

# chapter 04





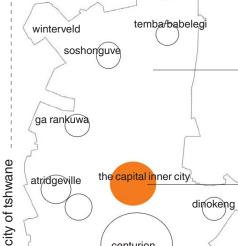




Municipality, edited by author 2011]



gauteng

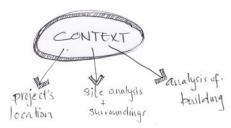


# 1.1 context

### 4.1.1\_INTRODUCTION

This chapter is divided into three parts. The first part will discuss the location of the project. It further describes the climatic conditions of the City of Tshwane and the legislative context of the site. The framework that the design project will be responding to is also included.

The second part will discuss the analysis of the site and its surrounding, followed by an analysis of the existing building.



### 4.1.2\_LOCATION

Geographically South Africa is geographically located on the southern point of Africa. This project will focus in the administrative capital, Pretoria, where the European Commission is based. According to the SA-EU Development Partners Progress Report, South Africa is recognized as a major political and economic power on the African continent (SA-EU Progress Report, 2010:2), playing an important leadership role in the progress of this continent.

develop the North develop urban areas celebrate the City Core maintain established areas

Fig.228:Tshwane framework intensions [Source: City of Tshwane Municipality, edited by author 2011]

centurion



# 4.1.3\_CLIMATIC ZONE

### wind--

The City of Tshwane is protected by the ridges of the Magaliesberg, Skanskop, Daspoortridge and Klapperkop. Gale winds are minimal, and the general direction of wind in summer is in a north-easterly direction, blowing in winter from the north-west.

### Design implication:

To solely utilise wind as energy will prove to be difficult; however, the idea of roof cowls with the assistance of mechanical pumps can be explored to assist in ventilation, as well as heating and cooling in the Agrivaal Building.

### \_temperature and rainfall \_\_\_\_\_

The City of Tshwane can be classified as moderately dry subtropical, with hot and rainy summers and cool, dry winters. The average annual temperature is 18.7°C. Thunderstorms are common in summer, with levels of 110mm of rainfall recorded in the month of January. The high average rainfall presents a design opportunity in terms of water harvesting and protection from heavy rain.

### Design implication:

Due to the large variations in temperature and seasons, walls and floors should provide thermal mass. External spaces should provide shade in the summer, and surfaces should be light in colour or reflective to minimize solar heat gain in the warm months (Holm, 1998:69).

The existing concrete roofs on the Agrivaal building, will collect rainfall during rainy seasons, this will be beneficial to areas of the roof that will have a roof garden. The runoff will be directed into a reservoir, where treatment and use for landscaping will benefit the complex.

### solar

South Africa has one of the highest solar radiation levels in the world (ranging from around 1450 kWh/m2 to about 1950 kWh/m2 per year, compared to Europe which on average receives 910kWh/m2 per year).

### Design implication:

The production of energy will depend on the size and type of photovoltaic (PV) panel used, as well as where it is placed. This provides an opportunity to explore solar energy in an attempt to minimize complete reliance on the national grid.



Fig.232:Wind driven ventilation system in Sutton, England. Wind cowls use the wind to draw warm stale air up from inside, and direct fresh air downwards over passive heat exchanger [Source: www.flickr.com/photos/8586443@ N03/2377282168/in/photostream/]

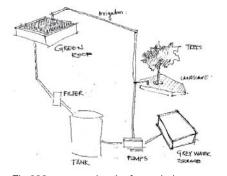


Fig.233:concept sketch of recycled water system from green roof [Source: Author]

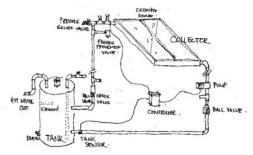


Fig.231:solar water heaters utilizing solar energy to provide warm water [Source: www.solardev.com/\_ FSEC-solar-heating.php, edited by author 2011]

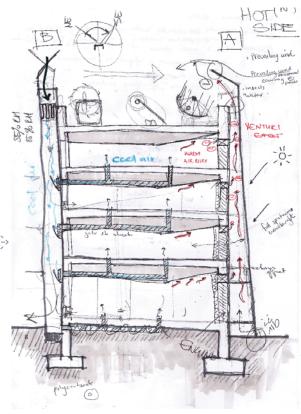


Fig.235:concept of proposed ventilation in the Agrivaal Building [Source: Author]

