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yo URBAN living room

Interaction and Identity in Esselen Street, Trevenna

Submitted in partial fulfilment of the requirements for the degree of Master of Interior Architecture (Professional)

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In accordance with Regulation 4(e) of the General Regulations (G.57) for dissertations and theses, I declare that this thesis, which I hereby submit for the degree Master of Interior Architecture (Professional) at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution. I further state that no part of my thesis has already been, or is currently being, submitted for any such degree, diploma or other qualification.

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Elzbeth Petzsch

*aftercare|café|services|backyard

EKSERP

Die verskynsel van stedelike identiteit spring ‘n noue definisie vry. Die belangrikheid daarvan met betrekking tot die konteks van interieur ontwerp dui daarop as metode in stedelike hernuwing. Sodoende kan dit ‘n waardevolle bydra lewer deur te fokus op die unieke karakter van ‘n bepaalde area, wat gevorm word deur die bestaande sosiale verhoudings wat dit onderskei van ander areas.

Die stad is ‘n ewigdurende wisselwerking van menslike interaksie. Daaglikse rituele en gebruike het tot gevolg die interaksie wat plaasvind tussen die mens en sy medemens, en die mens en sy omgewing. Dit is op hierdie intieme skaal waar interieur ontwerp die moontlikheid bied om die fiesiese manipulering van ruimte en form te verken en sodoende ‘n effek te hê op bogenoemde interaksies. Beweging asook interieur elemente word dus gebruik om sosialisering oor verskillende kultuur- en ouderdomsgroepe aan te spoor en te bewerkstellig.

Sosiale wrywing verteenwoordig die tradisionele sosiale aspek van interaksie. Hier word die belangrikheid daarvan nie weggelaat nie, maar eerder gelyk gestel aan die tasbare dimensies van die fisiese en visuële.

Die verhouding tussen die sosiale, fiesiese en visuële elemente word op die voorgrond gestel met betrekking tot die opkomende aspek van voorstedelike hernuwing. Identiteit word hier gesien as kern element van die gevoel, karakter en eienaarskap van ‘n plek aangesien dit verseker dat die hernuwing van ‘n area deur die inwoners ondersteun en gedryf word beide as individûe en as gemeenskap. Sunnyside en Travenna is twee woongebiede wat groot demografiese en fisiese veranderinge ondergaan het. Hier word die moontlikheid om ‘n omgewing te skep waarin interaksie tussen mense van verskillende kulture asook die omgewing kan plaasvind ondersoek. Die doel is om ‘n gevoel van eienaarskap te vestig, om die gewenste atmosfeer te defineer en om ‘n omgewing te skep waarin die kollektiewe waardes van die gedurig veranderende buurt gestuur kan word.

Die ontwerp ondersoek die verhouding tussen formele ontwerp en informele aktiwiteite deur ‘n nuwe morfologie in die vorm van ‘n publieke ruimte voor te stel. Hierdie publieke ruimte bestaan uit ‘n koffie winkel op die grondvloer en ‘n jeug- en nasorg sentrum op die eerste twee vloere waarvan die ontwerp verskeie aspekte van die bestaande struktuur inkorporeer.

ABSTRACT

The phenomenon of urban identity escapes narrow definition. Its relevance to the interior design context arises as a tool for regeneration where it can assist to capitalize on the potential of particular places and social relations that distinguish one location from another.

The city is a constant interplay of human actions. Small moments and rituals that take place with human activity give rise to the everyday interaction between people with one other and with their environment. It is specifically on this human scale that interior design offers the possibility to explore the physical manipulation of space and form to influence interaction. Circulation and interior elements become a means to promote socialisation across different cultural groups and generations.

Social friction represents the traditional societal aspect when considering interaction. Here its importance is not diminished but is put on par with the tactile dimensions of the physical as well as the visual.

The interrelatedness of the social, physical and visual elements is set against the emerging topic of neighbourhood regeneration. Identity is here considered to be part of the core essence of a sense of place and belonging, which ensures that the regeneration is driven by the local residents, both as individuals and collectively as a community. In the specific context of Sunnyside and Trevenna, which is an area that has undergone many demographic and physical changes, the possibility of a built space as a platform for different people to engage with one another and their surroundings is investigated. Such as intervention aims to instil a sense of ownership, to define the desired atmosphere and to provide a space where collective values for the shifting neighbourhood can be navigated.

The design explores this relation between formal design and informal activities through the proposal of a new morphology in form of a public space and café on the ground floor, and a youth aftercare centre on the upper two floors that incorporates desirable aspects of the original structure's functions.

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INTRODUCTION 1

The first chapter explores identity as an integral part of urban regeneration strategies. Small scale neighbourhood initiatives have the potential for design and informal activities to come together to bring about more immediate change.

Esselen Street, running though the areas of Sunnyside and Trevenna, forms a unique high street neighbourhood. It is analysed for its strengths and weaknesses which helps to identify how a real world problem can be addressed through an interior intervention. By defining the scope and methodology it sets a benchmark for the following theoretical and design investigation.

Fig.1.1 South elevation of Esselen Street

Fig.1.2 Potential of neighbourhood regeneration to contribute to individual and communal identity

1.1 BACKGROUND

> *"The cultures of cities retain a residual memory of tolerance and freedom. The very diversity of the population and their need for cultural and economic exchanges create unpredictable spaces of freedom… This is the city that people cherish."*
> (Zukin, 1995:294)

City neighbourhoods all have a certain identity, whether positive or negative, and the quality of the image of an area has become a valuable commodity in the global context (Stevenson, 2003:97). This project supports the idea that areas with definite identities can use these to contribute to their success and attractiveness for both residents and visitors. Identity allows people to have a sense of ownership, individually and collectively, which encourages them to advocate for a place and can strengthen informal networks (Scheffler, 2009:1). By drawing on urban identity as a complex and manifold phenomenon, it can become more than an empty vision.

The notion of identity plays a significant role when dealing with regeneration of neighbourhoods in a city. It can form the core of transformation only by offering an overall vision that draws on the realities of the specific location, not by clever branding and signage used as a superficial marketing tool. Identity must be managed; this means that it must be nurtured, safeguarded and manipulated, extending beyond the physical environment (Scheffler, 2009:5).

Large scale urban planning strategies can draw on the concentration of people, industries and infrastructure to help achieve resource efficiency. At the same time, smaller scale neighbourhood initiatives can contribute to sustainability, as well as to the quality of life of the residents. These informal societies and activities are often the drive for urban change. Apart from having a more immediate effect, they can be realized by the residents themselves.

Identity is increasingly moving away from physical connections towards shifting temporal associations. At the same time, forms of identity are becoming more explicitly and proactively defined, creating "identities of resistance" (Jamieson, 2009:1).

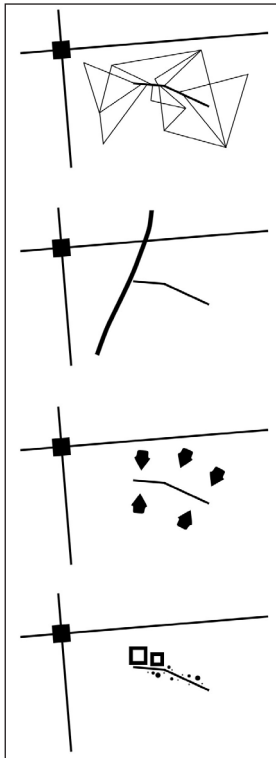
This project explores neighbourhood regeneration and the possibility of such small scale resistance within the

order of the city (Fig.1.2). This does not imply a full-on anarchist ideology that rejects all authority or ownership. The idea is that of an "unimposed order" (Berthelson, 2011) that allows for individual and collective expression, where "complexity of the social world can be an asset rather than a source of perpetual war" (ibid). By doing away with traditional hierarchies, it creates situations for interaction where new possibilities can be realized.

* Pretoria consists of multiple neighbourhoods with a certain identity. But they are not living up to their full potential in terms of strengthening their uniqueness and character. This project explores identity in the street neighbourhood of Esselen Street, Trevenna and Sunnyside in order to support and give meaning to the potential changes and informal networks.

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis (see Fig.1.3) was done of Esselen Street as a distinct street neighbourhood in the larger Sunnyside area to determine the status quo and identify possibilities for regeneration.

ESSELEN STREET HAS



Strengths
- location close the Central Business District (CBD)
- availability of services: schools, universities, institutions and retail in close vicinity
- historical richness and character of buildings

Weaknesses
- cut off from the city centre
- transitional area between the eastern suburbs and the CBD
- surrounded by obsolete and badly planned building stock
- public space and amenities have not been catered for sufficiently as the area developed

Opportunities
- street as backbone and magnet for the area
- different interventions can work together as catalysts under a general vision
- currently isolated public spaces can be better integrated and connected
- diversity of people and cultures add to vibrancy and uniqueness

Threats
- Regeneration projects on the edge of the area are large scale, there is no ownership or connection to the people
- lack of responsibility for the area
- office conversions threaten the variety and character of the street
- leisure establishments are male dominated

Fig.1.3 SWOT analysis of Esselen Street

Fig.1.4 Department of Trade and Industry (DTI), Esselen Street, Trevenna

Fig.1.5 Sunnypark Mall, Esselen Street , Sunnyside

Fig.1.6 Sunnyside Galleries , Esselen Street, Sunnyside

1.2 REAL WORLD PROBLEM

Esselen Street forms a unique street neighbourhood in the Sunnyside and Trevenna area and is identified as the larger context of investigation.

Sunnyside is one of the three oldest residential suburbs of Pretoria. The Central Business District (CBD) underwent a period of rapid expansion in the 1950s. This resulted in the rezoning of Sunnyside from a residential area of low density to one of high density, with the proliferation of high rise apartment blocks. Esselen Street runs through the centre of Sunnyside and Trevenna and remains medium density, with three to seven storey high mixed use buildings. It is the busiest street and forms the backbone of the area, with a variety of retail and commercial functions. It also connects the eastern suburbs with the inner city.

Initially a white neighbourhood with a large student population, the demographic makeup underwent substantial changes from the early 1990s onwards. It still features many students and young professionals, as well as a significant percentage of foreign nationals from various other African countries. This heterogeneous population comes from a range of different backgrounds which contributes to the vibrancy of the area.

After a period of development stagnation, Esselen Street has undergone many changes in the last few years. Most notable is the refurbishment of *Sunnypark Mall*, located on the corner that divides the street into west and east side, and the development of the Department of Trade and Industry (DTI) campus to the western end. The campus forms part of the larger Mandela Development Corridor (MDC) framework, which identifies various catalytic sites along Nelson Mandela Drive and proposes to strengthen the north-south axis of Pretoria. It also aims to reconnect Sunnyside to the CBD, re-establish pedestrian walkways and develop open space.

A successful characteristic of Esselen Street is the 0m building line between buildings, established in order to maximize the building area for commercial developments. In addition, buildings align right up to the pavement and feature overhangs that form a continuous band. This all contributes to a coherent street edge and adds a human scale threshold.

The street loses this unity towards the western side where some buildings are set back and/ or away from the neighbouring structures. This side used to host many illicit activites.

Since then a few blocks have been renovated; together with the new DTI campus it has greatly improved the previously worst end of the street, giving the area an urban edge and a visual landmark. The DTI adds to the corporate and business reputation that the MDC framework proposes for the area of Trevenna, which includes the western side of Esselen Street.

Sunnypark Mall, located on the corner of Esselen and Jeppe Street, was upgraded and has absorbed and consolidated many smaller businesses in the area. It features shops, restaurants and a cinema on the lower three levels with apartments, conference venues,

office suites, a new *Holiday Inn Hotel* and parking on the upper levels. Apart from the entrance that spills out onto an open space on the corner of the city block, the rest of the building is inwardly oriented and features a dead façade to the south on Esselen Street.

There are three public squares, or open spaces, along the street; firstly in front of *Sunnypark Mall* as mentioned (Fig.1.5), secondly on the corner of the DTI (Fig.1.4) and thirdly the open pocket formed by the mixed use building called *Sunnyside Galleries* (Fig.1.6). The one in front of the DTI is less successful; it features an open expanse of paving with little seating and no shade. In contrast, the space in front of the entrance of Sunnypark Mall has a pleasant atmosphere and is well visited, with urban furniture that offers a variety of seating and trees. The open space of the Sunnyside Galleries shows signs of neglect and is not as well-used.

The various upgrades of the street have contributed to the improvement of the overall safety of the area. Prostitution and drugs remain the main problems, becoming more prominent during the night.

The dichotomy of the two sides of the street, to the east and to the west, seems to parallel current contrasts of the area. On the one hand Esselen Street is a modern, vibrant place where status is influenced largely by wealth, image and brands. On the other hand, people come from a more traditional background. Some struggle to adapt to all the cultural changes as well as survive financially.

The identified site is located opposite Sunnypark Mall on the bend of Esselen Street. It offers the potential to explore an interior intervention that engages and brings together the diverse residents as well as the two ends of the street, by acting as a catalyst to the identity of the neighbourhood. The area around Esselen Street offers enough density and diversity for such an appropriation of space to be actualised.

Fig.1.7 Impressions of Esselen Street

1.3 PROBLEM STATEMENT

The diversity of the area creates a high tolerance of other cultures but masks the fact that the various groups and individuals live in isolation. People are not engaging with each other or the environment, resulting in a lack of ownership and identification with Esselen Street.

The many high rise apartment blocks in the area around Esselen Street offer a high density of people but no attention has been given to create corresponding public spaces. Apart from the three open spaces there is a scarcity of protected areas where people can congregate, interact and express themselves.

To summarise,

TWO MAIN ISSUES have been identified:

- the unused potential of the identity of Esselen Street as a tool of urban regeneration and,
- the lack of public space that caters for a variety of community needs and where informal networks are fostered.

1.4 HYPOTHESIS

Through an intervention that integrates order with unplanned actions, informal networks and spontaneous cultural expression can start to happen.

By offering a platform that encourages interaction and expression it will contribute to the emotional attachment to the place, make it more meaningful and foster an understanding of different cultures. The catalytic nature of the intervention contributes to strengthening the identity and the regeneration of the larger neighbourhood.

1.5 RESEARCH QUESTIONS

The following will be investigated:

- What constitutes the identity and character of Esselen Street?
- What changes and developments have influenced the current condition?
- What are the characteristics and needs of the residents?

These issues inform the theoretical and design exploration:

- How can an interior intervention increase interaction and create a platform for informal actions to take place?
- How can the principles of an urban catalyst and the theory of social friction be adapted as strategies to manipulate interior space?

1.6 AIM

The aim of the project is to investigate Esselen Street as unique street neighbourhood and explore the potential of identity and social interaction from an interior perspective. By drawing on and appropriating knowledge from other disciplines, the importance of human scale design is advanced to contribute to the knowledge base of the interior field.

The project aims to bring together tangible and intangible influences to create meaning through physical design. The contemporary intervention and programme aims to allow for a connection with the past yet is flexible and adaptable for future needs.

Fig.1.8 Street elevation of Traders #117 on Esselen Street

1.7 METHODOLOGY

This study envisages a contextual and situated approach to distance itself from general abstractions and global concepts of identity and neighbourhood. In order to investigate and understand the context, a combination of qualitative and quantitative research methods are used.

The phenomenological approach of lived experience is taken as a starting point to explore what it means to live in the neighbourhood and identify significant trends and patterns. The term phenomenology covers a range of qualitative research approaches that focus on the way things appear through experience and in our mind.

Lived experience involves our immediate consciousness: by forgetting awareness of a situation and experiencing it naturally and immediately, it does not offer a subjective, perceived reality (Von Manen, 1990:36). Instead, it has a temporal quality to it: only later the experience becomes objective. Thus this approach acknowledges the existence of a reality by reflecting on an experience afterwards, thereby gaining an understanding and awareness of it (ibid:35-36). It is noted that through observation and conducting interviews one gathers 'data', although the latter may not be quantifiable.

This way of qualitative research is valid although reliability becomes less relevant: it indicates the truth but does not ensure it. By grounding the research in its context it increases the capacity to substantiate predictions of current and future trends.

Methods include:

- **Site visits.**
  Observation and use of facilities in Esselen Street contribute to a deeper understanding of current conditions. The investigation involves the documentation of three time-based 360° scenarios from a strategic location opposite the site to look at users and activities.

- **Conversational interviews.**
  These were conducted on the street and in stores along the length of Esselen Street. A questionnaire (see Appendix A) was used as guide, but by allowing the interviewees to steer the conversation, their choice of topics and words served as additional informative data.

- **Precedent studies.**
  The research, analysis and understanding of related projects and examples give insight to underlying principles in terms of design and theory. A local case study is investigated in detail to serve as a real world example in relation to its context.

- **Literature study.**
  A review on the subjects of cultural catalyst, anarchy and social friction help to establish the existing context and define the theoretical argument.

The research is reflected upon and synthesized to interpret the character of the place and what the experience of Esselen Street is, and what it should be. The combination of qualitative and quantitative research allows an intrinsic understanding of the area, as well as distilling specific needs of the residents to inform the programme, the design process and its practical outcomes.

1.8 DEFINITIONS

NEIGHBOURHOOD

> *"(1) The city as a whole; (2) street neighbourhoods; (3) districts."*
> (Jacobs, 1961:127)

There are several understandings of what the concept of a neighbourhood entails, depending on whether one looks at it from ideological, sociological or physical aspects. The definition favoured here is the geographically bound area, in this case specifically the street neighbourhood as part of a city within which changing social networks nest in one another, overlap and extend beyond the boundaries.

ANARCHY

> *"Small places of anarchy are zones of human-scale action, attachment and care."*
> (Berthelsen, 2011)

They occupy space within the existing order or system and can be tacitly accepted or actively protected.

CATALYST

> *"A person or thing that precipitates an event"*
> (The Oxford compact English dictionary, 2000)

Used here in the sense of an intervention that is interrelated with the public realm and has a positive influence or ripple effect on its surroundings.

URBAN ACUPUNCTURE

> *"Urban acupuncture connects the public to the real reality through small scale interventions."*
> (Casagrande, 2009)

This concept was originated and implemented by Jaime Lerner, a former mayor of Curitiba in Brazil. (Lubow, 2007:1). Similar to acupuncture where a needle is inserted to correct the flow of energy, it aims to selectively manipulate the urban energy to create a sustainable urban development.

IDENTITY

> *"Identity is the foundation to a sense of belonging. It is the means by which people locate themselves as members of communities and groups and how they define their place in society."*
> (Jamieson, 2009:1)

Identity relates to tangible and intangible elements that make up an area: buildings, history and memory. It helps to strengthen the emotional attachment of people individually and collectively, increasing their support for a place. It also contributes to the image of a place, increasing its distinctiveness.

Instead of trying to determine a specific identity for the building, the idea is to provide a space where the local residents can interact and express themselves, thereby contributing to the uniqueness of Esselen Street.

1.9 OUTLINE OF THE STUDY

For this study the milieu and problem statement are presented in **Chapter 1**, which delineates the topic of investigation and introduces the issues that will be explored more in depth.

Chapter 2 contains a larger scale context analysis of the area as well as the historical background. It also discusses the proposed urban framework and its implications for this study. The specific site and its surroundings, as well as tangible and intangible elements of the structure are analysed in depth to determine the architectural significance and articulate a specific interventional approach.

Chapter 3 introduces the theoretical explorations of friction that inform the design process. It also sets out the approach and implications in terms of the interior.

Chapter 4 contains various precedents as well as a critically analysed case study.

Chapter 5 introduces the user, client and programme. It also establishes the conceptual approach to structure, materials and proposed interventions.

The preceding chapters inform the design development in **Chapter 6**, which is a tangible culmination of the study.

Chapter 7 consists of the technical investigation that looks at building systems, structure, details and materials.

1.10 SUMMARY

The project looks at neighbourhood regeneration and how a smaller scale project offers the possibility for individual and communal expression and participation. An interior intervention has the potential to act as catalyst on a human scale and create a platform for informal activities to take place.

Sunnyside and Trevenna are introduced as context, with the specific focus on Esselen Street as neighbourhood. A SWOT analysis is done to determine initial strengths and weaknesses.

The real world problem identifies two issues, namely the potential for Esselen Street to strengthen its identity by drawing on the diversity of its residents and the lack of public space.The scope of the project is set out, including specific research questions and definitions of the main concepts to serve as basis for the following investigation and design exploration.

The research methodology combines qualitative and quantitative methods, including a 360° investigation, interviews, precedents studies and a literature review in order to establish specific needs and characteristics.

CONTEXT 2

A potential site is identified on the bend of Esselen Street. Relevant urban frameworks as well as the historical context of the Sunnyside area are explored. Various data is mapped in addition to information gathered from a 360° panorama investigation and interviews conducted along the street.

A detailed site analysis looks at the chosen site in terms of form and structure, function and historical development, spatial qualities, as well as the immediate surroundings and their impact. These tangible and intangible aspects inform the architectural significance and define an approach to the intervention.

The chapter concludes with an overview of the group framework proposed for Sunnyside and the surrounding areas.

Fig.2.1 Site and its surroundings viewed from Esselen Street

Fig.2.2 Location of Tshwane in the Gauteng province

Fig.2.3 Location of Pretoria in the Tshwane area

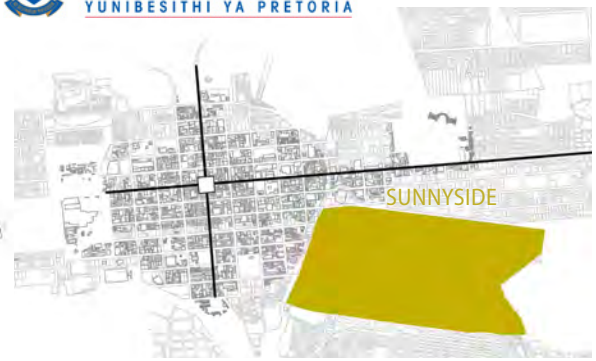


Fig.2.4 Sunnyside area in the city of Pretoria

Fig.2.5 Esselen Street running through Trevenna and Sunnyside

2.1 INTRODUCTION

Initially, specific criteria are set out in order to identify a neighbourhood and specific site in Pretoria.

These include that the neighbourhood should:

- be established yet offer the opportunity to diversify and strengthen the local identity
- be of medium-density
- preferably have elements of mixed use.

Esselen Street is identified as a distinct street neighbourhood that draws together the area of Sunnyside and adjacent to it, Trevenna (Fig.2.5).

#117 as selected site is located on the bend of the street, on the southern side (Fig.2.6, Fig.2.7). It is located opposite Sunnypark Mall and currently hosts *Traders Pawn Shop* on all three floors.

The surrounding high-density areas allow for the support for an interior intervention as catalyst that that is community-driven and adds to the diversity of Esselen Street.

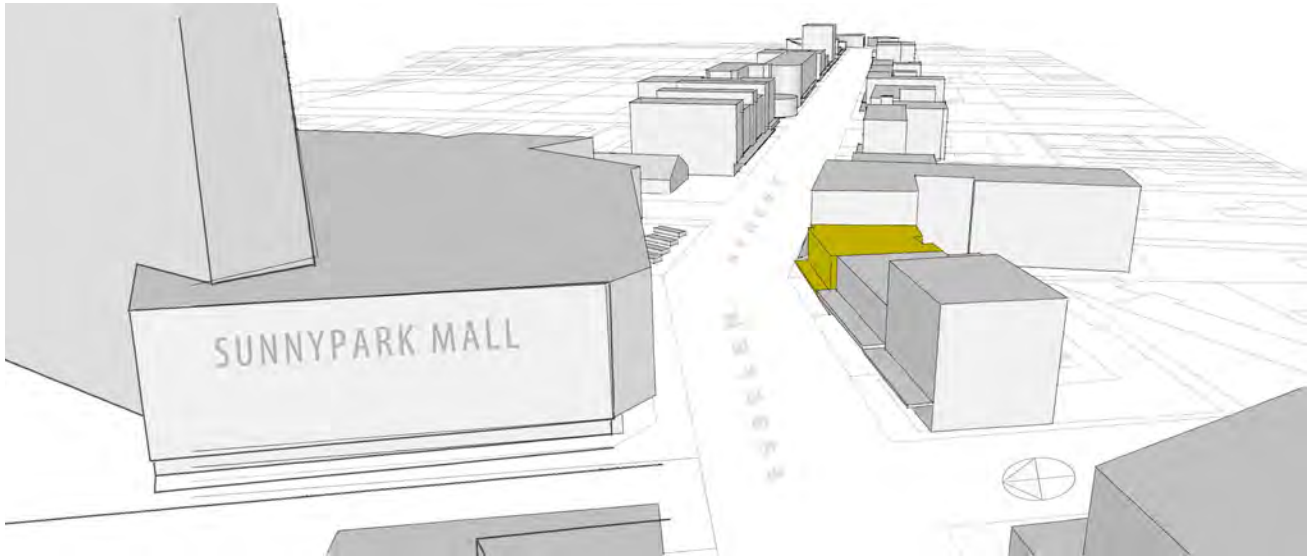


Fig.2.6 View of Traders #117 on Esselen Street looking east

Fig.2.7 Site plan indicating Traders #117 on Esselen Street

2.2 GREATER CONTEXT

The Mandela Development Corridor (MDC) is located at the epicentre of the inner city within the intersection of most of Pretoria's major northern, southern, eastern and western thoroughfares. It is a major development opportunity and is a "seam" that connects these important parts of the inner city.

The MDC framework proposal (GAPP Architects and Urban Designers, 2009) (Fig.2.8) includes new building footprints, hard surfaces upgrades and open space development, grouped into the following three precincts:

- **Precinct 1**: Student accommodation and tertiary education facilities, residential development

- **Precinct 2**: hotel and conferencing; mixed use retail, commercial and housing; government buildings; interchange transport

- **Precinct 3**: Culture and tourism district centre, including office and studio facilities.

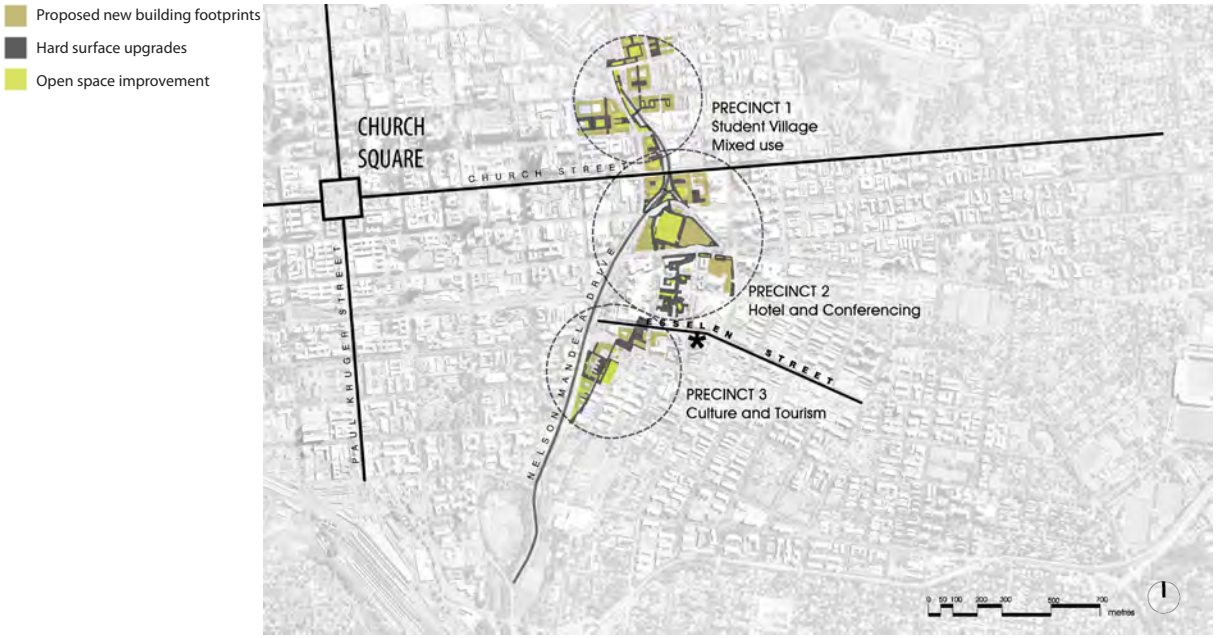


Fig.2.8 Mandela Development Corridor (MDC) framework

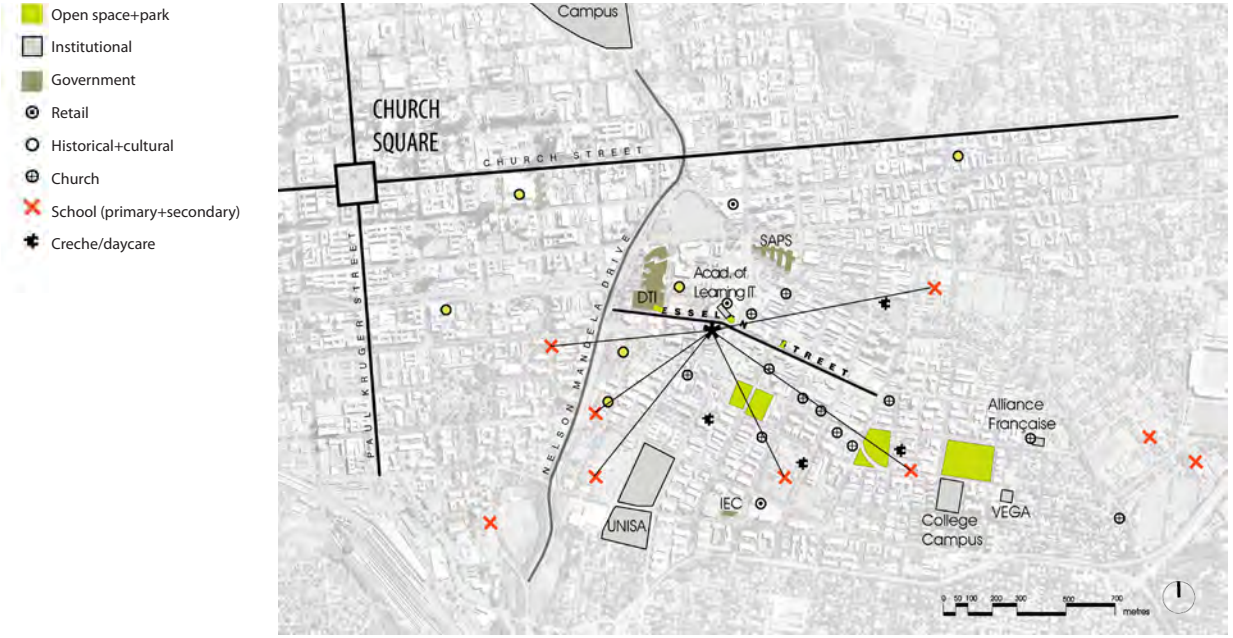


Fig.2.9 Institutions and facilities

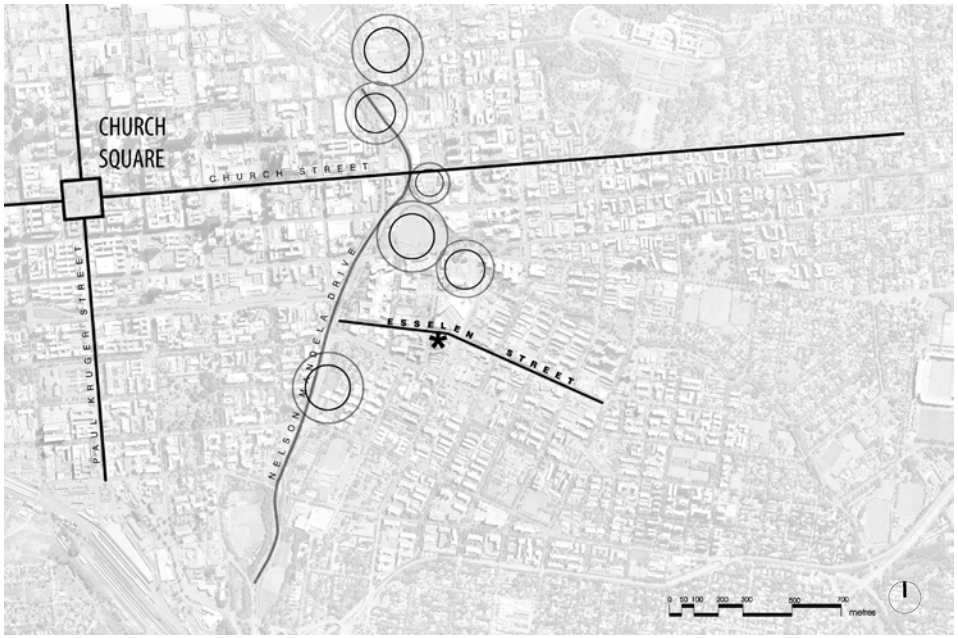


Fig.2.10 Initial catalytic sites identified in the MDC framework

Catalytic initial sites for development

* SITE AS POTENTIAL CATALYST

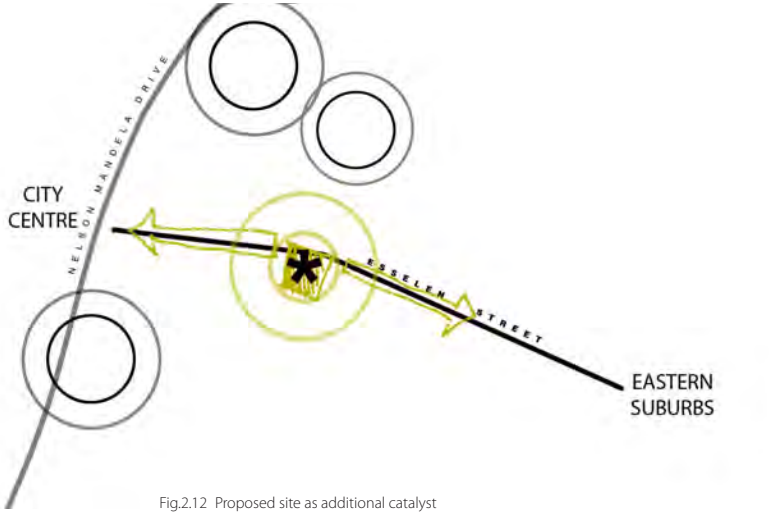


Fig.2.12 Proposed site as additional catalyst

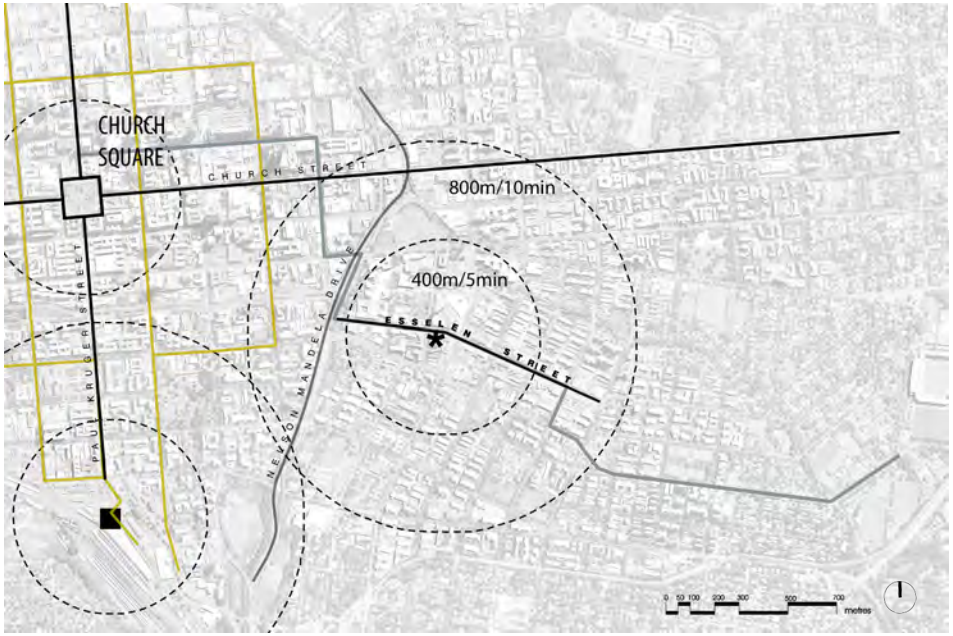


Fig.2.11 Public transport and walking circles

Walking circle
Gautrain bus route
Bus route

Given the high number of schools in the area (Fig.2.9) it is noticeable that there are various crèches catering for infants and young children but no facilities for preadolescent children and the youth.

Various catalytic sites have been identified for development (Fig.2.10). A general Esselen Street upgrade is indicated in the MDC framework but the scope thereof is not set out in detail.

The identified site can act as an additional catalyst. Its central location on the bend of Esselen Street allows it to connect to the CBD and eastern suburbs whilst at the same time drawing the eastern and western part of the street neighbourhood together (Fig.2.12).

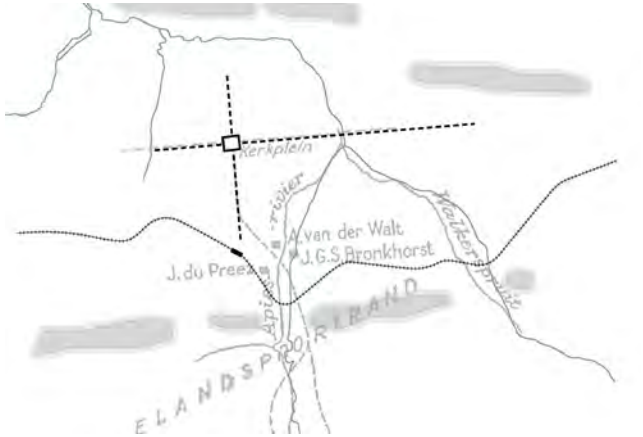


Fig.2.13 Pretoria with its natural boundaries, the railway line and Church Square

Fig.2.14 The suburbs of Arcadia, Sunnyside and Pretoria West

2.3 HISTORICAL CONTEXT

Pretoria was founded in 1855 and laid out to a man-made order along two main axes of cardo and decumanus that cross in the symbolically important centre, which today is Church Square (Fig.2.13).

The expansion of the city gave rise to the establishment of the residential areas of Arcadia, Sunnyside and Pretoria West (Fig.2.14). The area which today makes up Sunnyside consisted of various farms that were bought up in phases as the city expanded. This can still be traced today in the street pattern that features streets not lining up or changing direction, reflecting the original farm boundaries.

The neighbourhood is defined by natural borders such as the Apies River to the east and the Walker Spruit to the west. The railway line forms the southern border (Fig.2.13).

High speed routes later developed along the northern and western border. The thoroughfare framework of the 1960s expanded the road network along the Apies River, resulting in Sunnyside being separated from the inner city.

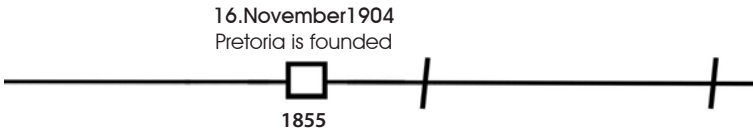
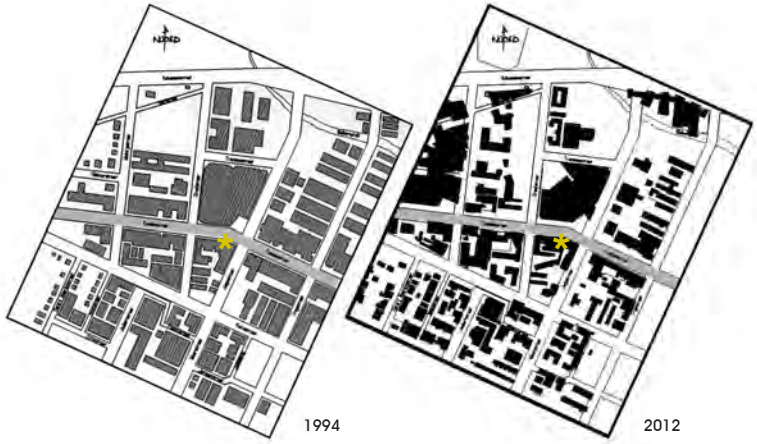


Fig.2.15 Timeline showing the development phases of Esselen Street and the larger Sunnyside area

Sunnyside, at the turn of the century

The Castle Brewery on Esselen Street

Figure ground 1934



1994 2012

Early Phase **Modernist Phase** **Transition** **New Development**

1900 1920 1940 1960 1980 2000

1889 Arcadia incorporated into Pretoria

1890 Sunnyside incorporated into Pretoria

1904 Horse-drawn trams as public transport

1910 Electric tram connecting Sunnyside and Church Square via Esselen Street

1913 Shops in Esselen Street: shoemaker, bicycle shop, bakery, butchery, greengrocer, chemist

1959 Sunnyside Galleries (the 'Grapevine')

1974 Sunnypark Mall is built

2004 Development of DTI campus

2008 Refurbishment of Sunnypark Mall

Sunnyside, 1938

Esselen Street, 1970s

Sunnypark Mall under construction, 1974

Sunnyside, 1980s

Intersection of Jeppe and Esselen Street, 2012

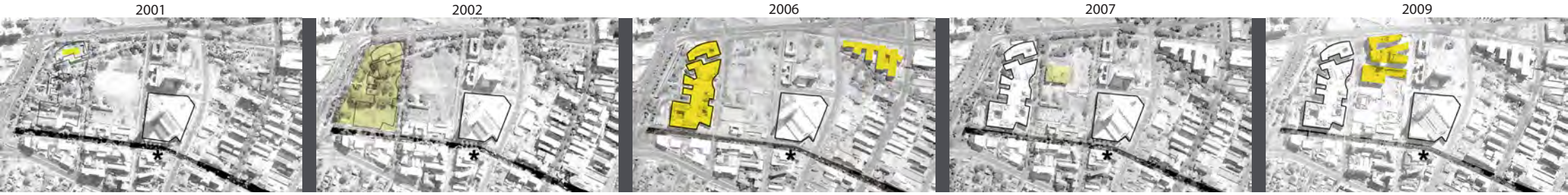


Fig.2.16 Development of Trevenna 2001-2009

There have been three distinct historical development phases in the area.

1920s: Early Phase

This consisted of residential houses and some commercial ventures. Only a few examples remain today, notably houses along Gerhard Moerdyk Street that now form the Overzicht Art Village, and a double storey structure on the corner of Esselen and Leyds Street.

1950-1970: Modernist Phase

There was an expansion phase during this time, resulting in large developments in the CBD. This led to a residential shortage in the city and a rezoning of Sunnyside as high density residential in order to construct large apartment blocks (Kruger, 1991:9). Esselen Street kept its mixed use zoning, with the successful typology of shops on the ground floor and flats or offices on the upper floors. This was more a result of the residential shortage rather than following the example of a European city model.

1970s: The Transition

This marked a period of change in South Africa. The development in the CBD has been satiated; the economic recession and inflation resulted in investments shifting from state-driven projects in the inner city to smaller commercial developments to the east. Some of the buildings of the second period are being converted to offices as the demand for commercial space increases, with the latter offering a higher return in investment with lower maintenance costs.

TODAY

After a long stagnation in development and various proposals, the MDC framework is currently being implemented along the Nelson Mandela Drive. The new DTI campus has been realized in the Trevenna area, giving new definition and a visual landmark to the western edge of Esselen Street. Other departments that have moved back or into new developments in the area include the South African Police Service (SAPS), the Independent Electoral Commission (IEC) Offices and the Department of Human Settlements (DHS) (Fig.2.16).

Many economic and social changes in the last few years have contributed to the diverse and dynamic neighbourhood of what Sunnyside is today (see Fig.2.18). It finds itself at a crossroads, either it can realize its full potential as attractive street neighbourhood and draw on its rich history and diverse residents or it can fail to offer a sense of place and belonging.

Esselen Street has always formed the central commercial axis through the neighbourhood. In 1913 it featured a shoemaker, a bicycle shop, a bakery, a piano tuner, butchery, a greengrocers and a chemist (in Boegman, 1994: 15). The Castle Brewery was located a block away from where Sunnypark Mall is today (see Fig.2.15).

The street showcases remnants of all three development phases, as well as the new developments on the eastern side. The majority of the structures were built in the same period though, as well as designed by same the architect, namely Paul Voutsas, including the identified site.

A successful characteristic is the 0m building line between structures, established in order to maximize the building area for commercial developments (see Fig.2.20). Buildings also line up on the pavement. This results in the elevations displaying historically rich façades yet having a coherent street character. Most structures have a cantilevering overhang that provides shade and adds a threshold. The many Jacaranda trees contribute to the streetscape.

The main typology found in Esselen Street features glazed shopfronts on the ground floor with either offices or flats on the upper floors (Fig.2.17). The structures range from three to seven storeys high. Discernable differences of the buildings include the typology, the façade treatment, the shopfront as well as scale and mass.

In the 1980s Esselen Street was a vibrant shopping street with many restaurants and a variety of shops. This has been replaced with secondary quality shops such as cellphone repair, beauty salons, loans, pawn shops and fast food.

Notable landmarks in Esselen Street include the Bronberg Church, which provides a visual boundary to the east and Sunnypark Mall as other boundary where the street turns. The addition of the DTI campus forms a new landmark to the west and helps to unify the once edgeless western side of Esselen Street.

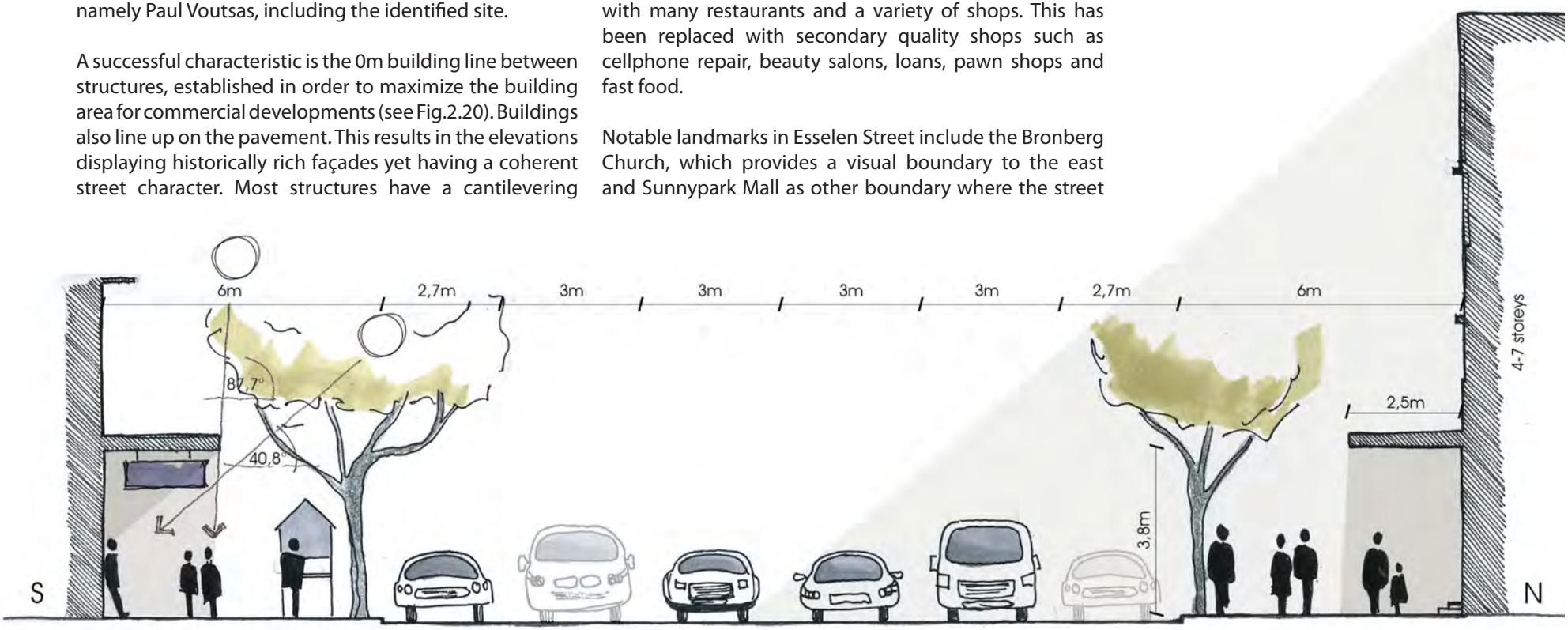


Fig.2.17 Section through Esselen Street looking west

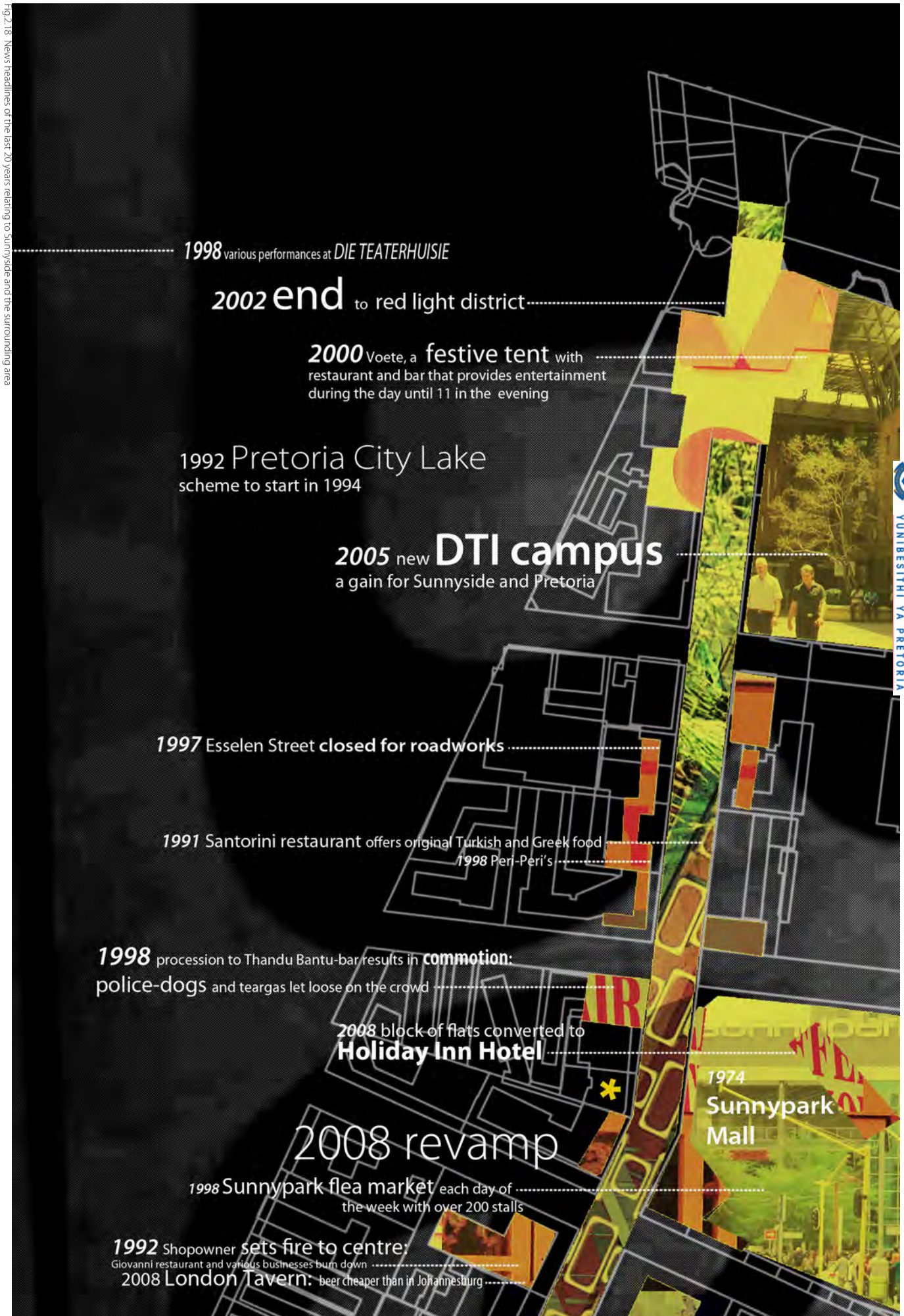
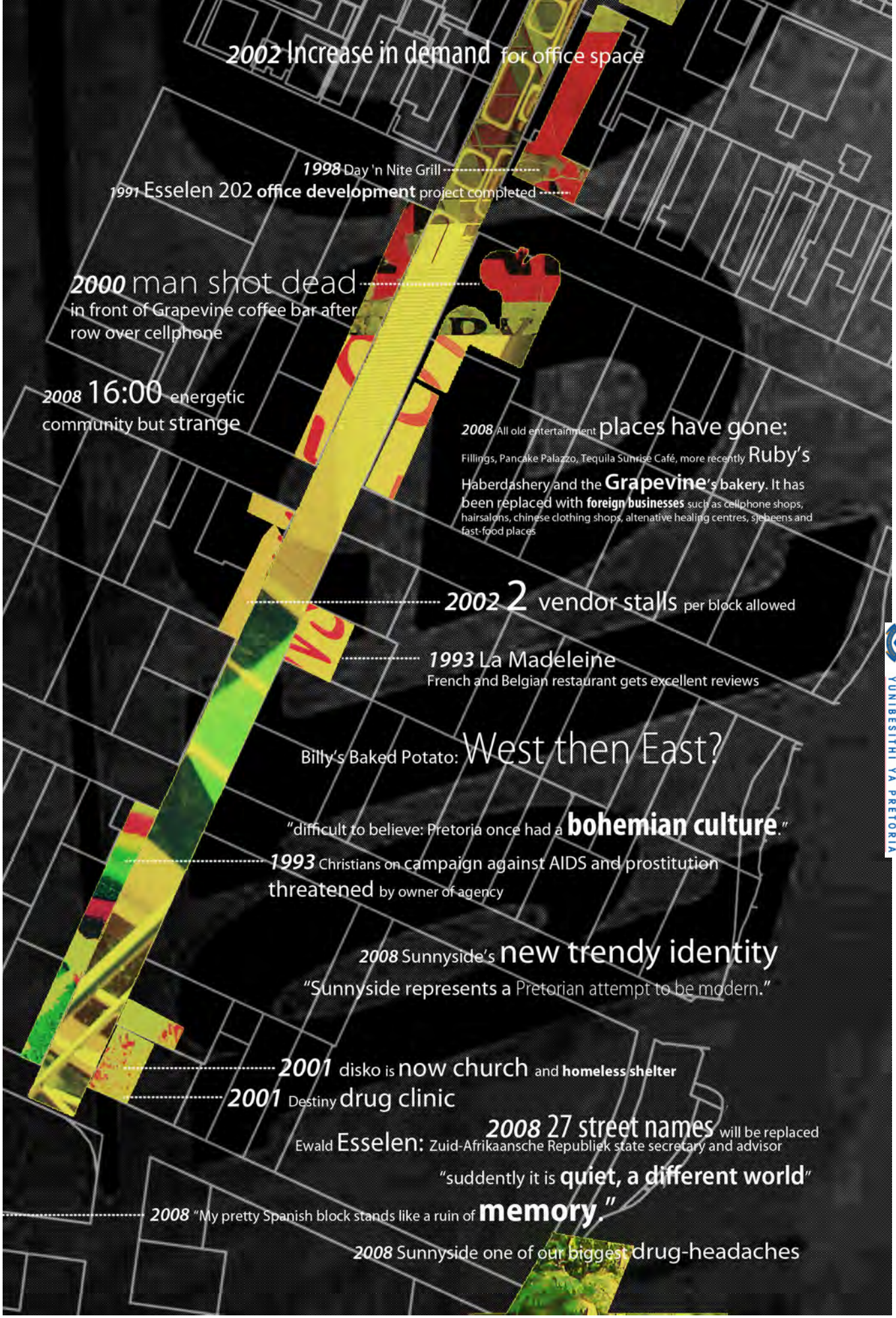


Fig 2.18 News headlines of the last 20 years relating to Sunnyside and the surrounding area



2.1 ESSELEN STREET MAPPING

For this dissertation the analysis focuses on Esselen Street as larger context.

Various quantitative data is mapped. Fig.2.19 shows the various building typologies and the mixed use nature of the street. The traditional typology of shop on ground floor with flats on the upper floors is still found to the eastern side. To the western side there are large scale commercial developments and office conversions that threaten the status quo.

A limited amount of buildings are not placed on the street building line: the result being the open spaces in front of the DTI campus, on the corner of *Sunnypark Mall* as well as in front of the *Sunnyside Galleries* as identified in Chapter 1. These have the potential to become animated public squares.

Fig.2.20 indicates the built and unbuilt areas. It clearly shows the continuous building line of Esselen Street compared to areas around with individual high rise blocks of flats.

