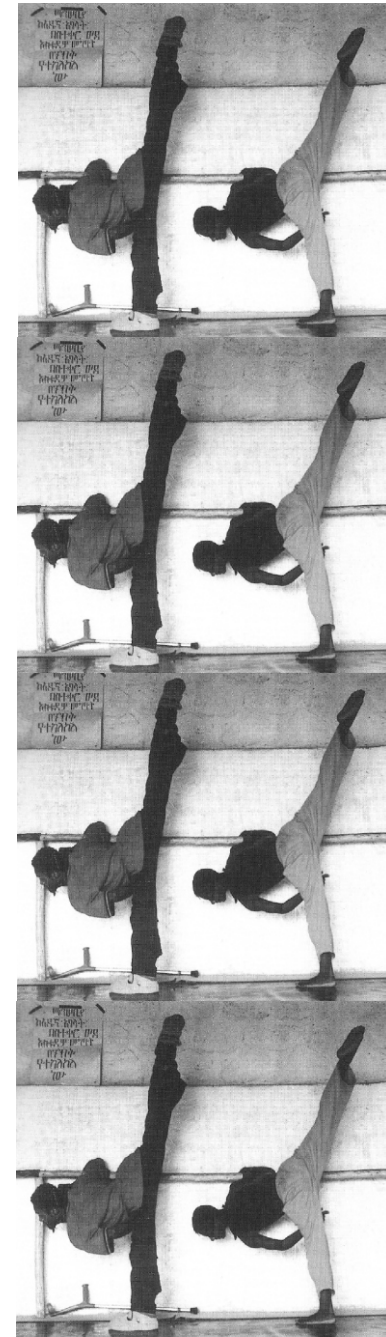


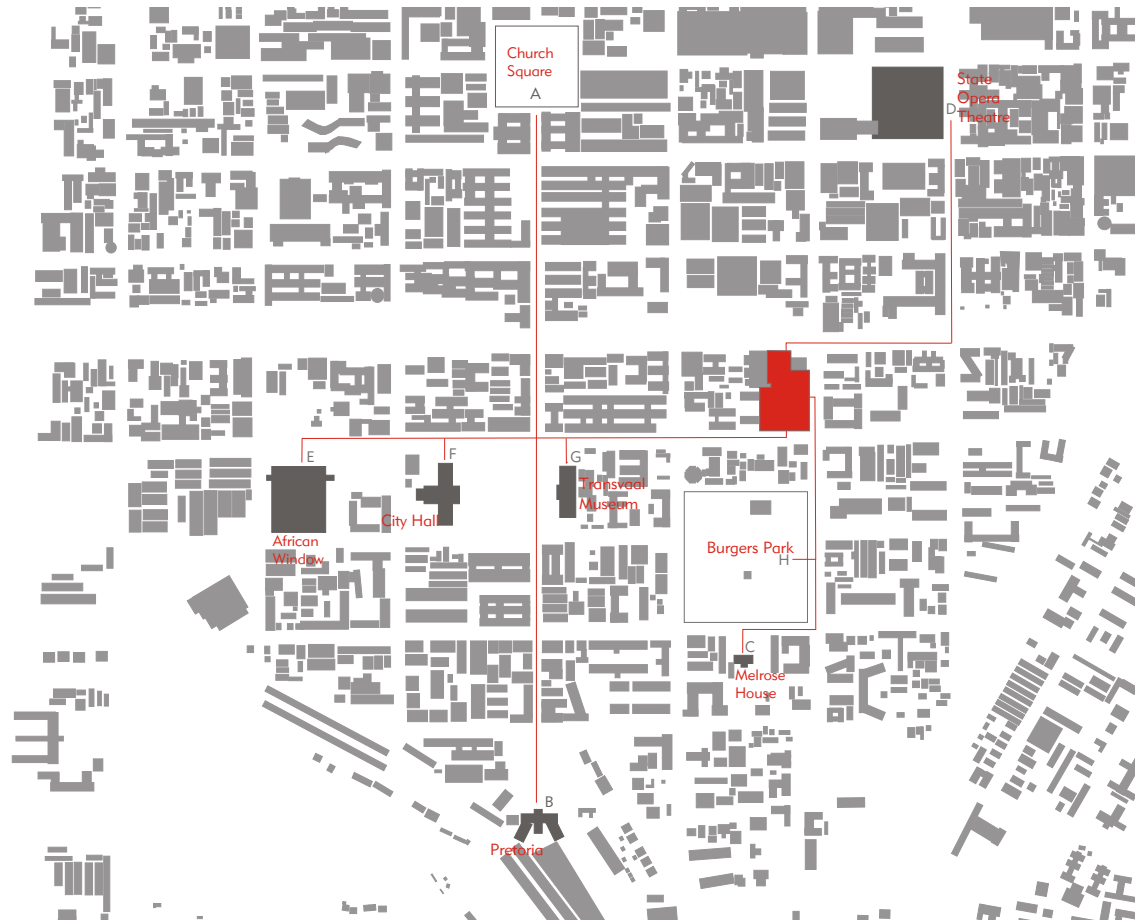
development framework



Development framework

To start of the design process after the completion of the brief a master plan needs to be set. At its simplest level the task requires the positioning of each building as a part of a plan on site, showing where each should be constructed. At its most complex, involves a theory of design composition that includes a hierarchy of ideas and elements that can be used to create concepts representing development frameworks, which in turn illustrate a particular set of functions and attitudes of part of a society's habits and culture (Billings, K, 1993; 1).

The system with its surroundings is taken apart in order to explore the relationship between hard and soft edges, hard and soft open spaces, vehicular and pedestrian spines as well as pedestrian links. The relationship and linkage of the site to nearby important vehicular routes and significant buildings are analysed by using a method suggested by Bentley in Responsive Environments.



A	B	C	D	E	F	G	H
6	6	5	4	4	3	2	2
Least	←	Connected	→	Most			

Analysis of links connecting the site to the city as a whole

University of Pretoria, etd - Human, M (2003)



5|2

A	B	C	D	E
1	1	1	2	2
Most ← Direct → Least				

Analysis of links connecting the site to its immediate surroundings

The starting point for a permeable development framework is the existing system of links into and through the site from the surrounding areas. Permeability is important at two scales:

- links which connect the site to the city as a whole
