

04

DESIGN DEVELOPMENT

4.1 INTRODUCTION

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

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

4.2 INHABITATION AND THE INTERIOR

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

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

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

4.2.1 INTERIOR COMPONENTS AND INHABITATION

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

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

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

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

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

4.2.2 DOMESTICATING MODERN MOVEMENT SPACE

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

FACILITATING INHABITATION WITHIN THE MEAT BOARD BUILDING

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

4.3 DEVELOPMENT OF DESIGN APPROACH

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

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

Table 4.1 The synthesizing of concepts into a design approach.

4.4 CASE STUDIES

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

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

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

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

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



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



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



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



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

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

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

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

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



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



Figure 4.6 Interior staircase (Time Travel Turtle 2014).

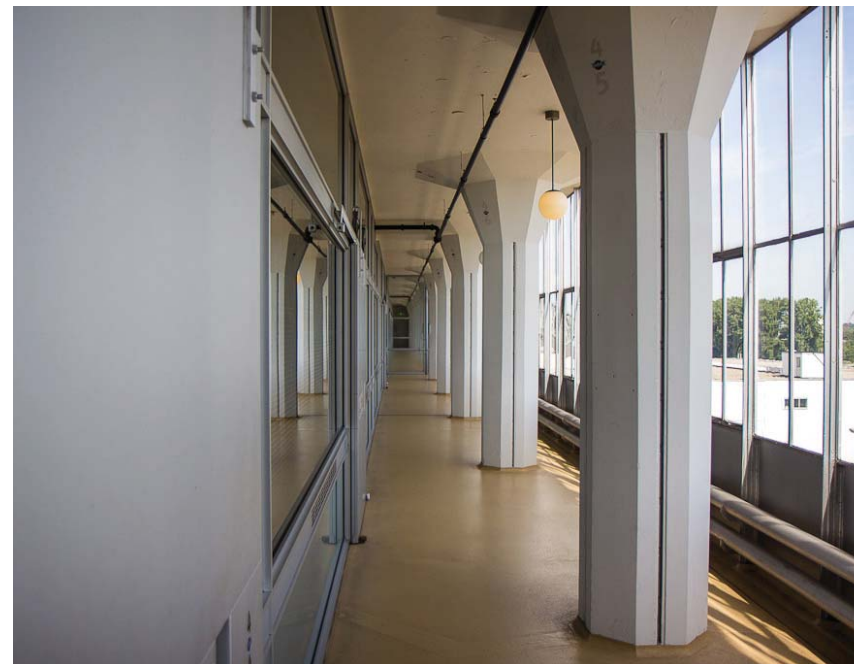


Figure 4.7 Corridor in between double glass facade within the Van Nelle Tobacco company (Time Travel Turtle 2014).

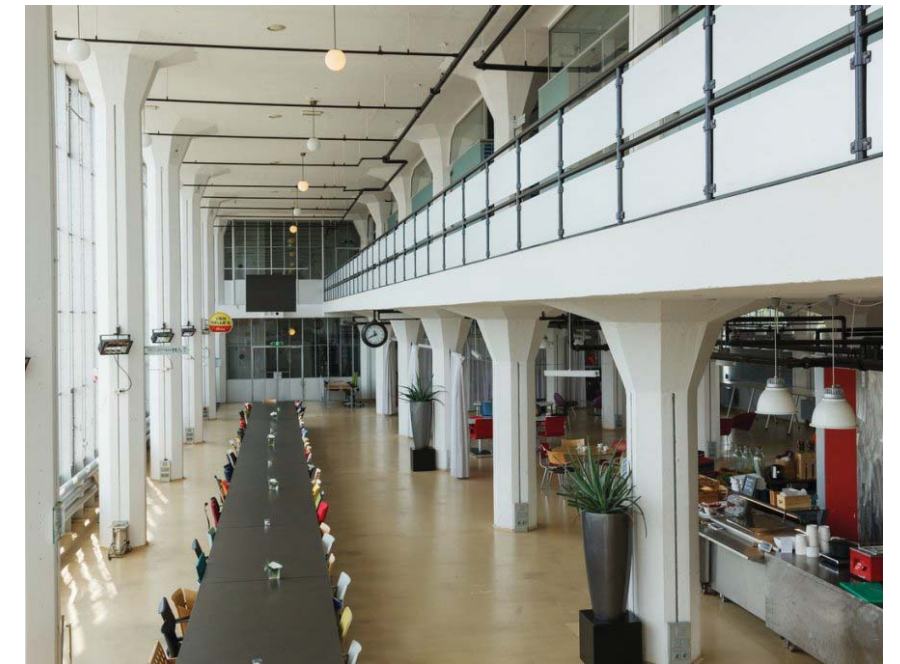


Figure 4.8 Restaurant space within Van Nelle Tobacco company. (Time Travel Turtle 2014).

4.4.3 ROOM 606, SAS ROYAL HOTEL BY ARNE JACOBSEN

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

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

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

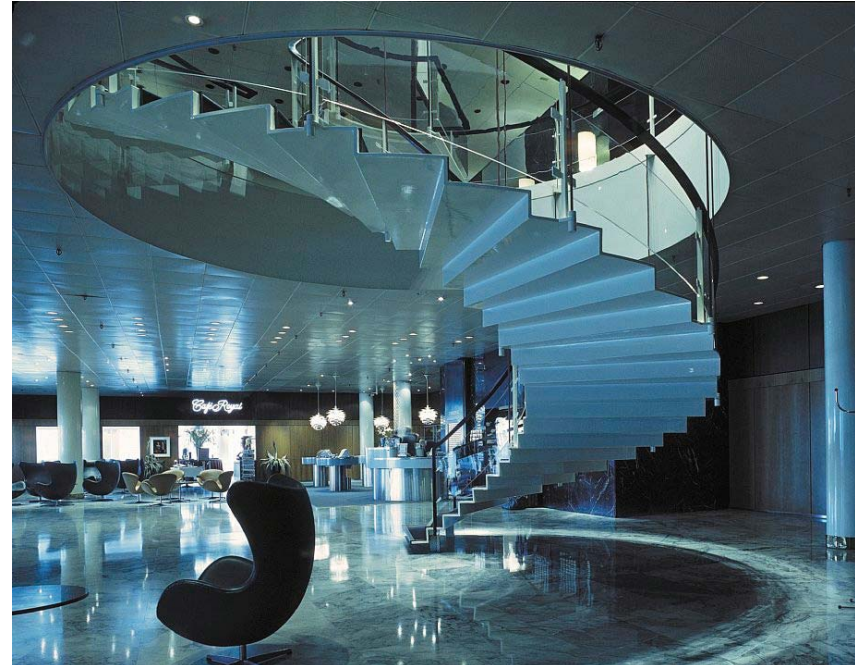


Figure 4.9 Original entrance foyer of the SAS Royal Hotel, Copenhagen (Vita Estelo 2014)



