



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

## **Chapter 7** \_Building Design Development

## 7.1 Introduction

The Hotel School inclusive of all the supporting facilities requires the reprogramming of the site as an all-encompassing entity. The hospitality and tourism programmes have been identified as having great potential in uplifting and unifying the community as mentioned before. The urban design strategy informs the design development to a point; thereafter the potential of the physical development is explored in order to unite the peripheral site with the existing Campus framework. Focus now shifts to the implementation of the education and hospitality programmes within the ideals of the urban strategy with the intention of site reintegration.

## 7.2 Spatial properties

The spatial enclosure of the development has the potential to influence the interaction between the individual or various groups. The importance of space is associated with the requirement of privacy and territoriality, where it functions as buffer that provides physical and psychological protection against intruders. Enclosure without immediate visual freedom or access to open space constricts community or individual interaction. Norberg-Schultz (1980) suggests that space enclosure is the first real attempt of people to possess the environment, and its typical dimension and form varies from culture to culture.

### Inside/outside

Changing space into place is a process of qualification and differentiation. Differentiation is the process of defining place, which is achieved through the use of fixed or semi-fixed elements that penetrate the building.

Qualification is the assignment of the level of involvement with regards to man's activities, or the programme. Through the process of demarcating and differentiating place, the user is able to establish a connection with the space. The phenomenological dimension of the place is therefore a practice of setting up the inside/outside which results in qualities such as territoriality, identity and privacy.

### Application

For the purpose of this dissertation two systems of spatial appropriation will be explored namely space defining and space enclosure systems. The reason for considering the two systems only, is as a result of the programme nature.

The two systems are expressed architecturally through the structure, form, openings and organizational structure of the various programmes.

Due to the unorthodox placement of the building in terms the building acting as boundary, particular attention must be placed on security, as well as the private and public functions communicating correctly to the user. The inclusive quality of the building is not affected by the structural placement or systems, which will inform the user of the choices that are available throughout the development. The development has two entrances that face the public, both of which are on Duxbury Street. The Hotel foyer has a dual function in that it guides the guest and adds the necessary measures of security by controlling and directing circulation.

Safety measures consist of personnel at the reception desk of the hotel, and restaurant, while further unauthorised admittance restricting elements such as electronic access control points provide additional security to the School and the premises of the University.

### Defined space.

The defined space primarily consists of public space that is permeable in nature and that offer the widest range of choice and adaptive qualities.

### Enclosed space.

The space enclosure of the development is defined by the space establishing elements and fabric. The majority of enclosed space consists of the services or supportive facilities of the core processes. It also occurs where the user requires more private space and where access to the development is controlled to ensure safety.

These two systems of spatial definitions are further represented by a framework of functional assumptions:

- Privacy is an important concept for the spatial and social behaviour of the user.
- Spatial definition is impacted on by territorial requirements of the user. This refers to the control of spatial boundaries in order to claim and defend space.
- Territoriality is a mechanism for satisfying privacy needs and the desired levels of interaction.

The system of spatial enclosure is hierarchically ordered, guiding the process of spatial organisation vertically from the public to private realm.

### 7.3 Building Skin

In any human settlement the intention of architecture is driven by two fundamental aims: The wish to create platforms or make better use of land, and in the varying climates of the world, to provide shelter. These two generative forces guide the act of building, which constitute the basis of the form making process, and the essential requirements for performance.

Consider for a moment the earliest form of shelter by our country's indigenous people. The Khoikhoi hunter-gatherer transportable mat domes to the cone on cylinder clay and thatch dwelling of the Tswana people were primitive, yet simple and elegant forms of shelter.

Their dwelling was a holistic and simple response to the particular needs at a point in time. Through its fusion of structure and envelope it provides a design response to the exigencies of climate as well as socio-economic identity.

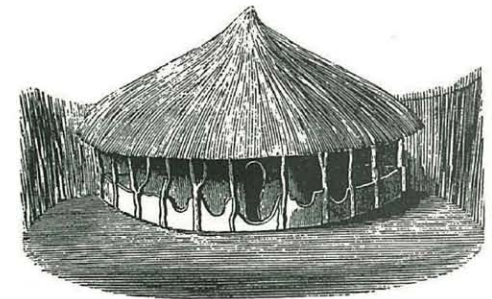
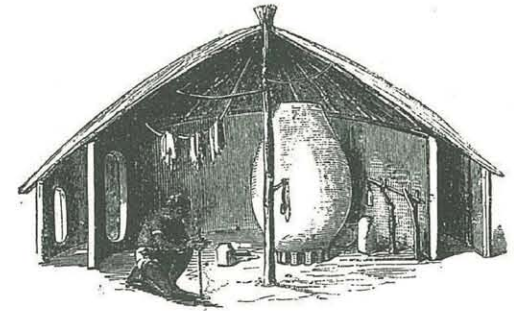


Fig. 7.3: Typical Khoikhoi dwelling enclosure

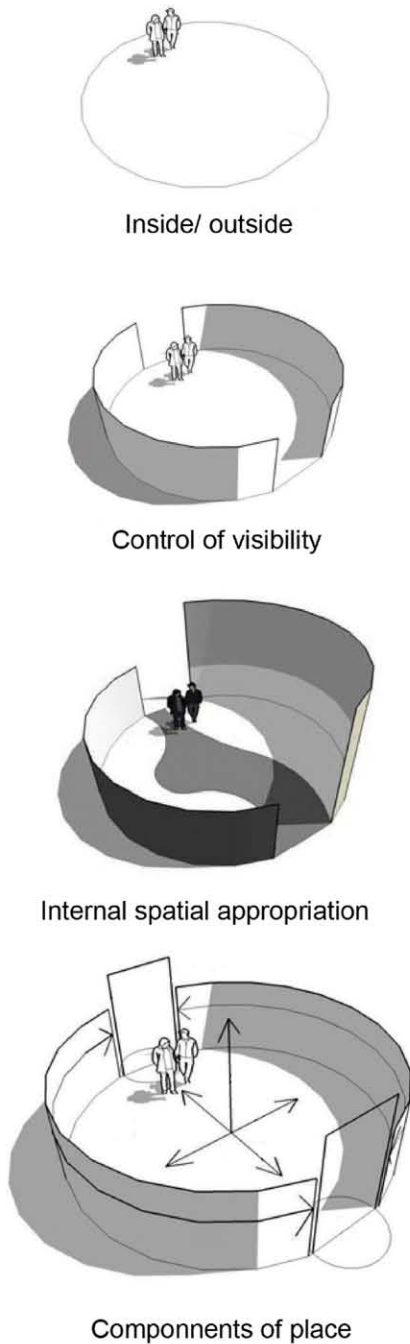


Fig. 7.1: Exploring spatial properties

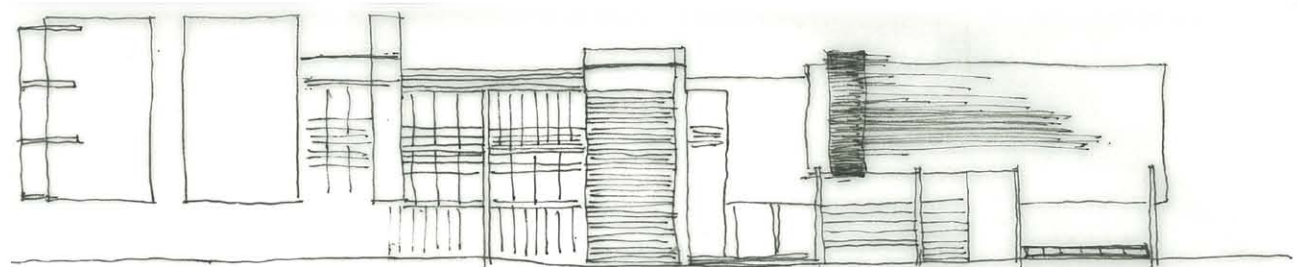


Fig. 7.2: Conceptual façade treatment

## 7.4 Identity of the intervention

A building which offers a positive experience to the users of a building and community alike draws identity from its programme as well as the setting in which the project is located. The preceding section revealed that public acceptance and use would be more readily achieved if the relationship between user, physical plant and contextual setting are complimentary. The intention with regards to the proposal will be to establish an identity which is inherent to the City of Pretoria.

