

identity and personality

[7]

[Architectural
Language]

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INTRODUCTION

STRUCTURAL EXPRESSIONISM

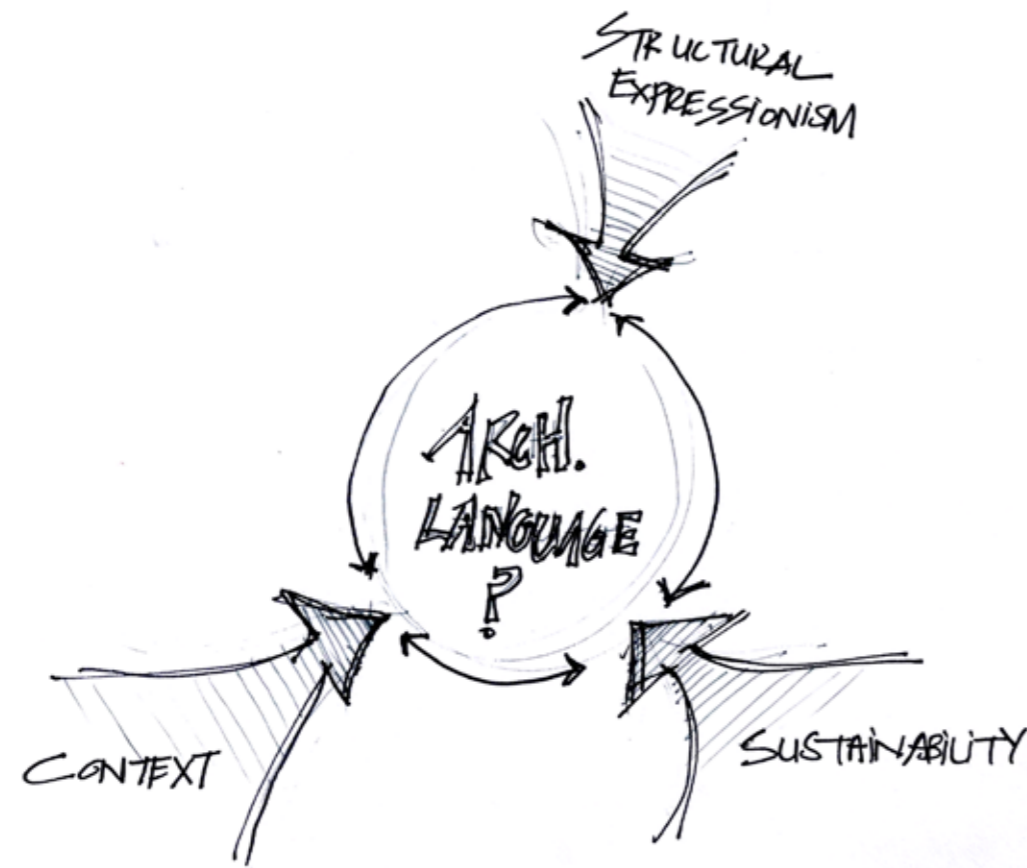
THE ARCHITECTURE OF

SUSTAINABILITY

THE ARCHITECTURE OF CONTEXT

After the exploration, the **basic framework** of the project, which is the use of infrastructure to act as a host of space and place, it became evident that **more investigation is needed regarding the language of the architecture**. The architecture of the project is influenced by three main informants:

- _ The architecture of infrastructure, also referred to as **Structural Expressionism** or Hi-Tech Architecture, a late modern movement.
- _ The 'architecture' of **sustainability**.
- _ And the architecture of the **context**.



The reason why structural expressionism is a relevant reference to this project, is because of the general similarities in approach. Like the work of the Structural Expressionists, the focus of the project revolves around **creating a building in which particular attention is given to the design of the services; the infrastructure of the building.**

The Structural Expressionists regard their architecture as an architecture which acts as a catalyst, a building which serves and responds, a building which can evolve and grow, which is **functional, efficient, makes use of technology, a 'muscular' architecture which is honest and expressive** (Davies 1985: 45).

Renowned Structural Expressionists are Richard Rogers, Norman Foster, Santiago Calatrava, Nicolas Grimshaw, Michael Hopkins, I.M Pei and Renzo Piano (Davies 1985 : 44). Individually they all translated and expressed parallel principles of Structural Expressionism in their work during the 1970s. These similarities were:

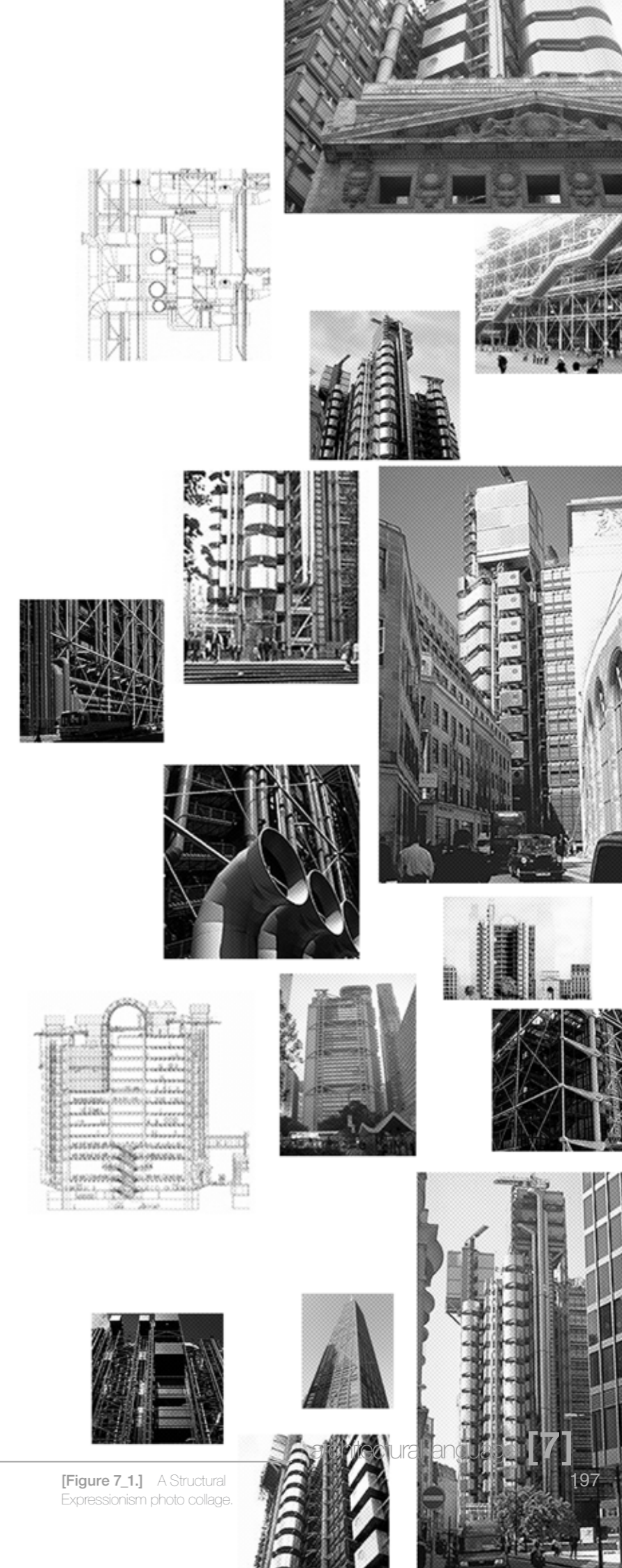
- _ To create an **exoskeleton** which consists of services and the structure of the building which is exposed either internally or externally.
- _ Highly **technological focus**, looking for inspiration from industry, transport, communications, flight and space travel.
- _ The use of glass, steel and concrete to contrast the 'muscular' structure with the smooth skin, making the **essential construction of the building the source of the aesthetic** of the building.
- _ Creating a building which does not have a set programme but can be **adapted** to house different programmes.
- _ Design and use of **prefabricated components** even to the extent where 'plug-in-pods' were used for set configurations such as ablutions.
- _ Use of tensioned steel and **dramatic suspended structures.**
- _ Transforming the **elevation into an abstract grid** that can accommodate a number of different functions (Davies 1985: 46).

The difference in approach between *Infratecture* and Structural Expressionism is where Structural Expressionism fell short. Their work focused on intention rather than tradition, rather functional and efficient contributors than artistic or symbolic (Davies 1985 : 45). Thus the spaces they created were an abstract entity, devoid of cultural qualities, **context is not given priority over diagram and they had no urbanistic concerns.**

In contrast *Infratecture* is primarily **concerned with the existing urban fabric**, contributing to the longevity thereof, the servicing thereof and the resultant **in-between public spaces.**

When viewed from outside, one doubts one's conception of the internal space of a structural expressionist building, the building's form is not derived from the function of the internal spaces. Instead, the **issue of space is replaced by the issue of flexibility**, the serviced zone or 'omniplatz' is a clutter-free space where possibility can reign free (Davies 1985 : 55). Although it is in many cases optimal to have clutter-free space, especially in a parkade, it seems that the **equipment becomes more important than the place/space**, even externally the building 'sits' on the ground like a piece of equipment disregarding the urban interface. It is *Infratecture's* endeavour to **create good architectural space via systems**, not only internally but also externally.

It is the Structural Expressionist's mission to make use of and participate in the 'spirit of the age' (Davies 2000: 45). In the 1970s the spirit of the age was advanced technology. Today, however, it is sustainable technology. It might not necessarily be the spirit of the age but it surely is the obligation of the age. *Infratecture* focuses on sustainable technology to serve and sustain its context, to not only emphasize its presence in the name of aesthetics but also as a educating interface, a **communicative 'diagram' of give and take.**



[Figure 7_1.] A Structural Expressionism photo collage.

What does sustainable architecture 'look' like? Entire books have been written on this topic and it all comes down to three approaches:

- _ Integrative approach
- _ Organic approach
- _ Technological approach

Each approach has a different architectural language provided by the approaches' principles, intent and resources used.

Integrating sustainable systems, principles and technologies into *Infritecture's* already mechanistic and serviced framework adds another layer of complexity to the building which is part of the emphasis on **infrastructure as a tool which can control and regulate the consumption of resources** and bring about behavioural change. Thus these principles and systems are not interpreted as subtle decisions and content elements but rather **emphasized, exaggerated and pronounced elements communicating their use and purpose and importance.**

INTEGRATIVE APPROACH

This approach focuses on using different construction materials, **locally produced and easily constructed**. It would also apply **basic sustainable design principles** like passive solar heating and cooling, natural lighting and optimizing solar angles (Wines 2000 : 11). Typical examples of Integrative design would be the work of **Glen Murcutt and Diébédo Francis Kéré**.



ORGANIC APPROACH

This approach relates closely to nature, using principles of **biomimicry and ancient construction methods**. The use of natural materials and rudimentary construction results in **biodegradable structures which are low cost and have low energy consumption** (Wines 2000 : 24). This can be seen in new advances of old techniques like rammed earth construction and some of the work of **Peter Rich and Nobel Hamdi**.