- links which connect the site to its immediate local surroundings

University of Pretoria, etd - Human, M (2003)

Site analysis



Soft open spaces



Hard open spaces



— Hard edges
- - - Soft edges



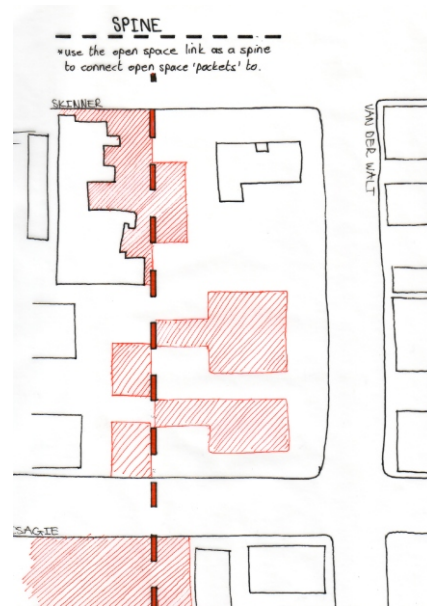
- - - Pedestrian link



— Main vehicular spine
- - - Main pedestrian routes



Vehicular traffic spines (directions indicated by arrows)



The 'spine' connecting Burgers Park with the Skinner Street Boulevard form the most important ordering element.

Problems:

- medium density
- lack of institutional facilities
- safety
- integration between sites
- provision for pedestrians
- lack of social gathering space
- public transport facilities

5 | 4

Objectives:

- a safe environment
- public access to and from site
- sustainable urban development
- mixed land-use
- sense of place
- cultural diversity
- recreational facilities
- social gathering spaces
- pedestrian friendly walkways
- adaptable multi-functional spaces
- parking facilities
- public square
- dense spaces
- educational facilities

Needs and requirements:

- institutional facilities
- integration and overlap of activities
- provision for pedestrians
- convenience and opportunity
- vibrant local economy
- eyes on the street
- visual and physical linkages
- linked soft open spaces
- comfort: noise, climate
- diversity of uses
- public spaces

Vision:

- liveable, clean, safe and welcoming
- urban diversity
- pedestrian centered, accessible and celebrating cultural diversity
- a vibrant 24 hour place

The following urban design ideas, as formulated by Bentley in Responsive Environments, will be used:

- ensure visual as well as physical permeability
- create alternative public routes
- create as many as possible entrances from the public space
- use existing links with immediate surroundings to connect the site to the city
- use existing links with main roads to establish routes on the site
- provide parking and public transport to attract large numbers of pedestrians
- locate shops close to main pedestrian flows
- make the building legible for pedestrians
- give each path a different character
- locate active areas on ground floor and first floor

Site specific principles:

- where privacy and security permit, the building must allow the passer-by to see the activities inside
- the above mentioned animated edges is especially important on ground and first floor on the facades adjacent to movement spines
- street furniture appropriately placed and arranged in a regulated manner in relation to other streetscape elements in Museum Park

University of Pretoria, etd - Human, M (2003)

- tree-lined (deciduous trees) paths and pedestrian routes to protect pedestrians from direct sunlight
- external pause areas and waiting areas should provide protection against direct sun, rain and wind
- create pedestrian friendly edges to the space
- thresholds should be created between public, semi-private and private spaces
- create a humanist relationship between interior and exterior
- provide building set-backs at building entrances where high volumes of pedestrians can be expected
- the façade should respond equally well to the street and the occupiers on the inside
- the façade should also be influenced by external factors such as the sun and noise as well as by the use on the inside
- windows should be designed to promote informal surveillance on the street and open spaces
- material selection and detail are very important on ground floor level where people come in contact with the building
- the buildings should be robust so that future changes can be accommodated comfortably
- make provision for handicapped people
- create narrow shop units on ground floor level which can be surveyed internally
- use building elements that will assist surveillance on streets, like balconies
- secure clear pedestrian sightlines on ongoing vehicular traffic at pedestrian crossings
- calm traffic speeds at 40km/h at places of pedestrian crossing

The two elements that are initially used to create a plan are firstly the forms representing buildings, functions and spaces and secondly lines or bands representing movement patterns and sight lines. Forms can be either genetic or generic in origin, and can be strung together or connected. The term movement patterns in this case describe the system of paths, corridors and stairs that provide access for people and goods through the site and buildings. Movement patterns should be calculated and designed according to their needs based on functional relationships and volumes of movement. In these early stages, vertical movement should already be considered as an element as important as horizontal movement. The above-mentioned elements together forms an essential part of the development framework.

The majority of master plans should be designed (because of their likely physical impact by definition) on the basis of a program/brief that recognises community responses and where the planning, design, and construction process (phases) all allow for dialogue with the community during each stage of the development (Billings, K, 1993; 18). Because this discourse is about making an attempt to contribute to the urban domain, renewal and vitality of the Berea precinct the development is driven by context; sociological, physical and hypothetical. According to Dewar and Uitenbogaart in their book, *South African Cities: a Manifesto for Change*, urban spaces should be designed to contain a variety of overlapping conditions and activities, in order for them to provide the opportunity for the spontaneous and unexpected to occur.