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



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



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

09 Design Development

4.5 DESIGN INFORMANTS

4.5.1 MACRO CONTEXT

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

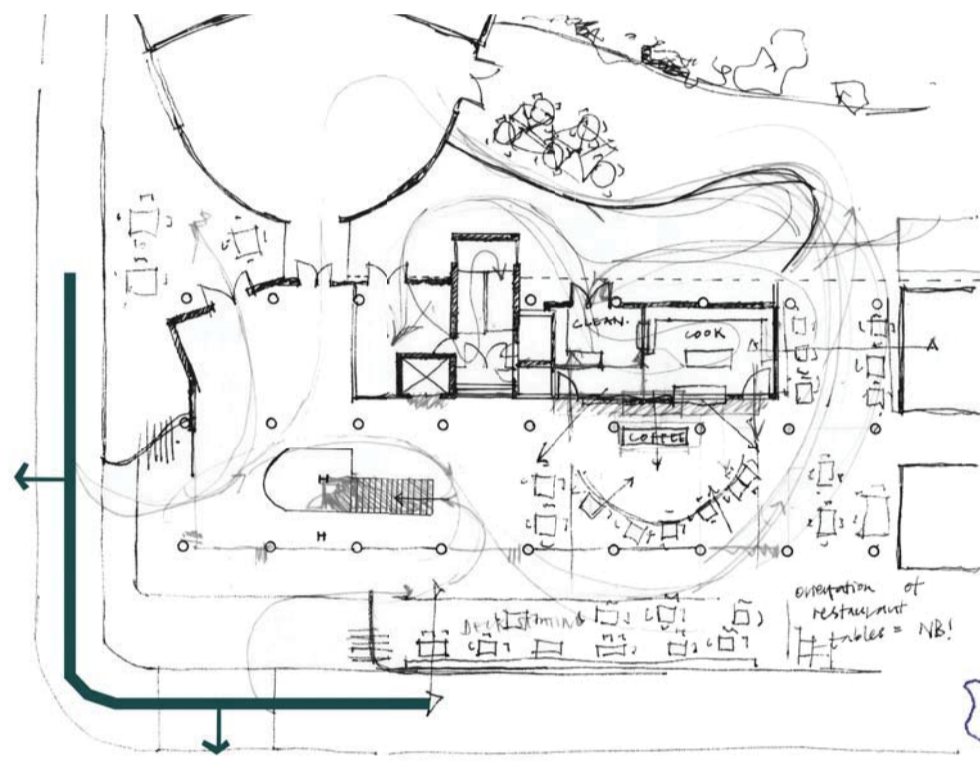


Figure 413 Sketch that shows the ground floor circulation and activated street edge.

4.5.2 HOST BUILDING

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

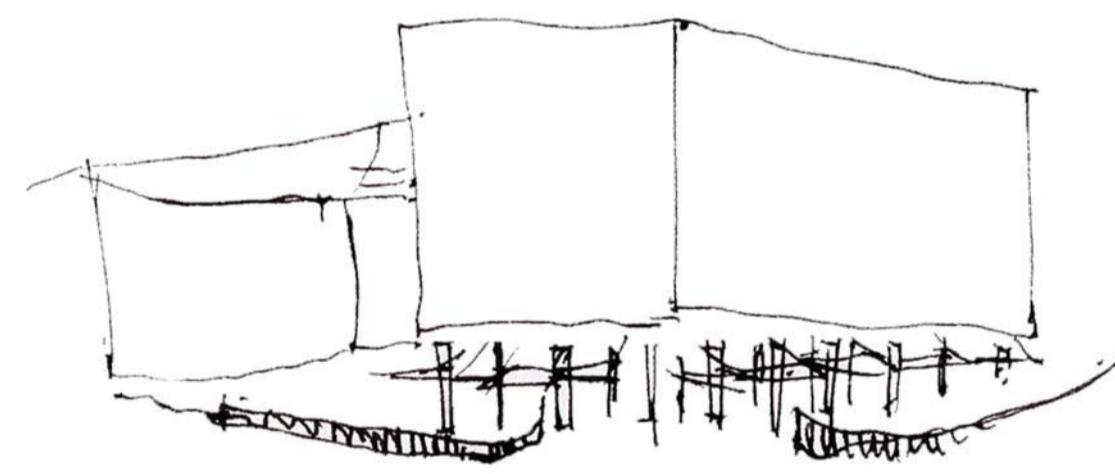


Figure 414 Sketch showing the basic morphology of the Meat Board building and conceptual lines of the proposed entrance.

