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ADAPTIVE REUSE :
The Salt River Market

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Adaptive Reuse: The Salt River market

Recycling a historic building into appropriate use so that it may
regain its vitality and its place in the community

Design Research Project APG50585 submitted to the:
Faculty of Engineering and the Built Environment
Of the University of Cape Town

In partial fulfilment of the requirements for the degree:
Masters of Architecture (Professional),
In the School of Architecture, Planning and Geomatics

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In loving memory of my parents who have always been a source of
strength and support

PROPOSITION

Architecture needs to seek ways in dealing with underutilised and abandoned buildings in the city through the role of adaptive reuse, by transforming and activating its neglected urban fabric into areas where buildings can withstand the passage of time and contribute to the diversity, complexity and continuity of its place.

ABSTRACT

We live in a society that is constantly in change. As society moves forward, we experience social, political and economic shifts that somehow prove difficult for our buildings to survive in this rapid change. My interest therefore looks to adaptive reuse as an approach to dealing with the change in our built environment. How do you deal, in an urban setting, with a neglected urban fabric without compromising its historical and architectural memory which becomes important to a community? How do we begin to engage with the built fabric? It begins with accepting that transformation needs to occur. Adaptive reuse ensures the evolving life of any old building by expanding its practical use in its contemporary context. Existing and abandoned buildings represent a substantial resource. Through adaptive reuse, many buildings can continue to be brought back into use and contribute to a more sustainable development pattern.

Old buildings in my opinion possess a timeless character. The aim of this document is to investigate the potential of adaptive reuse as a response in transforming an existing structure on the brink of neglect into potentially a space that could be reused and function in a way that it supports the community and promote social engagement.

The design and research develops a theoretically informed and sustainable approach to recycling built fabric in its contemporary urban context by linking patterns of adaptation and reuse to the change experienced in the contemporary built environment.

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introduction..

states the thesis, identifies the problem and central question of adaptive reuse and its role as an act of transformation.

defines adaptive reuse and explores its role in the built environment as a way of addressing sustainable design.

thinking..

states my theoretical position by exploring the role of Modernism and its principles of 'function' in buildings, its influence in modernist architecture, the role of Functionalism in severing the connection between the past and present and the adaptation of architecture as palimpsest which as an architectural tool, begins to demonstrate the change and continuity of the life cycle of a building in the contemporary city.

siting..

introduces the location of the project and analyses Cape Town, specifically the area of Salt River as my point of interest.

begins to address issues of the site and begins to analyse and propose a strategy that will appropriate the site at an urban scale and at a site scale.

materiality..

explores the role of layering as an architectural tool in developing a dialectic language between new and old structure. Technology plays an important role in translating architecture that is capable of communicating its own history by developing a contemporary and dynamic vocabulary of its own.

programming..

looks at typological precedents which will be described as a basis for developing the project. These precedent studies will be examined through diagrams which are then analyzed and appropriate strategies will be developed in order for the design process to move forward.

making

begins to introduce ideas of the possibilities of a program that could exist in the given area.

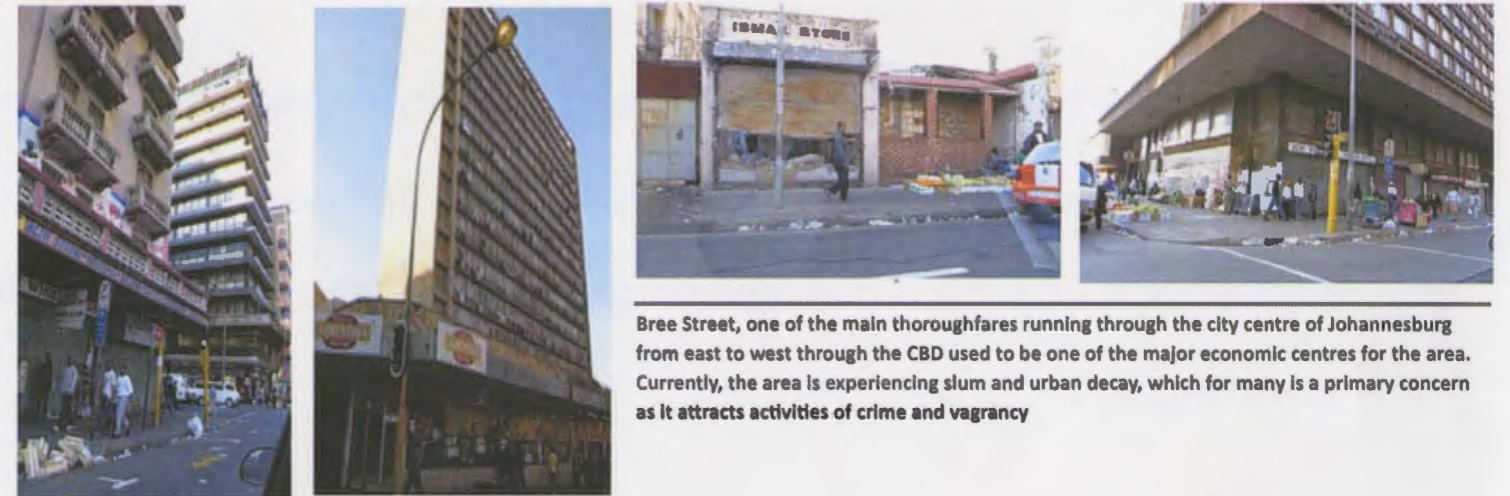
Product will focus on a design which focus on meeting the demands of the community by allowing the building to accommodate and cope with the demands of the change of society.

How do we begin to transform and engage space while keeping within the architectural memory of a place and its space by providing a spatial framework of which old buildings can seek to find and richly explore new meaning in its urban context ?

00. Introduction

My personal interest in the topic of adaptive reuse is rooted in the memory of my experience living in the city of Johannesburg, in the 1990's at the tender age of 12. I remember walking through the streets of the city centre finding ways of experiencing the city in ways a mind of a 12 year old child can fathom. I recall my experiences walking into buildings that are over 100 years old, one of which still remains to be quite a significant piece of architecture, The Carlton Centre, which holds a historical and social significance to its local residents, functions on a day to day basis serving the needs of the inhabitants. As years go by, occupation of these buildings have decreased and will decrease rapidly; as people move away from the city, nothing but neglect and abandonment will dominate the empty spaces of these buildings. Several buildings have slowly become victims of urban decay. These buildings now stand as empty vessels in the city. However, recent development (World Cup and Gautrain projects amongst others) in the city has forced action to occur in order to revitalise these areas. But despite efforts made, many buildings in the inner city still remain in a bad state and are desperate for some form of transformation to occur (Figure 001).

//001



Bree Street, one of the main thoroughfares running through the city centre of Johannesburg from east to west through the CBD used to be one of the major economic centres for the area. Currently, the area is experiencing slum and urban decay, which for many is a primary concern as it attracts activities of crime and vagrancy

The Ponte City Apartment in Berea (Figure 002), Johannesburg is another interesting and typical case of neglect in the city. Built in 1976 by architect Manfred Hermer, was the most fashionable place to be in town. In its modern architectural style and being deemed the highest apartment building in Africa, it represented the life and times of Ponte City which became part of the drama of Johannesburg. It is a symbolic building; it represents the modernist perception of self sufficient living in the city, which ironically became one of the failures of modernism. Ponte City has been used as a transit base for foreigners new to the city, and after the 1994 elections it became home to thousands of immigrants from all over Africa. Like the rest of Hillbrow, it later attracted its share of crime and developed a reputation as a dangerous and

//002



Ponte Towers located in Berea, Hillbrow is said to be the highest apartment in Africa

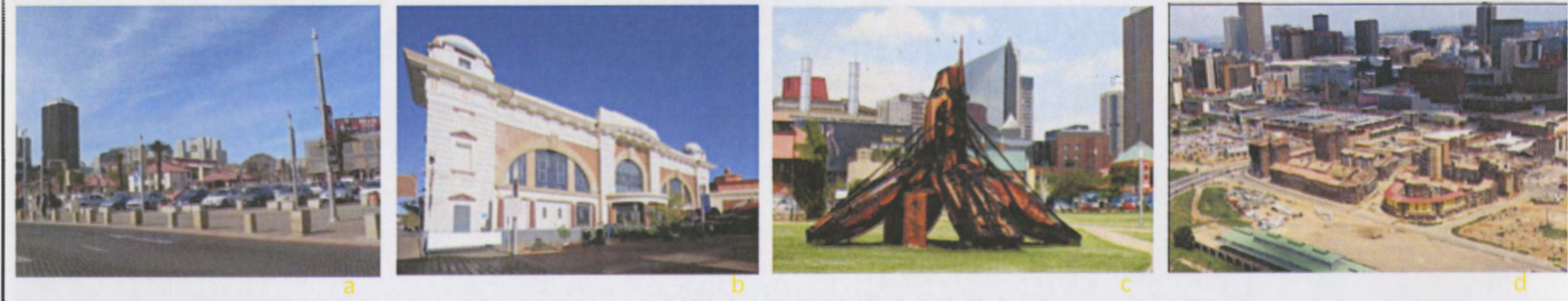
At this stage 122 buildings in Johannesburg are identified within the inner city as having the worst conditions and one probable cause for this phenomenon contributes to the fact that many buildings in the city have been left abandoned by their owners, due to arrears in rates and service charges owed to the city council as well as market value of the building being too low to sell in order to cover such debt².

With many buildings slowly dilapidating and degenerating, it leaves little opportunity for transformation to occur through adaptive reuse. Due to the neglect, many buildings have faced demolition and have become unsafe because of safety and environmental hazards it brought to the area. While this continues, it leaves a piece of history to lie lost in the rubble.

Newtown, however, is an area that is slowly transforming and showing great promise for regeneration. Located in the western sector of Johannesburg, Newtown Precinct, also known as “the brickfields’ is transforming into a vibrant and trendy mixed-used area with unique characteristics based on existing cultural facilities (Figure 003).

While the deterioration of Newtown was not as drastic as the city centre of Johannesburg, regeneration was also needed to bring businesses and attract locals into the area once again hosting a number of cultural activities like theatres, studios, workshops and museums, becoming a historic area within Johannesburg’s central business district, acting as a magnet for creative and cultural activities. Newtown has now become synonymous with the heritage and culture of South Africa.

//003



The Newtown Cultural Precinct

3(a) Maryfrids Gerald square (b) Museum Africa (c) Culture District (d) Brickfields Social Housing Project

Transforming old historical buildings into new is not a new phenomenon; it has been practiced for centuries. Historically, buildings have been reworked and adapted into new uses. By not doing so would have seemed abnormal. The driving force behind reuse was purely functional and financial. Throughout the years many people interested in restoring old buildings have asked themselves, "What would I do with it?"

New York's SoHo district's entire section of town has been built upon an existing urban fabric (Figure 004).

//004

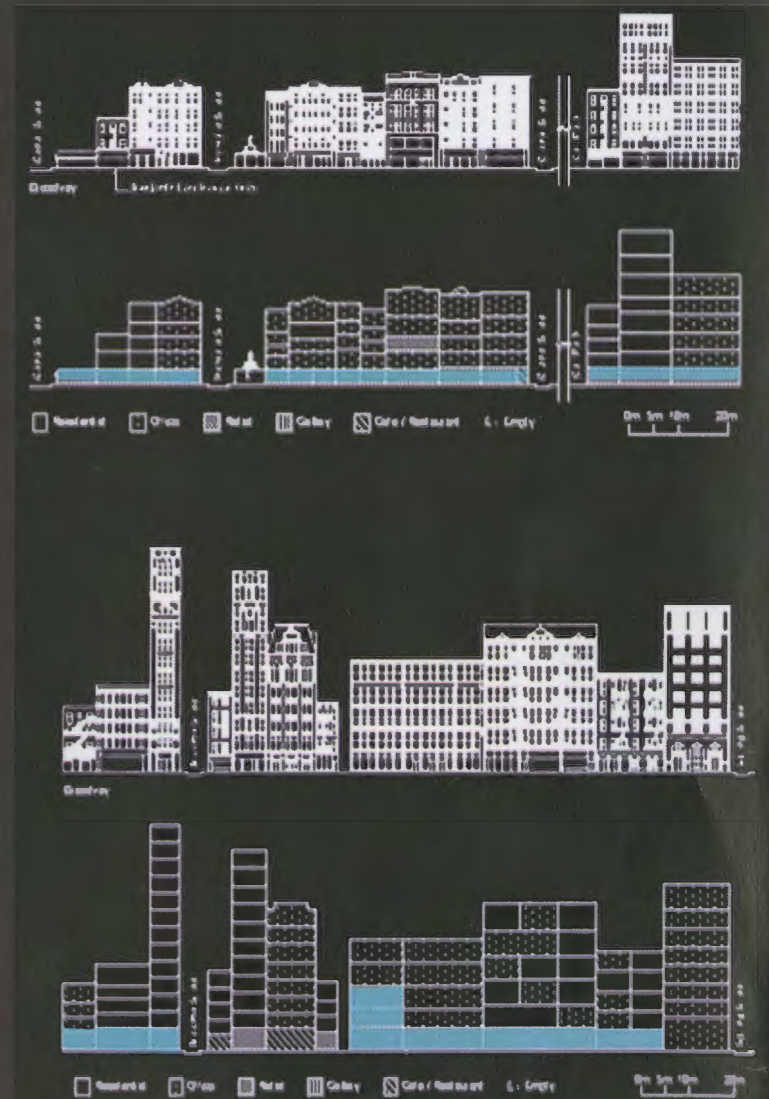


Manhattan Island, New York, showing the location of SoHo.

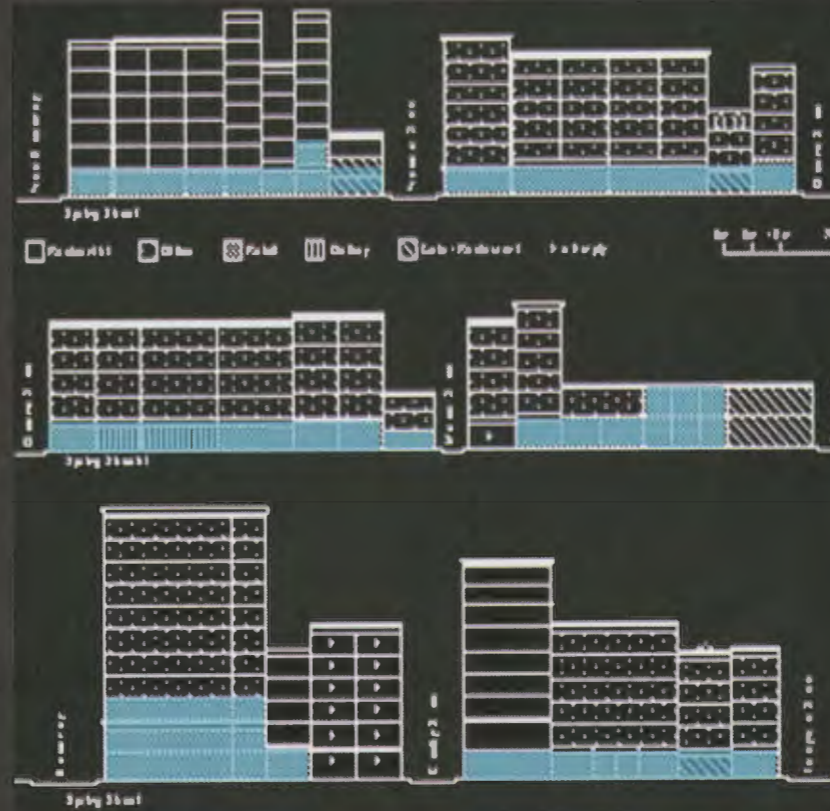


The SoHo District

The density of SoHo district increased after it had become a fashion Hub.



West elevation of Broadway, at Canal, Howard and Grand Streets, with the Benjamin Lord House, one of the first to be built on the former marshland. The extensive retail use at ground level gives permeability to the street facades while the mix of other uses such as residential and office mean there is constant movement and circulation in the street.



North elevation of Spring Street from West Broadway to Lafayette Street, with more empty buildings than on Broadway. Although the perception is that SoHo has been fully overhauled, in reality many vacant buildings still exist; the process is not finished.



New York's Soho's District was originally created on an existing urban fabric. Today the area caters to a diverse community of inhabitants.

An industrial and commercial buildings on Mercer street, with an electric mix of brick, stone and cast iron construction demonstrating the latest building technology of its time .



I believe that any building can adapt. But the process of adaptation, however, depends on the extent of transformation it has in the community as well as the viewpoint one wishes to adopt for adaptive reuse.

Society is changing at such speeds that buildings are faced with new demands which they should be in a position to meet⁴.

While I have a particular interest in the concept of adaptive reuse which will be discussed extensively in this report, I also acknowledge, that there are other ways that adaptive reuse can be applied to point out the significance of the rehabilitation of old buildings. Preservation and restoration are other methods as well; however, one needs to acknowledge the difference between the process of adaptive reuse and the concept of preservation and restoration.

Adaptive reuse facilitates the process of transformation 'from' one 'to' the other. It is the act of introducing what can simply be a new idea to the existing fabric, by somehow radically changing how one interacts with the building. Preservation and restoration, however, is the act of reinstating its original function of the built work by making subtle changes to the state of its function. It does not introduce a new idea, it acts on what is given, and reinstates what was/is existing. While both methods possesses significant architectural merit, my interest in the matter therefore is not in the latter.



Adaptive Reuse:

Definition and its role in the Built Environment

Definition

To my understanding, Adaptive reuse is the process of transforming an unused (to a point where it's left in a state of neglect and abandonment) or underused building into one that serves a new and vital use. It is essentially the act of **'transforming'** from what it was to what it needs to be. It is a pragmatic tool that can be used, architecturally, to change the function of a building into another. The term is used differently in many contexts; one needs to develop your own vocabulary associated with adaptive reuse by looking at the state of decay and the condition of transformation that needs to occur.

My own personal vocabulary associated with adaptive reuse will develop out of the investigation and analysis that will be partaken when specific ideas of theory, technology, site and programming begin to structure the foundation of the design/ product.

With adaptive reuse, the idea that needs to be brought forth is, contrary to what the Modern Movements approach was in dealing with old buildings and the preservation of history, which will be discussed in depth later on in the paper, **what the larger problem is? How do we begin to link patterns of adaptation to the dynamics of urban change?**

The idea therefore comes from the fact that one can use the principles of adaptive reuse as a method (it is not the end all and be all of the design process) to convert and transform an abandoned building in order to reverse current emerging patterns that threatens our cities from becoming disposable societies. It aids to create a sustainable society; a society that inspires to constantly grow and change with time.

The Role of Adaptive reuse in the Built Environment

Abandoned buildings remain victims of a disposable society and in order to address current architectural practices of linear production where something is produced, used and discarded, adaptive reuse in the built environment follows a process that reduces, reuse and recycle production (urban fabric) which can be more responsive to the environment. In many cases it is clear that if a new programme is very similar to the original one, conversion has more chance of success with less intervention. However, if the programme is very different, a more severe intervention on the building's general structure will be needed so that the result will be more critical for the enhancement of its identity⁵.

In my opinion, adaptive reuse has an incremental influence on sustainable development. Bypassing the wasteful process of demolition and reconstruction alone benefits the environment through adaptive reuse. With adaptive reuse, it reduces the need and demand for new construction materials and resources to be used and sustains an existing footprint. It is about recycling our historic buildings into useful structures.

What significance and identity will the idea bring to the new structure?

In many cases, older buildings retain some of the existing architectural fabric which made the building unique in character.

Within the heritage of 20th century functionalism, buildings have generally been designed as end products intended for pre-defined functional purposes⁶. Looking at industrial buildings for example, they still hold much architectural significance within the contemporary city, but because they are regarded as "specific function-holders" each space is specially designed to host specific machinery, process, activity, e.t.c. When they lose their original function, most of them prove to be solid, and lack spatial qualities that could adapt to accommodate further use.

When approaching an adaptive reuse project, precedents take on a greater level of importance because history is not only used in the creation of a new work but history is actually a physical part of the work, making the building itself a valuable precedent. Reusing existing buildings is foremost a matter of common sense economics and it is a process which has gone on throughout history. Building conversion took place in the past without any regard of history and only in the 19th century did legislation, rooted in a romantic and historicist ideology, began to merge the aim of protecting old buildings⁷.

The social advantage of recycling a valued heritage place makes adaptive reuse an essential component of sustainable development.

Conclusion..

In conclusion, adaptive reuse is centred around two questions: the 'what' and on the 'how' in order to transform a given structure into another. Answers to the 'what' followed by the 'how' request for a modification in purpose which will lead to the change of the function and sometimes the form of the original structure. The modern city as it is perceived does not succeed in preserving and communicating its own past.

Adaptive projects should trigger in the contemporary city a process of transformation and growth that will allow its own history to be reflected and celebrated, and by doing so, society will always continue to change and its urban fabric will be able to cope and adapt to this change. The project will bring constraints and opportunities but the challenge of building upon and improving what already exists should be the focus of my architectural inquiry. Reuse of an old and historical structure on an urban site preserves a piece of history, restores land to usable conditions and contributes to a sustainable pattern.

Conclusion

The study has shown that the proposed method is effective in reducing the error rate of the classification task. The results are promising and suggest that the method can be used as a practical tool for improving the performance of machine learning models. The method is simple to implement and does not require any additional data or resources. It is therefore a valuable addition to the toolbox of machine learning practitioners. The study also highlights the importance of feature selection and model regularization in improving the performance of machine learning models. These techniques can be used in combination with the proposed method to achieve even better results. The study is a step towards developing more robust and accurate machine learning models. Further research is needed to explore the potential of the proposed method in other applications and to optimize its performance. The study is a valuable contribution to the field of machine learning and provides a practical solution to a common problem. The method is easy to use and can be applied to a wide range of machine learning tasks. It is therefore a useful tool for anyone interested in improving the performance of their machine learning models. The study is a testament to the power of simple and effective machine learning techniques. It shows that sometimes the best solutions are the simplest ones. The proposed method is a clear example of this. It is a simple and effective way to improve the performance of machine learning models. The study is a valuable contribution to the field of machine learning and provides a practical solution to a common problem. The method is easy to use and can be applied to a wide range of machine learning tasks. It is therefore a useful tool for anyone interested in improving the performance of their machine learning models. The study is a testament to the power of simple and effective machine learning techniques. It shows that sometimes the best solutions are the simplest ones. The proposed method is a clear example of this. It is a simple and effective way to improve the performance of machine learning models.

q1. What is this new relationship I intend to bring to this project ?

A

thinking...

WW

thinking.

What happens when an old building has outlived its function?

Is architecture discarded simply because it finds no position in the society to operate and to find meaning?

My theoretical position is to challenge the idea that architecture can **transform** within any urban fabric. Old buildings have the potential to transform through the passage of time, contributing to the diversity, complexity and continuity of its place. My theoretical analysis places itself in a position by looking at Modernism as a point of departure.

01. Theoretical Position

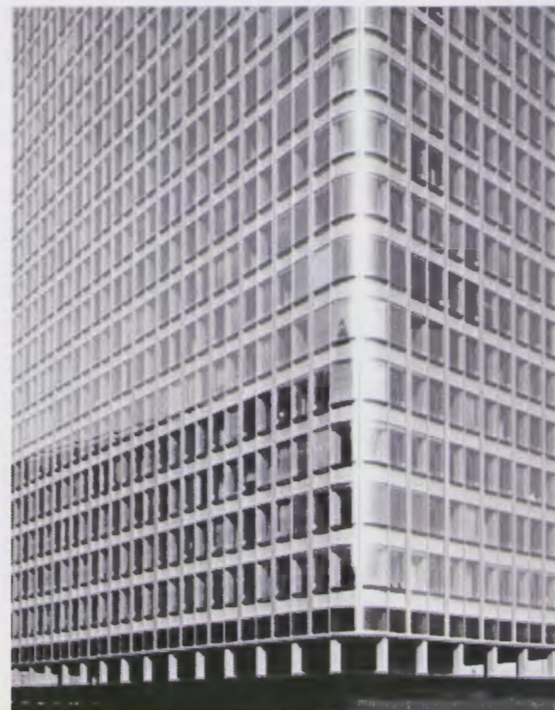
introduction

In contrast to the contemporary city, modernist architecture played a major role in the production of functional efficient structures having no connection to its past, non-integration with existing buildings surrounded nor having any social connection between what functioned inside the building or around it.

Architects alike (of whom major influences were from Le Corbusier, Mies van der Rohe and Walter Gropius) adopted this principle and the production of this process resulted in a production of buildings whose design focused on Modern development producing architecture that was purely functional. There is a disconnected relationship between how we respond to buildings in our built environment versus modernist ideas of what a functional building represented.

The literature of functionalism before the 20th century generally dealt with the relationship between function and beauty in form, and at the beginning of the 20th century, aesthetics had been abandoned and functionalist buildings tended to deal with value or worth of building than with beauty.

One such figure, whose essay 'Ornament and Crime' (1908) argued that applying decoration to a designed product was both uneconomical and criminal, because ultimately it resulted in the exploitation of the craftsman: 'If I pay as much for a smooth box as for a decorated one, the difference in labour belongs to the worker.'¹



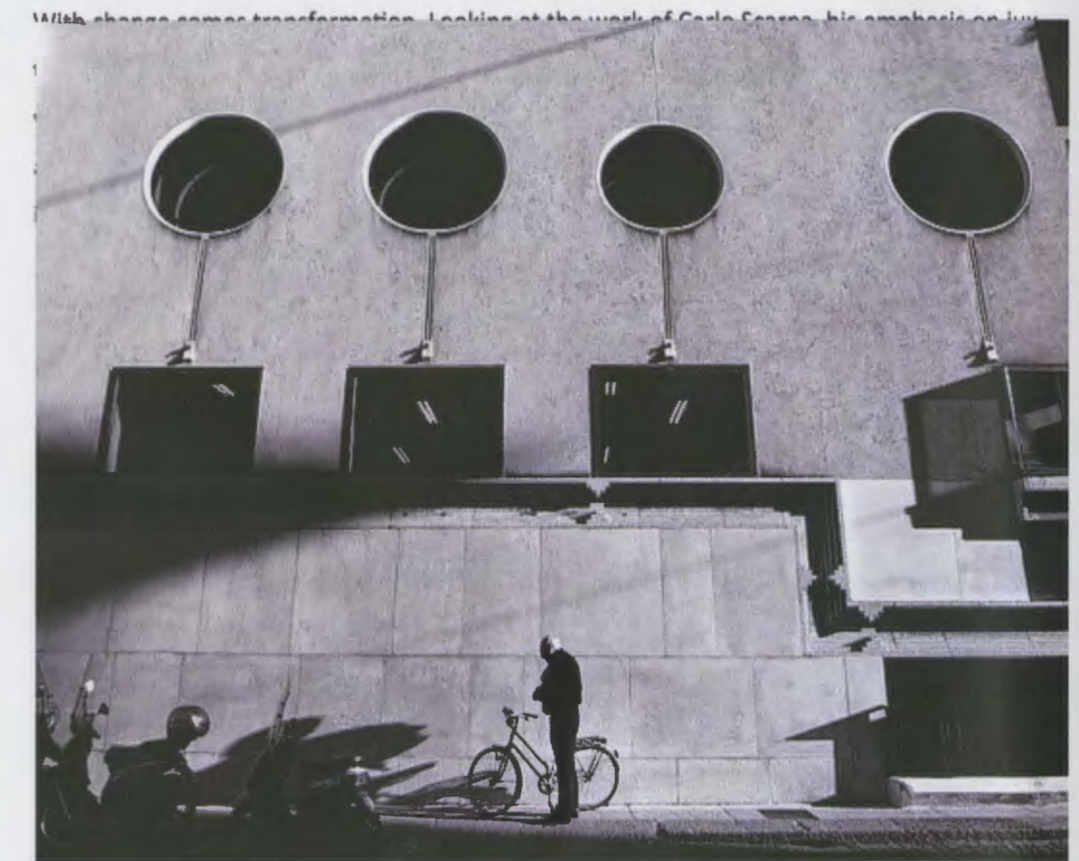
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¹ Adolph Loos quoted in Frank Whitford, Bauhaus p20

Past masters like Mies van der Rohe, Le Corbusier and Walter Gropius had no obvious interest in old buildings which is ironic given that most of modernism's key monuments were built within the context of existing towns and cities.

The new aesthetic was to be derived from the new processes of mass production, resulting in a simple, essentialist style that was based on geometry. Geometry became a model

The challenge that presents itself is one that finds a way to overlay old and new so that the dialogue between the two is clearly visible tectonically, and programmatically resulting in a new spatial experience.



Therefore in order for new 'modern' architecture to transform from 'old' modern architecture,

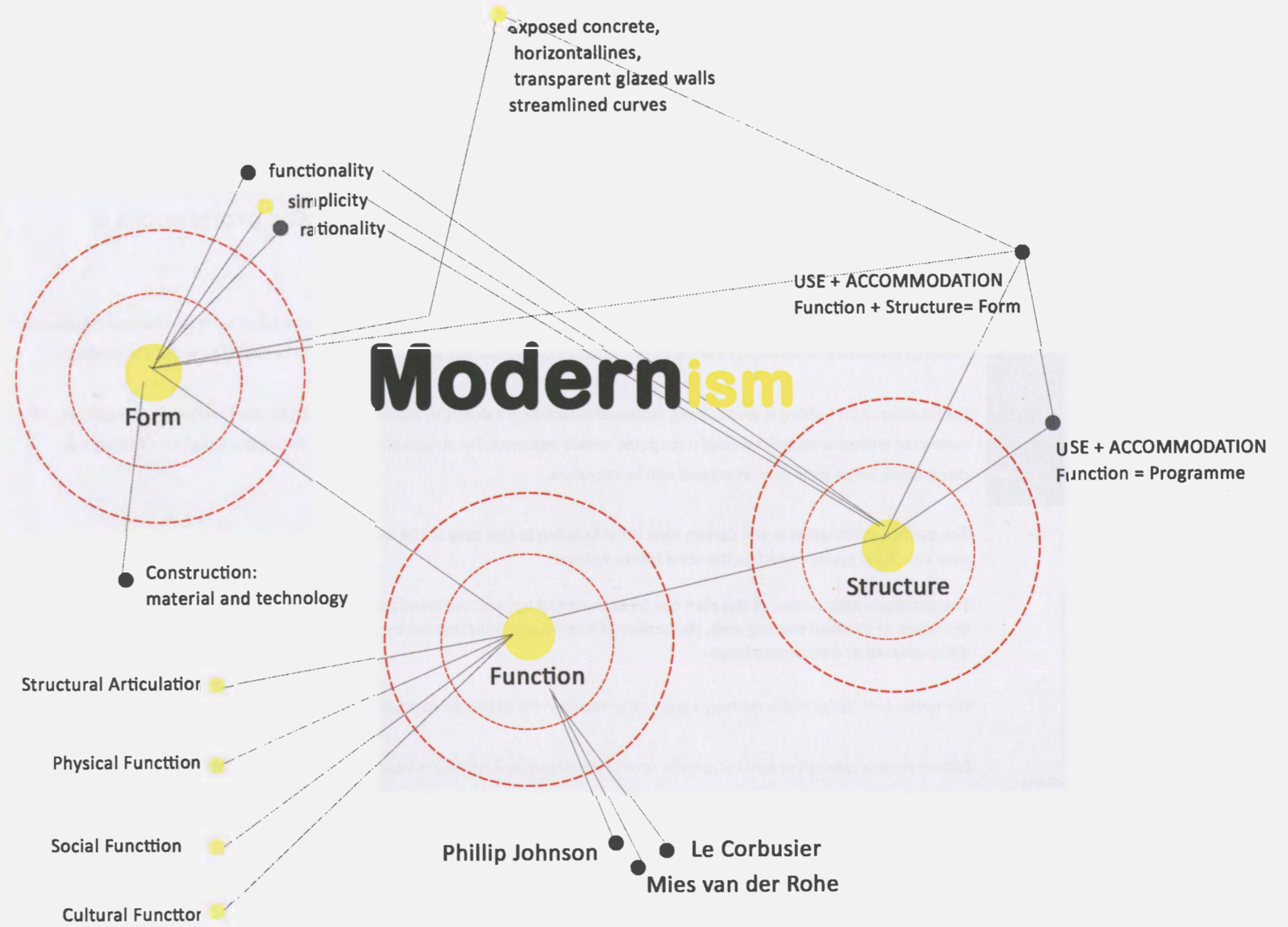
There need to exist a dialectic language between the new and the old. In order to understand this dialectic language, a new layer relevant to the contemporary urban fabric should be explored. In this exploration it is clear that layering as an architectural tool should challenge modernistic approach to design, and within this approach, perhaps 'new' sites with the



The new architecture is about process rather than product. It welcomes the dynamic of the future and addresses the lessons of the past. Today, new and old overlap, mediate and confront each other fearlessly. The issue is no longer about new versus old but about the nature of the vital relationship between the two⁹ .

1920s modernism in architecture took as its premise the fact that a building, structure or space primarily fulfilled a function... **A building design that focused on functional efficiency**

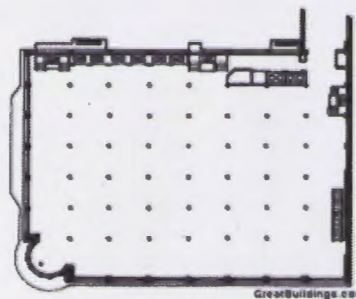
modernism: form follows function



Carson Pirie Scott Building, Louis Sullivan, Chicago (1899-1904)



Carson Pirie Scott building by Louis Sullivan in New York



Floor Plan of the Carson Pirie Scott Building



The term 'function' here understood in its traditional sense refers to 'utility', 'fitness for purpose', a task a building is meant to fulfill and the effect it has on those who use or view it. To examine function in this century, a logical way to understand function is to begin to look more closely at the phenomenon of functionalism. The types of function to which 20th century architecture refers to fall into the following categories:

Structural Articulation: referring to the buildings structural materials and method

Physical function: buildings accommodation of the physical aspects of its intended purpose.

Social function: what a building "says" about its role in society and about the activity or institution which it houses.

Cultural function: refers to what architecture does with regard to cultural beliefs or values.

Structural Articulation

"Structural technique = form" where the role of aesthetic preferences is minimized.

The principle of structural articulation can be fully understood only in relation to analysing differentiation of function. One method refers to the buildings materials and techniques and the other the nature or arrangement of human activities to be carried on within the building².

The Function of the building is seen as being expressed outwardly in a design; in another case it may be the 'function' of a specific building material or technique which is revealed through the surface treatment. The structural method on the surface design of a building is a characteristic which came to be associated with functionalism.

The surface articulation in the Carson Pirie Scott building in this case at the beginning of its century was an introduction to a new structural system which is the steel frame system.

The structural articulation of the plan can be understood by: without freedom of partition placement, brought about by the liberation of the load bearing wall, the variety of human activities housed by the building could not have been so successfully differentiated and accommodated.

The tendency to design in this mode by a group of architects in the 1920s, aimed at unification and simplification in the expression of plan.

Critics therefore refer to two kinds of *function* which should be articulated for the viewer/audience of the building: one is the 'function' of the structural elements in combination; the other is the function of the spaces of the building and its activities intended to have. Both of which are important to a postmodern style³.

Physical function

The physical function deals with the effectiveness of a building in satisfying purely physical requirements of its users.

Early functionalism had the reputation for making mechanical efficiency and practicality in architecture its ultimate goal. This was executed using the idea of the 'functional frame'.

The building's design is influenced greatly by the need to control certain physical elements. The toughness and clarity of the form suggest a functionalism made monumental and grand, though in fact, the building, not mindful enough for the demand for flexibility.

² Ligo, L. (1974). The Concept of Function in Twentieth-century Architectural Criticism. UMI Research Press.p.32

³ Ligo, L. (1974). The Concept of Function in Twentieth-century Architectural Criticism. UMI Research Press.p.34

How does Adaptive reuse begin to challenge structural articulation and physical function in contemporary architecture?

a. Caixa Forum

Typology: Building onto adaptive reuse
Architect: Herzog & De Meuron
Location: Madrid, Spain (2006)
Previous function: The existing building was previously an electrical Power station (Central Eletrica de Mediodia)
Program: Caixa Forum caters to programs in art, music, theatre and literature.



Previous Form

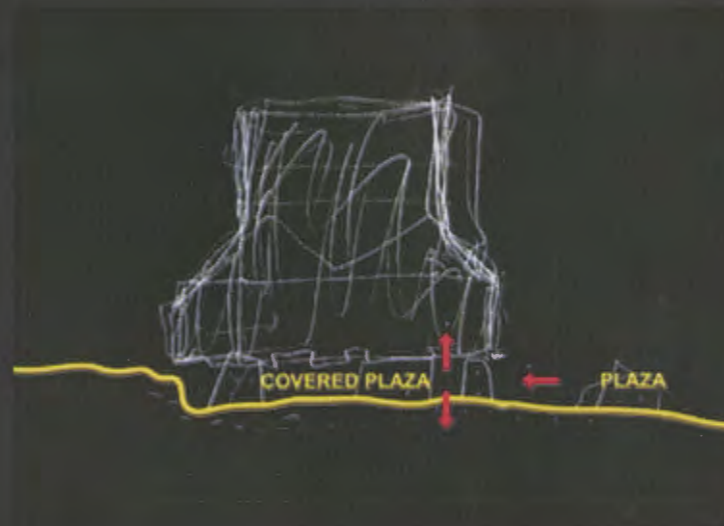
The classic brick walls of the former power station are a reminiscent of the early industrial age in Madrid. The brick shell was the only material that was reused. The architects demolished the original roof and its interiors.



Current Form

The new addition consists of two upper stories clad in rusted cast iron and two underground levels. The building's height was doubled and the floor area was increased to accommodate its new function.