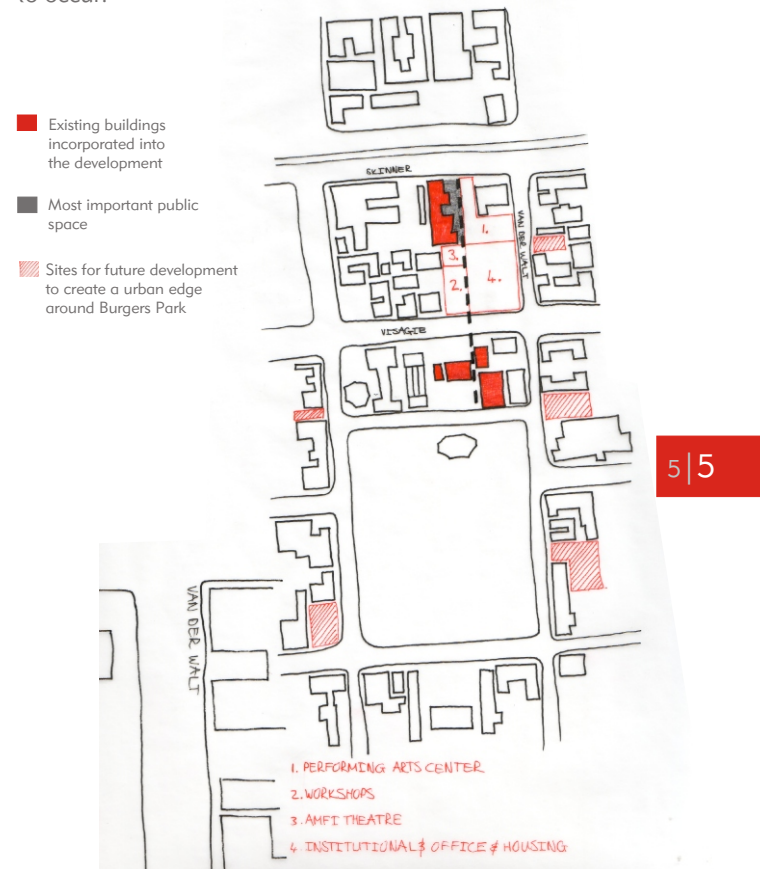
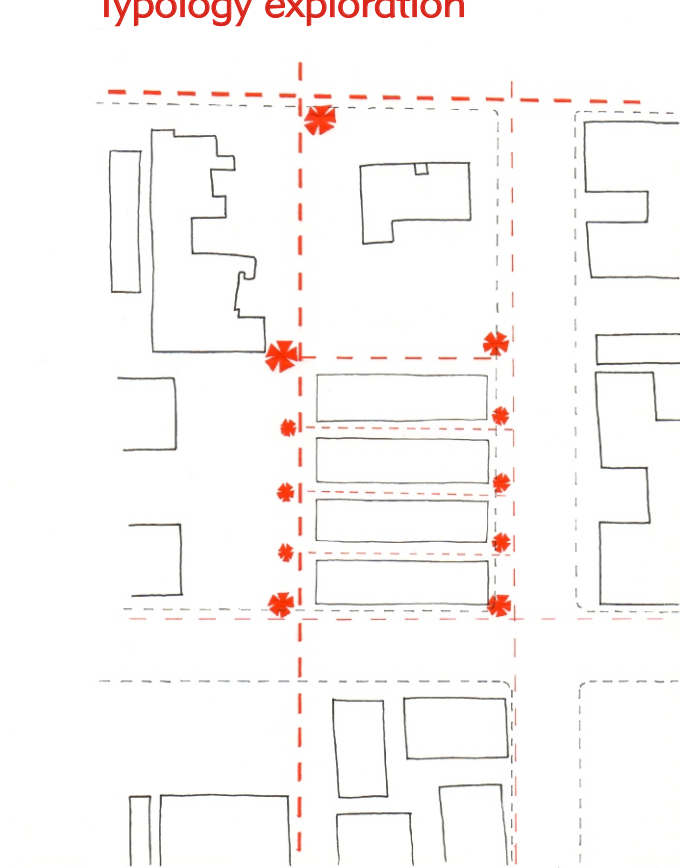


Diagram indicating all proposed and new infrastructure incorporated into the development framework.

Typology exploration



5|6 1

Fine grain response







Advantages

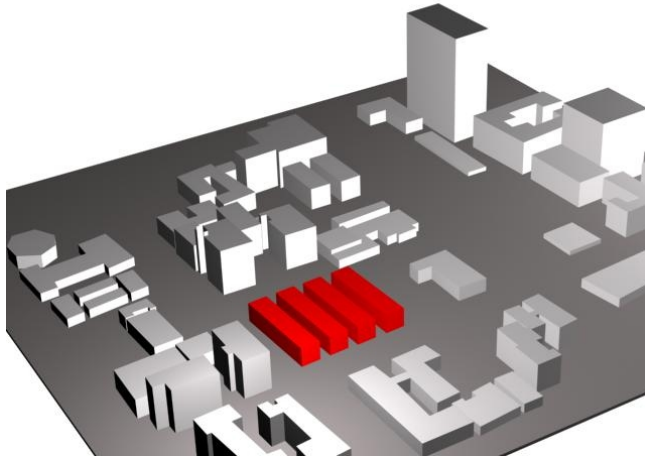
- good pedestrian penetration from Van Der Walt Street
- street edge on Visagie Street
- legibility
- visual permeability in the east west
- alternative routes
- narrow shop units
- width 9-14m
- 4 storey walk-up buildings

Disadvantages

- lack of animated edges
- orientation
- lack of public space "pockets"
- lack of thresholds
- no defined entrance
- little integration and overlap of facilities
- little diversity
- no street edge on Van Der Walt Street

