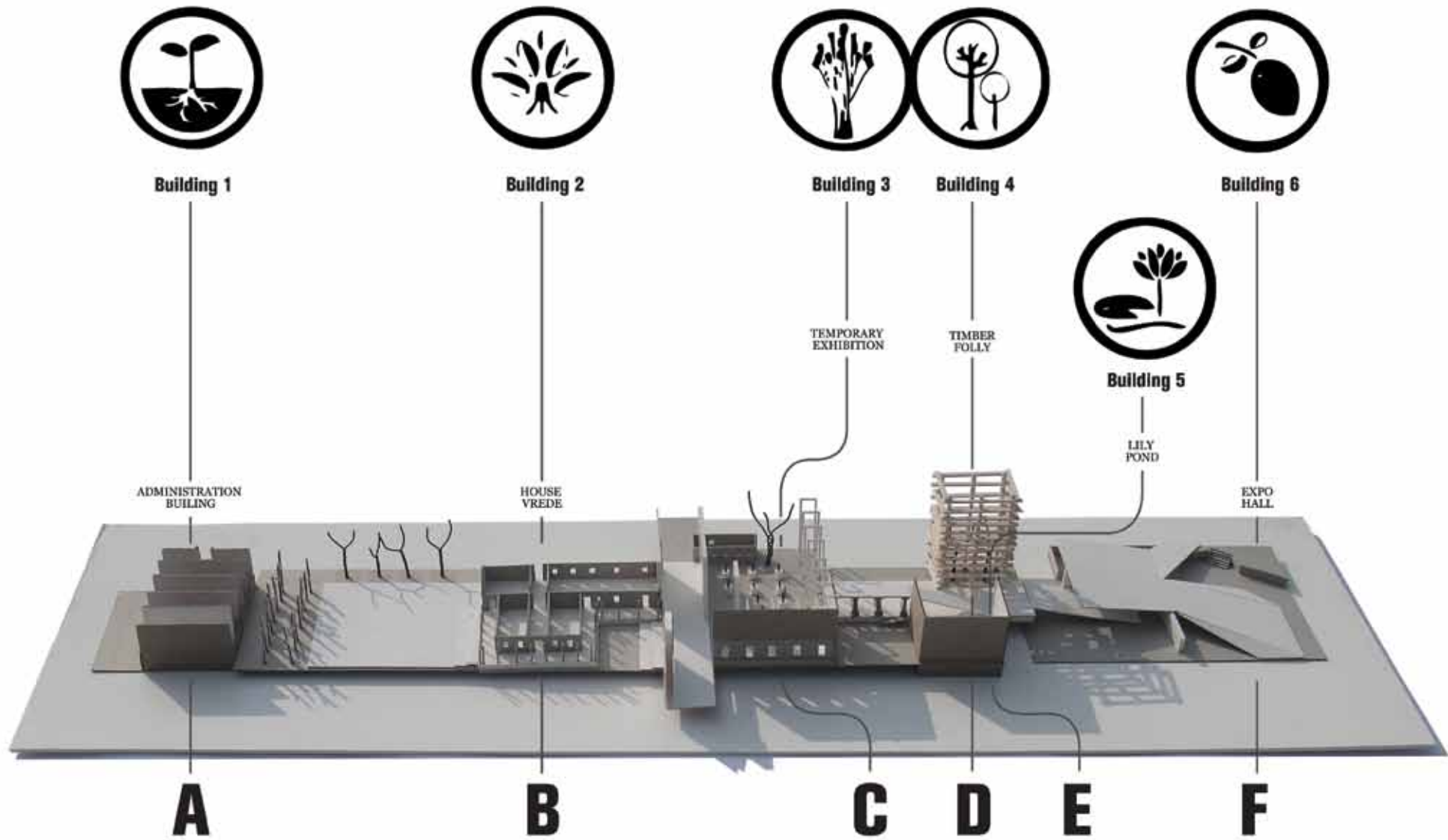
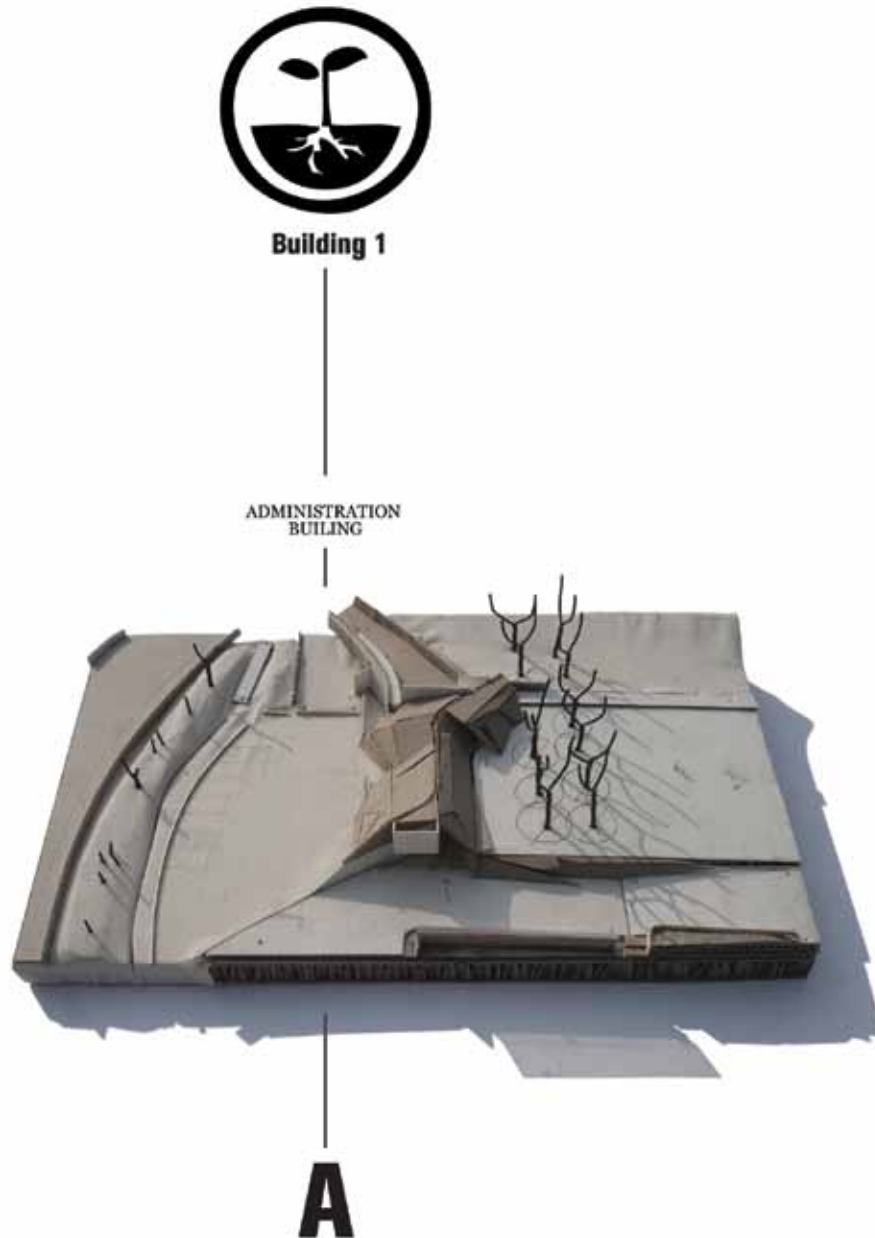


