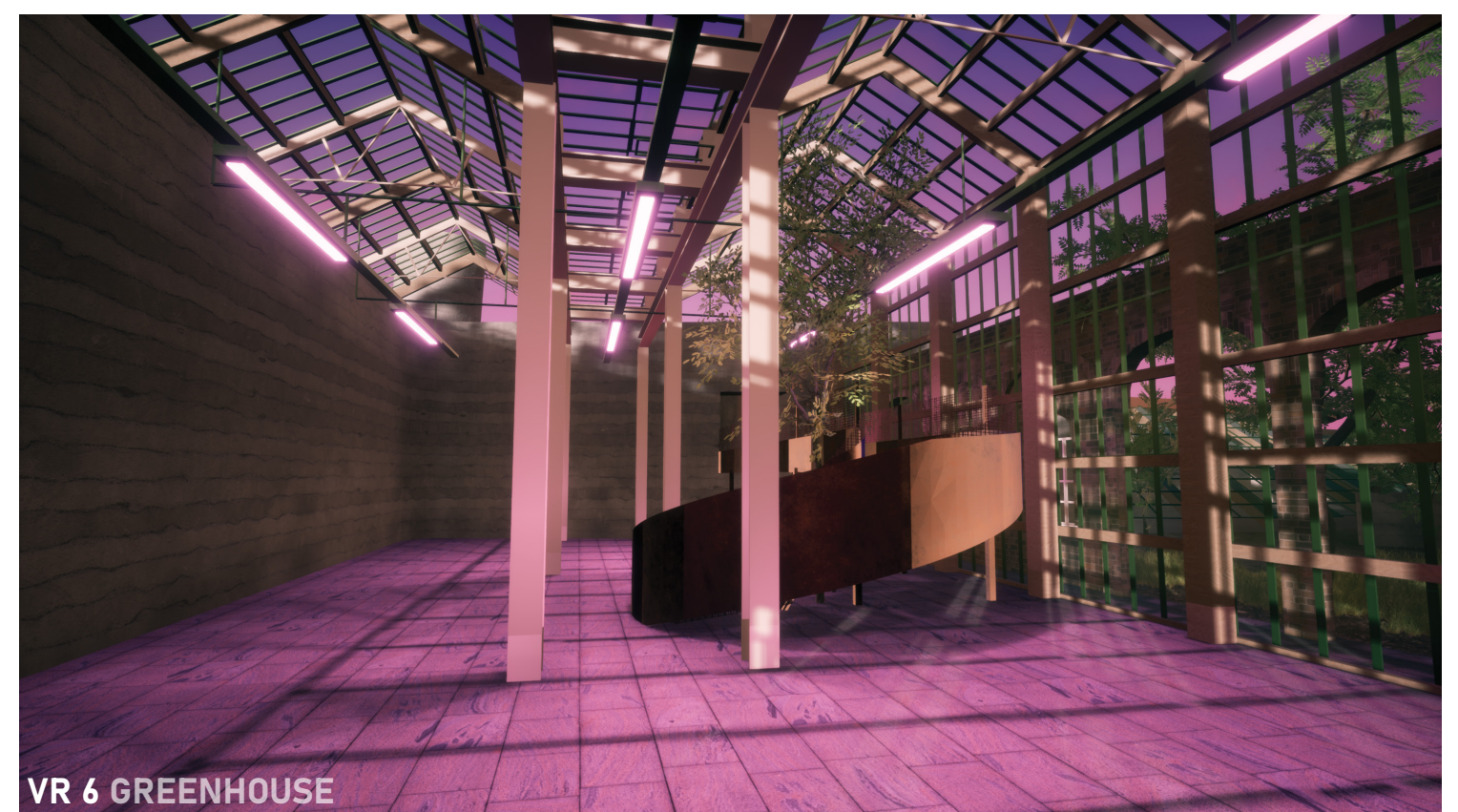
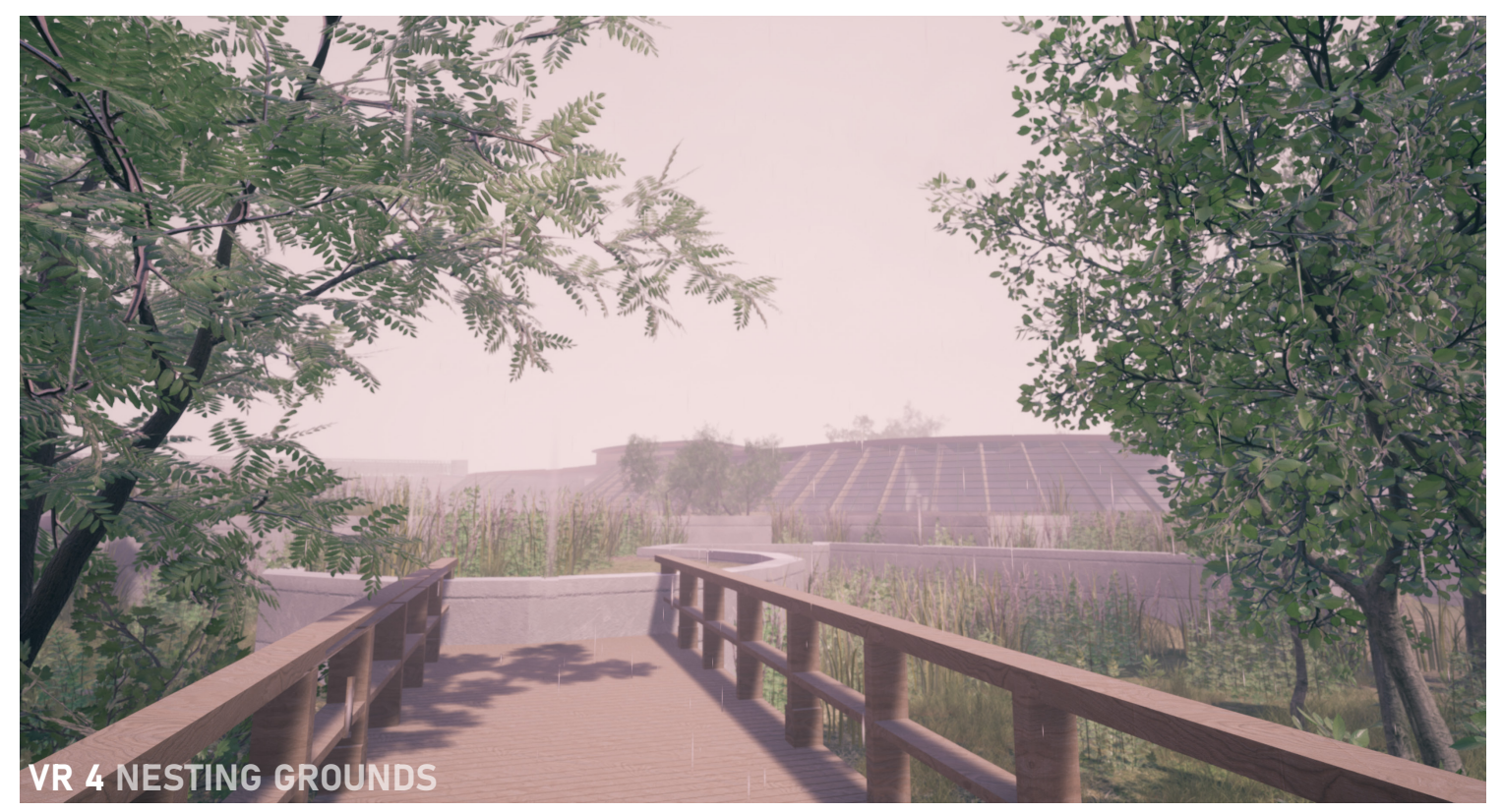
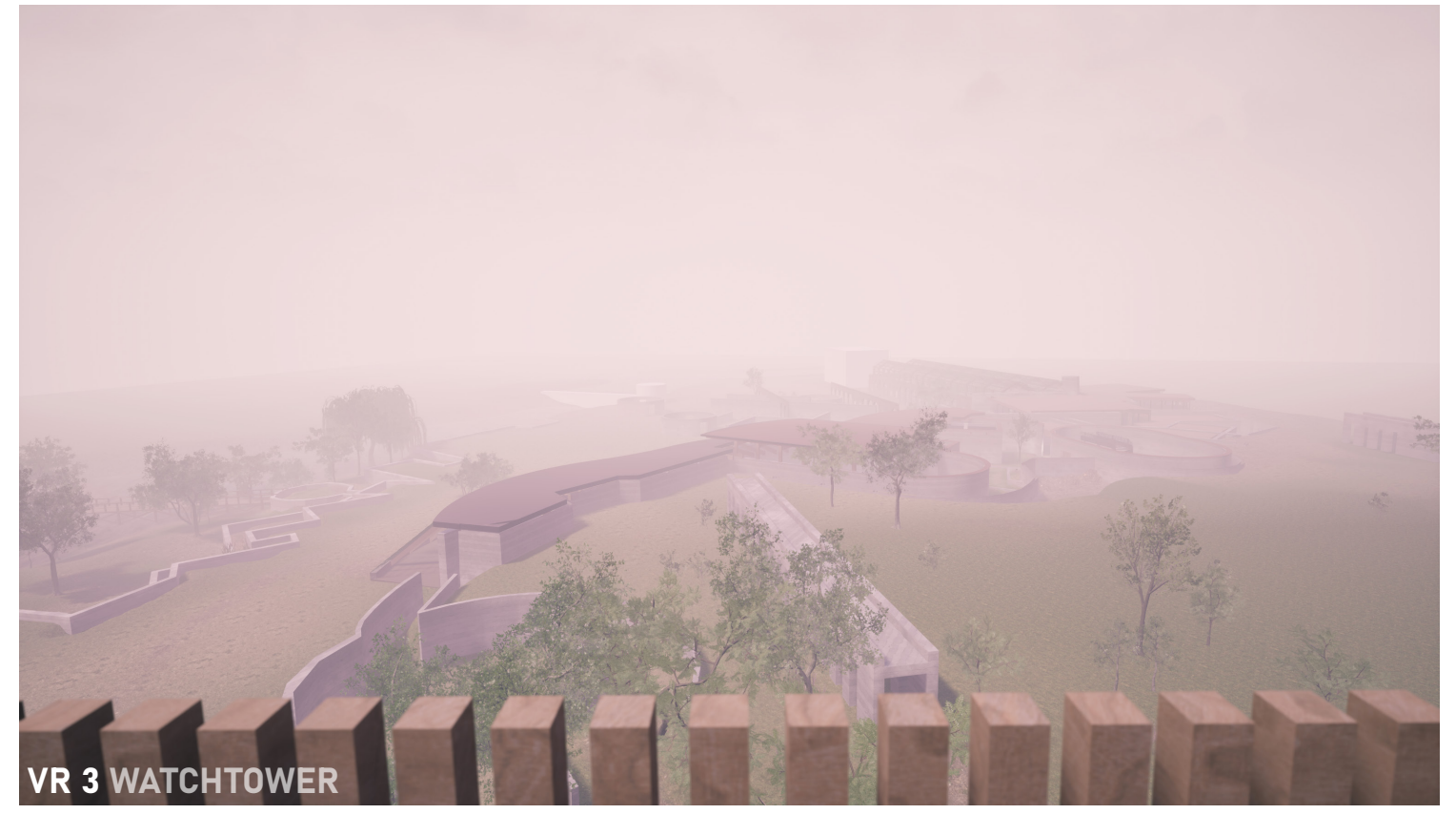
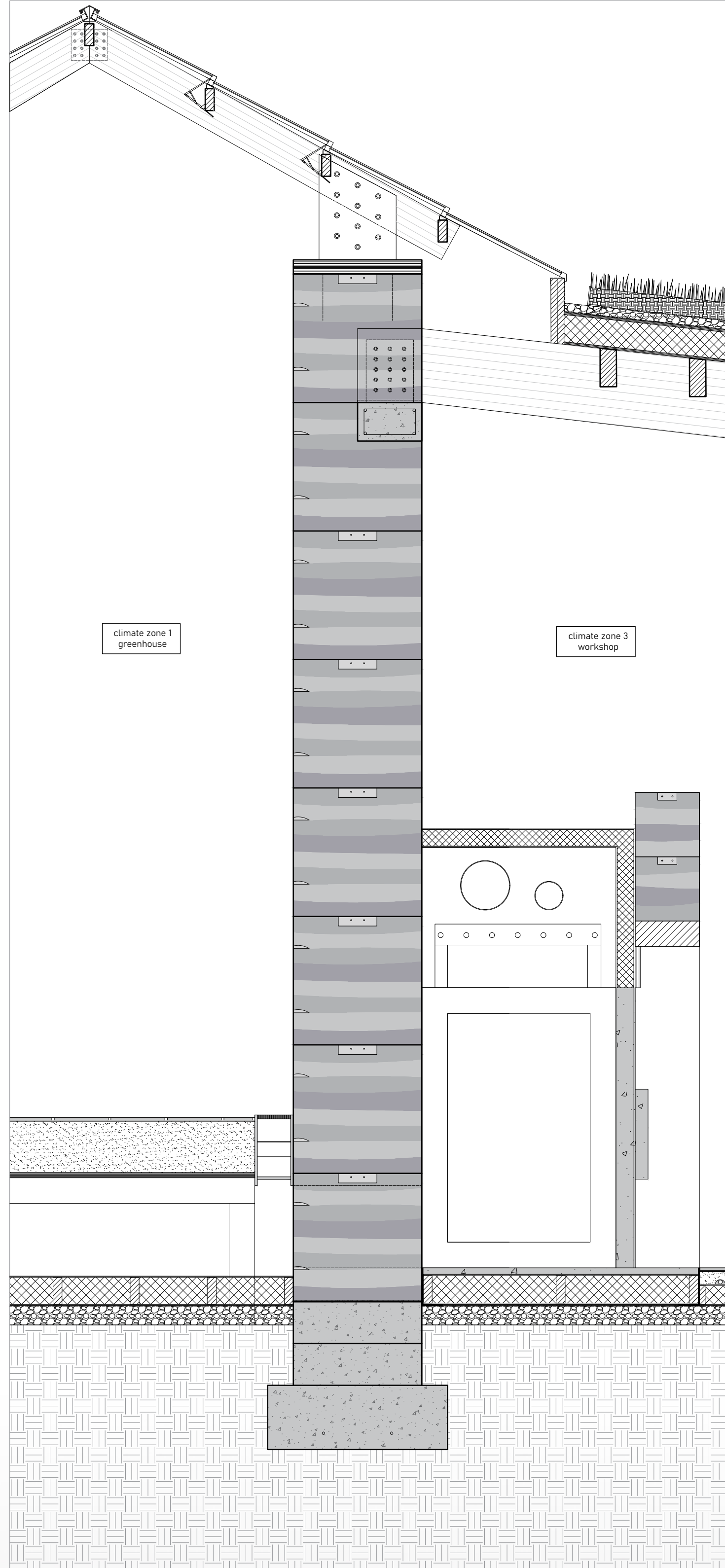
