



Figure 4.1: Site Author (2015)

IV

S I T E

4.1 INTRODUCTION

The aim of this chapter is to explain how the choice of appropriate site, developed as a collaboration of considering the urban context and theory, as to develop and strengthen an overarching architectural concept.

4.2 “Inner City Sprawl”: An Urban Strategy

The inevitable and continual expansion of Pretoria and the subsequent decrease of energy and social capital of the urban core are in danger of being amplified through further infrastructural and governmental emphasis. If urban governance is to utilise social networks of urban innovation to bolster ecosystem services, whilst enabling discussions that place the city within the boundaries of regional ecosystems (Alfsen, 2010:531), an alternative reading and experience of the urban scope is required to make these social networks clear. In other words, definite form will continue to overpower indefinite activity if the latter is not allowed to impact on the former. Such a disproportional urban model runs the risk of not being able to capitalise on the diverse base which “informal” urban activity offers, aiding urban planning in generating good and current condition-specific places for the development of human livelihoods.

In such a model, the provisional public space represents an afterthought, the surplus of modernist and ideological city planning, to be seen as good enough for the everyday user. In this sense, it reflects the dominance of definite form over indefinite social activity, which is made evident in the limited range of alternative space made available for public use. Where insurgent activity resembles an urban reaction against low levels of entropy, or a lack of information free-flow, marginal space becomes the symptomatic spatial condition as a result of such an urban model.

The similarity in origin regarding both these urban phenomena provides possibility for strengthening a relationship between marginal space and insurgent activity as an alternative strategy. Memarian and Niazkar (2014) proposes that lost spaces are to be harnessed and implicated into a design process, with the aim of responding to the primary demands of contemporary society as well as future demands. These spaces offer an interactive sensibility and responsibility which does not propagate a definite rule or ideology (Memarian and niazkar, 2014:312).

As a counterstrategy to this scenario, the notion of “inner city sprawl” is introduced. This strategy intersects three symptoms of the oblique model, namely marginalised user, activity and space, with the aim of imploding the urban built and social fabric at strategic locations. Site-specific micro implosions further aim at establishing communication with other sites geared towards the same strategy, each implosion in synergy with the specific nature of its associated marginal space, to increase diversity of networks and to generate a subversive framework of an alternative urban experience (Fig 4.1).