HOUSE VREDE & EXHIBITION BUILDINGS

CONCEPT MODEL



BUILDING 1 - ADMINISTRATION BUILDING CONCEPT MODEL



A – ADMINISTRATION BUILDING:

BRIEF AND ASSIGNABLE AREA - With a schedule area of 420 assignable square meters, the building incorporates the programme of production into the administrative center of the botanical garden. Administrative activities include a lower-ground floor - (two horticulturists, a plant records clerk and a administration officer) and ground floor office block (curator, deliveries and building infrastructure maintenance).

SITTING AND BUILDING PLANNING - Located on the western edge of a platform formed by existing structures, the building is cut into the site. A three meter level difference is accommodated by creating two levels in the building. Facing west, the entrance and parking are placed on a lower ground floor, close to access from Koetswegpad.

FORM - The building form is dominated by its roof, a 100 mm concrete shell clad with masonry paving that folds over the structure. The idea behind the folding roof integrates the building on two levels, connecting a square on the upper level to the lower parking area. The form terminates the Western end of the entrance podium as an undulating shape in the landscape. The buildings tectonic expression is influenced by the cast-iron glass and potting houses.

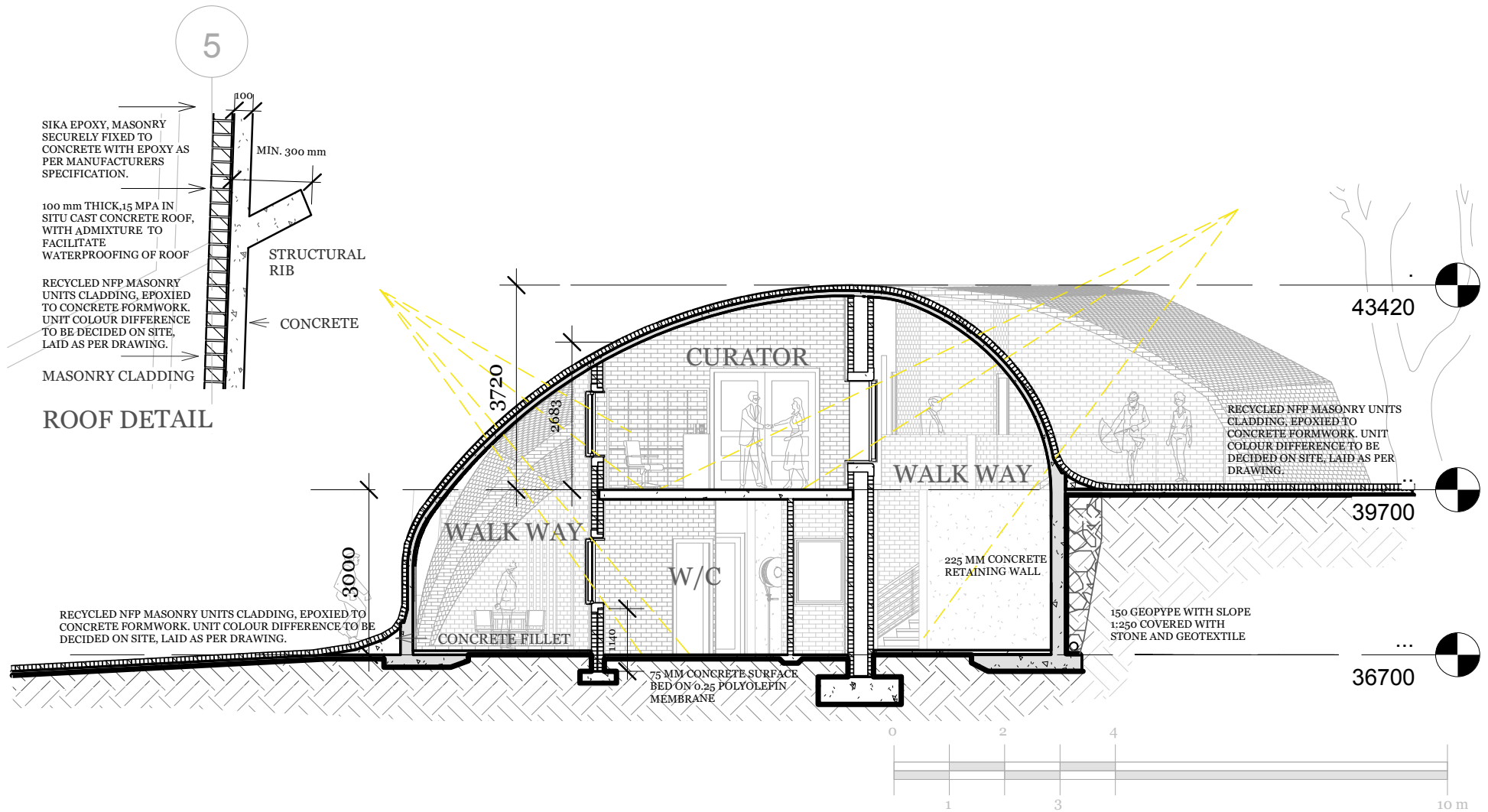


Fig_106: Victorian cast-iron potting house: c. 1914



Fig_107: Roof detail with timber louvers.