### Pretoria Regionalism

Regionalist architecture is a design response which is generated by site or 'place' specific conditions such as climate, materials, defence, economics, religion and culture. The Pretoria Regionalism is known more specifically as the Third Vernacular as it matured beyond the previous two vernaculars which were the Cape Dutch of the 18<sup>th</sup> century and the Georgian of the early 19<sup>th</sup> century. This vernacular is a modified design response of the modern movement that takes into account an economic approach to nature and landscape using natural and industrially produced building materials that are empirically responsive to climate. (Fisher, 1998)

The pioneers of the local vernacular were the Transvaal group, of which Norman Eaton was the most representative of Pretoria Regionalism. Characteristic elements used by the Third Vernacular protagonists were traditional plan forms, extensive use of brick, low pitched corrugated iron roofs, verandas and sun shy windows, as well as sensitivity to landscape and climatic conditions.

In terms of material use the emphasis was placed on the use of local materials, with the Kirkness brick being material of choice due to its implicit honesty. The Dutch and German influences were particularly important as the socialist and communist allies introduced to the local vernacular new uses of materials such as steel, glass and concrete by architects such as Le Corbusier, Dudok and Mendelsohn. Although the use of brick had been readily exploited, the industrial revolution brought about the local production of concrete, steel and glass with revolutionary new modern applications that challenged the Pretoria Regionalists.

The flat concrete roof of the International Style proved to be more innovative than the low pitched corrugated iron roofs, however the tin roof was more cost effective, resulting in the two materials being used in conjunction. Due to the activity of farming the Afrikaner had a strong connection or genius loci through the soil that they used for agriculture, this dependence strengthened their sense of dwelling and of place within the environment, which is further defined by Heidegger's concept of "wohnen". (Fisher, 1998)



Fig. 7.4: Extensive use of concrete

## 7.5 Architectural response

The intention of the development is to introduce elements that are representative of the Pretoria vernacular. A strong and well established modern movement within Pretoria has an influence on the building, however it is not to be regarded as a modernist building.

Elements used in the development are the extensive use of concrete roofs, with cantilevers and fins on a grid protecting the openings. Particular attention is placed on the use of floor to ceiling glazing, which allows visual commutation by user and passers-by. This is particularly evident at the corners, where visual emphasis is placed on the ideal of openness and welcoming. Within the Campus context the staircases are treated as separate elements, unifying the spaces and acting as viewing platform.

The auditorium too is articulated as a separate entity, giving the development an identity within the University. This is a regular feature of institutional buildings within Pretoria, as can be seen on the Aula at University, and is reflective of the Brazilian influence on local architecture.





Fig. 7.5: The Aula and College of Nursing—the freestanding auditorium

## 7.6 Application Enclosure

The building skin becomes the place where the interior space meets the exterior, it constitutes the boundary between the internal environment and the climate outside. It will define the function of the building and provide privacy, security and views while simultaneously assisting the formation of exterior space, as it defines the streetscape of both Duxbury and Herold Streets.

Layering of the façade is achieved on both the vertical and horizontal plains. The effect of layering will be created through the degree to which space is enclosed, and as such will be determined by the configuration of its defining elements such as openings and rhythm.

The initial concept of the hotel school is to discover and celebrate the functions inherent with such a programme. The building is thus conceived around the event of hospitality, particularly the process of cookery. By allowing the user or passerby visual connection through the building skin to the event from the street or restaurant area, the building becomes an event space or active platform. It displays it's own function, allowing observation and the opportunity to take part in the functions of the programme, ultimately exposing individuals to chance encounters.

The hotel suites are completely glazed to either the north or south, however layering of the skin through depth and additional moveable elements the balcony area becomes a semi public viewing platform where the guest may take part in the street activities and vice versa.

Instead of merely enclosing space within as an envelope, the space must be formed to exploit the capacity as interfaces shared by, and therefore defined by the interaction between adjoining spaces. The building enclosure therefore has the capacity to integrate, as well as divide the space and acts as the limit that separates and indicates the relationship between two spaces-between here and there, private and public.

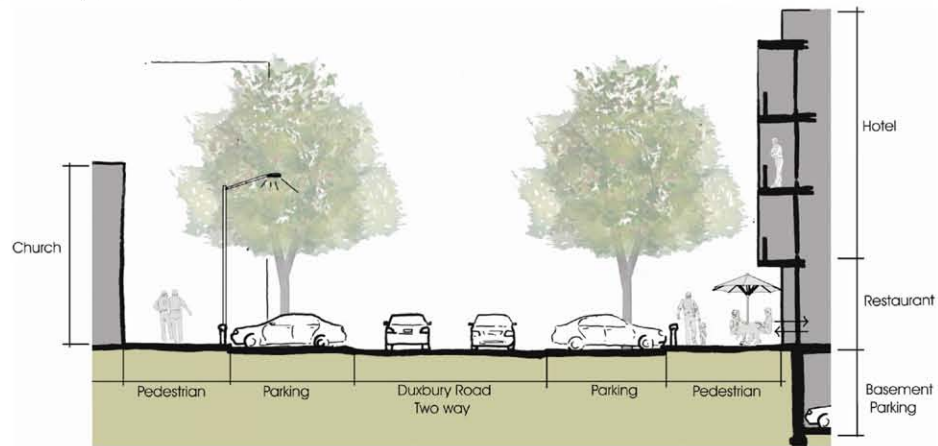


Fig. 7.6: Section through Duxbury Street illustrating proposed street character

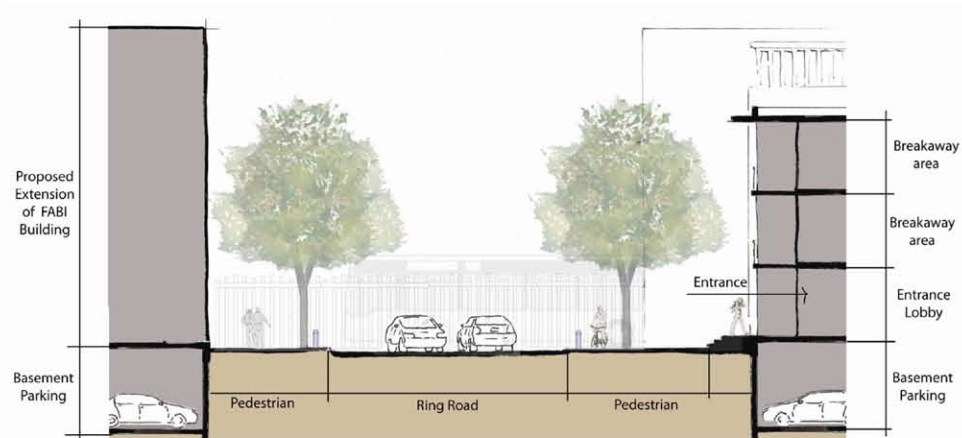


Fig. 7.7: Section through Ring Road illustrating proposed street character on Campus