4.5.3 CONCEPT: HOTEL ANALOGY

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

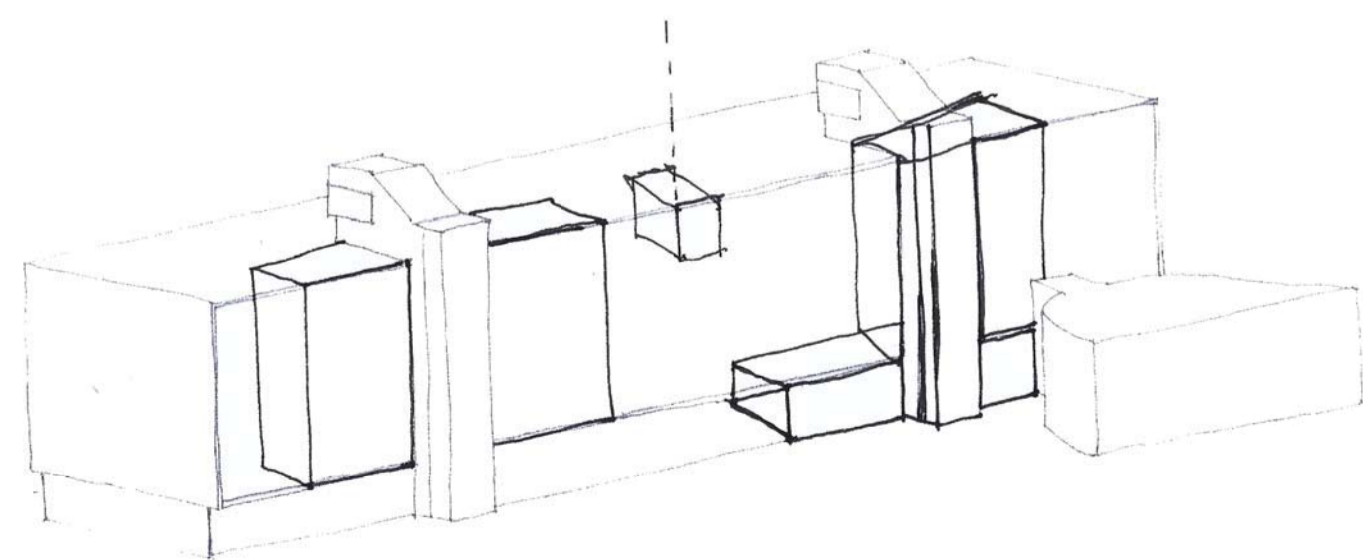


Figure 415 Sketch showing location of new services adjacent to existing service cores as influenced by the hotel analogy.

4.5.4 COLLABORATION AND SOCIAL SPACE

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

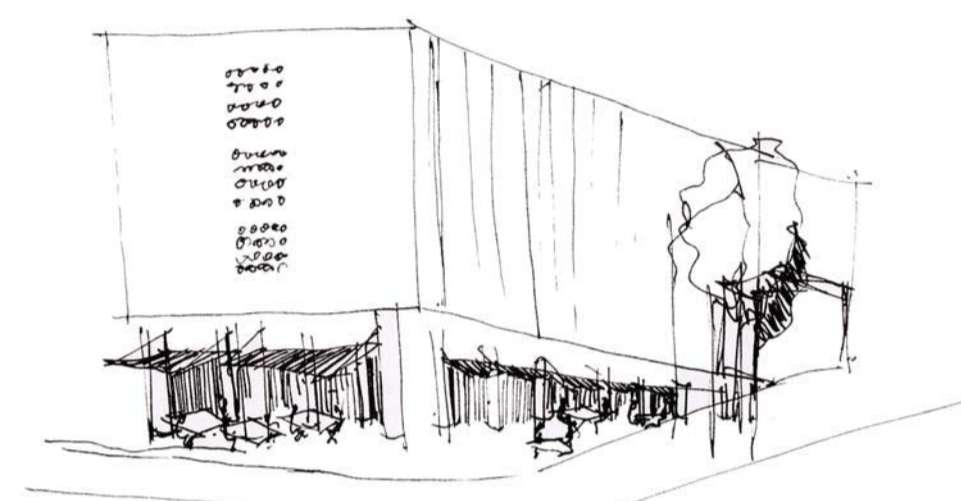


Figure 416 Sketch showing the new social character of the lower ground floor.