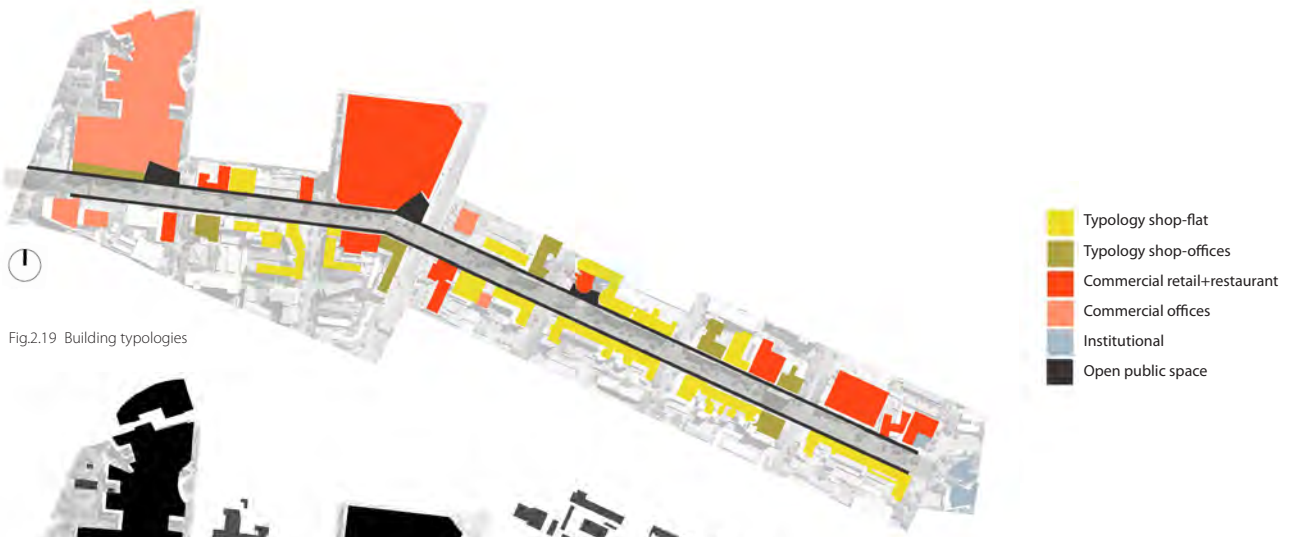


Fig.2.19 Building typologies

Fig.2.20 Figure ground of Esselen Street and surrounding city blocks

Fig.2.21 Architectural development periods

Fig.2.22 Types of shops

Fig.2.23 Pedestrian speed, vendor stall locations and social pausing areas

There are remnants of the various historical development periods (Fig.2.21). Most buildings in Esselen Street originate from the period of the 1950s to 70s, which contributes to a sense of unity. The continuous covered pavement further ties the street façades together.

Fig.2.22 shows the various stores found along the street. They are colour-grouped, indicating similar services and goods offered. It is found that despite the apparent variety, many shops offer a similar selection, thereby making them less distinct.

The mapping of pedestrian speed and social interaction shows that the pedestrian speed increases where shopfronts are less responsive or varied (Fig.2.23) In areas that are shaded and with the possibility to sit there is more interaction and people stay and linger. Overall there is a lack of seating along the whole of Esselen Street. Only the three open spaces offer some benches and urban furniture.

2.5 SENSE OF PLACE

2.5.1 360 ° INVESTIGATION

The 360° investigation involves the observation and documentation of pedestrian activities for three time-based scenarios from a single strategic location (Fig.2.24). The information is compiled into three respective dioramas and compared.

A 360° view was made from the corner of Esselen and Jeppe Street in front of Sunnypark Mall on the following three days and times: Wednesday morning at 8:00, Thursday afternoon at 15:00 and Saturday morning at 11:00 (Fig.2.26-Fig.2.28).

Important factors noted include the flow of traffic, the speed and direction of pedestrians as well as the activities that were taking place. From the clothing, body language and manners certain speculations were made, such as profession, financial status and subculture, giving an indication of certain lifestyles and demographics of the area.

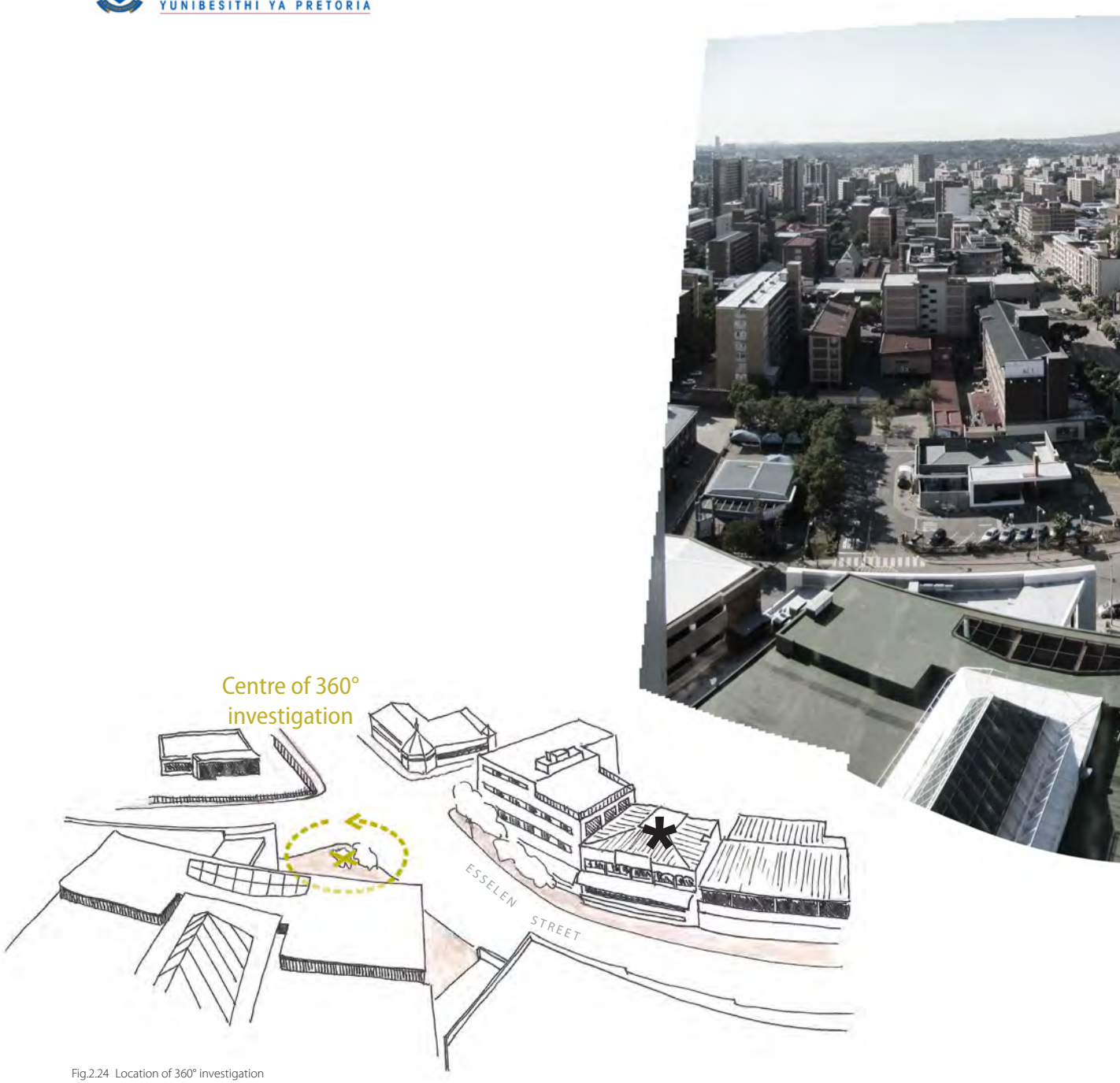


Fig.2.24 Location of 360° investigation

Fig.2.25 Bird's eye view of Sunnyside from the top of Sunnypark Mall with Esselen Street in front

Wednesday 8:00

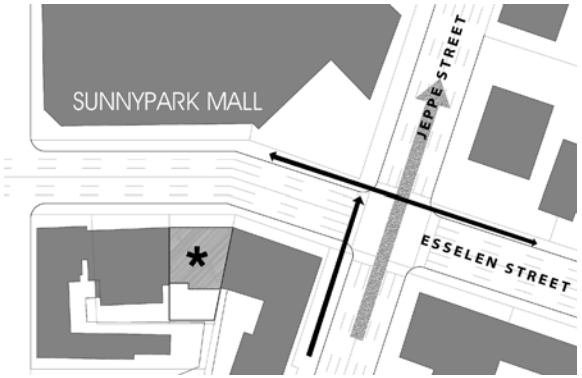


Fig.2.26 360 ° investigation scenario 1

Thursday 15:00

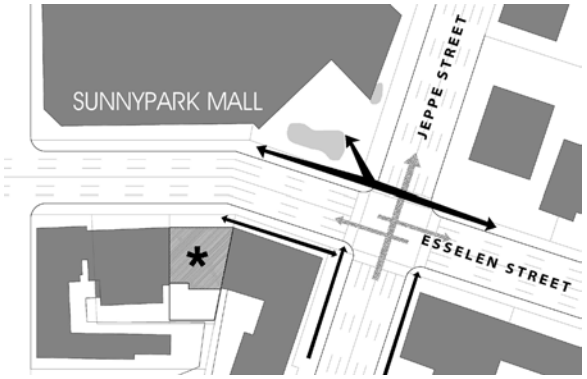


Fig.2.27 360 ° investigation scenario 2

Saturday 11:00

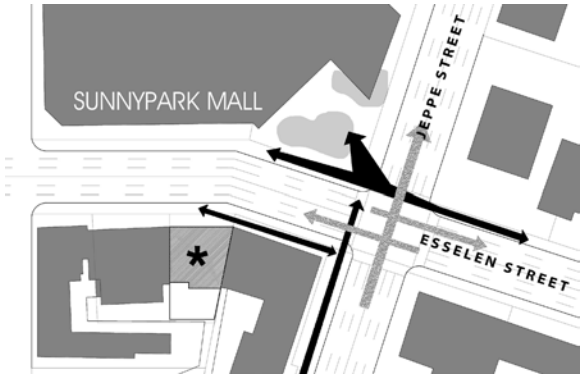
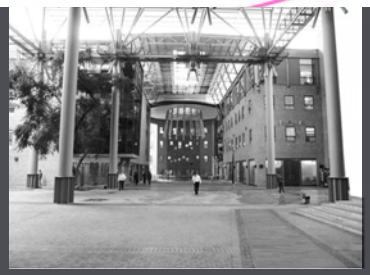


Fig.2.28 360 ° investigation scenario 3

Esselen Street is still waking up. There are people on their way to work as well as students and children on their way to school and university. Newspaper vendors have long since started their day and street cleaners are busy removing remnants of the night's activities.

A variety of people are on the move: everyone seems on the way to a specific destination. People of every age linger in the open space in front of Sunnypark Mall.

A busy Saturday morning with pleasant weather - the pedestrian and vehicular traffic is at its busiest. The mall is well visited with many young people hanging out in the open space under the trees.



Christine, 35, from South Africa, registers companies at the DTI. She often goes across the street to the beauty salon. According to her, anyone can register a company, locals and foreigners, so one does not know what happens behind closed doors.

Trevor, 60, from Pretoria, caretaker of the Sunnypark flats for the last four years. He lives alone on the 18th floor. The tenants are mostly students and people that work for the government. Flats go for R3.600,-. According to him, the building across and further down used to be a hellhole. They renovated it and it is very different now. He says he sometimes comes back home after 12 at night and has not had any problems.

Ali, 38, works in a cellphone shop. He lives in Sunnyside with his family and is from Pakistani origin. He states that the shop has been there for 8 months, since they revamped the building. There are mostly take away places and cellphone shops in the area.

Mohammed (owner), 58 and Joe (employee), 55, both from Pretoria, of the Yarn&Wool Centre. The store has been around for 25 years. They say the area has changed a lot, there are many foreigners, most of whom have their own businesses. They know how to organise amongst themselves.
They say that on the site where the DTI is now there used to be a car dealership. At night there are many taverns and it gets loud and unsafe.

Estelle, 55, from Pretoria, wife of the owner of Traders Pawn Shop. She recalls that the store used to be located on the corner where the DTI is now. There used to be a municipal swimming pool. The store used to have flats upstairs; at some point it was a tavern with a bank on the ground floor. She finds that crime has increased and states that most white people that live in the area stay inside after 18:00. Once after finishing stocktaking at midnight she was shocked at "how bad" it was when stepping outside.

Ashley (owner), 34, and Christine (employee), 28, both from Pretoria, of the Cakery Bakery cake shop.
According to Ashley, it is a modern area where image is everything. Nigerians often come in and insist on a cake for their child that costs at least R1000,-. She says a classy restaurant where you can sit down and be seen is needed. Many children parties are held at the McDonalds since people living in flats do not have much space.

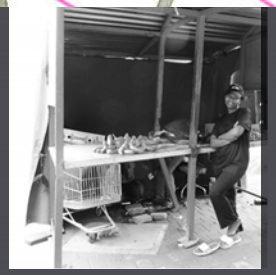
Moses came to Pretoria to work. He lives on the street but wants to get enough money to buy a container to sleep in.

2.5.2 QUESTIONNAIRE

Through a range of conversational interviews done along Esselen Street the following information was gathered (see Appendix for guideline questionnaire[1]):

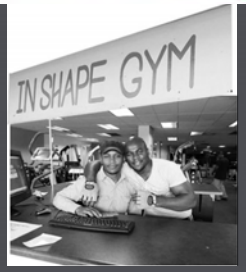
1 The questionnaire is of a general nature. Each person interviewed was informed beforehand about the nature of the investigation and the intended purpose. Permission was also asked with regards to the photos taken, otherwise only the location is shown.

> "I get many requests for a venue for children's parties. Some also insist on an expensive cake, it is part of the status to brag with the price."

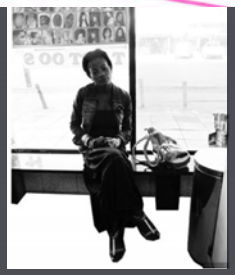


Nickel, 29 + Gladys, 32, family, rent the vendor stall. They have sold products on the street for ten years. Since the establishment of the DTI they have to rent a stall. The conditions are that the same person runs the stall but they say that is not possible, since some of the people they employed stole things and they had to get someone else. According to them, you can get anything in Esselen Street. The claim that there are more foreigners than locals and that all languages are spoken in the area.

Lawrencia, 22, from Ghana, works in the beauty salon. She has been here for a year and plans to study nursing. She lives upstairs above the shop. She does not really go out at night, but does go to the swimming pool. Most customers that come for beauty treatments are regulars. She states that people are friendly and treat her well.



Joseph, from Zimbabwe, works in InShape Gym and has been here for 6 years. The gym used to be close to Shoprite and moved to its current location 9 months ago. He stays on his own in a bachelor flat. According to him, only 30% of people in the area are locals.
It is mostly men that use the gym, women come for the aerobics class in the evenings. Most people do shift work so they come to gym in the mornings before work. He does not go out or drink and in his spare time he plays chess.



Solange, 30, from Congo, works in the beauty salon, with David, from Nigeria, and Maria, from Ghana. Someone takes care of her son while she is working but she struggles to always find someone. She says she wants to do something else but does not know who to contact or what to do. She does go out sometimes, but says you have to know to which places you can go. Solange sometimes goes to the park in Arcadia. She finds that everyone lives for themselves, people don't know the others in the flats around them.

David, 38, from Limpopo, manages 2 blocks of flats. He has been into real estate for eleven years. He has learnt to judge potential tenants but says that all Africans are the same, there is no honesty anymore. According to him, the younger generation should be exposed to activities other than only rugby and soccer. He does not go to the [Pretoria] art gallery or the State Theatre because they are too expensive. He would like to see plays, live musicians and comedians and enjoys the marathon that starts at Sunnypark Mall.

Mina, 63, from Colesberg, has rented the vendor stall for the last 3 years. She shares a flat with others, otherwise it would be too expensive. She says she does not see any improvement in the area. People break in and come and sell drugs. "There is no freedom, only freedom to kill. So many families have lost someone because of drugs." She does not know her neighbours and keeps her pots in her room. In her spare time she reads the Bible, but admits that she does not trust the churches. "They make up their own stories."

Fig.2.29 Profiles of interviewees

- Too much of everything: Esselen Street as neighbourhood is a vibrant place where you can get everything if you know where, but this also means that every shop stocks almost everything and thereby becomes hackneyed.
- There are many different cultures and languages, as well as a range of demographics ranging from students to families to senior residents. The majority of people are perceived to be from other African nations.
- People generally do not engage on a deeper level, they do not know their neighbours or trust others. Most people live in the surrounding Sunnyside area, often sharing a flat. For some, this is a lifestyle choice, for others a financial necessity. This means there is not a lot of space, e.g. for children's parties, groups of friends to get together, etc.
- Image is important: people come to the area to be seen, flashy cars and clothes abound. Restaurants with a glass front opening on the street are popular.
- Assumptions can deceive: despite the many taverns most people asked do not go out often. Leisure activities include playing chess, reading, live music, sport events and comedy.
- Perception vs reality: Esselen Street offers energy and possibility for some; others do not notice any improvement to the area, but rather observe an increase in crime and other problems such as drugs and prostitution.

Fig.2.30 Traders #117 on Esselen Street as identified site

2.6 SITE ANALYSIS

2.6.1 TRADERS #117

#117 Esselen Street, Trevenna, is located on the southern side on bend of the street, diagonally opposite Sunnypark Mall.

The three storey structure, built in 1957, was designed by Paul Voutsas who was responsible for a number of buildings in the area (Fig.2.30). It falls under the second architectural development period, namely the modernist phase, elaborated on as follows:

The function-driven typology of shops on the ground floor with flats on the upper floors (see Fig.2.43, pg.33) resulted as a reaction to the housing shortage rather than an adaptation of the European urban planning model featuring the combination of residential, commercial and leisure components (Becker, 2001:9), yet this precisely contributed to its identity and success as an urban area.

Modernism was tempered by the local climate, resulting in a context-specific architectural language. The windows on the northern façade are set back and have overhangs that shade the openings in summer while allowing the winter sun to enter (Fig.2.44). The ground floor has a glazed shopfront, originally featuring three shops with three recessed entrances (Fig.2.39). Here, a thin cantilevered overhang provides protection against the elements as well as connects with the continuous line of the street, defining the threshold area in front of the shops.

Locally available materials are used, such as the facebrick on the façade and corrugated iron used for the roof (see Fig.2.51). Other decorative elements are always function-driven; this includes the geometric ventilation grilles, the curvatures over the windows and the arches stretching over the columns in the flats on the upper floors. These elements together with the proportioned openings break down the mass of the building and relate it to human scale (Fig.2.30).

The structure has a rectangular floor plan with one side narrowing towards the back of the site. A driveway leads from the street to the back of the building where parking and outbuildings are situated. The living rooms and bedrooms were situated on the northern side; with balconies as extension of the rooms. The southern side accomodated storage rooms on ground floor, with kitchen and bathroom on the upper floors (Fig.2.41).

The structure consists of concrete columns and beams on ground floor (Fig.2.32), with steel columns taking over on the first and second floors (Fig.2.34). Brick is used for the structural walls and infill.

In summary the structure is a stylistic representative of the typology of the 1950s found in Esselen Street. The building forms an integral part of the existing urban fabric and the history of the streetscape.

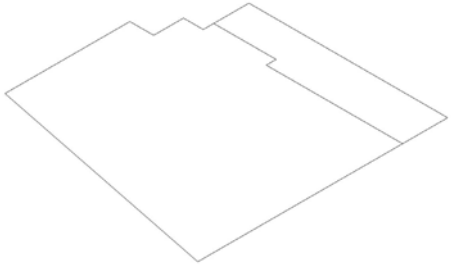


Fig.2.31 Ground floor building footprint

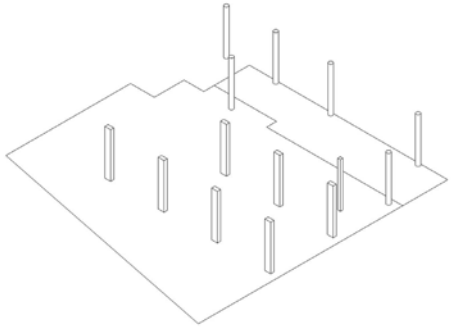


Fig.2.32 Ground floor column distribution

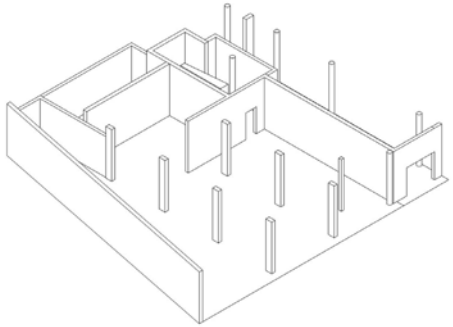


Fig.2.33 Structural walls and columns

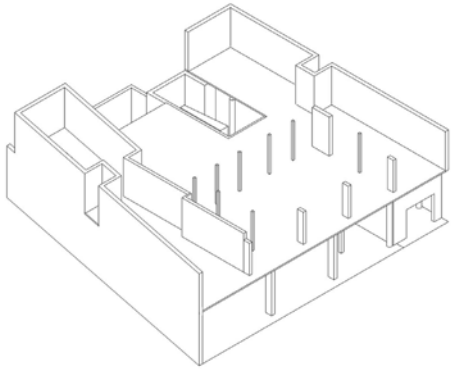


Fig.2.34 First and second floor columns and structural walls

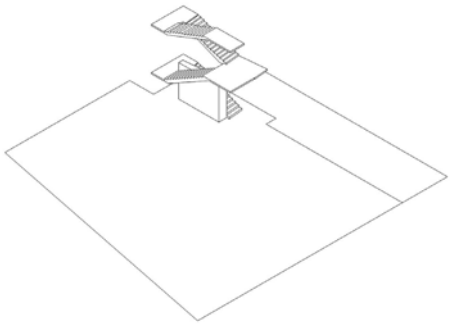


Fig.2.35 Main circulation

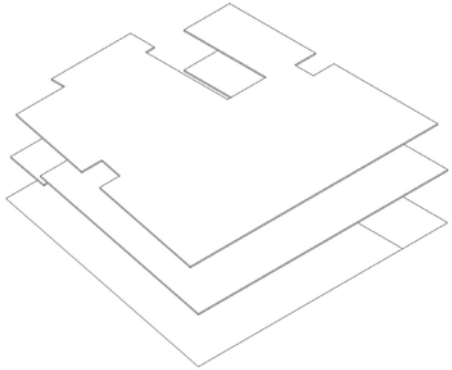


Fig.2.36 First and second floor slabs

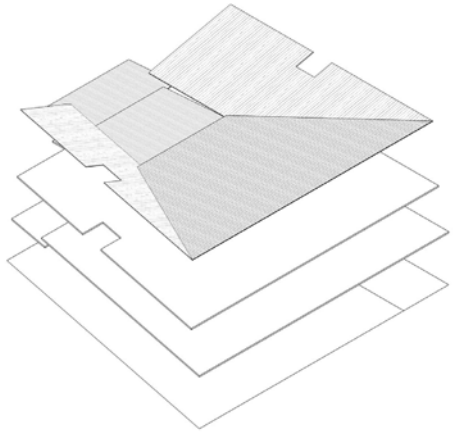


Fig.2.37 Corrugated roof

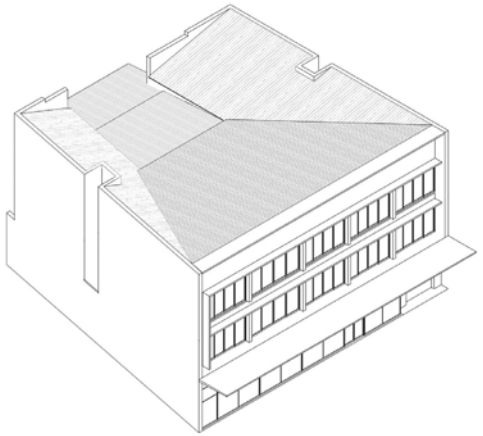


Fig.2.38 Structure with façade and overhang

Circulation flow
Entrance
Circulation
Bathroom
Services
Stormwater
Addition
Demolition

GROUND FLOOR

ORIGINAL

ESSELEN STREET

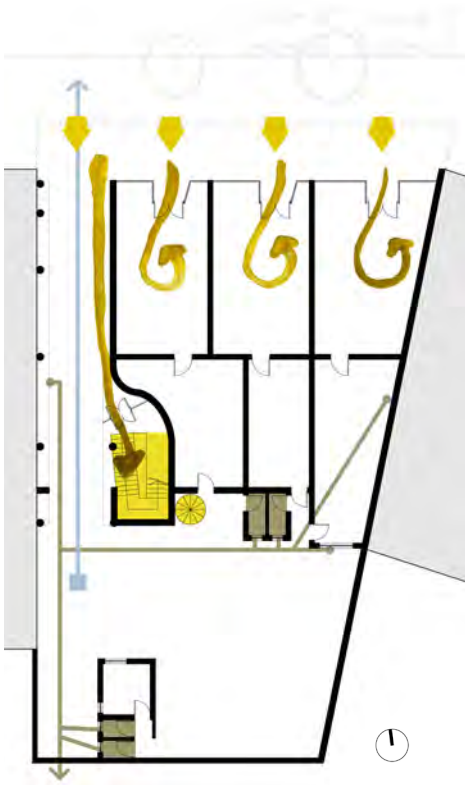


Fig.2.39 Original ground floor analysis

EXISTING

ESSELEN STREET

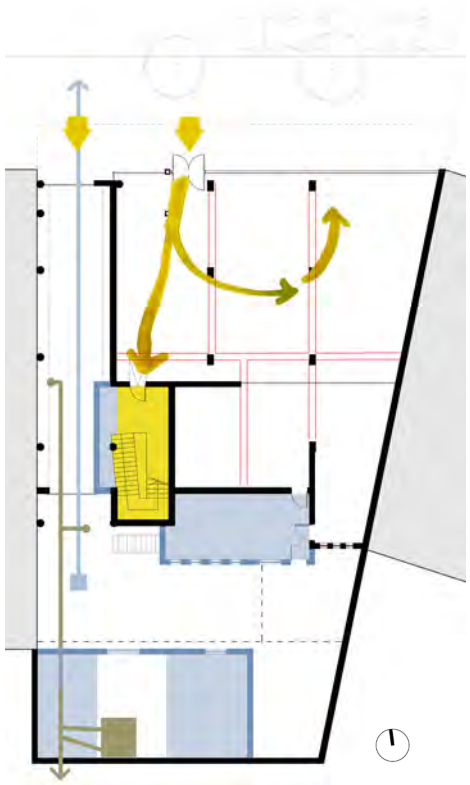


Fig.2.40 Existing ground floor analysis

FIRST+SECOND FLOOR

ORIGINAL

ESSELEN STREET

Fig.2.41 Original upper floors analysis

EXISTING

ESSELEN STREET

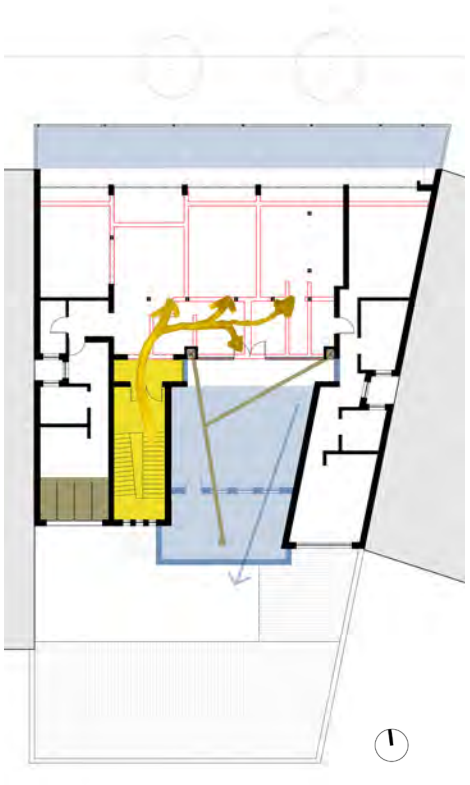


Fig.2.42 Existing upper floors analysis

Circulation flow
Entrance
Circulation
Bathroom
Services
Stormwater
Addition

SECTION

ORIGINAL

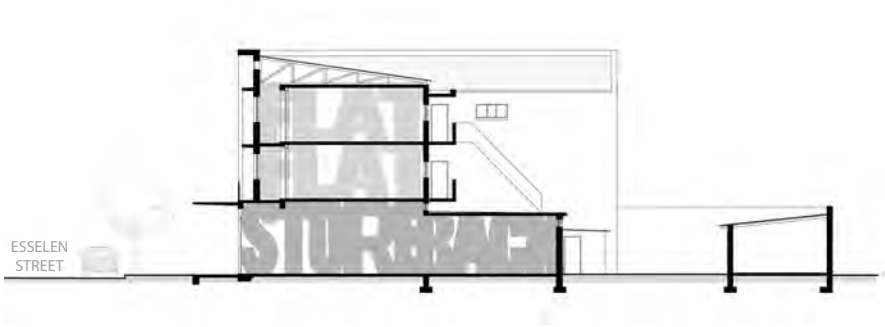


Fig.2.43 Original functional distribution shown in section

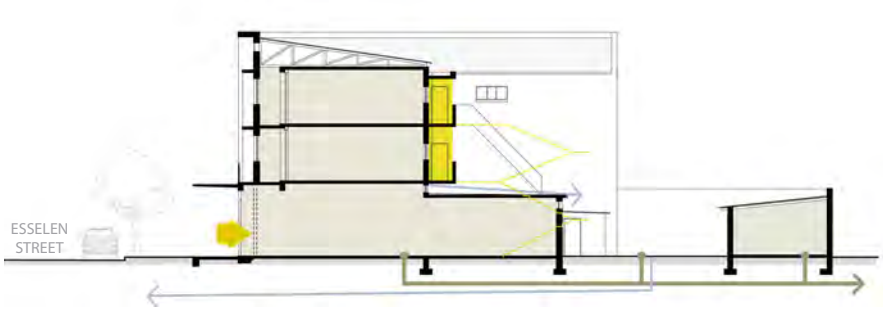


Fig.2.44 Original section analysis

EXISTING

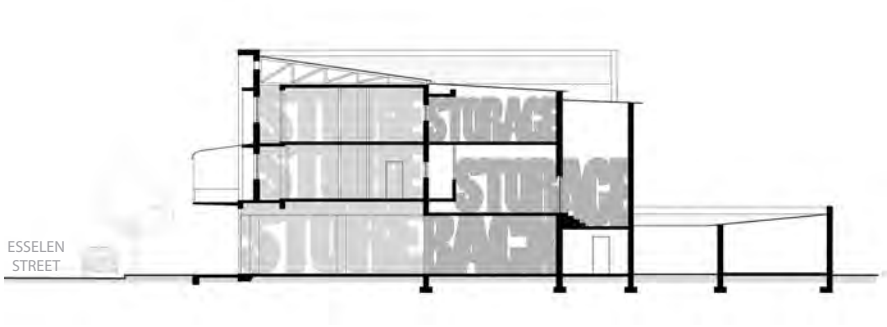


Fig.2.45 Existing functional distribution shown in section

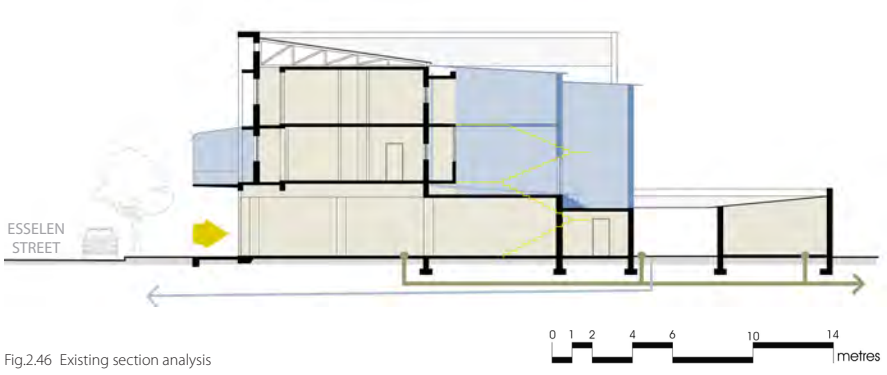


Fig.2.46 Existing section analysis

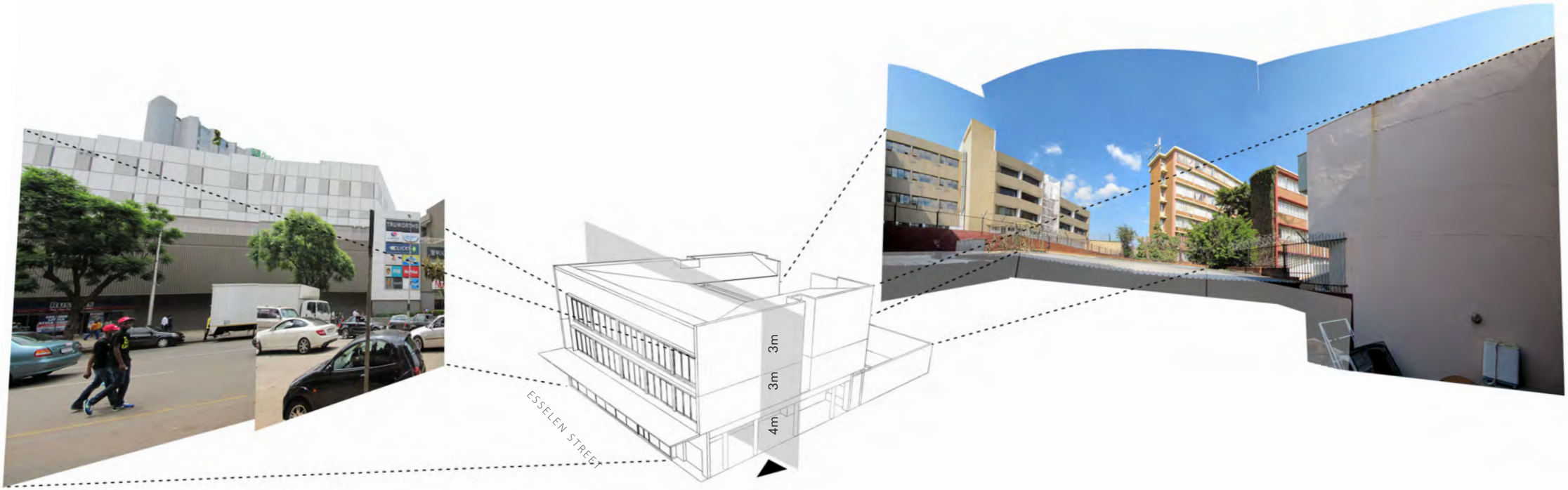


Fig.2.47 Front and back view fromTraders #117

2.6.2 SPATIAL QUALITIES

The ground floor slab height corresponds to the original function on that level as shops with 4m. The upper two floors have a slab height of 3m (Fig.2.47).

The building is flanked on one side by an entertainment venue and on the other side by a commercial structure, leaving a front view of Esselen Street and Sunnypark Mall. From the back courtyard one can glimpse the surrounding buildings.

Currently the pawn shop has extended the retail function to all three floors. Most internal non-loadbearing walls have been removed and the spaces are stacked full of furniture and equipment (Fig.2.48-Fig.2.50).

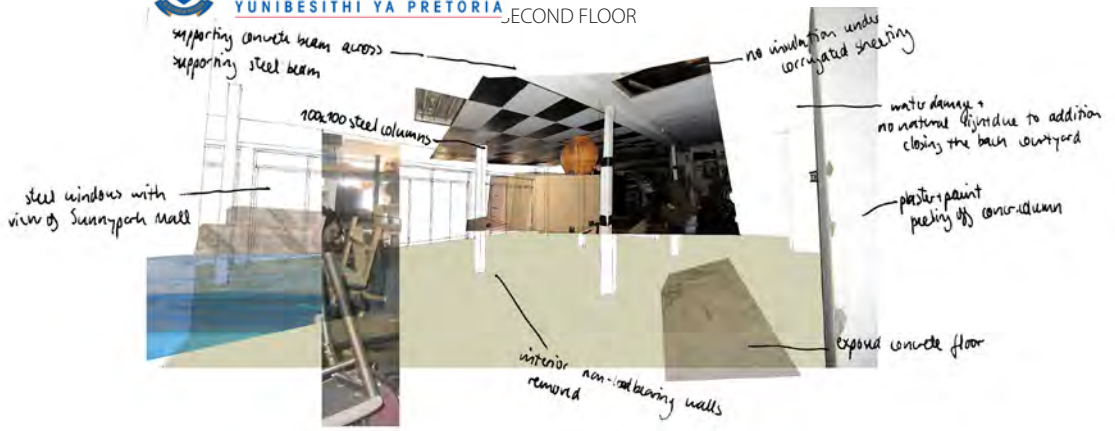


Fig.2.48 Second floor interior collage and spatial analysis

Fig.2.49 First floor interior collage and spatial analysis

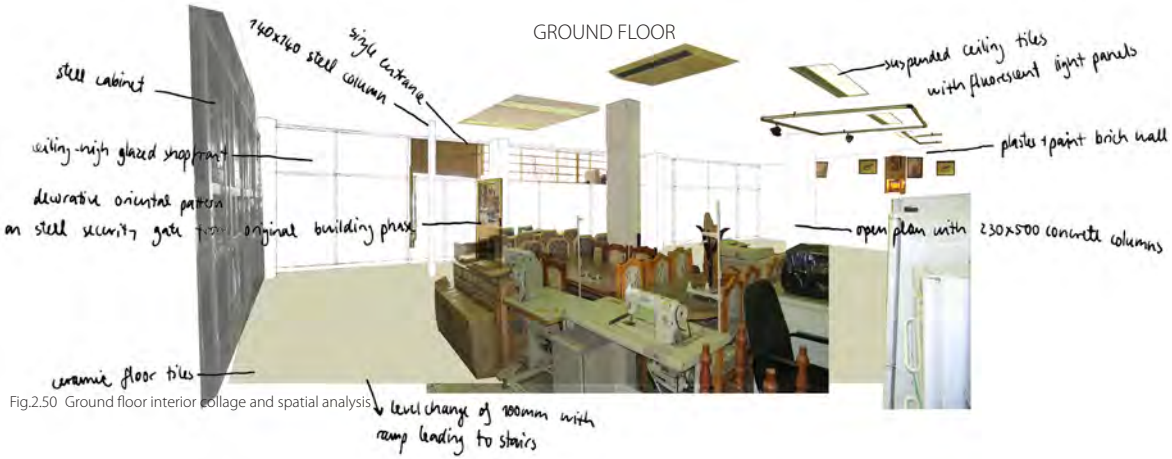


Fig.2.50 Ground floor interior collage and spatial analysis

2.6.3 ALTERATIONS

The structure has witnessed various changes, mostly in function and in plan configuration. As described in 2.6.1 (pg.30) the architectural language responds to the local climate and features locally available materials. Decorative elements always have a practical purpose, such as the ventilation grilles (l) and the arched overhangs (n).

Typology:
The original structure was multi-use with shops on the ground floor and flats on the upper floors, representing a context- specific typology driven by function. In the 1980s a bank was located on the ground floor with a tavern on the upper floors. Currently the structure hosts *Traders Pawn Shop*, who took over 10 years ago and occupies all three storeys.

Plan:
On the ground floor most walls were demolished to accommodate the pawn shop. The original three entrances that were set back are now reduced to a single one in a flush shopfront. The cellular plan separating the flats on the upper floors was also changed to open plan; most infill walls were removed with only the supporting columns in place (see Fig.2.39-Fig.2.42, pg.32).

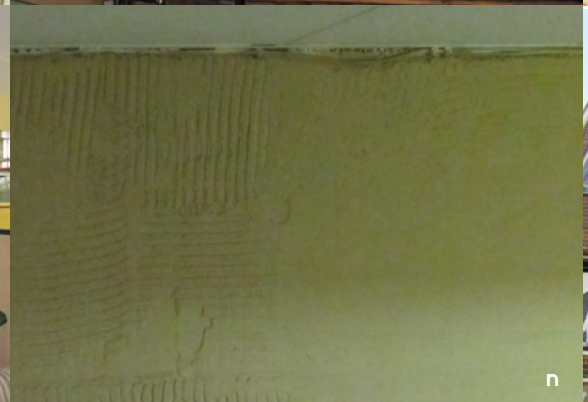
Circulation:
Originally, one accessed the flats by entering through the driveway where the staircase is located. The latter was enclosed on the driveway side, becoming part of the interior - now one enters the store on the ground floor and from there the staircase leads up to the upper floors (see Fig.2.39, Fig.2.40, pg.32).

Façade:
On the exterior the overhang on the northern façade was converted to a balcony with a roof covering (k).

Extension:
In the 1990s an addition of low quality was built on the southern side of the building, enclosing the existing courtyard (b and o). This prevents light and air from penetrating into the building and water leakage is evident on the ceiling of the extension.

Finishes:
Various original elements and finishes were covered with another layer, including the ceiling (e) and the stairs (a). The original balustrade remains (a) as well as different tile finishes in the kitchen and bathroom areas (i).

Fig.2.51 Existing building elements and finishes **a.** Staircase **b.** Addition at the back **c.** View of roof **d.** Entrance door **e.** Covered original ceiling **f.** Water damage on ceiling **g.** Obsolete fire escape staircase **h.** Decorative concrete overhang **i.** Original tiles in kitchen area **j.** Roof of addition **k.** Later added overhang over balcony **l.** Ventilation grille **m.** Interior arches **n.** Enclosure of main staircase evident in the difference in plaster, **o.** Back façade with addition **p.** Original brickwork on main façade



2.7 URBAN FRAMEWORK: CATALYST CULTURE

2.7.1 URBAN ACUPUNCTURE: A POINT OF DEPARTURE

The concept of urban acupuncture regards the city as a complex organic organism (Casagrande, 2009). Similar to traditional acupuncture where the skin is pricked with needles to correct imbalances in the flow of energy, underutilised or unused land and buildings are identified and made useful again by the community (ibid) (Fig.2.52). It thus brings life to what already exists by inserting contemporary, appropriate interventions.

The movement of urban acupuncture originated with Jaime Lerner, who as past mayor of Curitiba, Brazil, developed and implemented practical urban planning initiatives (Lubow, 2007:1). Marco Casagrande (2009) continues this urban environmentalist theory and promotes the "organic ruin of the industrial city", aiming to selectively manipulate the urban energy to create a sustainable urban development and the vision of the post-industrial city or, what he terms the "3rd Generation City".

This contemporary approach is highly applicable in an era of constrained budgets, limited resources and urban sprawl. The theory of urban acupuncture opens the door for unrestrained freedom as each citizen is enabled to join in the creative process, and develop the environment according to individual will.

Fig.2.52 Conceptual representation of urban acupuncture

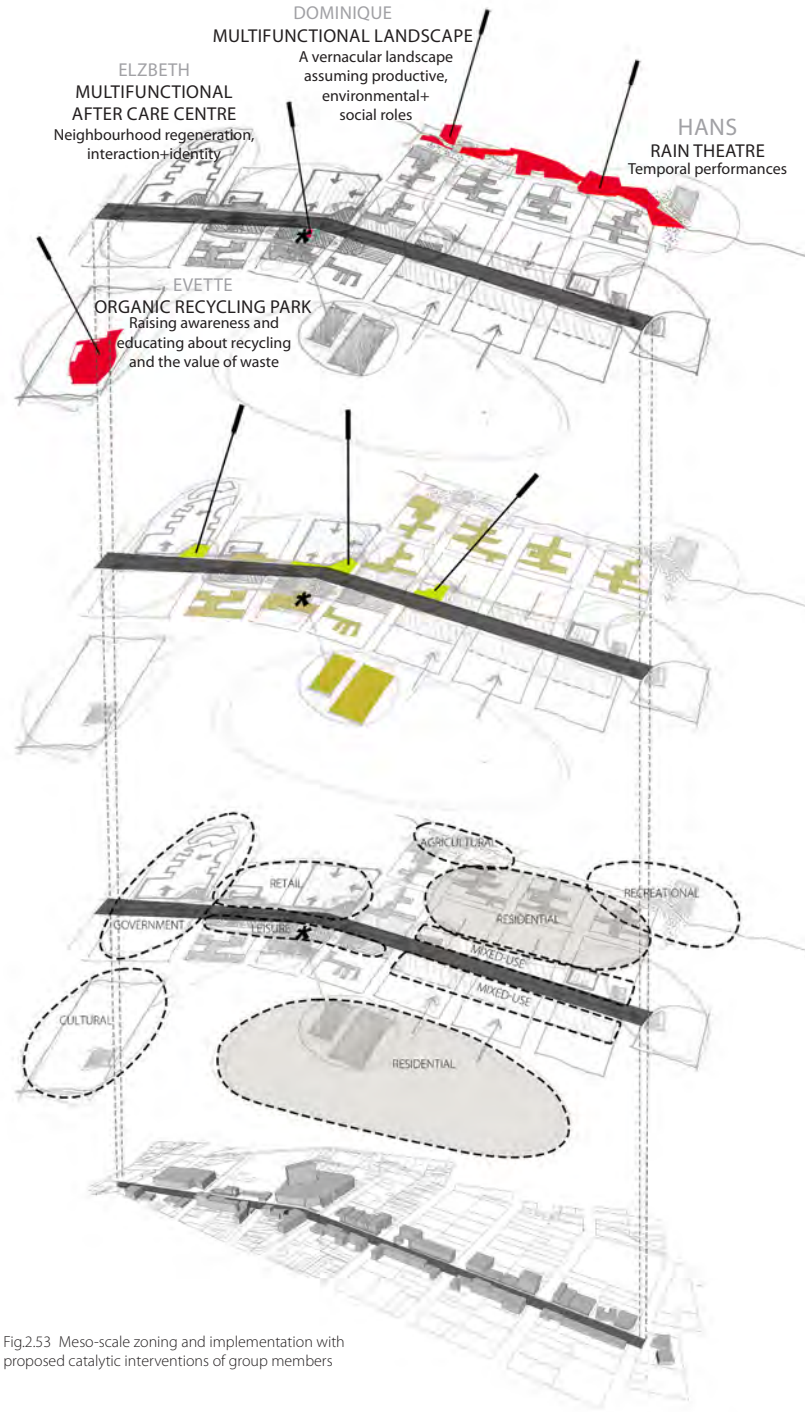


Fig.2.53 Meso-scale zoning and implementation with proposed catalytic interventions of group members

2.7.2 INTERIOR APPLICATION

In the context of Esselen Street the identified site is a 'dormant' area that can potentially be activated to aid in the revitalization of the area. The street can capitalize on its identity as street neighbourhood and diversity as assets to differentiate itself. Urban acupuncture regards the individual building as living environment that is interwoven within its context and where there is a complex interlayering of public to private spaces (Canada Mortgage and Housing Corporation, 2007).

As the revitalization is a process that is never complete, it allows it to adapt to various factors over time in order to cater for contemporary needs and allow the development of a community that is unique and authentic.

Fig.2.54 Strategically placed interior intervention as urban catalyst

2.7.3 RATIONALE

The inner city is dynamic and goes through periods where revitalization is needed. In the context of Sunnyside and Trevenna, there are many degenerated, neglected and dormant areas. These voids in the urban structure are viewed as problematic areas that contribute to neighbourhood deterioration. Moreover, there is a never-ending struggle within the authorities to provide adequate acquisition and development budgets, let alone provide their future upkeep.

However, it is suggested that the lost spaces of the city are misinterpreted as problems. This framework proposes that lost space should be seen as assets which perforate the city.

Viewed as the 'urban substrate' of the city, lost space is seen as the medium in which dormant potential lies (Fig.2.55).

Through catalytic and strategic interventions, and through community involvement, it is proposed that the community themselves can regenerate the city in which they live, without relying on the authorities. It is claimed that through setting up a platform for anarchy, the community may act together in order to do things for themselves.

Over time, as skills are passed down and interaction becomes independent, the healing 'roots' will take a life of their own in interconnecting and multiplying. A self-sustaining, multi-functional landscape will thus organically renew itself as it recovers, reclaims and adds a new layer of ethics. Sunnyside will hence become an 'organic ruin.'

The urban framework of *Catalyst Culture* (Kotze et al, 2012) sets out three aspects as follows:

• SOCIODIVERSITY:
A sustainable and holistic view of open space should include qualitative and longer-lasting criteria which the public can relate to. Programmes which involve health, education, recreation and interaction are important as they take the broader community into consideration. Local knowledge should also be incorporated as the neighbourhood's social status is recognised. Open spaces that evolved in this way will develop strong local interactions and provide opportunities for social contact while a sense of community is created.

• MOBILITY & CONNECTIVITY:
Through the identification of the gaps in the urban fabric and recognizing the overall patterns of development opportunities, a network of urban substrate offers the potential for reviving the city through reclaiming overlooked spaces. Furthermore, infill and recycling can integrate residual areas into the historic fabric of the city.

• SOCIAL SUSTAINABILITY:
This programme promotes repairing of the various broken and forgotten parts of the city through community collaboration. Community involvement promotes pride of ownership, which is vital for future self-sustainability. Furthermore, rather than trying to manufacture a completely new urban machine, this concept uses reclamation to sustainably repair and revitalize what already exists, while respecting the historical layer of Sunnyside.

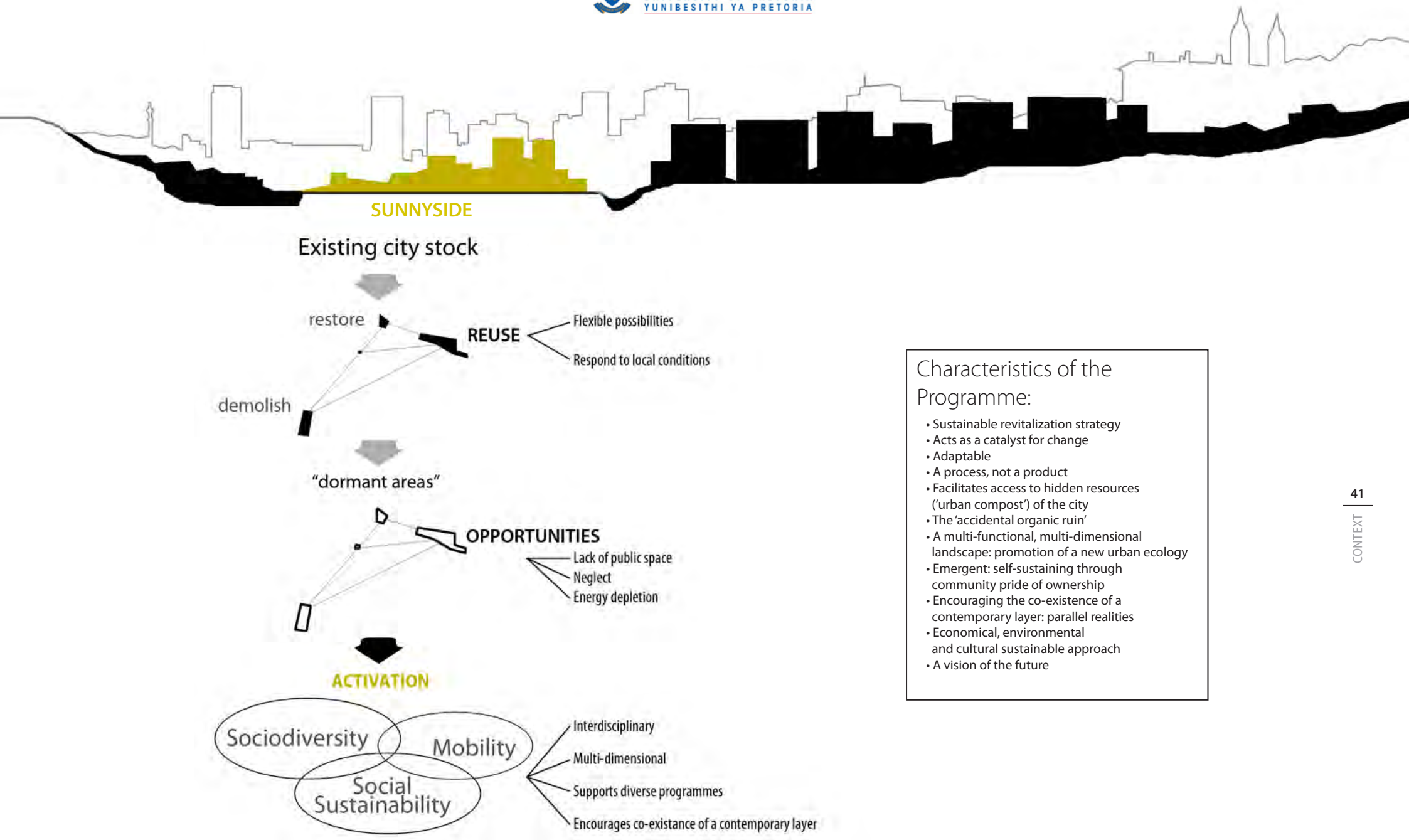
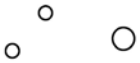


Fig.2.55 Flow diagram of urban framework proposal for Sunnyside

Characteristics of the Programme:

- Sustainable revitalization strategy
- Acts as a catalyst for change
- Adaptable
- A process, not a product
- Facilitates access to hidden resources ('urban compost') of the city
- The 'accidental organic ruin'
- A multi-functional, multi-dimensional landscape: promotion of a new urban ecology
- Emergent: self-sustaining through community pride of ownership
- Encouraging the co-existence of a contemporary layer: parallel realities
- Economical, environmental and cultural sustainable approach
- A vision of the future

STRATEGICALLY-PLACED CATALYTIC INTERVENTIONS



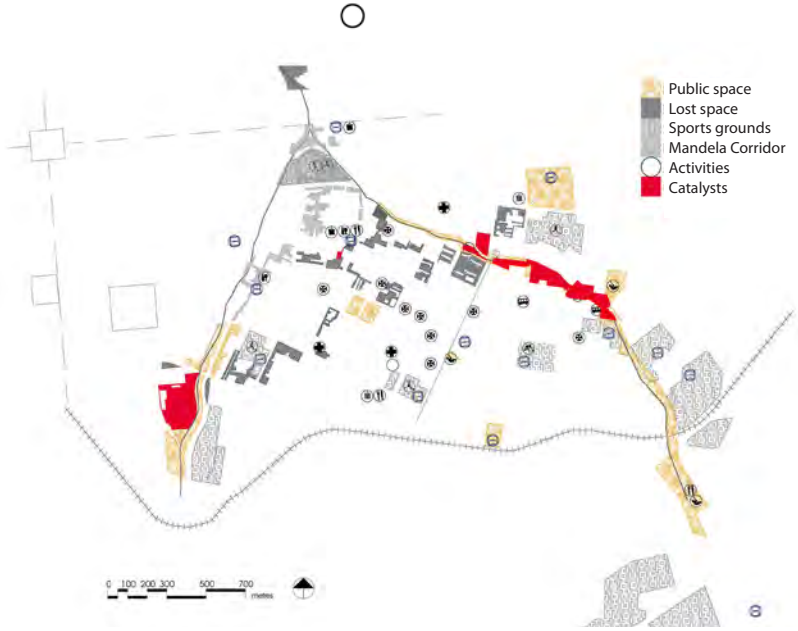
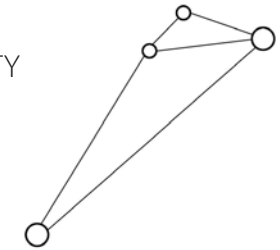


Fig.2.56 Mapping of open and lost space and identification of potential catalytic sites

CONNECTIVITY+MOBILITY



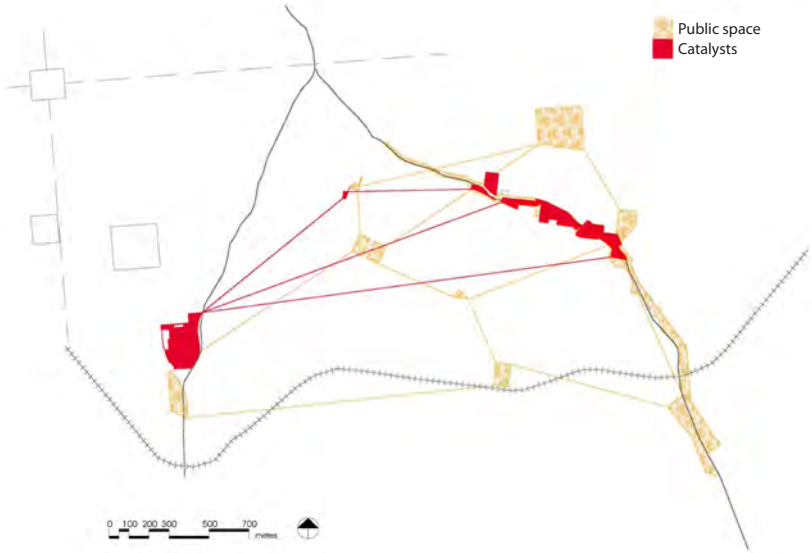


Fig.2.57 Public space along the connections between the catalytic sites

ASSISTED EMERGENCE

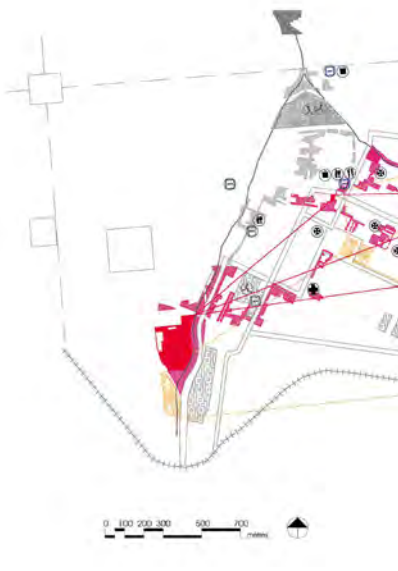
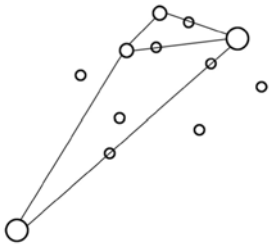
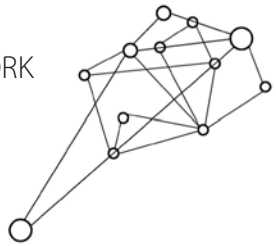


Fig.2.58 Intermediary space and potential linking spaces



MULTI-FUNCTIONAL NETWORK



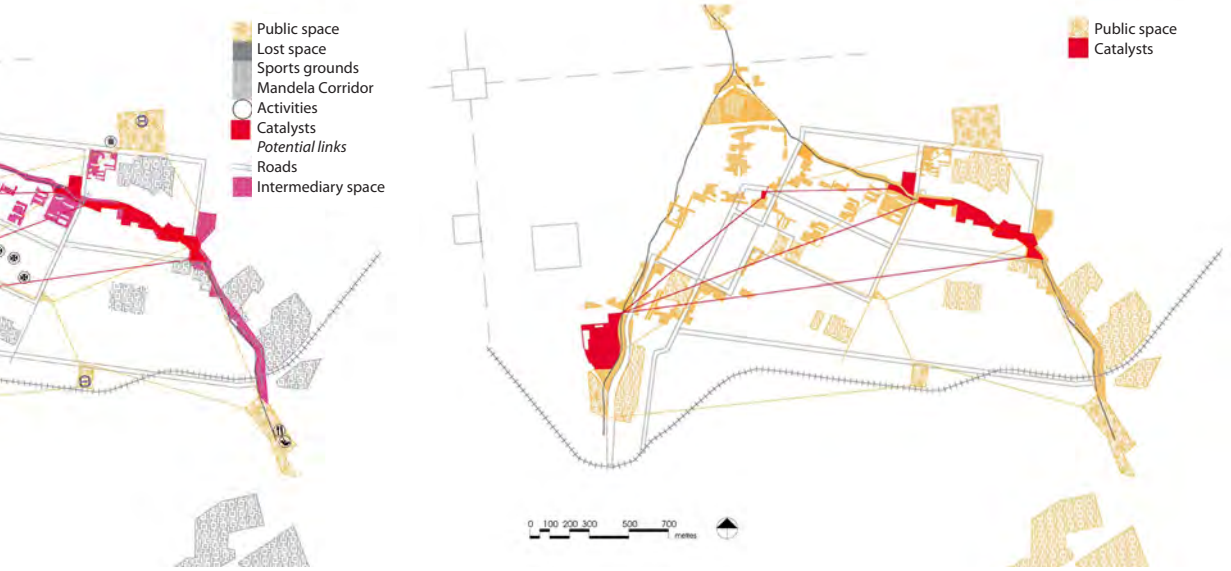
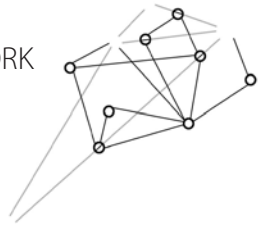


Fig.2.59 Network of links and additional catalytic sites

SELF-SUSTAINING URBAN NETWORK



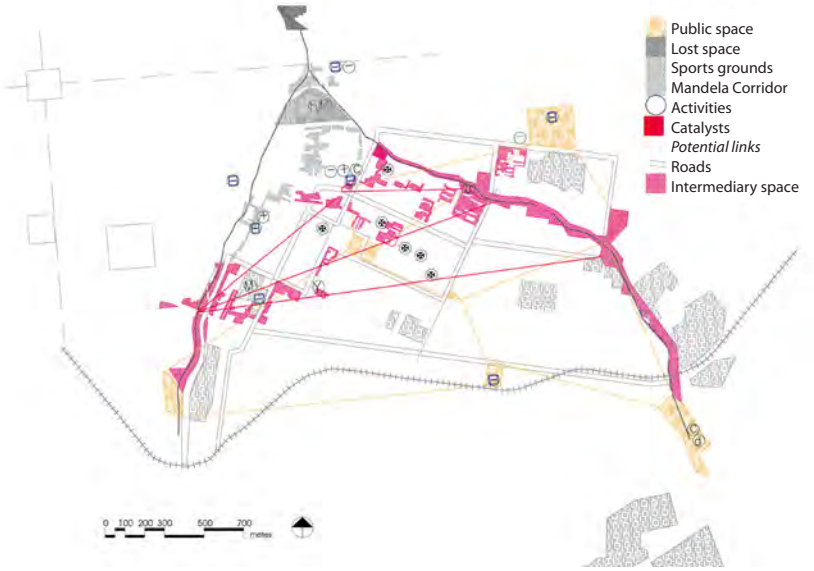


Fig.2.60 Secondary catalysts regenerate the surrounding areas

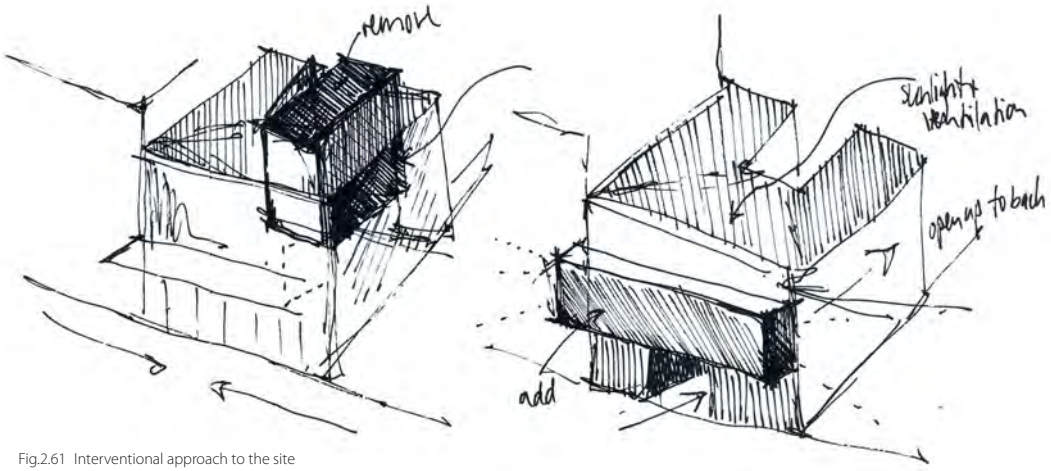


Fig.2.61 Interventional approach to the site

2.8 ESTABLISHING AN IDEAL

"Evolutionary design is healthier than visionary design."
(Brand, 1994:221)

The function of a building is informed by rituals and their evolving relationship with space. While buildings may appear static and permanent, they change and adapt to new usages, existing in both space and time. The question arises of how to deal with the temporal nature of buildings.

