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FRAMEWORK





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05

CHAPTER 5 FRAMEWORK

5.1 MACRO SCALE

An initial study of the broader context was undertaken by the inner city research groups.

This entailed the study of existing frameworks that could impact on both the individual study areas as well as the CBD as a whole.

The 7 precincts outlined in the “Re Kgabisa Tshwane” Framework was used to divide the group into smaller focus areas where a more detailed proposal for each would be undertaken.

A set of broad guidelines called React & Reinterpret (Group Framework) was agreed upon to ensure that each individual focus group would be working towards a single vision for the inner city area.

REACT & REINTERPRET

(GROUP FRAMEWORK)

The proposed group framework is based on the concept of reacting to current urban issues by reinterpreting the existing context.

FRAMEWORK MANIFESTO:

- Superimpose a reactive layer on the city.
- Use the existing city as a canvas for reactive design resolutions.
- Not imposing ideology but rather proposing new possibilities,
- Reacting to contextual issues such as:
 - *In-between Conditions*
 - *Stylistic homogeneity/insularity*
 - *Indeterminate space*
 - *Legibility | Identity (cohesion in the detailing | Subtle ordering of Chaos*
 - *Planning precedents (what came before e.g. “Ceremonial” boulevards)*
 - *Pedestrian hazards*
 - *Vehicle Dominance on Urban Space*

REACTIVE & INTERPRETATIVE VEHICLES:

- **INTERFACES** (soft architecture to address in-between conditions)
- **LEGIBILITY DEVICES** (Subtle detailing of street surface, edges)
- **INHERENT CULTURES** (bridges/underpasses/arcades/raised city floor to address unfriendly side walk conditions)

REACTIVE GUIDELINES:

- Address In-between conditions with Interface Solutions
- Create program mix to improve diversity.
- Address dysfunctional Edges
- Priority on Indeterminate Space
- Legibility | Identity (cohesion in the detailing | Subtle ordering of Chaos
- Strengthen inherent cultures/designs
- Subtle precinct branding/language (tectonic coding, detailing interfaces,)
- Gateway Installations along main corridors

DETAILED REACTIONS:

EDGES (as dysfunctional space)

- Convert Barriers into Interfaces
- Define Edge Continuity

VEHICULAR SPACE (as dysfunctional space)

- Apply opportunistic reprogramming of vehicular space
- Consolidate cars in structures | Free up potential pedestrian space

IN-BETWEEN SPACE

(Can be any, edges fall into this category)

- Address with Interface solution

SERVICE SPACE

Services/unsightly spaces become legibility devices (given a reactive purpose & reacting to unsightly results of negative ideology e.g. bright ORANGE HVAC units.



Figure 38: Individual group study areas.

EXISTING FRAMEWORKS

The inner city currently has a number of plans, frameworks and management schemes in place to help address various aspects of its growth.

The following plans have specifically been selected for study as they impact directly on the chosen study area:

- Inner City Development Strategy
- Nelson Mandela Development Corridor
- “Re Kgabisa Tshwane” Framework
- Tshwane Crossing (Kopanong)
- Apies River Urban Design Framework
- Tshwane Inner City Local Open Space Plan



Figure 39: Overlay of existing inner city frameworks.

INNER CITY DEVELOPMENT STRATEGY

(2004)

AIM:

To make proposals for the (re)structuring and (re)positioning of the Inner City within the City of Tshwane.

10 building blocks are proposed with strong relevance to image building. The building blocks include: (1) Announcing the destination; (2) Defining the capital precinct; (3) Pan-African Parliament; (4) Nelson Mandela Corridor; (5) Tshwane Crossing; (6) Apies River Promenade; (7) Tshwane park and residential development; (8) African Spirit; (9) Public transport; and (10) Beautification of the streetscape.

REACTION:

The chosen site is on the crossing between building blocks 1; 4; 5 and 6. This re-affirms the importance of the redevelopment of this site in the inner city context.

The proposed development of a defined gateway is noted and will be incorporated in the design resolution.



Figure 40: Inner city development strategy.

TSHWANE CROSSING (KOPANONG)

(2005)

AIM:

To consider scenarios for the redevelopment of the Apies River - Church Street crossing and the Caledonian Sports Grounds.

Three scenarios are proposed with a soft space at the and (apart from option 3) a hard space at Caledonian.

REACTION:

The change of use of the Caledonian sports fields is seen as a negative element as this facility is currently being used by local communities.

The development of neighbouring sites as public open space is preferred over this proposal.



Figure 41: Tshwane Crossing.

“RE KGABISA TSHWANE” FRAMEWORK

(2005)

AIM:

To make proposals for the development of the Inner City in terms of the Urban Renewal Programme and to enhance the public environment surrounding national departmental offices.

Proposed 7 precincts with a system of hard and soft spaces.

REACTION:

The use of both national and local government as client to fund the improvement of the public environment will be investigated for use in current project.



Figure 42: Re Kgabisa Tshwane Framework.

NELSON MANDELA DEVELOPMENT CORRIDOR

(2005)

AIM:

To propose a framework that could guide development along Nelson Mandela Drive.

Proposed precincts with different characteristics, a system of hard and soft open spaces and pedestrian circulation along the Apies River.

REACTION:

There are concerns about the proposed use of sites along the Apies river specifically in the study area.



Figure 43: Nelson Mandela Development Corridor

APIES RIVER URBAN DESIGN FRAMEWORK

(1999)

AIM:

To make proposals for the development and management of the Apies River (from Fountains to Bon Accord) and adjacent development. Proposed management guidelines in terms of 4 character categories (urban, suburban, cultivated, natural)

REACTION:

The proposal to develop the Apies river edge as an continuous accessible public open space is seen as a vital component of any proposed framework.



Figure 44: Apies River Urban Design Framework

TSHWANE INNER CITY LOCAL OPEN SPACE PLAN

(2007)

AIM:

The Tshwane Inner City Local Open Space Plan (LOSP) is a detailed plan that forms part of the Tshwane Open Space Framework (TOSF). The TOSF is a 3 Volume document compiled in 2006 by the City of Tshwane Environmental Planning section (in association with Holm Jordaan Group and Strategic Environmental Focus).