design informants

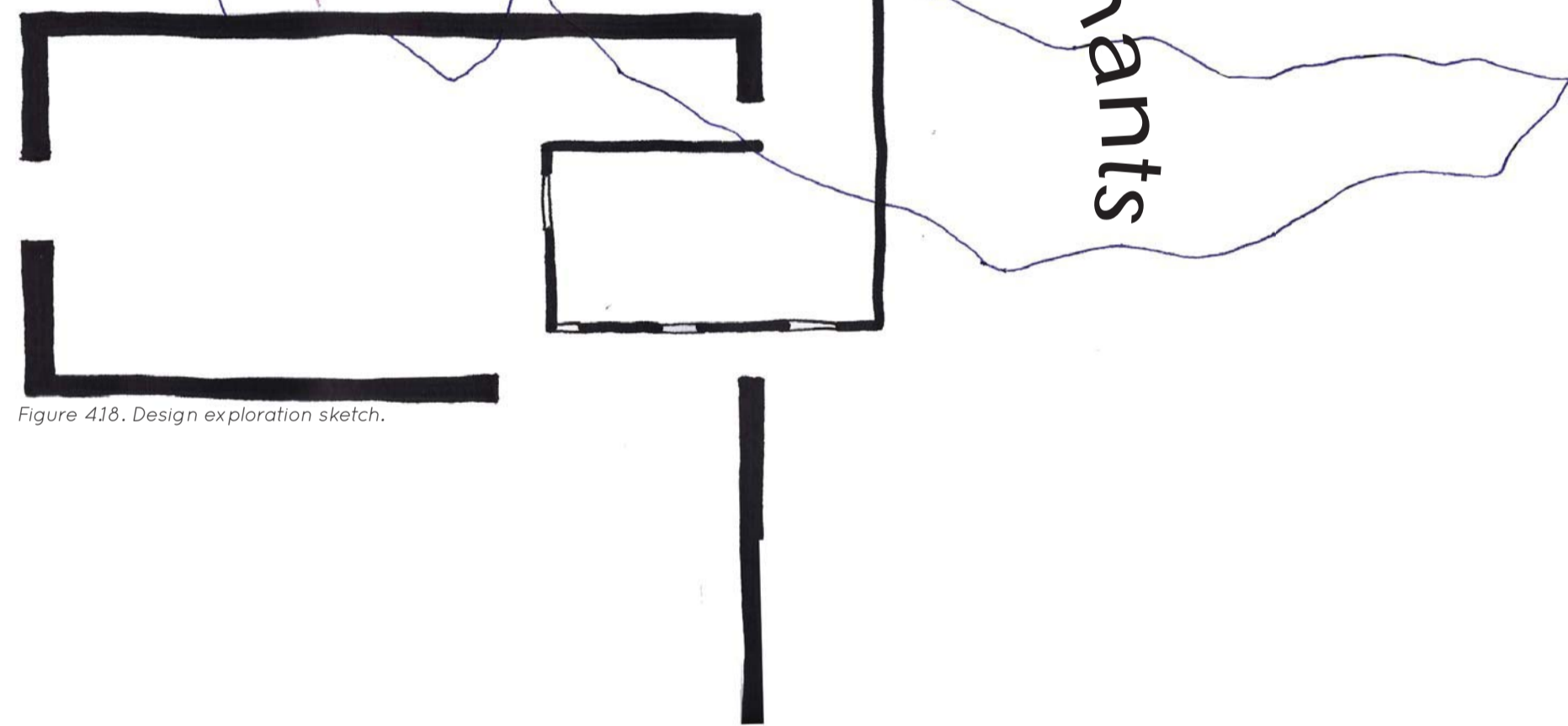


Figure 418. Design exploration sketch.

4.5.5 ARCHITECT'S ORIGINAL INTENTION

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

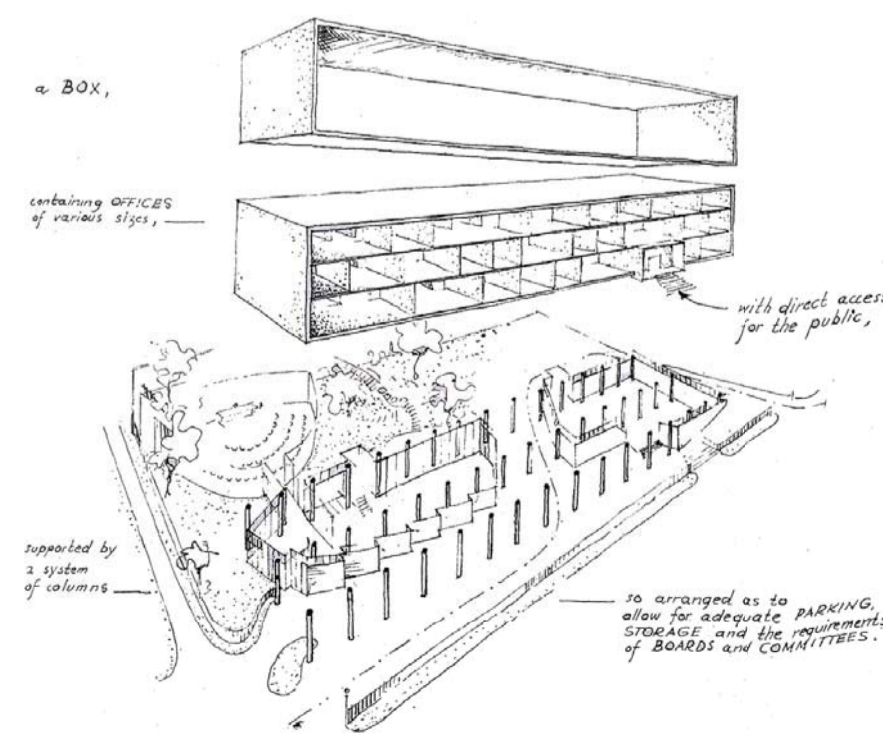


Figure 417 Sketch of original building by Stauch (Stauch 1951: 5)

ORIGINAL INTERIOR OF THE MEAT BOARD BUILDING

Interior blinds: dappled light effect.

Abundant natural light

Curved element: tea room counter

Uncluttered, minimalist interior character with raw materials.

Minimalistic ornaments

Formalistic furniture constellations

Exterior facade rhythm translated to the interior partitioning system

Timber clad wall- formal, intimate interior.

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

Figure 4.20 Photograph of the original recreation area on the upper ground floor (Howie 1952: 16).

Figure 4.21 Photograph showing the original furniture constellation of an office (Howie 1952: 16).

Figure 4.22 Photograph of the original committee room on the lower ground floor (Howie 1952: 16).

10 Design approach

4.6 HERITAGE STRATEGY

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

SUMMARY OF DEMOLITION WORK:

