In-cu-bate

An Architectural Investigation in Branding :
Accommodating Growth and Development
within a Global Economical Context

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requirements for the degree
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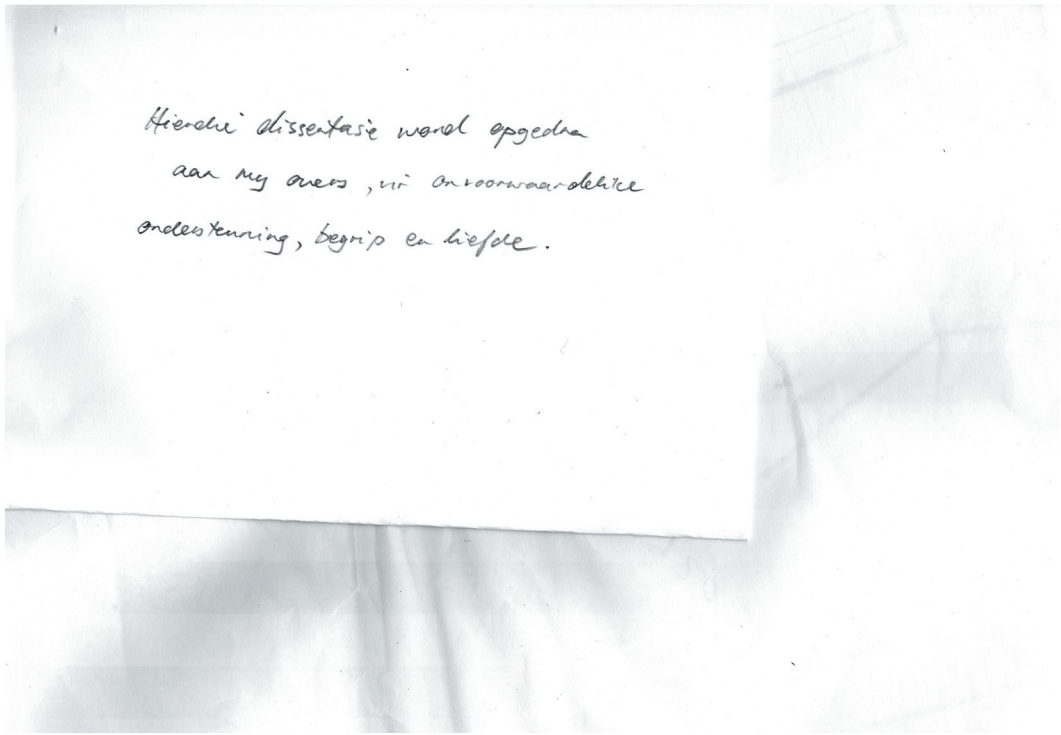

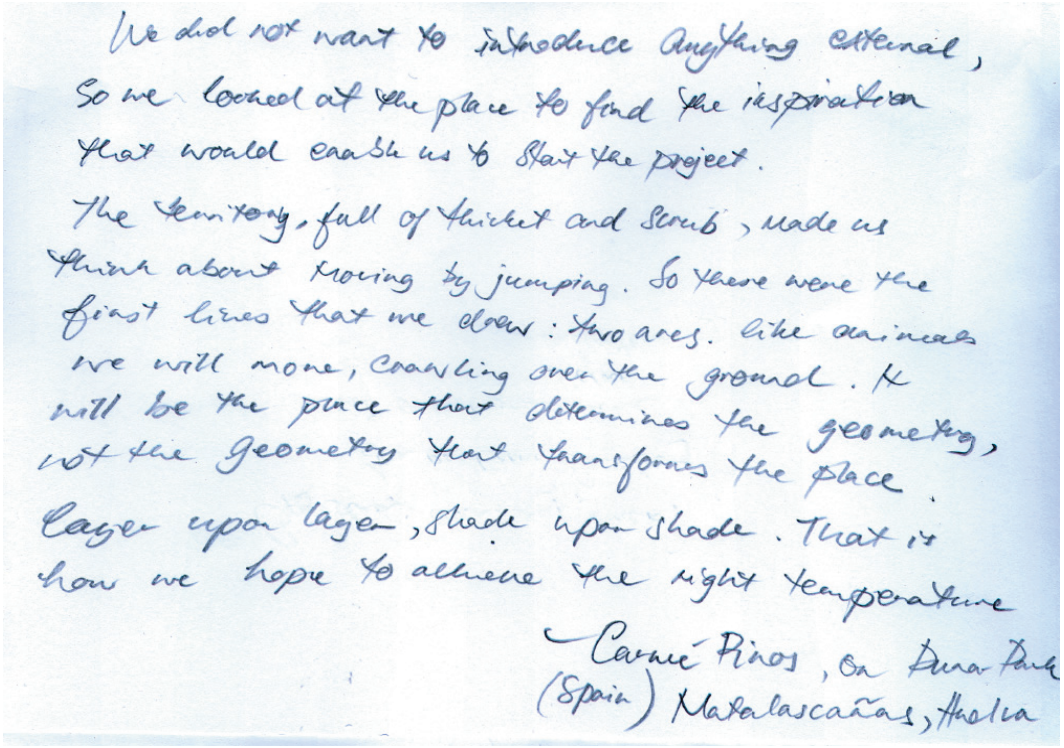

We did not want to introduce anything external, so we looked at the place to find the inspiration that would enable us to start the project.

The territory, full of thicket and scrub, made us think about moving by jumping. So there were the first lines that we drew: two axes. Like animals we will move, crawling over the ground. It will be the place that determines the geometry, not the geometry that transforms the place.

Layer upon layer, shade upon shade. That is how we hope to achieve the right temperature

— Carme Pinos, on Dune Park (Spain) Matalascañas, Huelva

.0.2. LIST OF FIGURES

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.1.1 PROLOGUE

"Perhaps the major challenges facing architecture today is one of identity"
(Farmer 1993:3).

Lydenburg, a town in Mpumalanga is set for large-scale expansion as a result of the opening of more than five platinum mines in the area. The frantic development is putting stress on infrastructure and services. Four dilemmas are identified as a result of this growth: Physical town planning and urban layout, the current economy, the issue of identity, and the architectural character of Lydenburg.

.1.1.1. Physical town planning and layout

The town's composition has resulted in physical fragmentation and has been the cause of injustice to fringe communities. This situation calls for an investigation on an urban level and a planning and design framework aimed at creating coherence between the subdivided districts of the town

.1.1.2. Economy

Another problem that is identified from this expansion is the nature of the economy that is promoting this growth. As this community is geared towards a second industrial economy, the rest of the world is trading in the dominating knowledge and service based economy. The question arises as to whether Lydenburg will be able to take part in a larger, global economy after the mines get to the end of their life expectancy. A community with a sole economical dependency on a primary industry is undesirable. This is proven by towns like Welkom, Kimberley, and more recently Stilfontein. These are all towns that were once thriving mining communities, only to be left desolate after the closure of the mines.

.1.1.3. Identity

The dynamics of the town have already shifted: Lydenburg has changed from a largely farming community into a thriving town of commerce and mining. This leads us to the dilemma of identity. An identity shift happens because of a changing economical climate, which remolds and changes the dynamics of the town. A previously quiet settlement which has always been popular as a retirement village, suddenly can find itself becoming a hustling and bustling growing location, attracting new businesses and younger, dynamic newcomers. The identity of a place not just connected to the physical qualities of town, but also in its services rendered towards its community.. A younger community will be reflected in the amenities that are hosted within it, as well as activities that are related to the place.. In gearing new development towards a single identity for Lydenburg, a marketable product is created in a town, which can attract visitors, or just generate pride amongst the residents of the town.

.1.1.4. Architectural character

The physical architectural quality of Lydenburg has not been a priority in the planning of this expansion so far. The quickly constructed group housing schemes that are already gracing the Lydenburg townscape has added to the architectural incoherence found within the town fabric. Architectural quality relates to the stylistic architecture found in the town, but also refers to the general town layout and planning. This needs to be addressed to create a sense of coherence and in bring the identity, character and a sense of history, or 'story' across to the visitor.

.1.2 OBJECTIVE

The objective of this dissertation is to investigate the current trend of branding, specifically destination branding, and to consider the role of architecture in this phenomenon of branding. The proposed development is to bring about a new economy and paradigm without turning its back on the history of the community. The

author agrees with David Lowenthal, who writes: “We can use the past fruitfully only when we realise that to inherit is also to transform: what our predecessors have left us deserves respect, but a patrimony simply preserved becomes an intolerable burden; the past is best used by being domesticated---and by our accepting and rejoicing that we do so” (Lowenthal 1993:181).

The programme of the proposed development is to be derived from a study of current and global economic trends and is to ascertain the relevant development from which Lydenburg will benefit This program will be re-evaluated as needs change. As a result, the building becomes a threshold which signifies change, accommodates change and growth, and is a changing entity itself. This dissertation supports a holistic view in determining the product Lydenburg is required to become in the eyes of the nation and, ultimately the world.

.1.3 PROBLEM STATEMENT

.1.3.1. CHARACTER & IDENTITY

Branding, according to Kotler and Gertner (2004:39), is an important focus of marketing, and also a key component of foreign and domestic policy international relations and economic and cultural development, trade and tourism.

Branding, character and identity are components of Economy, but also relate to social and ecological issues In order to create a sustainable economy, environmental sustainability and a sustainable society should also be achieved in order to reach equilibrium. Character is an existing element of the town, while Identity is viewed as a chosen perception that the town wants to project to the outside world.

A strong identity creates faith in a product, which, in this case, will be Lydenburg. In turn, faith in Lydenburg will lead to investments that will encourage economical growth. Lydenburg's original character is largely determined by its natural environment

and location. To preserve this character, visitors and residents alike should be made aware of the natural environment of the town. For this reason, the chosen site is located between the very busy intersection between the two main axes and the Sterkspruit River that meanders through the town and that is currently fenced off and inaccessible to the local community.

Members of the public need to be made aware of their built environment, and initiatives to involve the community should be staged. This action will ensure a greater awareness of the influence that identity and character can have on the economic prosperity of the settlement and will create a sense of involvement among members of the community.

The current architectural character of the town will be analysed to determine the direction the rapid new developments should follow.

.1.4 SUB PROBLEMS

.1.4.1. ECONOMY

.1.4.1.1. Service Economy and Knowledge

"A principal feature of contemporary society is disaggregation; it follows that resultant technologies are essentially concerned with decentralization. We live in a society with rapidly diminishing heavy industrial base and an increasing service economy" (Smith 2004:261).

The disaggregation of the industrial economy as noted by Smith is an important point of departure for this dissertation. The author is concerned with the results of this changeover as it will lead to a situation where many workers will be forced into early retirement, should industrial restructuring of employment reform happen. This will be due to a lack of formal skills and adequate schooling (Gilmore 2004:174). If an educational, skills development and schooling system is put into place now, the long-

term benefits could lead to a more sustainable economy for Lydenburg. Therefore, one of the focuses for the proposed development will be the promotion of a culture of life-long learning and the development of a knowledge economy.

The current trend of decentralisation is evident in the pattern of urban development found in South African cities such as Pretoria and Johannesburg. Previously towns and cities developed around the industrial infrastructure such as railways, harbours and mines, and the cities grew around these amenities. Today, because of the shift towards a knowledge-based economy, businesses can be located practically anywhere, as long as an information-base is accessible. This includes access to Information Technology, (the internet and other communication networks) and places of education, such as universities and companies which invest aggressively in their human capital. The change in the urban fabric as a result of this decentralisation is experienced in a defunct city centre, such as seen in Hillbrow, Johannesburg and Pretoria.

"In all the major developed cities of the world, core growth is based on the knowledge industries. The metropolis has been replaced by 'ideopolis' in which economic prosperity and competitiveness depend not on the ability to make things, but on generating ideas that can be sold to the world. In this age of intellectual capital both insight and innovation is more highly prized than physical wealth or infrastructure" (Gilmore, 2004: 176).

The author's proposal for Lydenburg is an 'incubation node' which will nurture and develop intellectual capital, insight, ideas and innovation. The knowledge gained is to be applied on a local level to help the community prosper. Most of the knowledge and information in the node will be geared towards creating a sustainable economy and ecology, focusing on primarily on tourism and local business development.

This dissertation focuses on strategy rather than on economics. Dorrian identifies that: "Economic thinking ought to be treated as a component of a more holistic

framework, rather than being employed as the primary force behind national development" (Dorrian,2005:3). In this holistic view, the social and ecological issues that accompany expansion and development are also addressed.

.1.4.2. COMMUNITY

.1.4.2.1. Community Fragmentation

Lydenburg is a typical post- apartheid town and is fragmented into four main settlements that are also sub-divided. The elements separating these communities from each other are the river flowing through the main town creating a barrier on the western edge, and the industrial area, also located on the western side. These fringe communities have no access to independent economic activity, except by trading on a small scale on a local level or by travelling to the main town. They therefore depend on transport for livelihood, as well as on a host community for economical activity.

.1.4.3. ECOLOGY

.1.4.3.1. Awareness of Natural Environment

A unique quality of Lydenburg is that it is situated inside a nature reserve, the Gustav Klingbiel Reserve. This natural environment reveals itself through parks within the town and a river that meanders through it. Although the river plays an important part in the character and identity of Lydenburg, recent years have seen properties along the river's edge being sold by the council to private developers who have, in turn, fenced off the areas. The town has turned its back on the river, and its existence is no longer acknowledged.

.1.5 LIMITATIONS AND DELIMITATIONS

The theme and sub-themes of the dissertation, namely branding and identity, urban planning, economic trends and social and sustainable development, are each treated within context of and relevance to the proposed project. The investigation is therefore limited to information applying to intervention in programme and outcome.

The ultimate limitations for this project is seen in the light of Farmer's statement (Farmer, 1993:3) that: "Traditionally architecture can be seen to be place-, time-, and culture- specific with logic, practicality and purpose being of central importance and with resource vision, organizational ability, talent and available technology as the ultimate limitations".

.1.6 NEEDS ASSESSMENT

.1.6.1. ECONOMY

.1.6.1.1. Local and Global Economy

A sustainable and sustaining economical system needs to be built and has to provide equitably for a thriving human and natural community, today and in the future, by

- Encouraging local ownership by developing building skills and promoting entrepreneurial innovation
- Considering distant ownership, seeking out business people who have demonstrated good citizenship in their local communities
- Building local capacity to support the financing of sustainable economic activity
- Considering the full environmental and social impact of economic decisions

- Promoting ecologically sustainable businesses
- Encouraging and giving priority to businesses that add to the economic value of regional, agricultural and other resources instead of exporting unprocessed resources for development elsewhere
- Capitalising on the economic opportunity presented by lydenburg's proximity to a natural, pristine environment, nature reserves and panoramic, aesthetic views for the tourism sector

Based on the Charter of Sustainability for New Pattonsburg, Missouri,
(Beatly and Manning 1997:104)

The proposed development is a project that will serve the community and act as a catalyst to create a shift towards a more sustainable economy. This undertaking is not in direct competition with the mining industry but should create another avenue for revenue and development for the town. The theme of this dissertation is branding (coupled with identity and image) but in conjunction with tourism, as in destination branding. This topic will be addressed in the programme of the building, the materials used, and the creation of a greater awareness of the natural environment. Moreover, Lydenburg's key elements or characteristics are identified that act as attractions to make the town an appealing place in which to live or invest or to visit. These elements can be existing ones, such as the area's rich history and the archaeological finds that originate from the town. Additionally, new elements can be introduced. These are a combination of global trends and local needs, such as a place to meet (local need) combined with educational facilities that cater for the global trends of knowledge management and knowledge economy.

.1.6.2. COMMUNITY

.1.6.2.1. Community Fragmentation

Lydenburg is a fragmented community, divided by man-made and natural boundaries. Where a sustainable society recognizes interdependence within a framework, Lydenburg needs to create partnership, equity and balance among all parties.

The project aims to remedy greater problems than the mere unharnessing of the potential that the tourism sector offers. To create a balanced, fair and just society, the community should look further than one single development focusing on tourism and education. The river must become the joining factor that knits these separated societies together. Developments along the edges of this river are proposed as the potential of the town will expand and grow. These projects will create equal opportunities for previously disadvantaged and marginalized communities by generating an equal chance of development and by strengthening the economical muscle of the individual through entrepreneurship.

.1.6.3. ECOLOGY

.1.6.3.1. Awareness of Natural Environment

- A sustainable and sustaining ecological system needs to be put in place; it should provide equitably for a thriving human and natural community today and in the future by
- Preserving the character and health of lydenburg's natural environment, using and re-using the
- Materials, energy and water needed as efficiently as possible and eliminating waste
- Utilizing clean, renewable resources extracted from and processed by the community whenever possible
- Preserving and expanding the choices of present and future members of the community,
- Providing Information and design alternatives that encourage the use of

sustainable resources, technologies and

- Methods suitable for the town's environment and culture

Based on the Charter of Sustainability for New Pattonsburg, Missouri,(Beatly and Manning 1997:104)

.2.1. INTRODUCTION

The normative position of the author deals with the philosophical background to decisions made in the course of this project development, while the theoretical discourse following under the branding exercise for Lydenburg, is an investigation of the practical implications and applications of concepts found in the consulted literature.