The aim of the LOSP was to firstly establish an understanding of the need for and value of Open space in cities. Then a plan for the creation of additional open space as well as the management of existing open space was put forth.

REACTION:

The importance of additional public open space in the city is acknowledged and will be supported in the proposed framework.



Figure 45: Tshwane inner city local open space plan.

PUBLIC SPACE NETWORKS

A CASE FOR PUBLIC OPEN SPACE

Open Space is an essential element within cities, for ecological, socio-economic and place-making purposes. It allows natural systems, without which human beings cannot survive, to function: it purifies water, harbours plant and animal life, cleans the air and regulates the urban climate. This life-giving function of Open Spaces is the most threatened by urban development.

(Tshwane, 2006: 35)

Open Spaces are necessary investments if we are to develop and sustain a healthy community.

QUALITY AND QUANTITY OF OPEN SPACES IN TSHWANE

Tshwane has a large variety of Open Space resources from protected areas, ecological and conservation areas to recreational parks, resorts, sporting facilities, as well as cultural historical Open Spaces,

which creates the opportunity and the potential for developing a high quality environment. However, the majority of Open Spaces in Tshwane lag far behind international cities in terms of quality and quantity:

Insufficient Open Space is provided for when compared to international ratios. Across the city a ratio of 0.5ha/1000 people developed recreational Open Space is available as apposed to the required international ratio of 2.4ha/1000.

Open Spaces are not integrated within a network, to facilitate movement easy pedestrian movement between them. (Tshwane, 2006: 35)

The Apies river water margin is identified as an opportunity to develop a continuous “green lung” giving pedestrian safe passage along a “North-South” axis while connecting multiple public open spaces in a wider network.

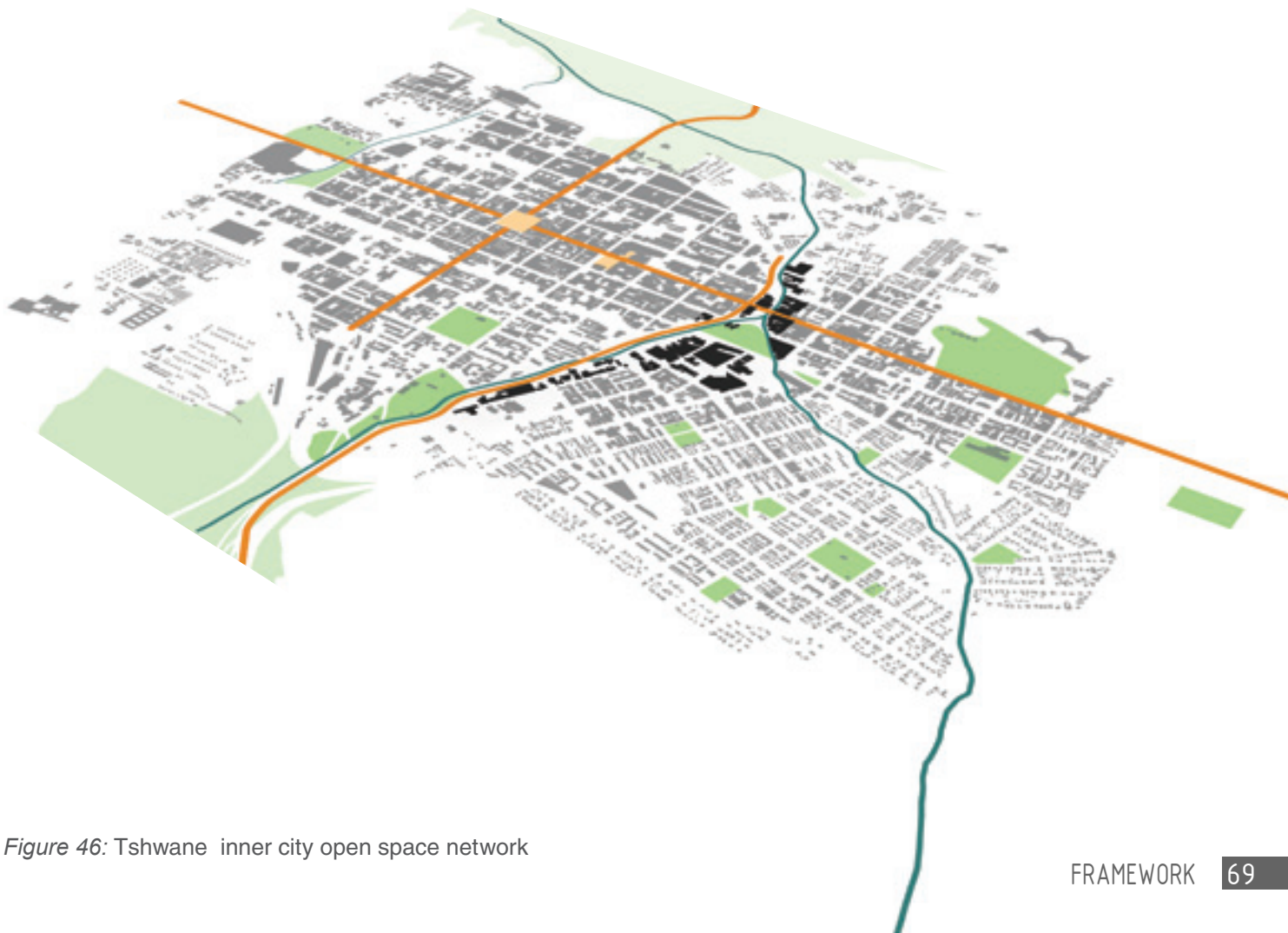


Figure 46: Tshwane inner city open space network

5.2 MESO SCALE

APIES RIVER (FOCUS AREA)

The area of the Apies river that falls within the study area has a high density of urban activity (land use, movement, transport, infrastructure, services and public amenities). (see Figure 47)

The encroachment of such dense urban fabric on the river system provides an ideal study area for the research problem.