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

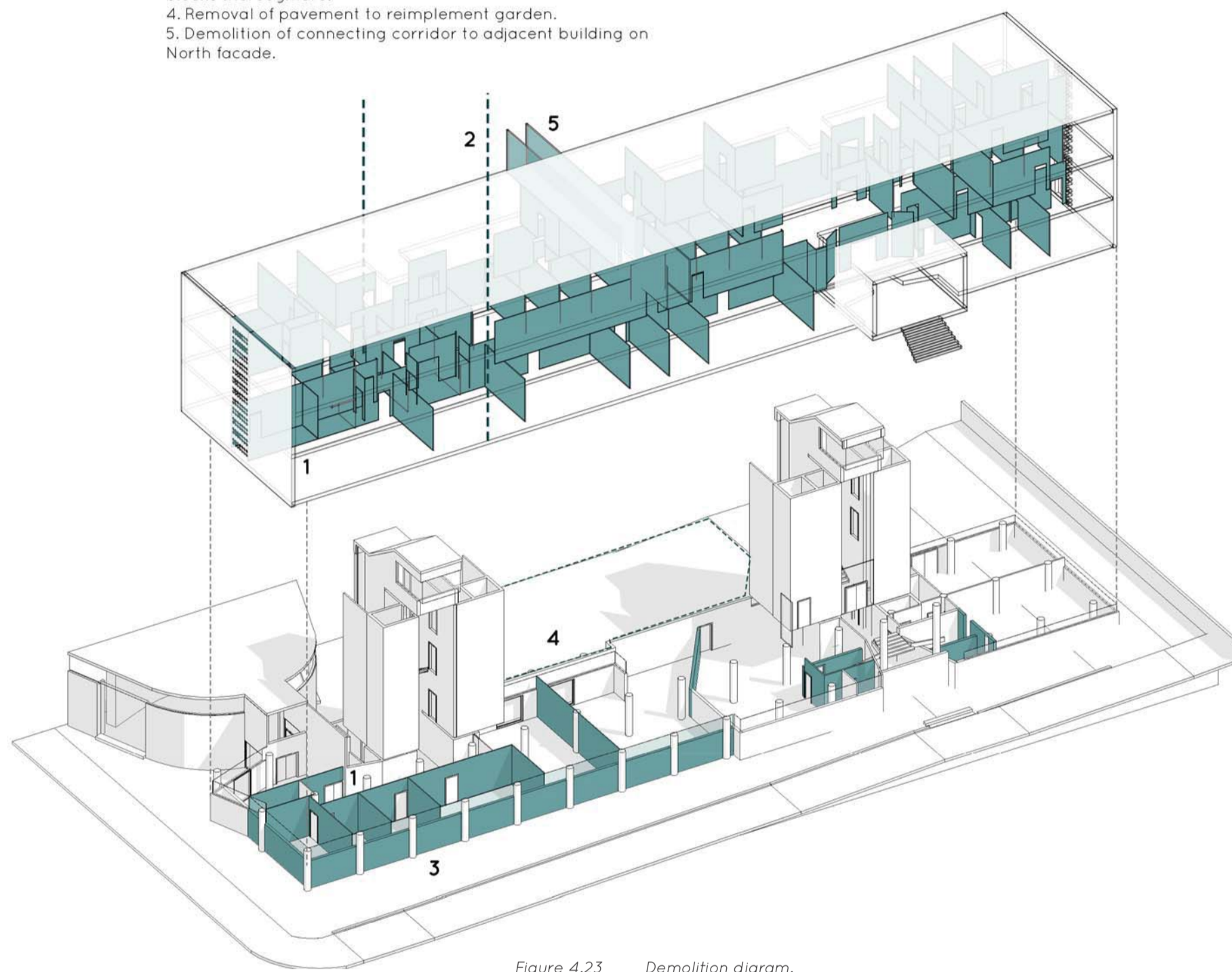


Figure 4.23 Demolition diagram.

4.7 INTERVENTIONIST APPROACH

SUMMARY OF NEW WORK

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

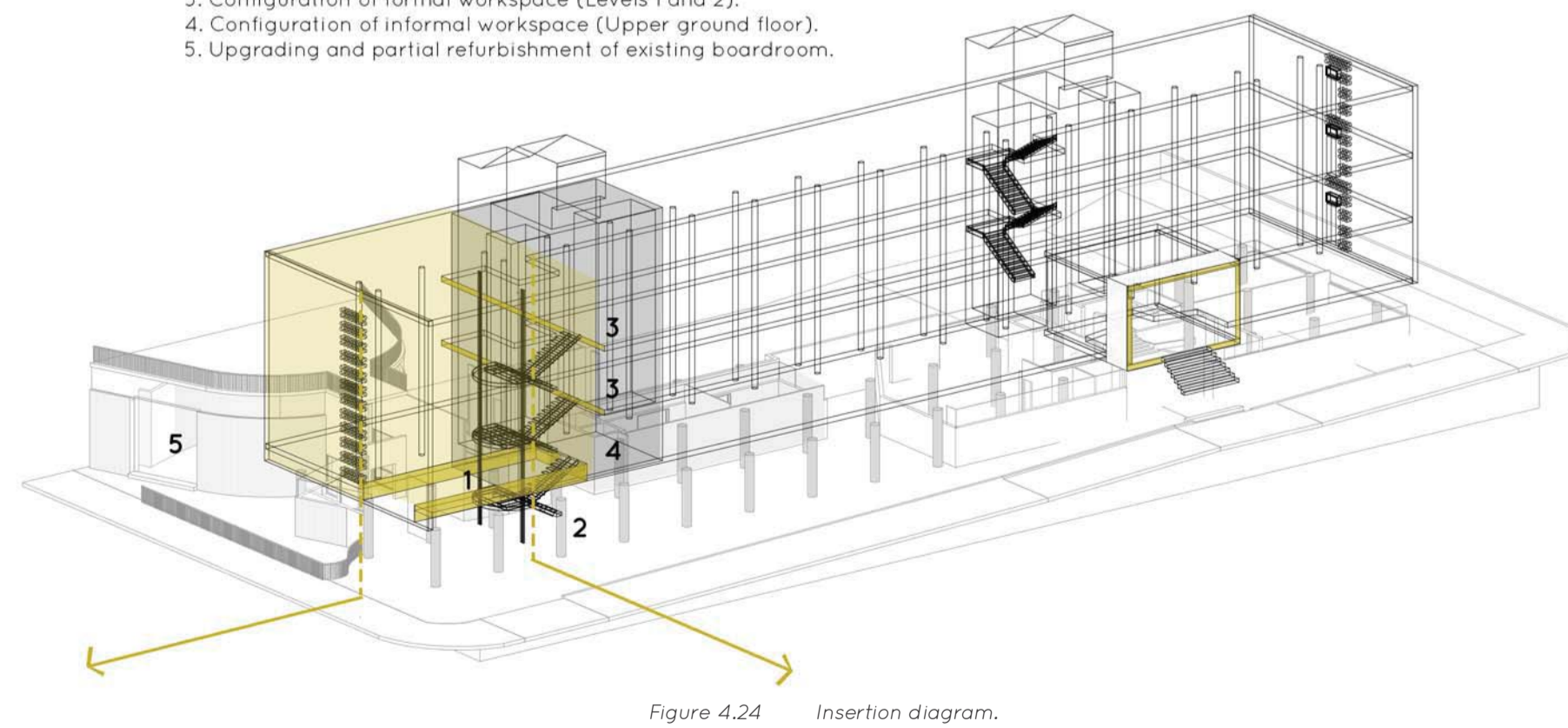


Figure 4.24 Insertion diagram.