.2.2. KNOWLEDGE

The inquiry into the programme of the intervention for Lydenburg is largely driven by the global shift to a knowledge-based economy. According to O'Hara (2003: 136), a knowledge-based economy involves 'a general switch from manufacturing to services, placing a premium on an educated and productive workforce'. The 'old' economy requires the 'exploitation of raw materials and labour'. The following definitions are taken from O'Hara:

Epistemology: the philosophical study of knowledge
Information: understandable data or data with a meaning
Know-how (also known as procedural knowledge): the practical application of knowledge
Knowledge: information that aids the performance of effective actions

Traditionally, epistemologists focused on the psychological aspects of knowledge; however, modern conditions governed by the knowledge-based economy have shown the need to expand the definition of knowledge to include non-psychological states (O'Hara, 2003:136).

In his book The Making of South Africa Inc., Paul Dorrian (2005:23-24) claims that in the knowledge society, the key production resource as opposed to labour and capital is the countries' human capital. He observes that although capital and labour are still important resources in creating and utilising knowledge, countries with global aspirations need to create and maintain a proper knowledge infrastructure. 'Generating a country's innovative capacity will therefore be of the utmost importance.'

.2.2. IMAGE

.2.2.1. LOGOCENTRISM AND LOGO CENTRISM

According to Horrocks (2003: 206), post-modern culture is broadly defined as a 'triumph of image over reality, surface over depth, style over content and signifier over signified'. In this dissertation, the influence of architecture on image and identity is explored. The image, or logos, represented by the project should be representative of a deeper reality or truth and not merely be a 'sign of a sign', as implied by logo centrism (Kruft 1994: 189). The author chooses to develop the project from a logocentric perspective according to which the centrality of the logos (speech, word or reason) (Kruft 1994: 188-189) is underwritten. This approach presupposes that appearances must be penetrated to generate an understanding of that which lies beneath the surface. It also ties in with Kotler and Gertner's (2004: 47) position on image generation and creation when they state that 'To be effective, the desired image must be close to reality, believable, simple, appealing and distinctive'.

Boulding (quoted in Smith 2004: 264) defined an image as 'what I believe to be true', arguing that an image is composed of 'everything a public knows about a place, a person or an idea'. He suggested that an image is 'built up as a result of all past experience of the possessor of the image' (Smith 2004: 264). A place's image can therefore be concluded to result from its geography and history. According to Hall (2004: 121), the areas of nature, heritage and culture, and ideals of sustainability are rapidly developing niches in identity projection for places.

Most contemporary public relations research argues that one cannot 'create' an image; rather, places must use what exists or what can exist in the community and communicate about that 'truth' (Smith 2004: 264).From this point of view, the aim of the dissertation turns into an exercise of reinforcing an existing idea or element of the community, until it becomes a recognisable image in the public's eye.

.2.2.2. CULTURE

.2.2.2.1. Architecture as a witness to culture

(Farmer 1993: 3) notes that the basic human needs of shelter 'have over centuries been transformed into the provision of architecture as a manifestation of the human spirit'. Farmer adds: 'Architecture as mistress of the arts has always doubled as witness to culture'. The Proposed development for Lydenburg stands as a witness to the birth of a new culture which supports sustainable economic and social as well as environmental development.

.2.2.3. VERNACULAR

It would be naïve to think that a return to a complete regional vernacular without reference to globalization would be possible as Manser (1993: 198) states that 'vernacular disappeared in the advent of pattern books, transport and communications'. This translates into the 'transformation' of the past into innovation, an essential element in social development and progress.

.2.2.4. SOCIAL INNOVATION

According to Murdock (quoted in Heath 1993: 290), four basic kinds of social innovation exist: variation; cultural borrowing; invention; and trial and error.

Variation entails only a slight modification of an established way of doing things. Cultural borrowing signifies the most commonplace mechanism of change. This phenomenon is evident in the infamous local cultural borrowing of Tuscan architecture found in the eastern suburbs of Pretoria and is already found in newer developments in Lydenburg.

Invention, according to Murdock, refers to ideas or forms transferred from one concept to another different concept, 'on the basis of the perception of an underlying community of organization'. Murdock argues that invention demands structural understanding.

Trial and error, according to Murdock, is a 'tactic of desperation'. He points out that desperate social groups seldom engage in architecture and that design as an activity is therefore the antithesis of trail and error.

In this case, design as an activity will aim at inventing a new identity for Lydenburg, but its origin and reasoning will be rooted in Lydenburg's rich past and culture. Innovation as a point of departure for this dissertation is important in order to facilitate and sustain growth. Innovation, growth and change are elements which are indispensable in the development of a new economy.

.3.1 GLOBAL CONTEXT

.3.1.1. INTRODUCTION

The democratic transformation of South Africa in 1994 elevated the country's economic and political position within the world's global rankings. South Africa was reborn into a global marketplace dominated by the world's most powerful nations, which practice neo-liberal market economics and promote their own self–interest. This is a challenge for a small economy like South Africa, and it should not be ignored that other emerging nations are also 'fighting for their share of the global pie' (Dorrian 2005:1).

Furthermore Dorrian notes that the world that greeted this new democracy was itself in the process of a global economic revolution, in that the centre of economic gravity shifted to Asia. This created a tripolar economic world, with strategic economic parity between Western Europe, North America and East Asia. It is currently estimated that Asian central banks hold approximately 70 percent of the world's foreign exchange reserves, a feat not to be taken lightly (Dorrian 2005:30).

There is little doubt that the current South African government aspires to be internationally recognised. Government's vision is clearly defined in its aspirations for the New Partnership for Africa's Development (NEPAD), and President Thabo Mbeki's desire to be seen on the international stage and to have his vision of an African Renaissance embraced by the world at large. (Dorrian 2005:56) In order to determine on how an emerging nation like South Africa is to compete within this global status quo, the country needs to know where it stands in the world, and what its economic capabilities are (Dorrian 2005:28) .

Dorrian stresses (2005:75) that South African success and progress cannot be considered in isolation and that it needs to be looked at in relation to the progress made by other countries , as competition is dynamic. Dorrian (2005:2)suggests a twofold approach to unlocking South Africa's potential, by incubating, nurturing, and developing the country's actual and potential human capital and in developing a radical and innovative strategic paradigm.

.3.1.2. HUMAN CAPITAL

> "The world has entered the era of the knowledge society, where knowledge is the key production resource, as apposed to capital and labour. Labour is still an important resource in creating and utilizing knowledge, but countries with global aspirations need to maintain a proper knowledge infrastructure. For that to happen, knowledge workers need to be developed and they need to be protected as a vital asset of the state. This can be done through the creation, growth and exploitation of cutting edge knowledge in which knowledge workers can play a key role"(Dorrian 2005:23).

In the knowledge economy, a country's people are considered to be its primary economic drive force, which gives it the competitive edge over its adversaries. The term 'human capital' is derived from this concept, in which a monetary value is attached to the value of the human workforce and in the amount of knowledge in which is traded.

Dorrian (2005:39) is of the opinion that the strategic process should causally connect everything in society. It cannot exist by itself. At the heart of this interconnectedness lies human capital. He states that 'A society exists in a process of change, and within the societal framework lies that outcome of limitless causal conditions". This interconnectedness creates a high degree of synergistic energy, whereby both the individual parts and the collective whole benefit. The relationship between the various elements, as identified by Dorrian has been termed "The Global Performance Triangle" (Dorrian 2005:40).

.3.1.3. STRATEGY

A more radical and innovative paradigm needs to be implemented in South Africa. This paradigm needs to be based on the principles of strategy, rather than economics (Dorrian 2005:3). Dorrian believes that from a South African perspective, the focus of the strategy should not only be outmaneuvering other emerging economies, but also on positioning South Africa advantageously in relation to the world's economic giants such as North America, Asia and Western Europe..

Although Dorrian (2005:182) concedes that branding is an important element as a component of any marketing strategy, he stresses the importance of not approaching this strategy solely as a branding exercise. The strategic paradigm is one that needs to be rooted in the truth, and in existing values of the country. This is why the country's first ambition should be to invest heavily and continually in its human capital.
Other aspects of the strategic paradigm have been identified by Dorrian (2005: 183-185) to include the following:

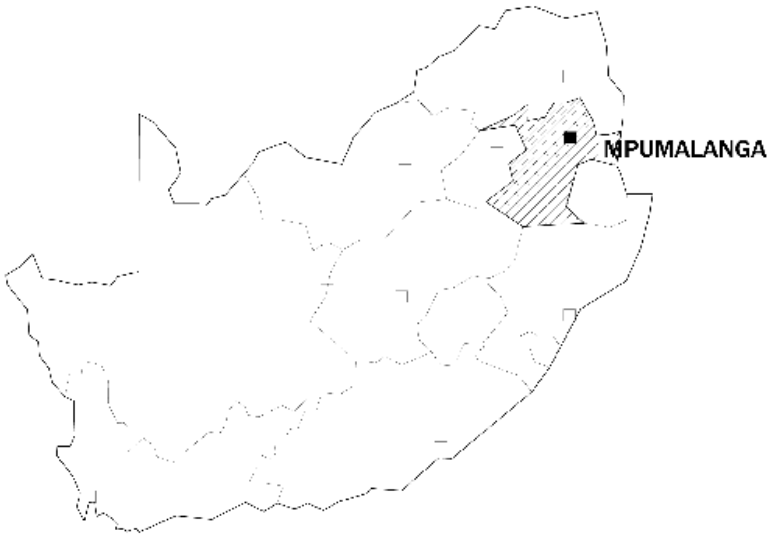
Differentiation	All clients or 'consumers' of South Africa such as tourist, investors and graduates need to believe and experience South Africa to be different to other countries in offering better opportunities than found elsewhere.
Global reach	South Africa needs to have a strong and consistent brand image and influence all through the world.

Marketing responsibility	The governing body of the country should be made aware of the marketing responsibility that their international and national policies carry. Decisions made on government level have the power to change international investor's opinions of the country's potential.
Internal alignment	It is important that the vision and ambitions of all the parts of the social infrastructure have the same vision and goals for the country as a whole
Human capital investment	A conscious effort needs to be implemented and maintained towards harnessing and developing human capital in order for South Africa to grow towards a globally competitive market.

Emotional influence	South Africa needs to aim at generating an emotional influence on its potential customers in order to create brand loyalty and continuous development.
Innovative energy	"Countries need to take existing knowledge and develop innovative thinking to create new knowledge, which then contributes to the creation of a competitive advantage" (Dorrian 2005:24). It is therefore vital that an environment that is conducive to innovative thinking is developed within South Africa.

.3.1.4 CONCLUSION

As South Africa needs to implement a strategic paradigm towards becoming a globally competitive entity, Lydenburg will have to apply a similar strategy as well. This approach ties in with the holistic view of interconnectedness and synergy of the collective sum of the parts. It is also important that the vision that Lydenburg has for its future and economy, associates itself with the vision of South Africa. This is why a key focus of Lydenburg's strategy is proposed to be aimed at developing a knowledge economy as well.



F.3.2.1

3.2 REGIONAL CONTEXT

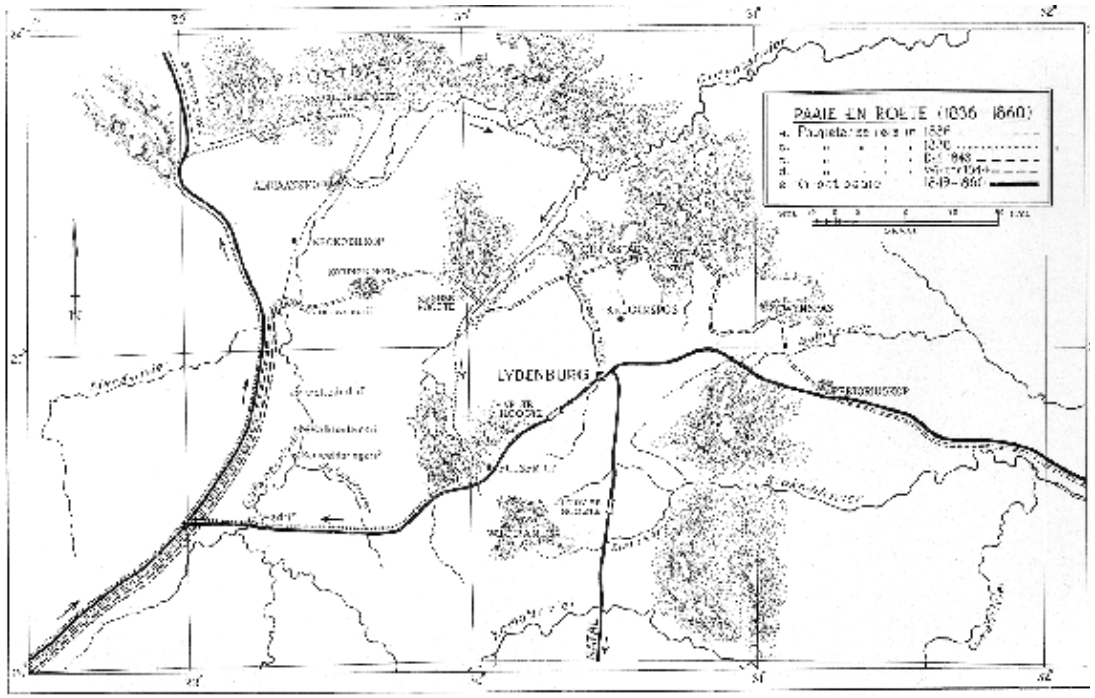
.3.2.1 HISTORICAL CONTEXT

.3.2.2 INFRASTRUCTURE

- .3.2.2.1. Roads
- .3.2.2.2. Railway
- .3.2.2.3. Airway
- .3.2.2.4. Water
- .3.2.2.5. Dams
- .3.2.2.6. Settlements

.3.2.3. DEMOGRAPHIC CONTEXT

- .3.2.3.1. Population
- .3.2.3.2. Socio-Psychological Context



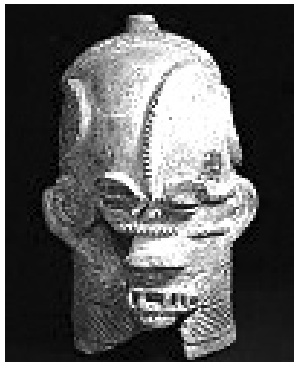
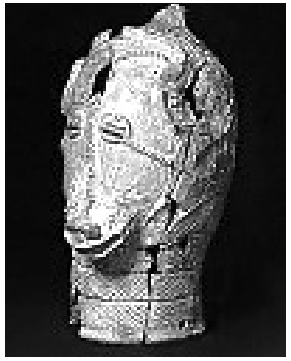
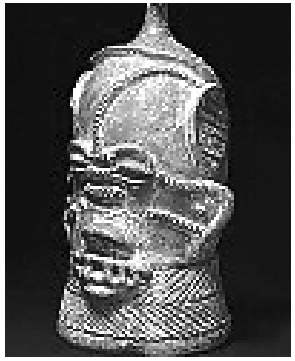
F.3.2.2

.3.2 REGIONAL CONTEXT

.3.2.1 HISTORICAL BACKGROUND

Lydenburg ('Town of Suffering') is a historic town in the province of Mpumalanga, in an area that was previously known as Transvaal. The town was founded in 1850 by the companions of Voortrekker leader Andries Potgieter after they had abandoned their first settlement, Andries-Ohrigstad, 50 km to the north. Located in a valley between the Steenkampsberg and Maughsberg on the Mpumalanga escarpment, Lydenburg was originally a Voortrekker settlement. The town is situated 1424 m above sea level, and the new inhabitants found the climate to be gentle and energizing. Lydenburg proved to be the malaria-free settlement the Voortrekkers were looking for after living in malaria-ridden Ohrigstad.It was from the ordeal suffered in Ohrigstad that Lydenburg derived is name.

In the indigenous tongue, the town was, and still is, known as Masising ('Place of the Long Grass') (Bulpin 1989: 64). The Lydenburg district was home to early (400–1500 AD) and late (1500–1800 AD) Iron Age settlements, of which remains have been found. The ceramic Lydenburg Heads, about which very little is known, are unique.

F.3.2.3 a); b); c); d)

Replicas, along with Stone Age (1.5 million –30 000 years ago) artifacts, are on display at the local museum.