Stewart Brand (1994:2), environmental thinker and best known as editor of *The Whole Earth Catalog* (sic) (1968-1972), states that when dealing with existing structures, one also deals with decisions taken in earlier times for reasons mostly unknown. There is no defined recipe when it comes to the the adaptation and reuse of existing structures.

Fred Scott (2008:17) explores interventional design as the "mediation between preservation or demolition". He attempts to justify it as an autonomous and equally important discipline compared to what he calls "pure architecture" that comprises a new building on a cleared site. A structure's obsolescence cannot only be judged according to its aesthetics: may have other intrinsic qualities (ibid:5).

The interventional approach is an attitude rather than a set of definite rules to navigate between what to remember and what to forget, without holding the former in too high regard. Or as Scott (ibid:171) states: "an over-reverent and potentially tiresome regard for every aspect of the existing can clog the creative mind."

Context is an important factor on any scale of intervention as it relates to the intrinsic qualities and conditions of the given, as well as to its specific location (ibid:143).

With regards to the response to the host building, this project follows the stages as set out by Scott (ibid:108) when dealing with an alteration: firstly stripping back[1], which refers to the removal of any degenerated fabric; secondly making good and enabling works, which as the name implies the reparation of removal of fabric to allow for the next step; and lastly new works, where the proposed changes are realized. Scott (2008:113) explains that "stripping back is here proposed as the theoretical basis for the work of intervention and alteration" and one has to ultimately combine the analysis with understanding of the existing tangible and intangible aspects.

The work of alteration provides an alternate option as "a mediation" (Scott, 2008:17) to preservation or demolition. Buildings are never completely static, but always learning and improving in an ongoing process. Alteration is a translation of a building from the past into the present, as well as a projection into the future (ibid:11). This is what keeps a building alive.

The lack of a singular method is what gives the approach of alteration its power – it is endlessly inventive.

This project requires a site specific solution: the intervention must be distinguishable from the old or existing, not reduced to a single quality, but rather as a reaction to the host building that is legible through the combination of deletion, restraint and addition, and articulated through contradiction, contrast and integration, which will be expanded on in the design exploration.

1 Scott expands on the first step to encompass the following four aspects: material, spatial, style, and the building as palimpsest

2.9 CONCLUSION

The chapter served to identify the site, namely #117 Traders located on Esselen Street, Trevenna, which has the potential to act as catalyst for the larger area.

Esselen Street as a distinct street neighbourhood serves as the larger context. The historical background of Esselen Street shows its importance as central activity spine through one of the oldest suburbs in Pretoria and illustrates the influences that shaped the current conditions. Its urban identity and development is explored through mapping and on site investigations.

The proposed urban framework of *Catalyst Culture* (Kotze et al, 2012) sets out the concept of dormant spaces in the urban fabric that can be activated by informal activities and citizen's freedom to shape their environment. These principles can be applied to the interior intervention and potentially contribute to the urban identity and neighbourhood revitalization.

A detailed analysis of the host building follows, looking at form and structure, the history, functions and character. The importance of the structure as part of the street fabric is identified. In addition, the approach to interventional design is articulated.

Detailed investigations include a 360° scenarios as well as conversational interviews. These helped to distil the urban identity and the needs of the residents.

The various investigations serve to understand the specific context and inform the programmatic development and further design explorations.

THEORY 3

The theoretical argument builds on the real world problem: the lack of engagement of people with each other and with their environment, impaired by the fact that there has been little improvement of suitable public space for the development and expression of culture and interaction in the neighbourhood, especially given the influx of the many diverse cultures in the area and the increase in residential density.

The meaning of public space, its appropriation and the existence of parallel realities formed by constantly changing intangible networks are looked at, informing the ways the many uses and needs of shared physical space can be harnessed as an asset. The concept of social friction is explored on a social and physical level as a productive way of interaction and engagement in the urban context as well as its potential applications for the interior.

Fig.3.1 Social movement and points of contact in the everyday

Fig.3.2 Diversity of local residents

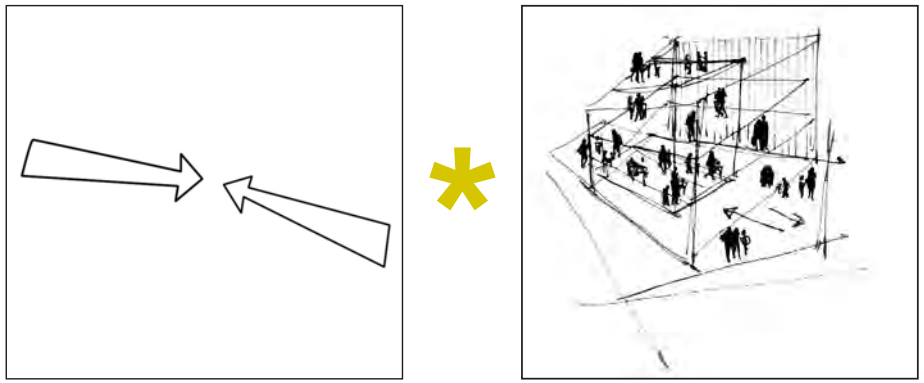


Fig.3.3 Factors that influence formal and informal space appropriation

3.1 INTRODUCTION

This thesis identifies the rituals of contact and interaction with others as potential to explore the parallels of physical design elements and informal activities in the context of everyday city life. More specifically, social friction is investigated as design strategy to realise new social and cultural potential.

The duality of intangible and tangible activities resumes the concept of urban acupuncture touched upon in Chapter 2; the theoretical investigation will look at the effect of individual and collective appropriation of space.

The theoretical argument sets out to explore these various concepts not by adapting urban principles to interior application, but to find new modes of expression from an interior language, thereby contributing to the field from within.

3.2 INTERACTION

3.2.1 PUBLIC SPACE

The present growth of cities and related concerns such as urbanisation make it significant to consider the future in terms of concrete issues that include spatial planning and sustainability, as well as spiritual issues of experience and meaning.

Public space has always been integral to the individual and the collective experience of the built environment. It is important to note though that the meaning thereof has evolved. Traditionally public spaces were associated with cultural formation and political participation; nowadays, these factors are more distributed and shaped by other channels such as the media (Amin, 2006:1). This means that the original significances are not tied to a physical space anymore. Public space has taken on a more social role, where the social response to others is developed. Yet despite a rising consumer culture, "the experience of public space remains one of sociability and social recognition and general acceptance of the codes of civic conduct and the benefits of access to collective public resources"(ibid:2).

A distinction must be made to the local context. Jo Noero, an award winning South African architect, acknowledges that cities are a relatively new phenomenon in Africa (Melvin, 2011:53). There is no culture of public space for the sake of expression except for political intentions.

The street becomes the closest thing to a place with a culture of public space; it serves as connection to other places, where informal activities happen and interaction takes place. Jo Noero sees it as the starting point to foster a public space culture for the sake of pleasure (ibid). He has applied some of the principles in the Red Location Cultural Precinct, where the various buildings located around an intersection are recessed to form forecourts that broaden the street (see Ch.4, 2.14, pg.63). A culture of public space for the sake of enjoyment and leisure, however, does not develop overnight, but is instead a long process.

Fig.3.5 A perceived urban reality

Fig.3.4 Collage representing a parallel reality

3.2.2 NEIGHBOURHOOD+ IDENTITY

Similar to cultural formation that is not tied to a physical space anymore, identity has become a less fixed concept as people have become more mobile. Changing patterns in population movement, developments in transport and advances in electronic communication have allowed the concept of identity to become virtual and frictionless, consisting more of informal and temporary associations (Jamieson, 2009:2).

Identity is seen as main aspect to create a sense of belonging and how one sees oneself in a community (ibid:1). If one considers personal clothing style, decorations and possessions, these are not only acquired and displayed for monetary value, but often as self-expression or having symbolic meaning. Consequently, the immediate surroundings of the larger neighbourhood become an extension of such an expression with which one identifies and attaches meaning.

However, identity is always multifaceted. When applied to a neighbourhood, certain elements of the identity of a place are cherished and safeguarded; in other instances negative legacies perhaps need to be discarded or reinvented to allow a new identity to develop and serve as vision for the area.

The definition of a neighbourhood as a geographically bound area, within which changing social networks nest in one another, overlap and extend beyond the boundaries (see Ch.1, pg.8), itself indicates greater social interaction and common features. But as Carmona et al (2003:115) warn, clustering together physical and social groups do not imply a community. It is reasoned that merely visual contact is superficial; for more profound interaction the people must "have something in common" (ibid:115).

Urban sociologist Ray Oldenburg (1997:16) promotes third space as space apart from home and work. Seen as mediation between the individual and public realm, it forms the "core settings of informal public life" (ibid). He (ibid:14) argues that daily life must be balanced in three realms of experience in order to be relaxed and fulfilling; these are the domestic, the productive and the sociable. Some of the core qualities of the sociable third spaces include that they are essentially neutral, inclusive, offer the element of novelty, provide psychological comfort and support and have conversation as the main sustaining activity (ibid:20-42). Although he paints a somewhat idealistic picture of third spaces, his insistence that cities can and should offer good public spaces that reacquaints people with what these actually mean and offer rare experiences remains relevant.

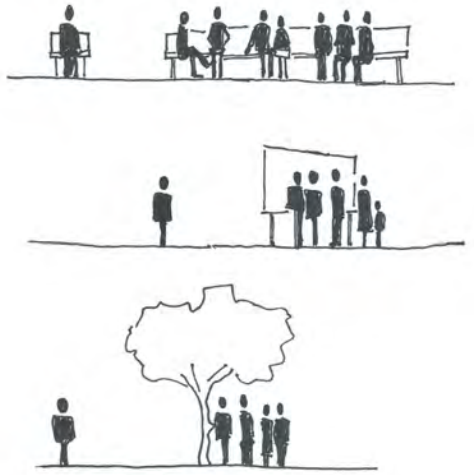


Fig.3.6 Friction can lead to unexpected encounters

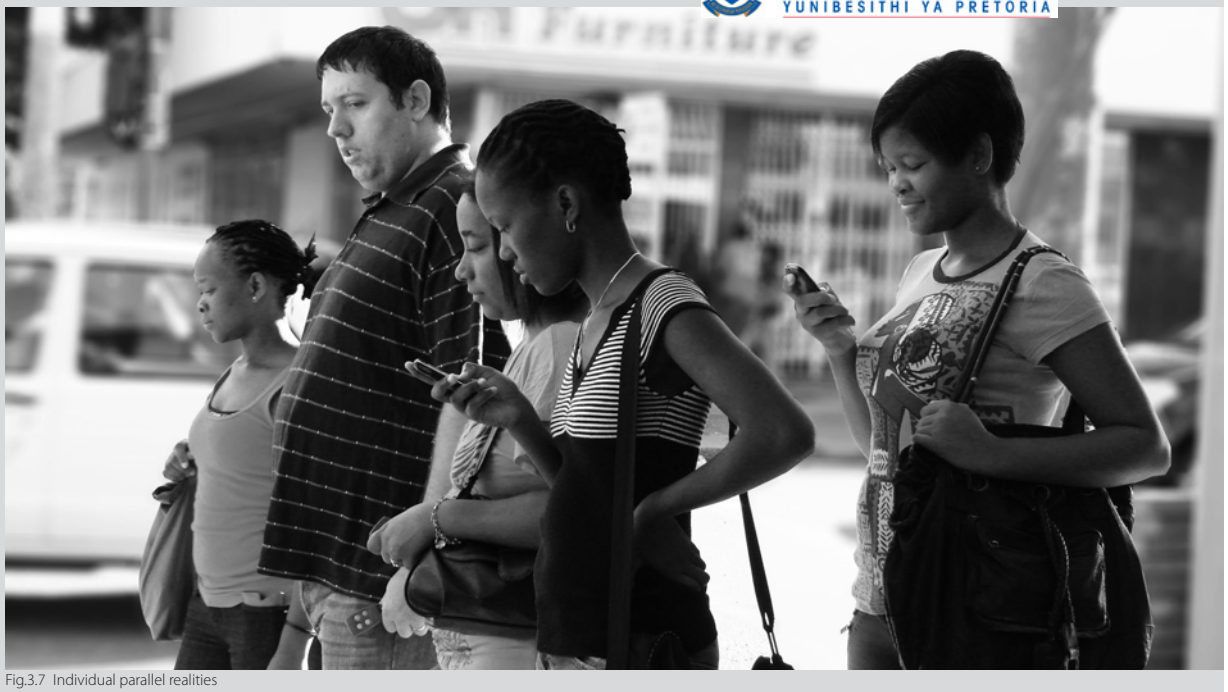


Fig.3.7 Individual parallel realities

Fig.3.8 Everyday rituals and interactions or lack thereof

3.3 SOCIAL FRICTION

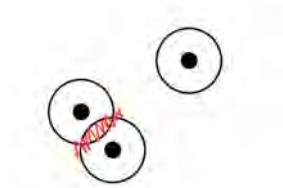
Urban space is important as the appropriation thereof forms part of the everyday in an urban context. Social friction forms a main component of this 'everyday'. It can arise from the exchange of a glance, a chat with a stranger or meeting friends.

Sociologist Richard Sennett (1970:189), who coined the term 'social friction', approached this phenomenon from a social context, advocating that conflict leads to men that are "more sensitive to each other as they become fully grown". Similarly, Jane Jacobs (1961), community and urban planning activist, promulgated diversity as a type of catalyst that encourages engagement and interrelations in neighbourhoods in the 1960s, with the main playground being the street (see Fig.3.9 as example of this type).

Rem Koolhaas in turn developed another idea relating to friction, that of the collision of paths of different people (Fig.3.10). For him this had an effect on the rate of movement; friction was related to acceleration and deceleration (in Kachwalla, 2010:11).

In this case friction is seen as related to daily rhythms being played out, acknowledging the temporal overlapping of the social and the physical. The underlying reasoning of social friction is that through awareness one gains knowledge and understanding of the other or the unfamiliar. The following definition captures the relation between the variable nature of friction and its influence:

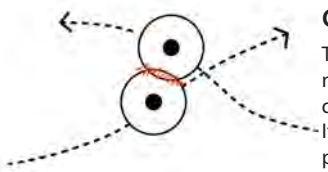
"One might say that social friction is the constant actualisation of difference, which produces a repository of energy that in turn will alter and drive social and cultural phenomena forward in often unpredictable ways ."
(Jensen, 2004:2)



CONTACT POINT

Gradual overlap of social groups. Exchange of ideas in slow movement areas.

Fig.3.9 Contact point



COLLISION POINT

The manipulation of movement patterns of different social groups. It is experienced in the process of movement.

Fig.3.10 Collision point

This also emphasises French philosopher Henri Lefebvre's assertion (1971:210) that urban space is never fixed, but is continuously produced by social actors and how they relate to each other. It is thus argued that culture and shifting patterns of collective and individual identity formation can be transformed, mediated or resisted by urban spaces.

Of course, awareness and civic conduct do not automatically translate into engagement and active involvement, but it is a promising starting point. If the argument is supported that the physical environment can shape social constructs, the question arises of how one can give people the means to engage with and affect the city that goes beyond the aesthetic?

Successful spaces seem distinct and driven by social intercourse. Amin (2006:3) identifies that safe public spaces do share some common traits in the way they are structured: they are busy, open to all, free of frenzy, and lightly regulated. This allows for trust, a sense of familiarity with the unfamiliar. "Urban complexity and diversity are somehow domesticated and valued through the social experience of this kind of urban public space" (ibid:3). This is quite an achievement considering the myriad of influences of environment and people that come together without resulting in chaos.

This thesis supports the argument made by Amin (ibid:2), that the success of our basic coexistence in cities does not stem solely from the quality of social interaction between strangers (in fact he claims this is idealistic, the main inter-personal interaction occurs among acquaintances), but involves the "entanglement between people and the material and visual culture of public space". This does not lessen the significance of the social quality, but acknowledges that there is an important tacit dimension.

1

PHYSICAL FRICTION

Interaction with space and the immediate physical surroundings.

2

VISUAL FRICTION

Draws from visual culture as an interdisciplinary approach dealing with the the visual image. The view becomes more than just seeing but an extended consciousness.

3

SOCIAL FRICTION

Indirect points of exchange: connections are created between individuals due to information obtained from the public character.

By engaging the differences of social groups new social relations are built.
Least movement = Maximum friction

Fig.3.11 Example of how and where the three types of friction can occur

Kachwalla (2010:35-36) identified three comparable categories of friction, namely:

- **INDIRECT**, as points of exchange where connections are created between individuals due to information obtained from the public character (interpreted here as relating to the PHYSICAL environment, from the spatial to the material)
- **VISUAL**, as the engagement with a difference in the line of sight, and
- **MANIPULATED**, as the physical interaction of two or more individuals to exchange ideas (seen here as relating to the SOCIAL element).

3.1 UNIMPOSED ORDER AND THE INTERIOR

If one considers that third spaces are very much driven by social dynamics, meaning small rituals and daily activities of people, the spaces become an overlap of various events rather than being fixed. These more transient informal activities and expressions are often a way of how people resist the order and control of the formal of a city.

The built structures around may offer one reality, but though action and subjective interpretation the city is reinterpreted, as promulgated by Michel de Certeau in *The Practice of the Everyday Life* (1984).

This is where the notion of an unimposed order emerges, not from anarchic principles, but from a learning of the complexity of the social as an asset instead of source of conflict, as mentioned in Chapter 1 (Berthelsen, 2011). Located within the existing system, these "small places of anarchy" (ibid) take on many forms ranging from the individual to collective expression, from being actively protected to quietly acknowledged.

Richard Sennett asserts in his book *The Uses of Disorder: Personal Identity and City Life* (1970) that the acceptance of order in the city leads to the underdevelopment of the individual as well as the community. Applied to city planning, his (ibid, 1970:164) suggestion to replace control with conflict seems highly impractical. Seen from a social standpoint where a certain "productive disorder" can help to create awareness of the complexity of a city as well as develop an ethical code of conduct through the engagement, recognition and understanding of diversity between various groups, his theories have more relevance (ibid:65,143).

From a less literal angle, Sennett's (1970) understanding reminds us that urbanity is not only planning but a state of mind, where thoughts and desires form a force which can shape the city.

Rather than dismissing all authority, the intersection of informal actions with the material context allows an unlimited yet controlled appropriation of space. The same plays out in the interior. It is indeterminate; it can be affected yet is not fixed.

> *"Interior concerns 'capacities to affect', rather than it being defined or described by fixed moments or things such as geometry, order, artifacts (sic) and objects. But it becomes events, in assemblages that are inseparable from an hour, a season, an atmosphere, an air, a life."*
> (Taylor, 2006:343)

It is here that the interior presents the ability to explore the various dynamic relations between three domains of social, visual and material. The interior becomes less defined, restrained by hard and soft boundaries. Space becomes fluid where it is altered by engagement. Yet very specific uses are played out and it is at this scale where the relation between user and space is shaped and developed, which forms the yardstick by which the quality of the experience is measured.

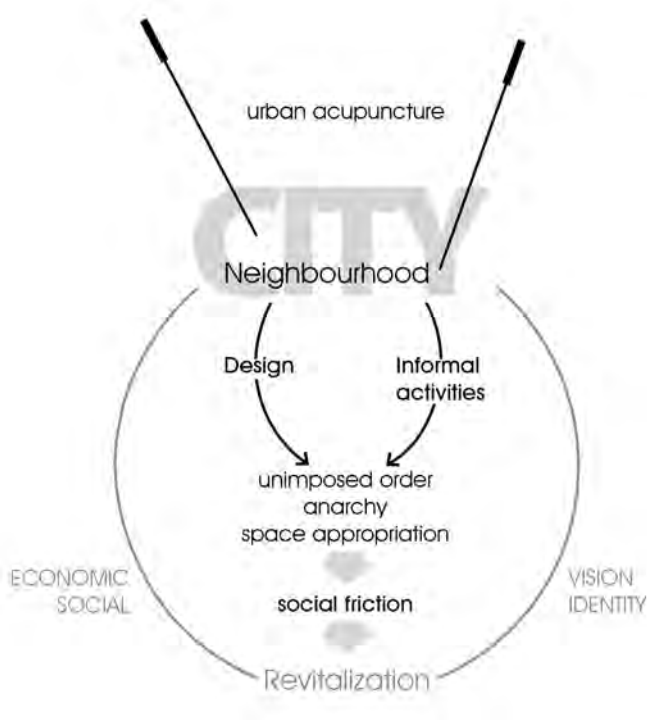


Fig.3.12 Flow diagram showing the interrelated processes of neighbourhood revitalisation

3.5 CONCLUSION

New technology and media allow communication and interaction to increasingly happen independently of space or time. The theoretical argument defends the importance of a physical third space next to home and work, where assembly and interaction can take place.

The focus is placed on the daily rituals and the activity of conversation. Social friction is investigated as strategy to promote social dynamism in an interior context. The investigation is approached from within the discipline to help distinguish the particular qualities of the interior. The indeterminate nature thereof is regarded as an advantage to explore space as an assemblage of unexpected encounters.

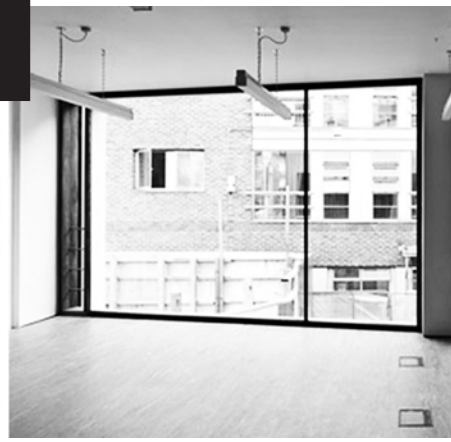
It is at this scale that the theoretical investigation sees the potential of the architecture to manipulate interaction and make meaningful spaces. An interior intervention should explore identified aspects, including the paths of people; the speed of movement; the interrelatedness and level of importance of the social, visual and material culture as well as the properties of physical interior elements.

Since there is no single recipe for an intervention, the theoretical investigation allows the design to translate the building into the present by also addressing anticipated intangible aspects in future.

In conclusion the dissertation identifies the potential for an interior to encourage the engagement of people with each other and with their surroundings, thereby fostering a sense of ownership with the city as an extension of their own identity.

PRECEDENT STUDIES 4



The study of precedents forms part of the investigative process: through the critical examination of existing projects the intention is to understand and learn from the underlying practices and design influences.

The chosen precedents are categorized into four main areas of focus: ① typology, ② function, ③ theory and ④ adaptive reuse. More specifically, these four criteria respectively refer to multipurpose community centres, new morphology combining various uses, the culture of public space and interventional design. They are discussed and evaluated in relation to the proposed design.

Furthermore, a local case study serves as qualitative fieldwork. It incorporates the four categories above and is analysed in a descriptive and subjective nature with the focus on evaluating the object and process.

Fig.4.1 Picture strip of all the precedents and case study, from left Sean O'Casey Community Centre, Casal de la Juventut de Novelda, The Book Club, Dellow Centre, Red Location Phase Two, BAT Centre


Fig.4.2 The entrance looks like a door standing ajar


Fig.4.3 Interior view


Fig.4.4 View from courtyard


Fig.4.5 Round element continued in openings and skylights


Fig.4.6 The high tower clearly visible from the surrounding area


Fig.4.7 Interior courtyards visually connect the various areas

4.1 SEAN O'CASEY COMMUNITY CENTRE

East Wall, Dublin, Ireland
O'Donnell+Tuomey
2009

The East Wall neighbourhood is a place shaped by infrastructural boundaries; it is surrounded on three sides by 19th century railway lines and its street network is offset from the dominant grid pattern. The ground of a former school building was appropriated for public uses, now serving as the site for the new community centre. It is surrounded by low-density two storey terraced housing. The brief required four main uses: crèche, day care (pensioners), sports and theatre (Rattenbury, 2009:62). The local residents also insisted on the new building being tall and visible to mark its importance and have its own identity.

As the four functions all ideally require ground floor location, the architects proposed a single-storey square, with each quadrant accommodating a different use. One edge is flipped up to create a tower that overlooks the surrounding landscape and is a visible expression of the centre's status (Fig.4.6).

Strategy:
The various functions set up an ideal platform for the centre to be open and sociable. Yet present cultural and safety norms dictate that these uses remain separate; one

would for example not allow the elderly from the day care to interact with the children in the crèche.

What is remarkable about this project is how the plan allows for a kind of social revolution (Fig.4.8). Its shape deceives: apart from the outline nothing is square. Elements are moved, slanted and dented, courtyards inserted to create visual and spatial groupings between different uses (Fig.4.5, Fig.4.7). This allows for functional crosspollination and diagonal interactions. Yet each quadrant retains its own character: volumes, orientation and materials adjust to each use.

Despite the various elements and uses, the building remains clear and understandable. As Rattenbury (2009:69) succinctly summarizes: " It [the centre] uses extraordinary skills to set up possibilities, in a clampdown culture, for activities and interaction – and then steps out of the way to let those activities happen".

Application:
- The simple plan allows a complex interaction of programme, space, visual connections and merging of interior and exterior. At the same time it makes the building easy to understand and navigate.
- Each quadrant has its own character that reflects the function. This ensures a lasting interest and variety; nevertheless, the continuation of materials and repetition of the circular design element, modified for each area, results in an overall congruous structure.

1- Crèche
2 -Sports
3 -Theatre
4- Day care

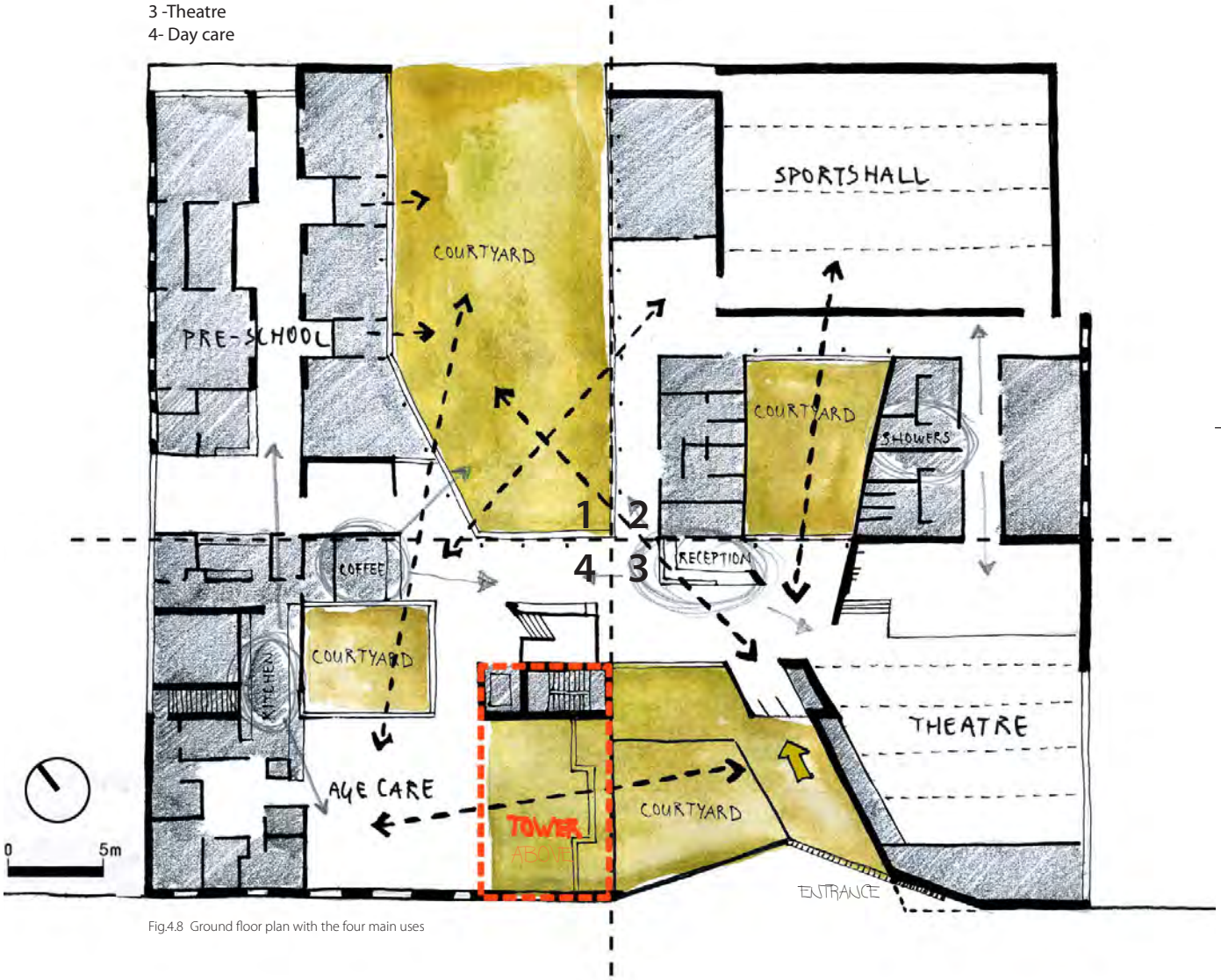


Fig.4.8 Ground floor plan with the four main uses

4.2 CASAL DE LA JUVENTUT DE NOVELDA

Novelda, Spain
CrystalZoo
2009

An old school and its yard have been reinvented and adapted as a youth centre that accommodates contemporary needs. After a public inquiry initiated by the local council, it was established that the area needs a physical space for social groups where these can realize cultural activities and hobbies in a controlled or supervised environment. The centre focuses on pre-adolescents (< 12 years) and a 'hotel of activities' caters for adolescents from 12 to 20 years (Warmann, 2011).

Strategy:
The main feature is the addition of a skin of polycarbonate panels that wraps around the upper part of the building (Fig.4.10). It serves to homogeneously unite the various functions as well as organize the interior spaces, which range from the inviting and interactive to the more tranquil. The skin accommodates new lighting, energy and information systems to cater for changing environments on the interior, offering easy access to the services and optimizing costs and energy outputs.

By revealing the original building underneath the skin it creates a dialogue between the different stages in the building's life. The façade successfully contrasts colour and transparency (Fig.4.13).

The yard serves as valuable open space in the dense residential area. The paving pattern creeps up on the lower ground walls and seems to anchor the building to the site. The open space also features grassy mounds with some of the exterior soft areas creating links to the interior.

Application:
- Interior-exterior boundaries become vague, with the exterior seeming to continue into the interior through the irregular passage lined partly with Astroturf that features skylights and sidelights (Fig.4.12)
- Polycarbonate sheeting is introduced on the façade: it gives the structure a new identity, contrasts with the existing materials and serves a functional purpose, namely hosting new services systems
- The irregular shaped plan allows for spaces to flow into one another yet create areas of varying degrees of privacy and interaction.


Fig.4.9 Existing school building that was converted


Fig.4.10 Exterior skin and yard with grass mounds


Fig.4.11 Entrance with information area

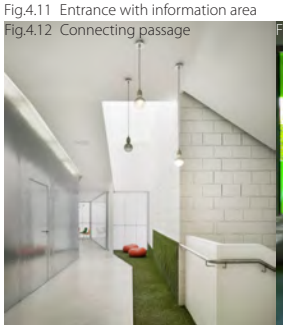


Fig.4.12 Connecting passage


Fig.4.13 Recessed windows highlighted in bright colours

4.3 THE BOOK CLUB

Shoreditch, London, England
Shai Akram
2010

Situated in a Victorian warehouse, this former club was transformed into a multi-space which includes a bar, exhibition space as well as workshops and events in art, music and film (Argyriades, 2012). The Book Club occupies the lower two floors of the building with offices located on the floors above. The programme caters for the public as well as the office workers, with a canteen serving as a meeting place to eat and drink.

Strategy:
The lower two floors of the warehouse were completely gutted: lowered ceilings, wallpaper and false walls were removed. The existing exposed brick walls have been left untouched, except for cut-out circles that visually connect the different spaces and hint at the general transformation (Fig.4.16). Full length windows provide a connection to the street and allow spaces to be naturally lit (Fig.4.15). In the basement where the bar is located, a different, more intimate, atmosphere has been created with low ceiling levels and selectively illuminated areas.

Commonplace bar and restaurant features such as mosaic tiles and bookshelves are reinterpreted through specific installations that counter their historic application. The ordinary light bulb is repeated to cover a whole ceiling (see Fig.4.1, pg. 56). Electrical conduits and existing ventilation ducts become focal points through accent lighting and decorative arrangements. The different textures and combination of random and specifically designed components all add to the mismatched lab-style feeling.


Fig.4.15 Dining area with long tables evoke a communal feel


Fig.4.16 Round cutouts in wall

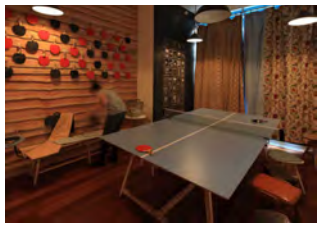


Fig.4.17 Game room with ping pong table

Application:
- The combination of unusual programmes makes this place unique; ideally one can imagine endless possibilities where people establish new rituals. Business meeting during a game of ping pong? Poetry reading over a beer? Coming up!
- Familiar elements and materials are reinterpreted through tactics such as repetition, arrangement and application, which results in a playful, uncommon-common environment.

Fig.4.14 Entrance with graphics mapping out the space's two floors

Fig.4.18 Bar with mosaic wall and logo add to the variety of textures and repetition of elements

Fig.4.19 Front façade with its angular folded band and snapshot windows

Fig.4.20 Concept sketch with the flexible façade closed

Fig.4.21 Concept sketch with the flexible façade open

Application:

- The zigzag protrusion of the façade animates the courtyard in front and makes the building extroverted. The visual connection to the exterior allows for an awareness of context and climate yet creates a sense of internal privacy
- The sliding doors offer control for the user and renders the façade active and playful (Fig.4.20, Fig.4.21)
- The conceptual intent to highlight rather than hide the issue of homelessness is successfully translated into the physical design through the use of colour and distinct materials

4.1 DELLOW CENTRE

East End, London, England
Featherstone Young
2011

Providence Row is a homelessness charity providing essential services such as food and showers. The addition of the Dellow Centre adjacent to the day care facility provides space for structured activities for the users; it incorporates a bicycle workshop on ground floor and an art studio and performing arts space on the first floor. The top floor hosts office space for the charity (Etherington, 2012).

Strategy:
The centre faces the existing day care facility across an underused courtyard. The architects wanted to create connections between the two buildings as well as animate the courtyard.

The façade features a zigzag mask forming a central horizontal band (Fig.4.19). The ceiling high windows provide a series of snapshots of the interior, while allowing clear views to the outside (see Fig.4.1). Green and yellow perforated cladding panels cover the ground floor and upper floor façades.

According to Featherstone Young (in Etherington, 2012), the façade serves as a visual metaphor showing that the homeless are not one-dimensional and stereotypical with the bright colours confronting the invisibility of homeless people.

4.5 RED LOCATION PHASE TWO

New Brighton, Port Elizabeth
Noero Wolff Architects
2011

Phase Two comprises of a new art gallery, library and archive joining the existing Museum of the People's Struggle. The relevance of the precedent to this dissertation lies in the exploration of the street as a generator for the creation of public space in the local context of South Africa. The width and edge articulation of a street contribute to its character, which in turn influences its function: a street can serve as a thoroughfare, can act as a decelerator that encourages public gathering and can extend its permeable boundaries into adjacent spaces and structures.

Strategy:
The project architect, Jo Noero (Melvin, 2011:53) remarks that in Africa cities are a new phenomenon; there is no well-developed African urbanism and designs rely on European models. There is no culture of public squares used for their own sake as places of leisure, as opposed to the traditional role of cultural formation and political participation.

In Africa the street can act as starting point for a culture of public space to develop; it is the connecting pathway along which interaction and informal trading takes place. Jane Jacobs (1961:39) argues for the value of streets, more precisely of sidewalks, in cities, declaring that a "city sidewalk by itself is nothing"; therefore it must be used as a public space otherwise it ceases to be.

Even in the West the role of the public space has evolved; the traditional physical platform for cultural and political expression has given way to less tangible outlets such as media and more private locations. Despite this, public spaces remain vital as places of recreation and learning, where "interpersonal and intergroup cooperation and conflict can be worked out in a safe and public forum" (Amin, 2006: 1-2).

The evolution of a vital 'urban culture' is a process with many intangible factors. However, the new buildings of Phase Two of the precinct successfully expand on the familiar concept of the street.

The gallery is indented 45° to expand the corner. Large celling-height windows provide views into the gallery as well as outwards. The street in front of the library also extends to form an entrance court.

Together with the courtyard in front of the existing museum, the two streets crossing each other physically extend to create intermediate zones in front of the buildings that one can imagine to gradually become meeting spaces for pleasure, as indicated in Fig.4.22.

Application:
- As the proposed design intervention is part of a street neighbourhood, this precedent shows how the design takes a familiar element, the street, and adapts it to become public space. This design consideration has a catalytic effect by creating a platform for future expression and activation.

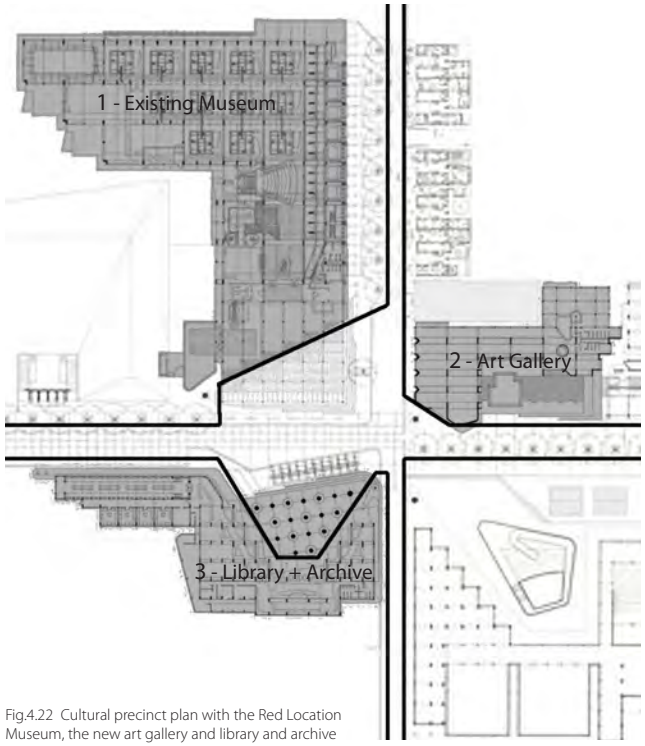


Fig.4.22 Cultural precinct plan with the Red Location Museum, the new art gallery and library and archive

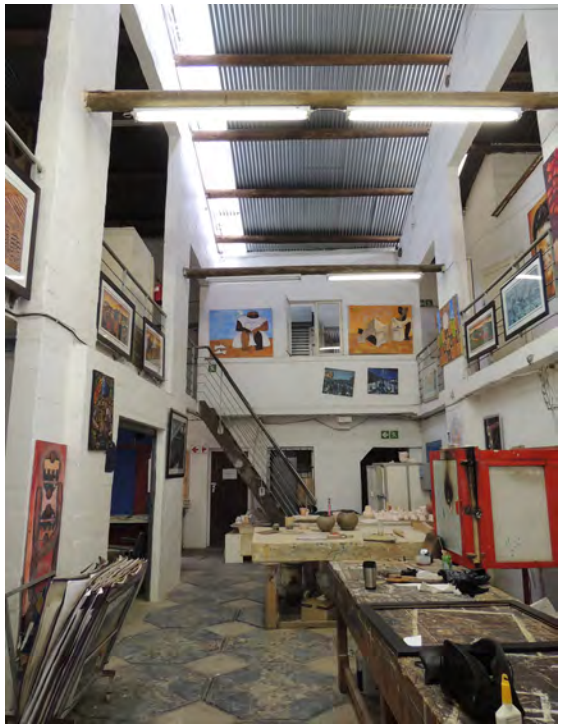


Fig.4.23 Workshop spaces around the double volume

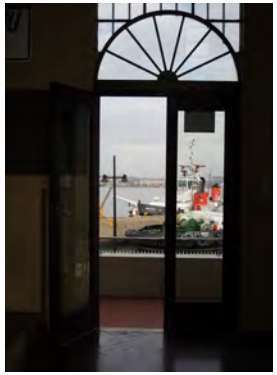


Fig.4.24 View of the harbour

Fig.4.25 Courtyard in the centre of the building

4.6 CASE STUDY: BAT CENTRE

Durban Harbour, Durban
Paul Mikula+Jennifer Whitehead
1995

The Bartle Arts Trust (BAT) Centre, established in 1995, was built around an existing naval training base. It is situated between the esplanade and the Durban waterfront. The non-profit organisation promotes music, visual arts, dance, craft and literature in KwaZulu-Natal, running various programmes including artists in residency, holiday art workshops and various events.

This case study differs from the other precedents in that it was physically visited. Interviews with artists and staff contribute to a greater understanding in order to assess the success of the project not only terms of the form and expression but also functionally and spatially. It serves as a local real world example of a similar typology and desired cross-programming.

Strategy:
A large part of the building's identity is its relation to the very specific context. The main façade, functioning as a giant active mural that also features sculpture and mosaic, looks out onto the harbour with the elevation to the city side reserved for services. It is painted differently every few years (Fig.4.26).

The façade can perhaps be dismissed as decoration in the sense of the word's implied excessiveness, but this would be to negate the important functions it plays as part of the building. People have always shown the desire to decorate their dwellings and even clothes, making something personal and giving meaning to it.

In this case the decorated façade as well as other elements throughout make structure accessible by softening the harsh harbour context; at the same time it establishes the centre's unique presence and becomes part of the branding and identity of the organisation. In addition it reflects the function by transforming the building itself into an artwork.

The structure is organised on two levels: the main façade features shops on ground floor with dual staircases leading to the main entrance on first floor (Fig.4.26). The stairs also lead to the bar and restaurant with a terrace looking out onto the harbour (Fig.4.24).

On entering the entrance foyer the original Drill Hall is to the left, which now forms a performance venue. To the right is a mezzanine level serving as exhibition space. Stepping through the entrance foyer one reaches a central courtyard from which one can glimpse some tall buildings implying the city beyond (Fig.4.25); to the other side through the glass doors of the bar one has a view of the harbour.

The courtyard provides clear orientation and links the various programmes, whilst the built structure around screens noise and pollution from the city. This also oddly lets the exterior courtyard feel contained and intimate compared to workshop/studios described as follows.

The workshop spaces are located on two levels that are centred around a double volume (Fig.4.23). Walls have large openings and take on a structural role more than separating spaces. This allows for vertical and horizontal transparency in terms of visual connections that let the various smaller spaces seem part of a larger fluid one. Various studios overlap, ranging from ceramics to

Fig.4.26 BAT Centre main façade

sculpture to graphics as well as a dance/practice hall. Visitors can come and interact with the different arts and artists. Once more, the art and creative processes become interlinked with the architecture.

The original bowstring trusses are visible in the workshop area, contrasting with the bagged concrete block walls (Fig.4.23). Translucent corrugated sheeting allows light into the double volume, with ceiling-height windows ensuring sufficient daylight levels on the second floor. The ground floor features niches with roller shutters, which although a good idea conceptually, seem dark and do not integrate with the studio spaces.

The materials used make up an eclectic mix that is associated with the townships, where elements are reused and recycled, as seen in the staircases and windows.

The building responds to the hot and humid climate of Durban with high volumes and open spaces with openings for cross ventilation. According to Sithole (2012), who is the marketing coordinator for the centre, some rooms do become very hot in summer, specifically the performance venue, where they had to install additional air-conditioning. Also, some of the materials struggle to withstand the marine environment.

Usually the success of such multipurpose centres can be determined by looking at the context, the durability and the programme. Perhaps not having the desired catalytic effect for further development in area yet, the recognition and on-going support of the various programmes and events speaks for itself.

Architect Paul Mikula (in Thorn, 2011:3) says that "Architecture and design aren't about buildings but rather about the people, plants, cats, the sky, trees, bricks, music and everything else that goes with them." In this case the building encourages the rest: it has an air of improvisation, allowing crosspollination of cultural activities and permitting contradictions; reminding one of Stewart Brand's (1994:24) low road buildings that are empowering because they are adaptable and not precious.

Application:
- Example of how identity, space and built form integrate and reflect in the architectural expression
- The workshops and the courtyard show how the flow of spaces can create interaction and cross-programming
- It has become a landmark more through referral - the building lacks visual and physical prominence from the city

4.7 CONCLUSION

Differently scaled local and international examples are chosen to provide insight into how theory and programme can direct concept and design. The precedents and the case study were chosen for aspects relating to the proposed design; all of which explore some aspects of the link between architecture and social interaction.

In summation a few key points:
- Architecture can set up possibilities for interaction (be it the plan, vertical spaces or diagonal visual connections)
- Design can relate to more than the physical, indicating the function, identity or abstract conceptual message
- Familiar elements and materials can be reinterpreted, e.g. by arrangement, repetition or using them for other intended purposes
- Potential of spaces to take on different qualities that can even be contradictory, e.g. open yet private
- Architectural elements can become something more, a staircase need not only be a staircase

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CONCEPT DEVELOPMENT 5

Within the setting of an urban scale street neighbourhood, the dissertation explores the catalytic effect an interior can have by focusing on daily rituals and activities played out by the many different people and cultures. The design concept emerges from the aim to increase engagement of people with their environment through a balance of formal design and activation through intangible activities.

The programme and user groups are rationalized, as well as a potential client and funding options identified.

The insight gained through the theoretical, contextual and tangible investigations in the previous chapters is consolidated into design influences and the proposed intervention.

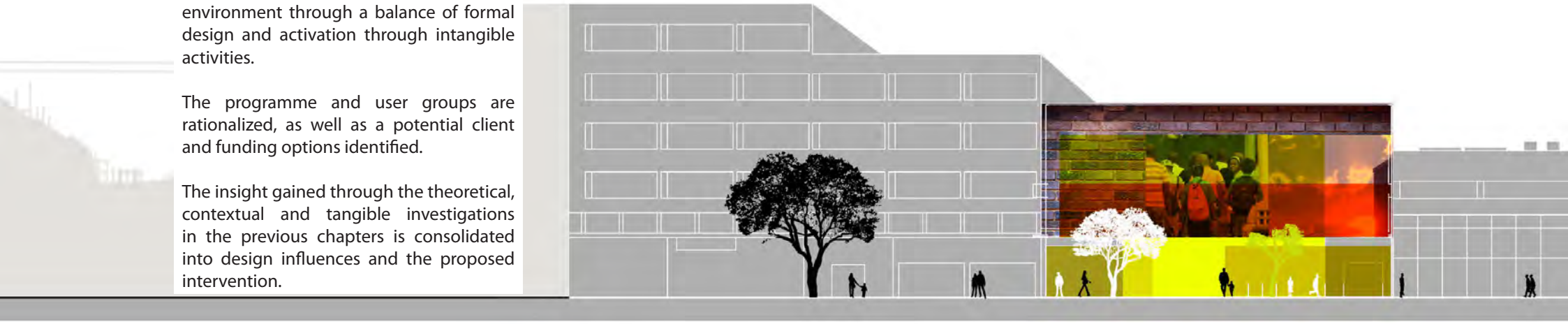


Fig.5.1 The façade takes on different characters

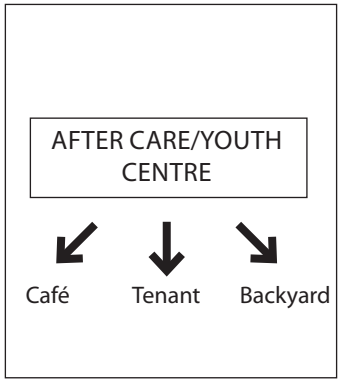


Fig.5.2 Distribution of functions

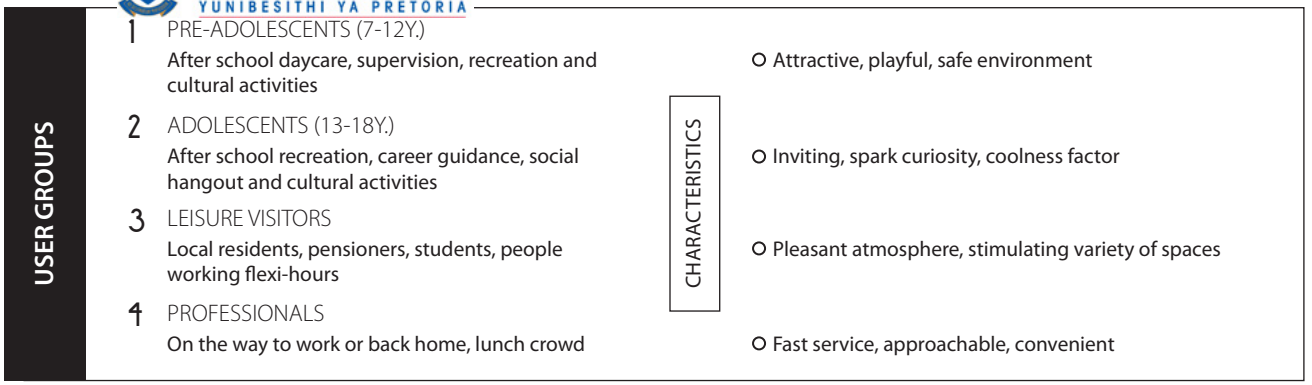


Fig.5.3 The four main user groups

5.1 INTRODUCTION

The concept results from the theoretical investigation of social friction and how it is translated into a physical manifestation through a combination of the social, physical and visual aspects.

The project proposes a conversion back to multi-use, with public functions including a café, rentable tenant space and an open public area on ground floor and a day-care/youth centre on the two upper floors (Fig.5.2). On a practical level, the various programmes have to be separated but through unexpected visual connections, ambiguity of use and flexible spaces the different programmes become interlinked and complex.

As stated, space is regarded as fluid and alterable by the unfolding of events. This is explored through the circulation and circulatory interior elements that, instead of having fixed boundaries, extend into a series of zones that range from the intimate to more public. Walls become dynamic thresholds that provide changing, engaging environments for individual as well as for collective expression.

5.2 USERS

The proposed functions cater for four main user groups as shown in Fig.5.3. The various conditions for each group indicate a desirable multi-spatial experience that must yet form part of the overall identity of the building.

The day-care/youth centre is seen as run by an organisation that offers various programmes. The space caters for the following needs for individuals and groups, together with various supporting functions:

- Supervised leisure activities not commonly found in public schools
- Academic support, consultation and career guidance
- Workshops and holiday programmes
- Exploration and expression of culture and identity, where one is exposed to the behaviour of others who are different from oneself
- Sense of belonging and place where a new 'community' can emerge

After-hours and on weekends the various spaces can be rented out for various other community uses.