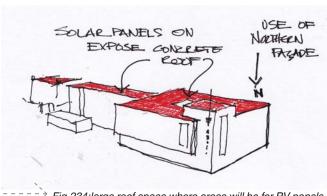


Fig.234:large roof space where areas will be for PV panels [Source: Author]



# 4.1.4\_SITE LOCATION

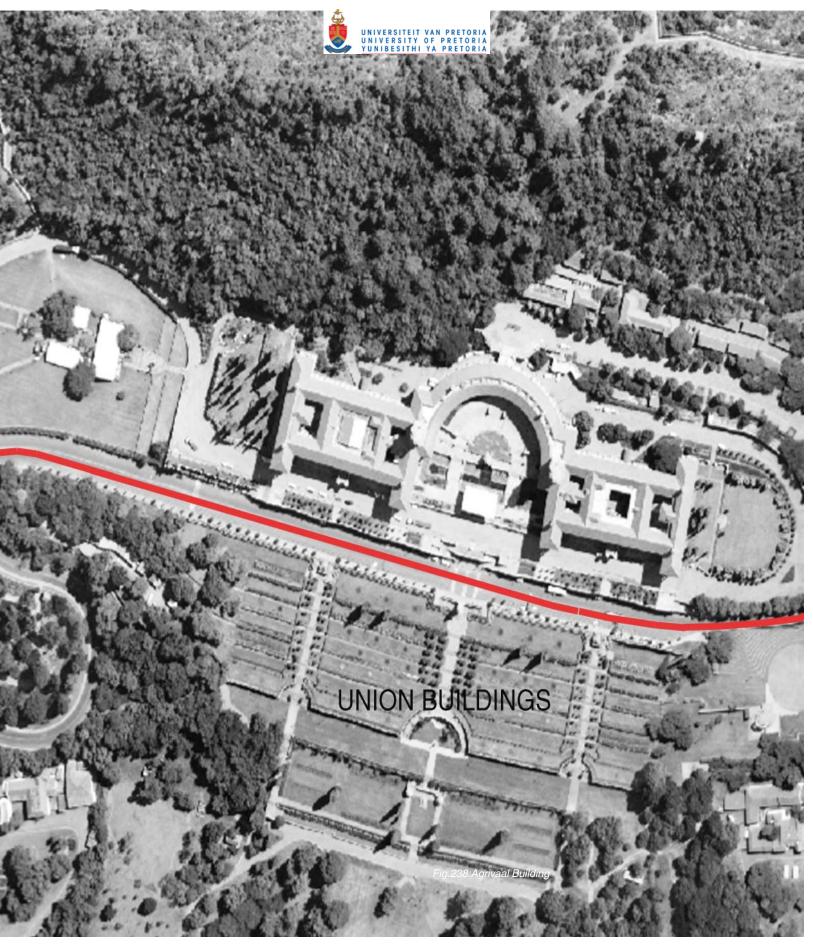


Fig.236:Position of the Agrivaal Building Source: City of Tshwane Municipality, edited by author 2011]

















# **4.1.5 LEGISLATIVE CONTEXT**

The following site information has been gathered from the Municipality of the City of Tshwane.

Erf number: 1087, Arcadia

### **Zoning:**

Erf 1087 was previously zoned as 'Residential 4 - which allowed for flats, hotels or guest houses. The erf was rezoned as special when the Agrivaal Building was built as 'Special', allowing government buildings and/or offices.

### **Height restriction:**

48m

Erf 1087 falls outside the 1381m contour height restriction area around the Union Buildings as stipulated by the Tshwane Town Planning (Clarke, 2009:34).

If the proposed design would need relaxation of the height restriction, it will not have negative effects on views to or form the Union Buildings.



# 4.1.6\_URBAN DESIGN

### 4.6.1 INTERNODAL FRAMEWORK

According to the ReKgabisa Tshwane Framework that is currently being implemented in the city, three major nodal points are focused on, the Union Buildings, Freedom Park and Church Square. The area encompassed by these points are where the future interventions are proposed. These interventions are mainly located in the northeastern quadrant of the City of Tshwane.

The intension of the framework is to explore development flexibility, thus ensuring structures that can respond to changing markets and development requirements. It thus focuses on Fred Scott's theory on 'altering architecture', however taking an urban stance and applying it to the framework. Fred Scott considers four guiding principles when making design decisions.

