

# DOMESTICATING MODERN MOVEMENT SPACE

**Adaptive Reuse of the Meat Board building as a serviced office facility.**

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Submitted in fulfilment of part of the requirements for the degree Master of Interior Architecture (Professional) in the Faculty of Engineering, the Built Environment and Information Technology

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## JESUS CHRIST

For divine inspiration and new joy every morning. Thank you for Godly vision and your continuous blessing on my life.

*Proverbs 29:18  
If people can't see what God is doing,  
they stumble all over themselves;  
But when they attend to what he reveals,  
they are most blessed.*

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Lief, thank you for your unconditional love and support and for drying many tears. Thank you for 'escape adventures' at times when life got unbearable. The best is yet to come!

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## JOHAN SWART

Thank you for asking the difficult questions.

# ABSTRACT

The Meat Board building is an icon of Modern Movement heritage with Brazilian influences in Pretoria. The building claims cultural and heritage value due to its association with renowned architect Helmut Stauch, its contextual influence on the Pretoria regionalist style and finally, to its national architectural contribution.

The current condition of the interior of the building contributes to an outdated, lifeless and dull working environment that directly contrasts the intended vision of a friendly, light-hearted working environment as originally described by the architect (Stauch 1951:3). The current interior is unresponsive to user needs and this results in a disconnection between the building and the user. Subsequently, there is an apparent dissociation between the heritage value and the use value of the building.

This dissertation explores the operation of a service office facility in a collaborative working environment as a programme in which the Meat Board building can be reused. The proposed typology caters for temporary and/or short-term office space needs. The interior of the proposed serviced office facility aims to be more adaptable to the needs of the contemporary office user. The analogy of a hotel is used to guide the operation and aesthetics of the facility.

Abercrombie (1990) compares entering an interior to the intimate experience of becoming human in the womb. The womb is fundamentally the first association we have of residential space. Irrespective of the character or scale of the space we may experience when we enter this world, Abercrombie states that we tend to associate an interior space subconsciously with this first sense of belonging. By understanding the habits, rituals and comfort zone of our personal room, we are able to engage with an interior space (Abercrombie 1990: 5). The dissertation further deals with the theme of inhabitation in the public sphere. The capability of the interior design discipline of improving human well-being by design is explored. Issues such as the claiming of personal space, customization of space, sense of belonging and self-expression are addressed.

The overall aim of the dissertation is to determine a viable reuse strategy for the Meat Board building by drawing inspiration from the original intent of the architect and from the existing (original) fabric.

# EKSKERP

Die Vleisraadgebou versinnebeeld die moderne-beweging-erfenis met Brasiliaanse invloede in die Pretoria-omgewing. Die gebou het kulturele en erfeniswaarde as gevolg van hoofsaaklik drie aspekte, naamlik, 1) die assosiasie met die welbekende argitek, Helmut Stauch, 2) die invloed wat die gebou uitoefen op Pretoria-regionalisme en 3) die nasionale bydrae tot argitektuurerfenis.

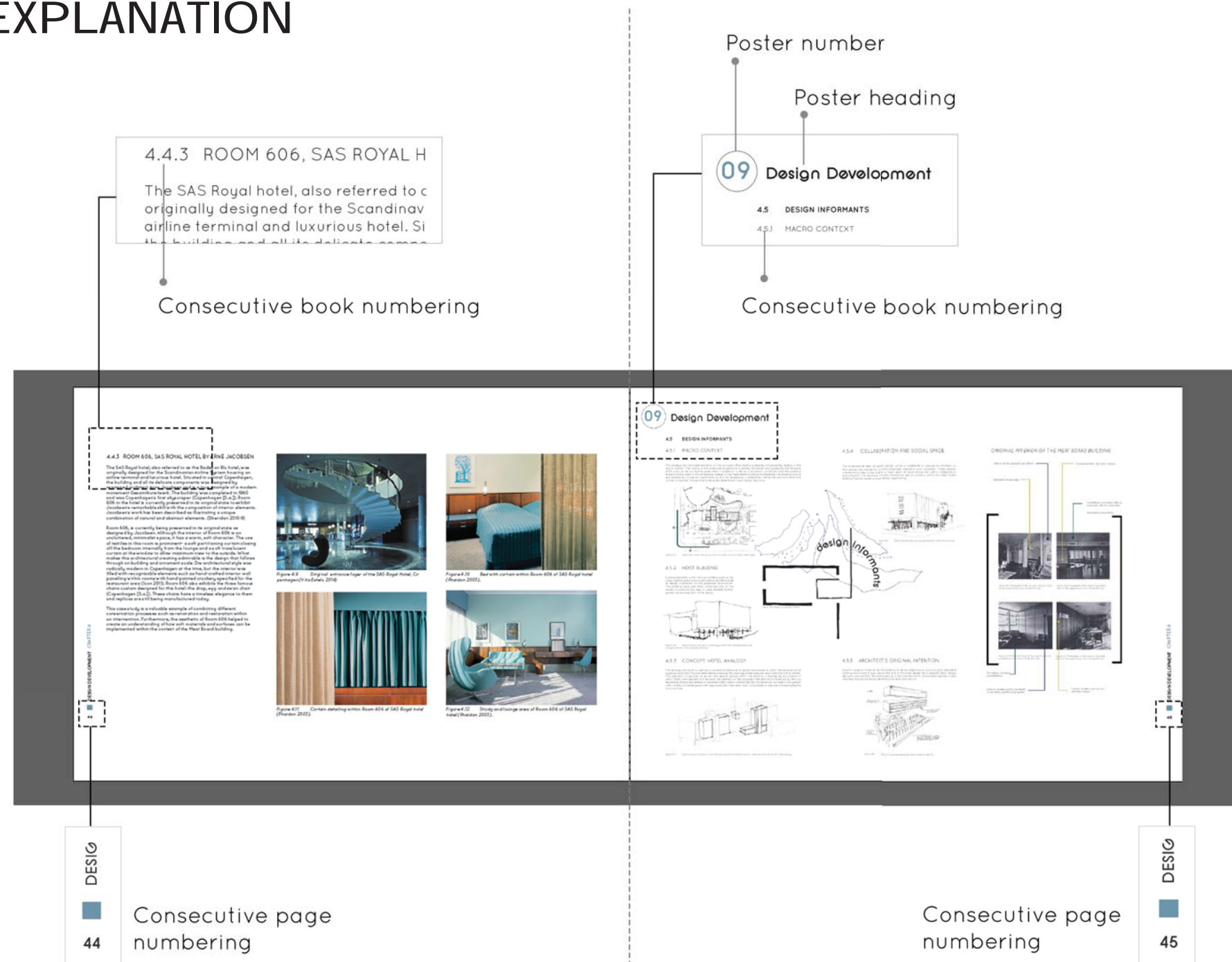
Die huidige toestand van die interieur in die gebou veroorsaak 'n ouderwetse, leweloze en onaantreklike werksomgewing wat kontrasteer met die aanvanklike visie wat beskryf is deur die argitek as 'n vriendelik en lughartige werkomgewing (Stauch 1951:3). Die huidige interieur kom onsimpatiek en stug teenoor die behoeftes van die gebruiker voor en diskonnekteer die gebou en die gebruiker. Dit veroorsaak uiteindelik dissosiasie tussen die erfeniswaarde en die gebruikswaarde van die gebou.

Hierdie verhandeling ondersoek die werking van 'n toegeruste kantoorfasiliteit in 'n samewerkingsomgewing as 'n program waardeur die Vleisraadgebou hergebruik kan word. Die voorgestelde tipologie poog om die behoeftes vir tydelike en/of korttermyn-kantoorspasie te ondervang. Die interieur van die toegeruste kantoorfasiliteit poog om meer aanpasbaar vir die behoeftes van die kontemporêre kantoorgebruiker te wees. Die idee van 'n hotel word as analogie gebruik om die werking en estetika van die voorgestelde fasiliteit te stuur.

Abercrombie (1990) vergelyk die ingang tot interieur met die ervaring van menswording in die baarmoeder. Die baarmoeder is fundamenteel die eerste kennismaking met residensiële ruimte. Benewens die karakter en skaal van die ruimte waardeur ons in die wêreld kom, assosieer die mens, volgens Abercrombie, 'n binneruimte met hierdie eerste ervaring van 'behoort-aan'. Die verstaan van gewoontes, rituele en gemaksones van persoonlike ruimte stel ons in staat om ook by ander binneruimtes betrokke te kan raak (Abercrombie 1990:5). Verder adresseer hierdie verhandeling ook spesifiek die tema van bewoning in die publieke ruim. Die geleentheid wat interieurontwerp as 'n dissipline bied om die welstand van die mense te verbeter, word ook ondersoek. Kwessies soos die opeis van persoonlik ruimte, die verpersoonliking van ruimte, die beleving om te behoort en selfuitdrukking in die interieur word ook hanteer.

Die oorhoofse doel met hierdie verhandeling is om 'n lewensvatbare hergebruikstrategie vir die Vleisraadgebou daar te stel wat geïnspireer is deur 1) die oorspronklike bedoeling van die argitek en 2) die bestaande gebou.

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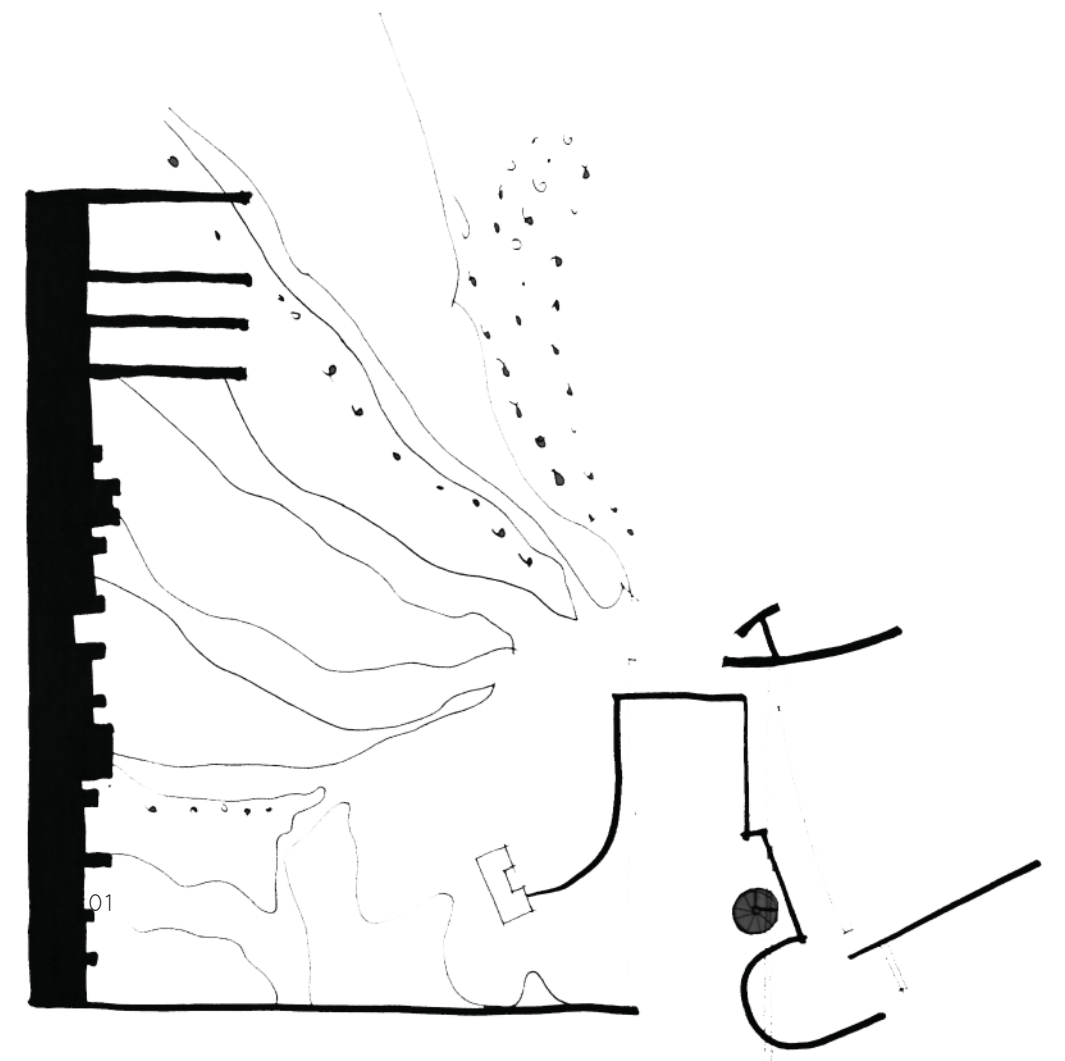


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01

## PROJECT OUTLINE

# PROLOGUE

This dissertation was born out of a fascination with the aesthetic and the experimental nature of the Modern Movement.

## 1.1. CLARIFICATION OF CONCEPTS

The following list is a clarification of key concepts used in this project.

### **Modernist**

The usage of style or terminology that is typical of the Modern Movement (Meriam-Webster [S.a.]).

### **Modern Movement**

Architectural movement of the 1900s. Architects of this period rebelled against conventions of previous eras and aimed to address contemporary social needs by the taking advantage of new materials and construction techniques (Henket & Heijnen 2002: 44). New architectural aesthetics were influenced by elements such as artistic movements, depictions of cars, aircrafts and essential technology (Henket & Heijnen 2002: 44). Ambassadors of the modern movement rejected a form of ornament and proclaimed the concept of function that dictates form (Bose 2008).

### **Modern**

Relating to, or characteristic of the present or the immediate past (Meriam-Webster [S.a.]).

### **Gesamtkunstwerk**

Synthesized work of art composed by various art forms (Meriam-Webster [S.a.]).

### **Conservation**

The umbrella term that includes all the processes of how a building is cared for in order to preserve its cultural heritage (ICOMOS 2011).

### **Preservation**

Maintaining fabric in its current condition whether in a good or deteriorating condition (ICOMOS 2011).

### **Renovation**

In practice, renovation may involve rehabilitation, rebuilding and several other activities. In addition, renovations are usually more extensive and costly than other activities for a given building. (ICOMOS 2011).

### **Retrofit**

The upgrading of a building to meet modern standards or requirements in terms of energy efficiency, security and fire protection (ICOMOS 2011).

### **Technology**

A manner of accomplishing a task especially using technical processes, methods or knowledge (Meriam-Webster [S.a.]).

### **Inhabit**

To live in, to have a home in, to be present in (Meriam-Webster [S.a.])

## 1.2 INTRODUCTION

The modern movement marks a particular point in architectural history where traditional conventions are challenged and radical design experiments manifested. The Industrial revolution at the end of the 19th century resulted in the mass production of iron, steel and glass (Henket & Heijnen 2002: 44), and created infinite prospects for architects in terms of construction and materials. Many of the twentieth century architectural icons are still admired today, but the ageing of these buildings is a global reality and the conservation of these buildings is a burning issue. In the current realm of conservation, Modern Movement buildings are often neglected and vulnerable, as the majority of conservation practice tends to focus on pre-twentieth century buildings (Henket 2008: 13). The approach to conserving Modern Movement buildings does not in essence vary from pre-twentieth century buildings as Henket states (2008:13), but the challenges faced with the process are of a different nature than those of earlier periods (Kindred 2007:1). From a technical perspective, the restoration processes of Modern Movement buildings are often challenging due to the experimental nature of the architecture (Henket & Heijnen 2002: 44). The stark reality of ageing buildings is that when the function becomes obsolete or it is no longer economically viable, owners become uninterested in spending money on the upkeep of these buildings (Henket 2008: 13) and this can ultimately lead to demolition.

As the world evolves and technology develops, it is inevitable that the user requirements change in existing building environments and the interior design discipline has a key role to play in the renovation of these buildings. The interior of a building is important as physical space with objects that allow inhabitation by working, entertaining or relaxing. Secondly, the interior of a building is crucial as container of experience. Abercrombie uses the metaphor of being born from a mother's womb to describe the psychological association with the interior space as shelter or a 'psychologically crucial container' (1990:5). Our understanding of the interior, according to Abercrombie, is largely influenced by the experience of birth (Abercrombie 1990:5). This explains why the influence of interior space on the human psychology is of great importance. The interior of a building is not merely a space of physical interaction, but a space that triggers meaning and associations differently for each user. The interior of buildings is after all where users spend most of their time, being constantly confronted with what is around them. The following statement by Frank Lloyd Wright further describes how crucial the interior environment of a building is both to its users and to the state of the building as an object.

'The space within becomes the reality of the building.'  
 (Brooks 1979: 9)

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The Meat Board building was designed by the renowned architect Hellmut Stauch and can be described as a local monument of the Modern Movement. The building claims cultural and heritage value due to its association with renowned architect Helmut Stauch, its contextual influence on the Pretoria regionalist style and finally, to its national architectural contribution.

'With the Meat Board paving the way, other Brazilian-influenced designs followed' (Gerneke 1998:217)

According to Gerneke (1998:217) the building is the first Modern Movement building nationally that demonstrates Brazilian elements such as moveable louvres and garden elements as a climate specific approach to the Modern Movement architecture of the time. The building subsequently was a major influence on the development of the Pretoria Regionalist style. Remarkable handcrafted elements and design innovation in terms of materials and construction contribute to rich cultural heritage that should be preserved and exhibited for future generations.

The building is situated on the edge of the Pretoria CBD, in Arcadia, which is an ideal location for a contemporary, state of the art office building. The building is privately owned but currently occupied by the Department of Public Works. The overall structure and exterior of the building is intact and in a relatively good condition, but the interior space is underutilized, lifeless and dull and contrasts the intended vision of a friendly, light-hearted office space as originally described by the architect (Stauch 1951:3). There is an apparent dissociation between the heritage value and the use value of the building. The current detrimental quality of the interior space contributes to an isolated, outdated working environment. The building is located on a vibrant street corner that forms part of the surrounding public transport networks, but the current blunt street corner facade discards any public interaction. The building as a whole is unresponsive to the modern corporate practice, and social patterns of office users.

## 1.4 AIMS/ OBJECTIVES

1. The project intends to determine a viable reuse strategy for the Meat Board building by drawing inspiration from the original intent of the architect and from the existing (original) fabric.
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3. The intervention aims to add softness and an element of adaptability to the current harsh and impersonal office environment.

4. The proposed intervention aims to diminish the disconnection between the user and the building.

## 1.5 RESEARCH QUESTIONS

1. What is the original intent of the architect? Is this intent realistic and relevant within the context and current paradigm?
2. What elements of the existing fabric can be used as inspiration to generate a design language for the proposed intervention?
3. How did working space evolve since the modern movement? What are the contemporary trends within the design of working space?
4. What factors contribute to the disconnection between the user and the Meat Board building?
5. What role does the interior designer play in the way that people inhabit space?

## 1.6 DELIMITATIONS

1. In order to complete the M(Int)Prof dissertation, the following assumptions are made:

BRIEF:

The current owner of the Meat Board building approaches an interior designer with the need to renovate the building into contemporary office space in order to attract a corporate company (companies) as tenant with the aim to increase the overall rental income of the building.

To implement the abovementioned brief, the following assumptions are made:

- \_ The formal client of the project is the owner of the Meat Board building,
  - \_ Existing tenants are relocated into new venues.
2. This dissertation focuses on the design of public space within the building and does not deal with offices on detail design level. Proposals for the spatial planning of the offices are made on building scale and proposals are made for the aesthetic quality of the office environment within the building.
  3. Proposals are made for upgrading of building services within the scope of the interior designer, but these diagrams will be review and

specified by the appropriate engineering professional.

## 1.7 METHODS

### \_ Literature studies

A literature review was conducted to create a broad understanding of current trends within the workplace.

### \_ Case studies

Case studies were performed to gather information that can be applied to design.

### \_ Historical Research as design method

As one of the aims of the dissertation is to develop a reuse strategy by drawing inspiration from the intent of the architect and from the existing (original) fabric, it was necessary to carefully study and interpret all the available information of the original Meat Board building. The original intention and vision for the building by the architect was studied by referring to articles written by the architect himself and by other journalists. Access to photographs of the original interior as designed by Stauch helped to interpret his intension as described in written format into spatial observations. Wang (2013: 174) describes the nature of historical research as interpretational due to the absence of empirical data. He advises that the researcher must make use of various methods to unveil and understand historical evidence as it is interpreted by his state of mind and his personal frame of reference. Furthermore, the existing (original) fabric was studied in terms of materials, construction methods and colour palette and was used as design inspiration.

### \_ Mood board as design exploration method

Mood boards were composed in order to explore the aesthetics of the proposed interior and how it relates to the existing fabric.

\_ From the start of the project, the site was the one constant factor that guided the development of the project. Figure 1.1 demonstrates the design process.

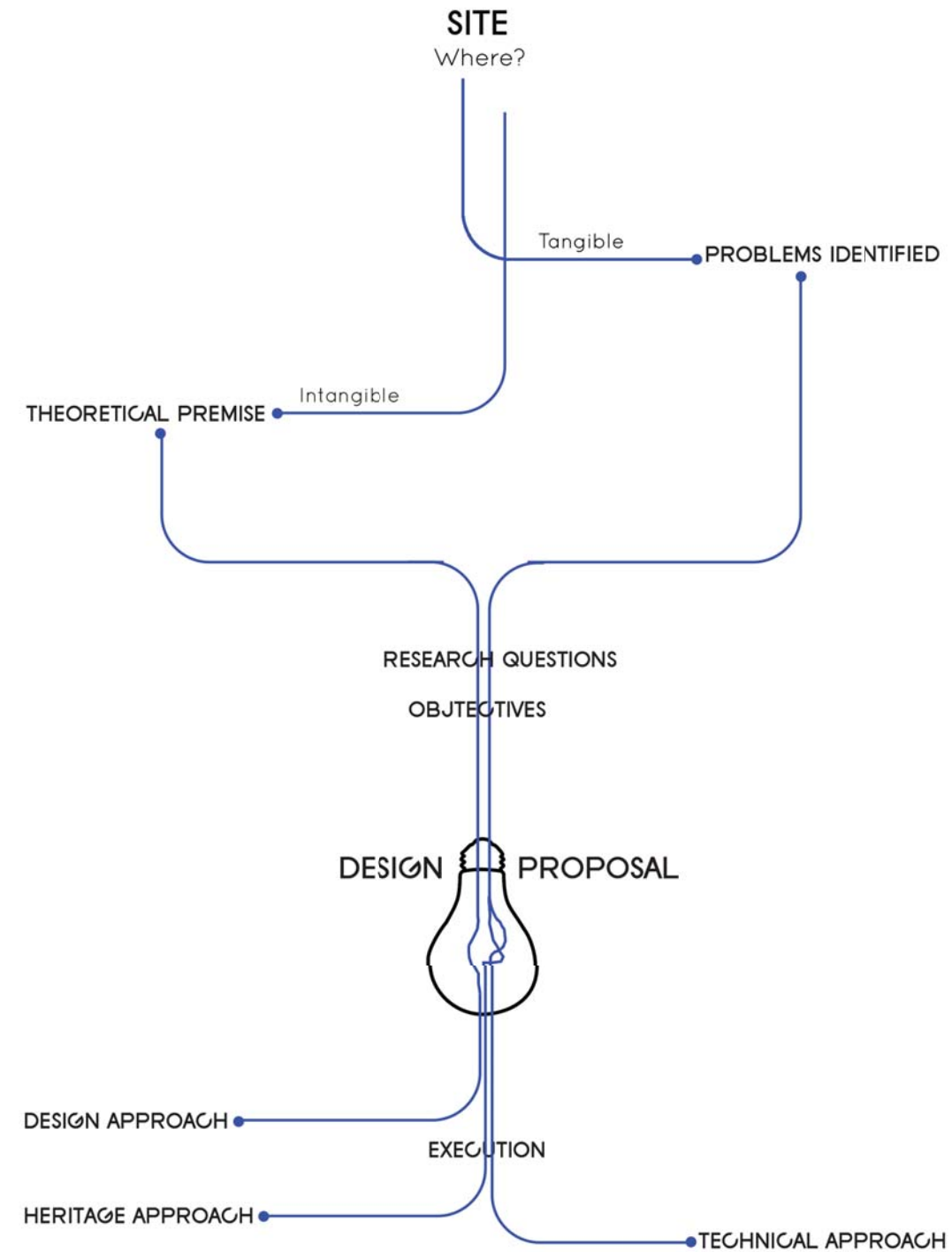


Figure 1.1 Diagram demonstrating design process.

# 01 Domesticating Modern Movement space

Adaptive Reuse of the Meat Board building as a serviced office facility.



Figure 1.2 Design exploration mood board experimenting with ways in which modern movement elements can be combined with the contemporary within constellations in the interior.

## ABSTRACT

The Meat Board building is an icon of Modern Movement heritage with Brazilian influences in Pretoria. The building claims cultural and heritage value due to its association with renowned architect Helmut Stauch. Its contextual influence on the Pretoria regionalist style and finally, to its national architectural contribution.

The current condition of the interior of the building contributes to an outdated, lifeless and dull working environment that directly contrasts the intended vision of a friendly, light-hearted working environment as originally described by the architect (Stauch 1951:3). The current interior is unresponsive to user needs and this results in a disconnection between the building and the user. Subsequently, there is an apparent dissociation between the heritage value and the use value of the building.

This dissertation explores the operation of a service office facility in a collaborative working environment as a programme in which the Meat Board building can be reused. The proposed typology caters for temporary and/or shared office space needs. The interior of the proposed serviced office facility aims to be more adaptable to the needs of the contemporary office user. The analogy of a hotel is used to guide the operation and aesthetics of the facility.

Abercrombie (1990) compares entering an interior to the intimate experience of becoming human in the womb. The womb is fundamentally the first association we have of residential space. Irrespective of the character or scale of the space we may experience when we enter this world, Abercrombie states that we tend to associate an interior space subconsciously with this first sense of belonging. By understanding the habits, rituals and comfort zone of our personal room, we are able to engage with an interior space (Abercrombie 1990: 5). The dissertation further deals with the theme of inhabitation in the public sphere. The capability of the interior design discipline of improving human well-being by design is explored. Issues such as the claiming of personal space, customization of space, sense of belonging and self-expression are addressed.

The overall aim of the dissertation is to determine a viable reuse strategy for the Meat Board building by drawing inspiration from the original intent of the architect and from the existing (original) fabric.

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## 1.8 DESIGN DISTRIBUTION

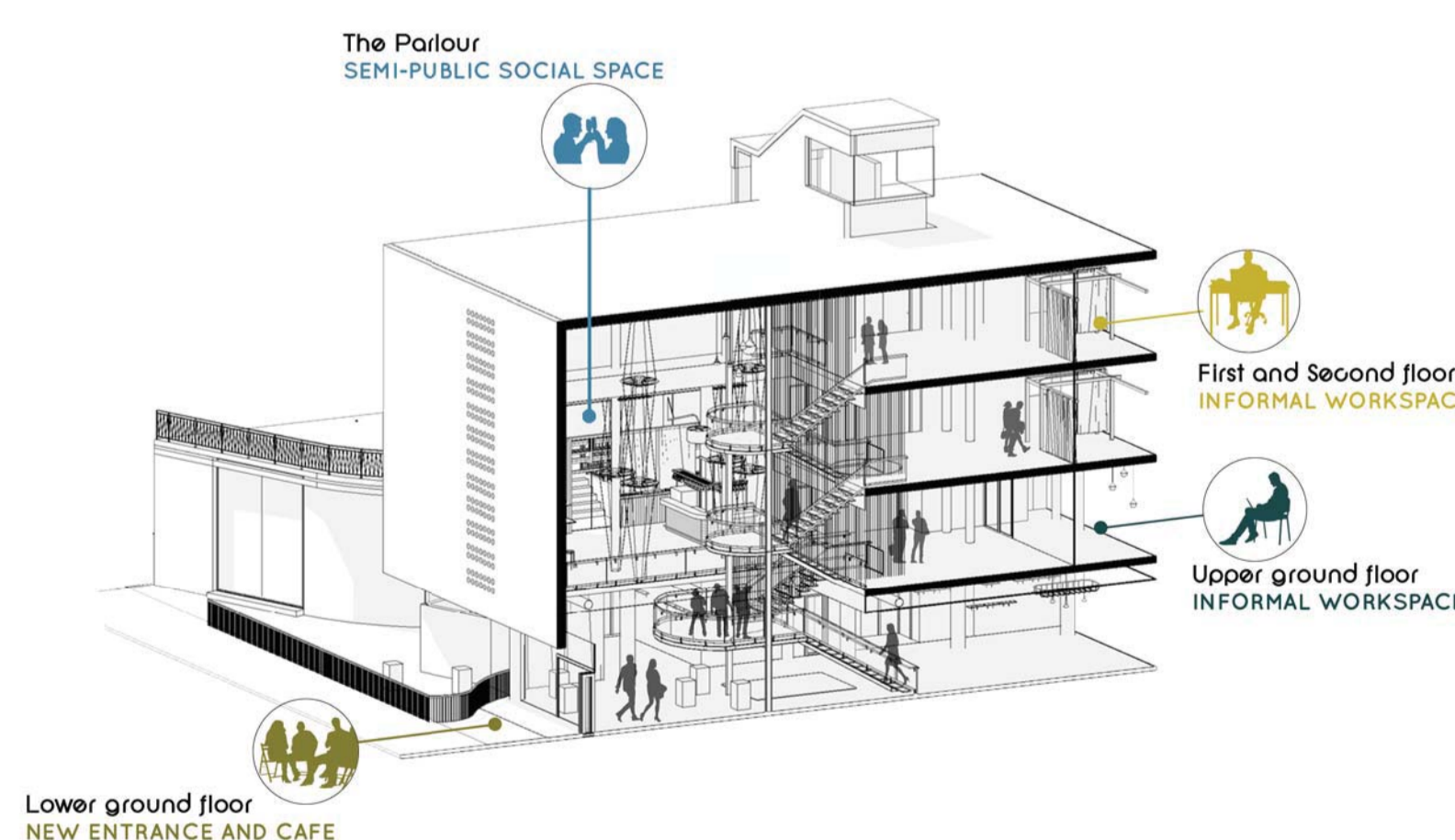
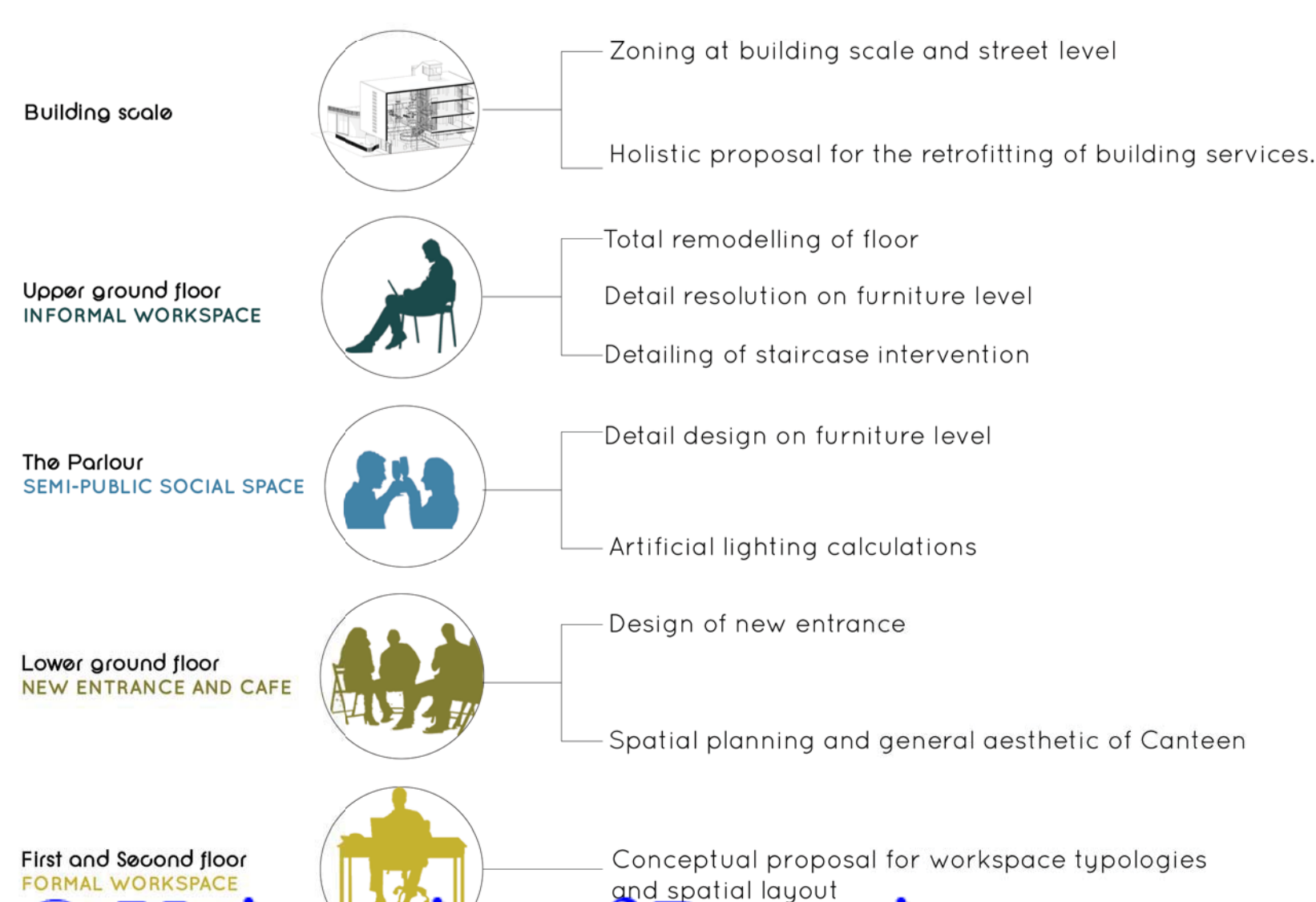
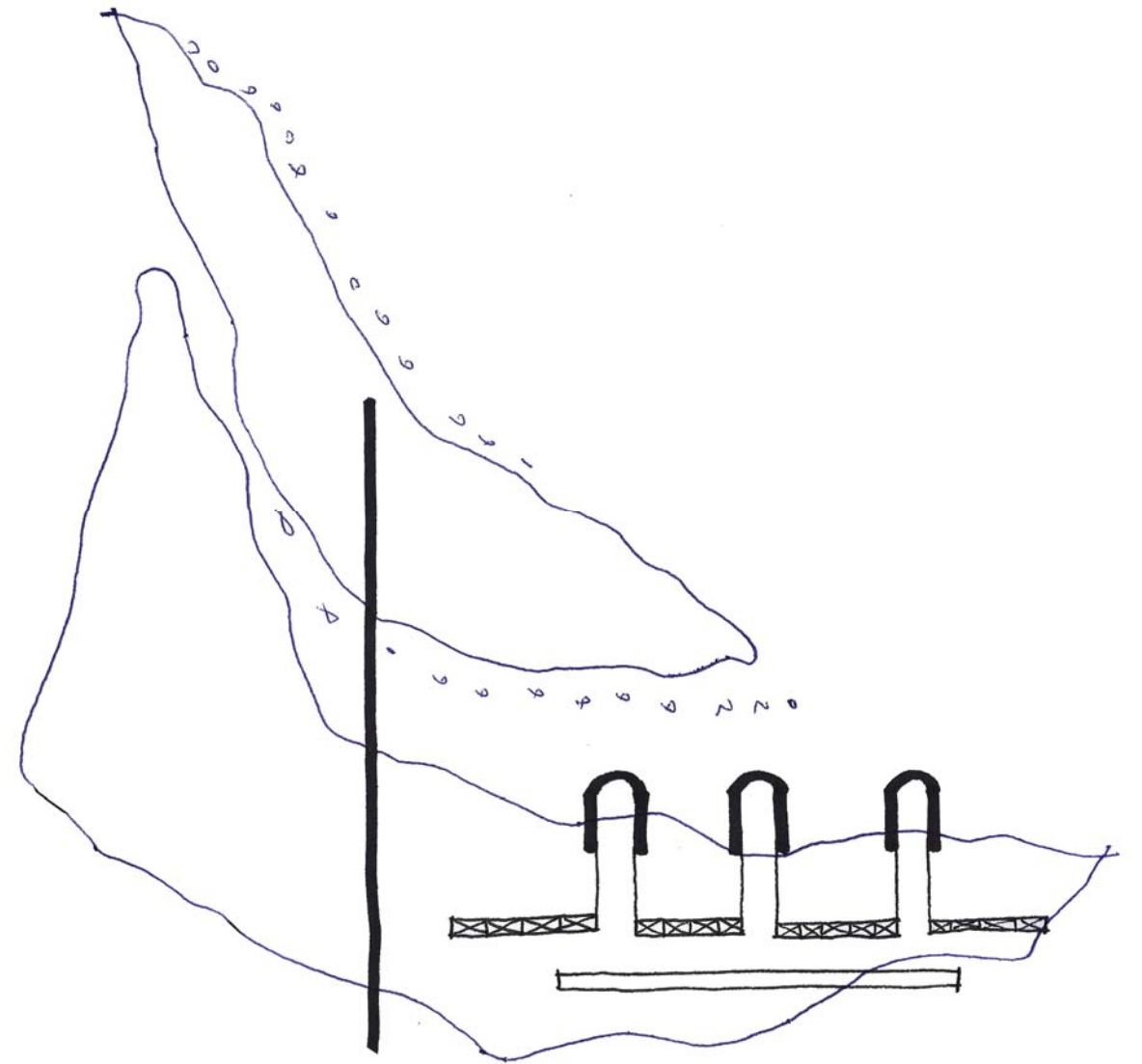


Figure 1.3 Diagram showing different areas of design focus in the project.

### 1.8.1 PROJECT LAYOUT





02

## SITE AND CONTEXT

## 2.1 INTRODUCTION

This chapter includes the analysis of the Meat Board to identify possible design influencers and issues affecting the proposed project. As mentioned earlier, the main design driver and constant factor in this dissertation from the beginning is the choice of site. The subsequent factor was understanding the site: the tangible and intangible factors were key to understanding the design resolution. Brooker & Stone in *Rereadings: Interior Architecture and the Design Principles of remodelling existing buildings* suggest a structure of the analysis of existing buildings that is used in this chapter. The format of the site and context analysis were done within the four main themes as suggested by Brooker & Stone: Context and Environment, History and Function, Form and Structure and Proposed function.

'The form of the adaption must be based on the form of the original building. Without an in-depth understanding of the unique qualities of the existing situation, it is impossible to create a coherent and comfortable remodelling' (Brooker & Stone 2004: 14).

The analysis commences with contextual background of Pretoria, specifically Arcadia and the need for office space in the area is investigated. The Tshwane 2055 Government framework is discussed and identified as the large urban vision that the proposed project aligns with. A street level context investigation considers the shortcomings and opportunities with the approach to the building. An in-depth analysis of the Meat Board building as site follows where intangible historical factors and physical aspects of form and structure are discussed. The chapter concludes with a proposal for a programme in which the building can be reused.

## 2.2 CONTEXTUAL BACKGROUND

### 2.2.1 OFFICE SPACE IN PRETORIA CBD

Urban sprawl and extensive development to the east and south of Pretoria resulted in the formation of nine nodes of office development around the Tshwane municipality. According to IOL Property these nodes are: Arcadia, Brooklyn, Hatfield, Lynwood/Menlopark, Menlyn/Faerie Glen, Pretoria's eastern suburbs, east Centurion and Highveld Technopark (Mudzuli 2014). It seems that the trend in the capital is that the CBD is mostly occupied by government departments and that private corporate companies migrate towards the new business nodes (Mudzuli 2014).

Various factors may have triggered the current trend of decentralization in the municipality. The first being a lack of public transport. Inadequate public transport led to an increased use of private transport that severely congests the road network. Secondly, old office buildings in the CBD often do not have sufficient parking for modern requirements (Mudzuli 2014). Additionally, modern

organizations often prefer to occupy 'green buildings' due to the economic advantages of lower energy usage and other benefits and old buildings can be costly to retrofit accordingly (Paviour-Williams 2013).

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### 2.2.2 TSHWANE 2055 VISION

The Tshwane 2055 Vision is an official campaign launched by the government of South Africa that directs future development towards a collective vision for the Tshwane district. The Tshwane 2055 Vision document reveals valuable information on the population distribution, economic sectors and the heritage of the capital.

Although Gauteng is the smallest province of the country, it is most densely populated and claims most economic activity. According to the report, the majority of Tshwane's population consists of 'youth' (classified as people 35 and younger) and it states that there is a definite need to create business opportunities for this age group. This biggest development issues in the city subsequently involves 'unemployment, education, security and participation' (Tshwane 2055 2014).

### 2.2.3 BUSINESS OPPORTUNITY WITHIN THE CAPITAL

Gauteng is known for its various business opportunities and is considered as the 'economic engine' of the country. The population of Gauteng has grown from 2.1 million in 2001 to 2.9 in 2011 and is expected to continually grow. The population growth reflects an influx of people in search of economic opportunities. The amplified economic opportunity subsequently increases the demand for infrastructure development in the area (Tshwane 2005 2014).

The major business sectors in the capital include government, social and personal services, finance and business services, automobile industry, wholesale, retail, trade & manufacturing. Additionally Tshwane is appraised to produce 90% of all research development with institutions such as Armscor, Medical Research Council and the Council for Scientific and Industrial Research, among others (Tshwane 2055 2014).

### 2.2.4 HERITAGE RESOURCES WITHIN THE CAPITAL

A capital city as such, inherits a certain symbolic character of identity and monumentality that is translated through architecture, cultural artefact and other cultural rituals. Tshwane is currently the political and administrative capital; Cape Town is the seat of the legislative

branch and Mangaung, the judicial capital. Historical city planning and political events contributed to the forming of three capital cities, which may deny some of Pretoria's monumental quality as the seat of executive authority.

The remodelling of the capital city therefor focuses on enhancing Pretoria's monumentality as capital city and on other crucial issues such as housing, economic use of space and functionality of nodes in the city (Tshwane 2055 2014).

### 2.2.5 NELSON MANDELA CORRIDOR

The Nelson Mandela corridor will be located around the Apies River and along Nelson Mandela Drive. The proposed plan is to lift the water level of the river with a nearby source with the aim of creating a promenade of arts, culture, business, sport and entertainment. The aim is to attract financial businesses and high-end retail services to the promenade (Coggin & Trangos 2013).

### 2.2.6 GOVERNMENT BOULEVARD

The proposed government boulevard is a joint project by the City of Tshwane and the Department of Public Works. This corridor aims to provide a long-term solution to the accommodation of government head offices and municipal agencies. A key focus of this project involves the creation of public space that will reflect 'the national spirit' and will house events such as celebrations, marches and festivals (Coggin & Trangos 2013). The boulevard will be located mostly on WF Nkomo Street and will include wider streets, pedestrian lanes and green spaces (Mudzuli 2014). Figure 2.1 shows the location of the Government Boulevard in relation to the site.



# 02 Site and Context

## 2.3 MACRO CONTEXT

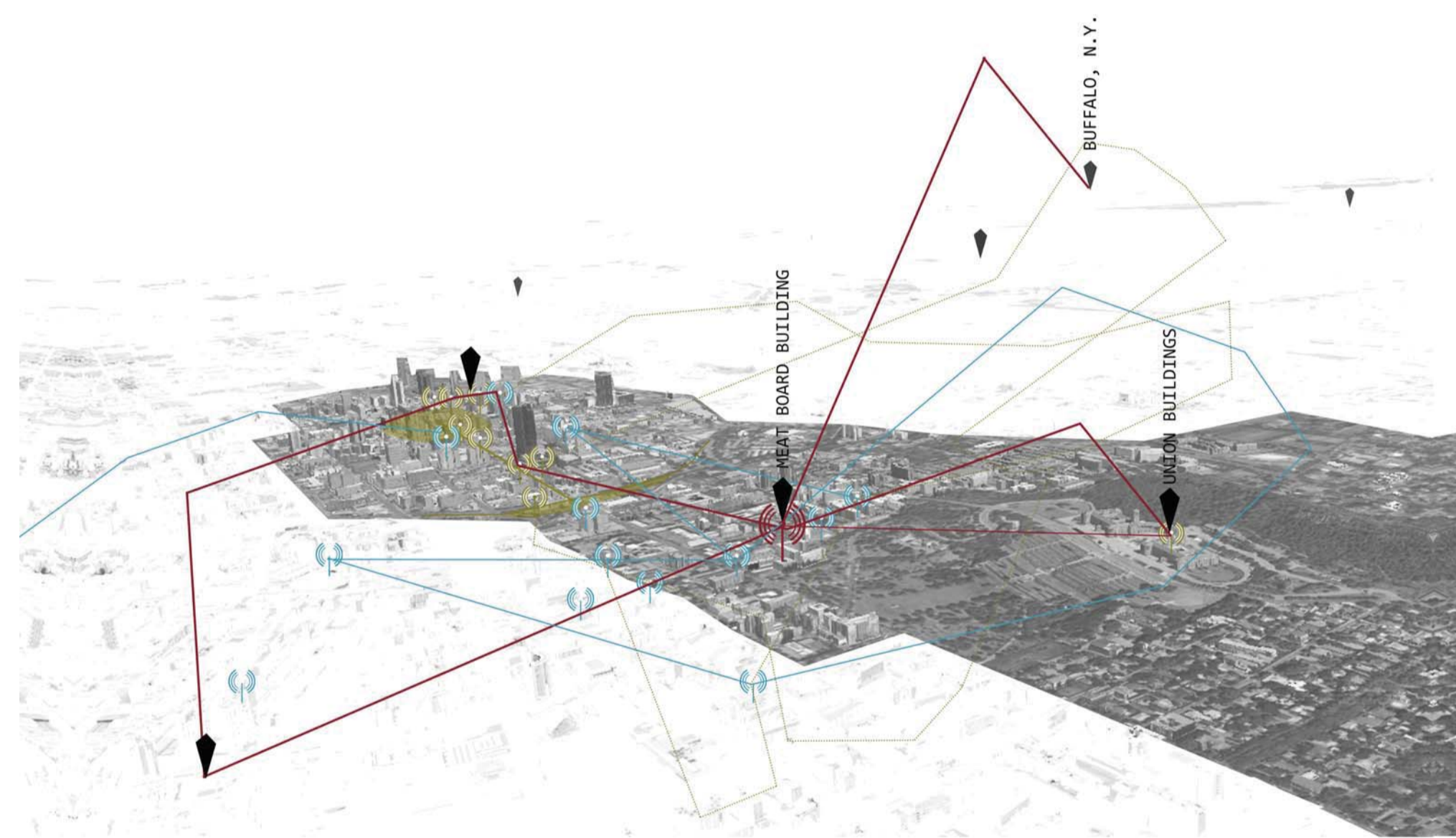
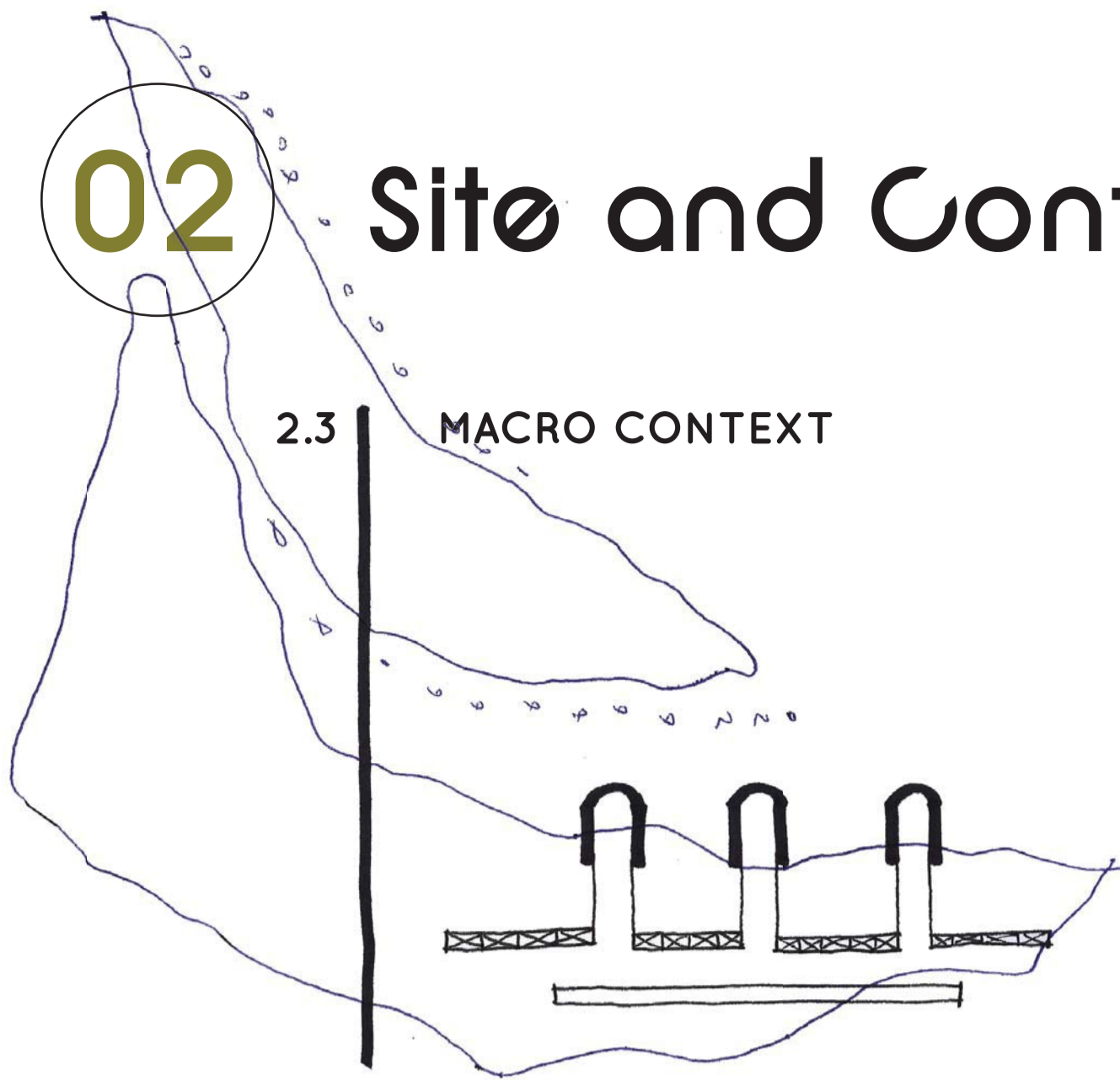
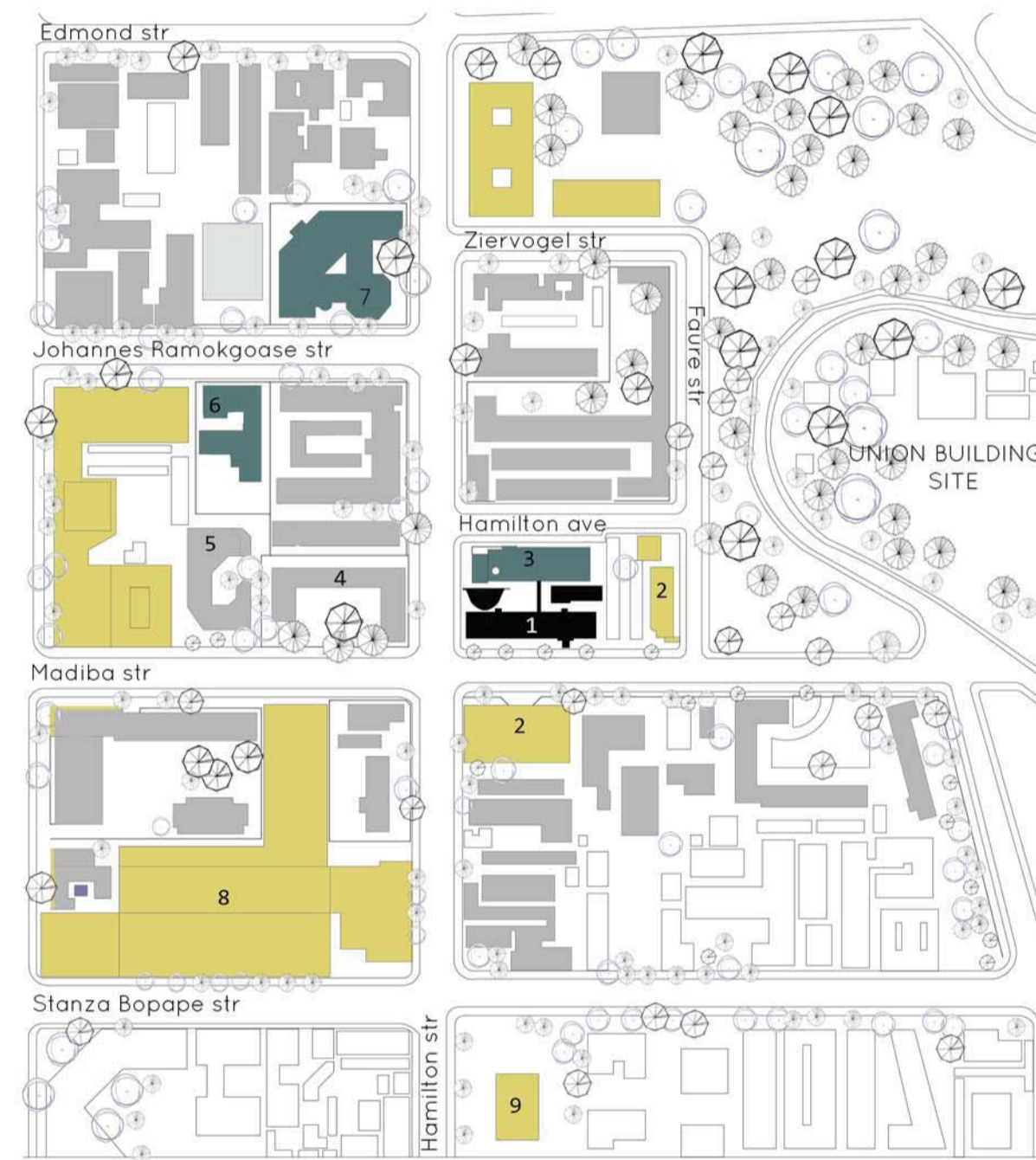


Figure 21 Conceptual aerial view of the macro context of the Meat Board building.