Fig.5.4 Timeline showing the different uses and staggered crowds

Fig.5.5 Conceptual drawing of entrance

5.3 CLIENT

The proposed client consists of a primary organisation that is responsible for the running and management of all activities of the day-care centre. The café and tenant space on the ground floor is rented out for income. After-hours and on weekends the various spaces of the day-care can be rented out for various other community uses, in addition to the open space that can accommodate events such as parties, performances, a weekend market, etc.

This organisation would ideally be supported by a combination of private and governmental agencies.

The following have been identified as potential supporting clients:

1. National Youth Development Agency (NYDA)

It supports initiatives that empower and advance the economic development of young people. The agency's various functions include research and development, information services as well as the National Youth Fund.

Fig.5.6 Logo of the National Youth Development Agency

2. PEN (Participate, Empower and Navigate)

PEN, founded in 1992, is a non-profit faith-based organisation that caters for various needs that people living in the inner city deal with. They work with other institutions such as the Sunnyside Faith Community located in the Bronberg church campus and the Department of Education at the University of Pretoria. Over the years they have bought several properties that serve as their offices as well as provide affordable housing units and rentable office space, which provides a steady income covering basic services.

Fig.5.7 Logo PEN (Participate, Empower and Navigate)

PEN has two initiatives that cater for the youth specifically; these are located in Vos Street in Sunnyside in 2011:

- PenKidz is a ministry for primary school children
- InFusion is a youth church with members from the ages of 13 to 19

3. Government institutions

Organisations in the surrounding area such as the DTI, which has a non-profit advice bureau, could offer educational workshops and career guidance.

Fig.5.8 Logo of the Department of Trade and Industry (DTI)

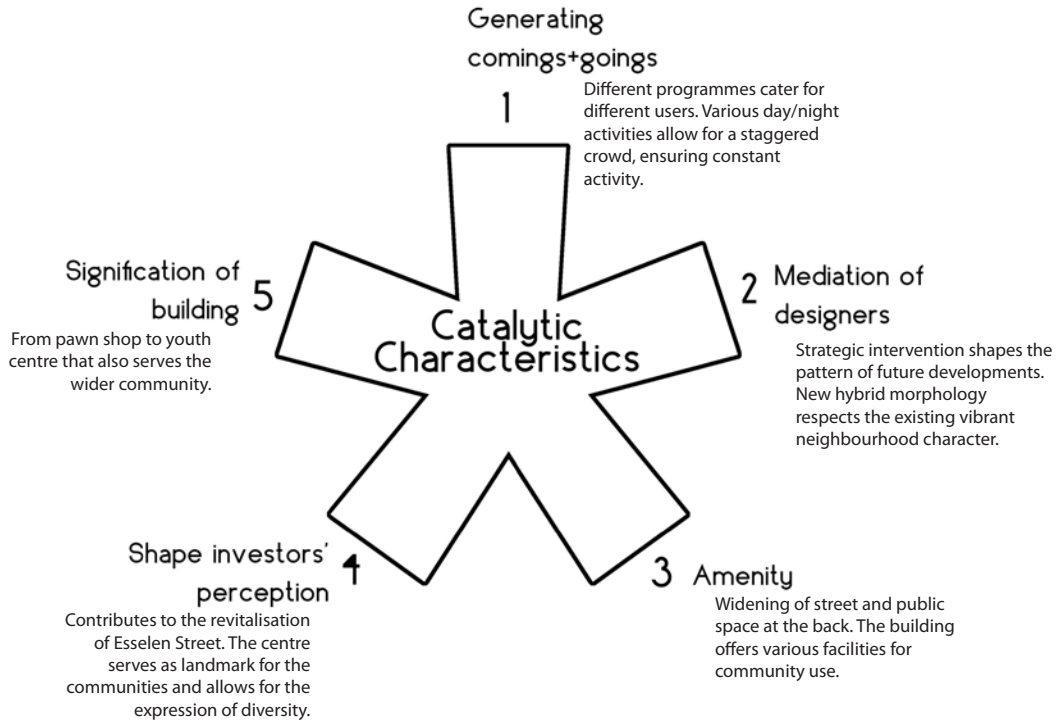


Fig.5.9 Five ways of how the intervention can spur surrounding development

5.4 DESIGN INFLUENCES

5.4.1 WHAT IS A CATALYTIC BUILDING?

In Chapter 2 the site is identified as a potential catalyst for the area, tying in with the MDC framework. What does this mean exactly? *The Oxford Dictionary*'s (2000) definition of a catalyst as "a person or thing that precipitates an event", hints at the triggering effect as well as a sense of the unexpected.

In order to better specify what a catalyst is in the context of the built environment, Sternberg (2002:31) compares it to other similar terms such as anchor, magnet and activity generator. These all have traffic-generating effects. In the case of a catalyst, the distinction should be made that the increased activity also spurs surrounding development (ibid:33).

Increased human activity does not guarantee the place to be catalytic, nor is generating more traffic necessarily better, as overcrowding and increased traffic can have a counter effect (ibid:37). Smaller venues with more events can be more catalytic as they have staggered crowds and a more continuous flow of people. It must also be noted that the building itself can be catalytic, the function thereof, or both.

The catalytic structure influences the owner and the user, but also generates interrelationships with the public realm and with other buildings, which, as Sternberg points out (ibid:34), "introduces an important noncommodifiable element". It does this once more by spurring surrounding development. Sternberg (2002:35) explores five ways of how this is achieved to serve as guideline when assessing the validity of a structure that claims to be catalytic (Fig.5.9).

The selective intervention aims to have a catalytic effect on the greater neighbourhood by

- Becoming a landmark that contributes to the area's identity
- Contributing to the commons as part of city life where communal values develop and individuals can appropriate their environment on a personal level
- Providing a human-scale place where tangible and intangible connections can be formed and strengthened
- Encouraging staggered crowds by catering for different user groups and offering activities at various times

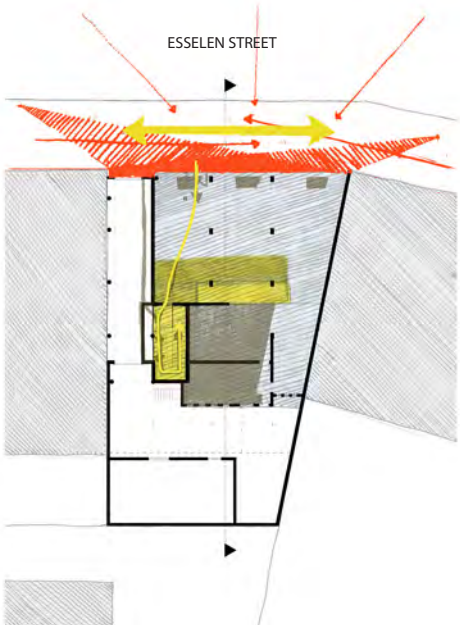


Fig.5.10 Design guidelines on floor plan

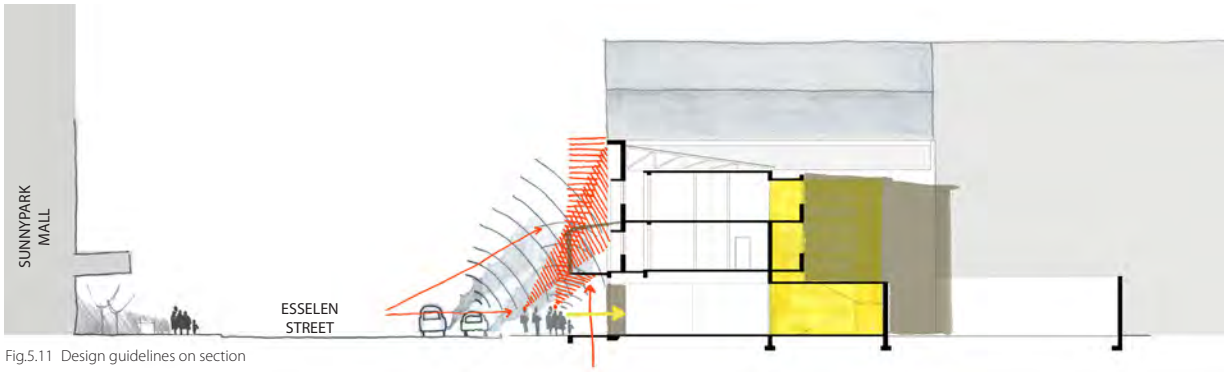


Fig.5.11 Design guidelines on section

5.1.2 CONTEXTUAL FACTORS

Factors which influence the design include: context, climate, structure, edges, circulation, sightlines, historical development and pedestrian movement. These were mapped and assessed according to their significance.

The three main influences were overlaid into a composite on plan (Fig.5.10) and section (Fig.5.11), which lead to a clarification of aspects to be addressed in the design investigation:

1. CIRCULATION

- The original staircase served its function as private access from the driveway to the flats above. For the proposed public-use building the entrance and circulation take on a more prominent role.
- The distance of the circulation from the street can serve the purpose to draw people into the building and vertically up.

2. HISTORICAL INFLUENCES

- The architectural significance lies more in the function of the original building as mixed use
- On ground floor the original shop front with three entrances and setbacks provided an engaging edge to the pavement.
- The later addition enclosing the original courtyard is of inferior structural quality and prevents the infiltration of natural ventilation and daylight.

3. SIGHTLINES

- The location of the building on the bend of the street has potential, but the structure itself is not very noticeable.

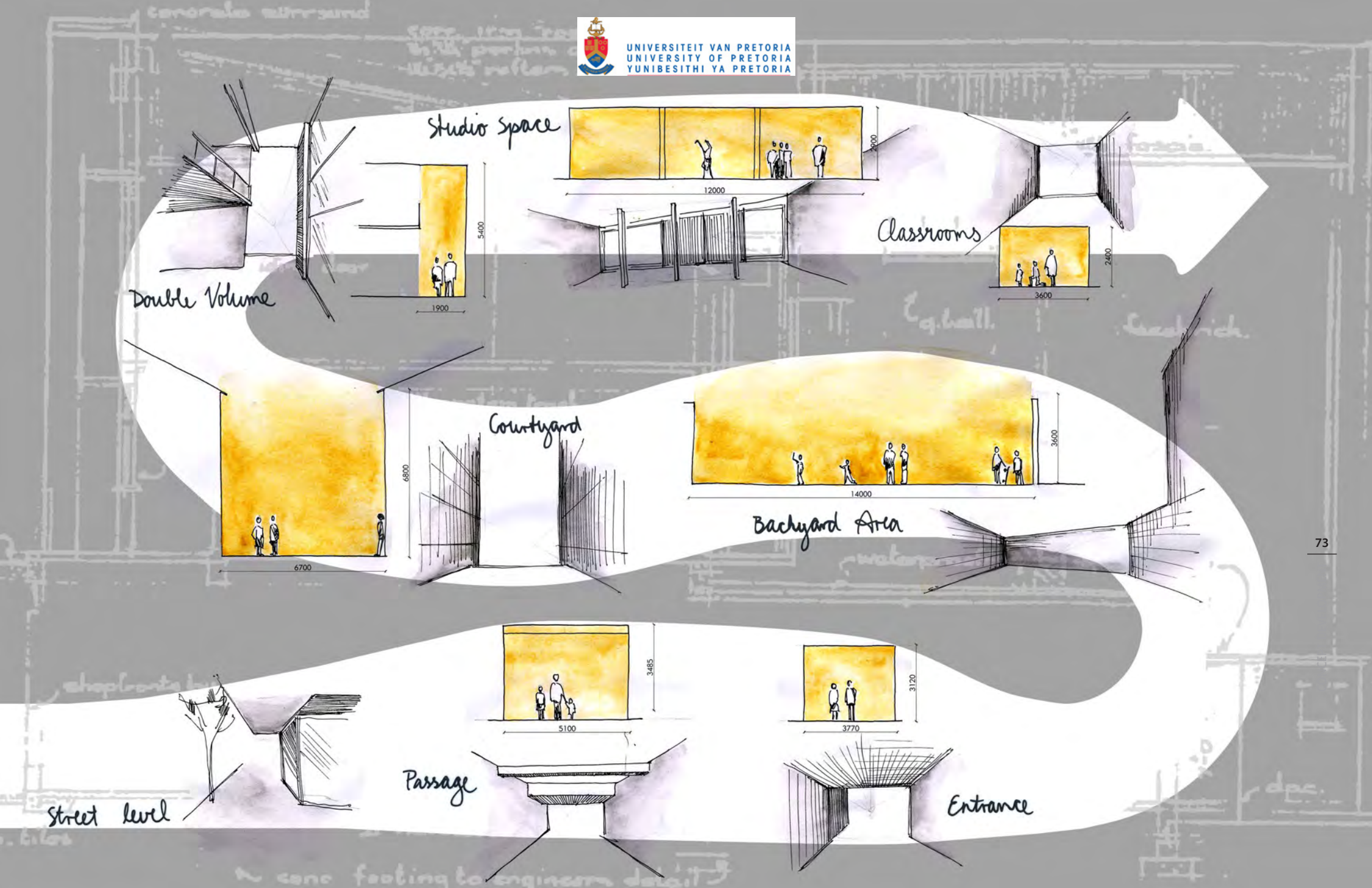


Fig.5.12 Spatial exploration along the circulation route created by the proposed changes

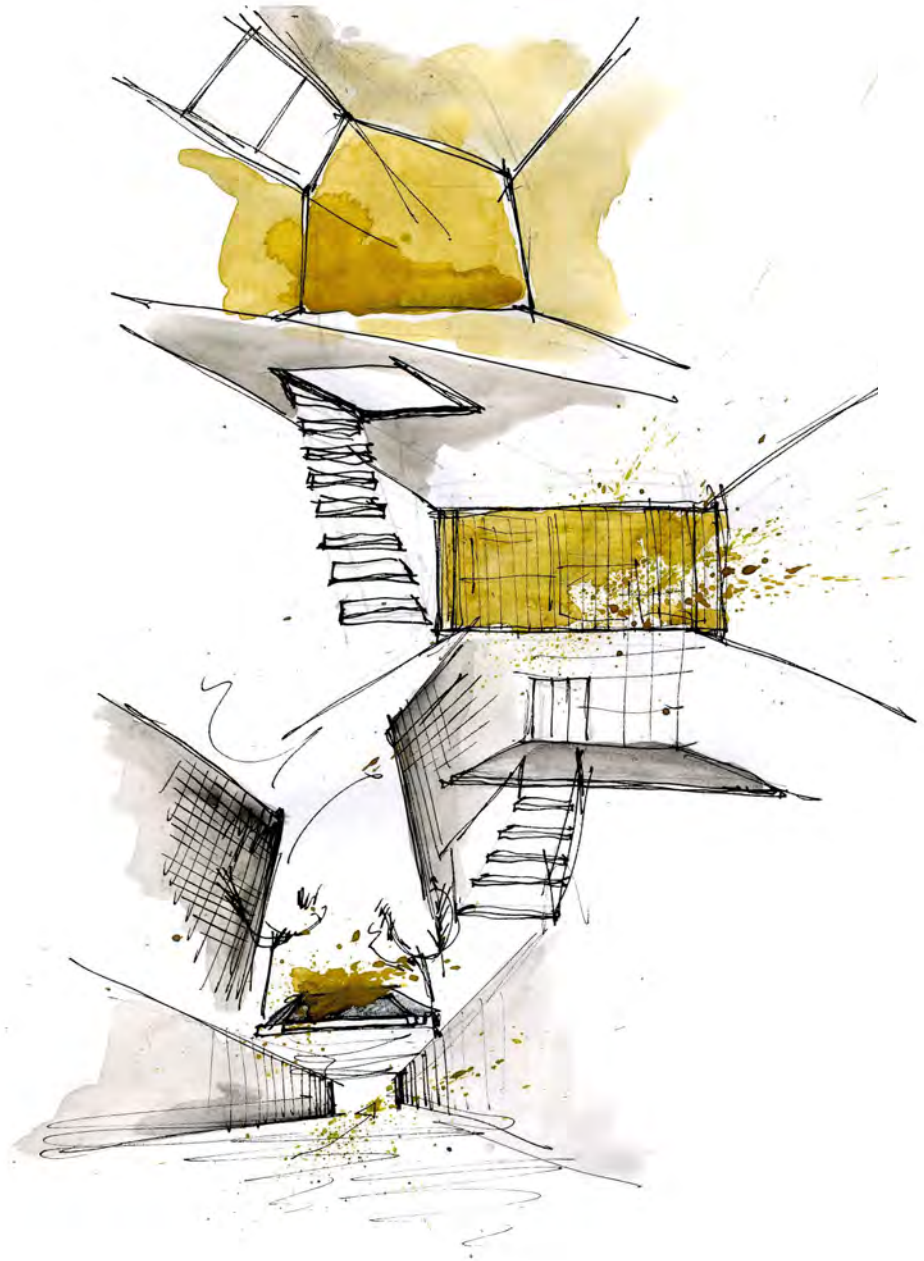


Fig.5.13 Interlinking the spatial experience and circulation

Fig.5.14 Overlapping of functions

5.4.3 CONCEPTUAL APPROACH

The concept derives from the threefold physical, visual and social friction explored in the theoretical investigation. This is used as a starting point to rethink the relation between the user and space. The tangible and intangible manifestation of friction is considered on various levels: existing versus new, static versus more lively activities, transparent versus ambiguous and individual versus the collective.

Social friction cannot be engineered solely by the availability of public space; everyone has a different expectation of what it is and engages with it to different degrees. The potential of the interior lies in its indefinability that can respond to these distinct engagements; where the physical context intersects with informal activities. A single real place can juxtapose time and actions to offer unexpected moments of individual and collective experience.

Traditional interior elements are explored for their ability to allow for friction, through their materiality, as visual elements and through spatial definition.

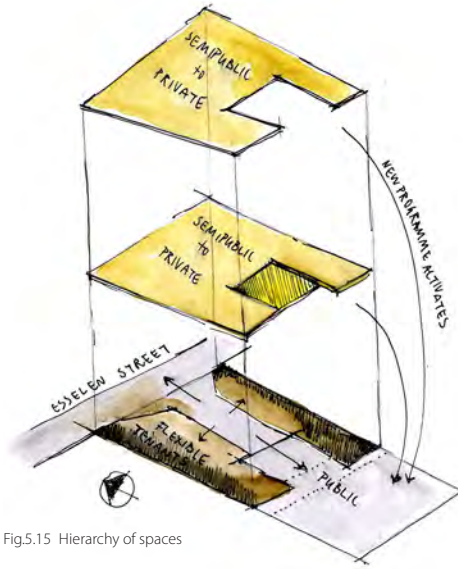


Fig.5.15 Hierarchy of spaces

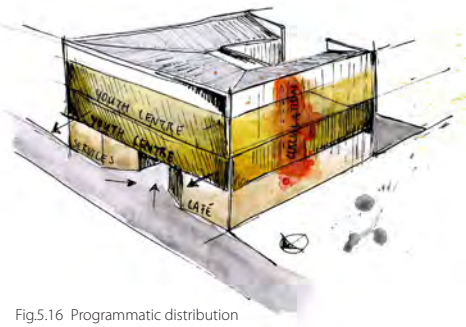


Fig.5.16 Programmatic distribution

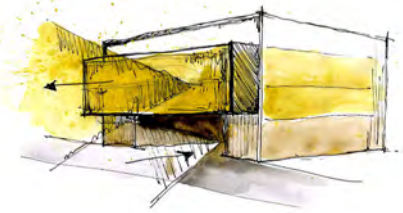


Fig.5.17 Conceptual manifestation

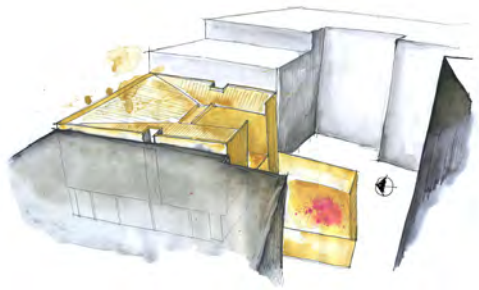


Fig.5.18 Context

HIERARCHY OF SPACES

Extending the street leads through the building to the new public space at the back. The new programme acts as activator and activity generator. The upper two floors are semi-public to more private and host the building's main programme.

PROGRAMMATIC DISTRIBUTION

The ground floor accommodates open space for public use, rentable retail space and a cafe. The first and second floor host the youth centre with flexible rooms available also to other community groups. The circulation is located further to the back, acting as central spine for interaction.

CONCEPTUAL MANIFESTATION

The concept proposes to open up the building on ground floor, inviting children and adolescents as well as the curious. The upper floors physically and conceptually push out toward the street, marking the change in programme and allowing activities happening on the inside to engage with the street.

CONTEXT

The public space area at the back is surrounded by higher buildings. This specific context is used as an asset to create the feeling of a sheltered backyard in the city. How the context affects the climate and possible passive design strategies are also considered.

Programme

Social public space is located on ground floor and freely accessible. The idea behind the public living room (Fig.5.19) is that the space is shared yet at the same time offers a sense of personal ownership. The two upper floors accommodate the day-care/youth centre.

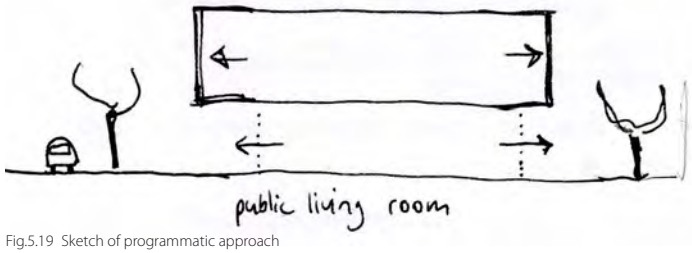


Fig.5.19 Sketch of programmatic approach

Structural

The elements on ground floor are solid; as one moves up they become more flexible and lightweight (Fig.5.21). This allows each floor to have a different character that corresponds to the various programmes. It also contributes to the flexibility of spaces to change from public to more private.

Junctions explore the friction between existing and new, solid and light, permanent and temporary.

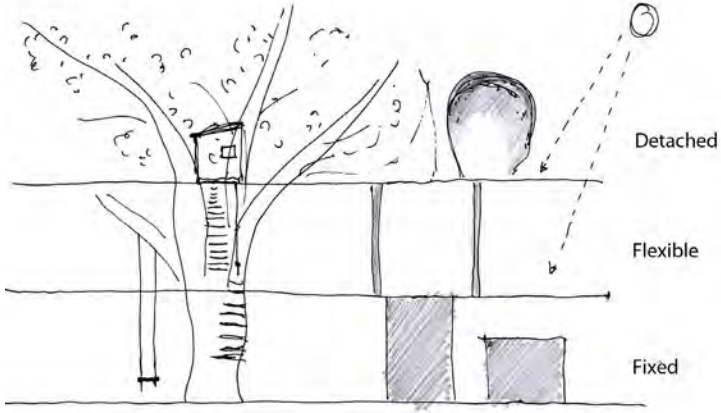


Fig.5.21 Conceptual approach to structure

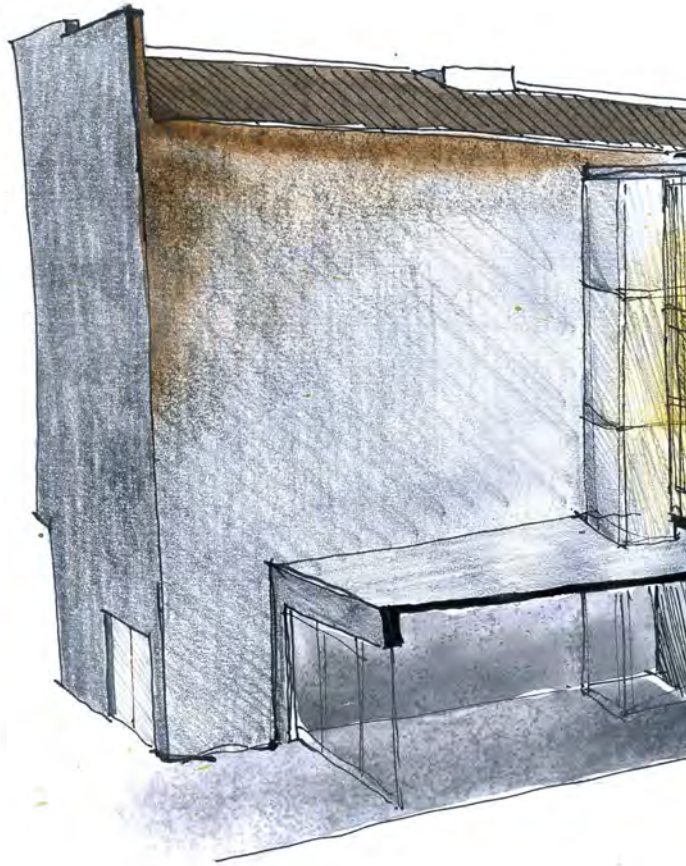


Fig.5.20 Sectional perspective showing the conceptual approach to materials

Design Elements

In Esselen Street the façade wall on each side is a key component to the identity and character of the area.

The importance of the vertical plane is translated into the interior: walls become flexible, interactive, dynamic thresholds (Fig.5.22).

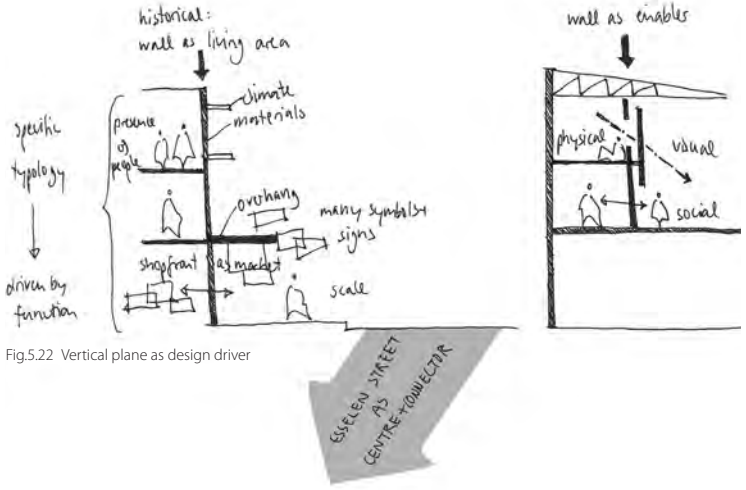
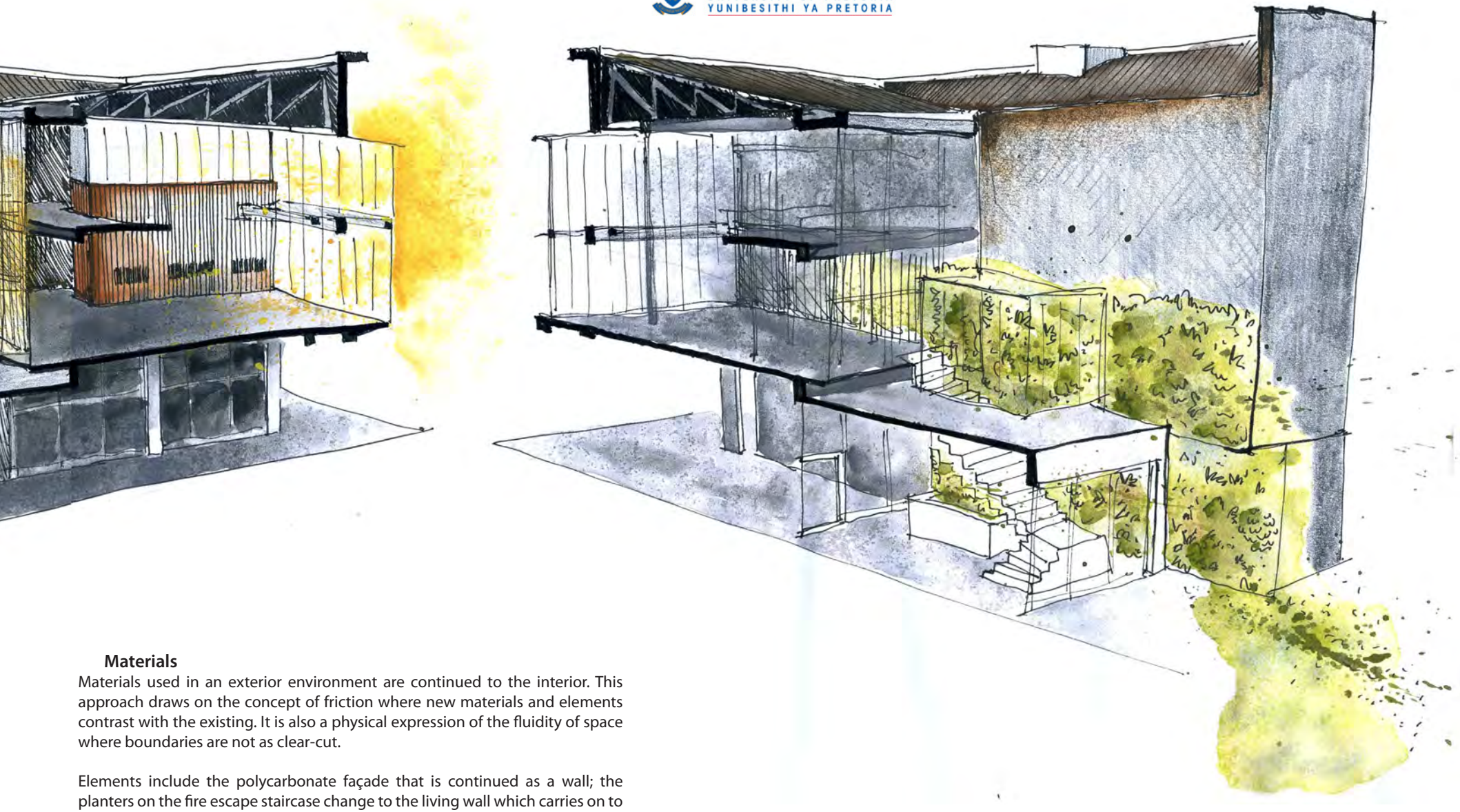


Fig.5.22 Vertical plane as design driver

A wall is a wall is a wall?

The vertical is activated by the user and explores the threefold notion of visual, social and physical friction through unexpected visual encounters, creating conversation areas and materials and texture.



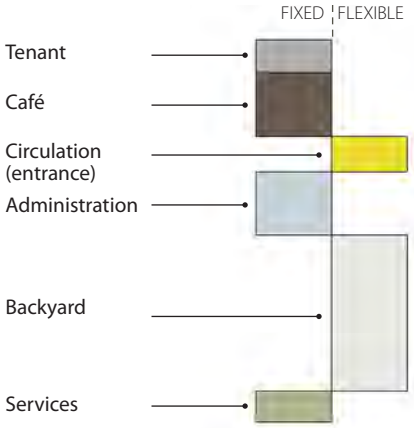
Materials

Materials used in an exterior environment are continued to the interior. This approach draws on the concept of friction where new materials and elements contrast with the existing. It is also a physical expression of the fluidity of space where boundaries are not as clear-cut.

Elements include the polycarbonate façade that is continued as a wall; the planters on the fire escape staircase change to the living wall which carries on to the second floor of the building (Fig.5.20); furthermore the steel and wire mesh articulation used in the exterior staircase is resumed in the interior balustrades.

The materials also play with visual contradictions. Walls made of seemingly solid materials are flexible and open up to allow direct views into other spaces whereas translucent and transparent materials alternate to offer unexpected glimpses into the building as well as to the exterior.

5.5 PROGRAMME DISTRIBUTION



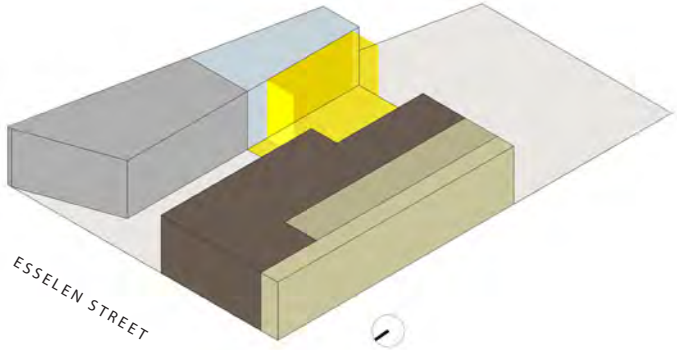
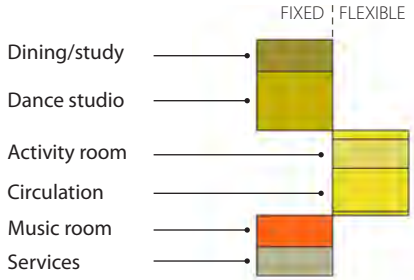


Fig.5.23 Programmatic distribution on ground floor

GROUND FLOOR



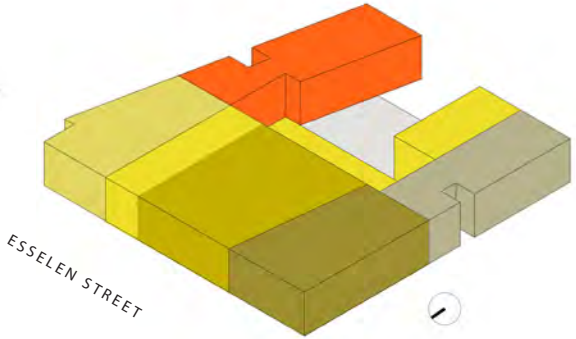
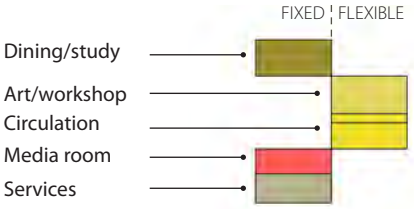


Fig.5.24 Programmatic distribution on first floor

FIRST FLOOR



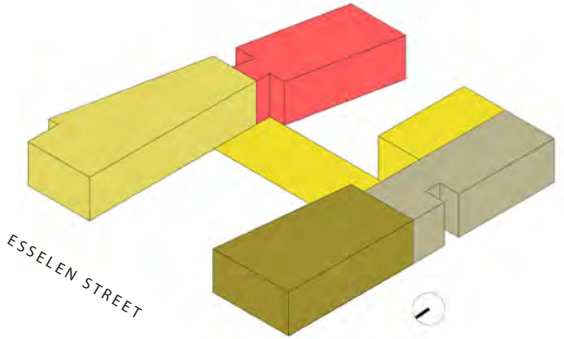


Fig.5.25 Programmatic distribution on second floor

SECOND FLOOR

The public functions are located on the ground floor (Fig.5.23). On the upper floors spaces are organized into fixed dedicated rooms and flexible activity rooms that can open up and merge with adjacent circulation spaces (Fig.5.24, Fig.5.25).

The spaces range from larger more public areas to more intimate, semi-private spaces. They are connected through programme and concept as well as form and expression. Depending on the activity and occupation the hierarchies are variable. Spaces change to become platforms for social interaction and spatial awareness.

The aim is to achieve a non-institutional environment that promotes interpersonal skills and provides dedicated spaces for the youth where they can express themselves. The centre provides activities around three core areas, namely music, dance and art.

With the influx of many different cultures in the area it is usually the new generation that has to navigate between their own traditions and the local cultural environment. By focusing on this group the centre then hopes to connect to parents and the various communities for weekend and afterhours activities.

Fig.5.26 Views of the existing building

Fig.5.27 Conceptual sketches of various proposed scenarios

5.6 PROPOSED INTERVENTION

The analysis of the existing building not only relies on its physical attributes but on its role as part of the street neighbourhood as well. The architectural significance lies more in its original function as a mixed use building. This was lost when it was converted to the current pawn shop, with retail on all three levels.

The design approaches the adaptive reuse of the building through a series of interventions to reactivate and restore the mixed use function. The three stages of the interventional method as promulgated by Fred Scott (see Chapter 2, pg. 44) of stripping back, making good and enabling works apply.

As stated earlier there is no single approach when dealing with existing structures. The various strategies are unified by the aim of emphasizing the counterpoint between original and new interventions and exploring the concept of friction as a physical manifestation.

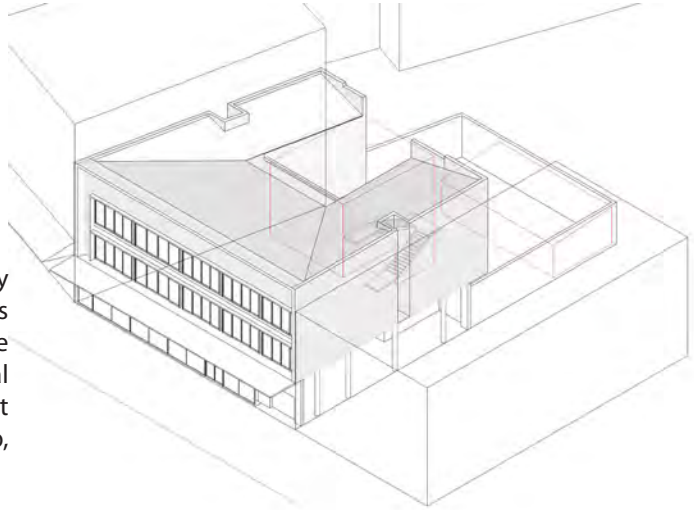


Fig.5.28 Proposed intervention step 1

1

(1- stripping back)

SELECTIVE DEMOLITION

of the later added extension that currently encloses the original courtyard.

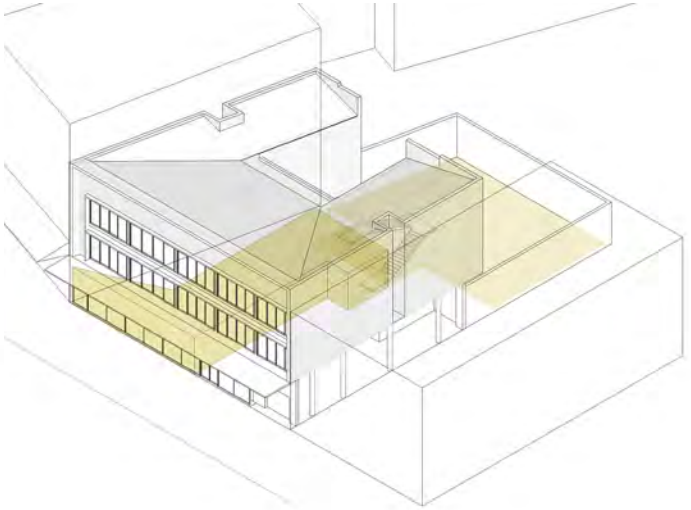


Fig.5.29 Proposed intervention step 2

2

(2- enabling works)

OPENING UP

the centre to become the main access. It provides a clear view of the backyard area and signifies its importance as main entry point next to the other two entrances that are re-established.

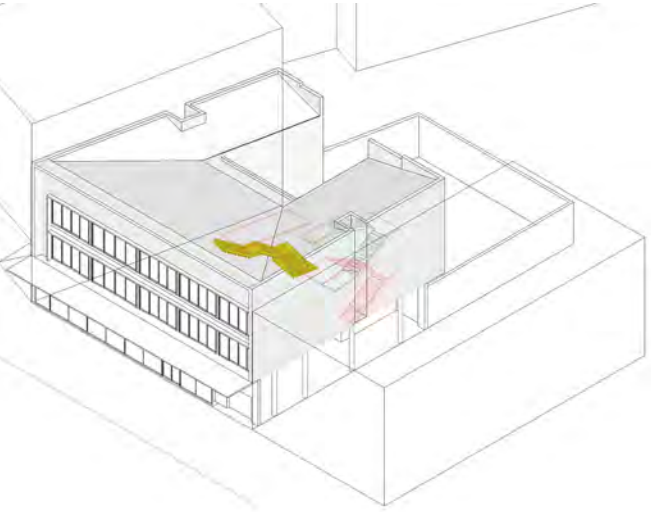


Fig.5.30 Proposed intervention step 3

3

(2- enabling works)

RELOCATION

of the ground floor staircase to the central access passage. This provides better orientation and signifies the main access to the upper floors.

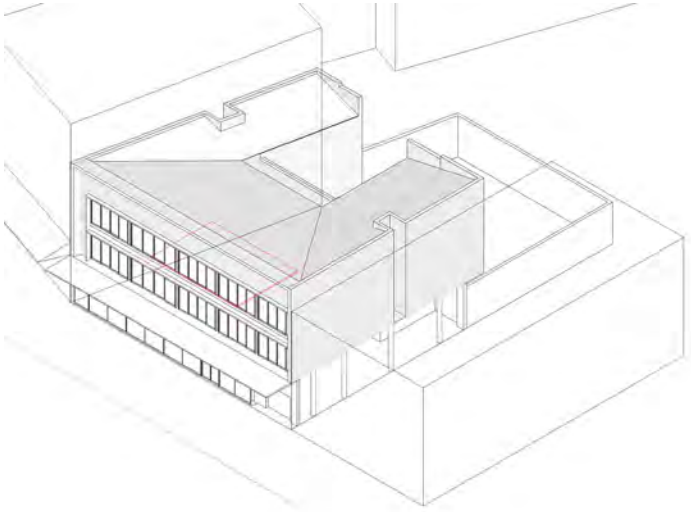


Fig.5.31 Proposed intervention step 4

4

(1- stripping back)

SELECTIVE DEMOLITION

of the upper floor slab to create a double volume. Together with the removal of some internal walls, various scaled volumes and visual links are established along the circulation route.

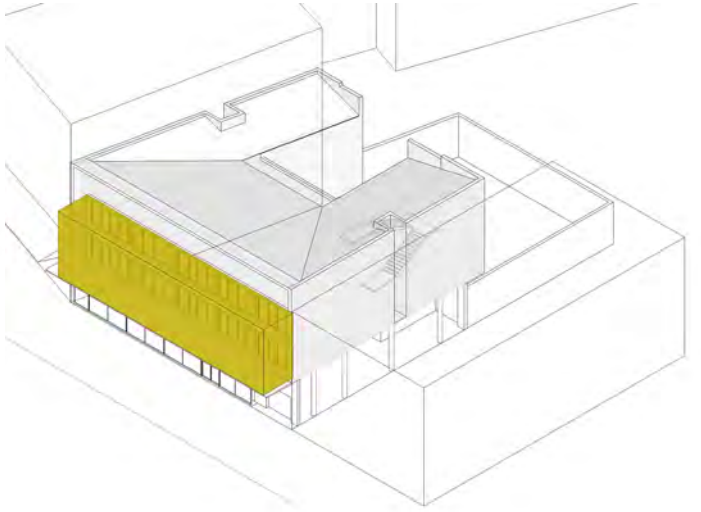


Fig.5.32 Proposed intervention step 5

5

(3- new works)

NEW ELEMENTS

The façade is extended in the dimensions of the original fenestration to signify the new function, make the building more visible and gain additional floor space. Internal vertical divisions are inserted to act as dynamic thresholds between spaces.

AUGUST

Fig.5.33 Working model with view of the façade, August 2012

SEPTEMBER

Fig.5.34 Working model with view of the façade, September 2012

AUGUST

Fig.5.35 Working model backyard view, August 2012

SEPTEMBER

Fig.5.36 Working model backyard view, September 2012

Fig.5.37 View of backyard from the street, September 2012

Fig.5.38 Circulation routes as opportunity for interaction traced on ground, first and second floor

The design presents the opportunity to explore how spaces can promote friction between various groups of people, especially considering the many cultures and different age groups in the area. The building is open to the city where overlaps can occur between business and creative culture.

Through accessibility and programme, visual connections as well as the design of solid, transparent, flexible and retractable walls the building becomes activated by its users.

5.7 CLIMATIC CONSIDERATIONS

Pretoria, with its latitude of-25,7° and longitude of 28,2°, has long, hot and rainy summers and short, cool and dry winters. Due to the nature of activities ranging from medium to more intense the issue is less of heating the interior spaces in winter but rather to control the solar radiation as well as internally generated heat in summer. The building has a concrete roof slab under the timber trusses which is a good insulator during winter, keeping the heat inside the building.

The orientation of the northern façade allows it to be shaded in summer (Fig.5.39) and sun to penetrate in winter (Fig.5.40). Natural daylight will be used as far as possible to reduce energy usage for artificial lighting. Natural ventilation is complemented by mechanical extraction as the building is surrounded on three sides by other structures which prevent sufficient airflow.

Rainwater from the existing roof can be collected and stored to be used for the proposed living wall.

TEMPERATURE	Summer	Winter
Average high:	29°C	22°C
Average low:	17°C	4°C

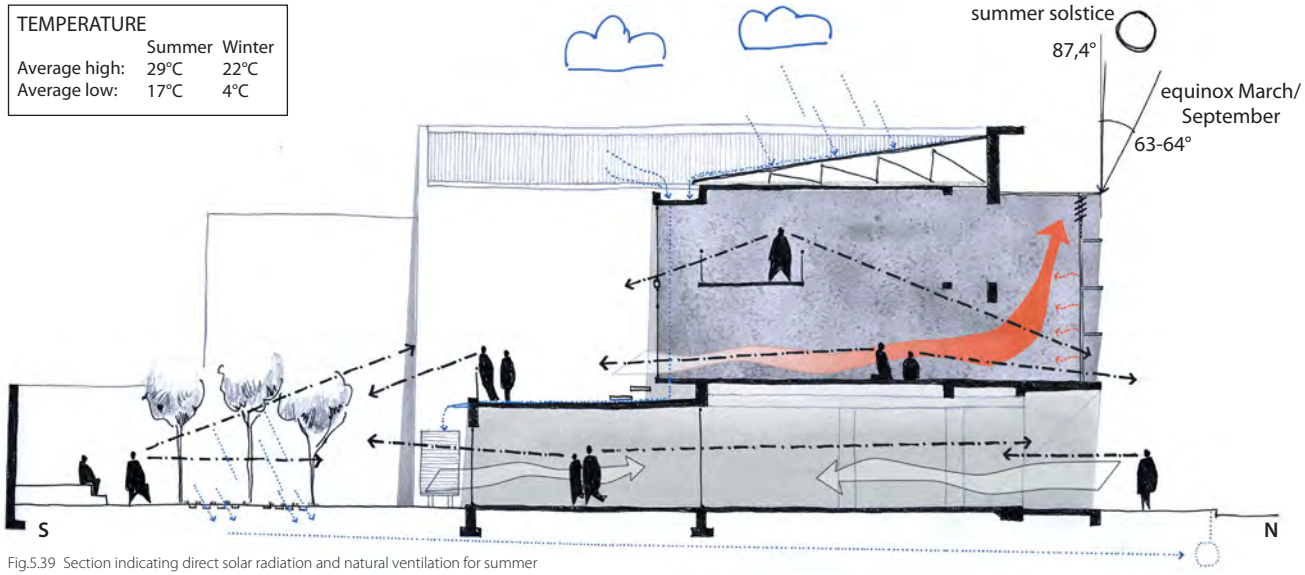


Fig.5.39 Section indicating direct solar radiation and natural ventilation for summer

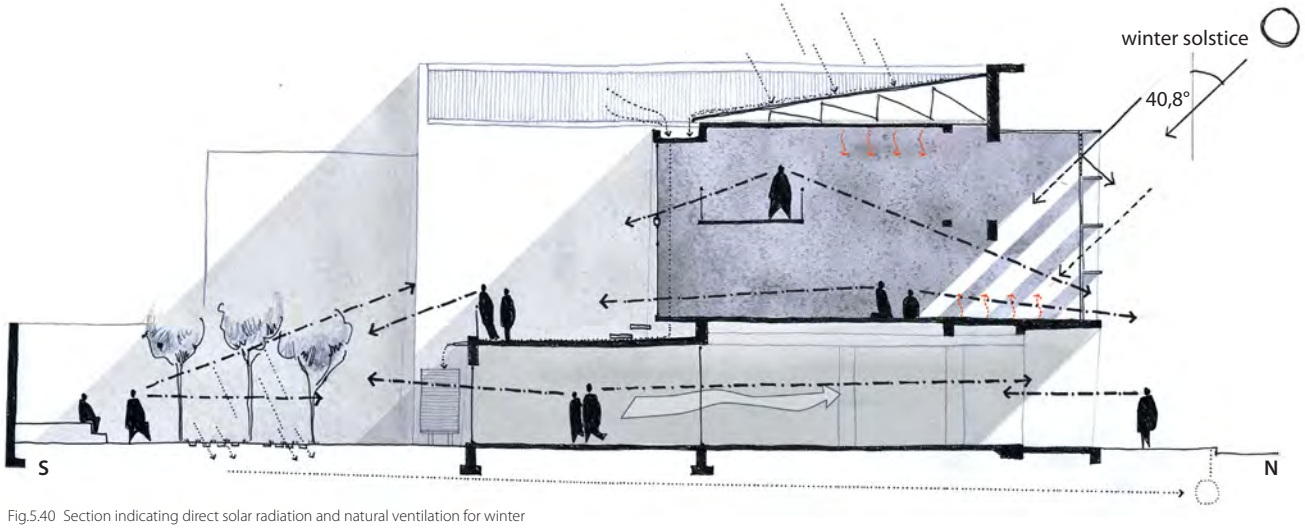


Fig.5.40 Section indicating direct solar radiation and natural ventilation for winter

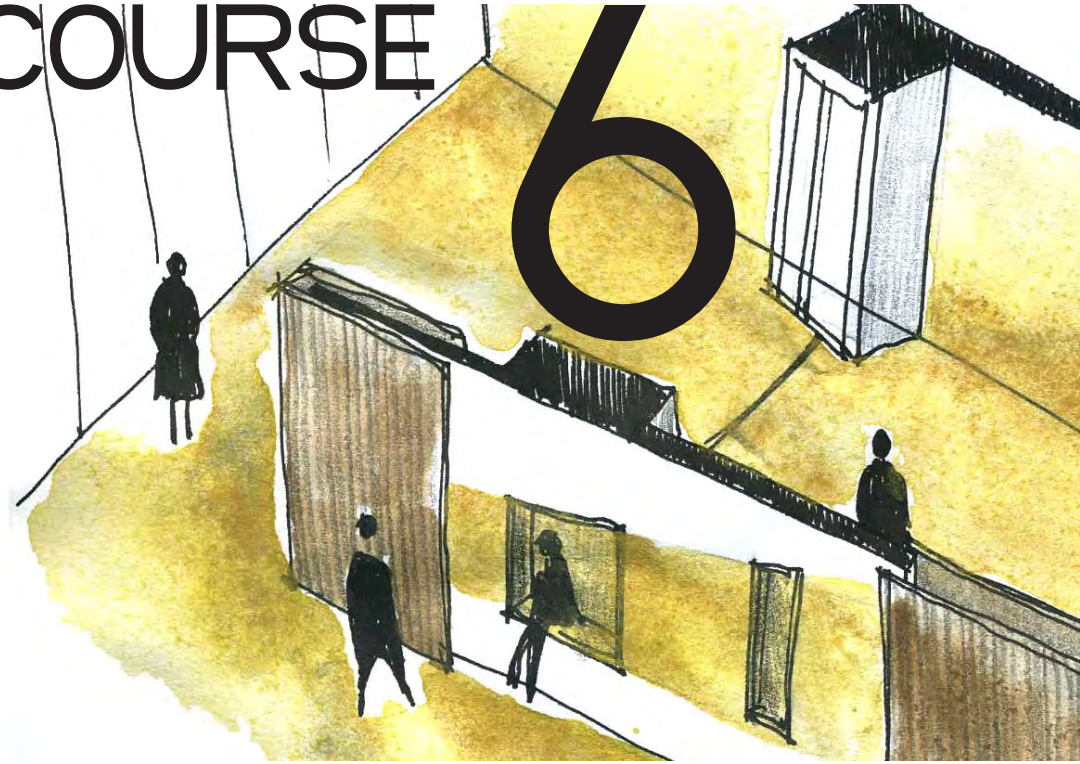
Fig.5.41 Conceptual sketch of circulation and spatial connections, August 2012

5.8 CONCLUSION

This chapter establishes the programme, users and potential clients. These tangible constraints together with the understanding gained by the precedent studies inform the conceptual approach, which is driven by the theoretical exploration of social friction.

This concept informs and justifies the following design decisions in terms of function, structure, materials and interventions.

DESIGN DISCOURSE 6



This chapter brings together the research, theory and conceptual ideas into a physical design. This is shown in the floor plans, elevations and sections as well as a narrative that explains the various design elements and spaces along the main circulation route.

The theoretical exploration looked at friction in various forms; the design addresses how this concept is physically translated to encourage interaction on the various levels mentioned - physical, visual and social.

Instead of defining a fixed identity for the building, the strategy of the design and its various programmes is to set up a space for exploration that can evolve with its surrounding. This is where a new identity can be navigated and a larger scale revitalisation can be driven from the diverse community.

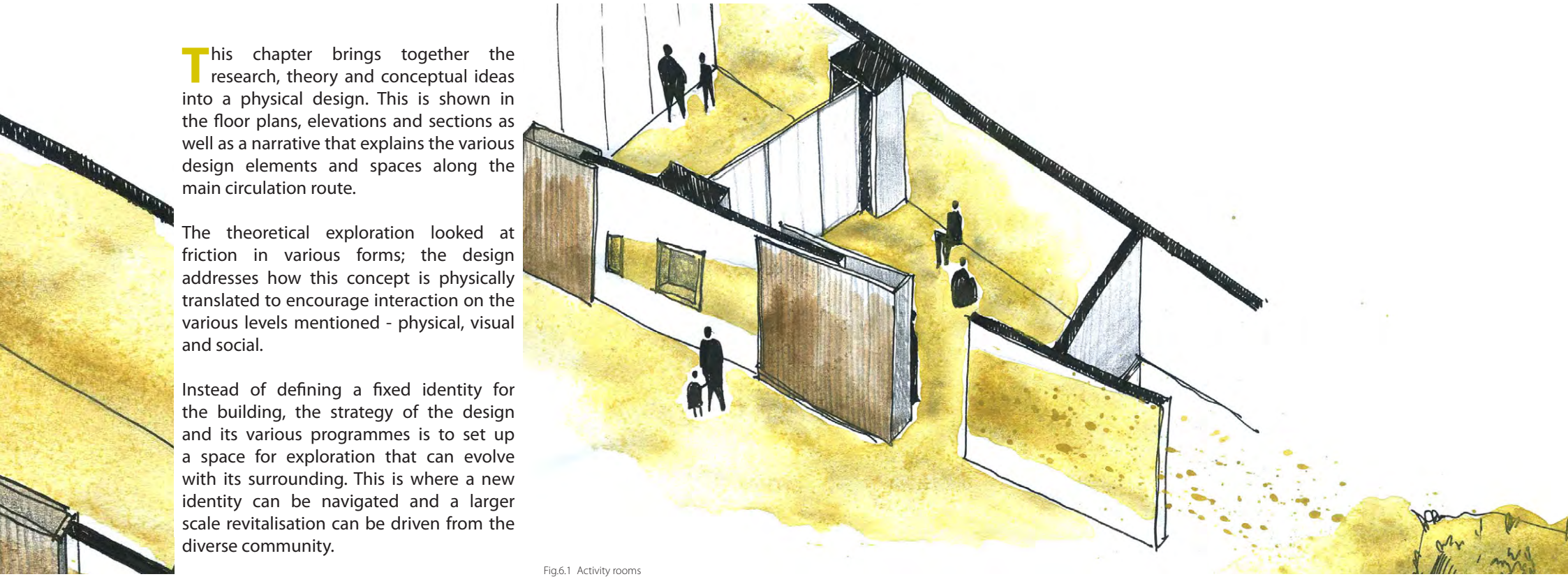


Fig.6.1 Activity rooms

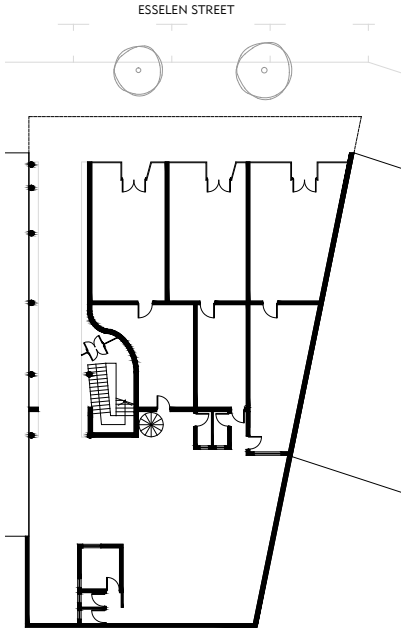


Fig.6.2 Original ground floor plan

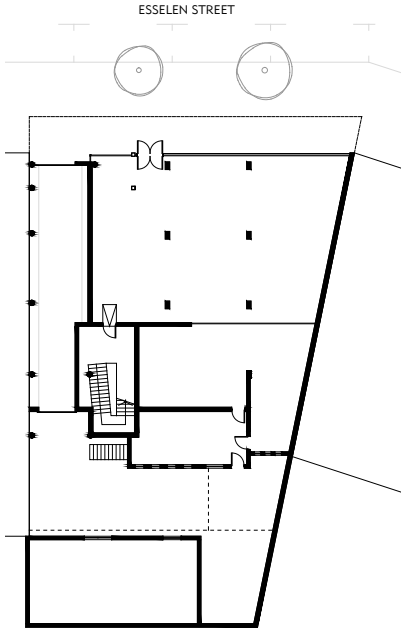


Fig.6.3 Existing ground floor plan

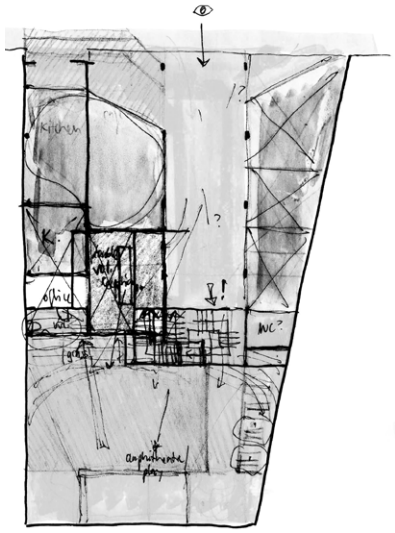


Fig.6.4 Concept plan development, May 2012

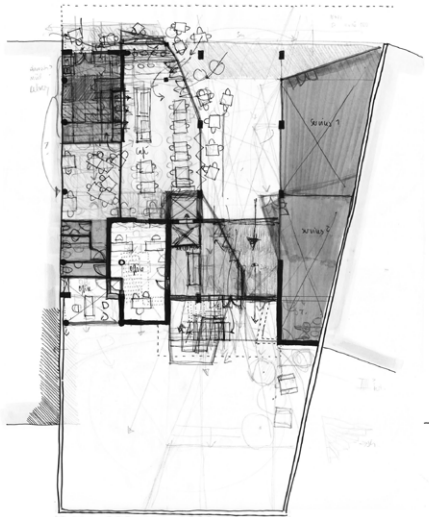


Fig.6.5 Concept plan development, June 2012

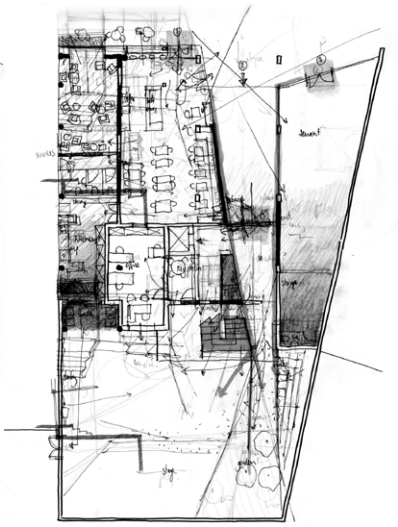


Fig.6.6 Concept plan development, June 2012

- Existing structure
- New brick infill
- New concrete
- Demolish
- Objects below
- Objects above

6.1 PLAN DEVELOPMENT

6.1.1 GROUND FLOOR PLAN

The ground floor is visually and physically accessible through large glass shopfronts. The plan restores the original three entrances, with the middle one leading to the entrance foyer for the aftercare. The main entrance creates a framed perspective of the living wall and backyard beyond, attracting people to look in and enter.