ADMINISTRATION BUILDING SECTION



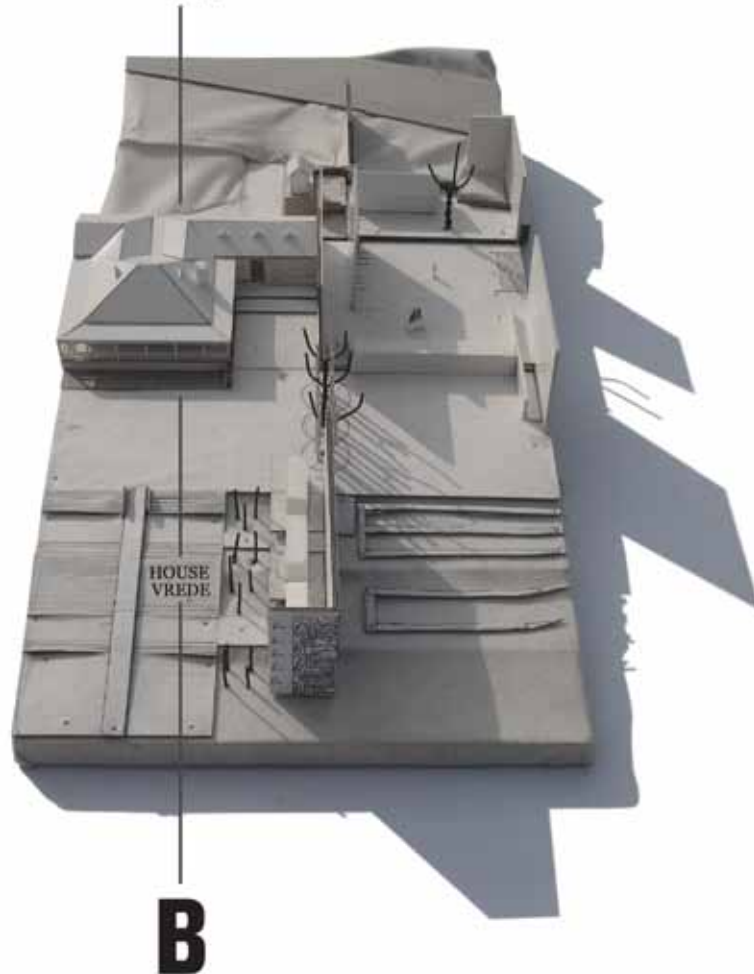
BUILDING 2 - HOUSE VREDE

CONCEPT MODEL

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Building 2



B – HOUSE VREDE:

Ultimately, we can say that type is the very idea of architecture, that which is closest to its essence.

- Aldo Rossi on building types.

(Forty 2000: 304)

The classification of architecture uses functional (programmatic classification, church etc.) and morphological (shape and form particular to design elements e.g. courtyard) types to define buildings and elements within it (Forty 2000: 304).

EXISTING FORM - The 1889 square structured house is set on a natural stone plinth. On the front of House Vrede a plinth forms a verandah bordered by timber lattice work. Openings have louvered shutters and are made of vertically proportioned timber frames. The main façade faces Church Street. The house is axially planned with a straight garden path that leads to a series of small entrance steps. The L-shaped house has details of late 19th Century British Colonial architecture.

NEW FORM - The restoration of the building references the use of typological elements. Generous open space is created around the building by a nursery-, entrance- and arrival court. The open character is determined by the residential scale of the building.

TYPE - VERANDAH - The verandah of House Vrede acts as a threshold between the outer and inner world. A tree replaces part of the structure. Nature mimics the function of separation between interior and exterior space.

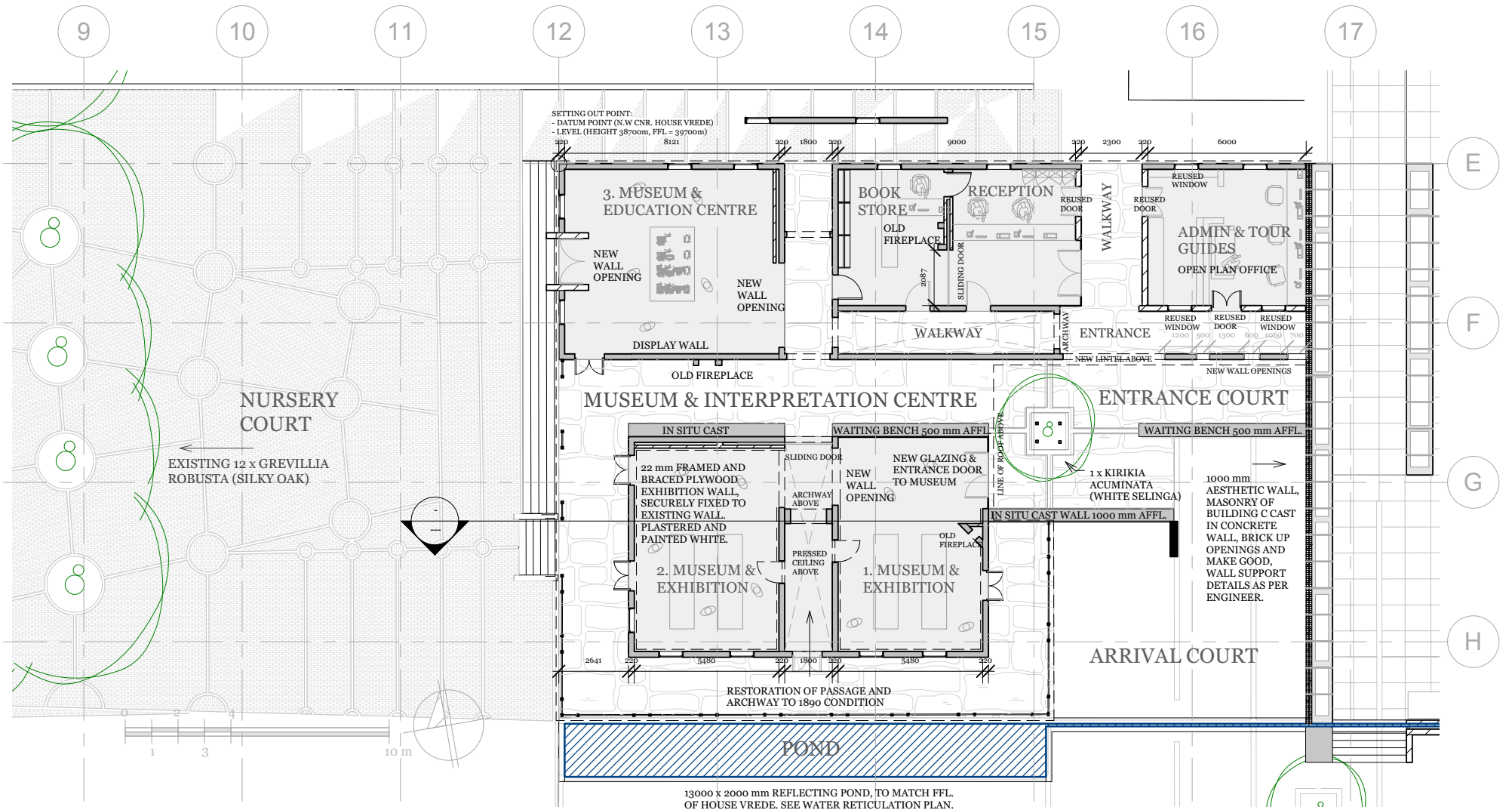
TYPE - PASSAGE - By moving the main entrance to the side, the original axial quality of the house is undermined. An entrance court and pond guides movement from the arrival court.