The classification of the type of transformation undergone could be classified in this case as a 'Building onto' transformation. The exterior surface of the building had been slightly modified to accommodate new uses. The most effective and successful device that is very interesting to me is the idea of 'cutting away' at the base to create a public space.



i. Form / Beauty

Design intention was to cut away the granite base of the brick exterior walls creating the illusion that the building floats in midair hovering over a covered entry plaza. The design strategy was based on the notion of character and collage giving each space its particular sensual and experiential quality. The strategy was to exploit the different properties in materials, it "carried a new level in their explorations of transformation and decay."⁴

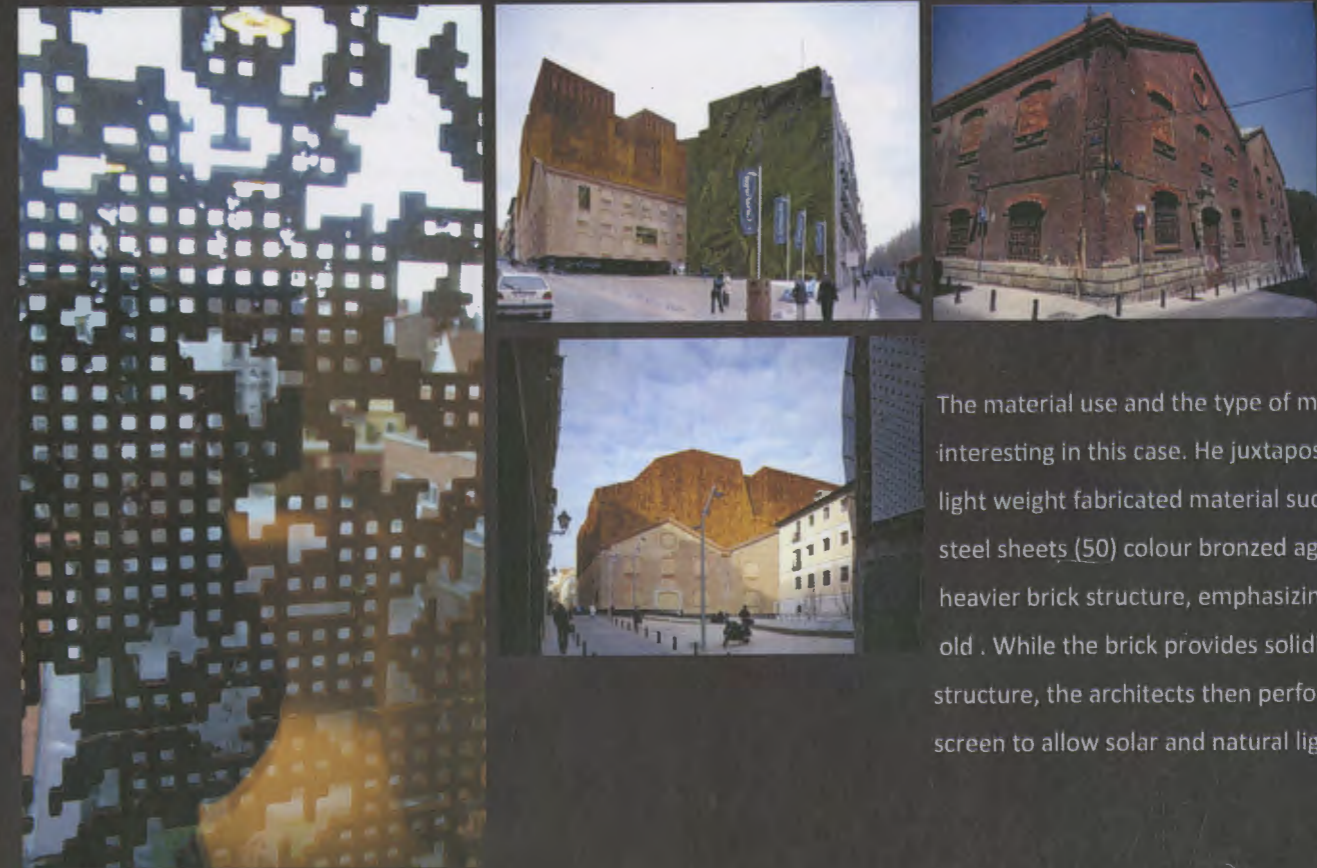
ii. Function / Programme

The building in terms of its function is at the base of the building where ground had been cut to open to the public making it more suitable for programs like, art, music, theatre and literature to occur (48).



iii. Tectonic/ structure

The existing structure of the former power station are a reminiscence of the early industrial age in Madrid. Its brick shell was the only material that retained its character. Its current structure represents a juxtaposition between the accentuation of brick and addition of a massing added of cast-iron clad organized in a such a way that the folding planes coincide with its ' previous roof structure .

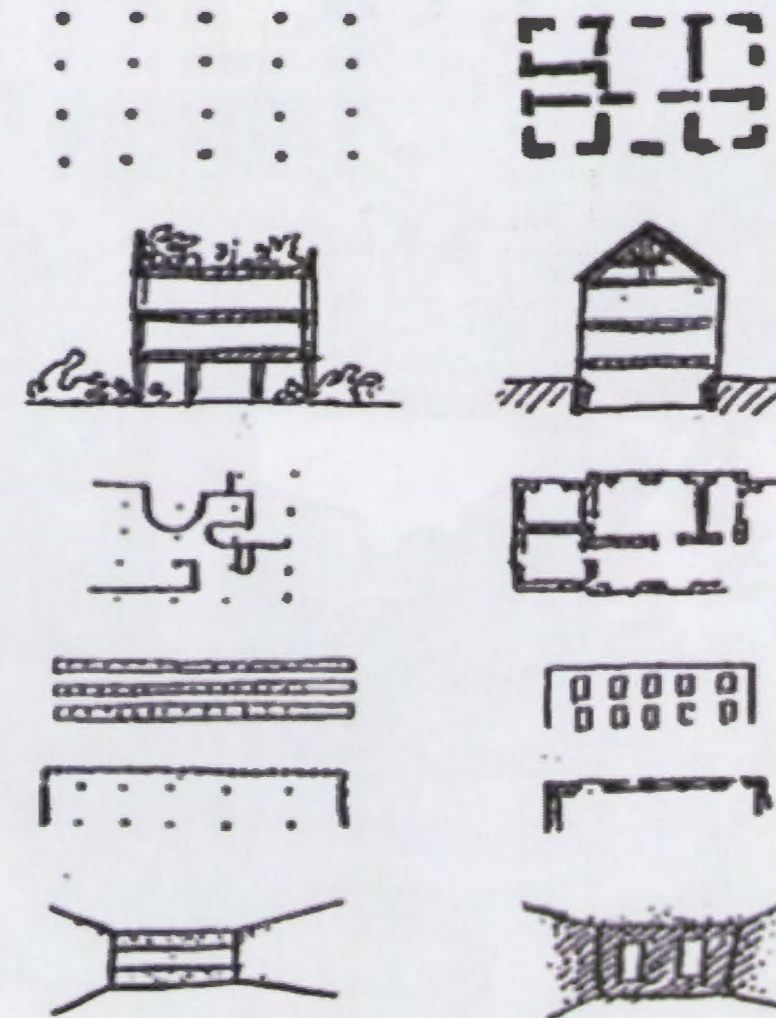


The material use and the type of material is very interesting in this case. He juxtaposes the use of a light weight fabricated material such as stainless steel sheets (50) colour bronzed against a much heavier brick structure, emphasizing the new and old . While the brick provides solidity to the structure, the architects then perforated the steel screen to allow solar and natural lighting to filter through.

Social Function

Social function is regarded as a higher level on which building function is in their capacity to provide a meaningful 'scene' for society. Adequate shelter to house certain group activity and in that nature provide forms which serve to symbolize the nature of that activity. Architecture contributing to the institutionalization of man by giving visible physical form to a social institution. Architectural function throughout the 20th century is primarily characterized by a recognition that an observer of a building needs to be made evident of what the structure is.

However, if one looks at Villa Savoye by Le Corbusier, he presents a very interesting notion about structure and function. By 'freeing up' all load bearing walls, he provided an opportunity to free up the floor plan making the space more flexible to the user (Figure 9- 13). This is very important within contemporary architecture and especially how we as architects deal with buildings, the occupation and the change in user and function. The house addressed Le Corbusier's 'Five Point in Architecture' which is very important in post modern architecture. It deals with function and structure and use coherently in such a way that it opens new possibilities to address any building, and in this case with addressing old buildings in a new manner in a contemporary context.

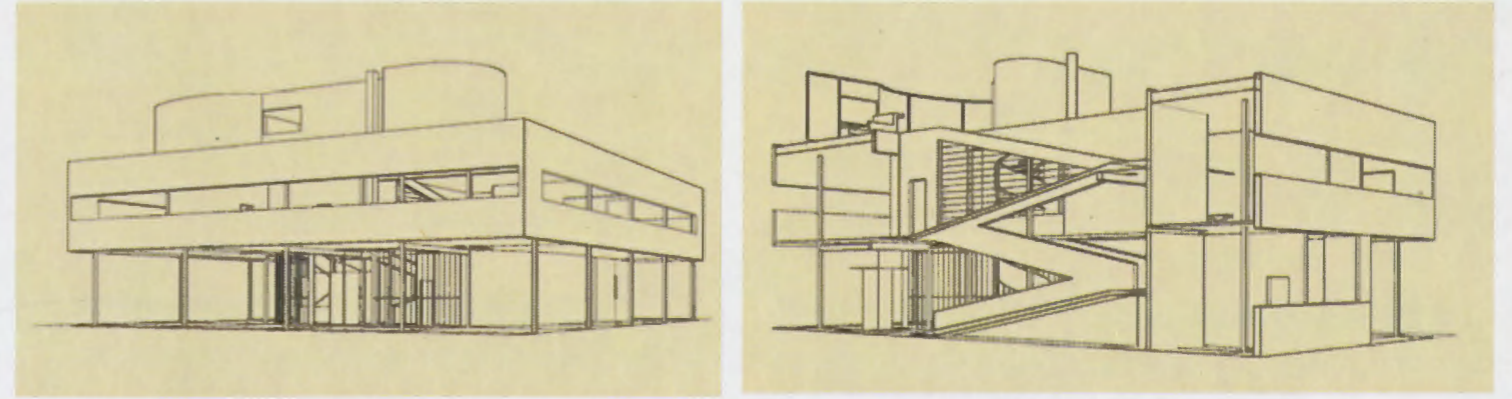


The 5 Points it addresses are:

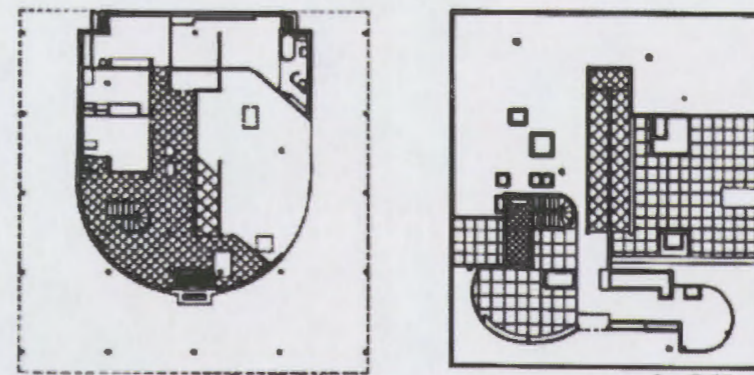
1. The pilotis, or ground-level supporting columns, elevate the building from the damp earth allowing the garden to flow beneath.
2. A flat roof terrace reclaims the area of the building site for domestic purposes, including a garden area.
3. The free plan, made possible by the elimination of load-bearing walls, consists of partitions placed where they are needed without regard for those on adjoining levels.
4. Horizontal windows provide even illumination and ventilation.
5. The freely-designed facade, unconstrained by load-bearing considerations, consists of a thin skin of wall and windows.

Le Corbusier's Five points of Architecture

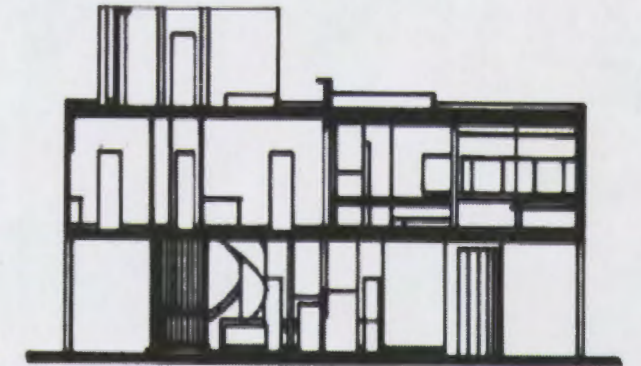
Sectional and Overall Perspective showing the thin skin, non-load bearing wall.



Ground Plan and 1st Floor plan



Section through the Villa Savoye



For the interest of this report, this section becomes most relevant when dealing with the design project. As it will be further discussed, the focus of the report will further be analysed looking at an underutilised market in the city of Cape Town. My choice of investigation will be to re-establish the social and cultural function it bears on the society. While Functionalism, disregards a building's function to have the capacity to provide a meaningful 'scene' for society, the role of social and cultural function, is brought forth in the act of transforming what was once a purely functional market into an institution where its physical activity can begin to address social importance within the society.

Therefore, while structural articulation and its physical function also play a major role in retaining what currently exists, the act of transformation within my given project begins to address how an old building, which once held an important social and cultural function in the community, can once again begin to serve its community in a new manner that is relevant to its contemporary context.

How does Adaptive reuse begin to challenge social function and cultural function in contemporary architecture?

b. Danish Jewish Museum

Typology: Building within adaptive reuse

Architect: Daniel Libeskind

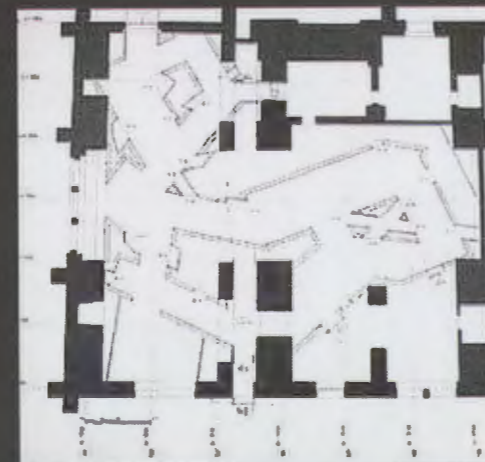
Location: Copenhagen, Denmark (2004)

Previous function: The Royal boathouse built by King Christian IV in the early 17th century

Program: an Exhibition space



In most cases when one thinks of transforming a building for its social or cultural function, one can look to a museum for such an example. In this case the Jewish museum plays that role. The type of transformation in this case is classified as having undergone transformation by 'building within' what currently exists. Its function preserves a collection containing the history of the Danish Jewish life in Denmark, therefore the transformation taken place here is that adaptive reuse begins to use the sites cultural function, in this case the fact that the area of Copenhagen, is the oldest part of where Danish Jewish history began, the Danish Jewish Museum inhabits a space as old as the Danish-Jewish history. In its physical structure the museum also begins to represent that idea.



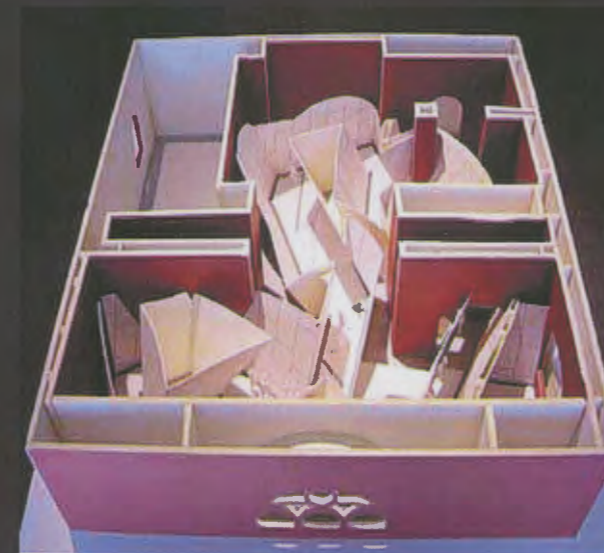
i. Form / Beauty



The Danish Jewish Museum combines the rich history and culture of the Jewish Community in Denmark with the strong Danish building tradition, detailing and materials. Therefore the museum is a unique spatial experience built in traditional red bricks birch ply walls and oak floors relating to the Scandinavian traditions as well as the journey by boat to Sweden in 1943. The contrast between the brick structure of the old boathouse and the newly interior irregular shapes of the folded planes begins to illustrate a historical shift from its original meaning and character.

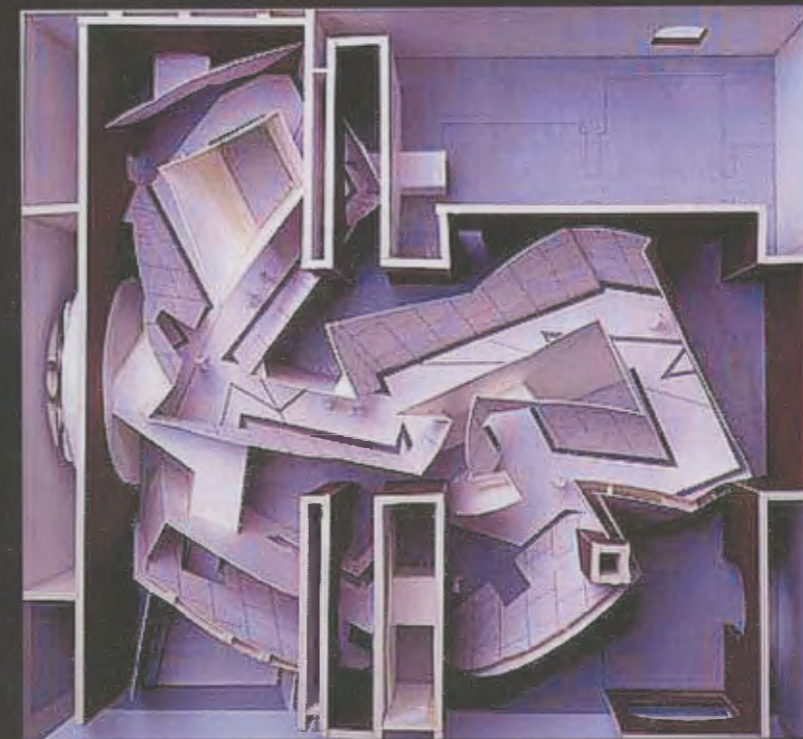
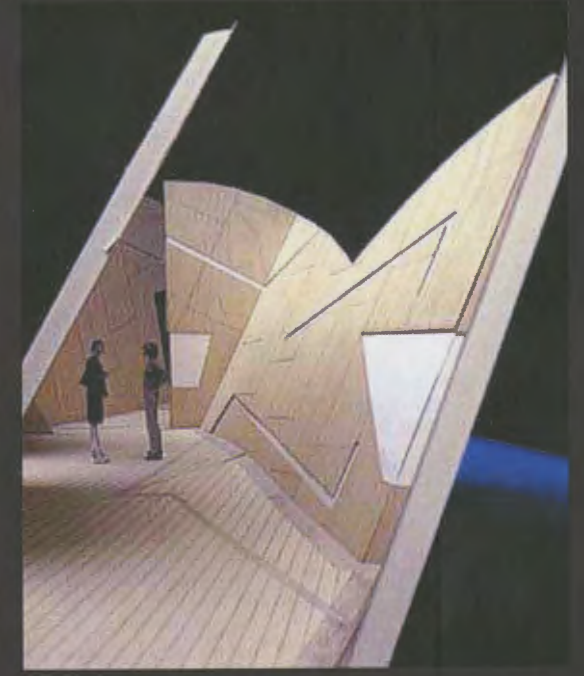
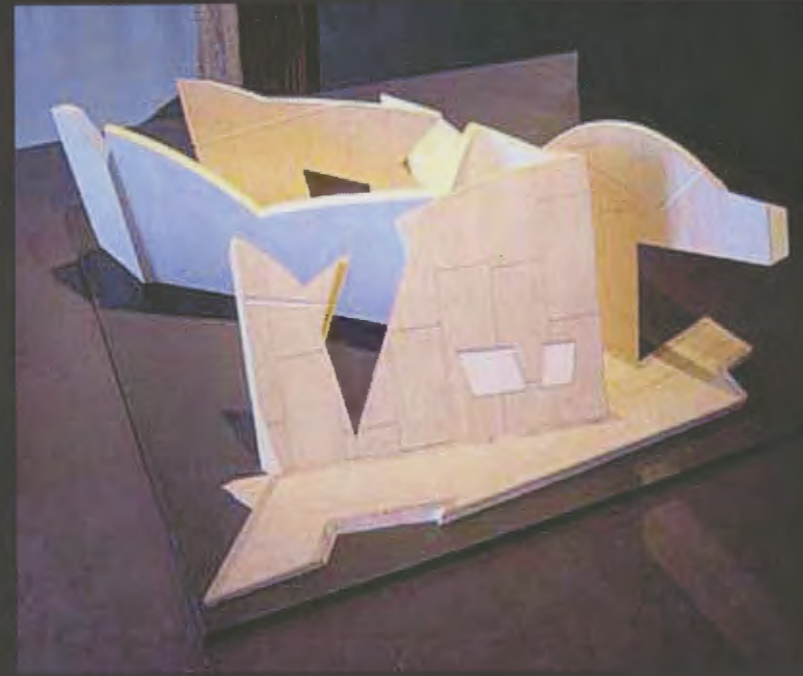
ii. Function / Programme

The concept of the museum is based on the Hebrew word 'Mitzvah' - an obligation or a good deed - which is symbolized in the form, structure and light of the Museum; with the exhibition conceived as a text within a text, in the same way that the museum itself is a building within a building¹. The new layout of the building transforms the interior spatial arrangement completely, the new vitrine walls make reference to the existing walls that shaped the original interior of the building.



iii. Tectonic/ structure

“ The intertwing of the old structure of the vaulted brick space of the Royal Boathouse and the unexpected co nnection to the unique exhibition space creates a dynamic dialogue between architecture of the past and of the future- the newness of the old and the agelessness of the new”



“We should not live in a bright shining new future; any more than we should hide in comfortable pastiche of the past. We must inhabit an ever-evolving present motivated by the possibilities of change, restricted by the baggage of memory and experience .”

DAVID CHIPPERFIELD, 1990

Continuity and change: Adaptation of Architecture as palimpsest

1.

All buildings represent a specific time point in architecture therefore, a clear representation of the old and new fabric exist. Both fabrics coincide and live in harmony in one space. In most spaces, the structural integrity is maintained and the new programs come to form.

2.

To deal with this issue I plan on exploring two possible strategies of adaptive reuse: One which is more common and architects across have explored this notion is one of Architecture of the palimpsest. This is a very common tool as it explores the layering of change. Old layers given new life through new layers while new layers have been created from the old.

3. The concept of palimpsest:

A palimpsest is a text written over an existing text. In direct translation to architecture, the architect who modifies the drawing of an elevation on one or several superimposed sheets of tracing paper creates a palimpsest 14. When we talk about superimposition whether architectural or not the most important feature of a palimpsest is the concept of layering. Architects throughout the centuries have practiced palimpsest in many different ways, from the extension of the Palazzo della Ragione by Andrea Palladio to the extension of the Goteborg Law courts by Gunnar Asplund. Palimpsest responds to change. Change however could include an alteration or addition. But in most cases the result could be change of use or program or even a social and economical change to an environment. Therefore this thesis aims to explore the possibility of what layering or 'palimpsest' can bring about in a given built environment.

Conclusion..

If buildings have a short life it can be assumed that much of the built environment will always look like a building site, which not only represents a burden on the environment but also an assault on our collective memory. We need to deal carefully with the condition existing currently brought about by earlier practices of modernism.

q2. How does this new relationship begin to engage with its given context ?

B

siting...

siting.

Locating and Identifying a suitable building site for the intervention

The potential area is located and identified as having integrated social activities and is located within a well established movement corridor enabling them to serve a wider public. Adaptive reuse in this context seeks to explore opportunities to champion the rebirth of existing urban infrastructure into new and creative solution.

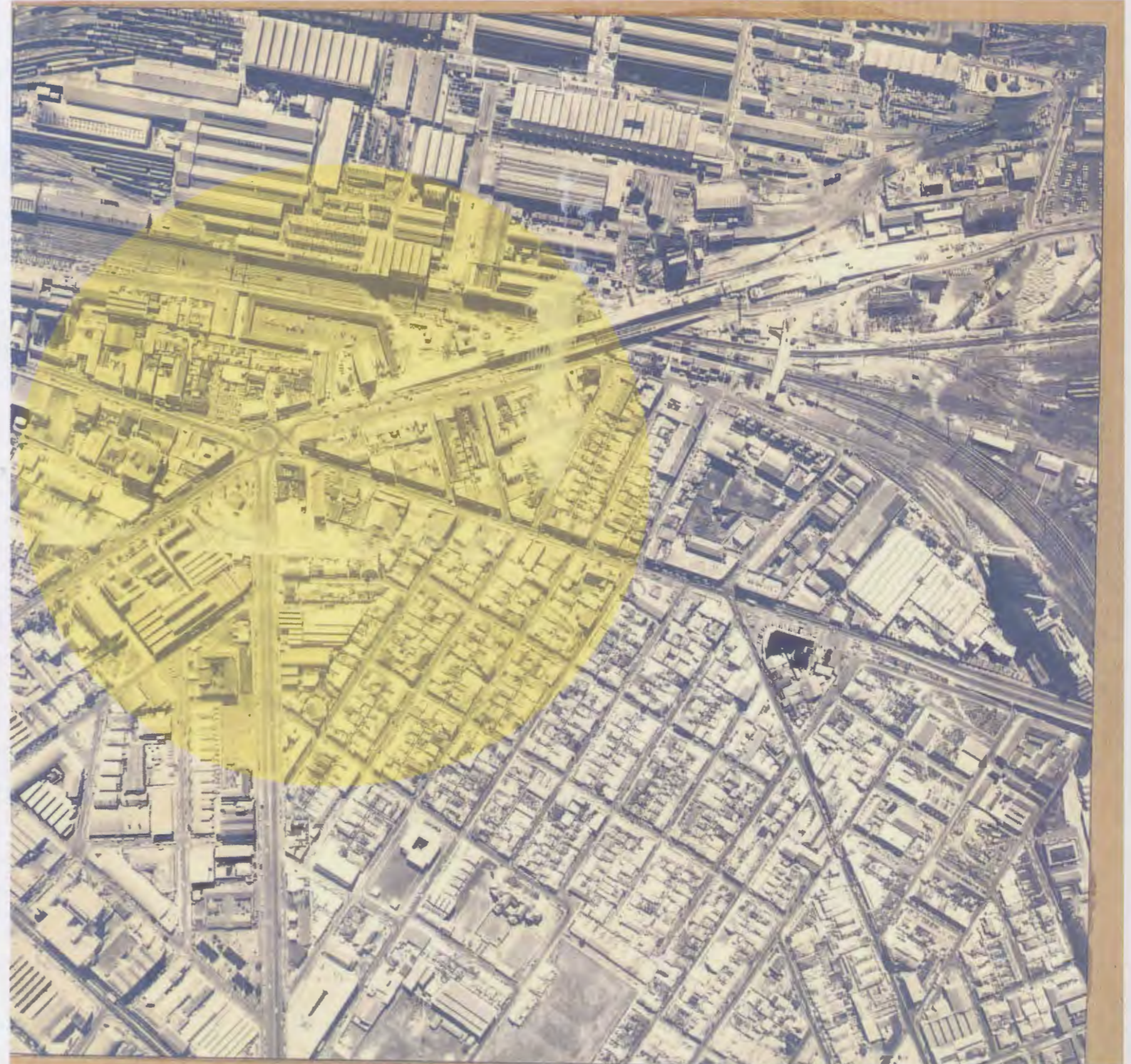
02. Contextual Development Framework

“Let us not discard the architectural beauty of our past which blends so well with our South African landscape and our way of life. Let us give more to our architects to develop their own individualism. If it is worth preserving our old Cape Dutch, classic and other styles of the 18th and 19th centuries, then surely it should be worthwhile incorporating some characteristics of that beauty in our modern architecture. I totally reject the theory that the architectural beauty of our past is incompatible with modern requirements. We dare not adopt such an attitude of wilful murder of our finest traditions.”

R.L. DE WET

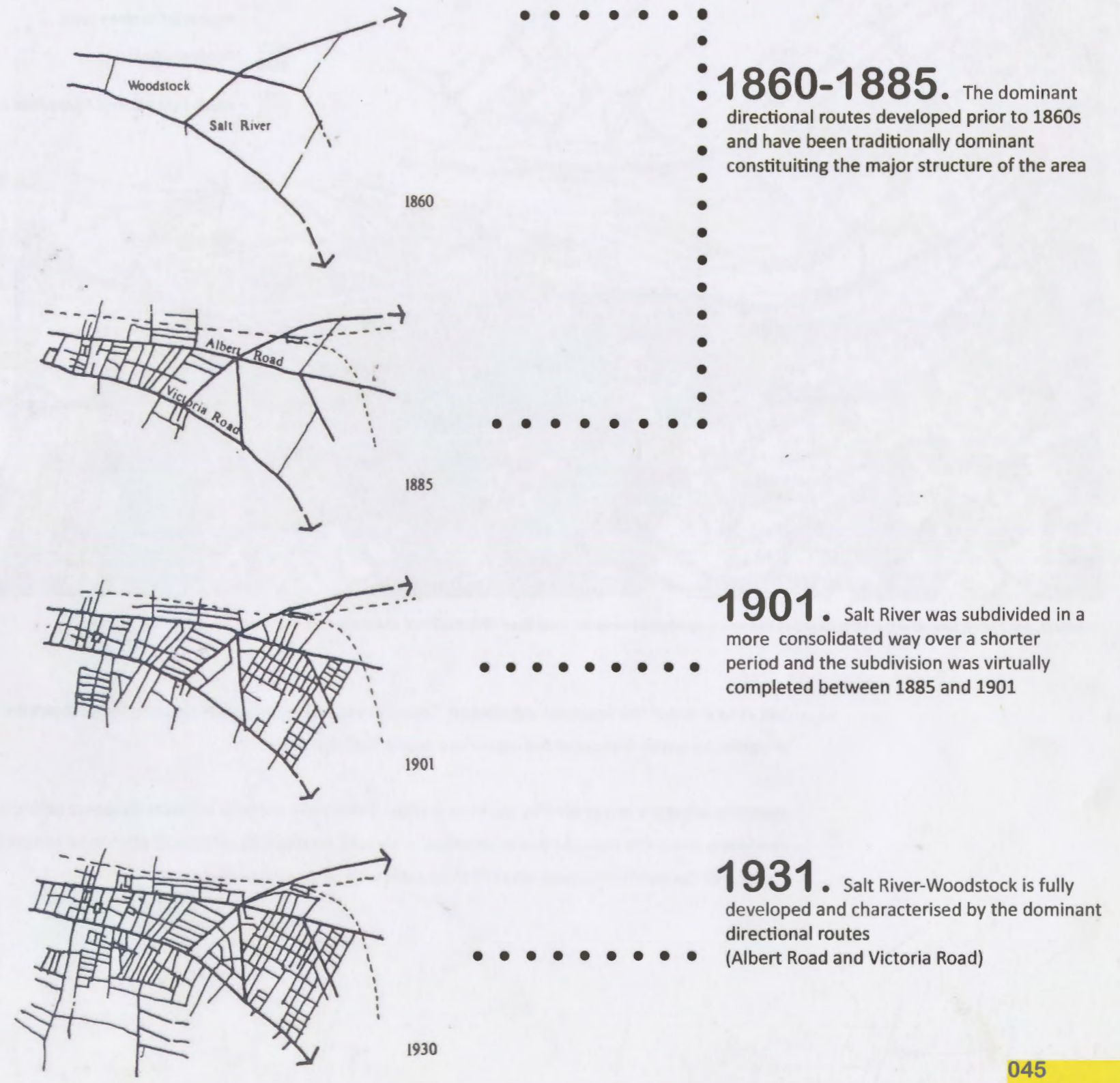
Introducing the study area and problem statement

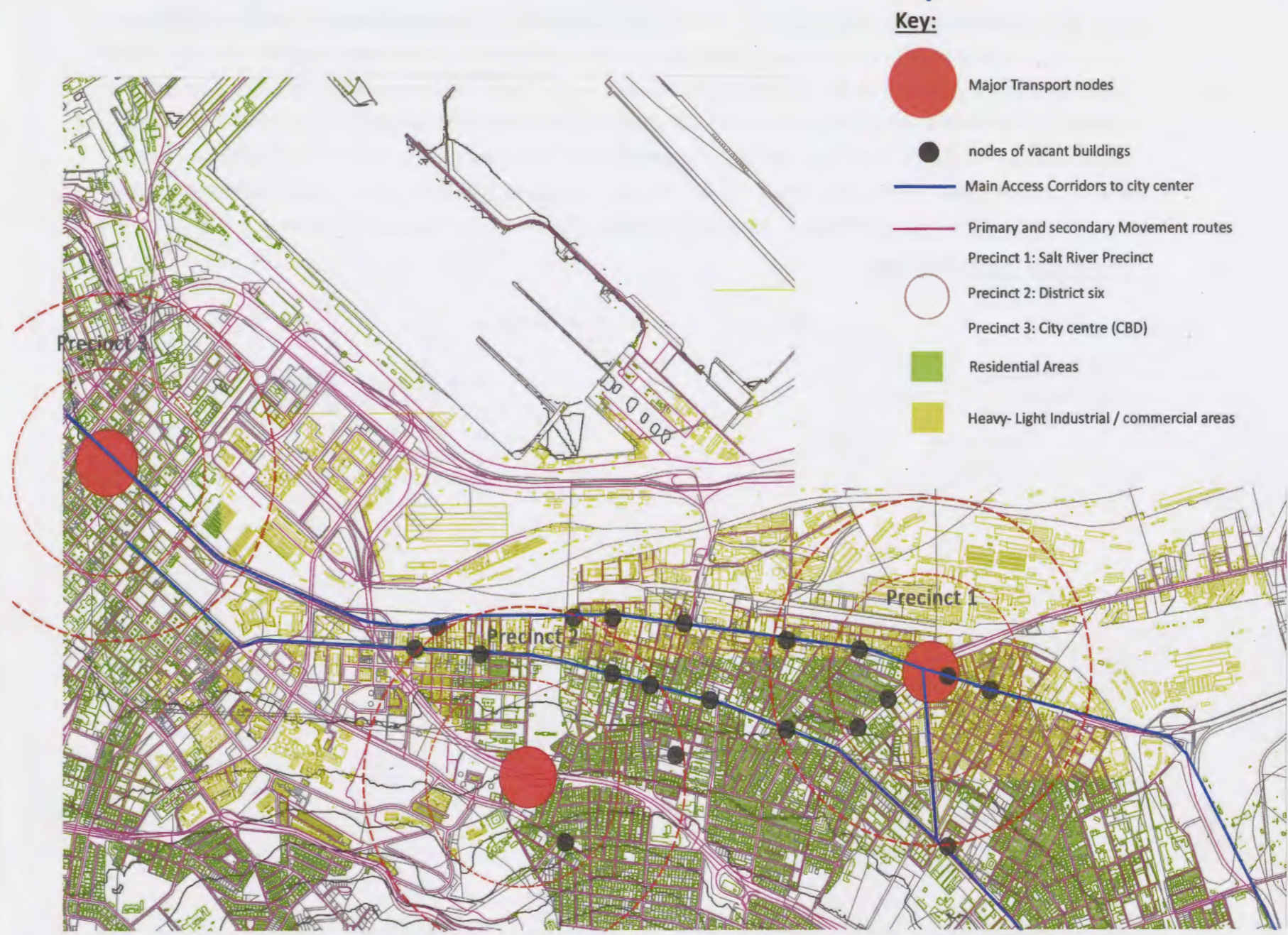
For the purpose of this study, Salt River was chosen as the study area. For a variety of reasons, the area, similarly Observatory and Woodstock to which are both strongly linked to Salt River, its built fabric is generally an integrated multi-functional area. The built fabric displays a broad coherence of forms and a notable urban and architectural character. The main problematic area that one can take out of the study of this area is that Salt River is very much an old industrial area with densely populated industrial buildings that are predominately unoccupied because of certain economic factors that have led to many of the industrial factories closing down, unable to support themselves.



The degree of urbanity for an area like Salt River developed out of the industrial sector in the early 1900s; today most of this industrial fabric stands unsupported by its local industry. The industrial sector of Salt River has decreased dramatically, what was once an area having one of the largest textile industries in the Western Cape, most have been reduced to a number of factories where retail outlets borrow these spaces to conduct business. Many people from factory workers, owners of tailoring and smaller service businesses were influenced by the garment and textile industry in Salt River. By looking at this analysis one can appreciate the significance the textile and garment industry has brought to the area; it had shaped the cultural and social character of the area. Therefore its heritage value, I believe, lies perhaps not only with the heritage value of the architectural style of the buildings themselves, but perhaps the cultural legacy is reflected within the social activity that had become a major influence of the structure of the Salt River.

Historical Development

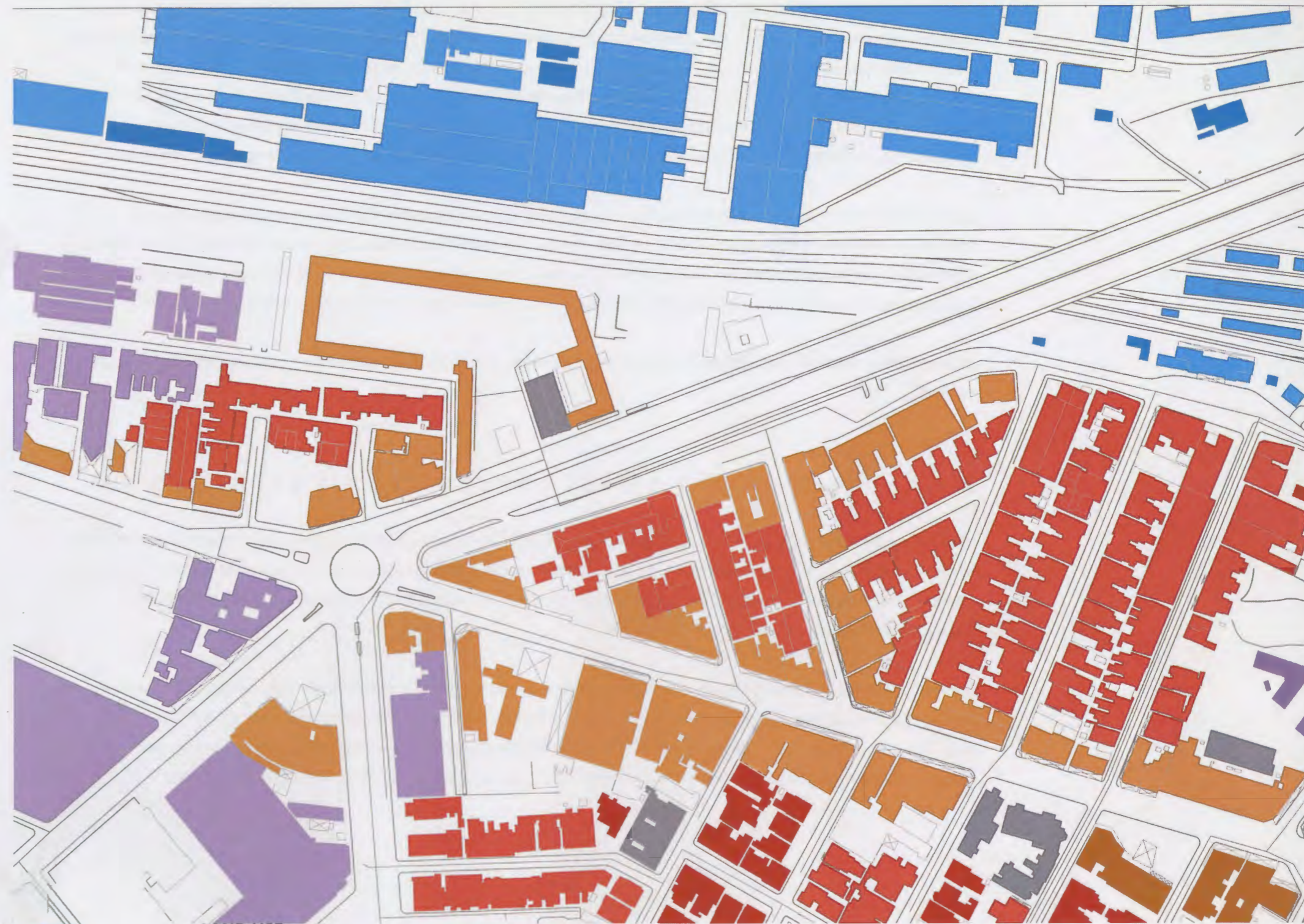




Precinct 1, Salt River is located within both dominant movement corridors between the Cape Town CBD, Precinct 3, and the southern suburbs.

