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.

DE WET BOSCH
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!

ERNA GERRYTS
For many coffees, friendship, and tremendous emotional support. Thank you for loving me, always.

BEEUWEN GERRYTS
For loving me and always believing in me. I am proud to be your daughter.

LIESL WHERRY
Thanks for your patience, friendship and companionship through the hard times.

RAYMUND KÖNIGK
Thank you for sharing your valuable knowledge and experience. I learned so much from you and I am honoured to be a student of yours.

JOHAN SWART
Thank you for asking the difficult questions.
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The current condition of the interior of the building contributes to an outdated, lifeless and dull working environment that directly contrasts the intended vision of a friendly, light-hearted working environment as originally described by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 relate with an interior space. Abercrombie (1990:5) states that: 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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03 programme and users

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01
PROJECT OUTLINE
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 2006: 13). The approach to conserving Modern Movement buildings does not in essence vary from pre-twentieth century buildings as Henket states (2006:13), 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 2006: 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 this transformation of existing 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:S). Our understanding of the interior, according to Abercrombie, is largely influenced by the experience of birth. Abercrombie (1990:5) 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)

1.3 PROBLEM STATEMENT

The Meat Board building was designed by the renowned architect Helmut 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 paying 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 handicraft 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 disjunction 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.

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 Staukh helped to interpret his intention 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. 

![Diagram demonstrating design process.](image)
Abstract

The Meat Board building is one of Johannesburg's architectural landmarks. The building was constructed in 1951 by the architect, Willem van der Vorm, in the Modern Movement style. The building is culturally valuable due to its association with significant historic events and it is also relevant due to its architectural merit and aesthetic value. However, the building has not seen any change since it was constructed in 1951. This research is about the potential for reusing the building. The building was chosen for this research due to its cultural value and architectural merit.

1.3 Problem Statement

The Meat Board building is a significant building in Johannesburg. The building was constructed in 1951 and has not seen any change since it was constructed in 1951. This research is about the potential for reusing the building. The building was chosen for this research due to its cultural value and architectural merit.

1.4 Aims and Objectives

1.4.1 Project aims

1.4.1.1 To contribute to the adaptive reuse of the Meat Board building by developing a viable strategy for the building

1.4.1.2 To contribute to the conservation of the Meat Board building by developing a viable strategy for the building

1.4.1.3 To contribute to the development of the Meat Board building by developing a viable strategy for the building

1.4.1.4 To contribute to the conservation of the Meat Board building by developing a viable strategy for the building

1.4.1.5 To contribute to the adaptive reuse of the Meat Board building by developing a viable strategy for the building

1.4.2 Research questions

1.4.2.1 What factors contribute to the disconnection between the user and the Meat Board building?

1.4.2.2 What is the original intent of the architect? Is this intent realistic and relevant in the context and current competitive office complex that responds to current user requirements and contextual opportunities?

1.4.2.3 The project intends to increase the functionality of the Meat Board by remodelling the building as a whole. Is this a viable strategy?

1.4.2.4 The project intends to increase the functionality of the Meat Board by remodelling the building as a whole. Is this a viable strategy?

1.4.2.5 The project intends to increase the functionality of the Meat Board by remodelling the building as a whole. Is this a viable strategy?

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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/ Faeire Glen, Pretoria’s eastern suburbs, east Centurion and Highfield 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).

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).

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 25 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 2005 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 Armosc, Medical Research Council and the Council for Scientific and Industrial Research, among others (Tshwane 2005 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 2005 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 at 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. The 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.
## 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 is now undergoing transformation to a mixed-use area. The building is accessible to large-scale retail schemes and commercial functions. Various embassies and government departments are located in Arcadia. According to Paviour-Williams (2013), office parks in Arcadia are few and far between with 3500 square meter office space or less.

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 2 km north of the Gautrain station and 1.5 km reach of the A Re Yeng bus service. The lack of pedestrian interfaced functions on street level contributes to this unfavourable pedestrian environment.
The exploded view of the Meat Board building shows significant elements in and around the building.

### 2.5 HISTORY AND FUNCTION

#### 2.5.1 BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>DATE OF ORIGIN</th>
<th>NGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENT NAME</td>
<td>Nipilar House</td>
</tr>
<tr>
<td>ARCHITECT</td>
<td>Hellmut Stauch</td>
</tr>
<tr>
<td>ADDRESS</td>
<td>140 Hamilton Street, Arcadia, Pretoria</td>
</tr>
<tr>
<td>COMMISSIONING OWNER</td>
<td>Livestock &amp; Meat Industries, Control Board</td>
</tr>
<tr>
<td>CURRENT OWNER</td>
<td>Private owner</td>
</tr>
<tr>
<td>CURRENT OCCUPANT</td>
<td>Department of Water Affairs &amp; Public Works</td>
</tr>
<tr>
<td>TYPOLOGY</td>
<td>Office Building</td>
</tr>
</tbody>
</table>

#### 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 elements: (1) Modern Movement architecture, (2) Brazilian influenced architecture, and (3) regionalist architecture within Pretoria.