TYPE - STAIRS - Based on the idea of an appropriate scale for trees, the straight garden path is exaggerated to form a dramatic entrance stair.

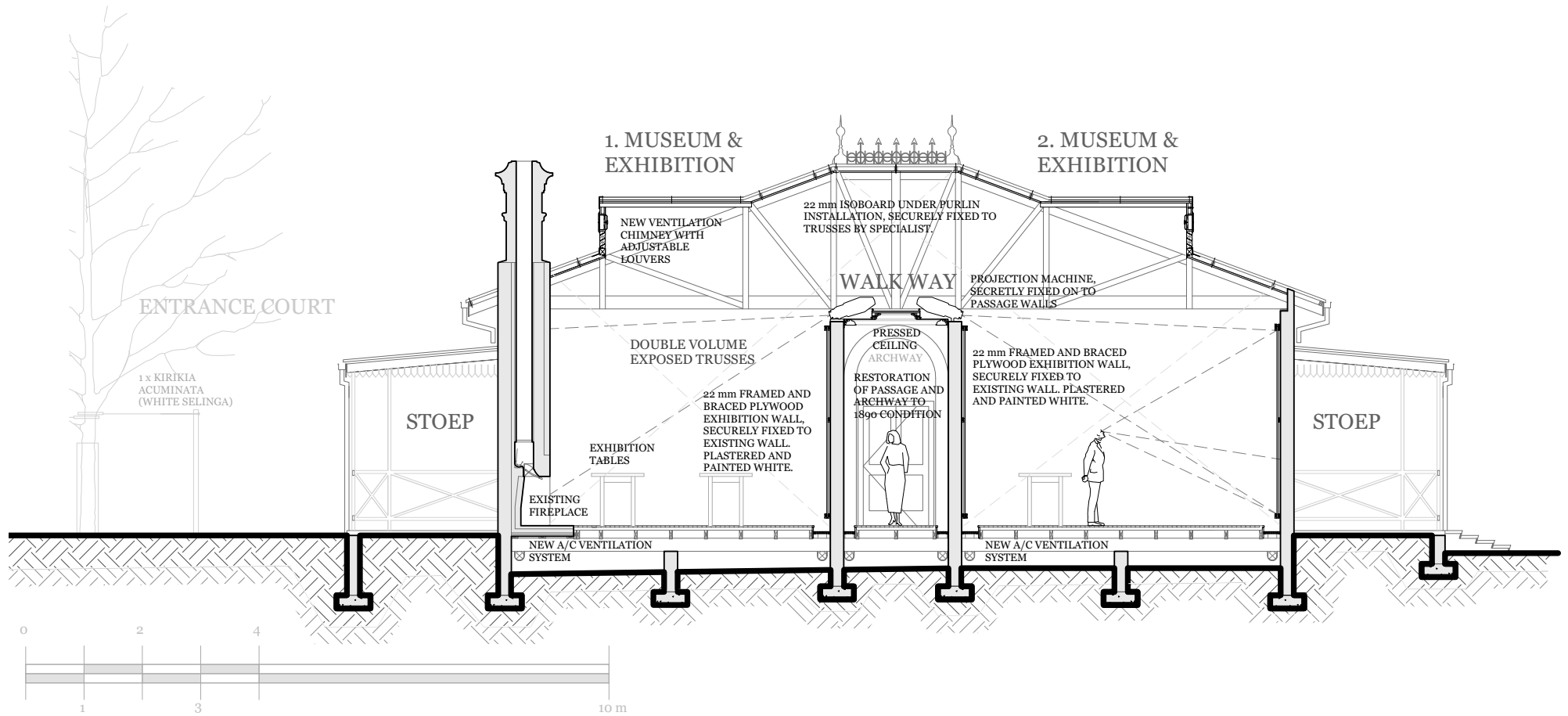
BRIEF AND ASSIGNABLE AREA - With a schedule area of 360 meters, the arrival center hosts the programme of museum, tour guides, book store and education centre.

SITTING AND BUILDING PLANNING - The building is located in the middle of a platform formed by structures on the site. The typology of the old house is symbolically opened to three of its four façades, recreating its original setting. The fourth façade connection to the old Herbarium is preserved.