Salt River is one of the last remaining places in Cape Town to display 'urbanism' meaning that it shows the kind of positive urban environment which rises out of the area where people both live and work.

Currently, unlike the rest of the city, Salt River in effect dies at night and local residents disappear behind the private walls of their residences due to the state of crime experienced in the area, making it an unidealistic place to be at night but during the day its streets course with thousands of workers who commute there from other surrounding areas.



LAND USE

- Industrial
- Commercial
- Business
- Industrial
- Residential

The Study Area:

- lies between and is bisected by major directional routes which converge at Salt River;
- activities ranging from residential to industrial are contained by this zone making it representative of the Salt River area in general
- is the location of part of the oldest built fabric in Salt River

The Commercial and Business area illustrates a high degree of urbanity, which has developed because the shops have concentrated together forming a continuous and coherent space, the urban space therefore show a clear coherence between private and public spatial activities that seems to resolve itself through the mutual benefits of the local residences.

There are many buildings in the surrounding area who have become victims of urban decay and like many cities around the world, most buildings end up in demolition. The development of industry particularly in the area of Woodstock and Salt River in Cape Town is closely linked to when Modernism was introduced in Cape Town architecture. Industrial Buildings therefore remained at the forefront of modernism. In its strongest sense the **Modernist ideology**, 'Form Follows Function' was most functional in this context and at its strongest. The cluster of industrial buildings **that occupy** this area of Salt River possess significant heritage value because of the architectural value it presents but yet again **they also** produce an important cultural heritage that is unique to the Cape Town area.

One important element that you could pick out from this principle is the way function was handled. In many modernist buildings structural elements within the building e.g walls and columns were structured so that they serve a specific function. It did not allow any flexibility to occur nor to withstand the demands and the change within a society. Therefore construction and choice of material were also dealt in a specific way and in order to accommodate the structural design new materials had to be sought.

How will then we start to address the needs and demands of the society where the function has long preceded its use?

Modernism in the 1930s : study in Salt River region

I decided to look at four buildings within the Salt River region to further my research on modernist buildings in Cape Town and specifically within my area of focus which represent good examples of modern buildings and are either underused, used or unused whom also having interesting architectural characteristics. The three buildings I chose to study was the **Rex Trueform Factory Building, the Duchess Clothing Factory/ Vanguard House, and Old Biscuit mill**

The reason for the choice of buildings, are their unique architectural style that not only represent the modern style but they current state also raise an awareness that adaptive reuse is very much important in this study. They hold an important architectural heritage, one that is very much important to Cape Town. Had it not being the case these buildings would have not existed as long as they would have, however, as much historical value it has to the greater Cape Town, they also tie into the cultural heritage of the area.

Study case 1: Rex Trueform Factory Building, Main Road, Salt River

timeline

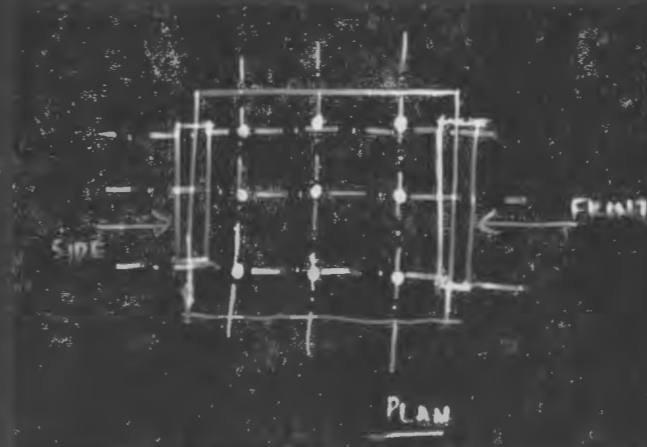


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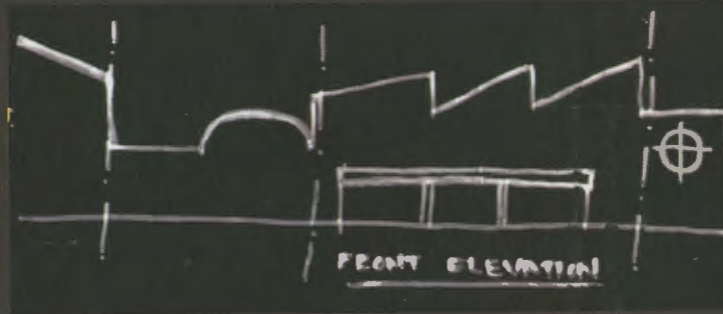
The Rex Trueform Factory Building is a very interesting case of a building falling victim to neglect and abandonment. This building was very much at the forefront of the Modern Movement in Cape Town. Its stone white facade, grand entrance and non-ornamental external appearance is typically a style adopted by modern architecture and by just assessing how physical building from the street, there are many interesting points that I found interesting:

sketch



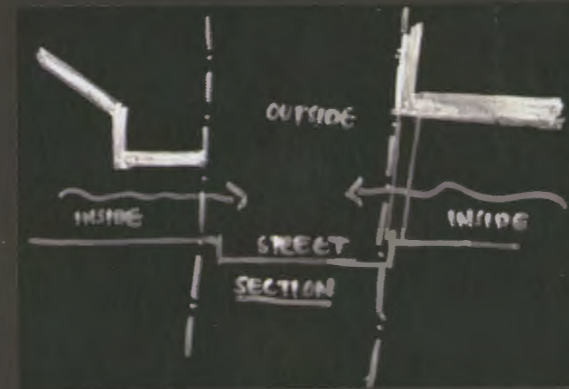
Floor plan has fixed dimensions and hold specific spaces for specific functions.
 There is one main entrance at the front which only managerial staff were allowed to use.
 Staff entrances are on the sides entrance of the building

sketch



2

The building's non-ornamental facade clearly expresses the building's function in its external appearance



3

The building steps back from the pavement showing its total lack of its engagement with the streetscape. There is a lack of public participation with the building.

While on my visit there I had discovered that people opt to sit on the rail opposite the street to wait for transport rather than to sit near the building because of its domineering stature.



4

The height of the entrance show a hierarchy of space where only managerial staff were allowed access, the space was more grand in size and clearly shows a level of hierarchy expressed in the design of the building

Study case 2: Duchess Clothing Factory/ Vanguard House, Main Road, Salt River

timeline

1950 - 1954
Dutchess Building officially opened in 1954 owned by Overwear MNF who traded as Duchess manufacturing ladies overalls trade uniforms and leisure wear

1965
Ownership of building was transferred to a private individual under the name of Amelia Augusta Pereira

1988
Clothing Factory closed and later purchased by another individual and remained unoccupied

2006
Saambou Bank LTD later purchased and remained within their property with no intention of using it for something else

2008
Property was later transferred to the Solomon Brothers, Property developers and little renovation has been done ever since

images



sketch

This building is quite a complex and difficult building to understand because of its design and its ability to adapt to new use. Using this building for adaptive reuse could prove to be much more challenging than using a very simple modern building. Its architectural style is a combination of both simple form in plan and structure, however, its external facade does not prove to be simple.

The main purpose of this thesis is to explore the possibilities of how you would and can respond to different architectural challenges a building may pose for adaptive reuse. Ideally, it would be interesting to tackle one of the projects I study above as their all possess something significant in their assembly which could uncover and prove valuable to not only how heritage buildings are dealt with but ties it back to this idea that sustainability is very much an important factor in this present age and it needs to be exercised more strictly, but I still do stress the point that adaptive reuse does not entirely help solve the problem, it however acts as a catalyst in responding to urban regeneration.



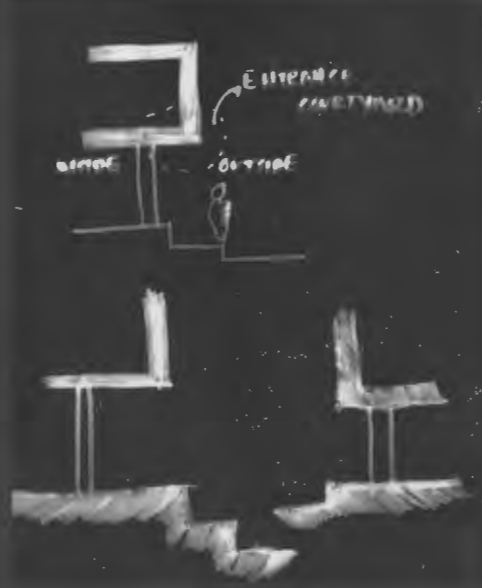
1

Floor plan has fixed dimensions and hold specific spaces for specific functions
There is one main entrance at the front but it allows everyone to use the same entrance



2

The architectural style is very much influenced by the style of the Art Deco. While some of the elements on the facade still resemble modernist influence, it therefore is very much a modernist building in its own right



3

The building steps back from the pavement showing its total lack of engagement with the street as well, however, due to scale, people respond to the building much more effectively than the Rex Trueform building.

Study case 3: Old Biscuit Mill, Albert Road, Salt River

timeline

1900 1930 1960 1970 1994 2000 2006 2007 2010

In the late 19th century it started off as a standard mill before being converted into a biscuit mill for 'Pyotts'. The history behind the biscuit mill is very uncertain, but up until 2006/2007 major renovation had occurred and later converted into a public market.

Salt River Market operates and functions on a day to day basis while the old mill was permanently closed down

image



The Old Biscuit Mill is a successful case for adaptive reuse. Its raw industrial character still remains as a prominent feature for the mill and most of its built fabric was retained making as little impact as possible for conversion. The interesting case for the Old Biscuit mill is how they have managed to use the spaces effectively for public use. Most retail shops are housed under a newly renovated area in the mill, it then opens up into a public courtyard where the market freely conducts business in. What I hope to get out of this investigation is how to successfully create a public space that responds to the activities that this building caters for.

Revitalisation Framework : a Critique

The *Revitalisation Framework** is a current project that focusses on urban regeneration for Woodstock and Salt River⁹. In the best interest of this research I had decided to place the architectural project within this framework. In doing so, my project developed from a chosen site that had been analysed from the given framework. In order to address the issue of adaptive reuse, Salt River presents itself with a surplus amount of vacant buildings and I believe in order to address rehabilitation and/or regeneration, one needs to take upon the initiative to design an architectural framework that will be able to respond to this condition.

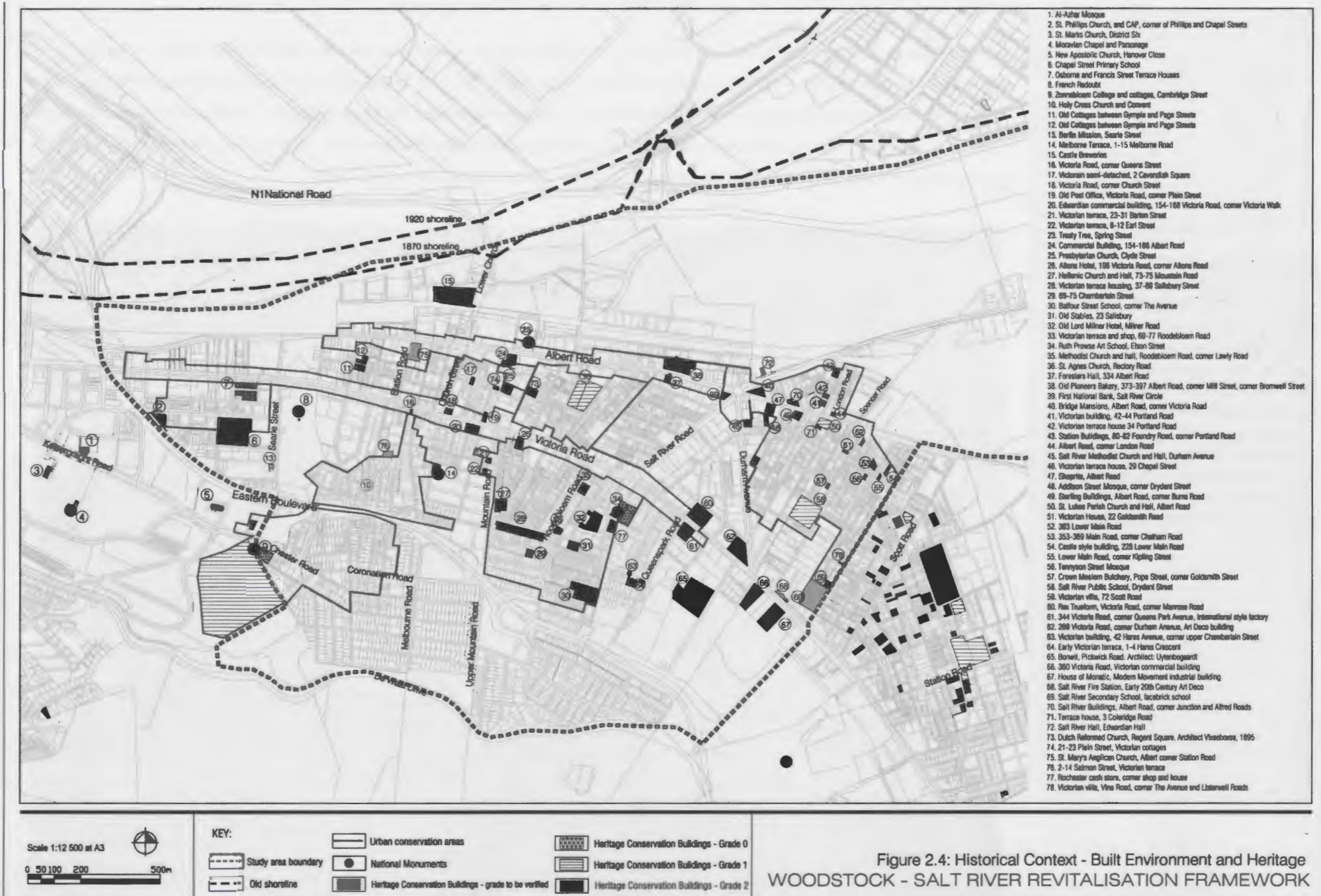
* The Revitalisation Framework

The Revitalisation Framework for Woodstock/Salt River, is an urban design initiative, designed by town and regional planner, Nisa Mammon, from NM & Associates Planners and Designers. The framework focuses on urban regeneration by looking into strategies where opportunities could present themselves in areas where limited opportunity exists. It also focuses on the richness of various cultures and peoples of the area and public spaces and buildings that should be rehabilitated with a view to promoting public use and value. At the same time, the framework seeks to improve possibilities for economic regeneration.



The intention for this research is to locate a couple of vacant buildings within the area of Salt River and initially work on an urban study that will help develop a concept for what the purpose for the building should serve. The Revitalisation Framework aids in that matter. It provides a set of constraints and opportunities to work within.

Revitalisation Framework: Heritage



Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

Heritage plays a very important role in the area of Salt River; a much larger part of Salt River is zoned as an urban conservation area, taking that into consideration, most buildings are over 80 years old. The derelict conditions of these heritage buildings raises a concern in dealing with conservation, most of these buildings have important architectural value and everyday, a building is demolished without careful consideration of the implication it could have on the community.

The Revitalisation Framework is effective in identifying those important buildings and it places it in a much wider urban context where perhaps the cause for intervention can start to happen at an urban scale by finding appropriate use for these buildings by working within a design framework that links different heritage buildings together and providing a strategic programme where each building could easily adjust and adapt to appropriate its contemporary context. The success of the revitalisation lies not only in preserving the state of the building but rather looking at different ways a heritage building could be put into appropriate use.

Revitalisation Framework: Heritage_

The Dutchess Factory,
Victoria Road, Salt River



The dutchess factory is a heritage building and is currently being renovated to be converted into a business complex.

The bridge Mansions,
Albert Road, Salt River



The bridge mansions sits between two busy intersections and therefore responds well to the commercial activity in the area. The building is also deemed as a heritage building. The commercial drive in the area, helps prevent the building from being neglected

The Bijou Theatre,
Lower Main Road,
Observatory



The Bijou theatre is currently not in use, it does lie within the revitalisation framework but its an important demonstration of how a heritage building could easily become victim of being neglected even though it holds an important social function.

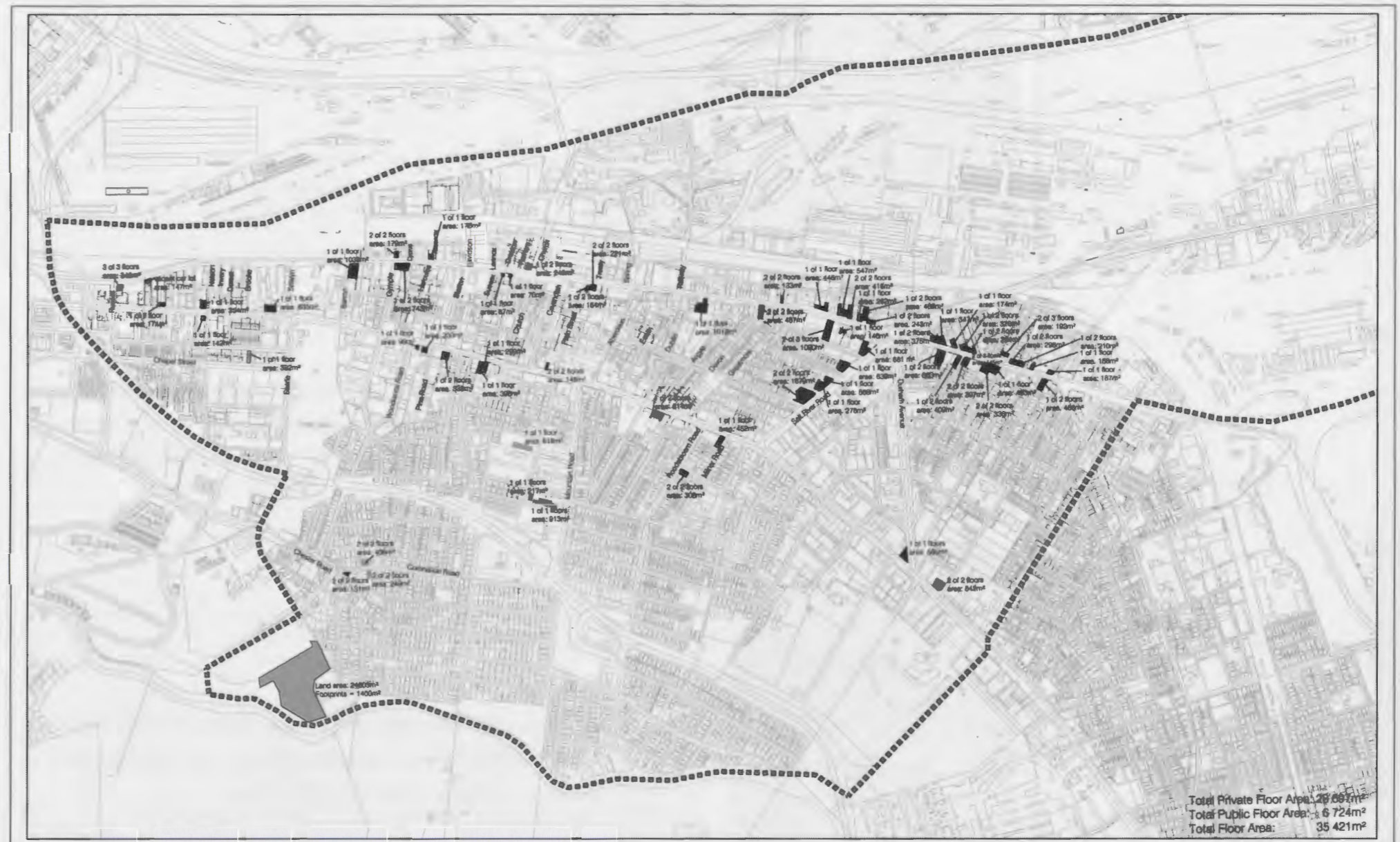
The Salt River Town Hall



The Salt River Town Hall lies within the revitalisation framework, as it sits next to another important heritage site, the salt river market, both are on the verge of being neglected. The idea is to link the town hall and market together and find appropriate use for both heritage buildings

“ The preservation of heritage symbols within the community (architectural design, suburban ambience), which is being eroded by crime & unrestrained development (formal or informal) is another major threat to revitalisation. Although good conservation laws exist, municipal support in enforcing them is lacking. Housing revitalisation programmes should always be linked with the study area’s social needs.” _ Mammon(2002)

Revitalisation Framework: Economic Structure: Vacant Buildings_



Scale 1:10 000 at A3

0 50 100 200 500m

KEY:

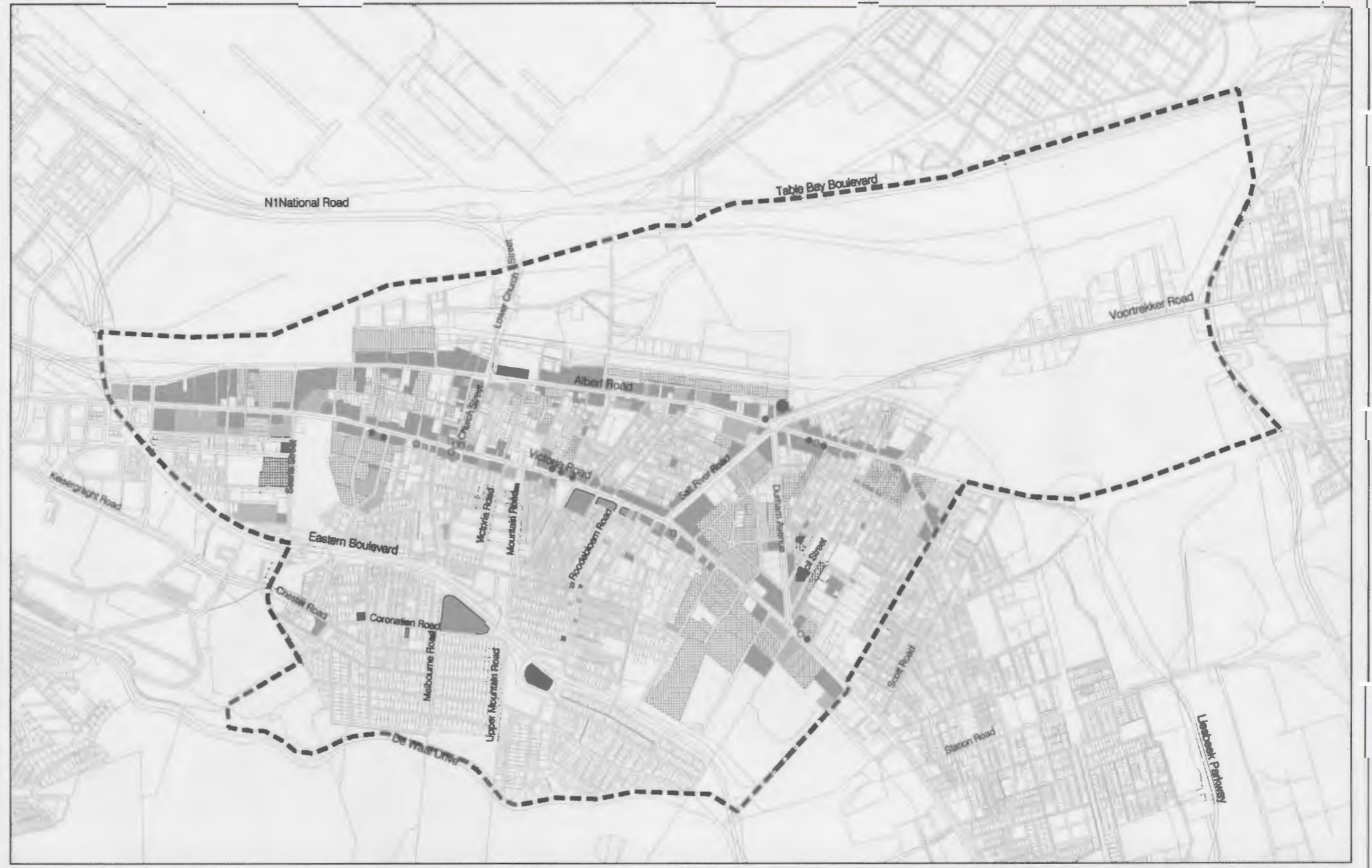
- Study area boundary
- Publicly owned
- Privately owned

Figure 4.8b: Local Context - Economic Structure: Vacant Buildings
WOODSTOCK - SALT RIVER REVITALISATION FRAMEWORK

Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

If properly constructed with suitable facilities, existing vacant commercial / public / industrial buildings have the potential to be recycled into residential accommodation because of the high demand for residential property. The main problem faced would be that there is no space for recreation. The revitalisation framework, tries to address such issues so that properties once renovated can put into proper recreational and commercial use. Most of the vacant buildings identified within the framework, consist of old warehouses and factories which are so run down that they house illegal occupancy.

Revitalisation Framework: Economic Structure



Scale 1:12 500 at A3
 0 50 100 200 500m

KEY:
 Mixed-Use
 Manufacturing/Industrial
 Commercial
 Informal trade: Fruit & vegetables
 Informal trade: Clothing & Shoes

Figure 4.8a: Local Context - Economic Structure
 WOODSTOCK - SALT RIVER REVITALISATION FRAMEWORK

Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

The high demand for residential space attributes to the market's minimal vacancy factor in the study area. The demand for residential space greatly exceeds that for commercial or industrial property. The main reasons for this are the area's proximity to the Cape Town CBD (alleviating expensive transport costs) & economical rentals. It is also seen as a safer area than alternative places of accommodation. Population sizes have increased and this has allowed for substantial new housing construction developments improvements.

Revitalisation Framework: Public and Social Resource Systems

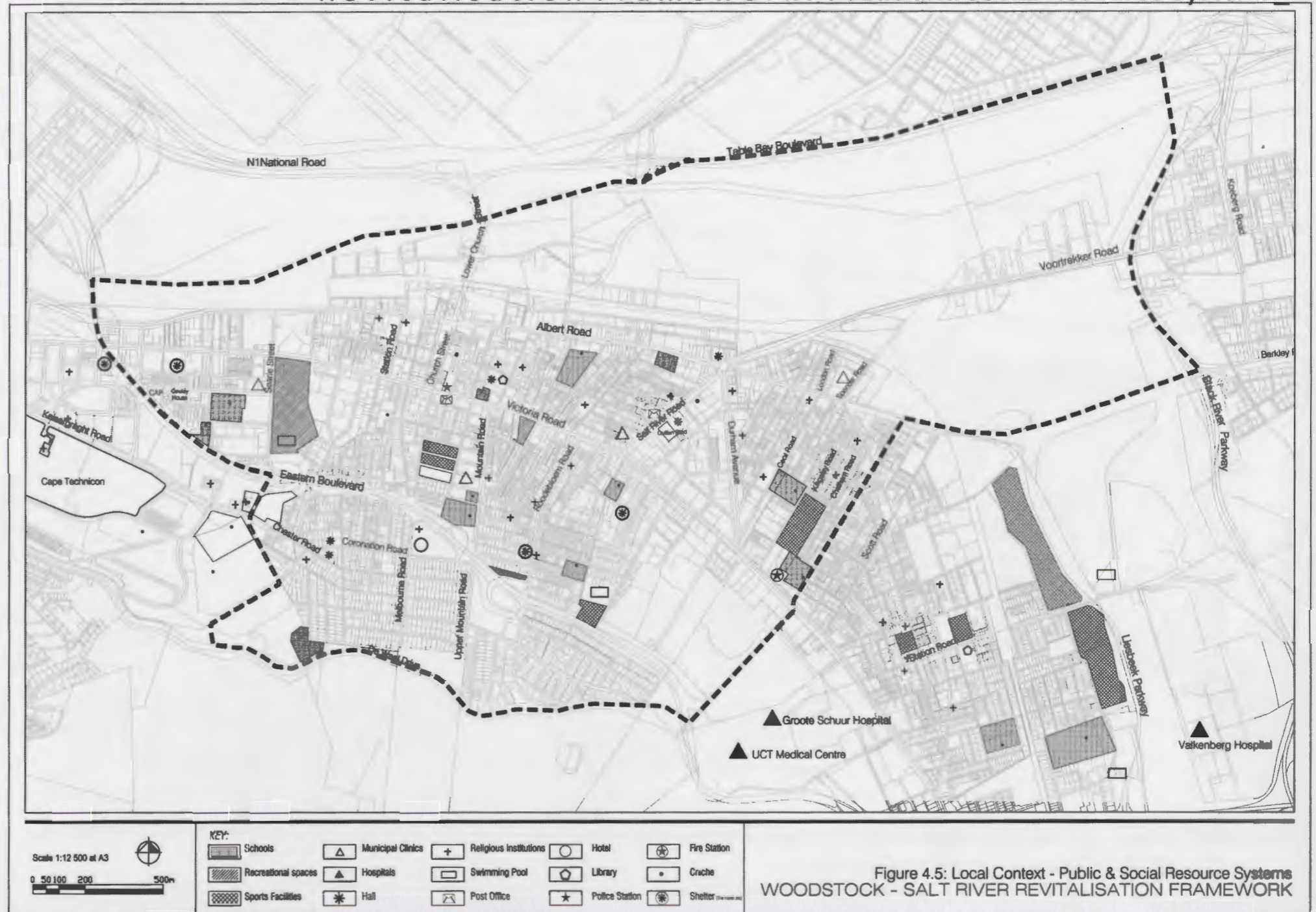
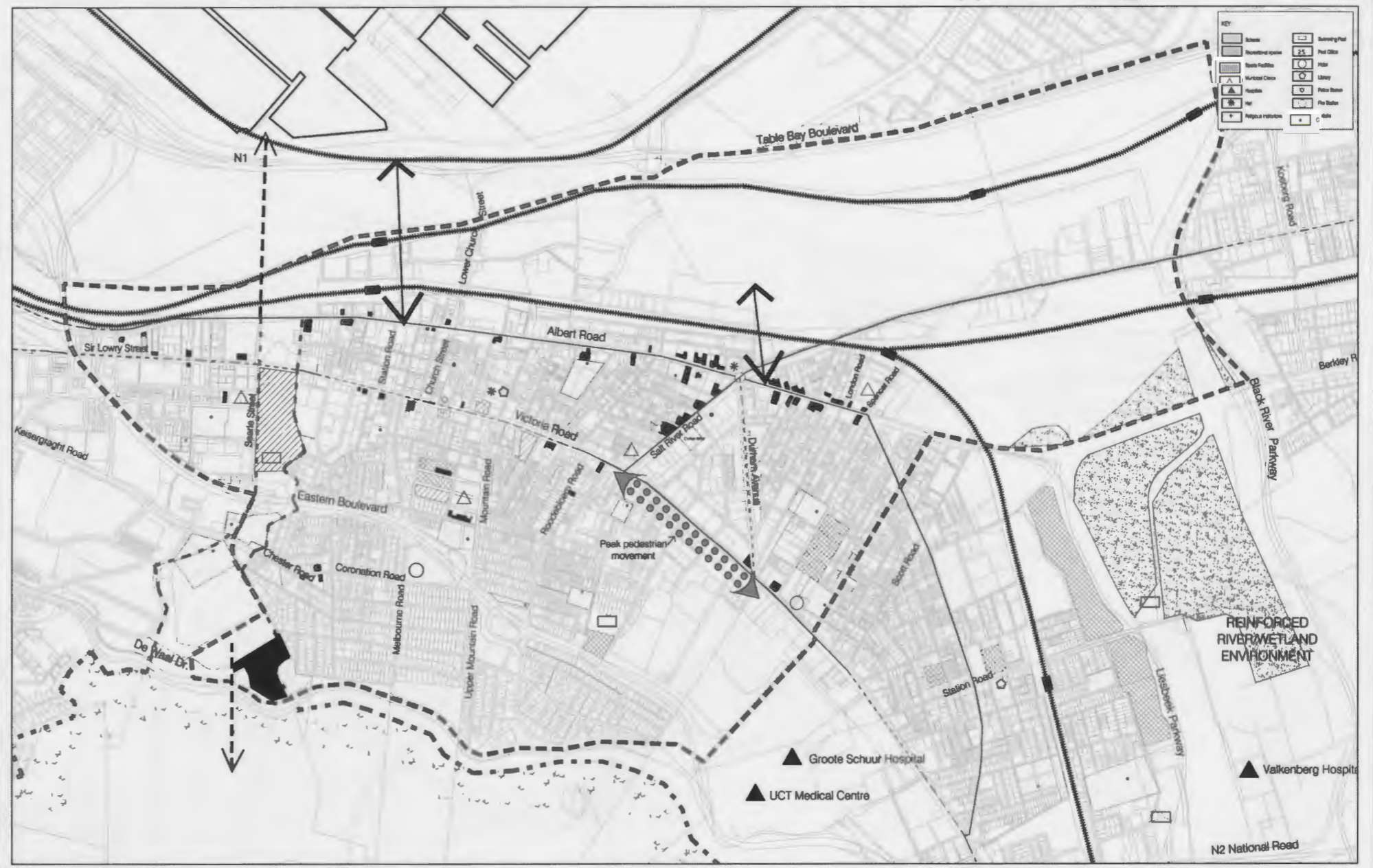


Figure 4.5: Local Context - Public & Social Resource Systems
WOODSTOCK - SALT RIVER REVITALISATION FRAMEWORK

Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

The area is well endowed with social and public facilities located at accessible points within the study area. Facilities are easily accessible on foot or by public transportation. The local clinic on Chapel Street functions as a higher order facility given that it serves a larger population. However most public facilities are not fully utilised, take for example the Salt River Town Hall, it may not serve as a high order facility but it generally does cater to a group of people at specific times (e.g church congregations on Wednesday and Sunday, the occasional wedding ceremony and community meetings during week days). Library facilities are limited. Given that most of the school goers do not live in the area, library facilities should be associated directly with schools. The old post-office along Salt River Road has been closed to the public. The building is vacant and vandalised. In addressing the issues noted above, in order to respond to these issues one needs to understand the structure of the community at large at begin to design a framework that will allow a group of facilities to be able to function as a group. In this study, what prompts my investigation is looking at the Salt River market and the Salt River Town Hall and begin to address the issues of the site and its relationship to the given context by providing a design framework that will respond to change and adaptability for these two seemingly culturally important sites.