Key to typology exploration diagrams

- | | |
|--|---|
|  Primary node |  Primary route |
|  Secondary node |  Secondary route |
|  Small node |  Private route |



2

1 2d fine grain exploration
2 3d fine grain mass exploration

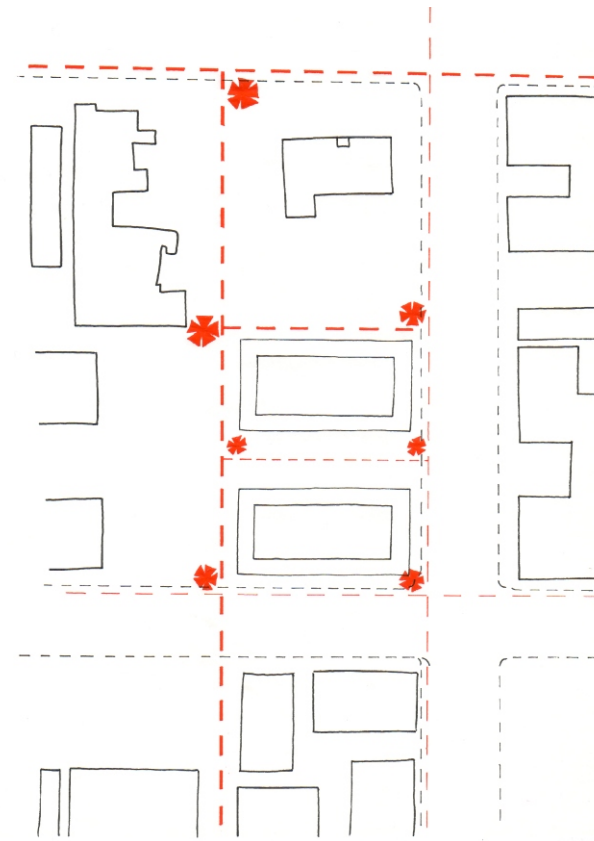
Podium response

Advantages

- visual permeability
- street edge on Visagie Street
- legibility
- high density
- relationship with other apartment buildings

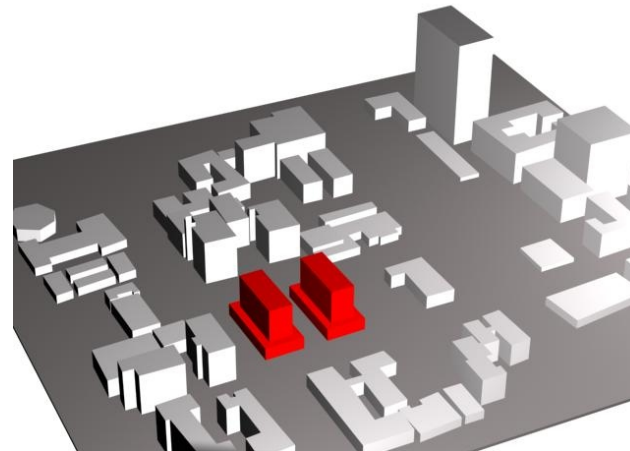
Disadvantages

- lack of public space "pockets"
- vertical circulation - elevators
- width - more than 14m
- orientation
- lack of alternative routes
- little diversity



