

05

DESIGN DISCOURSE

## 5.1 INTRODUCTION

This chapter is composed of the in-depth design resolution and its technification. The design development is guided by the strategies as set out in Chapter 4. The graphic presentation of this chapter combines drawings of a technical and conceptual character so that the proposed intervention can be understood holistically.

The design distribution within the project is as follows:



## 5.2 HOLISTIC DESIGN APPROACH

Due to the scope of the intervention, it is difficult to formulate a design approach that combines aims for specific spaces in the intervention. The holistic design goal is to renovate the Meat Board building into a contemporary serviced office building. This implies that the current spatial hierarchy is challenged to create a more social, collaborative working environment. In terms of public space, curved design elements are introduced (as used by Stauch on the lower ground floor) that aims to stimulate interior circulation and interaction. Curved elements contrast the stark rectilinear lines visible in most of the plan and elevation of the existing building. The narrow corridor view is broken in the formal workspace by demolishing interior partitioning into a partial open plan environment.

## 5.3 TECHNICAL APPROACH

The technical approach to the design intervention includes the implementation of various conservation processes:

- Restoration of significant elements: Elements in the boardroom, north/ south facades, sun control louvres, mosaic detailing and interior timber cladding.
- Renovation: Stripping and replacing all ceilings, repainting all the interior walls, replacing current linoleum flooring with new finishes and inserting contemporary furniture.
- Remodelling: The approach to the building, interior workspace, public space, garden space and the entrance foyer.
- Retrofitting: Overall building services and the artificial lighting strategy to meet contemporary standards.

## 5.4 MATERIAL APPROACH

The approach to materials is by considering the life cycle of elements in the environment of the Meat Board building. Furthermore, the level of adaptability required is a determining factor for the specification of materials. Figure 5.1. illustrates the life expectancy of elements in the proposed intervention.

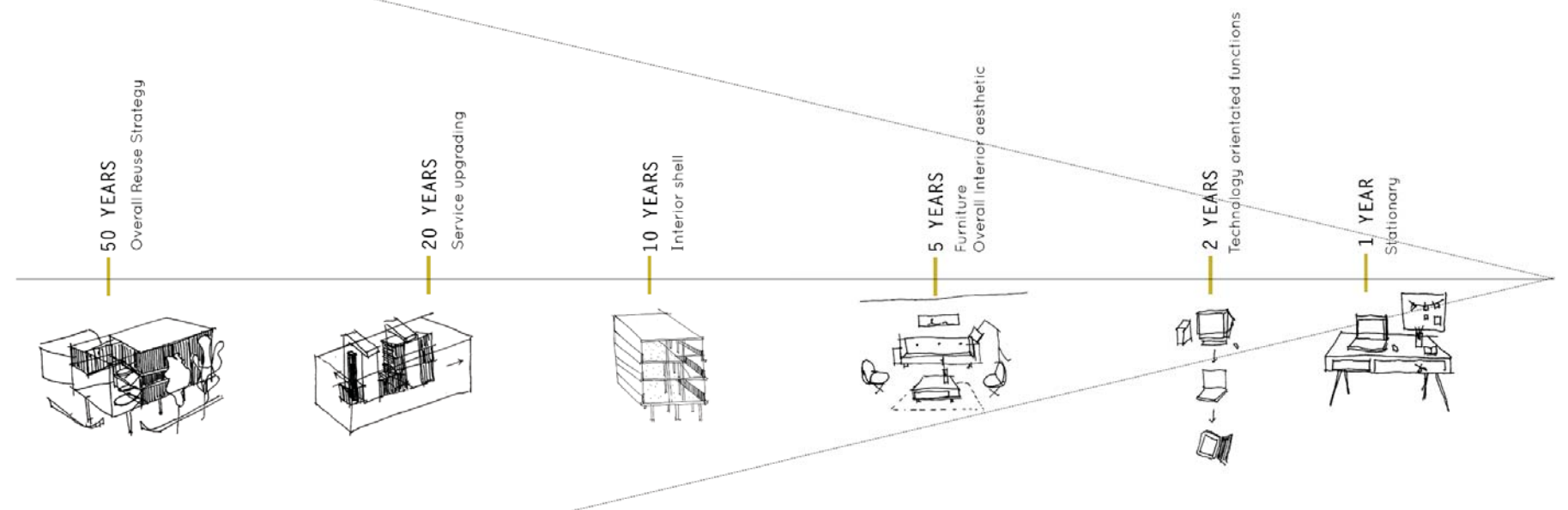


Figure 5.1 Diagram showing expected life cycle of elements within the proposed intervention.

# 12 Lower ground floor

## 5.5 REMODELLING THE LOWER GROUND FLOOR AND NEW ENTRANCE

### The Canteen

#### 5.6 LOWER GROUND FLOOR CAFE

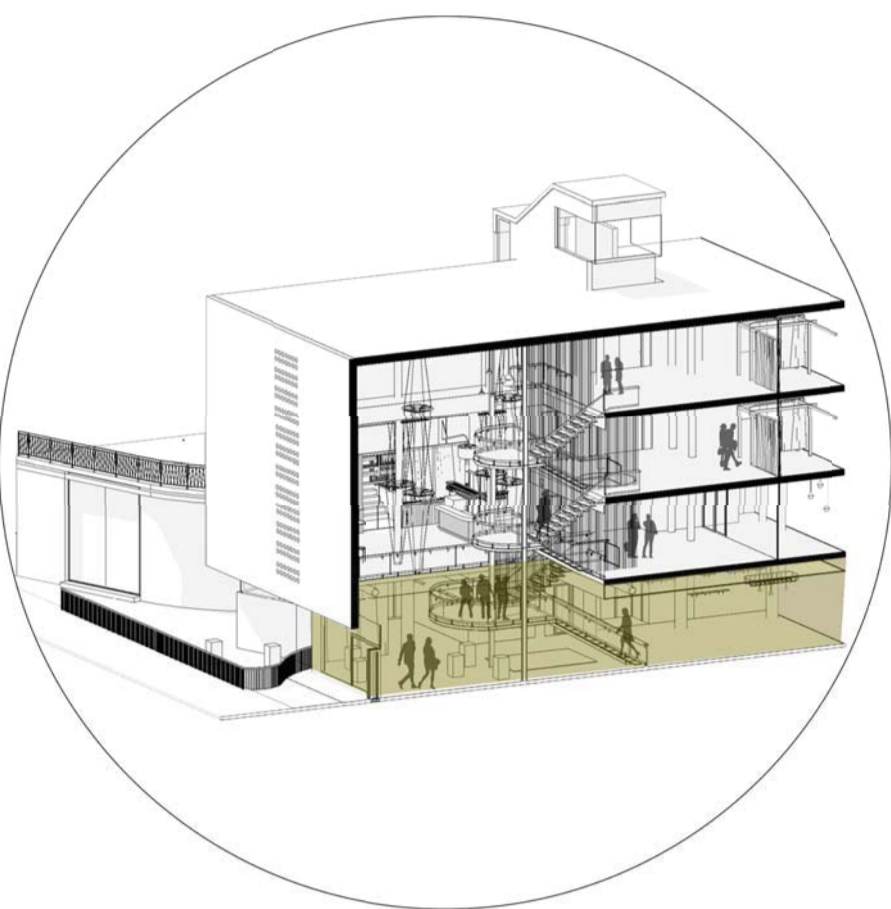


Figure 5.2 Diagram showing the location of new entrance and Canteen.

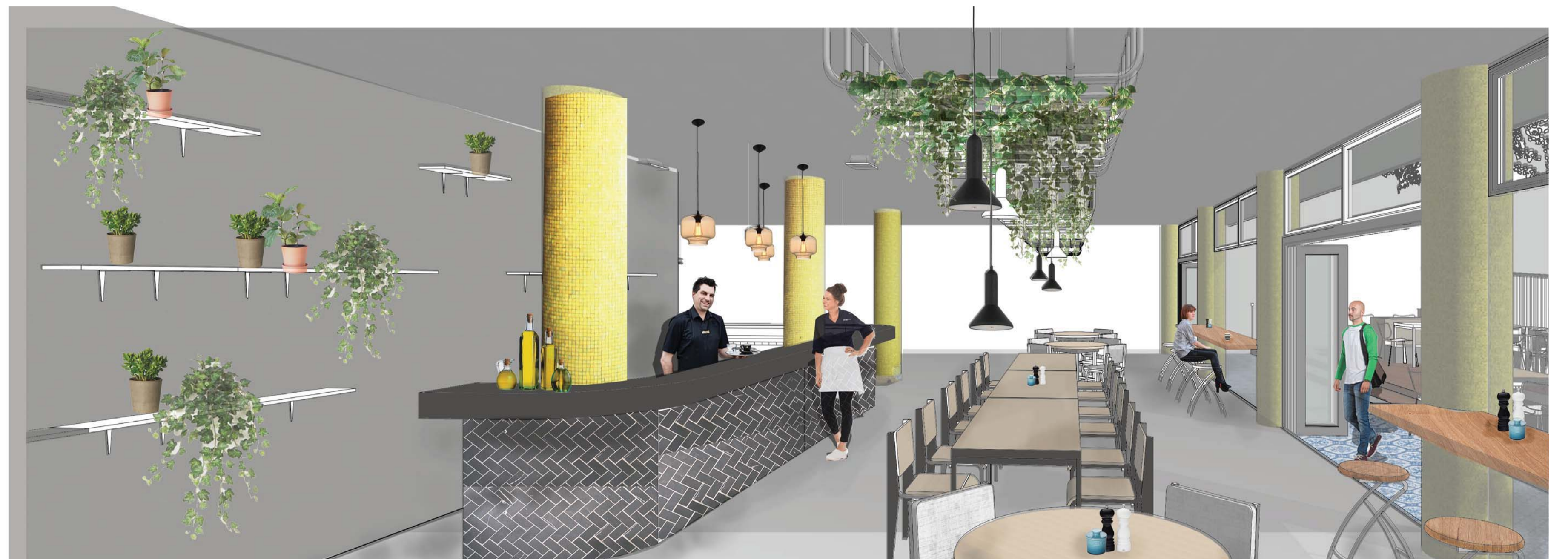


Figure 5.3 Canteen interior perspective: see view point 1 on plan.

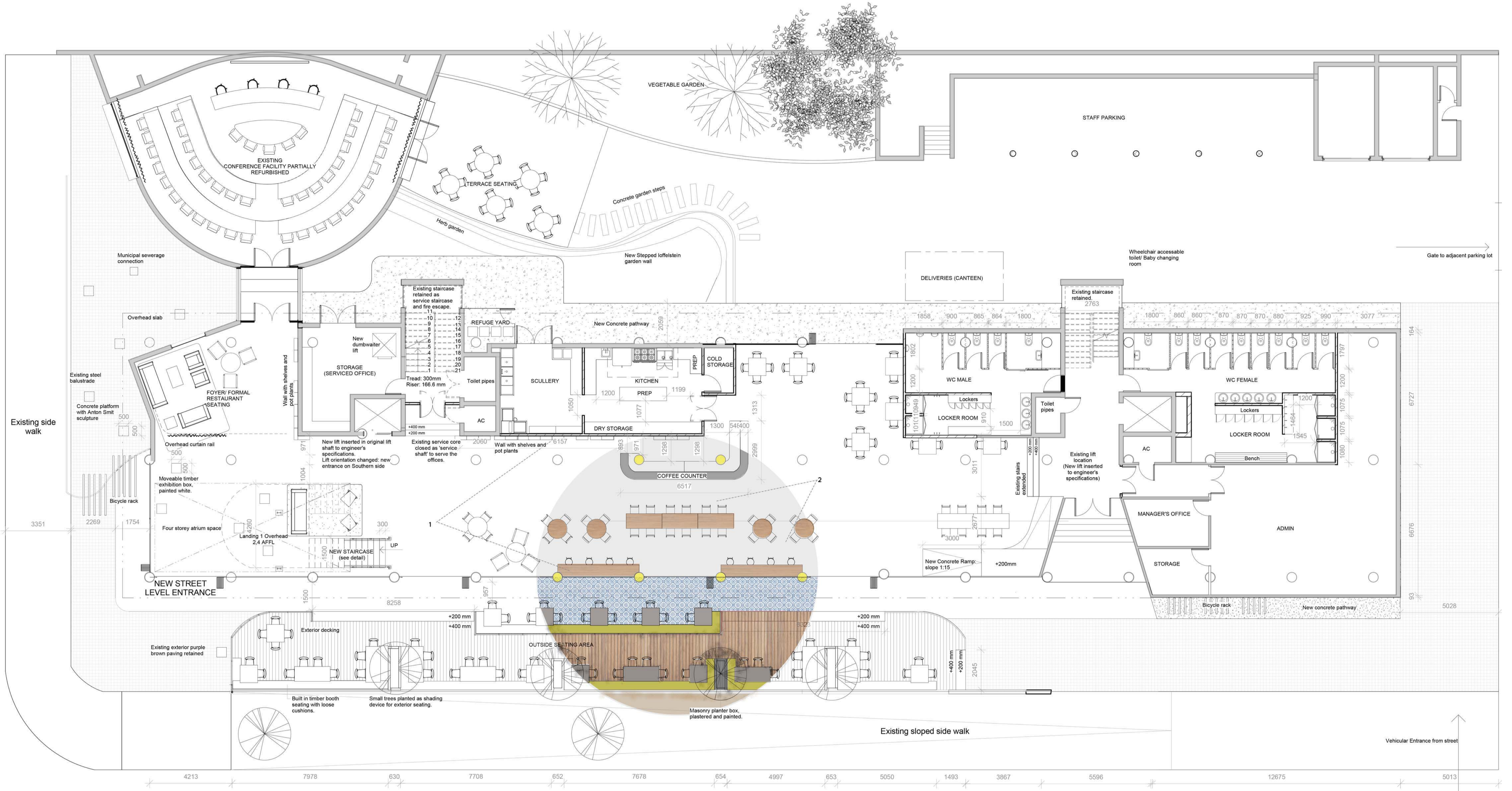


Figure 5.4 LOWER GROUND FLOOR PLAN SCALE 1:100

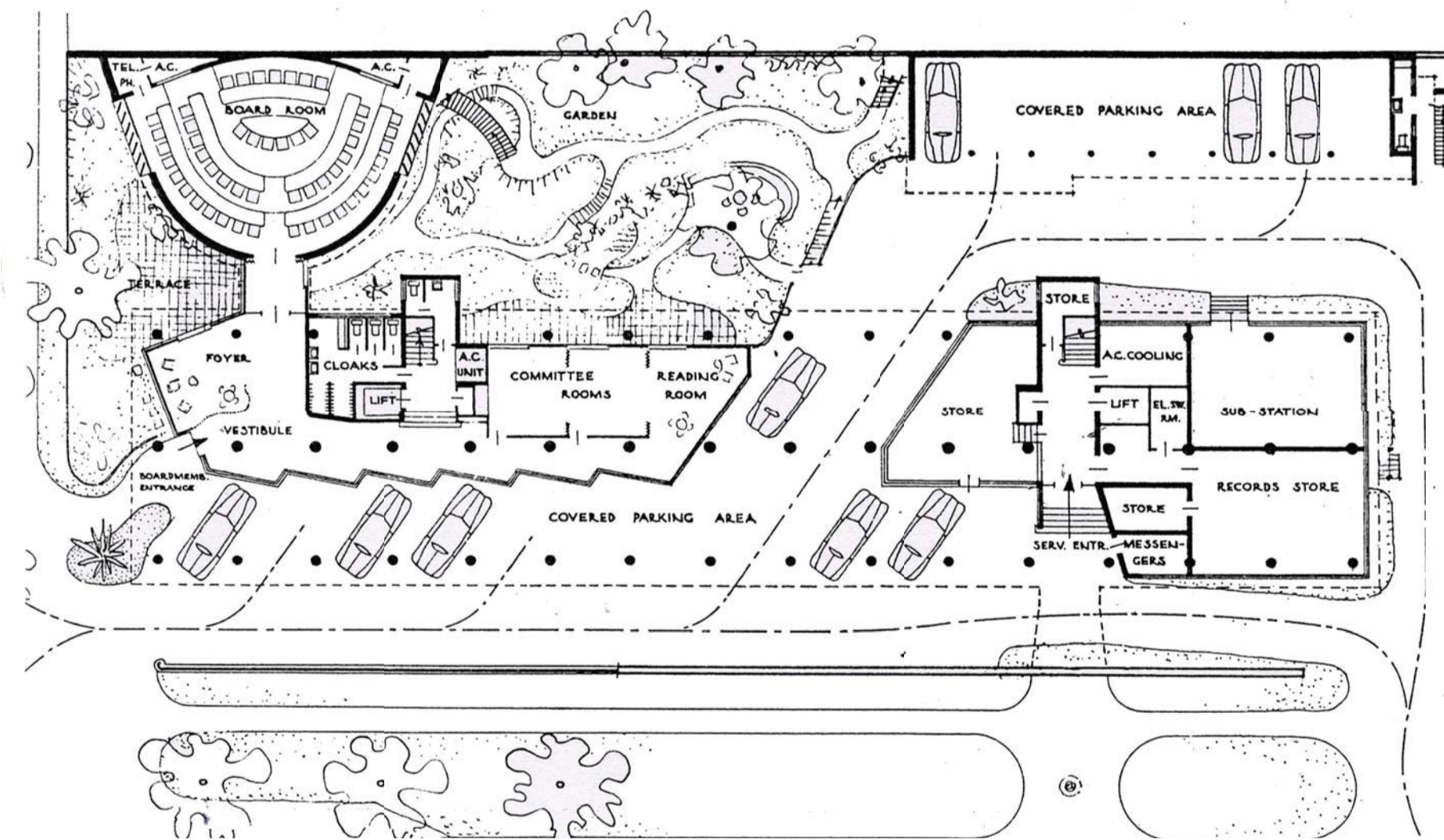
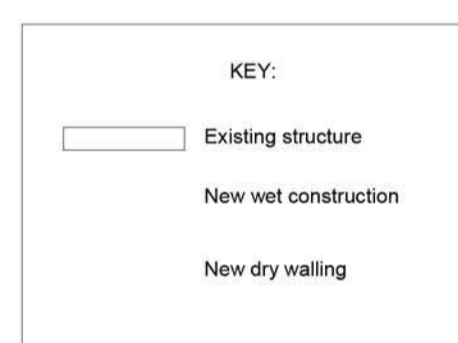


Figure 5.6 ORIGINAL LOWER GROUND FLOOR PLAN (Stauch 1991:4)

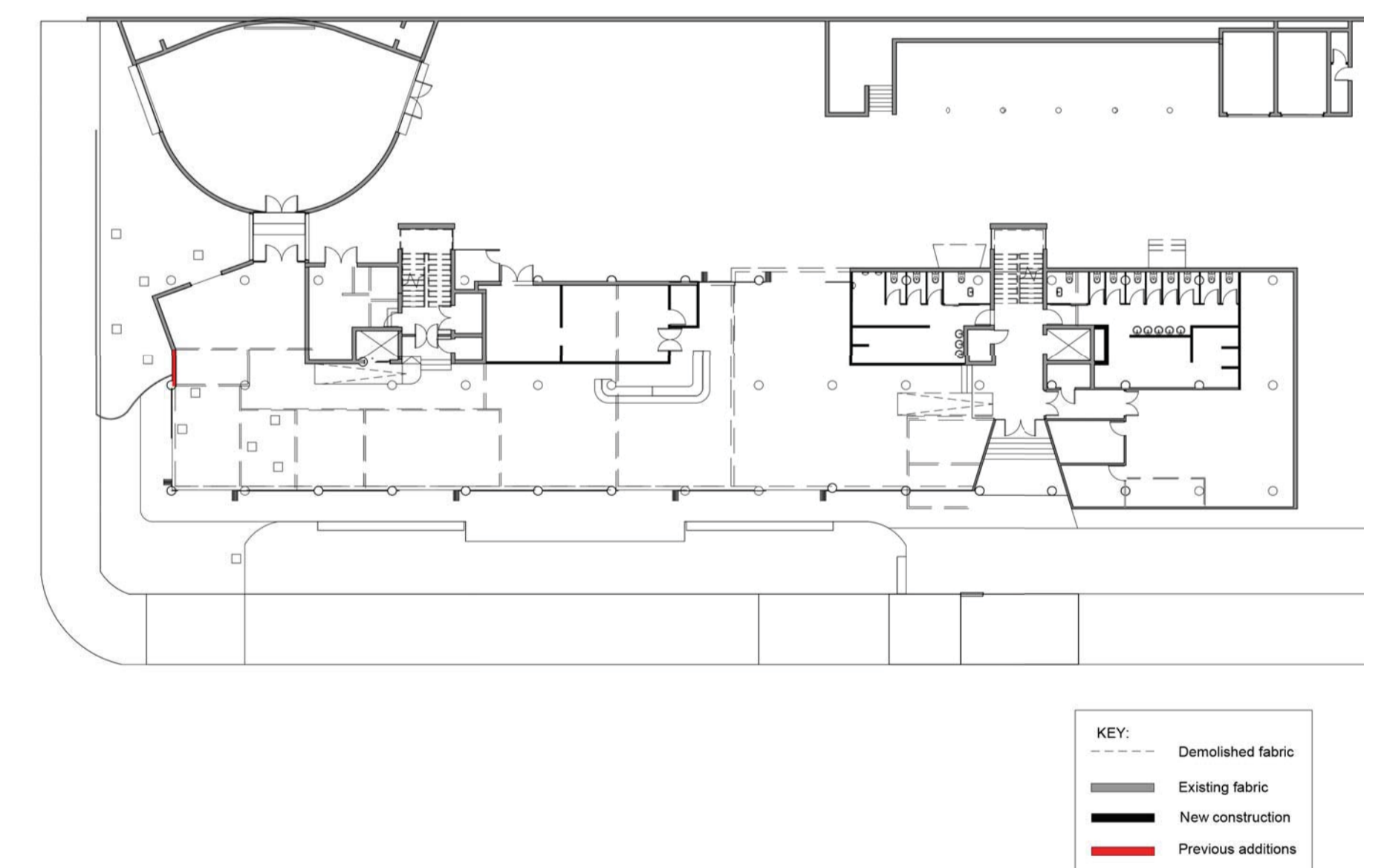


Figure 5.7 DEMOLITION DIAGRAM: PROPOSED INTERVENTION



Figure 5.5 Mood board showing proposed aesthetic for the Canteen.