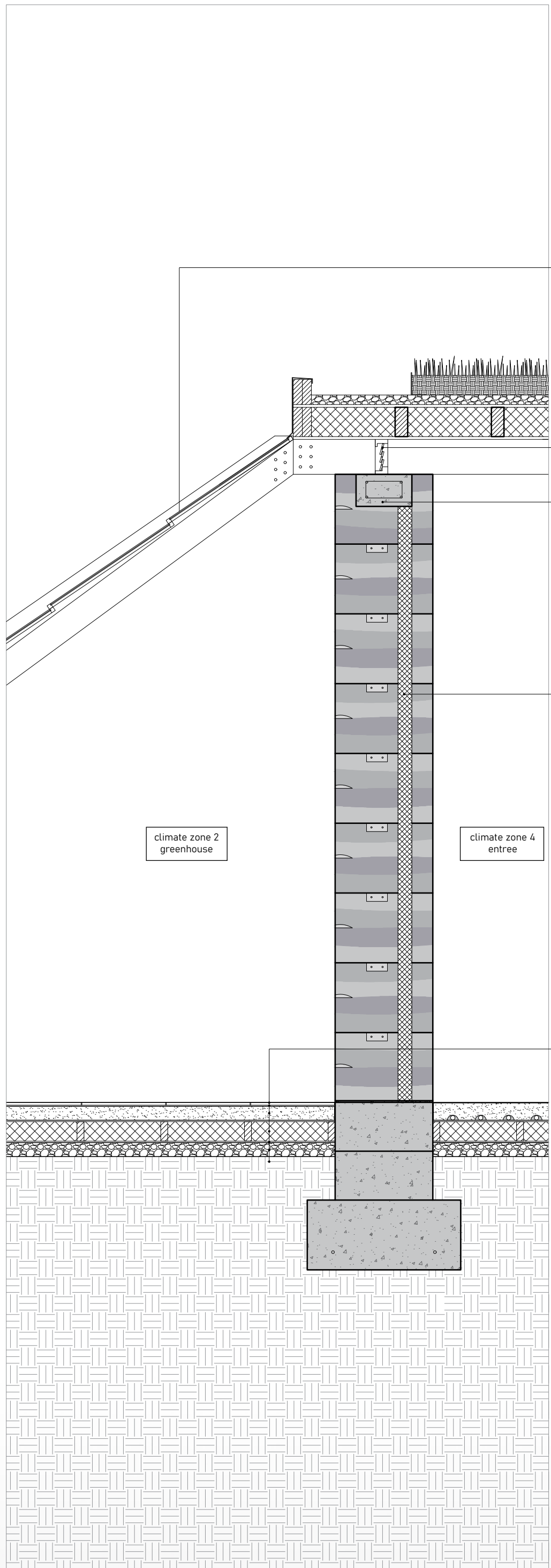
13 Foundation
 12 mm clay mortar
 2x 350x1000 mm concrete foundation blocks
 1x 500x1400 concrete foundation block
 rebar
 Concrete is made using recycled