## Threshold

The threshold or building edge is an integral aspect of the development in the sense that it must not be clear where the inside begins and outside ends. The building edge on Duxbury Street belongs to both the proposal and to the sidewalk, it therefore becomes a collective/ individual or public/private domain where the intimacy of the restaurant is also outdoors, part of the street and conducive to neighbourly congregation. It thus becomes an interspace of sorts. The courtyard area although semi public in nature allows visual freedom and thus is accessible from the street outside and could be used to draw the public into the development.

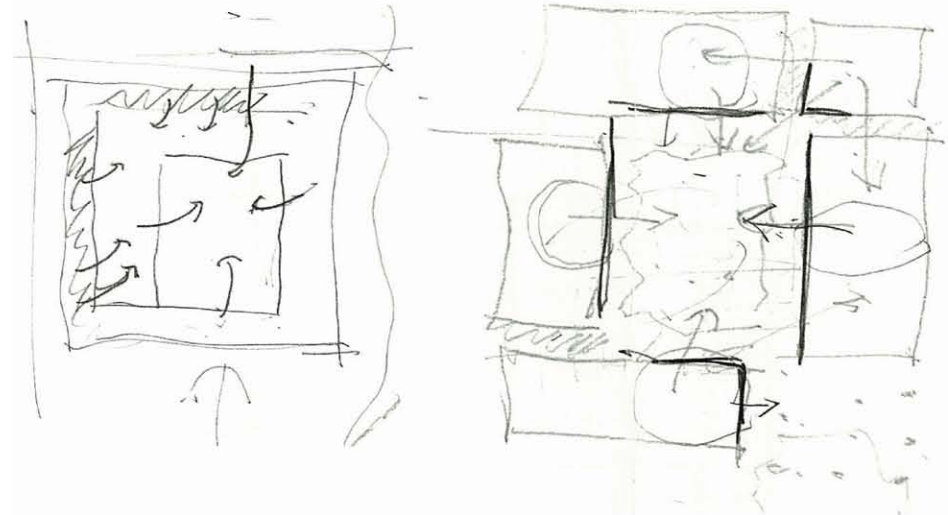


Fig. 7.9: Exploring thresholds and the relationship between mass and void

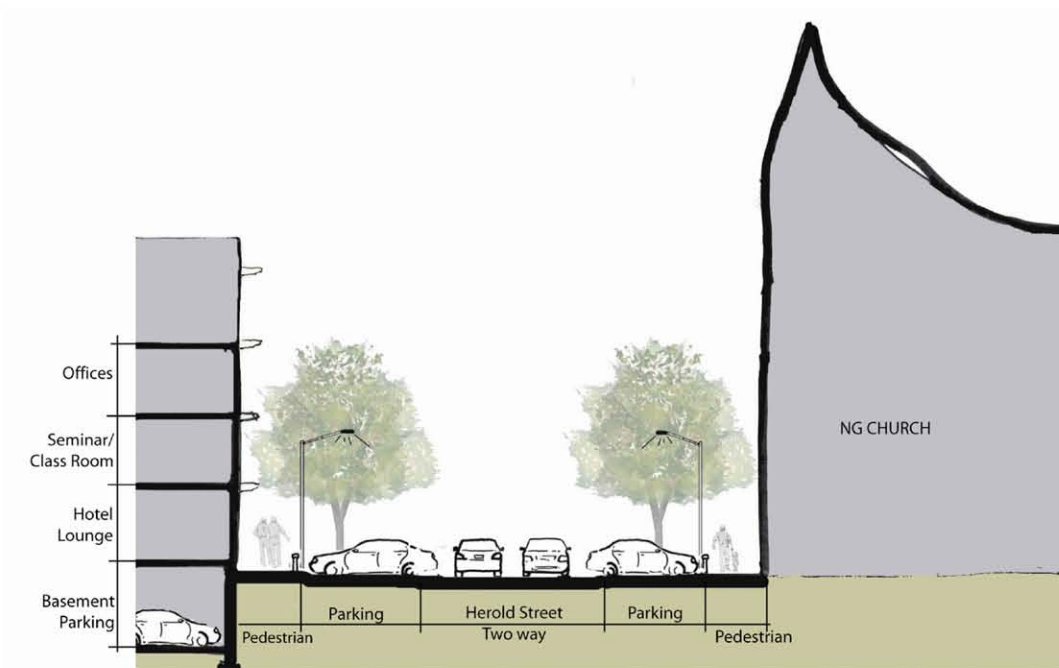


Fig. 7.8: Section through Herold Street illustrating proposed street character

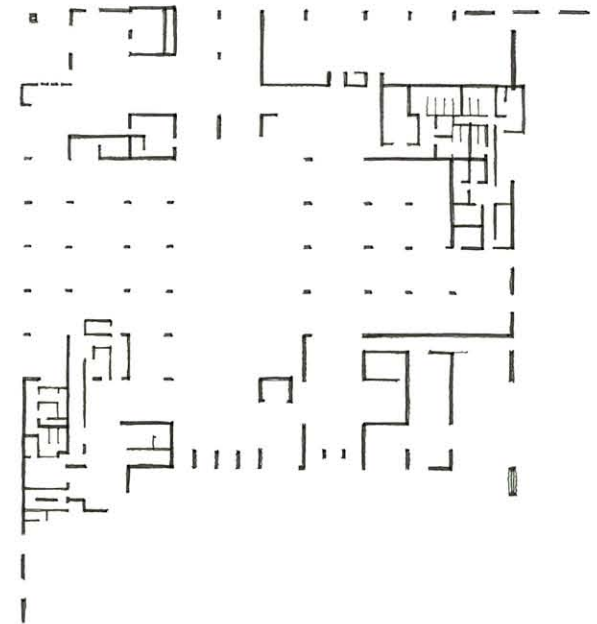


Fig. 7.10: Space defining elements

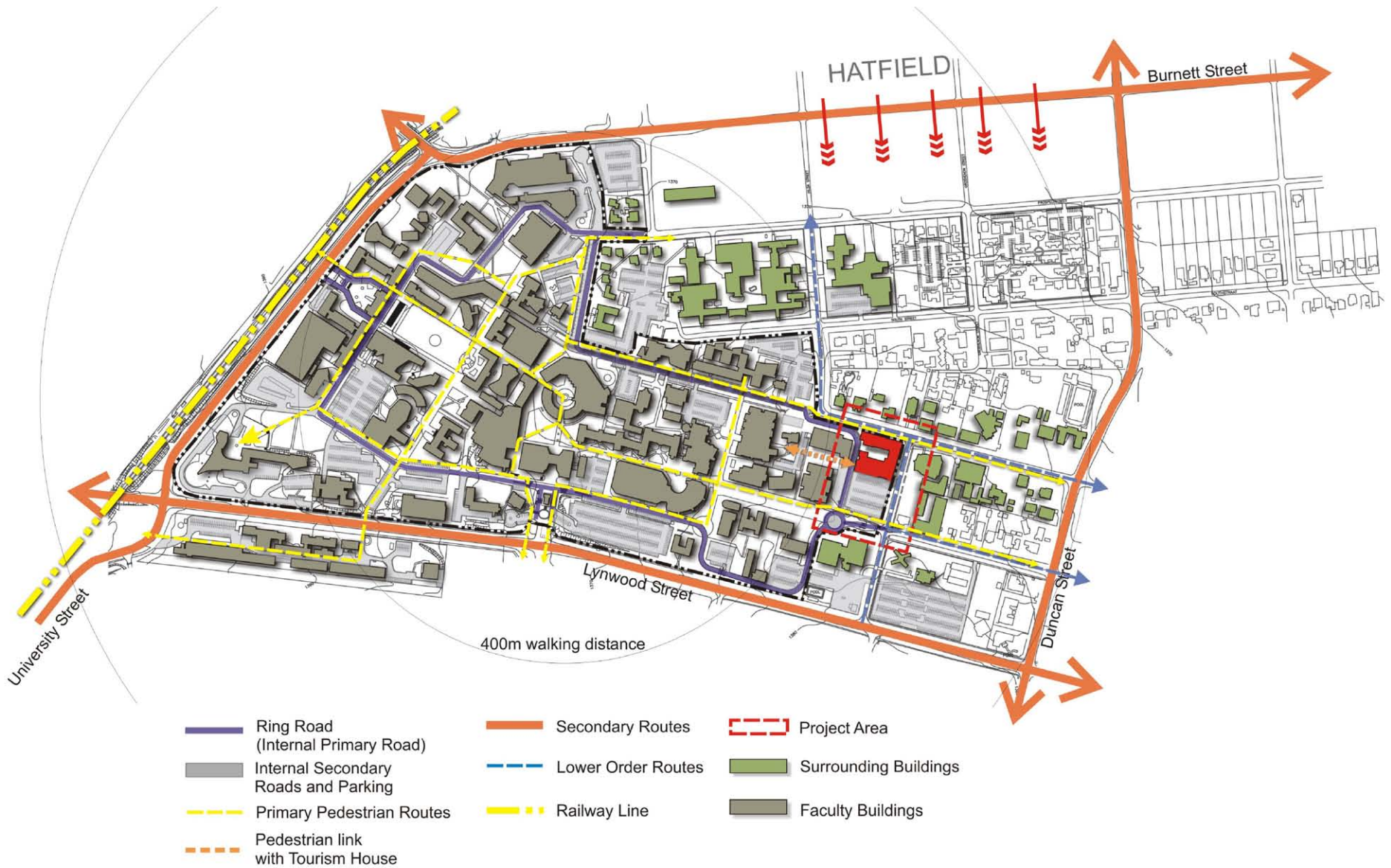


Fig. 7.11: Proposed site forces and movement after intervention (Refer to Fig.5.14)



## 7.7 Design Influences and site forces

### Hospitality programme as generator

The Oxford dictionary refers to hospitality as the friendly and generous reception and entertainment of guests or strangers. As such the intention of the proposal is to establish an environment that is representative of such an ideal.

In order to achieve the ideals of the development acting as a hospitable place it is essential to acknowledge that the design response to programme will effect user perception.

### Integration

The project achieves the integration process through:

- Defining an urban edge, thus strengthening and defining the eastern portion of Campus.
- Restructuring of open space through consolidation of place making.
- The building focuses on the user.