HOUSE VREDE GROUND FLOOR PLAN

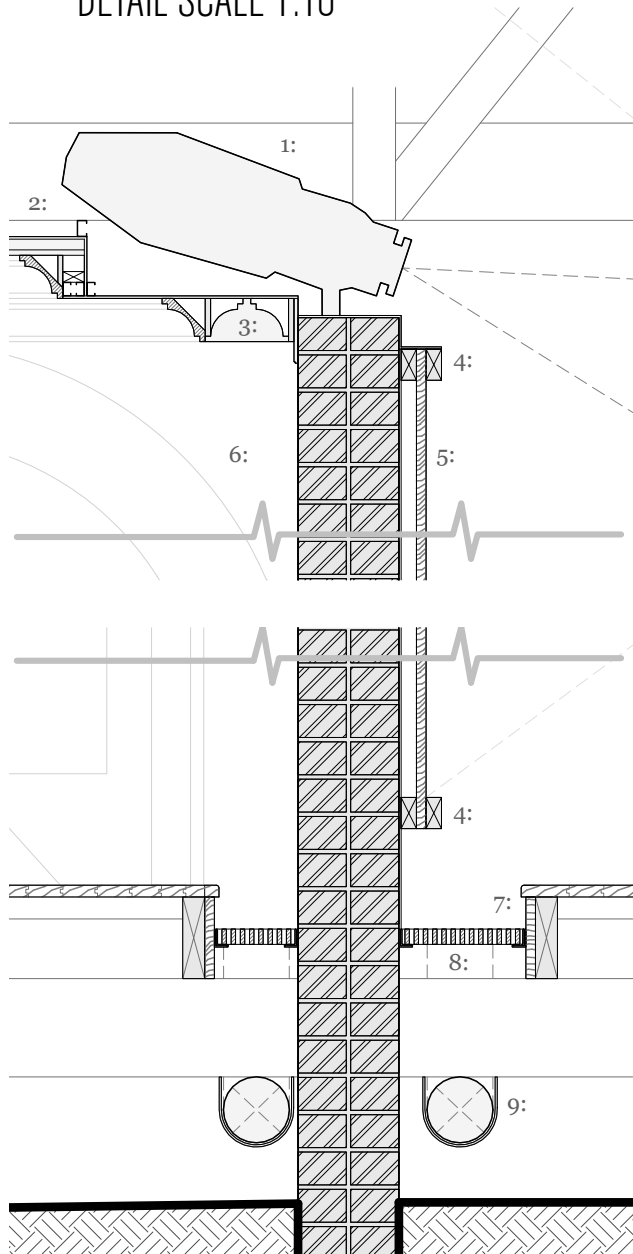


HOUSE VREDE SECTION



HOUSE VREDE

DETAIL SCALE 1:10



WALKWAY DETAIL:

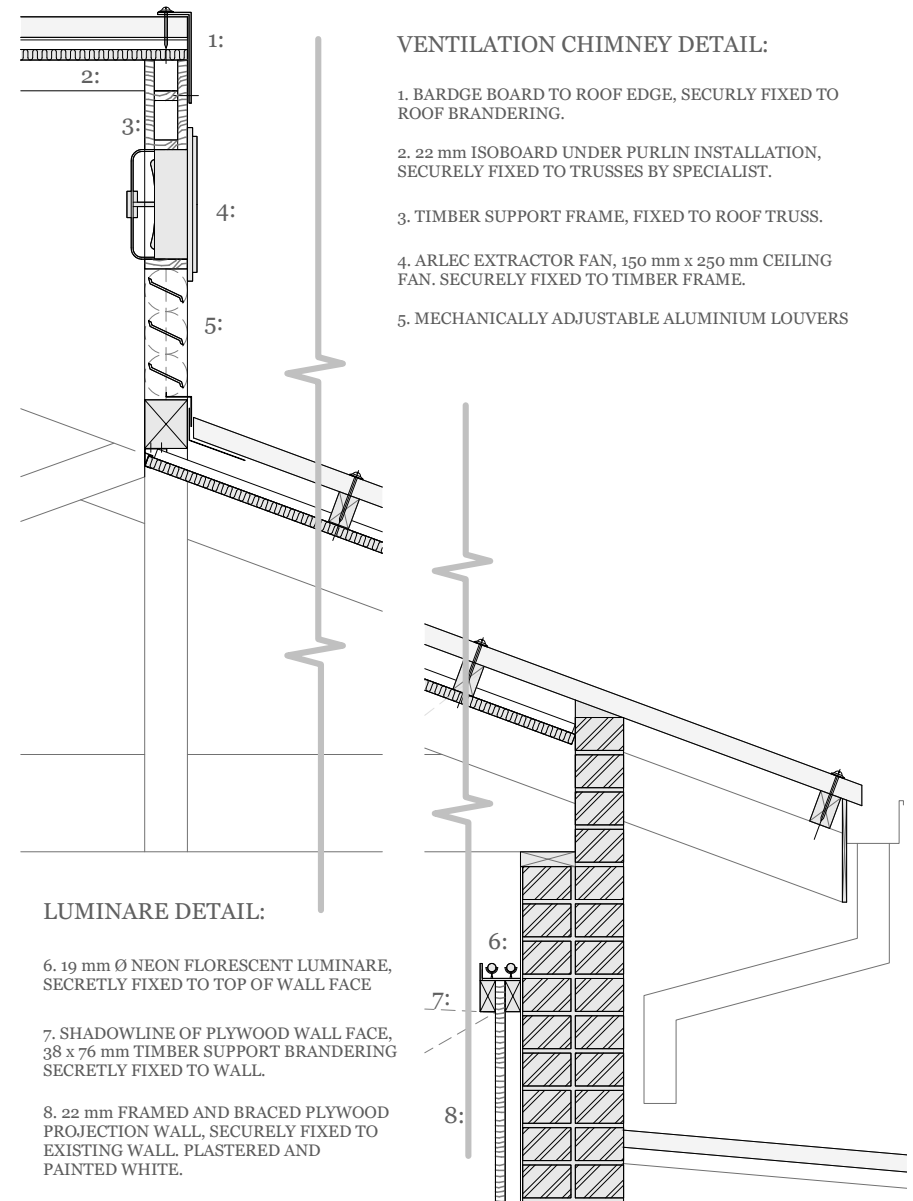
1. PROJECTION MACHINE, SECRETLY FIXED ON TO PASSAGE WALL. AS PER SPECIALIST.
2. PRESSED CEILING DETAIL, FIXED TO ROOF TRUSS WITH LAFARGE GRIDLOCK LIGHTWEIGHT STEEL BRANDING, AS PER SPECIALIST.
3. LUMINARE SHADOW LINE
4. SHADOWLINE OF PLYWOOD WALL FACE, 38 x 76 mm TIMBER SUPPORT BRANDING SECRETLY FIXED TO WALL.
5. 22 mm FRAMED AND BRACED PLYWOOD EXHIBITION WALL, SECURELY FIXED TO EXISTING WALL. PLASTERED AND PAINTED WHITE.
6. RESTORATION OF PASSAGE AND ARCHWAY TO 1890 CONDITION

A/C VENTILATION SYSTEM:

7. COVER BOARD, 22 mm TIMBER SECURELY FIXED TO FLOOR BEAM.
8. TIMBER AND STEEL A/C GRILL, PLACED LOOSE ON 3 x 24 x 41 mm STEEL SUPPORT FRAME.
9. EVAPORATIVE COOLING DISTRIBUTION PIPE, 150 mm Ø AIR VENTILATION FIXED WITH PURPOSE MADE STEEL BRACKET TO UNDERSIDE OF TIMBER BEARING BEAM.