The main aim of this framework is to ensure that buildings respond to context and users. Furthermore, it aims to address issues of accessibility, legibility and connectivity of all buildings and streets. A guiding principle in the framework design is the focus on movement routes throughout the area, regarding these movement routes as links, a guiding tool, and an accessibility medium from

one area/building/node to another.

This framework focuses major nodes in the north-eastern quadrant of the City of Tshwane. These nodes include the Transportation Hub, the Gateway Node and the Destination Node. The links between these nodes are major movement routes within the area, as well as feeder routes to other places in the city, including the CBD.

As this area is located just outside the CBD it is noticeable that it contains few dense high-rise buildings, but consists more of 3-5 storey buildings, with the single storey building quite common. However, as the area is still in close proximity to the city centre, residential and commercial activities are still prevalent.

The intension of the framework is to explore development flexibility, thus ensuring structures that can respond to changing markets and development requirements.





Due to the scattered layout of the three sites investigated. It is proposed that three nodes are strategically identified. These three notes will specifically indicate access into and through the proposed study area. The transportation routes within this context define the urban landscape. The connection between these access routes have been identified as nodes and were defined as:

- Gateways Places of Arrival or departure
   Transport hub

Transportation Hub
The study is located on the urban edge, north east of Pretoria's Central
Susiness District and forms a transport node at a large intersection,
where Boom, Southpansberg, Dr. Savage and du Toit Street intersect.
Relation to site

The Dr. Sevage Taxi Rank as well as the Blood Street Taxi Rank create high accessibility to the site, and encourage heavy pedestrian movement in this area. The Children's Development Centre and Day Clinic will be to-cated at the centre of this transport node in order to improve accessibility and strengthen the educational and health identity of the preciously.

- SWOT Analysis STRENGTHS Existing Dr. Savage Taxi Rank and Blood Street Taxi Rank as transport

WEAKNESSES

Deteriorated building fabric of structures in area

Light industrial programmes of buildings in the CBD

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# OPPORTUNITIES • The urban edge of the city has the opportunity to become a gateway site through transport nodes • To strengthen the existing Nelson Mandela Corridor and Apies River

Framework

• Abandoned spaces to become public green spaces

Gateway Node
Gateway node providing access to the north of Pretoria
Link to proposed site: a human anatomy centre will benefit from being
placed close to a high traffic area; a gateway will provide this opportunity. This is almed at creating public awareness.

- SWOT Analysis Strengths: High Vehicular/pedestrian traffic levels Relationship of node to other institutional buildings Access point to the north of the city

- Weakness:

   The current opportunity for the gateway is not expressed
   Deteriorated building fabric
   Area has light industrial properties. This reduces the opportunity for the user to interact with the urban environment.

- Opportunity:

   Introducing a gateway provide the opportunity for public interface

   There is now the possibility of introducing a new urban destination

   Placing an anatomy centre in this combat should provide growth from within contrasting superimposition.

Threats:
• The underutilization of the current Tshwane district hospital site, in conjunction with the perceived poor service delivery is a major concern

Destination Node
The Union Buildings, The Seat of Parliament, touristic destination and rocreational site.

The Agrivael Building is located on Edmond Street, which leads the Union Buildings. It is one of the last buildings approaching the 'destination' and thus provides a 'gateway' into or out of the site.

SWOT Analysis
Strength

• The 'node' is located close on BRT and taxi routes

• Hamilton Street is a busy street and allows for traffic flow into the site

• Hamilton Street is a busy street and allows for traffic flow into the site

• The 'node' is located on the ReRgabise Tramework as part of the Government Boulevard which enriches the identity of the city.

• Framing of the street by heritage Pine Trees from the Union Buildings,
relates to the identity of the area

Not many pedestrians
 Residents in the area do not use the quieter streets
 Feels unsafe

No proper signage towards the Union Buildings No street furniture

Opportunity

• The buildings in the area can take opportunity of the visitors to the Union Buildings, by providing retail, eating places

• Regeneration of certain buildings







Fig.240:Transport route [Source: author 2011]