## 2.4 MICRO CONTEXT

The Meat Board building is situated in Arcadia, a fringe development of the CBD. Arcadia is originally a residential area and a few original houses are still found within the area, but the suburb consists mostly of large-scale residential and commercial functions. Various embassies and government departments are located in Arcadia. According to Paviour-Williams, office parks in Arcadia are few and far apart and generally offer 3500 square meter office space or less (Paviour-Williams 2013).

The location of the Meat Board building on Madiba Street provides easy access to and from the CBD and the East of Pretoria as it is in 2km radius from the Gautrain station and in 1.5 km reach of the A Re Yeng bus service. Access to the site is currently difficult for private vehicles as there is a lack of parking on site although the parking arcade of the Sancardia shopping Centre is available as alternative. The immediate environment of the site is harsh for pedestrians as there are no in-between pause spaces with seating or pedestrian friendly street crossings. The lack of pedestrian interfaced functions on street level contributes to this unfavourable pedestrian environment.



- KEY:
- Commercial Facility
  - Government department
  - Residential Facility
  - 1. Meat Board Building (site)
  - 2. Health Professions Council of South Africa (HPCSA)
  - 3. Department of Agriculture, Forestry & Fisheries
  - 4. Orange Court Guest House
  - 5. Arcadia Hotel
  - 6. National Presidency
  - 7. Department of Cooperative Governance & Traditional affairs
  - 8. Sancardia Shopping Centre
  - 9. Mc Donalds

Figure 2.3 Map showing micro context of the Meat Board building.

## 2.4.1 STREET LEVEL CONTEXT

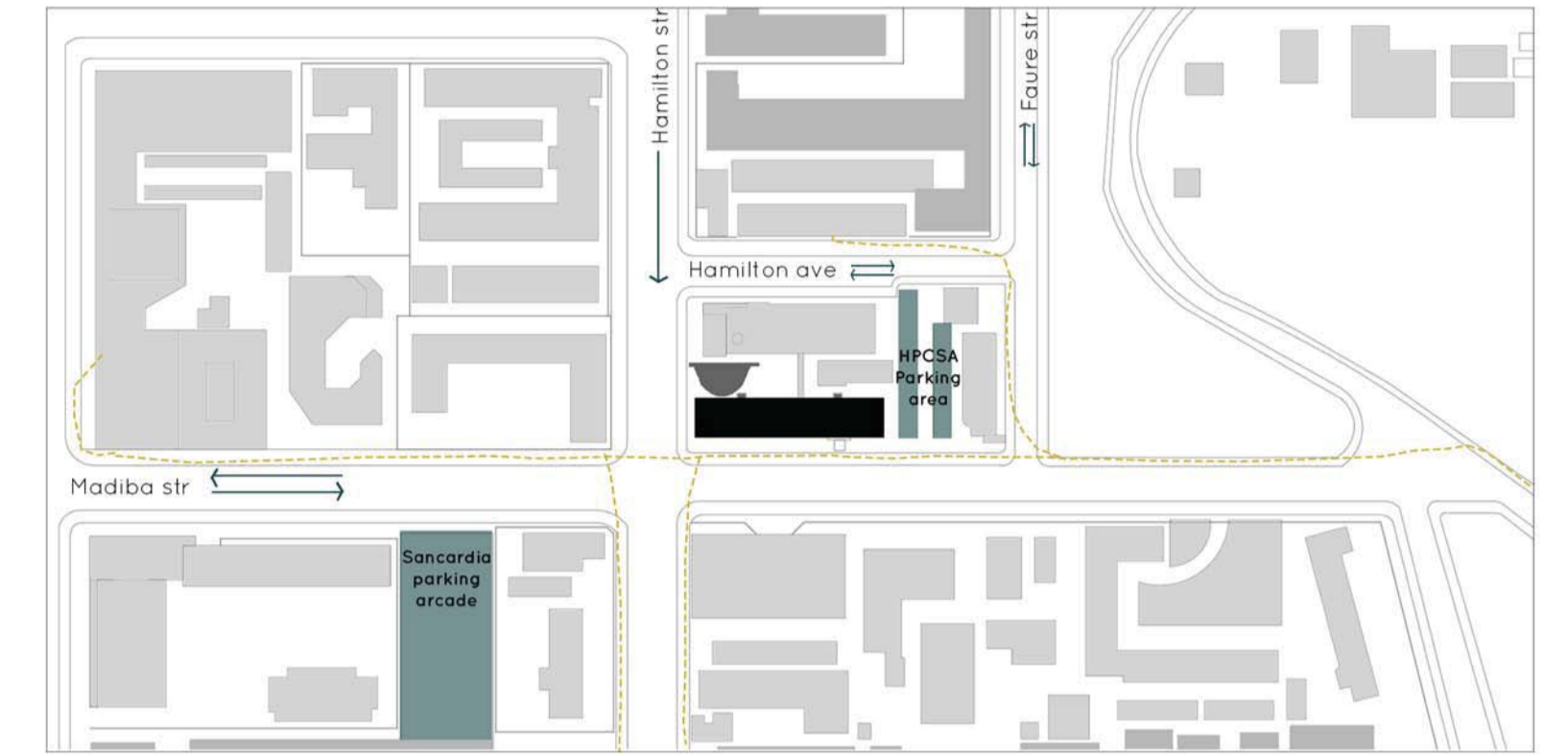


Figure 2.4 Diagram showing vehicle and pedestrian circulation around the site.

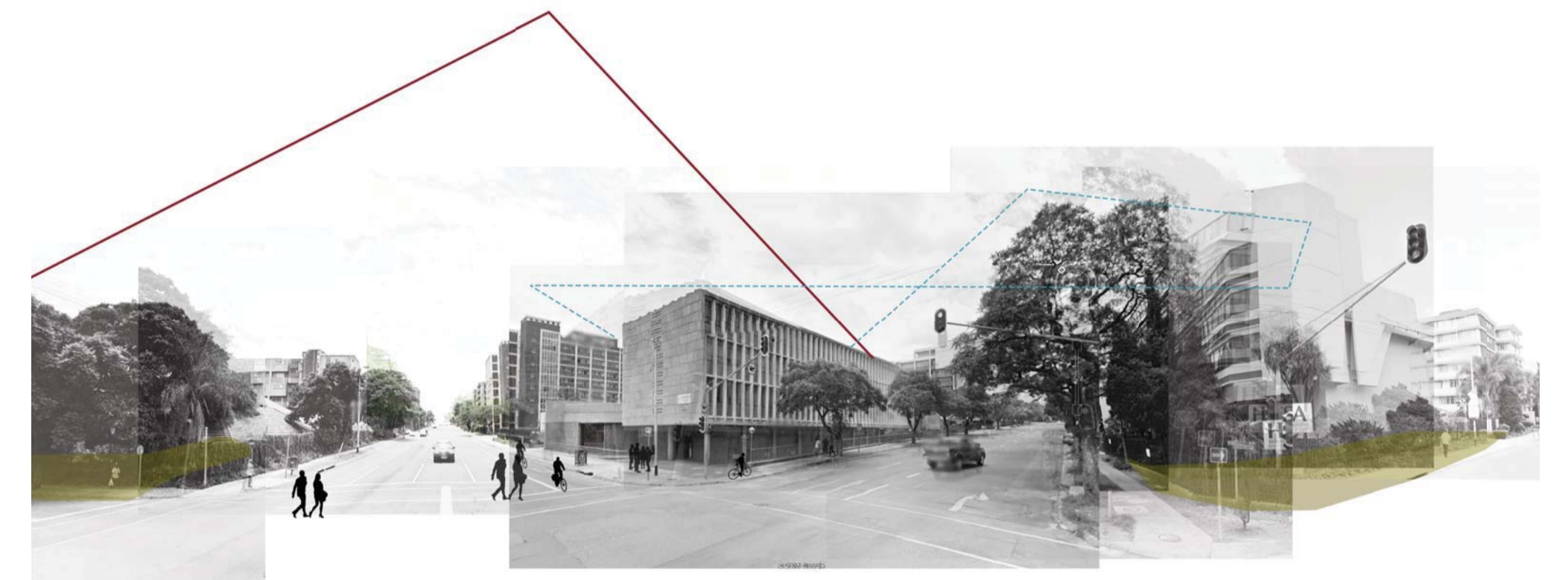


Figure 2.5 Conceptual perspective of the immediate context of the Meat Board building.



Figure 2.2 Diagram that shows location and proximity of points of interest in the immediate context.

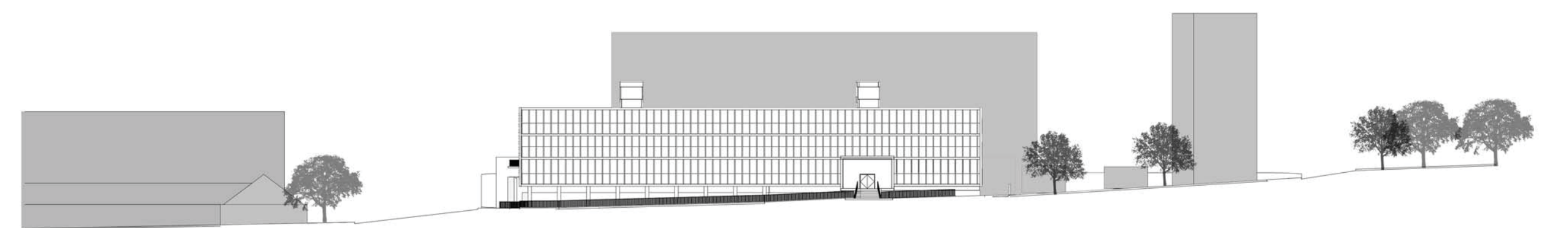


Figure 2.6 East West Site Section showing the scale of the Meat Board building in its context.

# 03 Meat Board building: a local Modern Movement icon

## 2.5 HISTORY AND FUNCTION

### 2.5.1 BACKGROUND INFORMATION

<b>DATE OF ORIGIN:</b>	1951
<b>CURRENT NAME:</b>	Nipilar House
<b>ARCHITECT:</b>	Hellmut Stauch
<b>ADDRESS:</b>	140 Hamilton Street, Arcadia, Pretoria
<b>COMMISSIONING OWNER:</b>	Livestock & Meat Industries Control Board
<b>CURRENT OWNER:</b>	Private owner
<b>CURRENT OCCUPANT:</b>	Department of Water Affairs & Public Works
<b>TPOLOGY:</b>	Office Building

### 2.5.2 STATEMENT OF SIGNIFICANCE

The Meat Board building by Hellmut Stauch is an iconic Modern Movement building in the architectural history of Pretoria and South Africa. The building holds significant tangible and intangible architectural value in its context. The legacy of the building falls under three main themes: (a) Modern Movement architecture; (b) Brazilian influenced architecture and (c) regionalist architecture within Pretoria.

The building as civic building is revolutionary from a stylistic viewpoint as the design challenges the classical style of most civic buildings at the time. The building reflects typical morphological elements of the Modern Movement such as an elevated mass on pilotis, horizontal windows and a roof garden.

On an excursion to Rio de Janeiro, Brazil, Stauch visited the Ministry of Education building designed by renowned architect Oscar Niemeyer. During this time, Stauch was inspired by the manner in which Niemeyer incorporated climatic principles into his architecture. The Meat Board building holds historical value as it can be considered a prototype for creating climate responsive architecture in South Africa. The textured mosaic tiling on columns, the organic garden layout and the organic morphology of the boardroom reflect a unique Brazilian character and should be preserved. The moveable sun control louvres on the northern façade holds historical significance as this is the first of its kind in South Africa (Nation 1985) and it is revolutionary in the current ecologically conscious paradigm.

Lastly, Stauch's ecological innovations in the Meat Board building can be seen as an influencer for the regionalist design approach of the Architecture School of Pretoria.

### 2.5.3 SIGNIFICANT ELEMENTS

The exploded view of the Meat Board building shows significant elements in and around the building.

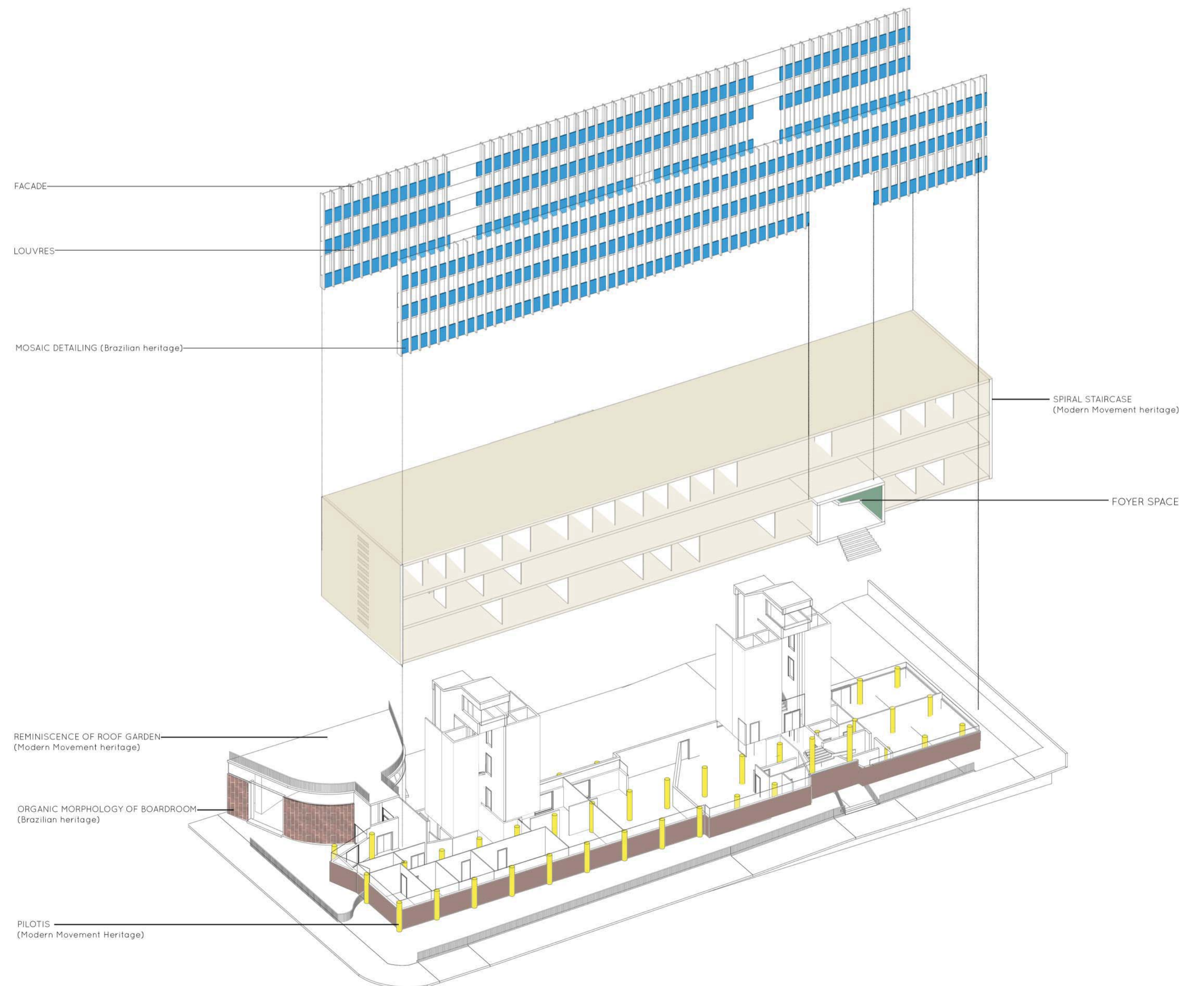


Figure 27 Meat Board building street view (Google Earth [S.a.]).

Figure 28 Exploded axonometric view demonstrating elements of cultural and heritage significance.

# 04 Current Condition

## 2.5.4 EXPLORING THE EXTERIOR



Figure 2.9 Building corner articulation.  
Figure 2.10 Window detailing on Western facade.  
Figure 2.11 Main entrance.  
Figure 2.12 Articulation close up showing entrance and facade detailing.  
Figure 2.13 Exterior spiral staircase.  
Figure 2.14 North facade view showing sun control louvers.

## 2.5.5 CURRENT INTERIOR CONDITION

The Meat Board currently serves as offices for various tenants of the Department of Public Works. The atmosphere in the building is gloomy and dark- not in line with the vision of a light and colourful working environment that Stauch originally envisioned. The current interior finishes are outdated and lack sophistication and the static cellular arrangement of offices contribute towards a dark, isolated environment. From a structural perspective, the building is in a good, useful condition. Currently the building does not comply with SANS sanitation requirements and this contributes towards an uncomplimentary working environment.

## 2.5.6 PREVIOUS FUNCTION

The original programme of the building was an office building for the Meat Board (Stauch 1951: 1). Meat was graded and tested on the ground floor of the building and the rest of the building consisted of administration offices for the Meat Board. The architect describes the requirements of the building to be typical of an administrative organization. The architect recognized the rapid pace at which the workplace environment changes and therefore he tried to compensate with the design of a flexible interior space (Stauch 1951:1).

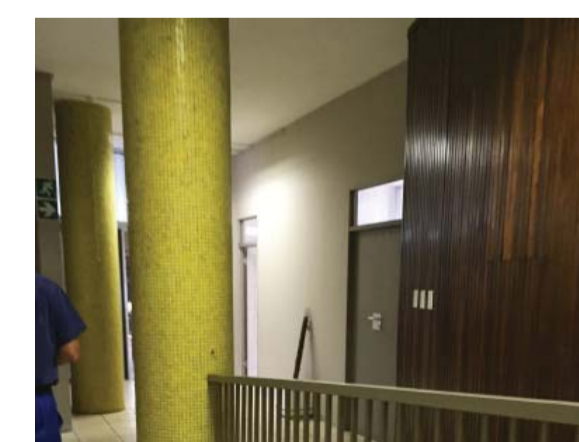
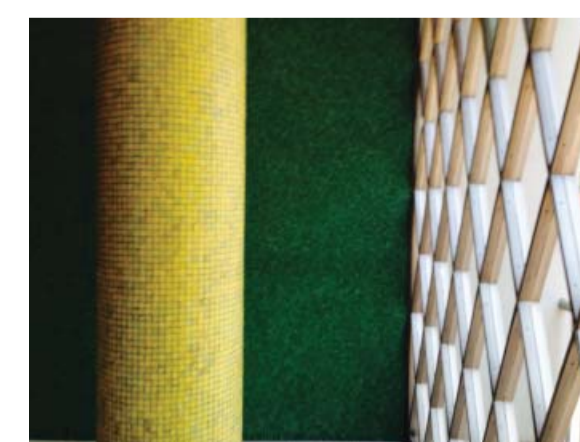
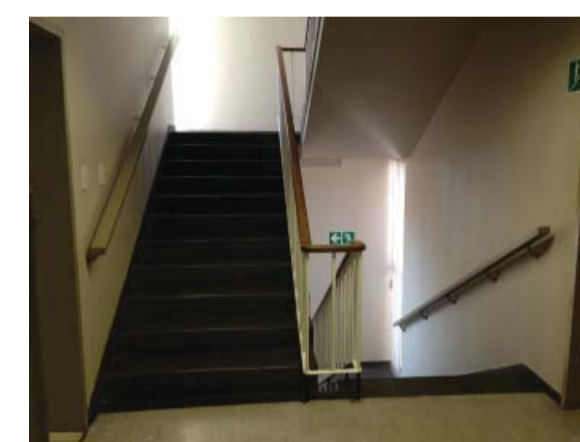


Figure 2.15 Boardroom interior view.  
Figure 2.16 Entrance foyer interior view.  
Figure 2.17 Existing interior staircase.  
Figure 2.18 Laboratory interior on upper ground floor.  
Figure 2.19 Entrance foyer detailing.  
Figure 2.20 Lower ground floor corridor view.  
Figure 2.21 Existing corridor space on first floor.  
Figure 2.22 Existing corridor space on upper ground floor.

## 2.5.7 ADDITIONS

Additions to the structure were made in 2006 when the Department of Government Works relocated staff into the building. These additions were made with one goal only: to fit maximum office space into the building. The additions consisted of the insertion of dry walling on all floors and the restriction of the thoroughfare on the ground floor level to allow for more office space. The consequence of obscuring the thoroughfare is that the intimate garden space that mimics the original residential environment is lost. Furthermore, a connecting corridor to the building north of the Meat Board building, currently the Department of Agriculture, Forestry and Fisheries, was constructed. Since then, the access corridor between the buildings have been blocked and unfortunately, the most significant façade of the building is obstructed with an obsolete addition. Except for the connecting corridor, the additions made to the structure fortunately did not cause any physical damage to significant elements, but the intervention resulted in the situation that part of the character and authenticity of the original design got lost.

### LOWER GROUND FLOOR

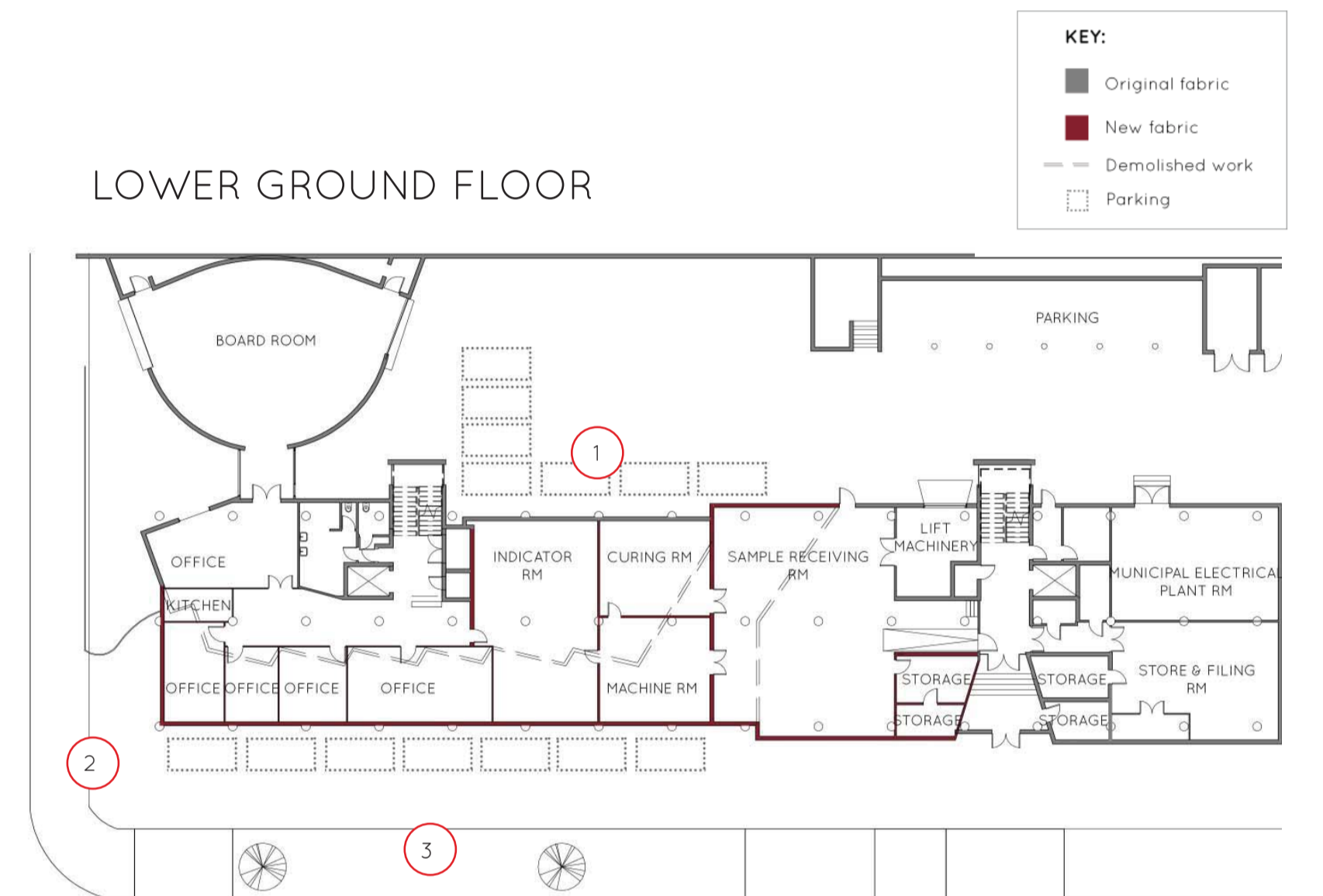


Figure 2.23 Lower ground floor plan diagram showing additions.

#### SUMMARY OF LOWER GROUND FLOOR ADDITIONS:

1. Original garden removed and area paved to provide parking facilities.
2. Street corner facade closed to provide extra office space. The illusion of a 'floating cube' is no longer visible- a character-defying element is lost.

#### RESULT:

3. Open space on site is used as parking facilities and this is detrimental for the overall functioning of the building from a space planning point of view.

### TYPICAL OFFICE FLOOR

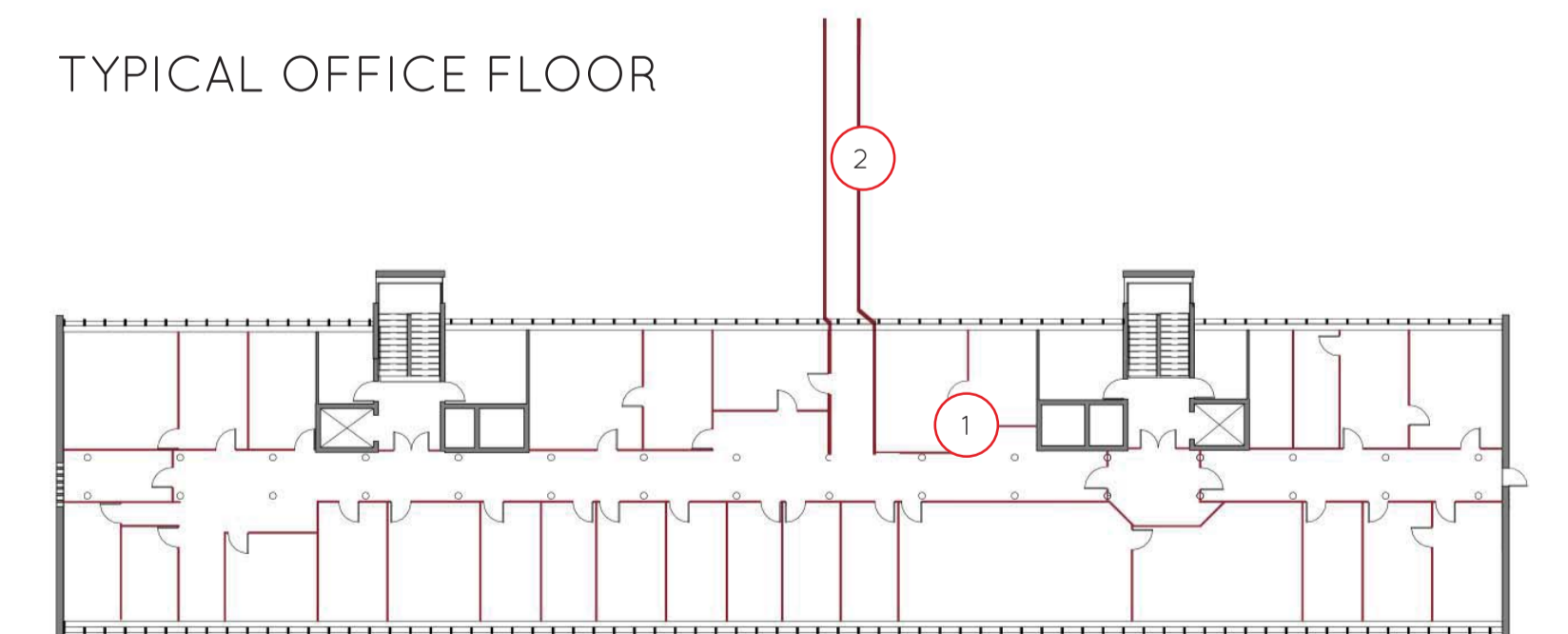


Figure 2.24 Upper ground floor plan diagram showing additions.

#### SUMMARY OF UPPER GROUND FLOOR ADDITIONS:

1. All original office system was constructed of asbestos and had to be removed for health reasons. The original flexible partitioning system was replaced by static dry walling.
2. A connecting corridor between the Meat Board building and the building to the North was constructed. Since then, the owners of the respected building have come to bad terms and the corridor is no longer used.

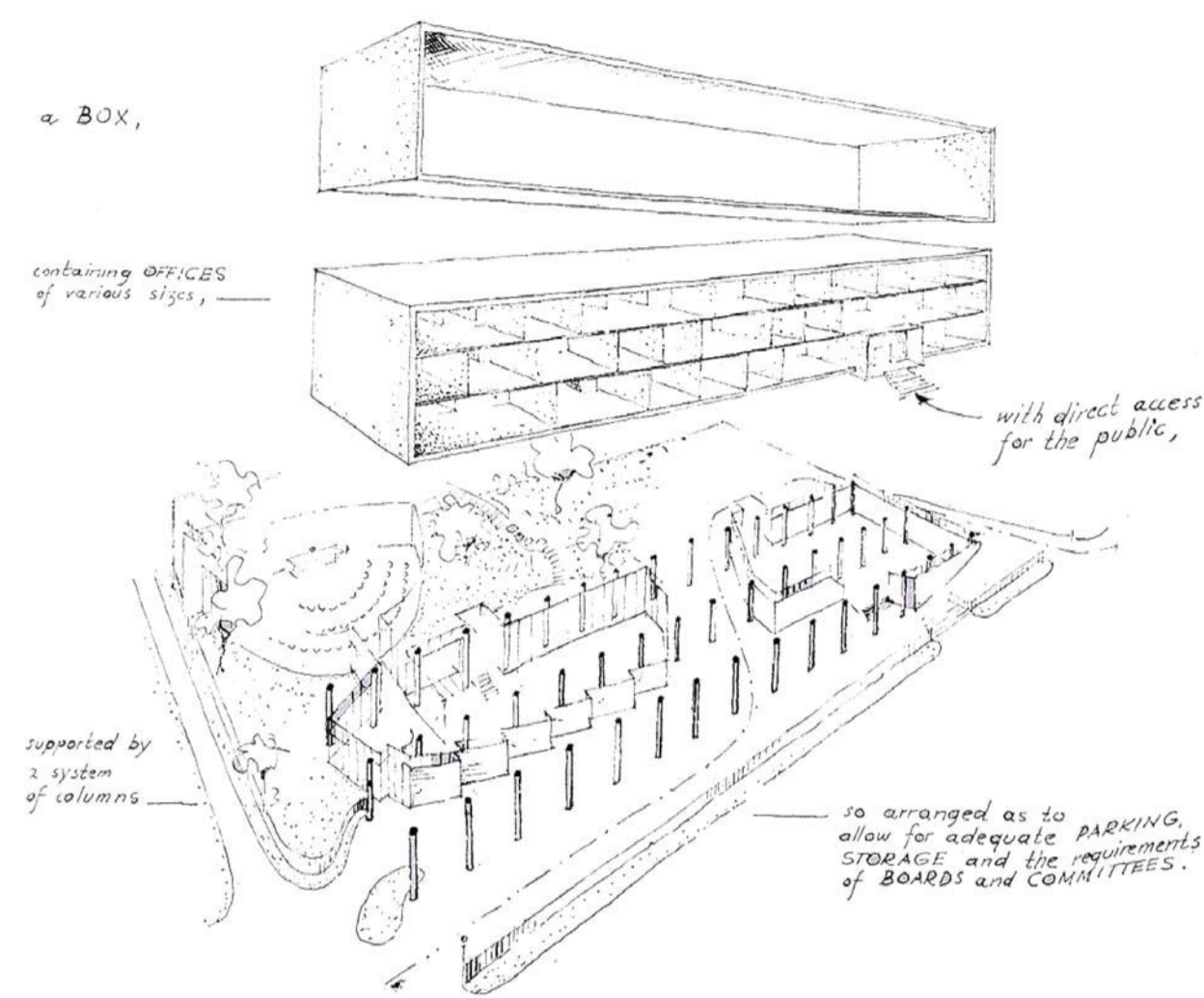
#### RESULT:

The current interior space within the Meat Board building is static and consists of a range cellular office without any space for socialization and interaction between users and this has a negative effect on the culture within the building as a whole.

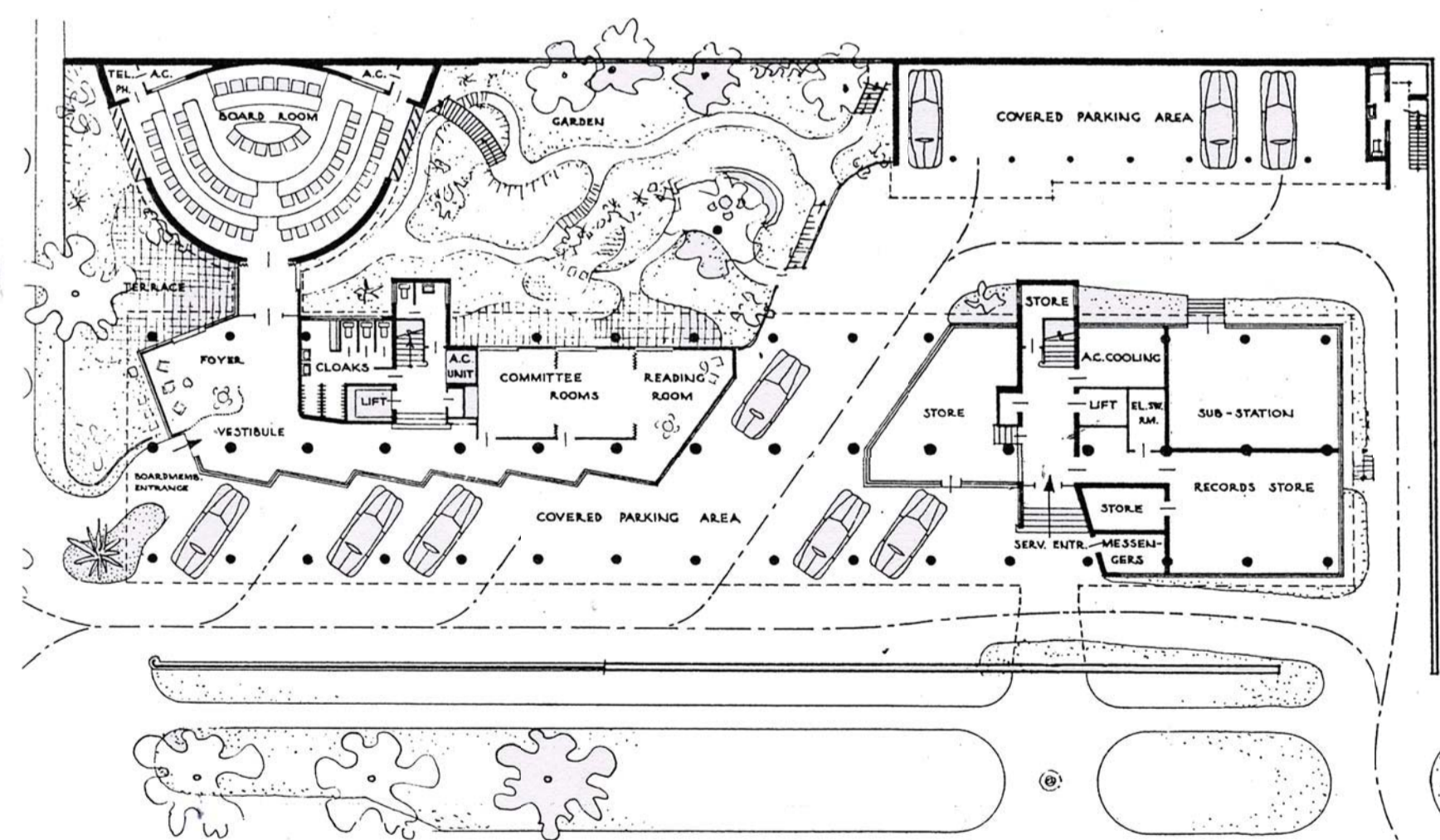
# 05 Architect's Vision

## 2.5.8 ORIGINAL INTENT BY STAUCH

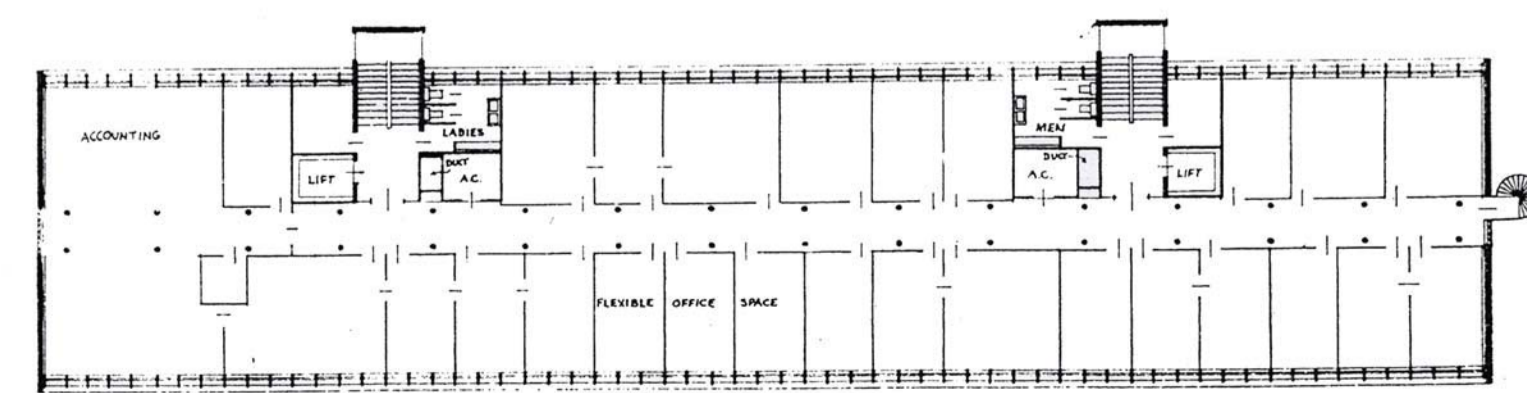
The original intent by architect Helmut Stauch was to create a colourful, positive and stimulating working environment (Stauch 1951: 3). His design response to this intent was to create modular office space with moveable partitions- an innovative and revolutionary solution for the time. The scale of the windows on the facade allows the user to have a connection with the context, but not a totally unobstructed view, as this may distract an individual in the working environment.



### ORIGINAL LOWER GROUND FLOOR PLAN



### ORIGINAL FIRST/SECOND FLOOR PLAN



## 2.5.9 MODERN MOVEMENT HERITAGE

The significance of the Meat Board building is primarily defined by its iconic Modern Movement characteristics. Three of the le Corbusian Modern Movement elements are visible in the original design: roof garden, pilotis and the free form plan. The use of these elements did not only change the aesthetic of architecture at the time, but it revolutionized the way in which forces work within a building. Each of the Modern Movement elements and the influence they have on the structure of the building will be explained.

**1. Pilotis:** The upper three floors of the building float on wide, round columns on ground floor and this gives the impression of a floating box- typical characteristic of a Modern Movement building and also visible in Villa Savoye by Le Corbusier. The use of pilotis as support structures, spreads the load of the building between columns arranged on a grid format as opposed to a normal ongoing foundation that carries the load of the building (Columbia, [S.a.]).

**2. Roof garden:** The roof garden is located on the roof of the boardroom and serves as an extension of the courtyard garden space. The revolution of a flat roof made it possible to utilize roof space where previously, this was lost space (Columbia, [S.a.]).

**3. Free form ground floor plan:** The walls are no longer main supporting elements, so there is freedom with the design of the ground floor plan (Columbia, [S.a.]). The lower ground floor plan of the Meat Board building consists of curved lines and sharp edged lines that compose a dynamic plan.

Although the rhythm of the windows on the north and south facade of the Meat Board building reminds of the typical horizontal windows of the Modern Movement, there are substantive difference. Often in the construction of Modern Movement buildings, the designers have total freedom with the design of the facade and horizontal window elements were popular in design (Columbia, [S.a.]). In the case of the Meat Board building, the architect designed a structural facade to allow for maximum open interior space and the size of the windows is therefore generated to fit between structural modules. The holistic view of the facade does create somewhat of an illusion of the typical horizontal window element.

#### PARADIGMAL INFLUENCES

##### Adolf Loos: 'Ornament and Crime'

Raumplan design methodology: building is designed as integrated whole (exterior & interior).

Interior space consists of rectilinear forms and open planes stripped of all applied ornament. Loos experiments with the integration between exterior and interior and uses contrasts in light and scale to create a theatrical effect (Heynen 19:85).

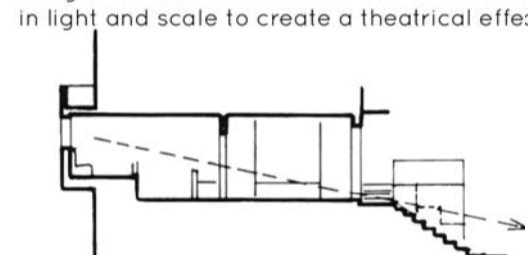


Figure 2.27 Diagram demonstrating the Raumplan design methodology (Lee 2015).



Figure 2.28 Interior perspective of Moller House by Adolf Loos (Heynen 1999:85)



Figure 2.29 Exterior facade of Moller House by Adolf Loos (Heynen 1999:85).

##### Le Corbusier: 'Le Modulor'

Describes the building as a 'machine for living in'. Emphasized the value of mass-produced objects.

Develops unique proportioning system based the ergonomomy of the 'general' man (sci.li/tecorbu.htm).

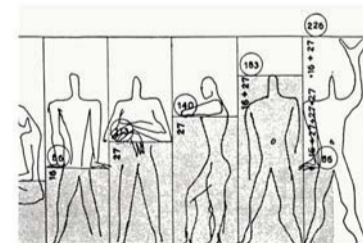


Figure 2.30 'Le Modulor' by Le Corbusier (Martin 2010).

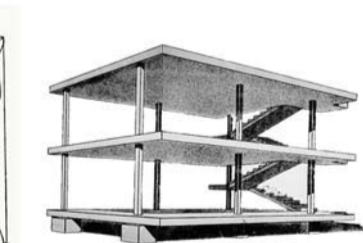


Figure 2.31 Domino structure developed for mass-production of residential complexes. (Studyblue, [S.a.]).

##### Frank Lloyd Wright

Honest use of materials, designs with an holistic view of the architecture and the interior.

Concept of organic architecture- integrates the context within the design.



Figure 2. Honest use of material within the interior (The Maritime Explorer 2014) (My Empire state of mind [S.a.]).



Figure 21. Falling Water by Frank Lloyd Wright, completed (My Empire state of mind [S.a.]).

#### DIRECT INFLUENCES ON THE MEAT BOARD BUILDING

##### Classical Civic buildings in Pretoria

The old Council Chamber demonstrated the lassical language of Civic buildings in Pretoria advocated by The Department of Public works at the time. Interior space is formal and heavily decorated.



Figure 2.32 Old Raadsaal from church square.

Figure 2.33 Old raadsaal interior view (Virtual tour guide [S.a.]).



Figure 2.34 Ministry of Education building, Rio de Janeiro (Studyblue, [S.a.]).

##### 1936- 1943 - The Ministry of Education and Health by Oscar Niemeyer, Rio de Janeiro.

Iconic modernist building, first modern movement building of this scale, higher than any building in Europe of the time. Excellent example of Brazilian creativity and technical ability. Use of Brise Soleil on facades for climatcal control, adding a regionalist component lacking from the International style. Revolutionary integration of greenery on the public plaza and roof gardens (Gerneke 1998:203).



Figure 2.35 Meat Board building (Google Earth [S.a.]).

## 2.5.10 BRAZILIAN INFLUENCE

### Ministry of Education, Rio de Janeiro, by Oscar Niemeyer



Figure 2.34 Ministry of Education building Rio de Janeiro (Studyblue, [S.a.]).  
Figure 2.35 Meat Board building (Google Earth [S.a.]).  
Figure 2.36 Ministry of Education building Rio de Janeiro (Cram 2013).  
Figure 2.37 Ministry of Education building Rio de Janeiro (The Hour Lounge [S.a.]).  
Figure 2.38 Open ground floor pedestrian space made possible by the use of piloti (Wikipedia 2015).  
Figure 2.39 Mosaic wall detailing on street level (Texas architecture [S.a.]).  
Figure 2.40 Mosaic detailing close view (Zheleznova 2015).  
Figure 2.41 Interior lobby of Ministry of Education building, Brazil (Architizer [S.a.]).  
Figure 2.42 Interior view of Ministry of Education building (Meisner 2014).

# 06 Structural Investigation

## 2.6 FORM AND STRUCTURE

### 2.6.1 MORPHOLOGY

The morphology of the building is a true reflection of typical modern movement buildings; an elegant concrete cube with a façade ordered by a strict grid that floats on pilotis. The strict rectangular form of the building is contrasted with the sweeping-curve form of the boardroom on the north-western side of the site.

### 2.6.2 STRUCTURAL SYSTEM

The construction of the building reflects the mechanical precision and machine produced character of the Modern Movement by the combination of site built and precast elements. The overall structure is in a good, stable condition and structurally appropriate for reuse.

The lower ground level consists of a simple concrete column and beam structure with masonry infill, ordered on a rectangular grid. The upper three levels also consists of a column and beam system, but with an integrated structural exterior facade to allow for maximum unobstructed space within the interior. The exterior facade of the building is composed of various site built and precast elements that forms a grid-like skin on the Northern and Southern facade.

The architect designed a structural facade to allow for maximum unobstructed interior space. The current rigid cellular spatial planning creates narrow, cubed spaces where there is an opportunity for an open plan formation.

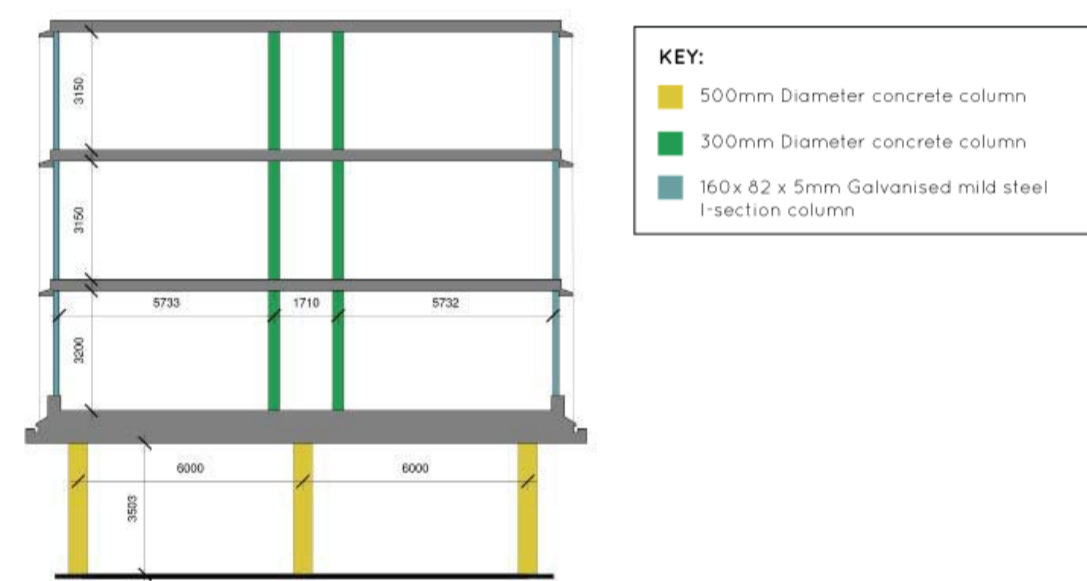


Figure 2.43 Structural section of the Meat Board building.