Figure 5.8 Canteen interior perspective: see view point 2 on plan. (to be completed and rendered).

# 13 Upper ground floor

## 5.7 REMODELLING THE UPPER GROUND FLOOR AS INFORMAL WORKING ENVIRONMENT

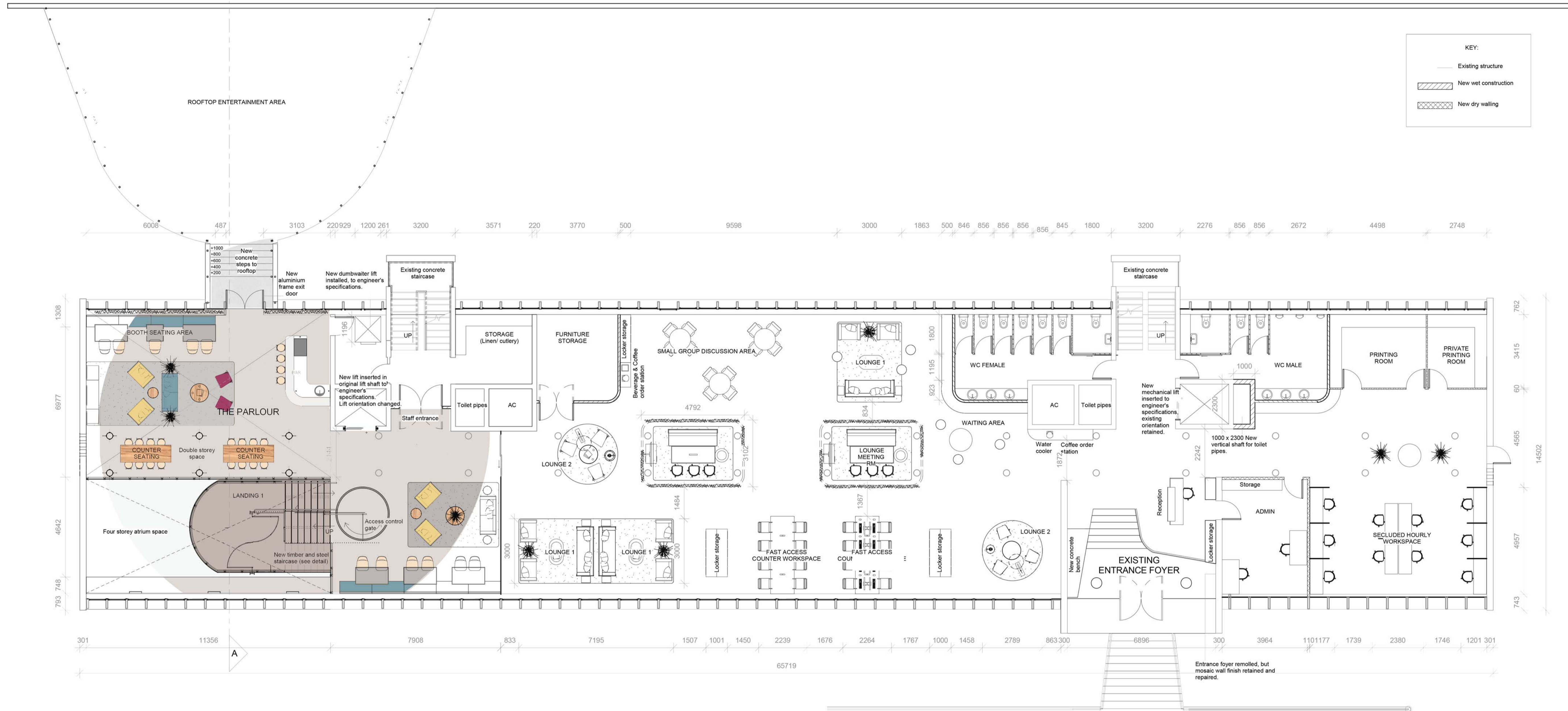


Figure 5.9 UPPER GROUND FLOOR PLAN SCALE 1:100

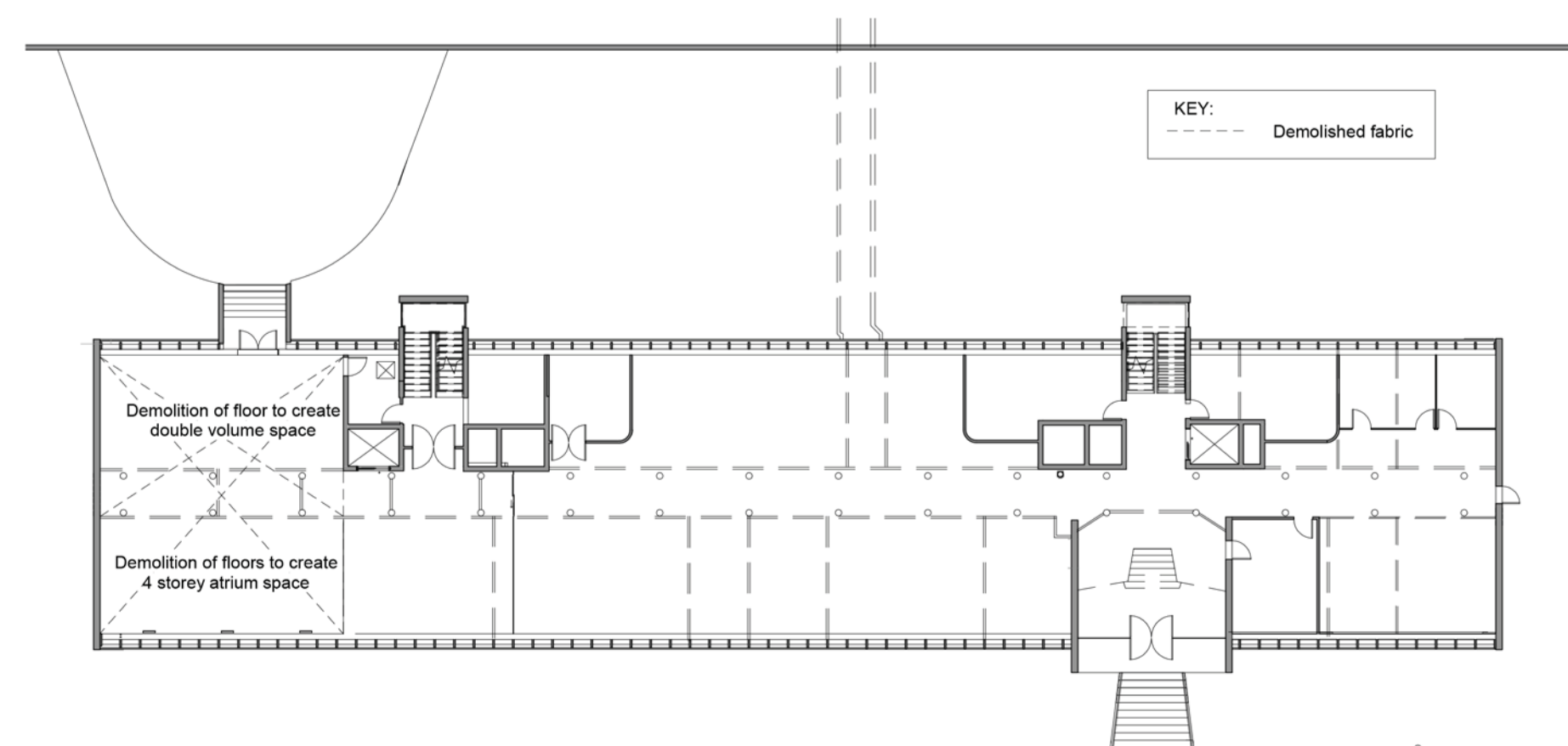


Figure 5.10 UPPER GROUND FLOOR DEMOLITION DIAGRAM

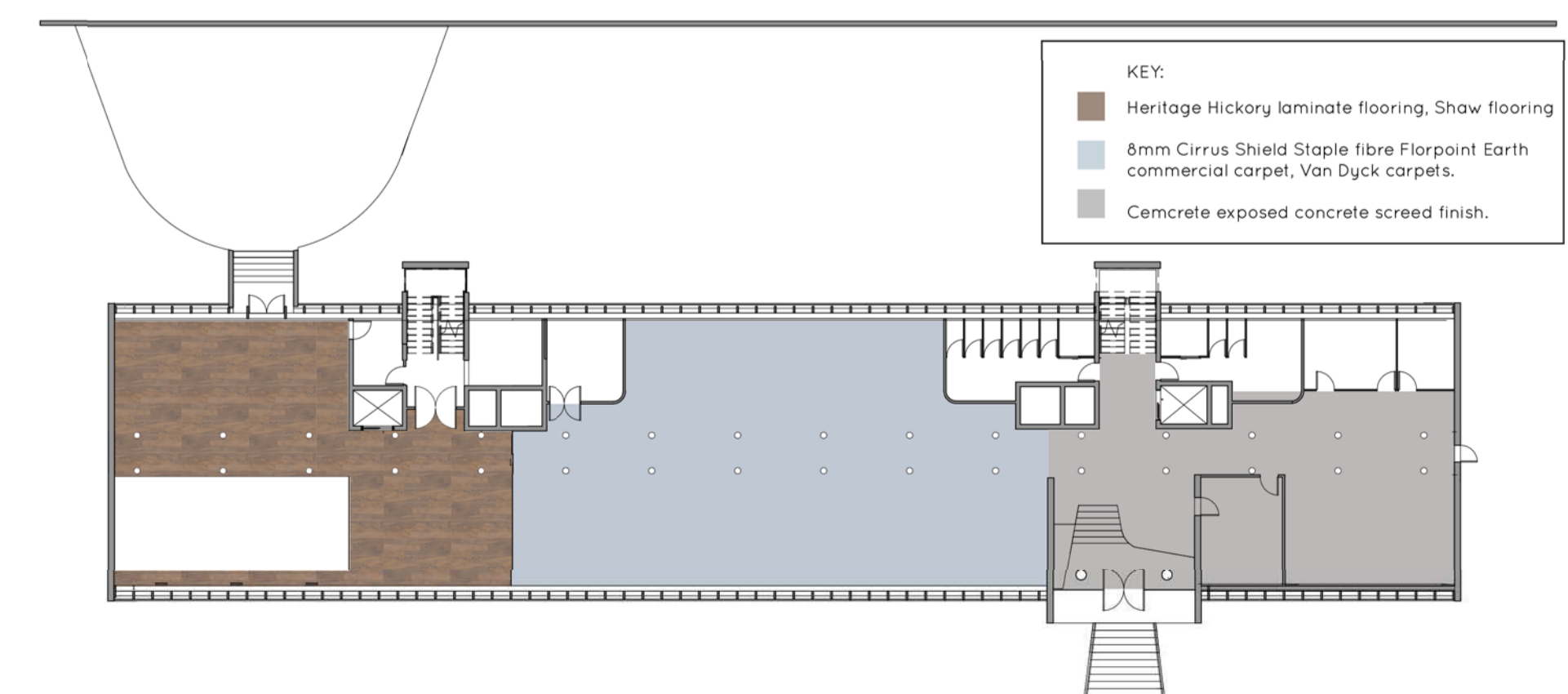


Figure 5.11 UPPER GROUND FLOOR FINISH DIAGRAM

# 14 Informal workspace configuration

## 5.8 HOW DO PEOPLE WORK IN COLLABORATIVE ENVIRONMENTS?

When approaching the design of a collaborative working environment, it is important to understand the new ways of working and the drivers behind it. The office is no longer a static room where individuals work, but a dynamic environment where users work at different settings and in different ways within one day.

Within the collaborative working environment, it is important to offer users choice and control in terms of where they work and how they work (Steelcase 2013:9). The ideal collaborative environment offers a diverse range of "workstations" which allow for different posture positions and different variations of group and individual settings (Steelcase 2013:9).

Although users are not attracted to spaces in the same manner, Knoll (2013:4) emphasizes the importance of the furnishings, technology, ambience and user comfort within these spaces. According to Knoll (2013:4) collaborative settings most favoured by users are less formal, small, group interacting spaces.

Knoll (2013:4) further suggests three guidelines to the design of collaborative workspace:

1. The role of technology in collaborative spaces is further emphasized: people should be able to connect their devices to power, connect to Wi-Fi easily, whiteboards and projector screens should be easily accessible to display information. Most importantly, Knoll (2013:4) suggests that the technology used should be adaptable, user-friendly and trustworthy.
2. Proximity refers to a size and location of workstations. Workspace should be designed in a comfortable size- not too big or too small and should be correctly located between functions. (Knoll 2013:4)
3. Privacy is key to the successful use of collaborative workspace says Knoll (2013:4). The level of privacy space are controlled by visual and/or auditory screening.

The following typologies for the informal workspace within the Meat Board building are proposed:

## 5.9 INFORMAL WORKSPACE TYPOLOGIES

- UPFRONT BOOKING ESSENTIAL
- FIRST COME FIRST SERVE BASIS

- LOUNGE WORKSPACE**  
Comfortable lounge setting with side tables for laptops, ideal for individual/ group working.
- IDEA ROOM**  
Comfortable informal meeting space ideal for small, group verbal brainstorming. Ottomans can be added for additional seating space.
- LOUNGE MEETING ROOM**  
Semi-private group meeting space with LED screen to connect with a laptop/ tablet. Soft furniture for ultimate comfort.
- FAST ACCESS WORKSPACE**  
High counter with bar stools as a location for quick browsing. Eight desktops available (on first come, first serve basis), built-in plug points for laptops.
- GROUP DISCUSSION AREA**  
Small group discussion areas with white boards. In close proximity to coffee order & beverage station.
- SECLUDED HOURLY WORKSPACE**  
Individual workstations for per hour rated browsing. Access to printing, scanning and faxing services.

## ENTERTAINMENT SPACE

- EXCLUSIVE ACCESS
- PUBLIC ACCESS

- THE PARLOUR**  
Social heart of the building. Day and night facility for events. Rooftop access. Functions on a first come first serve basis when not pre-booked for an event.
- THE CANTINEEN**  
Public cafe with garden access. Functions on a first come first serve basis when not pre-booked for an event or private function.
- ROOFTOP ENTERTAINMENT SPACE**  
Evening extension of The Parlour as event space.

### ACCESS:

- 1 Stair access from lower ground entrance
- 2 Lift Access from lower ground
- 3 Existing main entrance

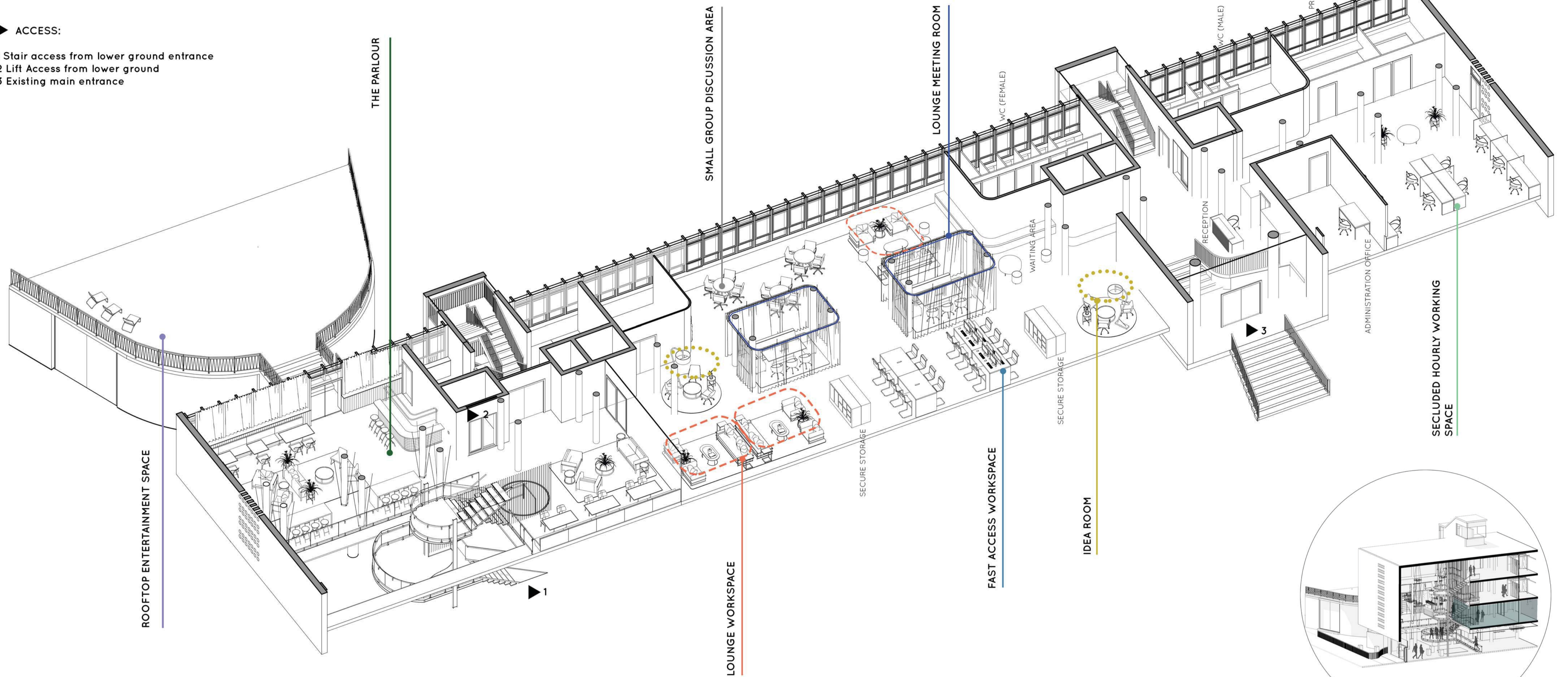


Figure 512 AXONOMETRIC VIEW OF THE UPPER GROUND INFORMAL WORKSPACE ENVIRONMENT.

Figure 513 Diagram showing the location of the upper ground floor informal workspace.

# Proximal assemblies as an approach to facilitate inhabitation

## 5.10 INFORMAL WORKSPACE DETAILING



Figure 514 Mood board showing overall aesthetic, colours and atmosphere of the informal workspace.

### LOUNGE MEETING ROOM

CONSTELLATION	SPECIFICATION	TECHNOLOGY
<p>PLAN (SCALE 1:50)</p> <p>3D (SCALE 1:50)</p>	<p>2250 x 750mm Custom 3 seater couch (no arm rests) with Brass detailing by Anatomy design.</p> <p>590 x 520 x 790 mm About a chair (AAC24) polypropylene chair with aluminium swivel base in mustard with mustard seat cushion by Crema design.</p> <p>2040 x 800 x 685mm Custom plywood booth table by local furniture designer.</p> <p>3000x 3700mm Custom Taksim Maramara polypropylene rug, Herlex Fabrics.</p> <p>L 630 x W450 x H630 mm Timber Bindi stool, Coricraft.</p> <p>Medium Orchid pot plant, Woolworths.</p> <p>500 x 560 x 900mm Birch plywood Tea trolley, Artek, supplied by Steelcase, South Africa.</p> <p><b>CURTAIN:</b> Custom made grey voile curtain on custom, suspended aluminium roll.</p>	<p>600 x 1200mm LED screen on suspended bracket with adjustable</p> <p>Electrical plugs for laptop power connection.</p> <p><b>LIGHTING:</b> LED downlighters as specified in lighting schedule.</p>

Table 51 Lounge Meeting Room furniture constellation detailing.