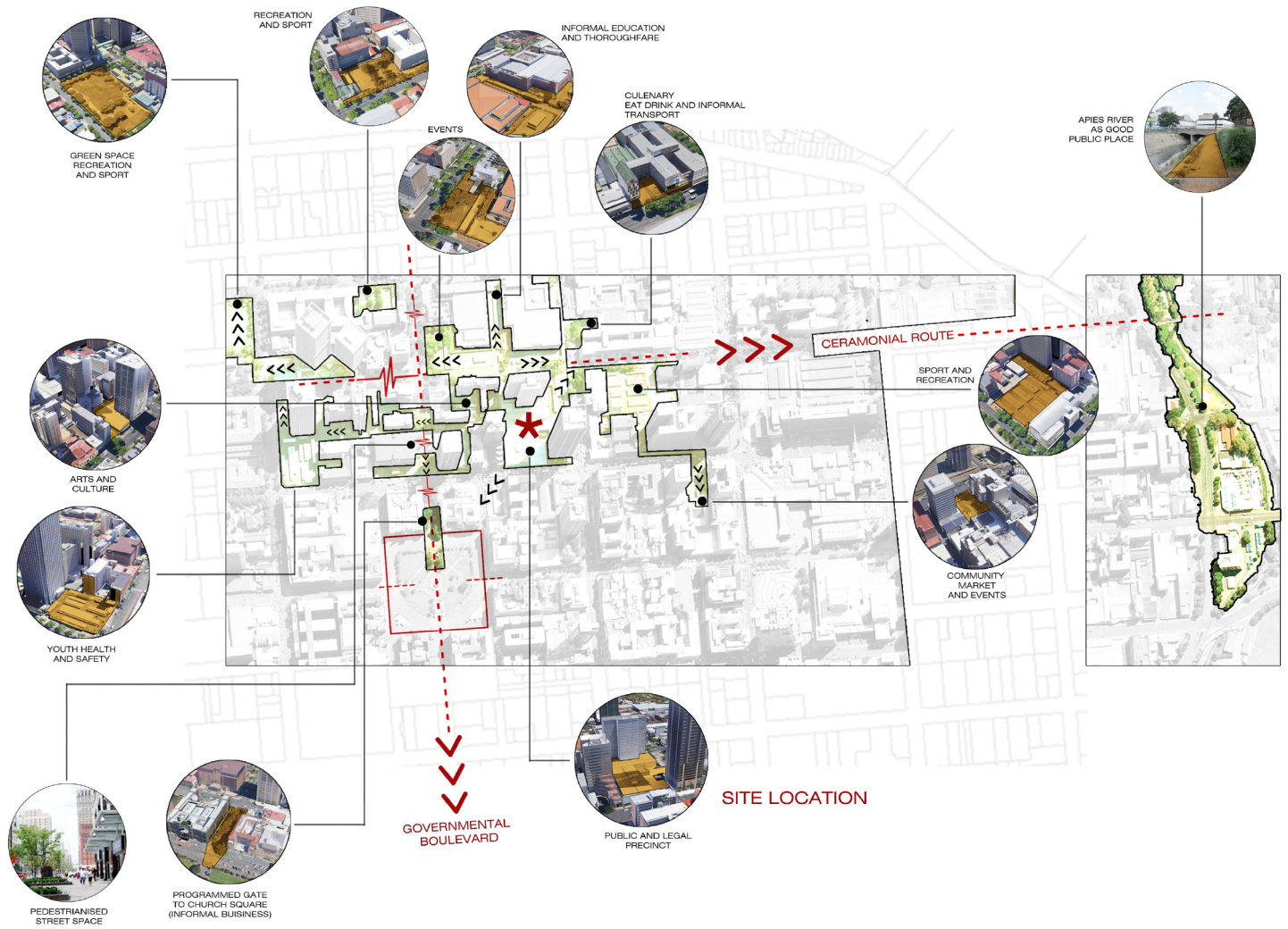


Figure 4.2: "Inner-City-Sprawl" (Author 2015)



Where conventional urban planning deals with physical densification, this strategy holds at its core the densification of social capital, utilising architecture of a more temporary nature to achieve a catalytic reaction that may expand beyond boundaries of pure and formal urban control. In a sense this could be likened to filling the gaps with flexible social matter – an urban expansion joint – that will further shape the environment they are penetrating, testing the resiliency of these environments and providing an urban barometer that will gauge design decisions.

4.3 SITE SELECTION

The selection of an appropriate site to deploy such a strategy rests heavily on the criteria that marginal space and insurgent urban practice should intersect, or indicate signs of such an intersection (fig 4.2). As concluded from the theoretical investigation, the intervention aims at an extension of insurgent practices infiltrating marginal urban space (fig 4.3). It is proposed that, due to its monumental and ideological character, Church Square – the main provisional public space in Pretoria's CBD – is considered, due to poor public interface at its edge conditions.

Due to this condition, social activity tends to migrate towards the east- and north-eastern quadrant from the city centre, where it manifests as insurgent activity on street edges and within street recesses (fig 4.4). A fractured spatial assembly around Church Square offers marginal space clusters to be investigated as possible sites for intervention. The programmatic structuring of buildings in this vicinity is mainly orientated towards legal and governmental purposes, which provides little or no ground floor and pedestrian street interface, and deters social interaction within the precinct.

The vast and monumental qualities of Church Square, drain the space of public activity and channels energy eastward towards Sammy Marks Square and the State Theatre precinct, where it accumulates in more intimate and defined pockets or enclaves. Low built density reveals itself within the interior of city blocks, such as open parking lots and plinth surfaces. Roofs of basement parking lots acting as service space to high-rise government and legal buildings represent wasted space in-between these buildings, closed off to provide private parking for legislative and government staff.

As Church Street extends to the east, it offers a favourable shop-front-lined pedestrian spine, which facilitates the formation of informal markets, aided by a double row of trees lining the interior spine. Ground-floor interfaces include clothing outlets, banks and fast-food restaurants, which create pleasant thoroughfares. Traversed by streets active with informal transportation, the spine links the markets at the State Theatre recess, Sammy Marks Square and Mall, where it eventually terminates perpendicular with Sisulu Street, a major transportation node. This experience is reinforced by the occasional access into arcades linking Church Street with Bureau Lane, providing diverse routes which stimulate small businesses to feed off increased pedestrian activity.

This pedestrian energy tends to filter into and circulate around Church Square within a two- to three block radius, with emphasis on its eastern flank (fig 4.5). This space resembles the only street within the city centre that offers such an urban experience, providing a lot more urban vibrancy as found on Church Square. As additional criteria for site selection, it is deemed fit to readapt a marginal pace within this precinct, with the aim of reinforcing this urban energy's sphere of influence.

4.4 MICRO CONTEXT

In order to develop a responsive conceptual approach, a comprehensive analysis of the specific site under investigation is required in order to extract possible concept informants. This will be dealt with through an investigation of the following:

How the site came to be associated with the characteristics of marginal space.

Site potential and interpretation.

Mapping the existing materiality and program function within the city block.