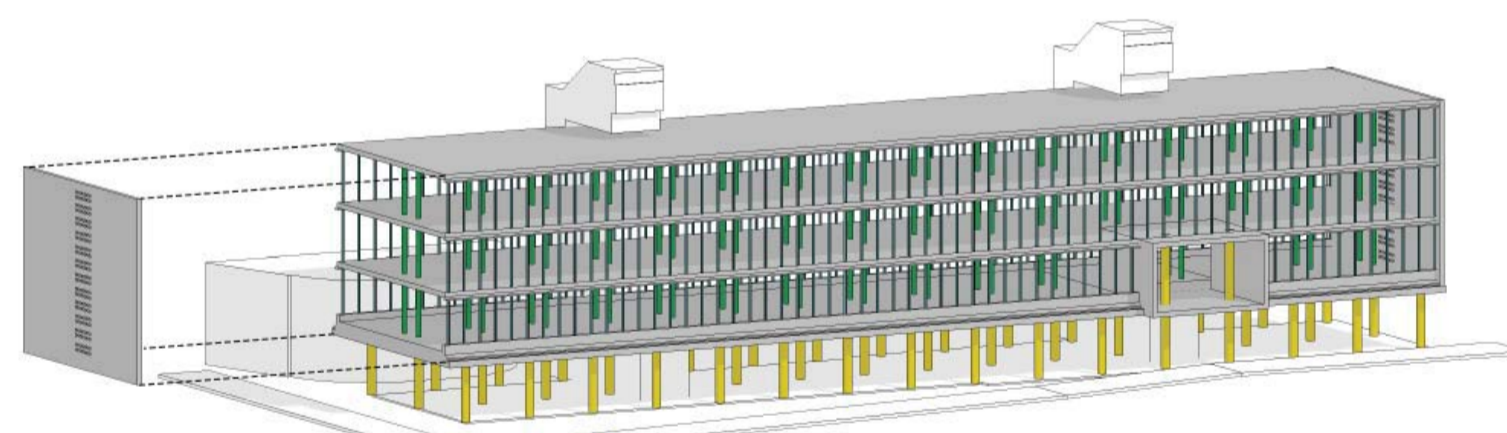


Figure 2.44 Three dimensional structural diagram of the Meat Board building.

### 2.6.3 SPATIAL PLANNING

Originally the reason for the structural system described above, was to create an open plan office environment- a fresh and revolutionary spatial approach at the time. Stauch designed an open spatial figuration with moveable office partitions. The grid-like facade was designed on a modular of 914 mm (3 feet) that translates into the design generator of the interior space.

Additions were made to the building in 2009, and it seems like the new intervention had a single purpose in mind, namely to create maximum office space. As a result, large amounts of dry walling were inserted into the building and the current spatial configuration consists of a cellular office arrangement.

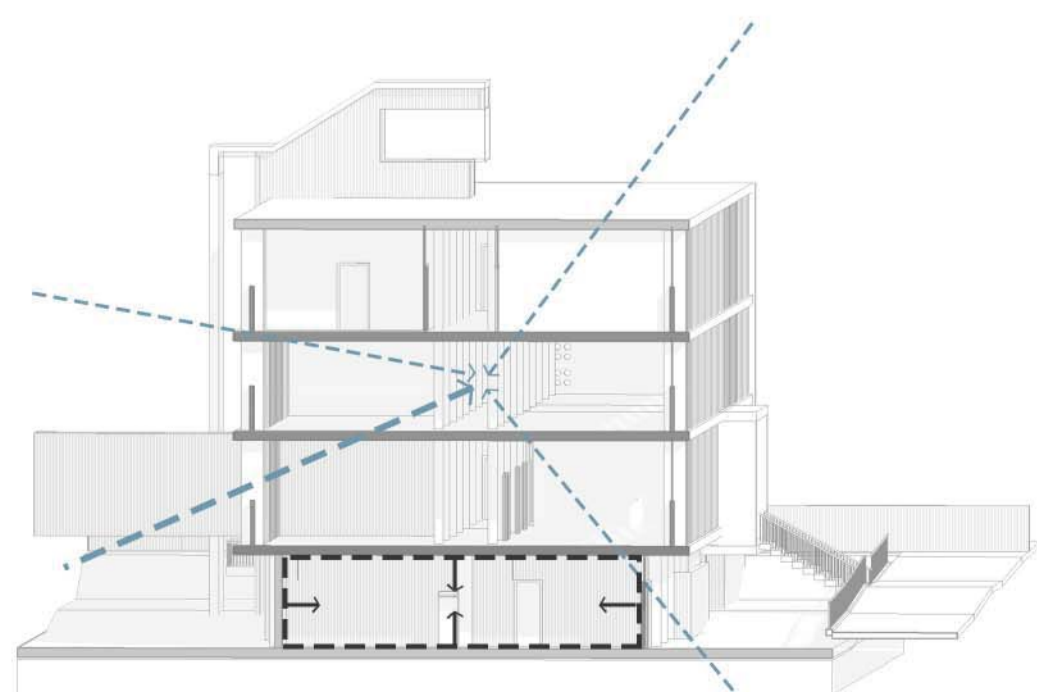


Figure 2.45 Diagram showing current interior environment: Inverted, isolated, static spatial character

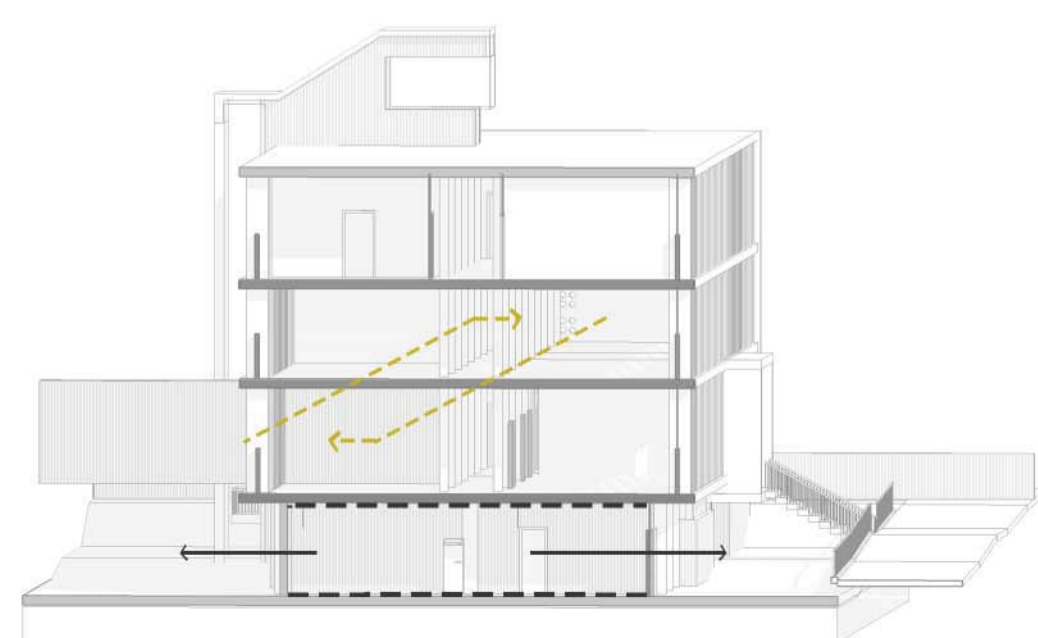


Figure 2.46 Diagram representation of original interior: Open, flexible, extroverted spatial character

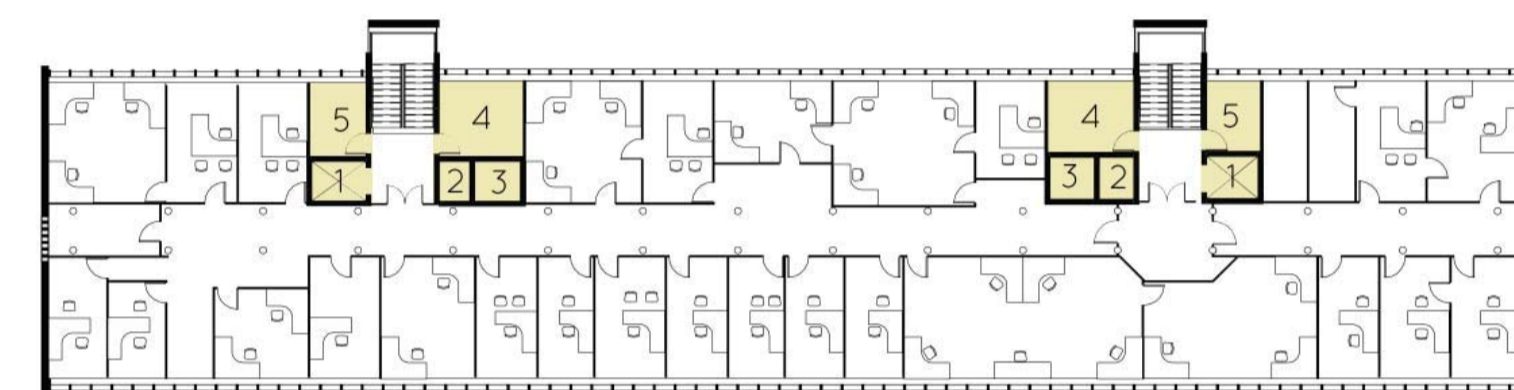
### 2.6.4 MATERIALS

The structure of the building consists mainly of precast and site constructed concrete elements with steel reinforcement. The exterior finishes of the building consist of a terrazzo finish with the addition of blue and white mosaic tiling on the facades. The ground floor columns are tiled in yellow mosaic and the masonry infill work is done in a dark purple brick to contrast the light palette of the floating concrete cube. Interior finishes consist of asphalt tiling, grey painted interior partitions and remaining original interior walls clad in Kiaat timber. The foyer space consists mainly of a yellow and green mosaic tiled surfaces with asphalt floor tiling (Howie 1952: 218).

### 2.6.5 SERVICES AND CIRCULATION

The services in the building are highlighted in the morphology. The two circulation shafts protrude to the north of the plan and rises above the roof level. Services like toilets, air conditioning and the lift machinery are located around the central circulation shafts and connect to the distributing ducts and pipes running along the corridor of the building.

#### 1st FLOOR/ SECOND FLOOR PLAN



**KEY**  
 1. Lift  
 2. Toilet pipes  
 3. Airconditioning  
 4. WC  
 5. Kitchenette

Office space area per floor: 587 m<sup>2</sup>  
 Office space per person: 13,7 m<sup>2</sup>

Figure 2.47 Plan diagram showing location of existing services

### 2.6.6 OCCUPANCY

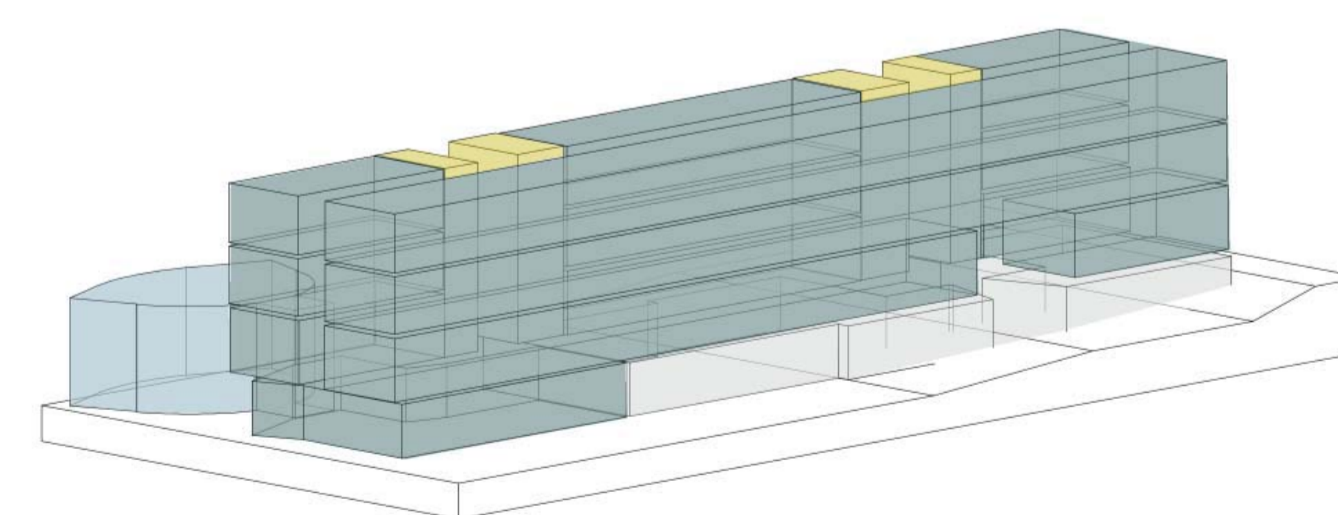
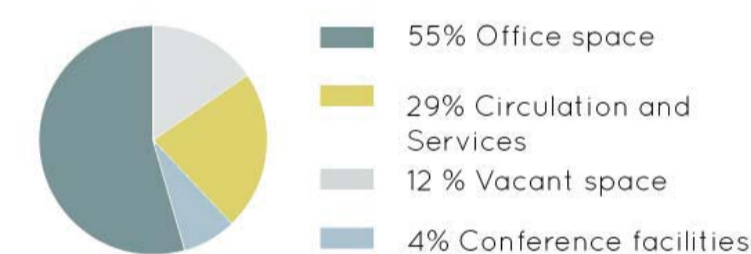
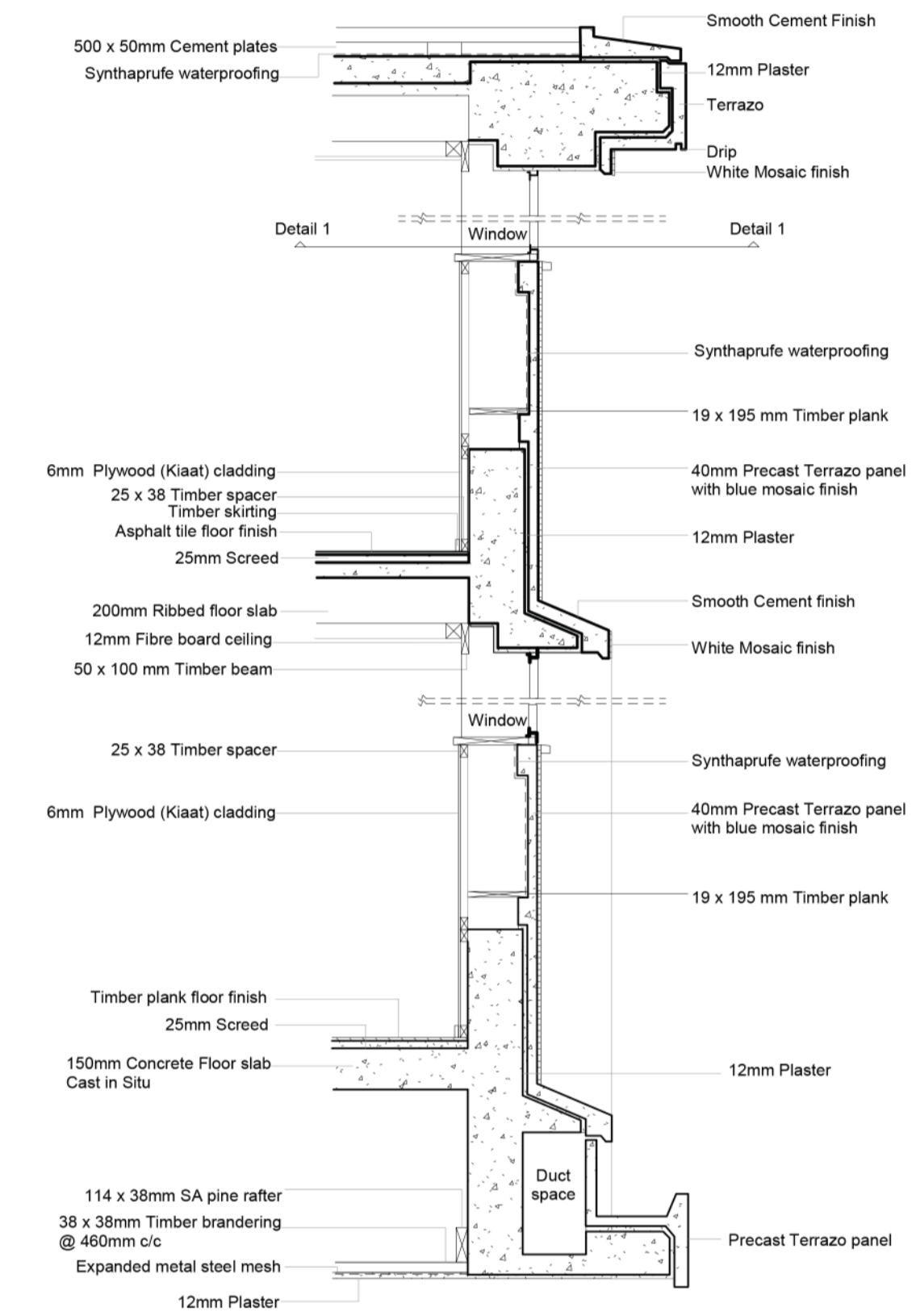


Figure 2.49 Diagram showing current occupancy of the Meat Board building.

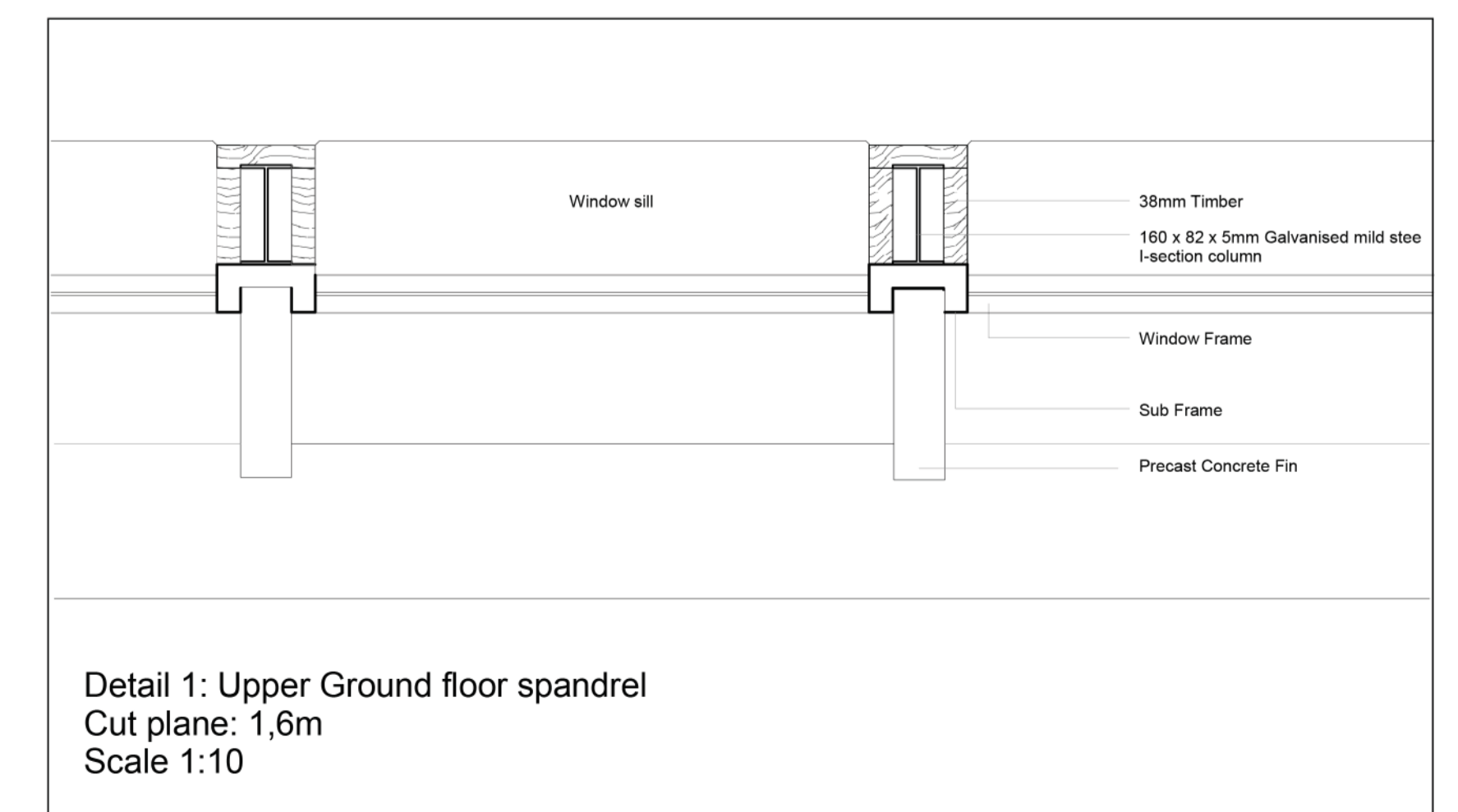
### 2.6.7 SKIN/ ENCLOSURE

The northern and southern facades consist of a repetition of precast concrete spandrels and blue cladded mosaic infill panels (refer to Figure 2.49). These textured facades are unique to the building and add character to the exterior. Adjustable louvres on the northern facade in each module are significant in the heritage of the building and are important elements that allow for user specific climate and light control within the building. The scale of the windows in each modular in the facade was delicately designed to create a connection between the user and the context.



Detailed wall section  
 Scale 1:20

Figure 2.49 Detail section of existing wall structure.



Detail 1: Upper Ground floor spandrel  
 Cut plane: 1,6m  
 Scale 1:10

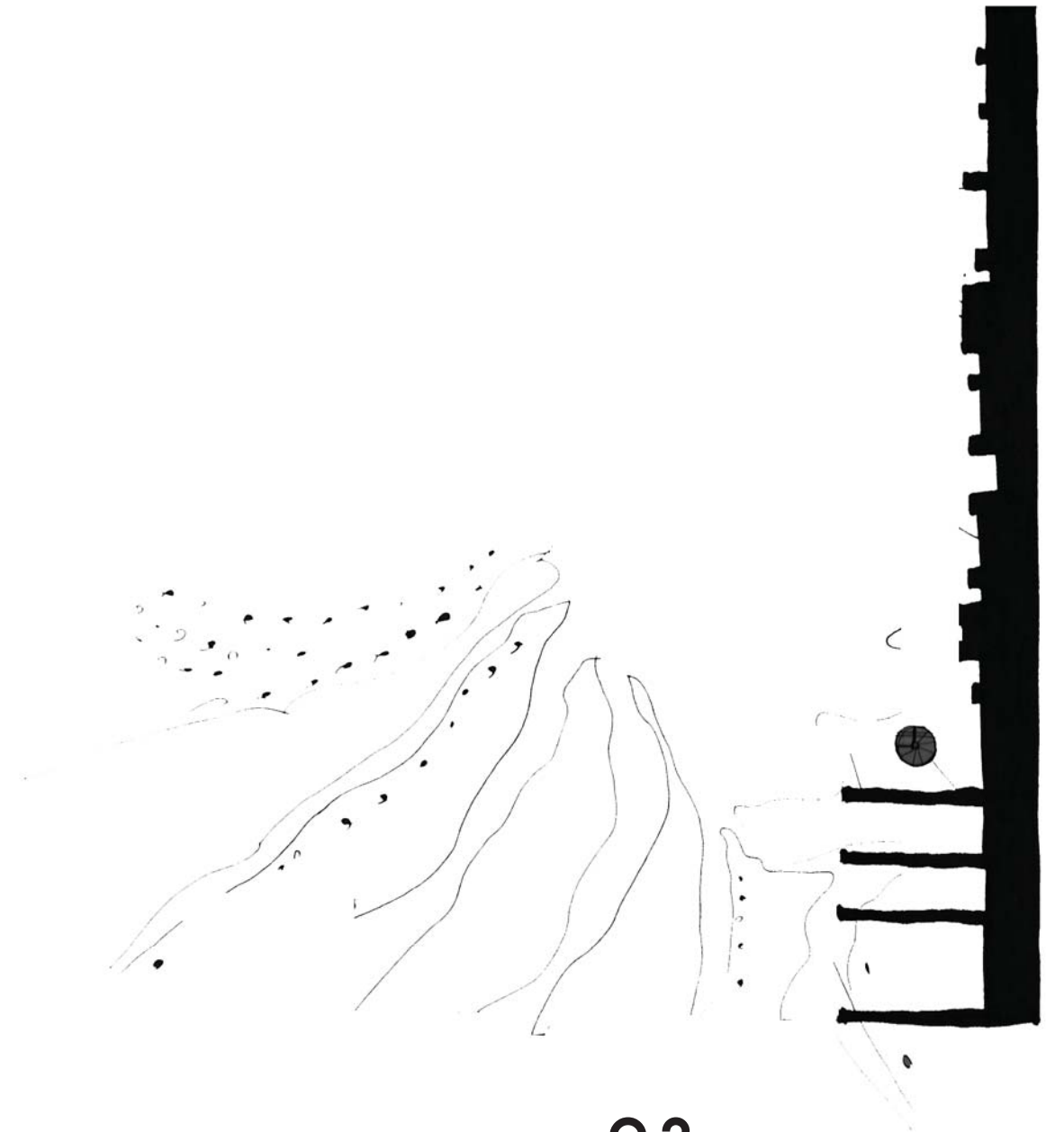
Figure 2.50 Floor detail of existing spandrel (facade structure).

## 2.7 PROPOSED FUNCTION

An in-depth site analysis has been conducted and it revealed that an office building is a viable programme in which the Meat Board building can be reused. According to the site analysis, the scale and location of the building is ideal for an office building. Although the building is being maintained on a day-to-day level, a large-scale renovation is required to comply with (1) SANS sanitation requirements and (2) to transform the building to a competing office building in the capital city.

## 2.8 CONCLUSION

An analysis of the Meat Board building has revealed that it is viable for reuse. The context and environment were analysed and revealed that the location of the building is close to public transport networks and governmental nodes. Additionally, the strategy of reuse of the Meat Board building can fit into the Tshwane 2055 urban planning which makes the project realistic. The analysis of the history and function investigated the layers of significance involved, the Meat Board building has been identified as an iconic modern movement building in Pretoria and it should be preserved for generations to come. Finally, the conclusions of the analysis are included in a proposed function for the reuse of the building. An in-depth investigation of the office typology follows in Chapter 3.



03

## PROGRAMME AND USERS

### 3.1 INTRODUCTION

In order to invest in and reclaim the inherent potential of the Meat Board building as discussed in Chapter 2, the gap between the current interior condition and the contemporary workplace environment needs to be diminished. The nature of the contemporary workplace is significantly different from the static and isolated working environment of the Meat Board building. Chapter 3 firstly aims to create a broad understanding of the influencing factors and the functioning of the contemporary collaborative workplace. Secondly, this chapter explores the operation of a service office facility in a collaborative working environment as programme in which the Meat Board building can be reused. The nature of the collaborative environment essentially consists of an informal group-working environment with integrated technology. This new way of working is investigated in a literature study. A programmatic investigation of the serviced office typology is conducted with the aim to clarify how these facilities work and to determine the design problems that are dealt with. Lastly, the analogy of a hotel is introduced as concept to guide the operation and aesthetics of the facility.

### 3.2 THE EVOLUTION OF THE OFFICE TYPOLOGY

Previously, offices were designed and furnished according to the specific task conducted or according to the organizational structure. Today the office is not necessarily the main place where work is conducted. The focus has shifted towards the creation of space to facilitate collaboration and interaction between workers. The development of the office typology from the pre-industrial era where the office was accommodated in other building types to the contemporary phenomena of the virtual office, is presented graphically on Poster 7, point 3.2.

### 3.3 THE EMERGING WORKPLACE: A LITERATURE REVIEW

There is a new role of the office in a world where technology has made it possible to work from anywhere and to collaborate virtually with anyone, anywhere in the world. As Laing (2014: 11) states, the relationship between work and place is in a state of flux and this directly challenges the 'office typology' as we know it. Duffy (2008:16) states that the boundaries of the workplace has "spilled out" to a wider spatial and temporal territory.

#### 3.3.1 THE KNOWLEDGE WORKPLACE

The advancement of technology and global economic situations demands adaption of the office environment (Green & Meyerson 2011:19). In the 1980's workers went to the office where they have a personal computer (PC) and at the workplace only, they had access

to a database (Laing 2013:4). The typical Taylorist model of the twentieth century office where large groups of people do specialized work, organized in a strong hierarchy is not relevant anymore in the current realm of the workplace.

Global changes contributed to the change in the type of work that is conducted today. Today many manual, time-consuming organizational jobs are atomized by technology or outsourced to countries that offer workers for a cheaper labour cost. The contemporary character of work, described as 'knowledge work' involves innovation, collaboration and initiative. Subsequently, the character of knowledge work demands for a more flexible approach to workplace design (Greene & Myerson 2011: 19).

#### 3.3.2 VIRTUAL WORKING AND THE URBAN WORKPLACE

With major technological advancements and the revolution of the office as we know it, one may wonder what role the location of the physical office plays in the ever-growing virtual environment. Laing (2014) highlights the correlation between the urban and the virtual environment when he states that 'place' is not substituted by technology, but technology rather enhances the value of physical place (2013:6).

The scale of the emerging workplace is no longer considered in terms of the office, but rather in terms of the city. Laing (2014) states that the changes in how work is conducted and technology change the way familiar spaces are occupied. Remote working and virtual collaboration is now possible with wireless technology and this changes the supply and demand economy of office real estate (Laing 2014:11). Technological and operational changes in businesses also change the demand for architecture and urbanism to consist of a mixed-used, connected and permeable character (Laing 2014:11). Duffy (2008) proposes a new typology referred to as 'The Networked Office', which summarizes the concept of the urban workplace where the office building as entity is no longer the only place that accommodates working, but rather the city as a whole (Duffy 2008: 18). By paring work with other functions, it changes the character of the environment to be more urban and additionally it makes the financing and development processes easier (The US Workplace Survey 2013: 6].

Flexible working holds many advantages for both the employer and employee. Research conducted by AECOM in 2013 reflects the desire of employees in Australia to work from home one or two days a week (Laing & Wittenoom 2013: 2). Furthermore, research suggests that the implementation of such a hybrid model of working promises rewarding outcomes such as an improved work-life balance, increased productivity for employees and the reduction of travelling which has a great environmental benefit (Laing & Wittenoom 2013: 2). By accommodating virtual working styles in a business, employers are often able to reduce expensive real estate costs (Helms &

Raiszadeh 2002: 240).

Although virtual working is encouraged by many firms, the physical office remains a key asset. Leading international office design company, Steelcase is of opinion that investing in a high-end office space can create a competitive advantage for companies. A high-end office environment will enhance employee performance and innovation that will highly benefit the organization (Steelcase 2012: 14). Although it may come at a high price, Conroy Ross Partners believe that the design and location of the office is an anchor by which employees are attracted and retained in the long term (Conroy Ross Partners 2014: 1).

#### 3.3.3 THE OFFICE AS COLLABORATIVE ENVIRONMENT

The spatial organization in the contemporary workplace is in essence different from the formal, hierarchal office configuration with user specific desk space. The spatial configuration of the contemporary workplace is predominantly more flexible: shared work and meeting spaces are common and collaborative spaces of different kinds are beneficial to the organizational culture (Laing & Wittenoom 2013: 2).

The nature of collaborative working spaces too, is changing. Formal, static boardrooms and meeting spaces that cater for large groups of people are no longer sufficient. According to a Knoll Research paper, employees desire to have social interaction while collaborating with fellow workers (Knoll 2013:1). From the employer's perspective, innovative collaborative spaces can help to fuel creative decision-making in organizations (Knoll 2013:1).

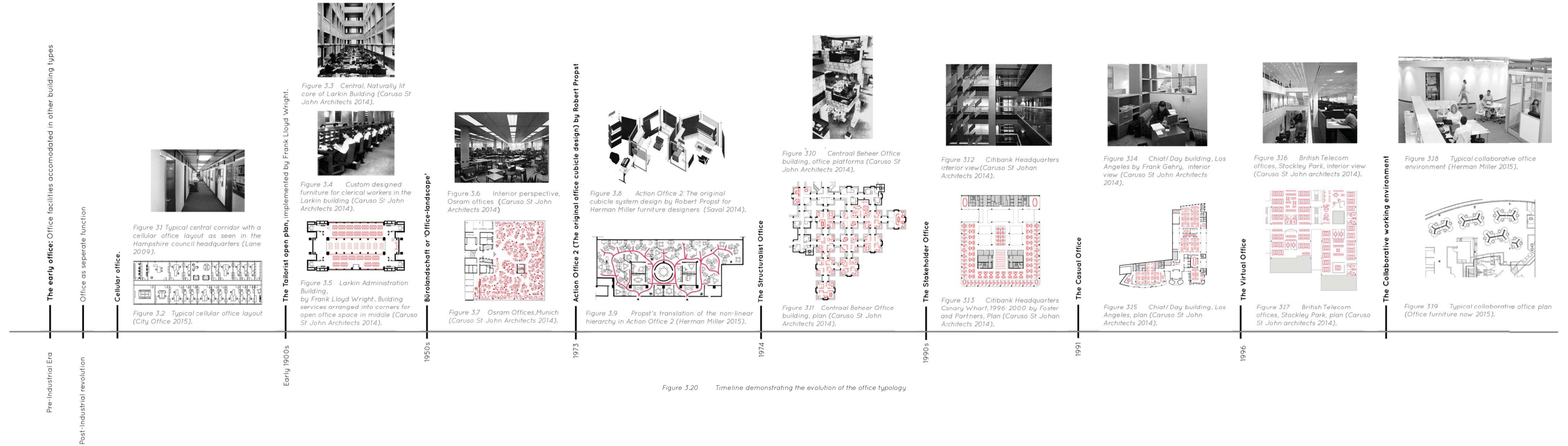
#### 3.3.4 PUBLIC SPACE IN THE COLLABORATIVE ENVIRONMENT

Collaborative working environments essentially consist of groups of people that work together towards a goal. Knoll (2013:4) is of the opinion that there is a shift in the spatial design in collaborative environments to facilitate unplanned meetings in small, informal meeting spaces. The conventional character of spaces are challenged in the collaborative environment and according to the Knoll (2013:4), spaces formerly known purely as of a social nature are now also considered as valid places to work. This dissertation will focus on the design of public space in the collaborative environment.



# 07 The Office typology

## 3.4 THE EVOLUTION OF THE OFFICE TYPOLOGY



## 3.5 THE SERVICED OFFICE TYPOLOGY

New ways of working require a fresh approach to office space design and real estate management. Harris (2015: 425) mentions two key attributes of organizations that keep up with technological and economical challenges. Firstly, there is a need for agility in organizations to be more resilient to market fluctuations. Connectivity between employees, clients and industrial processes, is also key to for organizations to function optimally (Harris 2015: 425).

Traditionally, corporate property investments are considered a core asset to a business, but today many companies in the knowledge industry validate assets differently. Instead of trading with a static property investment, organizations of knowledge workers trade with innovation and the skills of their employees (Harris 2015: 429). Gibson (2001: 38) is of the opinion that real estate assets should be considered on a wider range of requirements: either as physical, functional or financial assets. Although real estate assets fundamentally are static, in this way they can become more flexible (Gibson 2001: 38). This new approach shifts the focus from "managing buildings" to "managing people" (Harris 2015: 430) and the workplace subsequently becomes a dynamic framework to cater for flexible and virtual working routines. The serviced office typology supports the concept of shifting the focus from the importance of real estate to people- it is more flexible than static real estate.

The property market, in reaction to the changes in the working environment, responds with a flourishing market of flexible workspace of which the serviced office sector is the largest (Harris 2015: 430).

### 3.5.1 BACKGROUND

The origins of the serviced office date back to the UK commercial property market during the 1990's. During an economic recession, technological advancements and globalization have put significant pressure on businesses. The consequence of a tough business environment was that organizations began downsizing by outsourcing non-core functions and real estate managers required more flexible, short-term real estate options (McAllister 2001: 413). The development of the serviced office typology makes it possible to obtain office space with a short-term lease. The operation of serviced offices is particularly attractive to start-up companies, virtual companies and businesses expanding into new regions (Reed & Stewart 2003: 3).

The global serviced office giant Regus was established by Mark Dixon in the late 1980's. The idea was born when Dixon struggled to find an office facility in other countries while travelling. The first business centre was opened in Belgium, but the head office was later moved to the UK where he opened numerous other business centres. The concept of a short-term office rental facility was unique at the time when commercial property leases were commonly offered on a period of ten to twenty years. Regus was the first company in the UK to offer lease terms on a three-month basis with the opportunity to get occupation within a period of 2 days (Reed & Stewart 2003: 5).

### 3.5.2 DEFINING THE TYPOLOGY

The concept of a serviced office refers to an office environment that is furnished, interconnected and fit for immediate occupation. Serviced offices normally allow adaptability in office sizes to allow for individual or group working according to need. A common situation in the serviced office environment is also to rent out a number of primary offices that can be expanded into an office section when it is adjoined with adjacent offices (Reed & Stewart 2003: 3).

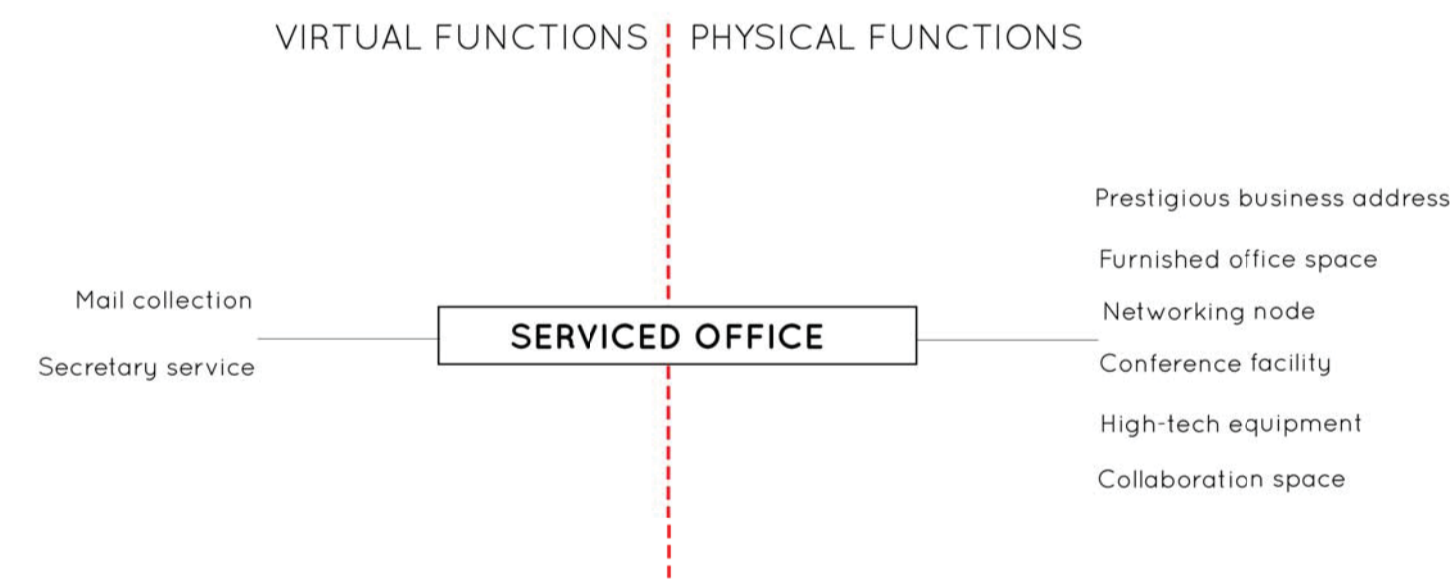


Figure 3.21 Diagram demonstrating the virtual and physical functions of the serviced office

### 3.5.3 CASE STUDY: THE BUSINESS EXCHANGE, SANDTON

The business exchange serviced office is a good local example of a serviced office. When arriving, one is welcomed with professional services in a contemporary environment. Ideally located on the Gautrain bus route in Rivonia, this is a hub for the short-term office rental market. The interior of the building reminds of a corporate office environment with generic furniture and art. While visiting the building, construction was underway in one of the ground floor offices and it caused major disturbance in the building. The logistics of the serviced office typology is something to be carefully considered in the design. Furthermore, a lack of room for customization of space in offices was identified as an area that can be given additional attention in the design.

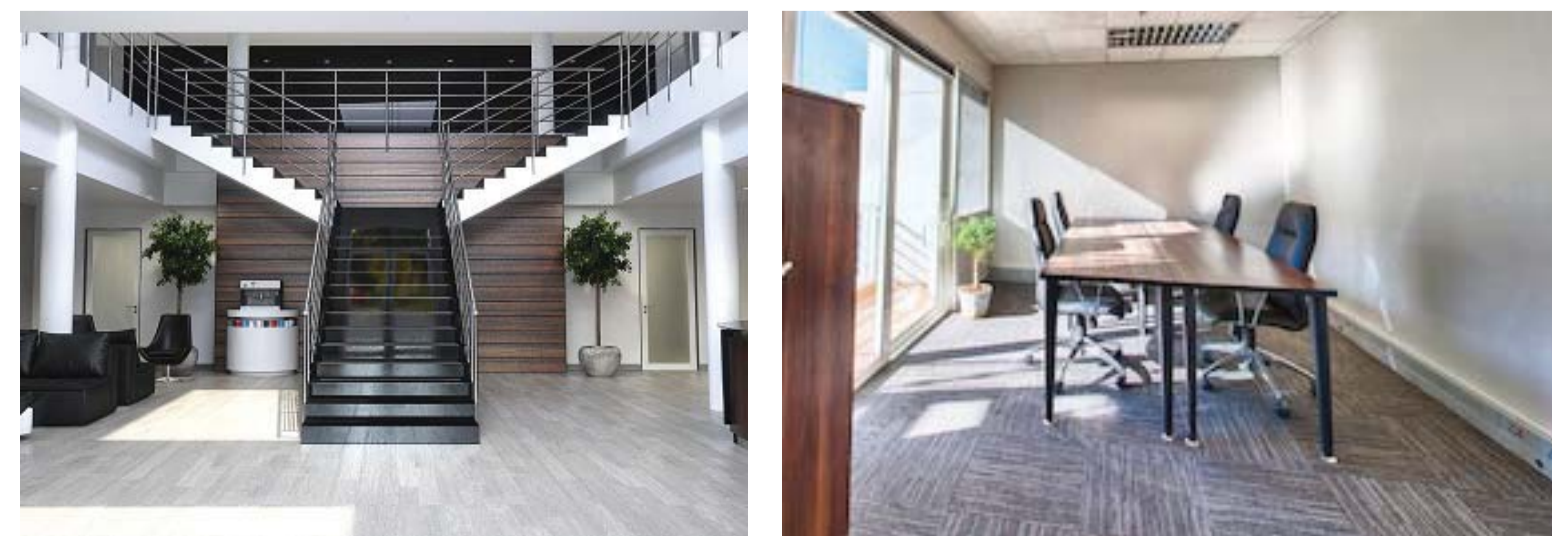


Figure 3.22 Entrance foyer of The Business Exchange (eProperty News 2014). Figure 3.23 Office interior of The Business Exchange (eProperty News 2014).

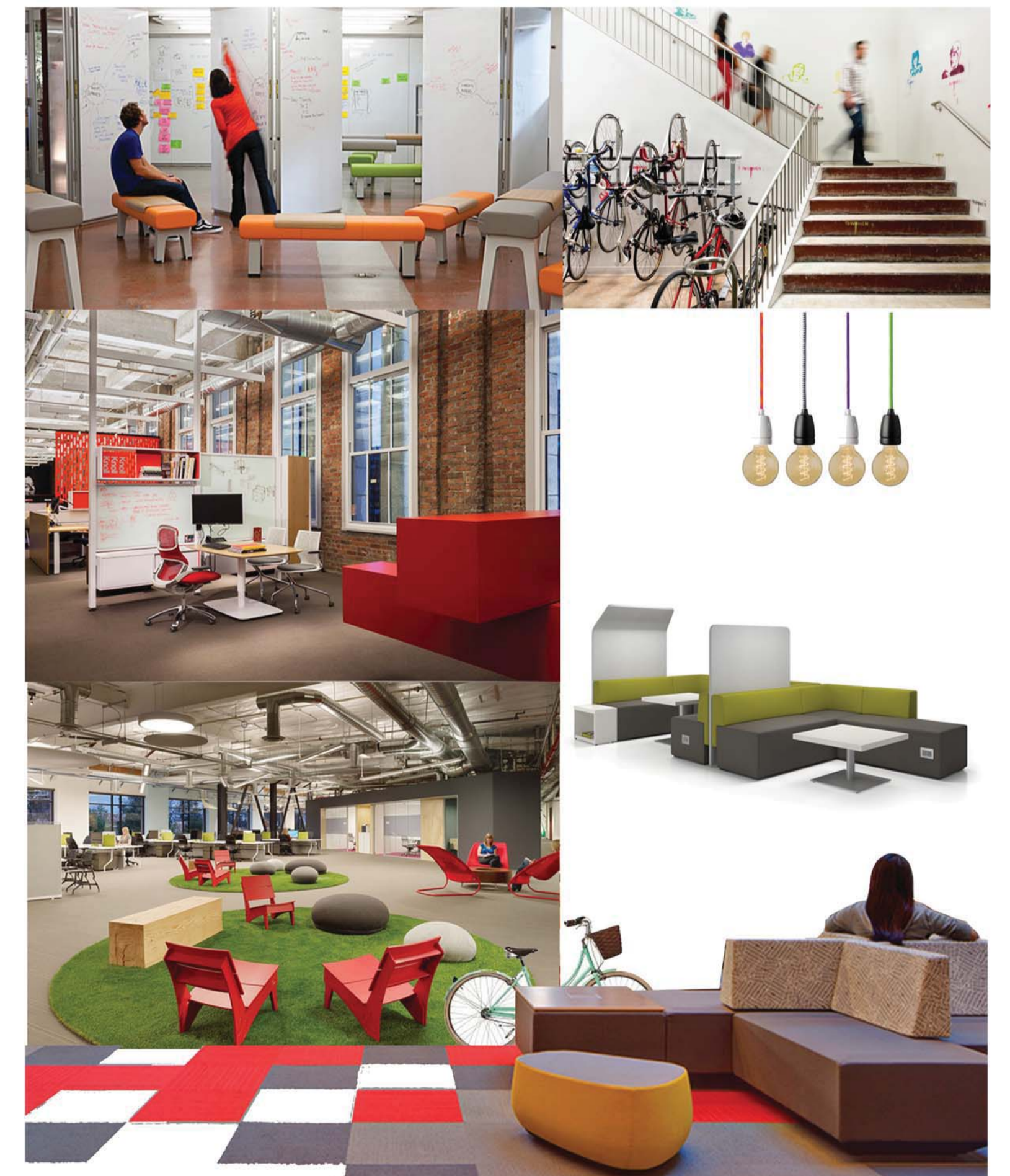


Figure 3.24 Mood board demonstrating the aesthetic and design opportunities of the collaborative office environment

### 3.5 CASE STUDIES: LOCAL COLLABORATIVE ENVIRONMENTS

#### 3.5.1 30 BAKER STREET (STANDARD BANK, ROSEBANK)

Situated opposite the Rosebank Gautrain station, the building serves as a new landmark in the city. The building was designed by Grosskopff Lombart Huyberechts & Associates. The north end of the site is a public piazza of a hectare in size that leads to the main entrance. The morphology of the building consists of 2 large masses of 9 storeys and 11 storeys. The two main cubes are connected with generous glass facades that contribute toward a remarkable foyer space. The building covers 65 000m<sup>2</sup> and provides workspace to 5000 employees (Grosskopff Lombart Huyberechts & Associates 2013: 60).

The architect's vision for the building was to create a progressive and comfortable working environment. The architects followed an all-inclusive approach on the sustainability of the project starting with the choice of site, a green construction process all the way to the choice of luminaires and the end user. Subsequently, the building has been rewarded with a 5-Star GBCSA Greenstar design rating (Grosskopff Lombart Huyberechts & Associates 2013: 63).

A comfortable interior environment has been created by the large glass facades in the atrium space that allow generous natural light into the building. These glass facades are closely monitored by a German designed louvre system that automatically compensate to avoid glare and control heat gain in the building. For an efficient lighting system, a DALI system (digitally addressable lighting system for the atomised switching and dimming of lights) has been specified and this makes it possible to programme groups of lighting according to the occupancy and user requirements (Grosskopff Lombart Huyberechts & Associates 2013: 65).

The spatial planning in the building consists of a total open office configuration except for the office of the bank chairman that is enclosed (Den Hartigh 2014). An innovative concept laboratory has been designed in the building- named 'Playroom'. This space is used to test new banking concepts to better cater for clients' needs with the idea to involve clients in the development stages of new systems. The colour palette of the playroom resembles that of a play park: Colourful furniture with green turf in some spaces, creating an environment that stimulates collaboration and creativity. The office interior is composed of carpet floors in shades of grey with white ceilings with neutral white, black, aluminium and timber furniture to create an elegant and light working environment. Splashes of colour such as red and ochre accentuate informal meeting spaces adjacent to the atrium space and extend an element of playfulness throughout the building. The atrium space interior emulates the piazza/ exterior park with benches, trees and canopies that mimic trees. The lavish foyer space is complemented by a 45m high suspended artwork 'Seed' by Marco Cianfanelli that is made of 229 laser-cut plywood panels (Grosskopff Lombart Huyberechts & Associates 2013: 67).



Figure 3.25 Atrium space in the Standard bank building (dsgn [S.a.]).

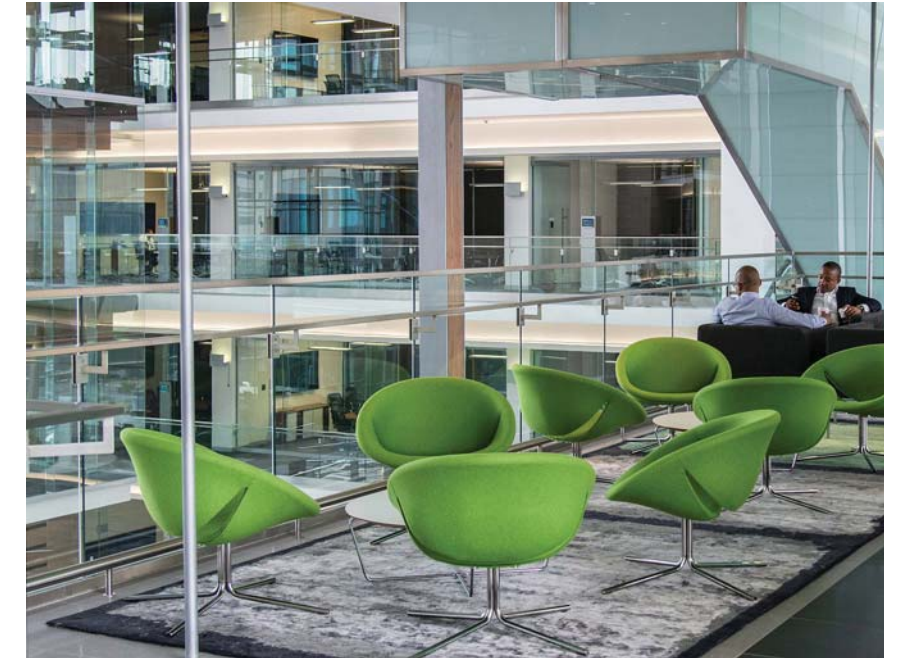


Figure 3.26 Meeting area in the Standard bank building (dsgn [S.a.]).



Figure 3.27 Atrium eating area in Standard bank building (dsgn [S.a.]).