Lydenburg was one of several republics established in the Transvaal because of dissention among the early Voortrekker leaders about the political destiny of their followers north of the Vaal River. In 1856, Lydenburg seceded from the Transvaal Republic headquartered in Potchefstroom and joined the Republic of Utrecht the following year. In 1860, both these republics rejoined the Transvaal Republic. Lydenburg played an important role in Transvaalers' early attempts to find a route to Delagoa Bay and a port free of British control (Lydenburgse Eeufeesgedenkboek, 1950: 77).

On 6 February 1873, several prospectors discovered alluvial gold in the district, and the Lydenburg goldfields were proclaimed three months later. Among the first finds were two large nuggets: Emma (7.65 kg) and Adeliza (7.37 kg); both were bought by President TF Burgers. Today, the gravels of the Spekboom River are still being washed for alluvial gold (Lydenburgse Eeeufeesgedenkboek, 1950: 97).

During the Transvaal's first war against Britain (1880–81), a British garrison under Lieutenant WH Long was stationed in Lydenburg. They built a small fort and named it Mary in honour of the commanding officer's wife. To counter the two small field guns used by the Transvaalers, the British fashioned a gun of their own from a barrel of a water pump, and it managed to hurl cannon balls of 1 kg at the enemy. After the war, the fort became dilapidated, and in 1889 some of its stones were used to build a powder magazine, which still stands

The main obstacle along the route was the Drakensberg. In 1871, at the request of President TF Burgers, the Transvaal Volksraad voted for the building of a road over this formidable barrier to the sea. The contract was given to Abraham Espag, and most of the work was done with pick and shovel. The first wagons to use the new road, which followed the route of the old hawepad in numerous places, arrived in Lydenburg from Delagoa Bay in 1874.

The pass used today was inaugurated on 22 July 1953. During this occasion, it was named Long Tom Pass to commemorate a famous skirmish between the Boers and

the British along this route in September 1900.

The province of Mpumalanga ('The Place Where the Sun Rises') was created immediately after South Africa's first democratic elections in 1994. It inhabitants are largely SiSwati- or isiNdebele-speaking, but it also has sizable communities of Xitsonga-, SeSotho-, isiZulu-, Afrikaans- and English-speaking people. Portuguese is fast becoming an essential business language as neighbouring Mozambique consolidates itself as a major trading partner.

Because it is bordered by Mozambique and Swaziland, Mpumalanga has a distinct atmosphere and is different from other rural South African provinces. Mpumalanga has proactively developed strong trade relations with its neighbours, who are capitalising on its medical, technical, retail and specialist manufacturing strengths.

.3.2.2 INFRASTRUCTURE

.3.2.2.1.Roads

Mpumalanga's economic wealth lies in the R35 billion Maputo Corridor development initiative. The corridor, which includes major frastructure projects such as a new road and rail and telecommunication links, is slowly changing the socio-economic structure of the entire sub-region. Although Mpumalanga is still largely a rural province, one quarter of its economy is already based on manufacturing. The corridor is designed to strengthen this trend.

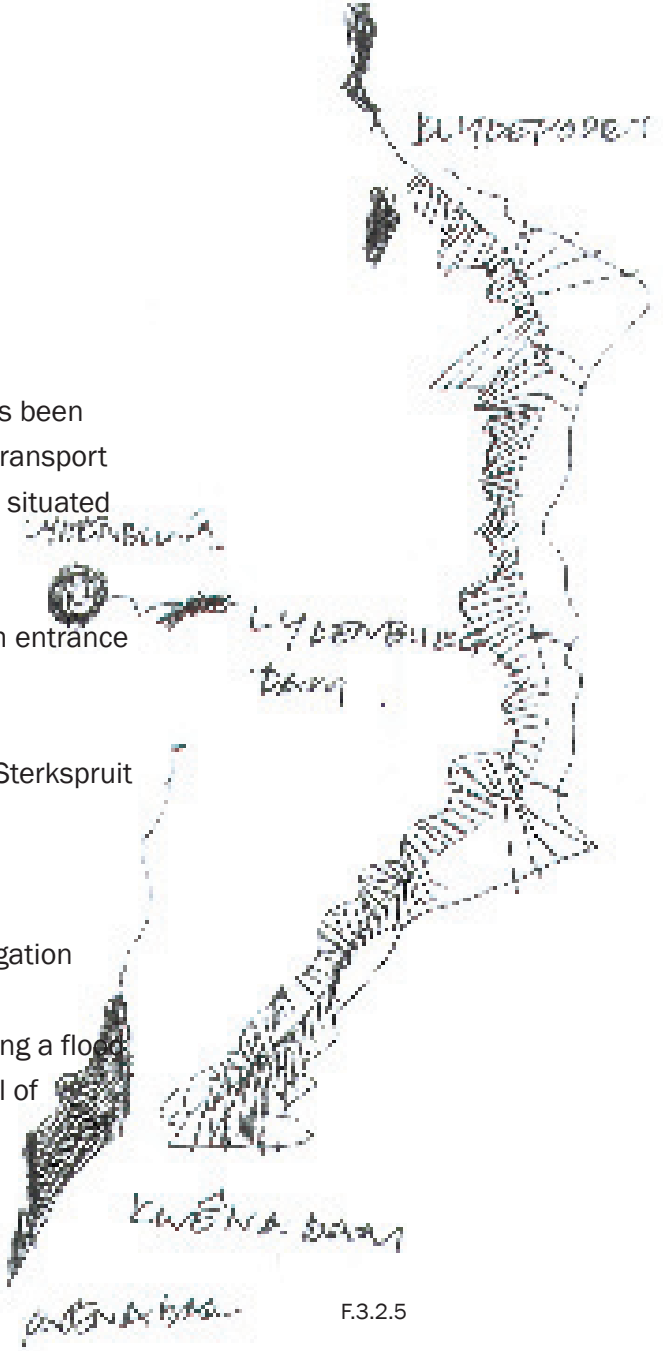
F.3.2.4

Railway — Although the railway runs through town, the passenger service has been defunct for a number of years now. The railway is mostly used to transport mining materials from mines such as Xstrata, the chromium mine situated about 5 km from town.

Airway — A landing strip/airfield is situated about 5 km from the Dullstroom entrance of town (south-west).

Water — The hinterland of Lydenburg is fed mostly by the Blyde River. The Sterkspruit flows through town and connects to the Dorps River, which terminates in the Olifants River.

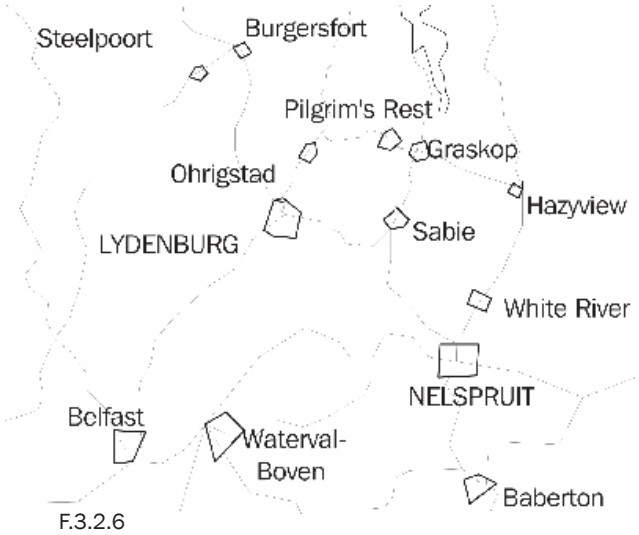
Dams — The Lydenburg Dam provides the town with water. Two greater irrigation systems are the Blydepoort Dam and the Kwena Dam between Machadodorp and Lydenburg. The denburg Dam's wall broke during a flood in 2001, leading to four deaths in the community and a great deal of damage to Infrastructure and property.



F.3.2.5

.3.2.2.2 Settlements

Lydenburg's immediate settlements include Masising and Kellysville, the Indian, coloured and black communities on the western side of the town. Lydenburg is also near Burgersfort, Steelpoort, Dullstroom and Belfast.



F.3.2.6

.3.2.3. DEMOGRAPHIC CONTEXT

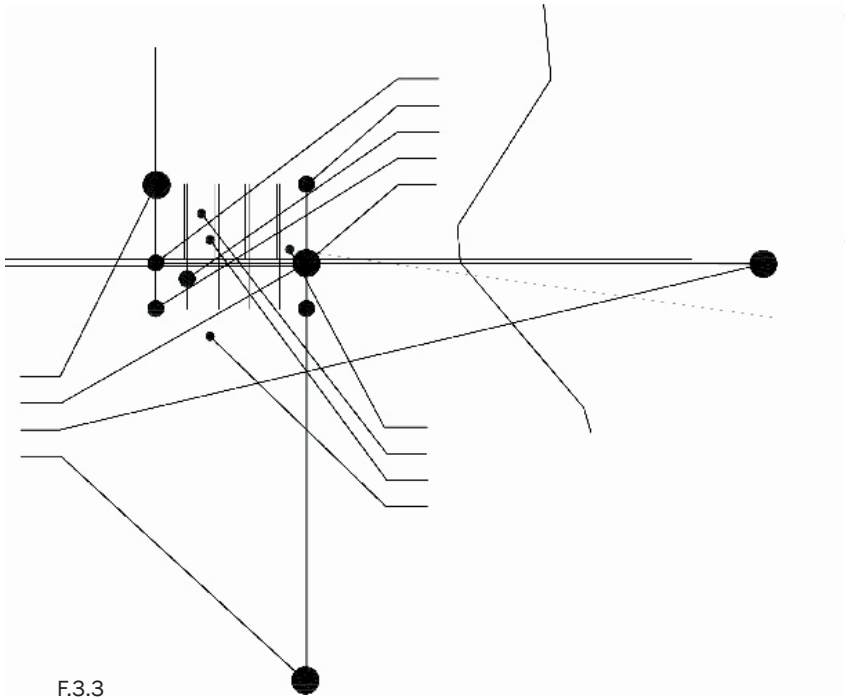
.3.2.3.1. Population

From an informal interview with Mr. Kenneth Van Niekerk from the Lydenburg Council (January 15, 2005), it is determined that out of a population of approximately 40 000 residents, eighty percent are resident in the segregated settlements. Mr.Van Niekerk explained that the only statistics on demographics available date from 1995, and is therefore deemed outdated.

.3.2.3.2. Socio-Psychological Context

Informal interviews conducted with members of the community determined that more than 50% of the marginalised settlements expect that the development will not cause problems in the community. The comparative figure for the residents of the main town is 30%.It needs to be noted that the marginalised residents often mentioned that they expected the development to have a positive effect and that the standard of living in their township would rise.

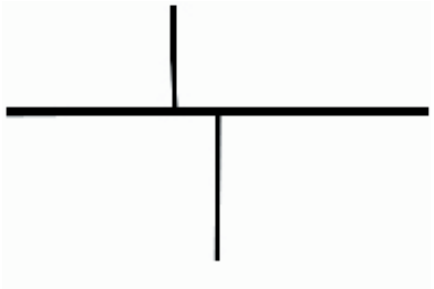
Most residents in Lydenburg expect the main cause of problems to be the influx of foreigners with habits and lifestyles different to theirs. Areas of community life in which the previously disadvantaged people expect extremely positive developments are political spectrum, employment and education. Seventy-five percent of local residents are confident that the local way of life will not be replaced by that of newcomers to the area, while twenty five percent display a high level of uncertainty about this issue. Most residents welcome the expansion.



F.3.3

.3.3. URBAN AND ARCHITECTURAL CONTEXT
- .3.3.1. URBAN ANALYSIS
- .3.3.2. ARCHITECTURAL CHARACTER

.3.3 URBAN AND ARCHITECTURAL CONTEXT
- .3.3.1 URBAN ANALYSIS
  - .3.3.1.1. Town elements
  - .3.3.1.2. Figure–ground study
  - .3.3.1.3. Areas of development
  - .3.3.1.4. Identified weaknesses
  - .3.3.1.5. Proposed solutions
- .3.3.2 ARCHITECTURAL CHARACTER
  - .3.3.2.1. Typology
  - .3.3.2.2. Elements, Textures and Materials
  - .3.3.2.3. Conclusion



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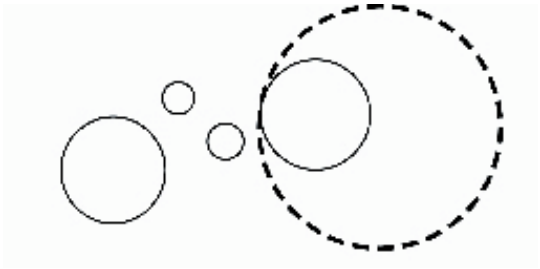

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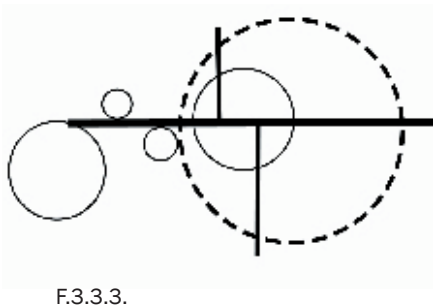

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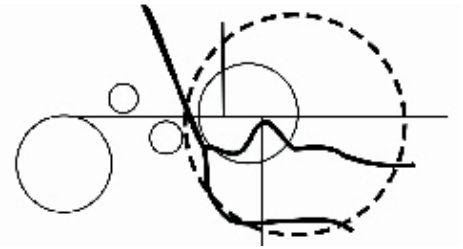


F.3.3.4.

.3.3 URBAN AND ARCHITECTURAL CONTEXT

.3.3.1 URBAN ANALYSIS

.3.3.1.1. Town elements

Lynch, in his Image of the City (1960) differentiates between elements found in the fabric of the city. These elements include: Paths, edges, districts, nodes and landmarks.An alternative method to distinguish between elements the urban environment was adapted form the 1920's Bauhaus Gestalt Psychology, where one can identify areas of repose, confusion, permeability and image ability. According to Lynch's theory, the following elements were determined:

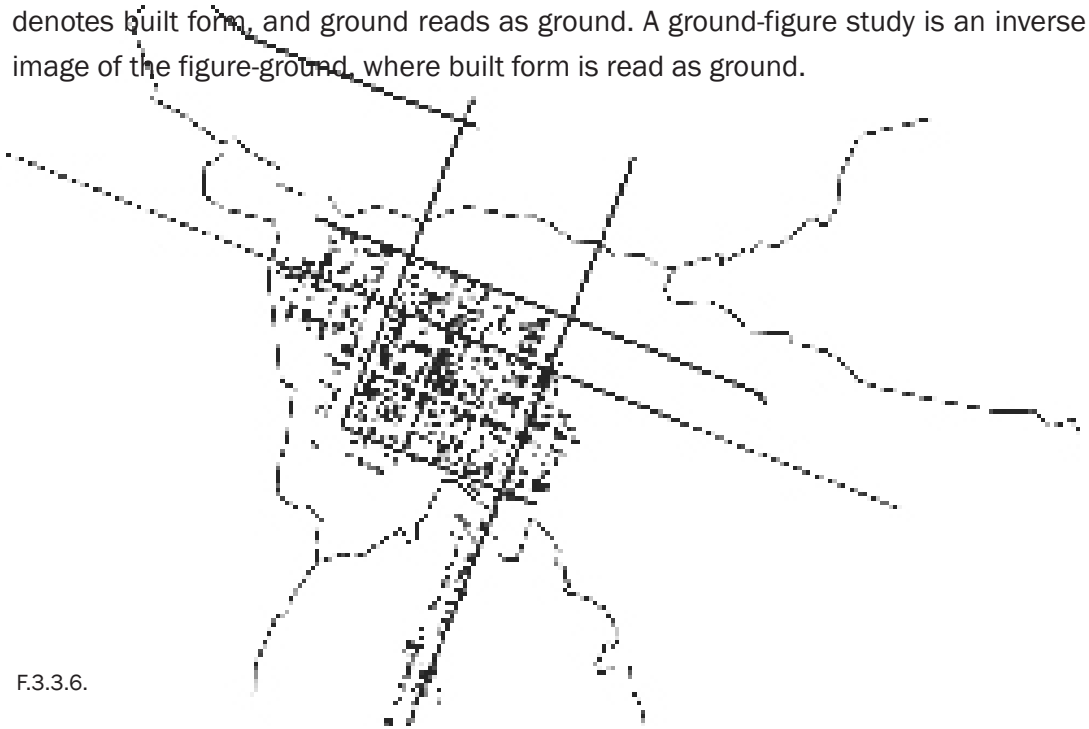
Paths 'The intersection and conjunction of routes, particularly of different kinds of routes (paths, road, rail, river, canal, sea and air) is of major importance to the establishment and development of towns and cities. Road patterns are often generating and controlling factors of development: influencing if not determining character.' (Farmer, 1993:24)

F.3.3.5.

ii.	Edges	An edge is a natural characteristic, such as topography, rivers and rail. Secondary edges are formed between different phases and are less defined as two regions become interrelated.
iii.	Districts	A district is the area bound by edges. A district has a definite character or function.
iv.	Nodes	A node is the most strategic area of town by which an observer can enter. Nodes are intensified focal points within districts. A node generally occurs at primary junctions, crossovers of transportation mode, public spaces, or transitional nodes from one structure to another. Anotherform of node is a concentrated activity area which gains importance from this concentration or special layout, for instance a square.
v.	Landmarks	A landmark is an external point of reference. It usually is a physical object, such as a building or a mountain

.3.3.1.2. Figure-ground study

A figure- ground study is a communication tool with which to analyse the relationship between built form and void. The texture of the urban fabric is communicated, and the density and direction of urban grain is identified. In a figure- ground study, figure denotes built form, and ground reads as ground. A ground-figure study is an inverse image of the figure-ground, where built form is read as ground.