### LOUNGE WORKSPACE

CONSTELLATION	SPECIFICATION	TECHNOLOGY
<p>PLAN (SCALE 1:50)</p> <p>3D (SCALE 1:50)</p>	<p>1200 x 650 x 412mm Any coffee table, plywood top with powder coated steel red base, Crema design.</p> <p>990 x 725 x 625mm Lounge A02 Le Corbusie Replica lounge chair (grey), Red Apple furniture.</p> <p>Campbell 3 seater sofa in teal, Tonic design.</p> <p>360 x 420 x 620mm Custom steel tubing (25,4 x 25,4mm x 3mm) laptop side table with glass top.</p> <p>400h x 600 Diameter timber Archipelago table, Crema design.</p> <p>500 x 500mm Scatter cushions by Herlex fabrics in Gunmetal, Sea foam and dark red.</p> <p>3000 x 3600mm 100% Wool Angles carpet (Colour: storm), Herlex fabrics.</p> <p>150 x 250 mm Clear glass Vase squared narrow neck, @Home.</p>	

Table 52 Lounge Workspace Furniture constellation detailing.

# 15 The Parlour

## 5.11 UPPER GROUND FLOOR SOCIAL SPACE

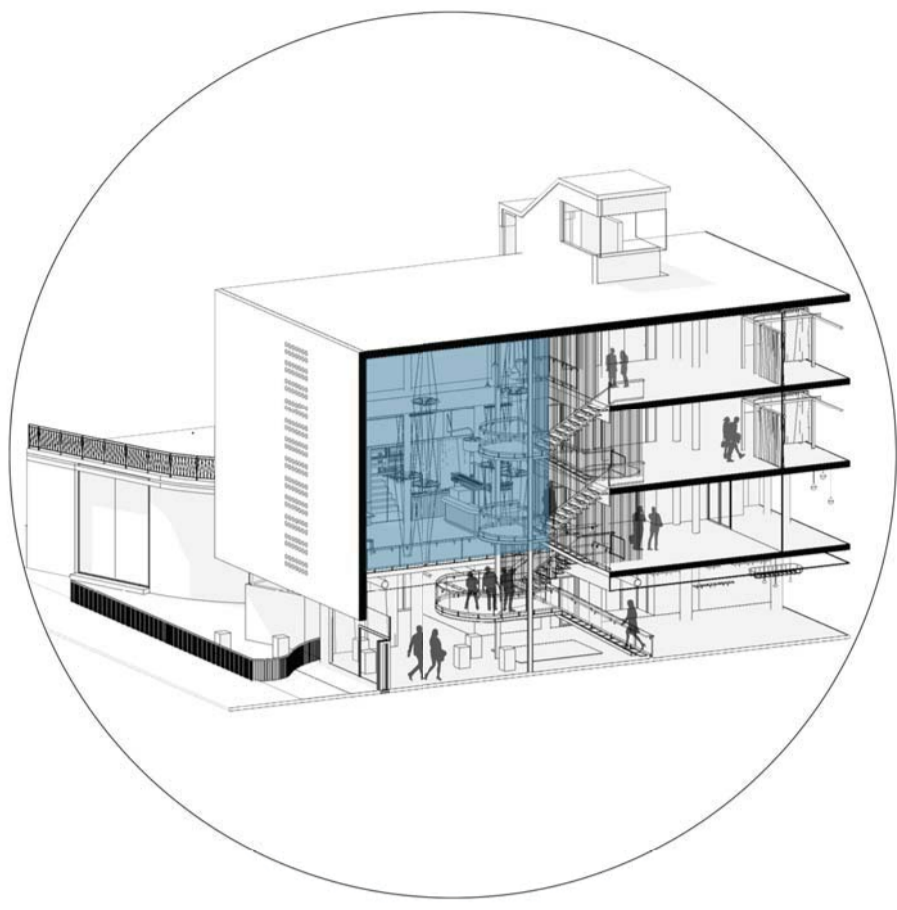


Figure 515

Diagram showing the location of The Parlour.

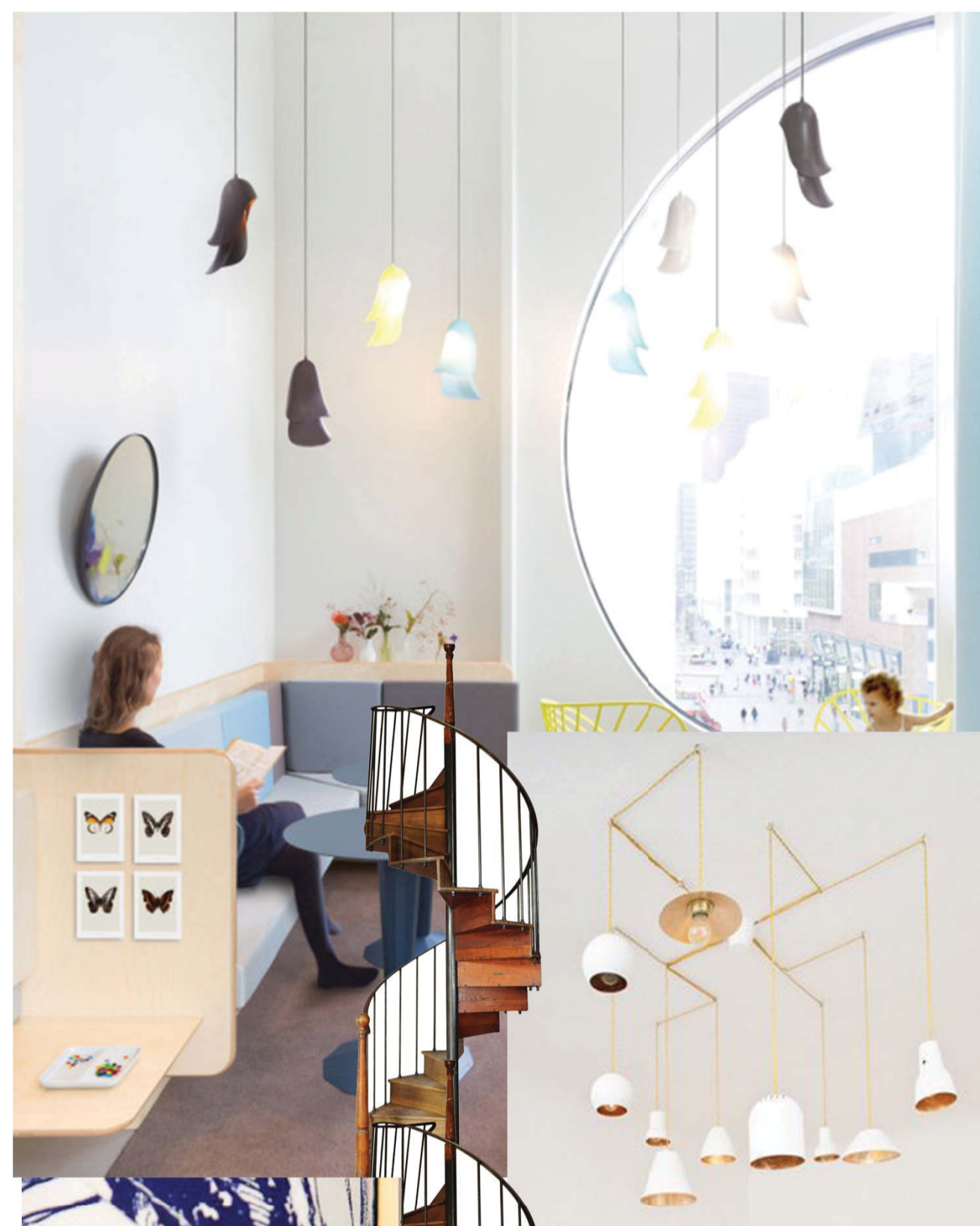


Figure 516 Mood board showing overall aesthetic and materials of The Parlour.



Figure 517 Interior perspective of the double volume space of The Parlour.

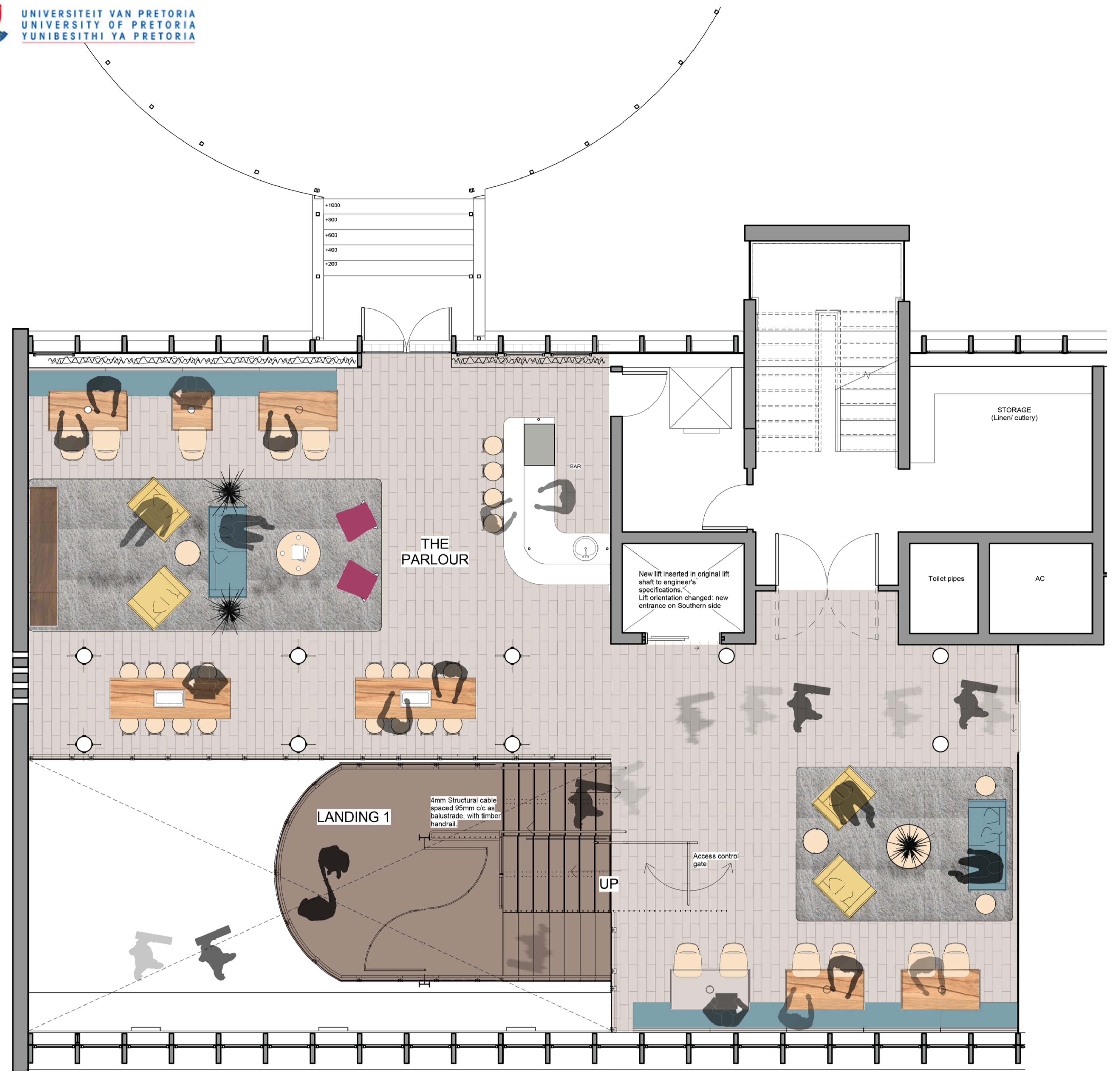


Figure 518 THE PARLOUR DETAIL PLAN SCALE 1:50

## 5.12 STABILIZING EXISTING COLUMNS AFTER THE DEMOLITION OF FLOORS

The existing concrete columns have been cast on site, into the existing floors. By demolishing the floor area around the columns, a new stabilizing structure for the columns are required. A structural cable connection and steel column capping have been designed to support the existing columns.

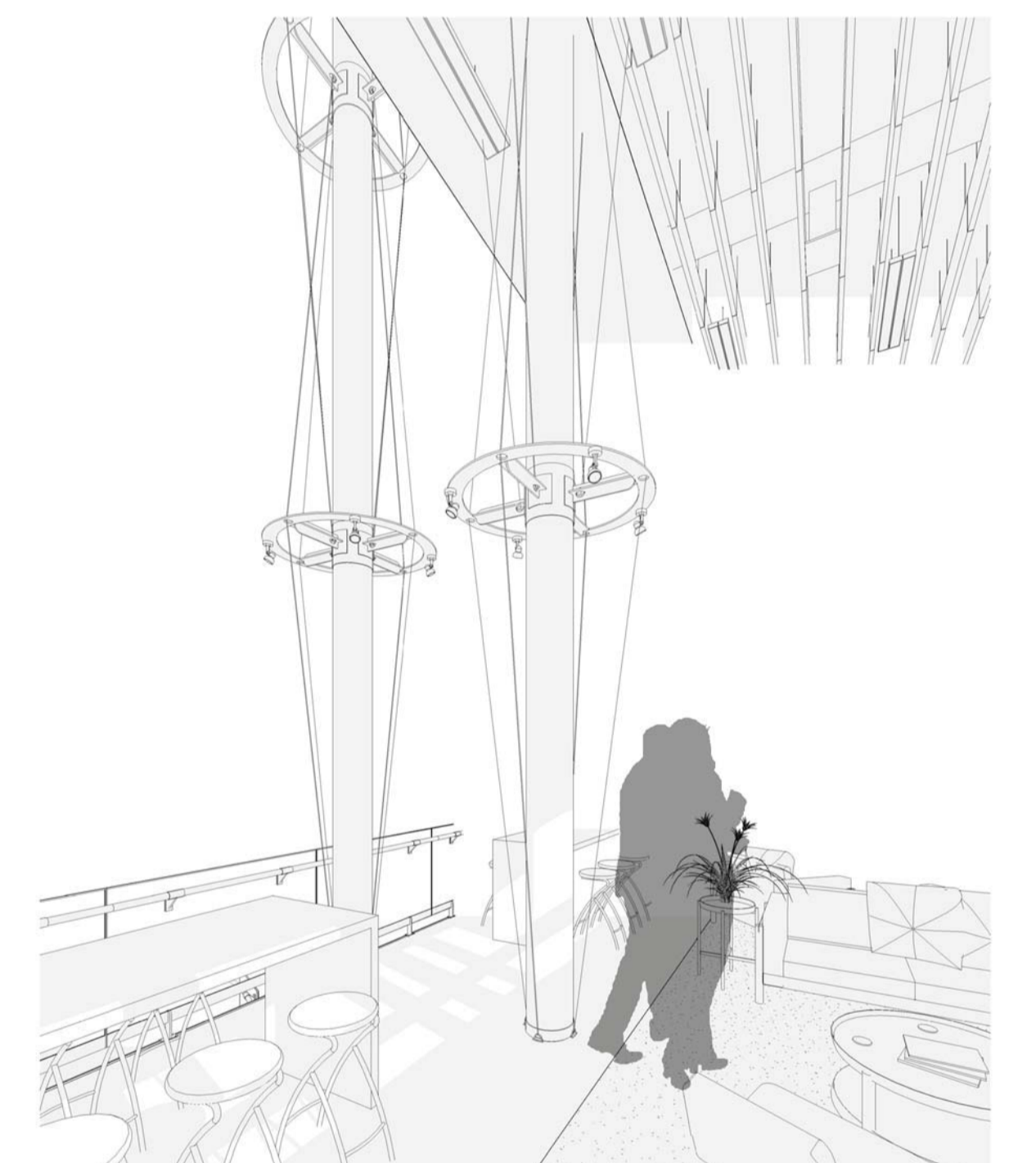


Figure 519 Perspective of The Parlour showing the support added to the existing column.

