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 Staub 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.
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 viewpoint 1 on plan.

Figure 5.4 Lower ground floor plan

Scale 1:100

Figure 5.5 Mood board showing proposed aesthetic for the Canteen.

Figure 5.6 Original lower ground floor plan (Stauch 1951:4)

Figure 5.7 Demolition diagram: proposed intervention.
Upper ground floor

5.7 REMODELLING THE UPPER GROUND FLOOR AS INFORMAL WORKING ENVIRONMENT
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

5.10 INFORMAL WORKSPACE DETAILING

Proximal assemblies as an approach to facilitate inhabitation
5.11  UPPER GROUND FLOOR SOCIAL SPACE

Figure 5.16 Mood board showing overall aesthetic and materials of The Parlour.

5.12  STABILIZING EXISTING COLUMNS AFTER THE DEMOLITION OF FLOORS

The existing concrete columns of the upper floor were cast in situ. During the process, three existing floors were removed, and a new stabilizing structure for the columns was required. A structural cable connection and steel column capping have been designed to support the existing columns.

Figure 5.18 The Parlour DETAIL PLAN SCALE 1:50

Figure 5.19 Perspective of The Parlour showing the support added to the existing column.
Staircase intervention

5.13 ATRIUM SPACE DETAILING

DESIGN CRITERIA:

1. AESTHETICS:
   - Design staircase as a furniture piece
   - Techtonic intervention contrasting existing stereotomic staircases
   - Integrated lighting
   - As little columns as possible

2. MATERIALS:
   - Formal aesthetic
   - Hardwearing materials
   - Materials to contrast existing material use

DEFINITION:

STAIRCASE FLIGHT DETAIL

SCALE 1:120

Figure 5.22 Staircase entrance perspective.

Figure 5.23 STAIRCASE FLIGHT DETAIL

SCALE 1:120

Figure 5.24 LANDING 1 PLAN

SCALE 1:50

Figure 5.25 FRONT ELEVATION

SCALE 1:50

Figure 5.26 LANDING 2 PLAN

SCALE 1:50

Figure 5.27 SIDE ELEVATION

SCALE 1:50

Design staircase to serve user as social meeting area.
5.14 ATRIUM DETAILING: ARTIFICIAL LIGHTING

5.14.1 LIGHTING PLAN DIAGRAMS

Figure 5.22  FIRST FLOOR LIGHTING PLAN

Figure 5.23  UPPER GROUND FLOOR LIGHTING PLAN

Figure 5.24  SECOND FLOOR LIGHTING PLAN

Table 5.3 Zone 1 lighting calculation table.

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

<table>
<thead>
<tr>
<th>Number of Lamps (N)</th>
<th>Lumen per Lamp (Fl)</th>
<th>Area</th>
<th>RI</th>
<th>UF</th>
<th>Initial Luminous Flux</th>
<th>Maintenance Factor (MF)</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>1851</td>
<td>12,144</td>
<td>0.6</td>
<td>0.31</td>
<td>378 lm</td>
<td>0.5</td>
<td>189 lx</td>
</tr>
</tbody>
</table>

Table 5.4 Zone 2 lighting calculation table.

ZONE 2
Required lux level (SANS 10114:2005): 100lx (Circulation area)

<table>
<thead>
<tr>
<th>Number of Lamps (N)</th>
<th>Lumen per Lamp (Fl)</th>
<th>Area</th>
<th>RI</th>
<th>UF</th>
<th>Initial Luminous Flux</th>
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<td>30</td>
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<td>74.58</td>
<td>1</td>
<td>0.35</td>
<td>347.74 lm</td>
<td>0.67</td>
<td>232.99 lx</td>
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Table 5.5 Zone 3 lighting calculation table.

ZONE 3
Required lux level (SANS 10114:2005): 100lx (Circulation area)

<table>
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<tr>
<th>Number of Lamps (N)</th>
<th>Lumen per Lamp (Fl)</th>
<th>Area</th>
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<th>UF</th>
<th>Initial Luminous Flux</th>
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<td>378 lm</td>
<td>0.5</td>
<td>189 lx</td>
</tr>
</tbody>
</table>

5.14.2 LIGHTING SPECIFICATION

Table 5.6 Lighting diagram key. Table 5.7 Lighting specification table (To be updated).
A CONCEPTUAL PROPOSAL FOR THE FORMAL WORKSPACE ENVIRONMENT

5.15

Formal workspace configuration

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

Figure 5.32  New permeable internal facade.

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

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

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

Figure 5.34  Diagram showing the location of the formal workspace environment on the first and second floor of the Meat Board building.
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 5.36 SECTION AA SCALE 1:50

Figure 5.37 SECTION CALLOUT: FLOOR EXTRUSION DETAIL

SCALE 1:20

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5.17 VENTILATION

A central air conditioning system is already in place to regulate indoor temperature. Currently, the original air conditioning system is still operational within the building. It is proposed that the current air conditioning system be 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 ducts 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 façade 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 insolation 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 insolation is proposed to seal the roof too.

Secondly, the windows of a building are a major source of temperature loss. From a technological perspective, the ideal would be to replace all windows with new double glazed windows, but this of course has huge economic implications. It is therefore advised that a specialist engineer advise on the issue.

5.17.3 ACCESS

New lifts are required as the current lifts (the original lifts as installed in 1951) are faulty at times and 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 spaces that connect to each other. These spaces are open and also spaces of social gathering for large groups of people. These spaces 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:

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 service cores. 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 though the exterior facade, causing damage to significant fabric), the Geberit monolith wall cistern is proposed.
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.