F.3.3.6.

F.3.3.7

.3.3.1.3. Expansion rates

According to Ms L Visser (Lydenburg Council, personal communication January 15,2005, Lydenburg), the number of new residential units to be erected within the next two years is expected to rise to 3 000. This number depends on how quickly services can be put into place. The council is currently negotiating with mines that have already committed themselves to developing residential areas for their employees. The actual number of units remains undisclosed as a great deal of politics is involved among the mines, the private developers and the Lydenburg Council.

.3.3.1.3. Areas of development

F.3.3.8

F.3.3.9

.3.3.1.4. Identified weaknesses

i. Lack of definition of the river's edge

ii. Lack of connectors between the river's edge and the CBD

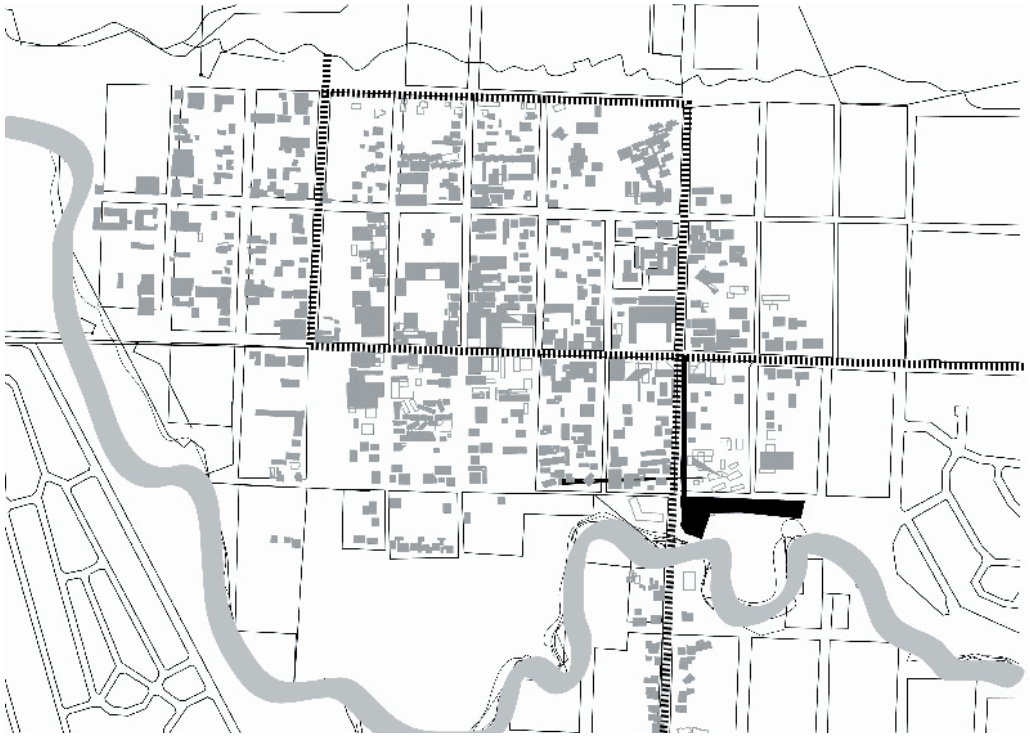
iii. Vaguely defined places of historical and architectural interest

iv. Lack of tourism focused enterprises

v. Lack of institutions

Institutions are defined as those elements of an urban environment that provide for the common living of people. They arise from three main desires: to learn, to meet, and to serve the well-being of all.

Institutions thus comprise roads, parks, paths and ordered institutional devices, which include post offices, law courts, municipalities, railway stations, churches, civic offices, schools and universities. These institutions create a capital web in and around which all development takes place. According to the general rule, high pedestrian access results in high-order retail and professional services with a consequent increase in demand for the adjacent land, resulting in high land value.



F.3.3.10

vi. Lack of pedestrian-friendly spaces

Pedestrian movement can mostly be found on the east–west axis in Voortrekker Street because it hosts most of the commercial shops and because the axis is the only link between the townships and the main town. The project will aim at improving pedestrian circulation in a north–south axis, linking with the east–west axis, to draw more visitors to the riverside development.

.3.3.1.5. Proposed solutions

i. Emphasis on the Sterkspruit River's edge

It is proposed that the river's edge be defined through pathways along the edge and through the encouraging of riverside activities such as fly-fishin, picknicking and walking.

ii. Emphasis on edges from the CBD to the Sterkspruit River

- Canopy
- Trees
- Water furrows
- Market
- Historical 'pockets' of interest.

iii. Vaguely defined places of historical and architectural interest

Define and create historical pockets and routes

iv. Lack of tourism focused enterprises

The lack of tourism focused enterprises is to be addressed by the Incubation Node and the resultant developments.

v. Lack of institutions

The lack of institutions is also to be addressed by the development proposal of the Incubation Node.

vi. Lack of pedestrian-friendly spaces

Pedestrian routes

Places to sit

Shade

Safety

Pedestrian movement across the north-south axis of Viljoen Street is treated with special care to prevent the road from becoming a barrier. Paving islands are situated along the road to slow down traffic and to ensure safety.

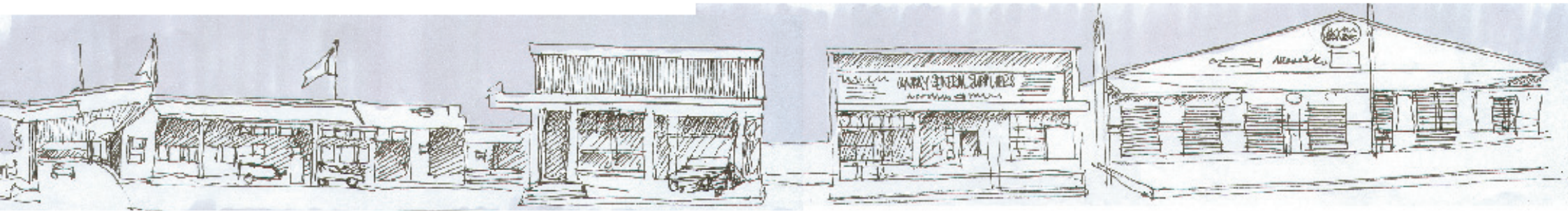
.3.3.2 ARCHITECTURAL CHARACTER

.3.3.2.1. Typology

i. Street Facades

A study of the street facades of the CBD of Lydenburg reveals a fragmented low-density loose fabric with a maximum height of 2 storeys. A wide variety of architectural styles are encountered. The lack of a definitive wall towards the Sterkspruit River leads to incoherence and makes orientation difficult. A defining landmark or gateway is proposed in the form of a water tower or welcome sign at the node where Viljoen and Voortrekker Streets meet. The north-facing facades are shaded against the sun. South facing facades have a less pronounced canopy.

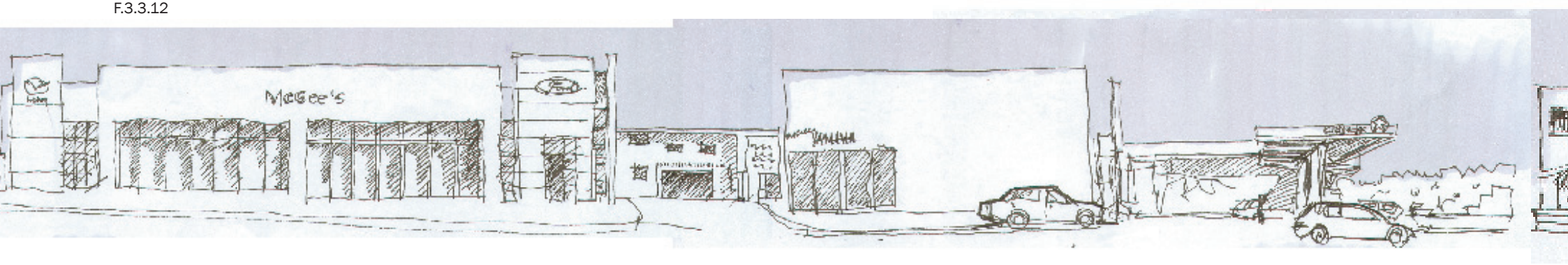
F.3.3.11

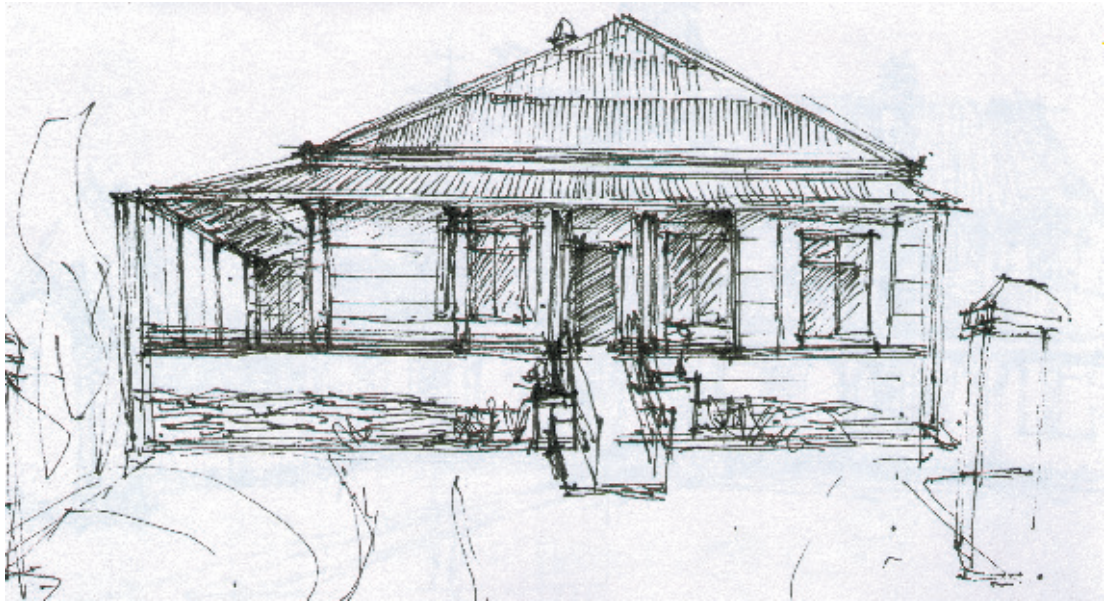


ii. Typical Lydenburg houses (1850-1940)

The typical historical Lydenburg dwelling has a raised plinth (sandstone) which is entered via four of five steps, and which is covered with a large overhanging eave to form a shaded stoep. The roof is invariably of corrugated metal. Original windows were of the sash-variety. Upon entering the house, a hanging timber floor is encountered, and an unexpected coolness experienced due to the heat absorbing qualities of the high –massed walls.

F.3.3.12





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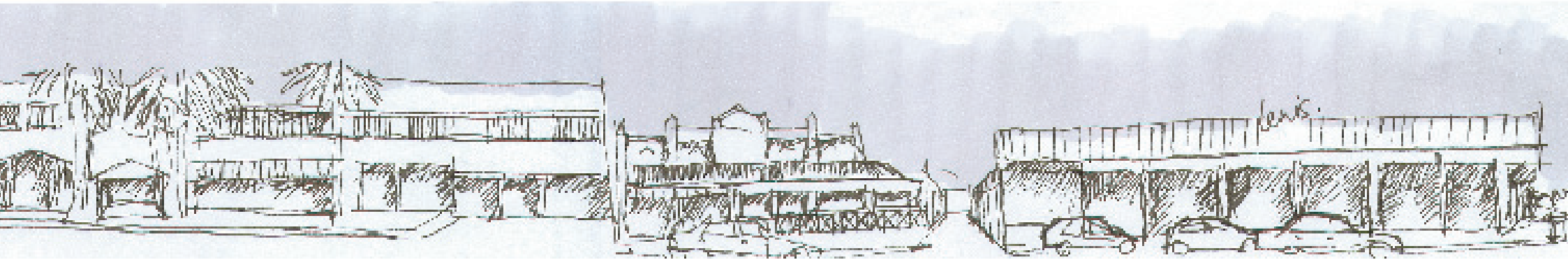
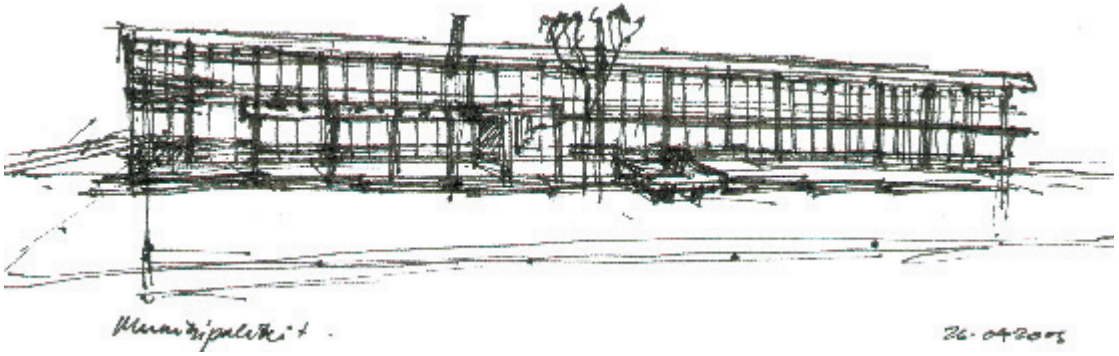


iii. Modern

A few examples of modern architecture are found in the Central Business district, of which the Lydenburg Municipality is the most prominent. The town's art deco theatre (bioscope) which changes its program and occupation every year or so, deserves more recognition than it is currently afforded.



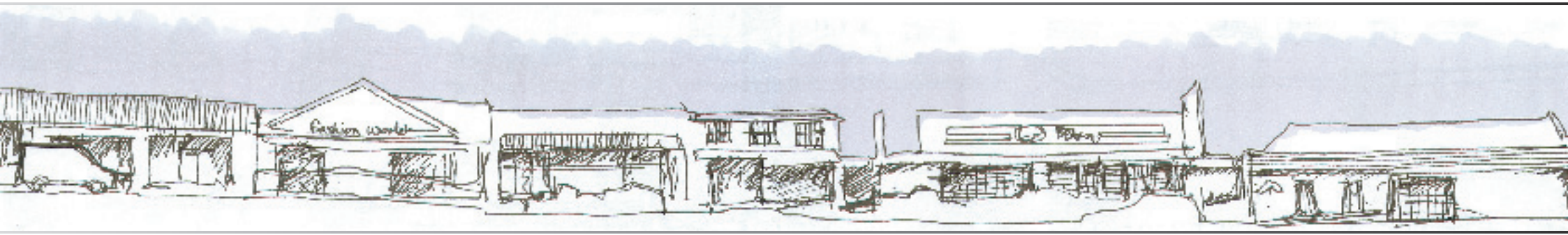
F.3.3.14

F.3.3.15

iv. Contemporary

Few good examples of contemporary architecture is encountered within the town fabric. This is alarming considering the rapid expansion of the town and the favourable climate which the construction sector is experiencing. A large portion of new developments are quickly constructed low-maintenance face-brick structures with clay tiled roofs and with little attention given to detail, occupant comfort and overall architectural identity. This is partly due to the pressing need for accomodation, and a willingness to feed this need by frantic developers.

An attempt in preserving Lydenburg's architectural character that is worth mentioning would be the early 2005 commercial complex opposite the chosen site for the Incubation Node. A neo-historical mixture of Victorian, Brooky-lace and the Lydenburg farm-house typology is a romantic acknowledgement to a little bit of everything found within the confines of the Lydenburg township.