TECHNOLOGICAL APPROACH

In this approach technology is implemented to start **regulating buildings' sustainability**, technologically advanced materials and machines are used to decrease energy consumption and cycle and generate resources. Here focus starts shifting to systems and products like **wind turbines, photo voltaic panels, solar panels, membrane bioreactors, mechanized louvre systems, solar thermal collectors etc.** (Wines 2000 : 47). Examples are expensive but efficient and lasting buildings like the **BEDZED project in London and the CH2 building in Melbourne**.

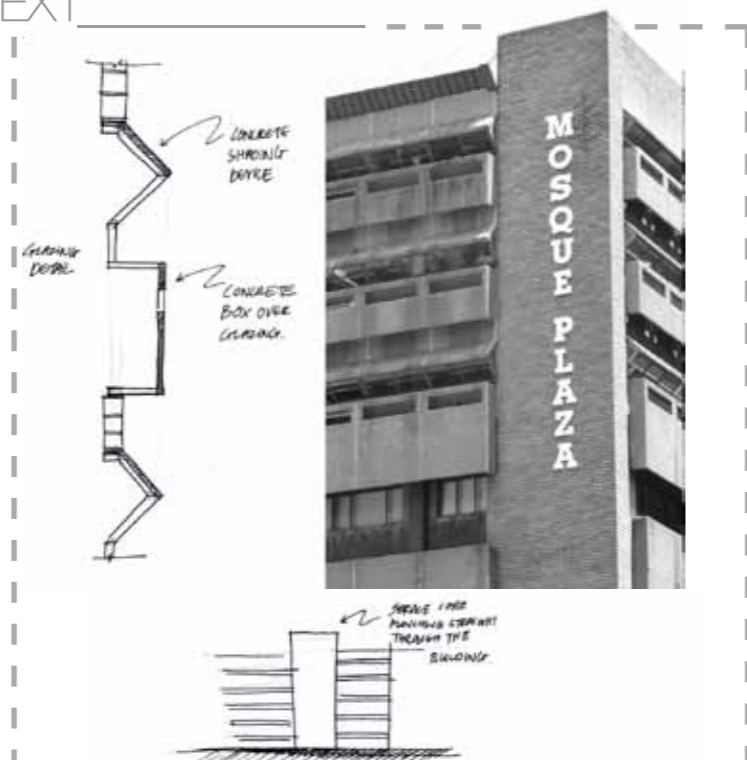


The contextual architectural language is an important informant, for here a 'bridge' needs to tie the design in-between numerous influences. The on-site architecture differs in scale, programme, materials and building style, to name but a few differences. For the *Infratecture* to respond to each and every of these differences might lead to a post modernist collage structure of confusion, a mini Dubai in the core of the block.

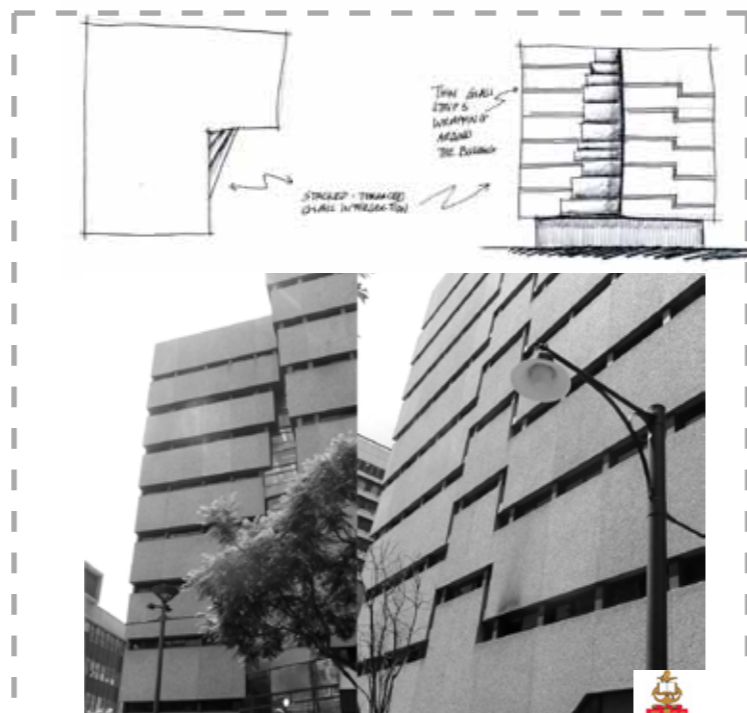
Instead, similarities should be sought out, clues of the general contextual response that these architectures had to reach to.

Most of the buildings on site were built in the 1970s, coincidentally also the late modern time. A short photographic and sketch investigation was done to illustrate the findings (illustrations on following pages).

One of the biggest buildings on site is **de Bruyn Park**. The building's architecture places great **emphasis on services which has a mechanistic language as result**. The service core punches through the 11 storey atrium and up through the roof. The concrete clad shading over the glazing looks **robotic and tank-like**, the air-conditioning ducts come out the sides of the building like large sewer pipes. The staggered glass atrium entrance of the **Sanlam Forum building** in contrast with its heavy concrete clad façade with thin strip windows looks like the floors were stacked on a central vertical axis and then spined around leaving the glazing offset and confused.