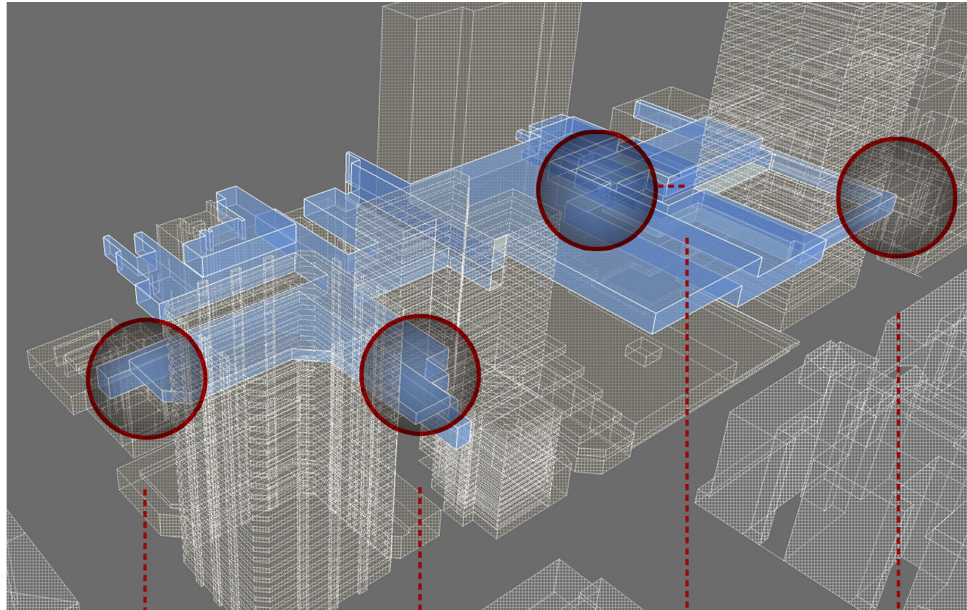
4.4.1 Causes of Marginalisation

Strict measures motivated by security concerns resulted in all access points to the block to be closed off. The spaces in-between buildings have been appropriated for private parking purposes, despite the availability of multi-storey basement parking facilities within the block, which generate increased security concerns. As per the macro model, the bureaucratic and programmatic nature of these buildings ensures that the need for social public access is of little concern, limited to official use only, which in turn keeps public activity limited to the street exterior of the block (fig 4.6 & 4.7).

The roof surface of the parking lot serving the employees housed in the respective buildings mainly acts as service space for these buildings in terms of air-conditioning units and vertical access lighting. Parking privileges within the lot are reserved for employees only, therefore its interior, as well as the roof surface, remains inaccessible to the public.

The courtyard and thoroughfare, linking Madiba and Thabo Sehume Streets via an enclave around the National Treasury Building, is currently closed off at Sehume Street.

Combined with the administrative program located within this thoroughfare, it reveals little public interest, despite its obvious potential as an alternative to narrow sidewalks for pedestrians to orientate themselves in and around the precinct. Further motivation for the marginalisation of the plinth may also include the environmental challenges, with special regard to poor solar access into the space. This aspect will be analysed in greater detail within this chapter.



POOR
MANAGEMENT
OF VEHICLE STORAGE



EXCLUSIVE
PROGRAMMES
AUTONOMOUS
INFLUENCE



INACCESSIBILITY
OF LOFT SPACE



CLOSING
THOROUGHFARES
AND PRIVATE
COURTYARDS



Figure 4.4: Causes of Marginalisation Continued (Author 2015)

4.4.2 Site potential and Interpretation

4.4.2.1 Programmatic Analysis

The city block under investigation does not represent the typical programmatic typology found in this precinct of the CBD. An eclectic mixture of programmes ranging from legislative, departmental and private education to a mosque, residential and small businesses located at ground level provides a diverse base for intervention.

Located within the city block, the intervention focuses on the marginal city plinth located between buildings housing the respective institutions of the North Gauteng Advocates Association, Department of Home Affairs (head quarters) and National Treasury (fig 4.8).

4.4.2.2 Spatial Analysis

The placement and size of the plinth provide the site with unique characteristics to be exploited for the purpose of furthering the expansion of insurgent practices (fig 4.9-13). A significant contrast exists between the cramped sidewalk and the vast open void of the plinth located some 5m above street level, of which the effect can only be observed upon entering the courtyard arcade, accessing the plinth and by viewing the site from opposite Vermeulen Street.



Figure 4.5: Spatial Analysis (Author 2015)