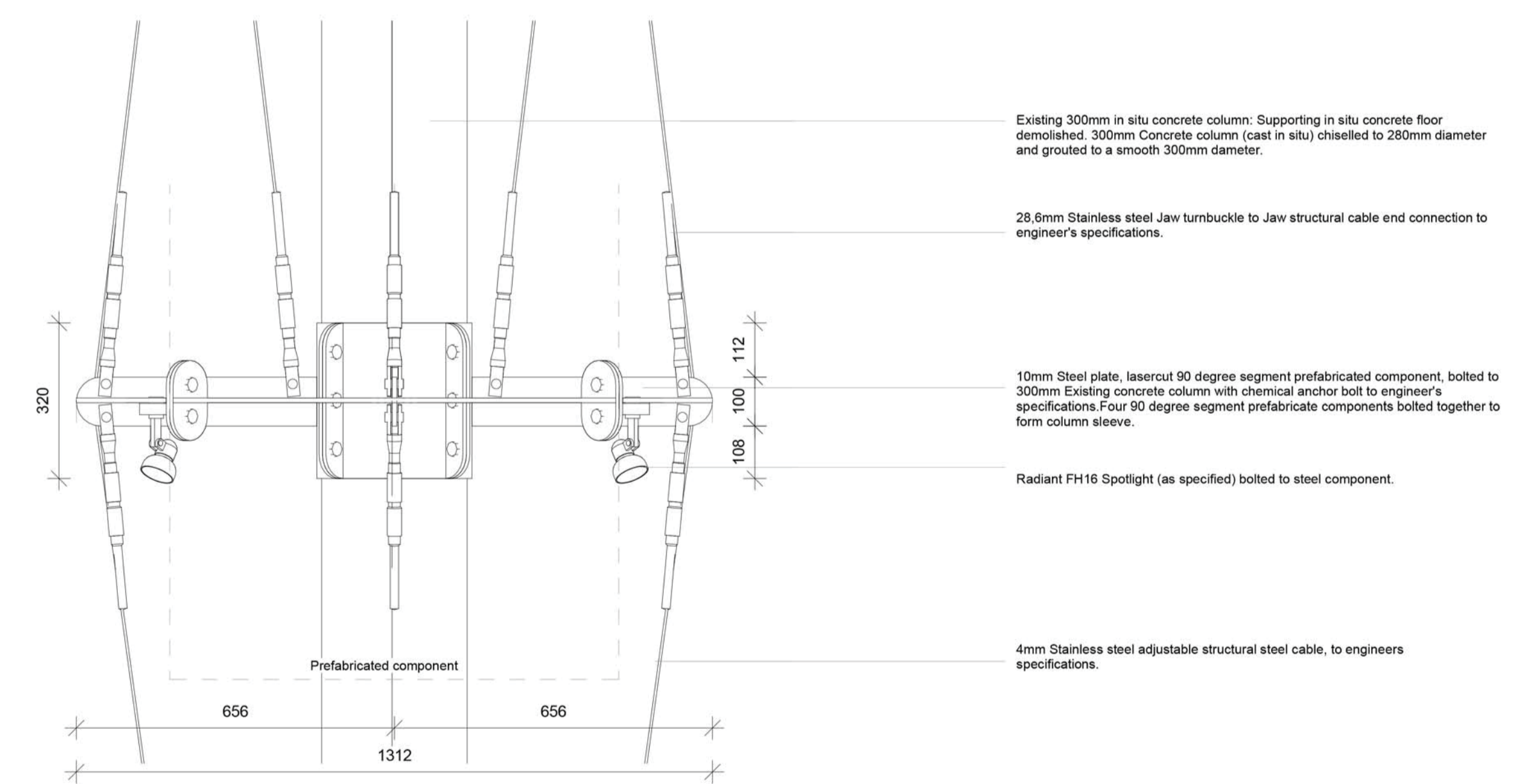


Figure 5.20 STRUCTURAL CABLE COLUMN SUPPORT DETAIL (ELEVATION) SCALE 1:10

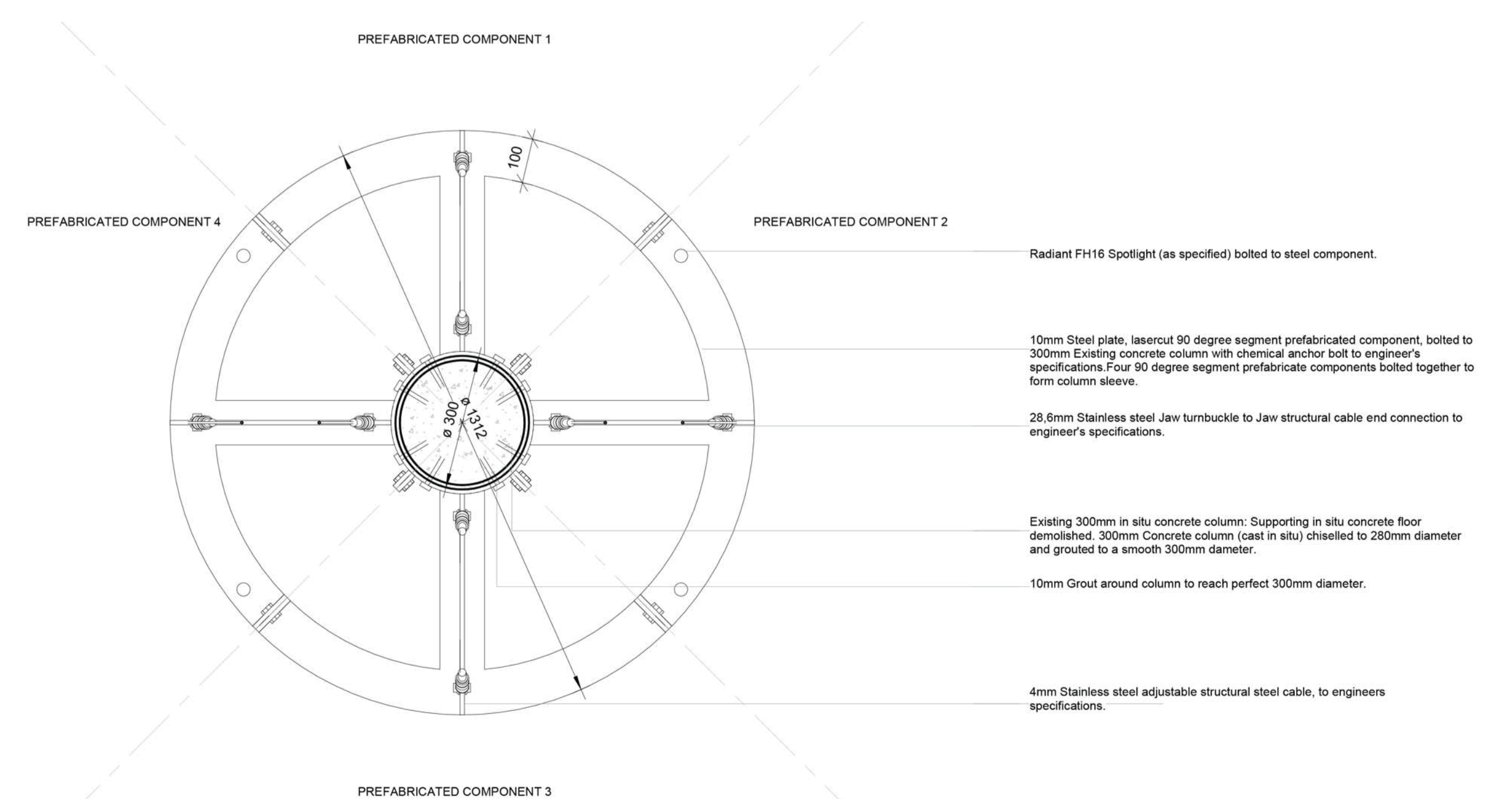
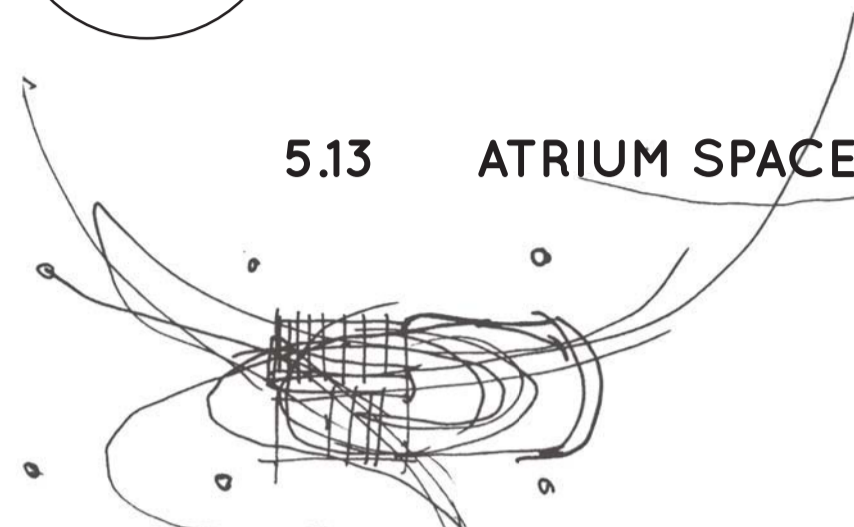


Figure 5.21 STRUCTURAL CABLE COLUMN SUPPORT DETAIL (PLAN) SCALE 1:10

# 16 Staircase intervention

## 5.13 ATRIUM SPACE DETAILING



### DESIGN CRITERIA:

#### 1. AESTHETICS:

- \_ Design staircase as a furniture piece
- \_ Technic intervention contrasting existing stereotomic staircases.
- \_ Integrated lighting
- \_ As little columns as possible

#### 2. MATERIALS:

- \_ Formal aesthetic
- \_ Hardwearing materials
- \_ Materials to contrast existing material use



Figure 5.22 Staircase entrance perspective.