cement mined on site to reduce carbon footprint.

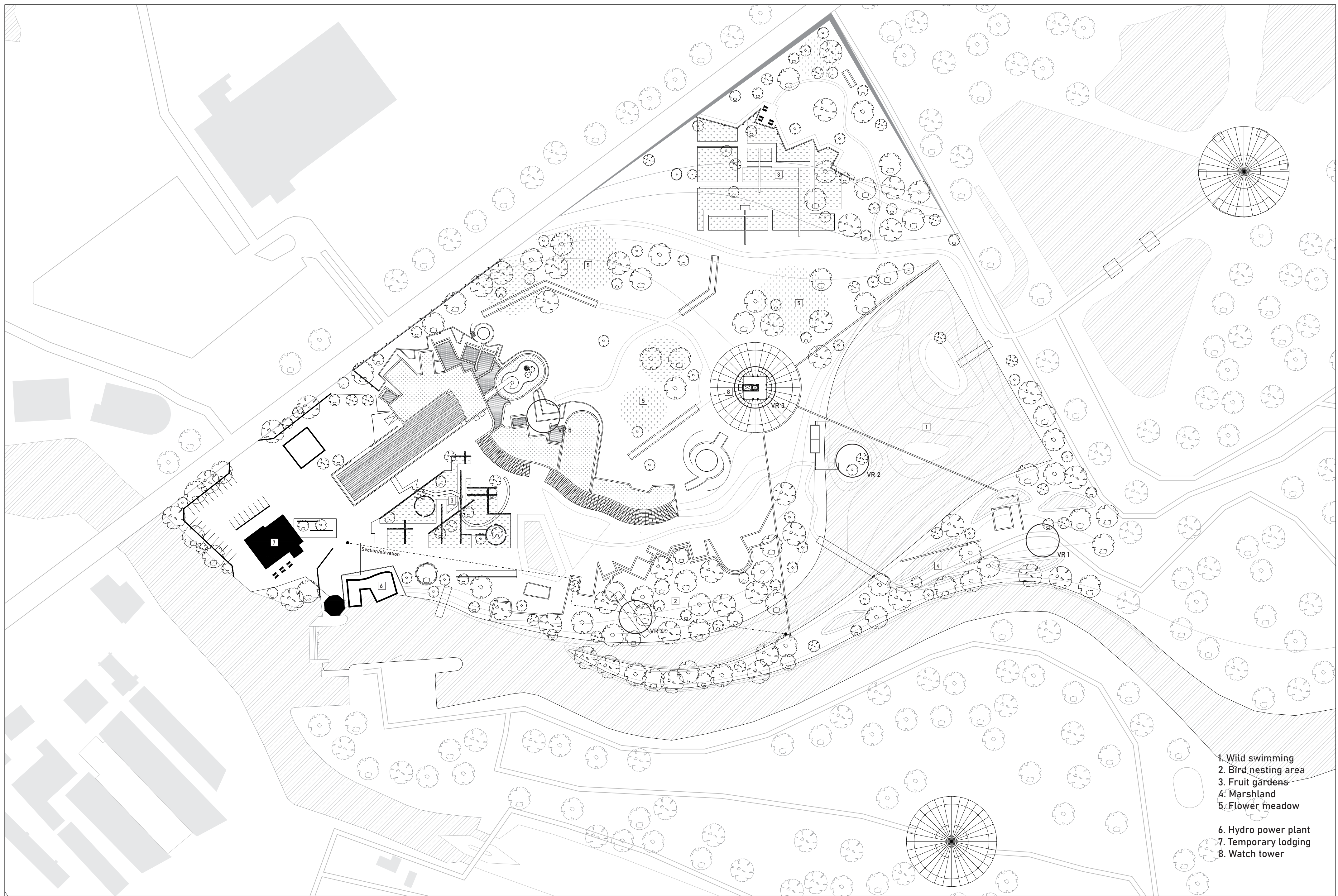


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D2 1:5 Greenhouse roof detail