Revitalisation Framework: Local Opportunities



Scale 1:12 500 at A3
0 50 100 200 500m

KEY:

| | | |
|---------------------------|--------------------|---|
| Study area boundary | Urban Edge | Linkage to Culemborg |
| Railway line and stations | Linkage to the sea | Vacant buildings - opportunity for re-use |

Figure 5.2: Local Context - Opportunities
WOODSTOCK - SALT RIVER REVITALISATION FRAMEWORK

Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

- There is an abundant supply of social and public facilities
- The parallel system of rail and road movement corridors present an excellent enabling structure for urban activities and opportunities of varied scales to thrive
- Peak pedestrian movement between Durham Avenue and Salt River Road along Victoria Road has the potential to support local economic activity
- The area has good existing residential fabric the majority of which is worthy of conservation
- Current densities can support economic activity and public transportation
- Prime location of publicly owned land and vacant buildings which could be developed for housing and social programmes

Revitalisation Framework: Movement and Access Systems_

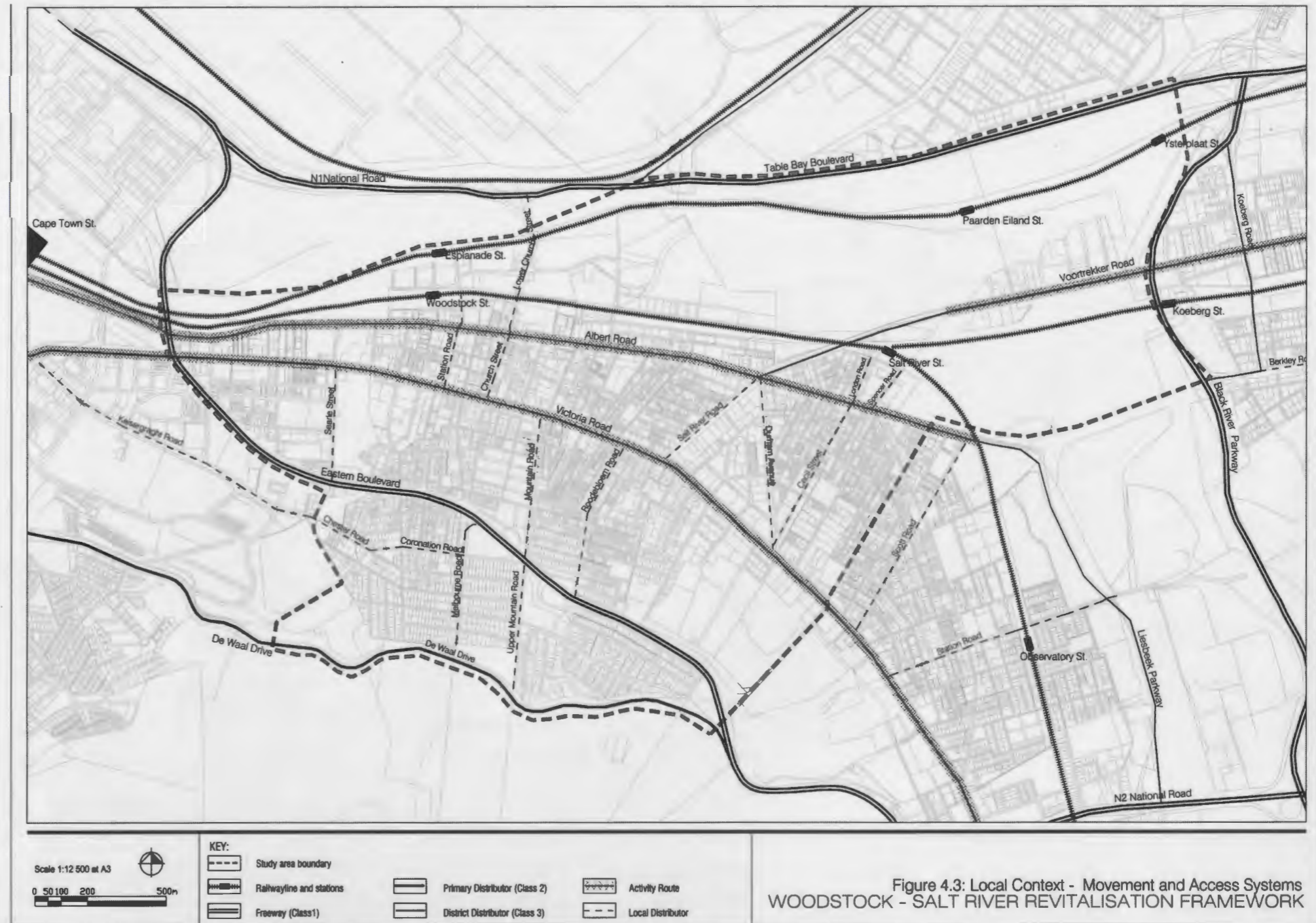


Figure 4.3: Local Context - Movement and Access Systems
WOODSTOCK - SALT RIVER REVITALISATION FRAMEWORK

Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

The rectilinear grid structure is advantageous in that it is multi-directional, easy to penetrate and facilitative of short blocks and pedestrian circulation. The Revitalisation Framework focuses on finding ways and means of reinforcing the grid pattern whilst designing creative ideas to deal with the security risks. There are excellent opportunities for reinforcing existing linkages, special places and major movement routes

In dealing with a project that requires revitalisation, there are two issues one needs to consider:

the ability to address parking along the two main roads, especially to accommodate businesses that rely on patrons travelling by car and delivery services; and conservation i.e. to ensure that the public face of the built form onto the street is not made by parking but by proper building and street edges. Movement and access is an important factor in dealing with my site, in dealing with this, one needs to drawing people from neighbouring areas to the site, that is by providing accessible routes that link other public facilities to my site, in that way one can create a very strong permeable edge that can respond to the use of site by locating within a much greater movement corridor system

Revitalisation Framework: Public and Pedestrian Movement

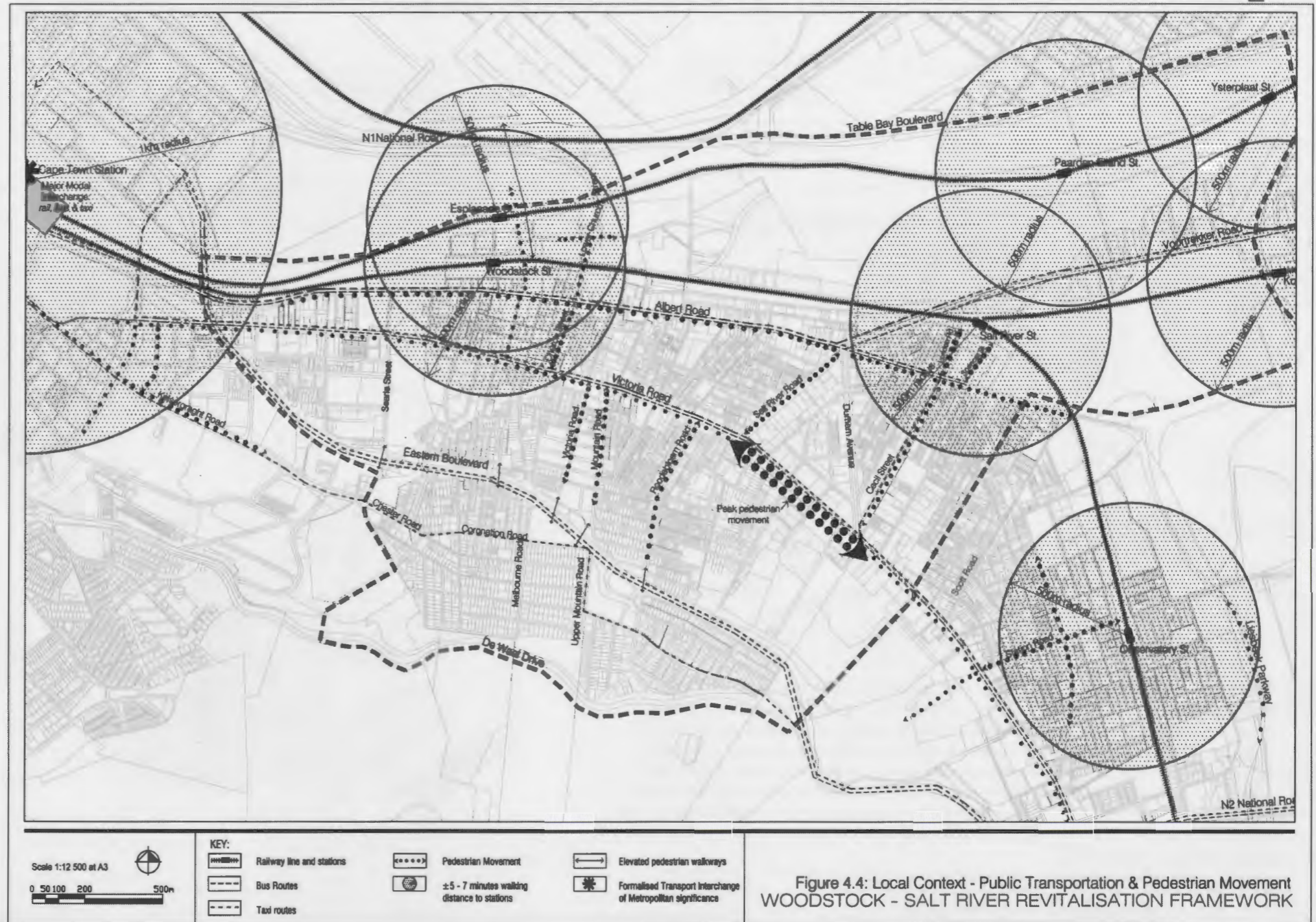


Figure 4.4: Local Context - Public Transportation & Pedestrian Movement
WOODSTOCK - SALT RIVER REVITALISATION FRAMEWORK

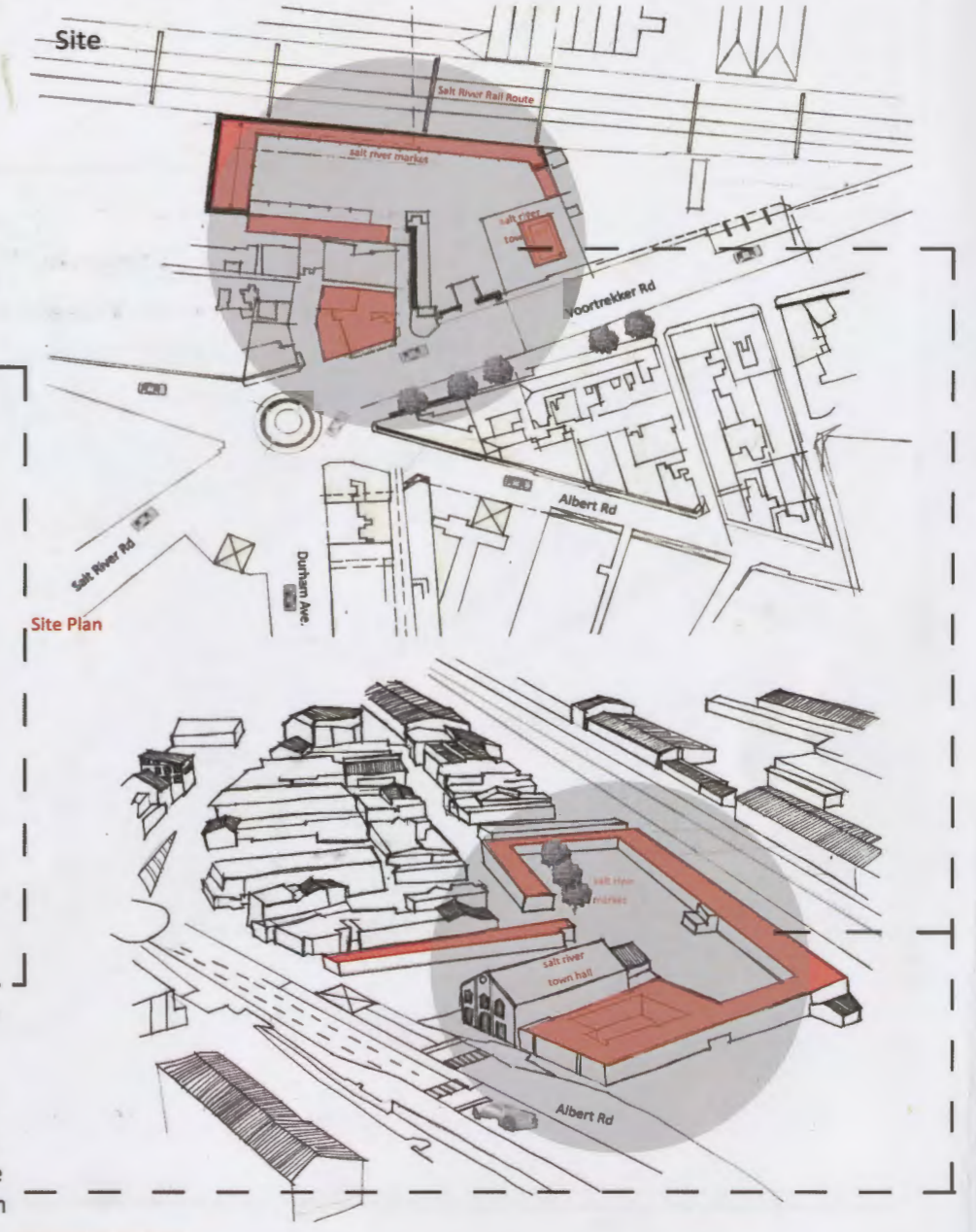
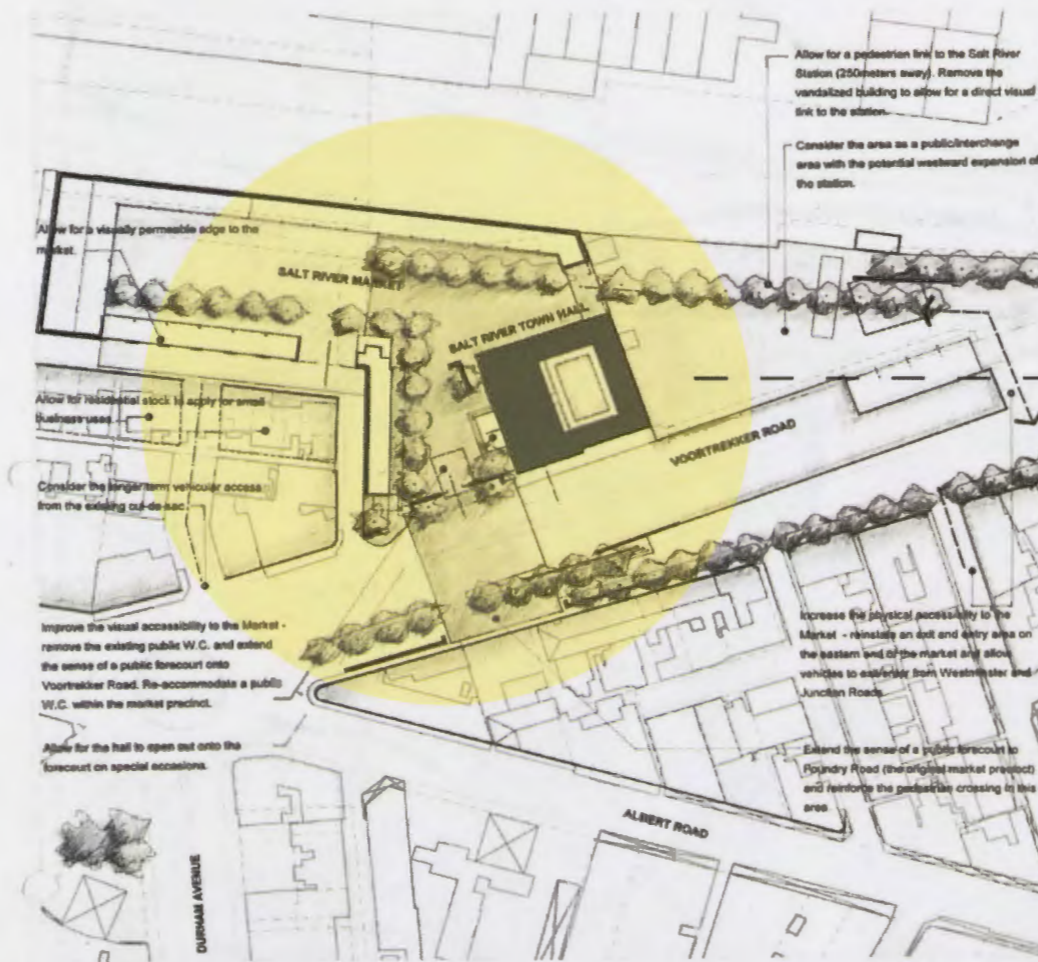
Revitalisation Framework: Mammon (2003), Inner City Revitalisation: The Woodstock & Salt River Revitalisation Framework. NM Associates, Claremont

Long distance buses travel into Cape Town CBD from the northern and southern suburbs and the Cape Flats area along the Eastern Boulevard, the N2, and the main roads. Local bus passengers are collected at bus stops (located at 150m intervals) along the two main roads. Bus movement occurs along a dedicated bus / taxi lane in the peak periods.

Long distance taxis travel into Cape Town CBD from the northern and southern suburbs and the Cape Flats area along the same routes as the buses collecting local passengers along the two main roads. Pedestrian movement relates very strongly to the railway stations and the associated local distributors between the main roads, although the Woodstock and Salt River rail stations both remain isolated from the main W-E road based public transport routes, contributing to vulnerability of commuters out of peak hour times.

Salt River Road is also a key pedestrian movement route connecting the Salt River Circle to Victoria Road. It would appear that pedestrian hot spots (in the morning and afternoon week-day peak hour are on Victoria Road between Salt River Road and Durham Avenue), close to the adjacent clothing and other industries. Albert Road appears more active than Durham Avenue in terms of pedestrian and public transport vehicular traffic movement. Salt River Road should therefore receive priority in the revitalisation framework as part of the Salt River market precinct and linkage between the mountain and the ocean.

Revitalisation Framework: The Salt River Market Urban Proposal



My project therefore locates itself on the Salt River Market, in order to respond to the issue. My intention for the project is to not only link the Salt River market into the urban fabric, where previously it failed to do so, but to also link both the Town Hall and the Market by exploring ways of transforming its current condition into facilities where the community will be able to utilise them more effectively. In achieving this, the Revitalisation Framework, proved as a useful resource to aid in the investigation. While identifying a specific design framework for which the market can be transformed into, it provided an approach to which the design can easily be adapted and transformed into. Through the Urban analysis of the Revitalisation Framework, my design approach arose from the given information that currently exists in its urban context.

WOODSTOCK - SALTRIVER REVITALISATION FRAMEWORK
 FOCUS AREA 3 : SALT RIVER MARKET PRECINCT
 Scale 1:500

03. Siting

There seem to be two avenues to the formation of a hypothetical architectural project. One would be to either choose a program, look for an appropriate site and set about resolving the resultant relationship, or one can set out to discover particular spatial and architectonic solutions necessary in a given area. This attitude would then lead to the development of specific and generic space types to house the necessary programs.

Salt River Market Precinct:

Looking at the Salt River market precinct the possibilities for intervention are endless however, careful planning has been put into place by considering the current existing built fabric. The Salt River market in my opinion, is a very important site for the area of Salt River. It thrived as a fully functional Fresh produce market, having more than 40 market stalls on the site, selling fresh fruit and vegetables as well as fish. It became the social focal point for Salt River. Today, out of the 40 previously existing market stalls, only 3 stand and are barely surviving. My story of the market begins at the beginning, it begins with a narrative of the history of the site. I chose this site as the focus of my project because of the cultural legacy it has left behind. Today, the supermarket has replaced the intimacy of a local market. This, I believe, has threatened the existence of the Salt River market. Therefore one needs to preserve perhaps not just the physical function of an old historic building, but needs to consider the cultural function and the impact it has on the community. Generations of families have shared their experiences in this market. It not only provided a place where the exchange of goods could be made, but it is also a place where social interaction occurred. It was a place to 'meet and greet and exchange'.

Today, my response to the site acknowledges the cultural legacy of the Salt River market. My intention for the project, in response to adaptive reuse, is to reinstate and rehabilitate the produce market and provide a design framework of which its current existing program can be adapted into so that it may regain its vitality and place in the community. It is located within a well established movement corridor enabling this area to serve a wider public.

Salt River Market : A Narrative



//005

The Voortrekker bridge overlooking the Salt River Market. The Voortrekker Road was used as the main access route to the southern suburbs by horse carriage.



The Salt River Market was a social focus for coloured, Indian and later Portuguese residences. In the 1950s customers 'used to come to the market after their supper when their fathers and husbands had come home from work and everybody would stand around talking and joking and having their after-dinner smokes at the market as the sun went down'.¹

//006

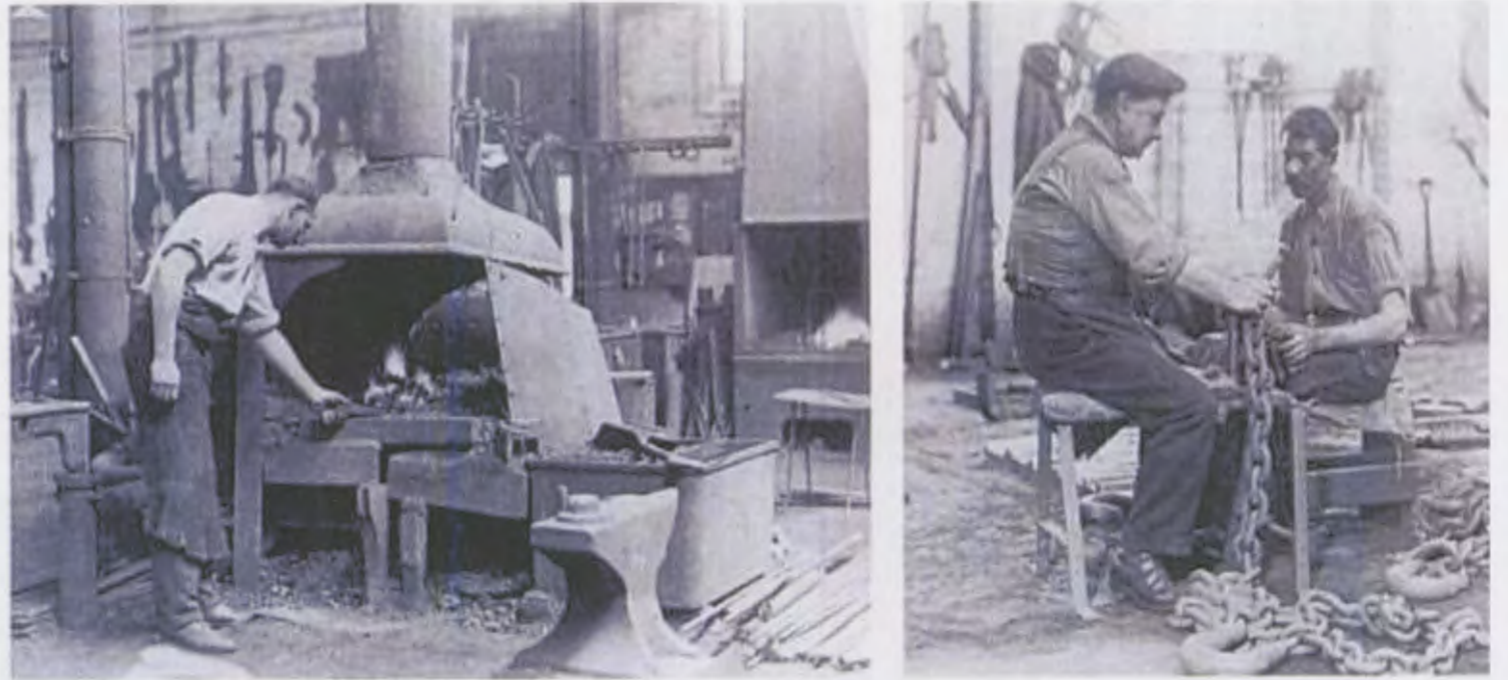
The Salt River back in the 1930s was more a community centre than an open plan market



065

//007

The Salt River Railway Works employees



Skilled labourers and artisans who worked in the neighbouring industrial factories made the Salt River market a place where they would socially interact in the evenings and then retire to their respected homes on the outskirts of Salt River.

Today, most of the industrial factories have closed down and the condition of the Salt River market has deteriorated because of lack of support from the local community. Out of the 40 stalls that previously occupied the site, only 3 remain.

//008

This picture was taken in the 1990s, The market is owned by Haroun Patel, his family has owned this stall for more that 70 years. Him together with 2 more other fruit and veg stalls are the only remaining stalls left.



//009

Current state of the Fruit and Vegetable stalls in the Salt River market.



//010

Two Oceans Fisheries



There are 16 facilities on the current site:

* **3 fruit and veg stalls:** on the site and 1 located on Albert Road (this stall has been a new addition to the site, it does not carry as much historical value as these other stalls. Of the 16 facilities the three fruit and veg stalls are the oldest facilities on the site dating back more than 60 years. Ownership has not changed as well. They have been taken over by their children and grandchildren

* **1 Fish Market:** Two Oceans Fisheries has also been around for more than 20 years but not as long as the original fruit and veg market. Their main business is conducted from the market but are mainly distributors to other shops rather than selling from their premises

* **1 Brassware shop:** Originally owned by John Brass, he had conducted business selling new and second hand brassware

* **11 more other services markets :** this includes furniture upholstery, vintage car autobody parts, a paint hardware store, plumbing and electrical services

//011

Johan Brass



//012

The market is set back from the main road, and in front of the site sits a big public square which links the Salt River town Hall to the market.



//013

The other service markets provide a day to day service and it is much easier for these service markets to have a business clientele than the fruit sellers. While they offer their services to other bigger companies, who outsource them for business, the fruit and veg sellers depend on the local clientele, i.e. the community to conduct their business. The owners of the fruit and veg sellers revenue is depended on how much fruit and veg is sold a month, as oppose to the service market which has a much more stable income





//014

Zubaida and her son Yuthman pose for the camera on a quiet Saturday afternoon at the Salt River Market which has seen business dry up steadily in recent decades as shopping revenue has increased closer towards supermarkets.

Zubaida's Story...

The two stories that struck me while I visited the market were that of Zubaida's story and Yumina's story on the early history of the market and their role there. Zubaida's family as well as Yumina Adams and Haroun Patel, of which are the last remaining fruit and veg sellers, have occupied and sold from those stalls for more than 70 years. They have sold to more families and formed long lasting bonds with the members of their community. Nowadays, everyday seems to be a struggle, business is not what it used to be and they have resorted to finding other means to provide a stable income. These days, I was told, Zubaida's family has lost most of their customers to supermarkets and shopping malls. I asked her why couldn't she just leave the premises and find another suitable place to conduct business from, and she responded by saying, "And go where? this is all I know, this is where my family is."



Yumina's Story...

Yumina's Adams story is no different to Zubeida's story in similar history, however, what comes out of the conversation we had was that most of these owners who not only have their families to feed but also have the families of the labourers who work there to consider. If she would decide to leave, she fears that she will be taking away the livelihood of other families who are dependant on the stall to keep going. Yumina however, has the opportunity to sell her produce on Saturdays at the Old Biscuit Mill. A fraction of her revenue comes from her selling her produce at the market where it attracts a much wealthier crowd who are willing to fork out more for a loaf of bread and butternut than her normal weekday customers. When she is not selling at her usual stall during weekdays and on Saturdays at the Old Biscuit Mill, she supplies her produce to hotels and larger businesses.

//015

A few hundred metres down the road at the Old Biscuit Mill, Luqman Adams and his mother, Yumina, enjoy a bustling trade at their stall at the neighbourhood market. They find wealthier shoppers who are often looking for organic products and gourmet foods. The Adams do not offer organic produce but their prices are low but they have the intimacy that organic-lovers seem to expect.



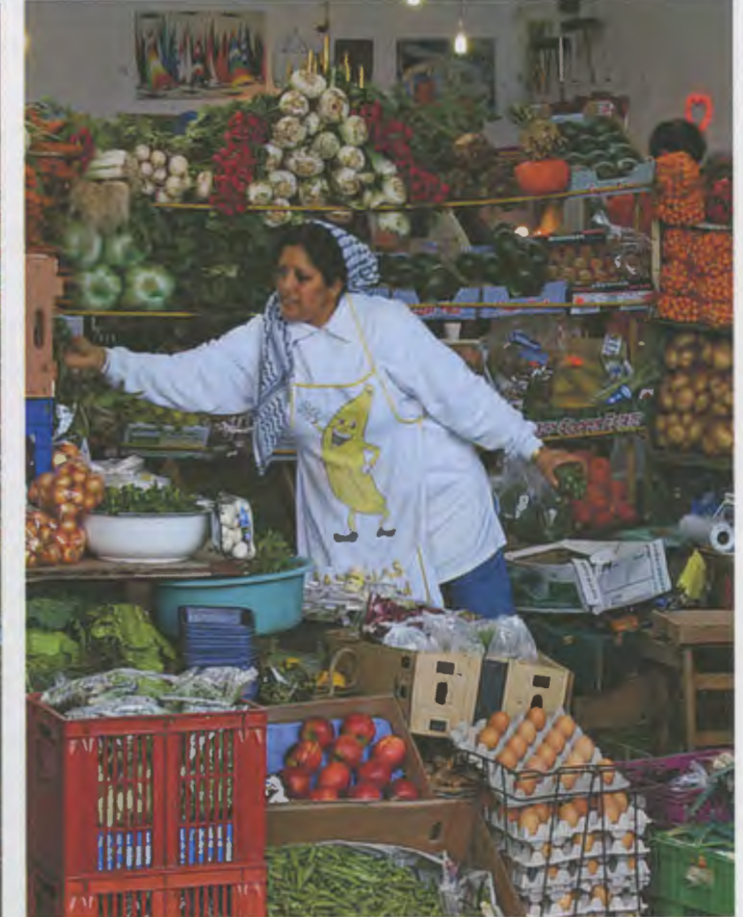
//016

The Adam's stall has an intimacy about it, prices for fruit and veg are much lower than supermarkets and the fresher produce seems to make up for the lack of atmosphere.



//017

The Adam's Saturday stall at the Old Biscuit mill has more of an atmosphere than their stall at the Salt River market.





The market stalls are configured in the same setting: All goods are displayed for the customer to walk through and have a look at what is available to be bought. Unlike the configuration of a supermarket, where all produce are arranged in aisles, the market provides an opportunity where everything is displayed in front you, and you are able to pick and choose your produce while having a conversation with the owner. It provides a level of intimacy the supermarket cannot provide.

//018

When asking one-long time customer (in the picture) about the changing patterns of consumption, he replied, "You want to know about changing patterns?" he gestured across the empty lot where the fresh produce market once thrived.



Urban Context Analysis



Field Analysis



mobility and movement

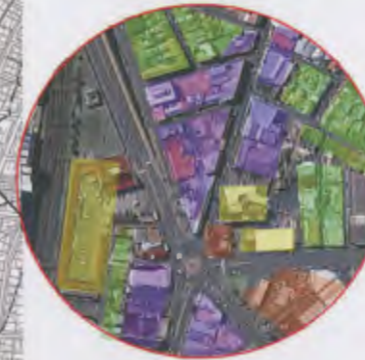
1. Voortrekker Road
2. Albert Road
3. Durham Avenue
4. Salt River Road



edge conditions_ permeable/impermeable



Located within a strong permeable commercial edge on Albert road



+ Design Criteria

Close to public amenities, close to recreational and commercial activity
 access to integrated public transport systems
 Has some value for the local community whether sentimental, historical, e.t.c.

Salt River Market



Methodology:

Analysis: The analysis of Salt River was conducted on three levels: personal observation, studying activity on aerial photographs and personal conversations with the local community. These three sources communicate the movement flows, building functions, activities and local economies of Salt River.

Purpose: To identify the problem about the market that need addressing by studying how the existing framework begin to resolve problems and aid in investigating the urban conditions on the site

Plan: Resolve the urban problems on site by integrating spaces

— 500m walking distance from public transport node

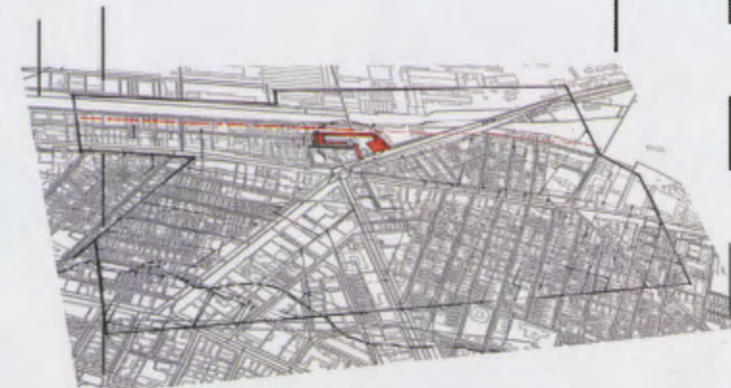
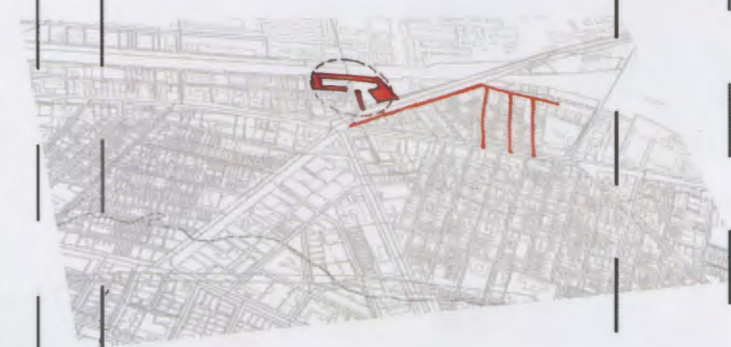
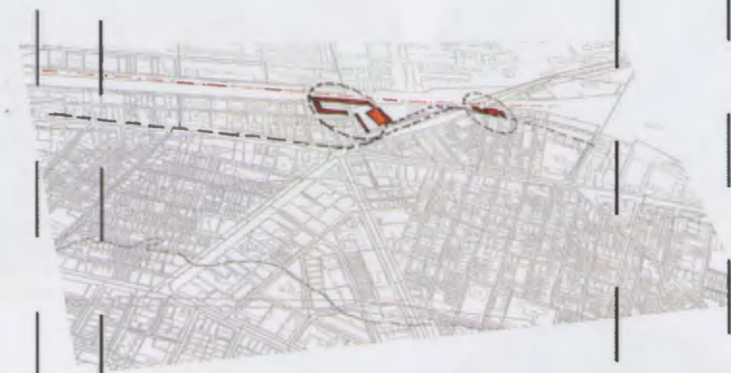
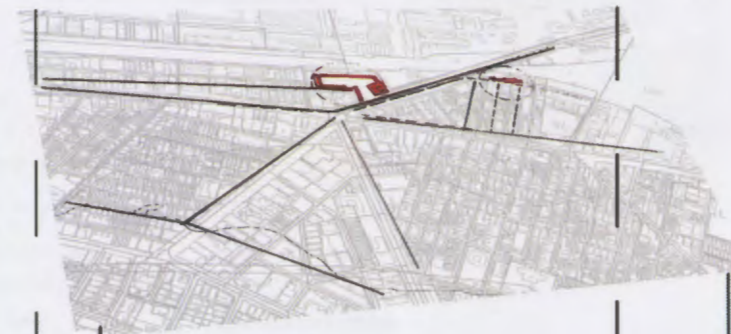
— main access roads

() location of site in relation to the railway station

- - - pedestrian walkway

— pedestrian oriented streets

□ Salt River precinct relative to the market



□ open space that has not been inhabited by any building. plot is a rubbish dump

■ Building infill with commercial and residential buildings

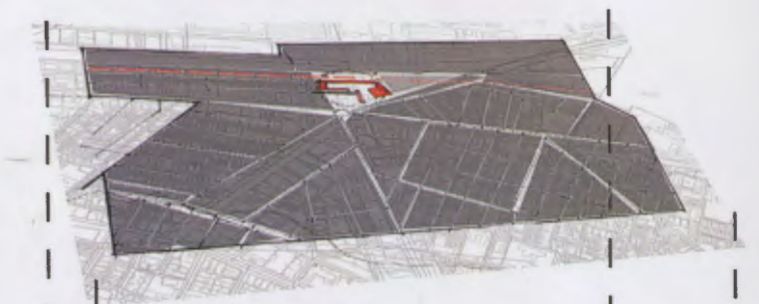


Figure ground diagram of Salt River Precinct

■ site



Fourth Order of Activities:

Entertainment District

- market
- restaurant
- nightclub

Third Order of Activities:

Cultural District

- gallery

Second Order of Activities:

Institution District

- schools
- municipal clinic
- public library

Highest Order of Activities:

Commercial District

- retail shops

Social space systems:

Related social spaces identified in order to determine areas where similar spaces can be organized in the future



site

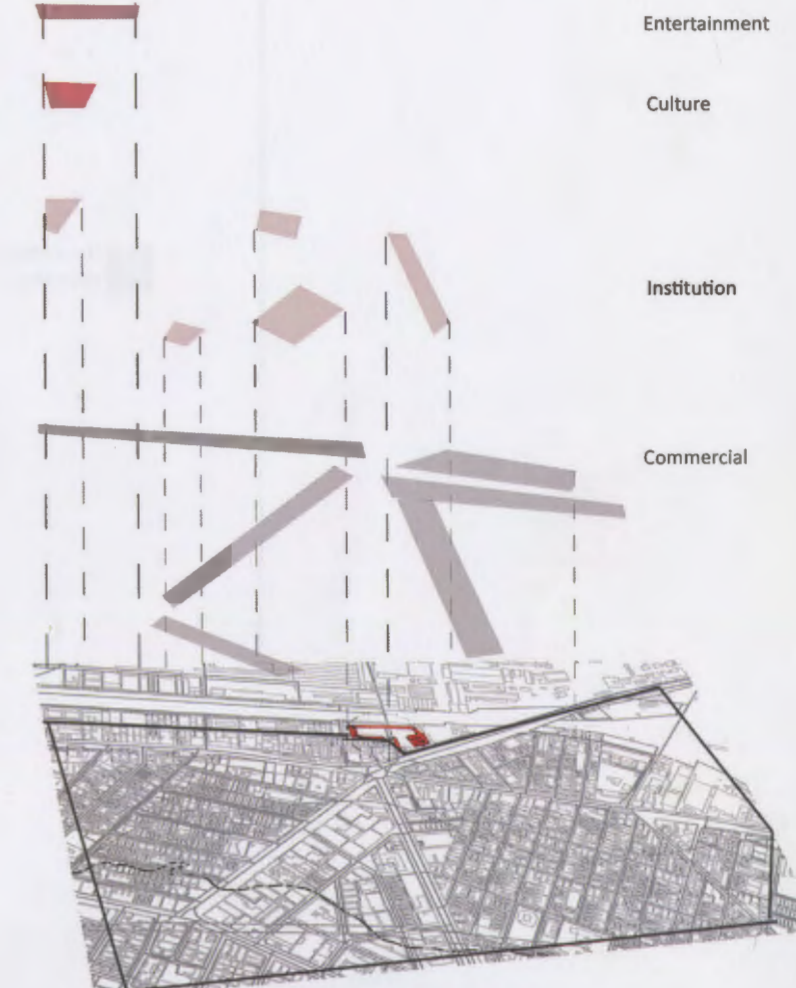


Entertainment

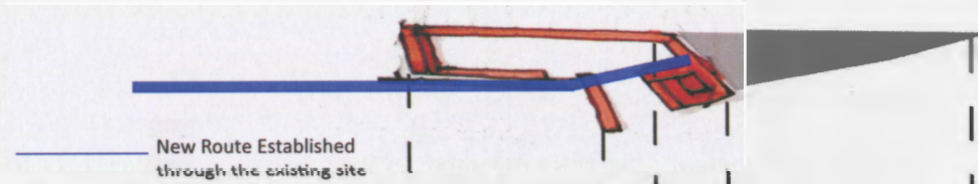
Culture

Institution

Commercial



Salt River can then be identified as a social district. It has a range of mixed activities. This can tie back well into the Salt River market's design framework

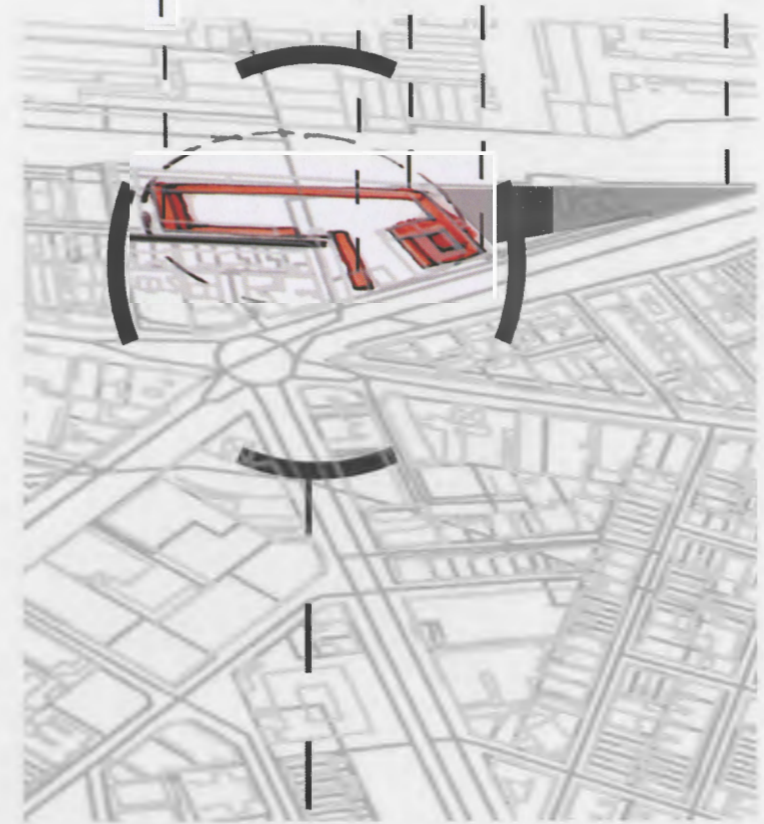


site

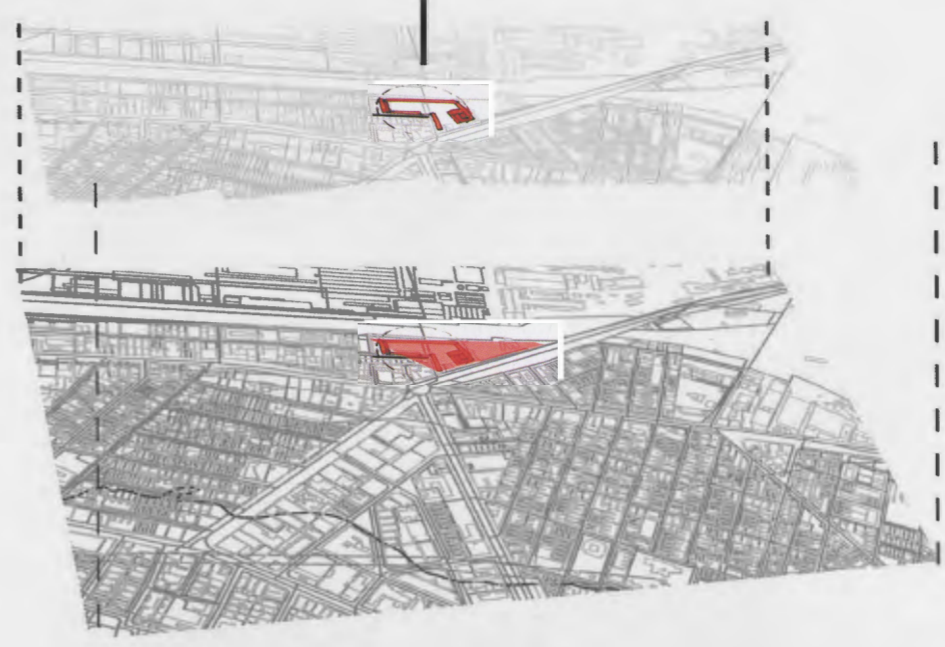
Problem:
Open spaces that do not facilitate balanced urban movement (pedestrian, public and private transport) become voids .