### FLIGHT STRUCTURE

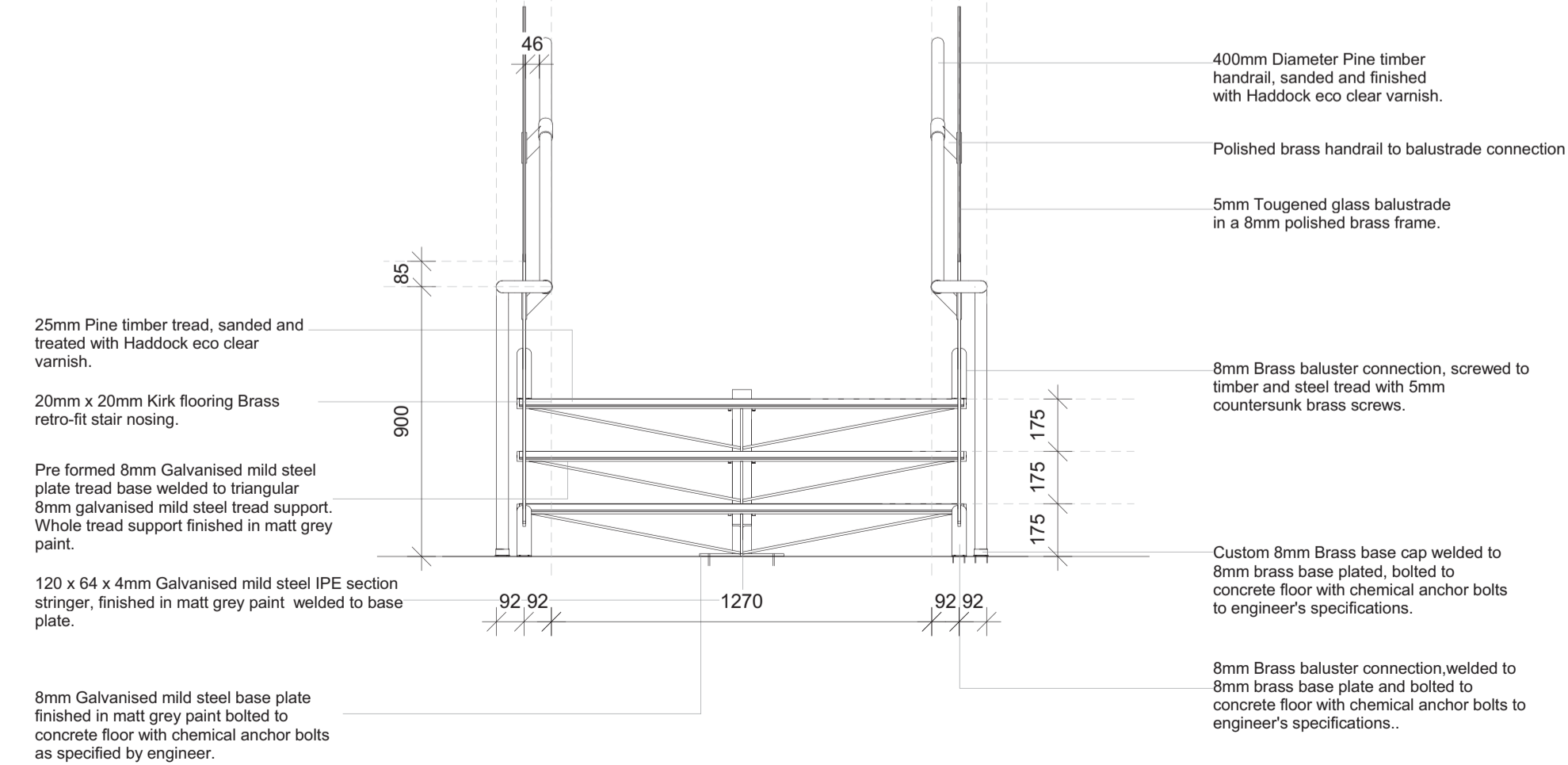


Figure 5.23 STAIRCASE FLIGHT DETAIL SCALE 1:20

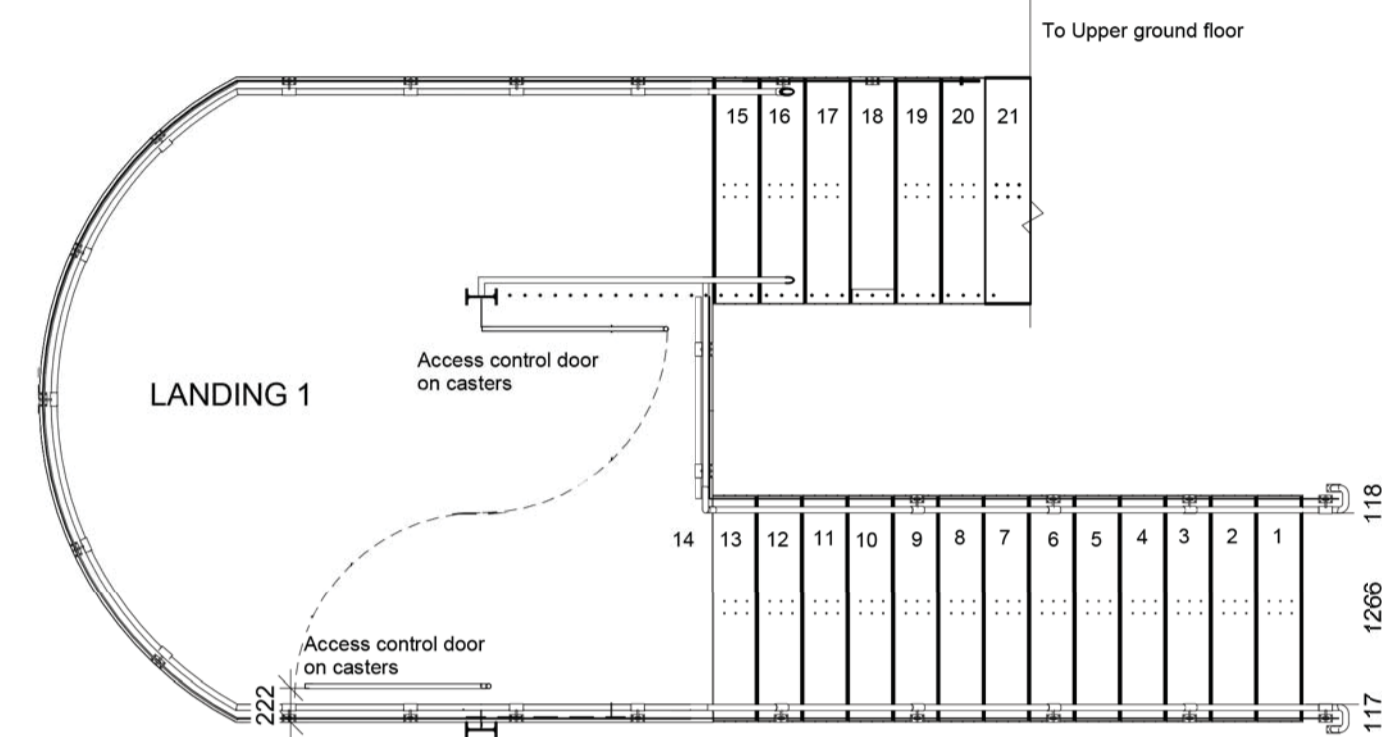


Figure 5.24 LANDING 1 PLAN SCALE 1:50

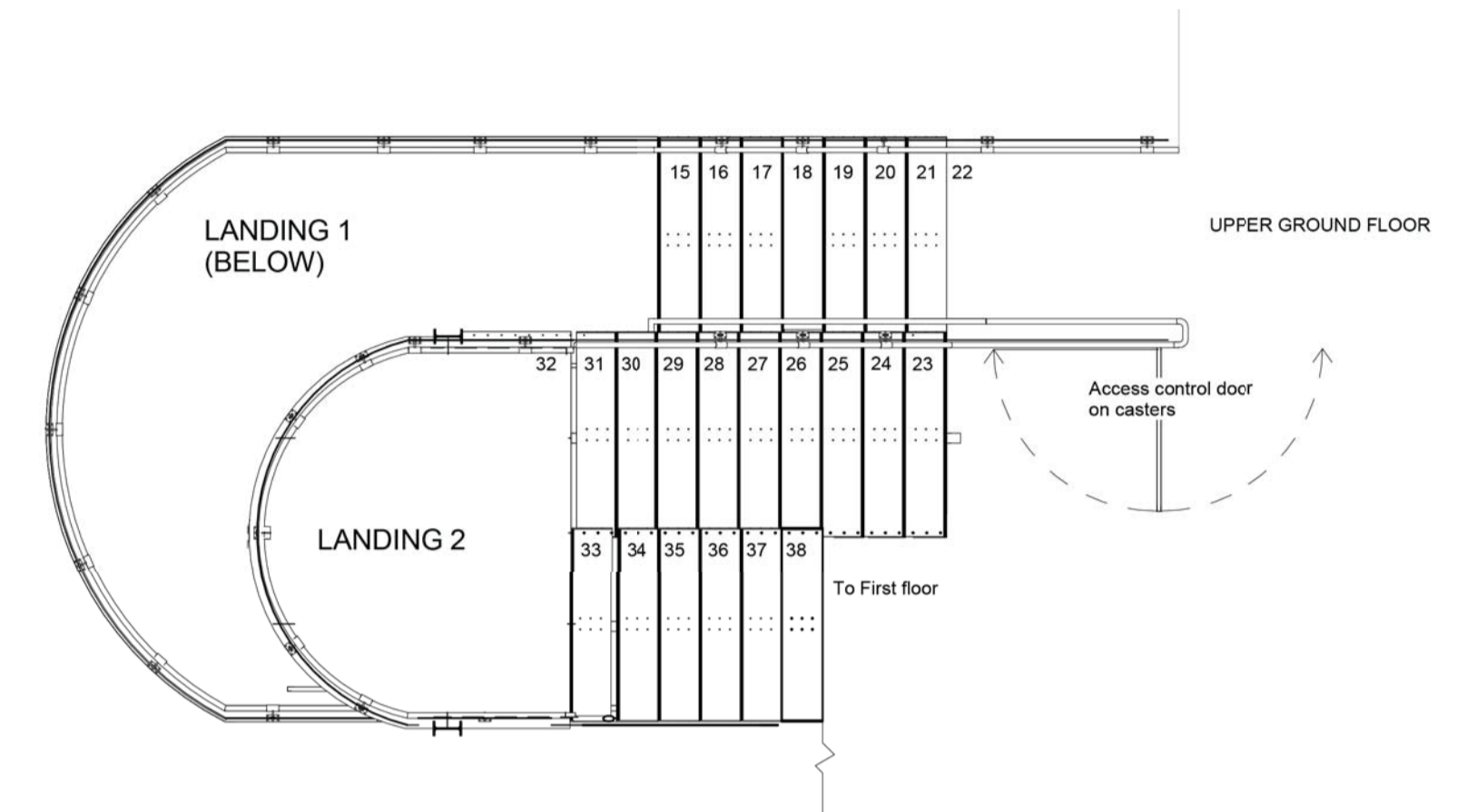


Figure 5.26 LANDING 2 PLAN SCALE 1:50

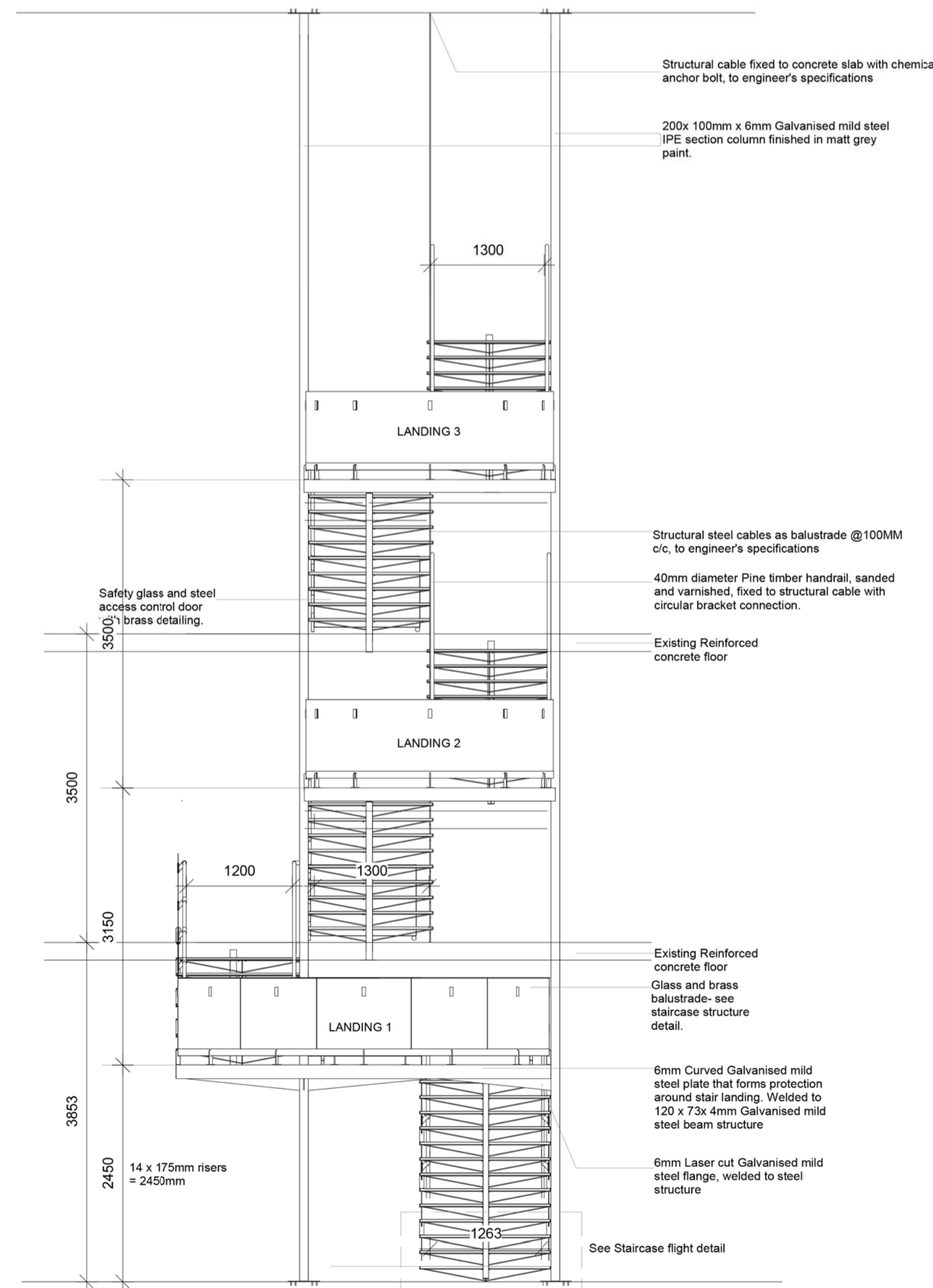


Figure 5.25 FRONT ELEVATION SCALE 1:50

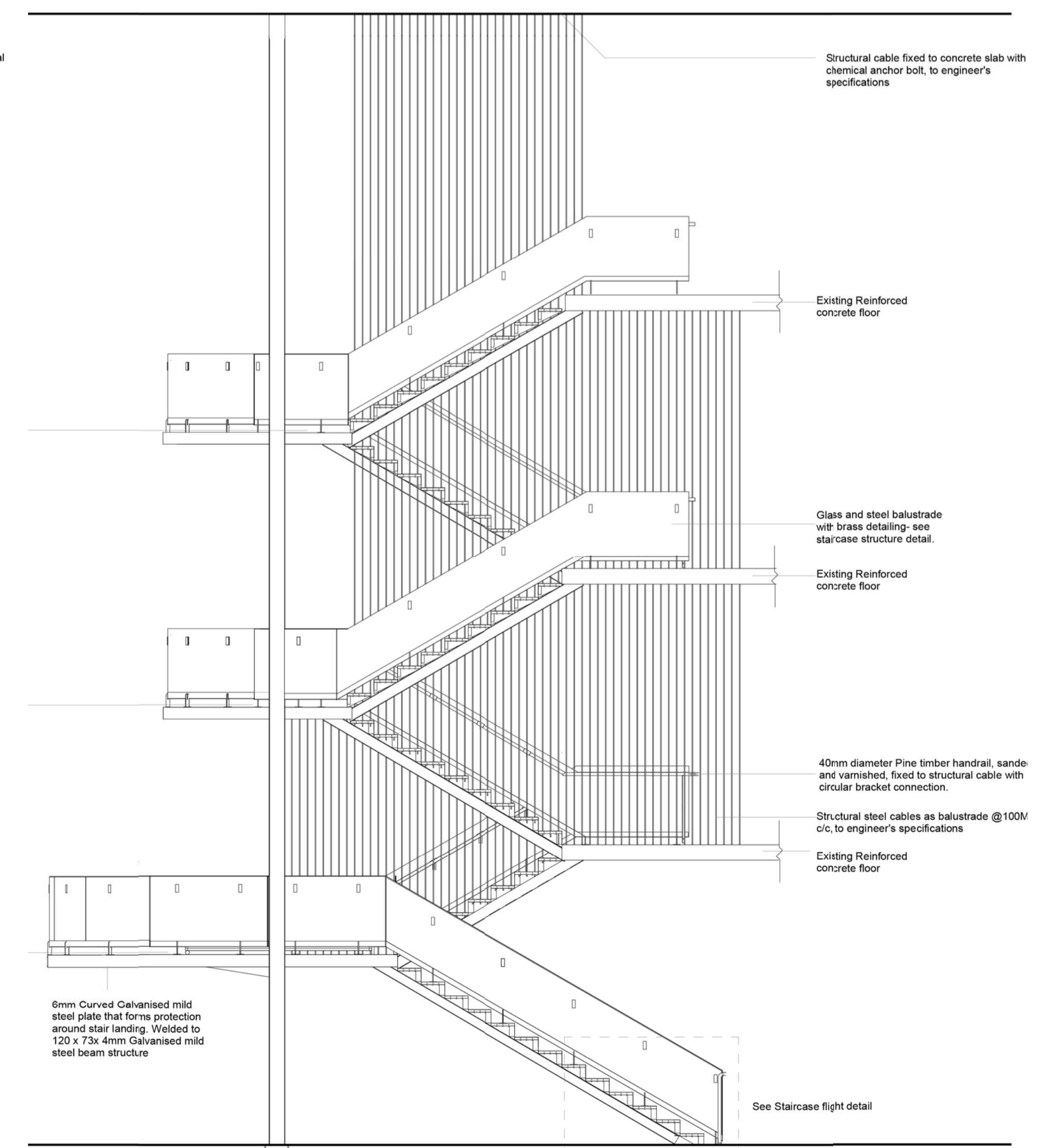


Figure 5.27 SIDE ELEVATION SCALE 1:50

# 17 Artificial Lighting

## 5.14.1 LIGHTING PLAN DIAGRAMS

## 5.14.2 LIGHTING SPECIFICATION

### 5.14 ATRIUM DETAILING: ARTIFICIAL LIGHTING

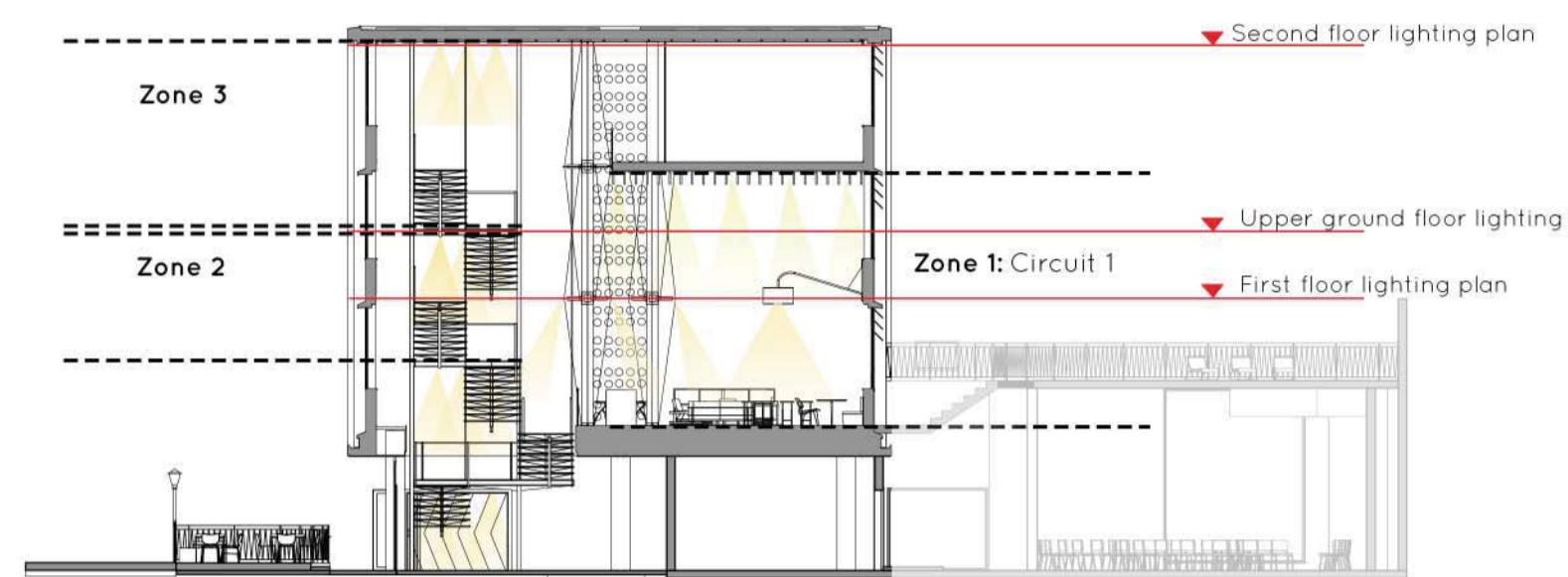


Figure 5.28 Lighting section diagram

#### ZONE 1

Required lux level (SANS 10114:1:2005): 200lx (Lounge)

	ZONE 1 (General lighting)	ZONE 1 (Task lighting)	ZONE 1 (Ambient lighting)
Number of Lamps (N)	30	20	3
Lumen per lamp (Fl)	2470	3000	1060
Area	74,58	74,58	74,58
Room index (RI)	1	1	1
Utilization factor (UF)	0,35	0,45	0,45
Initial luminous flux	347,74 lm	362,026	19,18
Maintenance factor (MF)	0,67	0,67	0,67
E	232,99 lx	242,56 lx	12,85 lx

Table 5.3 Zone 1 lighting calculation table.

#### ZONE 2

Required lux level (SANS 10114:1:2005): 100lx (Circulation area)

	ZONE 2 (General lighting)
Number of Lamps (N)	8
Lumen per lamp (Fl)	1851
Area	12,144
Room index (RI)	0,6
Utilization factor (UF)	0,31
Initial luminous flux	378 lm
Maintenance factor (MF)	0,5
E	189 lx

Table 5.4 Zone 2 lighting calculation table.

#### ZONE 3

Required lux level (SANS 10114:1:2005): 100lx (Circulation area)

	ZONE 2 (General lighting)	ZONE 3 (Ambient lighting)	ZONE 3 (Ambient lighting)
Number of Lamps (N)	8	5	4
Lumen per lamp (Fl)	1851	240	240
Area	12,144	12,14	12,14
Room index (RI)	0,6	0,6	0,6
Utilization factor (UF)	0,31	0,31	0,31
Initial luminous flux	378 lm	30,64	24,5
Maintenance factor (MF)	0,5	0,5	0,5
E	189 lx	15,32 lx	12,25 lx

Table 5.5 Zone 3 lighting calculation table.

ELECTRICAL LEGEND	
○	Osram Dulux Pro Globe compact fluorescent lamp.
●	Osram LUNIS SL-T LED spotlight
▬▬▬	Radiant Pendant fluorescent luminaire.
●	Osram KIT HALO PRO recessed downlighter.
○	Crema stout beat pendant, Osram halogen Spot 80
○	Crema fat beat pendant, Osram halogen Spot 80
○	Osram LED star classic globe.
S2	Two lever one way switch
S3	Three lever one way switch
—	General lighting
—	Accent lighting
—	Ambient lighting

Table 5.6 Lighting diagram key.

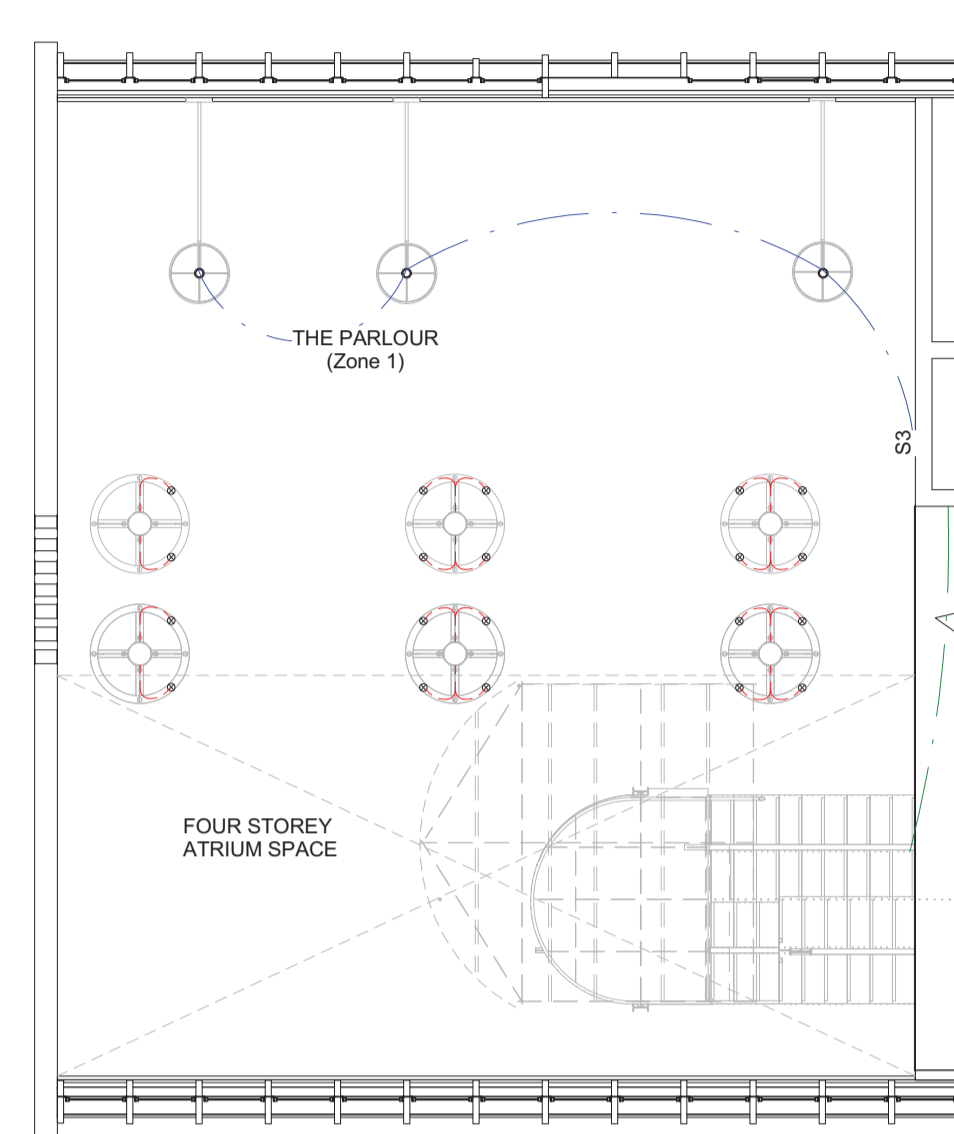


Figure 5.22 FIRST FLOOR LIGHTING PLAN

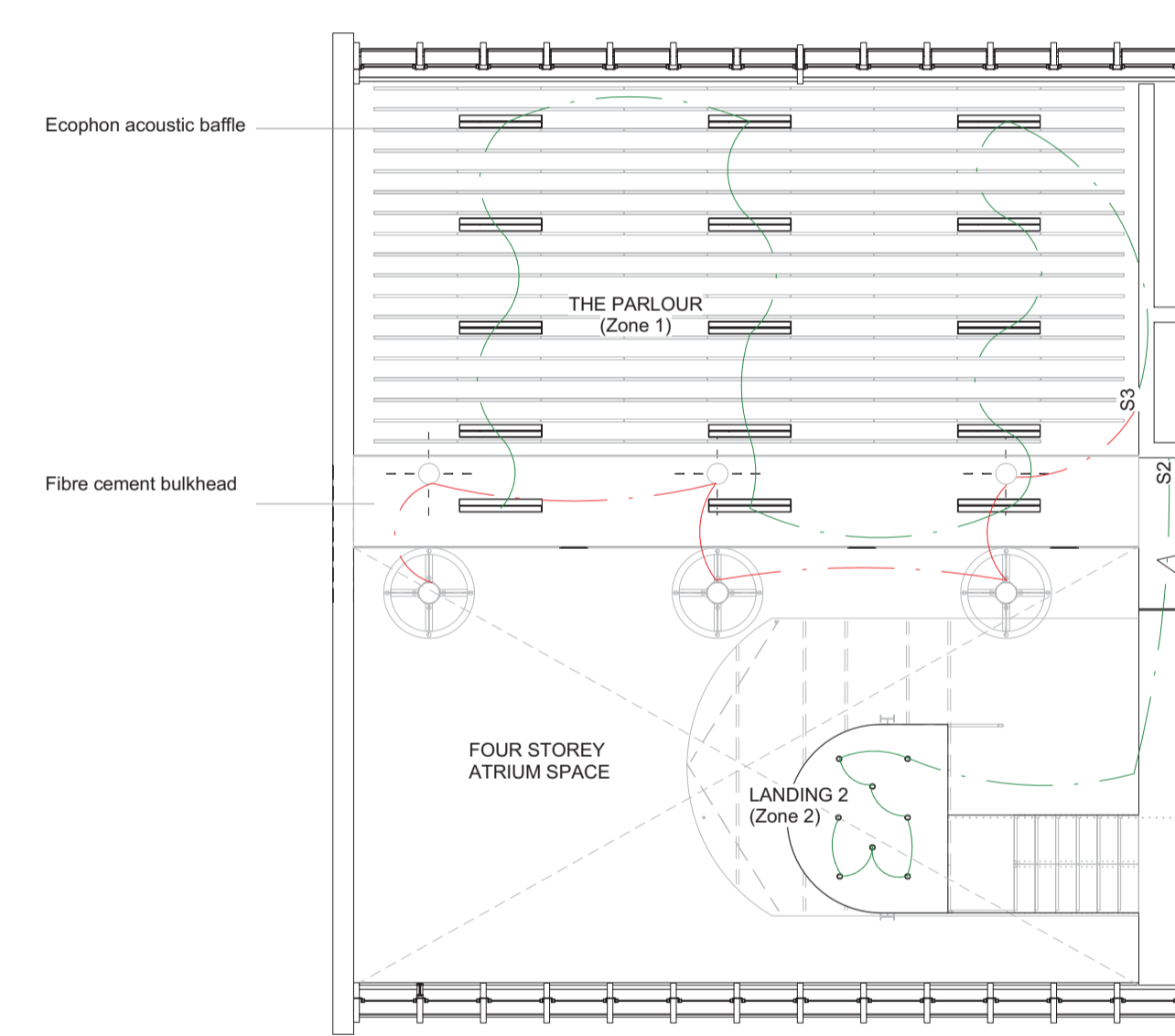


Figure 5.23 UPPER GROUND FLOOR LIGHTING PLAN

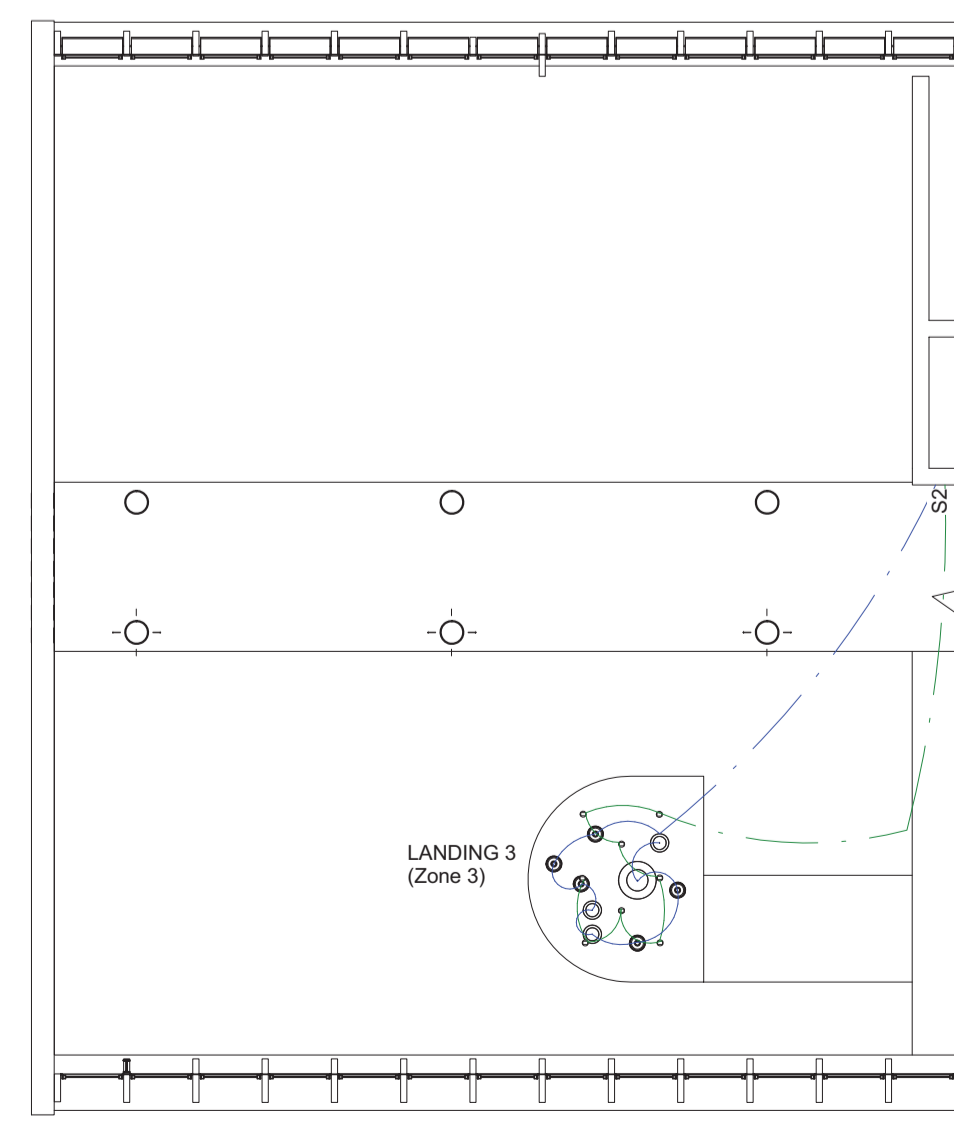


Figure 5.24 SECOND FLOOR LIGHTING PLAN

SYMBOL	ZONE	AMOUNT (Luminaire x lamp per luminaire)	LUMINAIRE	LAMP	lm/ LAMP	TOTAL lx (See Zone 1 calculation table 1)	WATTAGE
▬▬▬	1	12x 2= 24	Radiant Lighting 1195mm KD65 Pendant fluorescent luminaire, Satin silver.	Radiant lighting 1149mm high efficiency T5 triphosphorous tube. Product code: YFTL217 Colour rendering: Warm white.	2470 lm	232,99 lx	28W x24= 672W
⊗	1	20	Radiant FH16 spotlight with die-cast aluminium body with mesh shade.	Radiant MR16 halogen lamp. Colour rendering: clear	3000lm	242,56 lx	20 x 35W= 700W
○	1	3	Custom 400 mm diameter cork wall lamp. Galvanised mild steel structure finished in matt grey with brass detailing, cork lamp shade.	Osram Dulux Pro Globe 120mm diameter compact fluorescent lamp. Product code: DPRO GLOBE 18 W/825 E27 Colour rendering: Warm white	1060 lm	12,85 lx	80W x 3= 3180W
⊖	2	8	Osram KIT HALO PRO 91mm diameter round recessed downlighter. Die cast aluminium.	Halogen lamp. Colour rendering: warm white Beam angle: 36°	1851 lm	141,75 lx	35W x 6= 210W
⊖	3	8	Osram KIT HALO PRO 91mm diameter round recessed downlighter. Die cast aluminium.	Halogen lamp. Colour rendering: warm white Beam angle: 36°	1851 lm	141,75 lx	35W x 6= 210W
○	3	4	Crema design stout beat light pendant of Brass.	Radiant YFCT196 Compact fluorescent energy saving lamp. Colour rendering: warm white.	240 lm	15,32 lx	7W x 4= 36W
○	3	3	Crema design fat beat light pendant of Brass.	Radiant YFCT196 Compact fluorescent energy saving lamp. Colour rendering: warm white.	240lm	12,25 lx	9W x4= 36W



# 18 Formal workspace configuration

## 5.15 A CONCEPTUAL PROPOSAL FOR THE FORMAL WORKSPACE ENVIRONMENT



Figure 5.29 Sketch showing the spatial character of the existing interior.