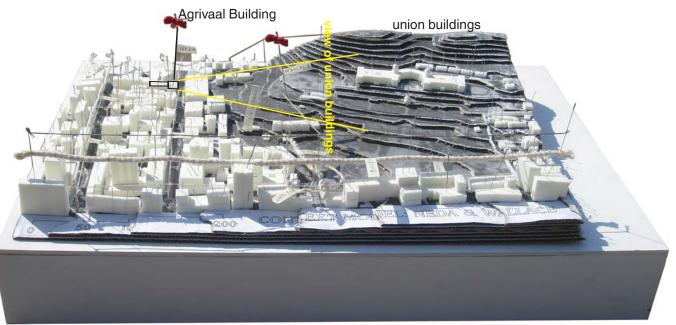


Fig.241:View [Source: author 2011]



site analysis



# 4.2\_site analysis

### 4.2.1\_INTRODUCTION:

This chapter will investigate the following concepts in terms of the Agrivaal Building and its location:

- The existing site conditions and analysis thereof;
- The Agrivaal Building as a dormant building, a disregarded, abandoned space;
- The regeneration of the Agrivaal Building through adaptive re-use, and its response to existing movement patterns, surrounding iconic buildings and structures, and social interactions taking place in the area.



Fig.242:Facades of the Agrivaal Building [Source: author 2011]





Fig.244:Pedestrian and vehicular movement surrounding the Agrivaal Building



Meters Meters

Fig.245:Height of buildings surrounding the Agrivaal Building





Fig.246:Bollards on sidewalks, however ending just before the Agrivaal Building [Source: author 2011]



Fig.247:Hamilton Street has four lanes, not very pedestrian friendly. [Source: author 2011]



Fig.248:Narrow sidewalks [Source: aut 2011]



Fig.249:High volumes of traffic at peak hours on Hamilton Street, photo taken on roof of the Agrivaal Building. [Source: author 2011]



Fig.250:Pine trees of heritage value on Edmond Street, Agrivaal Building located to the right of the photo. [Source: author 2011]





author



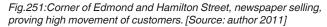




Fig.252:Lack of parking on Hamilton Street, opposite the Agrivaal Building [Source: author 2011]





Fig.253:Hamilton Street, one way four lanes towards Sunnyside. [Source: author 2011]



Fig.254:Commercial activity south of the Agrivaal Building, two blocks away. The Agrivaal Building has no commercial activity in it's surrounding. [Source: author 2011]



building analysis



# 4.3\_building analysis

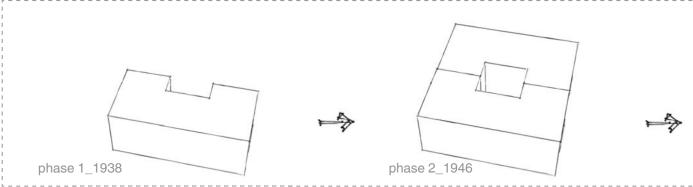


Fig.255: Building progression of the Agrivaal Building from 1938 to 1963 [Source: author 2011]

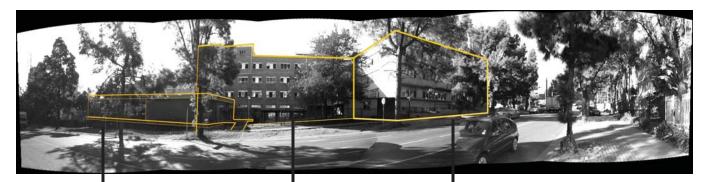


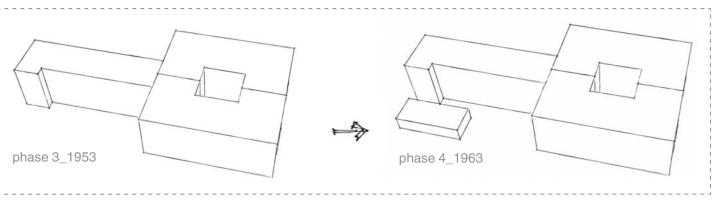






Fig.256: Clear distinction of different phases of the Agrivaal building due to material use. [Source: author 2011]