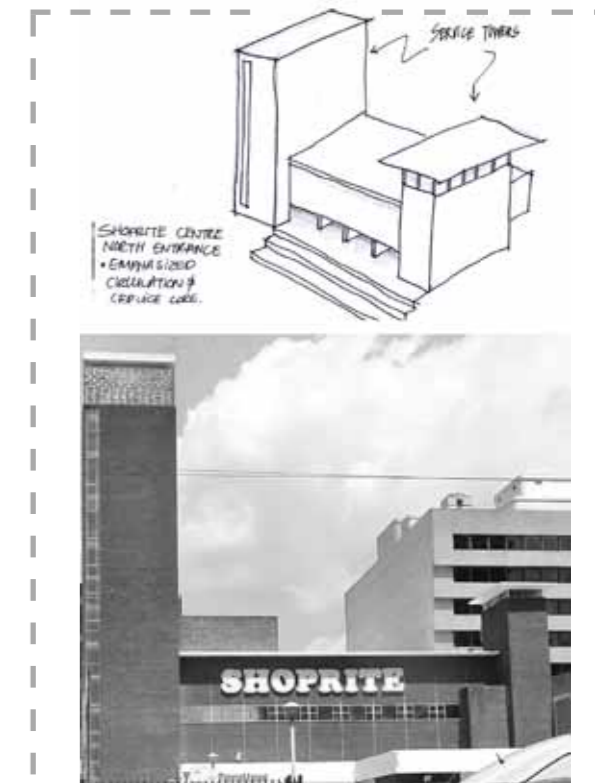


[Figure 7_2.] de Bruyn Park, emphasized service core & window cladding



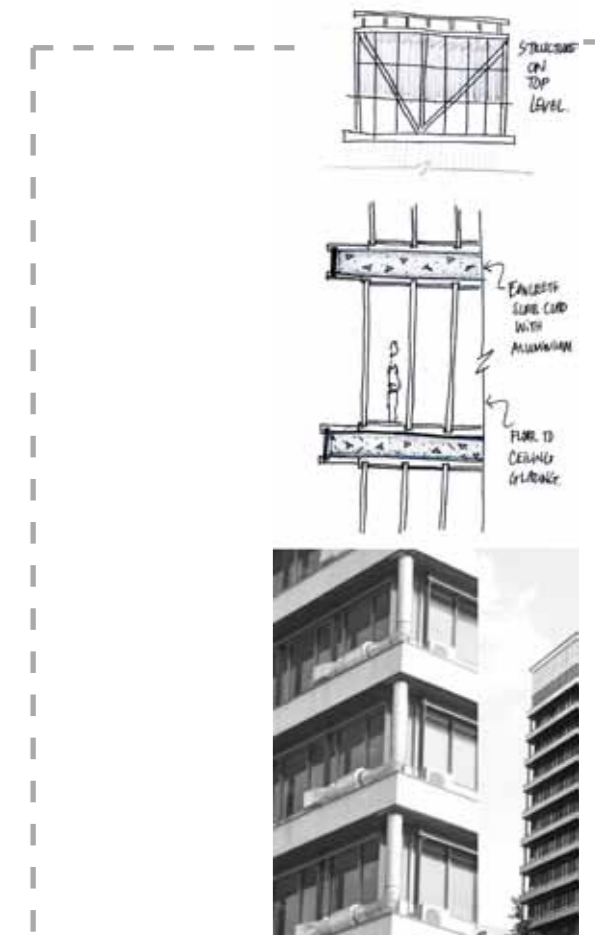
[Figure 7_3.] Sanlam Forum, staggered floors and thin strip window

The **Shoprite and OK Furniture buildings** have definite **set aside service cores framing the building** and working from the outside inwards.



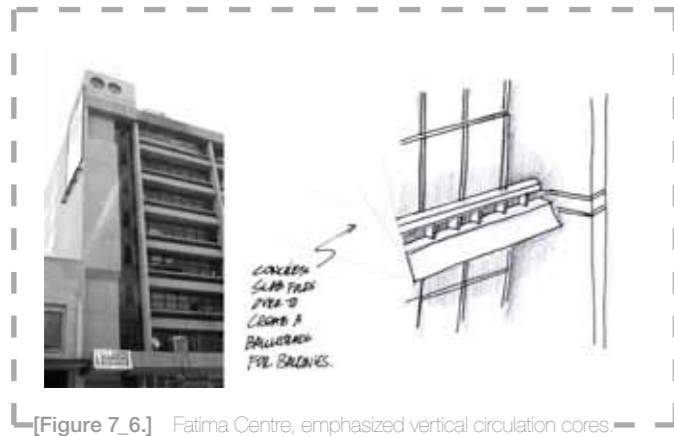
[Figure 7_4.] Shoprite Foods, prominent service towers

Regend Place is a sleek glass and steel building with a **muscular exposed steel structure** which can be seen on the top two floors behind the glazing.



[Figure 7_5.] Regend Place, glass and steel structure.

The **Fatima Centre building's** circulation cores stand separately from the rest of the building like two **machines holding onto the structure**.

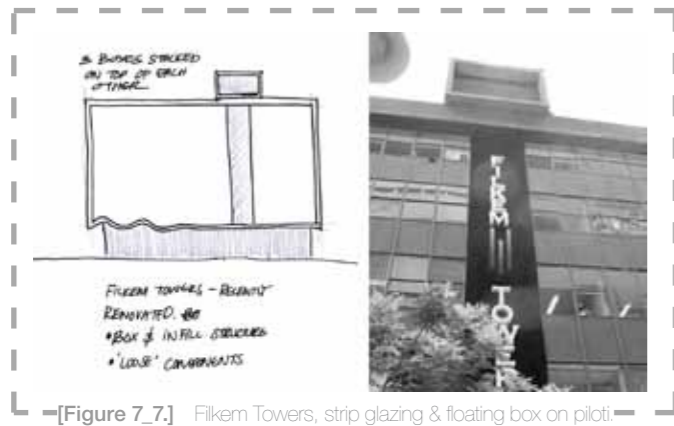


[Figure 7.6.] Fatima Centre, emphasized vertical circulation cores.