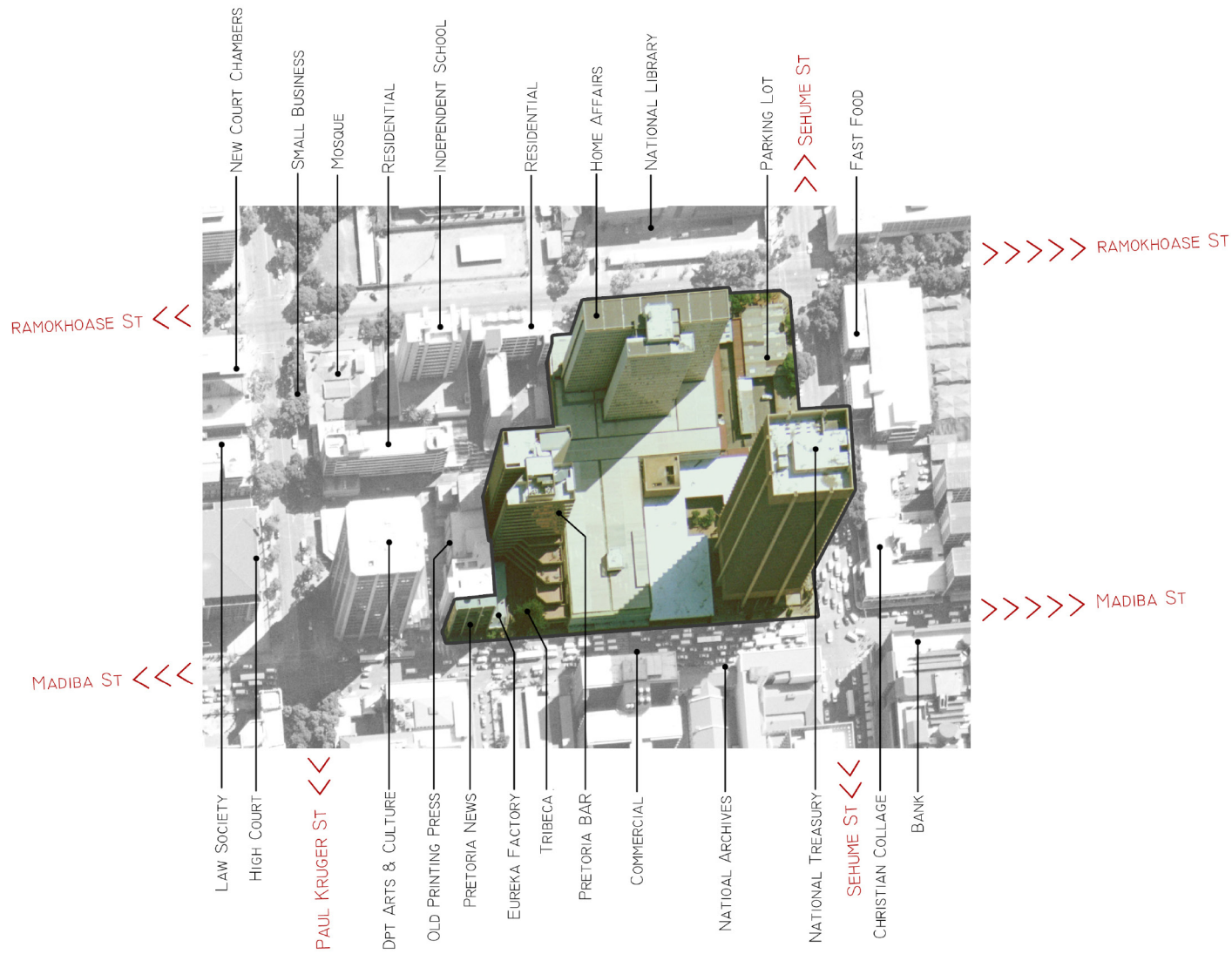


Figure 4.6: Site Context (Author 2015)

The hidden nature of the plinth site, as well as how to strategically reveal this effect without destroying its lethargic character, becomes the main concern regarding the design.

The existing courtyard provides a unique break in the busy sidewalk activity and is to be activated by providing its defining plinth edges with public activity. A garden defines the central point within the courtyard and provides the space with a less strenuous atmosphere when compared to street activity. Possible for access onto the plinth would be made possible through the adaptation and re-opening of the street-level courtyard and thoroughfare, currently closed off at Thabo Sehume Street.

From the plinth, unique and previously inaccessible vistas into the city become possible and would provide the public with “special” spatial privileges as an alternative to vehicular-dominated street circulation routes.

The raised platform also provides a suitable environment to incorporate the Metabolist principle of artificial ground into the project as an approach to the social renewal of the precinct. The natural public-to-private hierarchy offered by the progressive vertical extension of the site provides opportunity for diverse programmatic structures to be appropriated to the site.