HOUSE VREDE

DETAIL SCALE 1:10



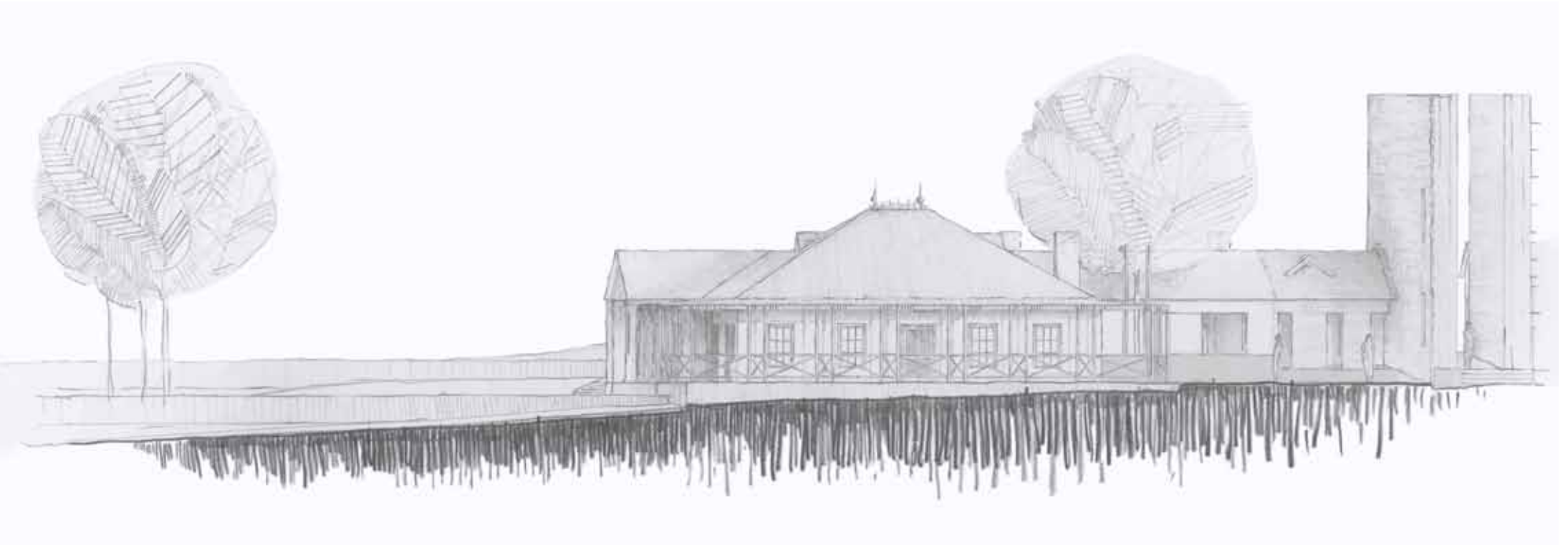
VENTILATION CHIMNEY DETAIL:

1. BARDGE BOARD TO ROOF EDGE, SECURLY FIXED TO ROOF BRANDING.
2. 22 mm ISOBOARD UNDER PURLIN INSTALLATION, SECURELY FIXED TO TRUSSES BY SPECIALIST.
3. TIMBER SUPPORT FRAME, FIXED TO ROOF TRUSS.
4. ARLEC EXTRACTOR FAN, 150 mm x 250 mm CEILING FAN. SECURELY FIXED TO TIMBER FRAME.
5. MECHANICALLY ADJUSTABLE ALUMINIUM LOUVERS

LUMINARE DETAIL:

6. 19 mm Ø NEON FLORESCENT LUMINARE, SECRETLY FIXED TO TOP OF WALL FACE
7. SHADOWLINE OF PLYWOOD WALL FACE, 38 x 76 mm TIMBER SUPPORT BRANDING SECRETLY FIXED TO WALL.
8. 22 mm FRAMED AND BRACED PLYWOOD PROJECTION WALL, SECURELY FIXED TO EXISTING WALL. PLASTERED AND PAINTED WHITE.

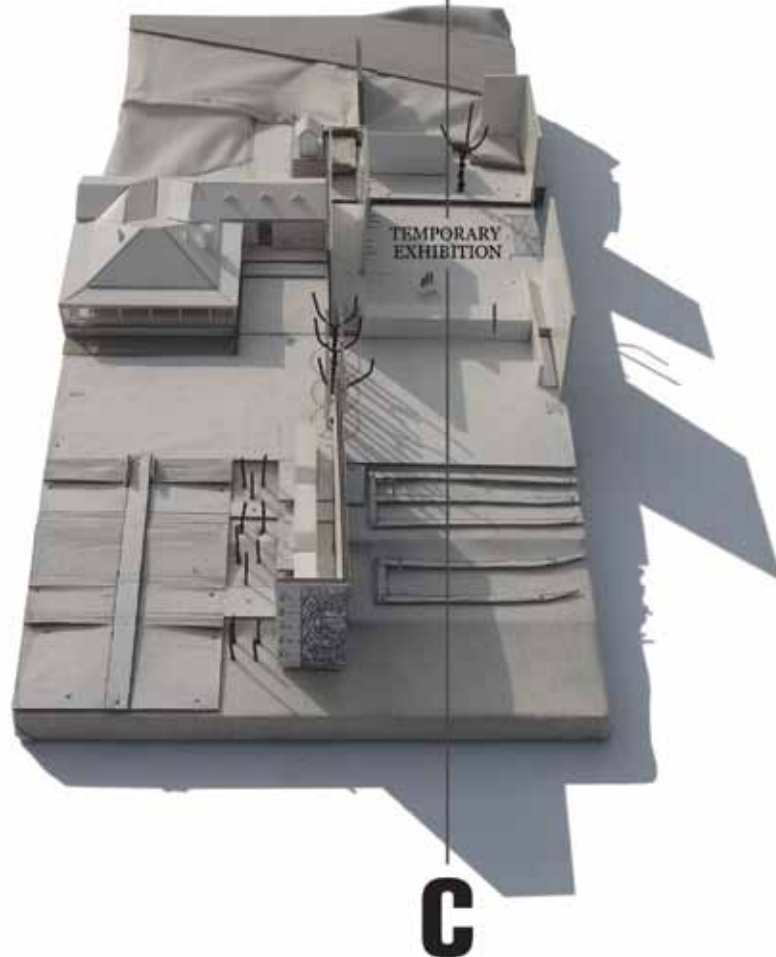
ADMINISTRATION BUILDING NORTH ELEVATION



BUILDING 3 - TEMP. EXHIBITION CONCEPT MODEL



Building 3



C - TEMPORARY EXHIBITION:

** The building occupies the footprint of the old Herbarium building. The building structure is argued on two ideas, the scale of the existing relationship between buildings and hortus cunclusus (walled gardens).*

BRIEF AND ASSIGNABLE AREA - Linked to the geometry of the 1889 axial connection of House Vrede, the 540 square meters building is located adjacent to the garden entrance. The exhibition space is developed as an outdoor environment, deferring from the standard practice of enclosed exhibition i.e. in a conservatory.