The building as civic building is revolutionary from a stylistic viewpoint as the design challenges the classical style in architectural design of the time. The building exhibits several defining elements of the Modern Movement such as an elevated mass on podium, 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 integrated the organic garden layout and the organic ecology of the building with the surrounding environment. The building is one of the first of its kind in South Africa 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 influence for the regionalist design approach of the Architecture School of Pretoria.

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**Figure 2.7** Meat Board building street view (Google Earth [S.a.]).

**Figure 2.8** Exploded axonometric view demonstrating elements of cultural and heritage significance.
### Current Condition

#### 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, at odds 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 contributes to a dark, gloomy environment. From a structural perspective, the building is in good overall condition. Currently, the building has not met environmental sanitation requirements and this contributes to an uncomprising 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 tracked on the ground floor of the building and the rest of the building consisted of administrative offices for the Meat Board. The architect describes the requirements of the building to be typical of an administrative organisation. The architect recognized the need for the workspace to be flexible in order to respond to change and modern needs. He was in compliance with the design of a ‘flexible interior space’ (Stauch 1951: 1).

#### 2.5.7 Additions

Additions to the structure were made in 2006 when the Department of Government Works relocated staff to the building. These additions were made with one goal in mind: increase office space within the building. The additions consisted of the removal of sky lighting on offices and the reduction of the Ronneplaat on the ground floor to allow for more office space. The consequences of reducing the Ronneplaat is the building’s visual identity is lost. Furthermore, connecting corridor to the building north of the Meat Board building currently, the Department of Agriculture (formerly, Food) was constructed. Since then, the access corridor between the buildings have been blocked and a wall added, the most significant facade of the building is obstructed with an incongruous addition. For the connecting corridor, the additions made to the corridor resulted in the situation that part of the character and authenticity of the original design got lost.

---

**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 closure of the ‘flexible interior space’ is no longer visible, a character-defining 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.

---

**SUMMARY OF UPPER GROUND FLOOR ADDITIONS:**

1. All original office were constructed of asbestos and had to be removed for health reasons. The original flexible interior space has been replaced by static, sky lighting.
2. A connecting corridor between the Meat Board building and the building to the North was constructed. Since then, the corridor of the respective building have come to lead turns 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.
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 north and south facade of the Meat Board building indicate the importance of the surrounding context, but not entirely undisturbed view as to this may distract an individual in the working environment.

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 ground floor plan. 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 characteristics of Modern Movement building and also visible in the Ministry of Education building by Oscar Niemeyer (Anstetten et al. 2019). The Meat Board building consists of curved lines and sharp edged lines that compose a dynamic plan.

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.

2.5.10 BRAZILIAN INFLUENCE

Ministry of Education, Rio de Janeiro, by Oscar Niemeyer

The Ministry of Education building in Rio de Janeiro, designed by Oscar Niemeyer, is a prime example of Modern Movement architecture. The building is characterized by its use of pilotis, roof garden and the free form ground floor plan. These elements are also visible in the Meat Board building, indicating a similar architectural approach.

1. Pilotis: The lower three floors of the building float on wide, round columns on ground floor and this gives the impression of a floating box. This is typical of Modern Movement buildings and also visible in the Ministry of Education building by Oscar Niemeyer (Anstetten et al. 2019). The Meat Board building consists of curved lines and sharp edged lines that compose a dynamic plan.

2. Roof garden: The roof garden is located on the rooftop 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 mimics the typical horizontal windows of the Modern Movement, there are substantive differences. Often in the construction of Modern Movement buildings, the designers have total freedom with the design of the façade and horizontal window elements were popular in design (Columbia [S.a.]). It is the case of the Meat Board building the architect designed a fenestration to show symmetry, a clear interior space and an aesthetic for the context of the building, this case of the façade does create somewhat of an illusion of the typical Modern Movement window element.

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 building’s form 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 construction of the 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 columns and beam systems, but with an integrated structural infill facade to allow for maximum unobstructed space within the interior. The lower façade of the building consists 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.

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 arrangement with maximum light and views. The steel supporting structure was designed on a module of 914 mm (3 feet) to allow for future expansion.