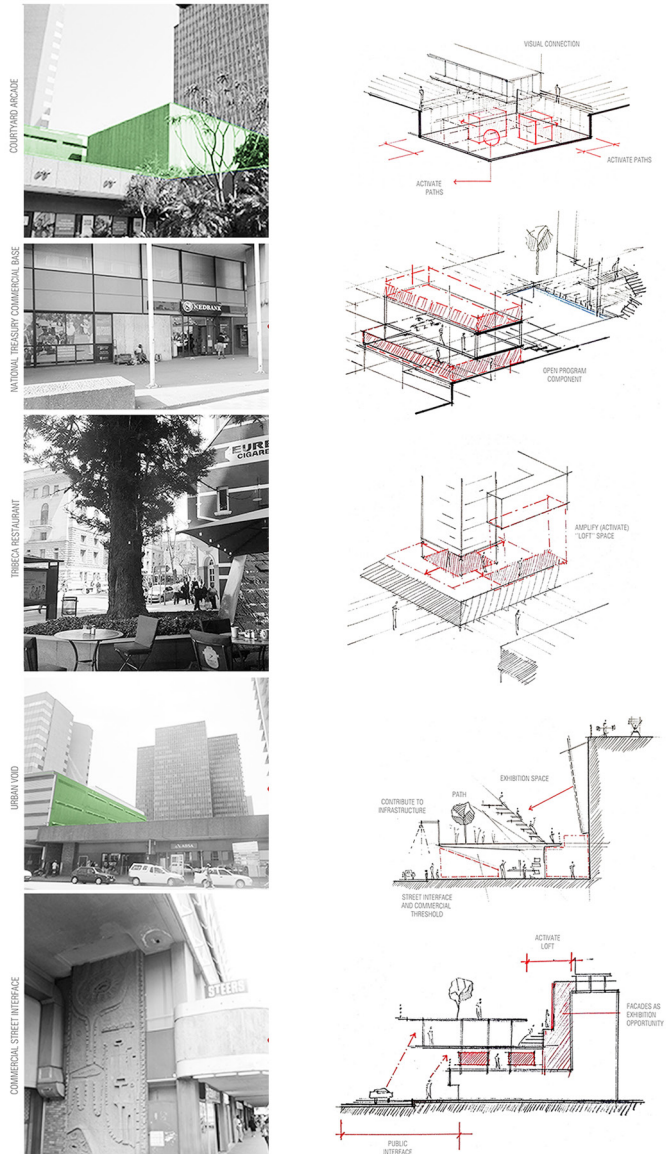


Figure 4.7: Site Potential (Author 2015)

Figure 4.8: Site Elevated View (Author 2015)



The high-rise character of buildings moulding this empty space provides a sense of recluse and escape from the busy vehicular traffic typical of Pretoria's inner core. Here the importance of the everyday public could be emphasised by raising associated activities above the city. This aspect also provides the benefit of security in terms of passive surveillance from the onlooking buildings already present and further implies that the intervention should be of such a nature that it improves the aesthetic experience of current inhabitants able to view the space from above. Design considerations in altering the plinth condition should also benefit user experience, as perceived from the existing and onlooking buildings, as their current daily experience of the plinth represents a lifeless and autonomous void.

4.4.3 Mapping Site Materiality

The materiality and texture of the site can generally be described as robust. Narrow paved or concrete sidewalks, typical to the precinct surrounding Pretoria's urban core, is the only barrier separating vehicles from pedestrian- and ground-floor building interfaces. Paving continues into the courtyard thoroughfare, with the exception of altering paver pattern and colour, distinguishing its function from that of the sidewalk and street.

Building facades in the vicinity reflect a similar robust, and to some extent harsh, interface with regards to exterior finishing. Fluted concrete block walls, fair-faced and concrete, as well as exposed or adhesively applied aggregates, give amplified effect to the internalised function of the surrounding buildings. Combined with this effect, existing building facades are limited in terms of glazed a surface, which are mostly reflective and only adds to the exclusive nature of the site.

What is referred to as "plinth" currently performs no greater purpose than that of a roof structure for parking within the precinct. As a concrete roof, the lower-level plinth, in its current condition, is waterproofed and does not reflect a pleasant texture for pedestrian activity.

The autonomous effect of the finish generates a lifeless colour balance, with the added problem of intense glare when exposed to harsh sunlight. Some attention will then have to be paid to the maintenance of the robust qualities of this surface, whilst increasing the aesthetic and public performance of the plinth.

A light structural steel-framed roof, covered with profiled roof sheeting, defines the upper plinth level, or roof, as non-structural and is likewise inaccessible to major public use. The surface also adds to unwanted glare, and provides a bothersome effect with regards to the everyday activities housed within existing high-rise buildings on site. The partial removal of the roof structure is therefore proposed so as to gain access to the structural concrete floor, which currently acts as the uppermost parking level of this structure.



STONE WORK



WATERPROOFING



CONCRETE FRESCOS



SOLAR LOUVRES



CONCRETE TILED PAVERS



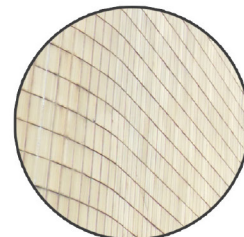
STEEL ROOF SHEETING



CONCRETE CLADDING



PAVERS



TILE CLADDING



FLUTED CONCRETE
COLUMNS



STEEL FRAME
GLAZING



EXPOSED AGGREGATE
CONCRETE CLADDING

Figure 4.9: Site Materiality (Author 2015)

4.4.4 Climatic Analysis

4.4.4.1 Solar Analysis

Due to the high-rise nature of surrounding built fabric within the city block, a solar analysis was done to establish the optimum building placement onto the plinth, as well as to establish the optimum height at which the structure could function effectively. It was discovered that the Department of Home Affairs building overshadows the majority of the plinth surface. This poses possible challenges in dealing with passive solar heat gain during the winter months, although early-morning sunlight enters the site during winter months. Notwithstanding, this same condition presents itself an opportunity to be exploited for cooler building conditions during the summer months, especially due to the high-mass plinth surface that otherwise would have had maximum daily exposure to heat gain from early in the mornings during summer months.