### East-west axis

The design approach from the outset was to respect the existing street grid as this would allow for a design that would relate to the surrounding environment. As stated previously the building has been placed a slight distance away from the Erf boundary in order to accommodate the pedestrian movement. However, the proposed new extension of the FABI building, although not built, does effect the placement of the proposal. As a result, the placement of the proposal is reflective of the FABI buildings sub-structural basement system.

### Views

The site has potential views at higher levels that extend to the north, towards the Hatfield Business District as well as perspectives over the Campus towards the west.

### Attention to detail

The building function necessitates a high degree of quality with regards to the finishing details and material use. The building will inform the users perception of place, it is therefore essential that the building convey a noble and honest approach towards materiality. This approach will ensure that the intervention impacts positively towards the guest and context, providing a sense of identity for both.

### Services

Due to the highly perishable nature of goods received it becomes necessary to place delivery points as close to the areas of preparation. The cold chain of the perishables must be maintained throughout the delivery process in order to extend the lifespan of the product. The events of the building focus on food preparation, with the deliveries occurring below ground level for the main kitchen, and on the south side of the development for the skills kitchen of the School.

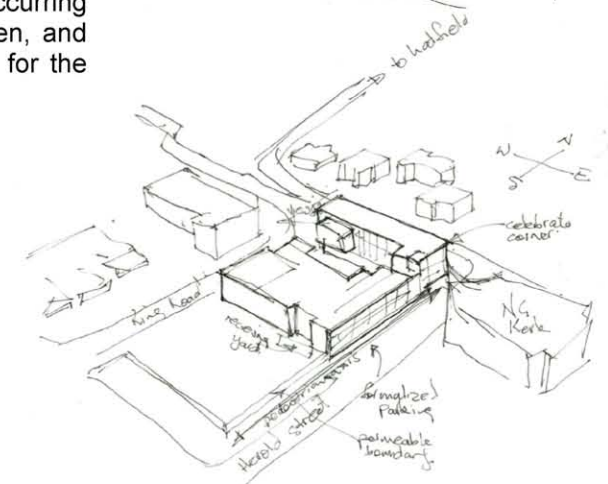
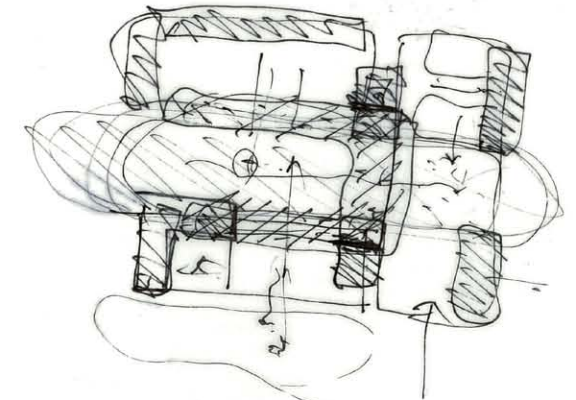
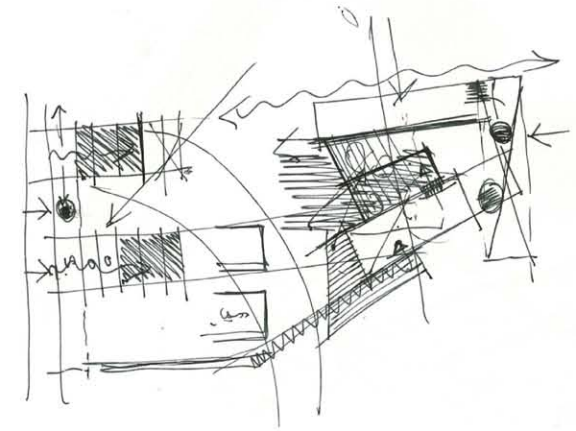


Fig. 7.12: Exploring potential service areas and their relationship to areas served

## 7.8 Spatial organisation

The development is organised around the event of hospitality, however the variation of function and spatial connections must inform the user of the range of access that is permissible.