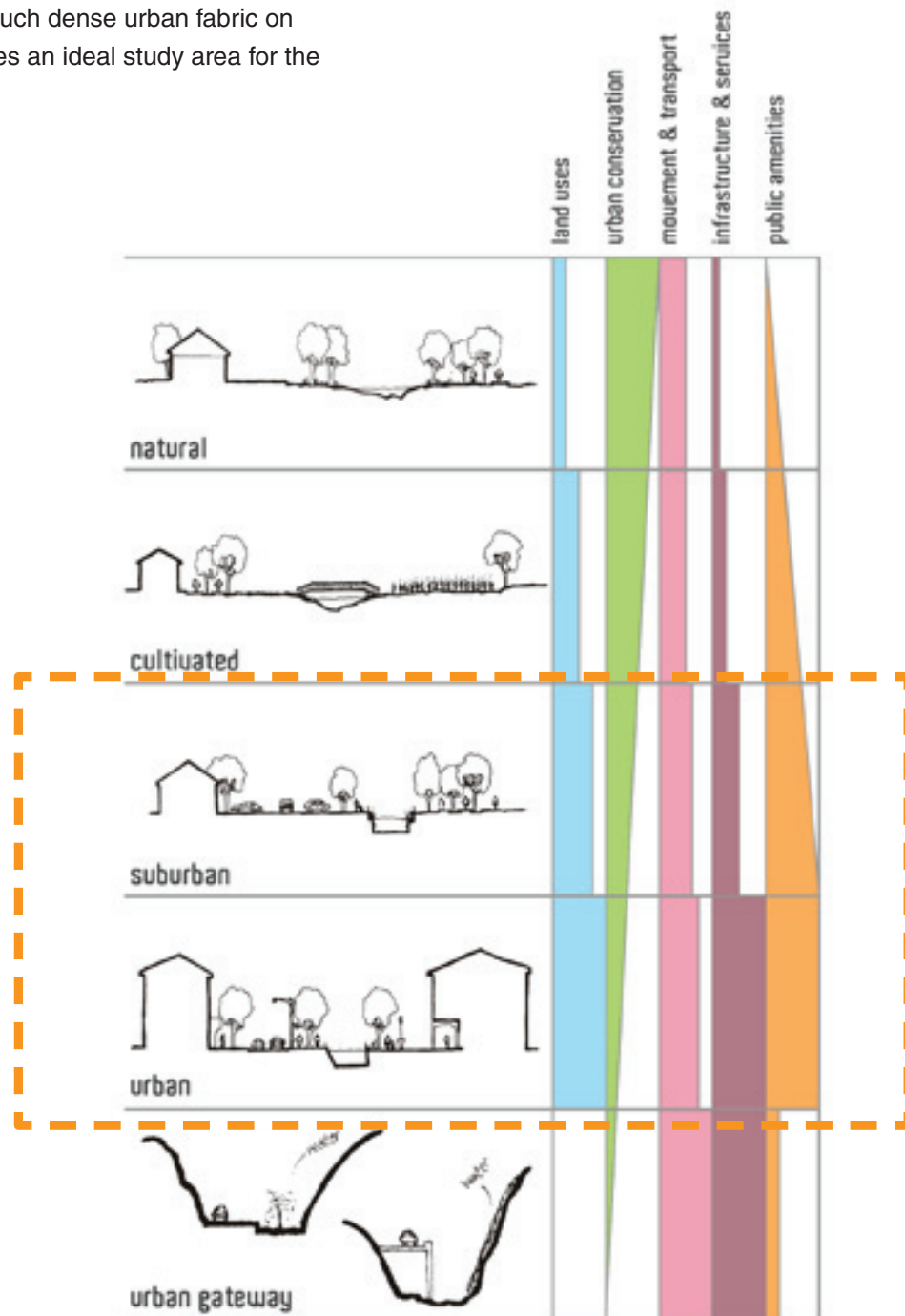


Figure 47: Character of the chosen study area.



URBAN STRIP PARK

The Proposal for the Apies river spine focuses on the development of this edge into a continuous “green lung” or linear park. The changing character of the park will be determined by the predominant usage of the surrounding area.



Figure 48: River as a urban strip park

URBAN THRESHOLD

The Apies river and Walker spruit form a natural boundary between 3 city districts: the CBD, Arcadia and Sunnyside. The redevelopment of the river edge will provide easy to cross thresholds between these areas.



Figure 49: River as a threshold between districts

OPEN SPACE NETWORK

A network of both hard and soft open spaces are identified within then inner city and surrounding area. These areas will be connected to the linear river park via a series of pedestrian routes to create a continuous open space network.



Figure 50: The river connecting the open space network.

HERITAGE NODES

The river system has numerous elements of heritage values, this includes the river itself, the palm trees on the river bank, the Caledonian sports fields and the numerous historic bridges still in use today.

These heritage nodes provide key points for future development due to their cultural significance.



CLIMATIC DATA

LOCALITY

Pretoria is located at 25°44'S; 28°11'E with an altitude of 1330m above sea level.

CLIMATIC DATA

Pretoria falls within the temperate interior climatic zone of South Africa as can be seen on Figure. Midday temperatures range from 27.5°C in summer to 18.3°C during winter.

On average humidity is 59% however it is known to exceed 80% for very short periods during the rainy season. (South African Weather Service 2009)

Pretoria gets an average rainfall of approximately 573mm per year, most of it occurring during summer months. Figure 53 illustrates monthly averages with the maximum 110mm in January and no rain in June.

The predominant wind direction changes from north-east in summer to south west in winter. The year average comes mostly from a North easterly direction however wind speeds in Pretoria are relatively low when compared to other cities in South Africa.