The new main staircase leading to the second floor is located in this central reception area and takes you up along the focal point that is the living wall. The floor consists of various patterns of bricks to provide a non-slip surface and allow a fluid threshold to the backyard. This blurring of spaces, enhanced by the living wall that continues as creepers against the fire escape staircase is a preparation for the experience of the spaces.

The east side provides rentable space for additional income and the western side accommodates the kitchen and café, which also leads to the backyard. Movable chairs allow people the freedom to sit where they want; the elevated stage is a good vantage point from where to observe the changing crowds in this urban oasis.

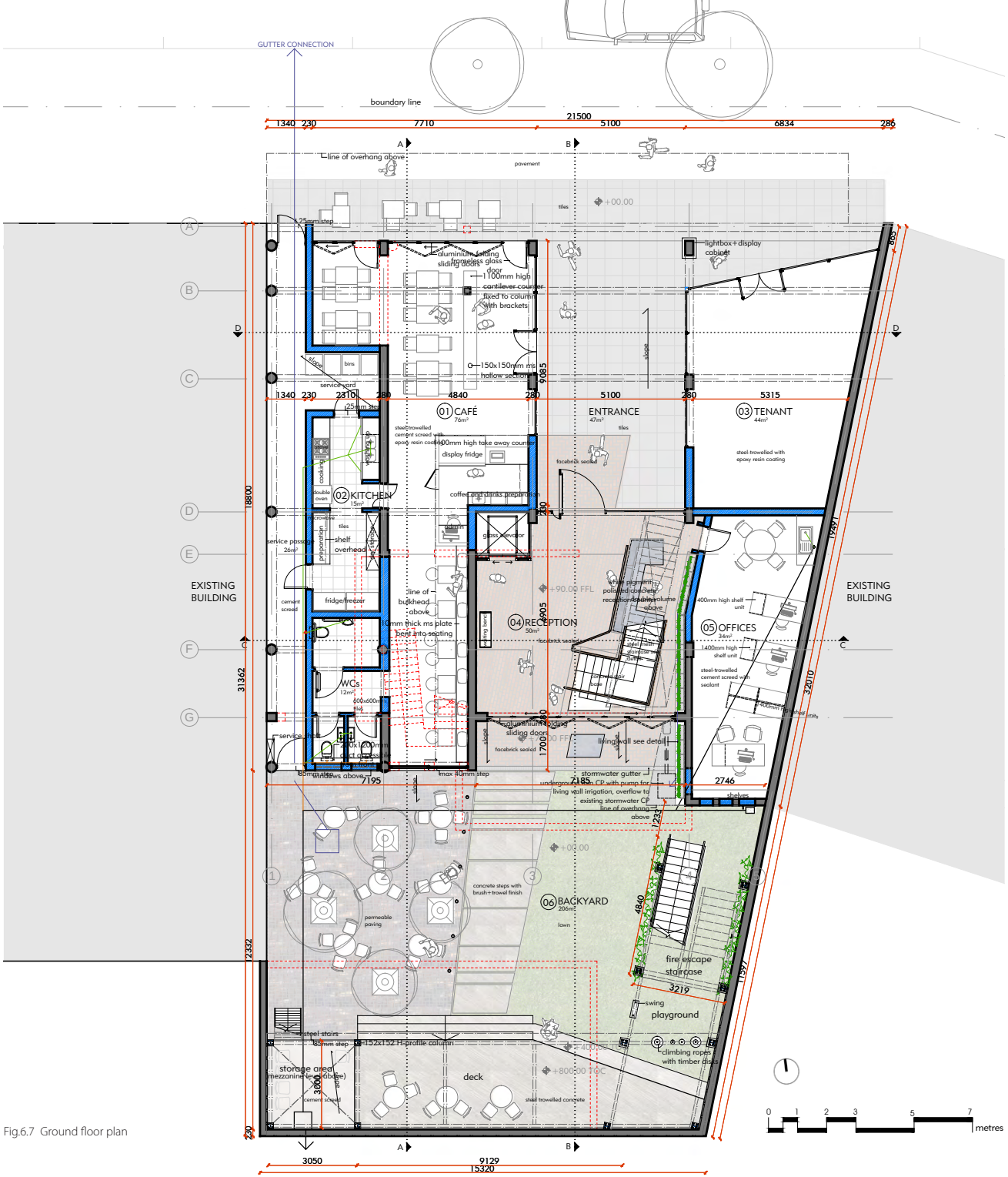


Fig.6.7 Ground floor plan

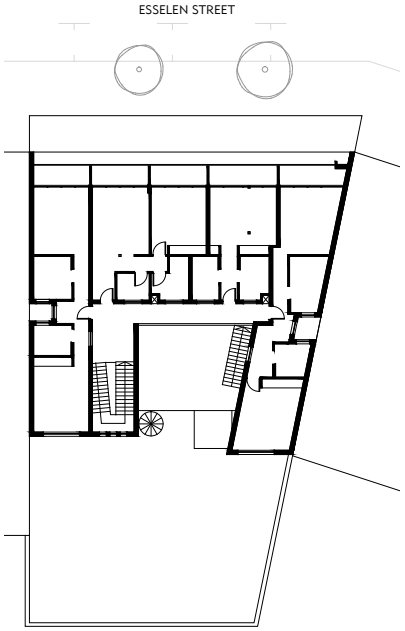


Fig.6.8 Original first floor plan

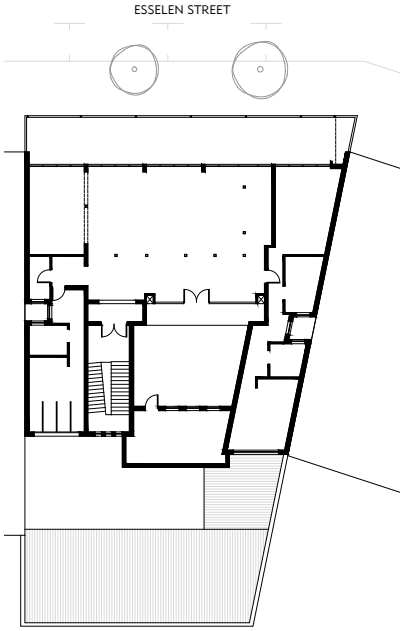


Fig.6.9 Existing first floor plan

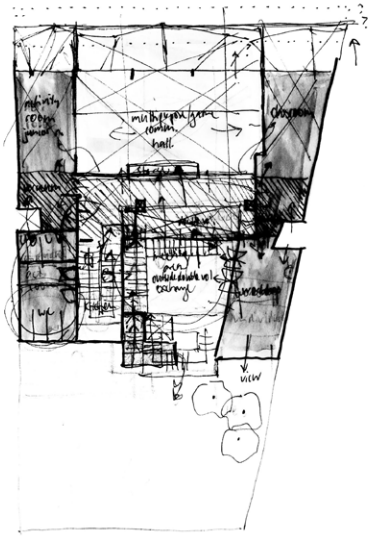


Fig.6.10 Concept plan development, May 2012

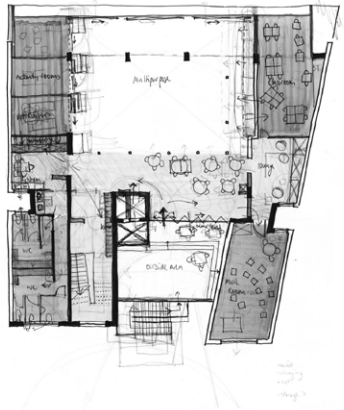


Fig.6.11 Concept plan development, June 2012

Fig.6.12 Concept plan development, June 2012

6.1.2 FIRST FLOOR PLAN

Access to the aftercare on the upper floors is controlled via the reception from where the main staircase rises up. From a central circulation passage smaller corridors and classrooms branch off. The green linoleum floor allows for clear orientation despite the overlapping spatial zones.

As one ascends along the vertical wall, the view shifts to the light-filled double-volume dance studio, separated by pivot doors. When these are closed, slits along the lower edges still allow a peek inside.

The first floor accommodates the dining and homework classroom for the preadolescents, where existing arches as remnant of the original residential function and the contrasting polycarbonate façade contribute to the unique space.

A yellow-tunnelled, fabric clad corridor leads to the music room. Adjacent to the dance studio is a series of activity rooms that can be customized for private use or, through movable walls, become part of the larger studio. An external courtyard overlooks the stage and backyard area. The design provides flexible and fun spaces to accommodate a variety of needs for the various users.

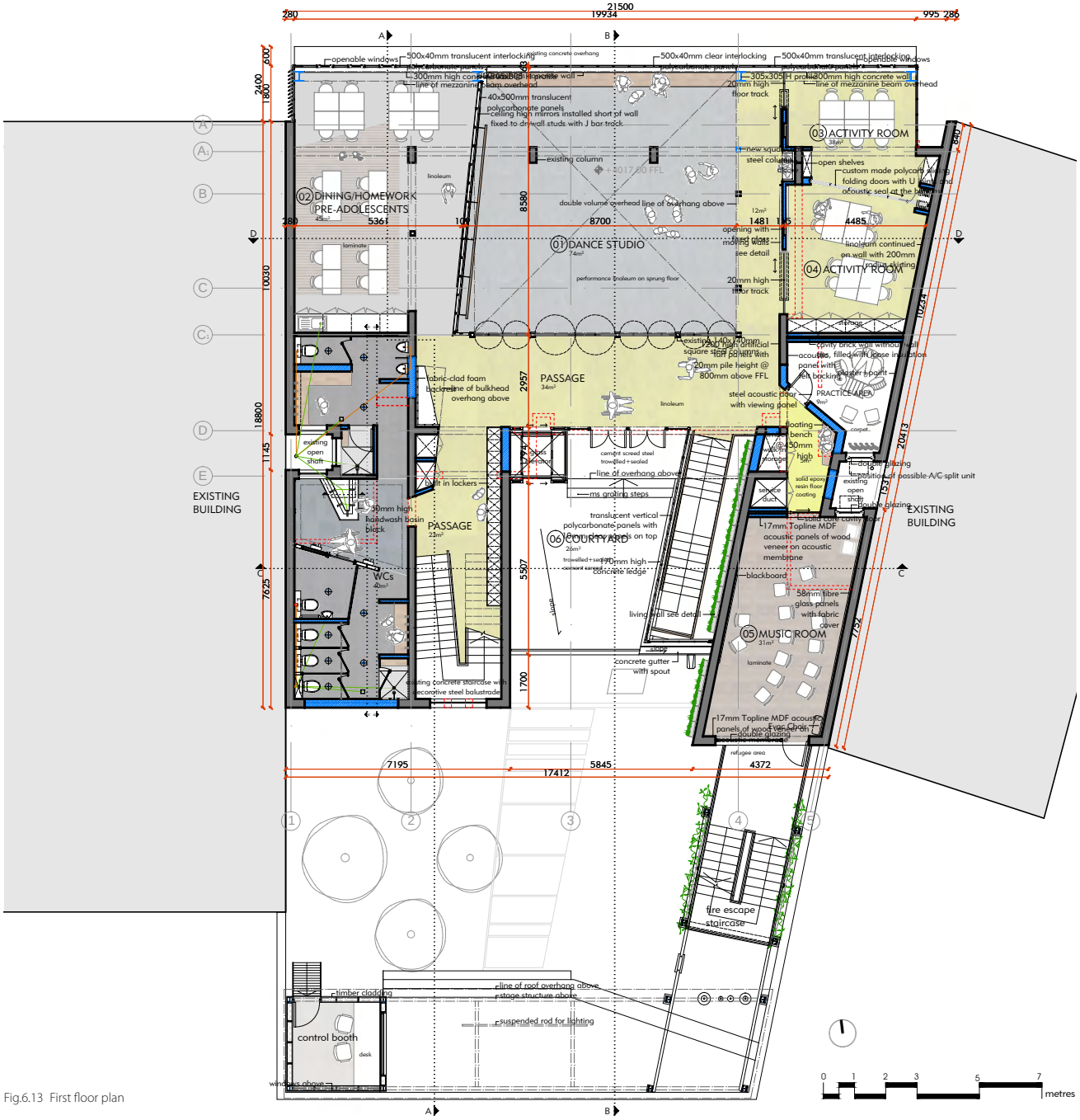


Fig.6.13 First floor plan

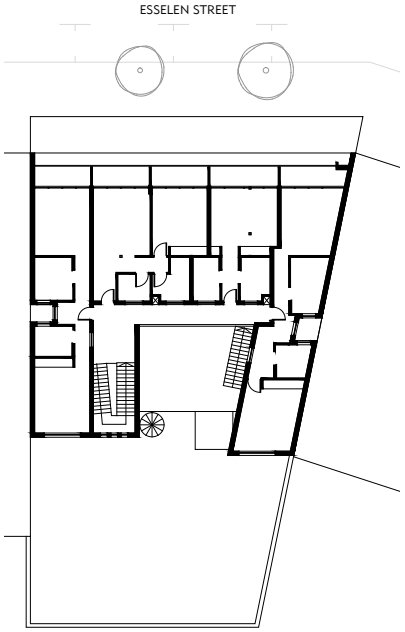


Fig.6.14 Original second floor plan

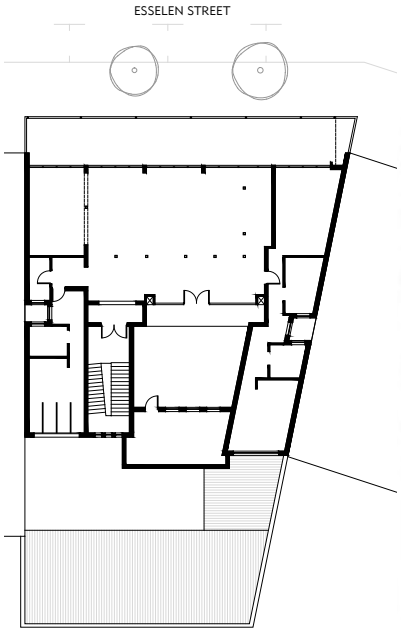


Fig.6.15 Existing second floor plan

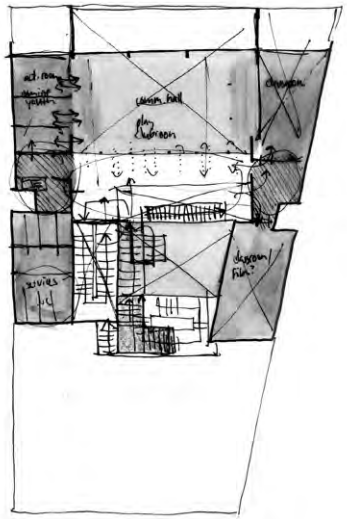


Fig.6.16 Concept plan development, May 2012

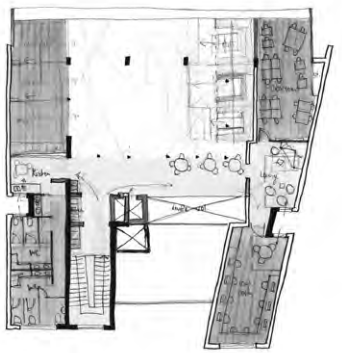


Fig.6.17 Concept plan development, June 2012

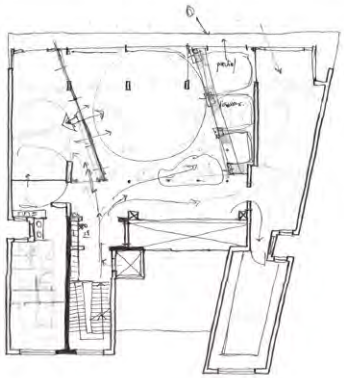


Fig.6.18 Concept plan development, June 2012

6.1.3 SECOND FLOOR PLAN

The second floor is accessed via the existing staircase. The layout is similar to the first floor with a central circulation corridor that in this case overlooks the double volume of the dance studio.

The dining and study room caters for the adolescent user group. On this floor the existing arches that are reinterpreted on the eastern side of the plan, where a punctured new wall separates the workshop area.

Other facilities that are accommodated include the media room and a type of clubhouse for the adolescents in the eastern wing. The circulation passage broadens into a lounge area that can double as exhibition space.

The second floor also provides visual links across the double volume to the dance studio and out into the street, as well as to the backyard.

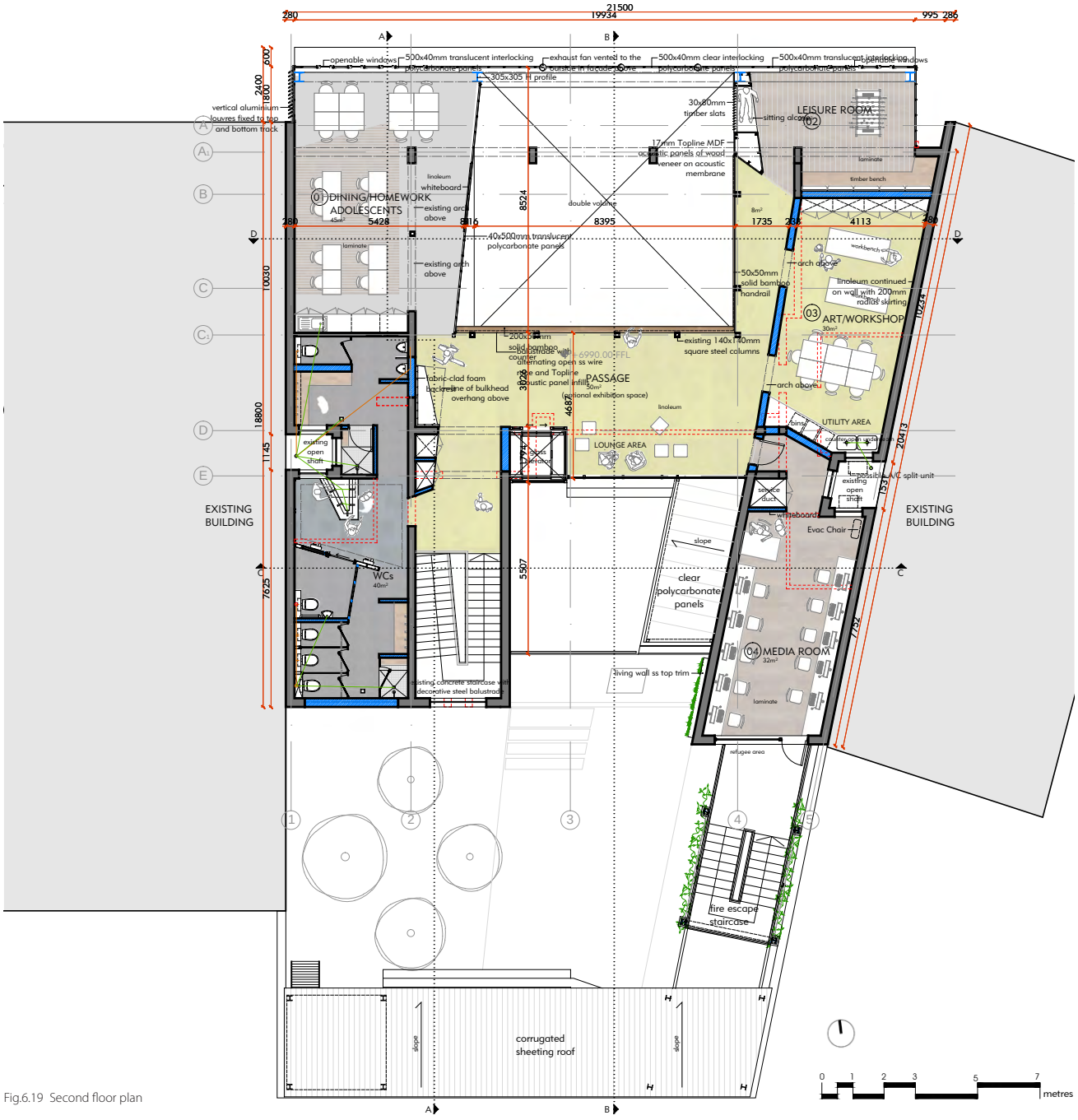


Fig.6.19 Second floor plan

BEFORE

Fig.6.25 Existing façade

AFTER

Fig.6.26 Proposed façade during the day

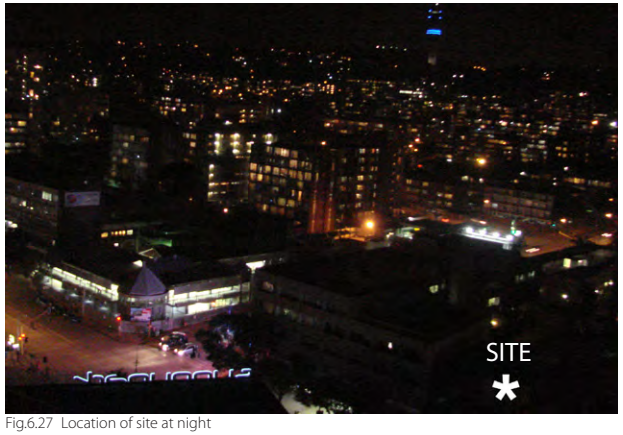


Fig.6.27 Location of site at night

Fig.6.28 Proposed façade at night

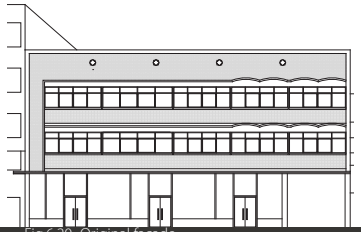


Fig.6.20 Original façade

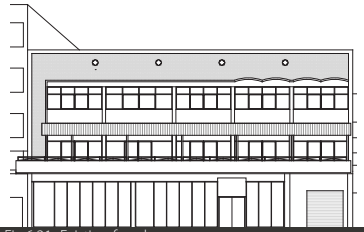


Fig.6.21 Existing façade

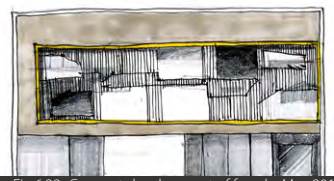


Fig.6.22 Concept development of façade, May 2012

Fig.6.23 Concept development of façade, June 2012

Fig.6.24 Concept development of façade, July 2012

6.1.4 ELEVATIONS

A new polycarbonate box pushes out of the northern façade where the original fenestration was located. This externally defines the aftercare on the two upper floors and makes the building more discernable from both sides of the street bend.

During the day, the translucent polycarbonate panels hint at the various activities taking place on the inside whilst still allowing for privacy (Fig.6.26); at night it is revealed as a unique light box in the otherwise dark street façade. (Fig.6.27, Fig.6.28) On ground floor the large glass shopfronts create an open and inviting atmosphere.

The first encounter with signage is the 'signal column' next to the pedestrian walkway (Fig.6.29). This position allows for events and programmes to be advertised and seen by all. It is repetition of the larger scale light box of the façade.

The exterior change of the façade serves as a first visual indication of the main new function of the aftercare. It also becomes an integral part of the identity and branding of the building itself.

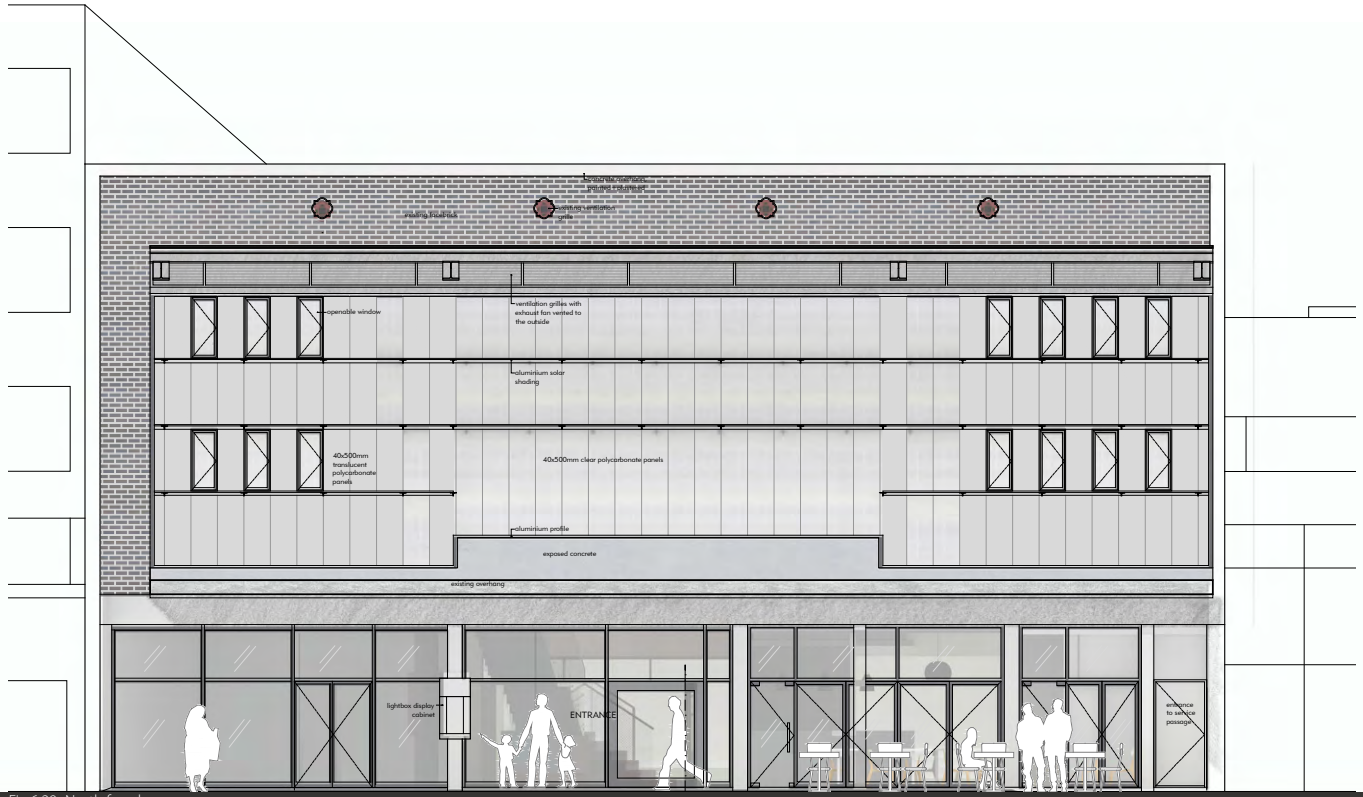


Fig.6.29 North façade

Fig.6.30 South façade

6.1.5 SECTIONS

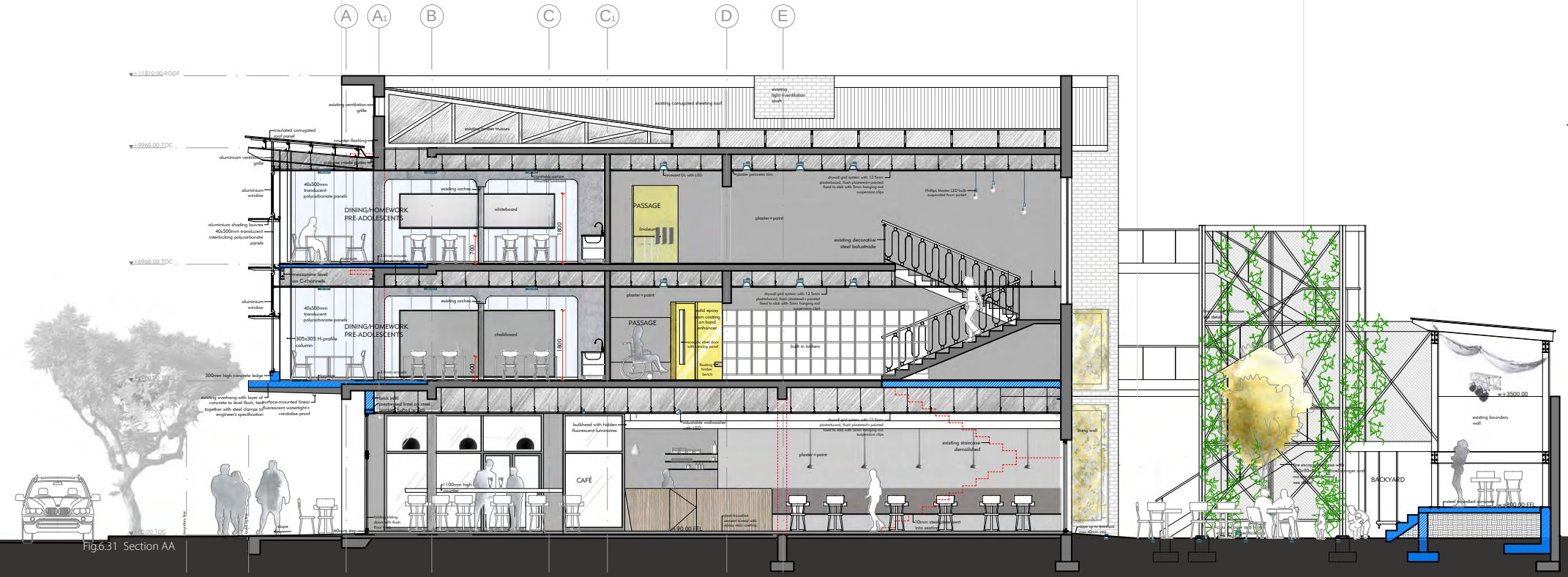


Fig.6.31 Section AA

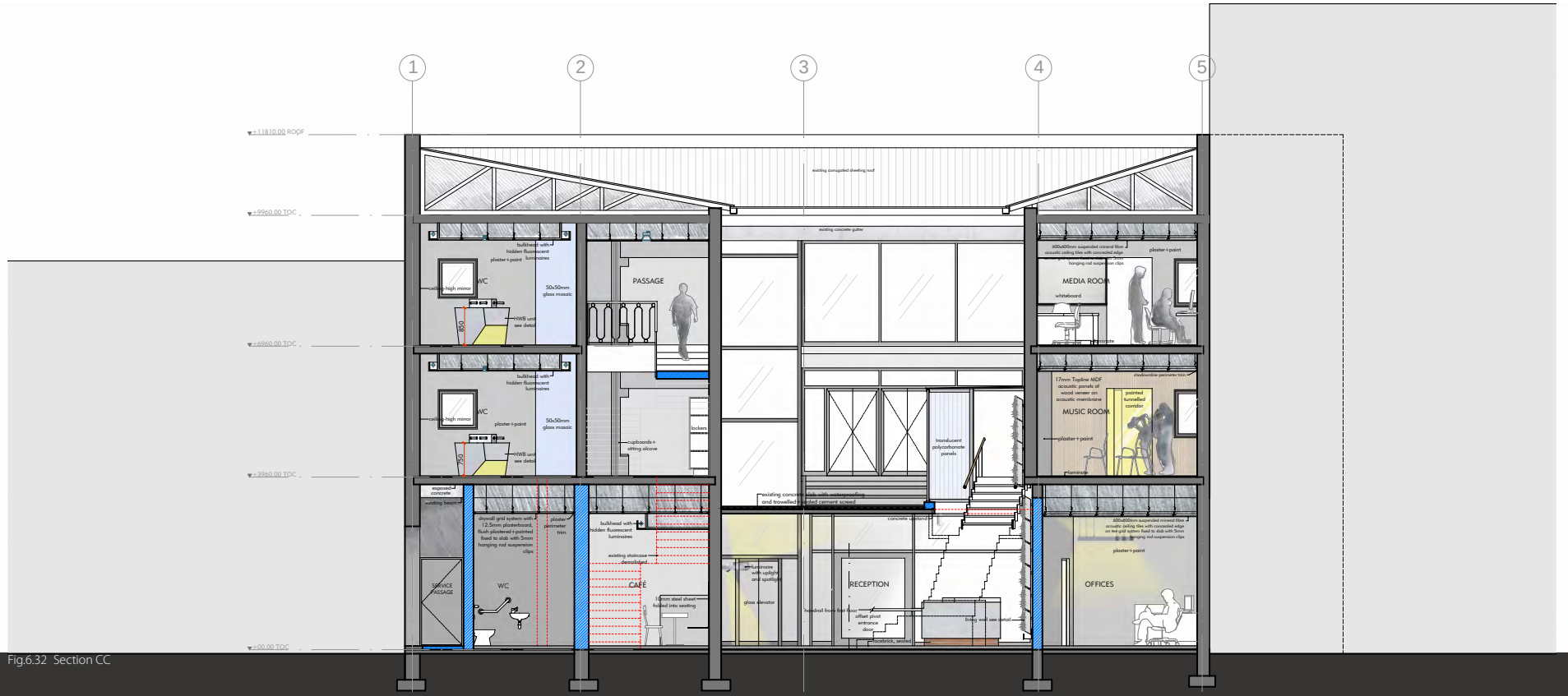


Fig.6.32 Section CC

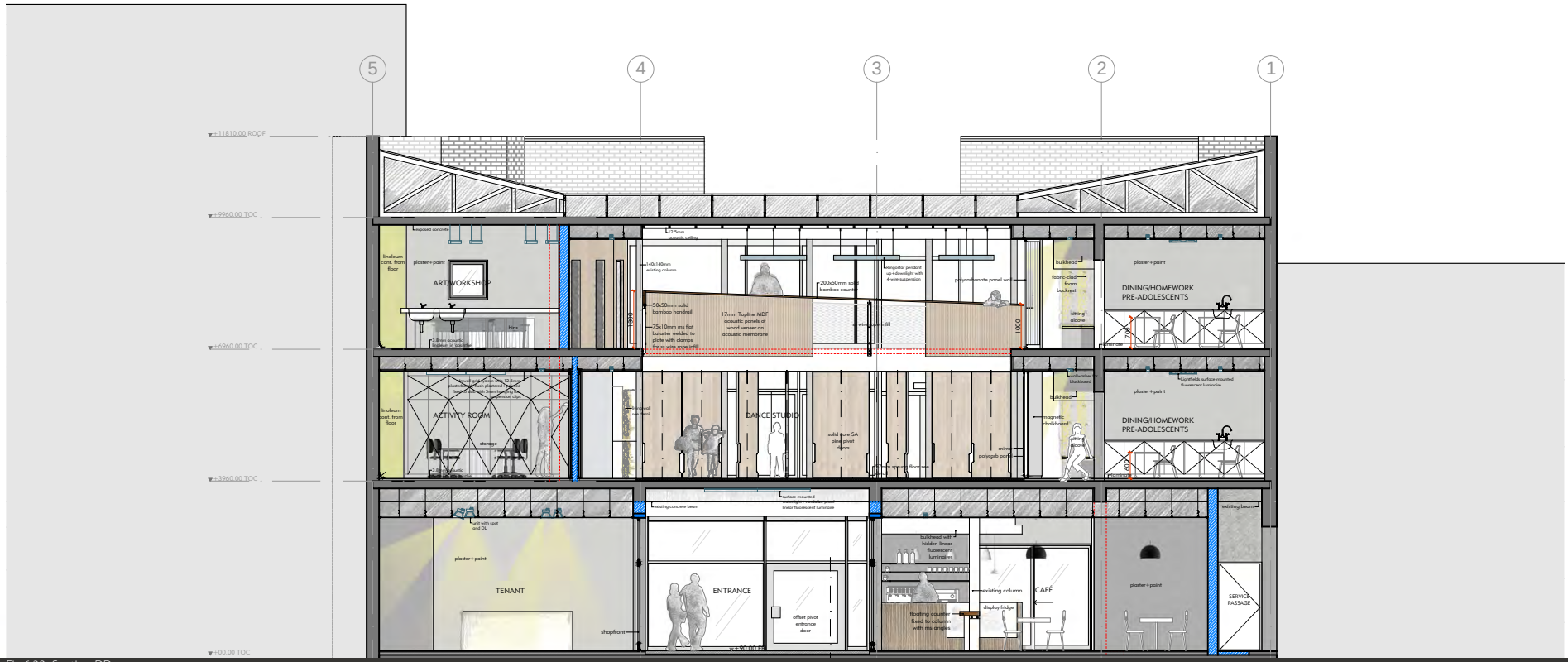


Fig.6.33 Section DD

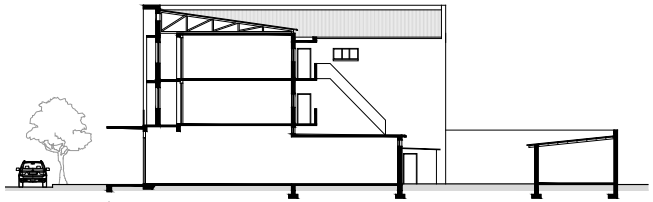


Fig.6.34 Original section AA

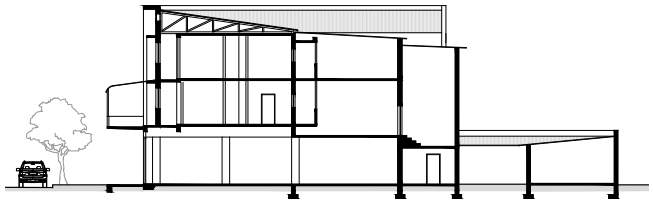


Fig.6.35 Existing section AA

Fig.6.36 Concept development of Section AA, June 2012

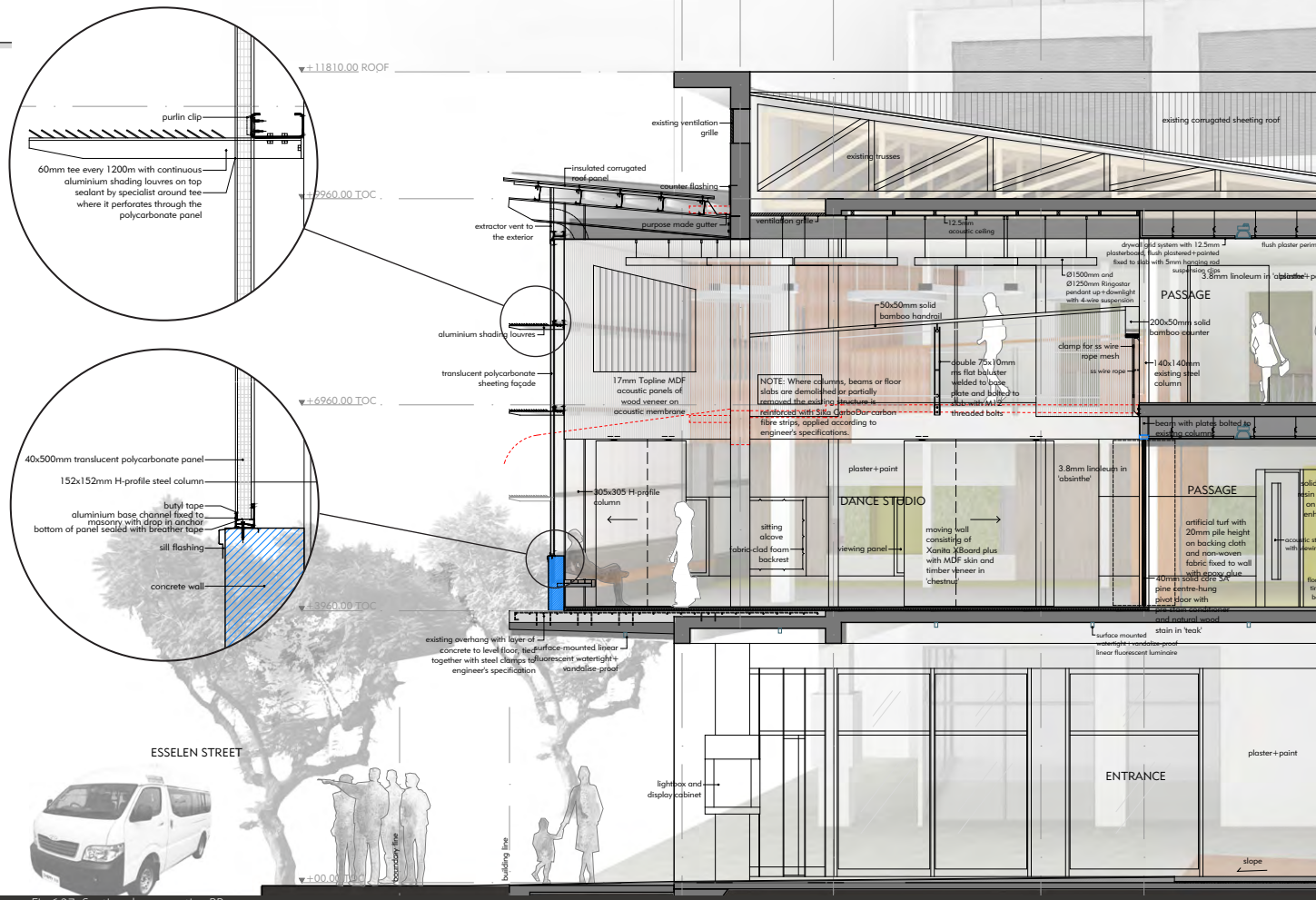


Fig.6.37 Sectional perspective BB


D
E
existing light+ventilation shaft
outlet to ground floor catchment pit
320x350mm Edge surface mounted decorative luminaire
existing facebrick
40x500mm interlocking tranlucent polycarbonate panels in aluminium profile
balustrade with Ø50 hollow tube steel handrail and 75x10mm steel flat balusters with Ø10mm horizontal rods @ every 100mm welded to base plate and bolted to upstand
ms grating steps bolted to C-profile stringer
existing concrete slab with waterproofing
trowelled+sealed cement screed
slope
concrete upstand
surface mounted cylinder downlight
drip
living wall see detail
living wall see detail
RECEPTION
+90.00 FFL
concrete bench
slope
stormwater drainage channel
fire escape staircase with 260x90mm C-channel stringer and ms bar grating tread see detail
BACKYARD
existing boundary wall
steel trowelled concrete
climbing ropes with timber disks
swing
grassed surface, fertilized
Bodpave interlocking paver cells filled with 7mm 60:40 rootzone (sand:soil)
50-70mm bedding layer: 60:40 rootzone
geogrid layer
existing soil subgrade

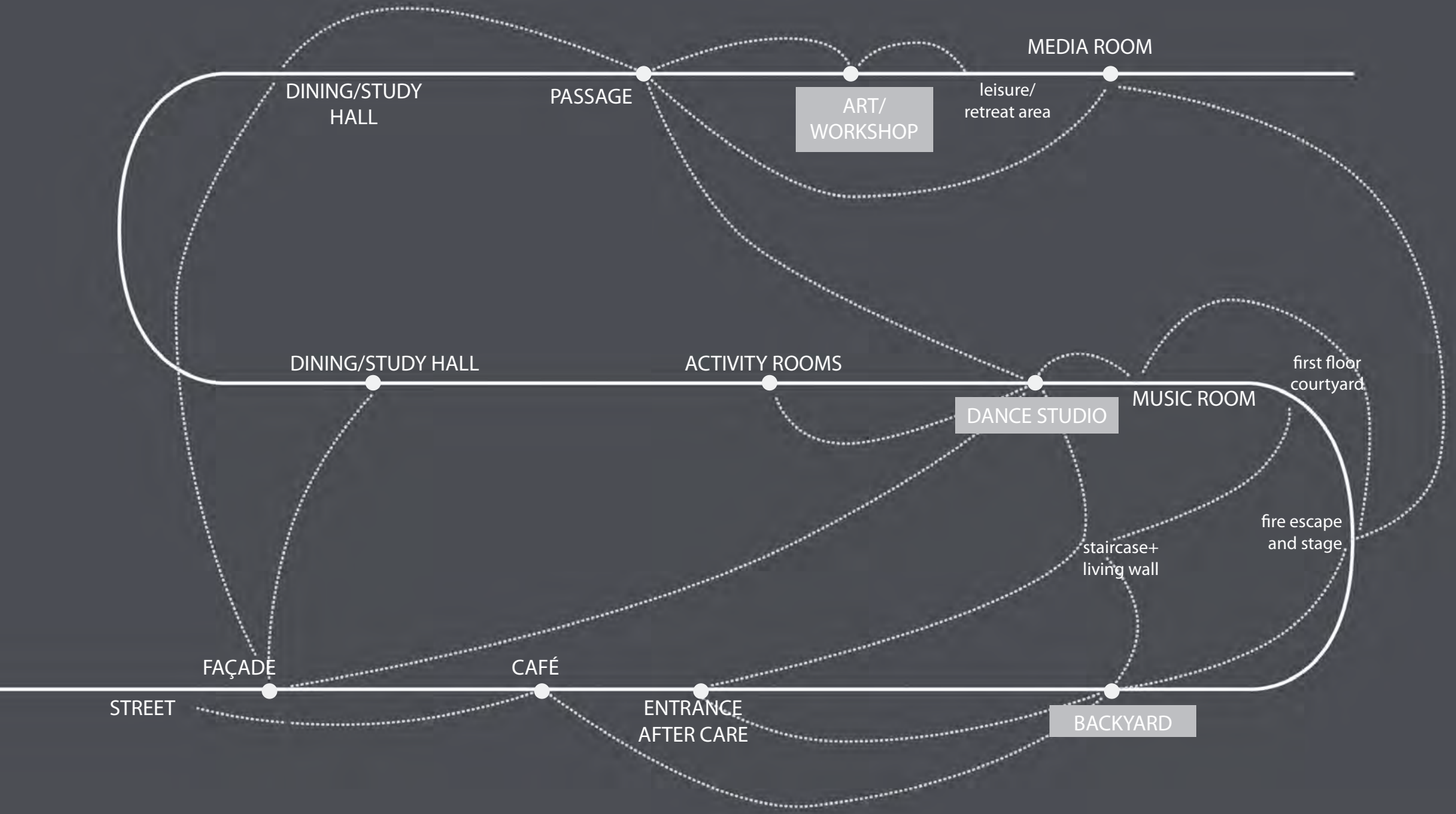


Fig.6.38 Diagram of circulation narrative through the building

6.2 CIRCULATION NARRATIVE

The encouragement of friction is the main driving force of the design: how do you get someone to make a connection? The project combines the notion of an urban living room that offers spaces to gather, relax and socialize. Flexible interiors are interactive and allow a sense of independence where people can appropriate spaces as individuals or groups.

Changing materials, degrees of transparencies and dynamic elements create a playful environment that contributes to a building that is not neutral, but offers a stimulating experience for the user and allow them to redefine the image of themselves.

The design explores the notion of space as a series of changing events and the relation with interior elements identified by Kachwalla (2010:57) such the staircase, passage, corridor, open and enclosed open plan. Kachwalla (2010:55) recognizes the interrelation between the three aspects of friction, where the one can facilitate the other. For example, a visual stimulation can slow down the movement of people to facilitate social interaction; conversely an area with high levels of social friction creates a visually dynamic picture.

Certain areas encourage friction, namely the backyard, dance studio and workshop area as well as their threshold spaces. The following narrative is an exploration of the building and its interrelated functions, spaces, materials and elements along the main circulation route (Fig.6.38).

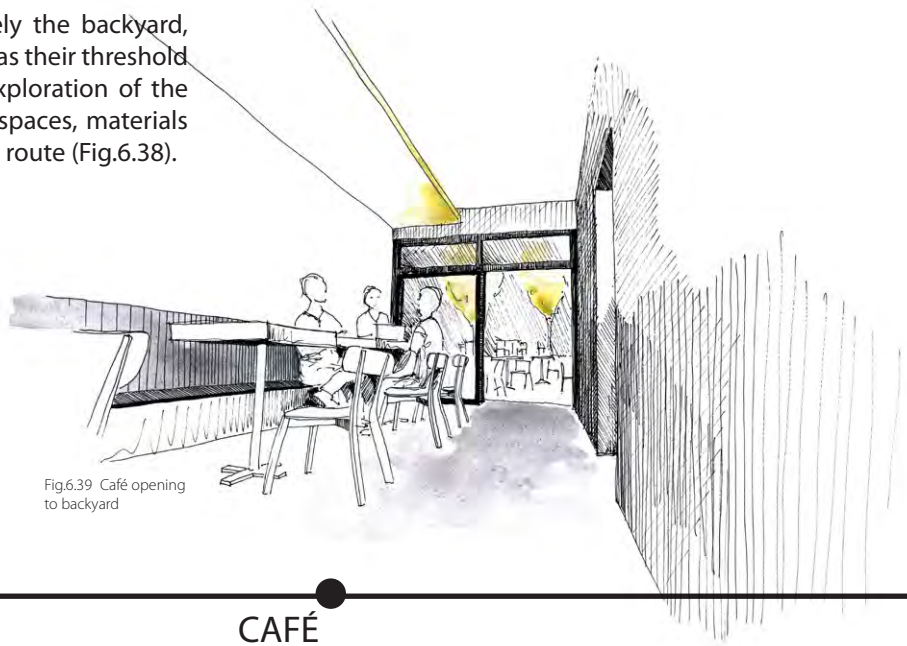


Fig.6.39 Café opening to backyard

Fig.6.40 Ground floor entrance foyer

Fig.6.42 Brick herringbone pattern

Fig.6.43 Facebrick used on floor

Fig.6.44 Polished concrete with white pigment

Fig.6.47 Perforated metal sheet

STAIRCASE

The main staircase is visible from the street. From its solid concrete base a lighter steel stringer rises up with folded perforated steel holding the precast treads. It provides a more intimate scale over the reception whilst creating dynamic diagonal lines that contrast with the living wall behind. The reception controls the access to the upper floors and can supervise the backyard area (Fig.6.40).

By opening up the folding sliding glass doors the interior and exterior spaces are blurred.

At night the entrance foyer is indirectly lit and the reception desk and stairs appear as solid objects that lightly float in space.

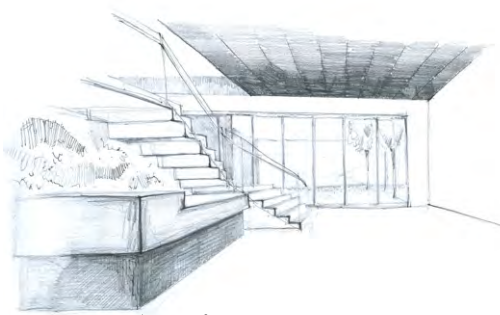


Fig.6.41 Concept exploration of staircase

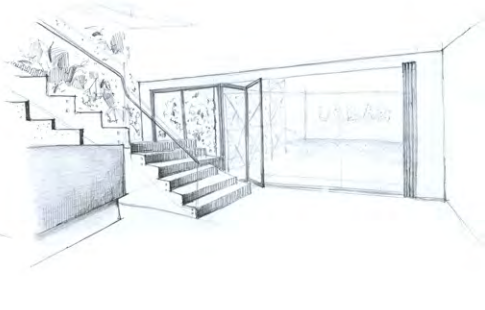


Fig.6.45 Concept exploration of staircase

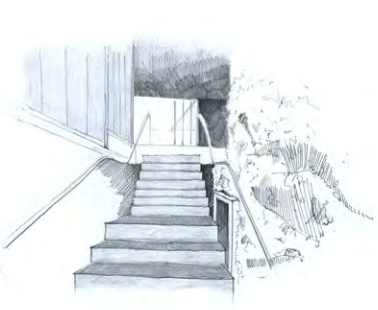


Fig.6.46 Concept exploration of staircase

Fig.6.48 Entrance foyer with view to the backyard

Fig.6.49 Ground floor staircase

LIVNG WALL

Most people in the area live in a flat - either on their own or, as is most often the case, share an apartment. There are not many opportunities to get in contact with a natural environment. The living wall is a focal point from the street. It leads the eye into the backyard where creeper plants continue along the fire escape staircase. Together with trees it creates a microclimate and green oasis in the urban context.

The living wall serves as a visual stimulus along the circulation route, a talking point of friction (Fig.6.40). As a unique feature it becomes integral to the new identity of the building. The plants have the additional benefit of improving air quality as well as acoustics. It can also serve an educational purpose; some panels can be grown by the adolescents from the aftercare centre with endemic or edible plants (also see 7.7.6, pg.131).

Lastly, the living wall is simply aesthetically pleasing and fascinating as it changes with the seasons.

Fig.6.50 Backyard

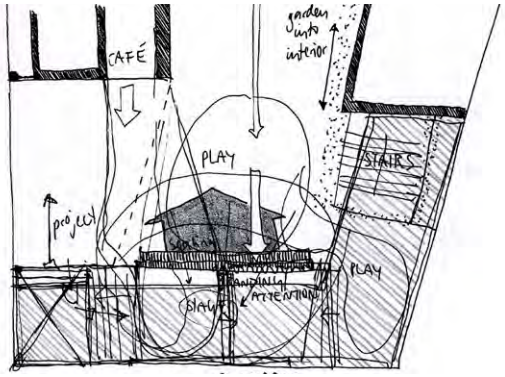


Fig.6.51 Concept exploration of plan layout, September 2012

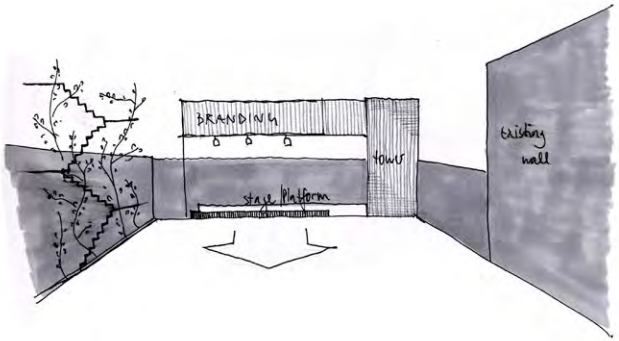


Fig.6.52 Vertical treatment indicating the various functions

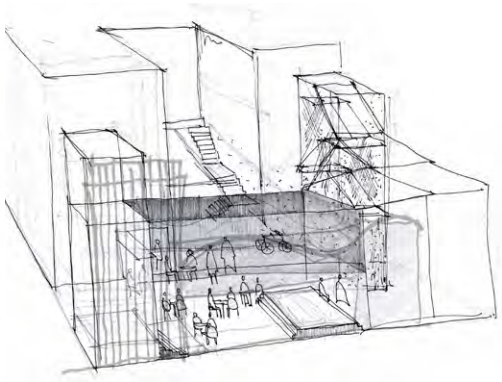


Fig.6.53 Concept sketch, September 2012

BACKYARD

The backyard acts as accessible public space. There are different activity zones, including the shaded café spill-out-area, playground corner, as well as the stage-like platform that invites occupation and action (Fig.6.51).

The fire escape staircase structure extends to become a stage and control booth, discernable by the various vertical treatments (Fig.6.52). This allows the backyard to host various events in the evenings and on weekends.

The backyard allows various user groups and age groups to interact.