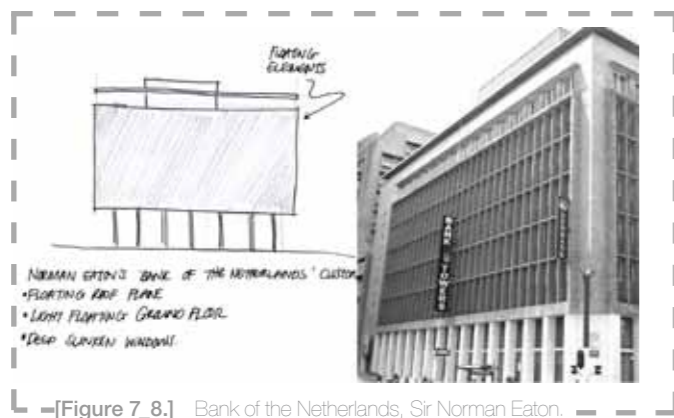
Navy House, Filkem Towers and the Bank of the Netherlands are more modernist with floating planes, pilotis and strip glazing.

On neighbouring sites, the architecture of **Sammy Marks'** steel roofs reminds of a **railway-industrial language** and the **ABSA building** in itself is an object of machine-like existence.

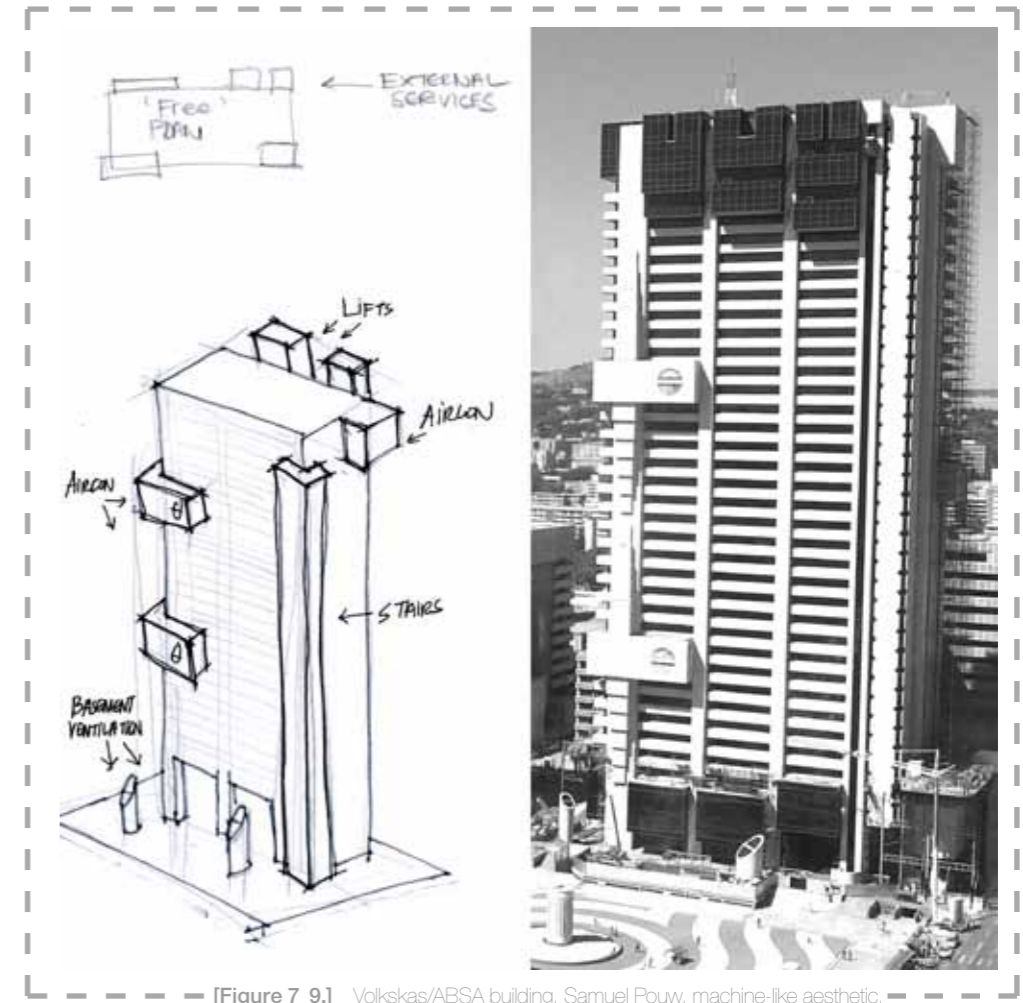
In conclusion, there is a strong element of the mechanistic era present on site. Thus the architecture does not communicate an alien language towards its context but rather is a **continuation of what is already there**.