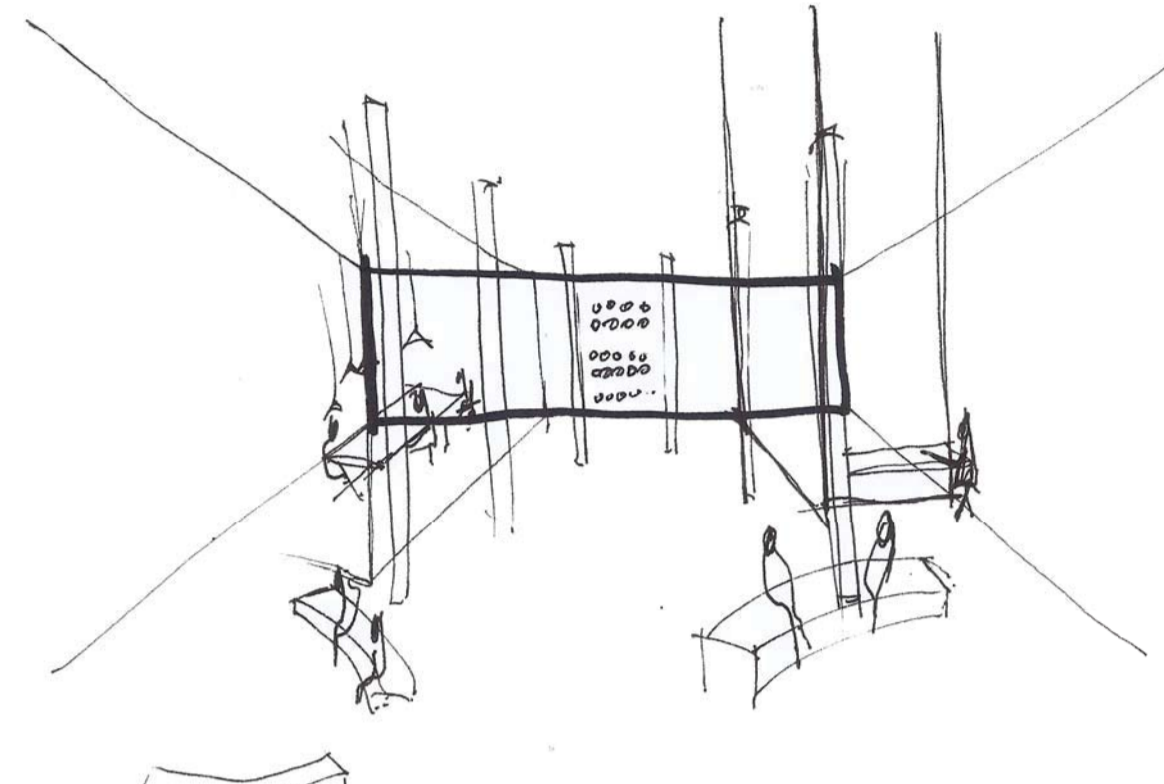


Figure 5.30 New Interior quality to be permeable and open with visual connection between rooms.

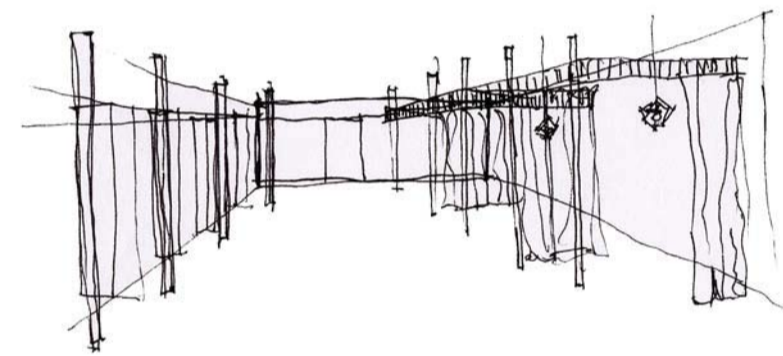


Figure 5.31 New open interior quality to be complemented with soft furnishings.

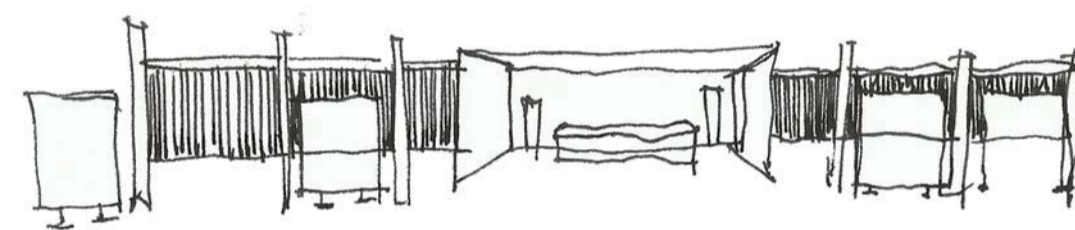


Figure 5.32 New permeable internal facade.

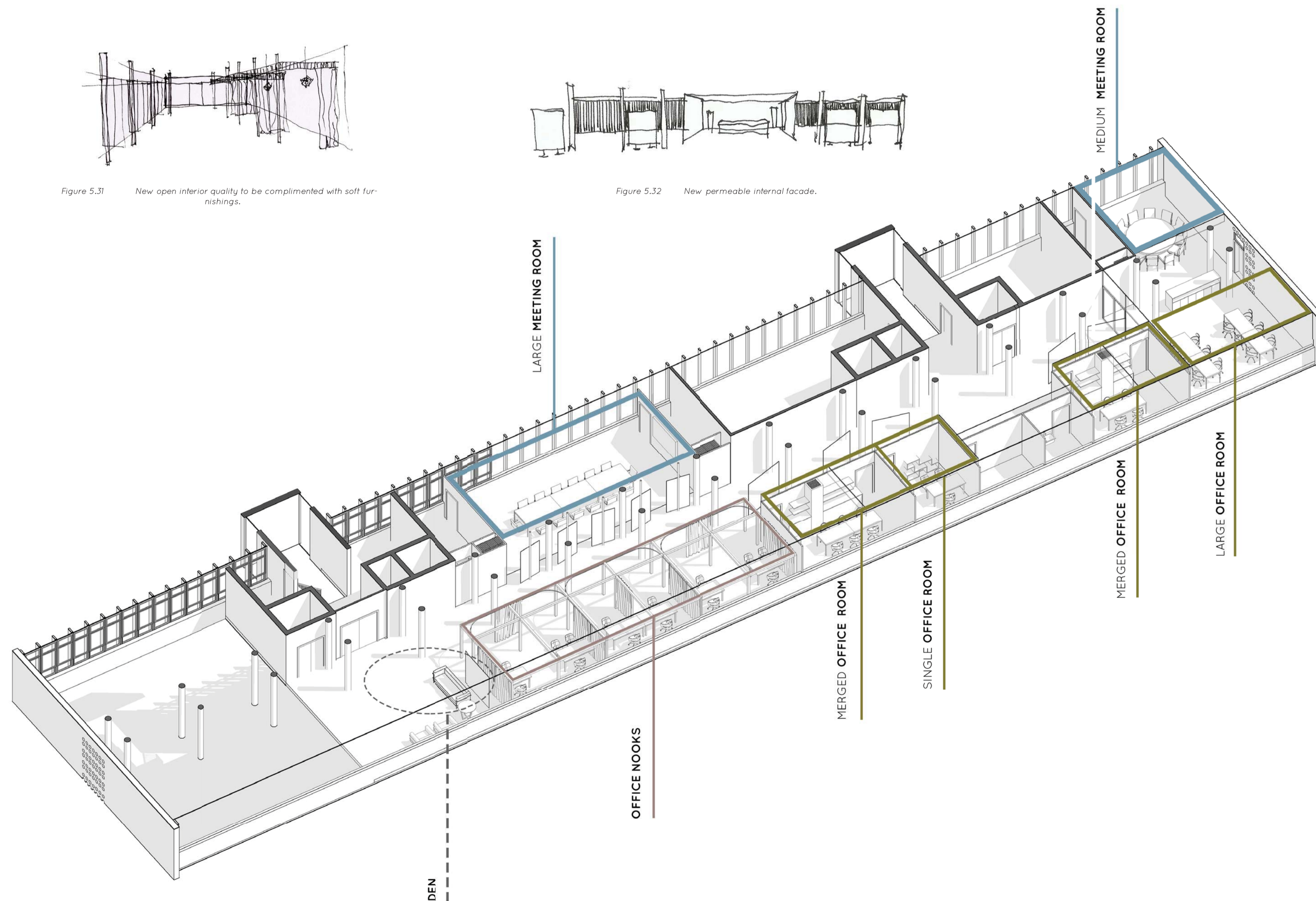


Figure 5.33 AXONOMETRIC VIEW OF THE FIRST/ SECOND FLOOR FORMAL WORKSPACE ENVIRONMENT

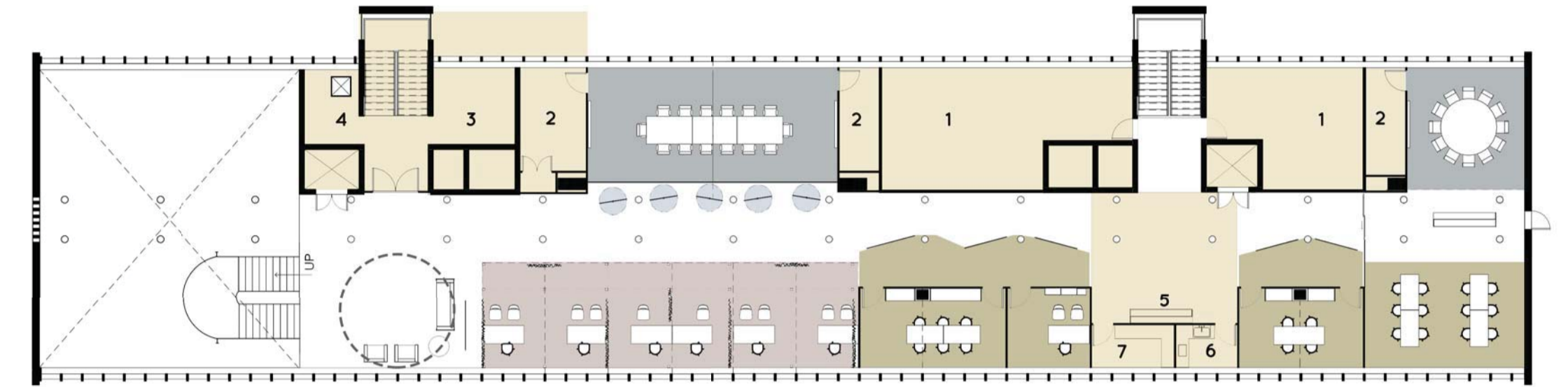


Figure 5.30 Plan diagram of proposed formal workspace typologies.

**SERVICES:**

- 1. WC
- 2. Furniture storage
- 3. Linen storage
- 4. Heavy duty dumbwaiter
- 5. Coffee counter
- 6. Kitchenette
- 7. Printing room

**FORMAL WORKSPACE TYPOLOGIES**

**KEY:**

- ↔ EXPANDABLE
- ↻ ADAPTABLE
- \$ RENTABLE
- 👤 SOCIAL

**OFFICE ROOM** (Green square)

- ↔ \$
- \_Private group/ individual working space
- \_Can connect to meeting room to expand

**OFFICE NOOKS** (Brown square)

- 👤 ↔ \$
- \_Semi-private group/individual working space

**MEETING ROOM** (Blue square)

- ↻ \$
- \_Formal group meeting area
- \_Conference call facilities

**DEN** (Dashed box)

- ↔ ↻ 👤
- \_Small informal working space used as break away area, brainstorm area or living room
- \_Adjacent to office room to control access
- \_Can add space to office room

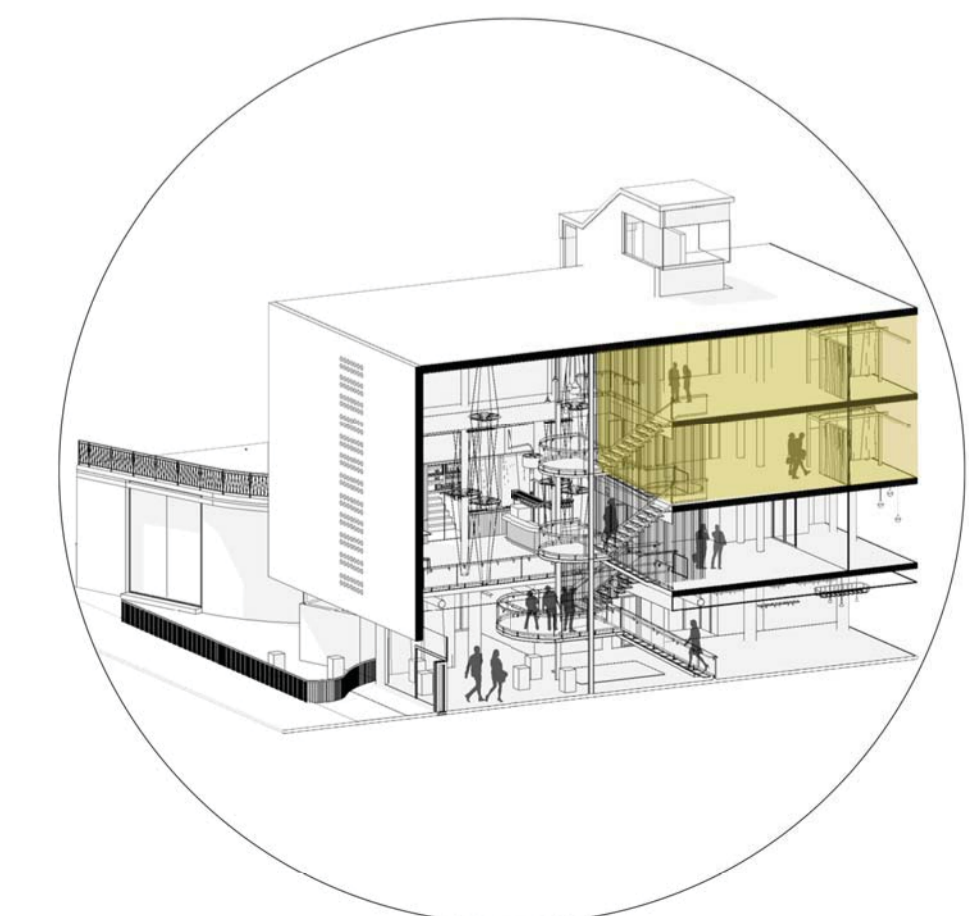


Figure 5.34 Diagram showing the location of the formal workspace environment on the first and second floor of the Meat Board building.

# 19 Section

## 5.16 TRANSVERSE SECTION SHOWING USE OF SPACE IN THE NEW ATRIUM SPACE AND THE PARLOUR

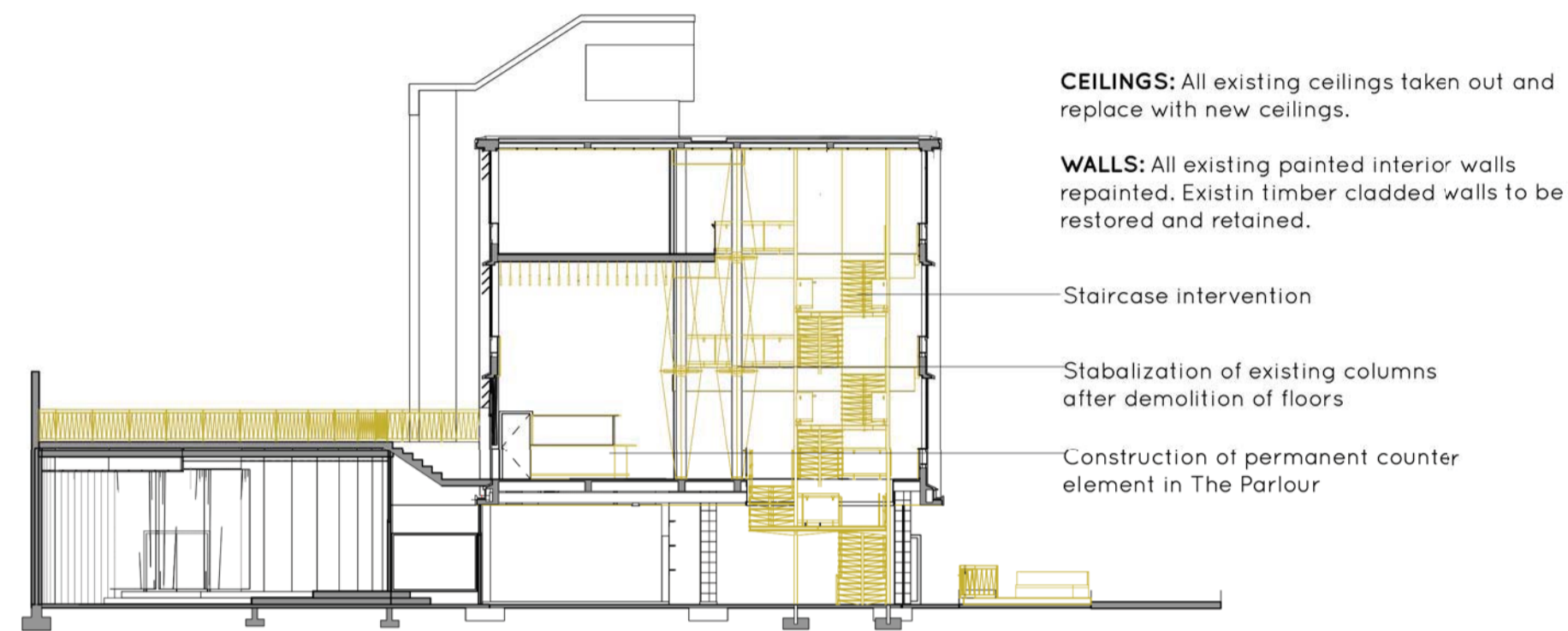


Figure 5.35 Section diagram summarizing new work within Section AA.