### Three primary uses:

- Education and supporting facilities.
- Hotel and restaurant facilities.
- Conference/seminar rooms and the hosting of functions inclusive of supporting facilities.

### Three primary users

- Students and staff
- Hotel and conference guests
- The general public

Due to the three main uses and users of the building the following considerations need to be explored.

- **To allow and restrict movement through the building.**

Permeability, hierarchy of space and zones of transition enable the user to understand the levels of access permitted.

- **To allow a range of users to utilize the facilities.**

Guests and public will utilize specific facilities, however portions of the building will not be accessible. Grouping of suitable functions will accommodate the user achieving maximum choice.

- **Make provision for utilization of functions at different times of day**

Building users vary according to different times throughout the day. The Hotel guests will be using the facility mainly during the evening, whereas students will use the building mainly during the day. The general public will use the building throughout the day (Appendix 2).

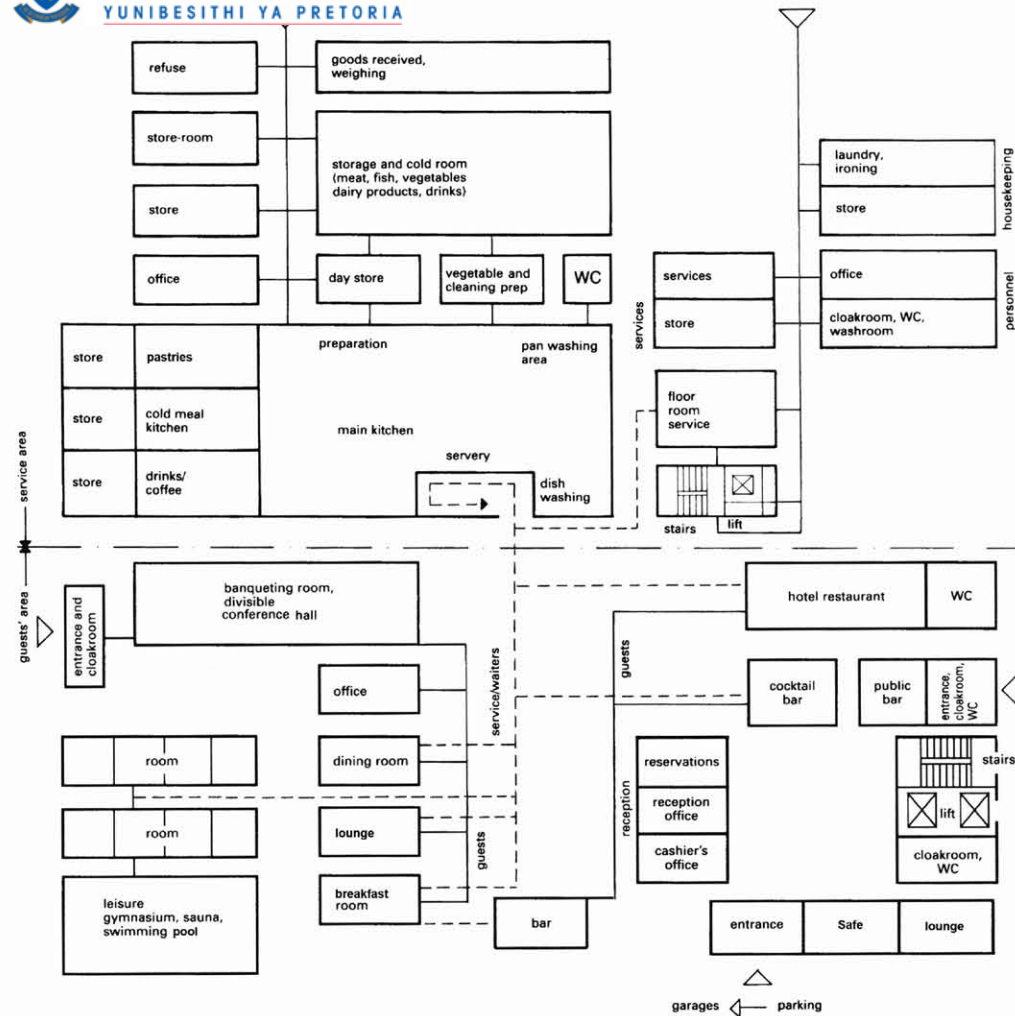


Fig. 7.13: Diagrammatic relationship of function and spatial planning within the Hospitality programme

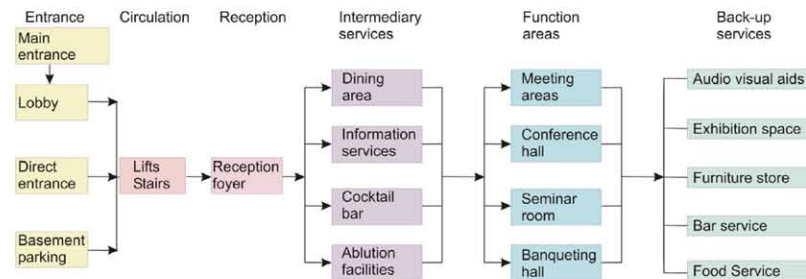


Fig. 7.14: Diagrammatic spatial relationship of public areas

## 7.9 Building users

### Public

Public access within the building will be limited to the use of the restaurant dining areas located on both ground floor as well as the first floor balcony overlooking the courtyard.

### Hotel and Conference guests- semi public

Guests at the Hotel will have the opportunity of being able to explore more of the building. The strategic placement of electronic control points will be necessary to control access to student facilities.

### Hotel Management and Professional Cookery students - private

The programme caters for the student learning about hotel management and professional cookery. The student will have complete access to the building, as it will be part of the curriculum to have experiential training. In this instance the students are allocated particular tasks and they are therefore responsible for the organising of events as well as the guests' general wellbeing.

### Public, private and service components

The three building components are planned around a courtyard area which acts as common link between the public and private functions. The services which support the Restaurant Kitchen are below ground and out of view to the visitor, whereas the receiving area for the Skills Kitchen is located at the south of the Building.