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

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

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

4.8 APPROACH TO SERVICES

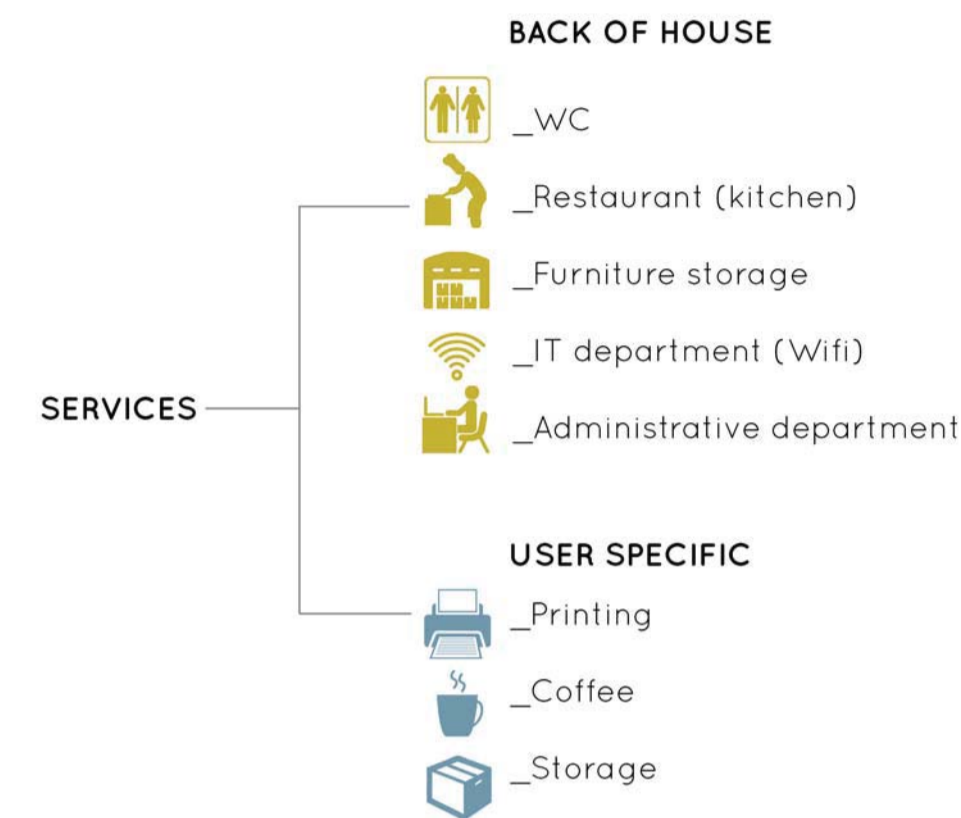


Figure 4.25 Diagram explaining the back of house and user specific services of the serviced office typology.

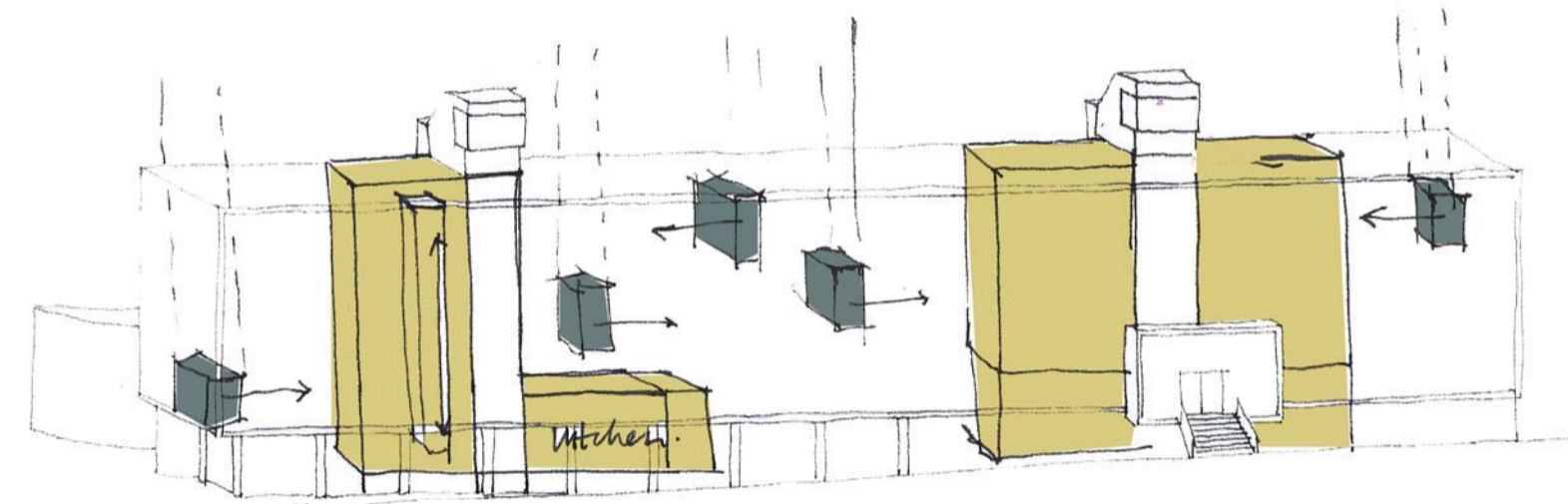


Figure 4.26 Sketch explaining the new back of house services that connect to the existing service cores and user specific services that are located within office and public space.