Aim:
Establish a well organized thoroughfare that facilitates both public and private transport and pedestrians.
New route is established here

Uninhabited open site



Identifying an Uninhabited open space around the site as an extension to the site. Opening up a range of new activities to occupy the site



Synopsis of Interview

To get a better understanding of what my project was dealing with and the realities of the project at hand, I had decided to conduct interviews with the local tenants during one of my earlier site visits. While trying to learn about the site, I realised at that time that it was necessary to hear what the local tenant had to say about my project, whether they supported the idea or not, if not how would they see it differently, and would they ideally want to see the market disappear in the addition of a new development. Many tenants expressed different opinions about the issue at hand. For the purpose of this interview, the tenants kindly requested to not have their faces photographed, due to personal reasons.

Date: 25 August 2010

Tenant 1

Name:

Yumina Adams

Occupation:

Owner of Y.I. Adams Fruit and Veg Enterprises

How long have you been in the Market?

My family has been here for over 60 years. I am currently supporting 6 families with this little stall

Has Business been good?

No not really, look around, do you see anyone? Since you have walked in you have been officially the first customer.

Has there been any cause as to why business hasn't been picking up?

Well nowadays people do not want to shop here anymore, Pick n Pay and Fruit and Veg has opened around every corner, they prefer to go there and shop, rather than coming here.

Who takes care of the market?

The market manager, but ever since the new market manager has been around, the condition of this market has worsened, he does not look after the place properly and we have had to resort to looking after it ourselves even though it is not our responsibility. We not even given the freedom to fully look after the site like posting advertisements to encourage people to come here. He has also banned us from doing so. The city council looks after the area but they have employed someone to manage the site.

How secure are you in this market? Do you think you can keep going like this for years to come?

We do not where we stand, ever since new ownership has taken over, we have been forced to sign a month to month lease. I don't know where I will be in a months time, I don't know where I will be in a years time. We have tried to fight this issue at council but we have been given the run around for almost 4 years now ever since the tender had been published in the papers. The only problem is that we as the tenants had not been notified of this tender and it had not gone out to the public as it is meant to.

If there was a new proposal to transform this place, what do you imagine replacing the market, if at all you would want the market to be replaced?

I don't think the market needs to be replaced, like I said, my family has been here for generations, as well as Mr. Patel, and Hajji's, I grew up here, I raised my children here, this is our livelihood, if I had to move away where will I go. I think that, because of how the Old Biscuit Mill is thriving, maybe we need to also try and do that here.

Why particularly the old biscuit mill?

It attracts a much wealthier crowd, people are willing to pay more for a product that looks, feels and taste the same product as what you will buy in normal supermarkets. It is the atmosphere that makes it different from here not the product.

What do you think about the Salt River Town Hall?

It has been here for many years, as long as the market has existed. I remember how busy it used to be back in the days. Now you have a church congregation and sometimes community meetings.

If the Salt River Town hall were to be demolished, and be replaced with the same development as the Old Biscuit Mill, do you think business will thrive

Of course it will.

We had concluded the interview by her expressing her concerns for the well being of the current situation of the market tenants. She notified me that although they have formed a corporate body to protect them from being forcefully removed, at the end the community at large have the potential to make an impact and change its current condition.

Tenant 2

Name:

Hajji

Occupation:

Owner of Gliders Fruit and Veg Enterprises

How long have you been in the Market?

I was here for more than 70 years. I was the original fruit seller here, I used to come here when I was nine years old to help my father, at the end of the year I will be 83 years old.

[When I proceeded to ask her if she knew Yumina's family since they have been here for the same period, she proceeded to respond, "**Sy lieg, why must she lie like that, I have been here 17 years before she got to South Africa, she used to live in the other street. Everybody wants to be like madame**"]

Has Business been good?

I don't complain about it, I have been in this stall working by myself, even though business hasn't been good I still get by. At the end of the day, I'm here because the people need me. My children help me occasionally here in the stall but mostly I do the work all by myself.

Has there been any cause as to why business hasn't been picking up?

People cannot afford to come here anymore you know, and most of my clientele have moved away from Salt River, I do get business, don't get me wrong.

How secure are you in this market? Do you think you can keep going like this for years to come?

I'm 83 years old, all my children have grown up, no one is in school anymore, my son and daughter are both doctors, I will not have anyone to leave this all behind to, my stall will stay as long as I am in this stall.

If there was a new proposal to transform this place, what do you imagine replacing the market, if at all you would want the market to be replaced?

No of course not, well I cant speak for just myself but everyone here has families to feed, if anything were to happen who will look after those families.

If the Salt River Town hall were to be demolished, and be replaced with the same development as the Old Biscuit Mill, do you think business will thrive

Yes it might but I do not support it.

Why?

I am a Muslim I do not want any alcohol on the premises

What do you think about the Salt River Town Hall?

What about it

[While sorting the order for her next client who was about to pick up his order in the next 30 mins, a customer walked in wanting to buy a box of tomatoes, she kindly excused herself and proceeded to helping him out, at the end of the exchange she concluded, "**At your service and don't get nervous**"]

After spending time talking to her about her family I had proceeded in ask her one last question:

How would you feel if the market were to change completely, removing all sense of what the market represented?

I wont feel anything because I can retire, but I worry about the tenants because they have kids to feed.

Tenant 3

Name:

Sonny

Occupation:

Owner of market paints

How long have you been in the Market?

About 28 years now, my father used to own Paint King down the road then we moved here.

Has Business been good?

We supply our paints outside, our business is dependant on bigger business out there, we occasionally supply to our local customers but most business is sought outside.

Do you supply a service market to the local residences?

Yes we do, we often make deliveries to peoples houses provided we have a good relationship with them we even offer painting services if need be. I usually get one of my boys to go and do a job if necessary.

How secure are you in this market? Do you think you can keep going like this for years to come?

Well our leases are month to month so ideally I would like to remain here and keep going, but I don't know where I stand with the ownership of the market, who knows I might not be here next week.

Where should the focus lie in revitalizing the market?

It starts with us, we should have first say as to what should happen here, after all, we have been here for more than 20 years, we should decide how the market should be transformed. The local residence identified this place with us being here. If we move away how would they where to go for paint? We have established relationships in this area.

Any ideas on how the market can be transformed?

It starts with maintenance, make the place look a little more appealing, plant some trees, make use of this big public square in front me then we can talk transformation. It lies within the little things first before considering the bigger matters.

Tenant 4

Name:

Farnaaz

Occupation:

Manages Prestige Trimmers, an upholstery company

Farnaaz is currently manages the area. She had taken over from the previous manager and has had this job for almost 3 weeks now. She has been corresponding with the council over matters concerning the ownership of market. Since ownership from the market hasn't, in her opinion been handled very well, they had decided to fight the matter.

How long have you been in the Market?

Not as long as Hajji and Yumina but we have had this business for 12 years now

Has Business been good?

Well I cant say business has been good but I cant say it has been bad as well

Are there any concerns you have about the future of this market?

Yes I have concerns, we have been trying for years now to take over the ownership of this place but we haven't gotten nowhere in our attempts. We are quite upset about how the tender had been handled as we feel we were not notified of it, a month after it was sold, we notified by a letter saying that there is new ownership and rent will have to be increased in order to maintain the site. What maintenance? we have been trying for months on end to have this place fixed. We have the money to fix our gutters, paint our walls and our roofs, we are willing to pump money into this place provided we have support from the council. That is the point for rental, it is about the upkeep of the market. But the council has not responded to any of our e-mails or phone calls or anything. There are currently 16 facilities on the site of which each facility costs about R112.00 to maintain, what happens to the rest of the rental, where does it go.

What do you think about the Salt River Town Hall?

It's for the community

If the Salt River Town hall were to be demolished, and be replaced with the same development as the Old Biscuit Mill, do you think business will thrive?

Community members use it so I don't think so. There are occasional functions here if they form weekend schools here they could use the facilities and we could perhaps charge them an amount for using water and electricity, not a ridiculous amount because after all the market serves the community we could come up with a strategy that the town hall can be leased out for special functions, it will be under our scare of course and the money we receive will be pumped back into the market in maintaining both the town hall and the market. Everything needs to self sufficient. Woodstock and Salt River community are not exactly from Bishopscourt and Rondebosch so we cant charge them a ridiculous amount, but at the end of the day, business is still business, we need to still make a profit.

At the end of this interview I met with a man, a Mr. Mike Reeds, who has been a loyal customer of the market for many years as his father used to own a fruit and vegetable store years ago who had also notified me about the history of Salt River Town hall where he proceeded by informing about all boxing promotions that happened in there. A vegetable dip (a mix vegetable basket) use to cost 25 cents back in the day. And one owner had more than one stall to sell from, Mr. Haroun Patel use to own six stalls where now he only owns one. The last thing he said as he walked away was, " **Alot of good things happened here...cant seem to forget. Everybody is doing their bit. We are who we are because of what the market has made us.**"

Tenant 5

Name:

Haroun Patel

Occupation:

Owner of Patel Enterprises

How long have you been in the Market?

I'm the third generation, my family has been here for 79 years. Rental back then was R25 a week now we pay R1500 per month

Has Business been good?

Yes I have loyal customers. But because of the crime in this area people are afraid to come here, 90% of my goods are delivered to houses rather than them coming here.

How secure are you in this market? Do you think you can keep going like this for years to come?

The reason why have not gone yet is the 100 year lease the council has with Transnet and that is why the council cant get rid of us, but I'm very bitter about the whole situation, I have 6 families to feed from my business what will happen to these people once I am gone.

Where should the focus lie in revitalizing the market?

We should have the first option in taking ownership over our own property, but we don't have that option

Any ideas on how the market can be transformed?

A flea market. People are looking for work all the time, A flea market is the best option for an area like this. While we have no support from the council we need to at least be able to make a difference.

What about it being transformed into what the Old Biscuit tries to achieve?

I wont be happy about it. We mostly Muslims here, our religion does not permit us to be around alcohol and that would be a main attraction here.

The interviews ended off with Mr. Haroun Patel saying, "Our children and grandchildren are all born from here. They came from these boxes, we have raised them from these boxes, we have nowhere else to go because we did not have the opportunity to have better education."

Urban Design: a Proposal

On a Saturday morning the streets of Salt River are full of shoppers and some streets such as Junction Road are turned into busy pedestrian streets by the sheer amount of people using them. Cars pick their way slowly through mass human traffic and there is an easy relationship between the motorist and the pedestrian.

Looking at this I decided to first map out significant aspects of the urban context that directly affects the way the Salt River market will begin to respond to the urban setting:

1. The close proximity of the Salt River Station to the Salt River market:

This has prompted me into looking at how one can link the pedestrian flow to and from the Salt River station linking them back to my site. Therefore that becomes the anchor of which how I plan to draw people back to my site.

2. The main vehicular movements across my site:

In establishing a strong movement corridor across my site, in order to create a strong permeable edge, the design will begin to address access to and from the Salt River Station by introducing a new vehicular movement within my site that will begin to connect the resources and facilities across both the market and Salt River station.

3. Linking and making a powerful urban connection space between Salt River Town Hall and its public square and the market:

The square can draw some life from the streets opposite it, by opening itself and its activities to the street, it would serve to invite the passers by (both on foot and by car) to stop and have a look. The viability of the marketplace will also be increased by the square

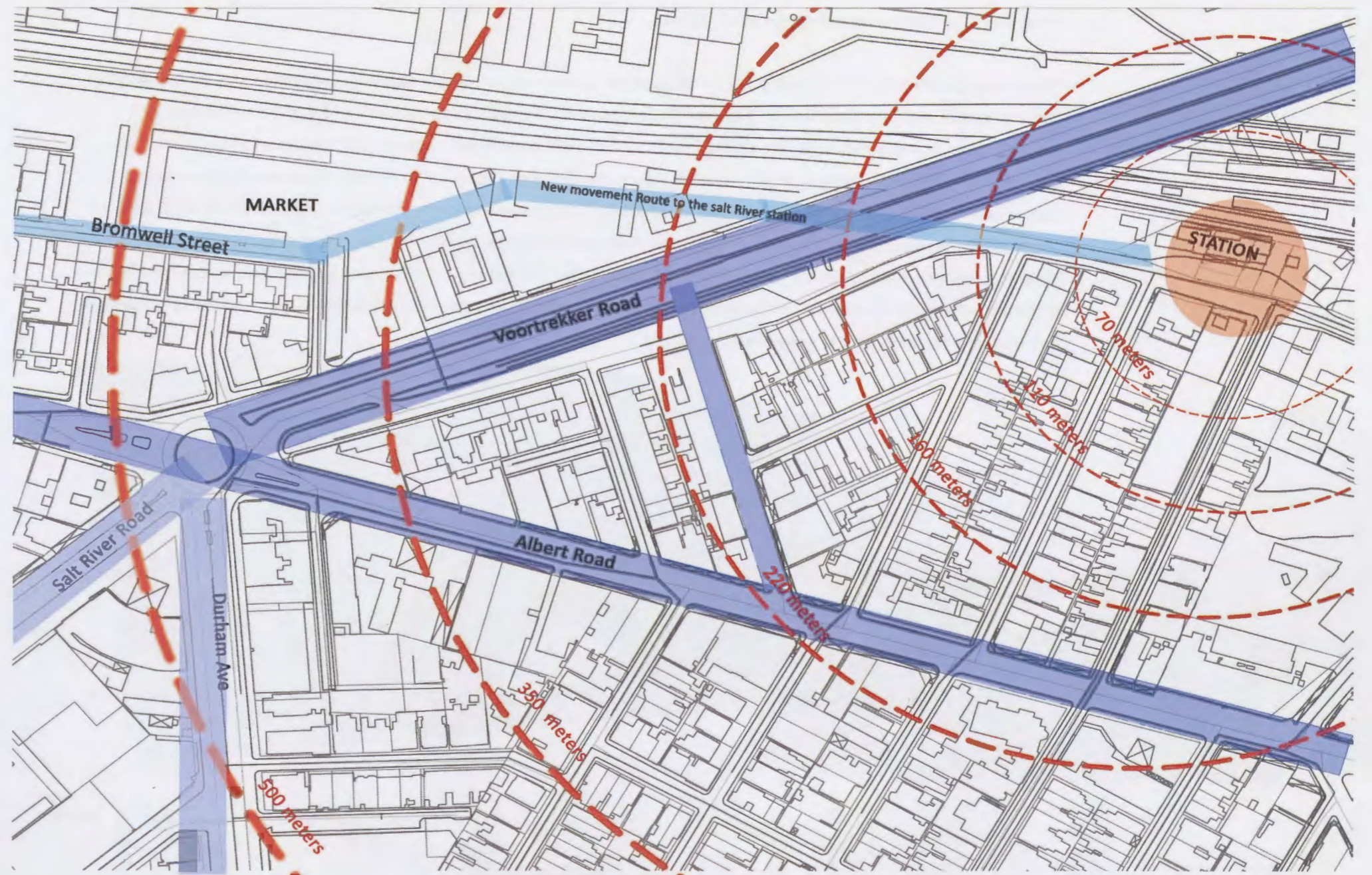


The close proximity of the Salt River Station to the Salt River market



The distance from the Salt River market to the Station is roughly 500 meters travelling by either car or by foot. What makes this station as an important anchor in informing the spatial order of the market is that most movement will be coming from that direction. Since the market has yet to prove successful in attracting local people to the site, the alternative to Voortrekker road would be to draw people from underneath the bridge into a pedestrian platform and then directly onto the site. In my investigation I have discovered that pedestrians would cover roughly the same distance walking from the market to the station through Foundry Road, and the proposed new route thoroughfare.

The main vehicular movements across my site:



The proposed new movement route, which will form part of Bromwell street, will continue to run through the site to connect to the station from underneath the Voortrekker bridge. This will eventually tie back into the existing movement corridor system. All commercial activity will be located along this edge as well as Voortrekker road. This will begin to create a pulsating edge in two edges, making two commercial edges (along Voortrekker and Bromwell street) rather than one. The site will begin to develop a sense of life and vibrancy.

The Public Square

What are the functions in appropriating a public square?

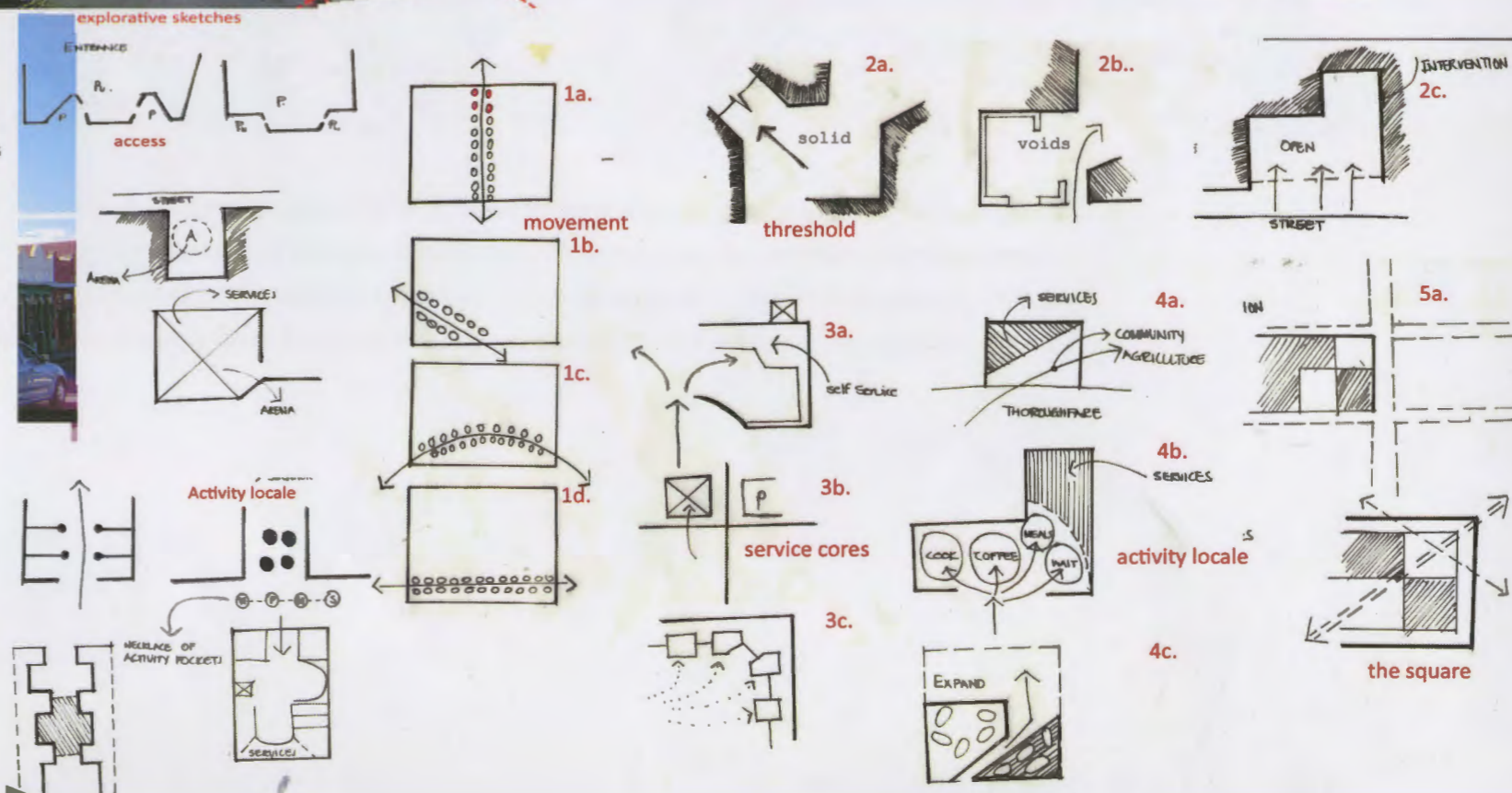
The commercial activities certainly such as the market assists in appropriating the idea. A public square together with a community hall can function to generate activity 24 hours a day. In making the concept stronger, residential units need to also be introduced to appropriate the site more effectively. The market seems to lend itself extremely well to the establishment of an urban square. Since there already exist a public space in creating an active square, the commercial activity of the market combined with the social and cultural centre of the town hall and the residential component of the scheme would ensure liveliness of the square. In successfully achieving this, the town hall can begin to open up and connect with the existing site in such a way that its acts as a connection and transition space from the street to the square. In this way, the heritage and memory is still kept alive by being used in a way that the entire site can begin to appropriate itself in a more effective way. The important part of this component is the memory of place can still be kept alive while responding to a contemporary context.

Site



//019

Explorative sketches in Finding new ways to appropriate the square



The Voortrekker bridge:

The empty space underneath the Voortrekker bridge has great opportunities. As it both links the Salt River market and the Salt River station, I felt that at an Urban scale one can also begin to appropriate the site in a more effective by occupying and injecting life underneath the bridge. This will begin to address issues of illegal occupancy and crime as well as finding new means of appropriating neglected space "underneath" the city. In my Urban Proposal, I propose that it should be transformed into either a commercial hub or and urban recreational park where kids will be able to play.

//020

As I walked along Foundry Road, I discovered an access route from the Salt River station to the neighboring site next to the market. This sparked interest as I began to think of ways in which the connection between the Salt River station and the market can be put into good use.

There is a long mesh fence bordering the edge of the bridge on the side of Foundry road, with a little opening at the edge of the site. Once you walk through, you are confronted with two old brown buildings which used be the old police station. Today it has been illegally occupied by vagrants where illegal activities such as drug trafficking usually take place. The site itself is also a rubbish dump, once a year at the beginning of the year, they clean it out only to have the same thing happen all over again. The property is currently owned by Transnet Railway system, no revamping development has ever been noted about this site. It remains as a 'dead' space.



Typology: Public Space
Architect: NL Architects
Location: Koog van de Zaan, The Netherlands
Program: an Exhibition space- Church square, covered square, marina, park, kid zone, shopping-supermarket fish / flower shop

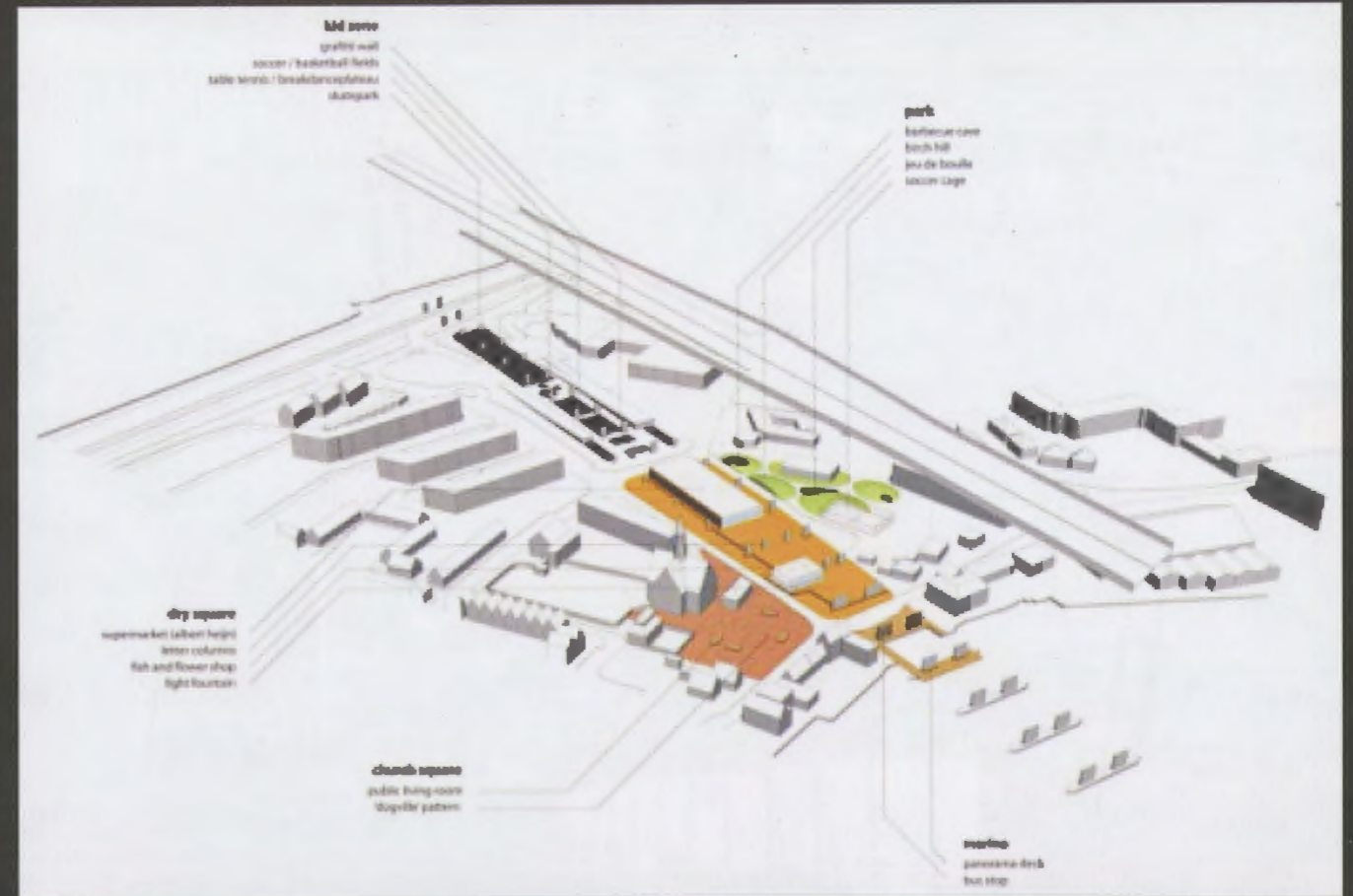


The space under the deck is strangely monumental: the project is an attempt to restore the connection between both sides of town and to activate the space under the road. The remarkable space under the road is now considered an opportunity.



//021

The suggestions of the community were laid down in a document called A8ernA. The locals- from residents to retailers and from young to old- came up with numerous proposals that were used as the starting point for the renewal. These featured a supermarket, a florist, a fish shop, parking spaces for 120 cars, a better connection to the river, a 'park' and a so-called 'graffiti gallery'



087



//022

Under the road from west to east are 'loveseats', a skate bowl, the so-called 'Ramp Scape' and Toy Area, a break dance stage, table soccer, a soccer field, a basket ball pitch, parking, a cross street, a sculptural bus stop, a mini marina the panorama deck and the river.



The skate pool is a kind of excavated blob that sits under the highway. It is built from polystyrene blocks that are sliced by computer-controlled foam cutter and sprayed over with concrete.

//023

Initial abstract Conceptual Site Model:

In trying to identify the architectural issue for my site I built this abstract model to try and have a better understanding of the site

In this model what I started to imagine for the site development was to first link the existing fabric around the site so that the market does no longer sit separate from its neighboring context but rather it begins to integrate the different built conditions.

[1.] The black blocks symbolize the neighboring houses on Bromwell street that border the edge of the market. Bromwell street is a very narrow and isolated street. This is a very hard edge, in a way the market turns its back away from the street. My intention is to strengthen Bromwell street by widening the road and creating filters from Bromwell street into the site. The market stalls will also be accessible from Bromwell street and the intention was to open it out onto Bromwell street so that pedestrians can quickly stop and shop at the market before proceeding to their desired destination.

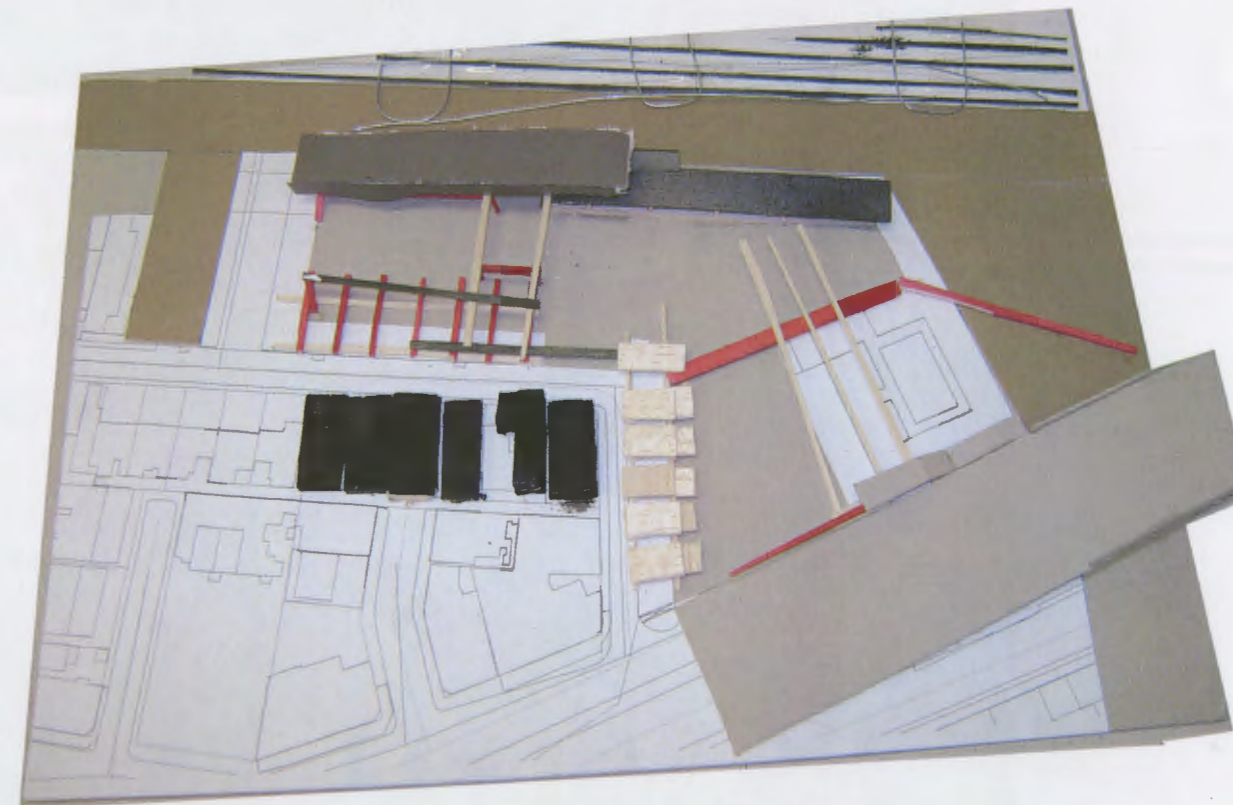
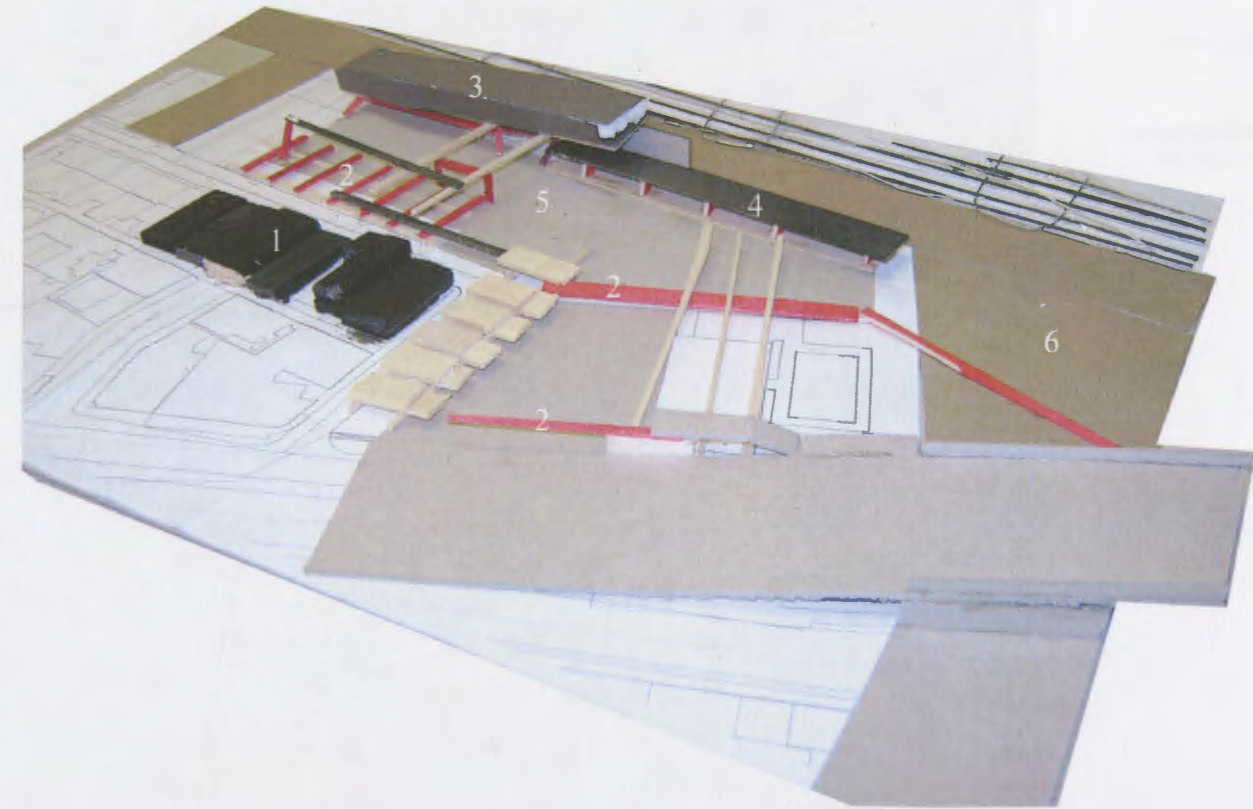
[2] The red lines begin to demonstrate access or filters into the site in order to create a permeable edge. Where some that are already existing, new routes and entrances will be introduced so that the site becomes more accessible.