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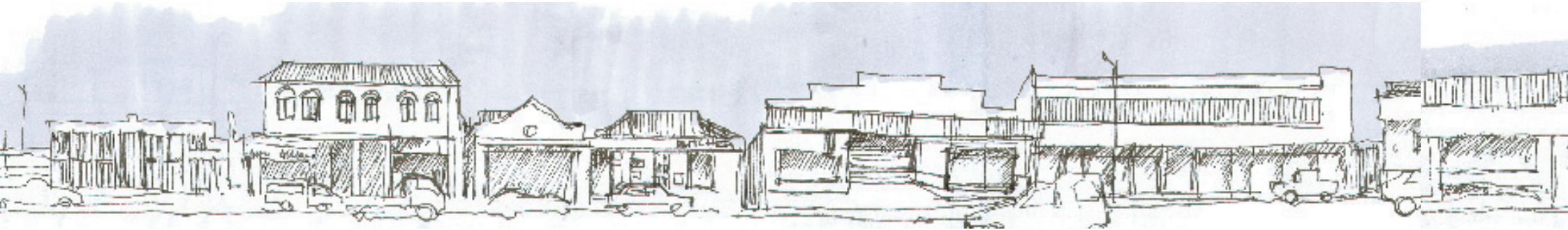
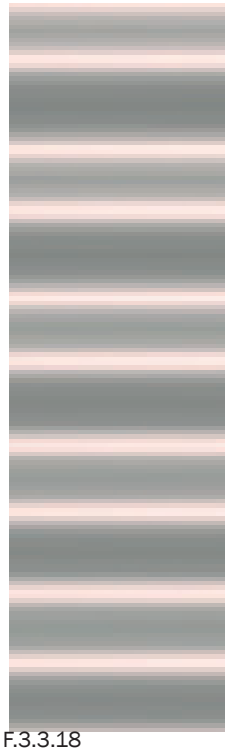


The attempt is commendable, although one might find the result to be a little bit misplaced. According to Murdock's four types of innovation (in Heath (1993:290), mentioned in the second chapter, this type of architectural practice is defined as 'variation', as in a slight modification of the existing. I believe that true innovation will result in an architectural language which responds to the environment positively and which makes use of local materials without patronising the past. It is therefore by looking towards textures, materials and elements, rather than style, that a new vernacular and identity can be developed.

.3.3.2.2. Elements, Textures and Materials

i. The Corrugated Metal Roof

The corrugated roof is one of the few elements that is still recognisable as a prominent element of the architectural character of Lydenburg. Although it has fallen out of favour in the middle to upper class residential sector (in favour of clay tile roofs), it remains an element which is low in cost, easy to erect and serves its purpose well. It is also deemed perfect for the local climate, especially when teamed with high –massed walls.



F.3.3.18

iii. Slate and stone

Due to the slate bed found in the Mauch Mountain range eastwards, a few of the earlier settlements are encountered which are built of this material. In older residents, boundary walls of stone and slate are also found. The Sidney Press House, on the farm Coromandel situated approximately 18 km from Lydenburg, is a prime example of stone construction and is discussed as a precedent study in chapter 6.

F.3.3.19

iv. Wood

Little wood constructed dwellings are found in Lydenburg. The use of wood is limited to supporting structures for roofs. As a renewable resource, and in the light of the close proximity and readily availability of wood in the area (due to the plantations cultivated along the mountain pass), the use of wood in construction should be encouraged.

F.3.3.20

F.3.3.21

.3.3.2.3. Conclusion

The issue of architectural quality and identity remains a personal one. The greatest test that such an endeavour can undergo will be the opinion of the community, as well as its assimilation into the local vernacular in time. Having ascertained that an integral part of growth and development is dependent on innovation, a bold step is taken towards a new identity.

The Incubation Node, as an exercise in branding and identity, as well as innovation, will announce its identity through the materials used. The walls are to be of a low-embodied energy material, such as stone or masonry, finished with a low-maintenance surface, such as a packed stone cladding, which will also add to the thermal inertia of the building. Roof structure is to be of a lightweight corrugated sheet-metal finish, painted a matt, light colour.

Shading systems are to be manufactured from wood, and wood should take precedence to steel in structural systems, but only to the point where it is still financially feasible.

The general planning and massing of the Incubation Node should assimilate the low-rise, fragmented and low-density of the surrounding buildings, as to compliment its environment.

.3.4 MICRO SCALE : SITE

.3.4.1. SITE SELECTION

.3.4.1.1. Criteria for site selection

The criteria for the selected site were developed form the weaknesses identified in Lydenburg's urban fabric. The site should therefore ideally be situated where it lends definition to the river's edge, connect the river to the CBD and where the location attracts attention to places of historical and architectural interest. Ideally the site should also be within walking distance of the CBD in order to promote pedestrian movement.

.3.4.1.2. Site selection

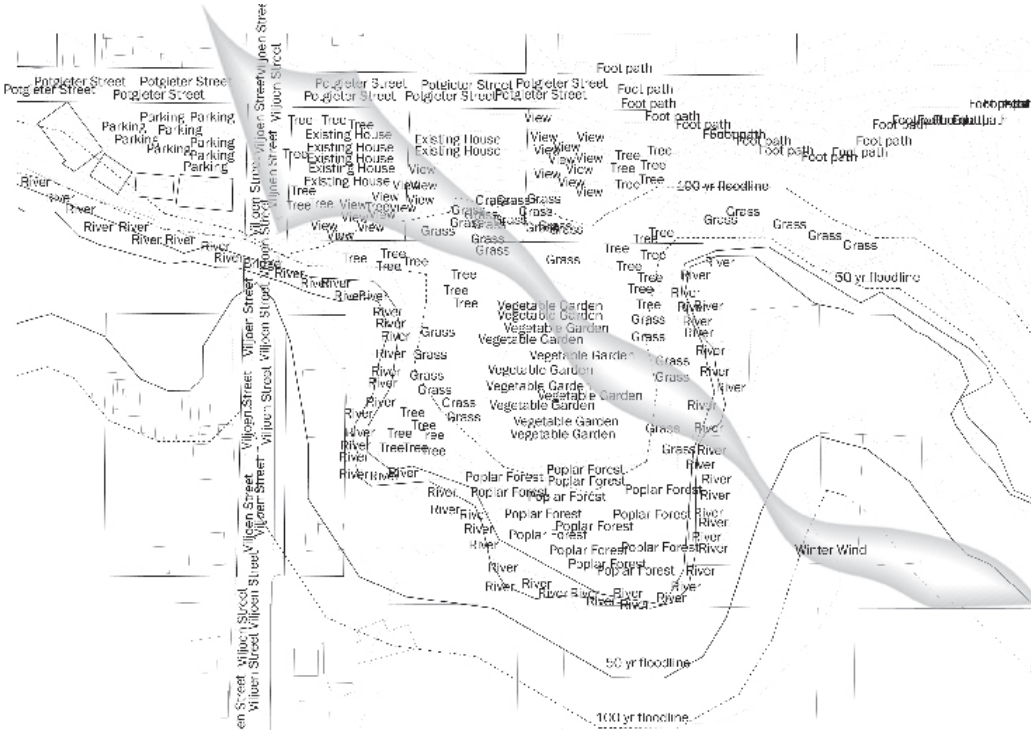
The site is located on the edge of the river on the north–south axis towards the CBD to reconnect the urban fabric to the river's edge, which plays a large part in Lydenburg's identity. While a site closer to the segregated communities towards the west would have been more convenient and beneficial for the economic restoration of these communities, situating this pilot project en route to the CBD along an already existing and well-used axis is more feasible. The proposal is that similar developments will then be inserted along the river's edge in a westerly direction, which will eventually knit these communities together with a strip of economic and leisure activities.

F.3.4.1.

.3.4.2. SITE ANALYSIS

.3.4.2.1. Location

The site is situated opposite a recent commercial development hosting a steak-house franchise and small business enterprises such as a hairdresser facility. The terrain is also within walking distance to the CBD (500 m).The largest part of the site is occupied by the Sterkspruit River's floodplain. The plain is currently being rented out by the municipality to the Department of Correctional Services, and it is being used as a vegetable garden that is tended by the inmates. A Poplar Forest is found in the bend of the floodplain along the river edge and is considered to add ambience to the terrain. The site runs lengthwise in an east–west direction, sloping towards the Sterkspruit River in the south. The slope falls from north to south at a fall of 10% on the western side to 20% on the eastern side. The slope falls 4% from east to west. Two residential Units are found on the site. They are to be demolished.



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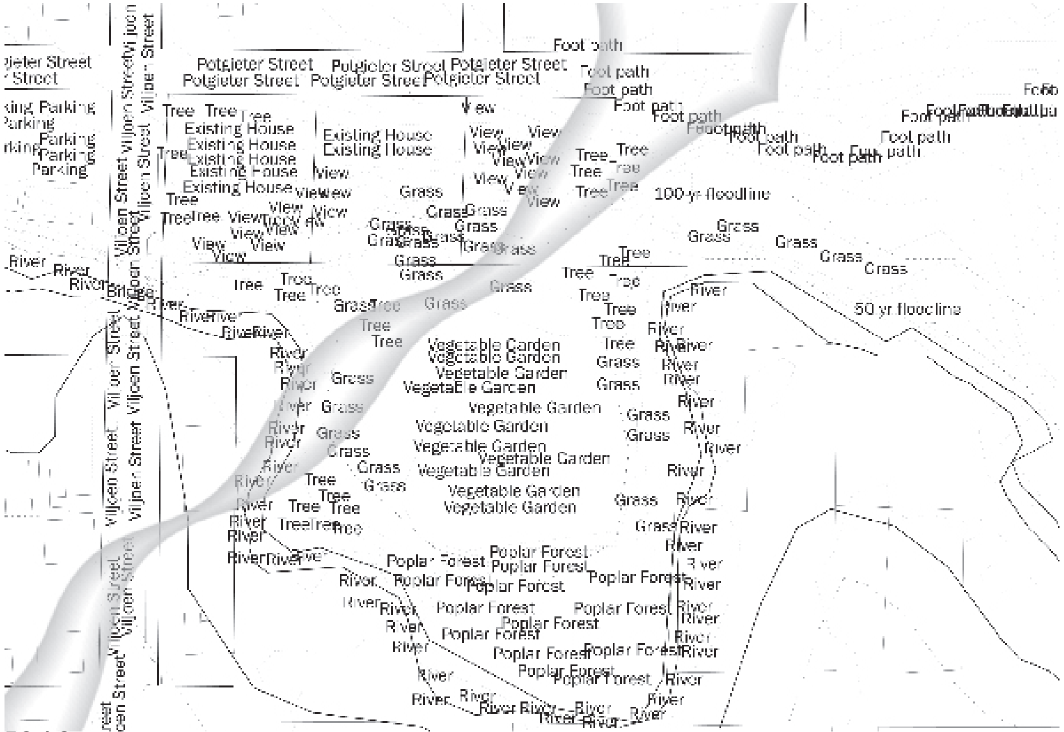

Potgieter Street
Viljoen Street
Parking
Existing House
Tree
View
Foot path
Grass
100 yr floodline
50 yr floodline
River
Bridge
Vegetable Garden
Poplar Forest

F.3.4.3.

.3.4.1.3.	Geology	Highly metamorphosed sedimentary rocks of the Transvaal super group underlie the terrain. The geological structure is highly stable and will have a positive impact during the total life cycle of the project (source).
.3.4.1.4.	Soils	The soils of the study area were formed by weathering of the underlying morphosed sediments. Soil investigated on an open area is of a red, fine, sandy-clay nature. it has low plasticity and shows little signs of slippage.
.3.4.1.5.	Topography	The area gently slopes from the northeast towards the southwest. The topography will have an impact on the project because of the gradient involved. Proper mitigation steps are to be taken.

.3.4.1.6.	Surface drainage	Because of the close proximity of the river at the southern side of the site, the building line should not exceed the 1:50 year flood line.
.3.4.1.7.	Groundwater	Underground water may be encountered on the southern sloping side. In the case of a basement, the tanking method is advised, or else an elevated structure of poles or piles.
.3.4.2.8.	Vegetation	Because of the existing structures on the site, little of the site landscape is still pristine. A poplar forest is found in the bend of the flood plain. Veldgrass and water plants are found along the river edge and less-cultivated areas of the veld.

Acocks (1988:112) speculates that the typical veld type of Lydenburg used to be an open savannah of *Acacia caffral*

Acocks also identified the eastern variety of Bankenveld in the Lydenburg area. Bankenveld, according to G.Brand, (landscape architecture student) is a transition veld type which needs to be burnt regularly to maintain a balanced ecosystem. The seasonal burning of the veld is to be controlled and incorporated into the design of the Incubation Node.

Vegetation identified by Acocks (1988:112) is as follows:

Digitariabrazzae,
Tristachya rehmanni,
Eragrostis curvula,
E, racemosa
Perotis paten
Themeda and
Heteropogon.

.3.4.2.9. Circulation

The Sterkspruit River is fenced off and made inaccessible to the public. Pedestrian movement occurs along the north-south axis (Viljoen Street). The new commercial development opposite the Incubation Node also encourages public movement between the CBD and the river edge. A footpath runs across the length of the site up to the eastern boundary of the terrain.

Parking

Parking is provided at the commercial development opposite the Incubation Node. The width of Viljoen Street also allows for cars to park at the side of the road. Because of the close proximity of the CBD and the existing parking lot to the site, it is proposed that no additional parking is provided for the Incubation Node. Should a large-scale event be held at the Incubation Node, vehicles can also be accommodated by utilising the rugby field situated 500m to the west along Potgieter Street.

vi. Transport nodes

A lack of formal transport nodes is identified. It is proposed that the Innovation Node becomes a drop-off and pick-up point for major transport services, as well as smaller shuttle services that serves the district. A formal taxi rank is to be incorporated adjacent to the long-distance busstop terminal.

.3.4.3. CLIMATE

.4.3.3.1. Climate zone

The climate of the area is typically that of the South African highveld, with a Summer maximum rainfall and a dry winter. Distinct rainy and dry easons exist with large day temperature variation and strong solar radiation. Humidity levels are moderate (Holm (1996: 64).

.4.3.3.2. Location:

Latitude	25.1 South
Longitude	30.4 East

.4.3.3.3. Average humidity

56 %

.4.3.3.4. Average rainfall

Lydenburg has a summer rainfall of 709 mm/year. Thundershowers often occur during summer, and intense rainfall events can happen. Thundershowers are frequently accompanied by hail.

.3.4.4.6.	Temperature difference	Maximum diurnal variation occurs in September.
		Average monthly diurnal
		variation = 11 K
	January temperature	25.6° C
	July temperature	16° C
.3.4.4.7.	Wind	
	i. Summer winds	Primarily north-easterly
	ii. Winter winds	Primarily north-westerly
		A fair amount of south-westerly wind (Holm 1996: 64)

.3.4.5. PLANNING

.3.4.4.1. PLANNING

i.	Urban planning	Compact with protection for pedestrians against high ultraviolet radiation and summer rains
i.	Plan form	Winter and summer requirements differ, with a compact plan form and a well-insulated envelope required in winter, as well as solar gain. In summer, external spaces should provide shade for outdoor activities.
ii.	Rain protection	Entrances to buildings are to be shielded from sporadic thunderstorms

.3.4.4.2. BUILDING ENVELOPE

i.	Mass	Thermal mass is advisable, especially when the daily temperature swing is larger than 13 K. This can be provided with massive floors and internal partitions. These measures are effective for approximately half the underheated period and for the entire overheated period.
i.	Insulation	Lightweight insulated roofs are feasible for this region.
ii.	Properties of materials	All external surfaces should be light-coloured or reflective, but not shiny, to minimize solar heat gain in the overheated period.

.3.4.4.3 SOLAR CONTROL

i.	Sun angles	Solstice	64.9°	(21 March and 23 Sept)
		Winter	41.4°	(22 June)
ii.	Equatorial window		An equatorial window with an area equal to 19.2% of the floor area is effective for the entire overheated window period. Openings for solar gain should be orientated towards the winter sun and screened in summer when solar control is necessary to prevent overheating.	
iii.	Ventilation		Ventilation is effective in alleviating overheating but may be unnecessary if thermal mass is exploited. Night ventilation can be implemented to compensate for insufficient mass.	