(South African Weather Service 2009)

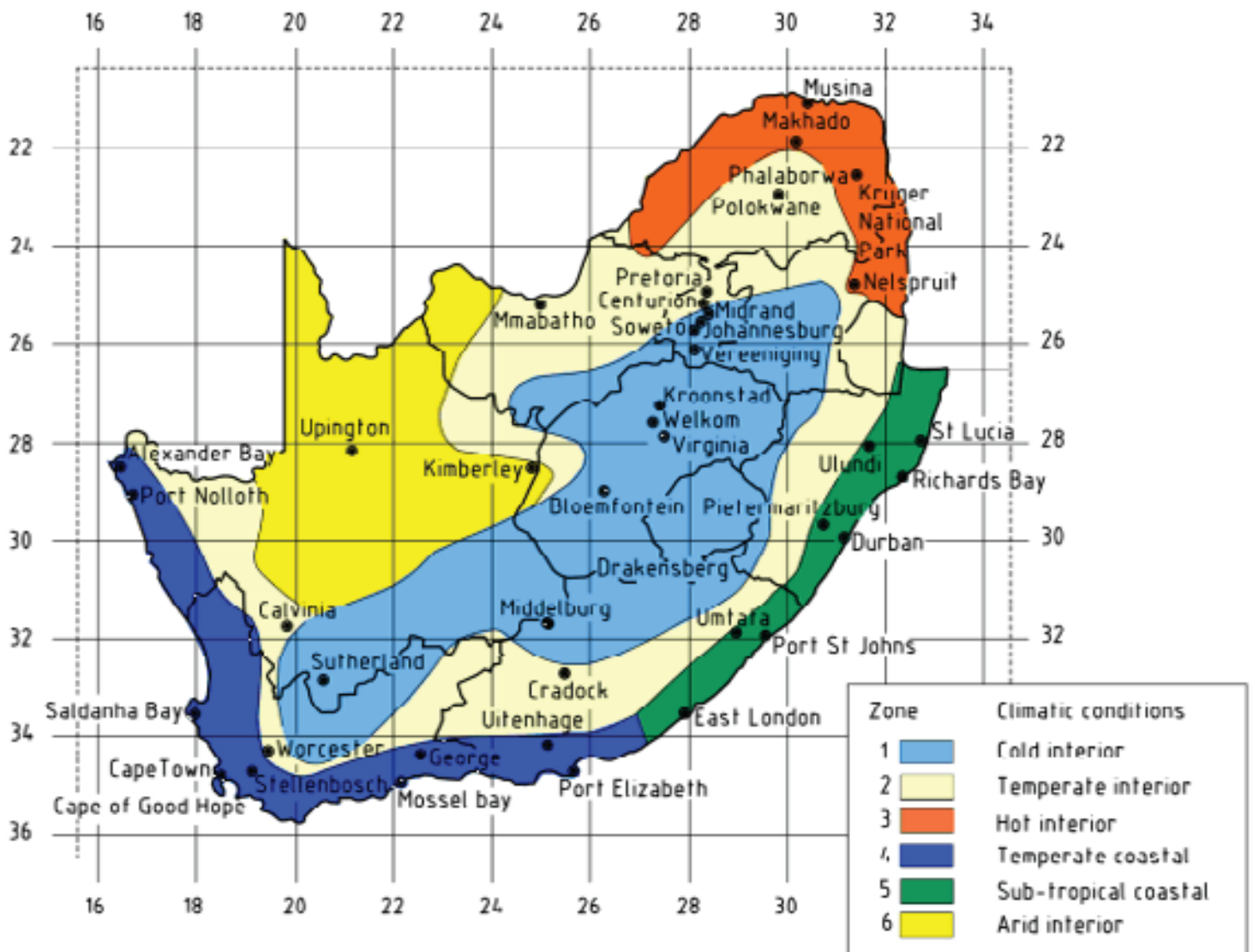


Figure 51: South Africa Climatic Zones as per SANS 204

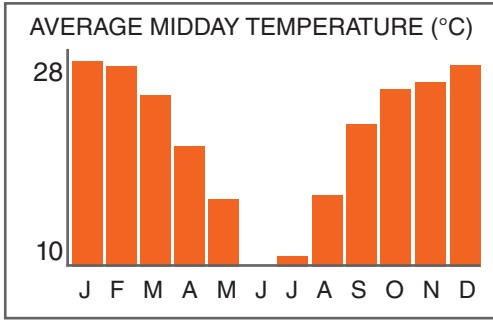


Figure 52: Average Midday Temp.

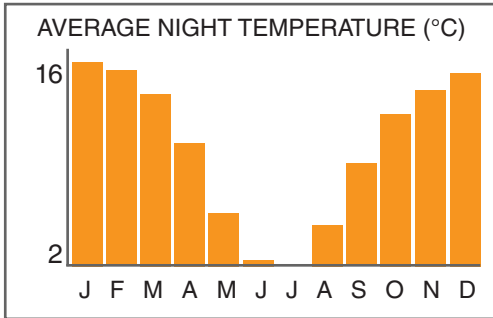


Figure 56: Average Night Temp.

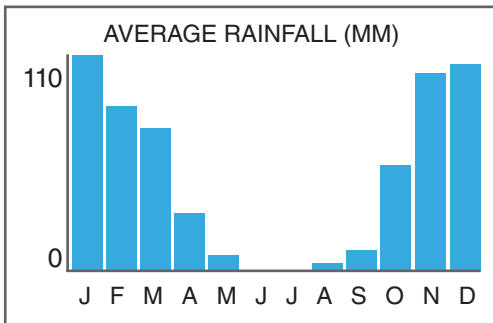


Figure 53: Average Rainfall.