4.9 FURNITURE PHILOSOPHY

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

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



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

11 Zoning

4.10 PROGRAMMATIC DISTRIBUTION/ ZONING

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

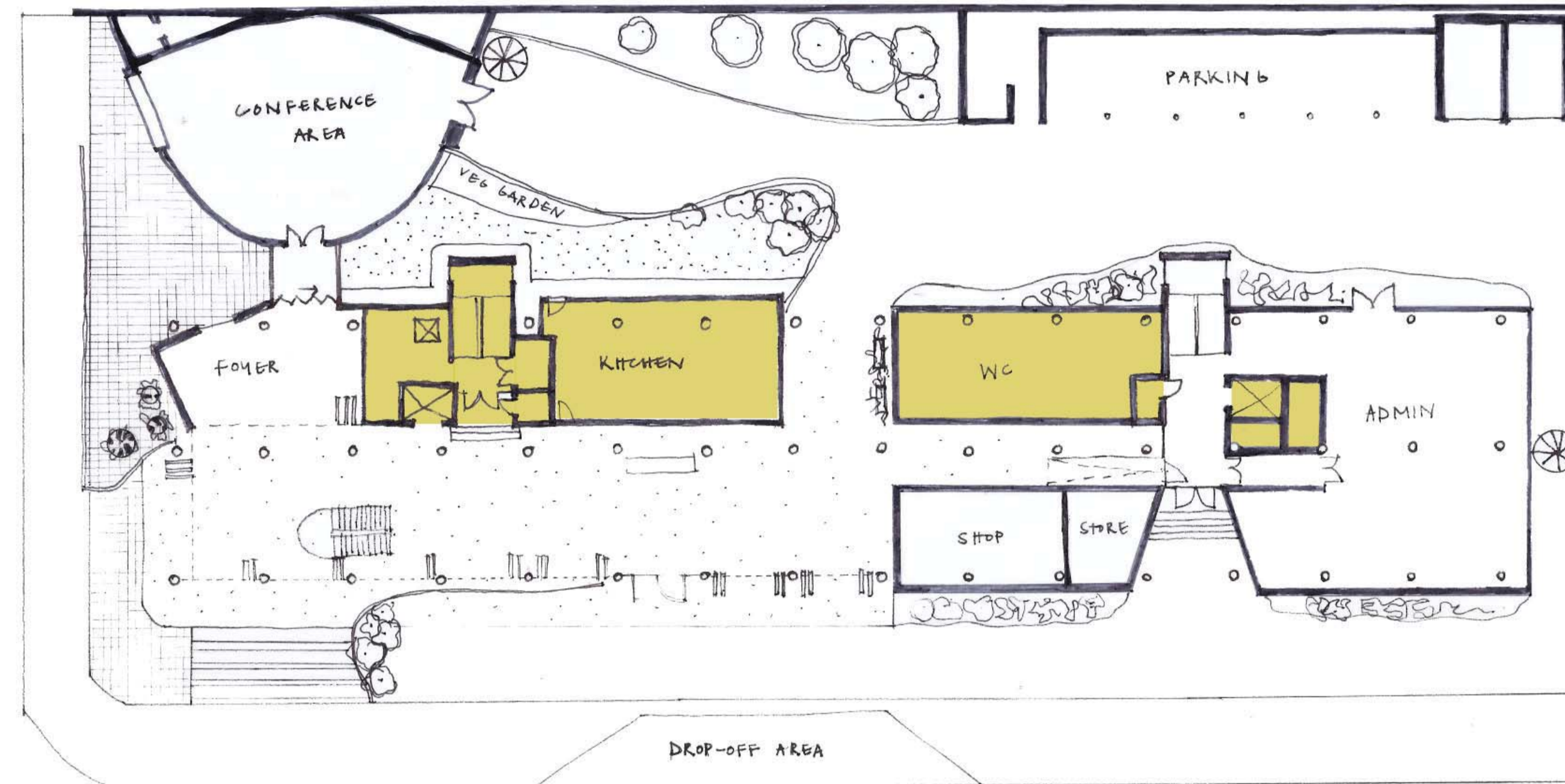


Figure 4.29 LOWER GROUND FLOOR ZONING PLAN

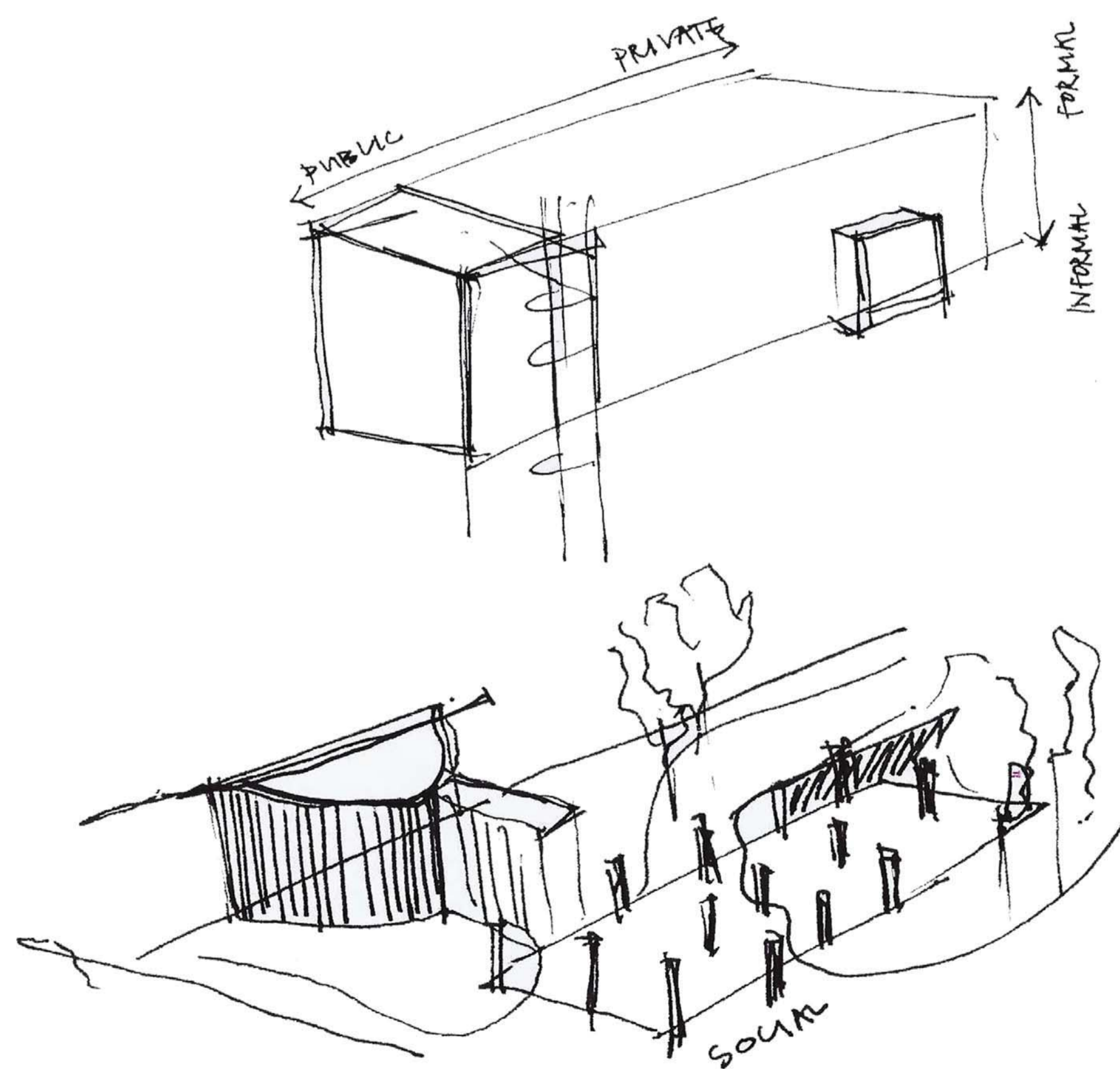