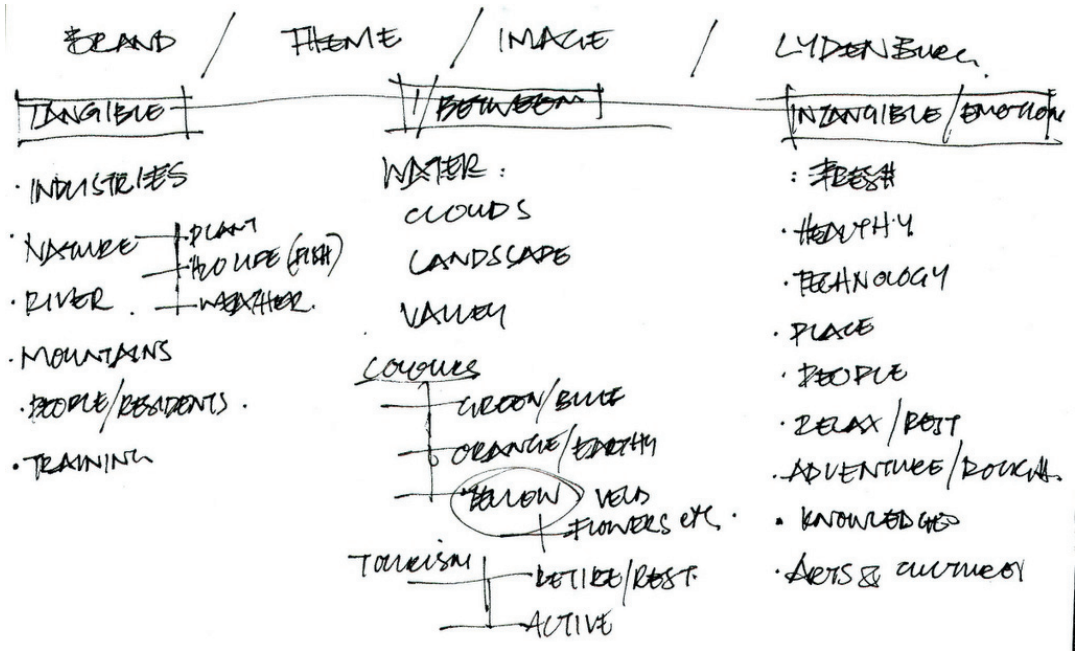
.3.4.4.4 SYSTEMS

i.	Evaporative cooling	Direct evaporative cooling is effective for control during the entire overheated period, but is unnecessary if thermal mass is exploited.
ii.	Active cooling	Air-conditioning is unnecessary unless the building function demands it.
iii.	Mechanical cooling	Mechanical ventilation is not required unless the building function requires higher ventilation rates.

.

.4.1 INTRODUCTION

'Architecture is concerned with defining objectives', says Heath (1993:292). He also believes that 'people's knowledge of their needs is often surprisingly vague and inexplicit.' The objective of the proposed development has already been identified as an intervention in bringing a shift in the current economy. The tourism industry is seen as a vehicle to reach this objective, is it is an economy which is not based on a depletable resource such as mining. The objectives and program of the proposed development is determined from the research conducted in the field of Destination Branding, which is a branch of marketing specifically aimed at the tourism sector. Branding becomes in turn the vehicle with which Lydenburg establishes itself within the tourism sector and within the mind of the consumer.


BRAND / THEME / IMAGE / LYDENBURG
TANGIBLE
INTANGIBLE / EMOTION
· INDUSTRIES
· NATURE
· PLANT
· FAUNA (FISH)
· WEATHER
· RIVER
· MOUNTAINS
· PEOPLE/RESIDENTS
· TRAINING
WATER :
CLOUDS
LANDSCAPE
VALLEY
COLOURS
GREEN/BLUE
ORANGE/EARTH
YELLOW
VELD
FLOWERS etc.
TOURISM
LEISURE/REST
ACTIVE
: FRESH
· HEALTHY
· TECHNOLOGY
· PLACE
· PEOPLE
· RELAX/REST
· ADVENTURE/TOUCH
· KNOWLEDGE
· ARTS & CULTURE

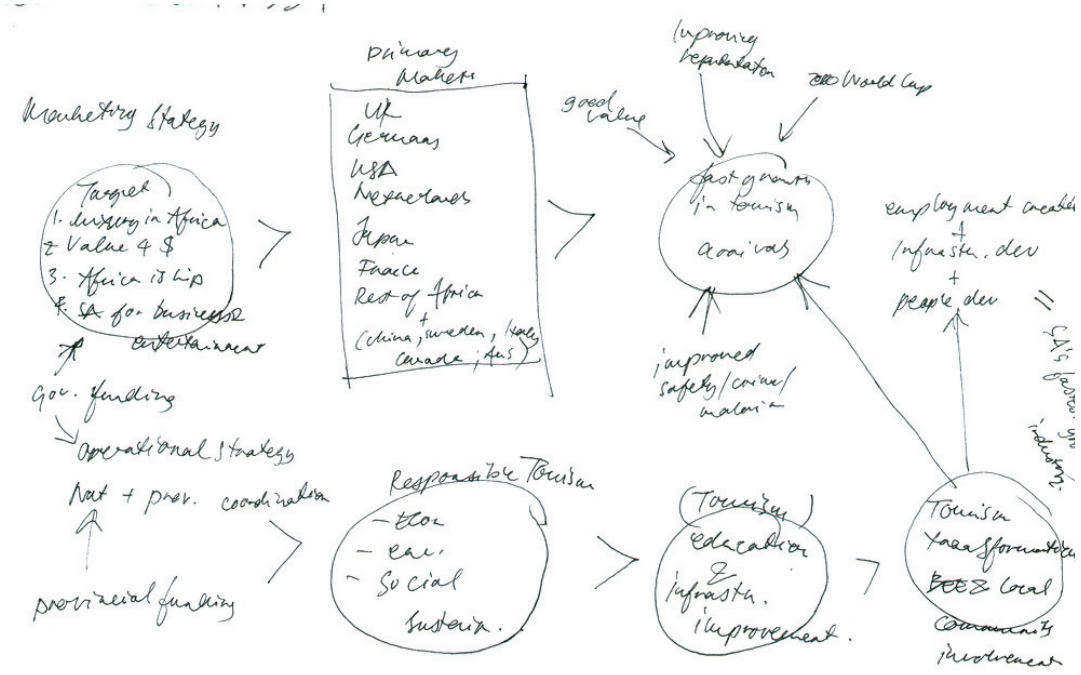
F.4.1.1

.4.2 BRANDING

.4.2.1. DEFINITION

According to Slater, 'branding evolved out of the Industrial Revolution as a means for a manufacturer to identify itself as the maker of a certain product. The brand then became the identifier for the certain product promising consistency and quality'. Morgan and Pritchard define branding as 'the conscious use of publicity and marketing to communicate selective images of specific geographical localities or areas to a target audience' (Morgan and Pritchard, 2004:59) (Slater, 2004:226) Brands also differentiate products, represent a promise of value, incite beliefs, evoke emotions and prompt behaviours (Kotler and Gertner, 2004:41).

A brand is an asset that, if built and managed properly, can generate superior returns for a given product, service or organisation (Personal Communication, April 5, 2005, with David Blyth (branding specialist) and Faan Nel (architect) of branding company Enterprise IG).

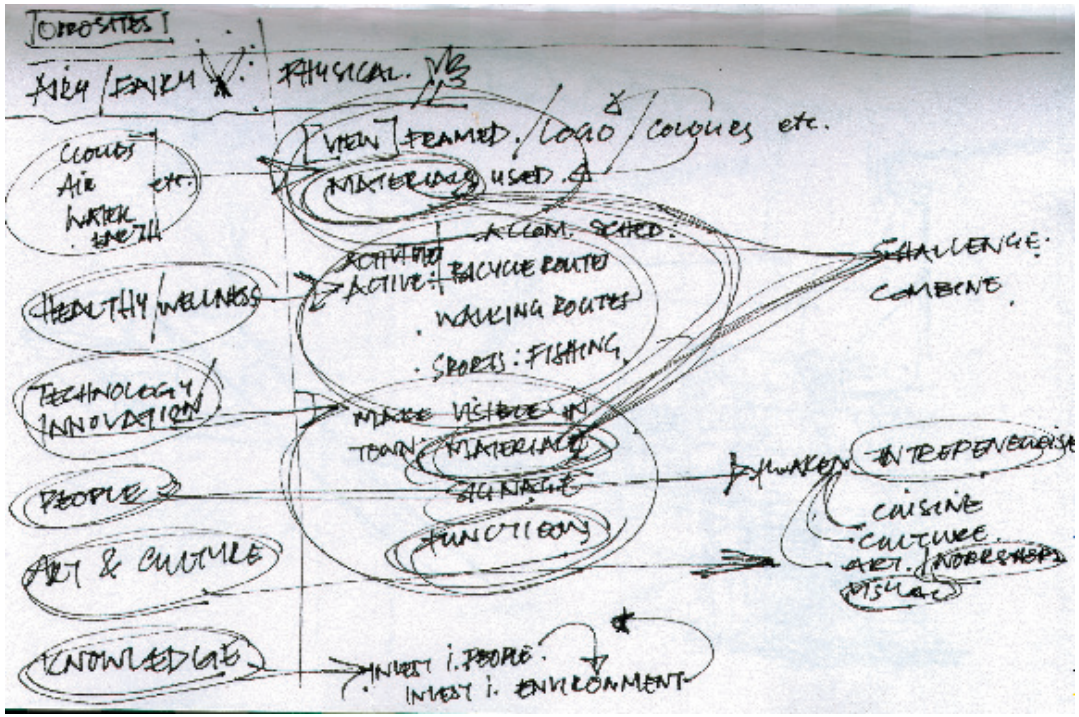

Marketing Strategy
Target
1. Increase in Africa
2. Value 4 $
3. Africa is hip
4. SA for business
entertainment
Gov. funding
operational Strategy
Nat + prov. coordination
provincial funding
Primary Markets
UK
Germany
USA
Netherlands
Japan
France
Rest of Africa
+
(China, Sweden, Italy
Canada, Aus)
good value
improve representation
2010 World Cup
past growth in tourism
arrivals
improved safety/crime/malaria
employment created
+
Infrastr. dev
+
people dev
Responsible Tourism
- Econ
- Env.
- Social
Sustain.
Tourism
education
&
Infrastr.
improvement
Tourism
transformation
BEE & local
community
involvement

F.4.2.1

.4.2.2. BENEFITS OF BRANDING

Olins contends that the notion exists that branding is a concept linked only to business or an enterprise geared towards profit with no social consequences (Olins 2004:24). However, Morgan, Pritchard and Pride note that a "nation's brand image can profoundly shape its economic, cultural and political destiny", that "global brands could be the ultimate (re)distributor of global wealth" (Morgan, Pritchard and Pride 2004:6) and that "place branding is an extremely complex and highly political activity that can enhance a nation's economy, national self-image and identity" (Morgan, Pritchard and Pride 2004:14) (Anholt, 2004:28). Moreover, Anholt states that 'A positive place brand encourages inward investment, and tourism is a magnet for talent (both new immigrants and returning members of the diaspora), and if properly managed can create a renewed sense of purpose and identity for the inhabitants of the country, region or city' (Anholt 2004:29).

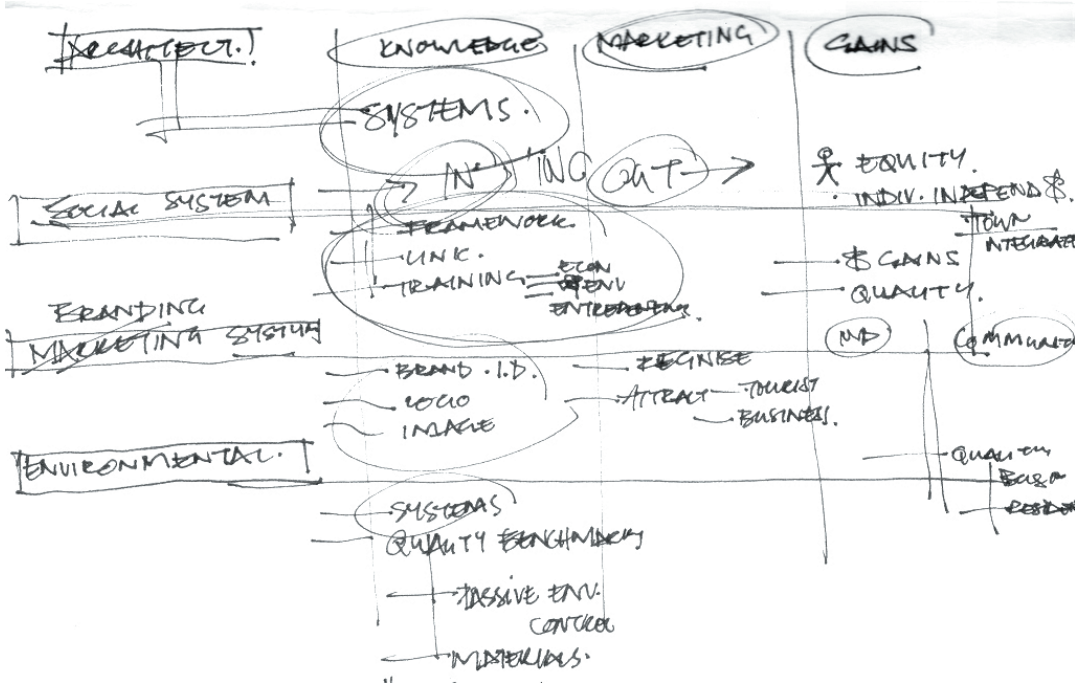
According to Slater, 'Places currently offer the greatest untapped branding opportunities' (Slater 2004:227). This comment is relevant because 'Place of origin


OPPOSITES !
AIR / EARTH
PHYSICAL
VIEW
FRAMED
LOGO
colours etc.
MATERIALS USED
CLOUDS
AIR
etc.
WATER
HEALTH
HEALTHY / WELLNESS
ACTIVE
CYCLE ROUTES
WALKING ROUTES
SPORTS : FISHING
CHALLENGE
COMBINE
TECHNOLOGY
INNOVATION
MADE VISIBLE IN
TOWN
MATERIALS
SIGNAGE
FUNCTIONS
PEOPLE
CUISINE
CULTURE
ART
ART & CULTURE
KNOWLEDGE
INVEST i. PEOPLE
INVEST i. ENVIRONMENT

F.4.2.2

is hard equity, which does not need to be built from scratch, because it already exists the consumer's mind, and has a definite shape and form' (Anholt, 2004:38). Morgan and Pritchard add that 'Consumers enrobe themselves with brands, partly for what they do, but more for what they help express about their emotions, personalities and roles' (Morgan and Pritchard, 2004:61); therefore, as Anholt states, 'the place to start working out how to brand a country is often not with the country itself, but with the consumer and the marketplace, in the very limited amount of mindspace that each consumer has available to store perceptions' (Anholt 2004:36). This statement ties in with Seng Ooi's description of a destination brand's aim as being the shaping of public perceptions (Seng Ooi 2004:252).

As destinations are a composite of a bundle of different components (Morgan and Pritchard, 2004:63), including accommodation and catering establishments; tourist attractions; arts, entertainment and cultural venues; and the natural environment, a single brand will capture the essence of the destination in a unified manner, creating an umbrella under which the destination can be enjoyed at both a symbolic and an

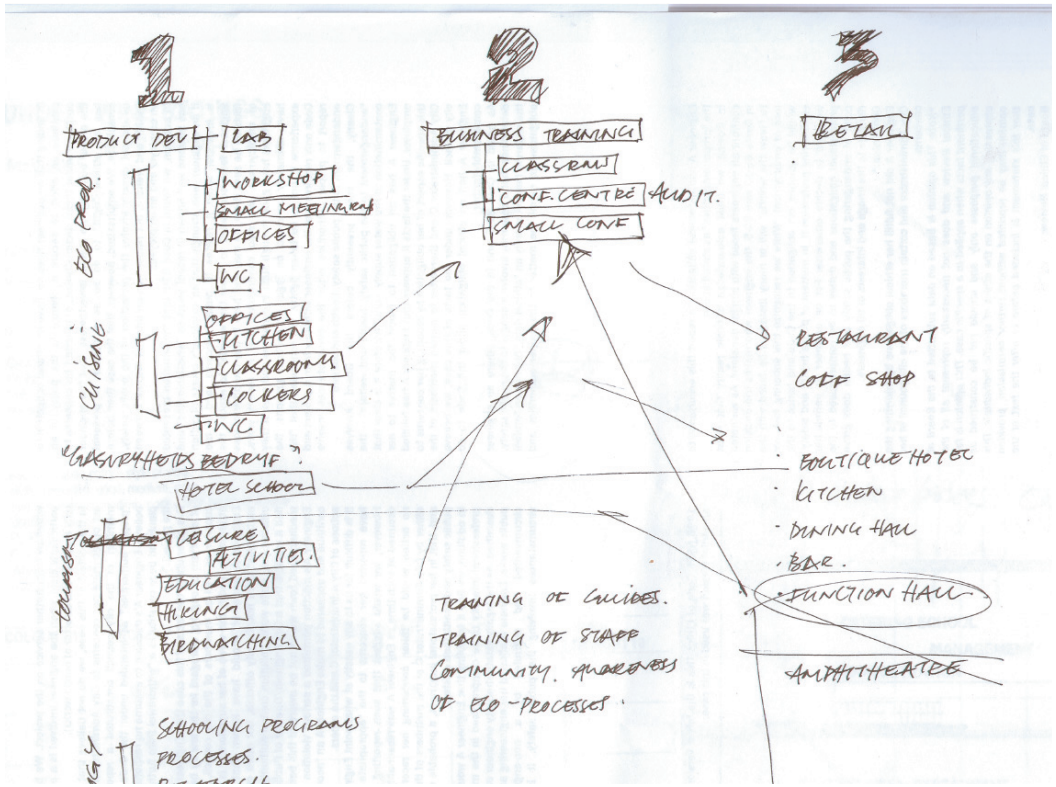

KNOWLEDGE
MARKETING
GAINS
SYSTEMS.
IN
ING
OUT
EQUITY.
INDIV. INDEPEND $.
SOCIAL SYSTEM
FRAMEWORK
LINK.
TRAINING
ECON
ENV
GAINS
QUALITY.
BRANDING
MARKETING SYSTEM
MD
BRAND I.D.
LOGO
IMAGE
RECOGNISE
ATTRACT
TOURIST
BUSINESS.
ENVIRONMENTAL.
SYSTEMS
QUALITY BENCHMARKING
PASSIVE ENV.
CONTROL
MATERIALS.