SITTING AND BUILDING PLANNING - Evacuated in 2008, the derelict Herbarium building is structurally unstable. Part of a series of haphazard additions, the programme of botanical exhibition is introduced to re-establish nature as function of the building. Located in the middle of House Vrede's East-West platform, walls in the building are opened to create an exhibition space.

MOVEMENT - The historic axis of House Vrede is used as key circulation route between the entrance and historic gardens. Made up of freestanding walls, the space is designed to resemble a Magaliesburg kran (ridge), planted with aloes and ficus trees, the walls recreate a vertical garden of plants growing in the surrounding Magaliesburg mountain range. Public bathrooms are located at the South end on the axis.



Fig_116: Magaliesburg kran: Walls recreate a vertical garden for plants growing in the surrounding Magaliesburg mountain range.

THE HOUSE AND THE TREE:

The theoretical investigation has concluded that up until the 19th Century, there was no differentiation between garden design and architecture. The exhibition space is designed round an existing tree (*Kirkia Acuminata*) that is located next to a small building (1929 Plant Pathology Shed). These elements are framed by the ten meter walls that enclose the space (referencing the proportion of the old building). The design is based on the classic idea of a walled garden (*hortus cunclusus*). The perception and representation of landscape is reinterpreted to create a spatial character for the exhibition of plants.

* *Figure 118 (Opposite page): Image of the Selinga tree and old laboratory shed, existing elements reused as focal elements within the exhibition building.*

NATURE AS INSPIRATION FOR ARCHITECTURAL FORM:

Apart from referring to the height of the existing building, the scale and proportion of the walls that enclose the exhibition space are influenced by the idea of creating an appropriate scale for the Selinga tree. Freestanding concrete walls are cast with a grid that can accommodate the vertical exhibition of plants. Designed to accommodate plant collections on the horizontal plane, the ground floor is designed with movable tables for plant collections. The envelope and floor plane that encloses the programme of exhibition becomes in itself the exhibition.

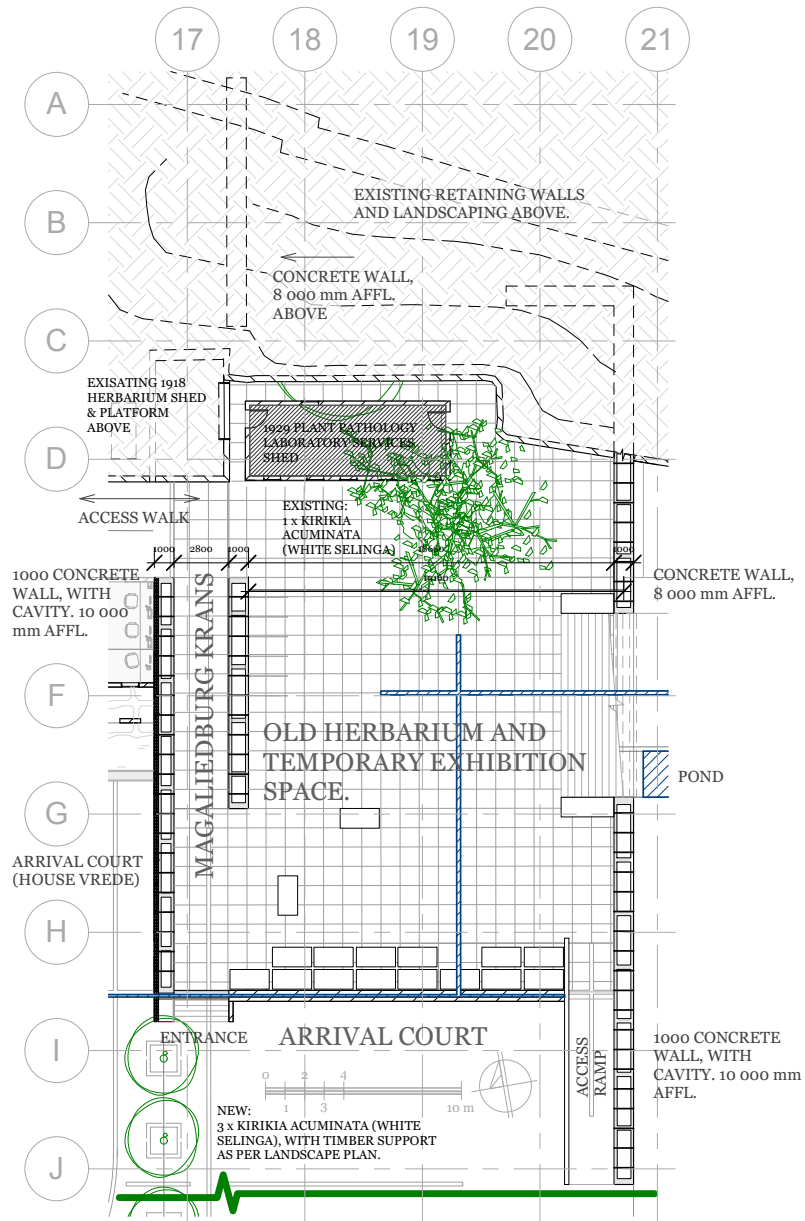


*Fig_117: House Vrede and the old Herbarium:
Existing relationship between the two buildings.*