[3] A new service market will be introduced to respond to an already existing service market in the area of Salt River. What I discovered in the study, local barbers, tailors and shoemakers are always looking for new premises to operate their businesses from and refuse to move to the CBD as rental is more expensive than Salt River, this market will help in aiding that problem

[4] The existing fresh produce market will be upgraded with better facilities to work from and more stalls will be provided so that it thrives as a produce market once again

[5] A public square will be designed this will be within keeping the memory of the place and it will begin to order and give hierarchy to the site

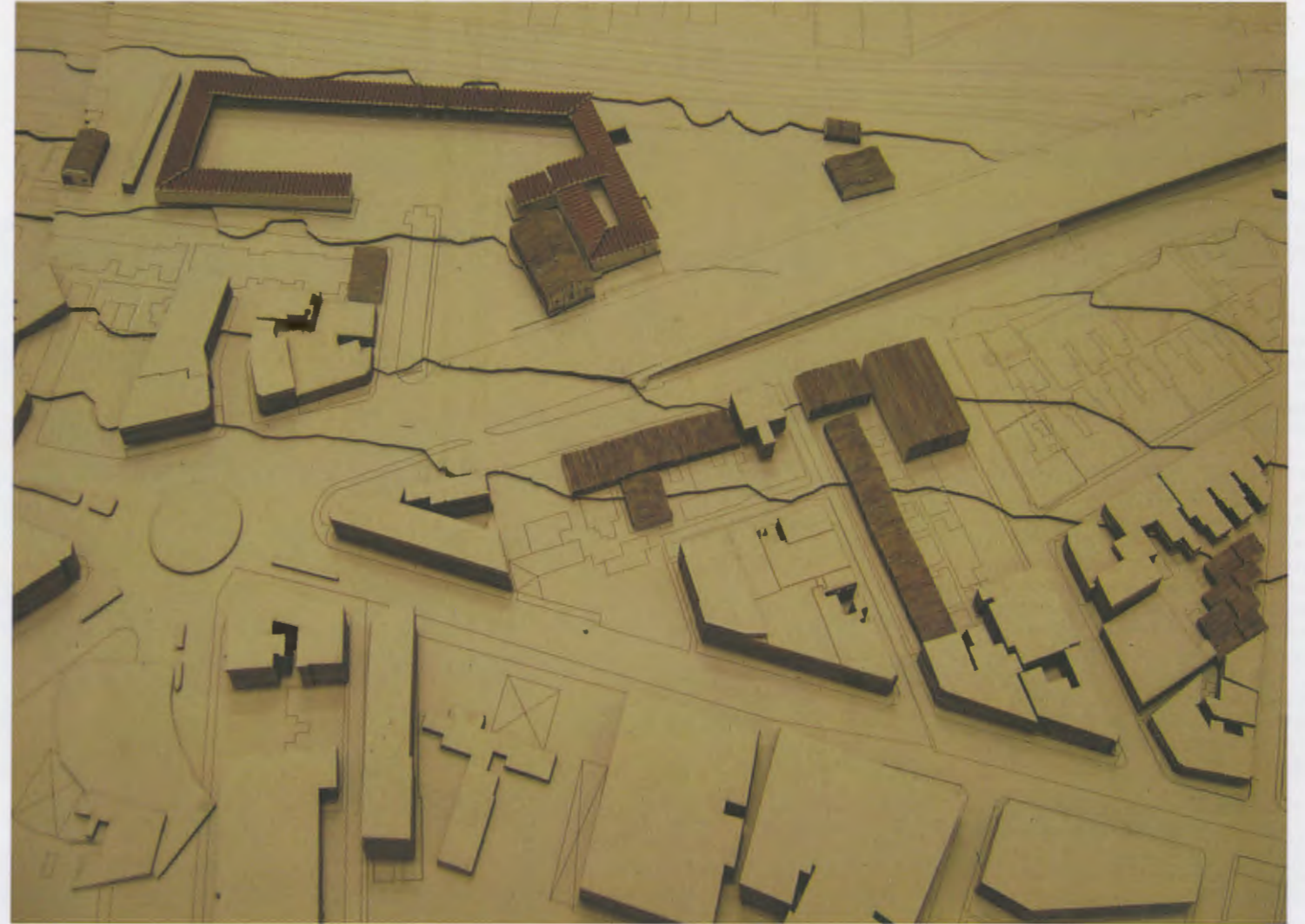
[6] The open space next to the market will be integrated into the existing market. The intention is to extend the market and introduce other facilities on the site e.g. restaurant, offices and pedestrian platform which becomes a new link to the Salt River station



//024

Site Model:

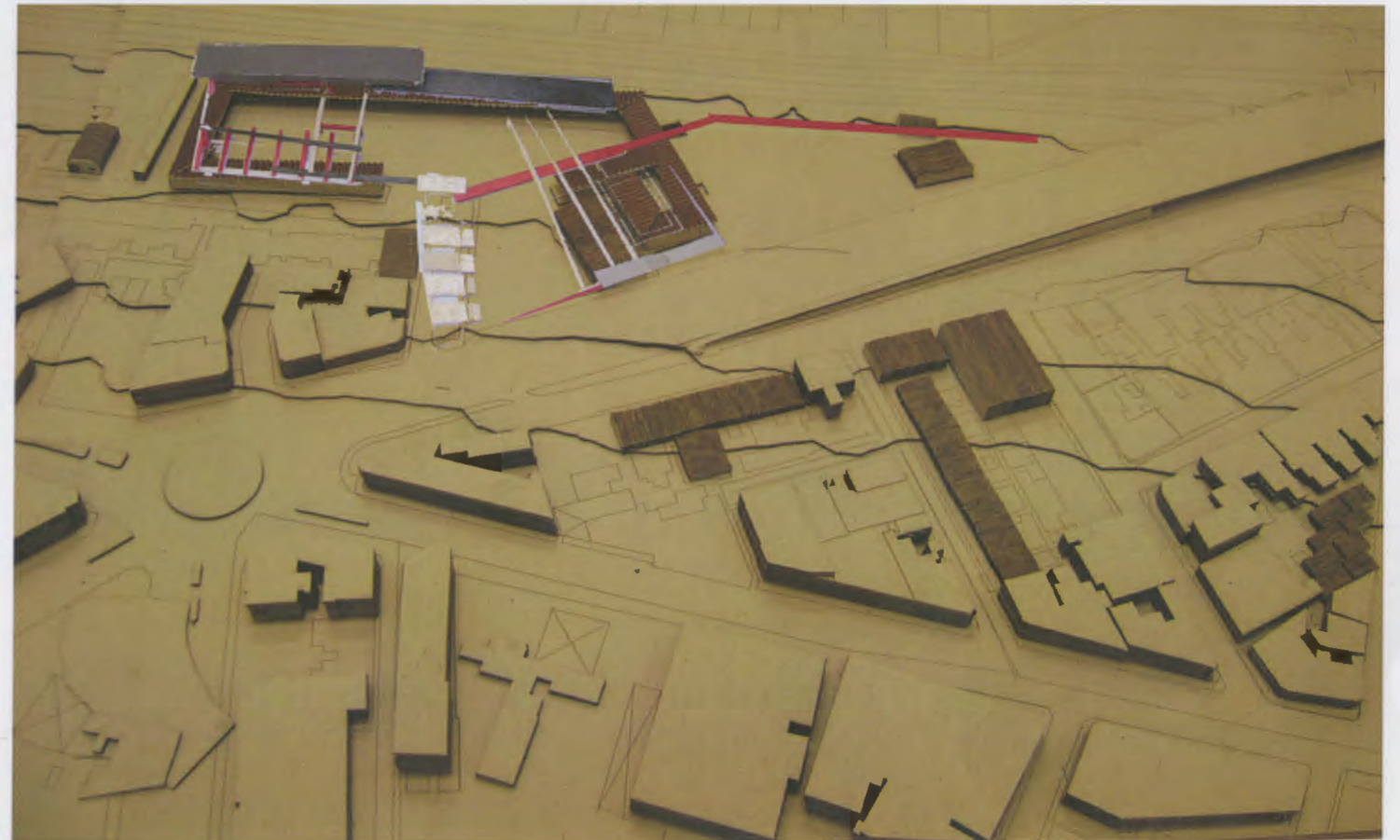
Model demonstrating an existing built fabric on the site with the market in its present condition



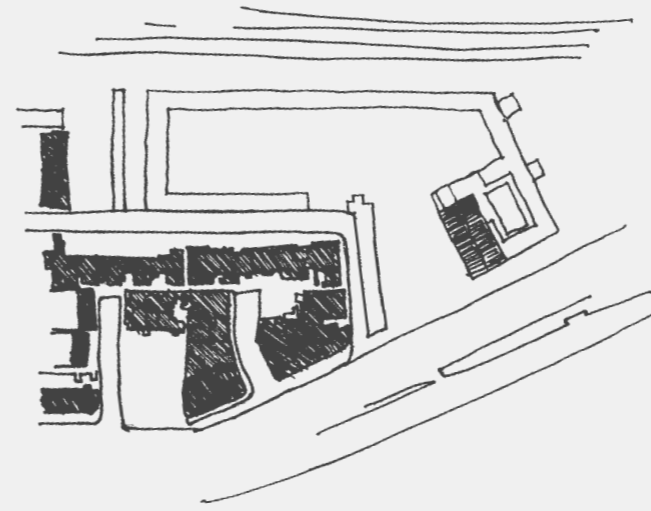
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Site Model:

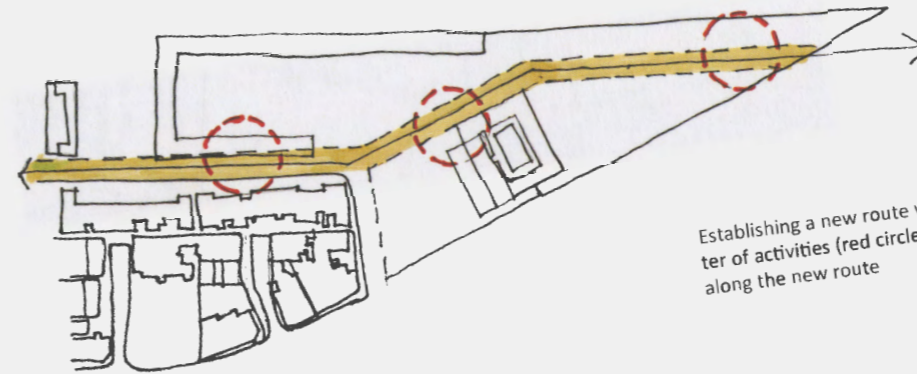
Ways in which the principles of my urban design proposal can begin to respond to issues regarding the site.



Overall Urban Design



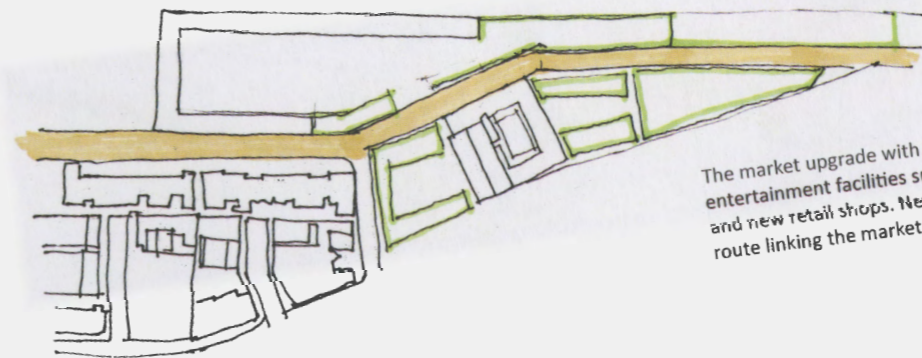
Existing Urban Context



Establishing a new route with proposed cluster of activities (red circles) beginning to form along the new route

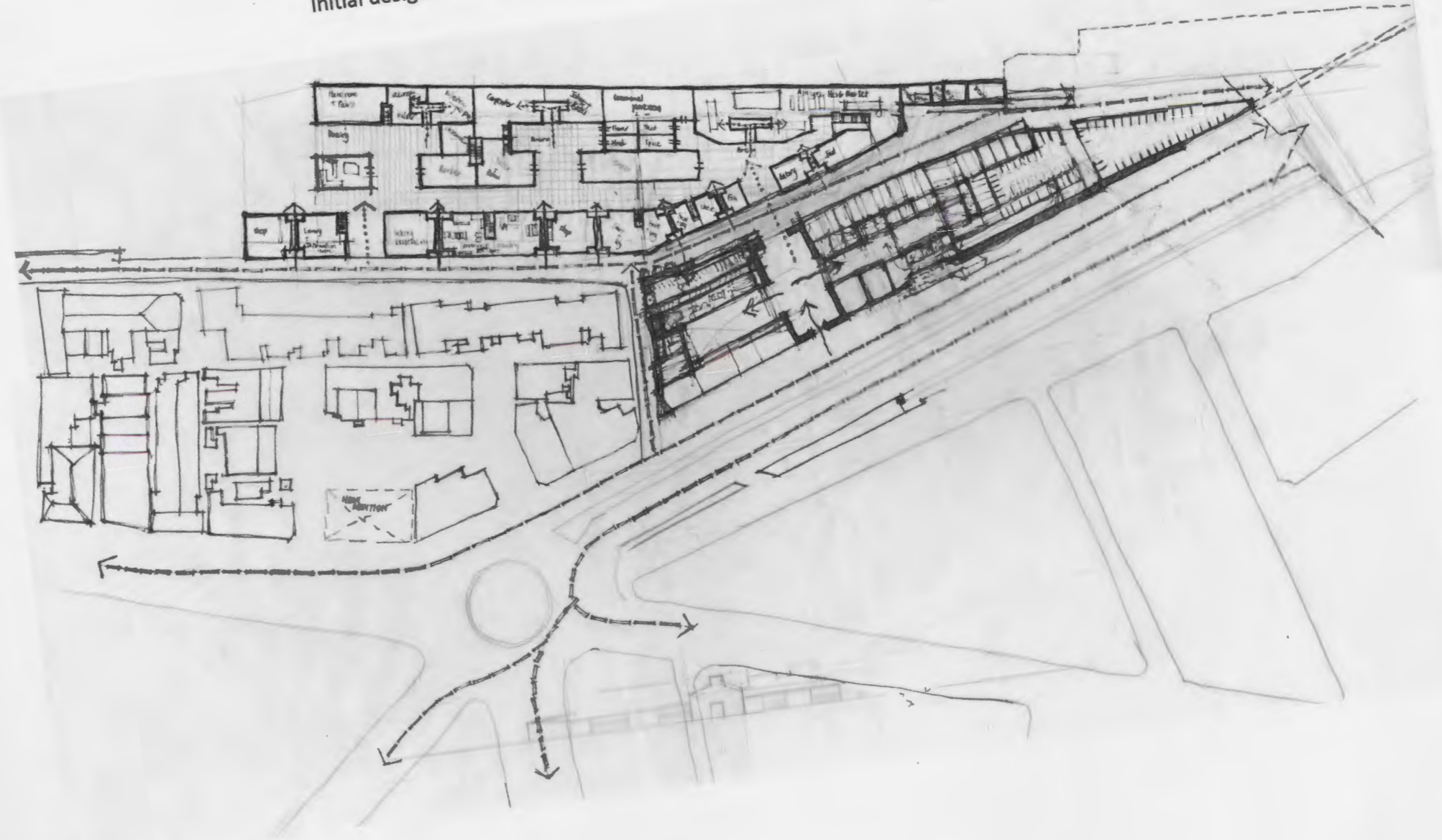


Proposed facilities clustered primarily along the new route

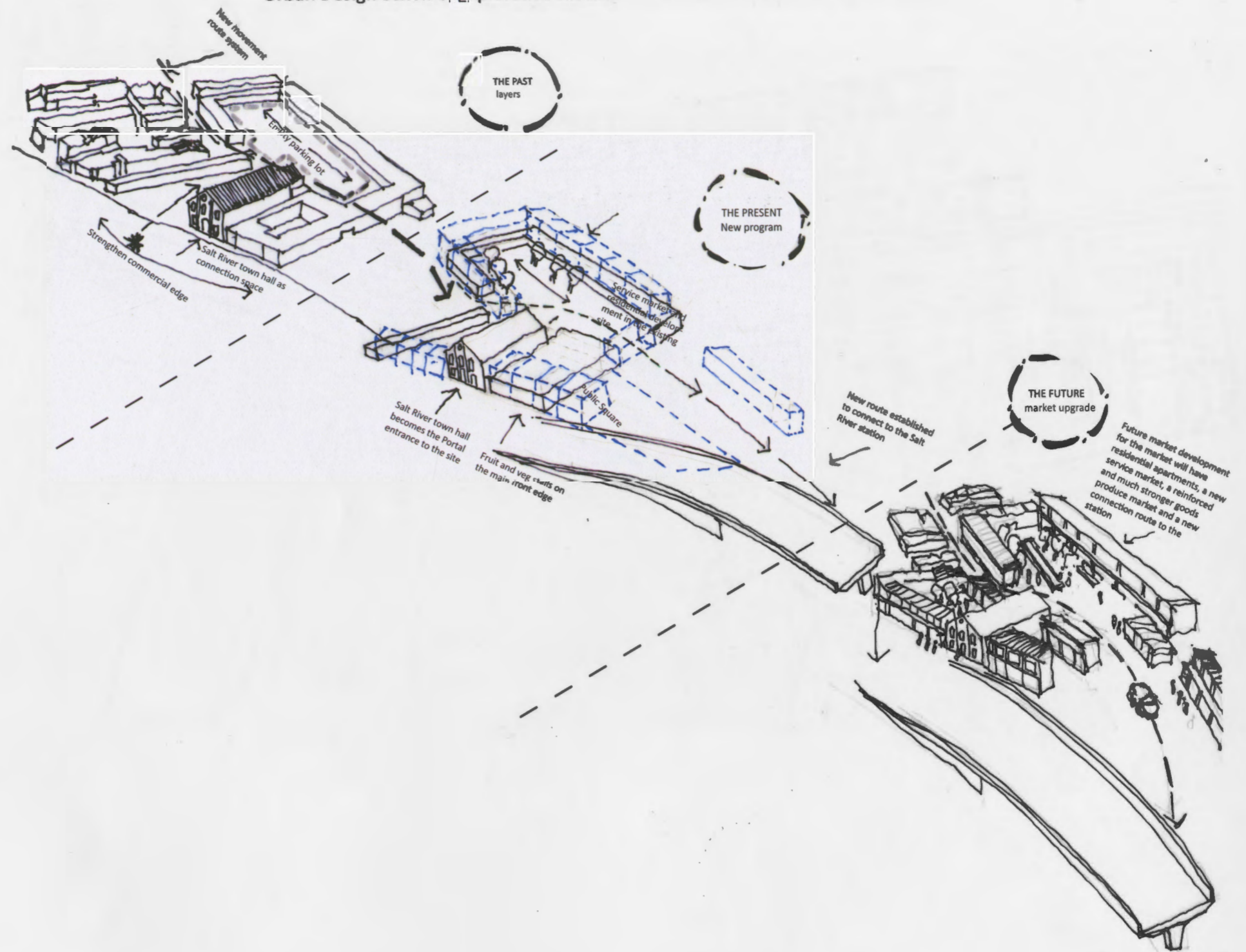


The market upgrade with new service market, entertainment facilities such as restaurants and new retail shops. New and established route linking the market to the train station

Initial design development sketch plans



Urban Design Scheme: Explorative sketch



Conclusion of Site Analysis

In concluding the site analysis, there are certain principles that has emerged and will help guide the architectural project further in response to dealing with the site at a site scale and at the urban scale. These principles are partly informed not just by direct observation of the area but by personal conversations that I had with the local community. I believe that in order to drive an architectural project to the level where it can serve a useful resource to the community, one needs to understand the project at the level of how the community engages with the given building. In this way these principles will materialise and enrich the project in demonstrating a clear understanding of how adaptive reuse can begin to transform a given building into one that it may bring vitality and a sense of place to the community.

However, in dealing with these principles I acknowledge that the society is forever changing. How I choose to deal with the site today may perhaps not be appropriate in the future. But in realizing this fact, what is important in the investigation is that, there will always be new ways of appropriating existing buildings. We should not accept that once a building has reached its life cycle, it should be 'thrown away'. The level of intervention as well should not just occur within the building itself but it should occur around and between existing buildings so that layers of history may always exist and not disappear under rubble .

C

materiality...

materiality.

“Layering makes visible the process of becoming.....especially at points of transition and interface that layering becomes a narative element that elucidates the tectonic qualities of the building.”

Old buildings in my opinion possess a timeless character. When an old building ages, certain new physical characteristics adapt themselves enriching its tectonic qualities. Layering produces a level of complexity that results in a poetical narrative when new structure carefully distinguished from the old articulates to create a rich sequence of spaces that are experienced in a new manner. This challenges the potential for technology to be able to adapt to a given situation. history does not only stand static and disconnected by an “ever-evolving” present, it is dynamic; it expands, extends and transform its present condition in order to accommodate contemporary building systems.

Tectonic- Derived from the Greek word *Tekton*, meaning carpenter or builder- **signifies the fusion of technique with art of construction and poetry**

Poetry- the art of assembling tectonic components into building parts and **expressing technique as craft.**

Construction = Poetics

Layering- overlaying fragments of **new and old** and the **co-existence** in the nature of the two

Junction- each material or element adapts its **condition to meet another** thereby **making it a deliberate and expressive event**

Transformation- the **juxtaposition of old work with new**, using an extraordinary palette of materials or junction systems to create a new relationship

In the interest of exploring the concept of adaptive reuse through transformation, my technological exploration takes upon the position, parallel to a theoretical position I have placed my research under, into looking at the role of layering as an architectural tool in developing a dialectic language between new and old structure. The subject of my thesis explores abandoned structures in the built fabric. In this exploration, my theoretical position looked to exploring Modernism and the role of 'function' in many modern buildings. This exploration therefore lead the investigation into dealing with adaptive reuse by looking into transformation through the tool of layering as a response to adaptive reuse. My technological exploration and interest not only looks to layering as a response but rather interests itself in the tectonics between old and new.

When dealing with an old building, particularly when the intent is transforming an old structure into something that is useful, technology plays an important role in translating architecture that is capable of communicating its own history by developing a contemporary and dynamic vocabulary of its own. Technology begins with the understanding that it is no longer accepted that buildings have to be intended to last forever, but the possibilities lies within exploring continuity and change. Technology acts a response to creating new demands that respond to need.

My technological position for this paper looks to layering as a narrative element that clearly expresses the tectonic qualities in a building. The work of two great architects that are important in this research who add much weight to adaptation and developing a dialectic language in understanding the relevance of the study and practice in tectonics, and of whom will be discussed extensively in this paper, are the works of Carlos Scarpa. The work of Carlos Scarpa as I feel emphasizes and makes visible the process of overlaying and expressing the potential of materials and its transformation into poetry.

It is especially at points of transition that they make layering a narrative element that expresses the tectonic qualities of the building.

By understanding his work one can understand how overlaying becomes the tool in leaving a record of how an object came into being - either by means of the sediments of its history or through the intervention the architect takes upon, in emphasizing and expressing the potential of materials.

My investigation will begin by looking exclusively at one project by Carlos Scarpa and I will analyze how they convey a tectonic dialogue of an existing built fabric in promoting continuity and change. One needs to be able to understand and engage in all the different methods. Each method contributes to understanding tectonics: how things are brought together, assembled and transformed. What was there always seem to remain, in the process of reflecting new change, new tectonic qualities begin to surface.

The building project chosen for this investigation has a clear way in which it embodies particular tectonic issues, demonstrating the continuity of an idea and how it begins to develop and change. Although the tectonic language varies, a number of common themes are present in their work. A number of these building types reflect the reality of changing technologies.

Layering places a new building within an older context as an honest expression of its time in the choice of materials and technology and it creates an aesthetic continuity with its surroundings.

Key Questions:

q1. How can an old building be designed and accommodated to relate to the existing environment?

q2. Is this old/new building subservient to its context or does it seek to create a statement of its own?

In conclusion, the intention for this paper is to not only explore an appropriate use in developing a tectonic dialogue in dealing with the transformation of an old building but it looks to the typologies of building types that help reflect changing technologies.

04. Construction: The Art of Making

Introduction: Making and meaning in tectonics

Architecture and tectonics are two very closely linked concepts, one can say they are inter-dependant on each other, refer to the poetics of construction¹. The notion of tectonics as employed by Frampton in his reader *Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture*, focuses on architecture as a constructional craft. According to Kenneth Frampton in his book, the function of 'tectonics' emphasizes on expression and looks to architecture as an appreciation of craft, by making *art* as its tectonic basis. This constitutes a direct challenge to current mainstream thinking on the artistic limits of postmodernism, and suggests a convincing alternative². Frampton argues that modern architecture is invariably as much about structure and construction as it is about space and abstract form. Frampton in search for a postmodern tradition suggests that the nature of the tectonic tradition in architecture is an essential element in the future development of architectural form. In dealing with this concept, the nature of the existing built fabric has suggested new use which comes out of the encounter between the old envelope and its new requirements, making the new object unique in character. Tectonic therefore forms a "union of technique and art", in this union the construction becomes poetic.³ It describes the close integration of materials, construction techniques, building physics and design in order to answer the new and complex demands on the appearance and functioning of buildings.

By my understand on the study of tectonics from Frampton's reader, he suggests that the tectonic potential lies and derives from its part in the articulation of its joints.

*"The tectonic presents itself as a mode by which to express different states thereby as a means for accommodating, through inflection, the various conditions under which different things appear and sustain themselves."*⁴

-John Cava (1995)

¹ Cava, J [ed]. (1995). *Kenneth Frampton: Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture*. The MIT Press. Massachusetts p.ix

² Cava, J [ed]. (1995). *Kenneth Frampton: Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture*. The MIT Press. Massachusetts p.ix

³ Le Cuyer, A. (2001). *Radical Tectonics: Miralles, Behnisch, Mecanoo, Patkau*. Thames & Hudson. p.1

⁴ Cava, J [ed]. (1995). *Kenneth Frampton: Studies in Tectonic Culture: The poetics of Construction in Nineteenth and Twentieth Century Architecture*. The MIT Press. Massachusetts p.23

Frampton's emphasis on the potential of tectonics in architecture can be understood in three ways:

1. Expressing and integrating materials emphasizes tectonics in a manner that when composed against each other, a new junction forms. (Alvar Aalto's Summer house)
2. The juxtaposition of different construction techniques allows the building to respond to changing technologies juxtapose and create new and dynamic forms (Coop Himmelblau's Falkestrasse).
3. Tectonic can also be transformed merely by manipulating the buildings physical design in order to show points of transition between its historical built fabric and its new design order. (Carlos Scarpa's Fondazione Querini- Stampalia)

//026

Alvar Aalto,
Summer House,
Muuratsalo, Finland, 1953

With modernism preoccupied with industrialization of mass production, Alvar Aalto, conversely humanizes modernism by exploring the expressive potential of material and transforming constructional necessity into poetry. This is exemplified by the nature of the brick wall of this summer house



Alvar Aalto explores the tactility of the brick. He explored a variety of brick patterns and combinations to better understand the properties of the materials. This experiment is not merely technical, but also poetic. The exterior walls of this court are developed as mosaic-like experimental walls, divided into about fifty areas in which different types and sizes of brick and ceramic tile with different methods of jointing are used, so as to test their effect from both the aesthetic and practical standpoints.

//027

Aalto's tectonic dialogue creates a new pattern through a juxtaposition of different brick types to create a composition that richly expresses the relationship between function and form of the building.

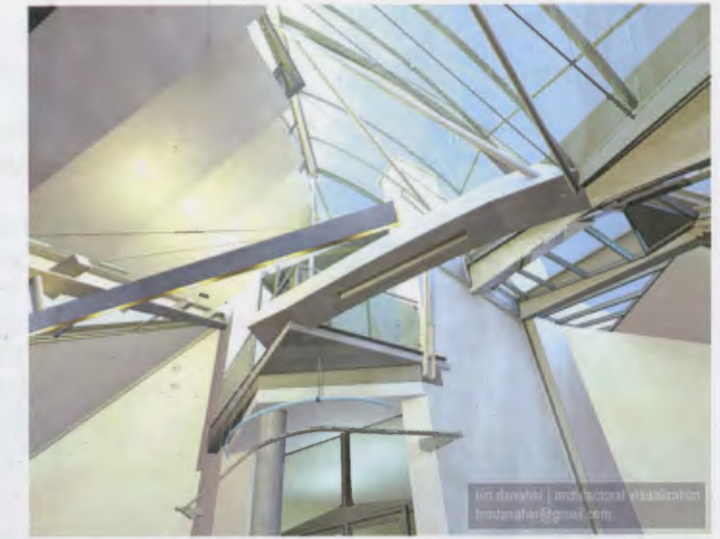
Construction = poetical



//028

Coop Himmelb(l)au,
Falkestrasse Rooftop Conversion,
Vienna, 1988

The brief was to fit a new boardroom and offices on top of a nineteenth-century block in a historic thoroughfare. The new structure is described as 'a cross between a bridge and an aeroplane'. Its dynamic form is 'deliberately disruptive but had a dynamic beauty of its own'.



//029

Coop Himmelb(l)au,
Falkestrasse Rooftop Conversion,
Vienna, 1988

Coop-Himmelblau's tectonic dialogue creates a new spatial relationship through a juxtaposition of different technological systems in order to produce a dynamic 'organ' that respond to changing technologies

Technique + construction = art



In the case of the Falkestrasse project, Coop Himmelblau overlays a new structure over an old structure, using two different constructional techniques in order to highlight the juxtaposition between the spaces. The new modern and sleek extension predominantly sits over the old modern building clearly defining new technology structure over old technological structure.

The building in its tectonic dialogue also explores the juxtaposition of new technology versus old technology by constructing the new structure using digital technology in the aid to great a dynamic form. It generates an asymmetrical structure (contrary to a Modernist building which is more ordered and symmetrical) that strive for freedom from the constrained formalism of a given style. It creates an "open-planned, open-minded, open-ended" design, made up of complex and undefined spaces

//030

Carlos Scarpa,
Fondazione Querini- Stampalia,
Venice, 1963

Scarpa uses the opportunity provided by a water-logged ground floor to thread a new level through the historic palazzo allowing the canal to penetrate the building and form an internal moat. It is a particularly impressive example of a renovation project which layers the past and present constructions into a powerful assemblage.



Facade Before and After Renovation

The flow of water is designed in such a way that it flows slowly; in which observers will be visually engaged and it is this kind of attention that makes the gallery, delightful. the way the water flows into the circular plate; produces the sound of water stream which is heard throughout the garden

"It is in relation to these effects that the development of all paths were oriented horizontally and played by the channel to the garden, facing the front gate to the back of the building as a unified barrier on which the light plays, dematerializing waste plastic in each area to take on a new meaning "

- Giuseppe Mazzariol,



A tectonic dialogue: Carlos Scarpa

I have come to know the work of Carlos Scarpa throughout my years of studying and I have regarded his work as having one of the most influential pieces of architecture of all time. What initially intrigued me about his work is the ability to realize and fully express and accentuate tectonically a clear dialogue between space, detail and material. In the case of Carlos Scarpa most of his better known projects have involved the renovation and reuse of old buildings; there is clear understanding in his work of the potential of how tectonic detail could manipulate the way space is perceived. Therefore in the case for Carlos Scarpa, he richly explores tectonic qualities by respecting technique and craft in the assembly of his work, which is in itself the poetical dialogue of his work.

What I have learned in merely studying his buildings and method of design is that there aren't any limitations to the properties of a material, the ability for a material to express itself in a building is at the level of intervention one wishes to take on the issue of adaptation. Therefore in most cases, adaptation is successful where the 'Junction' is celebrated and expressed in a building.

The 'Junction' can refer to many things and its widely defined across all mediums, but for the purpose of this paper, I define it as the adaptation of one element in its **condition to meet another** thereby **making it a deliberate and expressive event**.

In architectural terms, the junction expresses the relationship between a material and its joint or between two joints or two materials. My interest therefore lies in that investigation of developing a dialogue between the junction and what it represents not only at a scale of its detail, but at the scale of the space it encloses and at the scale of the whole building it represents.

Carlos Scarpa

"The problem historical materials, which we can never ignore but can't imitate directly either, is an issue that has always concerned me...I've had nothing but trouble from planning rules in Venice and the bureaucracies who interpret them. They order you to imitate the style of ancient windows forgetting that those windows were produced in different times by a different way of life with 'windows' made of other materials in other styles and with a different way of making windows. Anyway, stupid imitations of that sort always look mean. Buildings that imitate look like humbugs and that's just what they are."

- Carlos Scarpa

Carlo Scarpa's work represents a set of interesting ideas in confronting and dealing with the transformation in old buildings. In most of his projects key elements that are constantly present in the line of his work: transition, composition, juxtaposition and the overlapping of elements. These qualities best represent the tectonic qualities that he evokes in his buildings. For Scarpa, he establishes a dialogue between old and new. Scarpa's intention to fuse past and present styles and ideas refer to the process of layering.

Scarpa believed in the coexistence of his vocabulary with those of the previous eras producing a constant dialogue with history. In the investigation of Carlo Scarpa's work, I will be looking at the Banca Popolare Di Verona project as the technological basis of this section of the paper. I think out of all his renovation projects, this project was regarded as one of the best representations transformation ever done from him. Although the building was not completed by him, because of his untimely death, most of the features of the building are. His method of using modern forms and structure makes this project the most relevant work. What I hope to reveal is how Scarpa's dialectic dialogue between old and new produced unique tectonic qualities.

"The existing building, of little value, is completely absorbed by the new construction. The elevation is drawn on two parallel planes: one, a load-bearing wall, has a doorway and carvings in the red stone of Verona; the other, recessed, is in glazed panels, revealing an impatience with conventional work, almost to the point of challenging functionality. However, the care taken with the decoration gives a dazzling gloss to this purposelessness, suggesting new reflections on the relationship between use and uselessness, between function and ornament."

—Maria Antonietta Crippa, Marina Loffi Randolin, ed. Carlo Scarpa: Theory Design Projects. p74.

The Creator's Words

"During Scarpa's five years of apprenticeship at the Academy, Venice enraptured him, brought to the surface a Byzantinism he already possessed, a taste for 'a relentless analysis of detail.' 'When I visited Florence for the first time I was immediately aware of the enormous architectural difference between the two cities. I can't deny that I'm impressed by Tuscan architecture, but such precision, such certainty are not part of my being. I am a true son of my region [Veneto] and have a strong feeling for my roots.' "

—Maria Antonietta Crippa, Marina Loffi Randolin, ed. Carlo Scarpa: Theory Design Projects. p14. ⁵

⁵ Banca Popolare di Verona.
Available [http://www.greatbuildings.com/buildings/Banca_Popolare_di_Verona.html]
2010, May 24. 4:15am

//031

The transition between the old section of the building and the new section is achieved by slightly receding the new building back and the point where the old building and new building meet, the junction is uninterrupted

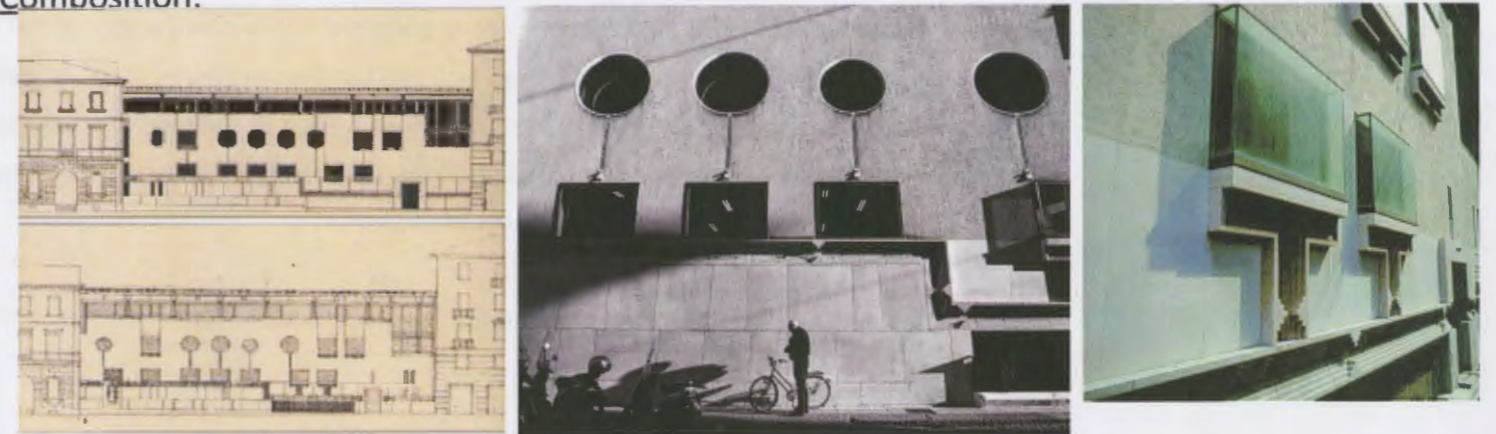
Transition:



//032

The composition of the whole building follows a rhythmic pattern in the representation of various planes. These are well executed through a combination of openings in the facade that somehow line up with the rhythmic pattern of the older buildings adjacent to the building (22). Although there is continuity in the reading of the language of the facade, he breaks that systems by receding and extruding his windows (23) (24) creating a dialectic dialogue between repetition and variation.

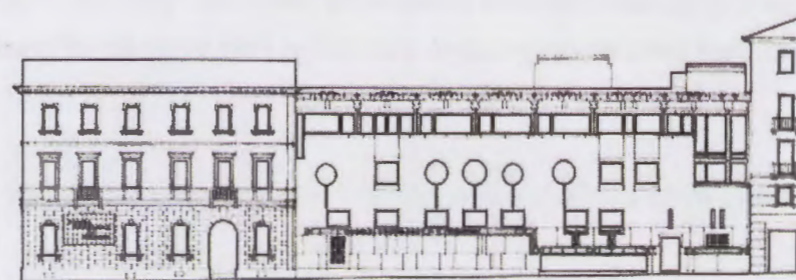
Composition:



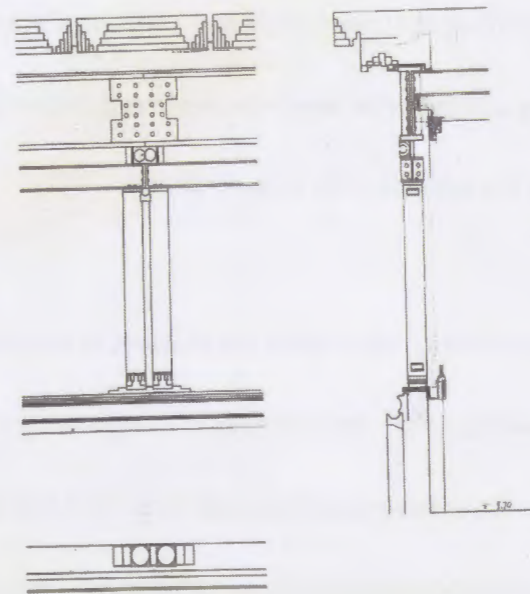
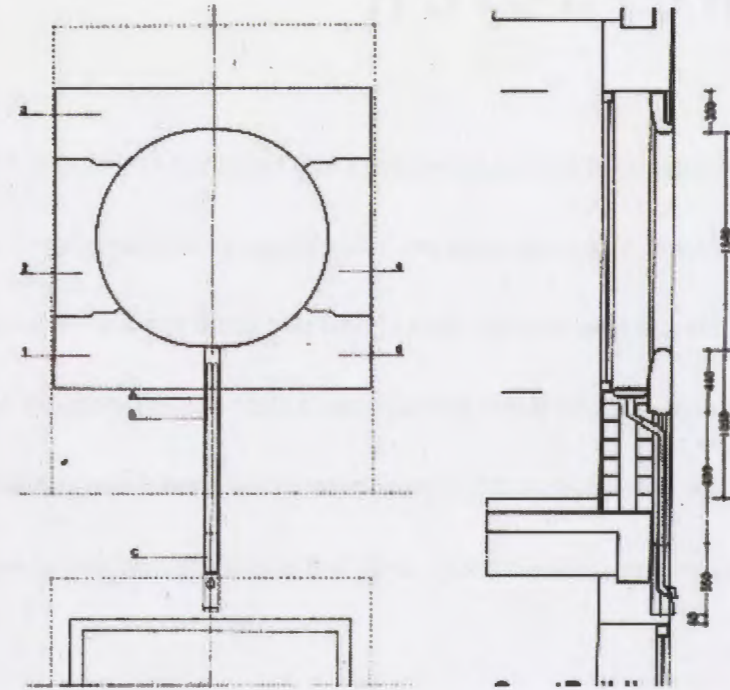
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Through the use of different size windows, he juxtaposes the element of continuity by placing the windows so that they may follow a horizontal rhythmic pattern from the old building to the new building and then places vertical mullions behind the curtain wall to break the rhythm and forms a different structural system of its own

Juxtaposition:



Overlaying of elements:



Conclusion

The technology behind looking to tectonics as a direct link to adaptive reuse should be established when addressing issues of structure, form, space and program. What I hope to address in my design process is a continuation of ideas that links the layering of old and new with the idea of how one could express the point at which the old and new meet. A culmination of projects, and ideas in this paper demonstrate a clear understanding of how one can approach an adaptive design by adopting an attitude as to what adaptive reuse means to oneself. In my opinion, adaptive reuse maintains elements of history by enriching its original historical fabric, and then overlaying its dialogue with elements that represent contemporary building technology.

The intention therefore is once I have established a building for adaptive reuse, my translation of layering will come across in the form of creating a dialogue between elements and understanding its parts from the scale of the building at a whole and from the scale of the building at its tectonic details.

The attitude that Carlos Scarpa takes upon will resonate in my project in the understanding of creating continuous rhythms between repetition and variation. The influence of design across all disciplines will be carried through in understanding how the relationship of junctions has a direct implication on how one interprets a specific part of the building. And finally the influence of the precedent studies analyzed will be brought forth in understanding how these building systems have been applied and how they could serve a purpose in dealing with my own transformation of an old building.

q3. What is the main value system here that I could adapt my project into it ?

E programming...

programming.