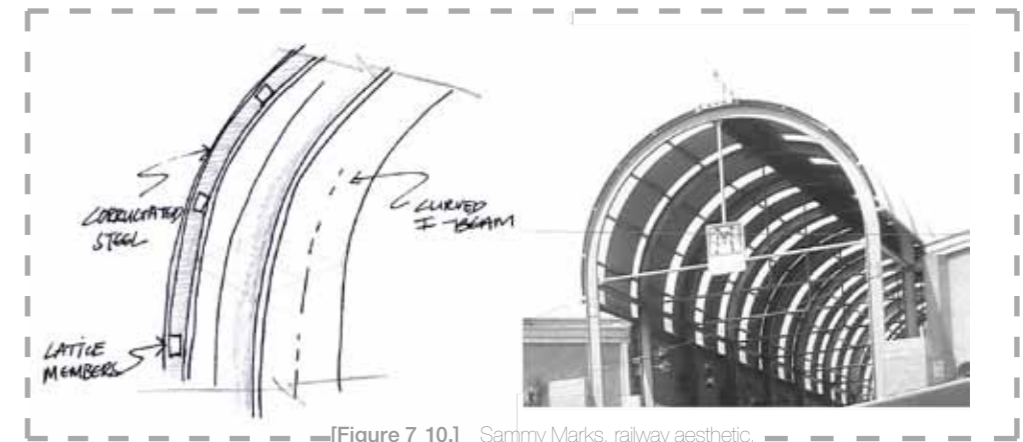
[Figure 7.7.] Filkem Towers, strip glazing & floating box on pilotis.



[Figure 7.8.] Bank of the Netherlands, Sir Norman Eaton.



[Figure 7.9.] Volkskas/ABSA building, Samuel Pouw, machine-like aesthetic.



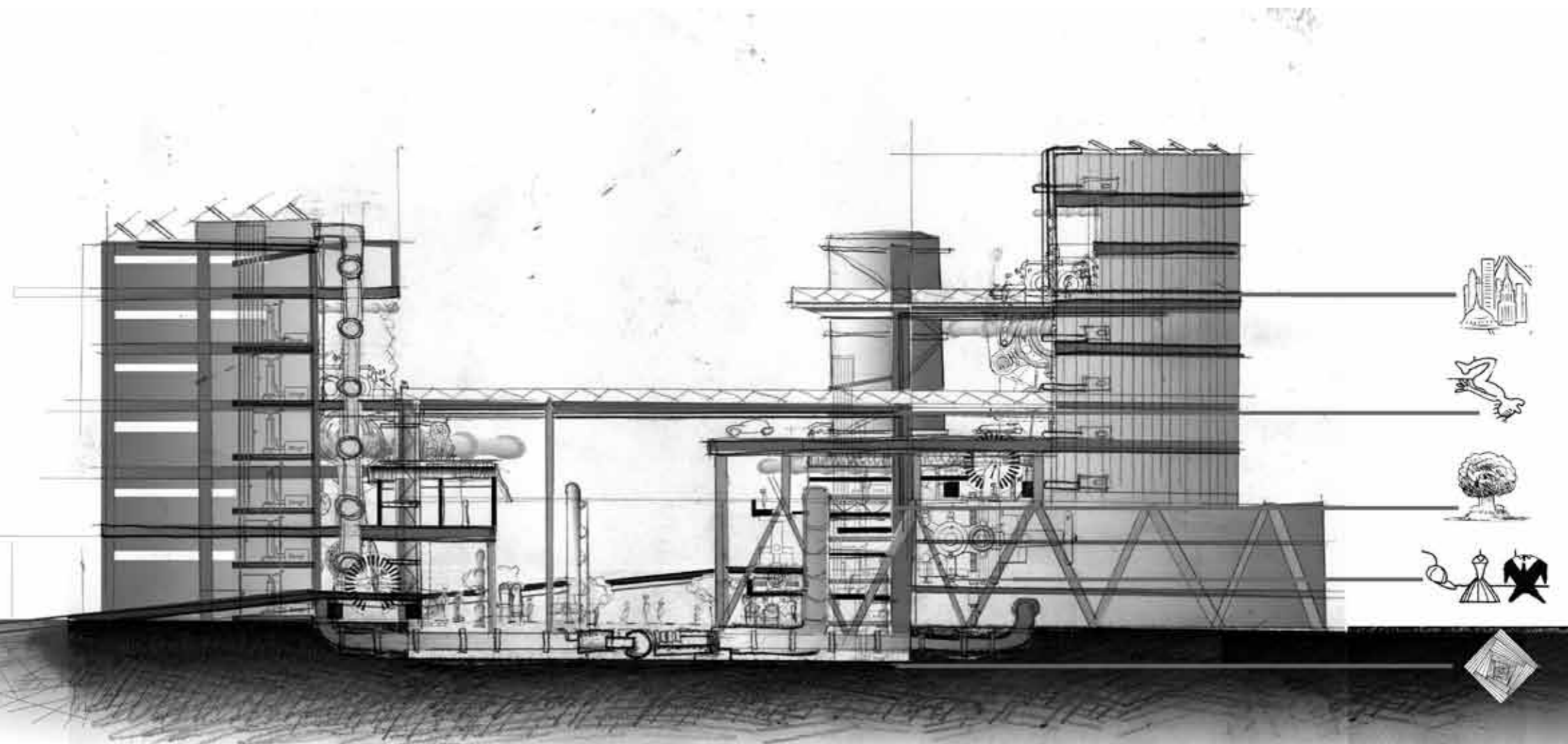
[Figure 7.10.] Sammy Marks, railway aesthetic.

Although it is the project's focus to create place and space via infrastructure, there are different ways to achieve this means. Renzo Piano celebrated services in a playful, honest and somewhat brutal manner. **The Pompidou Centre stands in contrast with its context**, it is an insertion, a machine in the city core. The **ancient aquaduct** system which is also an infrastructural service was built with natural materials, **blending in with the landscape and decorated as an extension of architecture**.