4.4.4.2 Precipitation Analysis

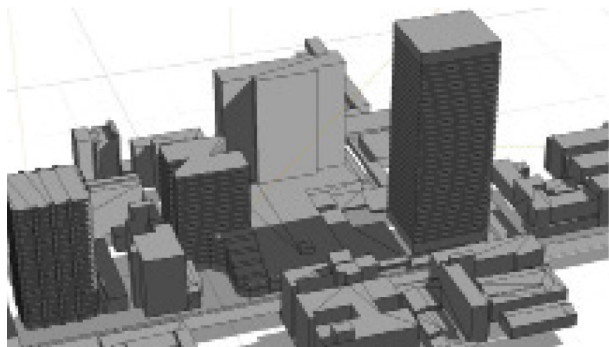
Studying the monthly rainfall in the region serves the purpose of establishing the feasibility of orientating the building towards sustainable systems, such as rainwater harvesting. This site analysis process at an early stage is to ensure that provision for such a self-sustaining system is integrated into the design process so as to avoid an ad hoc attempt at sustainability. The data indicates a year-round availability of rainfall for the Pretoria region. Calculations to estimate the feasibility of a rainwater harvesting system will be conducted during the technological resolution of the intervention, as well as an investigation into urban variables that might affect such a system. The project intends to investigate the management of a rainwater harvesting system in order to reduce the project's dependence on existing infrastructure, as well as to consider the economical feasibility of sustaining the building.

4.4.4.3 Wind Analysis

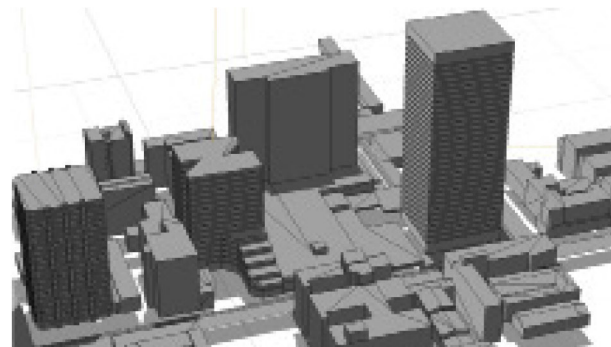
A basic understanding of how airflow might enter the site, as well as how it is altered by surrounding buildings, is required in order to establish any possibilities of increasing natural ventilation into the building envelope. The importance of this mechanism is furthered due to the fact that the high-mass qualities of the plinth may cause air passing over the existing surface to heat up. This will require design proposals to implement strategies to counter this effect.



Figure 4.10: Sun Path Analysis Winter Solstice (Author 2015)



SUMMER SOLCTICE 09.00



SUMMER SOLCTICE 12.00

Figure 4.11: Sun Path Analysis Summer Solctice (Author 2015)