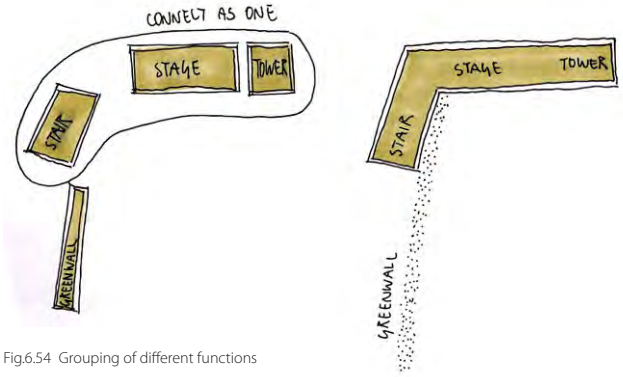


Fig.6.54 Grouping of different functions

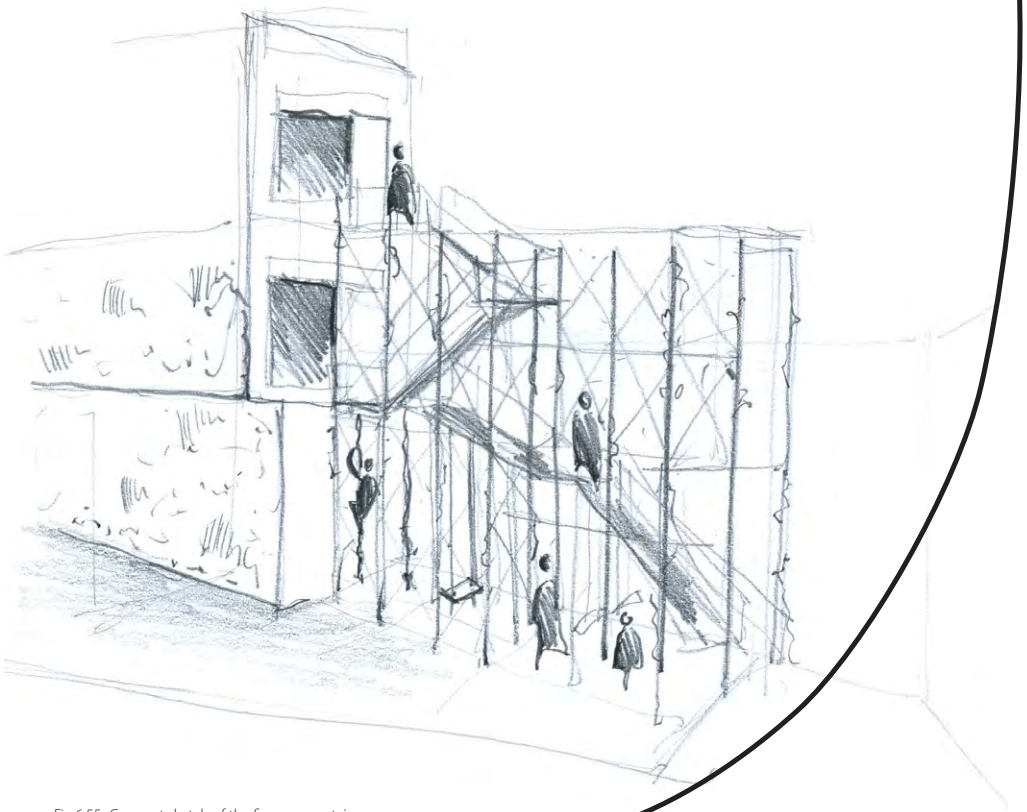


Fig.6.55 Concept sketch of the fire escape staircase

Fig.6.56 Working model with pivot doors closed

Fig.6.57 Working model with pivot doors open

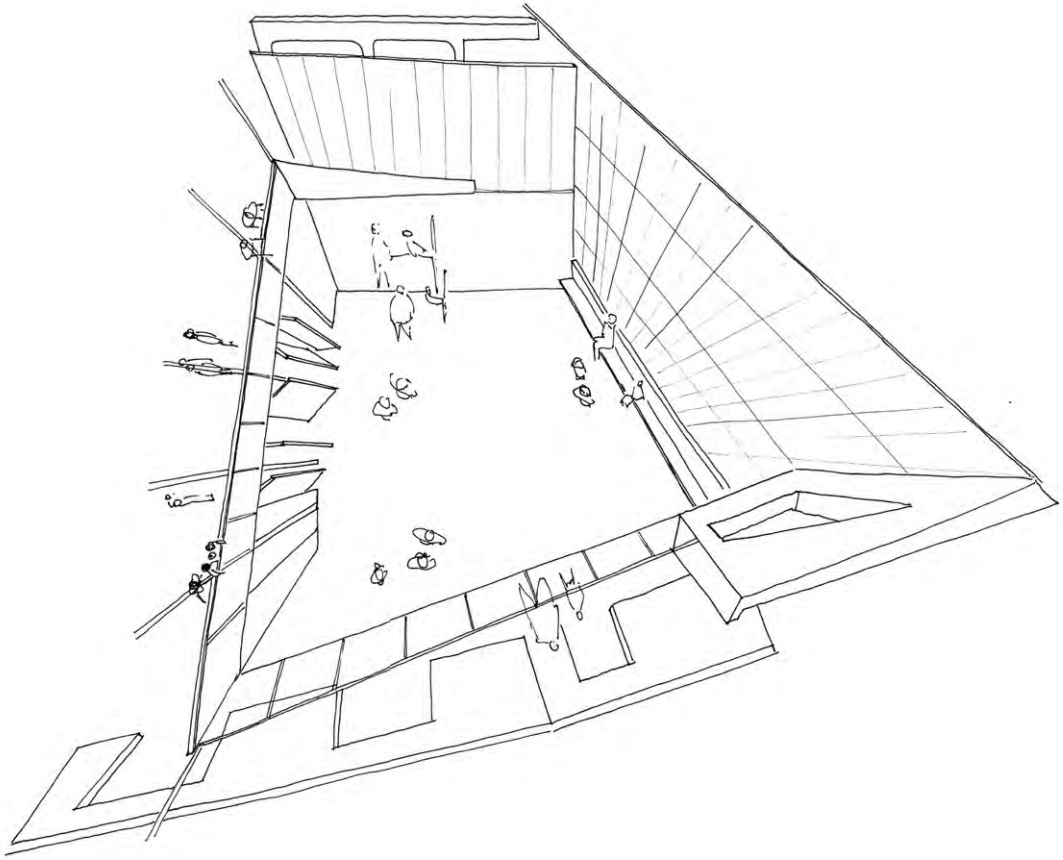


Fig.6.58 Bird's eye view of the dance studio

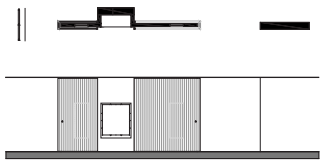
Fig.6.59 Dance studio with pivot doors and mirrors

6.2.3 DANCE STUDIO

The pivot doors, moving walls, mirrors and polycarbonate façade form fluid thresholds that enclose the dance studio. The transparent and translucent, solid and casual divisions are positioned dynamically on plan to create visual and spatial groupings between uses that are actually segregated. The vertical planes become layers that manipulate space and light.

Circular luminaires contrast with the angular lines and allow the double volume to appear imposing yet intimate (Fig.6.60). The indirect and direct lighting components can be adjusted to create various atmospheres. Most importantly, the architecture remains a flexible backdrop to be activated by the user.

Fig.6.60 Perspective of dance studio



OPEN

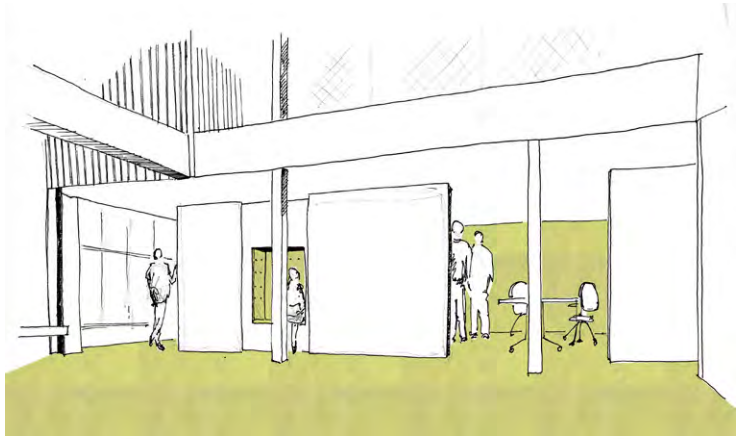
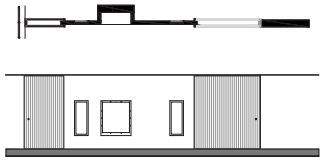
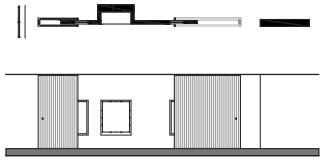


Fig.6.61 Moving walls scenario 1



CLOSED

Fig.6.62 Moving walls scenario 2



SEMI OPEN

Fig.6.63 Moving walls scenario 3

Fig.6.64 Chalkboard

Fig.6.65 Xanita X Board Plus 'harvard cherry' veneer

Fig.6.66 Linoleum colour 'absinthe'

Fig.6.67 Artificial turf

Fig.6.68 Foam-clad seating alcove

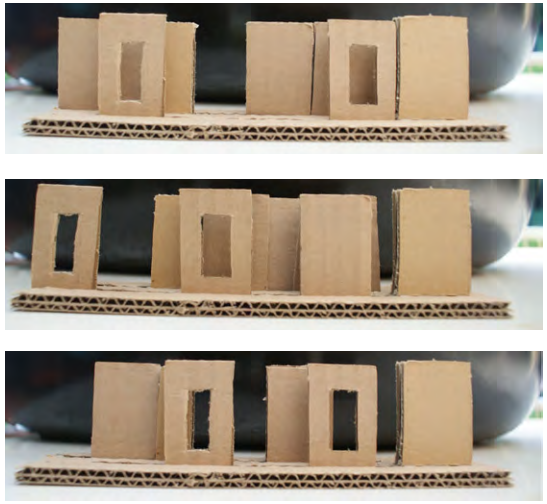


Fig.6.70 Working model exploring the concept of the moving walls

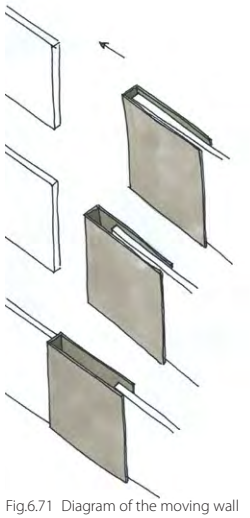


Fig.6.71 Diagram of the moving wall

MOVING WALLS

The activity rooms adjacent to the dance studio can either become hideaway spaces for private activities or be extensions of the main space through the opening or closing of the moving walls (Fig.6.61-Fig.6.63). Viewing panels in the walls allow a glimpse into the rooms. A central sitting alcove becomes a secluded hideout and encourages private conversation.

The linoleum floor is extended into the rooms and continues on the wall, to reinforce the idea that the thresholds are not fixed but are flexible elements in the larger space (see pg.128).

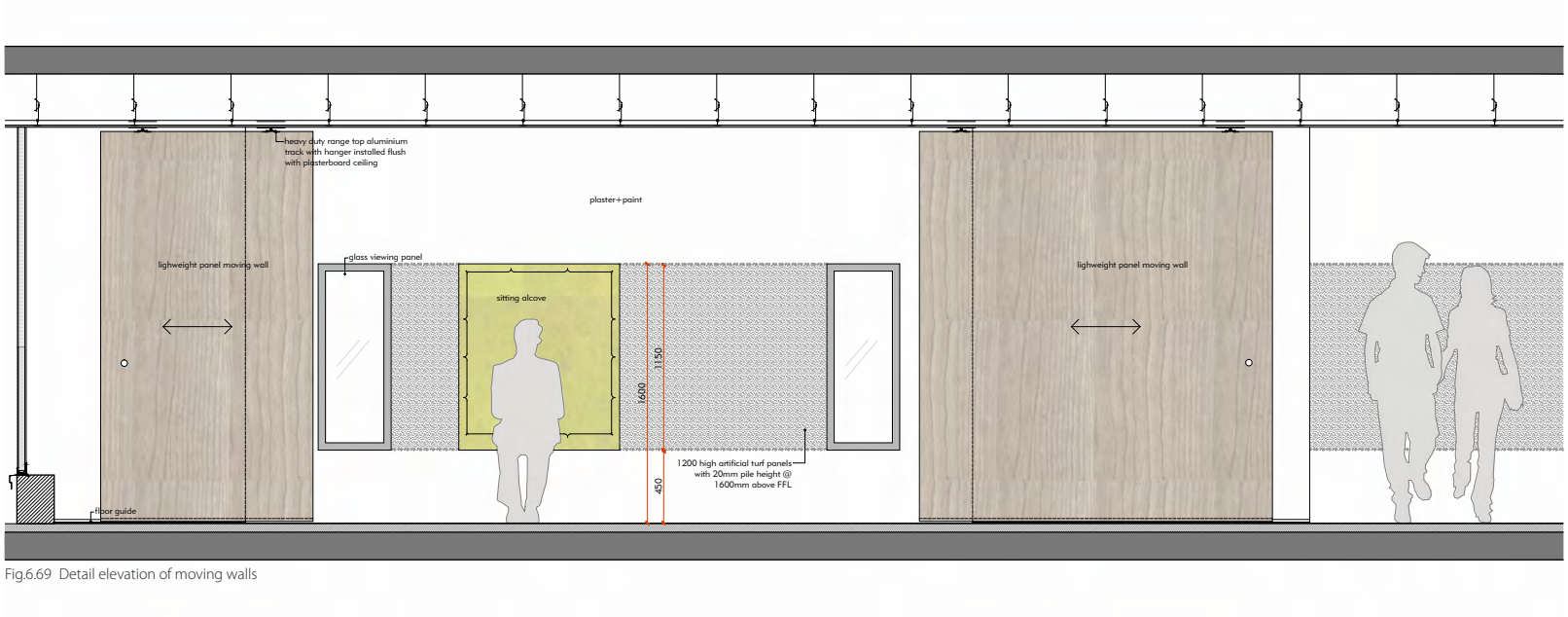


Fig.6.69 Detail elevation of moving walls

Fig.6.72 Perspective of the dining+study hall with sitting alcove in front

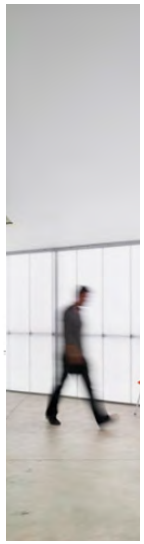


Fig.6.73 Polycarbonate wall

Fig.6.74 Model with chalkboard+whiteboard

6.2.5 DINING+STUDY HALL

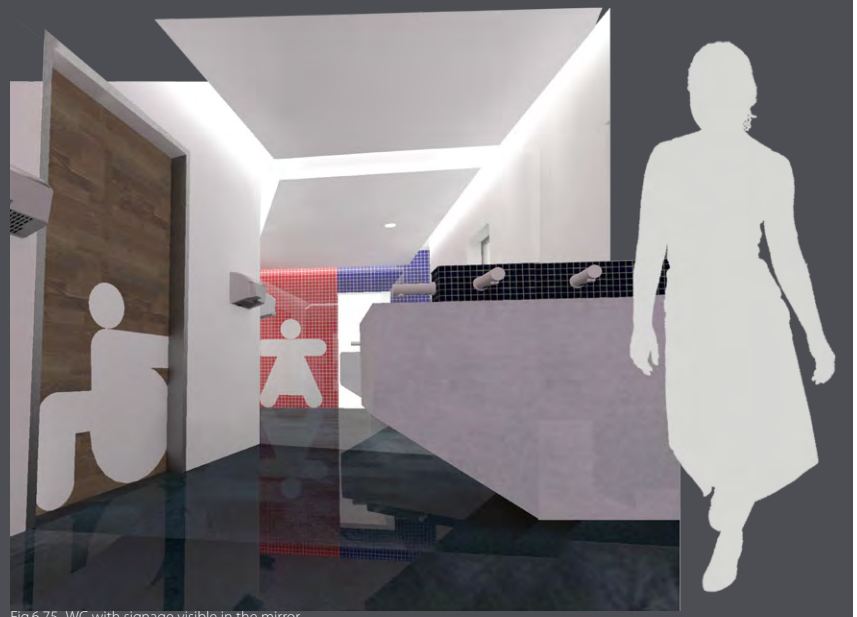


Fig.6.75 WC with signage visible in the mirror

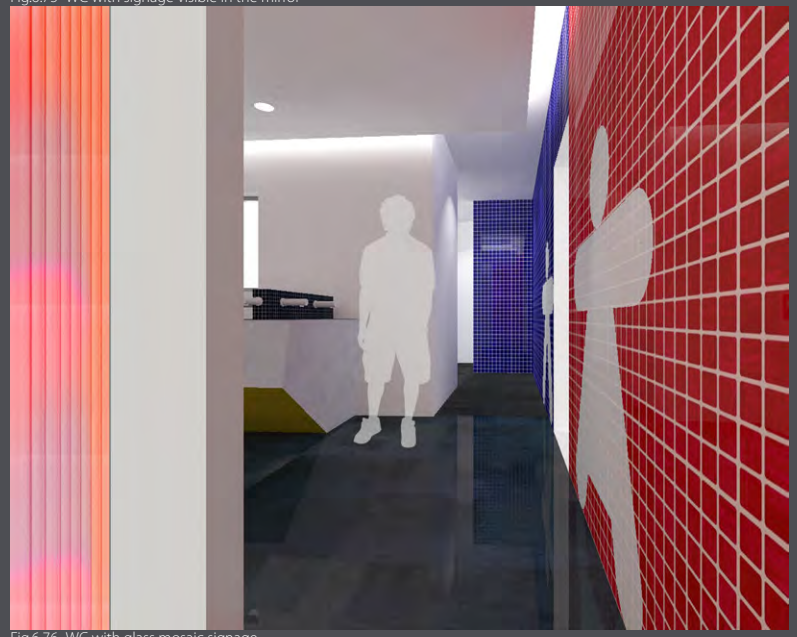


Fig.6.76 WC with glass mosaic signage

6.2.6 WCs

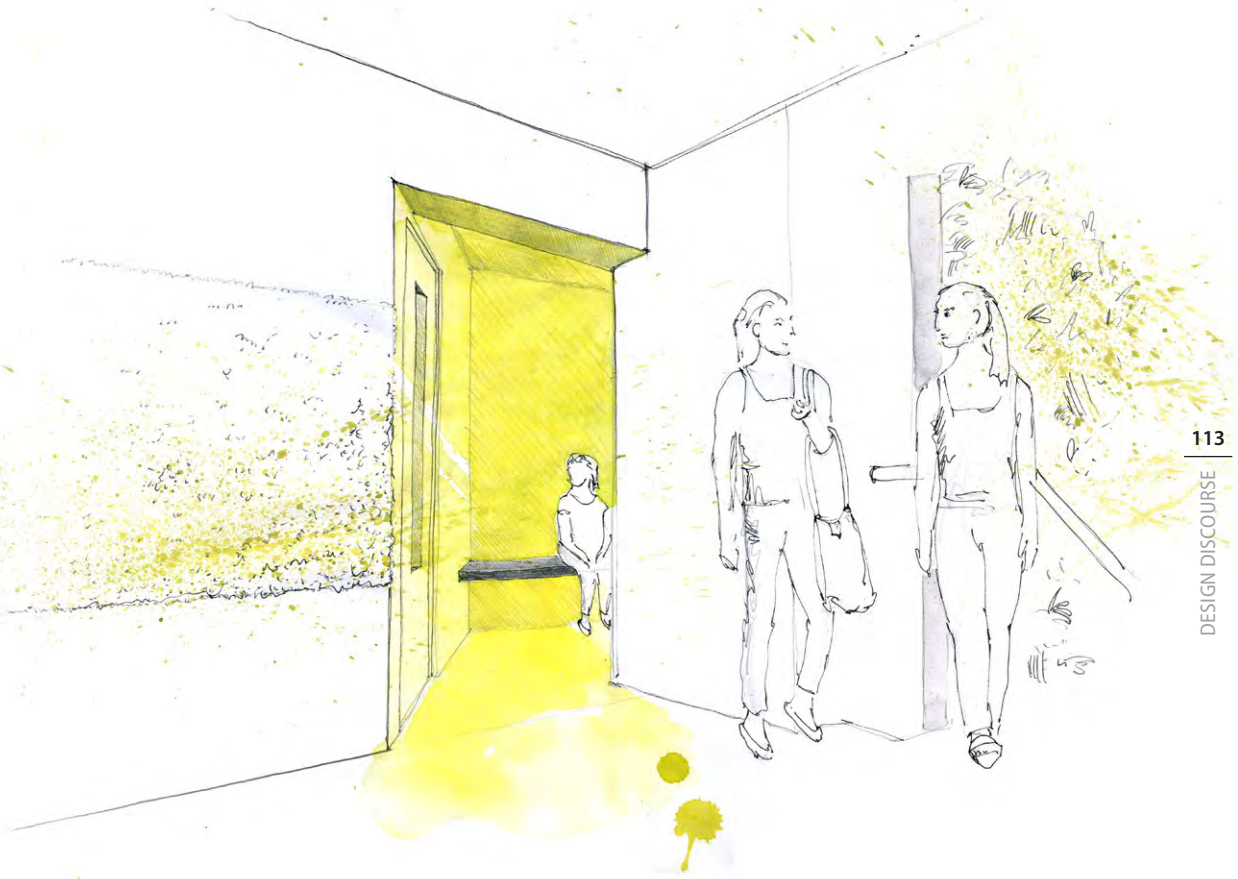


Fig.6.77 Perspective of the connecting tunnelled corridor

6.2.7 MUSIC ROOMS

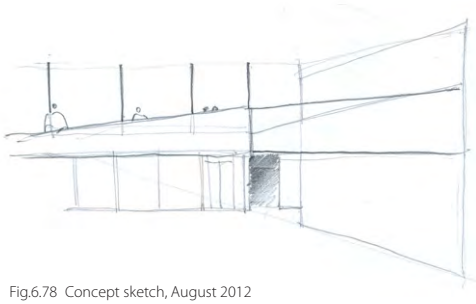


Fig.6.78 Concept sketch, August 2012

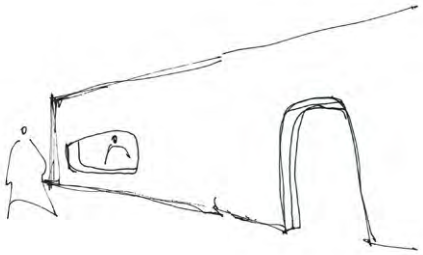


Fig.6.81 Concept sketch, August 2012

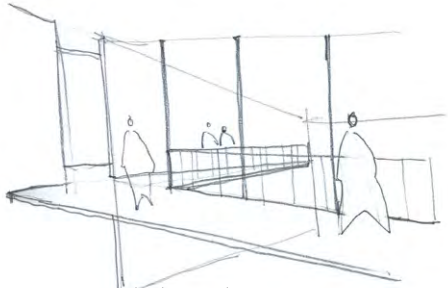


Fig.6.79 Concept sketch, September 2012

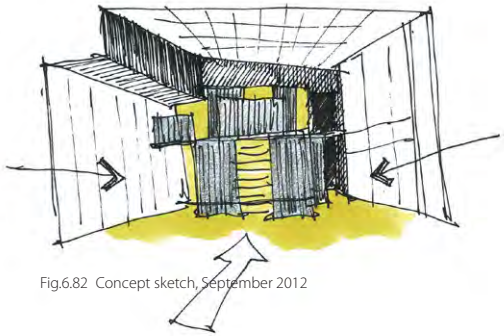


Fig.6.82 Concept sketch, September 2012

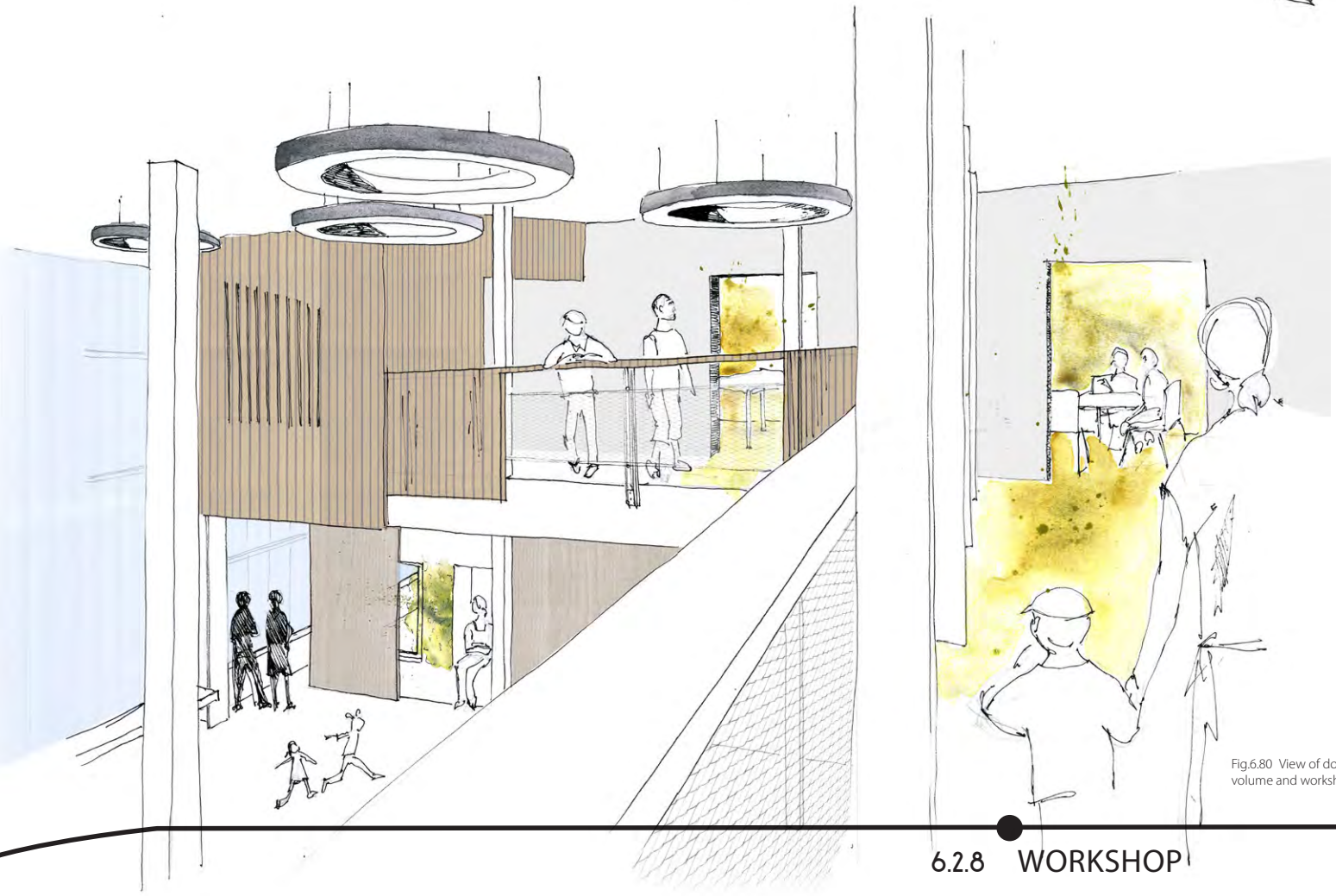


Fig.6.80 View of double-volume and workshop area

6.2.8 WORKSHOP

Fig.6.83 Pivot doors with view into the dance studio

6.3 CONCLUSION

This chapter is an overview of the iterative design process. The aim was to take friction as a traditional urban concept and explore the interrelation of the physical, social and visual aspects to create new forms of expression for the interior.

Various conceptual ideas such as space as a fluid, the vertical plane and the urban living room were integrated into the design of the various interior elements and spaces to establish areas of different levels of interaction and privacy.

Friction manifests in the approach of old and new, the material choices, as well as in the possible crosspollination of the various programmes.

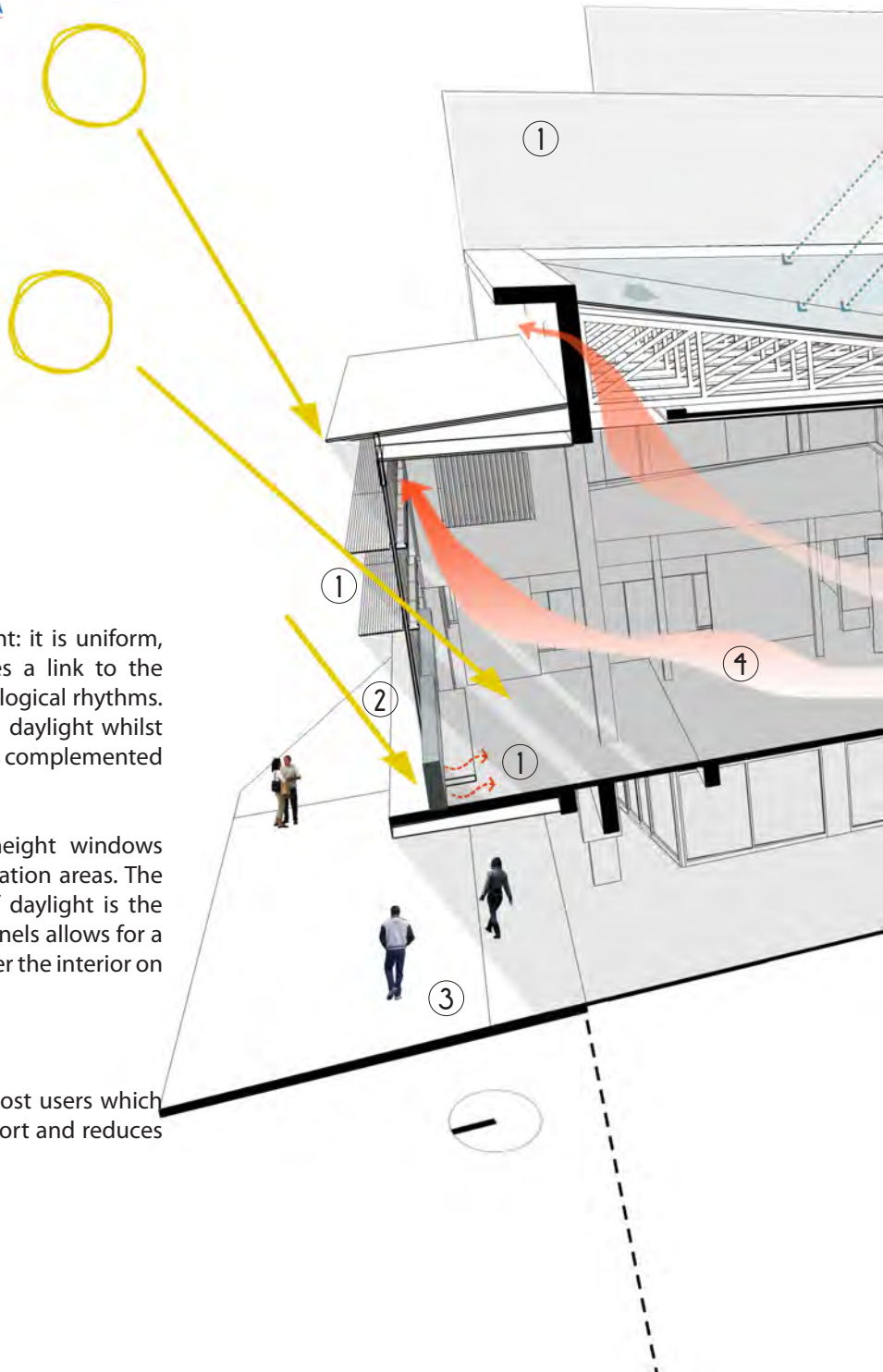
The intervention becomes distinctive through the qualities of space rather than a context-specific design language. The purpose of the design is to provide thoughtfully designed interiors that not all users have perhaps experienced in order to contribute to the unique sense of place and ownership.

TECHNICAL INVESTIGATION 7

This chapter considers the systems, structure, details and materials which come together as the physical integration of the programmatic requirement and conceptual approach. Each floor features distinct spatial experiences and physical characteristics that correspond to the different functions.

The architectural language found in the original building, where elements are decorative yet functional, is taken up in the new interventions together with the exploration of friction in various forms.

Fig.7.1 Collage of existing materials and textures



7.1 DESIGN AND INNOVATION

Fig.7.2 shows the various systems in the building. Passive systems such as natural ventilation and daylight are supplemented with active systems where necessary. The new design ties into existing services where possible.

7.1.1 PASSIVE SOLAR DESIGN

The building faces north and is flanked by other buildings on the east and west side. This allows for passive solar control with exterior sun louvres on the northern side that mitigate heat gain and glare. They shade the façade in summer and allow sun in during winter.

A low concrete wall acts as a thermal storage material, storing solar energy during the day and releasing it to the interior at night.

7.1.2 NATURAL DAYLIGHT

There is no substitute for natural daylight: it is uniform, causes a sense of wellbeing, establishes a link to the outside and is the gauge for our daily biological rhythms. The design maximises the use of natural daylight whilst preventing glare and heat gain. Daylight is complemented with artificial light where necessary.

The southern façade features ceiling-height windows in the classrooms as well as in the circulation areas. The design element that exploits the use of daylight is the façade: the translucent polycarbonate panels allows for a uniform, diffuse light without glare to enter the interior on the first and second floors.

7.1.3 SITE

The site is within walking distance for most users which eliminates the need for additional transport and reduces the carbon footprint.

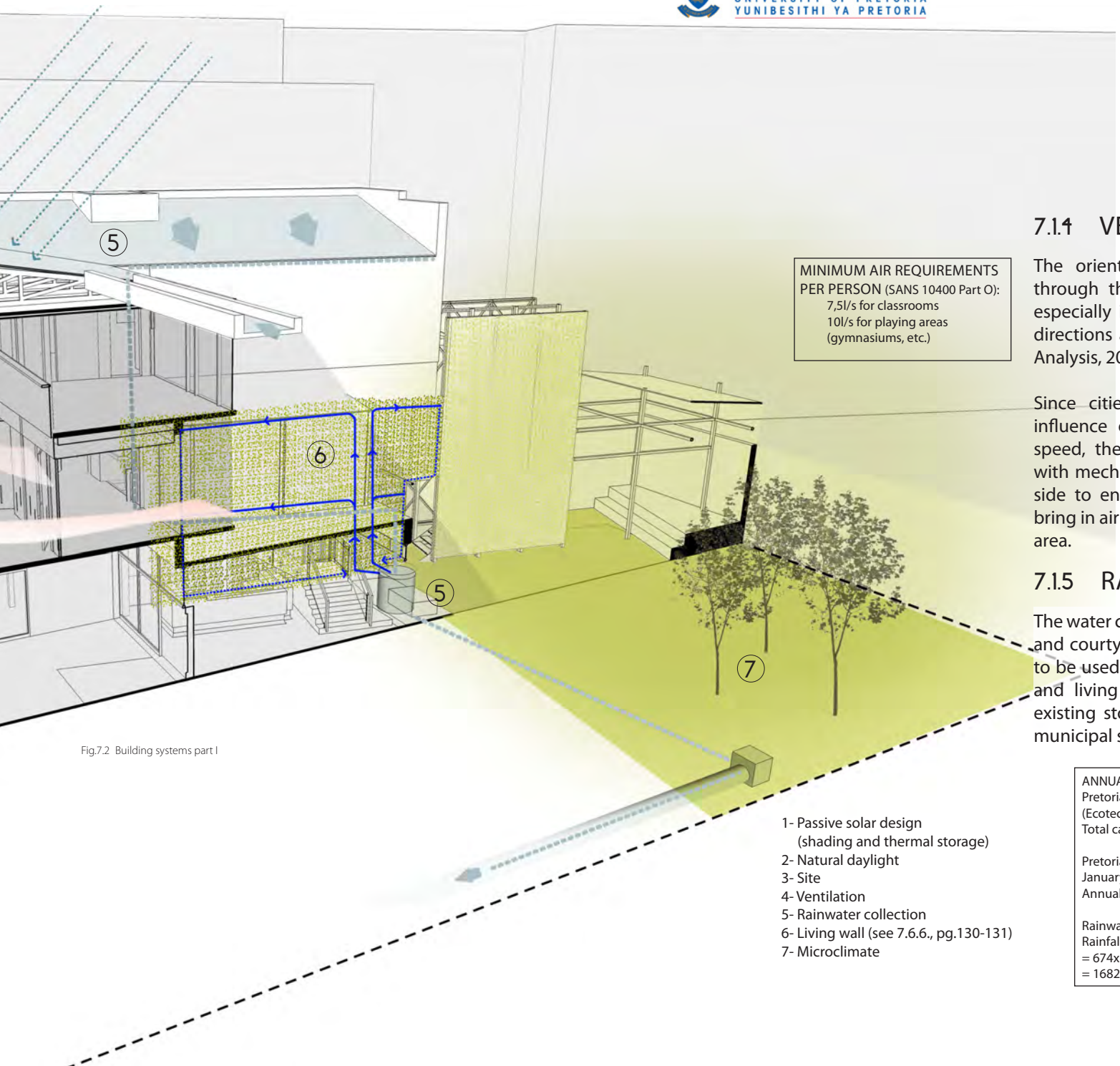


Fig.7.2 Building systems part I

MINIMUM AIR REQUIREMENTS
PER PERSON (SANS 10400 Part O):
7,5l/s for classrooms
10l/s for playing areas
(gymnasiums, etc.)

1- Passive solar design
(shading and thermal storage)
2- Natural daylight
3- Site
4- Ventilation
5- Rainwater collection
6- Living wall (see 7.6.6., pg.130-131)
7- Microclimate

7.1.4 VENTILATION

The orientation allows for natural ventilation through the building on the north-south axis, especially in summer where the prevalent wind directions are northwest and southwest (Ecotect Analysis, 2011).

Since cities and built-up areas can have an influence on wind directions as well as wind speed, the natural ventilation is supplemented with mechanical extraction fans on the northern side to ensure sufficient air displacement; they bring in air from the cooler, less polluted backyard area.

7.1.5 RAINWATER COLLECTION

The water collected from the existing roof surfaces and courtyard area drains into the catchment pit to be used for the irrigation of the backyard area and living wall. The overflow connects to the existing storm water drain that connects to the municipal storm water management system.

ANNUAL RAINWATER COLECTION:
Pretoria: summer rainfall region
(Ecotect Analysis, 2011)
Total catchment area= 312m^2

Pretoria maximum average rainfall:
January: 136mm^2
Annual: 674mm^2

Rainwater collected=
Rainfall (mm/year) x area (m^2) x runoff coefficient (%)
= 674x312x0,8
= 168230l

7.2 CIRCULATION

The ground floor staircase is located in the reception area that acts as central thoroughfare to the backyard. From the first floor the circulation corridor connects to the existing staircase that leads to the second floor.

The vertical circulation also features a hydraulic glass elevator with opposite doors that allows access to each floor as well as the exterior courtyard on the first floor. The elevator features a small machine room, lighter hoistway construction and does not place any load on the building itself as it is supported from below.

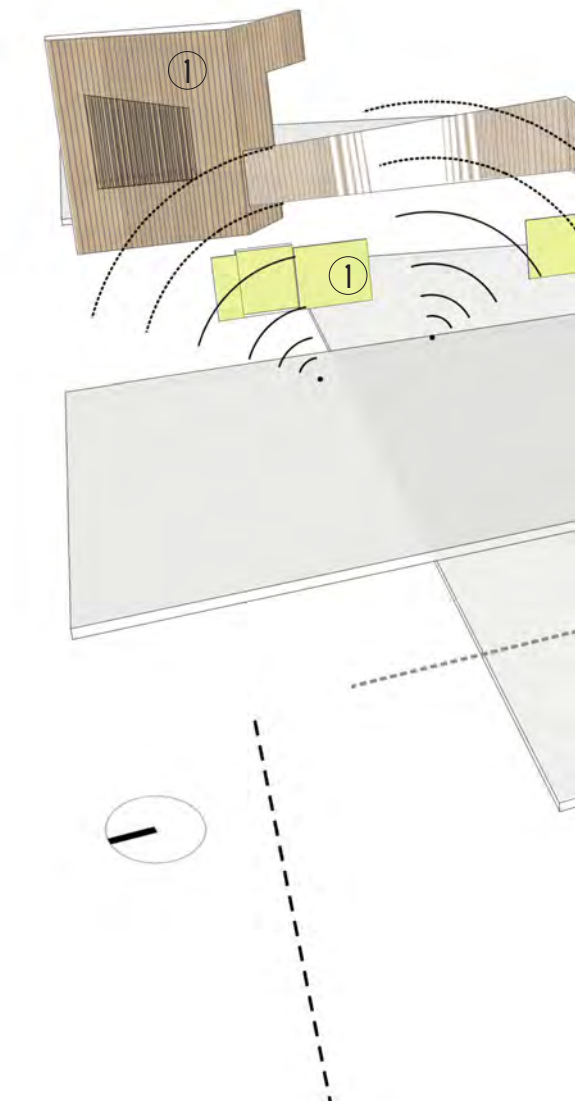
An external fire escape staircase is accessed from the eastern wing (also see pg.123).

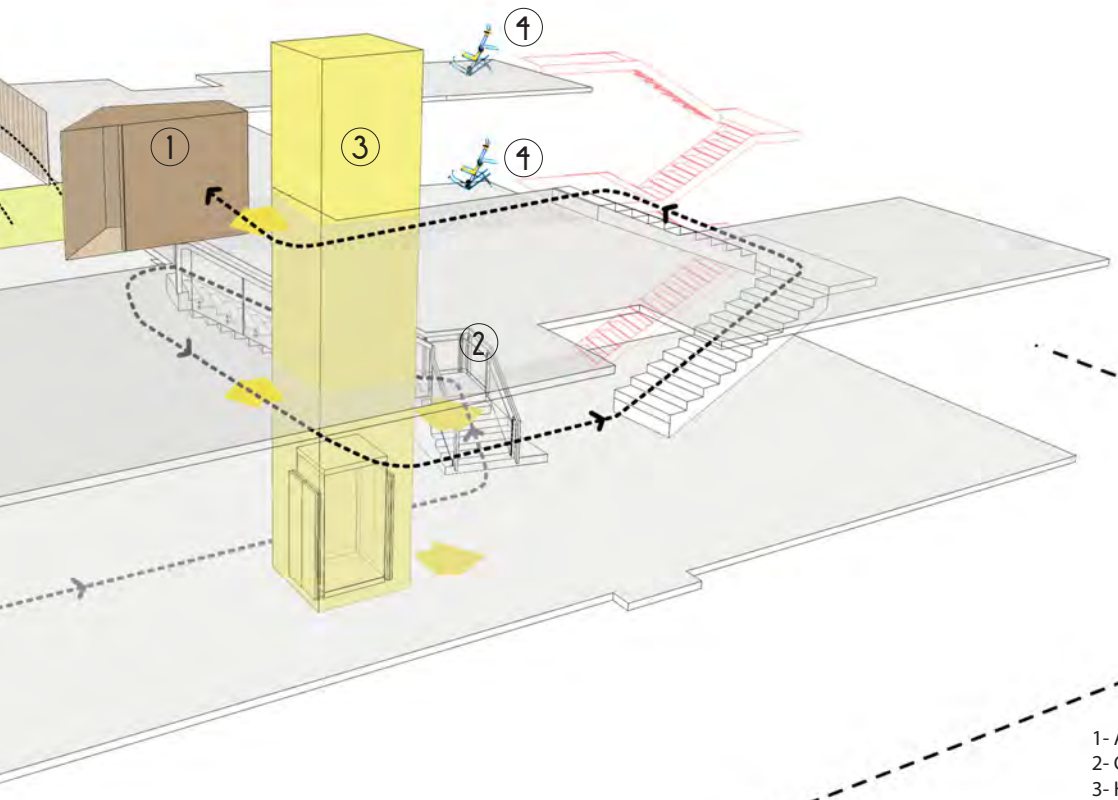
7.3 INCLUSIVITY

According to the NBR Part S (SANS 10400), all facilities should be fully accessible to persons with disabilities.

This involves the following:

- An elevator provides access to each floor
- No threshold is more than 40mm. Where needed ramps are provided with no less than a 1:12 slope
- Surfaces are slip-resistant
- The use of contrast and colour facilitates orientation for people with visual impairment
- Each floor has a wheelchair accessible toilet
- The external fire escape staircase features a refugee area from where further assistance can be provided in case of an emergency.
- A stairway evacuation chair (Edwards & Buckley Systems, 2004) is provided in the rooms leading out to the fire escape staircase.





1- Acoustic panels
2- Circulation
3- Hydraulic glass elevator
4- Evac-chair

Fig.7.3 Building systems part II

7.1 LONG LIFE LOOSE FIT

The ground floor is designed to be accessible to the public and promote public interaction. The upper floors offer flexible spaces that can accommodate various group sizes and events.

New internal non-loadbearing walls are mostly lightweight in construction, allowing for future changes without major demolition work needed.

The programmes can connect or function autonomously, for example the kitchen on ground floor caters primarily for the café but can also provide for the after care on the upper levels or for an event in the backyard.

The original structure features a concrete slab under the roof onto which another floor can be added for any future extensions.

CLASS OF OCCUPANCY
(SABS0400-1990: 34):
The building can be classified as
A1 Entertainment and public assembly, and
A3 Places of instruction


Fig.7.4 Acoustic panel with felt backing

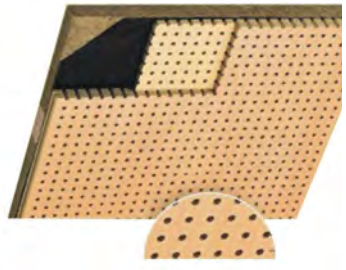


Fig.7.5 Acoustic panel with felt backing


Fig.7.6 Acoustic sliding cavity door

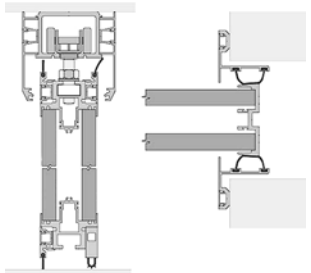


Fig.7.7 Sliding door panel cross section and plan


Fig.7.8 Acoustic steel door with viewing panel

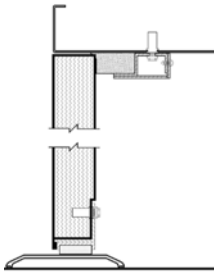


Fig.7.9 Steel door cross section

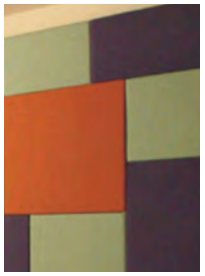


Fig.7.10 Fibre glass panels with fabric cover

7.5 ACOUSTICS

Most spaces flow into one another without a solid threshold. The design and positioning of openings, sealing vertical elements and the choice of floor and ceiling materials with good sound absorption qualities, all aid to dampen background noise and contribute to the acoustic comfort.

Special attention is given to the dance studio with the double volume overhead. In order to counter the hard surfaces of the polycarbonate panels and brick walls, timber acoustic panels are used for the exterior of the leisure room and in part of the balustrade (Fig.7.3, also see 7.6.2, pg.129), as well as fabric-clad fibre glass panels (Fig.7.10, Fig.10)

The classrooms feature openable windows to the street side which will let in an allowable amount of noise. In the double volume the seamless façade minimizes the noise from the street.

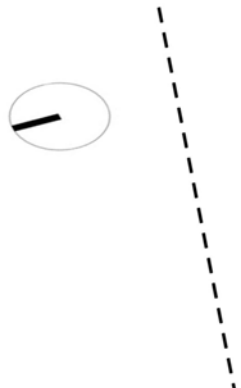
The music practice room has a cavity wall without wall ties that is filled with loose insulation material to prevent sound from penetrating into the activity rooms. A single-leaf wall (110mm) plastered both sides will reduce airborne sound by more than 45 dB[1]. A cavity wall increases this to about 55 dB, and it is also good at reducing impact noise (the sound of something striking the wall) because of the air gap (AAL 224 class notes, 2006). The absorption material in the cavity is effective for absorbing low and high frequencies.

The music and practice rooms are clad with wall acoustic timber panels on a felt backing (Fig.7.4, Fig.7.5). Additional wall panels made from a fiberglass product wrapped in a cloth material can be added to reduce ambient noise levels and excessive reverberation (Fig.7.10). One plastered brick wall is left as is to provide a reflective surface in order to prevent the room from sounding too dead (White,1998).

The windows of these rooms feature double glazing with laminated glass. The two rooms are separated by a 'sound tunnel' where the existing window is closed up. An acoustic steel door with viewing panel leads to the practice room Fig.7.8, Fig.7.9) and a cavity sliding door with a floor track seal to the music room (Fig.7.6, Fig.7.7). Both feature a sealed glass viewing panel.

1 The weighted sound reduction index Rw in dB (decibels) describes the airborne sound insulating power of a building element.

The programmatic distribution also contributes to controlling noise levels: social areas are located close to the main circulation route. Classrooms are located further away, accessed by smaller corridors and doors.



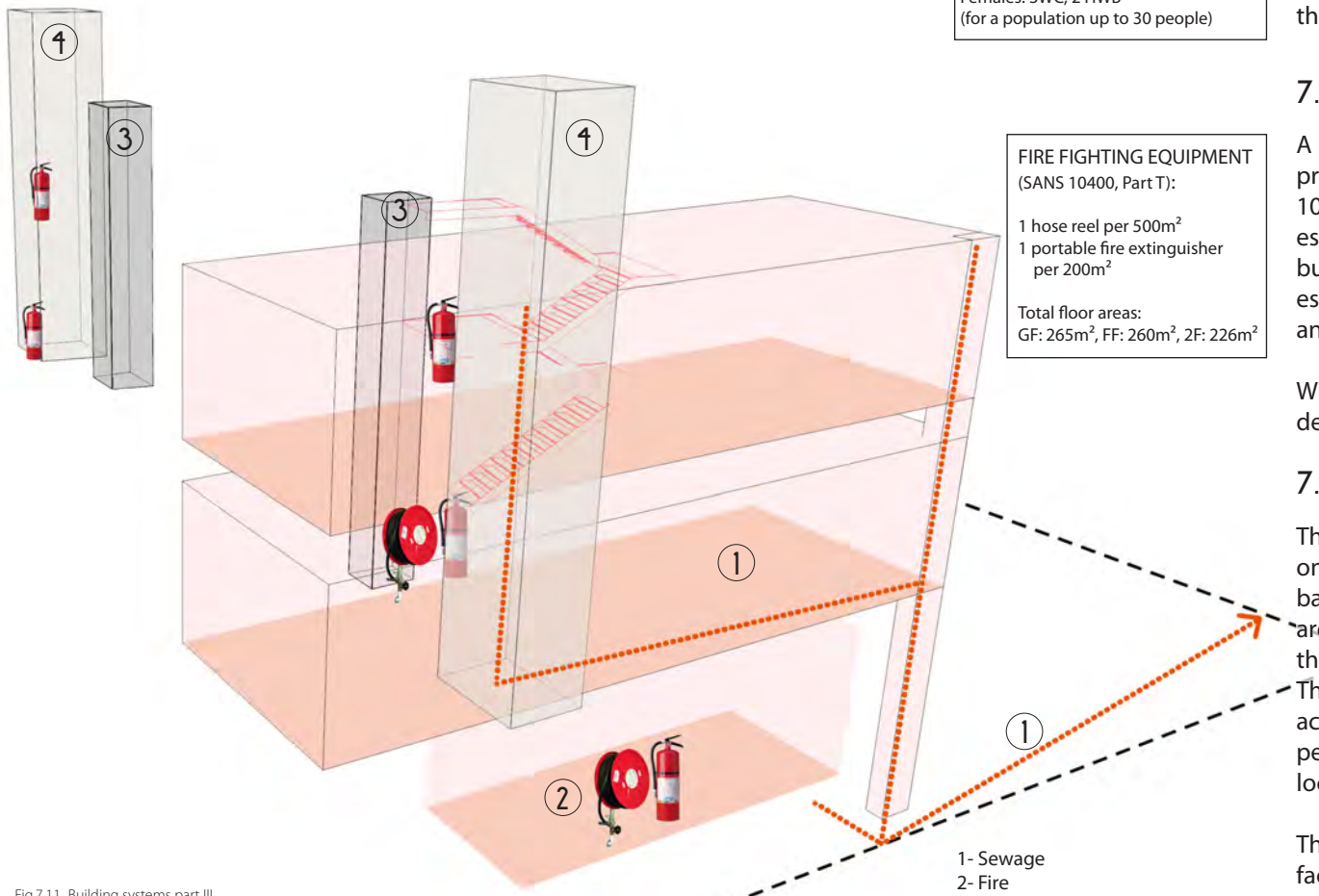
NUMBER OF SANITARY FIXTURES
(SANS 10400, Part P):

Males: 1 WC, 2 Urinals, 2HWB
Females: 3WC, 2 HWB
(for a population up to 30 people)

FIRE FIGHTING EQUIPMENT
(SANS 10400, Part T):

1 hose reel per 500m²
1 portable fire extinguisher per 200m²

Total floor areas:
GF: 265m², FF: 260m², 2F: 226m²



1- Sewage
2- Fire
3- Electrical service duct
4- Light shaft

Fig.7.11 Building systems part III

7.6 OTHER SERVICES

7.6.1 SEWAGE

The toilets are located above each other in the same wing on each floor. The pipes link to the existing sewage system, which includes a manhole in the corner of the backyard where it connects to the municipal system.

7.6.2 FIRE

A rational fire design needs to be done by a professional. According to the NBR TT16 (SANS 10400), where the travel distance to the nearest escape door is more than 45m, a three storey building shall be provided with at least two escape routes[1], but shall not be required to have an emergency route[2].

With the addition of the fire escape staircase the design complies with the regulations.

7.6.3 SECURITY

The reception controls the access to the aftercare on the upper two floors as well as overlooks the backyard for passive surveillance. The glass doors are locked at night if there is no event, controlling the access to the backyard and upper floors. The aftercare organisation provides supervised activities: all classes offered will have dedicated personnel. When not in use, the classrooms can be locked.

The translucent polycarbonate panels of the façade ensure privacy for the interior whilst making shadows from people moving in the interior discernable.

1 An escape route is unobstructed and discharges at ground level into the street or public space.
2 An emergency route performs the dual function of protection during evacuation and fire-fighting operations.

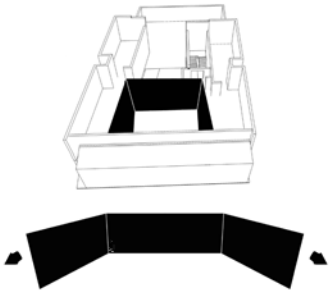


Fig.7.13 Area shown in the unfolded elevation

7.7 MATERIALS

The technical concept is based on the theoretical investigation explored in Chapter 3, where friction had various definitions alternately as conflict, diversity or movement. These terms all have a dynamic element to them, which is inherent by the meaning of the word friction itself.

This sense of the dynamic is expressed in the floor planning and taken up in the joining of the new and the existing. Where materials meet the one resists the other. Flexible elements offer a dynamic background with a change in vantage point. Changing light levels transform certain materials.

The choice of materials also echoes the structural approach where components become lighter as one moves up in the building.

The function of the upper floors as aftercare for children and adolescents makes haptics and acoustics very important. Since most spaces flow into each other without solid thresholds, comfortable acoustic levels are carefully considered, especially in the double-volume, circulation areas, as well as the music and practice room.

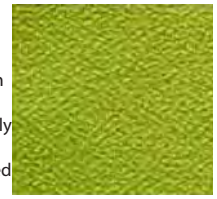
Other factors considered include environmental impact, toxins, maintenance and life span.

The existing colour palette (see Fig.7.1, pg.118-119) is complemented with materials of different textures in shades of grey. The polycarbonate panels are white translucent and together with the materials used in the bathroom offer a glossy contrast. The colour green is represented in various forms and textures: the fire escape, the climbing plants, the living wall, the artificial turf wall panels, the fabric used in the seating alcoves as well as in the linoleum on the floor that indicates the circulation areas.

Various timber and timber veneers offer a warm and tactile experience.

17mm Topline TLS 6/2 MDF acoustic timber panel joined in tongue-and-groove with chestnut veneer finish. Panels mounted vertically in stretcher bond on 38x50mm battens spaced at 600mm centres.