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.

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 facade. The ground floor columns are tiled in yellow mosaic and the remaining wall work is done in dark purple tile to contrast the light palette of the floating concrete cube. The Morphy spatial planning allows for an open plan arrangement in the interior that is achieved through the elimination of the floor-to-ceiling windows and the addition of a yellow and green mosaic tile surfaces with opaque floor tiling (Knorre 1952: 29).

The services in the building are highlighted in the morphology. The two circulation shafts protrude to the north of the site and are 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.

2.6.5 SERVICES AND CIRCULATION

The two circulation shafts protrude to the north of the site and are 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.

2.6.6 OCCUPANCY

The services in the building are highlighted in the morphology. The two circulation shafts protrude to the north of the site and are 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.

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 2.45). These facades were designed to allow for maximum visual character and height control regardless of the building’s height. The use of the precast concrete spandrels in the facade was decaying, designed to relate a connection between the user and the context.

![Diagram showing current layout of the Meat Board building](image-2.6)

![Diagram showing current occupancy of the Meat Board building](image-2.6.6)

![Diagram showing current enclosure of the Meat Board building](image-2.6.7)
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.
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 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. 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 adaptation of the office environment. Green & Meyerson (2011:19) state that the 1960’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 (2015:6).

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 & Wittensom 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 & Wittensom 2013:2). By accommodating virtual working styles in a business, employers are often able to reduce expensive real estate costs (Helms & Reisszaheh 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, hierarchical 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 & Wittensom 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 Knoll Research paper, employees desire to have social interaction while collaborating with fellow workers (Knoll 2013:3). 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 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.
The Office typology

3.4 THE EVOLUTION OF THE 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 exposed to market fluctuations, which means that companies and business processes, is becoming key 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, companies are trading with a flexible one (Harris 2015: 425; Gibson 2011: 38) as the notion that real estate assets should be considered in a wider range of requirements, either strategic, financial, management or flexibility. Although real estate assets fundamentally are static, in the way they can become more flexible (Gibson 2011: 38). This new approach shifts the focus from “managing buildings,” to “managing people” (Harris 2015: 425) and the workplace subsequently becomes a dynamic framework to cater for mobile and virtual working routines. The property market, in reaction to the changes in the working environment, developed with a flourishing market of flexible workspace of which the serviced office sector is the largest (Harris 2015: 430).

3.5 THE SERVICED OFFICE TYPOLOGY

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 developing by outsourcing non-core functions and manageable managed. More flexible, short-term real estate options (McKee 2007: 457). The development of the serviced office typology makes it possible for companies to operate on a short-term basis. The concept of the serviced office is particularly attractive to start-up companies, virtual companies and businesses expanding into new regions (Reed & Stewart 2003: 5).

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 London, offering clients offices that can be expanded into an office section when it is adjoined with adjacent offices (Reed & Stewart 2003: 5).

3.5.1 BACKGROUND

The concept of a serviced office refers to an office environment that is furnished, interconnected and fit for immediate use. The service comprises administrative and secretarial support, access to a virtual private network and other office-related services (Reed & Stewart 2003: 5).

3.5.2 DEFINING THE TYPOLOGY

Virtual functions include internet access, fax, printer facilities and virtual private network access. Physical functions include a reception area, conference rooms, parking facilities, access to a virtual private network and telephone services (Reed & Stewart 2003: 5).

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 Bryanston, this is hub for the short-term office rental market. The interior of the building remains a corporate office environment with generic furniture and decor, while the building itself, a construction was recently completed on the office center. The concept of the serviced office typology is something to be carefully considered in the design. Furthermore, a lack of more for customization of space in offices was identified as an area that can be given additional attention in the design.
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 plaza of a hectare in size that leads to the main entrance. The morphology of the building consists of two large masses of nine 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 000m² 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 compensates 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, 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 plaza’s 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).
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).
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: 60).
08 Programme and Concept

3.6 DETAILED PROGRAMME

3.7 CONCEPTUAL APPROACH: THE HOTEL ANALOGY

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

Figure 3.37 Diagram showing the functions of a hotel.

Figure 3.38 Mood board interpretation of the Hotel aesthetic.

Figure 3.39 Mood board interpretation of the conventional office aesthetic.

PROGRAMME AND USERS

37 CHAPTER 3
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.
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 the 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 space, 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 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 (König 2015:5).