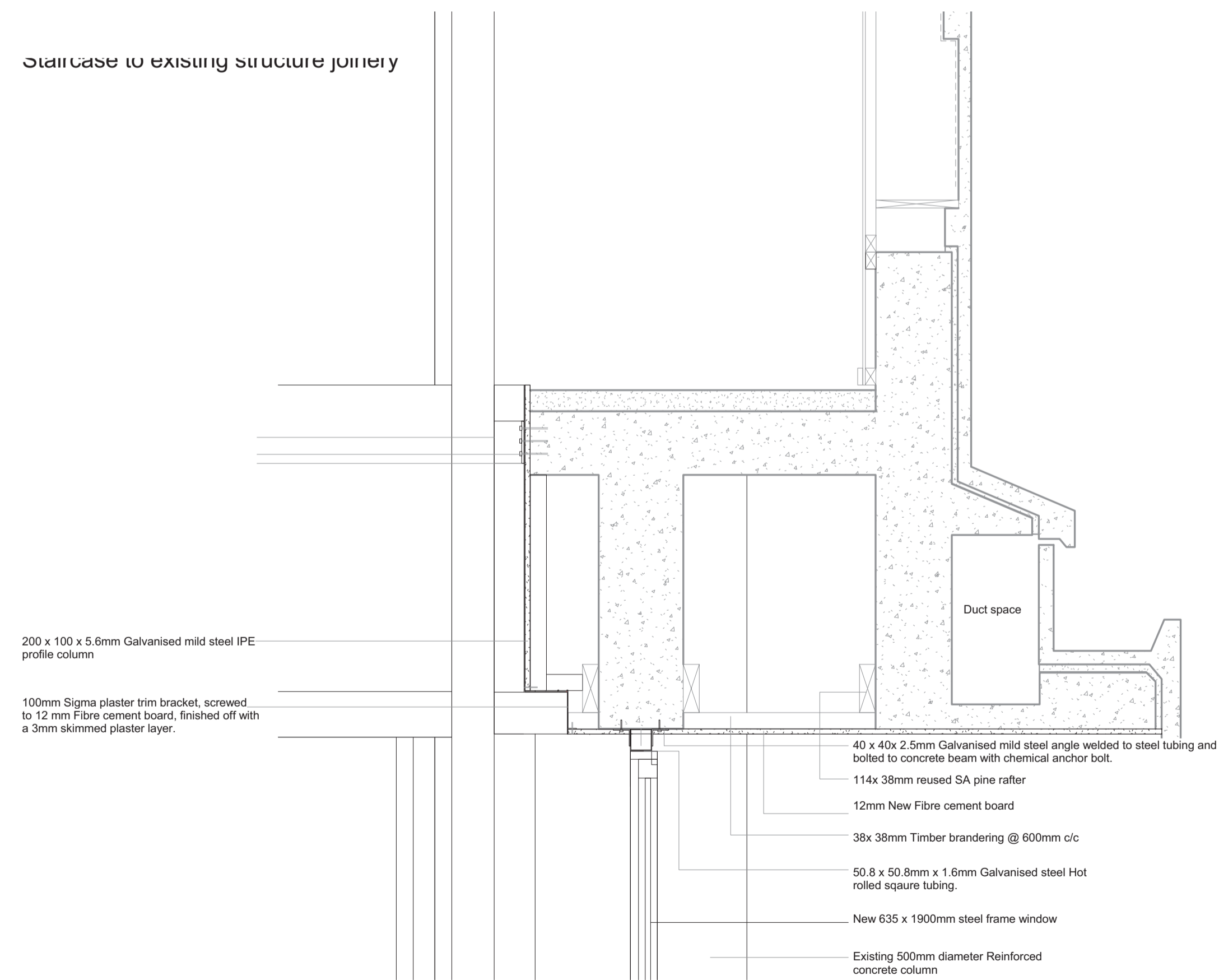
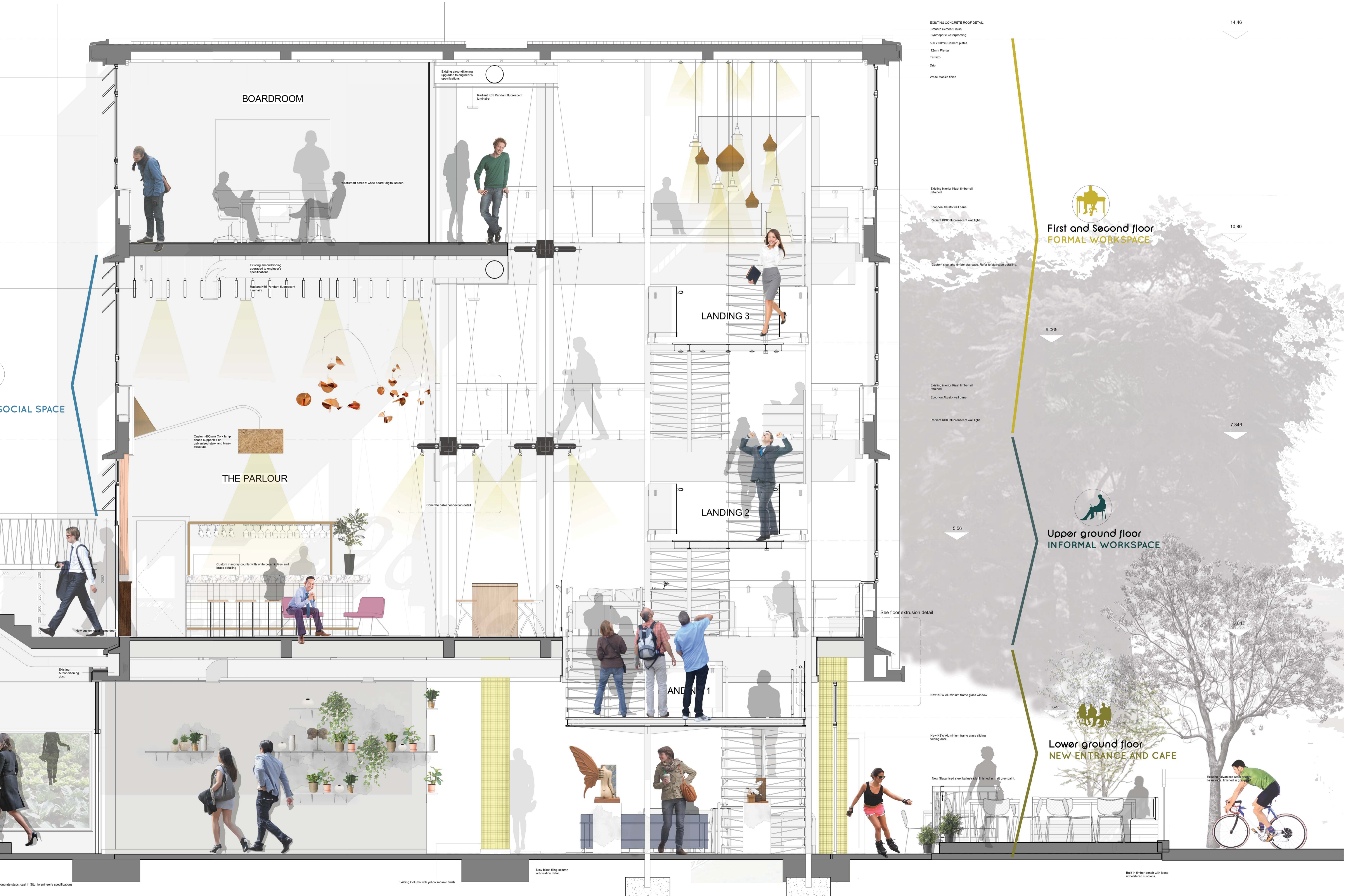


Figure 5.37 SECTION CALLOUT: FLOOR EXTRUSION DETAIL SCALE 1:20



Figure 5.36 SECTION AA SCALE 1:50

The Parlour  
SEMI-PUBLIC



EXISTING CONCRETE ROOF DETAIL:  
Smooth Cement Finish  
Synthetic waterproofing  
500 x 50mm Cement plates  
12mm Plaster  
Terrazo  
Drip  
White mosaic finish

Existing interior Kiasat timber sill retained  
Ecophon Akusto wall panel  
Radiant KD90 fluorescent wall light  
Custom steel and timber staircase. Refer to staircase detailing.

Existing interior Kiasat timber sill retained  
Ecophon Akusto wall panel  
Radiant KD90 fluorescent wall light

See floor extrusion detail

New K31W Aluminum frame glass window

New K31W Aluminum frame glass sliding folding door

New Glawamed steel ballustrade, finished in matt grey paint.

14,46

**First and Second floor  
FORMAL WORKSPACE**

10,80

9,065

7,346

**Upper ground floor  
INFORMAL WORKSPACE**

5,56

3,84E

**Lower ground floor  
NEW ENTRANCE AND CAFE**

2,416



Built in timber bench with loose upholstered cushions.

# 20 Services

## 5.17 PROPOSALS FOR THE OVERALL SERVICE UPGRADING OF THE MEAT BOARD BUILDING

### 5.17.1 VENTILATION

A central air conditioning system is already in place to regulate indoor temperature. Currently, the original air conditioning system is still operated within the building. It is proposed that the current air conditioning system is replaced with new energy efficient technology. This will help to reduce the overall energy consumption within the building.

It is proposed that the design of the system works similar to the original system by making use of a central duct within the plenum of the central corridor. Furthermore, it is proposed that secondary duct are inserted within the width of the building to spread cool air more evenly throughout the space. The new secondary duct system will be exposed, as seen in many contemporary buildings. A 'zoned' air conditioning system is proposed that allows for user specific control within rooms. Openable windows throughout the building facade allow for additional user specific temperature control.

The isolation of the roof and exterior walls is key to the success of the ventilation system within the building as it is often where heat and energy is lost within the ventilation system. It is proposed that new insulation is inserted in all exterior walls. The installation process is done from the interior in order to protect the heritage significant mosaic finish of the exterior facade. New insulation is proposed to seal the roof too. Secondly, the windows of a building is a major source of temperature loss. From technological perspective, the ideal would be to replace all windows with new double glazed windows, but this off course has huge economic implications. It is therefore advised that a specialised engineer advise on the issue.

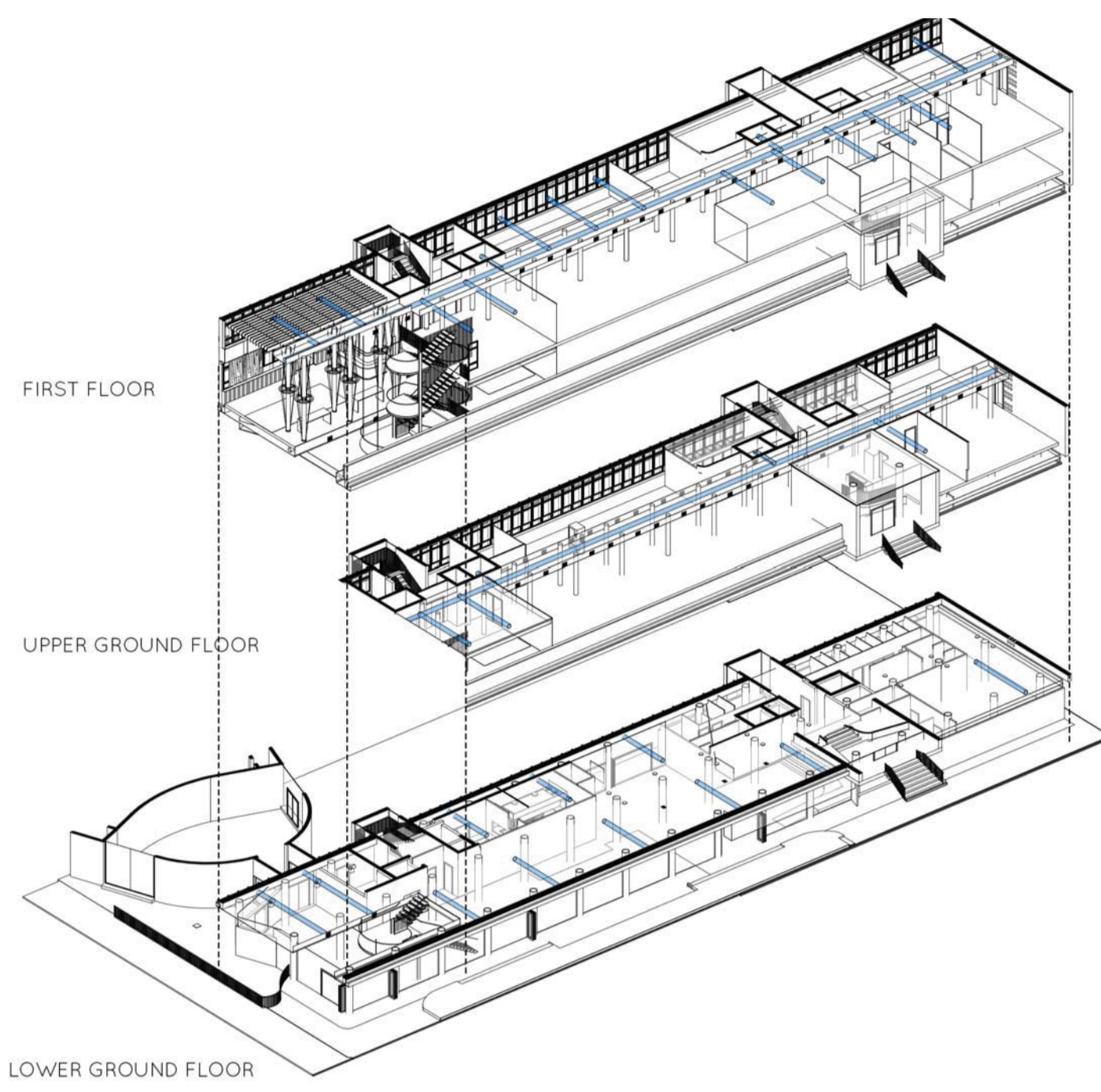


Figure 5.38 AXONOMETRIC AIR CONDITIONING DIAGRAM

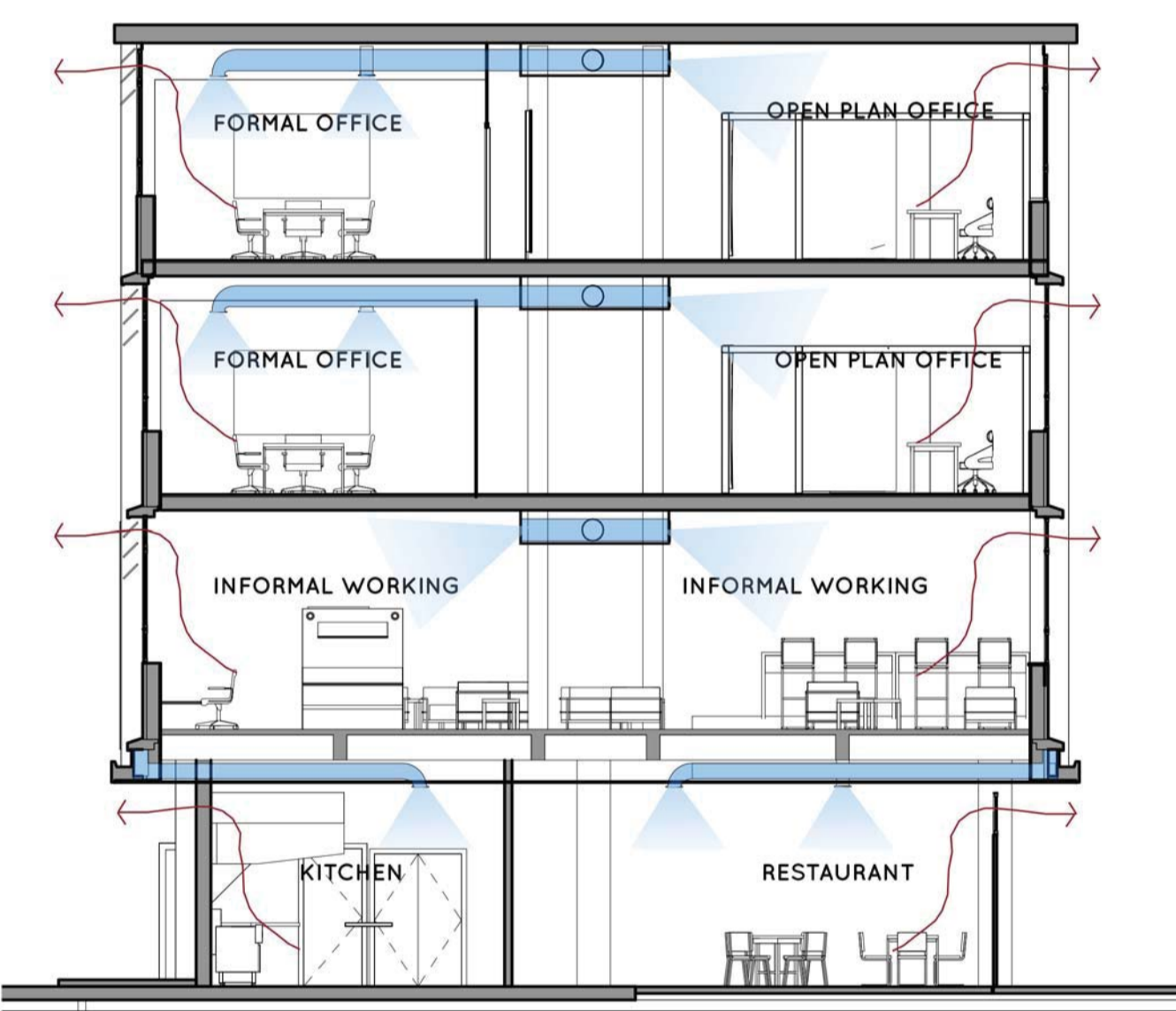
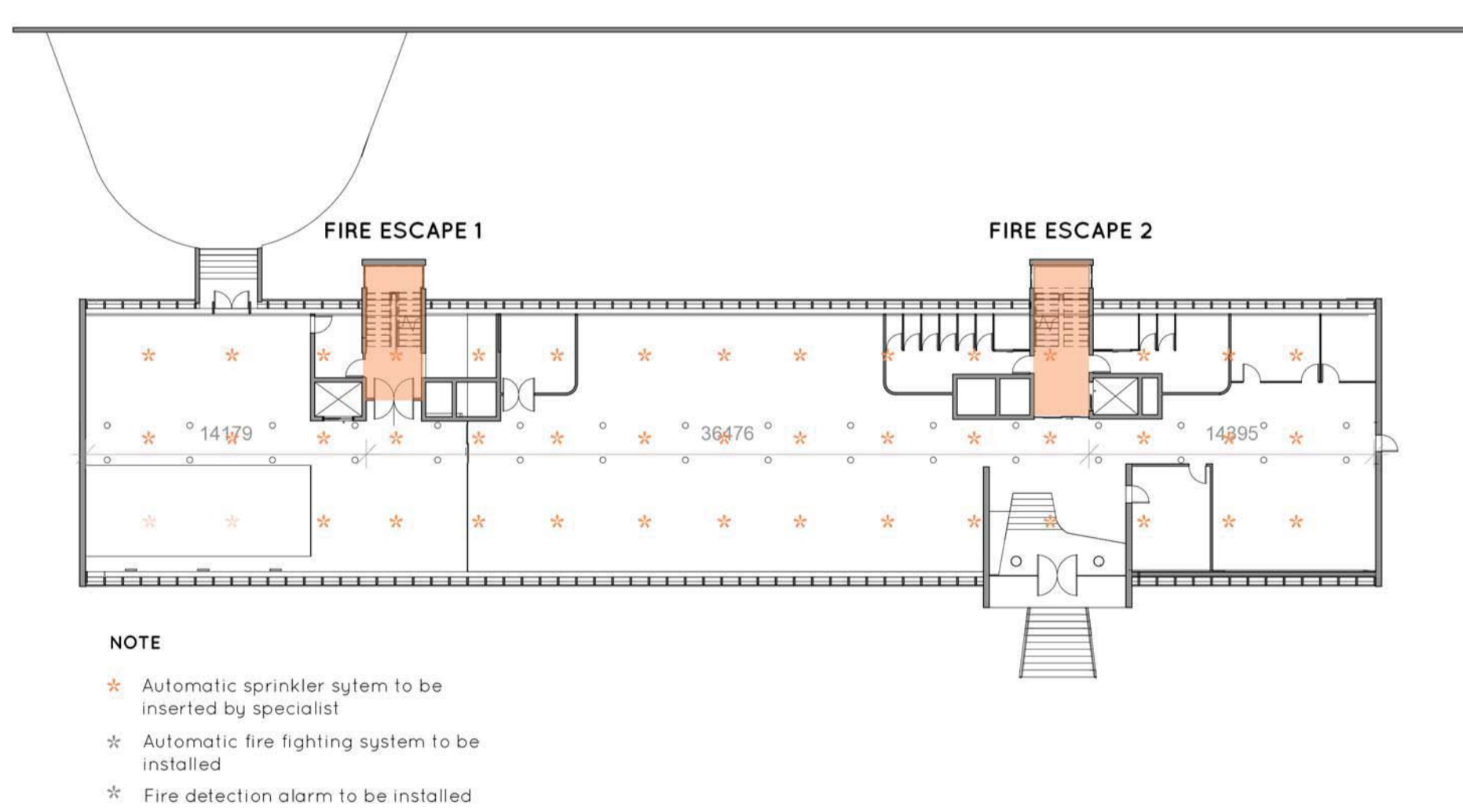


Figure 5.39 VENTILATION STRATEGY SECTION DIAGRAM

### 5.17.2 FIRE PROTECTION

A proposal is made for the basic functioning of the fire protection according to SANS 10400: Part F.