Fig.7.14 Acoustic timber veneer



58mm Genesis acoustic fibreglass panel with fabric cover in colour 'mamba'

Fig.7.15 Acoustic fibreglass panel'

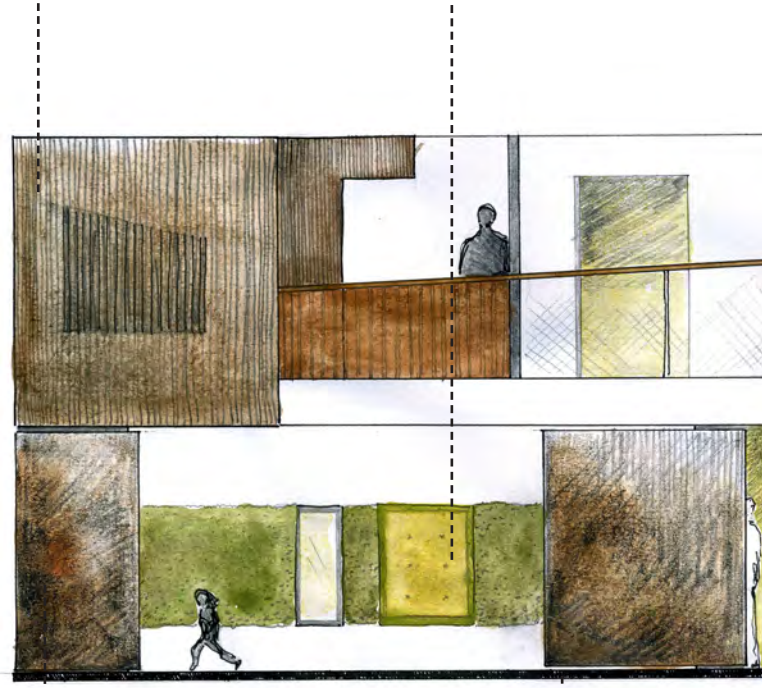


Fig.7.12 Unfolded elevations view of the dance studio and double volume space

Xanita X Board Plus with 30mm bagasse core bonded to an 8mm MDF outer skin with crown cut 'harvard cherry' veneer (also see 7.9.2, pg.138)

Fig.7.16 Xanita X Board Plus 'harvard cherry' veneer

3.8mm Tarkett Linoleum Silencio xf 18 dB consisting of 2.5mm treated linoleum on jute backing prebonded to 1.3mm polyurethane foam under layer in colour 'absinthe'

Fig.7.17 Linoleum floor

Artificial turf with 20mm pile height on backing cloth and non-woven fabric fixed to wall with epoxy glue

Fig.7.18 Artificial turf

Living wall (see 7.7.6, pg. 130-131).

Fig.7.19 Living wall

Stainless steel wire rope mesh for balustrade infill

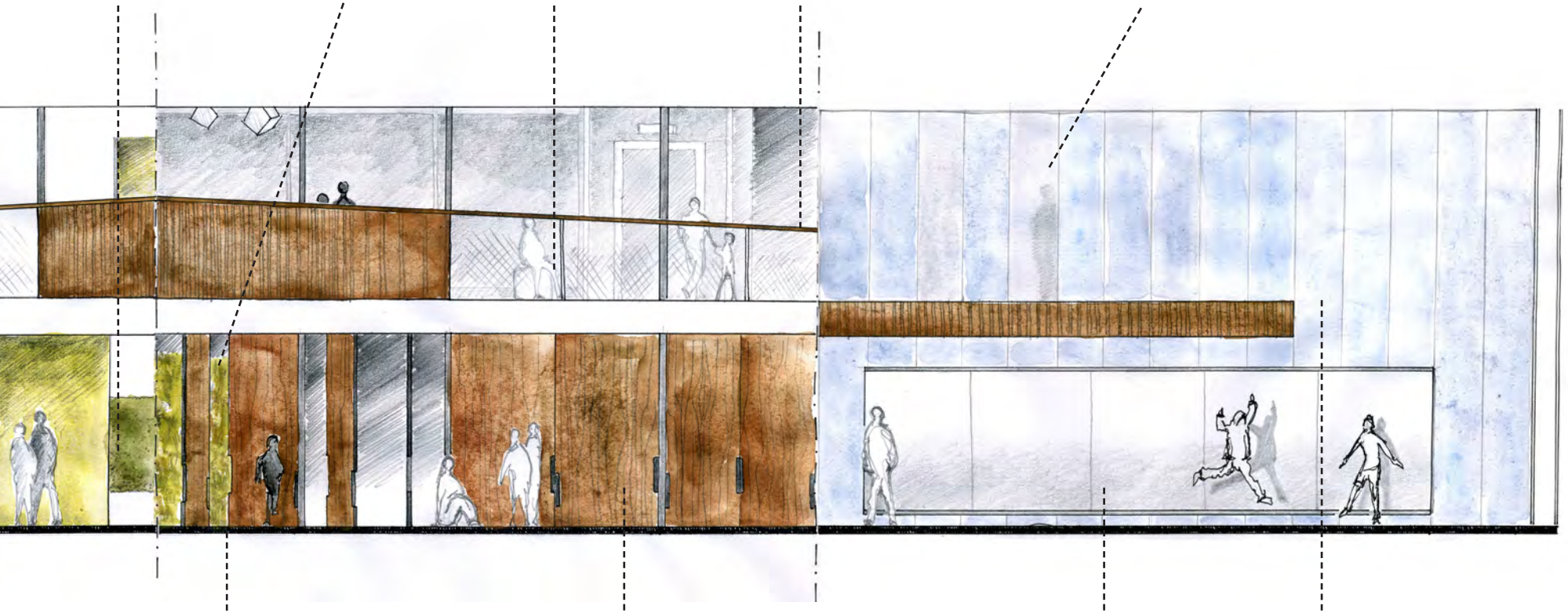
Fig.7.20 Stainless steel wire rope mesh

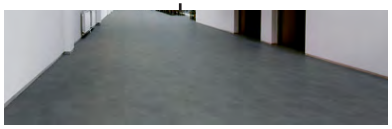
38mm grip solid bamboo handrail in natural finish coated with low VOC water based clear coat finish in low luster satin

Fig.7.21 Natural finish bamboo

500x40x5000mm Marlon Clickfix1040 structured interlocking polycarb panels in 'clear' installed with flush mounted aluminium profile frame

Fig.7.22 Translucent polycarbonate panel





4mm Tarkett Classsic with linoleum monolayer on jute backing and xf finish in PUR polyurethane resin with UV cross-linking in colour 'grey' installed over sprung floor

Fig.7.23 Linoleum floor

Solid core pivot door with galvanised steel edge made of SA pine treated with one coat of pre-stain conditioner, followed by Woodoc natural wood stain in 'teak' and Woodoc10 finishing sealer.

Fig.7.24 SA pine with natural wood stain

1500x2000mm high mirrors installed short of wall with top and bottom J-bar tracks

Fig.7.25 Mirror

500x40x5000mm Marlon Clickfix1040 structured interlocking polycarb panels in 'white' installed with flush mounted aluminium profile frame

Fig.7.26 Translucent polycarbonate panel

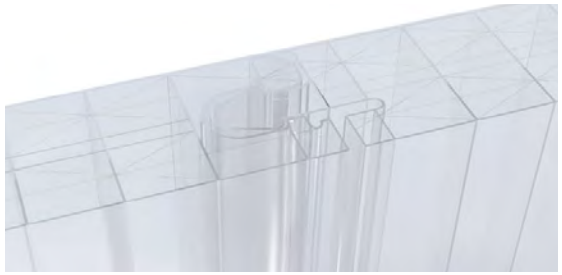


Fig.7.27 Marlon Clickfix1040 in white

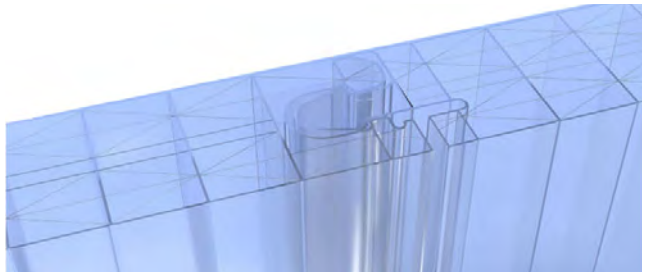


Fig.7.28 Marlon Clickfix1040 in clear

Fig.7.29 Façade at night with polycarbonate panels

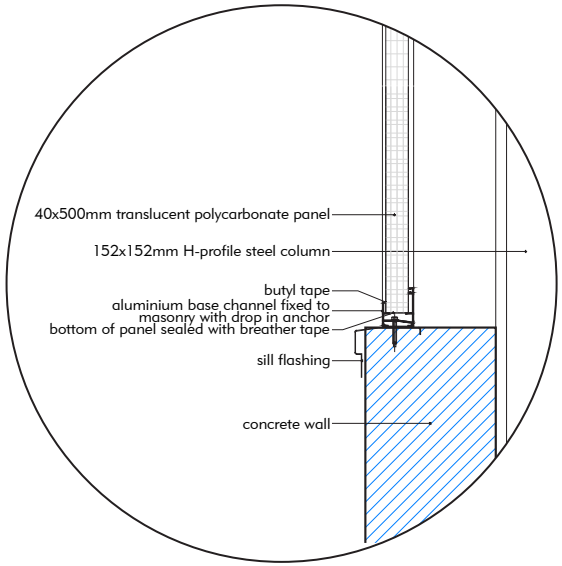


Fig.7.30 Façade section detail

TRANSMISSION			
COLOUR	LT	SHGC	SC
Clear	52%	0.42	0.48
White	44%	0.28	0.32

LT Light Transmission, SHGC Solar Heat Gain Coefficient, SC Shading Coefficient.

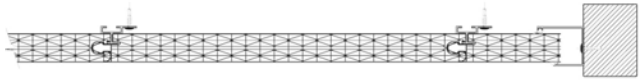


Fig.7.31 Plan view of interlocking panels and side profile.

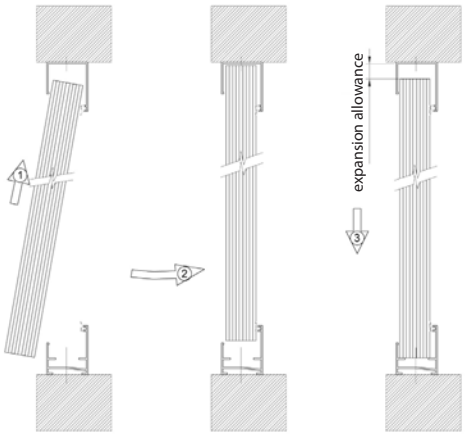


Fig.7.32 Cross section showing steps of installation

7.7.1 POLYCARBONATE PANELS

Marlon Clickfix1040 is a 40mm structured polycarbonate panel up to 5m high with ten insulating internal walls (Brett Martin, 2011:4). The panels interlock, providing a seamless façade with no adhesives required (Fig.31).

Polycarbonate sheeting is chosen for the following reasons:

- Lightweight (extension of the façade)
- High impact resistance (children playing)
- Availability in different colours with varying degrees of translucency[1] (for the interplay on the façade, during the night it transforms into a light box, see Fig.7.29)
- High insulating properties with minimal solar gain (U-value= .099 W/m^{2}K, which places it between the performance of a double glass and triple glass with argon and low-e coatings (Solla, 2010))
- Fully recyclable

1 The SHGC expressed as ratio where 1 equals the maximum amount of solar heat allowed through a window . The solar heat gain coefficient of 0.28 of the white panel is lower than the clear panel and is favourable in the region where the main concern is to keep the interiors cool.

Fig.7.36 Topline panels in wall application

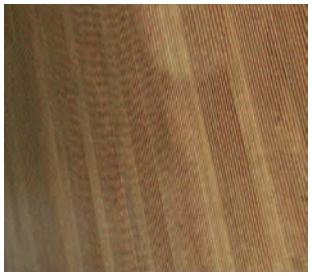


Fig.7.34 Topline panels in wall application

Fig.7.35 Veneer finish 'Chestnut'

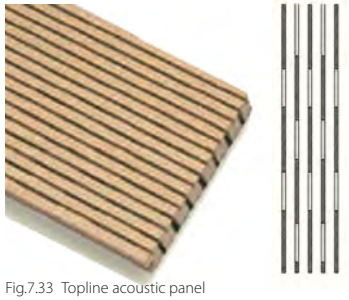


Fig.7.33 Topline acoustic panel

7.7.2 ACOUSTIC TIMBER PANELS

Topline TLS 6/2 is a 17mm medium density fibre board (MDF) veneered panel that features a decorative groove pattern on the visible side with a perforation pattern on the reverse (Fig. 7.38). The acoustic specification is achieved through a unique milling and groove pattern combined with a black acoustic fleece acoustic membrane (Fig.7.33) (Hunter Douglas, 2011:18-21).

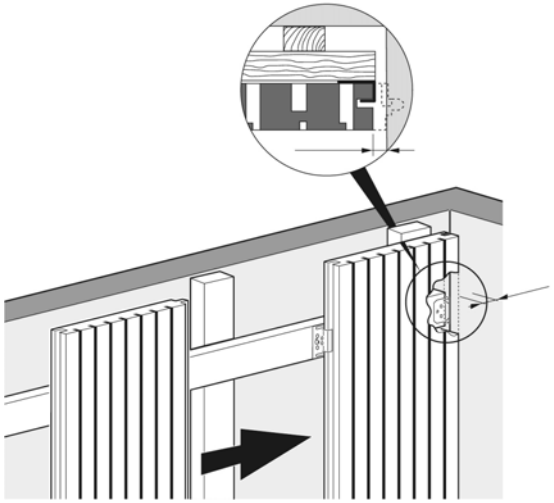


Fig.7.37 Topline acoustic panel vertical installation

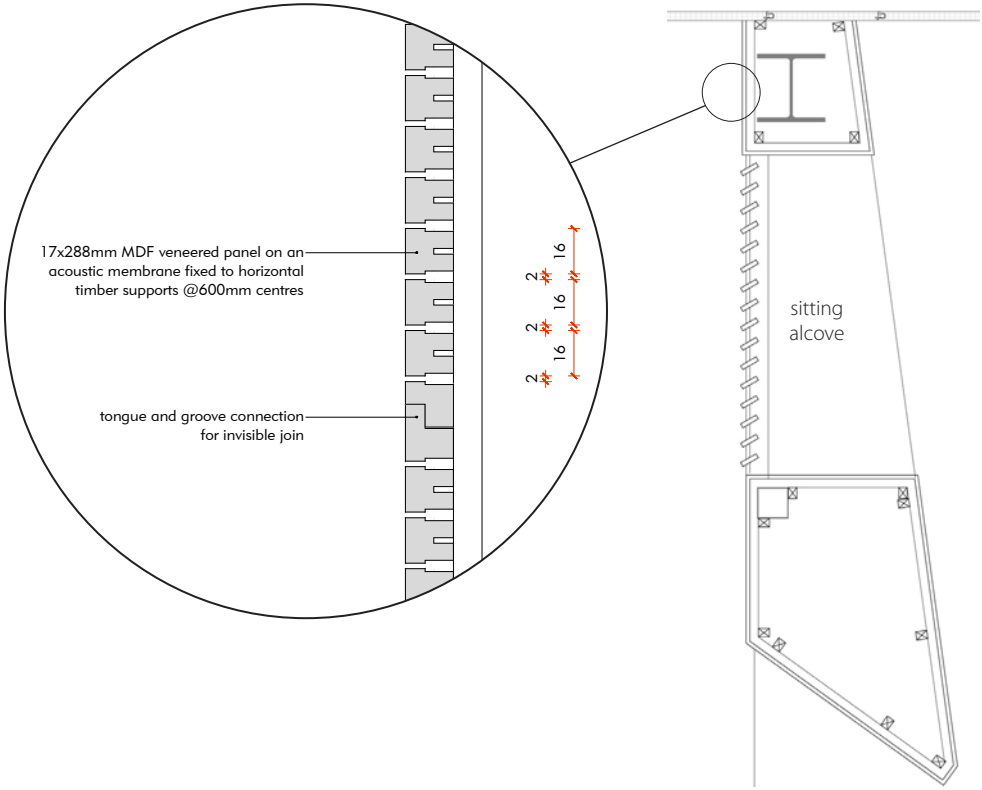


Fig.7.38 Plan view of sitting alcove in leisure area

Fig.7.39 Linoleum colour 'absinthe'

Fig.7.40 Linoleum colour 'grey'

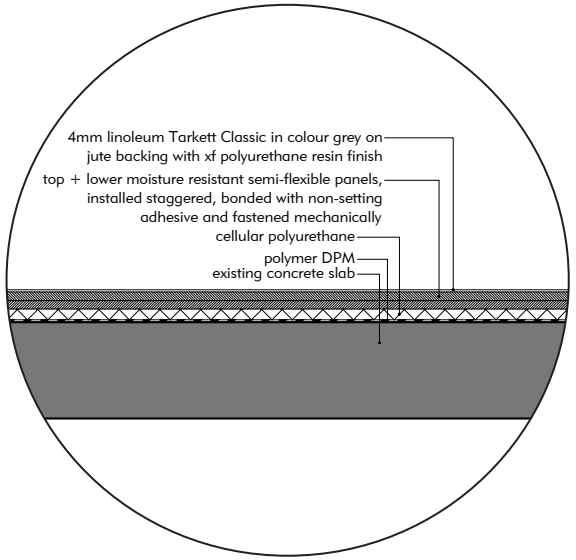


Fig.7.41 Detail of sprung floor with linoleum finish

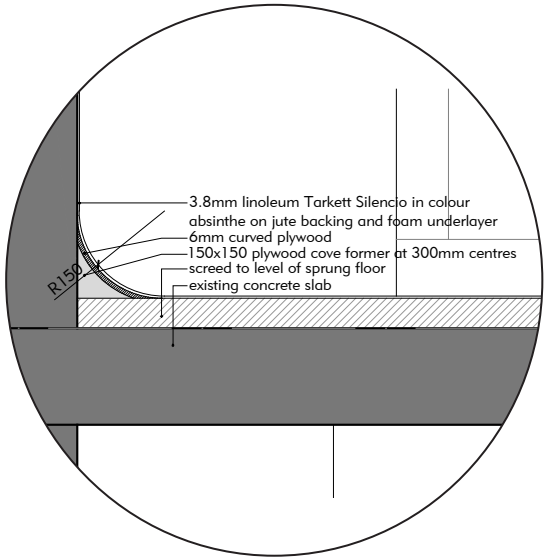


Fig.7.42 Detail of linoleum floor and wall transition

7.7.3 LINOLEUM

The dance studio floor needs to be able to withstand multiple sports and leisure activities. 4mm Tarkett Classic in 'grey' (Fig.7.40) is used as finishing layer over a sprung floor sub-base (Fig.7.41). It does not need additional floor protection and is robust, long-lasting, hardwearing as well as slip-resistant. The sprung floor offers enough resilience to prevent injuries.

For the circulation and classroom areas, 3.8mm Tarkett Linoleum Silencio xf 18 dB in 'absinthe' is chosen, which features treated linoleum with jute backing on a foam underlayer and gives a sound reduction of 18 dB (Fig.7.39).

In addition to its good sound insulation properties, linoleum has the following advantages:

- contains a large portion of renewable raw materials
- available in many colours
- antibacterial
- flexibility and large roll sizes allow a continuous application as floor and wall finish (Fig.7.42).

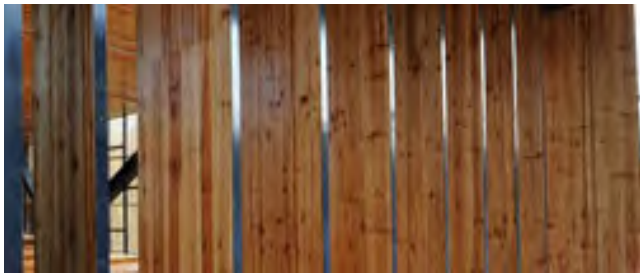


Fig.7.43 Solid core doors with steel edge

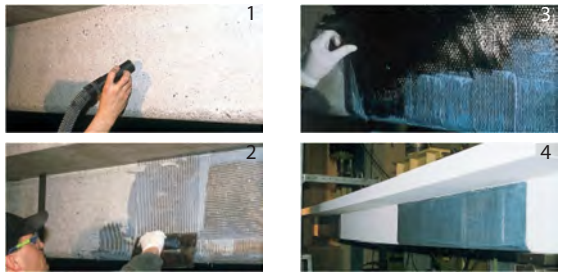


Fig.7.44 Application of Sika carbon fibre strips

7.7.4 SA PINE

The pivot doors close off one side of the dance studio. They rotate 360° and consist of solid core SA pine with galvanized steel edges. The pine is is pre-treated with one coat of pre-stain conditioner, followed by *Woodoc* natural wood stain in 'teak' and *Woodoc*10 finishing sealer.

When they are in closed position there are slits at the bottom that allow one to glimpse into the dance studio as one ascends the stairs from the ground floor (Fig.7.45).

The doors have magnets installed at the top as well as in the ceiling to hold them in an open or closed position (Fig.7.47).

Fig.7.45 Elevation of pivot doors closed

Fig.7.46 Elevation of pivot doors open

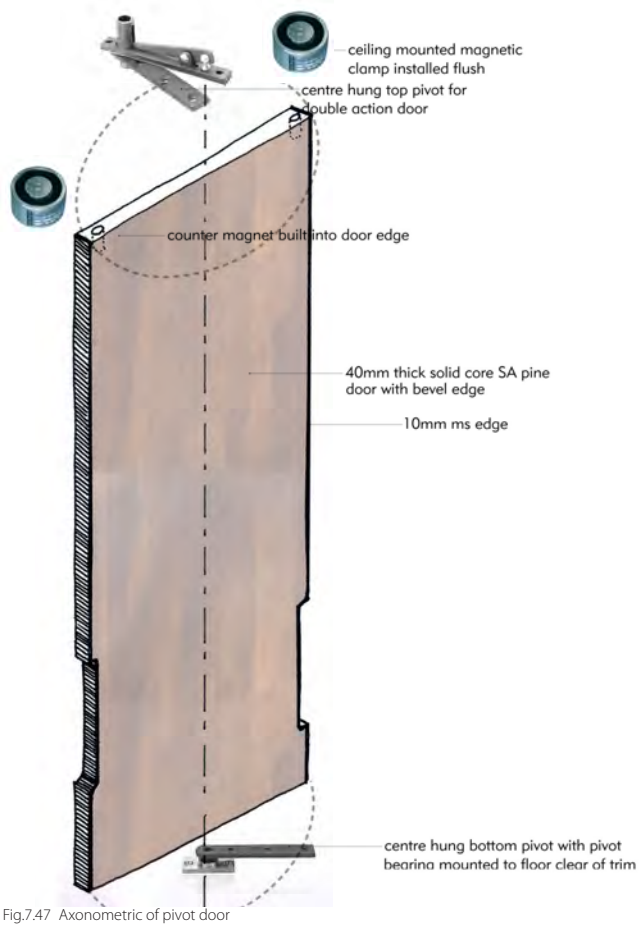


Fig.7.47 Axonometric of pivot door

7.7.5 CARBON FIBRE STRIPS

These are necessary where there are changes in the structural system, such as the removal of columns and part of floor slab in the double volume and over the ground floor staircase.

Sika CarboDur is a pultruded carbon fiber reinforced polymer (CFRP) laminate designed for strengthening concrete, timber and masonry structures (Sika, 2011:1).

Advantages:

- Very high strength
- Lightweight
- Non-corrosive
- Very easy to install
- High modulus of elasticity and outstanding fatigue resistance

APPLICATION (see Fig.7.44)
1. Surface preparation with sandblasting
2. Sikadur 30 epoxy resin as the adhesive is applied on the prepared substrate
3. Sika Carbo Dur is bonded onto the structure
4. Reinforced beam with Sika CarboDur

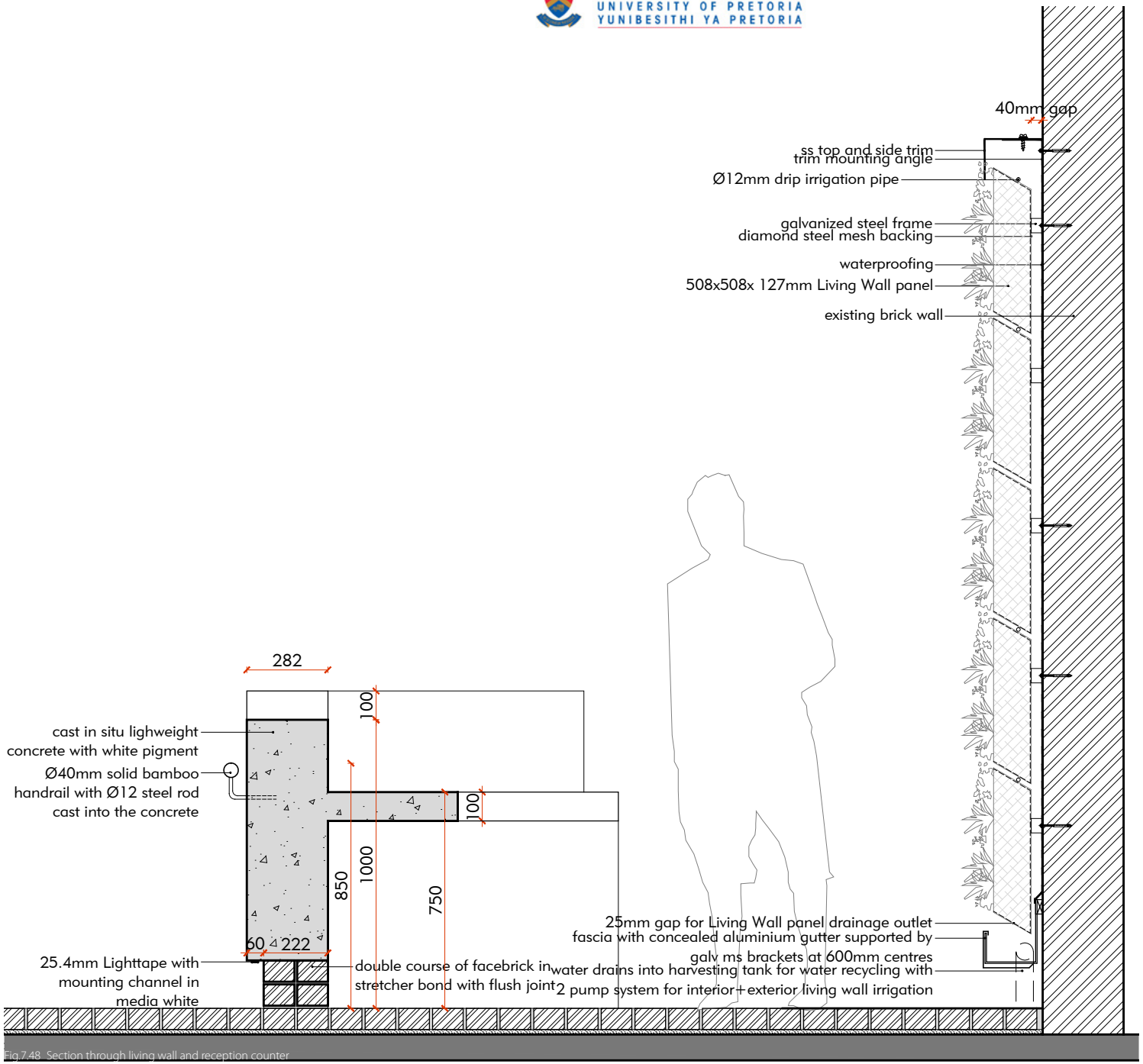


Fig.7.48 Section through living wall and reception counter

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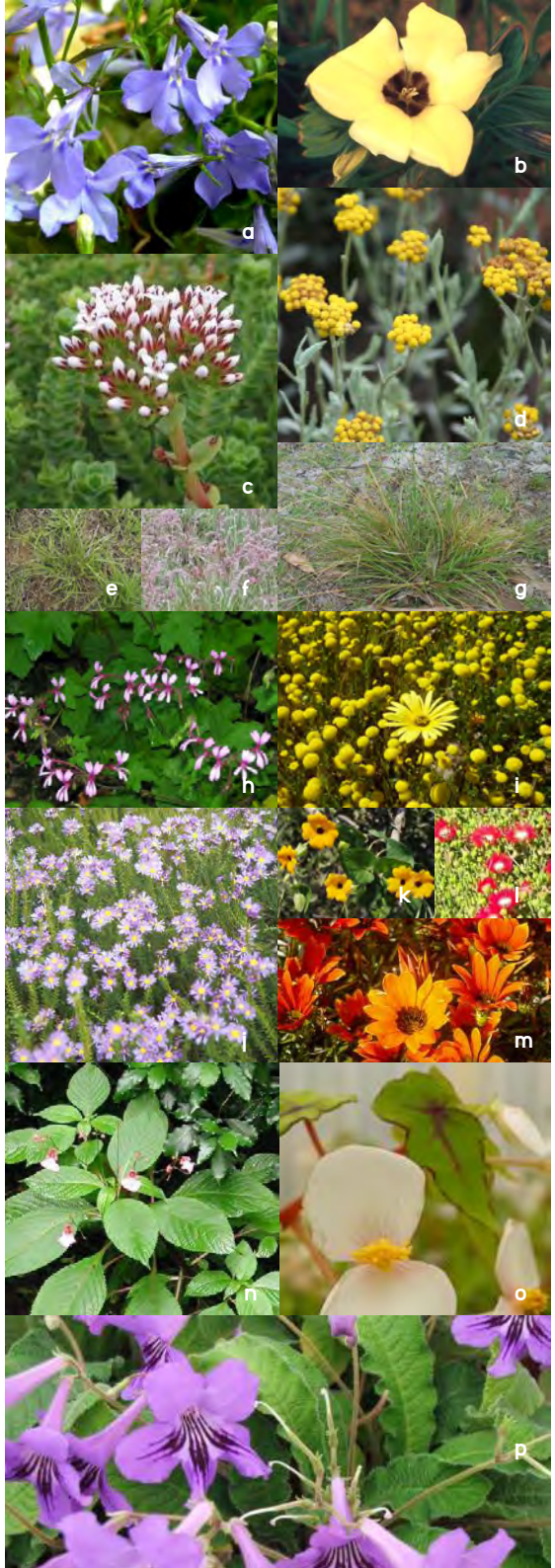
YUNIBESITHI YA PRETORIA

SUGGESTED PLANTS AND PLANT FAMILIES
(Most are perennials, not too tall, endemic and with dense growth)

Lobelia (a)
Babiana (b)
Crassulaceae (c)
Helichrysum (everlastings) (d)
Pelargonium (e)
Microglossa (trailing daisy) (f)
Felicia (g)
Thunbergia pondoensis (h)
Various ferns
Grasses: Sporobolus africanus (i)
Melinis nerviglumis (j)
Paspalum notatum (Bahia grass) (k)
SUN Mesembryanthemum (l)
Gazania (m)
SHADE Balsaminaceae (impatiens) (n)
Begoniaceae (o)
Streptocarpus (from the African violet family) (p)

Fig.7.50 Suggested plants and plant families



7.7.6 LIVING WALL

A living wall is a vegetated wall surface; in this case it is made up of pre-planted modules retaining a growing medium that are secured to a structural wall (Fig. 7.48) (Irwin, 2012). The medium consist of a high quality potting soil mix, including fertilizer, coco peat and bone meal. The modules are installed with drip irrigation activated by a pumping system.

The medium-based system has the following advantages, compared to a hydroponic system, (where recirculate water delivers nutrients directly to the roots of the plant material):

- less fragile (in terms of root rotting, nutrient balance, watering)
- media can support beneficial bacteria
- goes a longer time without irrigation.

Planning for maintenance is vital; this refers to access to the wall, planning of the planting of the wall (as elaborated below), keeping the catch basin clean as well as following an irrigation checklist with a proper nutrient solution.

Fig.7.49 Example of a healthy living wall

The living wall consists of two separate systems (see pg.119), one interior and one exterior. The planting has to carefully planned, considering what type of plants grow well in the area and under varying conditions (indoor and exterior), how the plants change in winter, the suitability for the chosen media-based system and microclimates (different height and light conditions on the same wall).

Watering needs are lowered with the choice of water-wise plants (see above) and the reduced evaporation on a vertical wall versus a horizontal garden.

The irrigation uses the water in the rain harvesting pit, supplemented with regular water supply. It has two circulation loops, feeding the interior and exterior separately to cater for the different plants and watering requirements.

GENERAL IRRIGATION REQUIREMENTS:
2-5 l/m^2/day
Area= +/-13m^2
Maximum per day: 5lx13= 65l/day
The irrigation pump is run 2-3 times a day for a couple minutes per cycle.

7.8 LIGHTING

7.8.1 CEILING PLANS

SECOND FLOOR


Fig.7.51 Suspended linear fluorescent luminaire

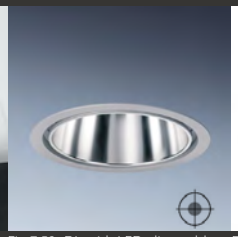


Fig.7.52 DL with LED, dimmable

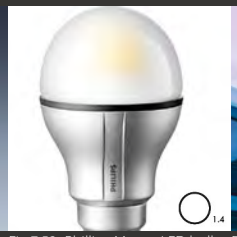


Fig.7.53 Phillips Master LED bulb

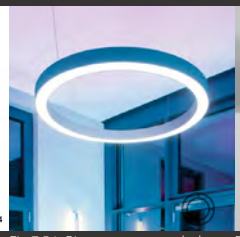


Fig.7.54 Ringostar suspended decorative luminaire

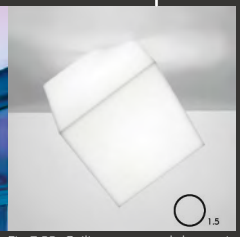


Fig.7.55 Ceiling mounted decorative lighting cube

FIRST FLOOR


Fig.7.56 Linear LED luminaire


Fig.7.57 Wallwasher for blackboard

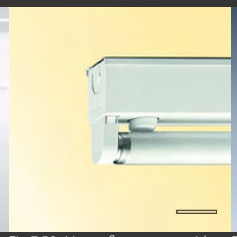


Fig.7.58 Linear fluorescent with seamless connection

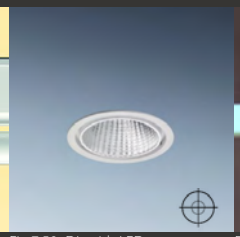


Fig.7.59 DL with LED


Fig.7.60 Recessed linear fluorescent


Fig.7.61 Prismatic luminaire

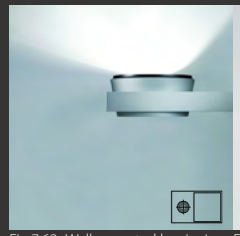


Fig.7.62 Wall mounted luminaire w. indirect wallwasher and DL

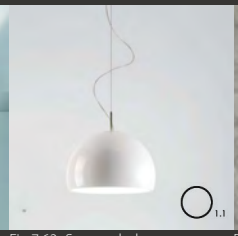


Fig.7.63 Suspended decorative luminaire

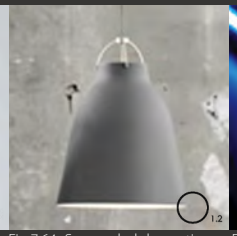


Fig.7.64 Suspended decorative luminaire

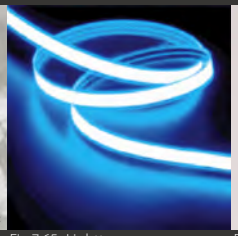


Fig.7.65 Lighttape

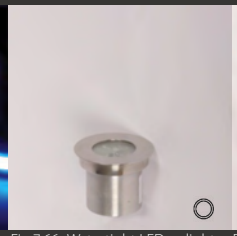


Fig.7.66 Watertight LED uplight


Fig.7.67 Watertight indirect direct wall mounted luminaire


Fig.7.68 Surface mounted linear fluorescent


Fig.7.69 Recessed uplight with asymmetrical lense

LEGEND

- Existing building fabric
- New brick infill

LEGEND CEILING

- Existing exposed concrete slab
- Bulkhead
- 12.5mm plasterboard plastered flush+painted
- 600x600x5mm suspended mineral fibre acoustic ceiling tiles fixed to slab with threaded steel bars
- 12.5mm mineral fibre acoustic ceiling fixed to timber battens
- 17mm Topline TLS 6/2 MDF acoustic timber panel joined tongue-and-groove, w chestnut veneer finish
- IBR sheeting, painted

LEGEND LUMINAIRES

- Ø100mm recessed DL with LED
- Ø170mm Phillips Latina recessed LED downlight, 36° beam angle
- Recessed unit with adjustable spot and downlight with LED, dimmable
- Cylinder surface mounted watertight luminaire
- 1198x114 Mirel recessed wallwasher with 1x54W T16, dimmable
- Ø200mm in ground watertight uplight with directional asymmetric lense with 27W LED
- Wall mounted fluorescent luminaire with CFL
- In ground watertight LED with diffuser, 30° optic
- Recessed LED orientation luminaire
- 25.4mm Lighttape LED strip in media white installed undercounter with mounting channel
- Task light luminaire with fluorescent lamp
- Ø600mm Biluna decorative pendant with 2x40W low voltage halogen
- Ø110mm Caravaggio P0 decorative pendant with G9 clear halogen
- Ø100mm decorative pendant with 60W low voltage halogen
- Phillips Master LED bulb suspended from enclosed socket
- 350x320mm Edge decorative ceiling mounted luminaire with 20W low voltage halogen
- Wall mounted watertight up and downlight w. 2x7.2W LED mounted at 1800mm height above FFL
- Wall mounted watertight downlight with 2x7.2W LED mounted at 1800mm height above FFL
- Linear luminaire with asymmetrical reflector hidden above bulkhead with T16, seamless with no dark spots
- Surface mounted linear fluorescent with T16
- Surface mounted watertight and vandalise-proof linear fluorescent with T16
- Suspended up and downlight fluorescent luminaire with T16
- Recessed linear wallwasher with T16 lamps
- Lightfields square 623x623mm surface mounted luminaire with microprismatic diffuser with 4x14W T16, dimmable
- Lightfields 1248x311mm surface mounted luminaire with microprismatic diffuser with 2x28W T16, dimmable
- Ø1500mm+Ø1250mm Ringostar suspended independant up and downlight with opal diffuser with LED 120W, dimmable
- Custom-made wall mounted luminaire with indirect fluorescent component and adjustable spotlight
- Various stage spot and downlight luminaires

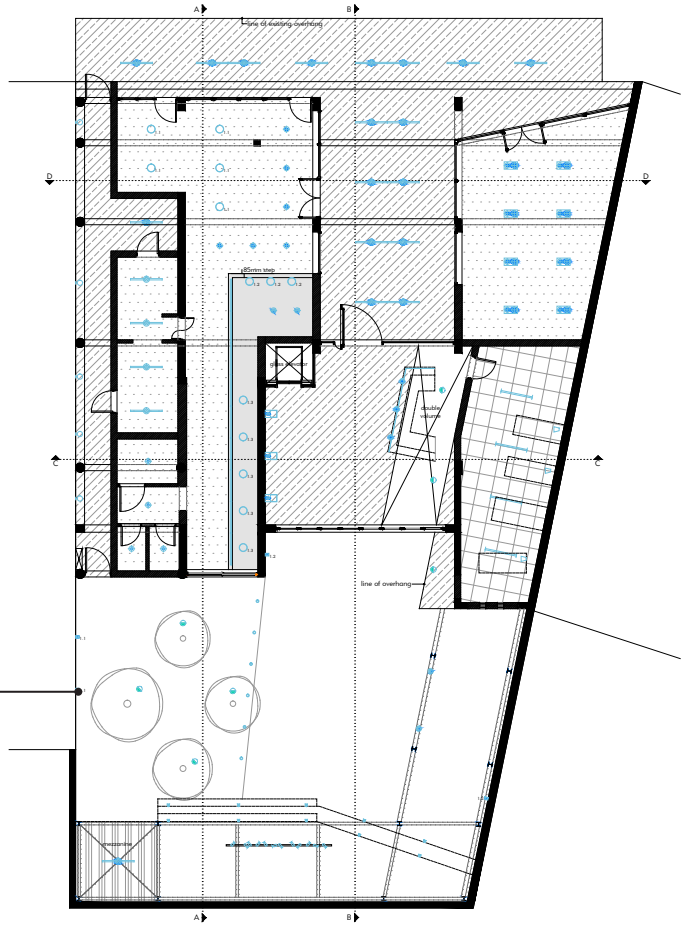


Fig.7.70 Ceiling plan ground floor

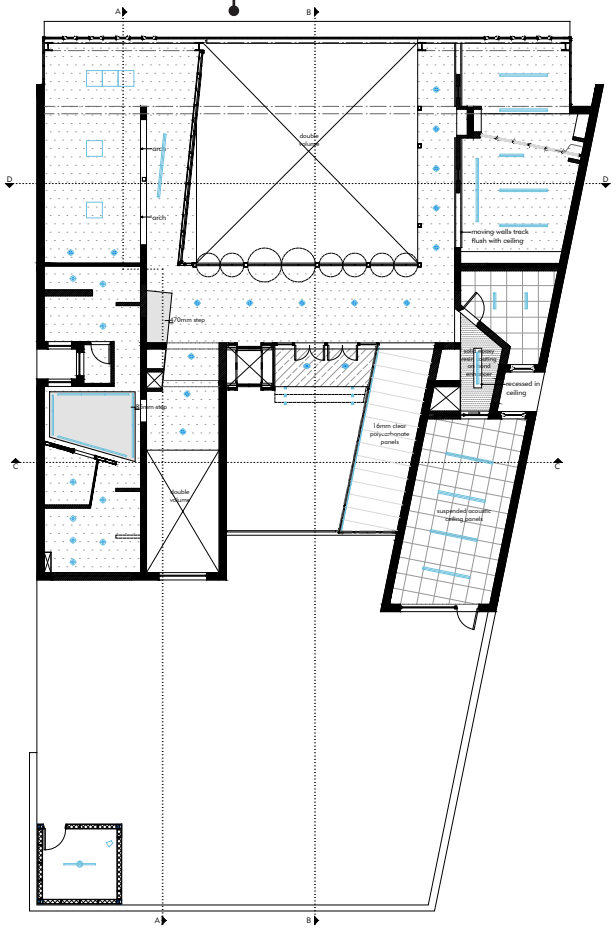


Fig.7.71 Ceiling plan first floor

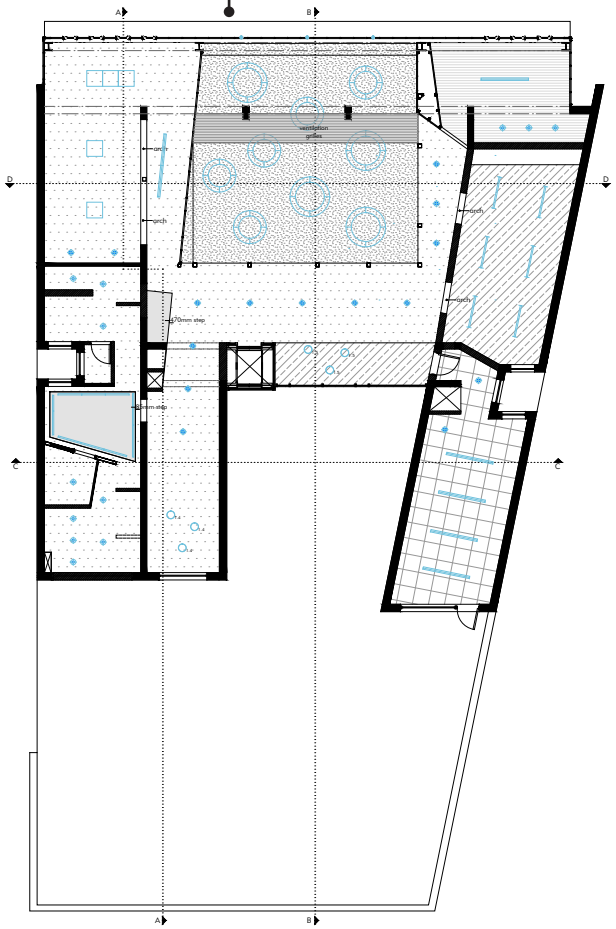


Fig.7.72 Ceiling plan second floor

7.8.2 LIGHTING PLANS

The strategy for the artificial lighting is to supplement the natural daylight only when necessary. A lighting control system regulates the necessary quantity of artificial light. The use of dimmable lamps lowers the energy consumption. In addition, the rooms will mostly be used during the day, with only security and orientation lighting switched on at night.

Considering the various functions that can take place in each room, the lighting design provides uniform and glare free illumination in all directions, so that changing furniture arrangements are not dependant on luminaire positions.

The lighting plays an important role as part of the identity of the building, where the façade acts as lightbox during the night. Ambiance and the emotional effect of lighting contribute to the building's uniqueness and are important factors to attract people and create a sense of place.

The double volume features distinct suspended luminaires that are visible from the street through the façade (Fig.7.54). They have an indirect and direct component that can be switched on separately, or together provide maximum lighting levels. At night or when daylight needs to be supplemented, the indirect component is reflected off the white-painted ceiling and fills the double volume. The luminaires can be dimmed to create a certain atmosphere.

Downlights mark the circulation areas as well as offer a more varied lighting on the ground (Fig.7.52,Fig.7.59).

In the entrance on ground floor custom made wall-mounted luminaires have an indirect component to provide general lighting as well as a downlight for emotional accents (Fig.7.62). By hiding the light source, the space seems lit from within with clear views of the living wall and backyard area.

RECOMMENDED LIGHTING LEVELS, POWER AND ENERGY
(SANS 204-2:2008):

	Recommended good practice maximum values		
Class of occupancy	Power W/m^2	Energy $kWh/(m^2a)$	Lux
A1 Entertainment and public	10	25	50
A3 Places of instruction	10	25	100

COLOUR RENDERING
(SANS 204-2:2008):

Schools:	Ra80-90 (group 1B)
Workshop	Ra>90 (group 1A) is desireable.

LUX LEVEL RECOMMENDATIONS
(SABS0114-1:1996):

Recreation hall:	500lx
Classroom:	200lx
Corridor:	100lx

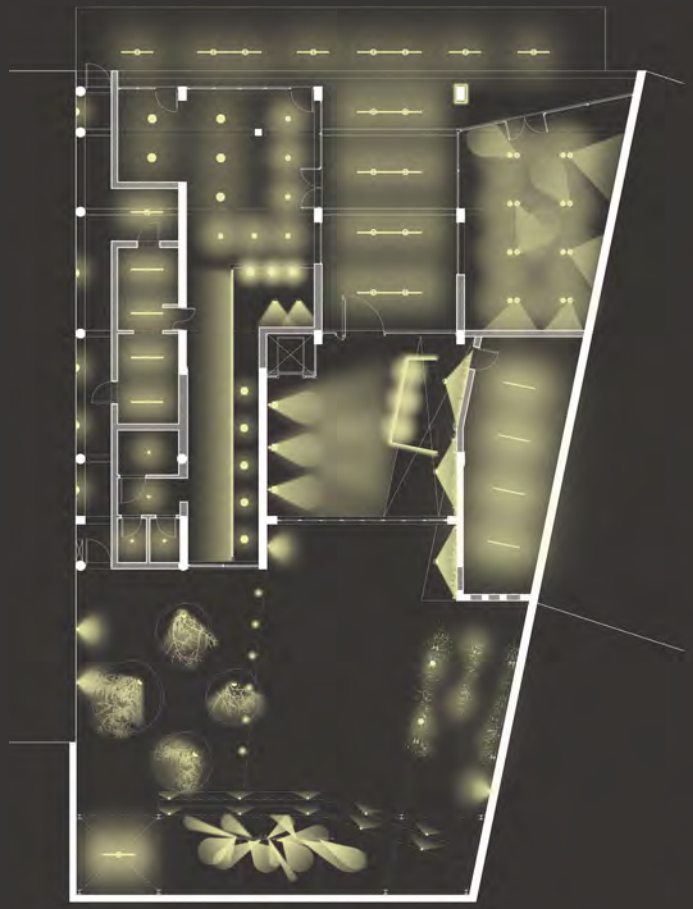


Fig.7.73 Lighting plan ground floor

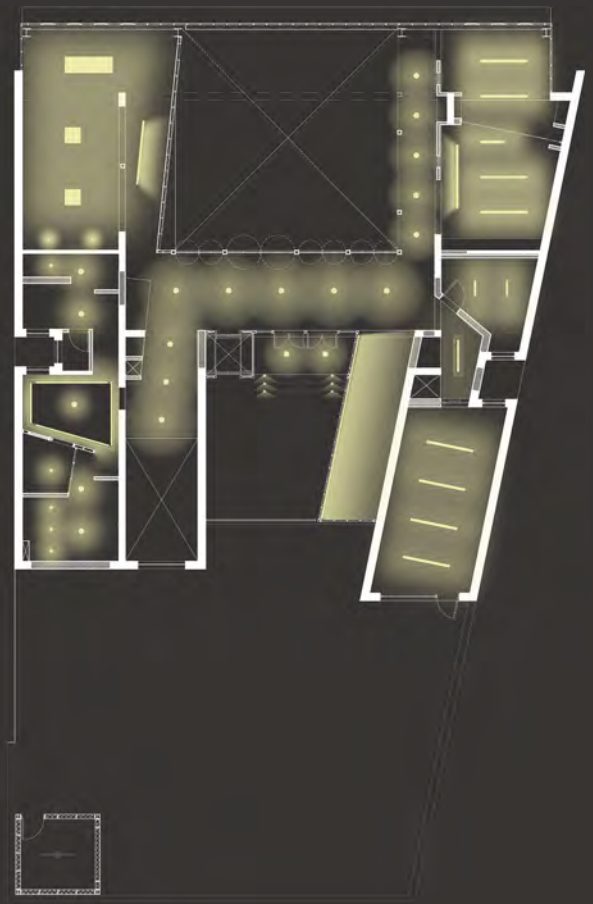


Fig.7.74 Lighting plan first floor

Fig.7.75 Lighting plan second floor

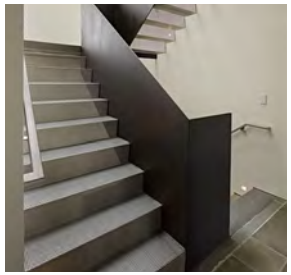


Fig.7.76 Staircase with mesh treads and risers


Fig.7.77 Two contrasting styles of stairs are combined


Fig.7.78 Staircase with ss wire rope mesh infill

7.9 DETAILS

7.9.1 GROUND FLOOR STAIRCASE

The existing staircase on the ground floor is demolished in order to position the main access to the upper floors more centrally. The new staircase is located in the reception area where it rises over the counter and is visible from the street through the glass shopfront (Fig.7.81).

The staircase combines contrasting elements: a solid concrete base with irregular steps that double as seating acts as anchor from which the steel plate stringers rise up. The steel staircase consists of folded perforate steel mesh with solid risers. This allows for visual supervision of the backyard whilst providing a solid horizontal surface. The stringer and handrail read as two minimal diagonal lines. The latter takes its cue from a dance barre and is bent to connect to the reception counter. The balustrade features an unobtrusive stainless steel wire rope mesh infill that refines the language from the exterior fire escape staircase and allows a clear view of the living wall behind.