4.2.1 INTERIOR COMPONENTS AND INHABITATION

Interior design influences the way people inhabit a space. 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, König (2015b) emphasizes the importance of placing objects in an intimate proximity in order to suggest inhabitation. In his thesis, König 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 building scheme on the building scale that suggests the inherent nature. (König 2015a:172-175). The use of proximal assemblies in the interior facilitates the user in claiming personal space and rearranging objects to personal preference (König 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 (König 2015a). As König (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 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 for designers to work in more informal environments that reams 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.

<table>
<thead>
<tr>
<th>ELEMENT</th>
<th>MODERN MOVEMENT DESIGN APPROACH</th>
<th>STAUCH’S INTERPRETATION</th>
<th>COLLABORATIVE OFFICE INTERIOR DESIGN APPROACH</th>
<th>DESIGN RESPONSE</th>
</tr>
</thead>
</table>
| User/ building relationship | Standardization of elements limit’s 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 adoption with organizational changes, but it does not allow for individual user control. | Designed to offer maximum choice to users in terms of:  
  - Ergonomics  
  - User-specific thermal comfort  
  - Working environment  
  - Social environment | Allow for user choice in office setting in terms of personalization of space. Informal workspACES 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. | Mobile 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 contract 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 requirements, 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. | Sdauch 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 synthesising 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 United 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 2004:175). 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 layers. 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 recognizable elements such as handcrafted interior wall paneling 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.
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 vehicular and pedestrian circulation movements on site, the availability of pedestrian accessible interface locations in the context and public transportation networks determined major design decisions.

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’s shape and other characteristics of the Modern Movement (as seen in case studies) further guided the development of the design.

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 is developed. The fundamental idea of spatial design in a collaborative working environment is that spaces are designed to facilitate employee interaction and innovation. Ziglar’s central focus of spatial design in a collaborative working environment is the absence of public interaction space currently in the Meat Board building therefore posed a major design opportunity.

4.5.4 COLLABORATION AND SOCIAL SPACE

The fundamental idea of spatial design in a collaborative working environment is that spaces are designed to facilitate employee interaction and innovation. Ziglar’s central focus of spatial design in a collaborative working environment is the absence of public interaction space currently in the Meat Board building therefore posed a major design opportunity.

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.

Figures 4.13-4.22 Photographs of the original building interiors. (Stauch 1951: 5)
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 now returned to its original phase and it can be seen as a blank canvas from where the new intervention can be implemented.

4.6 APPROACH TO SERVICES

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.

4.7 INTERVENTIONIST APPROACH

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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 now returned to its original phase and it can be seen as a blank canvas from where the new intervention can be implemented.

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 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 is to create associations of a homey nature. The furniture constellations and ensembles relate back to the heritage of the building but are of contemporary nature.

DESIGN DEVELOPMENT
4.10 PROGRAMMATIC DISTRIBUTION/ ZONING

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

Figure 4.28 Zoning concept sketch.

Figure 4.29 LOWER GROUND FLOOR ZONING PLAN

Figure 4.30 UPPER GROUND FLOOR ZONING PLAN

Figure 4.31 FIRST/SECOND FLOOR ZONING PLAN
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.
5.1 INTRODUCTION

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

The design distribution within the project is as follows:

5.2 HOLISTIC DESIGN APPROACH

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

5.3 TECHNICAL APPROACH

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

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

5.4 MATERIAL APPROACH

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

5.5 REMODELLING THE LOWER GROUND FLOOR AND NEW ENTRANCE

The Canteen

5.6 LOWER GROUND FLOOR CAFE

Figure 5.7 DEMOLITION DIAGRAM: PROPOSED INTERVENTION

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

Figure 5.3 Canteen interior perspective: see viewpoint 1 on plan.

Figure 5.4 LOWER GROUND FLOOR PLAN

SCALE 1:100

Figure 5.5 Mood board showing proposed aesthetic for the Canteen.

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

Figure 5.6 ORIGINAL LOWER GROUND FLOOR PLAN (Stauch 1951:4)

Figure 5.1 LOWER GROUND FLOOR PLAN

SCALE 1:100
5.7 REMODELLING THE UPPER GROUND FLOOR AS INFORMAL WORKING ENVIRONMENT
Informal workspace configuration

5.8 HOW DO PEOPLE WORK IN COLLABORATIVE ENVIRONMENTS?

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

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

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

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

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:

5.10 INFORMAL WORKSPACE DETAILING

ACCESS:
1. Stair access from lower ground entrance
2. 2m. Notice from lower ground
3. Section main entrance

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

Figure 5.18  THE PARLOUR DETAIL PLAN  
SCALE 1:50

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

Figure 5.17  Interior perspective of the double volume space of The Parlour.