Figure 3.28 Pause area in the Standard bank building (dsgn [S.a.]).

### 3.5.2 MICROSOFT WORKPLACE ADVANTAGE PROGRAM (WPA)

The Microsoft Workplace Advantage Program began in 2004 with an internal research program to understand the working styles, demographics of their employees and their relation with the physical workplace. Today the programme is a powerful tool and guideline for innovative workplace design applied to Microsoft offices globally without becoming a cookie cutter solution. In addition, the programme is an asset to motivate employees, increase productivity and attract aspiring new talent (Microsoft 2012).

The core of the Workplace Advantage Program is based on research on how the future office is conceptualized. Research conducted by Microsoft in 2009 made it possible to create a benchmark of five working styles for Microsoft employees. Three out of the five working styles are mobile workers that work from home and in the office in varying degrees. Typical human resources or admin support personnel work at a desk in an office 50% of the time. Lastly, the typical profile of an employee in a management position is that they mostly work mobile, but with regular private contact sessions. The result of the research brought a change in occupancy in the Microsoft office by minimizing individual space and increasing collaborative workspace. The real estate advantage of this change is that space per person minimized from 16 to 11 square meters (Microsoft 2012).

#### MICROSOFT HEADQUARTERS, SCHIPHOL, AMSTERDAM BY SEVIL PEACH

New ways of working according the Workplace Advantage Program as researched by Microsoft inspired the interior of the Dutch Microsoft headquarters by the implementation of activity-based working. Activity-based working is the design of an office layout that caters for different tasks conducted in the office rather than catering for individual space (Government of Western Australia, [S.a.]). An activity-based office will most likely consist of unassigned workstations throughout that employees can use as they desire (Government of Western Australia, [S.a.]).

This office environment challenges the traditional expectations of the workplace with having receptionists (not at desks) walking around and escorting clients to a communal office (the traditional waiting room) where they can meet with an employee. Floors are assigned to employees who share certain activity-based space and on each floor, there is a variation of workspaces. Spatial configurations include individual and group workspace and informal meeting environments that are easily expandable. The first floor is the heart of this office with the restaurant serving the best coffee in the building. This floor serves as both social space and informal working area (Ross 2012).



Figure 3.29 Informal working area in Microsoft office. Schiphol (Sevil Peach [S.a.]).



Figure 3.30 Counter seating space at informal working area in Microsoft office. Schiphol (Sevil Peach [S.a.]).

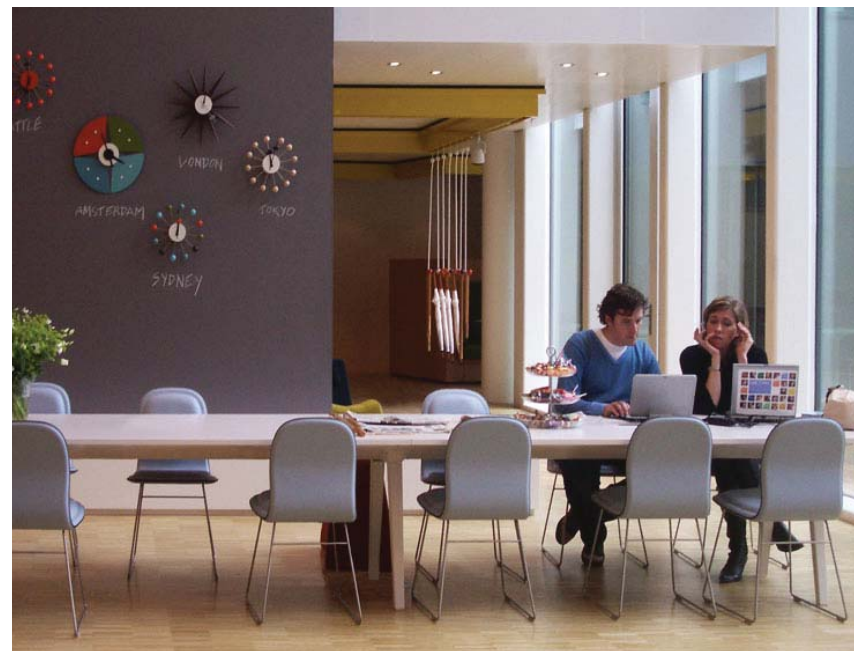


Figure 3.31 Secluded informal working area next to kitchen in Microsoft office. Schiphol (Sevil Peach [S.a.]).



Figure 3.32 Exterior dining area (Sevil Peach [S.a.]).

### MICROSOFT HEAD OFFICE, SOUTH AFRICA BY GLH INTERIORS

The South African Microsoft Head Office is located in Bryanston and the building was previously designed by Grosskopff Lombart Huyberechts & Associates architects. The brief included the total renovation of the first and second floors in order to align with the principles of the Microsoft Workplace Advantage Program. Furthermore, the brief included the application of the Microsoft workplace advantage but with a local flavour (Grosskopff Lombart Huyberechts & Associates 2015: 78).

A key decision of the renovation process was the design of a coherent visual language that reflects the brand values and that can be extended throughout the design. Different ways of working are accentuated by the use of varying finishes, colours, furniture and graphic elements. The user is offered a choice in the space: Either working collaboratively or as an individual in a bigger system of cooperation. Flexible elements are designed to adapt easily and with the aim to foster collaborative working (Grosskopff Lombart Huyberechts & Associates 2015: 79).

A major workstyle as set out by the WPA is 'hot desking'. This working style offers users the choice of sitting at one desk today and at another desk tomorrow. Storage lockers are located at communal printing stations where personal items can be stored overnight or for the day. Hot desking additionally helps to declutter the open plan office. In terms of furniture, there are assigned and unassigned elements. Assigned furniture in the space mostly consists of standard desk working space, while the unassigned workspace was differentiated by an American walnut top finish. The overall aim of the Microsoft office refurbishment is to offer the user 'variety, option and flexibility' (Grosskopff Lombart Huyberechts & Associates 2015: 80).



Figure 3.33 Informal work environment in the local Microsoft Head Office showing a use of colour and soft furnishings (Grosskopff Lombart Huyberechts & Associates 2015).



Figure 3.34 Informal work environment and formal working desks in the background (Grosskopff Lombart Huyberechts & Associates 2015).



Figure 3.35 Booth working space (Grosskopff Lombart Huyberechts & Associates 2015).

# 08 Programme and Concept

## 3.6 DETAILED PROGRAMME

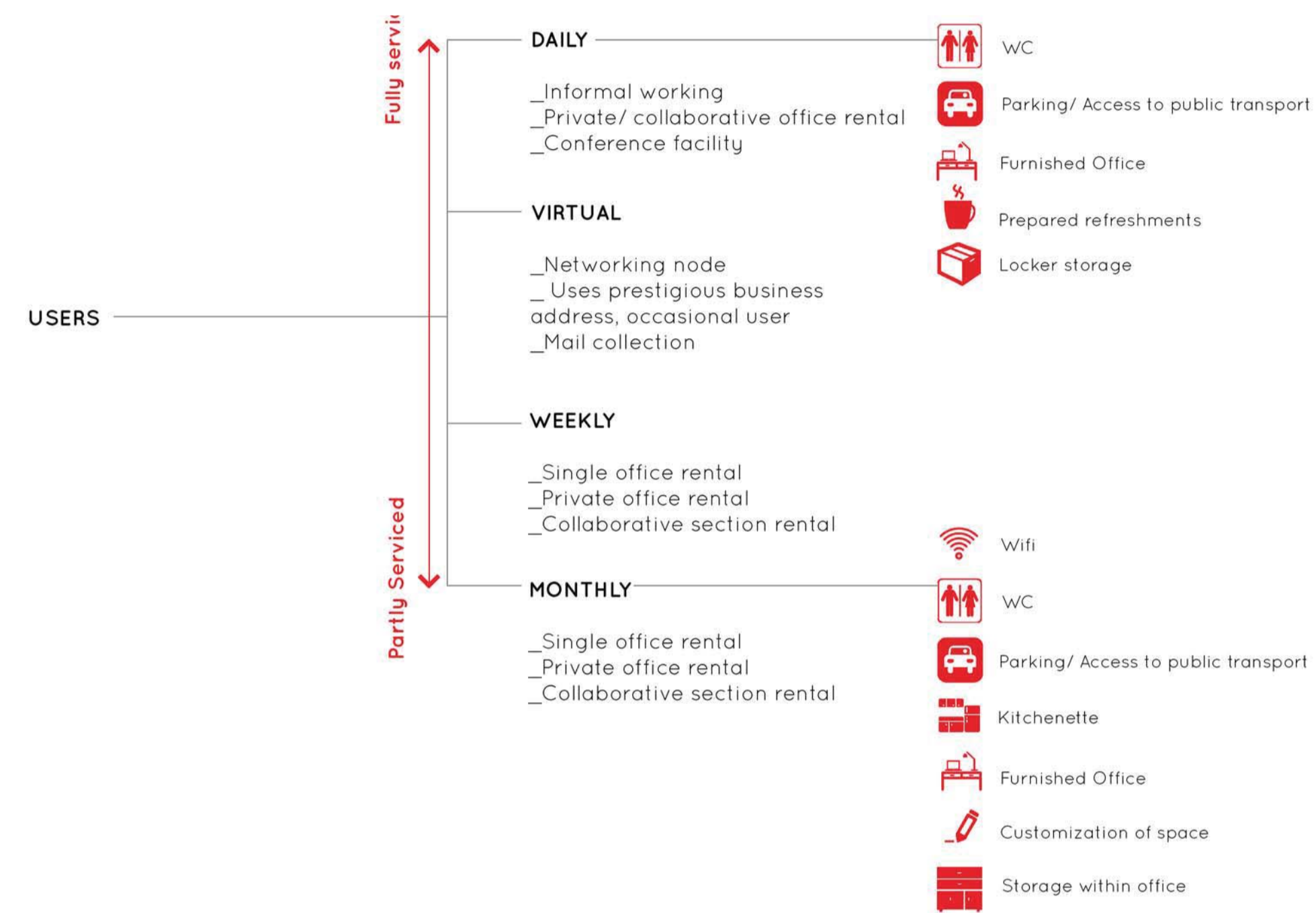


Figure 3.36 Diagram showing the detailed programme of the collaborative serviced office facility.

## 3.7 CONCEPTUAL APPROACH: THE HOTEL ANALOGY

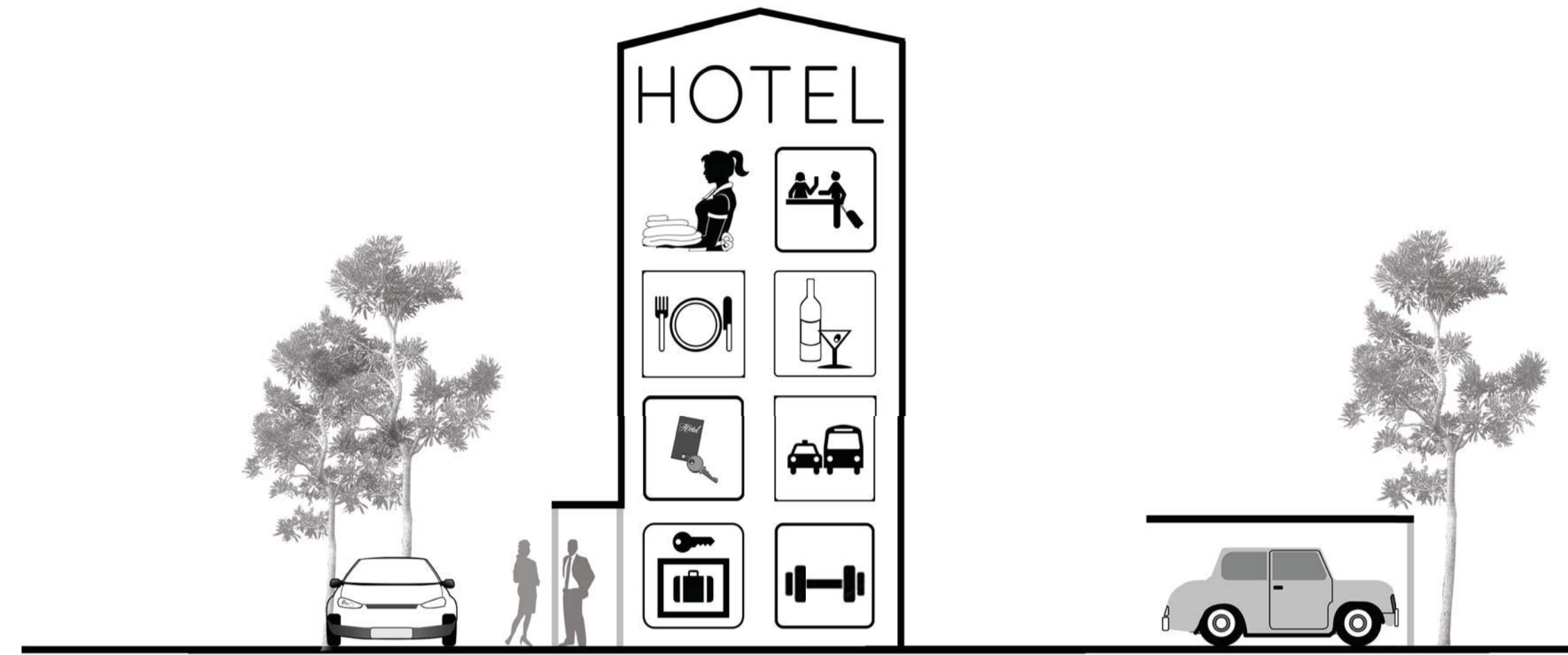
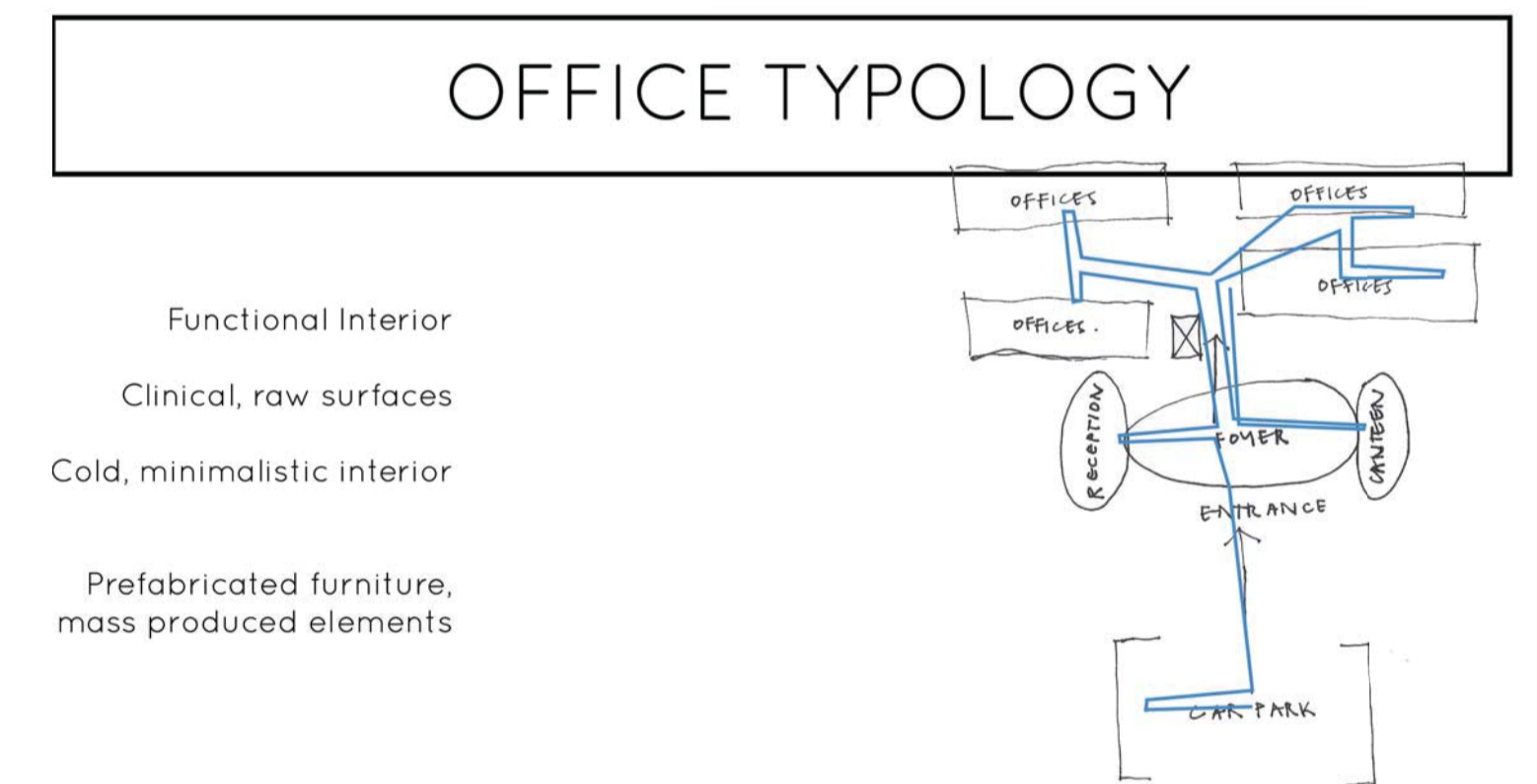
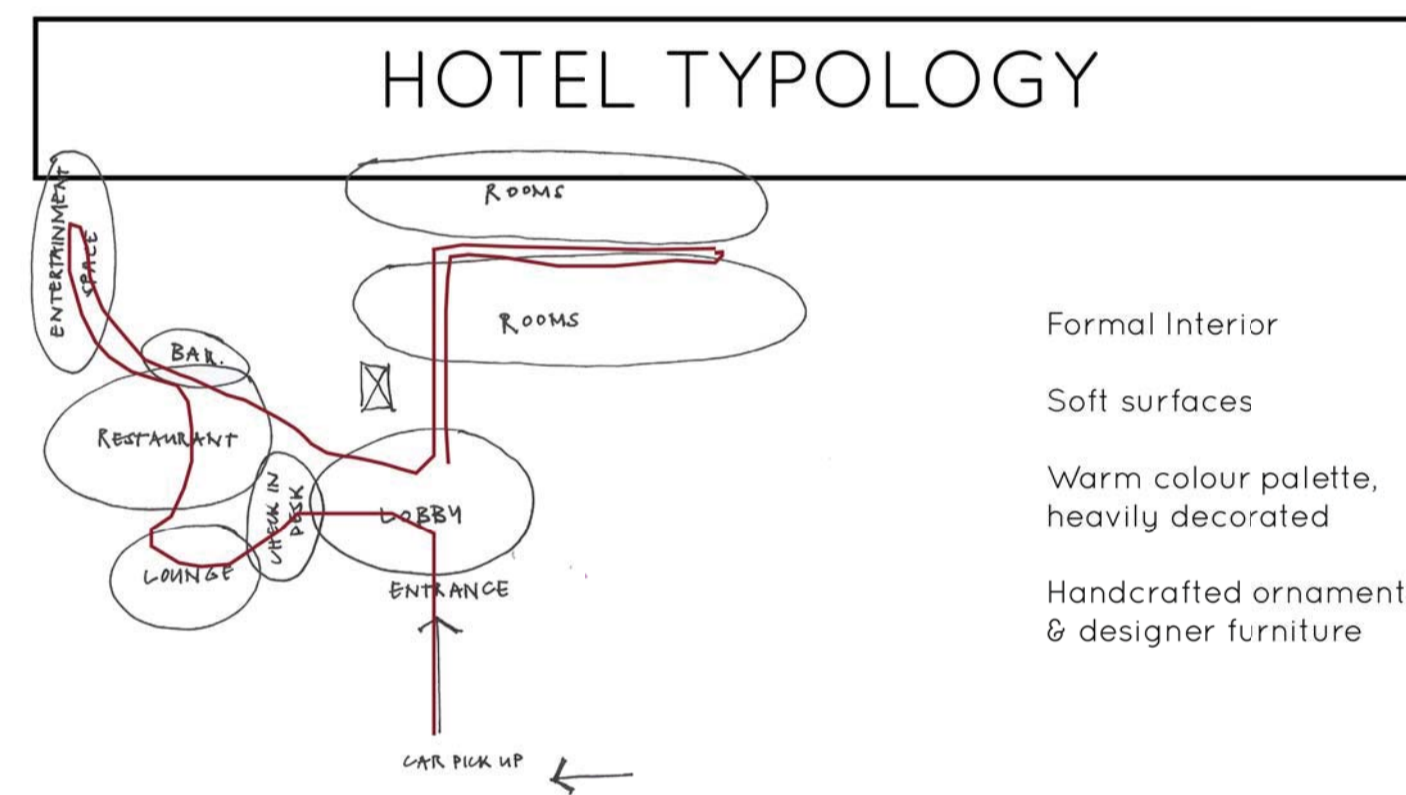


Figure 3.37 Diagram showing the functions of a hotel.



VS



Figure 3.38 Mood board interpretation of the Hotel aesthetic.

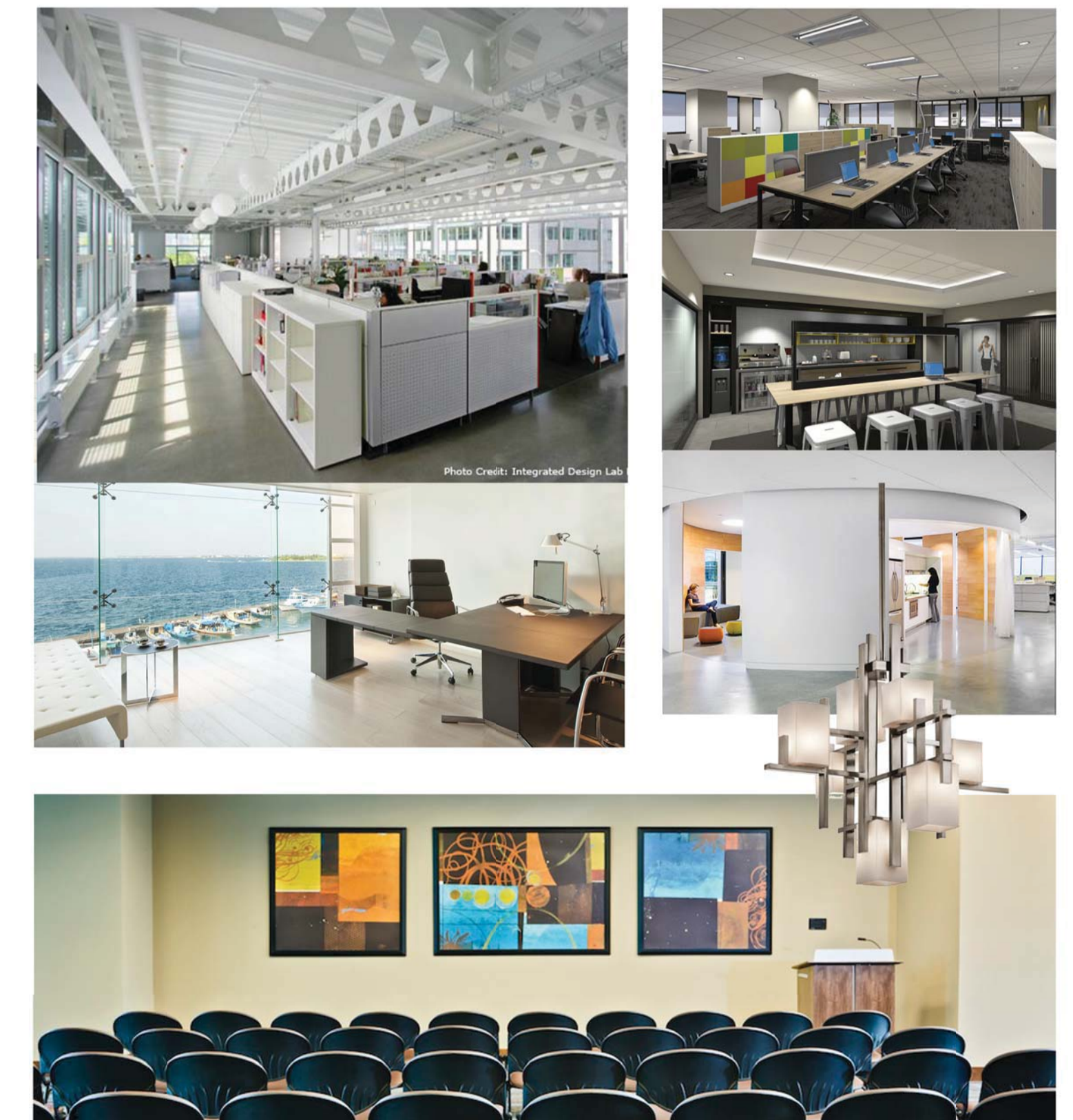
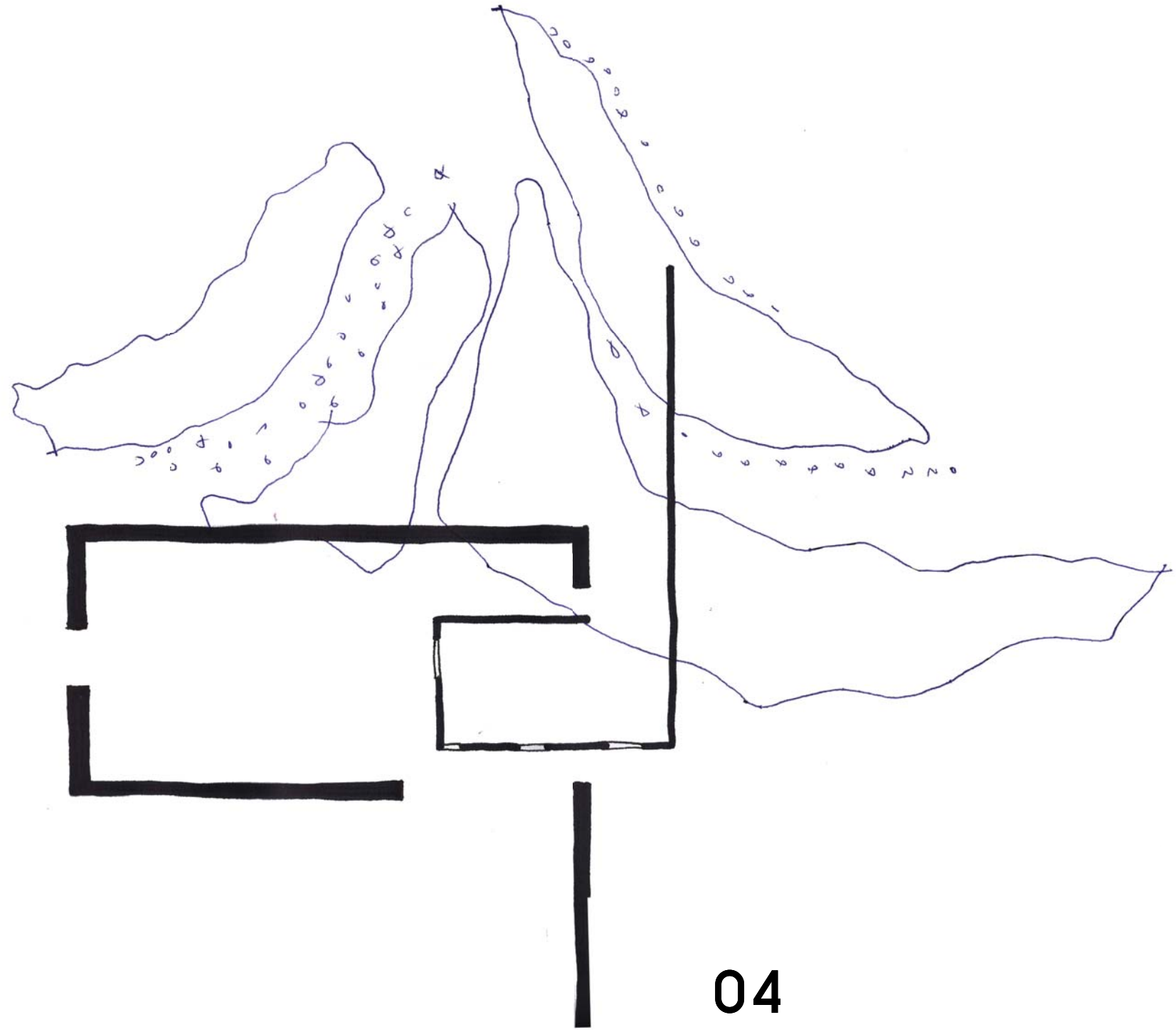


Figure 3.39 Mood board interpretation of the conventional office aesthetic.

### 3.8 CONCLUSION

A broad overview of the evolution of the workplace was given by the use of a timeline and a literature review. The collaborative workplace was analysed and explored and case studies have been conducted. The proposed serviced office typology was discussed and analysed. The chapter concluded with the detailed programme and the conceptual approach to the programme.



04

# DESIGN DEVELOPMENT

## 4.1 INTRODUCTION

Chapter 4 explores the design approach to the proposed intervention. The design approach can be seen as a strategy that combines contextual issues and opportunities with theoretical concepts into a viable design outline for the project. After being confronted with the issues of the corporate working environment, the researcher realised that the usual set of design skills were not adequate. Initially the design focus was placed singularly on being nostalgic about the heritage value of this building and aiming to develop a design resolution that would give recognition to the embedded cultural significance. Thereafter it became clear that in order to develop a more realistic reuse strategy, it was necessary to consider a variation of role players. These factors include real estate considerations, economic viability and the consideration of design decisions from the investor's perspective. The design solution required the design of a network or system as a viable strategy to reuse the Meat Board building.

This chapter explores the concept of inhabitation as theoretical background to the design. Case studies were conducted to aid the development of the design language. The design informants are formalized and the chapter ends with the formal heritage approach, interventionist approach and the zoning plans that preceded the detail design.

## 4.2 INHABITATION AND THE INTERIOR

As mentioned in the introduction, Abercrombie (1990:5) compares entering an interior to the intimate experience of becoming human in the womb. The womb is fundamentally the first association we have of residential space. No matter the character or scale of the space we may enter in this world, Abercrombie states that we tend to associate an interior space subconsciously with this first sense of belonging. By understanding the habits, rituals and comfort zone of our personal room, we are able to engage with an interior space (Abercrombie 1990: 5).

The word inhabitation is defined as living, dwelling in or occupying a place or environment. The root of inhabitation is a habitat that is defined as the natural home or environment of an animal, plant or other organism. In interior design terms, inhabitation can then be translated as occupying space in a comfortable and familiar fashion. Firstly, space is a physical environment where people live, work, eat and play. Space also transcends the physical into another realm of symbolism. Space has the opportunity to cater for more than the demand of a physical shelter, but consists of the possible influence to improve people's wellbeing (Perolini 2011: 164). Interior design as discipline has a unique role to play in the built environment concerning issues of occupation, inhabitation and identity (Königk 2015:5).

The concept of inhabitation is difficult to understand and to apply because it is not quantifiable. As designer, one cannot say that one is designing for maximum inhabitation. The question should rather be: what meaning or symbolism do I want to portray with the placement of objects in the interior? Concerning this dissertation, the following question in the workplace context is asked: how can the arrangement of elements and the spatial design of an interior convey a domestic sense of belonging in contrast to a clinical, impersonal working environment?

### 4.2.1 INTERIOR COMPONENTS AND INHABITATION

Interior design influences the way people inhabit a space. As Nasar and Augustin (2007) explains in the case of an unfamiliar restaurant that the design language leads the user to make assumptions about price, service and food quality. Interior designers should realize the magnitude of their design decisions and as Perolini (2011:164) states, learn to predict user perception to design to intentionally convey an anticipated meaning.

Public space can often be impersonal and overwhelming to inhabitants due to unfamiliarity. In the context of public space, Königk (2015b) emphasizes the importance of placing objects in an intimate proximity in order to suggest inhabitation. In his thesis, Königk explains three proximal assemblies that convey meaning in the interior. Firstly, an ensemble is a synthetic arrangement of found objects on a small scale that contributes to the act of inhabitation, but is not inhabitable by itself, for example a set of cutlery on a dining table. A constellation is defined as a synthetic arrangement of found objects that guide and allow certain behaviour such as a formal table and chairs as dining space. Thirdly, a symbolic motif is defined as a holistic symbolic theme on the building scale that is of permanent nature. (Königk 2015a: 172-175). The use of proximal assemblies in the interior facilitates the user in claiming personal space and rearranging objects to personal preference (Königk 2015b), thus creating a sense of belonging in a large public space. When users take ownership of a space by the rearranging of objects to personal taste and needs, the act of inhabitation is indicated (Königk 2015b). As Königk (2015b) states, the interior designer can facilitate the act of inhabitation by creating territories in the interior that allow occupation and by leaving room for user customization to indicate occupation.

*'Every architect who loves his work must have had his enthusiasm dampened by a prophetic vision of the hideous furniture with which his clients may fill his rooms, and looks all the more incongruous as the rooms themselves are architecturally beautiful.'* (Scott 1895: 127)

The quotation above summarizes my normative position on the relationship between architecture and interior design: I see it as a

a total work of art. I believe that loose objects placed in an interior should be carefully selected and must be intentionally placed within a specific space. Elements in the interior convey meaning within itself and the placement of items in a specific space conveys another layer of meaning, especially in a heritage context. I therefore believe that the composition of elements in an interior is an intrinsic part of the spatial design and experience and cannot be considered in isolation.

### 4.2.2 DOMESTICATING MODERN MOVEMENT SPACE

For the purposes of this dissertation, the term 'domestic' refers to one of the aims of the project, namely to add softness and human quality to the currently harsh interior environment of the Meat Board building. The workplace today has evolved significantly and it is now possible and acceptable to conduct work in a more informal environment that reminds one of one's residential comfort zone. This implies that the proposed intervention aims to create residential associations for inhabitants by creating proximal assemblies similar to those found in the residential environment. On a theoretical level, the dissertation investigates the reuse of modern movement space, often known as inhabitable and impersonal and how it can be upgraded into contemporary associative space, while respecting the heritage value.

### FACILITATING INHABITATION WITHIN THE MEAT BOARD BUILDING

The concept of inhabitation led to the detailed design of furniture constellations as integral part of the design intervention in this dissertation. Furniture is intentionally specified within the context of the Meat Board building as elements with meaning and function. By approaching the specification of furniture in this way, furniture components can be considered in the overall budget of the reuse strategy from the start and in the process, the chance of a budget constraint as reason for the unintentional placement of furniture can be eliminated. The specification of furniture constellations by the interior designer will help to eliminate unqualified individuals to specify furniture that is not in line with the overall design approach, specifically in a project such as the reuse of the Meat Board building where the furniture intervention conveys a specific meaning to the user.



### 4.3 DEVELOPMENT OF DESIGN APPROACH

The following table aims to interpret the theory discussed in Chapter 2 and 3 into a physical design strategy.

ELEMENT	MODERN MOVEMENT DESIGN APPROACH	STAUCH'S INTERPRETATION	COLLABORATIVE OFFICE INTERIOR DESIGN APPROACH	DESIGN RESPONSE
User/ building relationship	Standardization of elements: limits user choice. Design is approached as an intellectual field, social influences of the time are rejected.	The Meat Board building was originally designed with a flexible interior system to allow for long-term adaption with organizational changes, but it does not allow for individual user control.	Designed to offer maximum choice to users in terms of: <ul style="list-style-type: none"> <li>• Ergonomics</li> <li>• User specific thermal comfort</li> <li>• Working environment</li> <li>• Social environment</li> </ul>	Allow for user choice in office setting in terms of personalization of space. Informal workings space offers choice of furniture according to the need.
Inclination	Building as 'machine for living in' independent from context.	Introverted building- isolated from macro context.	Mixed used developments are common- work environments are integrated with other urban functions.	A new entrance is designed to open up the building to be accessible to users within the context.
Services	Concealed building services. Good legibility of services within design language.	Concealed building services arranged around two central service cores.	Services are often exposed- open roof soffits with exposed conduits,	Approach to services influenced by the Hotel analogy. Back of house services is concealed, while user-specific services are incorporated within the furniture design level.
Volume	Wide, open plan space is typical. Large horizontal windows and flat roofs create illusion of space extension.	Mostly horizontal volumes within office space- lack of vertical views/ connection between users.	Building atriums are often a large volume of social interaction. Creates a surveyed entrance.	Vertical volumetric atrium intervention to create new entrance and social space for employees.
Natural light	The revolution of steel made it possible to have long uninterrupted horizontal glass facades that allows abundance of natural light within interior.	The illusion of horizontal ribbon windows is created by the repetition of small windows that allows limited views to employees to not be distracted.	Skylights are often used to incorporate maximum natural light within multi-storey office buildings. Windows and the type of glass are considered in terms of environmental factors.	Double volume and four storey atrium spaces created that allows large amount of natural light into the interior. A balance to be achieved between design- and environmental considerations
Decoration	'Ornament is Crime'. Interior space has no or as little decoration as possible.	No loose decoration, but furniture and ornaments are custom designed with a tremendous attention to detail.	Eclectic decoration, often different aesthetic themes are used throughout the interior to create stimulating, playful environment.	Decoration to be influenced by Hotel analogy- fully decorated, formal interior character. Character of space in contrast with traditional modern movement interior space- empty and removed from decoration.
Design Language	'Form follows function'. Primary colours, Geometric shapes and perpendicular lines.	Iconic modern movement stylistic elements with a Brazilian influence. Interplay between rectilinear and organic lines.	Design language is mostly eclectic. Main drivers for the choice of interior elements include: function, technology, comfort, and working style.	Contemporary design language with references to the existing. New work to be clearly distinguished from existing.
Materials	Raw materials are commonly used. Steel, concrete and timber and masonry are common.	Material use includes concrete, steel, masonry and glass combined with colourful mosaic tiling.	A wide range of materials are currently being used, but the determining factors are mostly aesthetic requirement, energy efficiency and economic considerations.	New work in materials such as steel, timber, masonry and concrete (as seen in existing) with the addition of soft materials.
Interior Aesthetic	Machine aesthetic, industrial quality with the use of raw materials and the resistance of decoration.	Industrial quality to space but the addition of timber and soft furniture in waiting areas adds warmth to the environment. Coloured mosaic tiling creates an inspiring atmosphere.	Interior space is mostly designed with the aim to motivate collaboration and interaction between employees.	Light, open colourful environment.
Environmental consciousness	Although modern movement architecture is often accused of being isolated objects, climatic elements such as orientation, roof overhangs and brise-soleil are seen in this era.	Stauch did incorporate the immediate context with design decisions as he respected the residential scale and character of the context at the time. The sun control louvres (brise soleil) on the North façade is said to be the first of its type in South Africa.	Sustainability is key within material choice, programme, transportation surrounding the building and community involvement.	Consider interior environmental quality by choosing the most energy and environmentally efficient lighting, ventilation strategy and

Table 4.1 The synthesizing of concepts into a design approach.

## 4.4 CASE STUDIES

### 4.4.1 REFURBISHMENT OF APARTMENT 50, UNITE'D HABITATION BY RONAN & ERWAN BOUROULLEC

This iconic post-war housing complex by Le Corbusier was revolutionary for its time in terms of scale but fundamental design flaws have caused this complex to be considered unsuccessful by many. Unite'd Habitation ('The Unified dwelling') is based on the concept of Le Corbusier's garden city and consists of 337 apartments, housing 1600 people, a hotel and additional functions such as 2 floors of shopping space and the flat roof as communal space with a gymnasium, nursery school, open theatre and running track (Karrick's M.Arch Thesis Blog 2008).

The design of the apartments creates a valuable precedent for future housing developments. The size of the apartments was determined by a modular system developed by Le Corbusier 'Le Modular' by integrating the proportions of an average person and the golden section (Fazio et al 2003: 175). The spatial planning of the complex consists of interlocking apartments. Many of them double storey apartments surrounded by horizontal 'streets' (Karrick's M.Arch Thesis Blog [S.a]). Furthermore, apartments are designed to face east/west to allow for cross ventilation and each apartment is accompanied by a balcony behind the brise soleil or an exterior (Fazio et al 2003: 175).

Although an architectural icon, the success of the Unite' d' Habitation is a controversial issue as many of the inhabitants are of the opinion that the apartments of this housing complex are not as ideal as they are made out to be. In 2010, Studio Bouroullec fitted out Apartment 50 as a limited edition exhibition of their bespoke furniture and ornaments. The exhibition was influenced by the manner in which the current owners inhabit the apartment (Dezeen 2010). In this design, it is evident that it is possible to translate the minimalist, open interior design approach of Le Corbusier into a more realistic, contemporary and comfortable space adding ornaments that serve a function and add character to the domestic environment.

The interior of refurbished Apartment 50 is colourful, well-articulated with an element of the avant-garde. Although the designers guide the user's lifestyle in the apartment with the arrangement of furniture and found objects, customization is catered for. It is evident that the colours of the exterior are translated into the interior environment. This case study is significant in this dissertation as it shows an interior intervention in the host building designed by a well-known architect as in the case of the Meat Board building. In this case study the interior designer was not too nostalgic about the architecture itself, but demonstrated courage and innovation with its contemporary reaction to the existing.



Figure 4.1 Exterior facade of the Unite d' Habitation (Uncube magazine 2013).



Figure 4.2 Interior view of Apartment 50 living room (Dezeen 2010).



Figure 4.3 Apartment 50 living room, view from balcony (Dezeen 2010).



Figure 4.4 Chair and lamp in Apartment 50 (Dezeen 2010).

#### 4.4.2 REUSE OF THE VAN NELLE TOBACCO COMPANY, WESSEL DE JONGE AND CLAASSEN ERDMANN ARCHITECTS

The Van Nelle Tobacco factory is an iconic example of the Modern Movement industrial era, situated in the Netherlands. The building was originally designed by Jan and Michiel Brinkman and Leendert Cornelis van der Vlugt and was erected in 1931. Tobacco production in the building came to an end in 1995 and thereafter the owner approached heritage specialists and governmental parties to start investigating an appropriate manner in which the building could be reused (Kennis- en Projectenbank Herbestemming [S.a.]). In 2014 the building was listed as a UNESCO World Heritage site (Holland 2014). In 2004 the building was reprogrammed as a 'creative factory' and is currently seen as one of Rotterdam's most important local monuments (Architecture in Rotterdam [S.a.]). The building is currently used as office space for creative businesses and serves as event space (Wessel de Jonge 2009).

The large glass facades were revolutionary at the time of erection and were designed to allow for maximum natural light in the interior and to save on overall energy consumption. With the redevelopment of the factory, the aim was to keep the interior light quality, but to improve on the indoor environmental quality. To compensate for the tremendous heat gain through the glass facades, the architects designed a secondary internal glass façade that controls the indoor temperature, but still allows daylight to penetrate deep into the building. On the south-western façade where the heat gain is the most, the secondary glass facades were placed where sun control louvres used to be and this created a ventilated double glass skin. On the north-eastern façade, the secondary glass façade is stepped back to allow for circulation space between the two glass. New offices are designed as box elements that are independently ventilated from the rest of the building (Wessel de Jonge 2009).

The new interior of the Van Nelle Tobacco Company resembles that of a heavy duty factory space: clinical, raw material use with minimal ornament. An element of amusement is introduced with the lighting throughout the building and with the use of colour. Existing elements such as old sign boards and various old furniture are used to create a contemporary and fresh aesthetic in the social space. This case study is a valuable example of how to handle a large scale reuse project from an interior perspective.



Figure 4.5 Van Nelle Tobacco company exterior view (Time Travel Turtle 2014).



Figure 4.6 Interior staircase (Time Travel Turtle 2014).

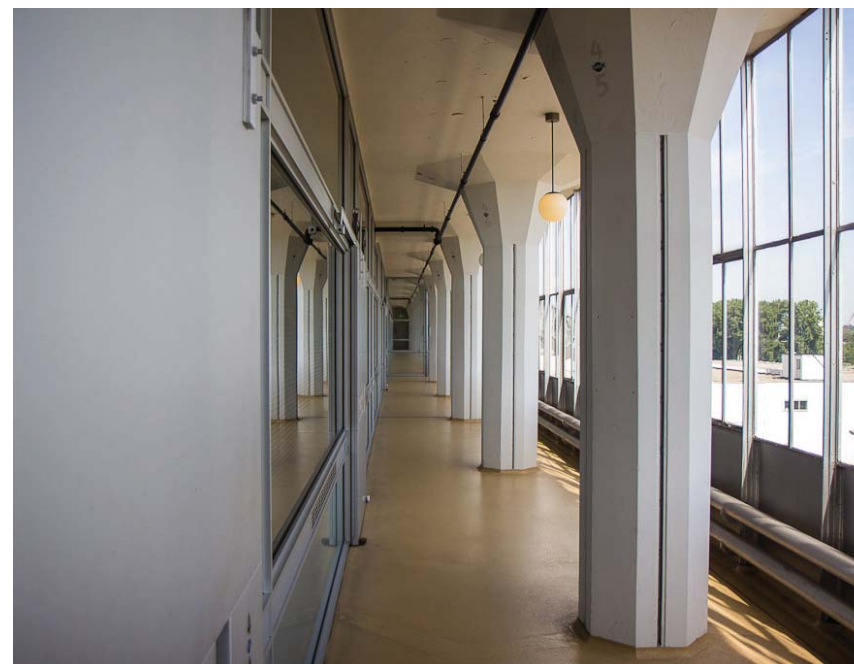


Figure 4.7 Corridor in between double glass facade within the Van Nelle Tobacco company (Time Travel Turtle 2014).

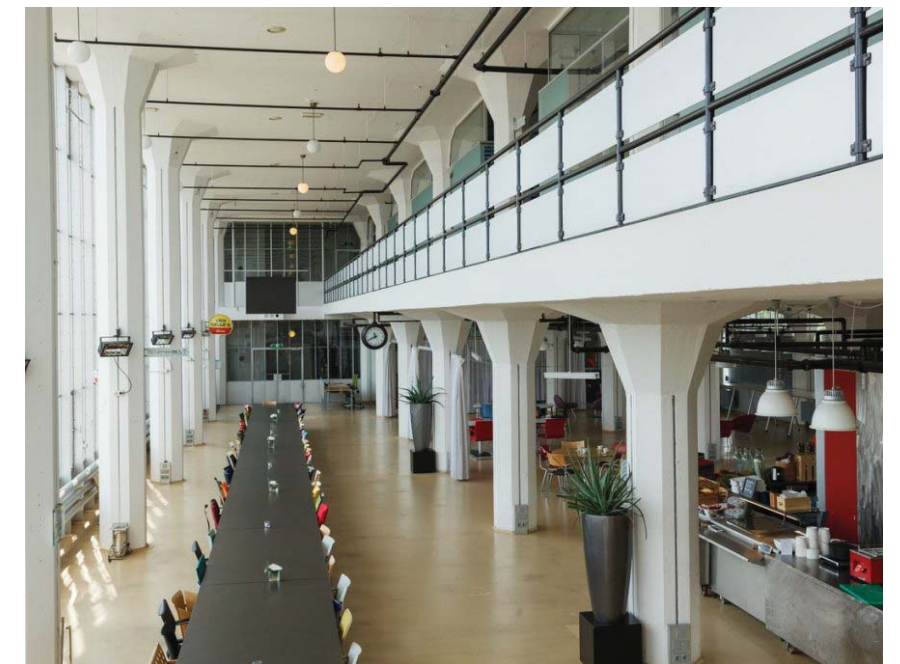


Figure 4.8 Restaurant space within Van Nelle Tobacco company. (Time Travel Turtle 2014).

#### 4.4.3 ROOM 606, SAS ROYAL HOTEL BY ARNE JACOBSEN

The SAS Royal hotel, also referred to as the Radisson Blu hotel, was originally designed for the Scandinavian Airline System housing an airline terminal and luxurious hotel. Situated in central Copenhagen, the building and all its delicate components were designed by renowned architect Arne Jacobsen and is a true example of a Modern Movement Gesamtkunstwerk. The building was completed in 1960 and was Copenhagen's first skyscraper (Copenhagen [S.a.]). Room 606 in the hotel is currently preserved in its original state to exhibit Jacobsen's remarkable skill with the composition of interior elements. Jacobsen's work has been described as illustrating a unique combination of natural and abstract elements (Sheridan 2010:9).

Room 606 is currently being preserved in its original state as designed by Jacobsen. Although the interior of Room 606 is an uncluttered, minimalist space, it has a warm, soft character. The use of textiles in this room is prominent. A soft partitioning curtain closing off the bedroom internally from the lounge and a soft translucent curtain at the window to allow maximum view to the outside. What makes this architectural creation admirable is the design that follows through on building and ornament scale. The architectural style was radically modern in Copenhagen at the time, but the interior was filled with recognisable elements such as handcrafted interior wall panelling in rooms with hand-painted crockery specified for the restaurant area (Icon 2011). Room 606 also exhibits the three famous chairs custom designed for this hotel: the drop, egg and swan chair (Copenhagen [S.a.]). These chairs have a timeless elegance to them and replicas are still being manufactured today.

This case study is a valuable example of combining different conservation processes such as renovation and restoration with an intervention. Furthermore, the aesthetic of Room 606 helped to create an understanding of how soft materials and surfaces can be implemented in the context of the Meat Board building.



Figure 4.9 Original entrance foyer of the SAS Royal Hotel, Copenhagen (Vita Estelo 2014)



Figure 4.10 Bed with curtain within Room 606 of SAS Royal hotel (Phaidon 2003).



Figure 4.11 Curtain detailing within Room 606 of SAS Royal hotel (Phaidon 2003).



Figure 4.12 Study and lounge area of Room 606 of SAS Royal hotel (Phaidon 2003).

# 09 Design Development

## 4.5 DESIGN INFORMANTS

### 4.5.1 MACRO CONTEXT

The strategy for the implementation of the serviced office facility is directly influenced by factors in the macro context. The choice of the proposed programme is greatly affected and guided by the Tshwane 2055 vision as set out by the government in addition to the socio-economic conditions (and its potential) of the users in the immediate context of the Meat Board building. Furthermore, the existing vehicle and pedestrian circulation movements on site, the availability of pedestrian interfaced functions in the context and public transportation networks determined major design decisions.