PERIOD 2003 - 2008
TIME 00:00 - 24:00

Wind Speed (km/h)

- 05 - 25
- 25 - 35
- 35 - 56
- 56 - 87
- 87 - 107
- + 107

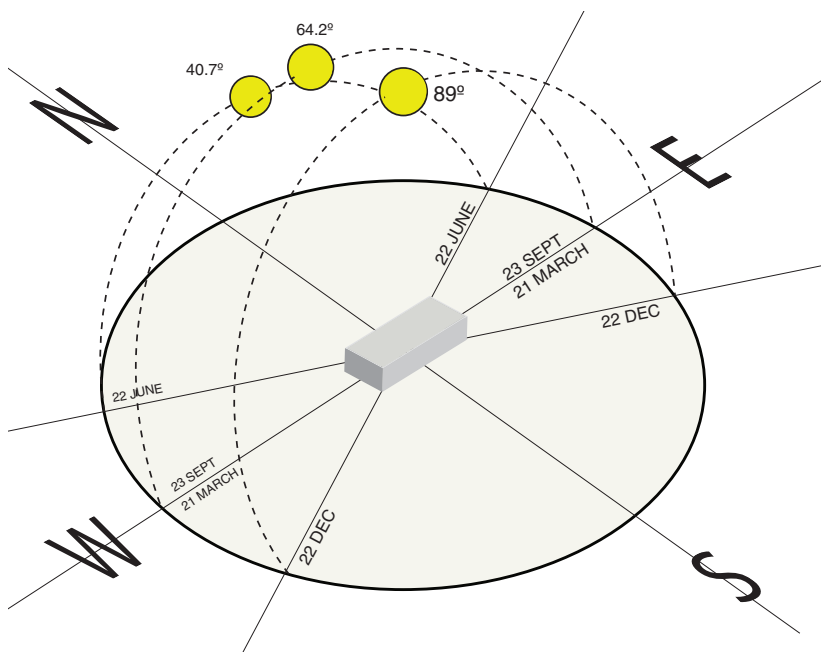
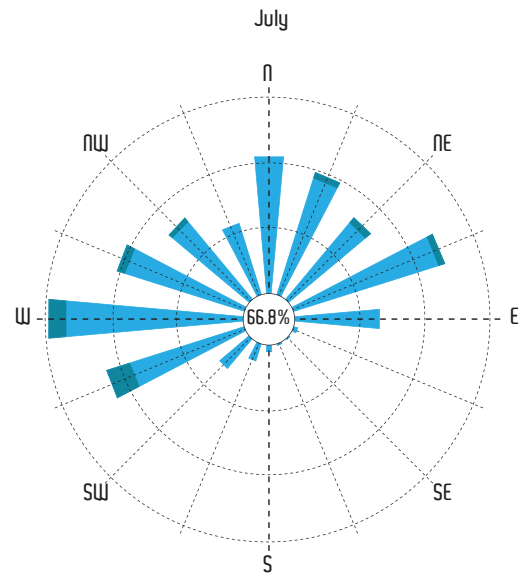
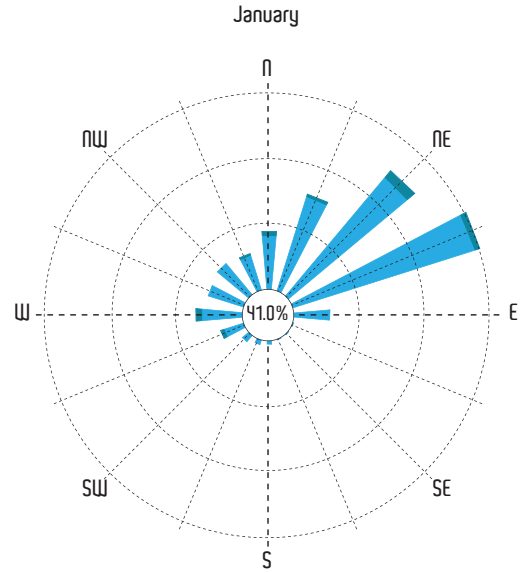


Figure 54: Sun Path for Pretoria

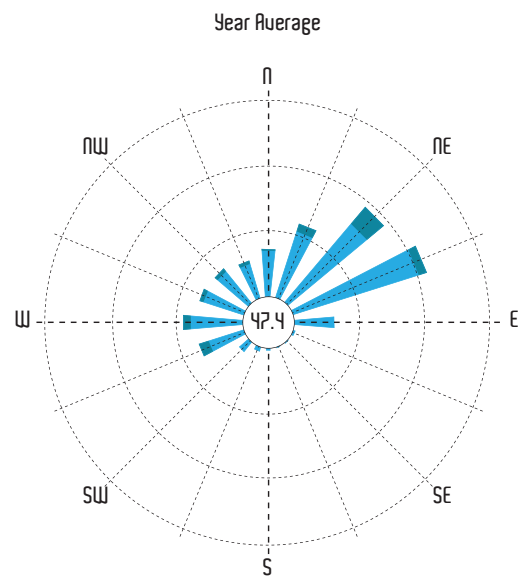


Figure 55: Pretoria Wind Rose

5.3 MICRO SCALE

Figure 57: Macro Scale: Land Usage



BUILDING & LAND USE

Building and land use in the macro context was mapped based on site visit observation of predominant program to identify existing shortcomings. Proposed uses could then be aligned with theory and background studies.

From these observations it is clear that there is a strong civic element in the western quadrant of the study area. These include mostly educational facilities ranging from urban schools to tertiary education.

There is a moderate level of residential program in the area as well as high densities of residential program in the neighbouring zones (Arcadia and Sunnyside). These areas require adequate public open space. The majority of the building (especially around the chosen site) have commercial programs. Almost all the commercial activity immediately surrounding the site is related to motor retail or services.