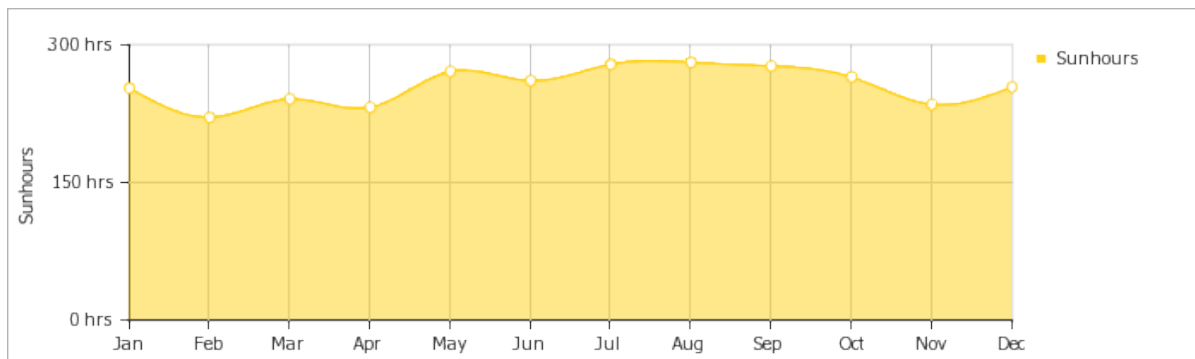


Figure 4.12: Pretoria Monthly Sunhours

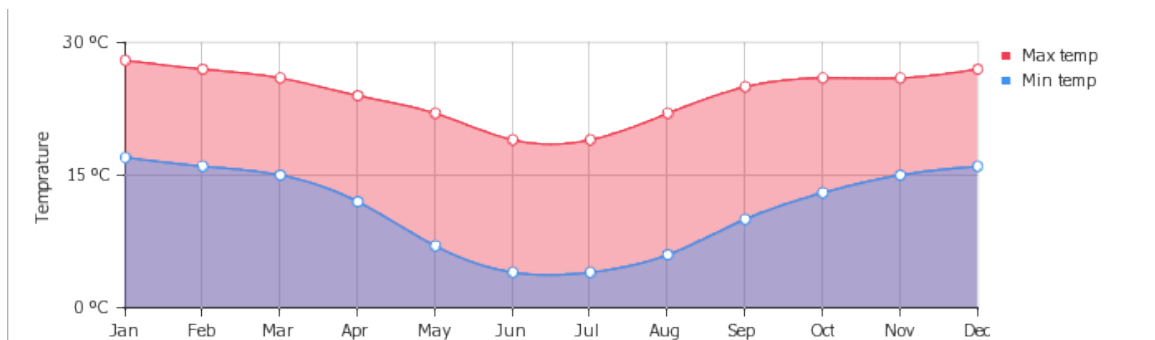


Figure 4.13: Pretoria Average Maximim and Minimum Temperatures

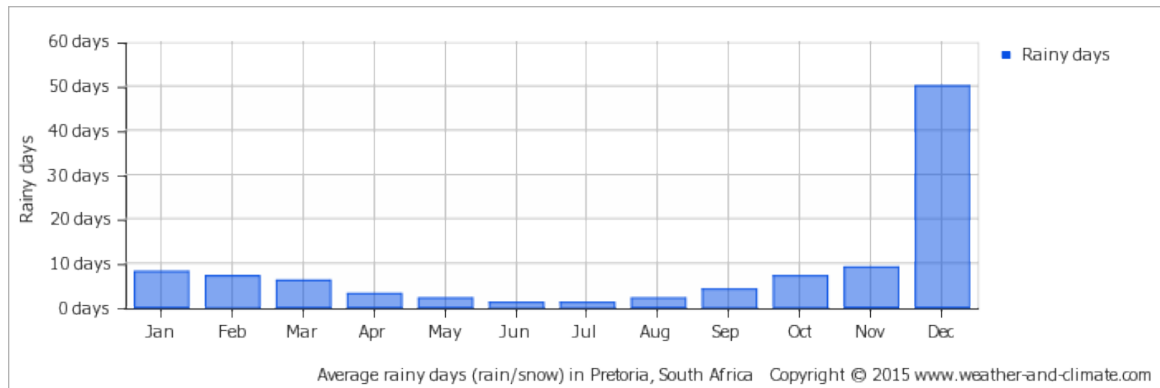


Figure 4.14: Average Rainy Days for Pretoria

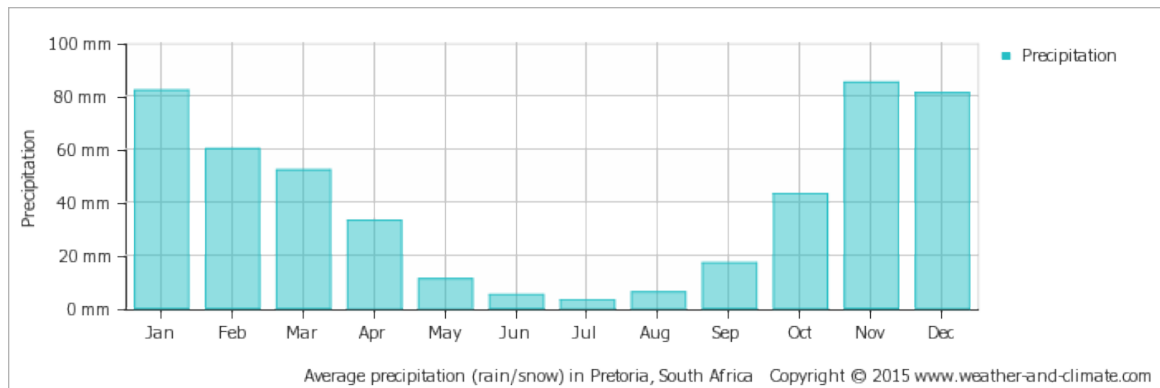


Figure 4.15: Average Precipitation for Pretoria

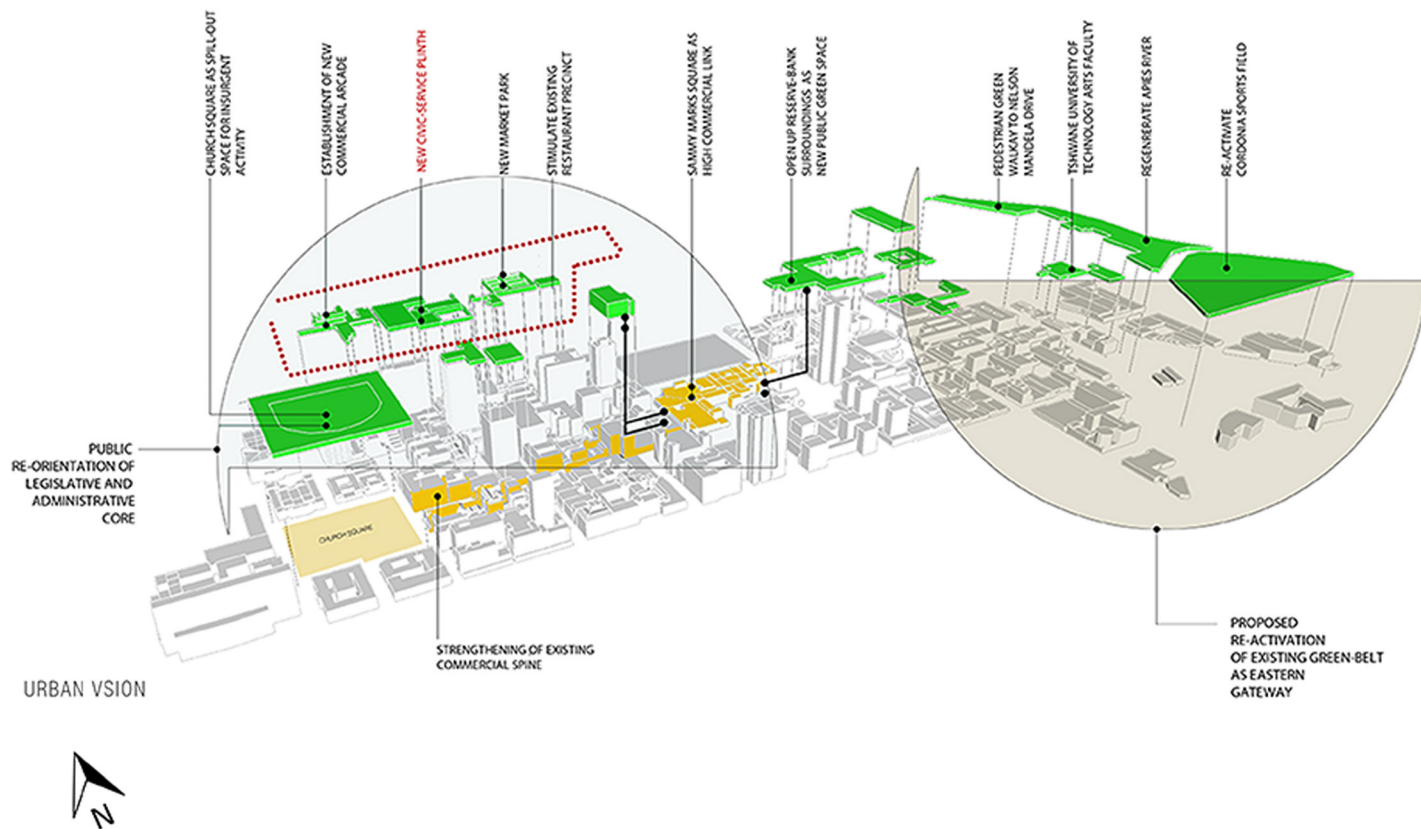


Figure 4.16 Urban Vision (Author 2015)

4.5 URBAN VISION

The site is to be readapted for insurgent urban activity do develop and activate the plinth site as a public component within the city precinct, while stimulating public activity to its currently introverted peripheries. Access to the site is to be determined by the nature and intensity of its surrounding public activity. The southern axis of Vermeulen Street is regarded as a formal route, as defined movement connecting the legislative, administrative and corporate functions housed along both its edges. In keeping with the formal nature of Vermeulen Street, access to the site via this axis will be less socially-activated.

It is proposed that the existing Eureka Factory building – currently used as a library by the high Court Chamber – is to be incorporated into the current public street-activity which occurs within the enclave shaped between the Eureka Factory and the Tribeca diner. The public activity which occurs in this space holds significant value in terms of the interaction between various employess and professionals of the high Court Chambers, Pretoria News and Court staff, which occurs within its boundaries.

The Eureka Factory is therefore to be re-orientated towards a more public function, allowing public to access its heritage value in an informal manner, whilst expanding the inter-disciplinary activity it represents.