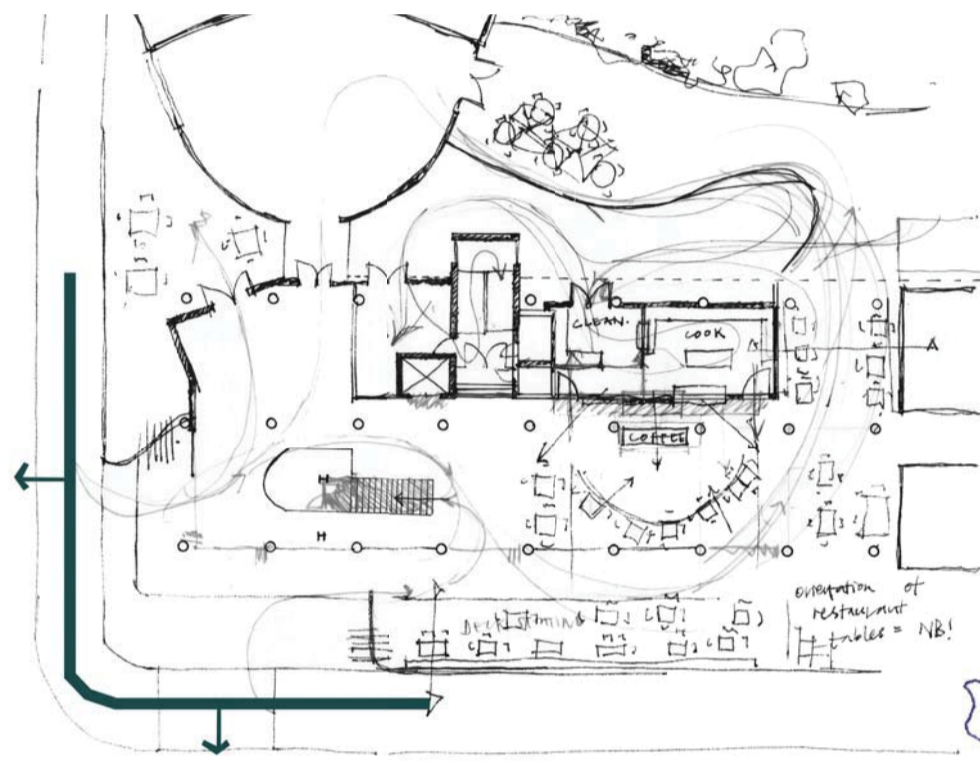


Figure 413 Sketch that shows the ground floor circulation and activated street edge.

### 4.5.2 HOST BUILDING

Existing elements within the host building such as the colour palette, articulation and material palette is used as design inspiration for the proposed intervention. The building style and other characteristics of the Modern Movement (as seen in case studies) further guided the development of the design.

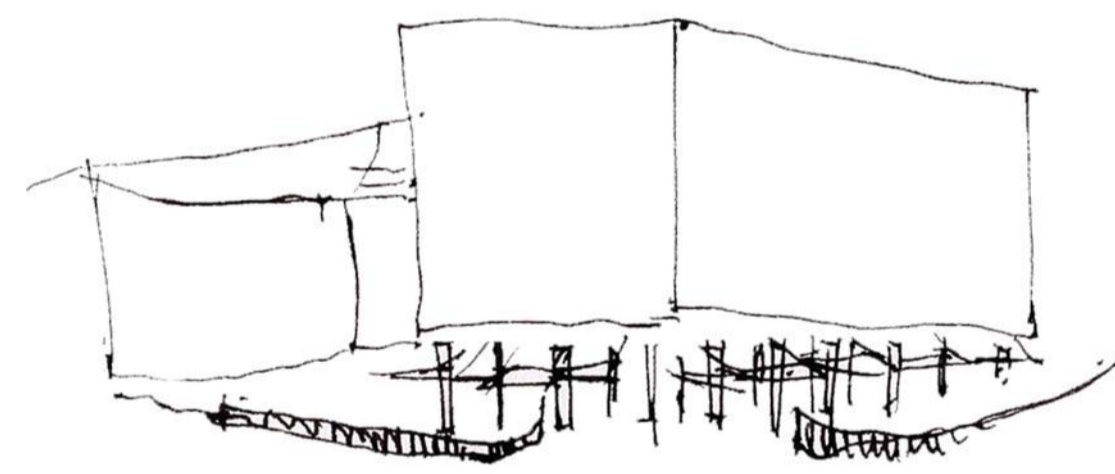


Figure 414 Sketch showing the basic morphology of the Meat Board building and conceptual lines of the proposed entrance.

### 4.5.3 CONCEPT: HOTEL ANALOGY

The analogy of a hotel is used as a conceptual influencer to guide the manner in which the serviced office typology functions. This was deemed necessary as the typology is relatively new and unfamiliar in the context. The approach to services as served and servant spaces in the building is inspired by the manner in which hotels are operated. Furthermore, the aesthetic of the proposed intervention is influenced by the fully decorated, formal and domestic character often visible in hotel interiors. Furthermore, the concept of occupation in a fully furnished space with opportunity for individual room customization was also introduced by the hotel analogy.

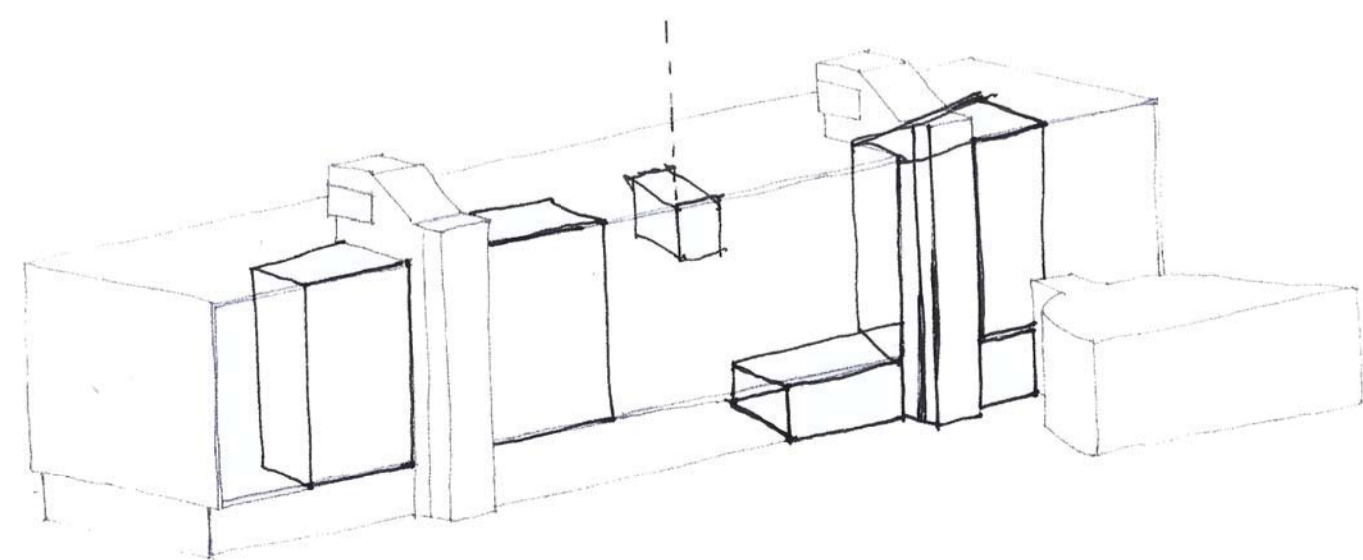


Figure 415 Sketch showing location of new services adjacent to existing service cores as influenced by the hotel analogy.

### 4.5.4 COLLABORATION AND SOCIAL SPACE

The fundamental idea of spatial design in a collaborative working environment is that spaces are created to motivate employee interaction and innovation. Public spaces subsequently play a key role as a major point of social interaction in collaborative environments. The absence of public interaction space currently in the Meat Board building therefore posed a major design opportunity.

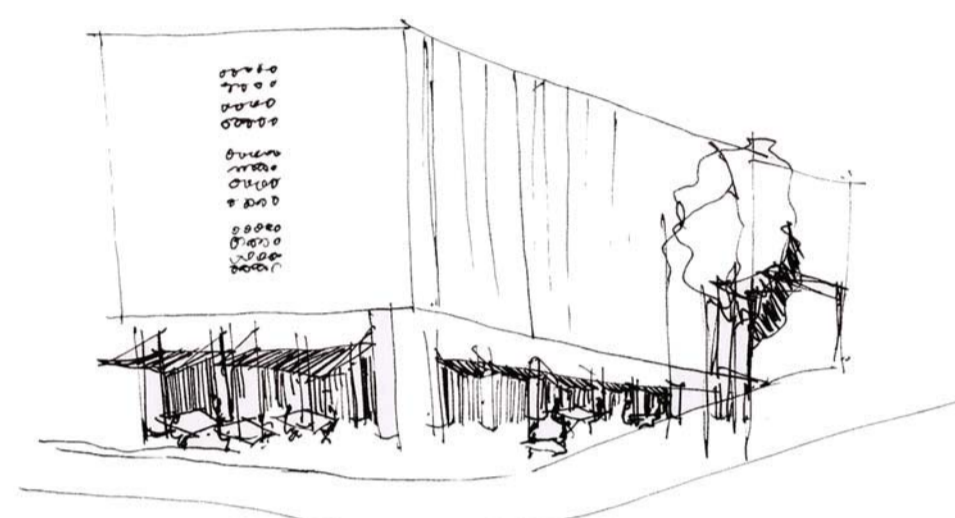
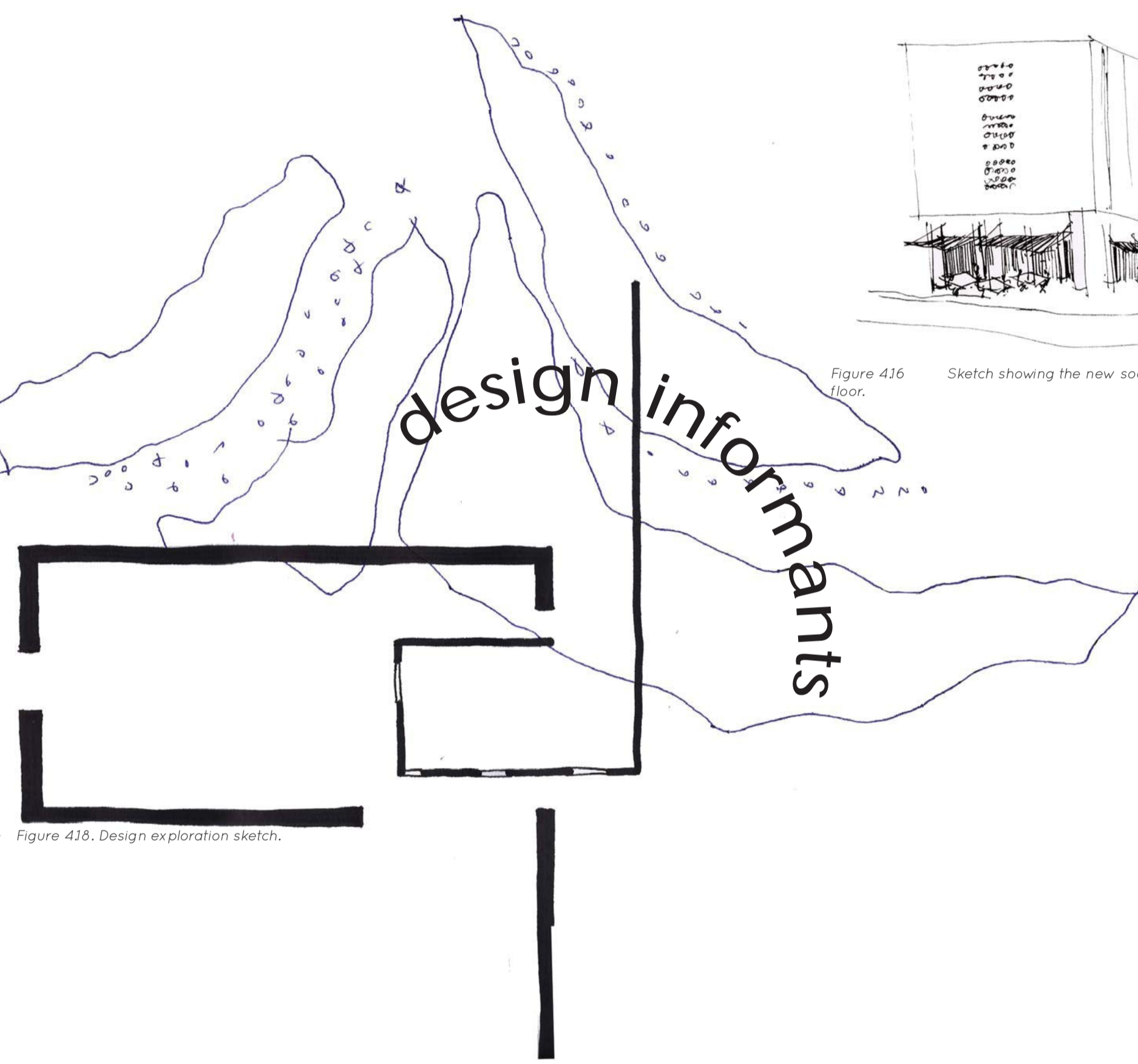


Figure 416 Sketch showing the new social character of the lower ground floor.



### 4.5.5 ARCHITECT'S ORIGINAL INTENTION

Stauch's original intention for the building to be an inspirational, colourful and adaptable working environment was used as the one of the main design aims against which design decisions were verified. The spatial quality of the original interior as designed by Stauch also informed the spatial character of the proposed intervention.

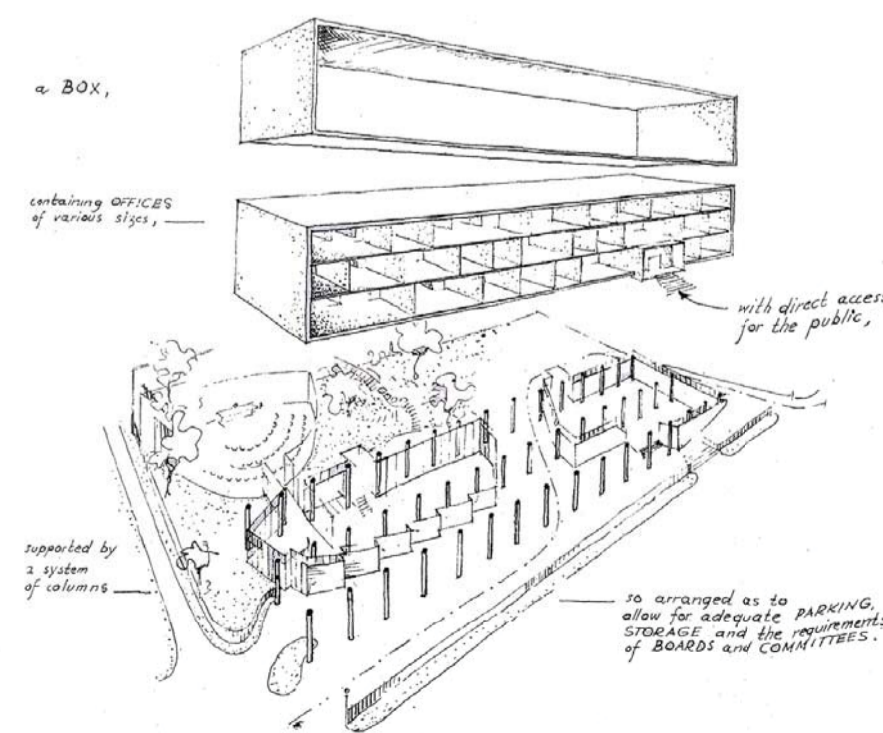


Figure 417 Sketch of original building by Stauch (Stauch 1951: 5)

### ORIGINAL INTERIOR OF THE MEAT BOARD BUILDING

- Interior blinds: dappled light effect.
- Abundant natural light
- Curved element: tea room counter
- Uncluttered, minimalist interior character with raw materials.
- Minimalistic ornaments
- Formalistic furniture constellations
- Exterior facade rhythm translated to the interior partitioning system
- Timber clad wall- formal, intimate interior.



Figure 419 Photograph of the original reading rooms on the lower ground floor (Howie 1952: 16).

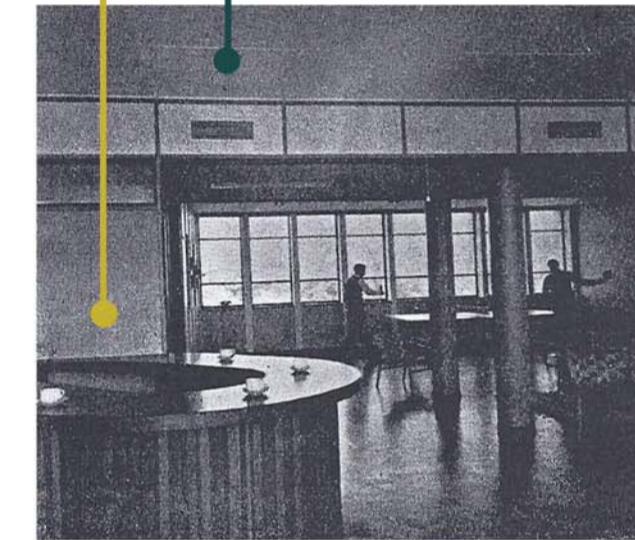


Figure 420 Photograph of the original recreation area on the upper ground floor (Howie 1952: 16).

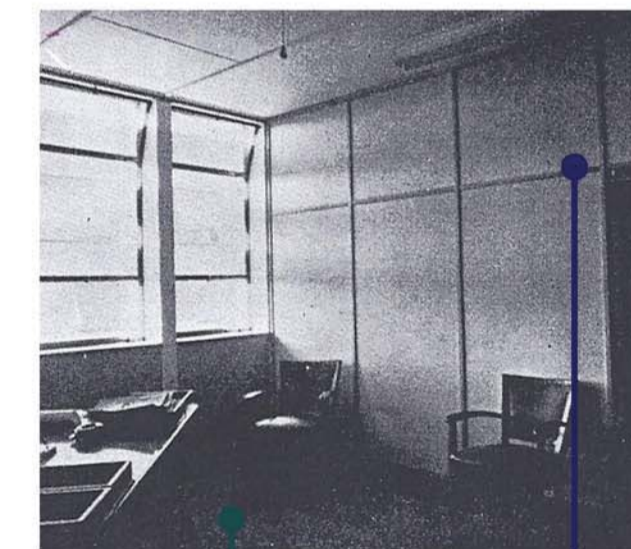


Figure 421 Photograph showing the original furniture constellation of an office (Howie 1952: 16).

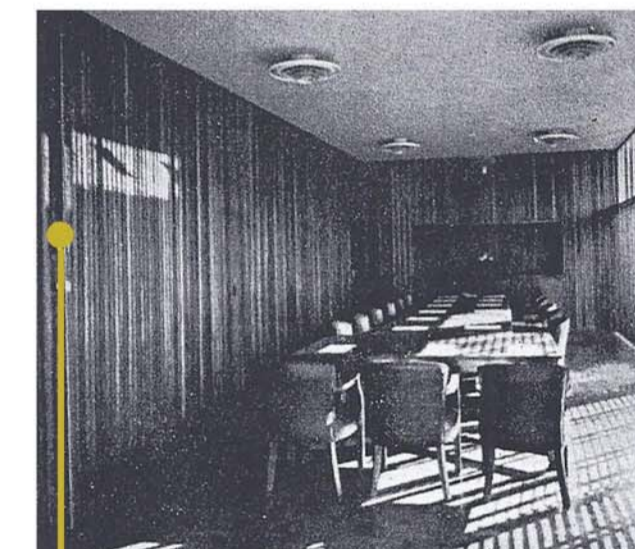


Figure 422 Photograph of the original committee room on the lower ground floor (Howie 1952: 16).

# 10 Design approach

## 4.6 HERITAGE STRATEGY

Firstly, the heritage strategy includes the stripping of all the additions that do not align with Stauch's original vision for the building. The building is then returned to a previous phase and it can be seen as a blank canvas from where the new intervention can be implemented.

### SUMMARY OF DEMOLITION WORK:

1. Demolition of all interior partitions throughout the building.
2. Cutting away of slabs within new atrium space.
3. Demolition of exterior walls on Southern facade that blocks throughfare.
4. Removal of pavement to reimplement garden.
5. Demolition of connecting corridor to adjacent building on North facade.

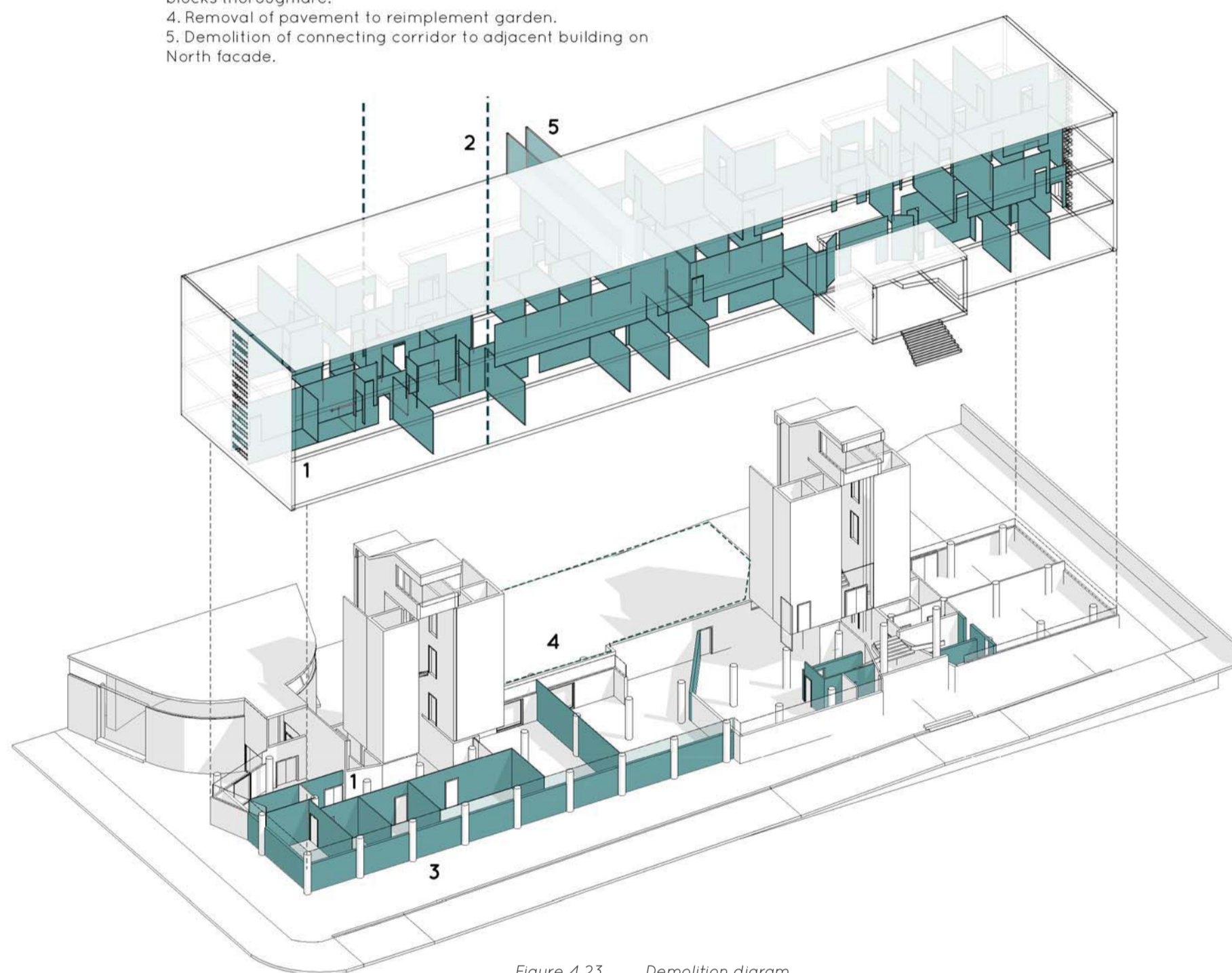


Figure 4.23 Demolition diagram.

## 4.7 INTERVENTIONIST APPROACH

### SUMMARY OF NEW WORK

1. Construction of new atrium space and new entrance.
2. Remodelling of Ground floor level as social space.
3. Configuration of formal workspace (Levels 1 and 2).
4. Configuration of informal workspace (Upper ground floor).
5. Upgrading and partial refurbishment of existing boardroom.

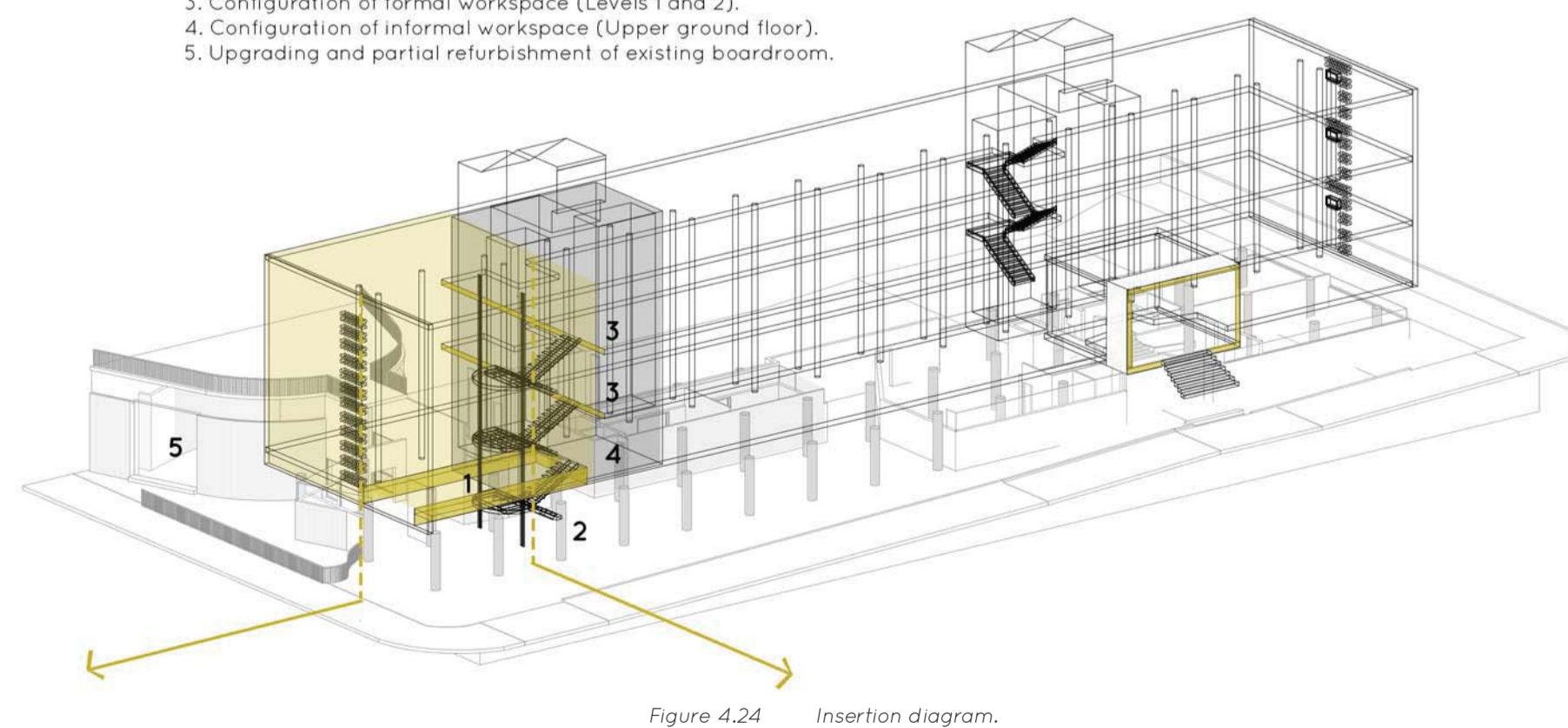


Figure 4.24 Insertion diagram.

The proposed intervention aims to meet the existing fabric in a way that exhibits the value of the existing significant elements. Secondly, existing poetic elements are used as a generator for the new elements.

Furthermore, the design approach to the project consists of a tri-scale intervention:

- 1. PERMANENT:** Large scale, overall service upgrade and maintenance to extend the life expectancy of the building and to bring the services up to date with the current SANS 10400 requirements.
- 2. FURNITURE:** Intervening on a medium scale; this involves furniture, lighting, interior finishes and interior environmental quality to facilitate inhabitation.
- 3. CUSTOMIZATION:** The design of space that allows for the claiming of personal space and for personification of space.

## 4.8 APPROACH TO SERVICES

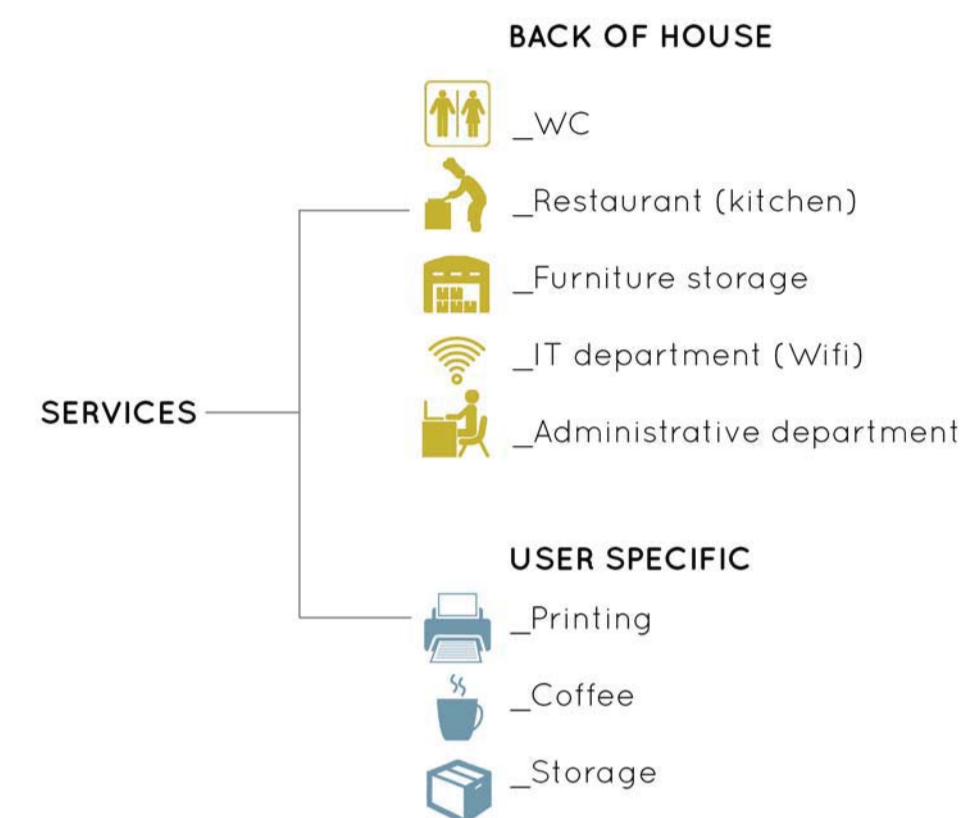


Figure 4.25 Diagram explaining the back of house and user specific services of the serviced office typology.

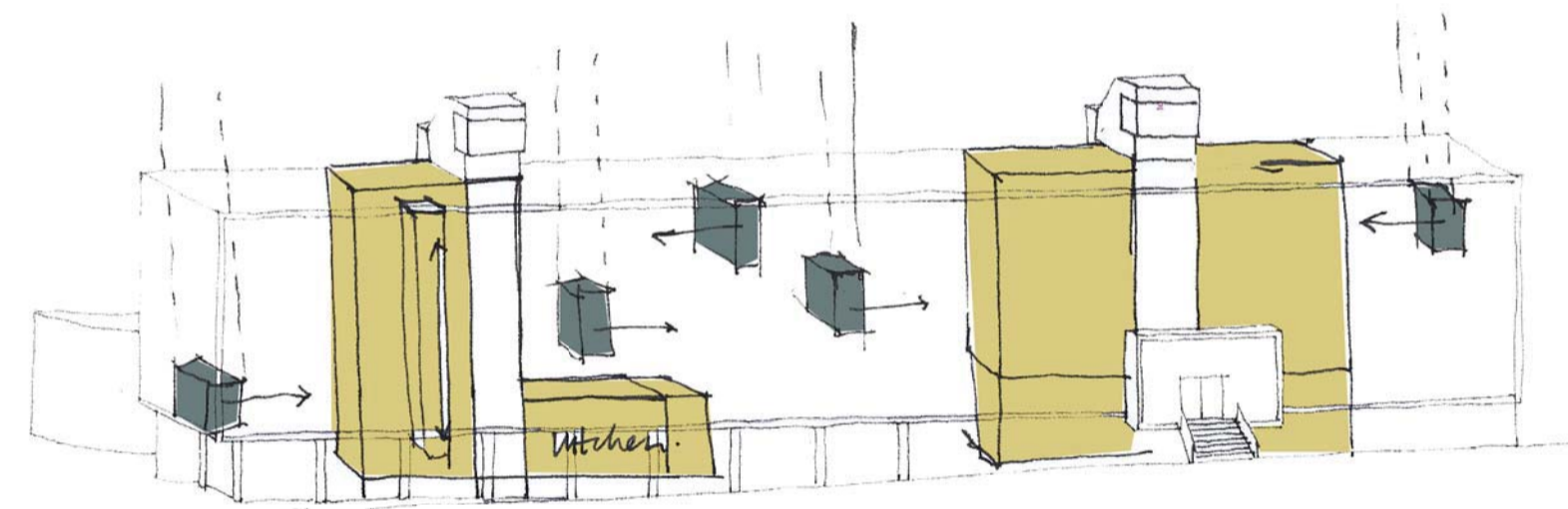


Figure 4.26 Sketch explaining the new back of house services that connect to the existing service cores and user specific services that are located within office and public space.

## 4.9 FURNITURE PHILOSOPHY

Stauch originally designed most of the furniture in the Meat Board building. Of these custom designed furniture, only the tables in the original boardroom are still intact. Photographs of the original interior reflect a sensitive, specific choice of furniture to enhance the spatial design. The style of the original furniture speaks of the time: Raw timber and mechanically clean articulation between members.

The furniture specified in the interior of a building, plays a big role in the way that users interact with a space. The aim with the furniture constellations inserted into the new atrium space is to create associations of a domestic character. Concerning the style of the new furniture, the specified objects are fashionable contemporary furniture with modernist characteristics (as informed by the case studies). In this way the furniture constellations and ensembles relate back to the heritage of the building but are of contemporary nature.



Figure 4.27 Design exploration mood board experimenting with ways in which modern movement elements can be combined with the contemporary within constellations in the interior.

# 11 Zoning

## 4.10 PROGRAMMATIC DISTRIBUTION/ ZONING

The design process commenced with the composition of the zoning plans that reprogrammes the host building according to the proposed programme. The following diagram summarizes the zoning concept:

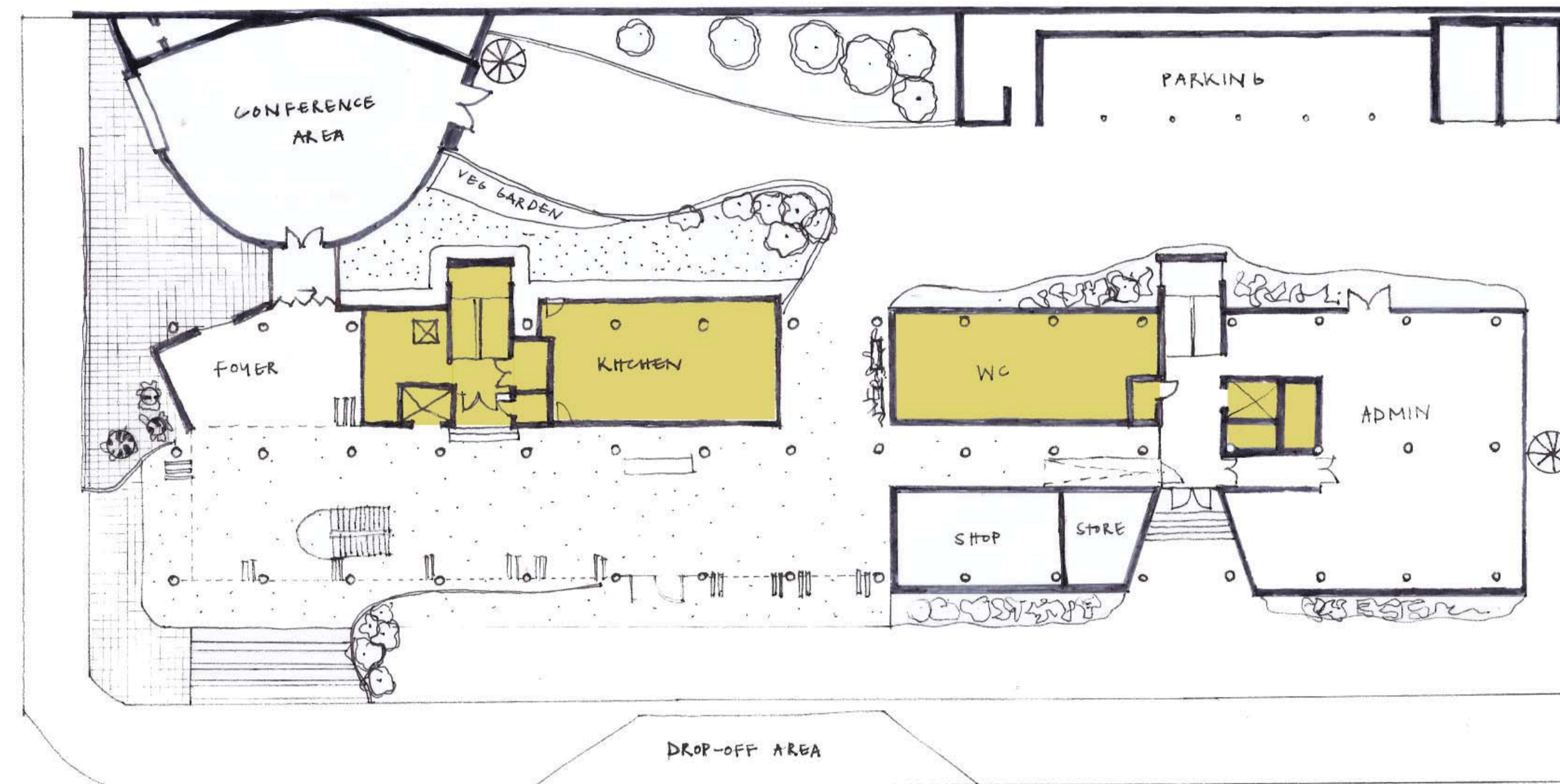


Figure 4.29 LOWER GROUND FLOOR ZONING PLAN

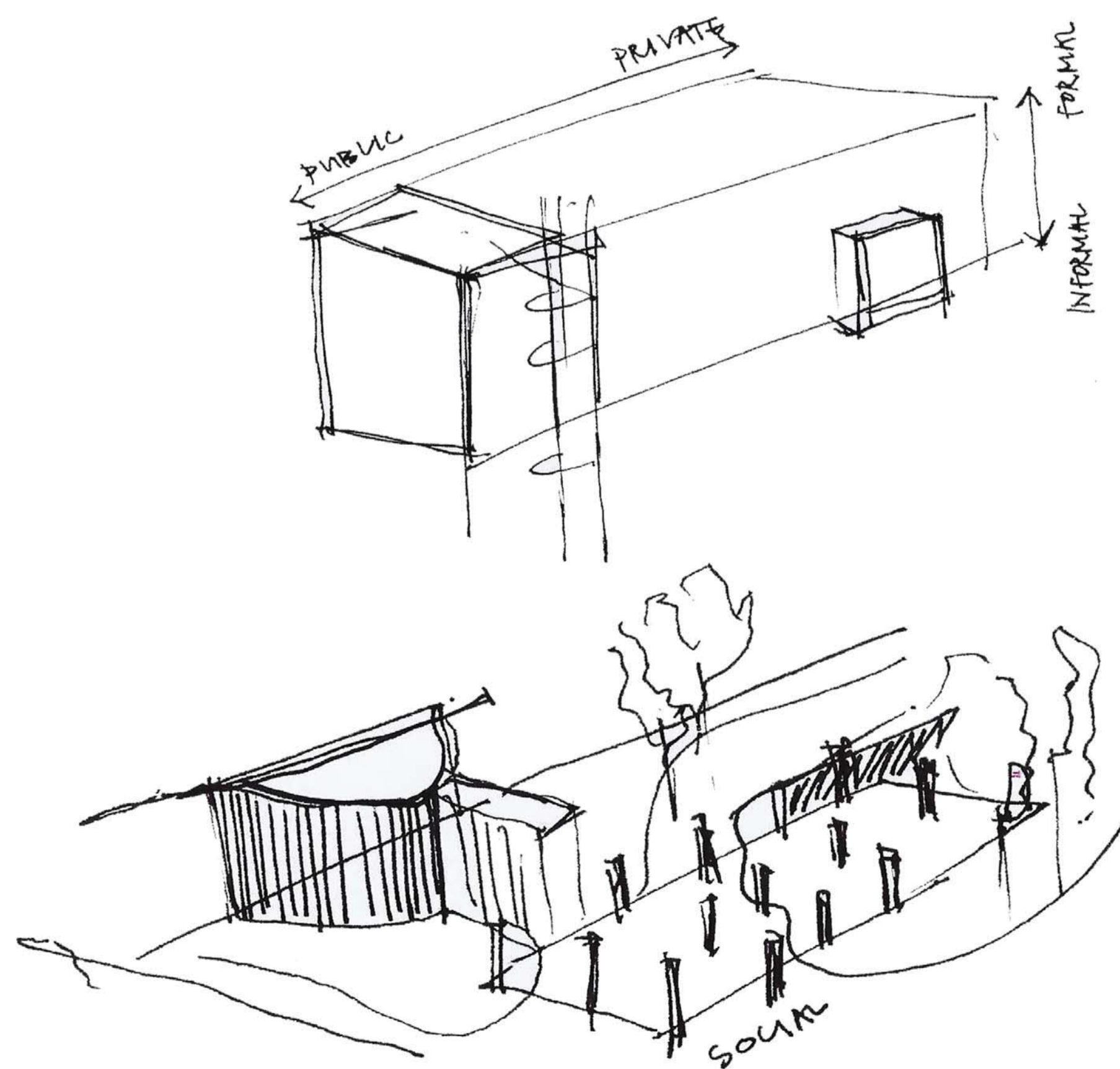


Figure 4.28 Zoning concept sketch.

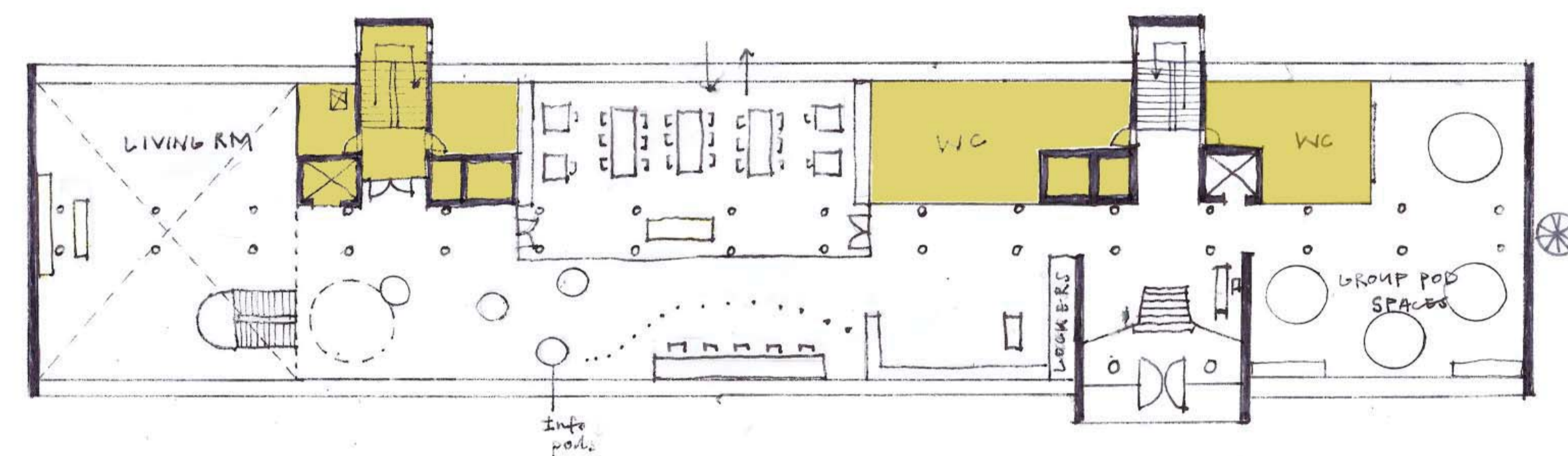


Figure 4.30 UPPER GROUND FLOOR ZONING PLAN

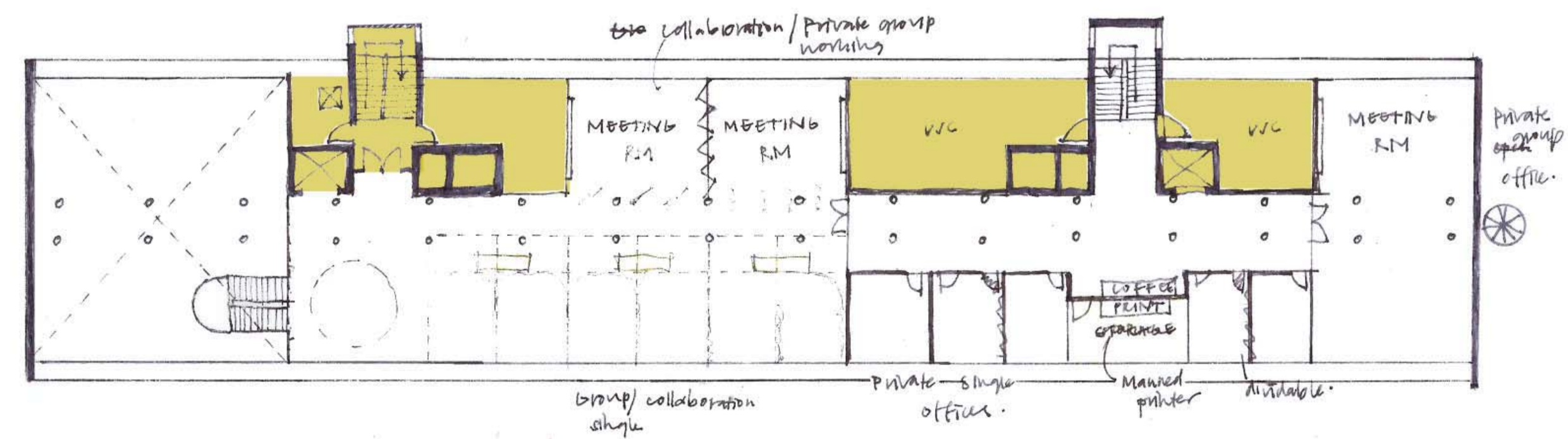


Figure 4.31 FIRST/ SECOND FLOOR ZONING PLAN

#### 4.11 CONCLUSION

This chapter considers the theoretical and physical approach to the holistic design. The design informants and information gathered from the context analysis and literature review have been synthesized into strategies. The detail design and technical approach towards the design are guided by the strategies formalized in this chapter and follows in Chapter 5.

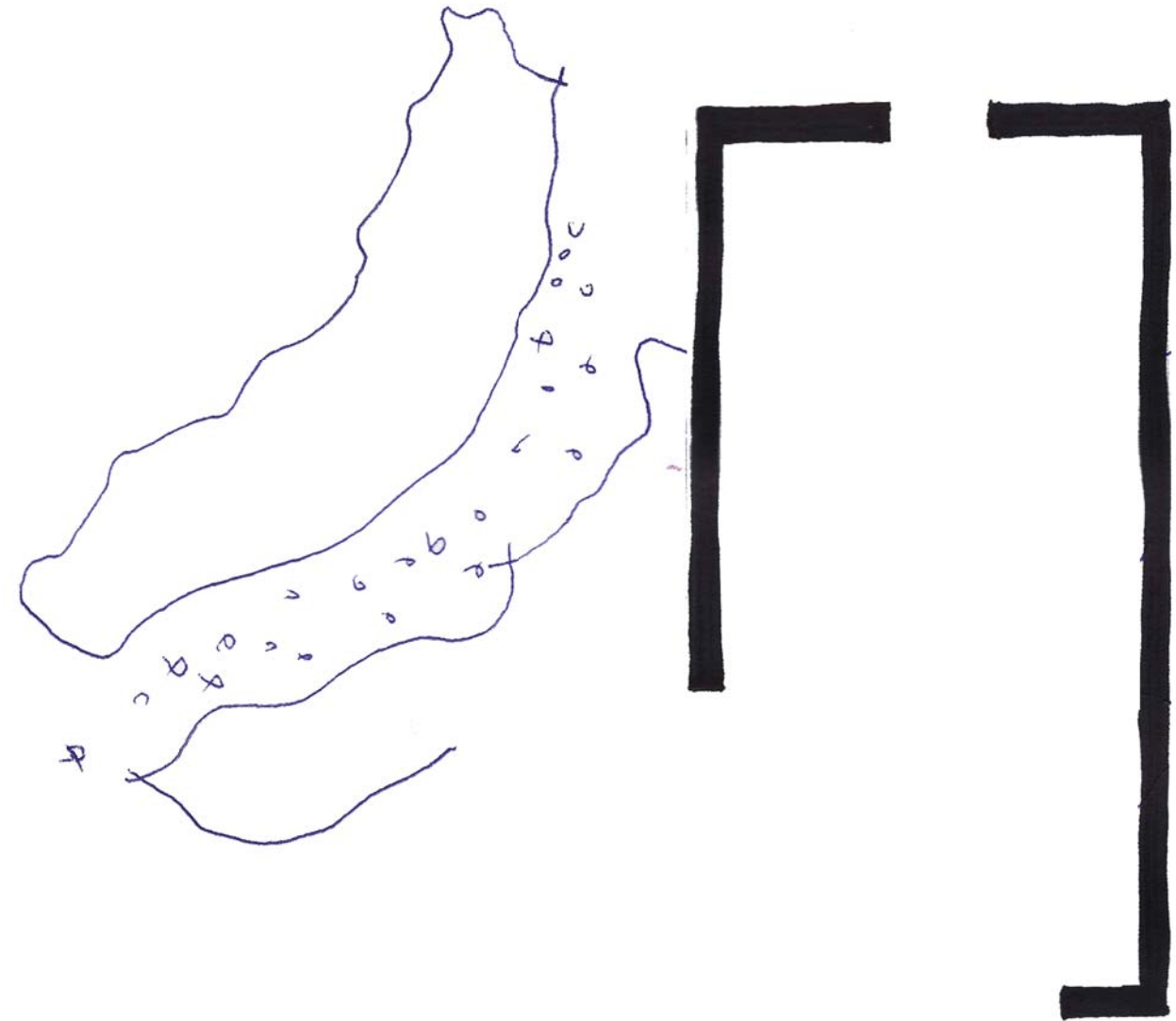


Figure 4.32 Conceptual section as presented in June showing the proposed staircase intervention and new entrance.



Figure 4.33 Longitudinal conceptual section as presented in June.





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.