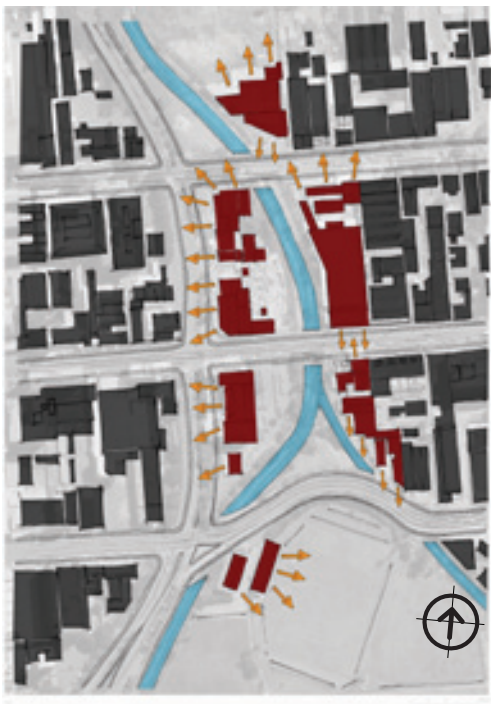


Figure 58: building edge condition



Figure 59: river access



Figure 60: pedestrian movement

BUILDING EDGE CONDITION

The nature of these commercial activities, having base stores, offices, and backyards, has a very negative effect on the river focus and edge condition. The buildings are oriented towards the street edges and service areas being located on the river side.

This is due to the specific programs focusing on street edges and service areas being located on the river side.

PUBLIC RIVER ACCESS

Public access to the river front is very negative.

Sites that have been developed make access to the river difficult edge due to their own security and boundary conditions.

Due to the dangerous edge condition of the storm water channel access is restricted with fencing and locked gates in undeveloped areas.

PEDESTRIAN MOVEMENT

Daytime readings taken from areal photographs show a complete lack of pedestrian activity along the river edge. A combination restricted access to the river as well as security issues in the area could very well be the cause.

The security situation along the river is aggravated by this lack of passive surveillance.

DYSFUNCTIONAL SITES

Following the study of current usage in the area a few sites have been identified as having inappropriate usage or programme. These buildings and sites have a negative impact on the river character, access and security.

The dysfunctional sites indicated on Figure 61 will be redeveloped either by complete demolition or where possible adaptive re-use of existing structures.



Figure 61: Site identified with inappropriate usage or programme.

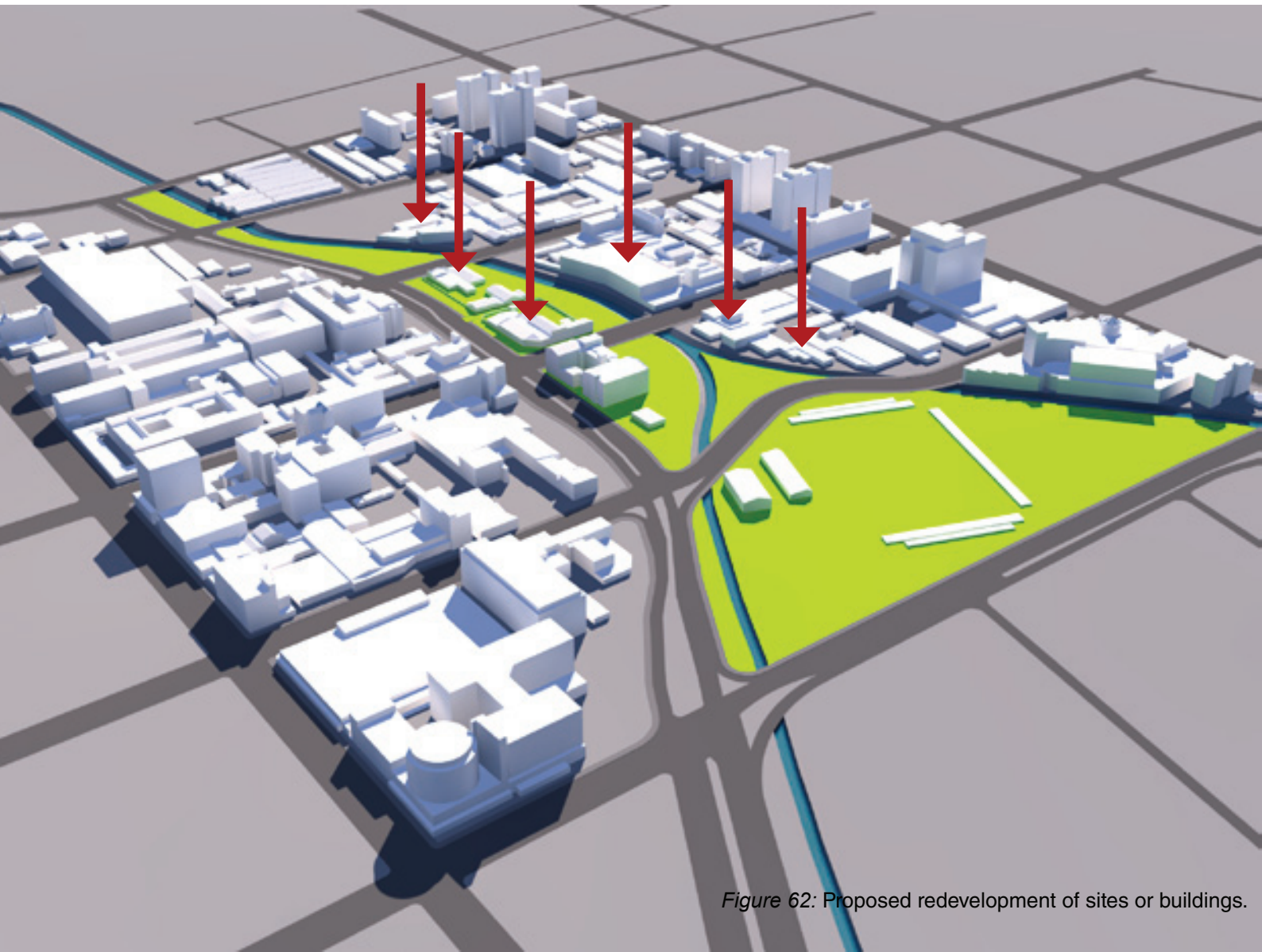


Figure 62: Proposed redevelopment of sites or buildings.

KEY DEVELOPMENT NODES

Figure 63 indicated nodes that exist in the study area with significant cultural or heritage value.

These nodes are ideal points to focus redevelopment on.