F.4.2.3

experiential level (Crockett and Wood, 2004: 202). As many different components as possible need to be included in the brand as 'a strong brand is a rich brand, and richness implies a complex and satisfying mix of many different elements' (Anholt, 2004:30).

The Lydenburg development must consist of a rich program that attracts a wide spectrum of users.

Seng Ooi divides destination branding into packaging a product, 'which focuses on attractions and activities that are considered significant and alluring' (Seng Ooi 2004:254), and identity: 'The brand asserts the place's unique identity. This uniqueness often emphasizes the historical, social and cultural values of the host society' (Seng Ooi 2004:255). The product in Lydenburg's case will be a building that focuses on attractions that are significant to Lydenburg, and will assert the unique identity of the place.

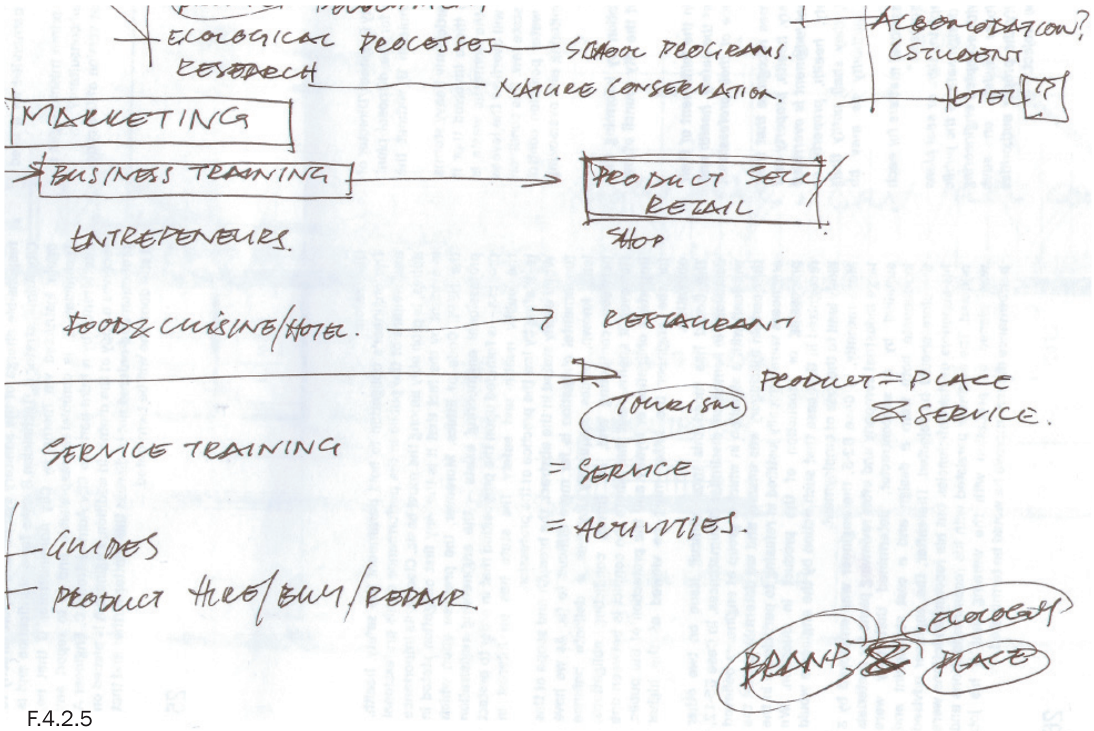

1
2
3
PRODUCT DEV
LAB
WORKSHOP
SMALL MEETINGS
OFFICES
WC
ECO PROD.
CUISINE
OFFICES
KITCHEN
CLASSROOMS
LOCKERS
WC
HOTEL SCHOOL
LEISURE
ACTIVITIES.
EDUCATION
HIKING
BIRDWATCHING
BUSINESS TRAINING
CLASSROOM
CONF. CENTRE
AUD 17.
SMALL CONF
RETAIL
RESTAURANT
COFF SHOP
BOUTIQUE HOTEL
KITCHEN
DINING HALL
BAR.
FUNCTION HALL
AMPHITHEATRE
TRAINING OF CHEFS.
TRAINING OF STAFF
COMMUNITY. AWARENESS
OF ECO-PROCESSES.
SCHOOLING PROGRAMS
PROCESSES.

F.4.2.4

.4.2.3. DIFFERENTIATION

Hallberg states that the key is to develop a strong brand that holds unique associations for the consumer and that can be articulated as a clear point of difference (Hallberg, 1995 in Morgan and Prichard, 2004:61), while Pride notes that "when it comes to branding perhaps the most difficult task facing any destination is the quest for true differentiation" (Pride 2004:159) and that "success will not be achieved as a result of imitation and copycat strategies" (Pride 2004:161). Another way of looking at differentiation is to view it as "the value of a successful brand to its potential to reduce substitutability" as pointed out by Morgan and Prichard, (2004:61).

The goals set for Lydenburg should therefore serve to differentiate the town from other towns with similar qualities, specifically in view of tourism. Surrounding towns like Machadorp and Dullstroom may also rely on trout tourism to establish their identity. Although fly-fishing should play a part in the make-up of Lydenburg's identity, focus should rather shift to adventure tourism, including 4x4 trips, hiking, and rock climbing in addition to trout fishing. A healthy lifestyle associated with the surrounding

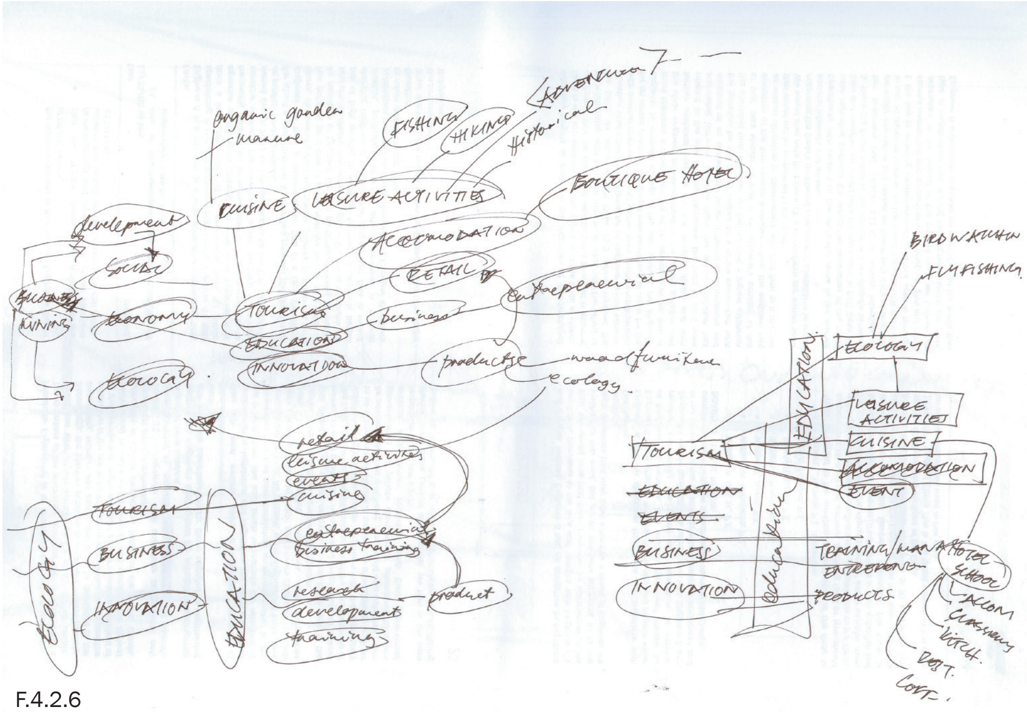

ECOLOGICAL PROCESSES
RESEARCH
SCHOOL PROGRAMS.
NATURE CONSERVATION.
(STUDENT
HOTEL
MARKETING
BUSINESS TRAINING
PRODUCT SELL/
RETAIL
SHOP
ENTREPENEURS.
FOOD& CUISINE/HOTEL.
RESTAURANT
TOURISM
PRODUCT = PLACE
& SERVICE.
SERVICE TRAINING
= SERVICE
= ACTIVITIES.
GUIDES
PRODUCT HIRE/BUY/REPAIR
ECOLOGY
BRAND & PLACE

F.4.2.5

area of Lydenburg can become an integral part of the Lydenburg brand, dissociating it from surrounding towns. The fact that Lydenburg is situated within a nature reserve should be the main focus of the new branding strategy, as it is a quality that could generate the differentiation needed in a successful branding strategy.

.4.2.4. CHALLENGES

Destination branding, with its core objective of producing a consistent, focused communication strategy (Morgan and Pritchard, 1998:147), confronts at least three major constraints. First, a lack of adequate finance to support appropriate marketing campaigns, a common complaint, has been exacerbated by limited experience of global markets and a lack of appropriate expertise. Second, tourism destination marketers may be pressured to show short-term results when long-term investment is required to build a consistent brand. Such a dilemma may be reflected in message inconsistency. Third, whereas centralized, relatively authoritarian regimes may exercise some control over and bring coherence to the components of a destination image, market economies may find it difficult to develop a coherent


organic garden
manure
FISHING
HIKING
historical
CUISINE
LEISURE ACTIVITIES
BOUTIQUE HOTEL
development
SOCIAL
ECONOMY
ECOLOGY
ACCOMODATION
RETAIL
entrepeneurial
TOURISM
business
EDUCATION
INNOVATION
products
wood furniture
ecology
BIRDWATCHIN
FLYFISHING
retail
leisure activities
events
cuisine
TOURISM
BUSINESS
INNOVATION
EDUCATION
ECOLOGY
entrepeneurial
business training
research
development
training
product
TOURISM
EDUCATION
EVENTS
BUSINESS
INNOVATION
EDUCATION
ECOLOGY
LEISURE ACTIVITIES
CUISINE
ACCOMODATION
EVENT
PRODUCTS
HOTEL SCHOOL

F.4.2.6

brand for destinations that are composed of a myriad of products and environments (Hall, 2004: 114).

Lydenburg urgently needs to set up a centralized branding committee through which the advertising and marketing of sub-services (private guesthouses and enterprises) will be promoted. The creation of this branding and marketing body will ensure a single, focused marketing strategy and will benefit the various smaller businesses in the area. This marketing body will be housed in the proposed development and will tie in with a business school on the premises that will educate residents in business management and entrepreneurship.

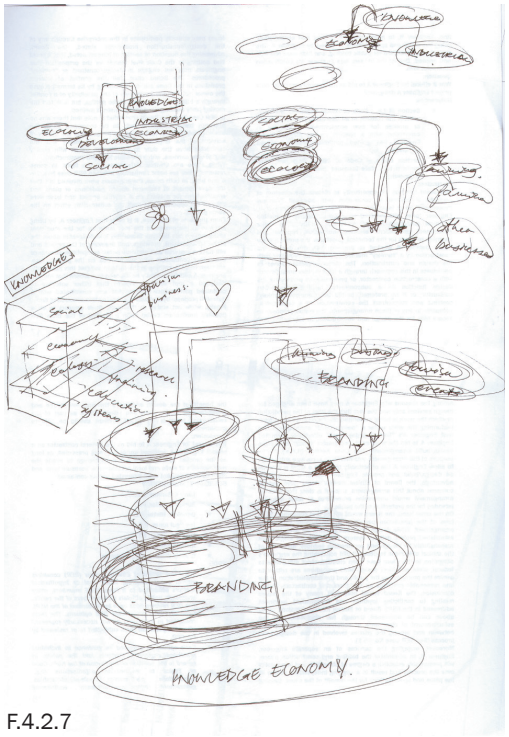
.4.2.5. CORE OBJECTIVE

A strong brand identity will drive the brand association, for example that of Lydenburg, as a 'unique, historical, cultural and culinary experience'. The extensive and strategic exposure of consumers to a consistent message generates brand awareness that, in turn, will rely on the deliverance of promises of quality made in the mind of the consumer. Once this perception has been achieved, visitors will visit

the town repeatedly and their continued presence will lead to brand loyalty. Events that will ensure repeat returns could include a marathon (the already existing Long Tom Marathon can be intrinsically associated with Lydenburg), as well as festivals throughout the year (trout festivals, culinary festivals, etc).

According to Hall (2004:116), the importance of projecting strong brand images is either sectorically or geographically based. Therefore, the Lydenburg brand firstly needs to emphasize a South African-ness: This quality will be achieved through natural landscaping or through the site that will largely consist of rehabilitated veld with indigenous grasses, as well as local handcrafted artifacts that will be promoted through the facility.

Morgan Pritchard and Pride (2004:10) contend that successful destination branding must embrace a host of activities, including infrastructural development. The proposed development in Lydenburg will stimulate infrastructural development along the river that meanders through the town. This will be done under intense scrutiny of the Department of Nature Conservation so that no harm is done to the



F.4.2.7

biosphere. An important part of the activities for which Lydenburg stands should be protection from environmental degradation. In this regard, continual educational workshops for school and interest groups will be held at the facility.

In The Making of South Africa Inc, Paul Dorrian stated that the key to unlocking South Africa's potential lies firstly in a "radical and innovative strategic paradigm that must be developed"; he proposed that Sun Tzu's military treatise The Art of War be consulted for such an exercise. Additionally, Dorrian declared that the "incubation, nurturing and development of the countries' actual and potential human capital" (Dorrian 2005:2) lay at the core of such a stratagem.