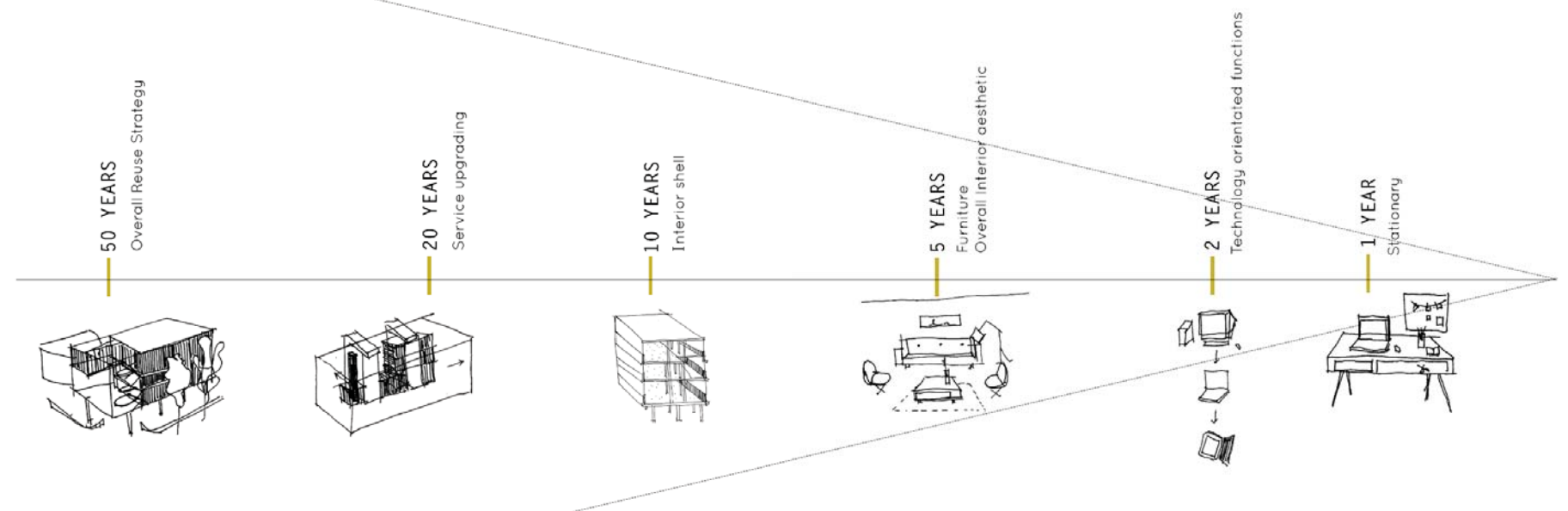


Figure 5.1 Diagram showing expected life cycle of elements within the proposed intervention.

# 12 Lower ground floor

## 5.5 REMODELLING THE LOWER GROUND FLOOR AND NEW ENTRANCE

### The Canteen

#### 5.6 LOWER GROUND FLOOR CAFE

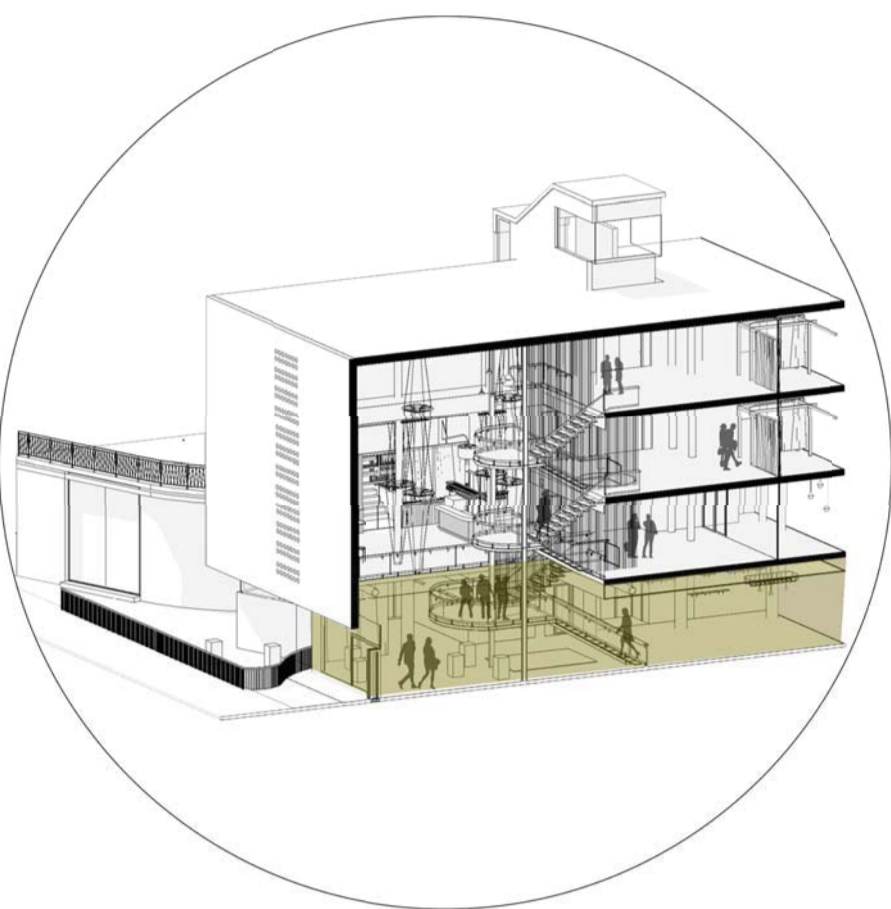


Figure 5.2 Diagram showing the location of new entrance and Canteen.

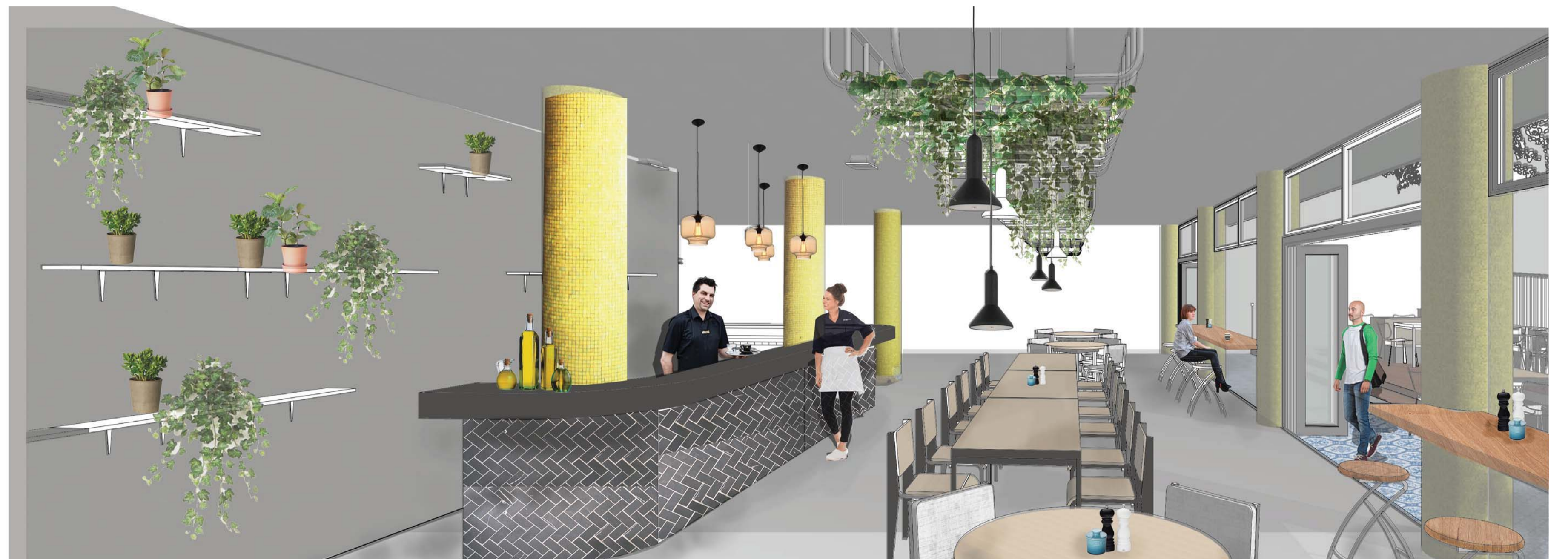


Figure 5.3 Canteen interior perspective: see view point 1 on plan.

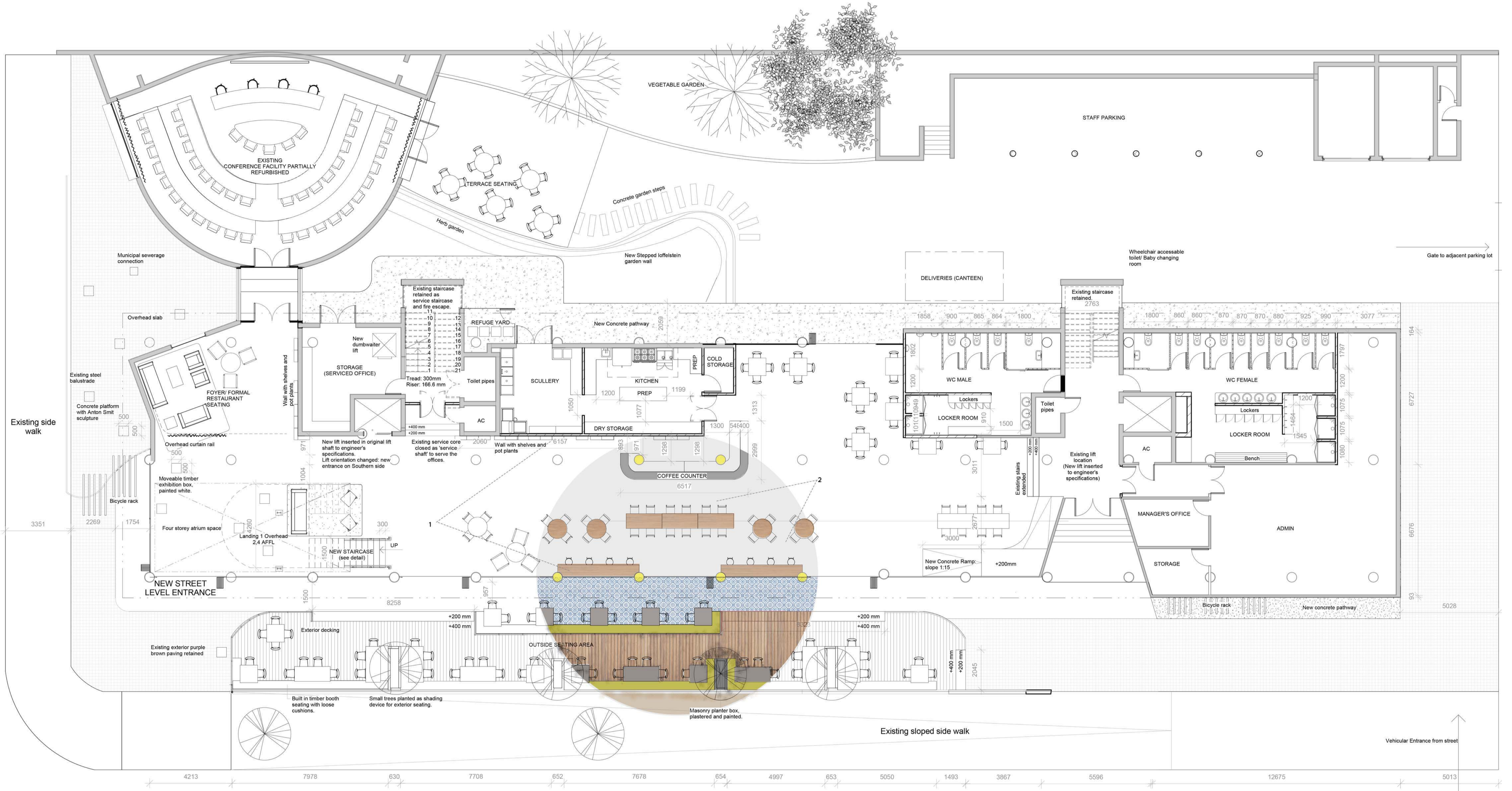


Figure 5.4 LOWER GROUND FLOOR PLAN SCALE 1:100

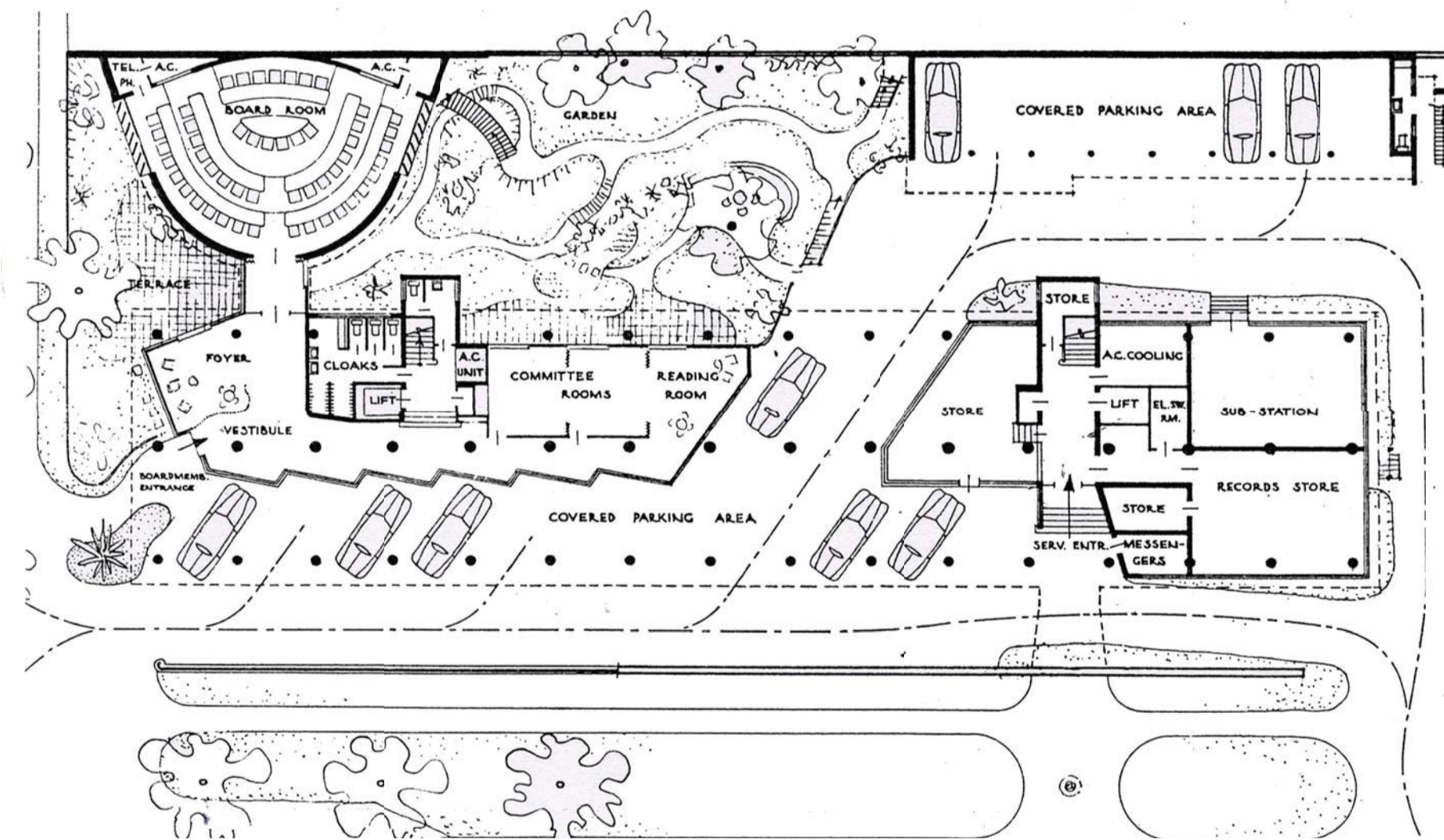
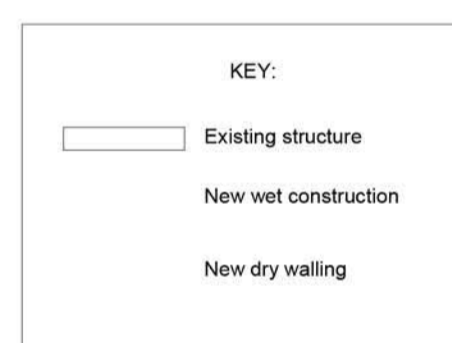


Figure 5.6 ORIGINAL LOWER GROUND FLOOR PLAN (Stauch 1991:4)

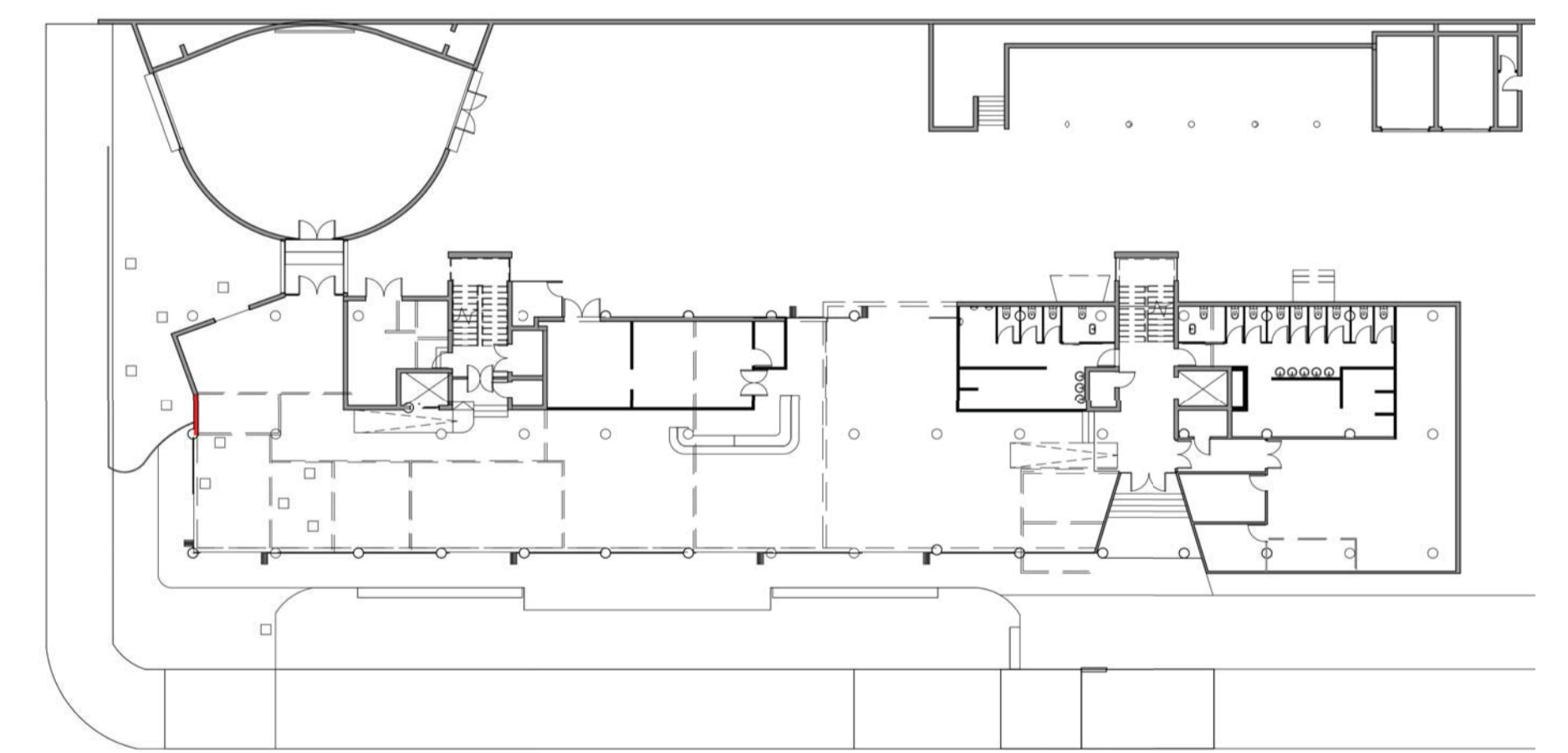


Figure 5.7 DEMOLITION DIAGRAM: PROPOSED INTERVENTION



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

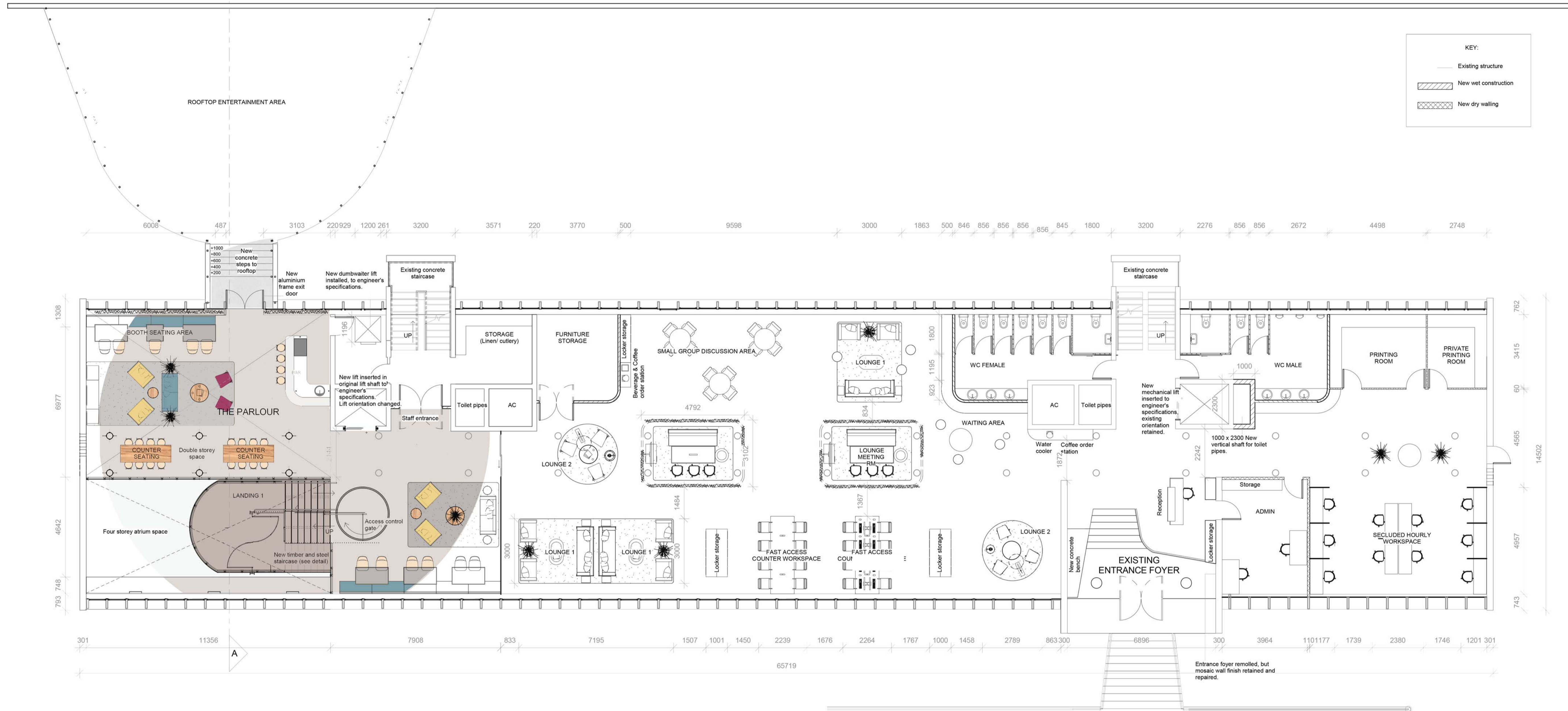


Figure 5.9 UPPER GROUND FLOOR PLAN SCALE 1:100

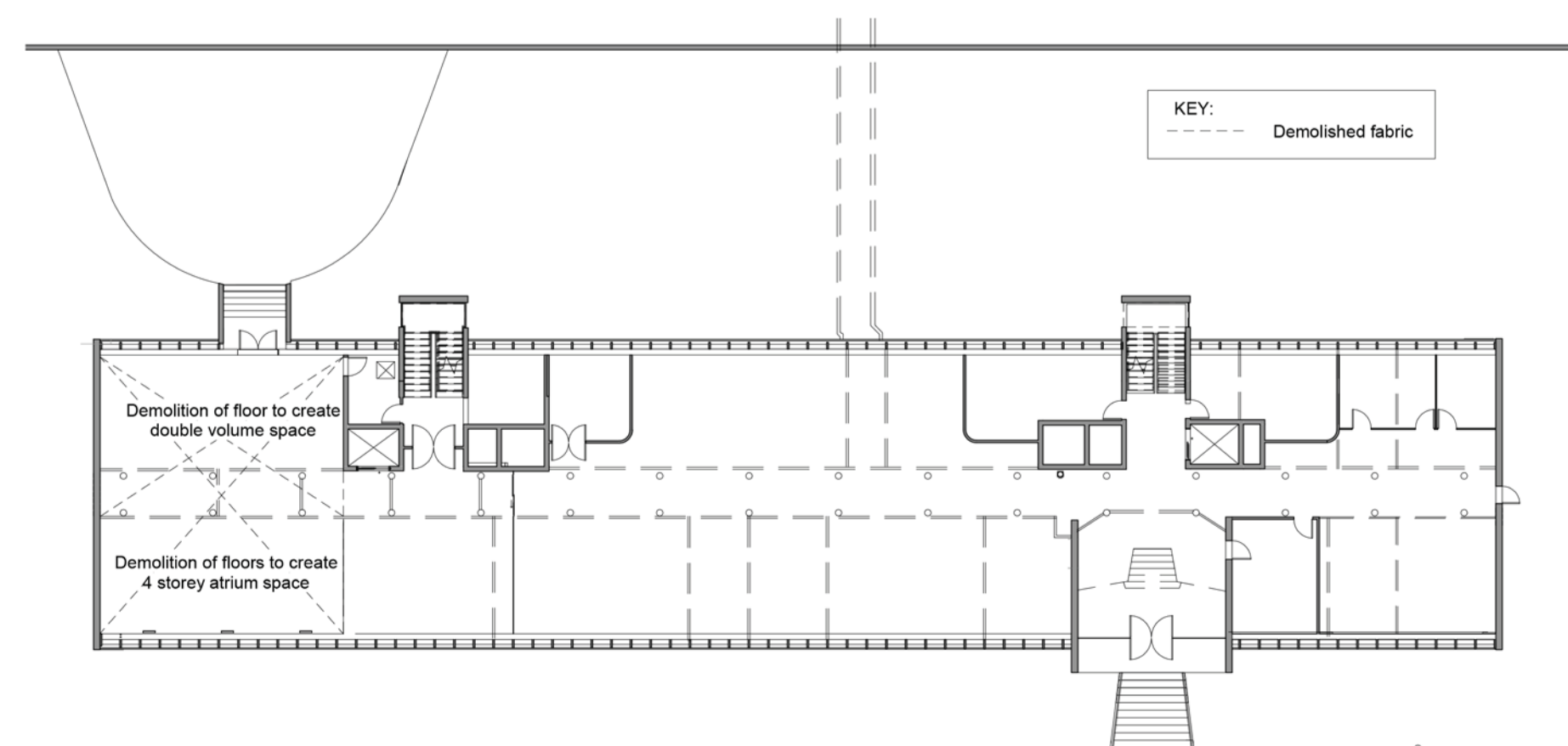


Figure 5.10 UPPER GROUND FLOOR DEMOLITION DIAGRAM

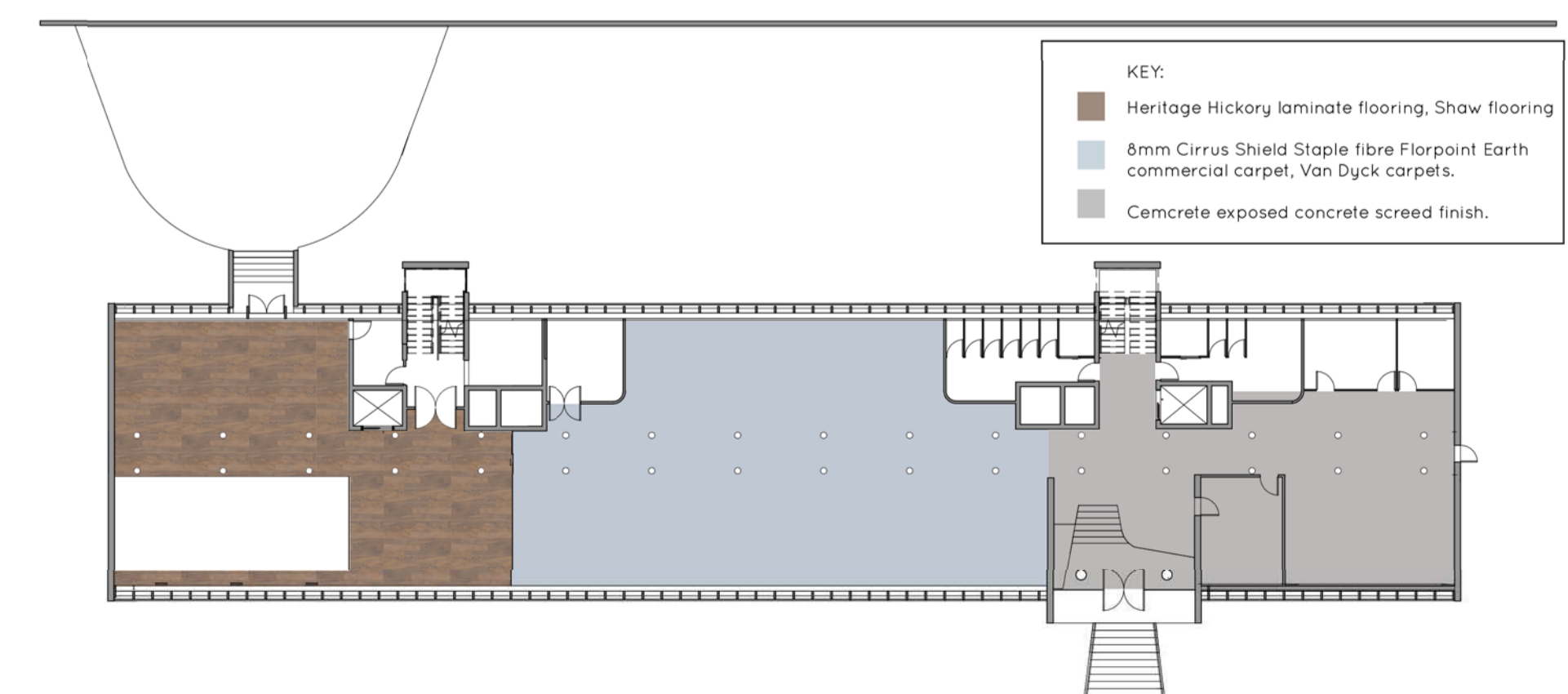


Figure 5.11 UPPER GROUND FLOOR FINISH DIAGRAM

# 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

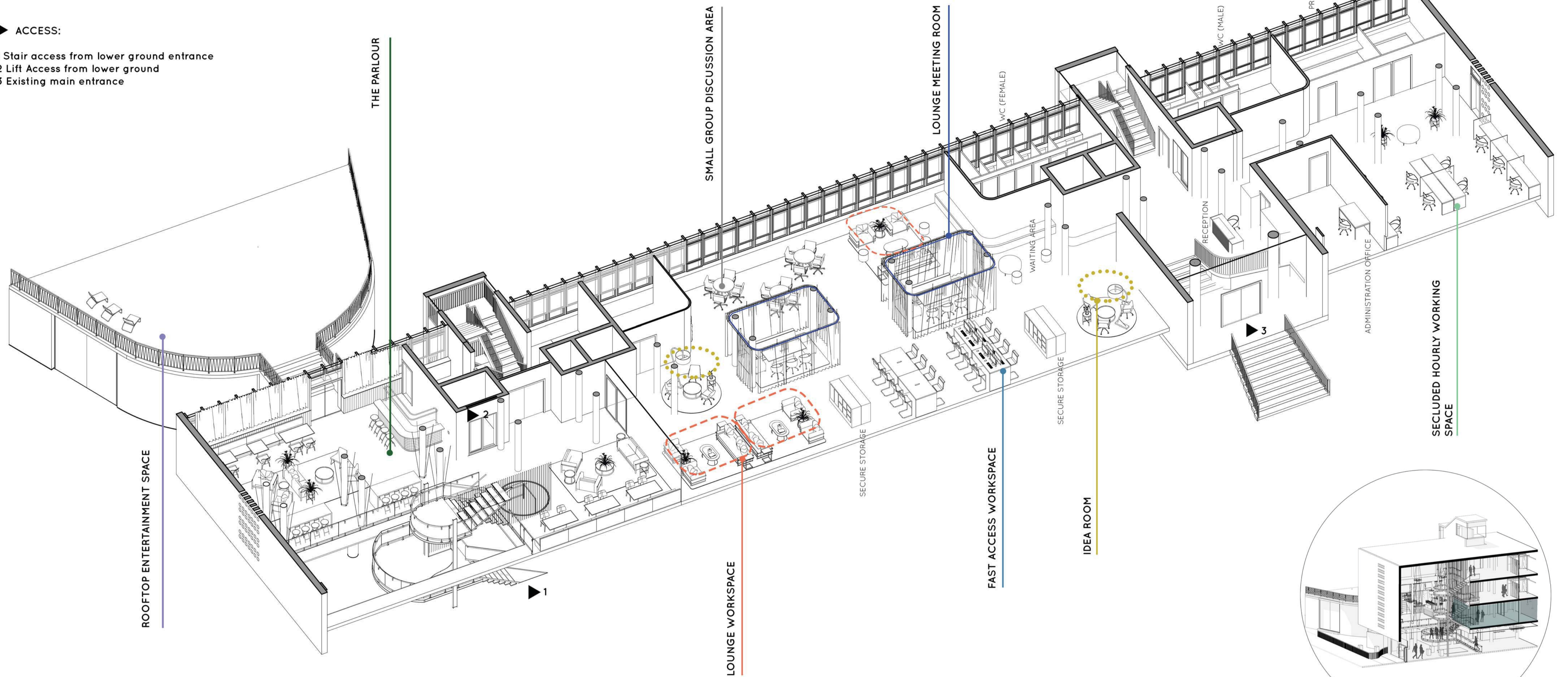


Figure 512 AXONOMETRIC VIEW OF THE UPPER GROUND INFORMAL WORKSPACE ENVIRONMENT.

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

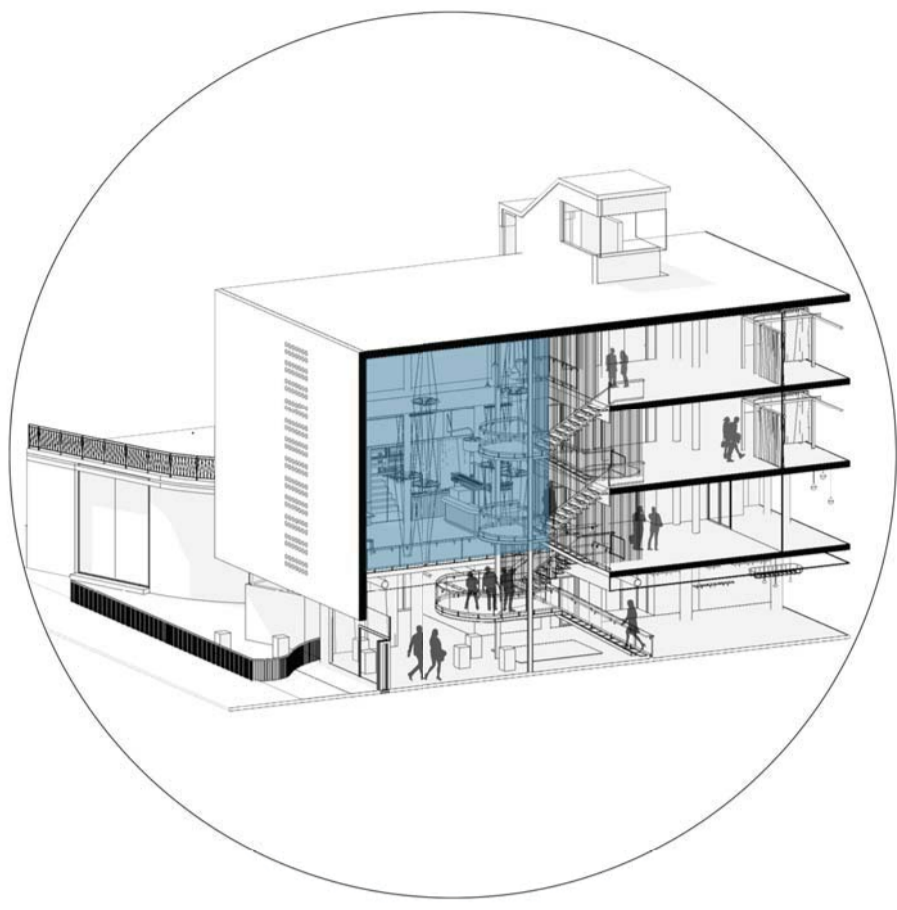


Figure 515

Diagram showing the location of The Parlour.

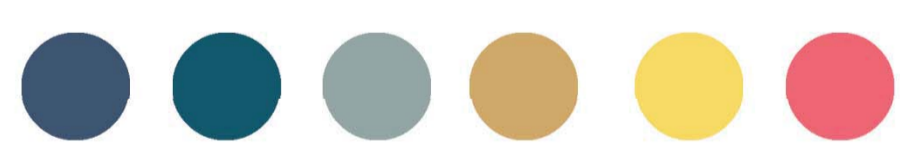
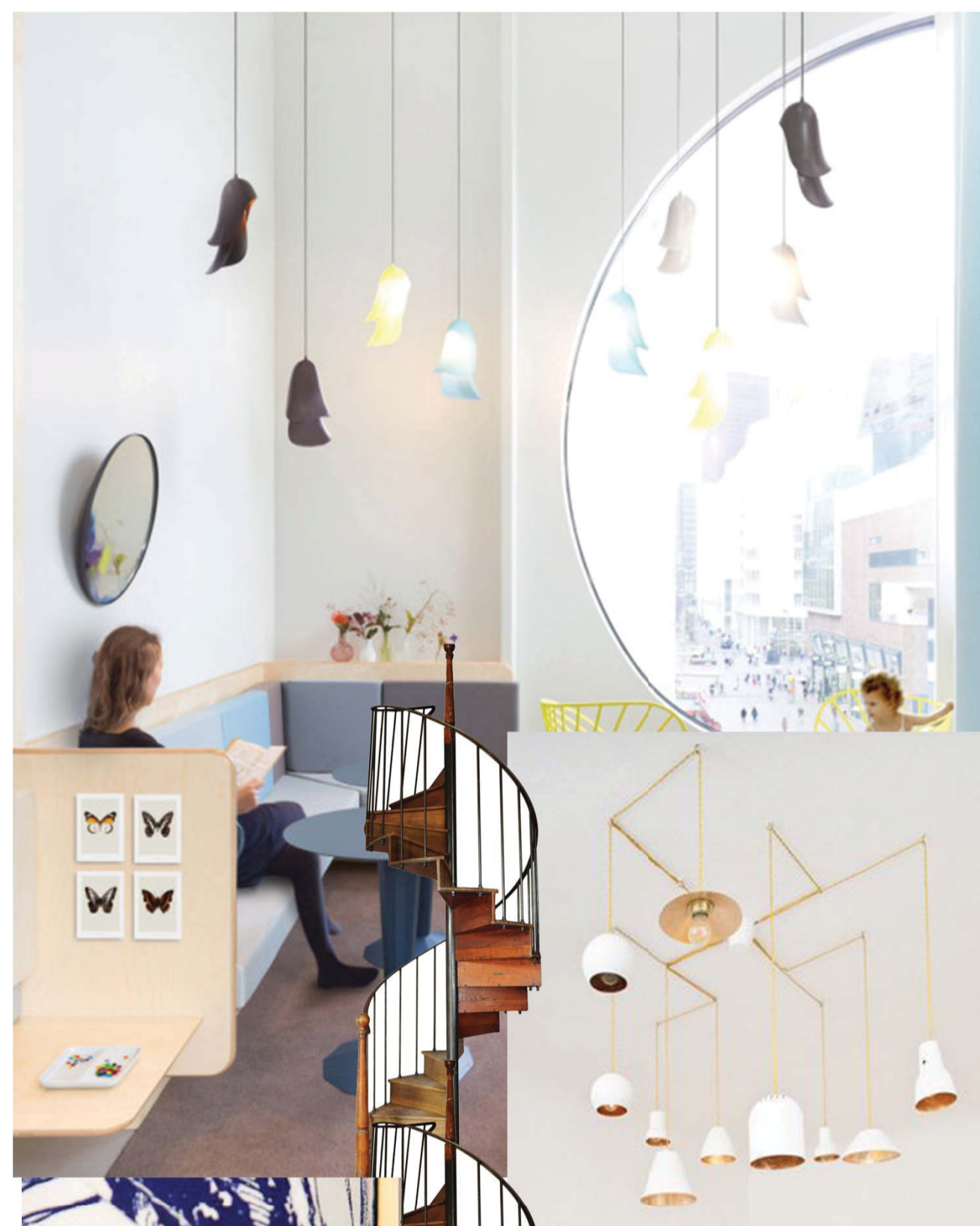


Figure 516 Mood board showing overall aesthetic and materials of The Parlour.



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

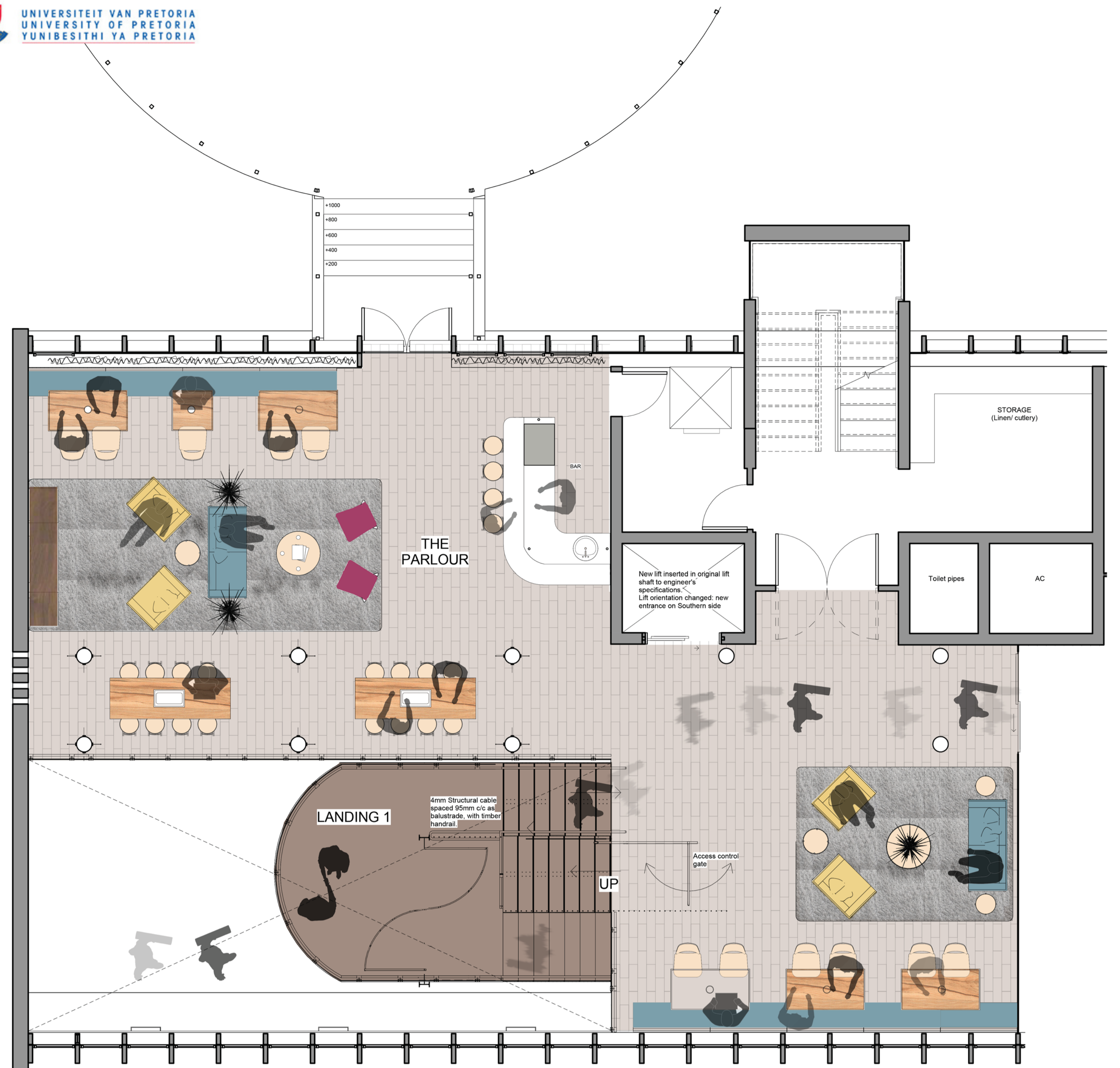


Figure 518 THE PARLOUR DETAIL PLAN SCALE 1:50

## 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.

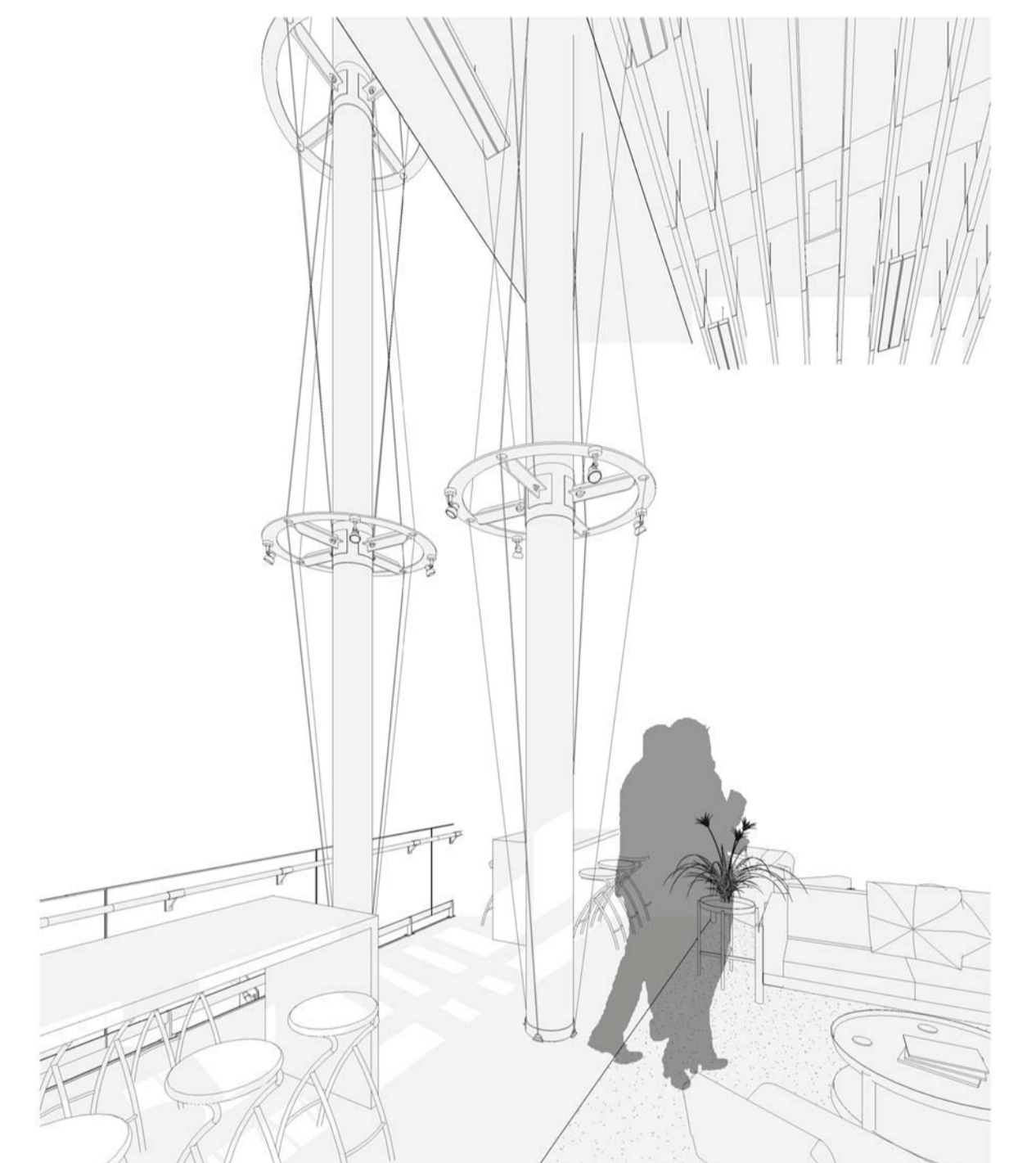


Figure 519 Perspective of The Parlour showing the support added to the existing column.