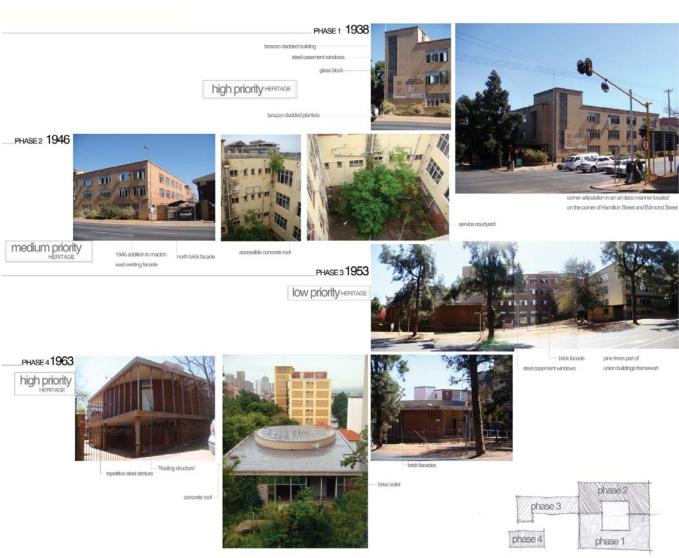


Fig.257: Different phases of the Agrivaal Building [Source: author 2011]

### 4.3.1 AGRIVAAL BUILDING PHASE 1 [1938]

The first phase of the Agrivaal Building is typical of the Art Deco period. The terrazzo-clad building shows evidence of early Modernism in South Africa, of which Jimmy Burg the architect of the Agrivaal Building and founder of the firm Burg Lodge and Burg, was a leading exponent. The massing and corner elements are characteristic to it's stylistic era.

The visual vocabulary of Art Deco, which was used for decorative, fashionable and commercial use, included influences from Cubism, Futurism, Expressionism and other modern movements (Victoria and Albert Museum, 2011). These were used stylistically in an eclectic manner, ranging between tradition and the avant-garde. In Architecture, Art Deco mediated between the Beaux-Art tradition and modern construction techniques in its distinction between skeleton and cladding (Victoria and Albert Museum, 2011).

The Agrivaal Building uses modern construction techniques consisting of a reinforced concrete framework with brick infill. The first two phases show the need to

decorate, although in a very minimalistic modern fashion, by means of the terrazzo cladding on the street front .

The first phase, built in a U-shaped plan around an open courtyard to the north, consists of a 3 storey building with steel casement windows. The main feature of the simple façade is the corner entrance which is celebrated with a Cubist protrusion defined by glass block elements and a flag mast (refer to fig 2). The main entrance is defined by a freestanding round column. The original doorway has been stolen and currently the entrance is partially closed in with rough brickwork (Clarke, 2009).

Windows are placed almost flush on the façade, relating to the Modernist Movement (Clarke, 2009). The whole of the street façade is covered in terrazzo panelling, which is presented in square blocks, emphasizing the modular nature of the building through this expression on the façade.

The whole building is crowned with a tubular steel balustrade along the parapet wall, typical of Modernist buildings of this era (Clarke, 2009). The facades are plain plastered brick with steel casement windows. They are interrupted by cast iron plumbing accents where needed.

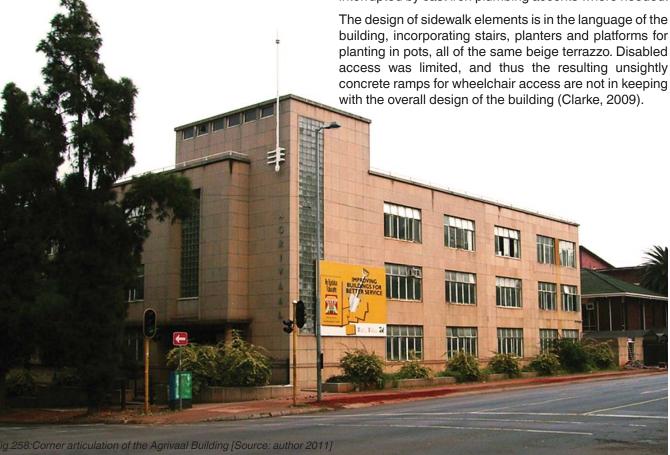






Fig.261:Phase 1 of the Agrivaal Building [Source: author 2011]



Fig.259:Phase 2 addition of the Agrivaal Building, 1946. [Source: author 2011]

### 4.3.2 AGRIVAAL BUILDING PHASE 2 [1946]

The second phase followed the same aesthetic as the first phase of the building, completing the courtyard and providing the building with (now enclosed) balconies on the Hamilton Street façade. This second phase completed the building as a courtyard building, however the façade that do not face the road is not clad in terrazzo (north and west façade).