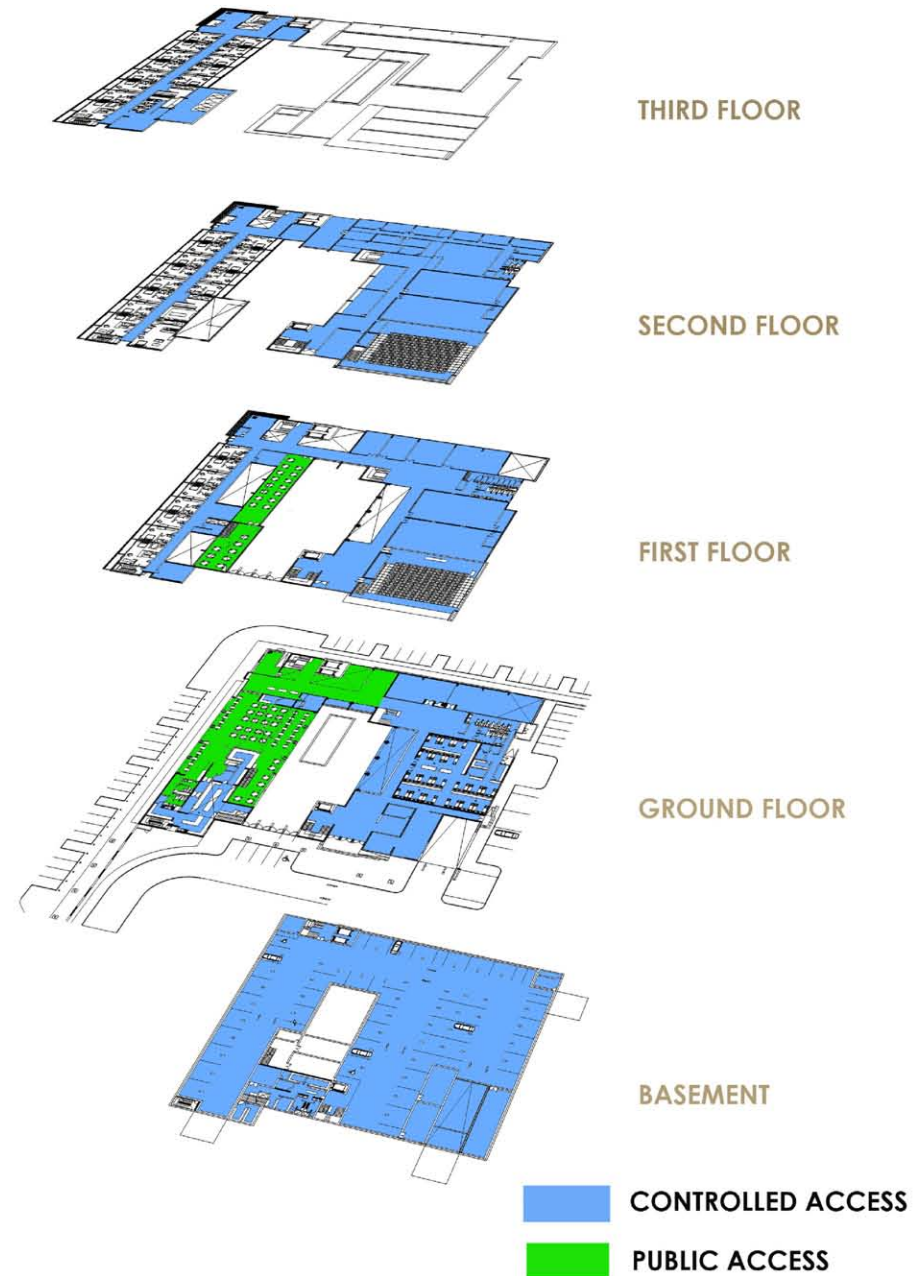


Fig. 7.15: Spatial diagram indicating controlled access and public areas

## 7.10 Programme Restaurant

The restaurant is placed along Duxbury Street sidewalk as this route accommodates the majority of pedestrian and vehicular traffic past the site. It has been placed centrally so as to respond to the courtyard and allow public users to be drawn through into the open court. In the event that a function requires additional space, the courtyard acts as outside dining with the skills kitchen acting as support to the main kitchen. Final year students are responsible for the majority of operations occurring in the restaurant. This forms part of the curriculum as experiential training which ranges from cookery to business management.

The restaurant is serviced from the basement below where the staff facilities are situated.

Supporting operations functions:

- Staff/student shower and change rooms.
- Receiving area and goods storage.
- Laundry.
- Offices chef and receiving-back of house.
- Floor manager office and cash up area-front of house.

Supporting dining functions:

- Guest restrooms.
- Wine cellar and private dining below.
- Upper floor dining and balcony overlooking the Campus.

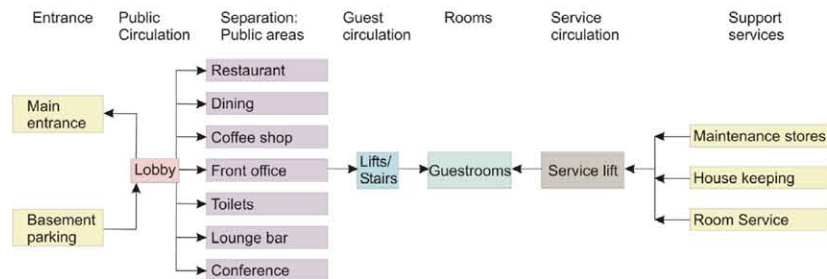


Fig. 7.16: Diagram indicating connections and circulation

## Hotel

Hotel suites are either north or south facing. The majority are oriented towards the north for maximum northern exposure. All suites are fully glazed on one side, however sliding wooden doors provide privacy as and when necessary.

The hotel, being a four star rating requires an eighteen hour per day room service, thus all hotel suites are serviced via a dumb waiter that is centrally located on each floor.

Supporting operation functions:

- Reception.
- Administration office.
- Room service and storage.
- Laundry and linen store.

Supporting guest functions:

- Breakfast room on each floor.
- Social lounge on each floor.
- Conference and seminar rooms.
- Gym on third floor.
- Sauna on third floor.
- Exclusive pool and bar area on third floor.
- Courtyard.

## Conference and seminar rooms

These facilities are located on the ground and first floors of the eastern wing of the development. These facilities provide a link between the School and Hotel functions as the areas will be used by both. The seminar rooms will be hired out to the corporate community, as well as providing for additional lecture rooms for students of the Tourism House.

These facilities will be serviced by either the skills kitchen of the school or the restaurant. The auditorium will be used by any group large enough to warrant the use of the facility.

Supporting operation functions:

- Restrooms.
- Breakaway areas.
- Snack areas.
- Lounge.
- Furniture store.
- Courtyard.

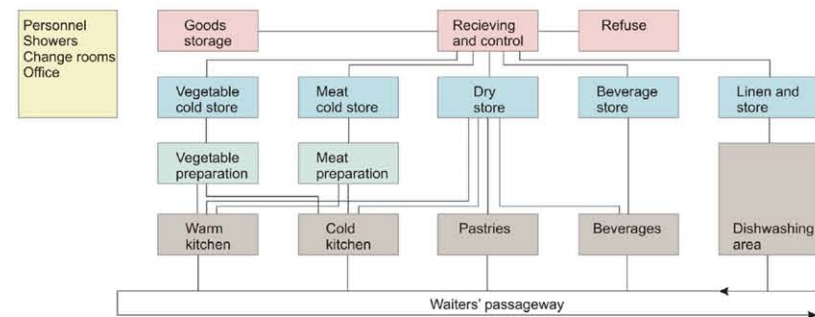


Fig. 7.17: Diagram indicating circulation and function connections of Restaurant

### School

Placement of the school is set well into the interior of the site. This response affords the student a better learning environment as there is less interference from the happenings of the street.

Students and staff of the school have unrestricted access to all the functions. The Hotel and Restaurant facilities provide senior students with experiential training. The school is the initial training facility and provides basic experiential training and theoretical knowledge to all students.