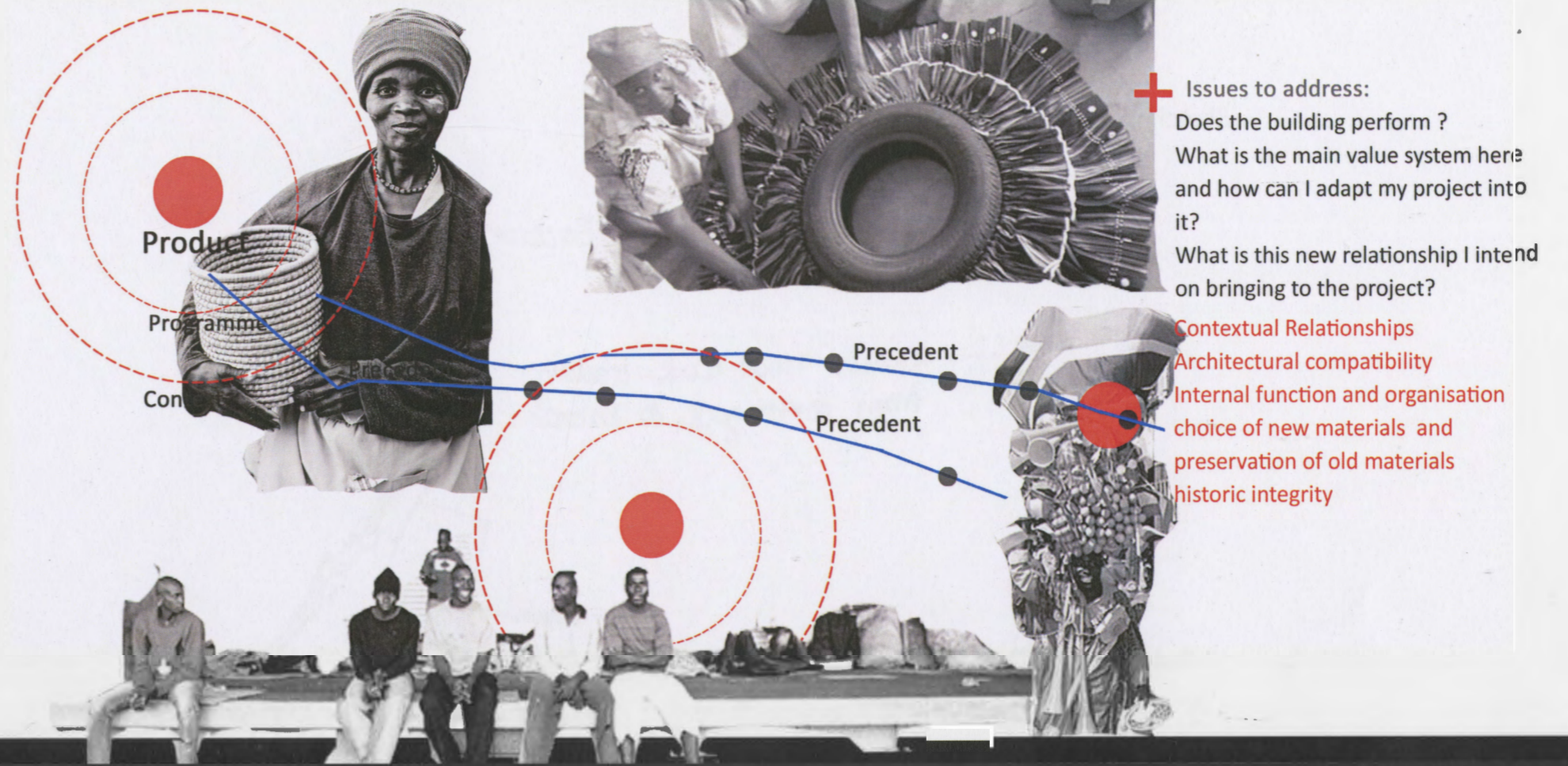
Program as an instrument for social transformation

The program will focus specifically in upgrading the currently existing fresh produce market in Salt River. New facilities will be added to the already existing program. This will include additional stalls for fruit and vegetables and fish and flowers selling. In addition to this type of market, a service market that has a range of services like tailors, shoemakers, locksmith, repair shop and a communal laundry will be added to the program. The third component to the program will include residential apartments i.e. studio units which can be used for either living or working. First option to lease will be given to the stall holders.

The market layout follows on the concept of the layout of the Isfahan Bazaar as a point of departure. The Isfahan Bazaar has a spatial quality that would be ideally appropriate for the site. The concept of the movement route as the anchor for ordering the site and its activities is a very important architectural idea as it starts to place hierarchical spaces along the movement route. This is taken into consideration in the urban and site design concept. This shapes the site...

Program

Program as an instrument of social transformation



+ Issues to address:
Does the building perform?
What is the main value system here and how can I adapt my project into it?
What is this new relationship I intend on bringing to the project?

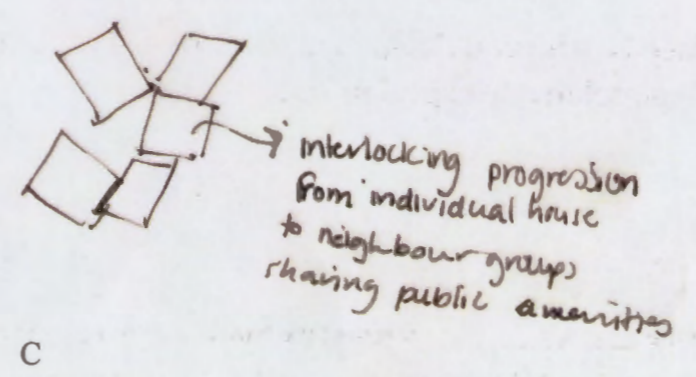
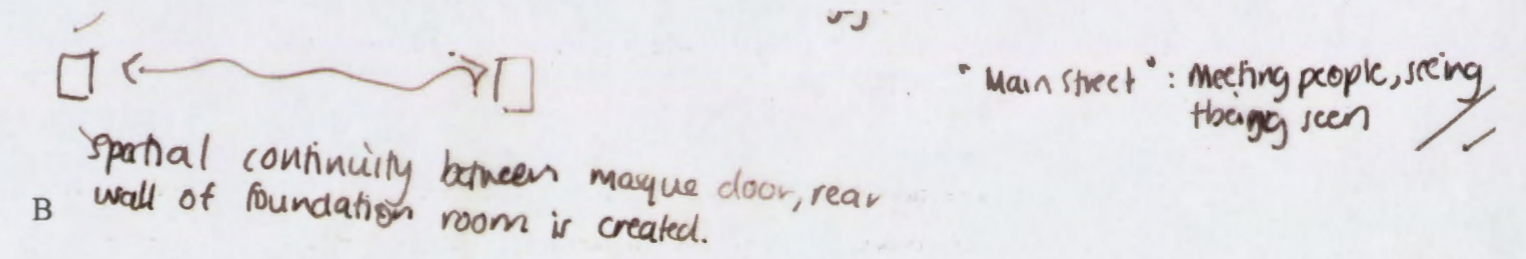
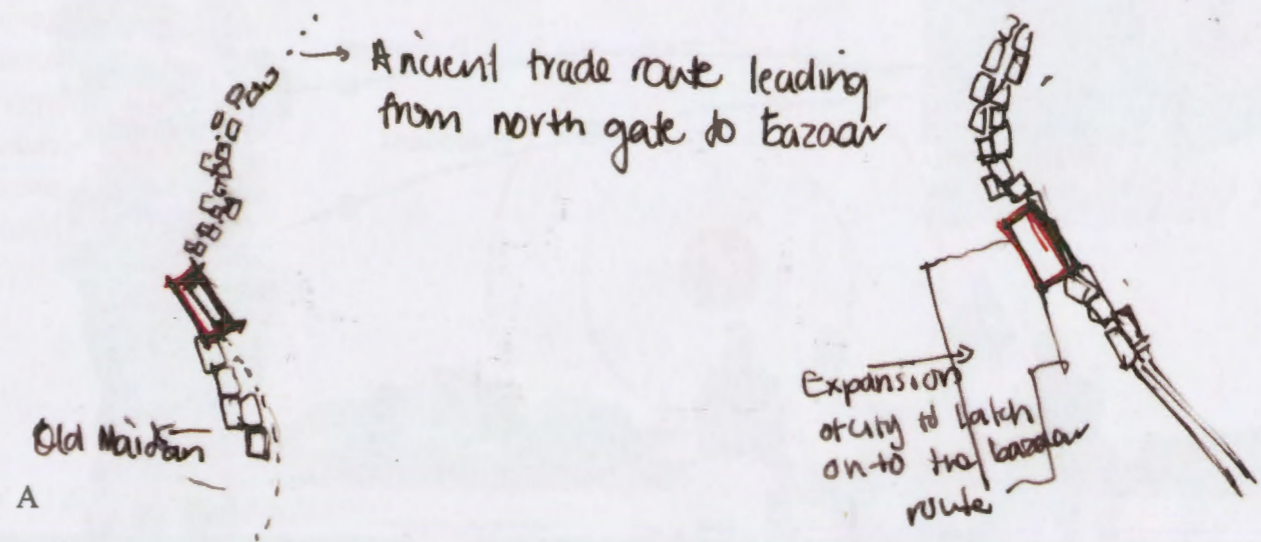
Contextual Relationships
Architectural compatibility
Internal function and organisation
choice of new materials and preservation of old materials
historic integrity

05. Program intervention

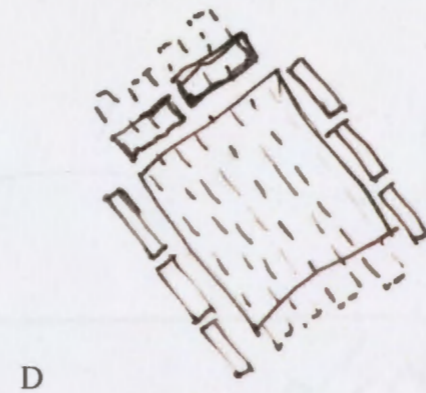
Precedent Analysis: The Bazaar of Isfahan

Sketches exploration

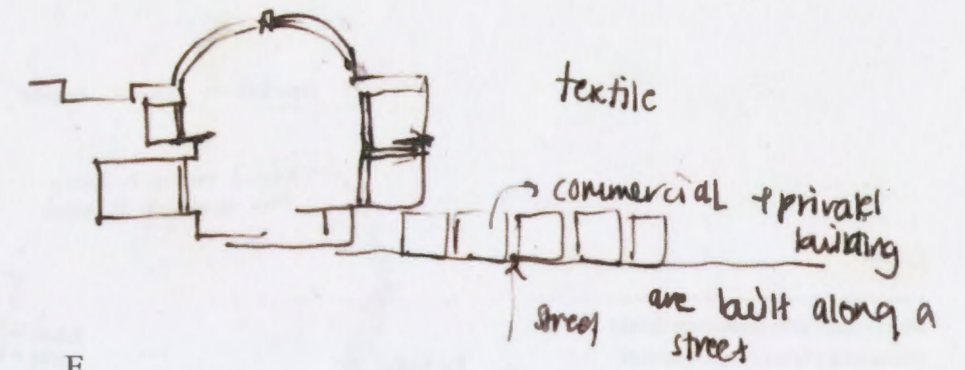
Formal Structure → Market, Bazaar, Isfahan



streets of the city fabric
lead to the public courtyard



D



E

Arcade exploration



F

My decision on looking at the Isfahan Bazaar stems from the fact it is a very old market but yet it still operational today. Although its more traditional type setting and it has no relationship with how contemporary markets are., the spatial quality of the bazaar, is much more richer than any other type of market investigated in this document. The intention for my design therefore is to explore that spatial quality that the bazaar has:

It has three interlocking spaces that are linked to the main primary movement route-

- i. Connection Space which connects the residential pathways which lead back to the main movement route
- ii. Transitional spaces which acts as niches that acts as threshold spaces before one enters private residences
- iii. Culmination spaces where all activities seems to spill onto, these culminations spaces are the courtyards

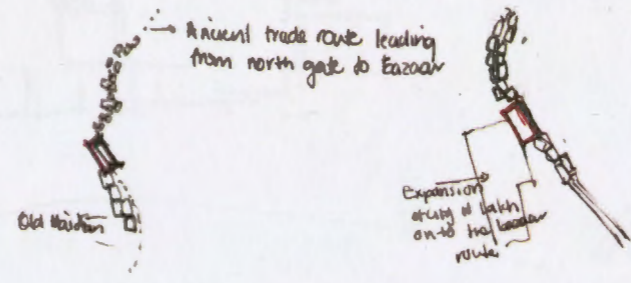
A strong sense of place is achieved through many levels of activities and movements of which all are individually and cumulatively experienced.

Order is based on a super conscious level of order making in which a sense of total order on both the macro scale and the micro scale is communally felt and manifested.

At the Macroscale: Order of the primary movement system of the bazaar, secondary movement system of the residential pathways and the tertiary system of water together with the regional bioclimate dictated, constitutes a unique design .

A

Formal Structure → Market, Bazaar, Istakhan

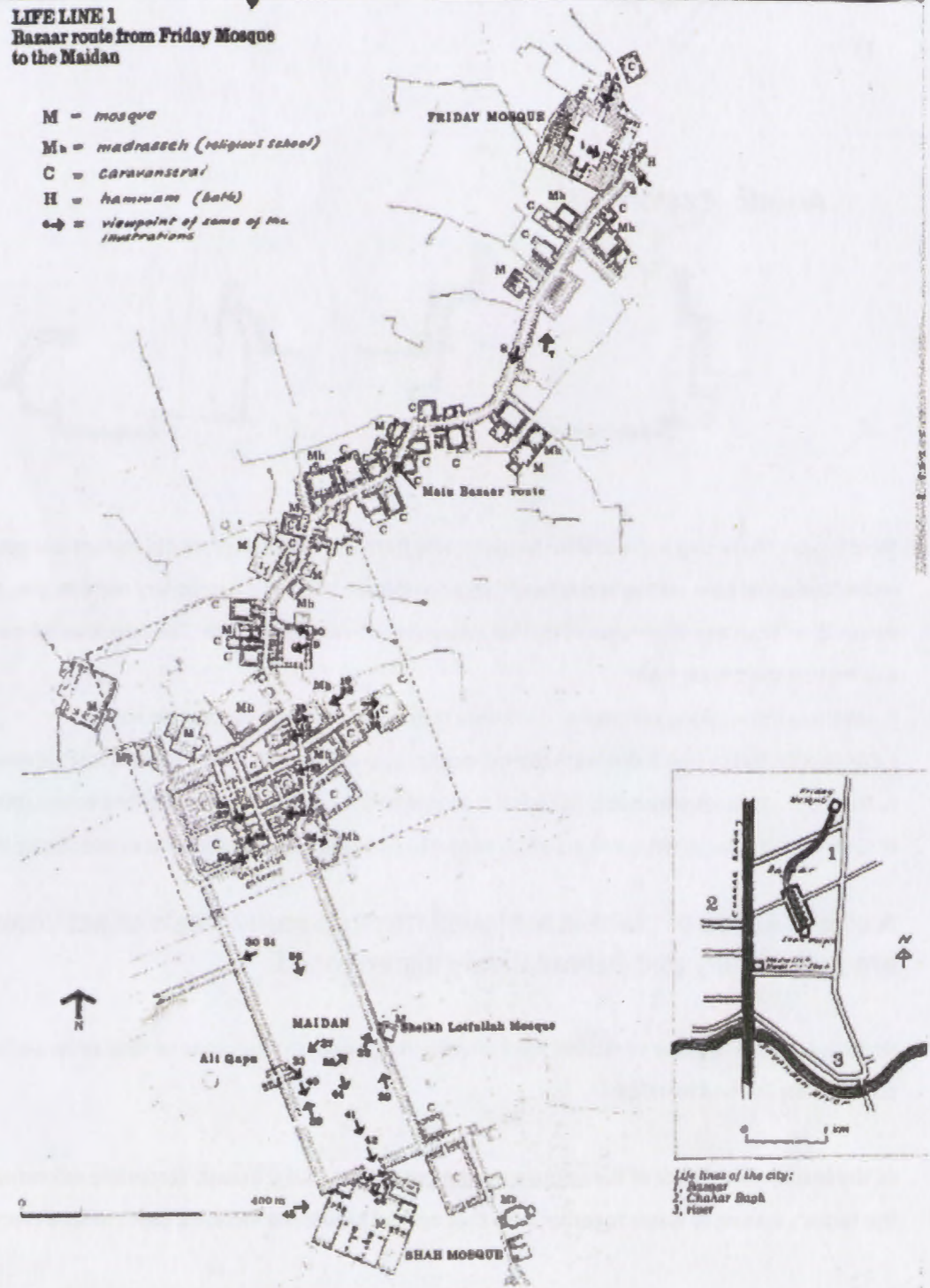


//034

Bazaar route with dependant spaces connecting a secondary movement system of residential pathways.

LIFE LINE 1
Bazaar route from Friday Mosque to the Maidan

- M = mosque
- Mh = madrassah (religious school)
- C = Caravanserai
- H = hammam (bath)
- ↔ = viewpoint of some of the illustrations



0116

B + C

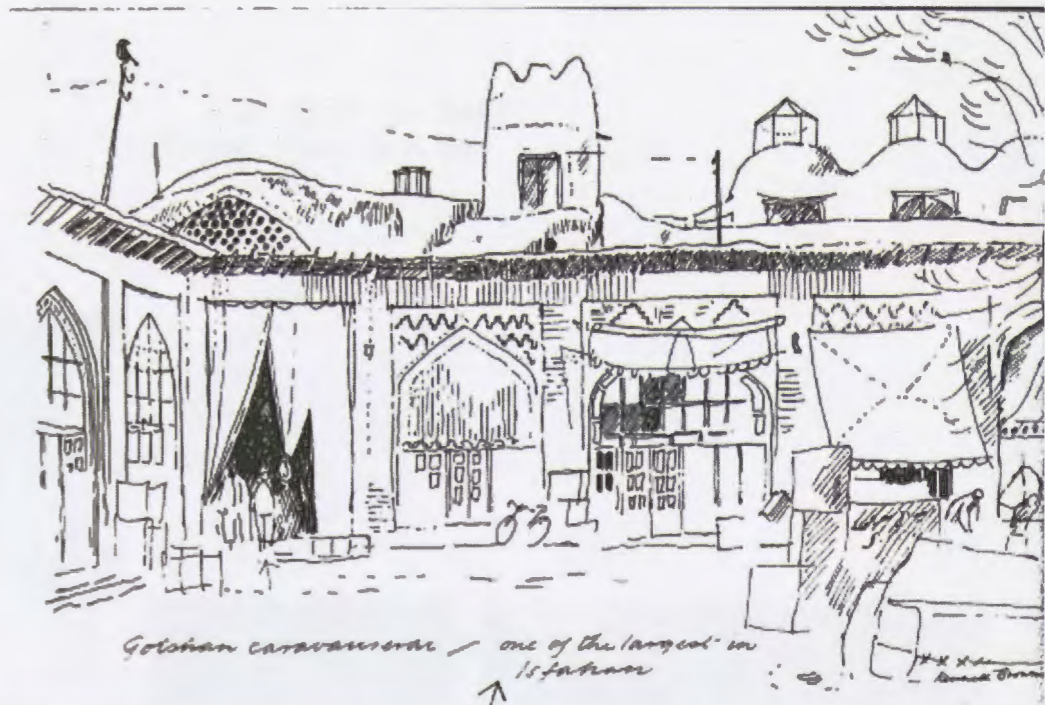
Special continuity between maqso door, rear wall of foundation room is created.

interlocking progression from individual units to neighbour groups creating public amenities

//035

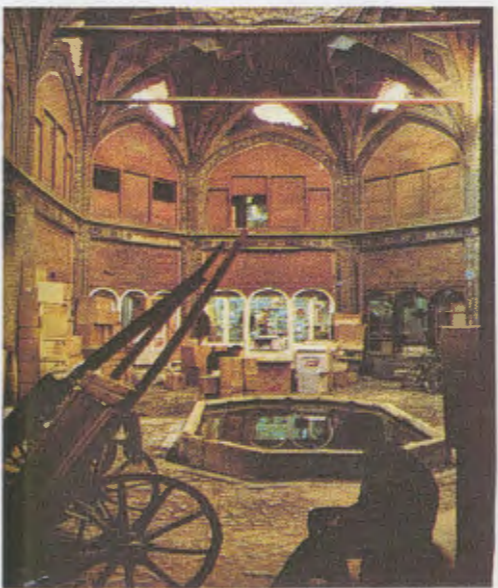
Branching from the central spine of the bazaar is an astounding variety of enclosed spaces each a separate world perfectly adapted to its purpose yet all bound to one primary system.

These punctuate the bazaar route by frequent activities not relative to the market but can be utilized.



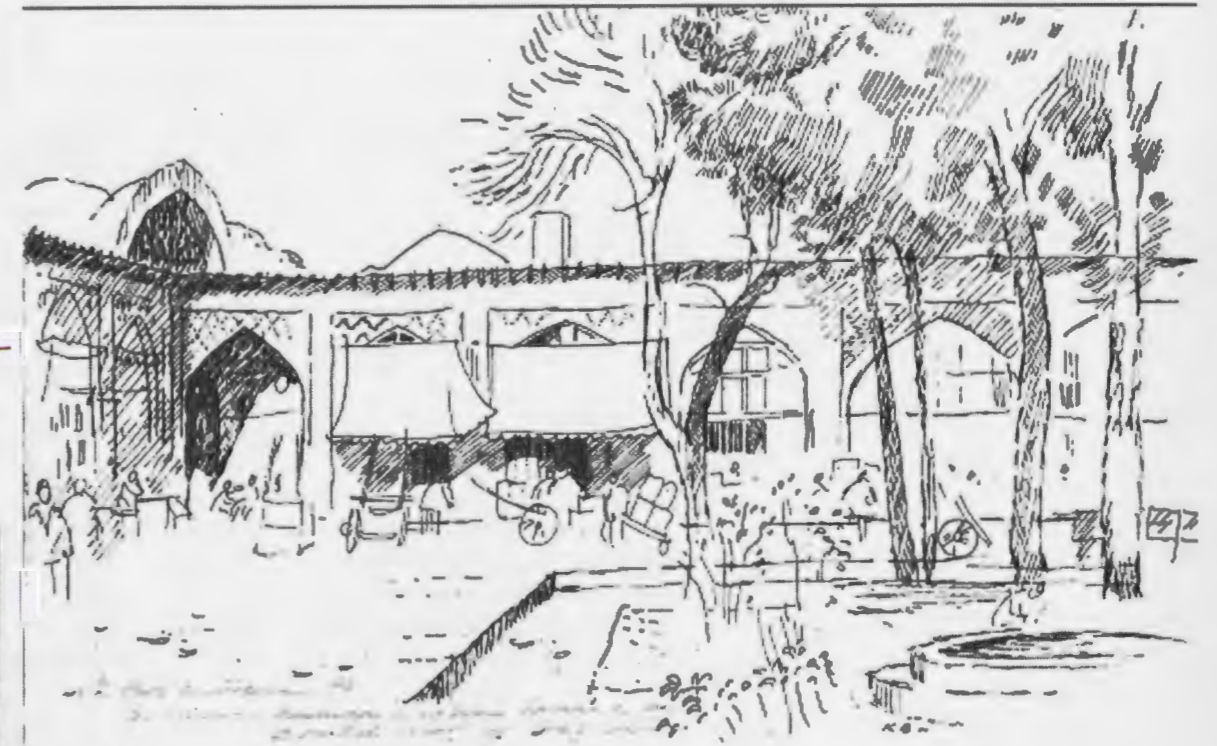
the aroma of spices, leather, baking bread, grilling meat. There are piles of scarlet pomegranates and shiny pink candy, magenta hookah pipes coiled like snakes and down a side alley drevats and lengths of fabric hung out to dry. The bazaar is an organism with a life of its own fed by supply routes extending far into the surrounding countryside. The handicrafts of distant desert villages, raw materials for manufacture in the bazaar—leather, cotton, wool, metal, skins—have for centuries arrived here in endless procession from as far away as the Caspian and Persian Gulf—they came by camel, donkey and mule train, following service roads built for their sole use between high blank walls of sun-dried brick leading direct to the serais or warehouses. Branching from the central spine of the bazaar is an astounding variety of enclosed spaces, each a separate world perfectly adapted to its purpose yet all close bound to Moslem commercial

Plan of part of the Bazaar adjacent to the Maidan (see plan for full plan).



D

streets of the city fabric
lead to the public courtyard



10

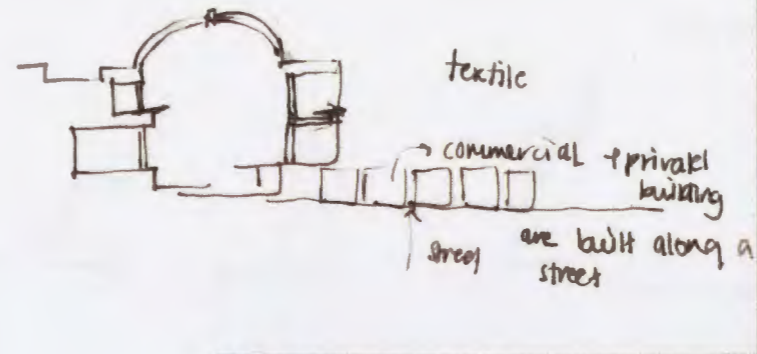


11



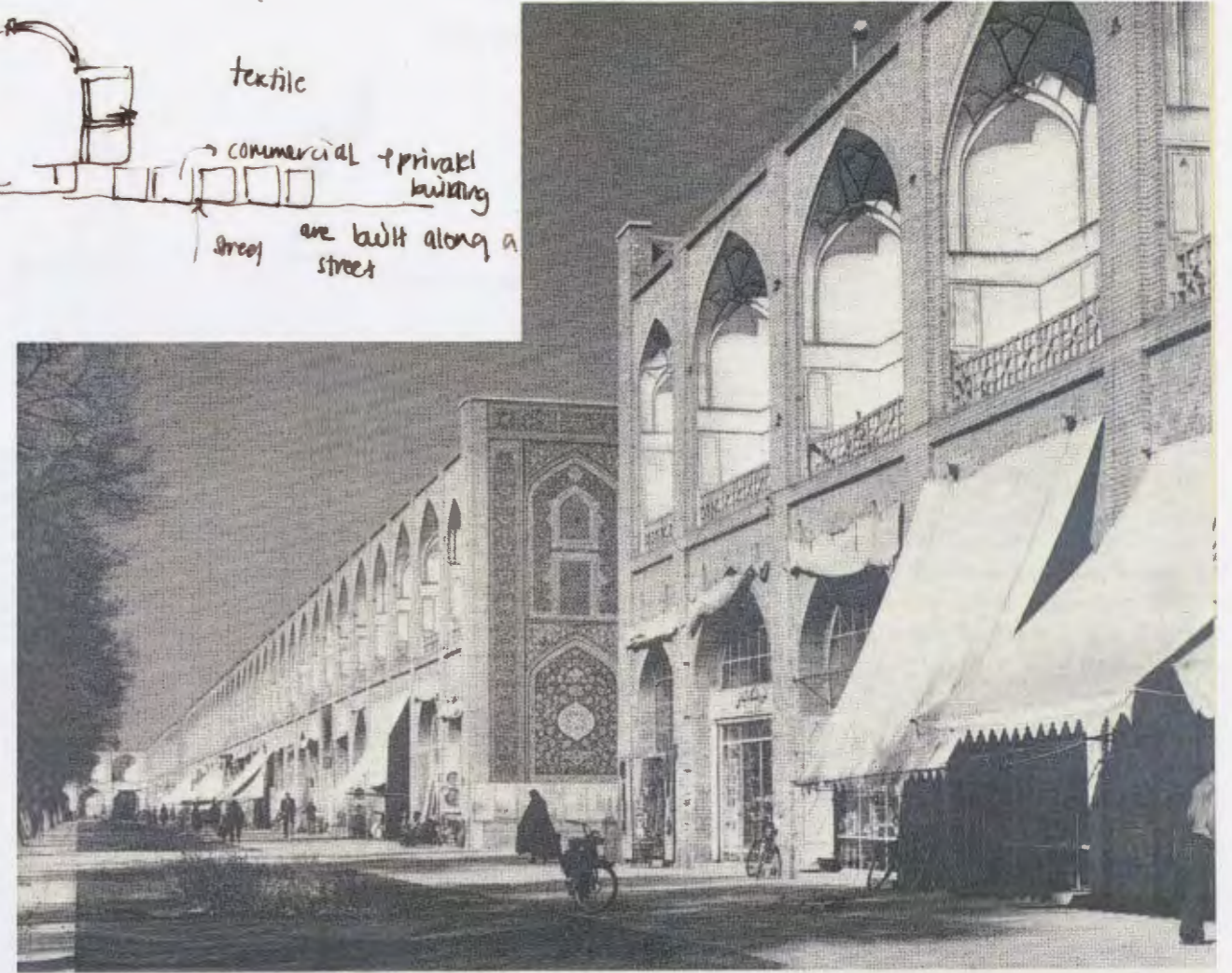
seraf is the Qavah Kashi, 12, a charming split-level building used for trading in coffee beans. Wooden columns support an upper-storey arcade and balcony, with a tiny courtyard below. At the other extreme, large serais such as Mokhles and Golsham, 8, 10, are commercial complexes round a big central courtyard with trees and a central pool. There are several entrances. Through one caravans reach the warehouses where goods are

E



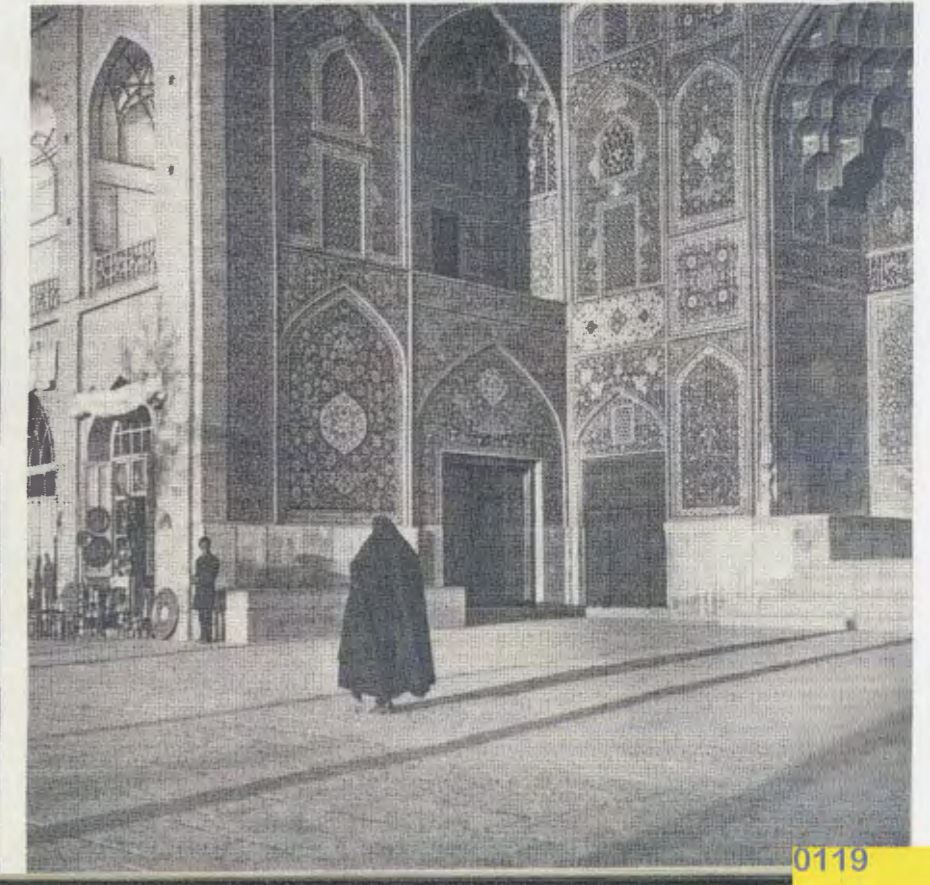
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The Commercial avenue not only extends onto the movement route but on the outskirts of the bazaar, market stalls are set up outside which open up onto the main street.

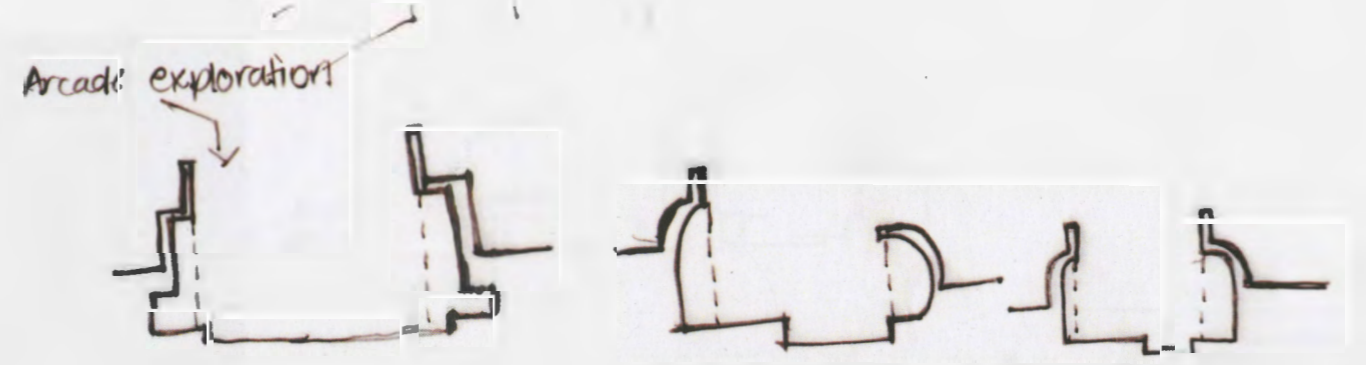


32

DAN
Looking north from the promenade round the square with the entrance to the Lotfullah mosque on the right. 30, 31, street of metalworkers on the side of the square.
Entrance to Lotfullah Mosque.



0119

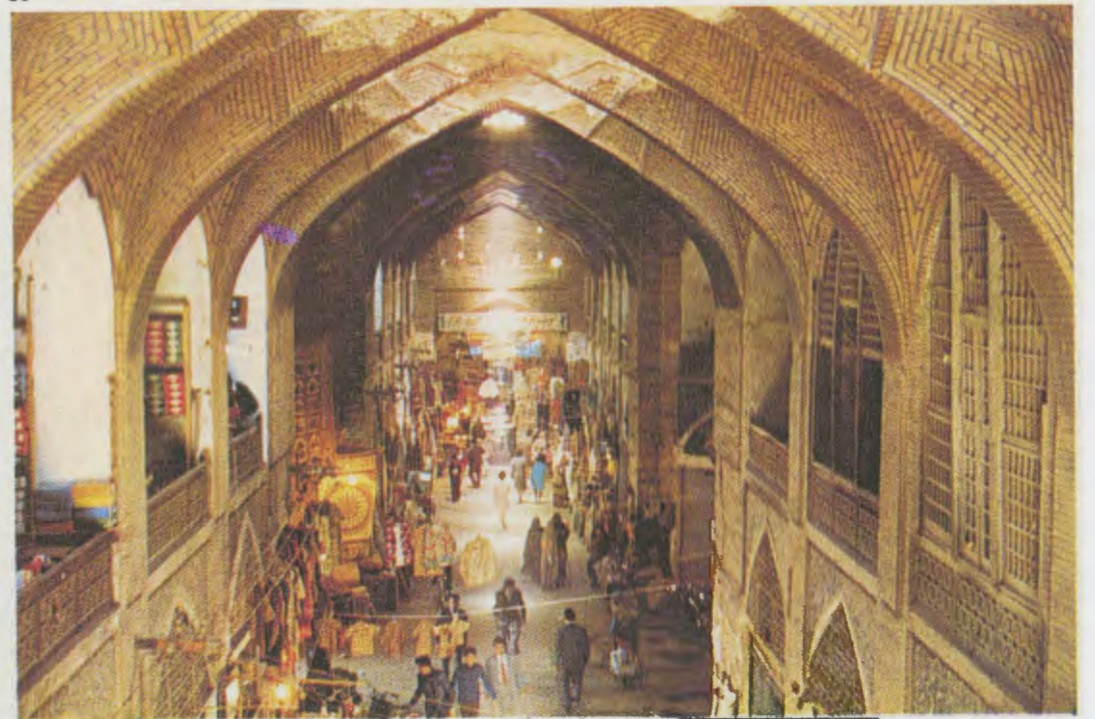


//037

The Bazaar is structured in an arcade which is much better suited for a bazaar setting. All goods are displayed in front of you as you pass by, a system which is very similar to the Salt River Market.



0120



//038

The stalls open out to the public during the day selling everything from Fruit to Jewelry. At night once the bazaar closes the stall holders retire to their private residences which is not located far from their stalls



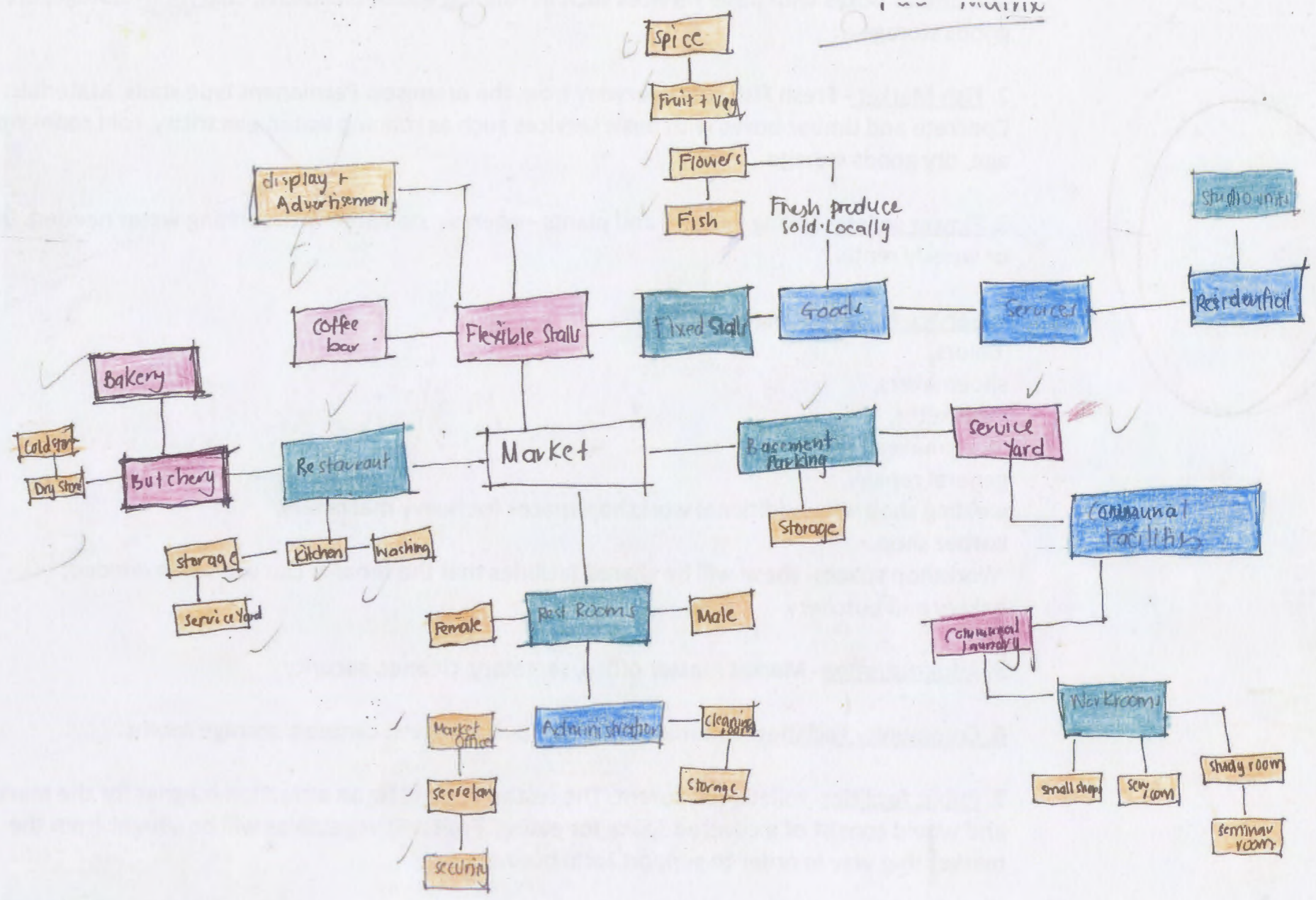
Here flowers and plants, the free shapes of nature, contrast with the formal architecture of man, with the mosque

Suitable program conversion



Space Matrix

Space Matrix



Proposed Market Activities:

1. Fruit and vegetables Market - Selling perishables..Permanent type stalls. Materials: Concrete and timber boxes with basic services such as running water, electricity, cold room storage, dry goods storage
2. Fish Market - Fresh Fish sold everyday from the premises. Permanent type stalls. Materials: Concrete and timber boxes with basic services such as running water, electricity, cold room storage, dry goods storage
3. Flower sellers- Selling Flowers and plants - open air stall area with running water needed. Daily or weekly rental
4. Service Market- Ranging from:
tailors,
shoemakers,
locksmiths,
dressmakers,
general repairs,
welding shop with additional workshop spaces for heavy machinery,
barber shop.
Workshop spaces- these will be shared facilities that the tenants can use when needed,
bakery and butchery
5. Administration- Market master office, secretary, cleaner, security
6. Community Facilities- communal laundry, public toilets, canteen, storage rooms.
7. Public facilities- toilets, restaurant. The restaurant will be an attraction magnet for the market and would consist of a covered space for eating. Fruit and vegetables will be sought from the market that way in order to support local business.
8. Residential Units- studio units, units will be available for long term lease, units can also be converted into workshop units if need be. These units are to accommodate the activities on the market.