# 4.3.3 AGRIVAAL BUILDING PHASE 3 [1953]

This addition presents face brick facades, possibly to avoid the high cost of covering the façade in terrazzo. It is set back from the street, connecting on the western façade of the main building. This section of the building follows the bare functionalist aesthetic of the courtyard of the Phase 1 and 2 Agrivaal Building, with some exceptions. The same proportioning as that of the original building was used in terms of the steel casement windows. The building, mostly roofed over with a flat concrete roof also has a balustrade at a higher level, providing for safety to the accessible roof (Clarke, 2009). The building is terminated at the western end by a hipped corrugated-iron roof. At the far western end a single storey corrugated-iron hipped roof provides for open parking at ground level (Clarke, 2009).



Fig.260:Phase 3 addition of the Agrivaal Building, 1953. [Source: author 2011]



### 4.3.4 AGRIVAAL BUILDING PHASE 4 [1963] COUNCIL CHAMBER

The Council Chamber can be categorised under the 'Brazil Builds' movement of the 1960s that was imported to Pretoria. As is typical of this movement, a range of materials is utilised in the building. Typical elements include rough stone walls, floating terrazzo stairs, mosaics and terracotta airbricks used as screening elements.

This single storey building (plus semi-basement to the west), placed between the street and the third phase 1953 building, defines the street boundary on Edmond Street towards the lower reaches of the site. Its placement creates a semi-enclosed space off Edmond Street, but this has little value as it is defined on one side by the vehicular entrance to the complex and bears no relation to the main entrance on the corner of Edmond and Hamilton Streets (Clarke, 2009).

The building is roughly square on plan with thin steel piloti enclosing a circular council Chamber, expressed as a separate element and celebrated through the oval shape of the Council Chamber itself punching through the concrete roof.

The façade of the building, defined above and below by strong horizontal terrazzo bands (reminiscent of the main building) bears little relation to the rest of the complex, being of a rough dark face brick in soldier bond without any openings along the sides but providing for daylighting towards the west (Clarke, 2009). The entrance to the building is from the east, accessed by pre-cast terrazzo steps floating on a steel substructure.

The building was entered through plate glass doors, now badly vandalized, over a marble and granite floor into a green mosaic entrance foyer, over a kidney-shaped water feature/fish pond which is now derelict.



Fig.262:Phase 4 addition to the Agrivaal Building, 1963 Council Chamber. [Source: author 2011]



### 4.3.5 ANALYSIS OF SPECIAL ARCHITECTURAL ELEMENTS OF CULTURAL SIGNIFICANCE

This section will deal with specific identified elements of value, i.e. those aspects of the building most worthy of conservation. It will highlight elements worthy of retention as well as those not so worthy, in order to feed into the decision-making process of the architect. This section has been compiled by means of site visits with a professional architect with experience in heritage, as well as reference with existing analysis documents.

Not all elements will be dealt with in this section. Only elements that have been altered or are relevant to the proposed design will be discussed.

# AGRIVAAL PHASE 1 BUILDING (1938) and AGRIVAAL PHASE 2 BUILDING (1946)

### **Main Entrance**

The sequence of stairs, planters and platforms leading to the main entrance of the Agrivaal building should be restored, all later accretions (crude access ramps and palisade fence) removed. A new door, of contemporary design, but with sympathetic proportioning to the character of the original design, should be installed. Due to its proximity to the main staircase, this new door could be designed to be utilized as emergency exit.

### \_Glass block panels

These will be retained and repaired where possible. Glass block panels showing some of the damage that has occurred over time.

### \_Exterior planters

The design of sidewalk elements is particularly striking, incorporating stairs and planters and platforms for planting in pots all of the same beige terrazzo.

### \_Concrete roof

The building, mostly roofed over with a flat concrete roof also has a balustrade at a higher level, providing for safety to the accessible roof.



Fig.263:Glass blocks used to accentuate the corner articulation of the Agrivaal Building [Source: author 2011]



Fig.264:Main existing entrance, currently blocked by a brick wall. [Source: author 2011]



### Mast

The corner mast will be retained as a vital element in the appearance of the building and as contributing factor to the landmark character of the corner of this building on the streetscape (Clarke, 2009).

### \_Façade Lettering

Like the mast, the lettering should be retained as an integral part of the character and original use of the building.

### \_Terrazzo Cladding

The whole of the street façade is covered in terrazzo paneling, jointed to form square blocks, emphasizing the modular nature of the building through this expression on the façade. The whole is crowned with a tubular steel balustrade along the parapet wall, typical of Modernist buildings of this era (Clarke, 2009).