#### Supporting operation functions:

- Reception.
- Reading room and library.
- Skills Kitchens, including lecture/chef office.
- Receiving area and goods storage.
- Separate Skills kitchen restrooms.
- Guest and student restrooms.
- Staff offices and meeting room.
- Gallery area. This area could act as display or examination area.
- Auditorium.
- Classrooms/seminar rooms.
- Computer room.
- Storage.

#### Supporting student/staff functions:

- Breakaway areas.
- Server room.
- Waiting area/lounge.
- Courtyard area.

#### USE

- Hotel Suites
- Offices
- Social Space
- Conference Facilities
- Classrooms
- Vertical Circulation
- Dining
- Kitchen
- Storage
- Services
- Services & Storage
- Bathrooms

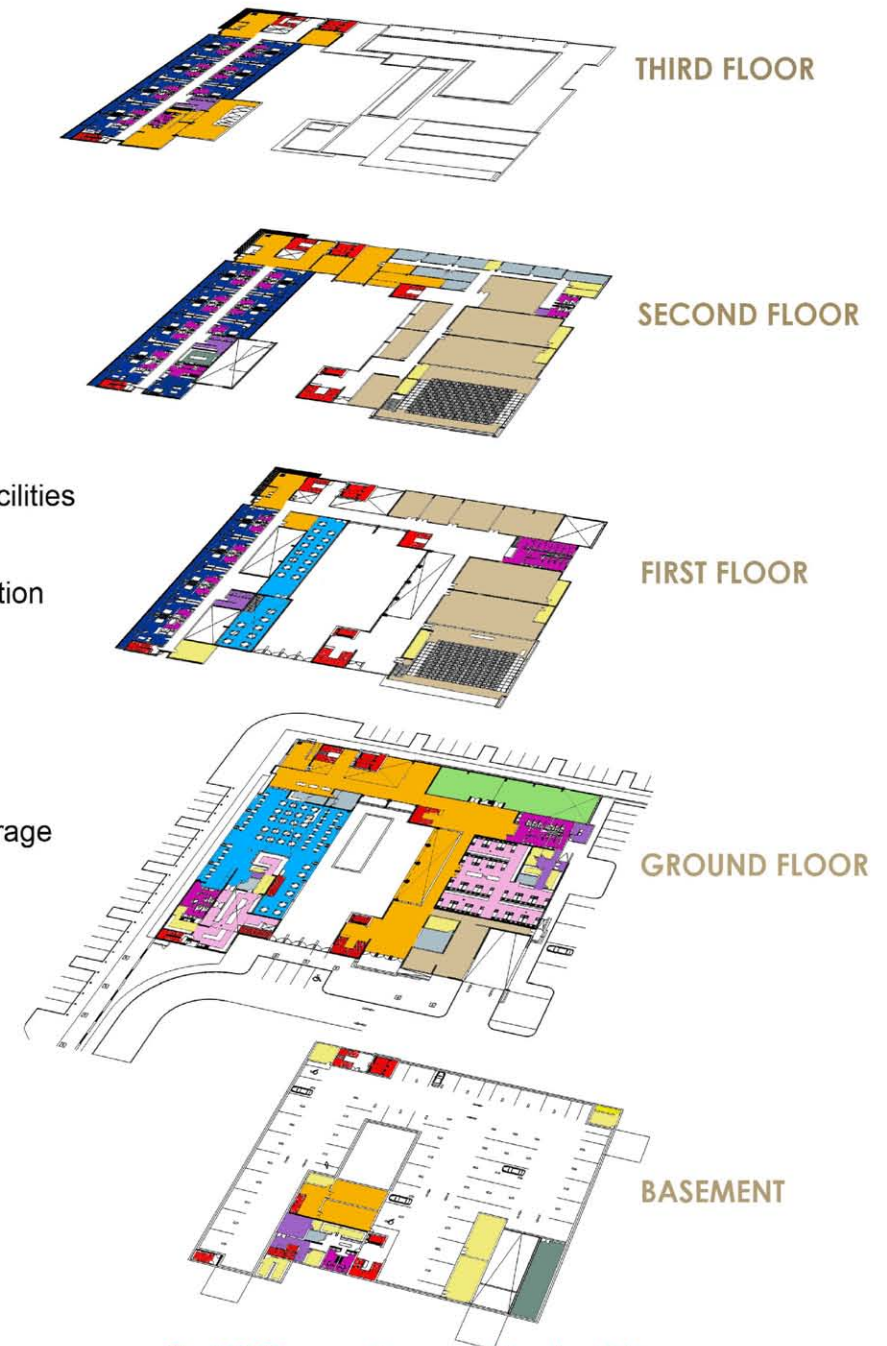


Fig. 7.18: Diagrammatic representation of spatial use

## 7.11 Circulation

The intention from the outset of the design process was to strengthen and reinforce the existing surrounding city fabric by drawing inspiration from the indigenous character of the neighbourhood. The site presents a wealth of potential however is terribly underutilized. At present the pedestrian movement around and through the site is accommodated for only by the sidewalks of Duxbury and Herold Streets. The Duxbury street sidewalk is the primary pedestrian axis of the site, it was for this reason that the public function is placed on it. The informal parking on the sidewalks presents a particular design challenge to the site, it was therefore appropriate to step the building edge further back to allow for better pedestrian movement.

The accommodation for the disabled user is one of the primary design objectives. The presence of lifts in both the School and Hotel wing ensures the accessibility for disabled users throughout the building, as well as providing the necessary ablution facilities.

Due to the site being located on the University, security is an essential design component. It is therefore necessary to plan the circulation routes with accessibility to the various spaces and their hierarchies in mind. The semi private or student circulation areas are dominant, where different levels of access are required. The public areas are concentrated around the Restaurant where the main circulation routes do not intrude and physical access is restricted. The possibility does exist to allow the general public into the courtyard area as an outdoor dining area.