NOTE  
 \* Automatic sprinkler system to be inserted by specialist  
 \* Automatic fire fighting system to be installed  
 \* Fire detection alarm to be installed

Figure 5.40 UPPER GROUND FLOOR FIRE PROTECTION DIAGRAM

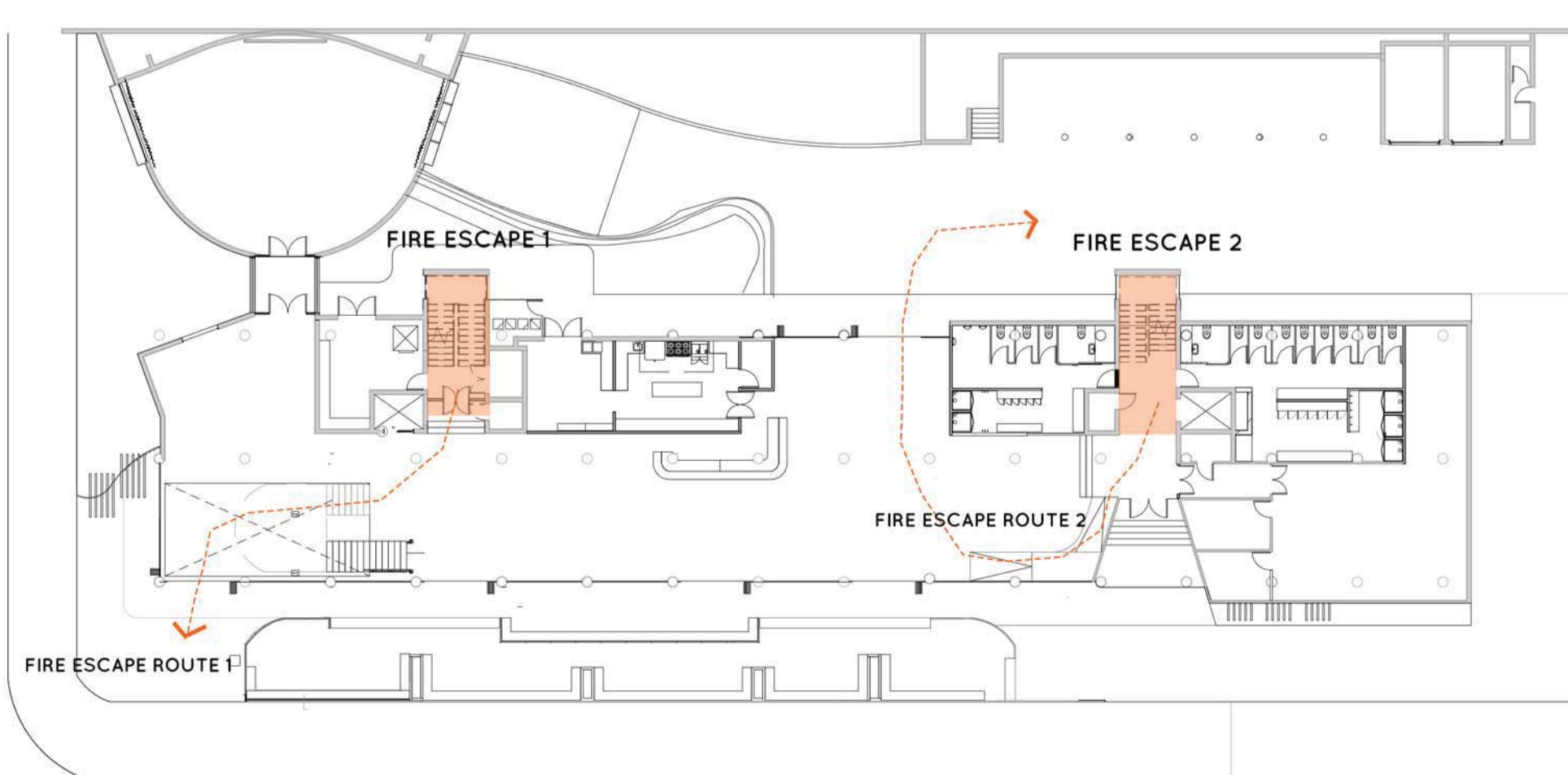
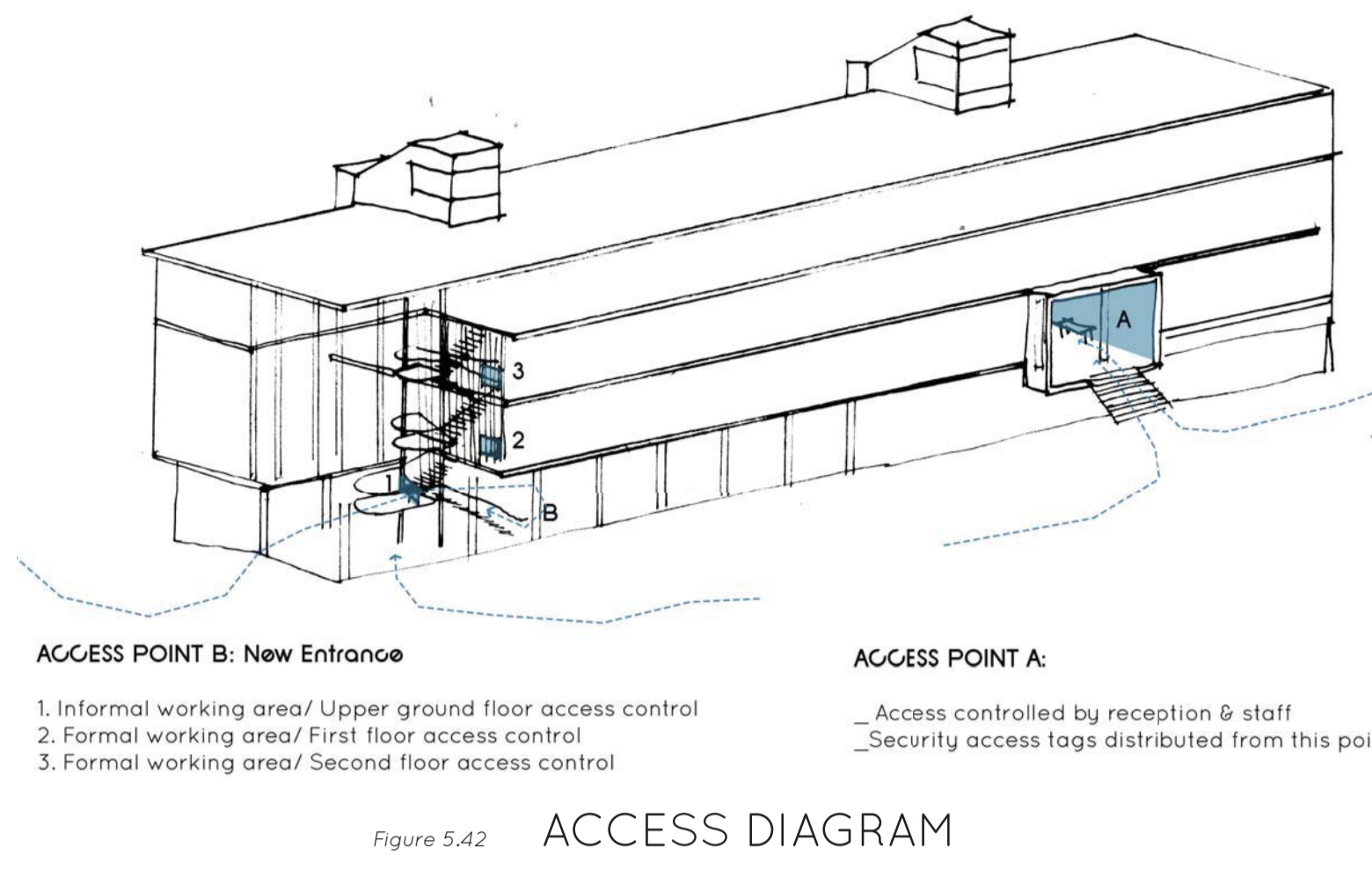


Figure 5.41 LOWER GROUND FLOOR FIRE PROTECTION DIAGRAM

### 5.17.3 ACCESS

New lifts are required as the current lifts (the original lifts as installed in 1951) are faulty at times and is considered as a safety risk. Secondly, the current lifts are replaced by energy efficient mechanical lift systems, as specified by an engineer.

A second entrance is proposed for the building- this requires a new strategy for access into the building. Access is controlled by a tag system as demonstrated in the following diagram:



### 5.17.4 ACOUSTICS

Two new spatial typologies are introduced within the intervention: the open plan environment and the atrium. Both of these typologies can be detrimental from an acoustic perspective and it is therefore needed to do necessary precautions on the matter. Soft furnishings, carpet, curtains and acoustic ceilings are implemented to absorb and diffuse noise within the open plan environment.

The atrium and parlour spaces are public space that connect to each other. These spaces are open and is also spaces of social gathering for large groups of people. These space can not be totally enclosed or isolated acoustically so acoustic surfaces are implemented to provide as much as possible sound absorption. The following diagram shows absorptive surfaces within the atrium and parlour space:

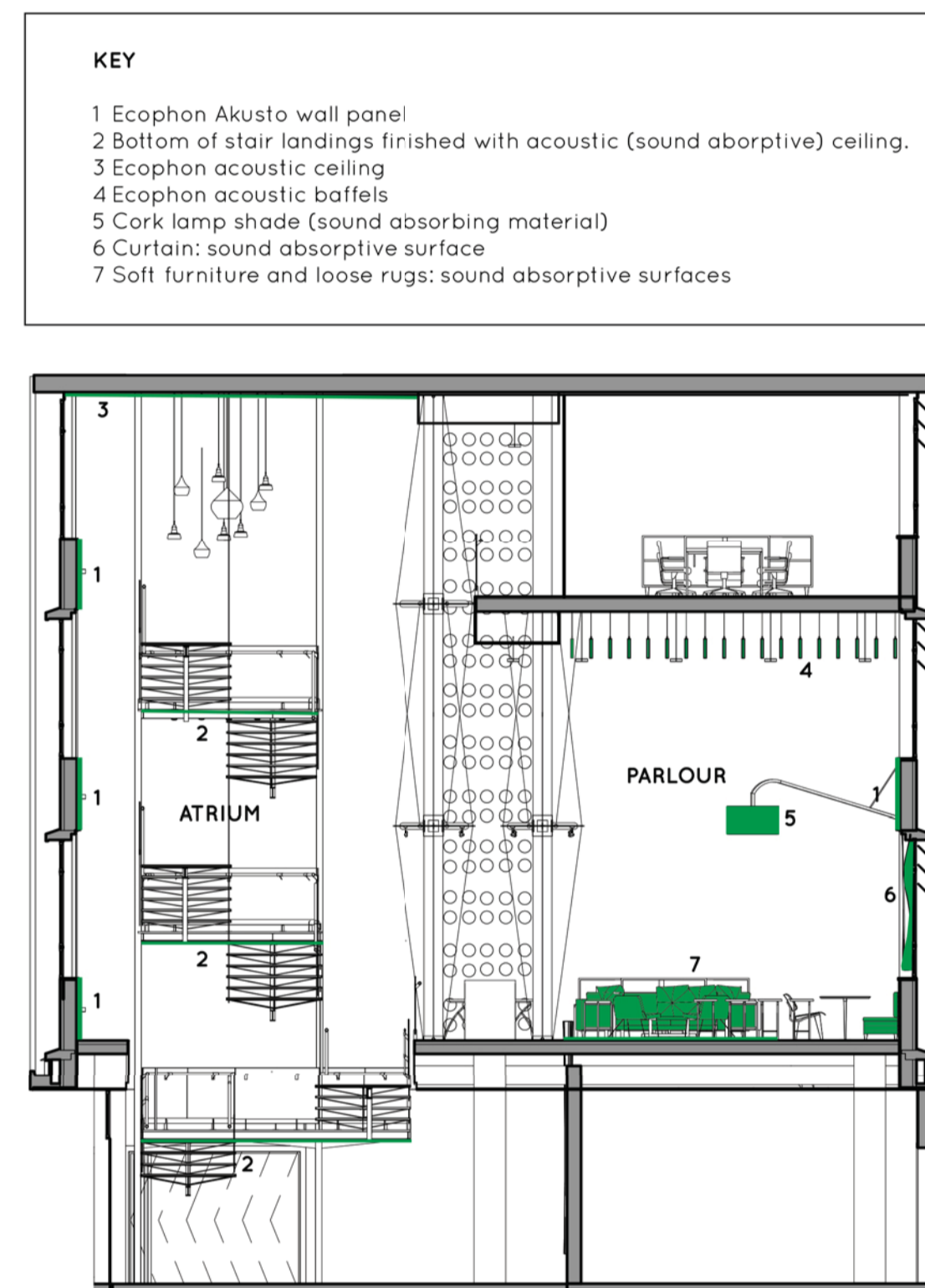


Figure 5.43 ACOUSTIC SECTION DIAGRAM

### 5.17.5 SANITATION

The current amount of toilets is insufficient to the current SANS 10400 requirements. New toilets are constructed in connection to existing eastern service core. A new vertical shaft is proposed adjacent to the existing lift on to accommodate the toilet pipes for the toilets east of the service core. To accommodate the toilet pipes on the inside of the building (instead of existing through the exterior facade, causing damage to significant fabric), the Geberit monolith wall cistern is proposed.

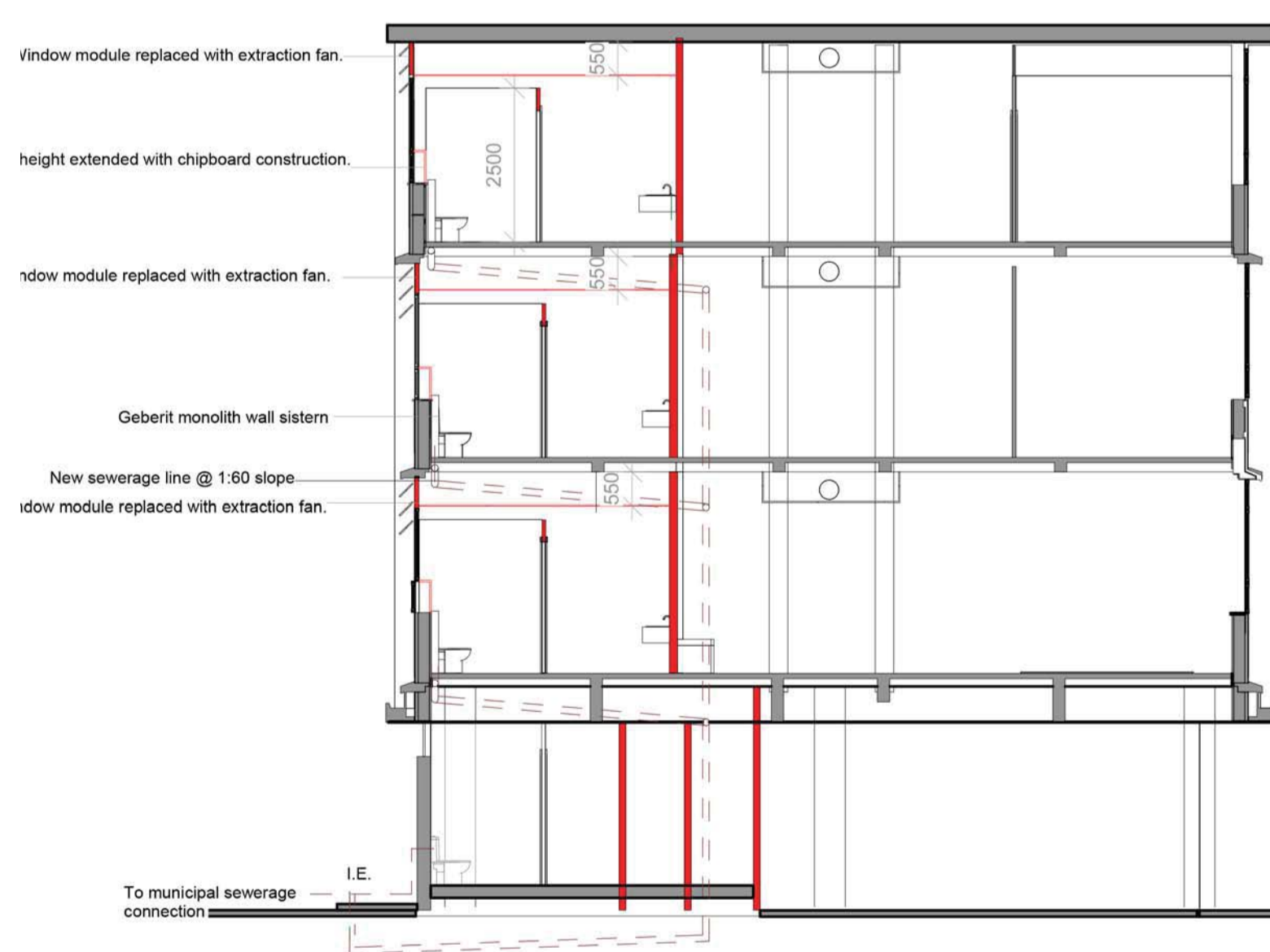


Figure 5.44 DRAINAGE SECTION DIAGRAM

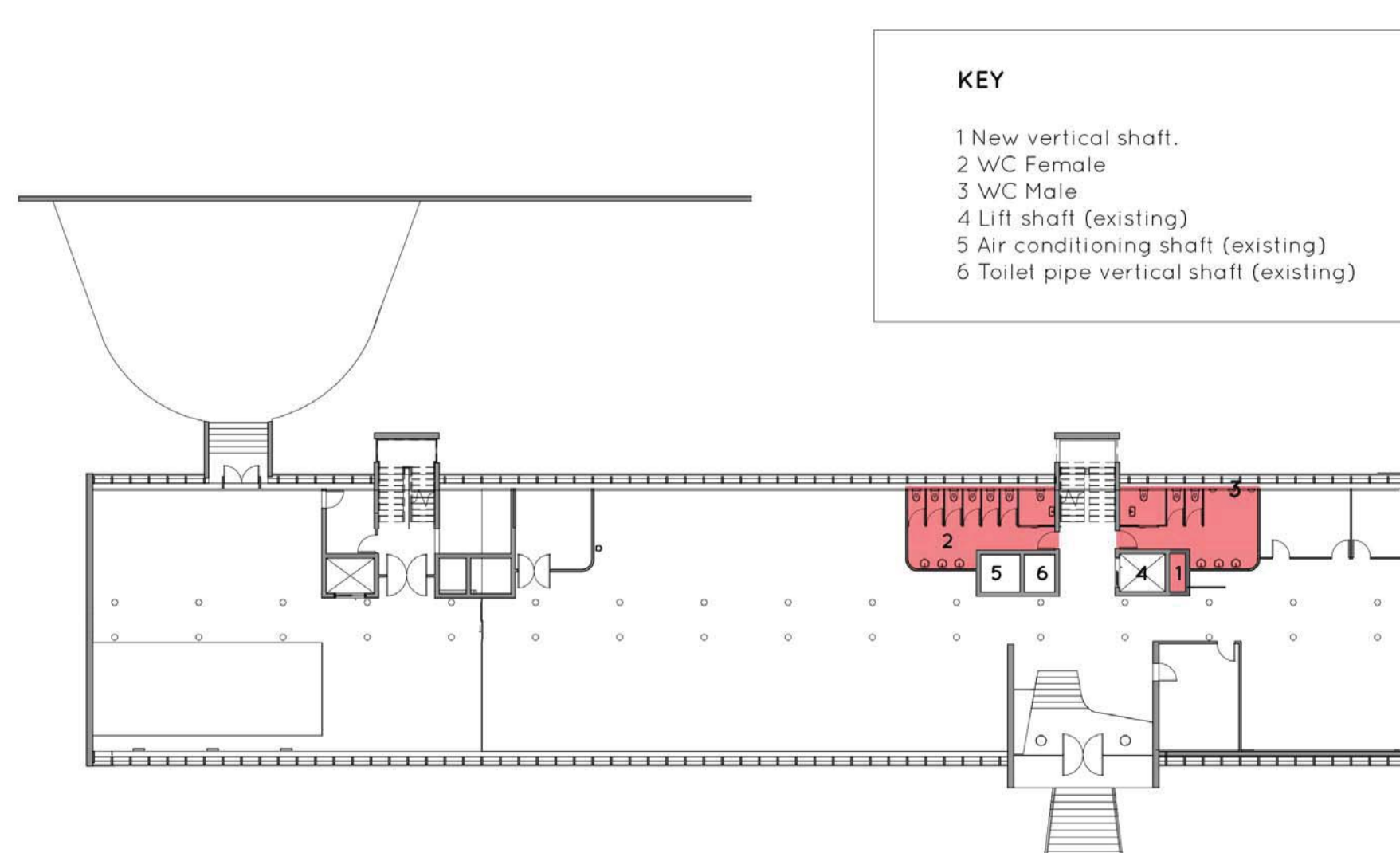


Figure 5.45 DRAINAGE PLAN DIAGRAM

## 5.18 CONCLUSION

This chapter presents all plans, details and three dimensional drawings as the design resolution of the project. The technification of design elements is integrated in the design presentation. A proposal for the upgrading of services is presented. Furthermore the design is performed on three scale: permanent, furniture and customization.