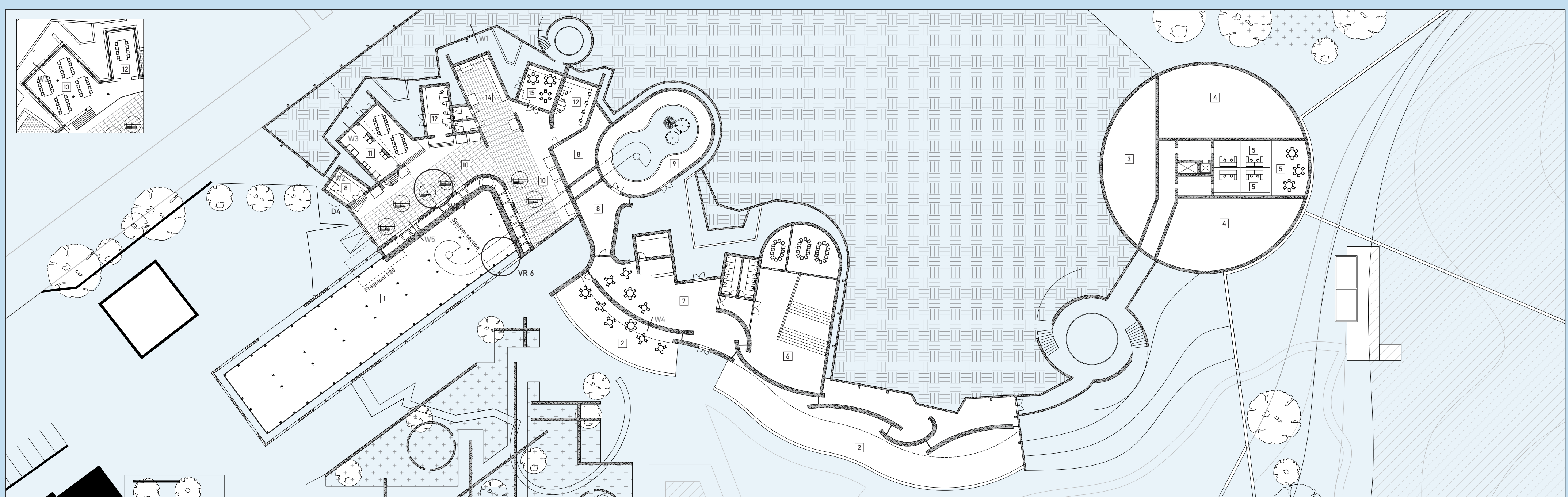






- 1. Wild swimming
- 2. Bird nesting area
- 3. Fruit gardens
- 4. Marshland
- 5. Flower meadow
- 6. Hydro power plant
- 7. Temporary lodging
- 8. Watch tower

Site plan, 1:1000



- 1. Hot greenhouse
- 2. Passive greenhouse
- 3. Germination Chambers
- 4. Plant factory
- 5. Labs
- 6. Auditorium
- 7. Entrance/Restaurant
- 8. Storage
- 9. Gallery
- 10. Hot shop
- 11. Kiln Shop
- 12. Studio
- 13. Flameworking
- 14. Coldshop
- 15. Break room

Ground floor plan, 1:500



System section