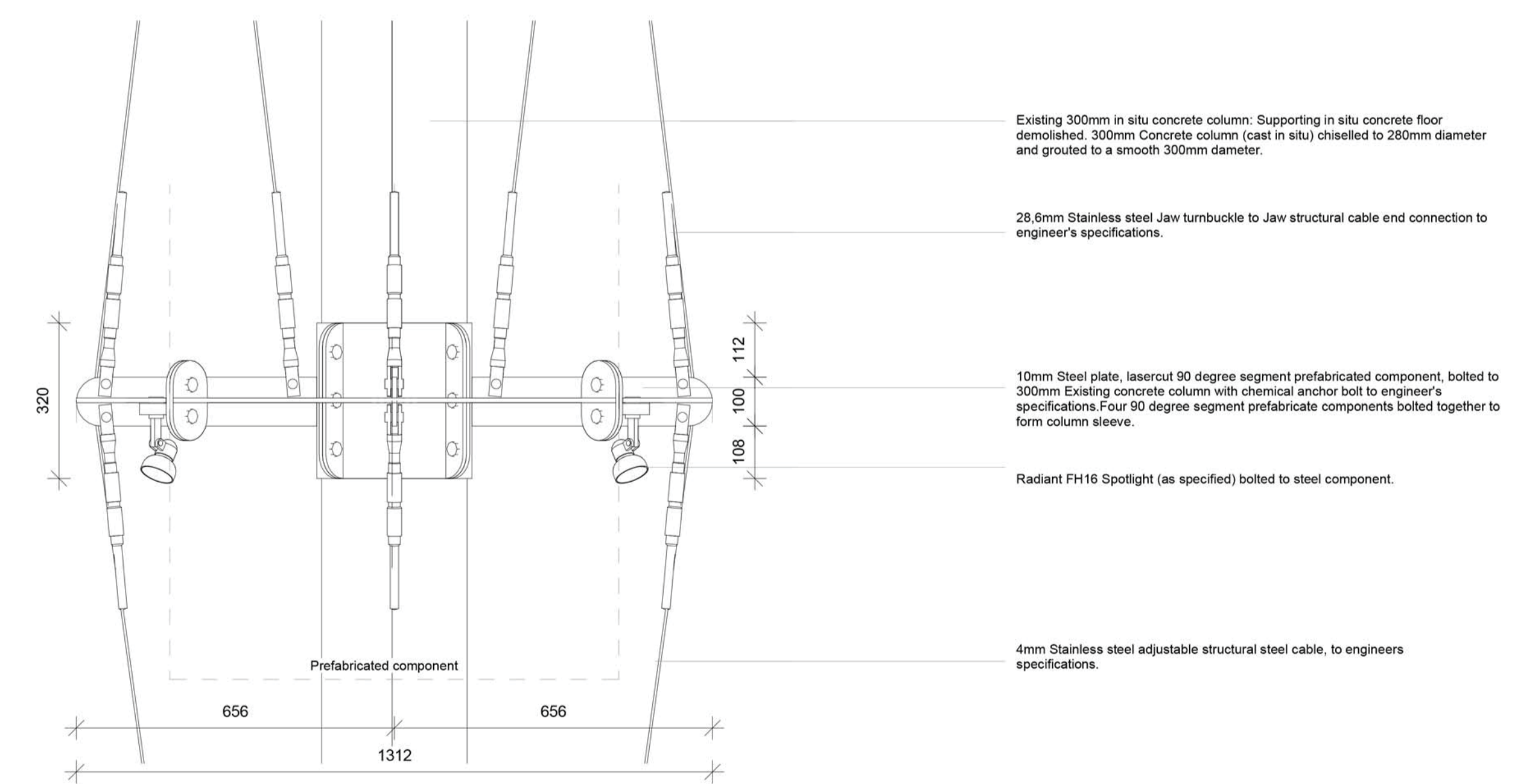


Figure 5.20 STRUCTURAL CABLE COLUMN SUPPORT DETAIL (ELEVATION) SCALE 1:10

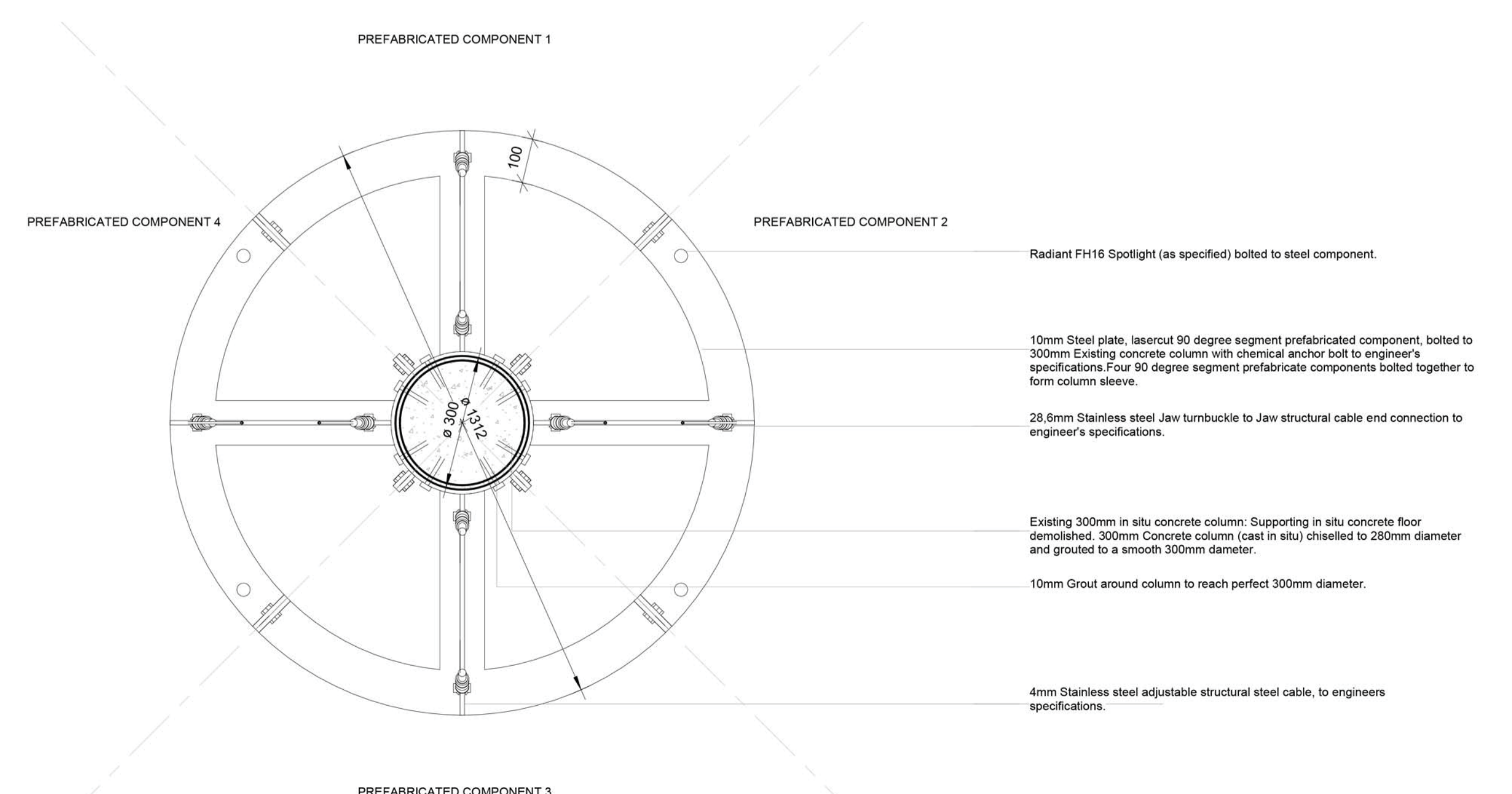
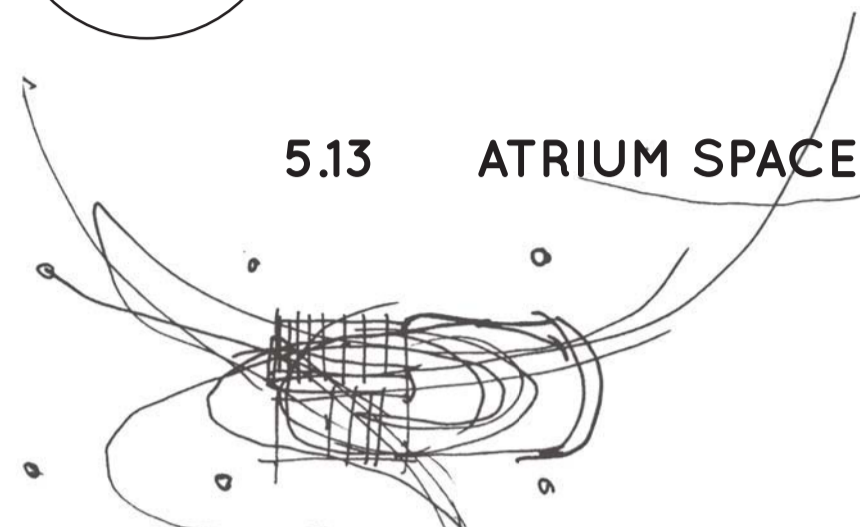


Figure 5.21 STRUCTURAL CABLE COLUMN SUPPORT DETAIL (PLAN) SCALE 1:10

# 16 Staircase intervention

## 5.13 ATRIUM SPACE DETAILING



### DESIGN CRITERIA:

#### 1. AESTHETICS:

- \_ Design staircase as a furniture piece
- \_ 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



Figure 5.22 Staircase entrance perspective.

### FLIGHT STRUCTURE

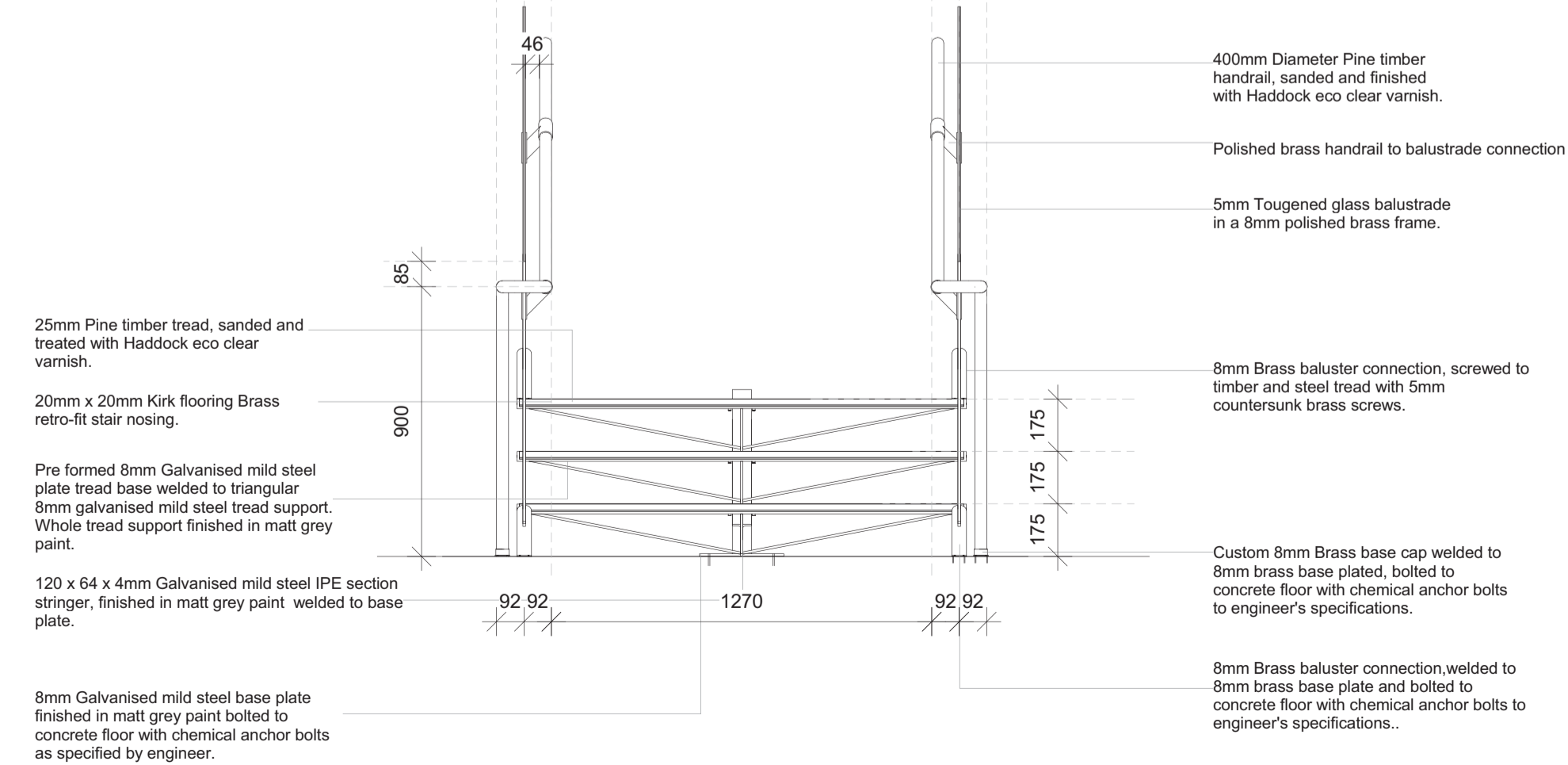


Figure 5.23 STAIRCASE FLIGHT DETAIL SCALE 1:20

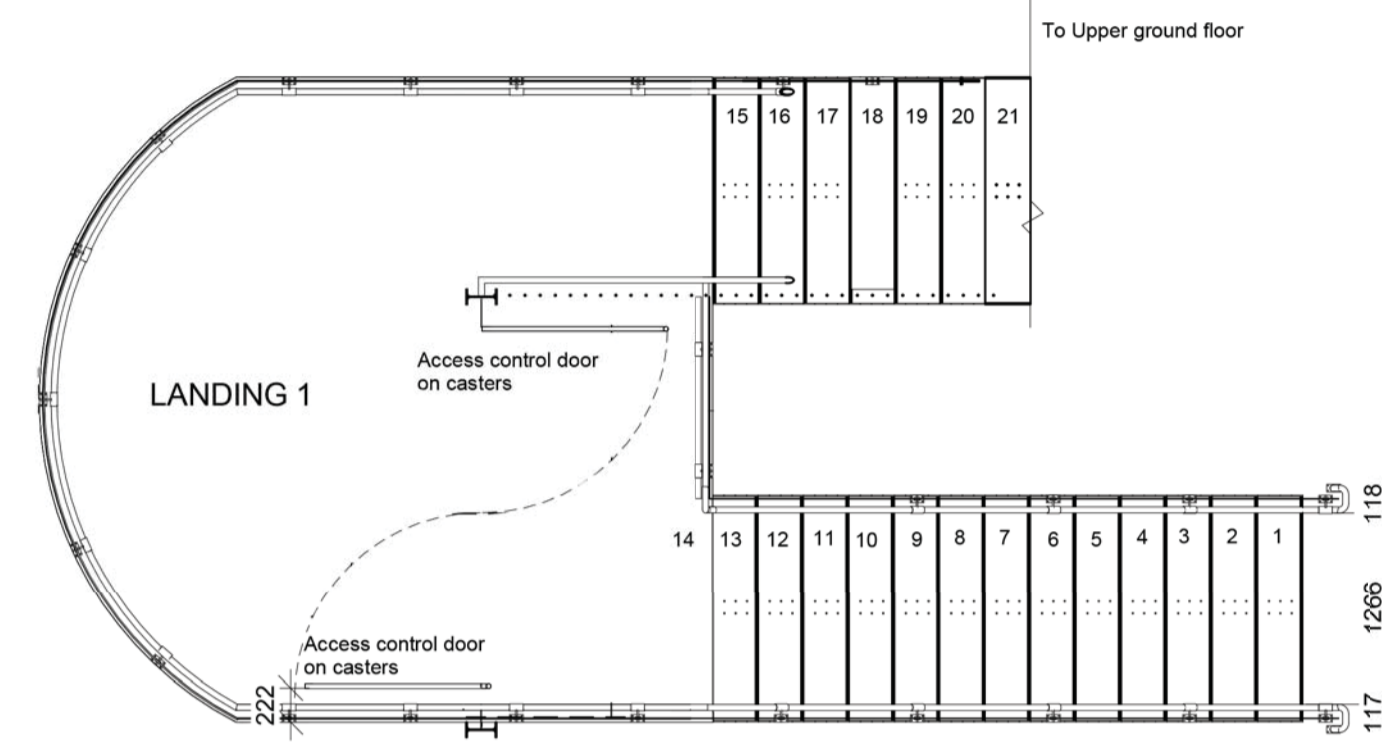


Figure 5.24 LANDING 1 PLAN SCALE 1:50

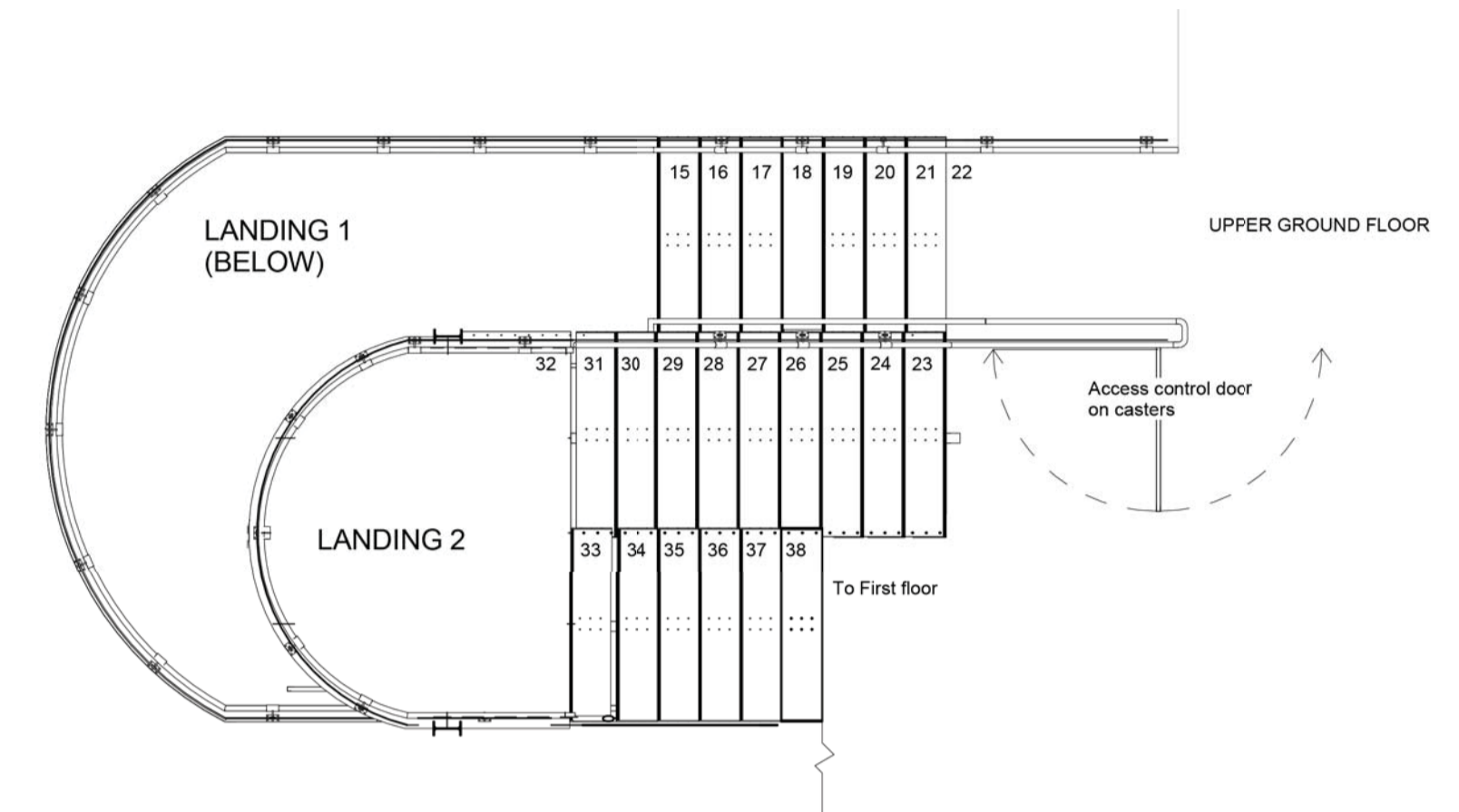


Figure 5.26 LANDING 2 PLAN SCALE 1:50

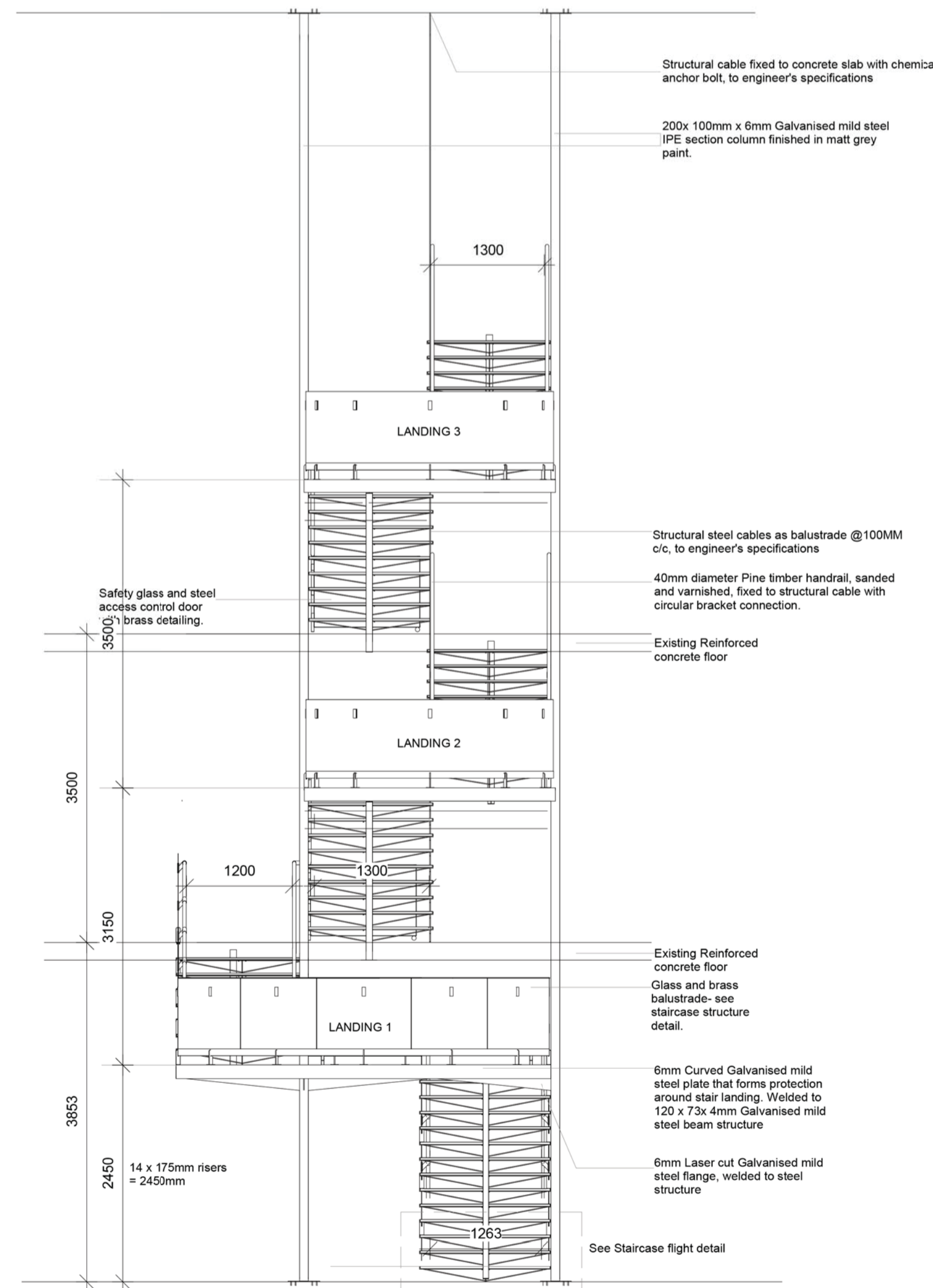


Figure 5.25 FRONT ELEVATION SCALE 1:50

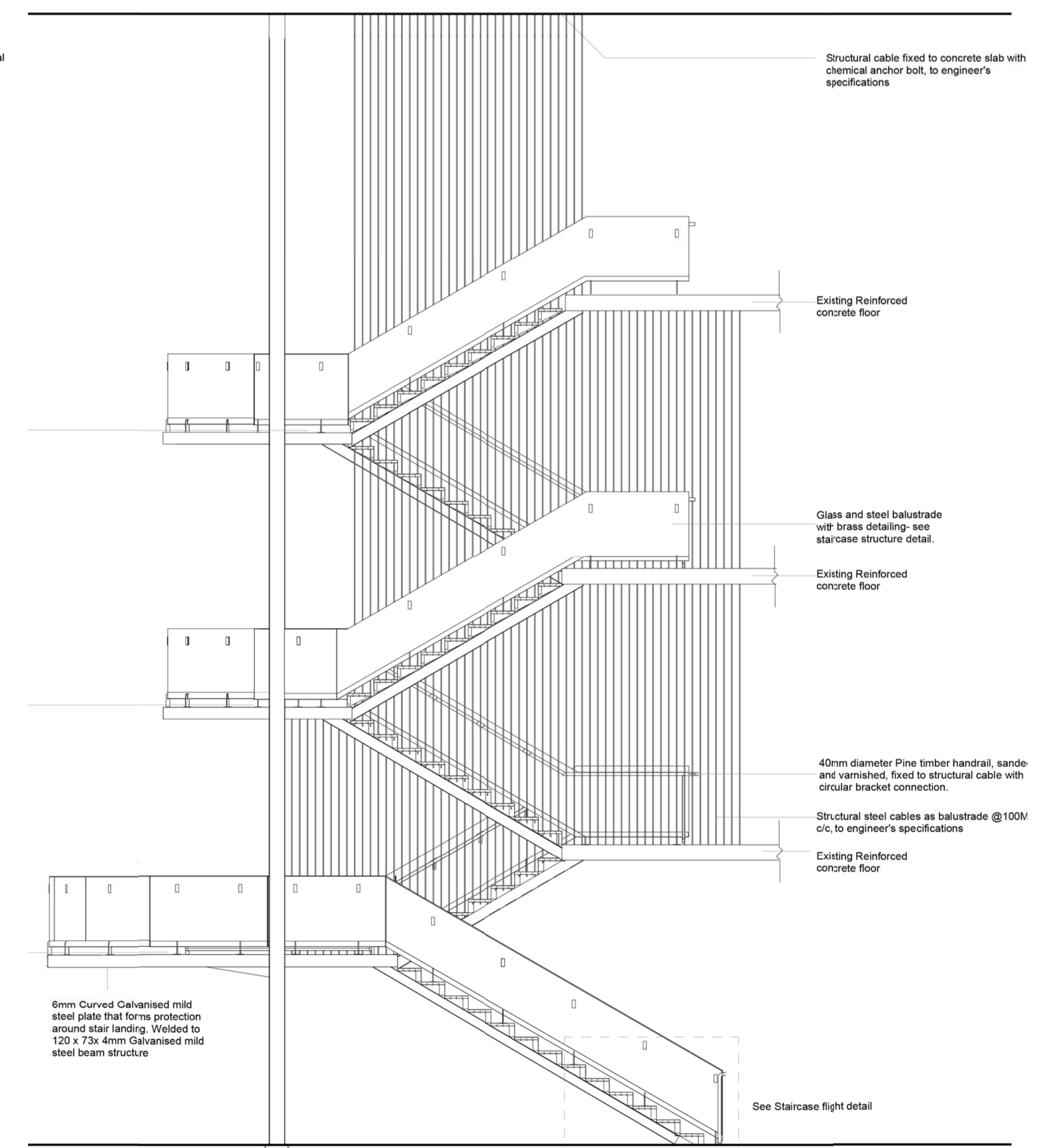


Figure 5.27 SIDE ELEVATION SCALE 1:50

# 17 Artificial Lighting

## 5.14.1 LIGHTING PLAN DIAGRAMS

## 5.14.2 LIGHTING SPECIFICATION

### 5.14 ATRIUM DETAILING: ARTIFICIAL LIGHTING

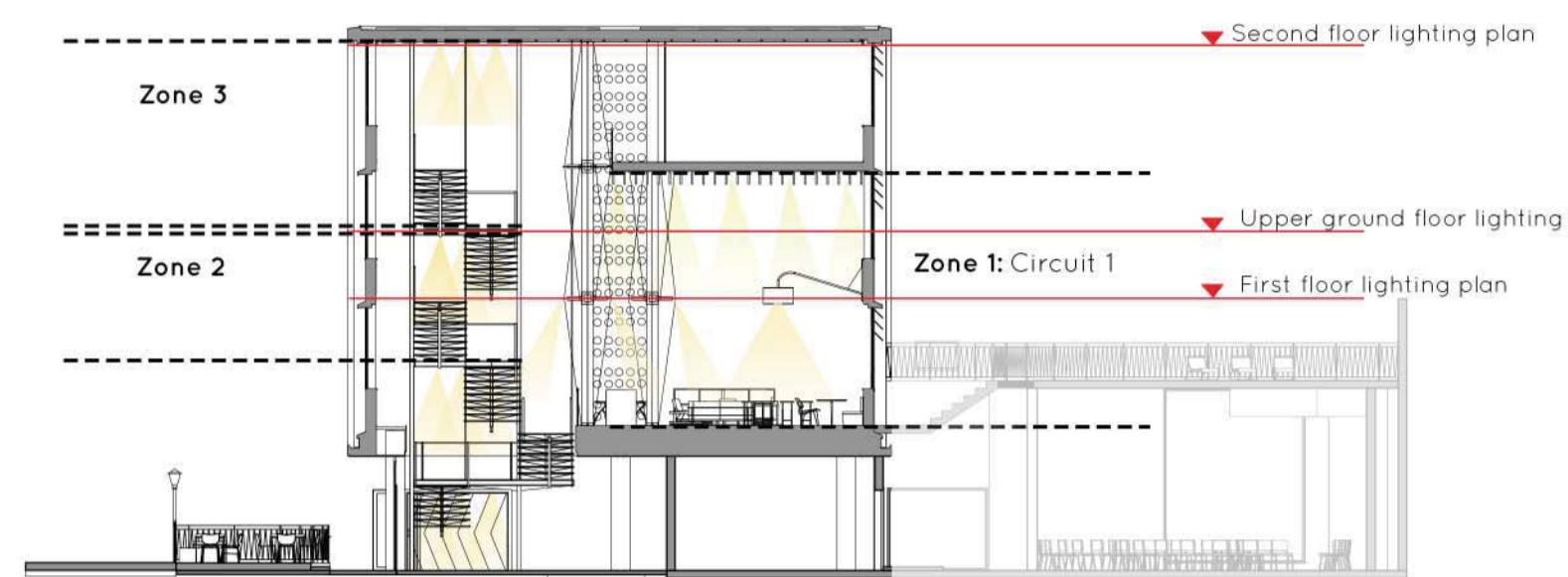


Figure 5.28 Lighting section diagram

#### 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.

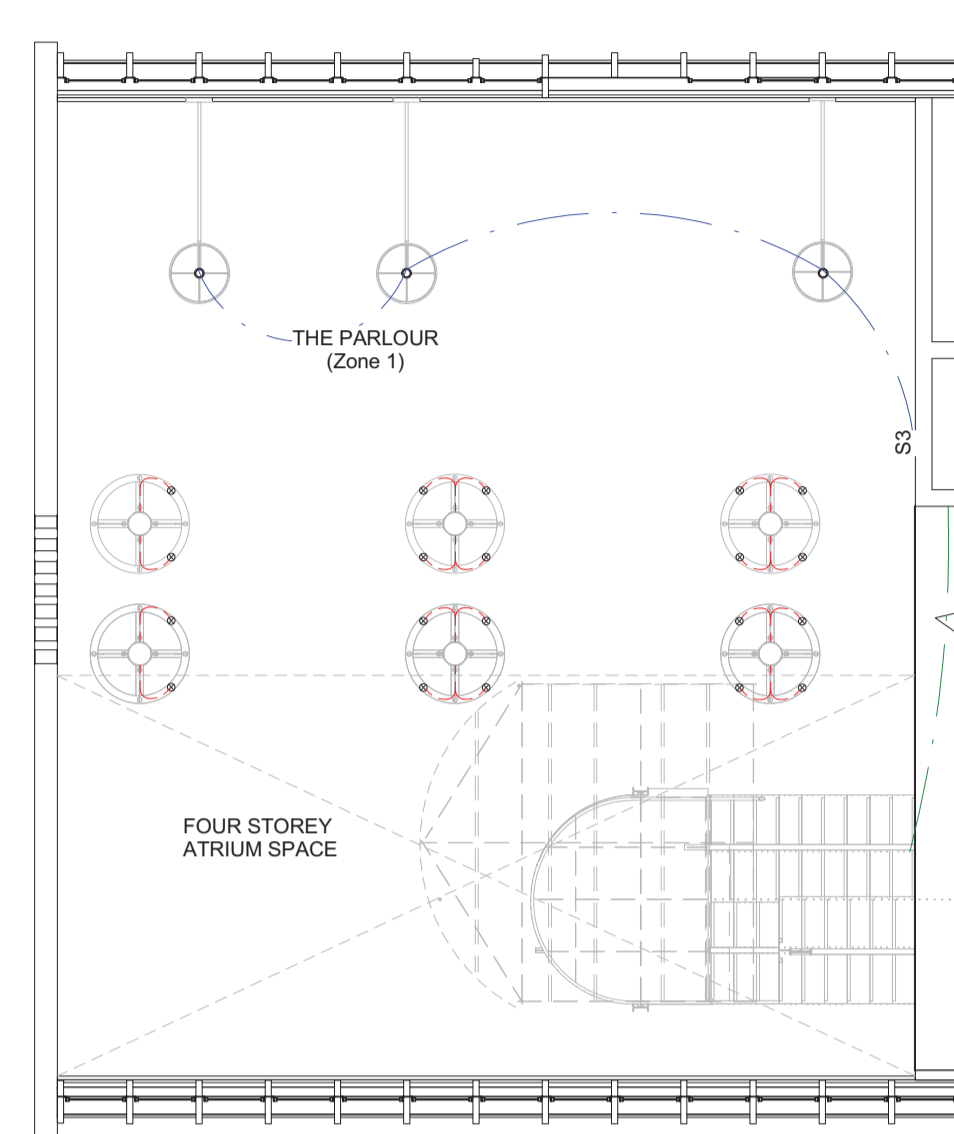


Figure 5.22 FIRST FLOOR LIGHTING PLAN

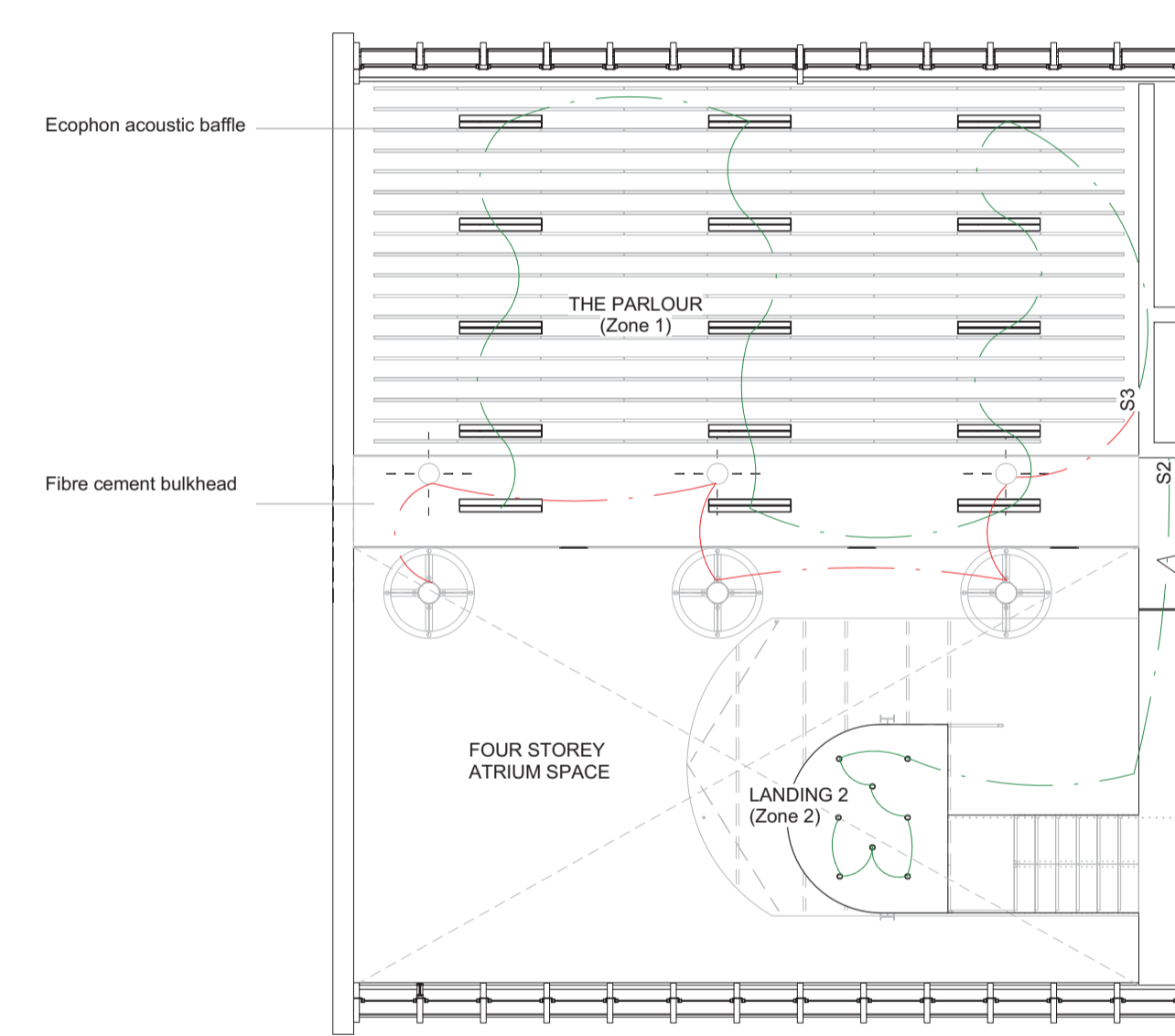


Figure 5.23 UPPER GROUND FLOOR LIGHTING PLAN

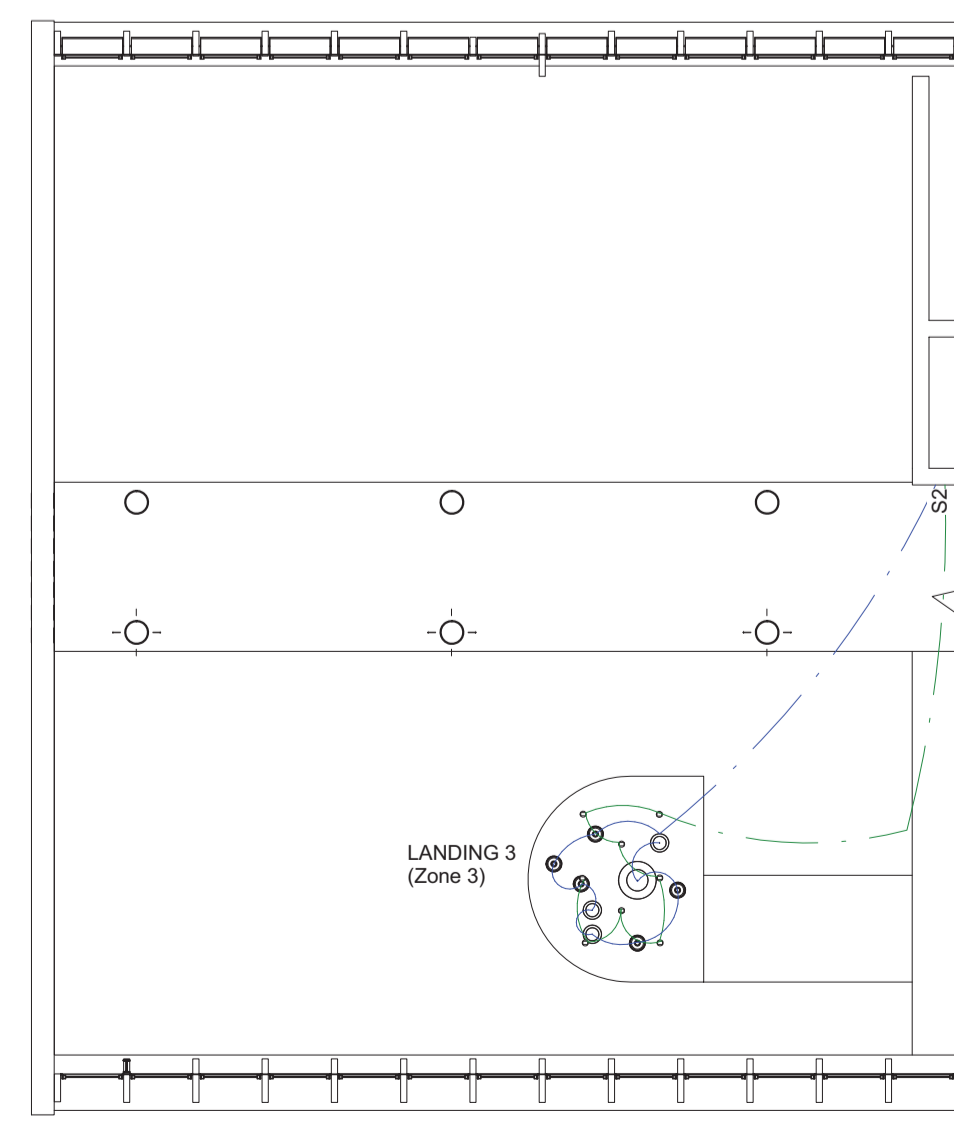


Figure 5.24 SECOND FLOOR LIGHTING PLAN

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.

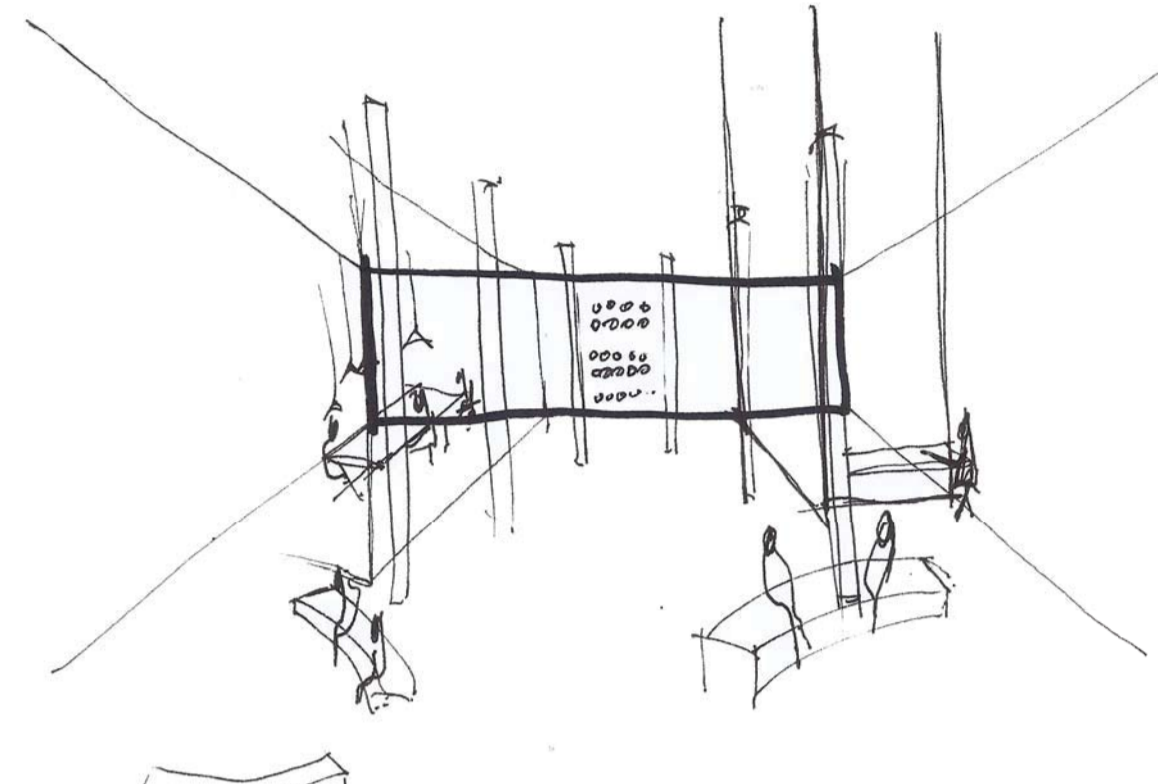


Figure 5.30 New interior quality to be permeable and open with visual connection between rooms.

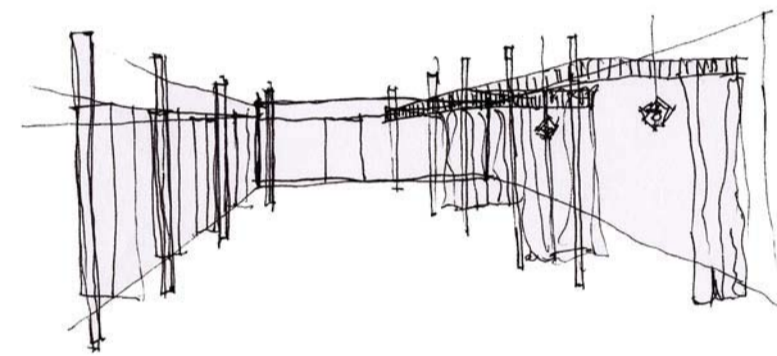


Figure 5.31 New open interior quality to be complemented with soft furnishings.

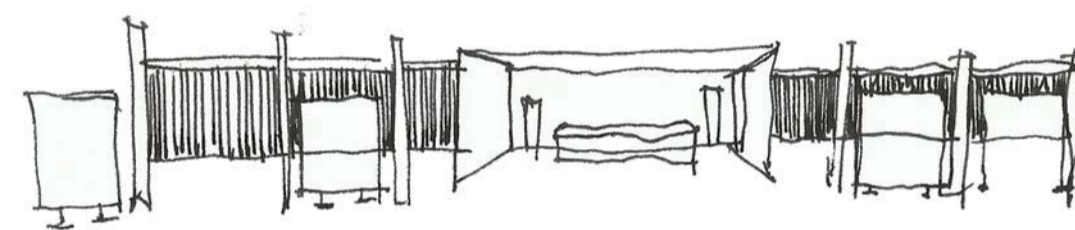


Figure 5.32 New permeable internal facade.

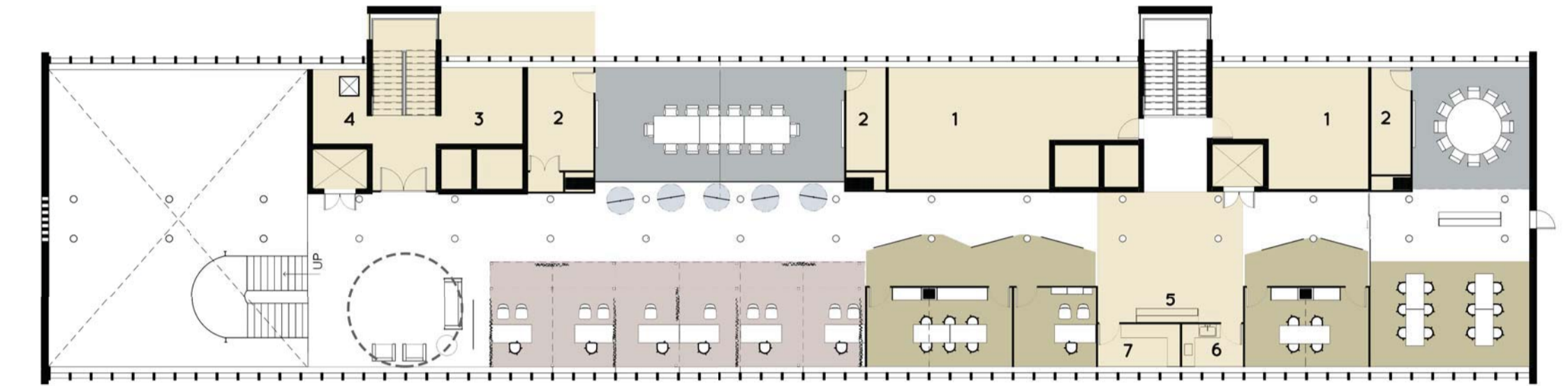


Figure 5.30 Plan diagram of proposed formal workspace typologies.

### SERVICES:

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

### FORMAL WORKSPACE TYPOLOGIES



- ↔ \$ **OFFICE ROOM**
  - \_Private group/ individual working space
  - \_Can connect to meeting room to expand
- 👤 ↔ \$ **OFFICE NOOKS**
  - \_Semi-private group/individual working space
- ↻ \$ **MEETING ROOM**
  - \_Formal group meeting area
  - \_Conference call facilities
- ↔ ↻ 👤 **DEN**
  - \_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

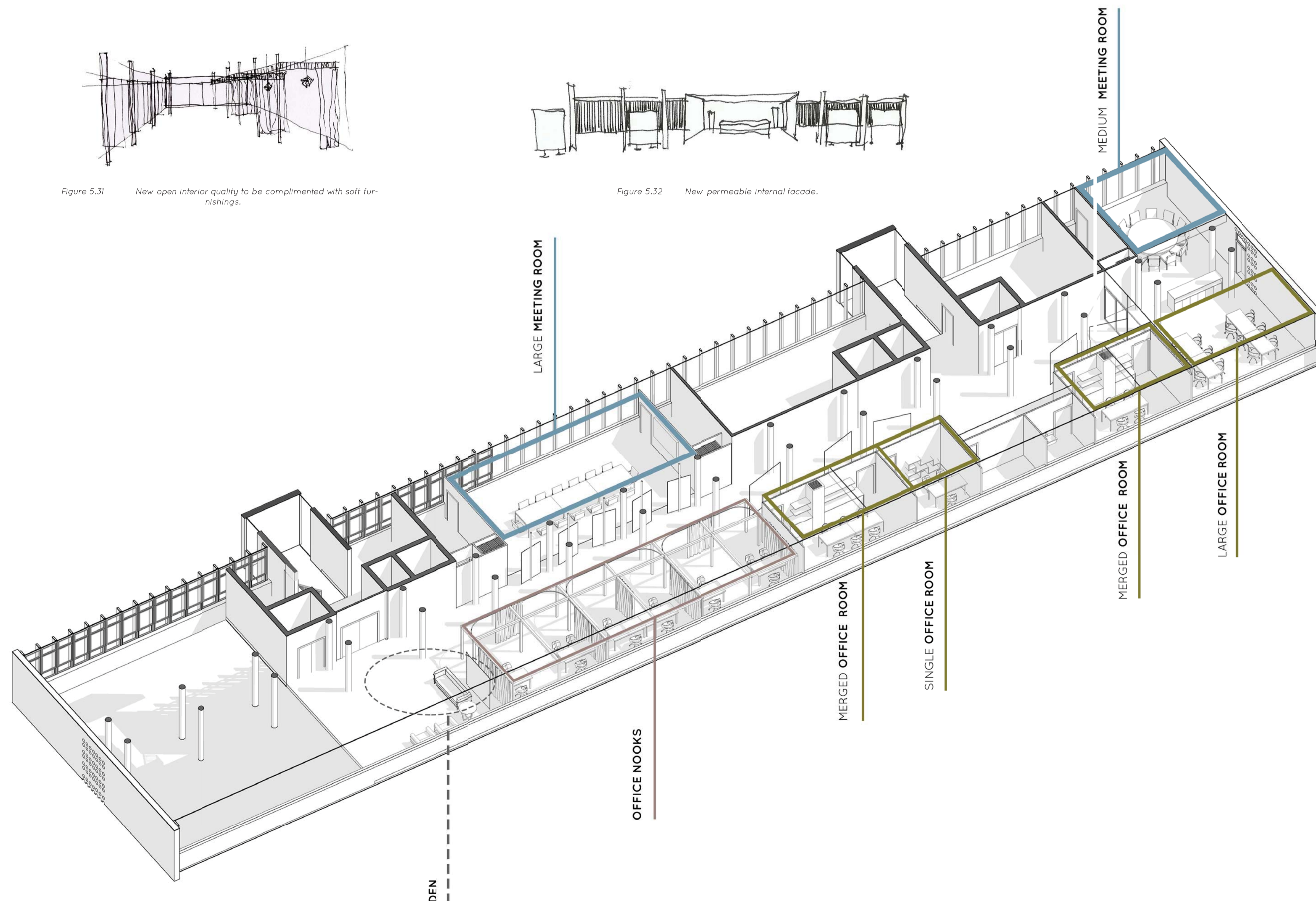


Figure 5.33 AXONOMETRIC VIEW OF THE FIRST/ SECOND FLOOR FORMAL WORKSPACE ENVIRONMENT

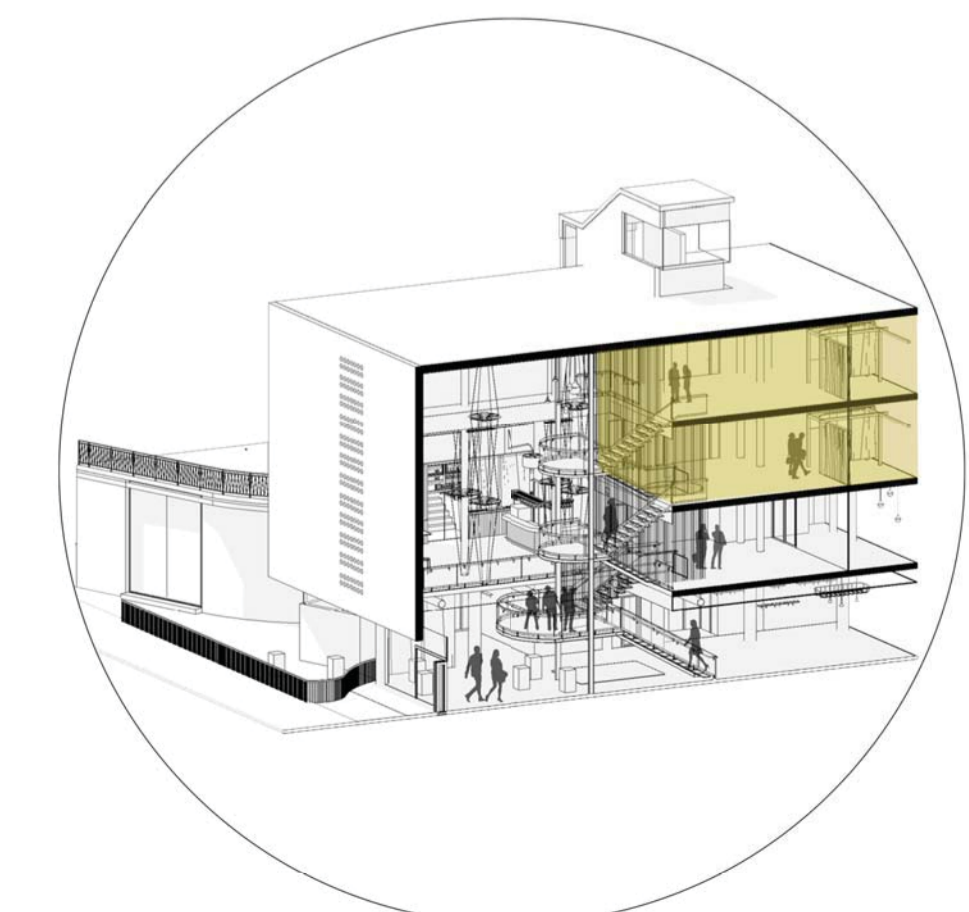


Figure 5.34 Diagram showing the location of the formal workspace environment on the first and second floor of the Meat Board building.