Figure 5.15  Diagram showing the location of The Parlour.

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

5.12  STABILIZING EXISTING COLUMNS AFTER THE DEMOLITION OF FLOORS

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

Figure 5.20  Structural Cable Column Support Detail (Elevation)  
SCALE 1:10

Figure 5.21  Structural Cable Column Support Detail (Plan)  
SCALE 1:10
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

STAIRCASE FLIGHT DETAIL
SCALE 1:20

LANDING 1 PLAN
SCALE 1:50

LANDING 2 PLAN
SCALE 1:50

FRONT ELEVATION
SCALE 1:50

SIDE ELEVATION
SCALE 1:50

Figure 5.22 Staircase entrance perspective.

Figure 5.23 Staircase flight detail.

Figure 5.24 Landing 1 plan.

Figure 5.25 Front elevation.

Figure 5.26 Landing 2 plan.

Figure 5.27 Side elevation.
5.14  ATRIUM DETAILING: ARTIFICIAL LIGHTING

5.14.1 LIGHTING PLAN DIAGRAMS

Figure 5.22  FIRST FLOOR LIGHTING PLAN

Figure 5.23  UPPER GROUND FLOOR LIGHTING PLAN

Figure 5.24  SECOND FLOOR LIGHTING PLAN

Table 5.3  Zone 1 lighting calculation table.

Table 5.4  Zone 2 lighting calculation table.

Table 5.5  Zone 3 lighting calculation table.

Table 5.6  Lighting diagram key.

Table 5.7  Lighting specification table (To be updated).

Table 5.8  ZONE 1 Calculation table.

Table 5.9  ZONE 2 Calculation table.

Table 5.10  ZONE 3 Calculation table.

Table 5.11  ZONE 1 Calculation table.

Table 5.12  ZONE 2 Calculation table.

Table 5.13  ZONE 3 Calculation table.

Table 5.14  ZONE 1 Calculation table.

Table 5.15  ZONE 2 Calculation table.

Table 5.16  ZONE 3 Calculation table.

Table 5.17  ZONE 1 Calculation table.

Table 5.18  ZONE 2 Calculation table.

Table 5.19  ZONE 3 Calculation table.

Table 5.20  ZONE 1 Calculation table.

Table 5.21  ZONE 2 Calculation table.

Table 5.22  ZONE 3 Calculation table.

Table 5.23  ZONE 1 Calculation table.

Table 5.24  ZONE 2 Calculation table.

Table 5.25  ZONE 3 Calculation table.

Table 5.26  ZONE 1 Calculation table.

Table 5.27  ZONE 2 Calculation table.

Table 5.28  ZONE 3 Calculation table.

Table 5.29  ZONE 1 Calculation table.

Table 5.30  ZONE 2 Calculation table.

Table 5.31  ZONE 3 Calculation table.
5.15 A CONCEPTUAL PROPOSAL FOR THE FORMAL WORKSPACE ENVIRONMENT

Formal workspace configuration

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 complimented with soft furnishings.

Figure 5.32 New permeable internal facade.

Figure 5.33 Axonometric view of the first/second floor formal workspace environment.
SECTION 5.16 TRANSVERSE SECTION SHOWING USE OF SPACE IN THE NEW ATRIUM SPACE AND THE PARLOUR

Ceilings: All existing ceilings taken out and replaced with new ceilings.

Walls: All existing painted interior walls replaced with render finish in seven cremes to be retained.

Staircase interventions:
- Redevelopment of existing columns
- Replacement of all existing ceiling beams
- Construction of permanent ceiling, framed in The Parlour

Scale 1:20

Figure 5.35 Section diagram summarizing new work within Section AA.

Figure 5.37 Section Callout: Floor Extrusion Detail

Scale 1:20
5.17 VENTILATION

A central air conditioning system already exists to regulate indoor temperature. Currently, the existing 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 ducts are inserted within the width of the building to spread cool air more evenly throughout the space. A 'zoned' air conditioning system is proposed that allows for user-specific control within rooms. Openable windows throughout the building façade allow for additional user-specific temperature control.

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

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 the east of the service core 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.

5.17.3 ACCESS

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

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

5.17.4 ACOUSTICS

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

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

5.17.5 SANITATION

The current amount of toilets is insufficient to the current SANS 10400 requirements. New toilets are constructed in connection to existing eastern service core. A new vertical shaft is proposed adjacent to the existing lift on the east of the service core 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.
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.
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 a starting point for all major decisions in the dissertation (refer to figure 11 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 RECOMMENDATIONS 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.
- 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 facade 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 to 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.