### Mural

Commissioned for the entrance fover of the Maize Board building, this mural, dealing with the cultivation of the mealie, is of value only in situ, in the space it was designed for. While some of the scenes may be thematically offensive to contemporary society, its value lies exactly in its recording of the mindset of a particular class at a particular time in the history of South Africa. It should not be removed. The artistic merit of the work however does not preclude its adaptation. It is proposed that an artist be appointed to add a layer to the mural, thereby making it current. This accretion should be reversible, easily movable or hinged. It should not damage the fabric of the mural in any way, but it can serve to cover some of the more offensive scenes of servitude depicted in the mural. This layer should be in dialogue with the original and form, with the original, a new artwork with new interpretations. not completely obscuring the original artwork.(Clarke, 2009).

### Windows

It is envisioned that the existing windows of the original building might not meet the safety and environmental





Fig.265:Lettering and the teak mask. [Source: author 2011]





Fig.266:Mural. [Source: author 2011]



Fig.267:Steel casement windows. [Source: author 2011]

standards of the new occupants. Technology of different materials will however influence the appearance of the windows. Elements such as sun shading applied to the façade of new additions to the complex will be applied to the original building, adding a 21st century layer to the existing façade.

### \_Paving

Bricks bearing the Kirkness insignia will be saved and intended to be re-used in areas of the building. As these are not elements that are of an endangered nature or rare within the context of Pretoria/Tshwane this action is not essential, but preferable (Clarke, 2009).

# \_Planting

No planting with any significance exists on site of the complex. Street planting on Edmond Street is of importance though. This section of Pine tree planting is a continuation of the pines at the Union Building grounds continued down Edmond Street. They are essential to the character and sense of place of this street. The development should not detrimentally affect this planting



Fig.270:Edmond Street framed with pine trees. [Source: author 2011]



Fig.268:Paving with Kirkness insignia. [Source: author 2011]

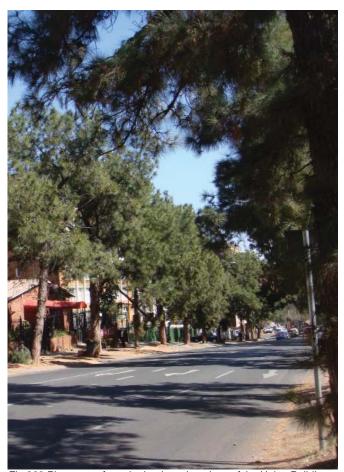


Fig.269:Pines trees from the landscaping plans of the Union Building [Source: author 2011]



# **AGRIVAAL PHASE 3 BUILDING (1953)**

Unlike the first two phases of the Agrivaal/Mealie Board building this phase has very little architectural merit or cultural/historical value and does not add value to the urban environment. It is possible to demolish the whole without any substantial loss of meaning should the whole be documented before demolition.

# AGRIVAAL PHASE 4 BUILDING (1963) COUNCIL CHAMBER

While a high-spec building in its day the Council Chamber has been severely vandalized. It is obsolete and contains very little physical material that should be incorporated in any new development should it be demolished (Clarke, 2009). Further to this the incorporation of breeze block screening walls, such as the one to the east of the Council Chamber, on the pedestrian level will serve as memory of the Council Chamber and evoke the idiom of the Brazil Builds era during which this structure was erected. This building will be kept and serve as an information centre.



Fig.271:Phase 3, with exposed brick. [Source: author 2011]

# 8.5 Outbuildings

These structures will be documented, however have no heritage value. They will be demolished to allow for the proposed intervention.



# 4.3.6 STATEMENT OF SIGNIFICANCE

### CONTEXT

Existing buildings are records of architectural eras and influences. The city is like a library that retains information on architecture and construction, allowing the public to refer back to the past and integrate it with the present. The Agrivaal Building is a prime example of Modernism with an Art Deco influence. It represents the importance of mealie farming in South Africa. The building retains a layer of the past and represents a layer of knowledge that should be kept and preserved in the city. The building is located on the corner of Hamilton and Edmond Streets, of which the latter lies on Government Boulevard.