# 19 Section

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

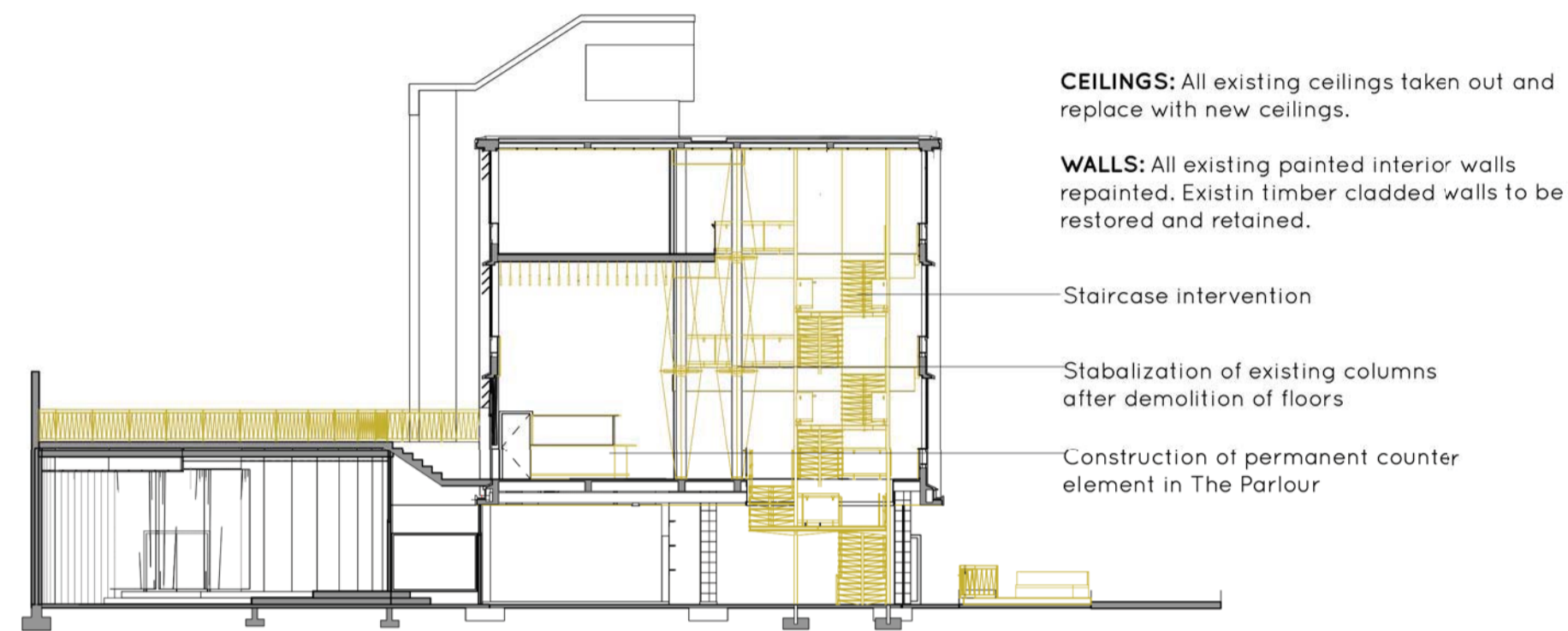


Figure 5.35 Section diagram summarizing new work within Section AA.

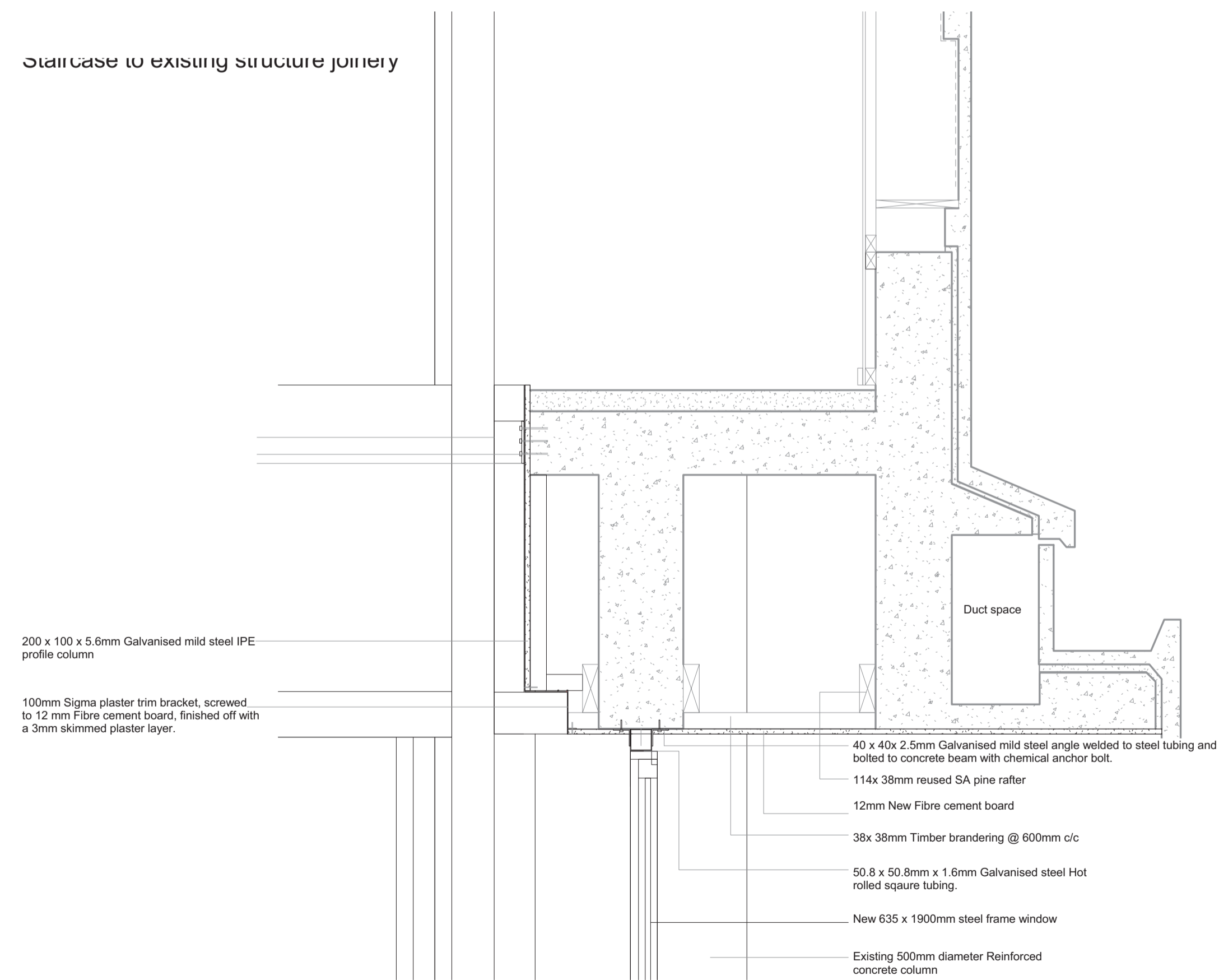
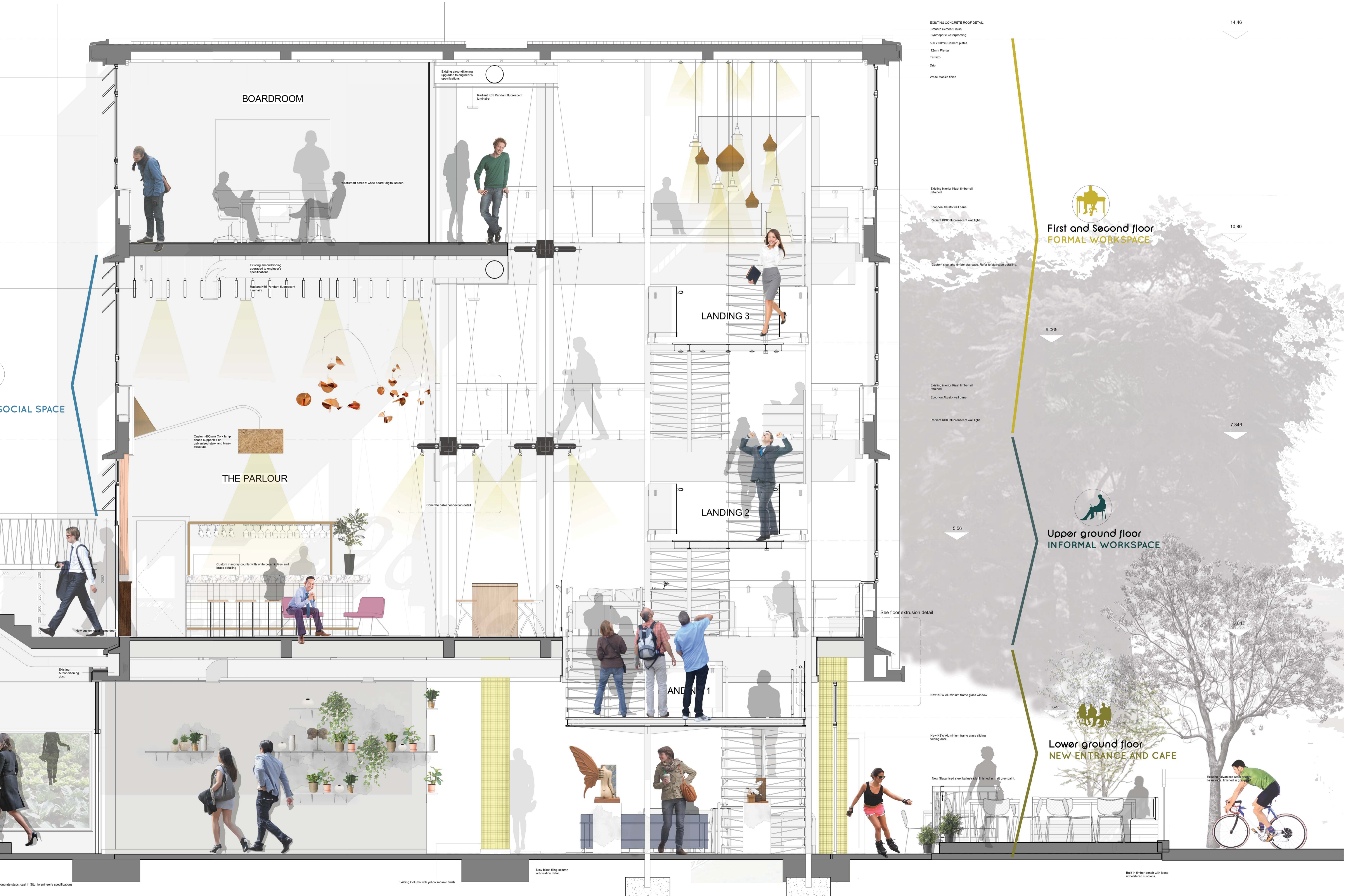


Figure 5.37 SECTION CALLOUT: FLOOR EXTRUSION DETAIL SCALE 1:20



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 Kist timber sill retained  
Ecophon Akusto wall panel  
Radiant K200 fluorescent wall light  
Custom steel and timber staircase. Refer to staircase detailing.

Existing interior Kist timber sill retained  
Ecophon Akusto wall panel  
Radiant K200 fluorescent wall light

See floor extrusion detail

New K21W Aluminium frame glass window

New K21W Aluminium frame glass sliding folding door

New Glawamed steel ballustrade, finished in matt grey paint.

14,46

10,80

**First and Second floor  
FORMAL WORKSPACE**

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 of course has huge economic implications. It is therefore advised that a specialised engineer advise on the issue.

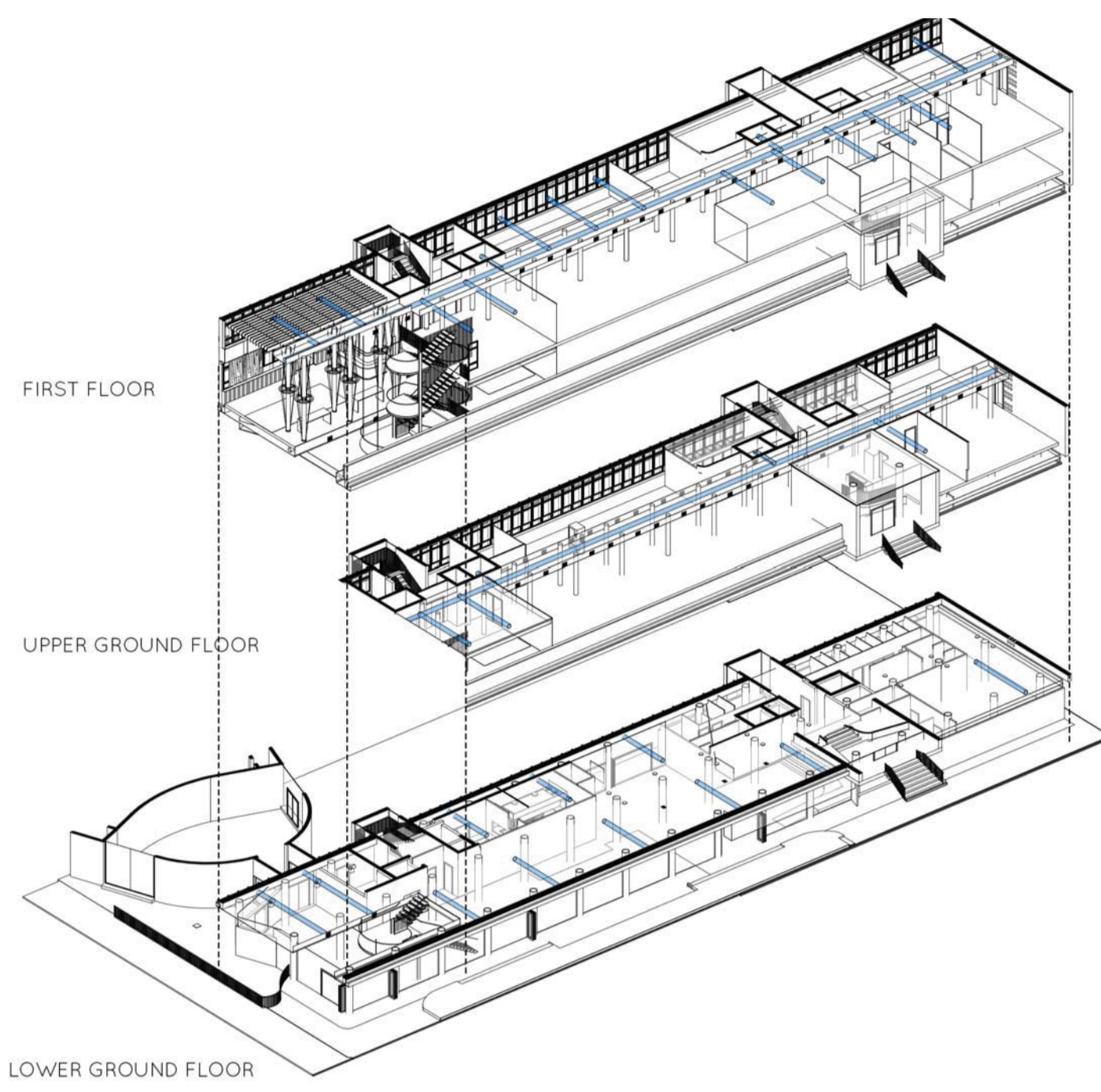


Figure 5.38 AXONOMETRIC AIR CONDITIONING DIAGRAM

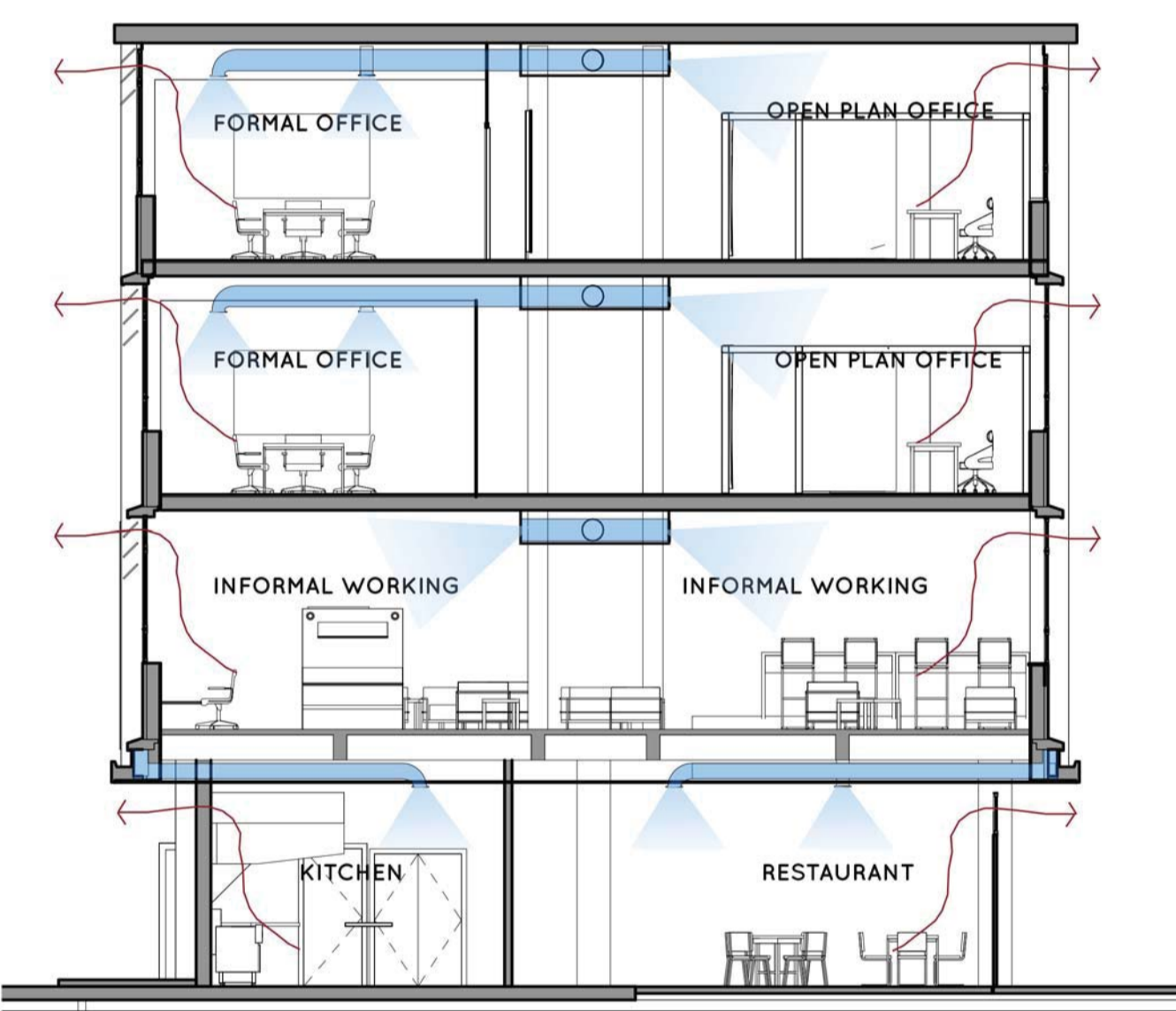
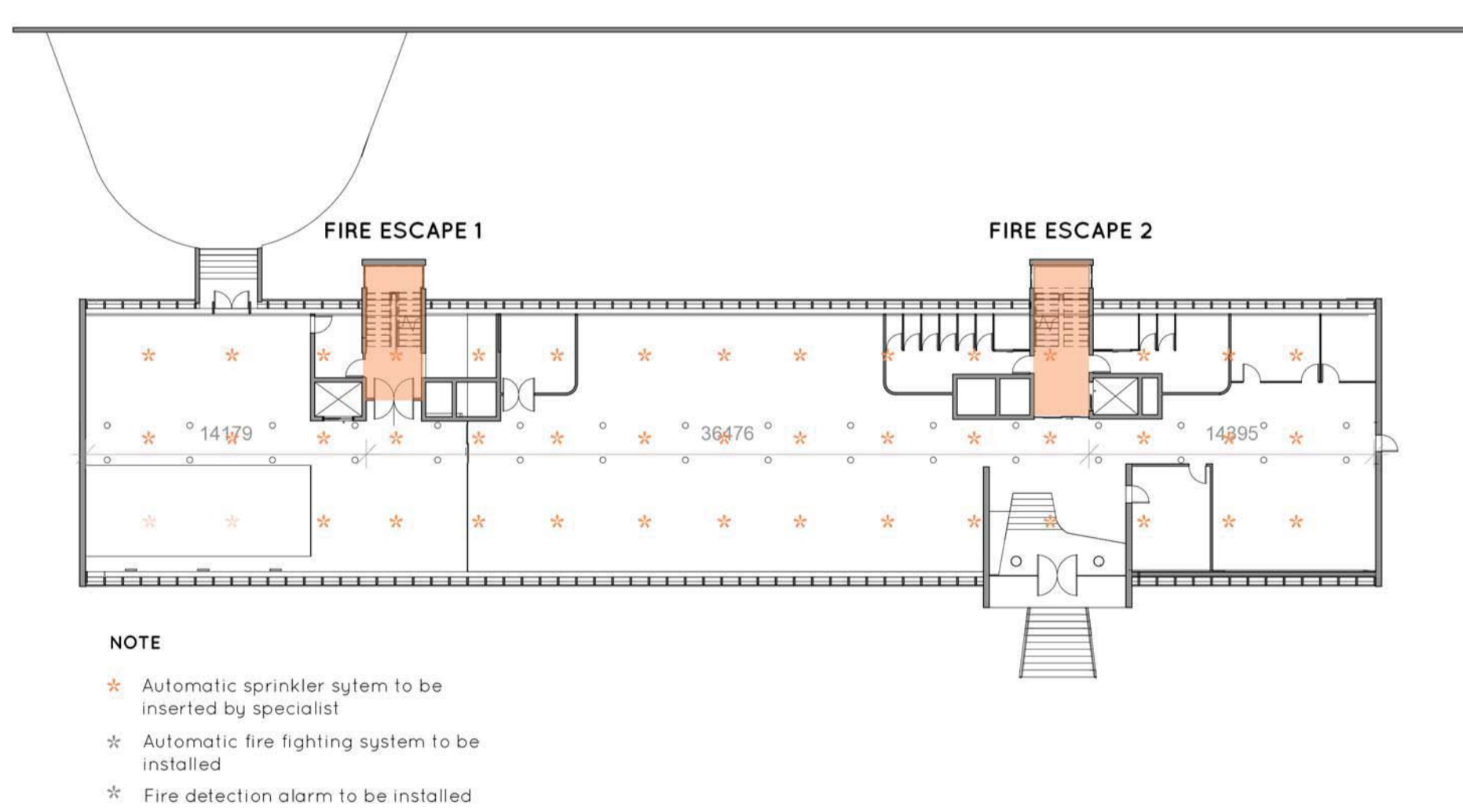


Figure 5.39 VENTILATION STRATEGY SECTION DIAGRAM

### 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

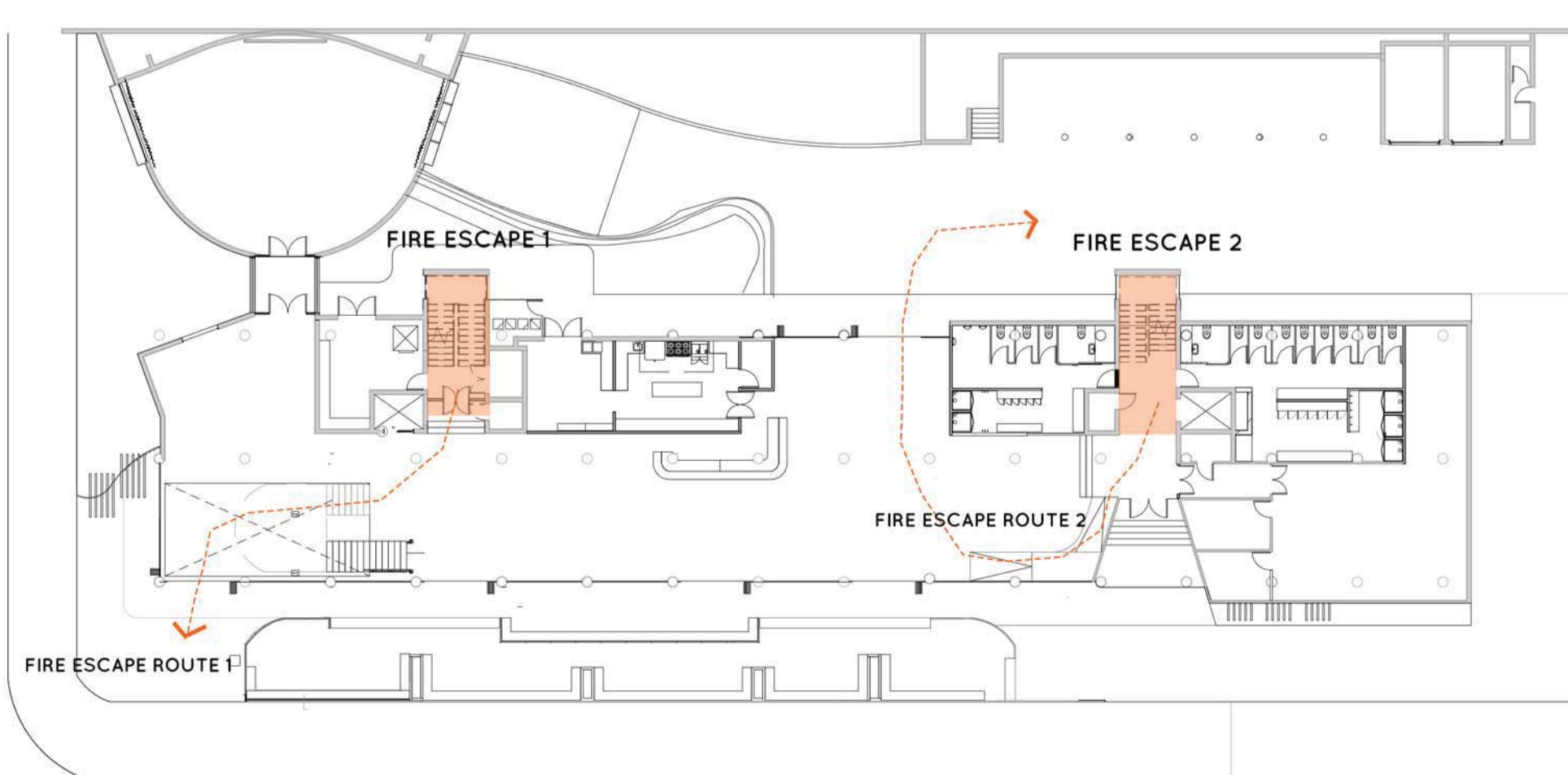
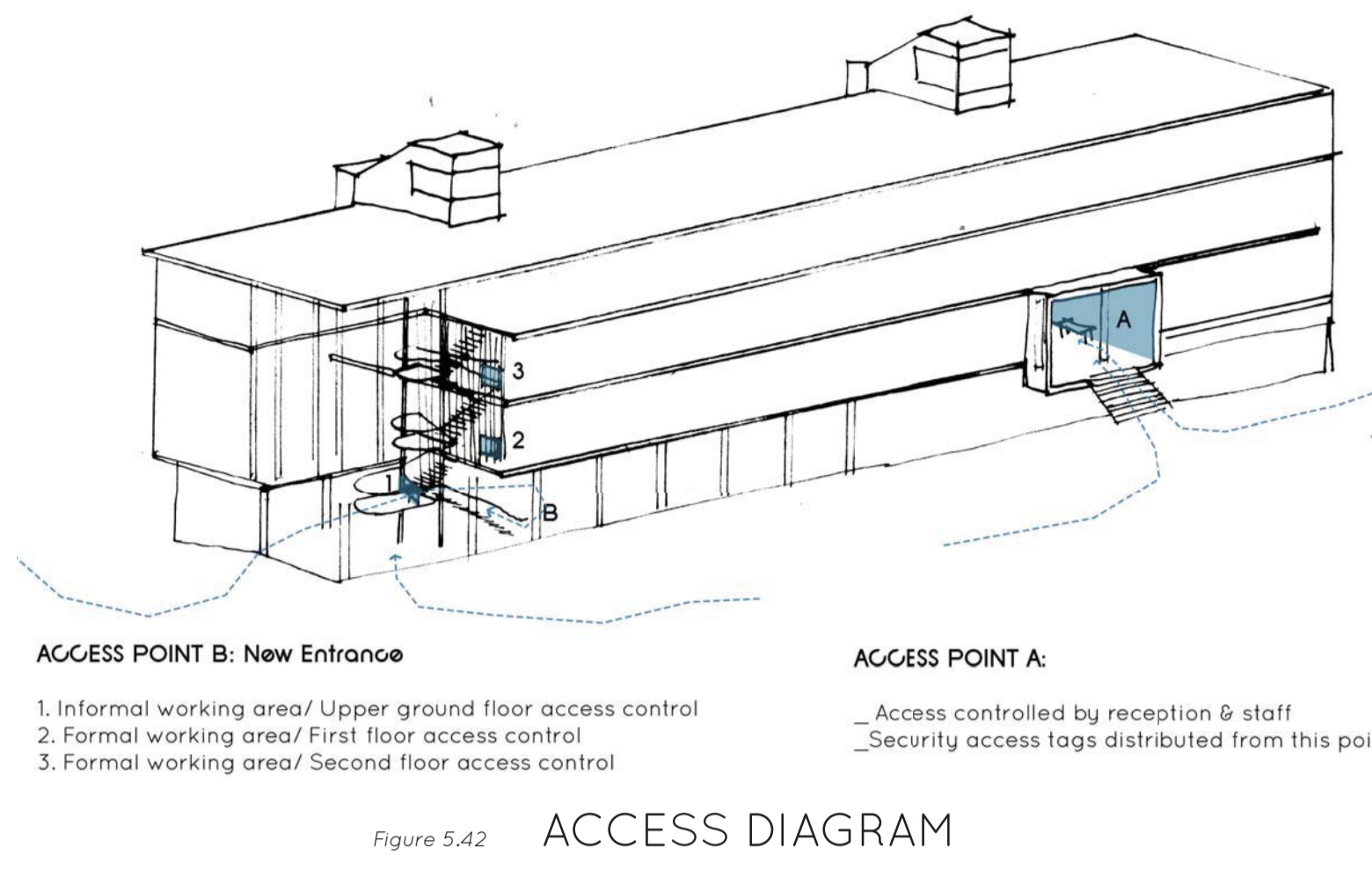


Figure 5.41 LOWER GROUND FLOOR FIRE PROTECTION DIAGRAM

### 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:

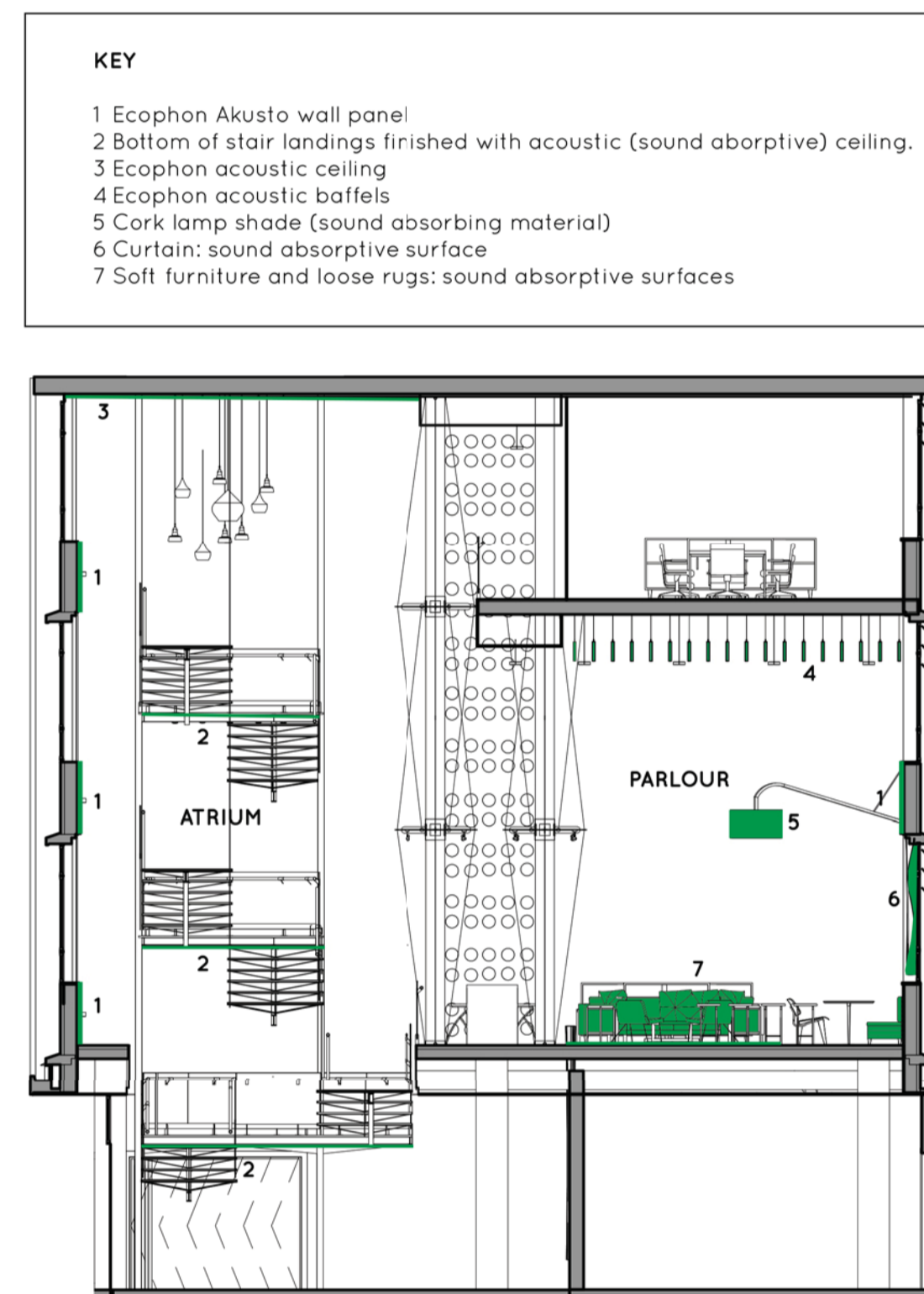


Figure 5.43 ACOUSTIC SECTION DIAGRAM

### 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.

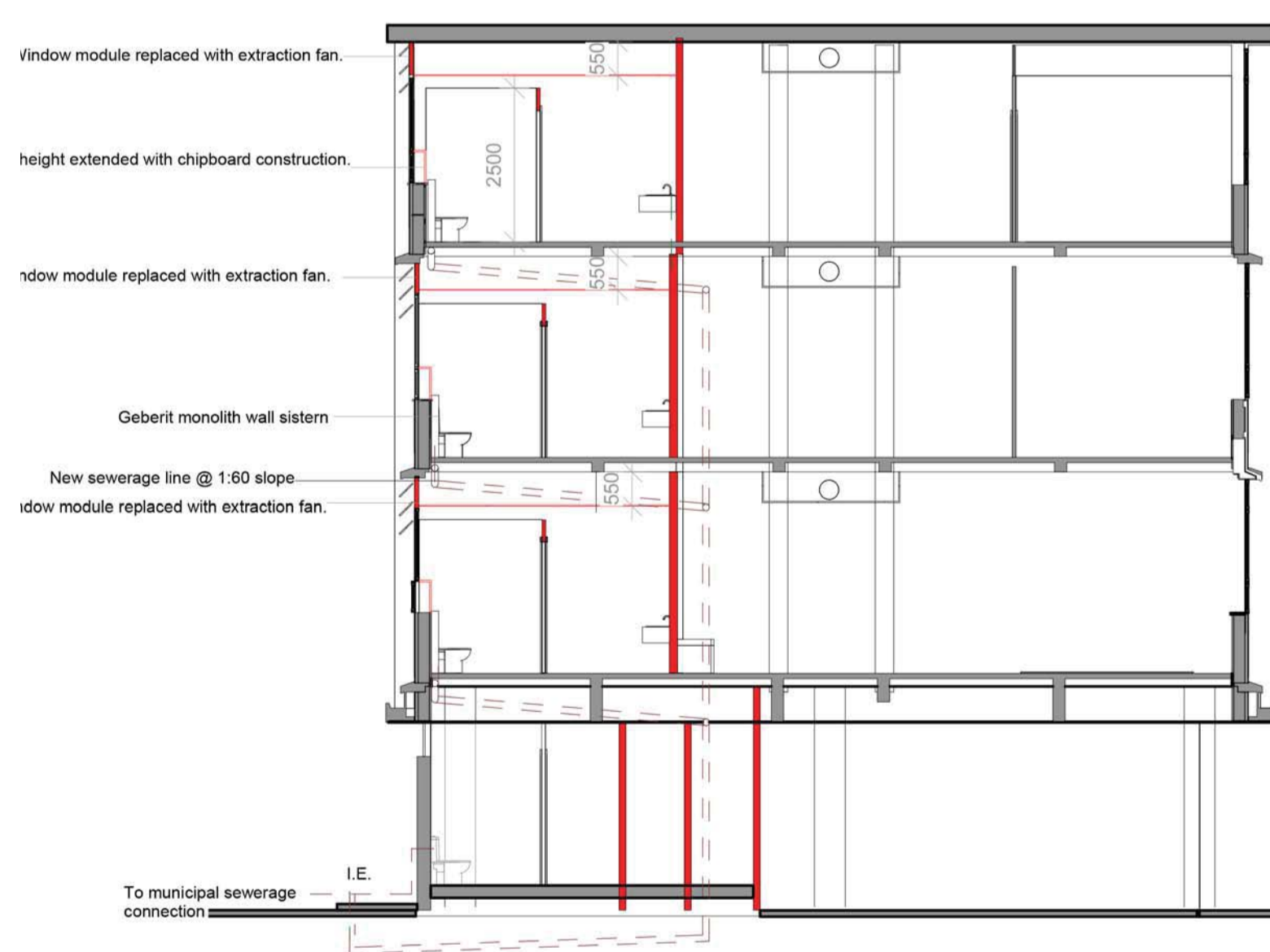


Figure 5.44 DRAINAGE SECTION DIAGRAM

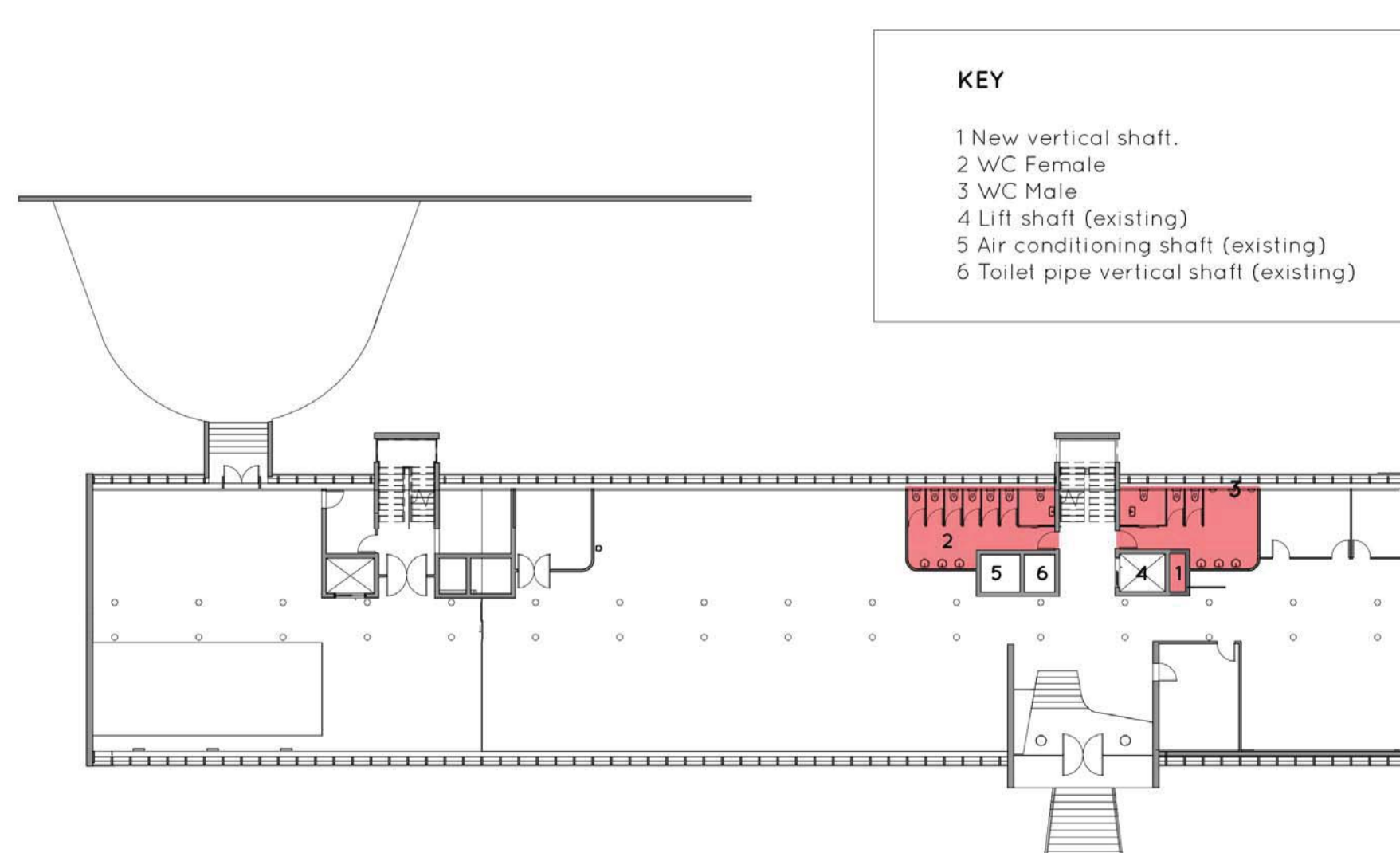
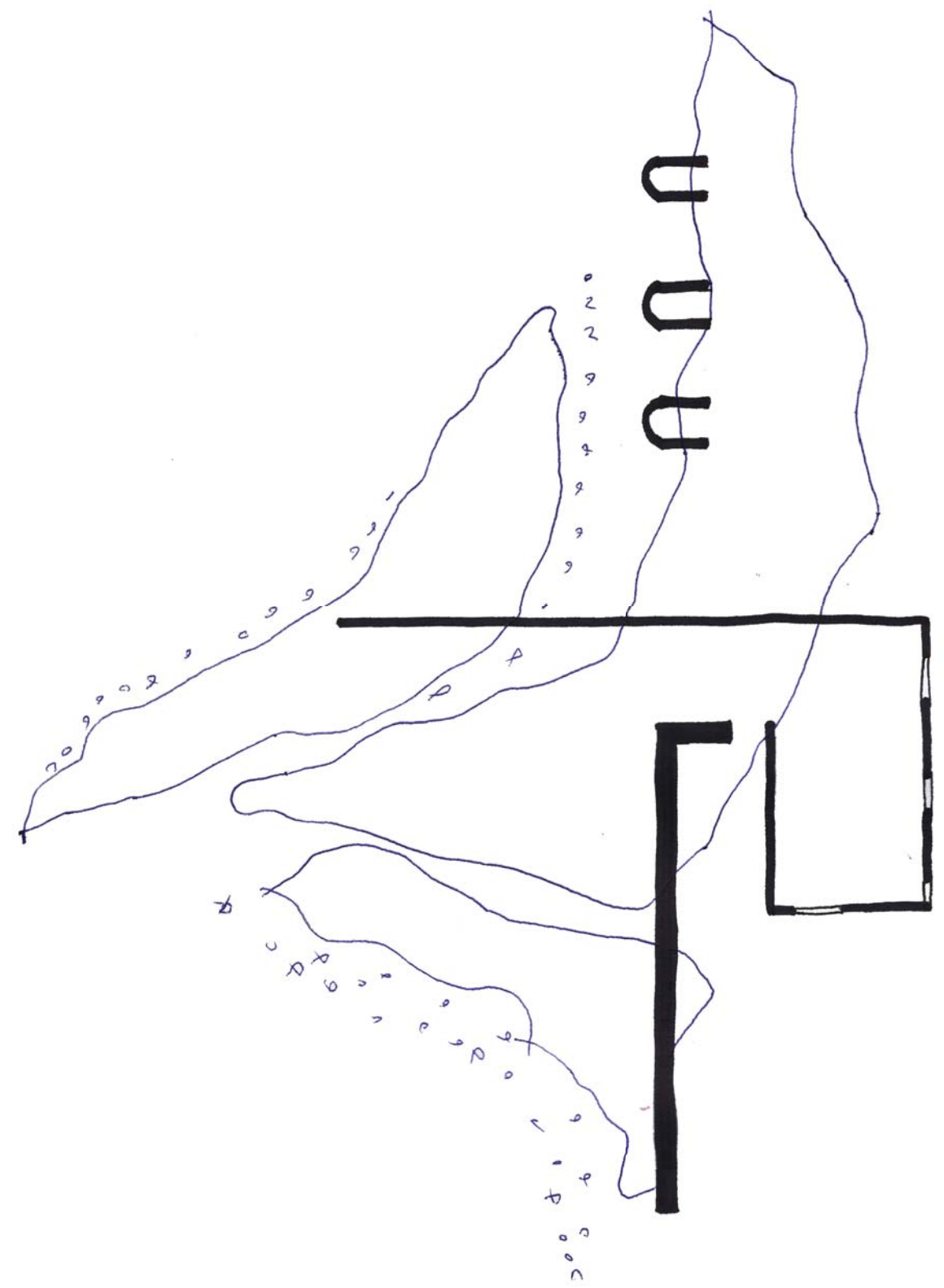


Figure 5.45 DRAINAGE PLAN DIAGRAM

## 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.





06

# CONCLUSION

## 6.1 CONCLUSION

This dissertation investigated the physical and theoretical aspects of the reuse of the Meat Board building. The cultural, heritage and architectural significance were reported and implemented in the design. The iconic Modern Movement host building was used as starting point for all major decisions in the dissertation (refer to figure 1.1 for a diagrammatic demonstration). Inspiration was drawn from the original intent of the architect and his original vision for the building. The original architectural intent inspired the character of a cheerful, adaptable and contemporary character of the interior.

The current disconnection between user and building due to an outdated and underutilized interior was investigated. The concept of inhabitation in public space informed design decisions that allow users to identify and associate with the interior. Among others, the use of the synthetic constellation of furniture, the analogy of the hotel that is implemented in the design adds a domestic symbol to the interior character of the proposed intervention. The proposed interior of the Meat Board building is composed of elements and furnishings that are of a human scale and this may help users to claim personal space and easily identify with the space.

The contemporary practice of the collaborative office environment was investigated and the proposed programme for the reuse of the building as serviced office facility may help to attract business professionals and ultimately revive the building. The adaptable nature of the serviced office facility will make the building more resilient to the future user requirements.

## 6.2 CONTRIBUTIONS

- This dissertation demonstrates the key role of the interior design discipline in the process of adaptive reuse in the heritage environment.
- The use of the hotel analogy influenced a range of design decisions and added depth to the dissertation. The use of a typological analogy as design method contributes to the design practice of the discipline.
- The use of mood boards as a visual design exploration tool contributes methodologically to the practice of interior design

## 6.3 RECCOMENDATIONS FOR FURTHER RESEARCH

- The theme of inhabitation is deep and complex. It offers a wide range of design opportunities too. Further theoretical research and the exploration of design applications would add value to the body of knowledge of interior design.

- The territorial behaviour of people in a public space can be further investigated to expand the knowledge and application of proximal assemblies in the interior.
- An investigation between old and new with the specification of proximal assemblies in the interior is recommended.
- The conservation of Modern Movement heritage sites consists of complicated physical and theoretical aspects. Modern Movement buildings are often accused as cold, clinical and uninhabitable. This phenomenon poses various opportunities for interior designers to take a normative stance on and to develop unique ways in which the interior can be revitalized.
- The Meat Board building is an icon of the so-called 'Pretoria regionalist style'. Furthermore, it is proclaimed that the sun control louvres on the north façade of the building were the first of its kind, nationally. This occasions an opportunity to develop a reuse strategy for the building in the Environmental Potential research field.



# EPILOGUE

Lastly, I would like mention that this year has been a steep learning curve and I am truly thankful for the experience gained through this degree. The choice of site has brought forward a wide range of design opportunities that stretched my thinking, which I am grateful for. My undergraduate architectural studies influenced my approach towards design as overwhelmingly conceptual but I always felt a need to find design methods and channels of expression that influence how people experience space in reality, but never had the skill or knowledge to do so. This dissertation provided insight into the concept of how people inhabit space - a concept that I will want to continue researching throughout my career. I am eternally grateful for the opportunity that the discipline of interior design poses: a meaningful contribution to the life and wellbeing of individuals.



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