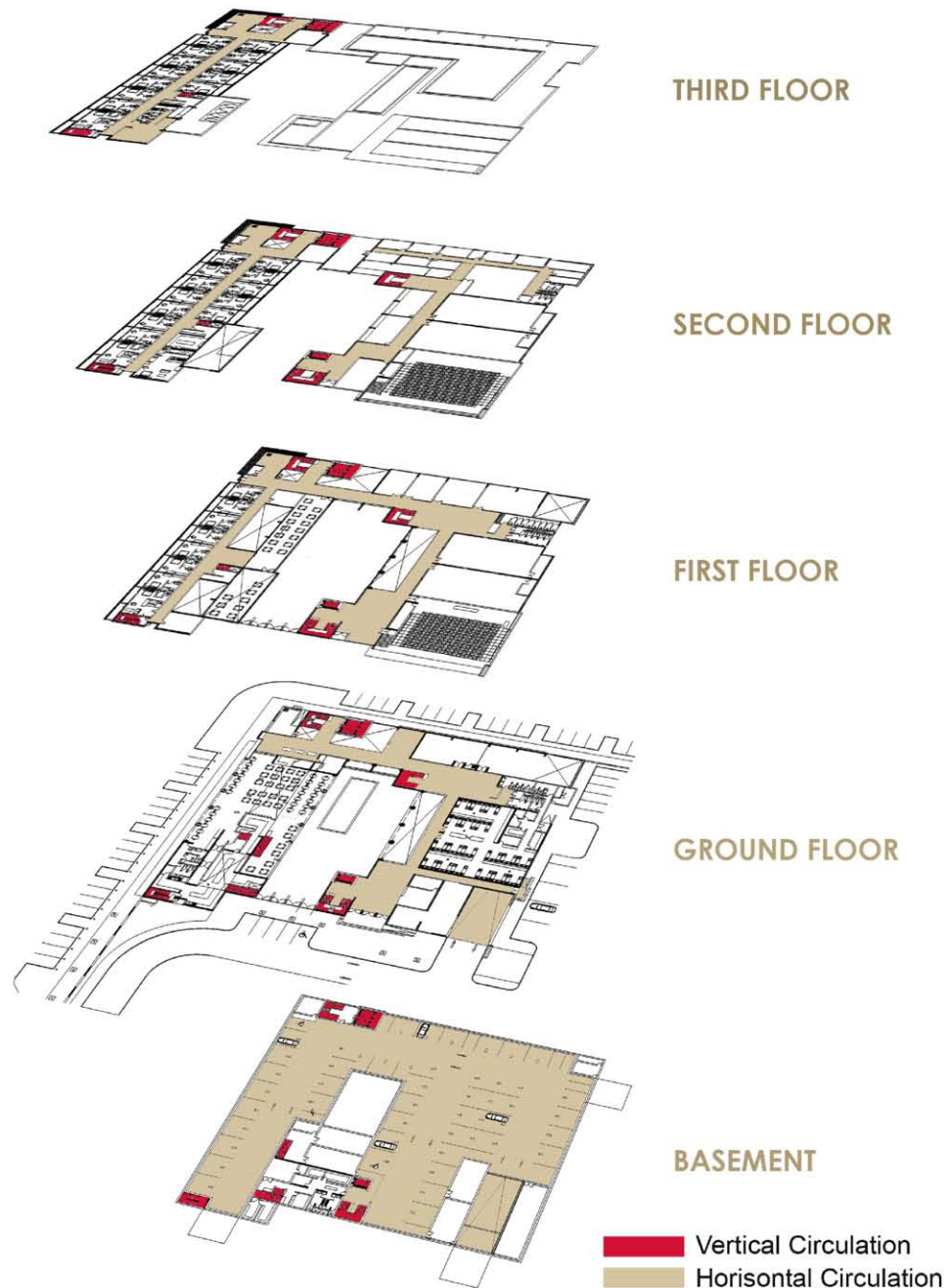


Fig. 7.19: Diagrammatic representation of circulation

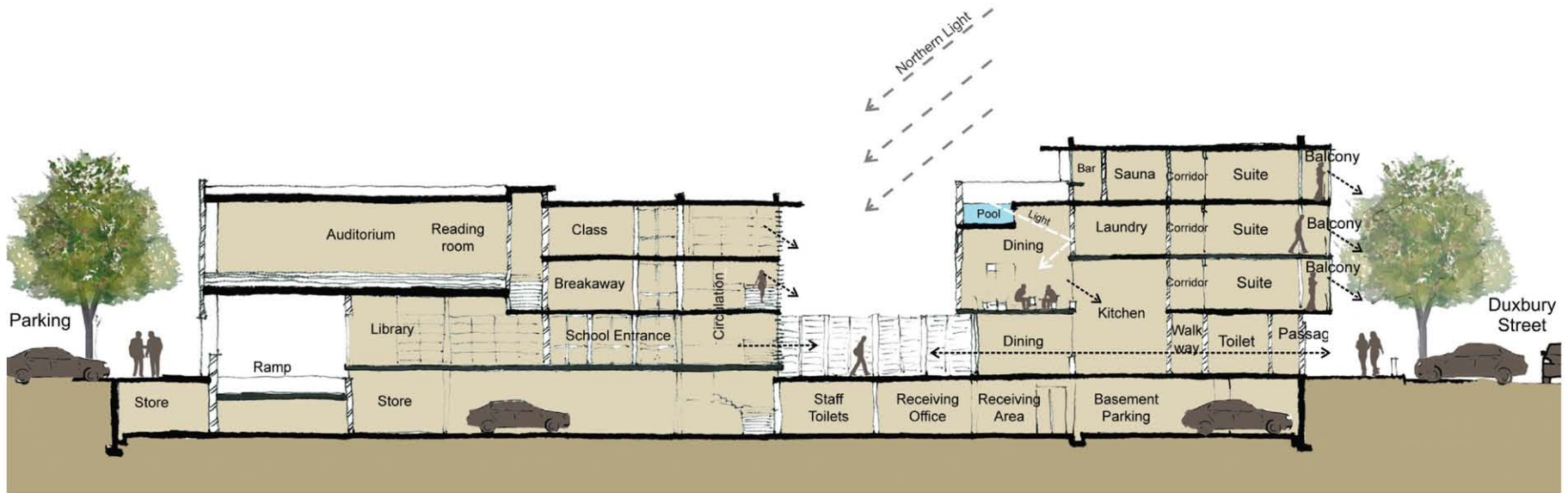


Fig. 7.20: Section looking westwards - exploring the building as viewing platform

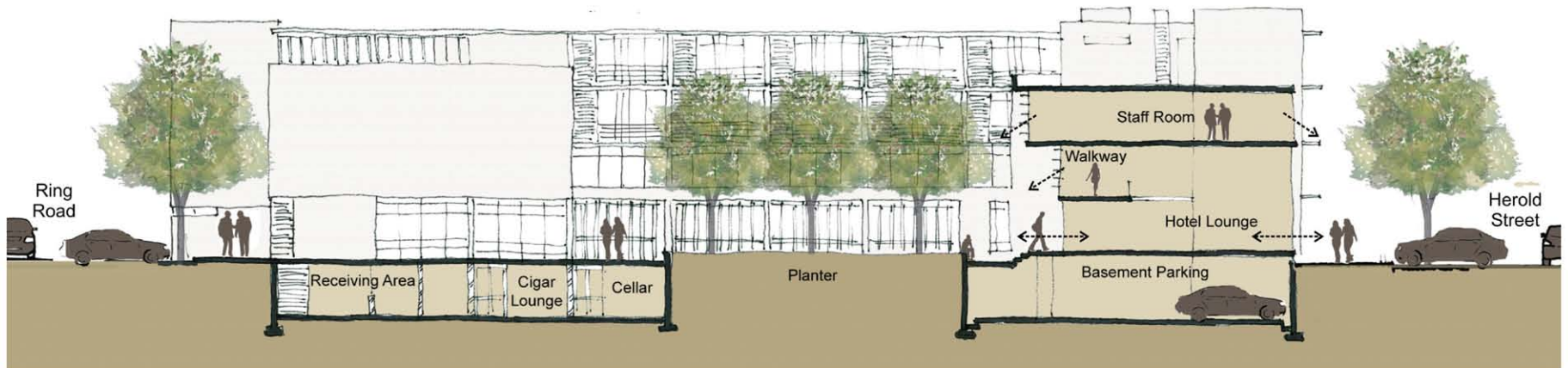


Fig. 7.21: Section looking northwards - exploring the building as viewing platform



Fig. 7.22: View towards south east showing public and private domain of intervention





Fig. 7.23: View towards south west showing corner of development



Fig. 7.24: Perspective view towards north east



Fig. 7.25: Perspective view towards south east



Fig. 7.26: Perspective view of courtyard area



Fig. 7.27: Perspective view of hotel component, looking towards south west