Edmund Street forms an important approach to the Union Buildings. The pine trees which line both sides of the street date to c. 1910 (Clarke, 2009). Their purpose was to frame views along a narrow vista from the city to the Union Buildings. Government Avenue is significant because of its close physical association with the Union Buildings, and because it links the city with important sites within Pretoria. It has superb views over Pretoria as well as to the newly developed Freedom Park across the valley (Clarke, 2009). Government Avenue is the gateway to the Union Buildings. Furthermore, the streetscape was never designed or intended to fulfil this function, and today it is being neglected and mismanaged. The value of this area lies in Sir Herbert Baker's original design intent of creating clear and uncluttered vistas to and from the Union Buildings (Clarke, 2009). Numerous tall buildings have been added to the sites surrounding the buildings, leading to them being gradually obscured from certain urban viewpoints.

The current derelict condition of the terrain of the western garden as well as Edmond Street does not provide a suitable approach to the Union Buildings and should be addressed. The majority of the buildings are residential or office buildings that do not open up to the public. The intension is that the new Agrivaal Building should respond to the urban context.

### **FORM**

### Elements to be retained:

The design intension is to identify the old and the new and how they link and work together sustainably. The old must still be understood and appreciated in terms of its merit. The transitional zone between old and new must be identified; it should communicate clearly.

- The corner articulation located on the corner of Hamilton and Edmond Streets is done in an Art Deco manner
- The current Council Chamber was influenced by Brazil Modernism, thus documenting it must be considered
- The courtyard will be utilized mainly for office space. It will be extended towards the west, allowing the courtyard space to include the new structure.
- The existing entrance will be utilized as an alternative entrance for uses such as general information, enquiries, mail services, submission of applications etc.
- The existing lift and staircase will be retained.
- Existing glass blocks must be either maintained or replaced.
- . The existing mast will be restored and used for the EU flag. The design of the flags and logo will be expressive of



the identities of the EU and South Africa. These must be visible from both Hamilton and Edmond Streets.

- Existing planters must be retained, maintained, and a system devised to water plants through collected rain
- Existing steel casement windows, especially on the eastern façade, must be restored and sealed to improve airtightness. They must serve to provide waterproofing as well as acoustic value.
- Solar shading must be considered on all necessary façades.
- Balconies that allow for winter sun and shading of the summer sun must be considered for the northern façade.

### **FUNCTION**

The building is currently derelict and unoccupied. It was previously used as the headquarters of the Maize Board in South Africa. It consisted mainly of offices, with access to a testing laboratory.

The building must accommodate the new European Union Commission in South Africa. It therefore needs to provide the following: the ambassador's office, general private offices and open plan offices, social spaces, meeting spaces, kitchens etc.

### Elements to consider:

- The addition of a basement for secure parking
- The use of public transport will be encouraged. The use of the BRT, taxi feeder systems and bicycles will be encouraged. Safe bicycle parking will be provided.
- All existing stairs must be retained to be utilized as fire escapes.
- It must be ensured that all fire escapes lead to Edmond Street without obstructions.
- A well designed fire strategy must be demarcated.
- The ground floor is a public level, therefore public functions must be made available.
- The safety and position of the reception must be considered, as it allows entry to upper levels. Stairs must be well articulated in order to prevent the public entering the upper levels.
- The reception must be clear and approachable. Clear logic should be applied in terms of the entrance to the building; attaining of information and further reaction?? must be considered.
- Upper floors are office orientated with a mix of private offices, open networked offices, social spaces, photocopying centres and meeting spaces.
- The ambassador's office must be the most secure. The architect should consider placing it on the top floor, with private access to the open roof garden. Views should be maximized.

# **Technology**

Building construction:

- The new building will have a light-weight feel, contrasting with the existing heavy terrazzo-clad building. The main materials used will be concrete and steel columns, glass and timber.
- The focus will be on how new materials meet the old and on how the links and joints work.



 Links and joints will represent the merging of the old and new, functioning as one but not necessarily read as one.

### **Environmental**

- solar shading shading on north, east, west
- ventilation cross ventilation, night ventilation, stack effect
- heating and cooling rock store, hot water production
- natural lighting depending on depth of building, access of light
- water harvesting water tanks
- · water runoff management
- · recycling paper, glass, metals

### Social

- Occupant comfort daylighting, ventilation, noise, thermal comfort, views
- Inclusive environments public transport, information for public, information occupants, clear signage, toilets, furniture
- Access to facilities access to BRT and taxi feeder system, access to atm, access to kiosk/canteen/food
- · Economic- local material, local skill,
- Institutional- governance, politics the role that the EU has in south Africa, the meetings that take place in relation to the EU and SA.