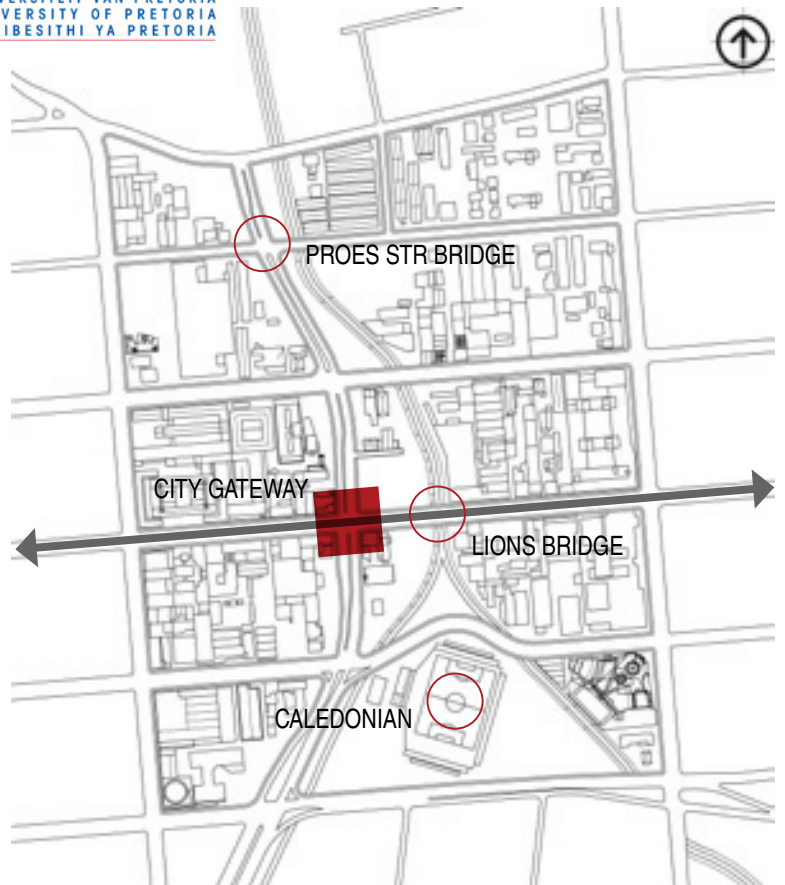


Figure 63: Points with cultural or heritage value.

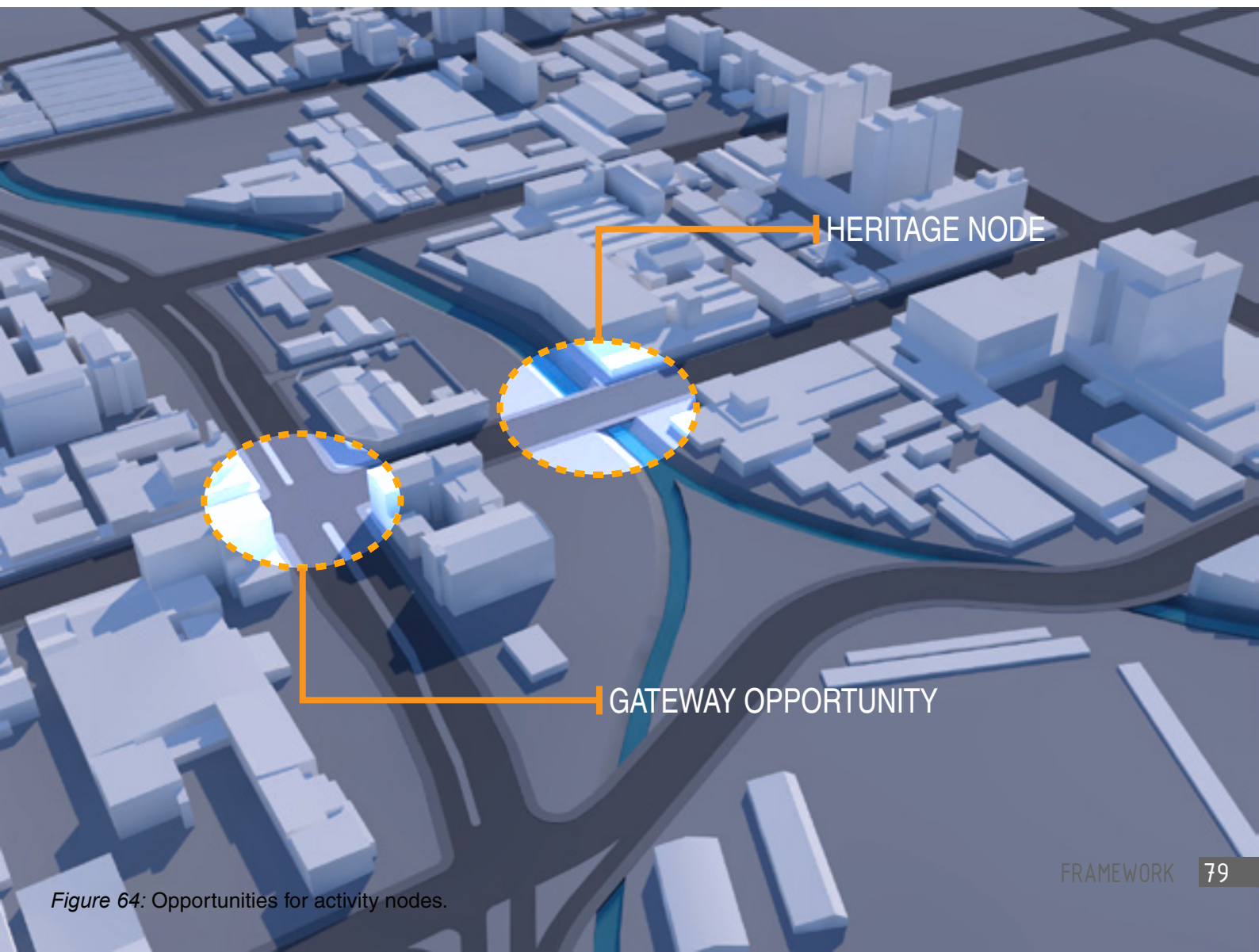


Figure 64: Opportunities for activity nodes.