1

5|7



2

- 1 2d podium exploration
- 2 3d podium mass exploration

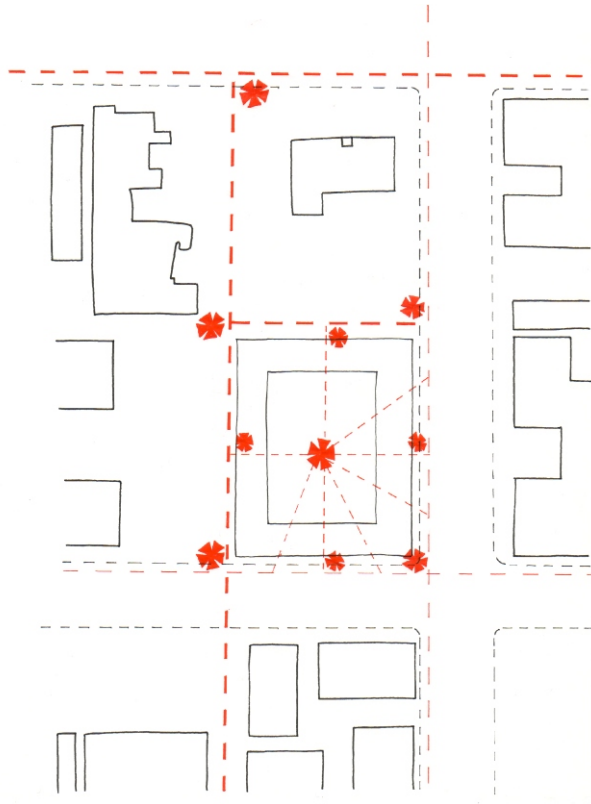
Courtyard response

Advantages

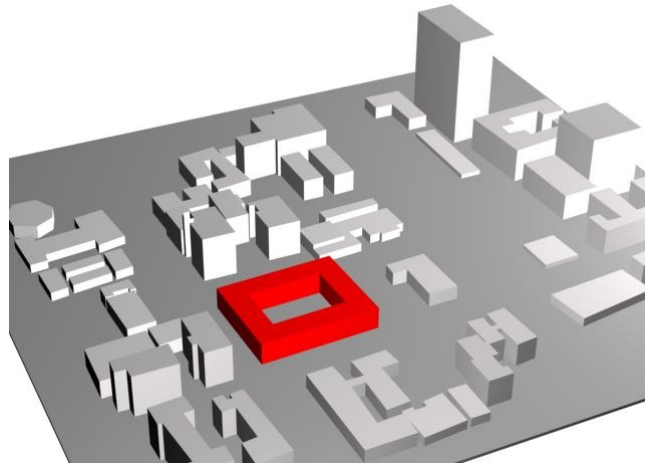
- street edge on Visagie and Van Der Walt Street
- 9-14m width
- 4 storey walk-up building
- legible
- animated edges
- well defined public space "pocket"
- integration and overflow of activities
- orientation
- thresholds

Disadvantages

- visual permeability
- diversity



5|8



2

1 2d courtyard exploration
2 3d courtyard mass exploration

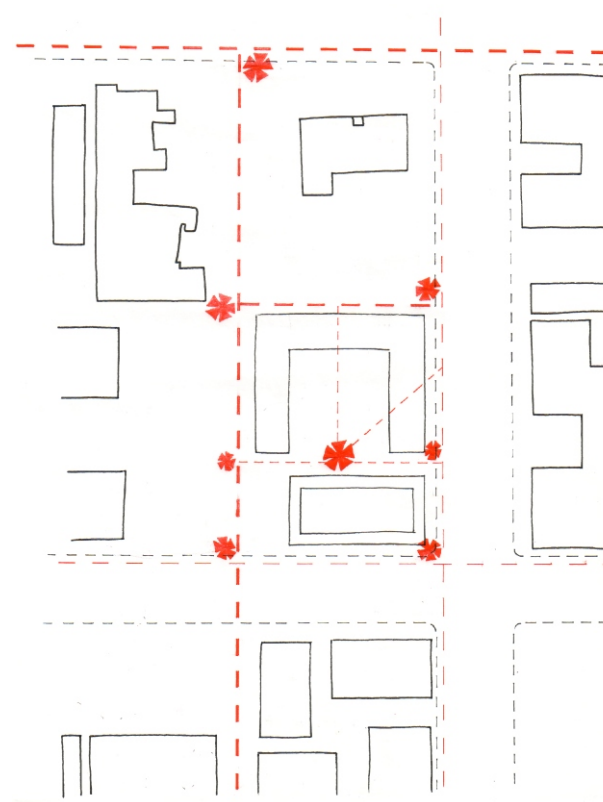
Combination response

Advantages

- visual permeability
- street edge on Visagie and Van Dr Walt Street
- 9-14m width
- 4 storey walk-up building
- high rise
- orientation
- integration and overflow of activities
- public space "pocket"
- diversity
- animated edges
- thresholds