In context, the intervention endeavours to become an **extension of the surrounding buildings** yet communicate its functional essence. The whole design becomes a **'form follows function'** statement. Thus the design exist as a **threshold, an interface between man and machine**, public and private, inside and outside, new and old. The buildings' existence first and foremost is as a services building built to serve its context, but parallel with this it must serve the people of the context, **not only physically but aesthetically and phenomenologically**.

The building **promotes a change in lifestyle** whereby our lives becomes 'smaller' once again, more intimate, more responsible. Thus a space which **promotes sharing, a close cycle of resources, re-introducing the close relationship of nature and man is now emphasized by the workings on site**. Sustainable living is part of this lifestyle change, with recycling depots placed along the arcade for convenience, organic digesters on route to all destinations, water supply points, electrical cars park for free, the Joule sales rooms are promoted by its position on the turing point of both ramps' meeting point. Thus almost every on-site aspect **acknowledges, promotes and reveals this lifestyle change, change of power, change of space, change of locality**.

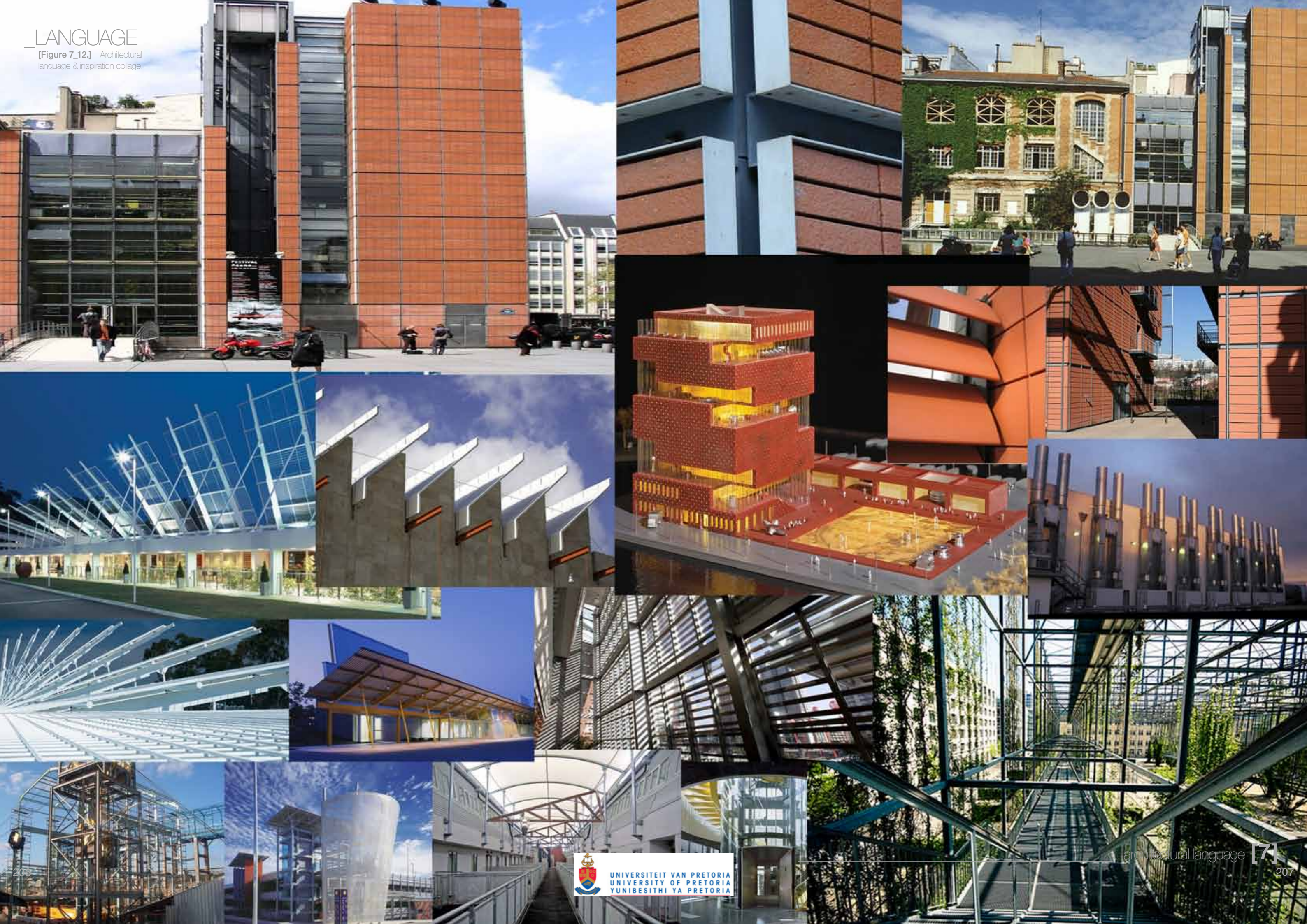
The building is a machine born from the contextual surrounds, it does not wish to boast as a machine but rather to communicate process, purpose and mentality. The machine is formed by and through connection, the weave of space, place, systems, people and matter.



[Figure 7_11.] Systems 'born' from the context.