Schedule of Accommodation:

Fruit and vegetables Market -
stalls approx. 10 stalls at 4x4m each = 160m²

Fish Market -
covered space 5 stalls at 3x4m each = 60m²

Flower sellers-
stalls approx. 4 stalls at 2x2m each = 16m²

Service Market- Ranging from:
8 Kiosk stalls at 2x3m = 48m²
6 workshop stalls at 3x5m = 90m²
2 machinery workshops at 5x7m each = 70m²
4 studio workshops at 5x 5m each = 100m²

Administration-
Market masters office at 5x3m = 15m²
Reception and waiting area at 3x4m = 12m²
cleaners room at 3x3m = 9m²
store room at 3x3m each = 9m²
caretakers flat at 7x7m = 49m²

Community Facilities-
communal laundry room at 10x10m = 100m²
toilets = ?
storage rooms at 4x3m each

Public facilities-
toilets at 3x5m M+F each

8. Residential Units-
6 units at 7x10m = 420m²
4 unit at 7x14m = 392m²
8 units at 6x6m = 288m²

9. Basement Parking-
147 parking bays at 2.5x 5m each = 1837.5m²

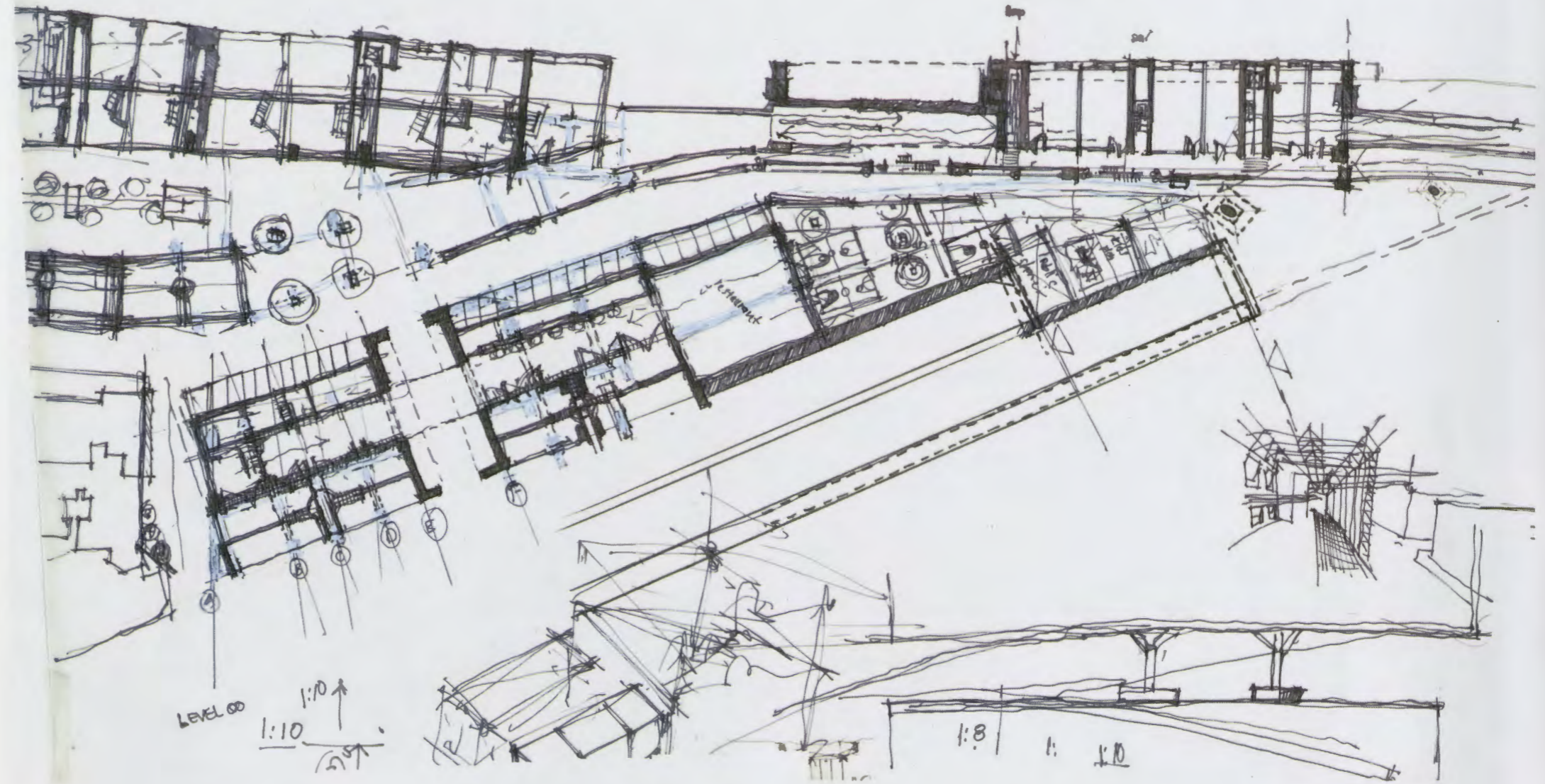
F
making...

making.

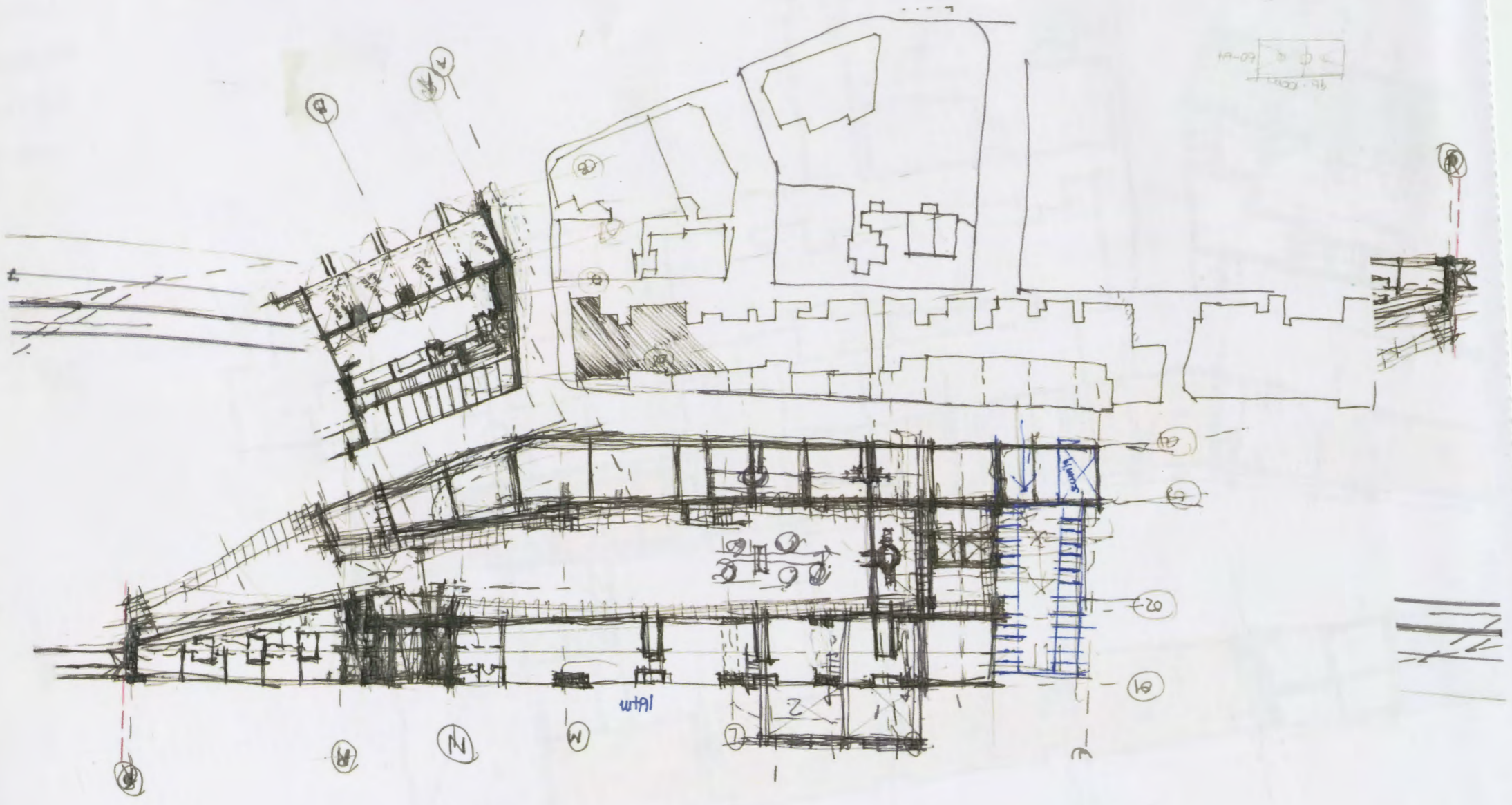
Chapter 3 of this thesis designed a set of principles that I believe begins to contribute to making the market a social institution for the local community. The organized spaces are based on principles which include facilities that are clustered together so that the site begins to serve as a multi-functional domain rather than singular, which it currently houses.

06. Design Development

Sketch plans



Sketch plans



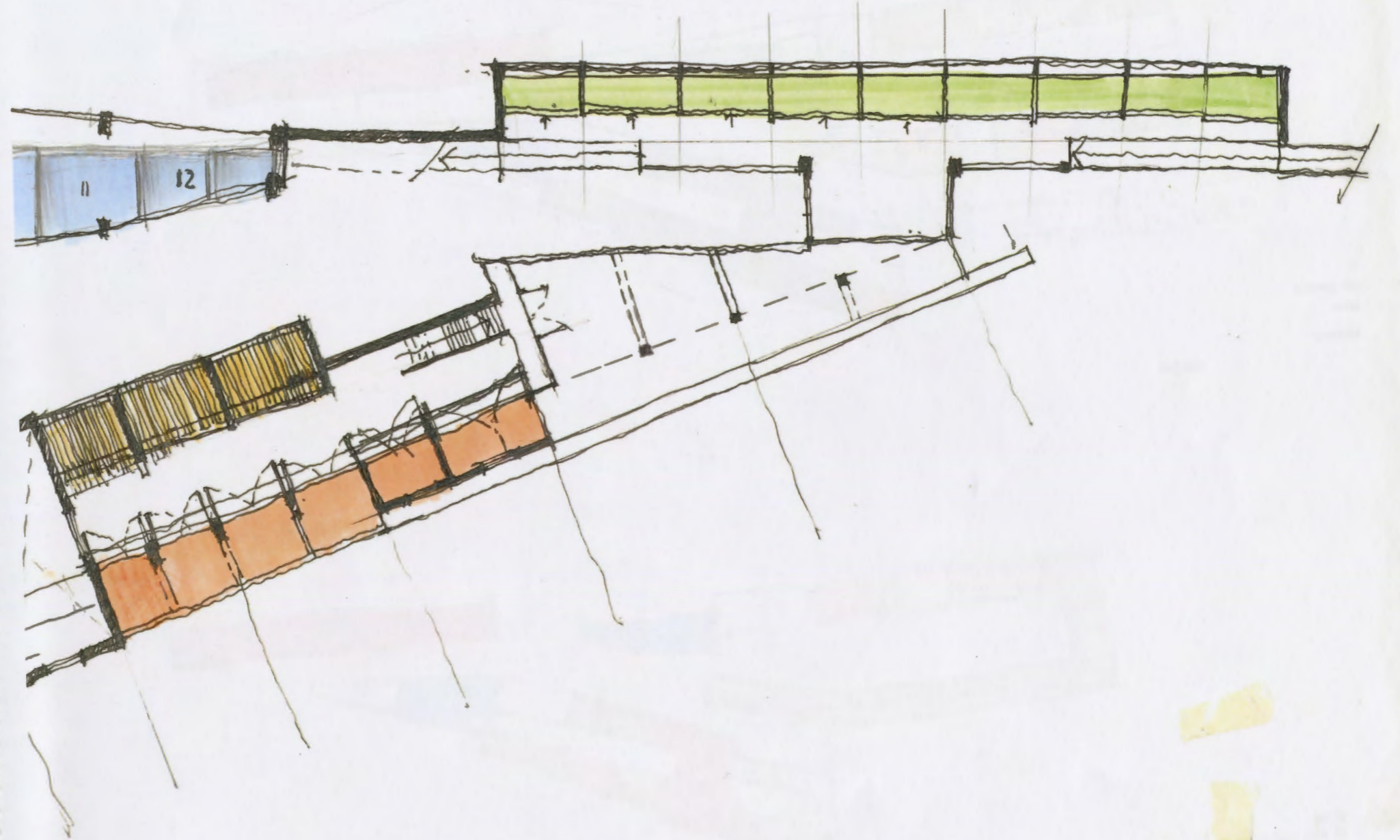
Sketch plans



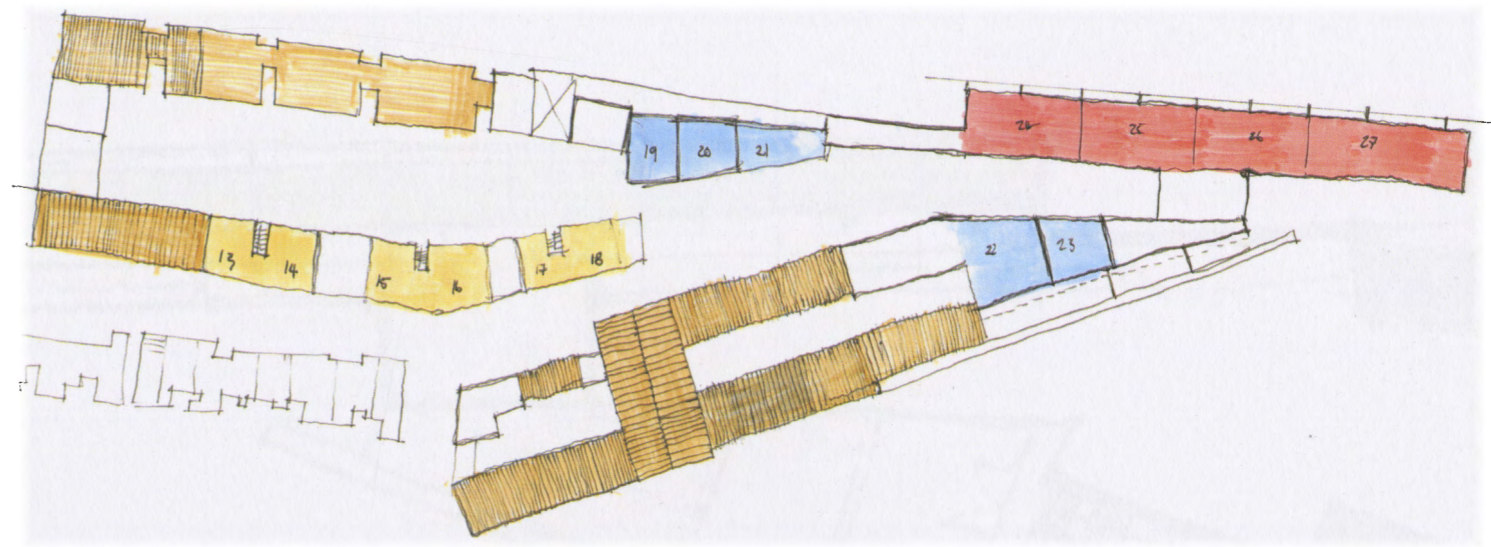
- Root
- Studio
- Office
- Stall

LEVEL ONE

Sketch plans

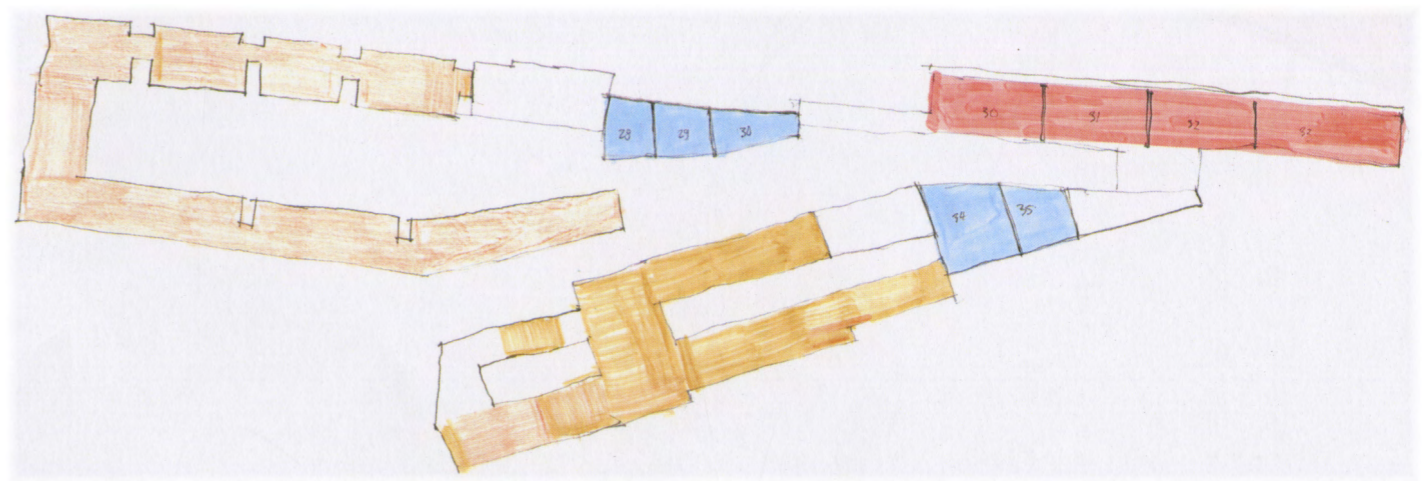


Sketch plans



of
two apartment
bedroom
bedroom

LEVEL TWO



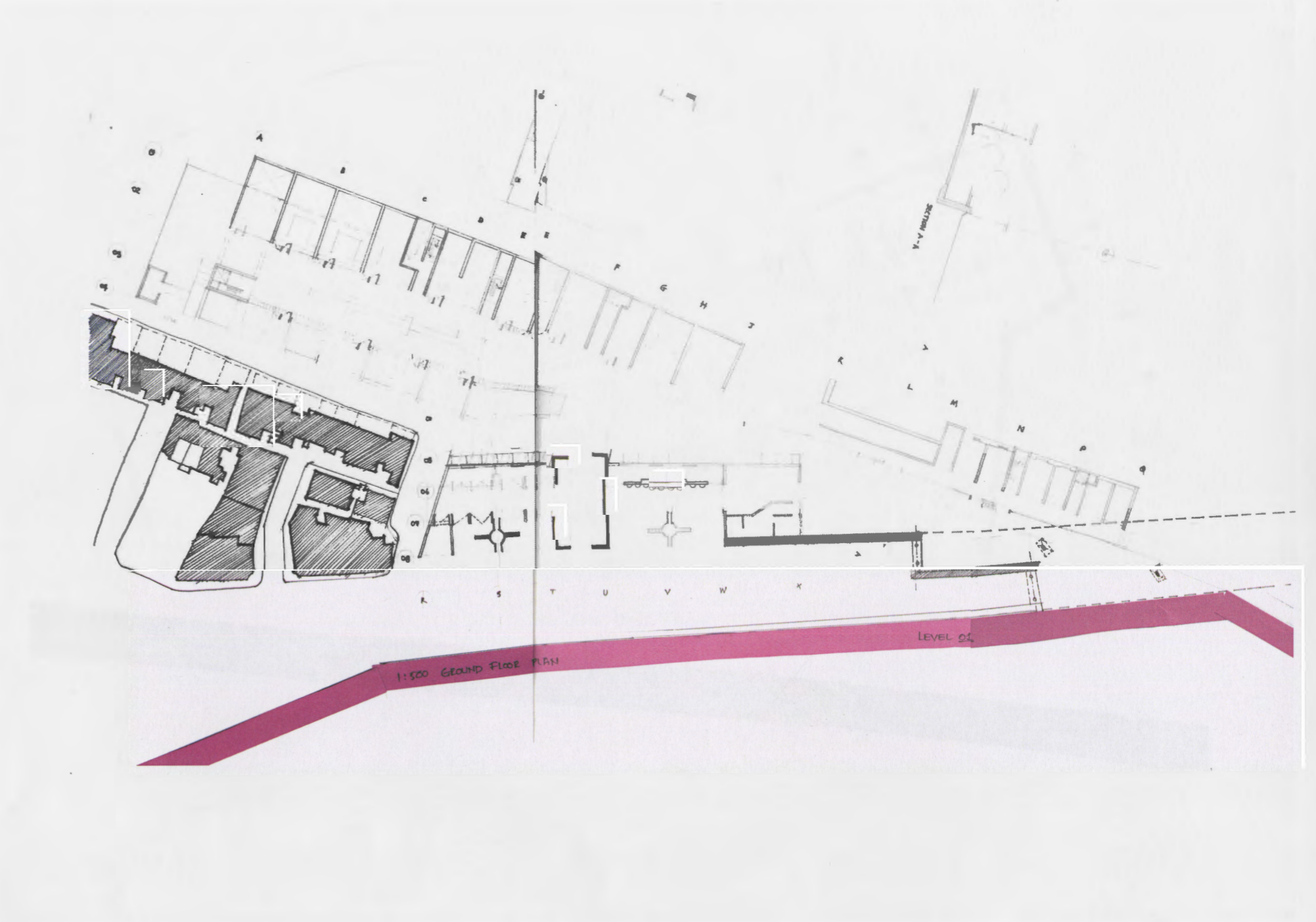
□ Roof
□ studio apartment
□ 1 bedroom
□ 2 bed room

Final sketch Plans_Level 00 Basement Plan

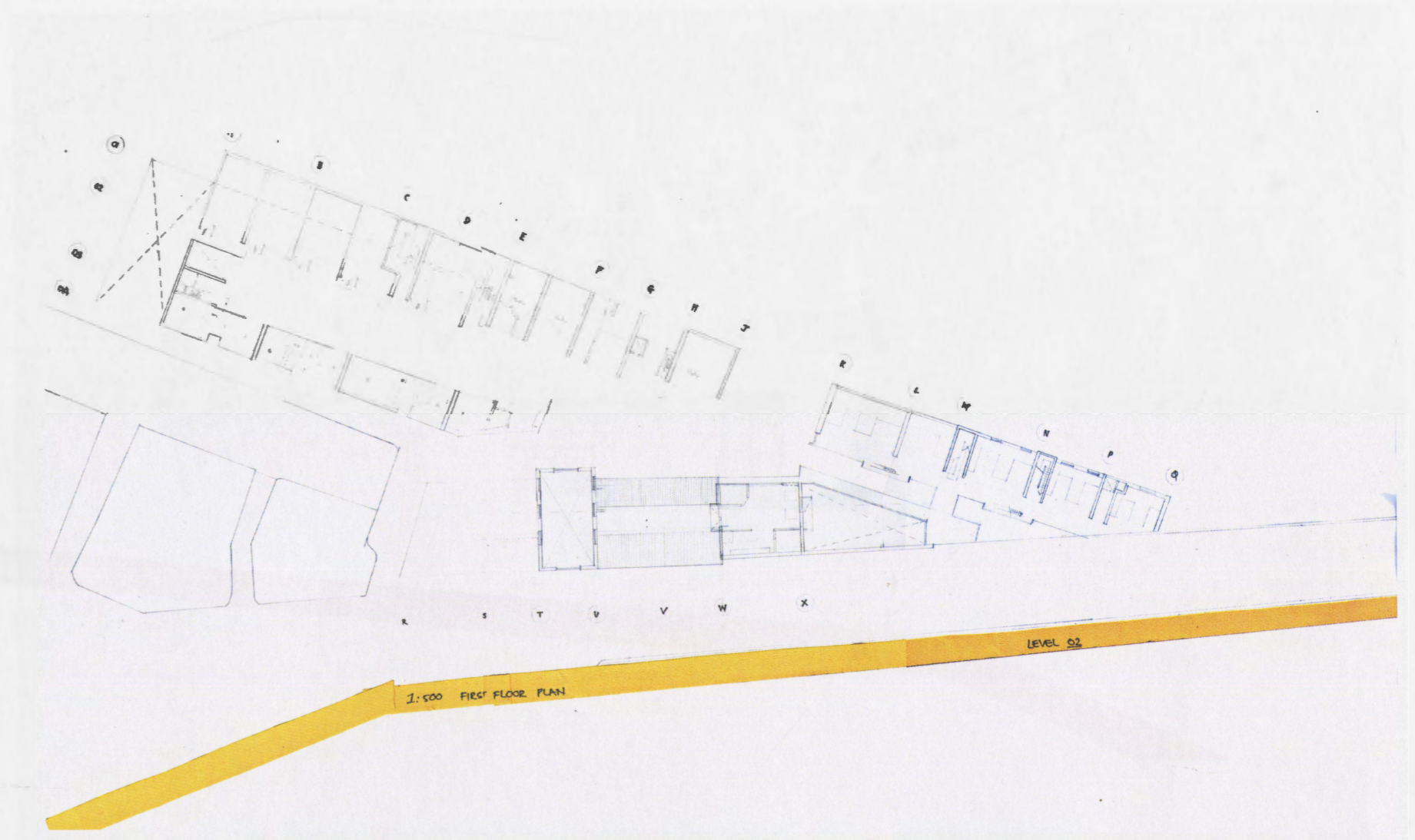


Basement Plan LEVEL 00

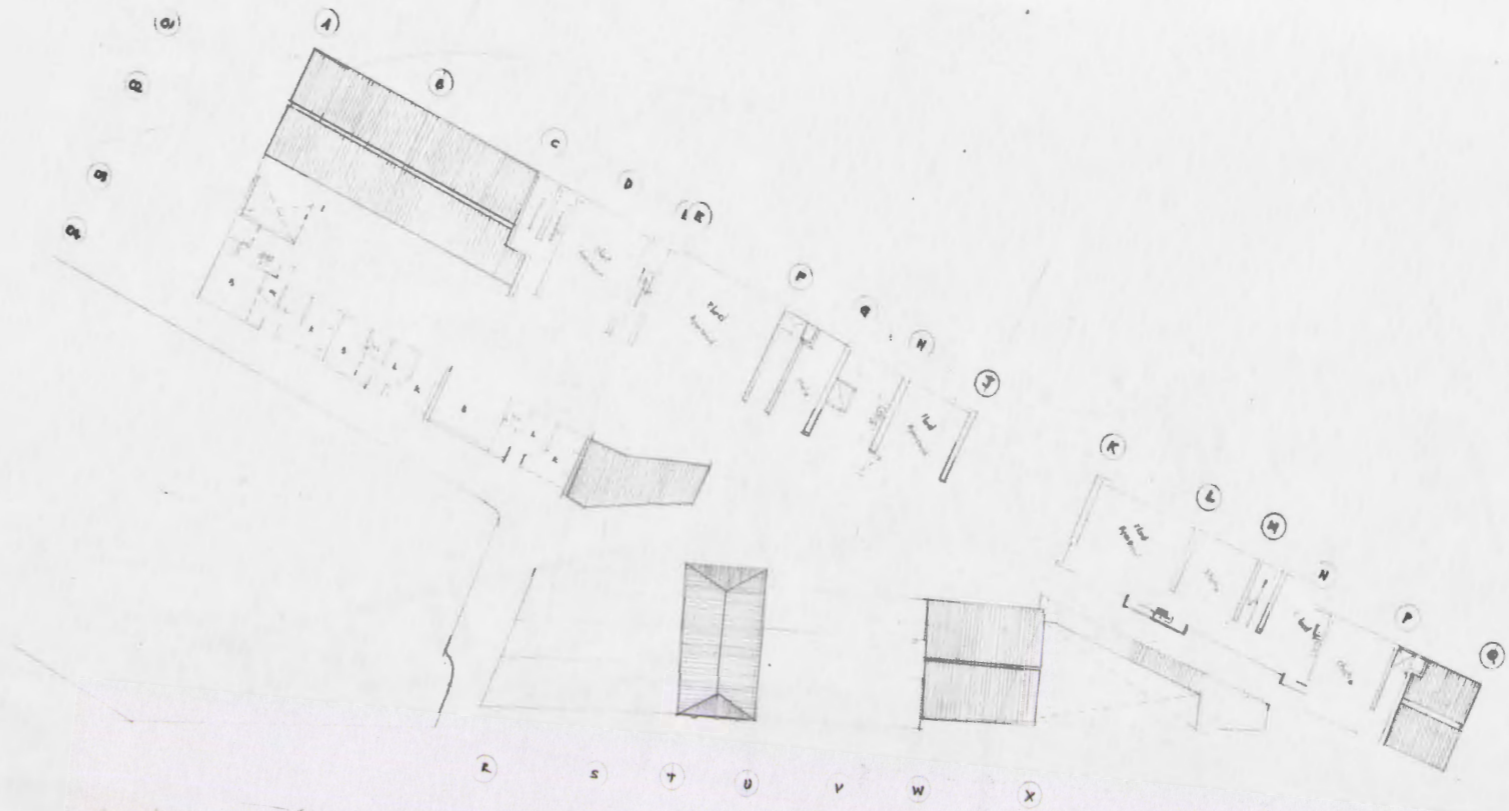
Final sketch Plans_Level 01 Ground Floor Plan



Final sketch Plans_Level 02 First Floor Plan



Final sketch Plans_Level 03 Second Floor Plan

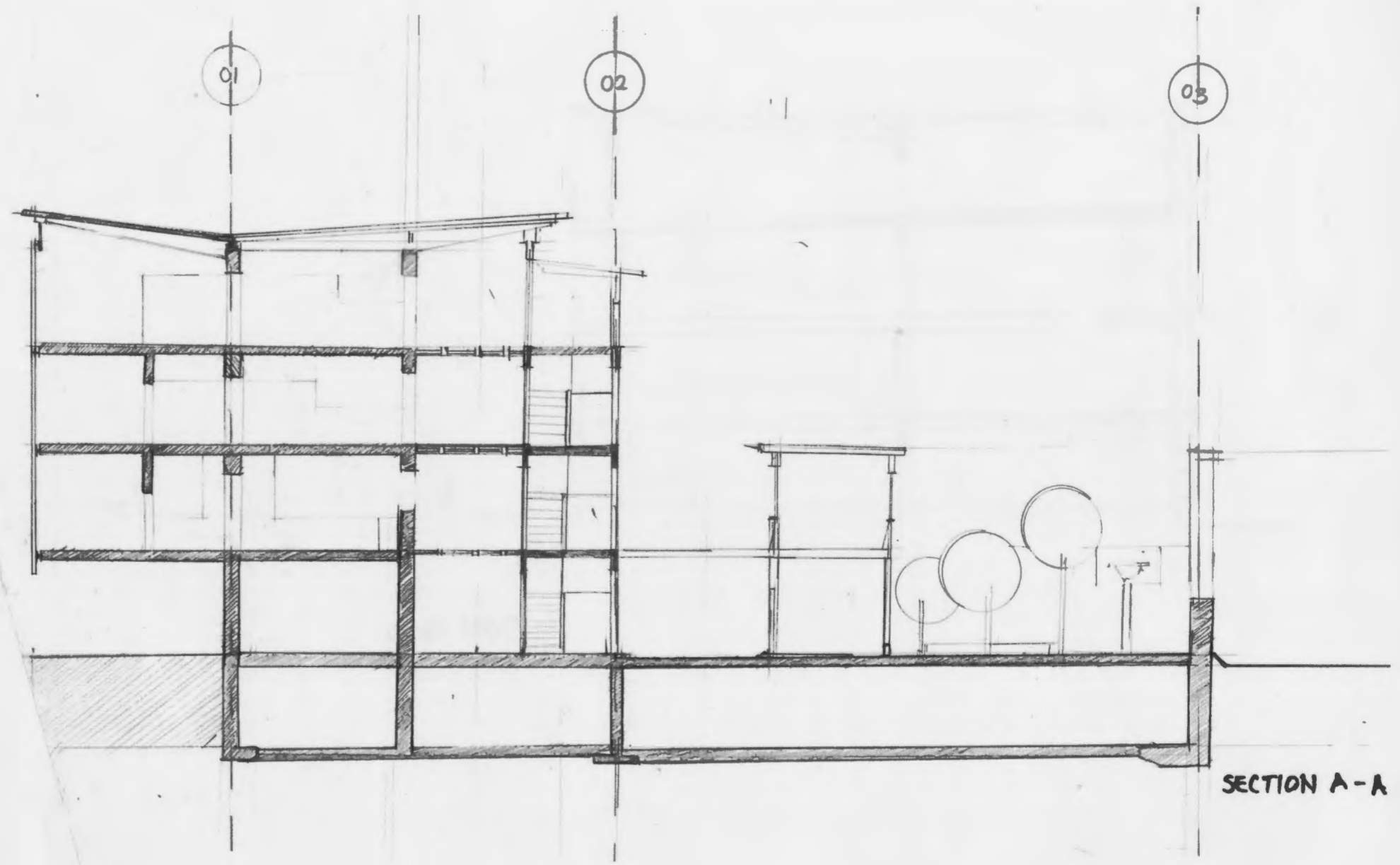


1:500 SECOND FLOOR PLAN

LEVEL 03

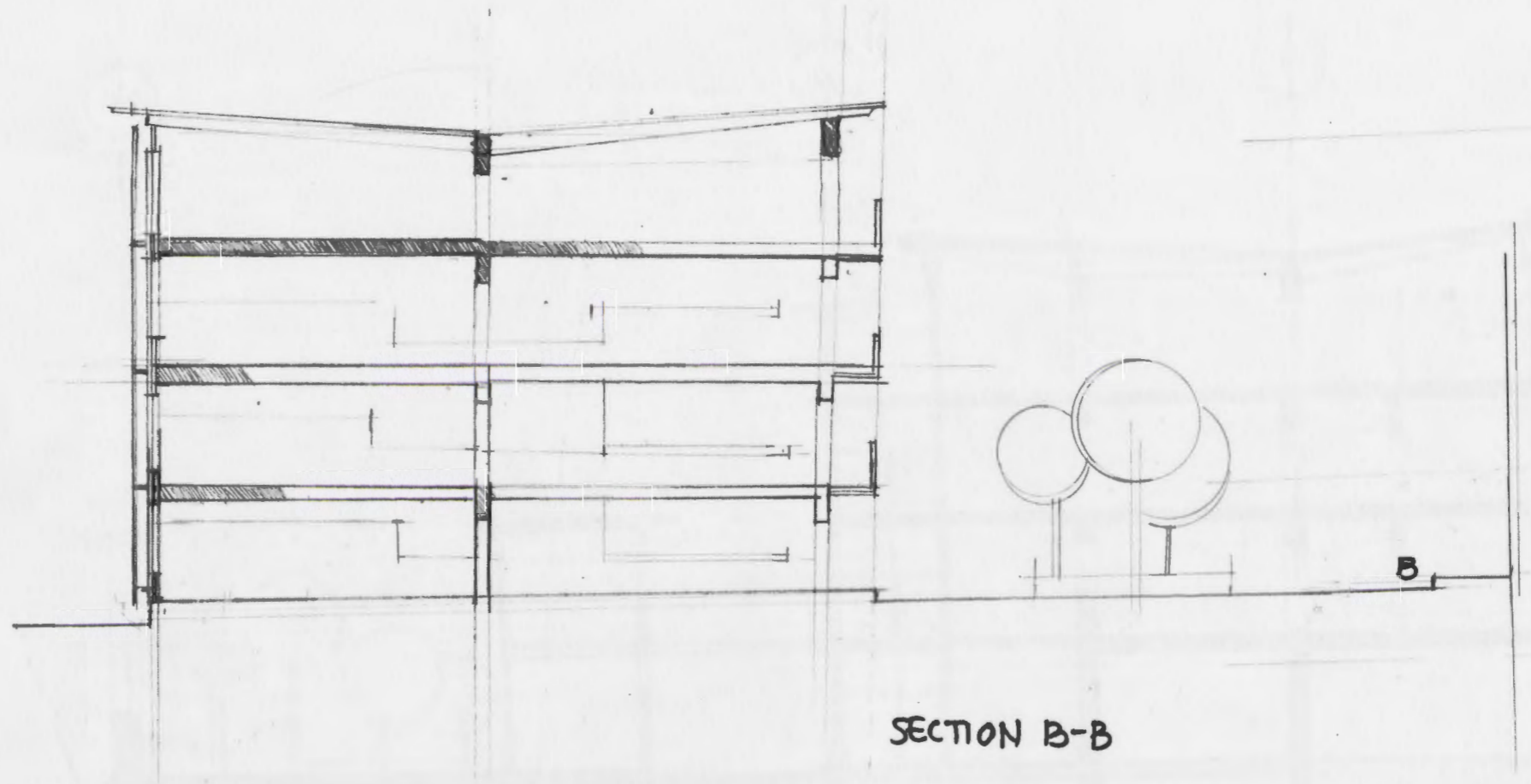
0136

Final sketch Plans_Section a-a



SECTION A-A

Final sketch Plans_Section b-b



SECTION B-B

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