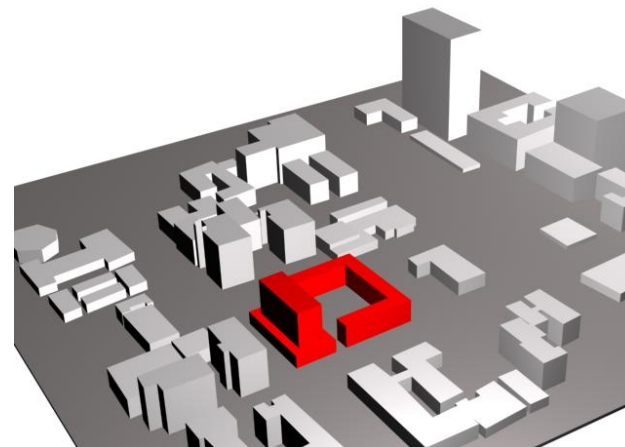
Disadvantages

- vertical circulation
- alternative routes



1

5|9

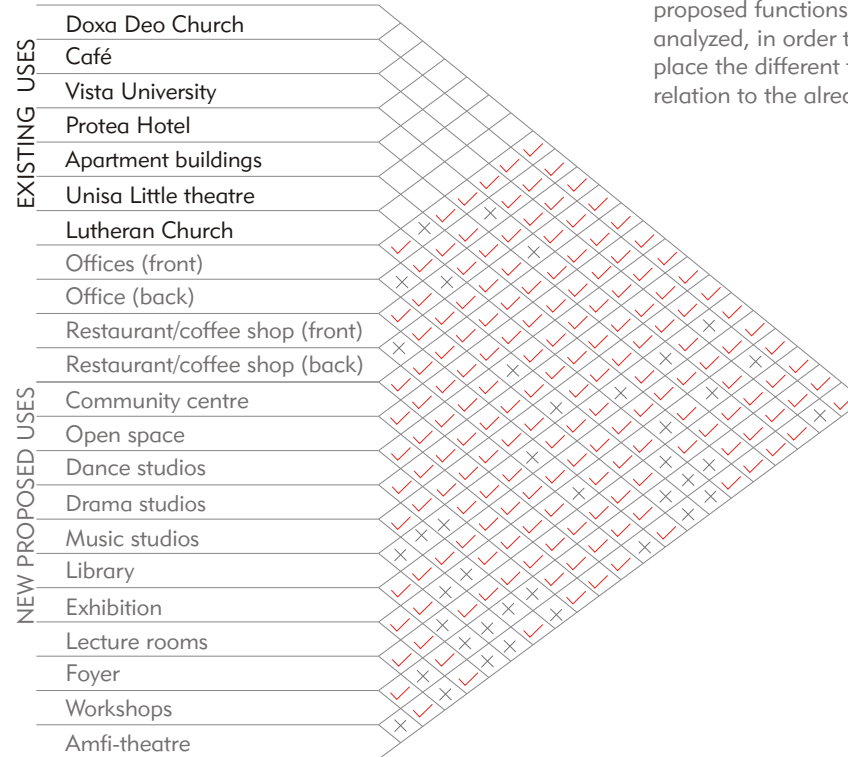


2

1 2d combination exploration
2 3d combination mass exploration

Final 3d exploration

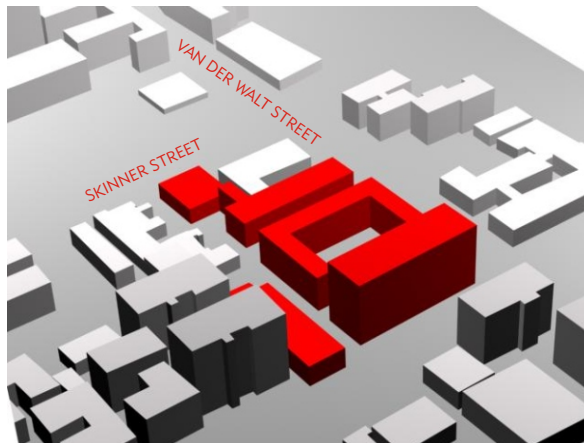
Relationship between existing and new uses:



Functional factors like noise or traffic generation by the uses of already existing structures as well as new proposed functions have to be analyzed, in order to decide where to place the different functions in relation to the already existing.

5 | 10

1



2

After the above proposal for functions and spaces needed in the development, it is important to realise that on master plan level a high level on contiguity and flexibility is needed. Firstly because other designers will probably do the detail design of the different buildings, and secondly because buildings usually outlive their functions. Elements like movement patterns will be set, but elements like buildings and to a lesser degree public and private spaces should only have guidelines so that a certain degree of change can be accommodated.

1 Matrix indicating compatible functions
2 3D exploration, indicating all proposed buildings in red