LANGUAGE

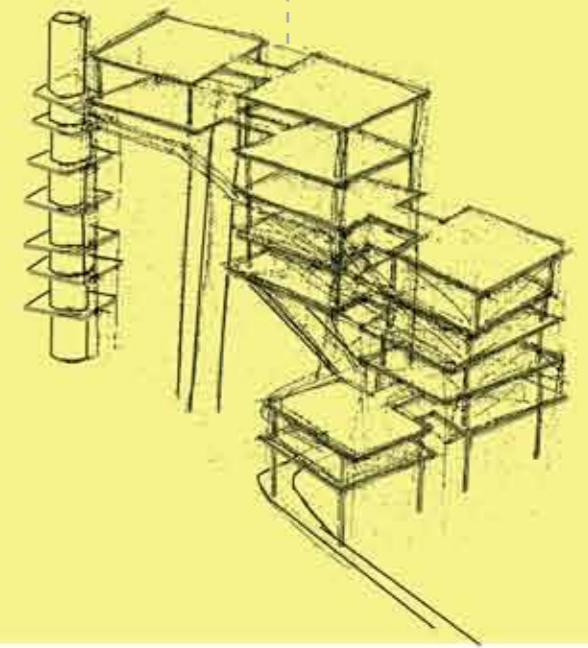
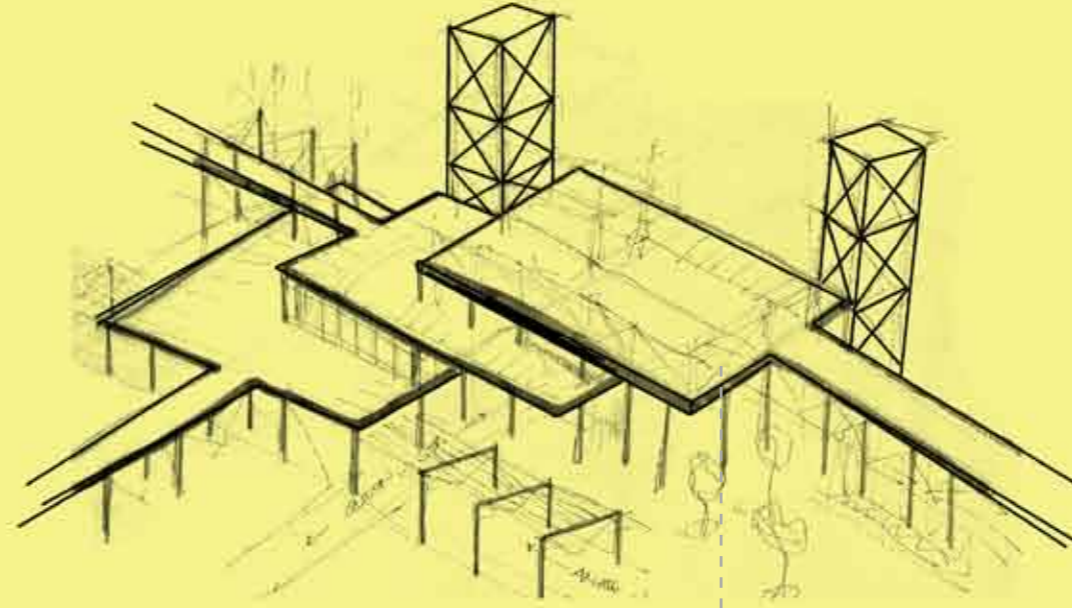
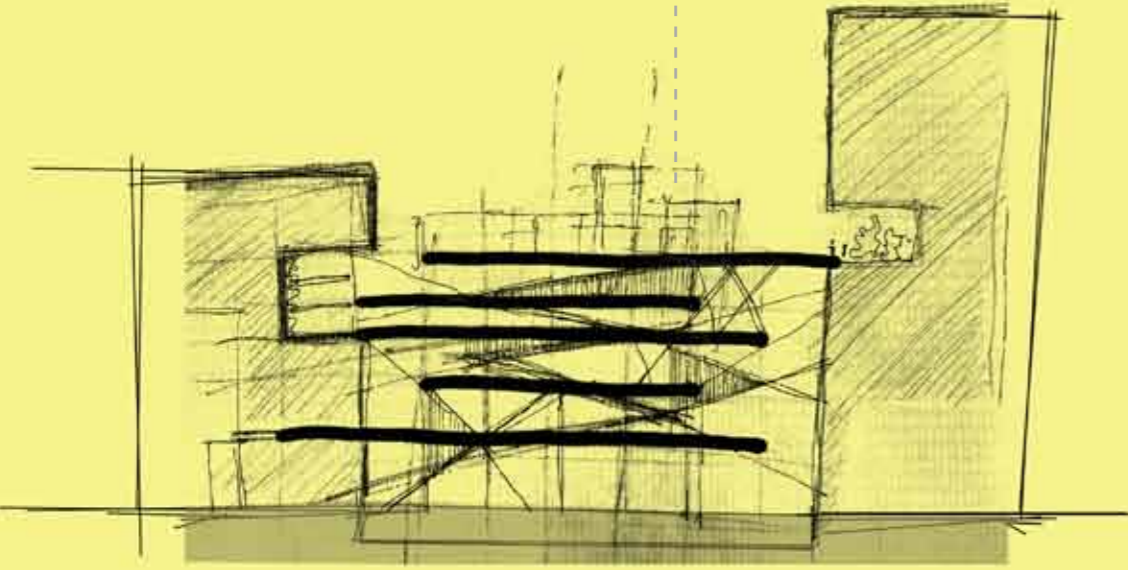
[Figure 7.12.] Architectural language & inspiration collage.



connecting existing fabric
on different levels

staggered floor over open
public space

staggered floors creating
different spaces



CONNECTIONS & EXTRUSIONS OF THE EXISTING FABRIC

[Figure 7_13.] Revised design sketch collage.



NORTH-SOUTH SECTION THROUGH QUEEN STREET

[Figure 7_14.] Abstract section illustrating the central public core.