Figure 4.28 Zoning concept sketch.

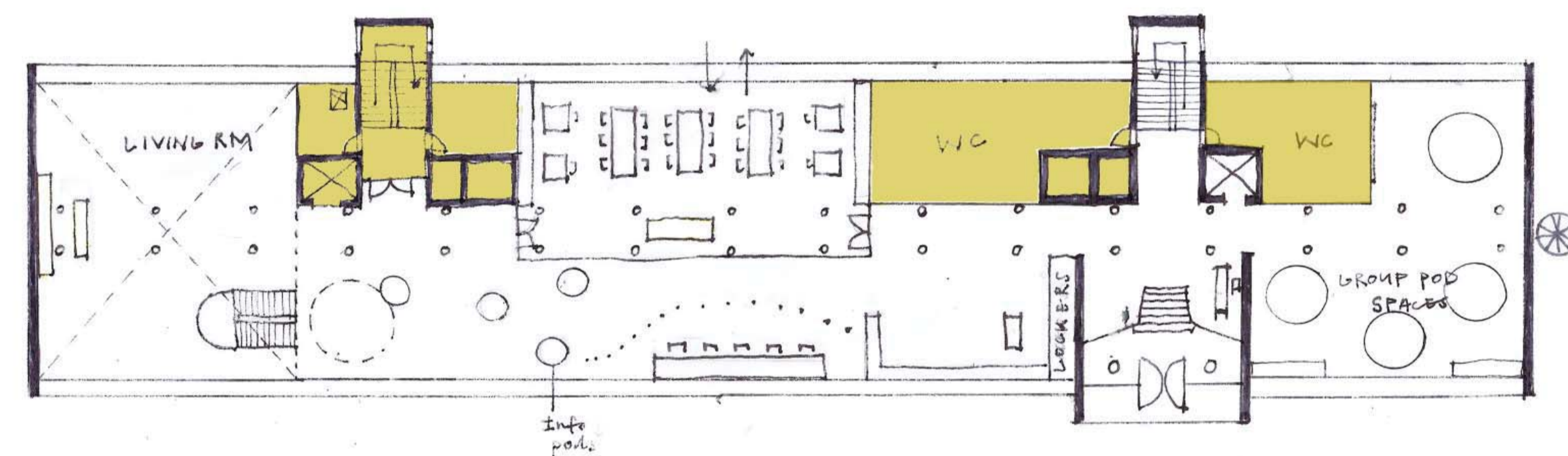


Figure 4.30 UPPER GROUND FLOOR ZONING PLAN

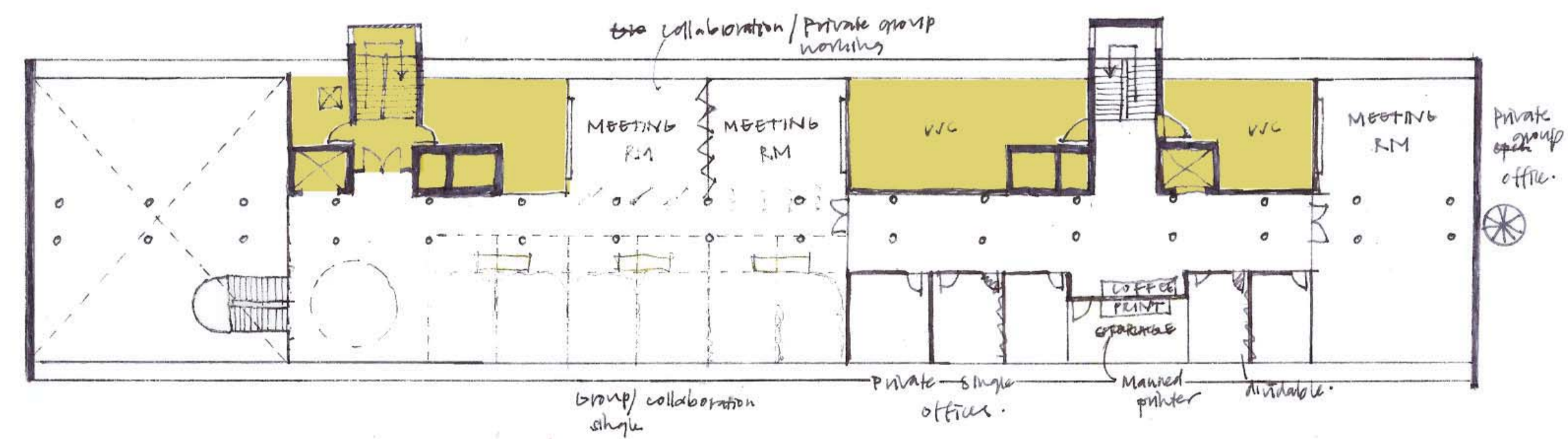


Figure 4.31 FIRST/ SECOND FLOOR ZONING PLAN

4.11 CONCLUSION

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



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



Figure 4.33 Longitudinal conceptual section as presented in June.