To capitalise on this diverse energy, the ground floor of the plinth will be re-appropriated into a lobby, accessible from the side-walk level, where users will gain access to the more public orientated plinth surface via reception, stairs and lift. Thabo Shume Street - the eastern edge of the site-constitutes a more informal route.

Movement located along this axis connects the National Library, to the north, with various fast-food restaurants and small businesses to the eastern edge of the street.

The northeastern corner of the site, currently a low functioning parking facility, is to be readapted to establish a green-market-space that will feed of the informal program of small restaurants and the lack of comfortable public space provided by the National Library.

As the city centre drastically lacks public green-space, this corner will provide the precinct with a relaxed environment where users could gather in-between work, and aims at stimulating the business of the nearby restaurants, by providing consumers with a favourable environment to enjoy meals. The market-park will provide an informal threshold onto the plinth site via a ramp, where the market will extend onto the plinth, where users will gain access to a sports-court and Department of Home Affairs services.

To its northern edge, the plinth is to establish a visual link between the activity of Johannes Ramokhoase Street and the public activity proposed on the plinth. The The Masjid Sultan Abdul Hamid mosque, located on the northwestern corner of the site, provides both Paul Kruger and Johannes Ramokhoase Streets, with regulated intervals of public activity, as determined by the weekly prayer schedules. This energy is to be capitalised upon by drawing activity from these streets into the proposed green-market-space, and to activate activity on both sides of Johannes Ramokhoase Street.