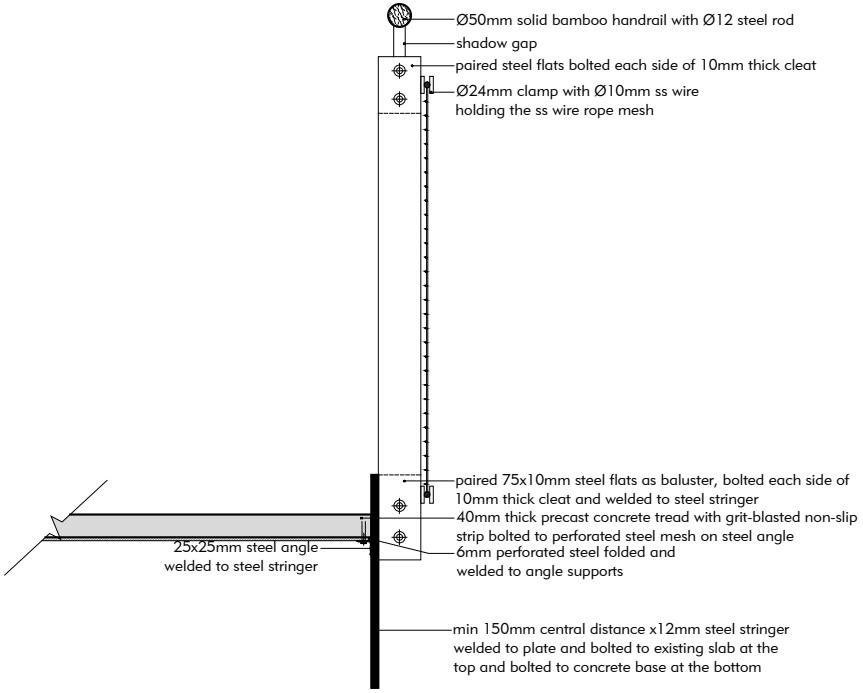


Fig.7.79 Section through tread+baluster

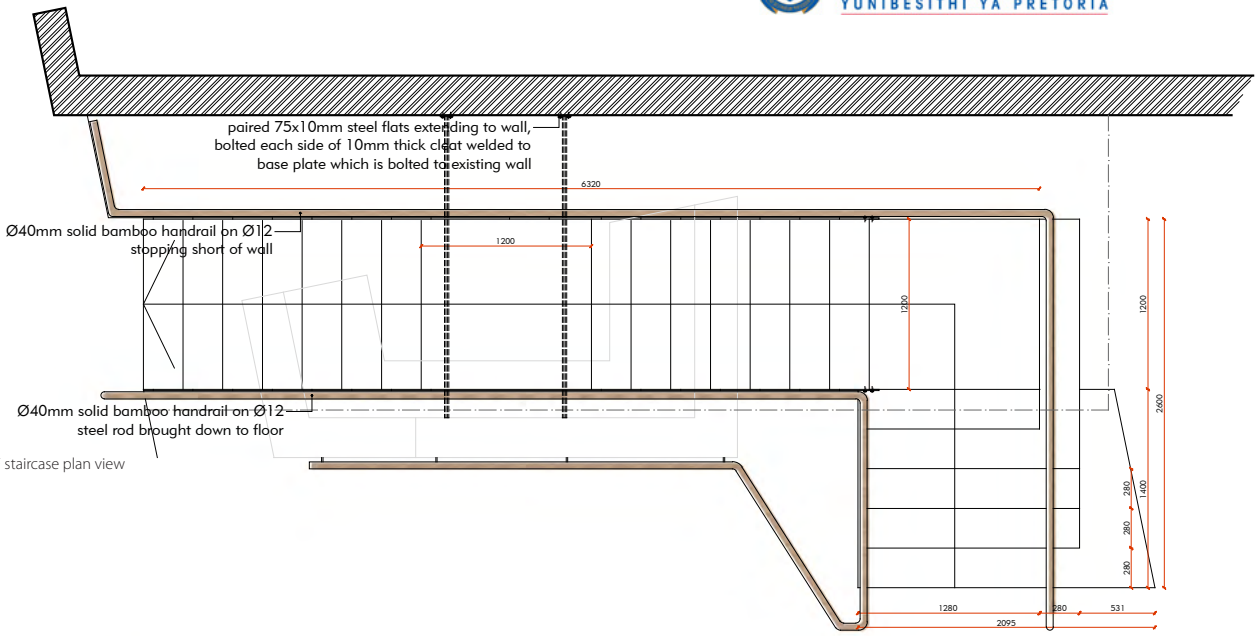


Fig.7.80 GF staircase plan view

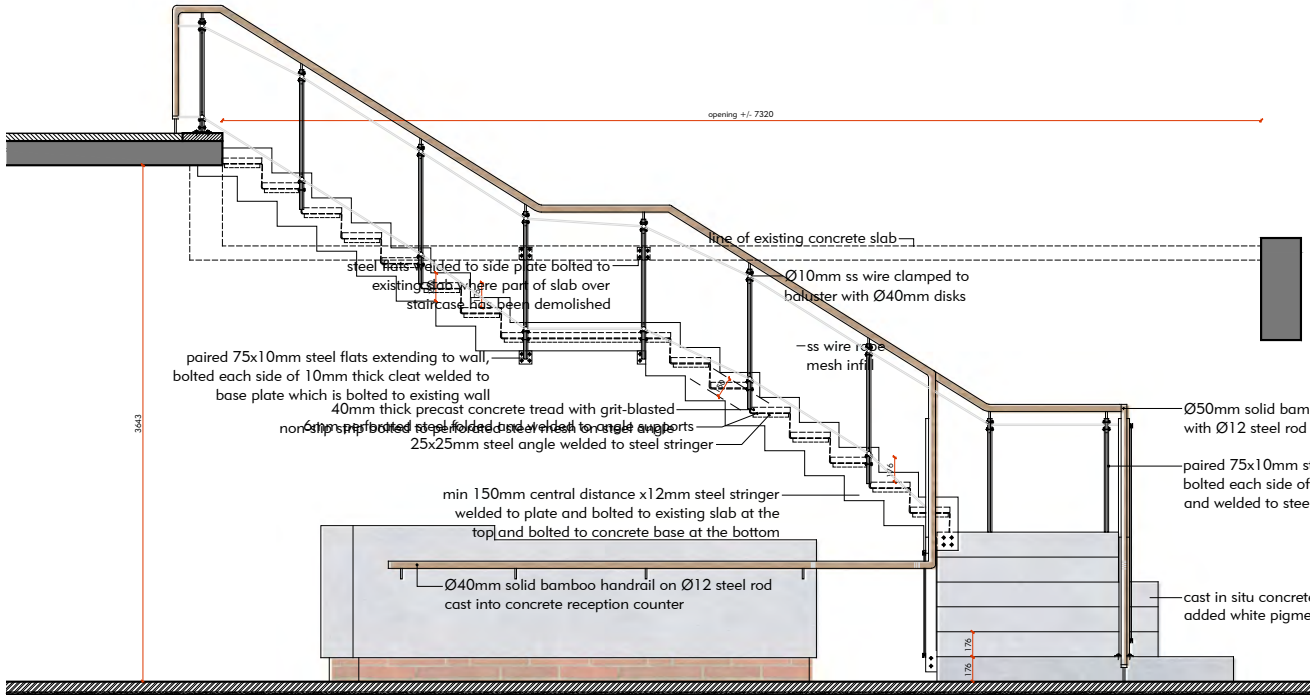


Fig.7.81 GF staircase front elevation

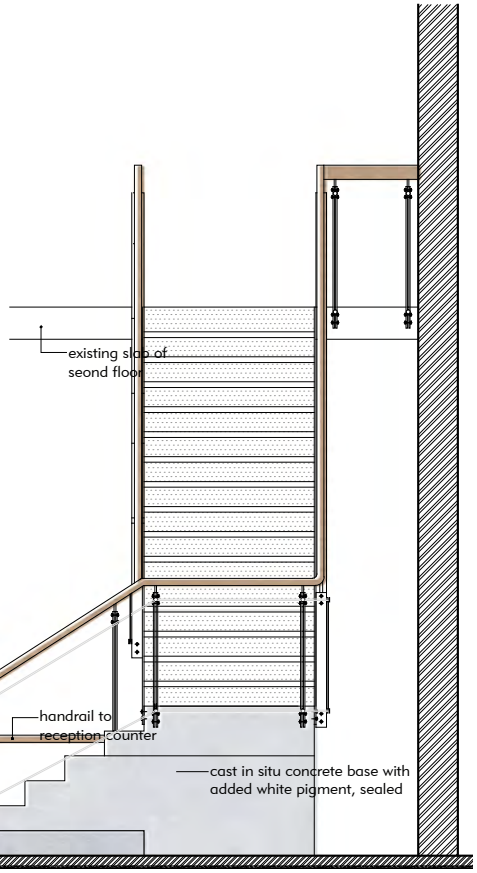


Fig.7.82 GF staircase side elevation

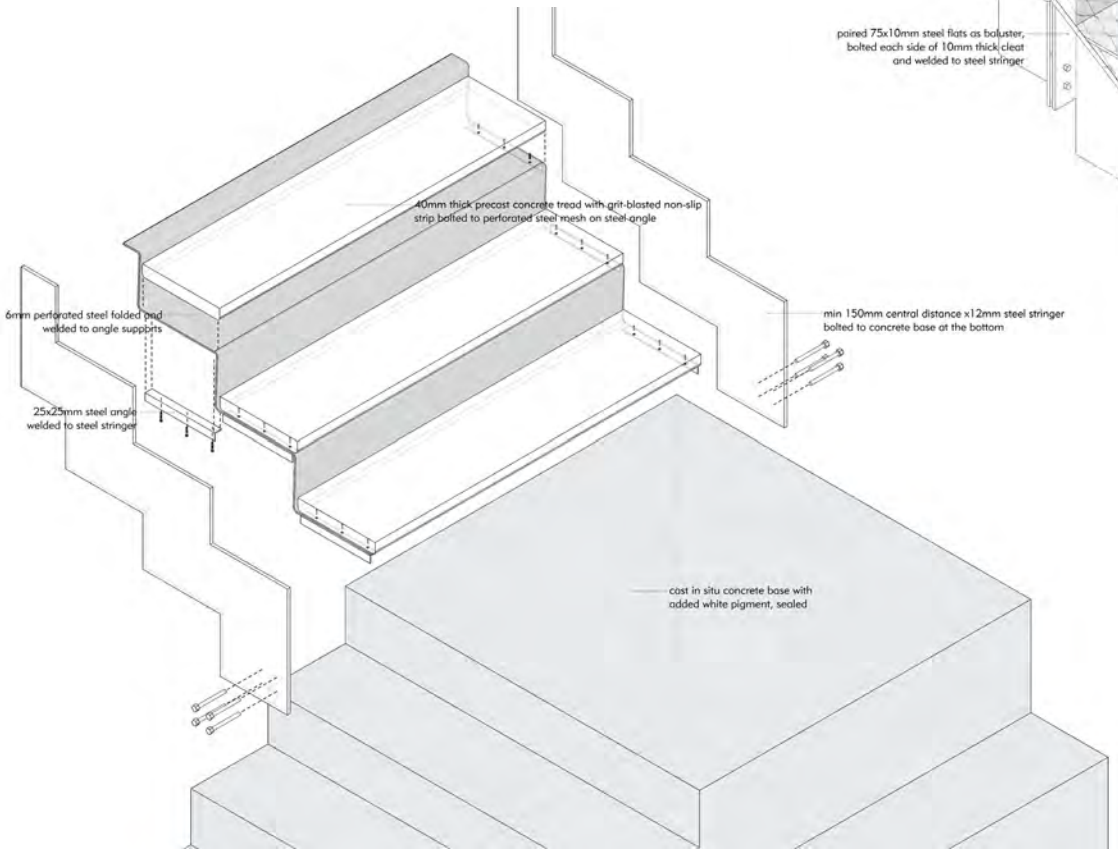


Fig.7.83 Isometric of tread+base

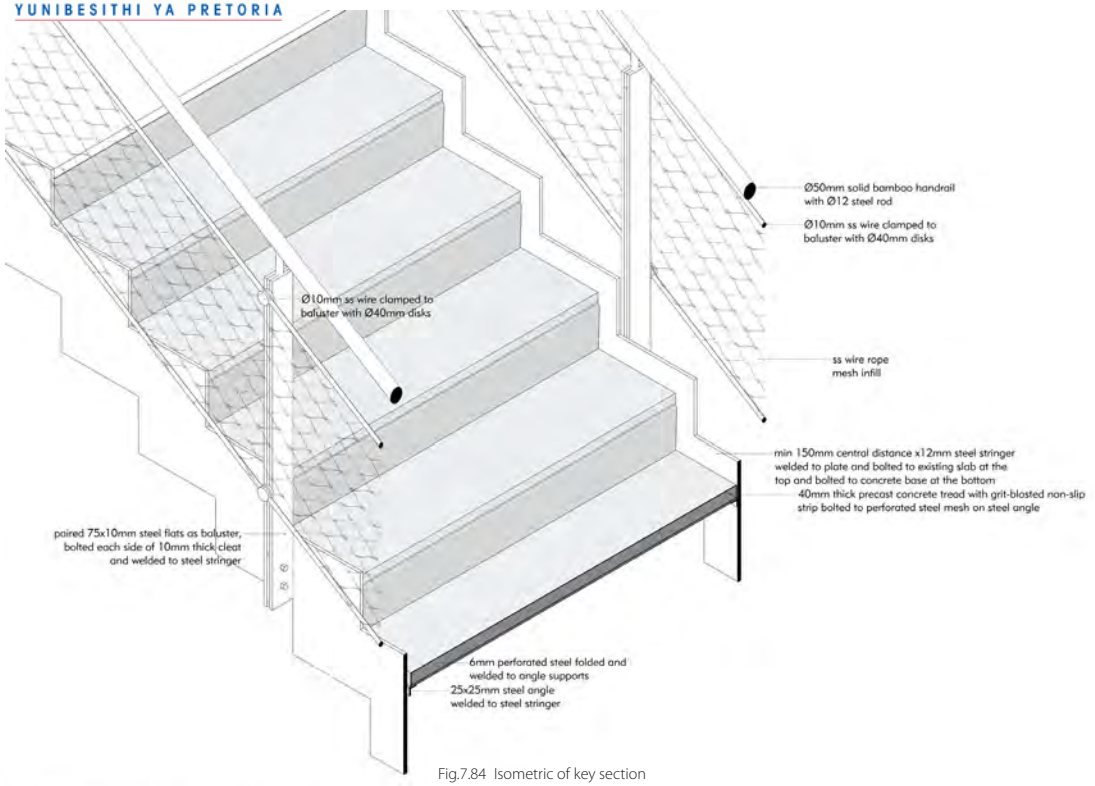


Fig.7.84 Isometric of key section

Fig.7.85 Special screw (top) and dowel for lighweight panels

Fig.7.86 Xanita X Board Plus 'harvard cherry' veneer

Fig.7.87 Xanita X Board Plus with structural skin and veneer

7.9.2 MOVING WALLS

The activity rooms adjacent to the dance studio are an extension of the larger space, further enhanced by the linoleum on the floor continuing as wall cover. They also need to be partitioned off for more private classes.

The design proposes U-shaped sliding doors that fit around the adjacent wall (Fig.7.90). The wall features glass viewing panels to allow a peek into the class when these 'moveable walls' are in closed position (Fig.7.89). They are made from Xanita X Board Plus with a veneer finish and the side towards the activity rooms is painted with blackboard paint to double as chalkboard (Fig.7.86).

The moveable walls allow for a physical and optical change to create a dynamic background that connects a traditional architectural element and furniture design.

The shape is robust for its use by children and adolescents and the double panels allow for improved acoustic sealing.

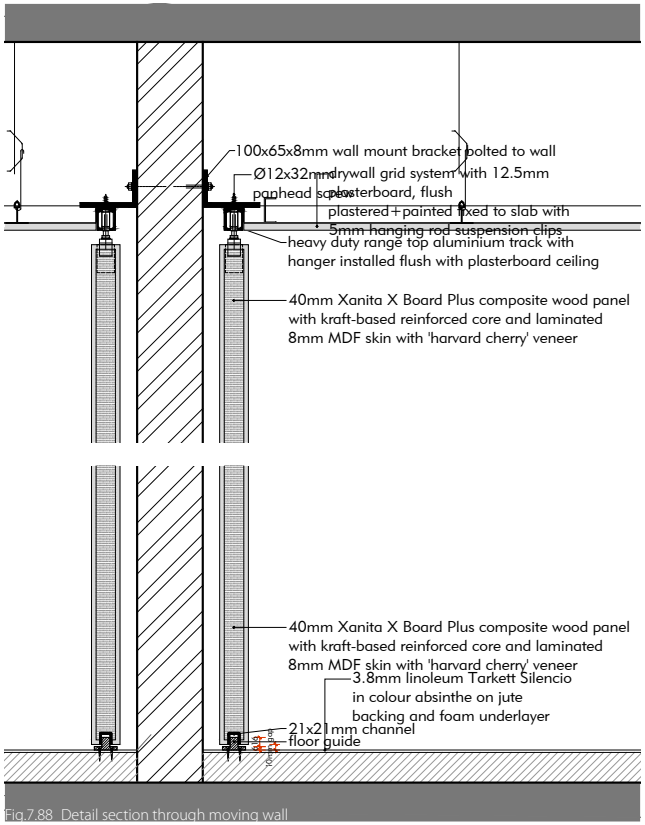


Fig.7.88 Detail section through moving wall

XANITA X BOARD PLUS

Xanita X-Board® plus is a composite fibre board consisting of a 100% post-consumer recycled kraft-based honeycomb core with a stiff outer layer structurally bonded to both sides of the board (Fig.7.87) (Xanita, 2011).

The core consists of sugar cane fibres (bagasse), contains no toxic formaldehyde resins and can be recycled back into waste paper. The outer sandwich skin consists of 8mm medium density fibreboard (MDF) with a timber veneer.

The high level of stability and light weight were important factors for the design of the moving walls. The construction uses special lightweight panel board fittings (Fig.7.85).

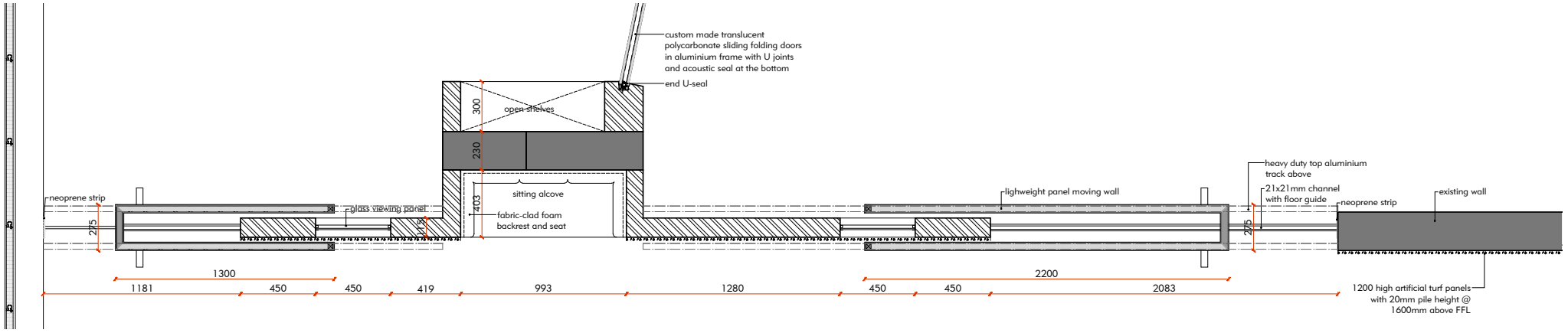


Fig.7.89 Moving walls with adjacent walls plan view

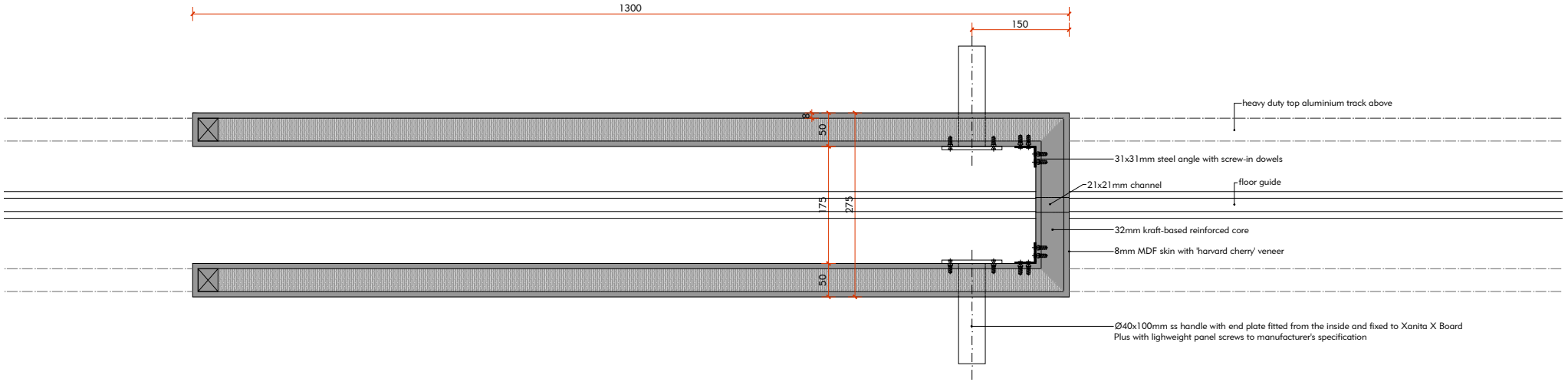


Fig.7.90 Moving walls detail plan view

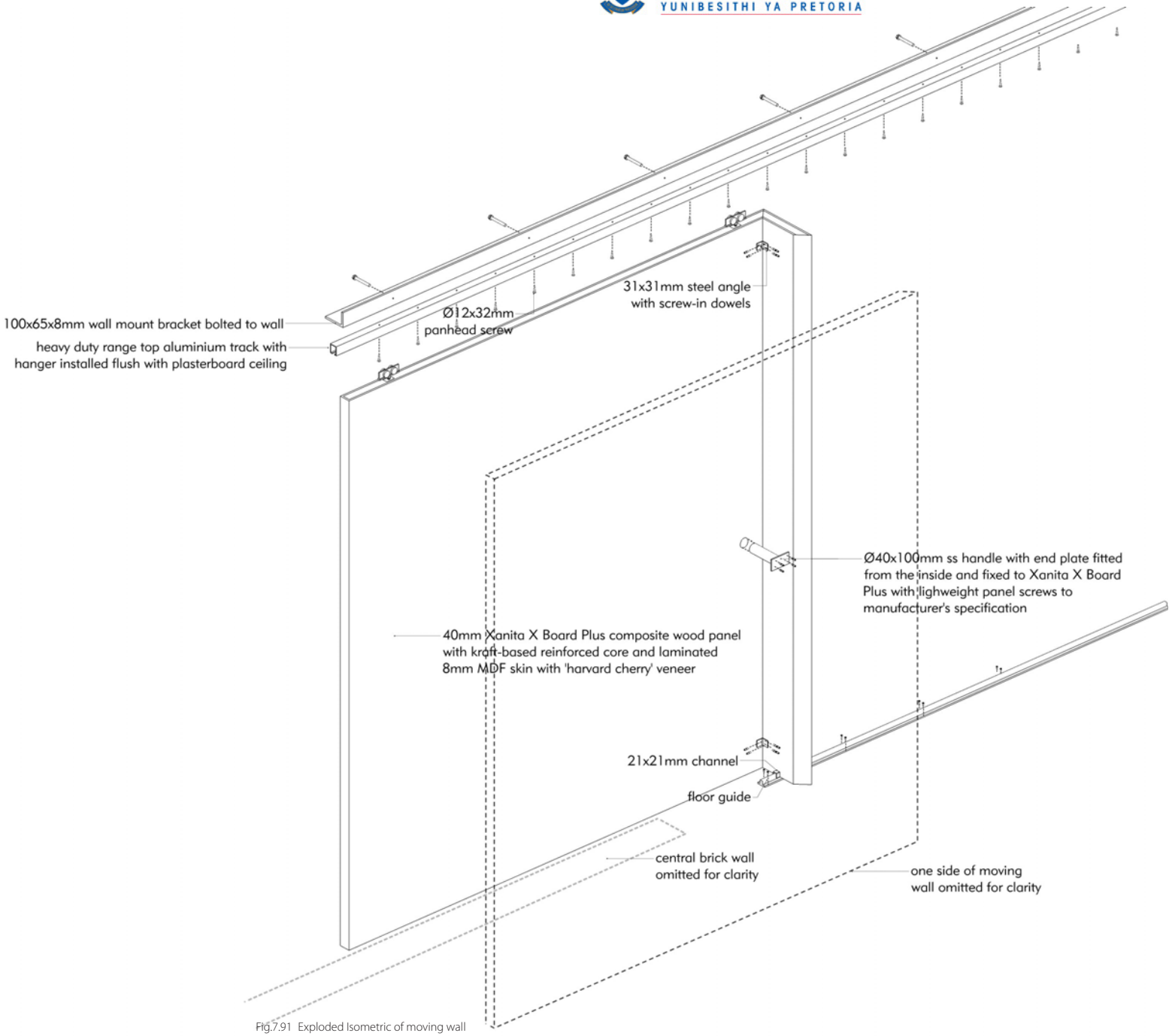


Fig.7.91 Exploded Isometric of moving wall

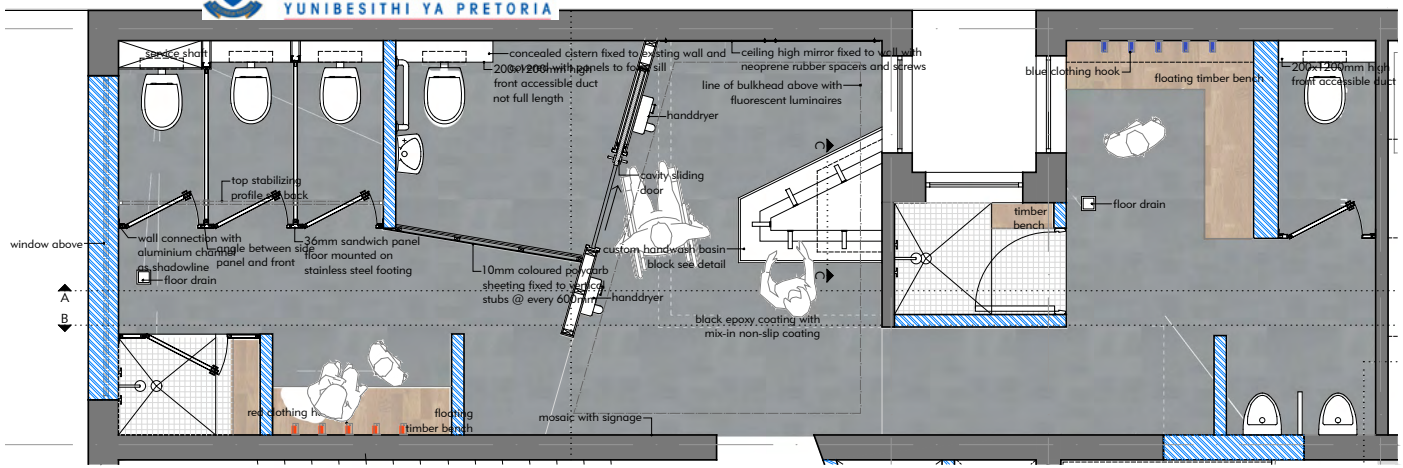


Fig.7.92 WCs plan layout for first and second floor

7.9.3 WCs

The design of the bathrooms contrasts the existing walls with glossy new materials such as glass mosaic tiles, epoxy flooring, mirrors and coloured polycarbonate sheeting to create a playful and stimulating setting.

The washbasins are housed in a central unit that is shared by men and women. The height of the unit on the first floor is 100mm lower than on the second floor to accommodate its pre-adolescent clientele (Fig.7.100).

This entrance area resists standard bathroom design to set up for interaction and mobility.

The pictograms used for signage convey a clear and modern image. The signage makes use of unexpected visual encounters - as one walks past the bathroom entrance, it is visible in the mirror on the opposite wall (Fig.7.94).

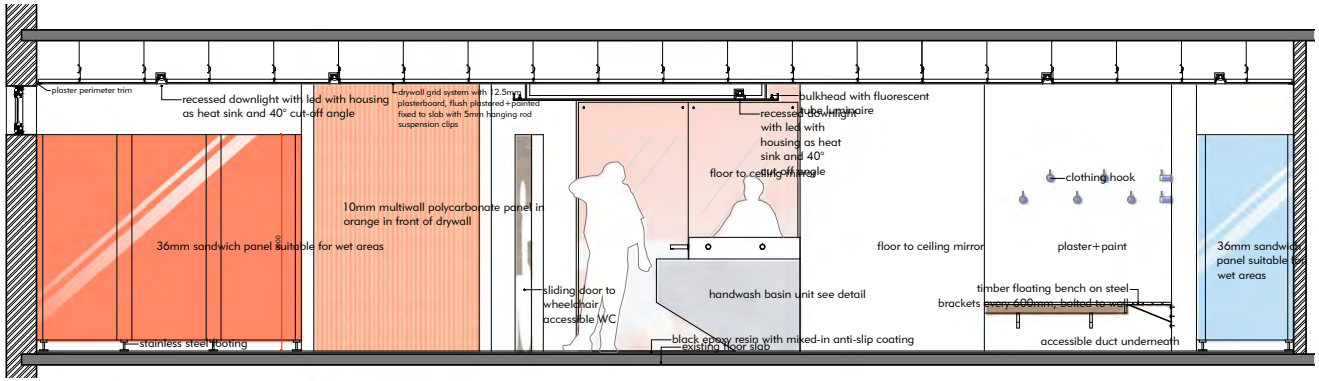


Fig.7.93 WCs section AA

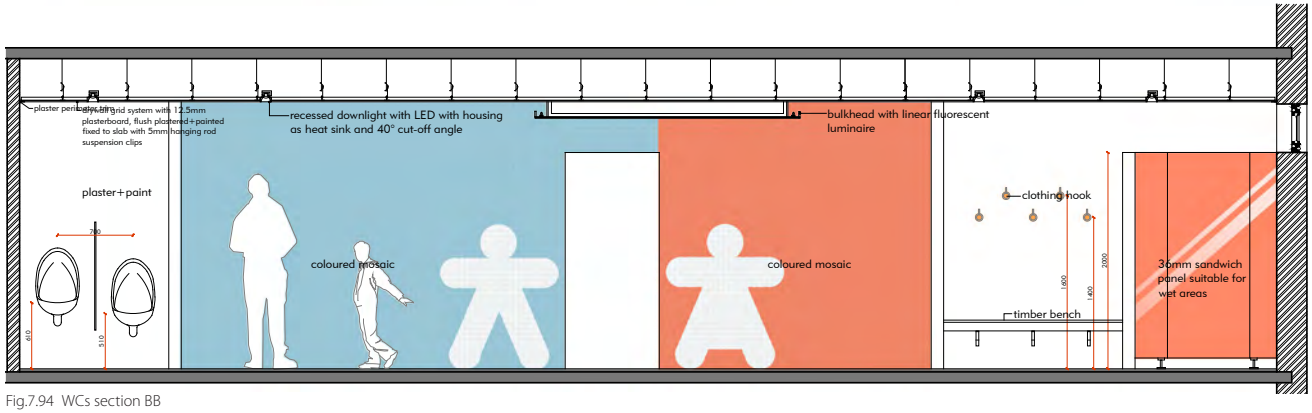
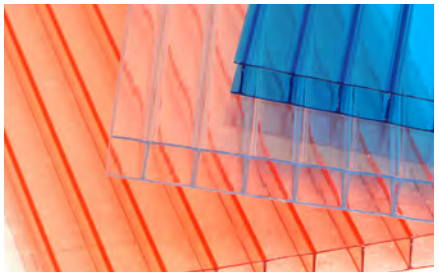


Fig.7.94 WCs section BB

50x50x3mm glass mosaic tiles in red applied with latex, thin set adhesive and grouting in 'dove grey'

Fig.7.96 Glass mosaic tiles

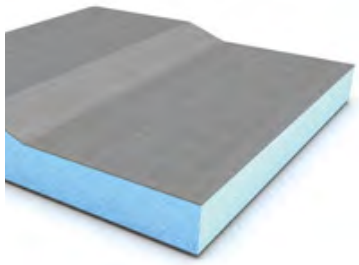


10mm Marlon Multilite twinwall panel

Fig.7.97 Coloured Multillite panels

20mm epoxy screed with mix-in non-slip coating in charcoal colour

Fig.7.98 Detail view of epoxy flooring with grit



WEDI building board made of HCFC free rigid polystyrene foam reinforced on both sides with a strong glass fibre matting coated with a specialist synthetic polymer resin mortar, clad with tile adhsive, glass mosaic tiles and grouted.

Fig.7.95 *WEDI* building board

Fig.7.99 Sectional perspective of WCs

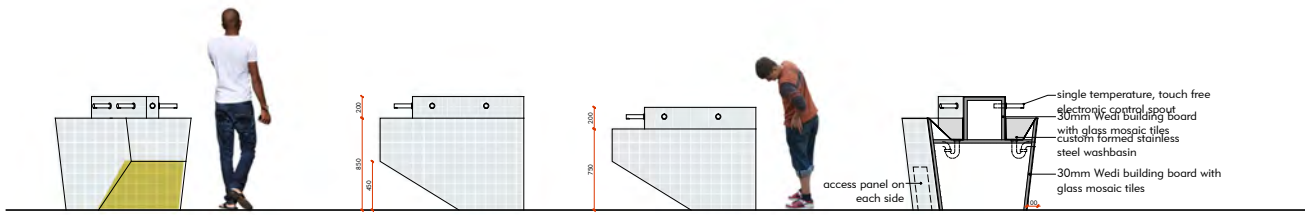


Fig.7.100 Handwashbasin elevations and detail

7.10 CONCLUSION

This chapter elaborated on the various systems and services to show how the design incorporates existing and new components. It also looks at lighting and acoustics as well as materials choices.

The concept of friction is addressed through the combination of elements, materials, choice of finishes and fixings. The detailed investigation of the ground floor staircase, moving walls and WCs explores the combined influence of the various elements on the spaces.

CONCLUSION 8

This dissertation looked at neighbourhood regeneration and how an interior intervention can act as a catalyst for surrounding development.

Esselen Street as street neighbourhood is identified as a historically rich area where an integrated approach to the development of its identity can be a tool for regeneration. It has been discovered that the area is undergoing various changes in terms of larger scale development projects and the convergence of various cultures.

This makes it difficult to pinpoint a single identity; instead, the project approach was to offer a protected public space on a smaller scale that restores a sense of ownership to the residents.

The interior involving the inside, outside and thresholds, where a range of human activities take place, offers the possibility to encourages interaction between people with one another and with their environment. By regarding spaces as fluid it sets up the possibility for exploration and gives a sense of freedom to discover identity and sense of place on an individual and collective level.

As explored in the theoretical investigation, the urban concept of social friction as part of the everyday is appropriated for an interior context. Instead of reinterpretation or opposition, this dissertation explores the interrelatedness of the physical, visual and social aspects to find new modes of expression for the interior, thereby contributing to the field.

The context and building analysis helped to define the architectural significance of the chosen building. This, together with the interventional approach as set out by Fred Scott (2008), informed the following design investigation.

Friction can enhance the experience of a building and spaces, not as static, but activated by events that lead to small moments of discovery.

REFERENCES 9

9.1 LIST OF SOURCES

AAL 224 unpublished class notes. 2006.

Amin, A. 2006. *Collective culture and urban public space* [online]. Available at: http://www.publicspace.org/en/text-library/eng/b003-collective-culture-and-urban-public-space (Accessed 28.5.2012).

Argyriades, M. 2012. *The Book Club in the heart of Shoreditch, East London* [online]. Available at: http://www.yatzer.com/The-Book-Club-London (Accessed 1.4.2012).

Beeld Argiewe. Various. [online]. Available at: http://152.111.1.88/cgi-bin/beeld.cgi (Accessed 22.3.2012).

Berthelsen, C. 2011. *Small places of anarchy in the city: Three investigations in Tokyo* [online]. Available at: http://thisbigcity.net/small-places-of-anarchy-in-the-city-three-investigations-in-tokyo/ (Accessed 2.4.2012).

Brand, S. 1994. *How buildings learn: what happens after they're built*. New York: Penguin.

Brett Martin. 2011. *Designing for daylight: Marlon Clickfix1040 polycarbonate glazing system* [online]. Available at: http://www.marlonclickfix.com/downloads.asp (Accessed 3.10.2012)

Canada Mortgage and Housing Corporation (CMHC). 2007. Urban acupuncture - a methodology for the sustainable rehabilitation of "society buildings" in Vancouver's Chinatown into contemporary housing. *Socio-Economic Series Journal* (07) 008 [online]. Available at: http://www.cmhc-schl.gc.ca/odpub/pdf/65644.pdf (Accessed 9.10.2011).

Carmona, M; Heath, T; Oc, T & Tiesdall, S. 2003. *Public places urban spaces: the dimensions of urban design*. Oxford: Architectural Press.

Casagrande, M. 2009. *Urban Acupuncture*. Casagrandetext blog [online] 9 February. Available at: http://casagrandetext.blogspot.com/2009/02/urban-acupuncture.html (Accessed 29.9.2011).

Council for Scientific and Industrial Research (CSIR). 2004. Sustainable Building Assessment Tool (SBAT) [online]. Available at: http://www.csir.co.za/Built_environment/Architectural_sciences/sbat.html (Accessed 1.11.2012).

De Certeau, M. 1984. *The practice of everyday life*. (transl. by Rendall, S). Berkeley: University of California Press.

Ecotect Analysis. 2011.Weather tool.

Edwards & Buckley Systems. 2004. Evac Chair [online]. Available at: http://www.evac-chair.co.za/ (Accessed 17.10.2012).

Etherington, R. 2012. *Dellow Centre by Featherstone Young* [online]. Available at: http://www.dezeen.com/2012/04/09/dellow-day-centre-by-featherstone-young/ (Acessed 19.4.2012).

GAPP Architects and Urban Designers. 2009. Mandela Development Corridor urban design framework review.

Kotze, E; Petzsch, E; Rossi, D&Viljoen, H. 2012. Group framework: Catalyst Culture.

Kruger, DJ. 1991. Gebou vir Esselenstraat. MArch(Prof) dissertation. University of Pretoria, Pretoria.

Hellgren, M. 2012. *How it works* [online]. Available at: http://www.verticalgardendesign.com/how-it-works (Accessed 25.9.2012).

Hunter Douglas. 2011. *Hunter Douglas ceilings: Wood panels* [online]. Available at: http://www2.hunterdouglascontract.com/en-ZA/ceilings/wood/woodtiles/topline/index.jsp (Accessed 27.9.2012).

Irwin, G. 2010. *The original green living wall: Basis for great design* [online]. Available at: http://www.greenroofs.com/archives/green_walls.htm (Accessed 25.9.2012)

Jacobs, J. 1961. *The death and life of great American cities*. Harmondsworth: Penguin.

Jamieson, C. 2009. *The future of identity in architecture and urbanism* [online]. Available at: http://www.buildingfutures.org.uk/assets/downloads/The_Future_of_Identity.pdf (Accessed 26.2.2012).

Jensen, UH & Lenskjold, TU. 2004. *Designing for social friction: exploring ubiquitous computing as means of cultural interventions in urban space* [online]. Available at: http://www.citynova.org/text/social_friction.pdf (Accessed 19.10.2011).

Kachwalla, N. 2010. Enhancing social dynamism in interior architecture through the use of social friction. Master of Architecture. Wellington: Victoria University [online]. Available at: http://researcharchive.vuw.ac.nz/bitstream/handle/10063/1432/thesis.pdf?sequence=2 (Accessed 20.9.2011).

Lefebvre, H. 1971. *Key writings*. NY: London: Continuum.

Lubow, A. 2007. *The road to Curitiba* [online]. Available at: http://www.nytimes.com/2007/05/20/magazine/20Curitiba-t.html (Accessed 2.1.2012).

Melvin, J. 2011. Living Space: Red Location's evolving cultural precinct explores ideas about placemaking and the African urban realm. *Architectural Review,* Vol. 230, Issue

1377(11). P. 44-53.

Oldenburg, R. 1997. (2nd ed.). *The great good place: cafes, coffee shops, bookstores, bars, hair salons and other hangouts at the heart of the community*. Cambridge: Da Capo Press.

Rattenbury, K. 2009. Sean O'Casey community centre. *Architectural Review*, Vol. 225, Issue 1347(05). P. 62-69.

SABS0114-1:1996 (first revision). Code of practice: interior lighting, part 1: artificial lighting of interiors. The South African Bureau of Standards.

SANS 10400. 1990. Code of practice for the application of the national building regulations. Pretoria: The Council of the South African Bureau of Standards. P.1-225.

SANS 204-2:2008. (1st ed.). Energy efficiency in buildings part 2: The application of the energy efficiency requirements for buildings with natural environmental control. P1-46. Pretoria: SABS Standards Division.

Scheffler, N; Kulikauskas, P & Barreiro, F. 2009. *Managing urban identities: Aim or tool of urban regeneration?* [online]. Available at: http://urbact.eu/fileadmin/general_library/Managing_Urban_Identities_01.pdf (Accessed 7.3.2012).

Scott, F. 2008. *On altering architecture*. New York: Routledge.

Sennett, R. 1970. *The uses of disorder: personal identity and city life*. London: Allen Lane.

Sika. 2011. *Product data sheet: Sika CarboDur* [online]. Available at: http://www.sika.com/dms/getdocument.get/b41dbe16-1042-3755-b761-962c69693f15/carbodur_structstrength.pdf (Accessed 18.9.2012).

Solla, IF. 2010. *Will transparent polymers kill glass?* [online]. Available at: http://facadesconfidential.blogspot.com/2010/11/will-transparent-polymers-kill-glass.html (Accessed 27.9.2012).

Sternberg, E. 2002. What makes buildings catalytic? How cultural facilities can be designed to spur surrounding development. *Journal of Architectural and Planning Research*, Vol. 19, Issue 1. P.30-43.

Stevenson, D. 2003. *Cities and urban cultures*. Berkshire: Open University Press.

Taylor, M. 2006. Architecture and interior: a roam of one's own. In *Intimus: Interior design theory reader*. Taylor, M & Preston, J (eds.). West Sussex: John Wiley&Sons Ltd.

The Oxford Compact English Dictionary. 2000. (2nd ed.). Oxford: Oxford University Press.

Thorn, L. 2011. *Raising the roof* [online]. Available at: http://www.visi.co.za/content/article/121/raising-the-roof (Accessed 8.7.2012).

Von Manen, M. 1990. *Researching lived experience: human science for an action sensitive pedagogy*. New York: State University of New York Press.

Warmann, C. 2011. *Casal de la Juventud de Novelda by Crystal Zoo* [online]. Available at: http://www.dezeen.com/2011/02/26/casal-de-la-juventud-de-novelda-by-crystalzoo/ (Accessed 5.3.2012).

White, P. 1998. *Practical studio soundproofing* [online]. Available at: http://www.soundonsound.com/sos/may98/articles/Soundproofing.html (Accessed 4.9.2012).

XANITA. 2011. [online]. Available at: http://www.xanita.com/products/x-board-plus/ (Accessed 24.8.2012).

Zukin, S. 1995. *The cultures of cities*. Cambridge: Blackwell Publishers.

INTERVIEWS

Sithole, Xolani. 2012. BAT Centre publicist. Personal communication on 12 July, Durban.

IMAGE INTERNET SOURCES

Basulto, D. 2009. *Zagreb Dance Center / 3LHD*. [online]. Available at: http://www.archdaily.com/42696 (Accessed 13 Oct 2012).

Becker, P. 2001, Gebou vir Esselenstraat. MArch(Prof) dissertation, University of Pretoria, Pretoria.

Boegman, N. 1994. Sunnyside Sinergie. MArch(Prof) dissertation. University of Pretoria, Pretoria.

Google Earth, 6.1.0.5001. 2011. (Accessed 4.4.2012).

http://davidfrutos.com/2011/01/casal-de-la-juventud/ (Accessed 5.3.2012).

http://d-maps.com/pays.php?num_pay=7&lang=en (Accessed 26.2.2012).

http://en.audiofanzine.com/dossiers_v3/making_a_studio/part2/wall-mounting-thermal-acoustic-panel-41078.jpg (Accessed 17.10.2012).

http://professionals.tarkett.com/content/lumaflex-duo-linosport (Accessed 13.10.2012).

http://professionals.tarkett.com/products/linoleum-xf/linoleum-acoustic/silencio-xf-38-mm#nav-tab-6 (Accessed 13.10.2012).

http://professionals.tarkett.com/solutions/education (Accessed 13.10.2012).

http://www.artemide.com/prodotti/scheda-prodotto.action?idProdotto=25175 (Accessed 5.10.2012).

http://www.assaabloy.co.za/en/local/za/reasons/About-ASSA-ABLOY/UK-organisation/Security-Doors/Products1/Powershield-Doors/Acoustic/Acoustic/# (Accessed 17.10.2012).

http://www.bamboowoodenflooring.com/china-carbonized_bamboo_floors_molding_for_stair_nose_stair_tread_stair_riser-191853.html (Accessed 30.9.2012).

http://www.bustler.net/index.php/article/riba_lubetkin_prize_shortlist_announced/ (Accessed 26.4.2012).

http://www.chictip.com/dream-homes/modern-dream-homes-p-house-by-tamizo-architects-group (Accessed 18.10.2012).

http://www.contemporist.com/2012/05/14/gallery-house-by-ogrydziakprillinger-architects/gh_140512_14/ (Accessed 18.10.2012).

http://www.deforestarchitects.com/pages/gallery_arthouse_stairs.htm (Accessed 18.10.2012).

http://www.dezeen.com/2009/11/25/wieden-kennedy-offices-by-featherstone-young/ (Accessed 27.6.2012).

http://www.dezeen.com/2009/12/23/bridge-school-at-pinghe-by-li-xiaodong/ (Accessed 7.3.2012).

http://www.dumoulinetassocies.com/reparation-de-beton-shotcrete-injection-renforcement-structural-renforcement-structural.html (Accessed 18.9.2012).

http://www.easygrasse.co.za/products.html (Accessed 4.9.2012).

http://www.genesisacoustics.co.za/products.php (Accessed 1.10.2012).

http://www.ght.co.za/products/wedi/ (Accessed 24.9.2012).

http://www.hettich.com/blaetterkataloge/TA_2010/en_AU/blaetterkatalog/ (Accessed 24.9.2012).

http://indulgy.com/post/bSPAFXJ3G1/herringbone-brick-floor (Accessed 15.9.2012).

http://www.lighting.philips.co.za/solutions/office_lighting_solutions.wpd (Accessed 5.10.2012).

http://www.lightnet.eu/download.php?f=f6a5973fe030559c04eec624e91f45c0 (Accessed 5.10.2012).

http://www.lighttape.co.za/ (Accessed 5.10.2012).

http://www.lightyears.dk/lamps/pendants/calabash-black.aspx (Accessed 5.10.2012).

http://www.lumenpulse.com/en/product/65/lumenline-pendant-directindirect (Accessed 5.10.2012).

http://www.made-in-china.com/showroom/potteryuhua/product-detailgeREzkacqLWP/China-Stainless-Steel-Rope-Net-MWN-SSRN-.html (Accessed 30.9.2012).

http://www.myplantconnection.com/green-wall-diy.php (Accessed 24.9.2012).

http://www.noerowolff.com/projects/projects.php?project=institutional/red-library-archive&image=institutional/red-library-archive/detail02.jpg (Accessed 26.4.2012).

http://www.nyda.gov.za/ (Accessed 5.7.2012).

http://www.pen.org.za/index.html (Accessed 5.7.2012).

http://www.pgbison.co.za/our-products/pick-a-colour.html?view=gallery&folder=Melawood%2Fwoodgrain (Accessed 13.10.2012).

http://www.plantzafrica.com/ (Accessed 13.10.2012).

http://www.prandina.it/prodotti_detail.hp?id=8&type=S (Accessed 5.10.2012).

http://www.regentlight.co.za/ (Accessed 5.10.2012).

http://www.regentlight.co.za/ (Accessed 5.10.2012).

http://www.regiolux.de/ProCAT.jsp;jsessionid=8ED1A5EED88E740F8DC4A5D0E1000A2E?productId=%28[16151184100]%29&template=Artikel&selectedIndex_article=4 (Accessed 5.10.2012).

http://www.seanocaseycommunitycentre.ie/gallery.html (Accessed 26.4.2012).

http://www.stylepark.com/en/forbo/allura-stone-grey-shades (Accessed 9.10.2012).

http://www.thedti.gov.za/ (Accessed 5.7.2012).

http://www.thewoodwhisperer.com/articles/shop-flooring-choices/ (Accessed 4.9.2012).

http://www.trilux.com/en/download-collector/ (Accessed 5.10.2012).

http://www.truesoundacoustics.co.za/docs/SiuAkustic_brochure.pdf (Accessed 17.10.2012).

http://www.wallsandfloors.co.uk/catrangetiles/mosaic-tiles/glass-square-mosaics/red-6392/7509/ (Accessed 3.10.2012).

http://www.woodoc.com/content/pdf/colourchart/pdf/10a7d9d2f87f001.pdf?20121020232044 (Accessed 9.10.2012).

http://www.yatzer.com/Palace-of-International-Forums-Uzbekistan-by-Ippolito-Fleitz-Group (Accessed 15.10.2012).

http://www.zumtobel.com/com-en/products/light_fields.html (Accessed 5.10.2012).

http://www.zumtobel.com/com-en/products/products.html?mirel_t16#MIREL%20T16%20FEW (Accessed 5.10.2012).

http://www.zumtobel.com/com-en/products/slotlight_II.html (Accessed 5.10.2012).

http://www2.hunterdouglascontract.com/en-ZA/ceilings/wood/woodtiles/topline/index.jsp (Accessed 13.10.2012)

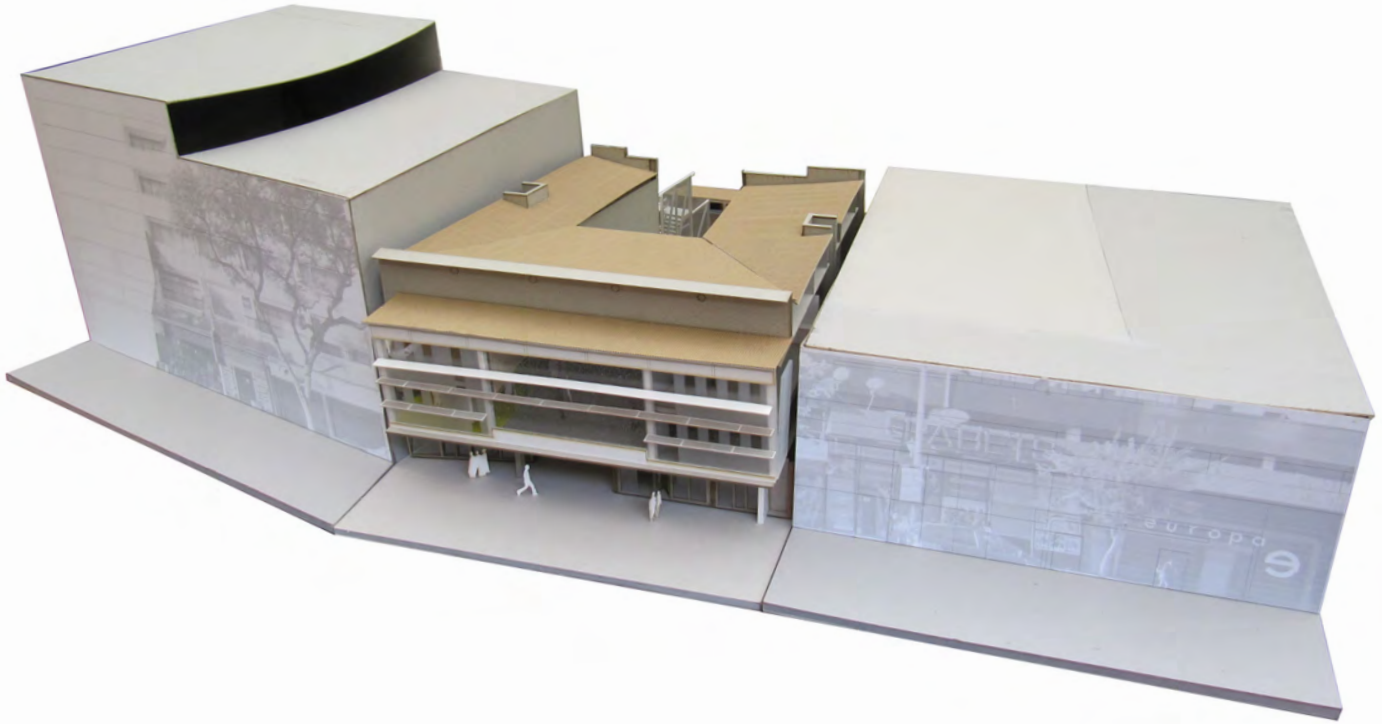
Stefprop Company Archives. (Accessed 15.5.2012).

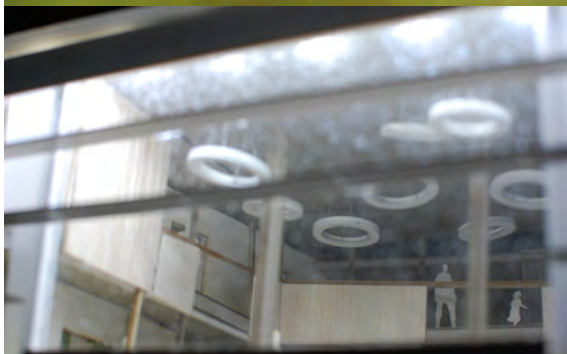
University of Pretoria record number 00218. Figure ground studies of central Sunnyside, photographic documentation of remaining Victorian houses, photos of historical Sunnyside.

http://www.iac-gmbh.de (Accessed 1.10.2012).

APPENDIX 10

10.1 PRESENTATION+MODEL



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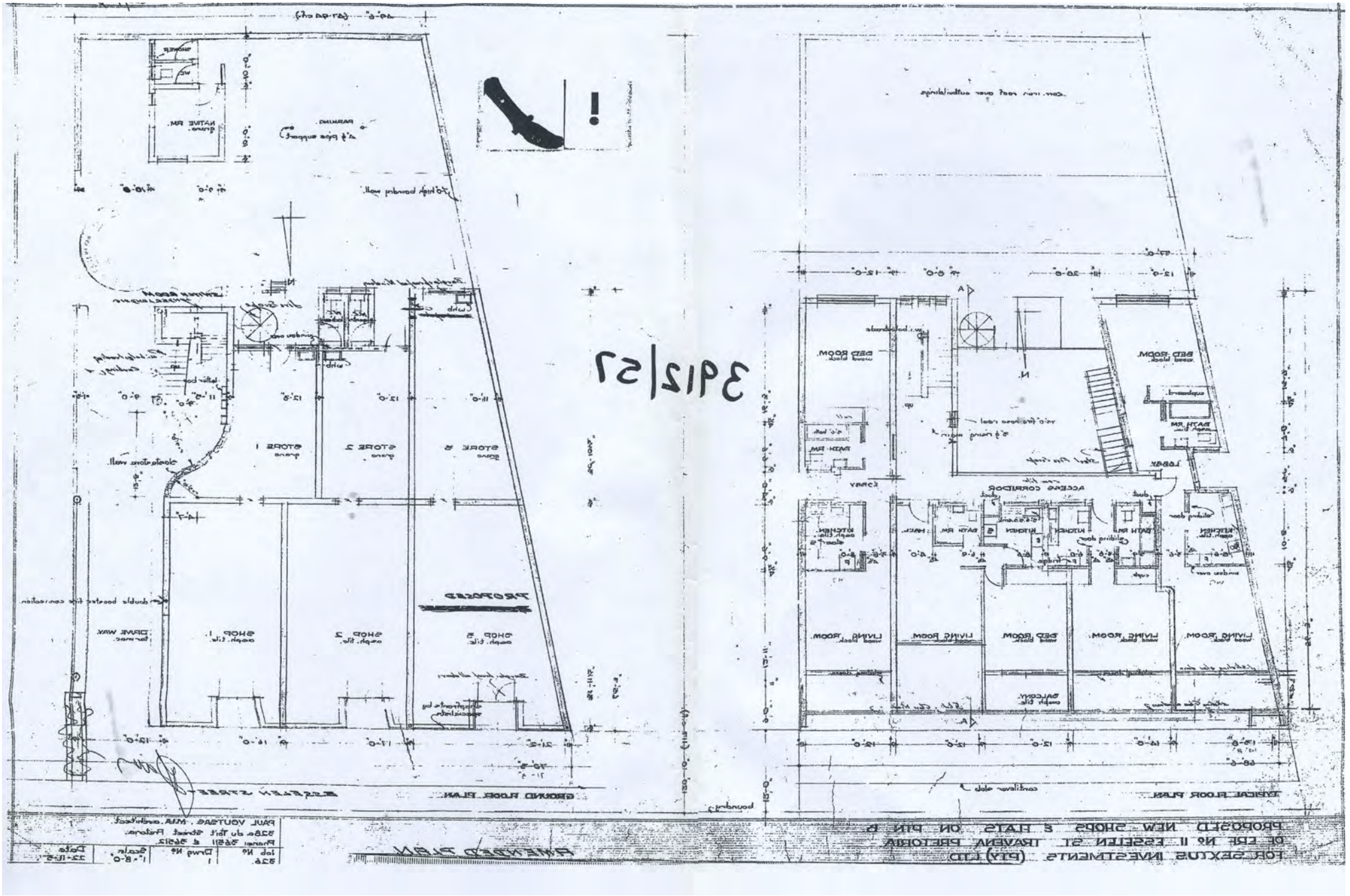
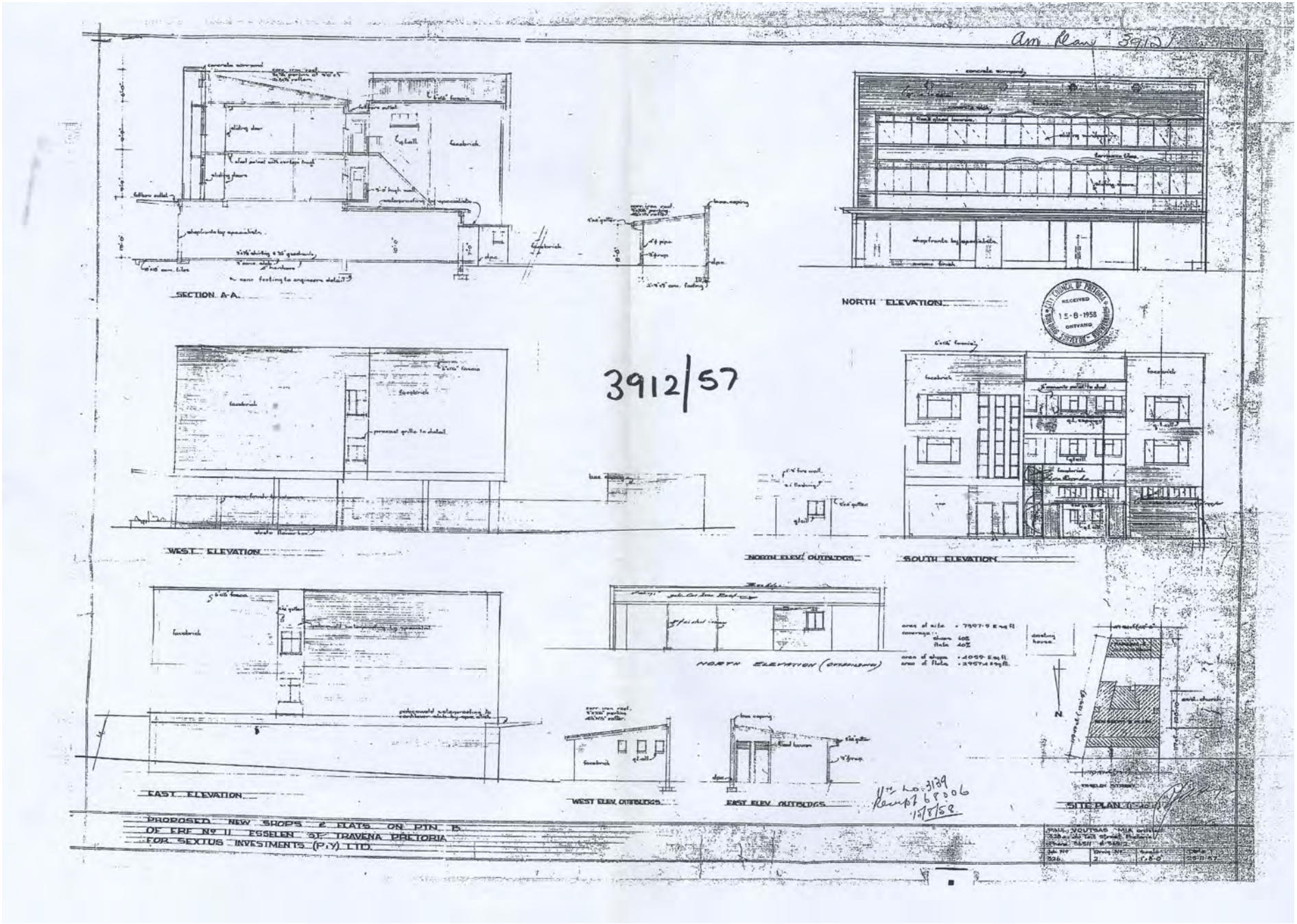
10.2 EXISTING PLANS

10.2.1 FLOOR PLANS



10.2.2 SECTION+ELEVATIONS

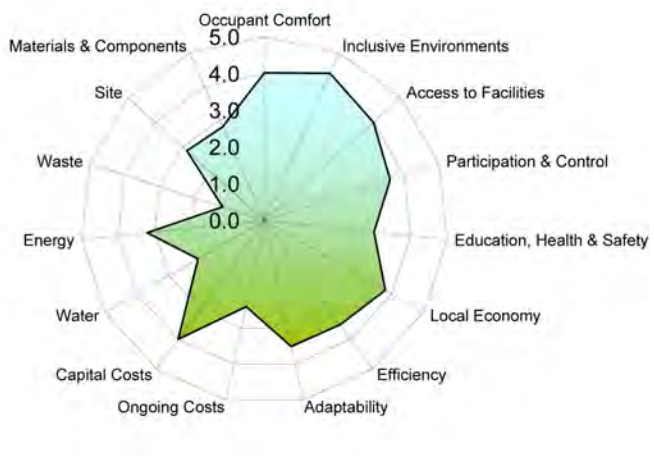


10.3 GUIDELINE QUESTIONNAIRE

1. Name?
2. Age?
3. Are you the owner of the store or do you work here?
4. Since when does the store exist or since when do you work here?
5. Where are you from?
6. Where do you live? Do you share your flat/ house with anyone?
7. Do you know your neighbours?
8. Are the customers regulars?
9. Has anything changed in the area?
10. Has anything changed since the DTI campus was built (in 2005)?
11. Do you notice a a difference between night and day activities?
12. Is there anything lacking in the area?
13. Is there something you would want in the area?

10.4 SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT)

The SBAT rating tool helps to evaluate a building's sustainability performance in consideration of economic, environmental and social factors in order to make further adjustments.
The values are summarized in a spidergraph below.



Society (SO)
SO1. Occupant comfort
SO2. Inclusiveness
SO3. Access to facilities
SO4. Participation and control
SO5. Education, health and safety

Economy (EC)
EC1. Impact on the local economy
EC2. Efficiency
EC3. Adaptability
EC4. Ongoing or operational costs
EC5. Capital costs

Environment (EN)
EN1. Water
EN2. Energy
EN3. Waste
EN4. Site
EN5. Materials and components

SOCIAL	3.8
ECONOMIC	3.4
ENVIRONMENTAL	2.4
OVERALL	3.2

To everyone who has supported and helped me this year, including Sabine, Gustav, Thorsten; as well as to Catherine for being a wonderful study leader.

To my mother: Thank you for all your support, not only this year but always.