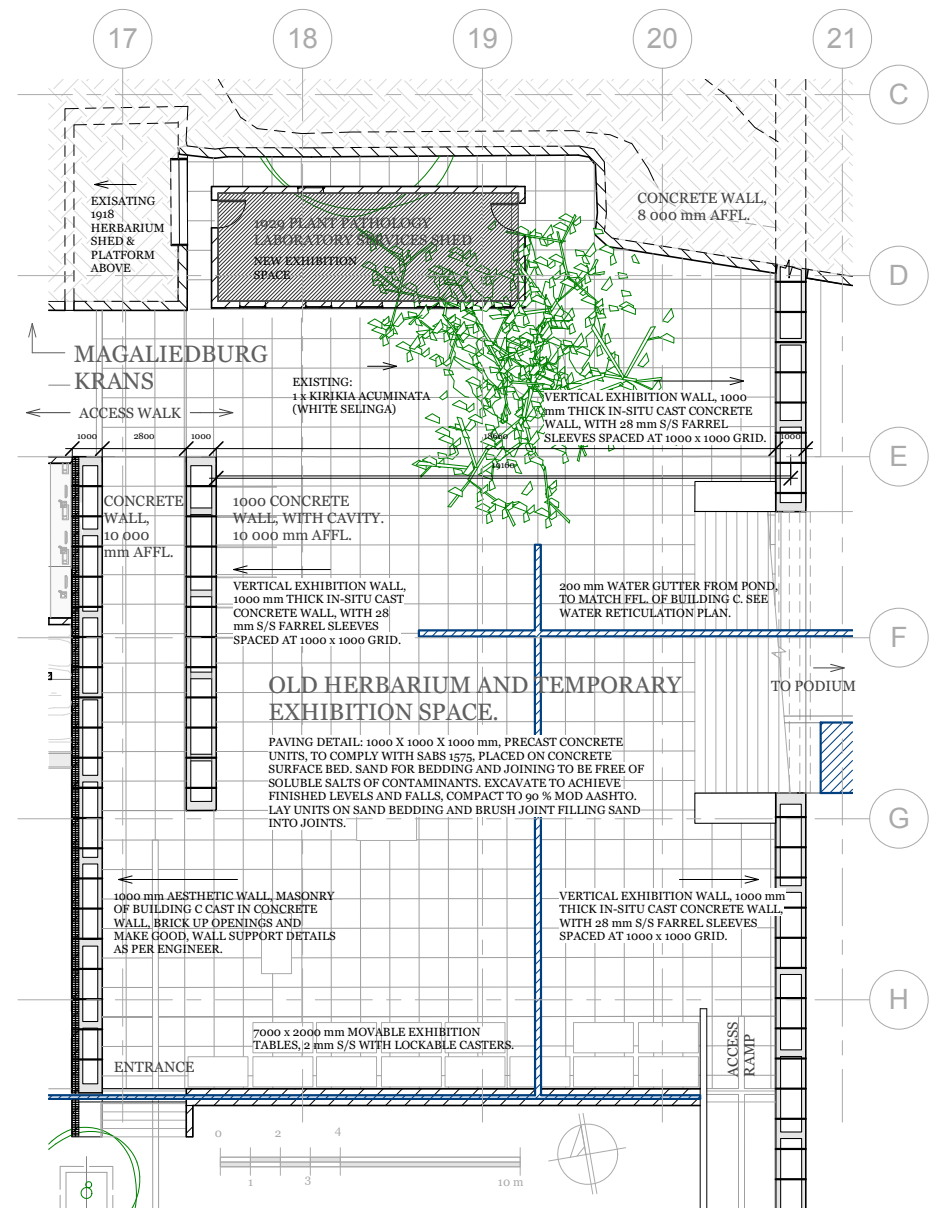


Fig_118: Kirkia Acuminata (White Selinga) and 1929 Plant Pathology shed.

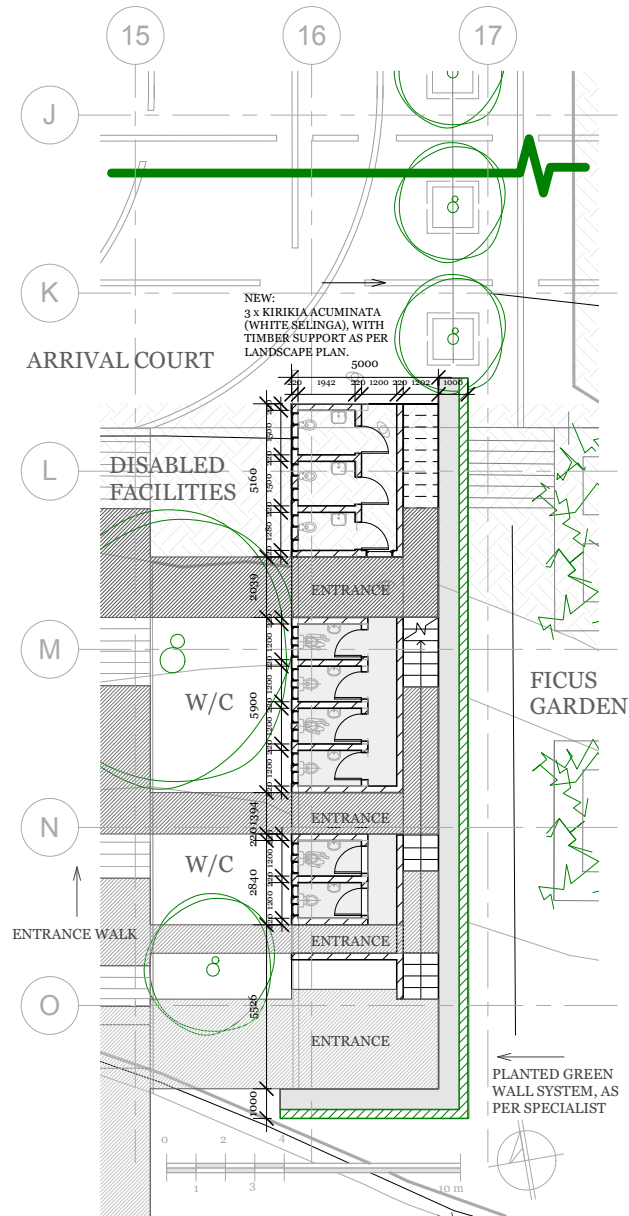
TEMP. EXHIBITION GROUND FLOOR PLAN



TEMP. EXHIBITION DETAILED PLAN



TEMP. EXHIBITION W/C PLAN



TEMP. EXHIBITION WALL DETAIL