EDGE CONDITIONS

Proposed street and river sections are indicated for different edge conditions within the study area.

APIES RIVER [1]

This section proposes the redevelopment of the river edge for safer access to the river bed as well as a continuous pedestrian and cycle route along the length of the river.

This proposal would require the introduction of a terraced edge or similar construction in areas where a less steep gradient can be accommodated.

CHURCH STREET [2]

The Church Street section proposes the introduction of dedicated cycle and public transport lanes.

Visible water retention sells in planter beds along the pedestrian walkway will visually connect this street back to the Apies River using the storm water system.

NELSON MANDELA DRIVE [3]

The use of trees, bollards and street furniture to create a continuous visible edge between road and sidewalk could help reduce the negative impact that heavy traffic (carried on Nelson Mandela drive) has on pedestrian activity along this edge.

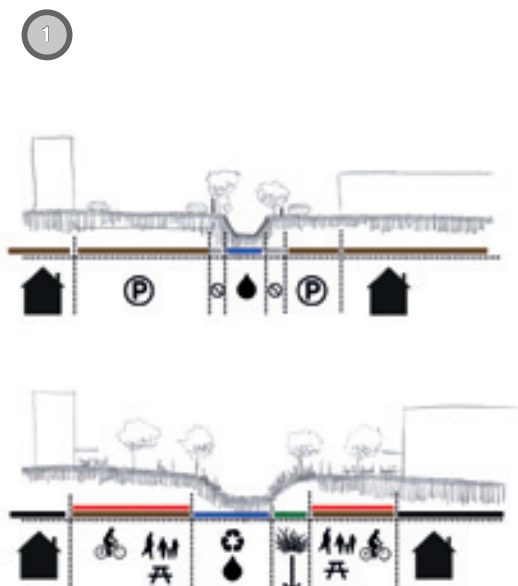


Figure 66: Apies River section.

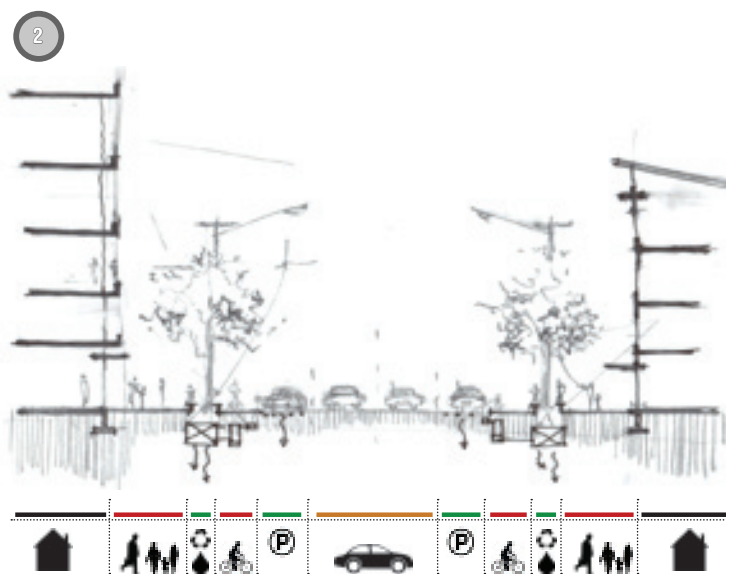


Figure 65: Street section through Church Str.



Figure 67: Map indicating position of street sections.

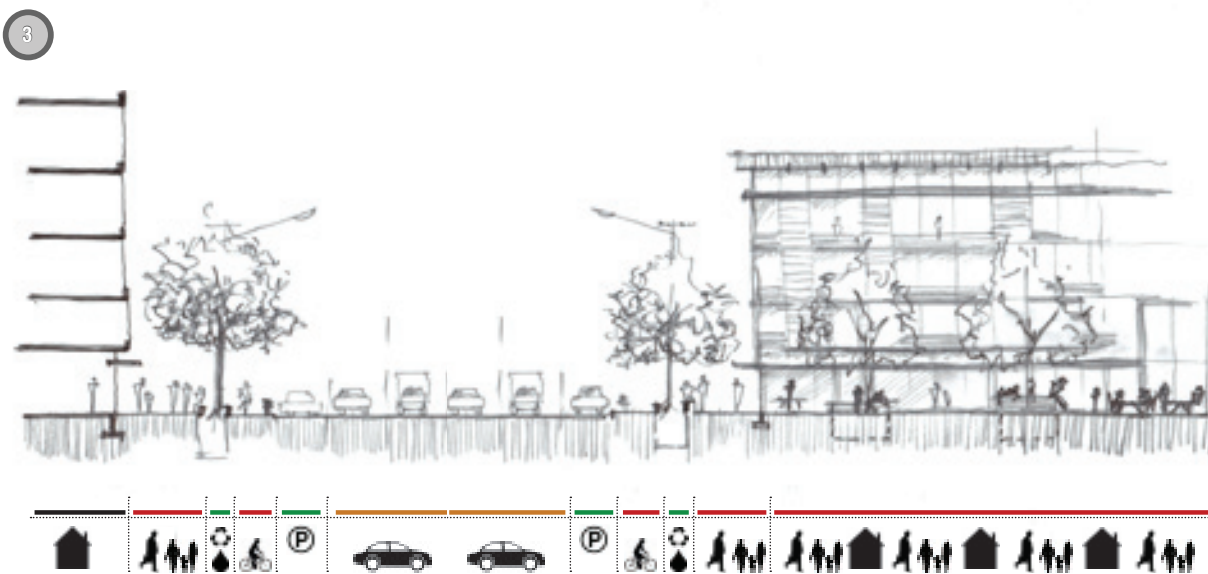


Figure 68: Street section through Nelson Mandela Drv .