F.4.2.8

.4.3. TOWN AS PRODUCT

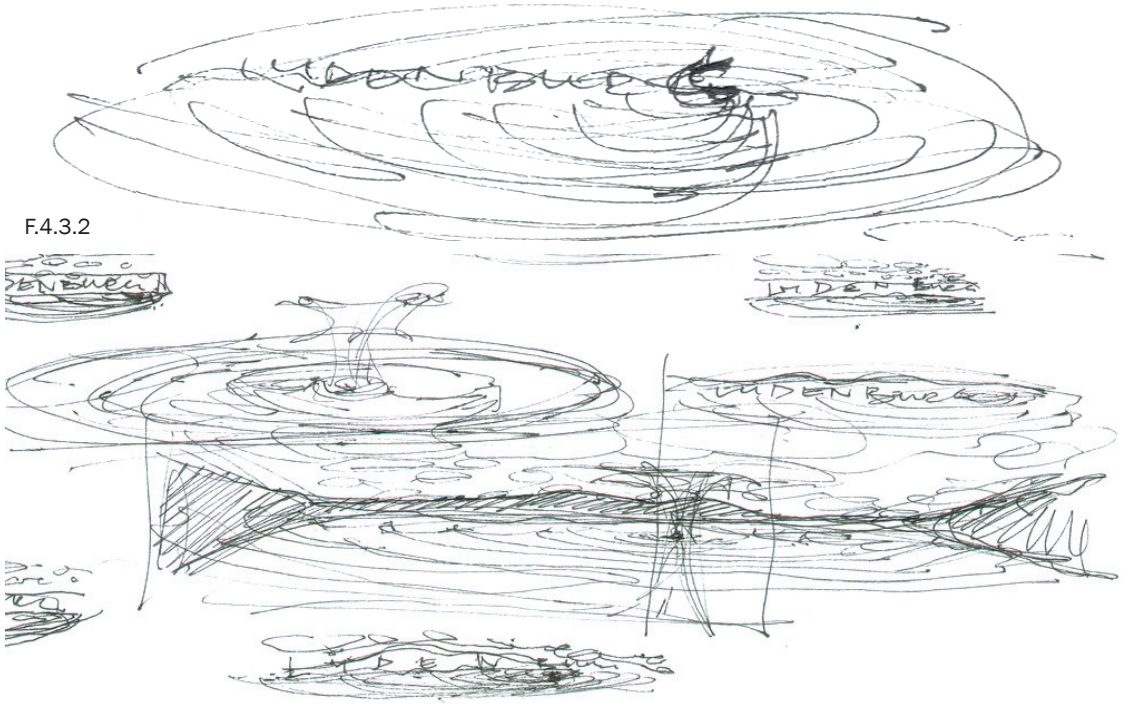
Beyond serving as brand names, towns can be products. They compete in the market for tourists, factories, businesses and talented people. Thus Lydenburg must embark on more conscious town branding. This quest requires the following strategic management approach as set out by Kotler and Gertner (Kotler and Gertner 2004:53)

F.4.3.1

.4.3.1. STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS ANALYSIS (SWOT-ANALYSIS)

.4.3.1.1. Strengths

- Natural environment
- Existing infrastructure
- Stable community
- Current economical growth
- River (trout)
- Events: trout festival/Long Tom Marathon
- Location with respect to the Lowveld, the Kruger National Park, game reserves and Maputu
- Home to the offices of the Department of Nature Conservation
- Location in the Gustav Klingbiel Reserve
- Existing hotel and catering school
- Various excellent restaurants



F.4.3.2

F.4.3.3

.4.3.1.2. Weaknesses

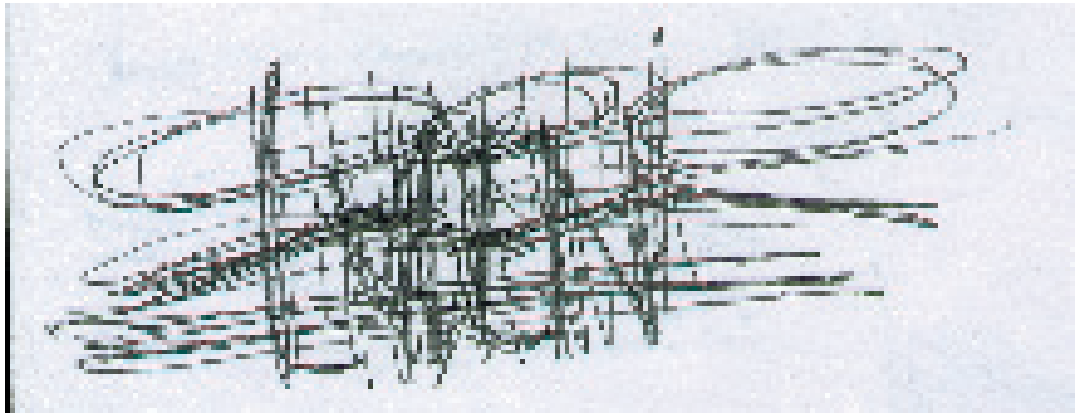
- Lack of a single marketing strategy
- Under-utilized tourism
- Cynical community
- Fenced–off river, separated from urban fabric
- Loss of architectural character

.4.3.1.3. Opportunities

- Capital gains promised by the opening of platinum mines
- Opportunity to identify a new identity for the town
- Quick erection of many buildings; an architectural identity can be secured within a short while
- Promotion of entrepreneurship and business opportunities
- Establishment of Lydenburg as a major competitor in the knowledge and idea industry
- Progress relates to new building opportunities and a more progressive architecture.

.4.3.1.4. Threats

- Too much focus on the mining industry
- Unsustainable economical growth with a focus on non-renewable resources
- Urban sprawl in an easterly direction
- Maintained segregation of the different settlements



F.4.3.4

.4.3.2 STORY TELLING.

Lydenburg needs to choose industries, personalities, natural landmarks and historical events that could provide a basis for strong branding and storytelling.

Industries

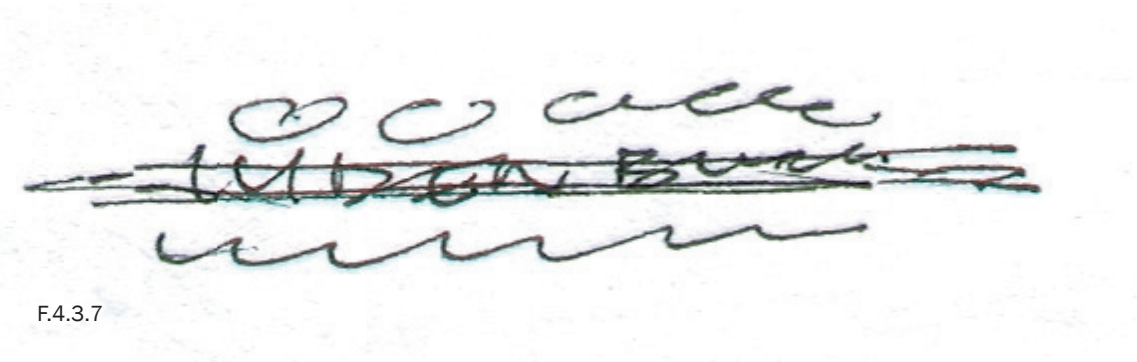
The mining industry is to be involved as part of the Friends of Lydenburg project, in which the industries that gain from the natural resources and the workforce of the area become visibly involved in bettering the community. The tourism sector, especially involving the trout industry is also to be aggressively promoted.

F.4.3.5

F.4.3.6

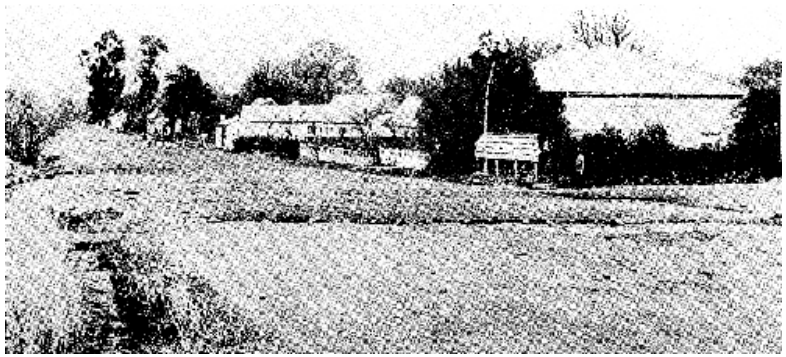
Natural Landmarks

The most prominent natural landmark of Lydenburg is the Sterkspruit River flowing through the town. It is the single reason for the proclamation of Lydenburg and was, for many years, the life force of the community before the damming of the river in the Lydenburg Dam. The Sterkspruit River will play an integral role in the storyboard of Lydenburg and will be the natural landmark along which the whole project will be designed.



F.4.3.7

Historical events: Stories about Lydenburg's rich Voortrekker history, as well as the Anglo-Boer War, will be retold in a series of pictures, films, festivals and permanent displays in the exhibition hall of the proposed project. The prehistoric artifacts that make up a major part of Lydenburg's identity is to be on permanent display. In addition, famous skirmishes between the British and the Boers could be re-enacted.



F.4.3.8

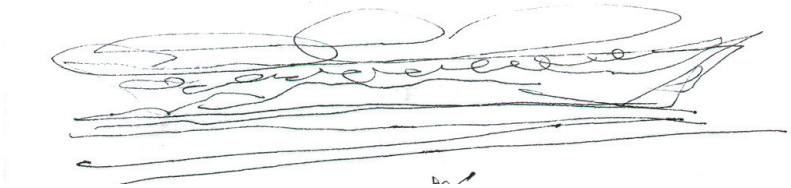
.4.3.3 UMBRELLA CONCEPT

The umbrella concept promoting Lydenburg as a brand should include both an emotional and a rational association. Elements such as knowledge and progress are united under the term innovation. This accommodates the primary industries to which this development is owed. However, note that the aim of the project is to create a shift in the economy from an industrial to a service-driven one. Service, health and happiness are elements that can be connected to this idea. Town growth promotes progress and innovation but can also tie in with the development and sustenance of the natural environment.

Most importantly, Lydenburg should be shown to be in favour of its community, its people and its residents. The whole exercise of branding is to create an economically, socially and environmentally sustainable community. I believe that the word sustainability has too often been used for mere lip-service. The original concept behind Lydenburg's identity was "Innovation, Sustainability, and Service". In an informal test, various people found this slogan to be too long; they had

difficulty in remembering it and found the terms too vague. It has been decided that the umbrella concept for Lydenburg should be “Growth” signifying progress, development and innovation, as well as a concern for the community and the natural environment.

Another concept for Lydenburg’s identity, as well as the Incubation Node’s identity, is the indigenous name of Lydenburg: ‘Masising’, denoting ‘place of the long grass.’ This is coupled with the term ‘growth’, and also signifies change, for I believe that growth and change compliment each other. It is envisioned that natural veldgrass and the subsequent imagery will become synonymous with the Incubation Node, and later with Lydenburg. This concept is to be further investigated in the Design Discourse.



F.4.3.9

.4.3.4 FUNDING

Lydenburg should allocate sufficient municipal or national funds to each branding activity deemed to have a potentially large impact. These activities could include the yearly marathon and conferences held in the town to promote the umbrella concepts, as well as the maintenance of the tourism complex that will be the vehicle for the Lydenburg brand.

The funding for the Incubation Node is to be supported by the Local Council, up to Government level, as a social development. Private enterprises will be encouraged to invest in the development with the long-term benefit of a boosted economy and an active tourism market.

.4.3.5 CONTROL

Lydenburg should create export controls to ensure that every exported product is reliable and delivers the promised level of performance. In effect, control is required of all services rendered under the banner of the Lydenburg brand.

.4.4 ELEMENTS OF A SUCCESSFUL BRAND

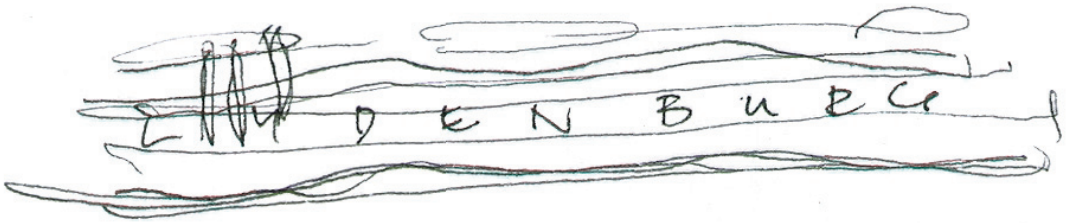
The following elements are discussed as possible elements that will form part of Lydenburg's distinctive brand.

.4.4.1. TOURISM AND EDUCATION

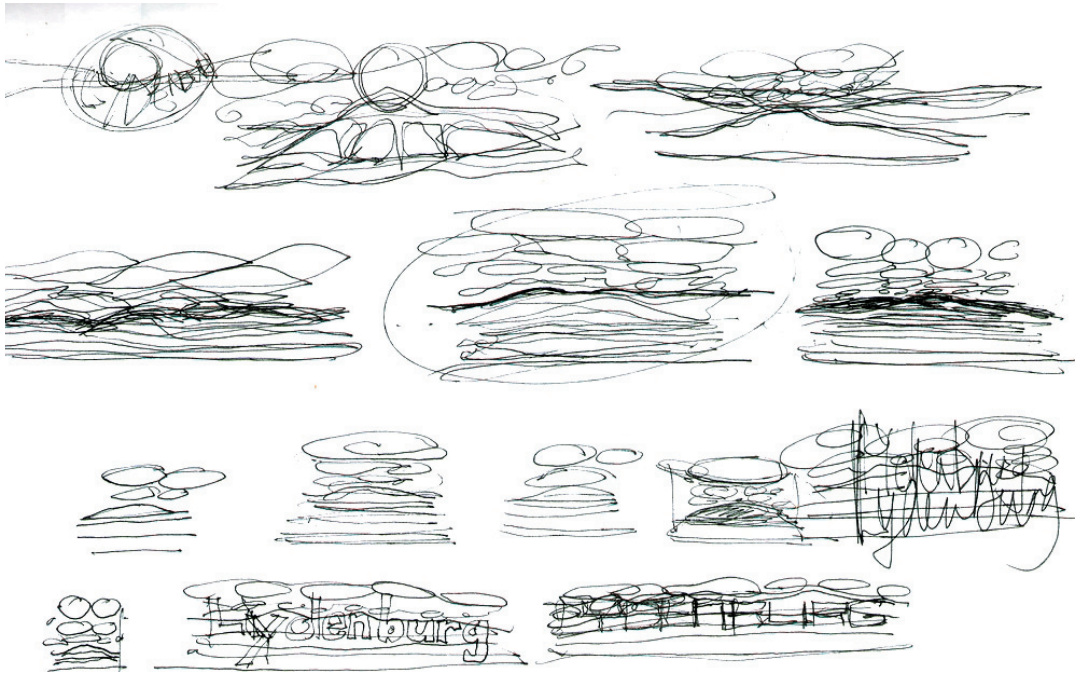
Tourism is just one element of any destination's economy and should be integral to place marketing since it "supports and leads the development of a place brand and for would-be investors and residents" (Morgan and Pritchard 2004:76).

Tourism offers communities the potential to build both identities and viable economies (Morgan, Pritchard and Pride 2004:13). Tourism, along with education, will be a key sector in the new Lydenburg economy. The role of this proposed development will be to promote Lydenburg, locally and overseas, as an attractive venue for conferences and for leisure and educational tourism.

Although the economies of a growing number of places do depend on tourism, other factors may be equally important, such as stimulating inward investment and aid, encouraging both skilled and unskilled workers to immigrate to the place of appeal (Anholt 2004:37). Branding a destination is not the same as promoting tourism. It is a part of the whole. Destination brands are beginning to reach beyond the tourism industry and are starting to position themselves as holistic place brands (Morgan, Prichard and Pride 2004:5).



F.4.4.1



F.4.4.2

Tourism (and its related industries) is a composite product consisting of many components, including

- Accommodation
- Transport
- Catering establishments
- Tourist attractions
- Arts
- Entertainment
- Natural environment (Crockett and Wood 2004:192)

.4.4.2. EVENTS

The relationship between events and tourism has become intrinsically linked. One significant element of this relationship is the way in which images associated with an event may be transferred to the destination. In this way, the destination brand may be strengthened, enhanced or changed (Smith, 2004:275). Furthermore, Smith contends that an increasing number of destinations have looked to major events to lure large numbers of visitors, attract investment and tourist spending, and generate

F.4.4.3

media coverage (Smith (2004:262). Events have a distinctive capacity to excite residents and to create markets. They become the basis for images, stories and emotions. The challenge to destination marketers is to find the best ways to use event images, stories and emotions to capture the consumer's attention and build the destination's brand (Brown, Chalip, Jago and Mules 2004:299).

According to Smith (2004:263), Events bring people into a place; if the event is of sufficient importance, it can generate media coverage, both in the general news media and among tourism writers. Events generate revenue for the town. When an event is over, it can leave the city with tangible and intangible byproducts. These include infrastructure improvements, such as new facilities; an enhanced reputation for future campaigns or events; and a sense of community pride and involvement.

The success of special events in capturing market appeal has been attributed to the fact that they match important changes in the demand for leisure activities; they are namely 'short-term, easily accessible, with a flexible time commitment and offer

options for all ages' (Smith 2004:263).

Some of the reasons for the dramatic increase in the popularity of special events relate to demographic and psychographic changes that have occurred, such as an increasing interest in culture as well as more adventurous destinations.

.4.4.3. BUSINESS (ECONOMY)

Economic prosperity and competitiveness depend not only on a city's location and infrastructure but also on its capacity to build new business and exploit innovation. The core aim for the implementation of a branding strategy would be the singular vision of growth.

Kotler and Gertner (2004:50) explore the attributes businesses look for when establishing an enterprise in an area:

- Access to customer and supplier markets

- Availability of development sites' facilities and infrastructure
- Transportation
- Education and training opportunities
- Quality of life
- Business climate
- Capital availability
- Taxes and regulations

.4.4.4. ART AND CULTURE

For ideas to prosper, people need an environment that supports and inspires the creative process, such as an open and vibrant arts and cultural scene that is empowered, not repressed, and an education system that encourages individuals to assimilate what is around them to come up with something new and useful. This is the challenge for the modern-day city: to set in place the conditions that will fire the imagination of its citizens to create their own future (Gilmore, 204:176). At the same time , the arts and cultural scene of a city must be nurtured for it to stimulate the imagination and to create an image and a reputation that will help to attract

investment and talented individuals to the city (Morgan, Pritchard and Pride 2004: 10).

I agree with Gilmore's view that 'Art and Culture are major embodiments of human imagination and breathe life into a city' (Gilmore, 2004:182). Gilmore declares that people need an environment that supports and inspires the creative process. An "open and vibrant arts and cultural scene that is empowered and not repressed", together with an education system geared towards encouraging people to assimilate their surroundings and to be innovative, is necessary to fire the imaginations of a town's citizens.

An arts environment will benefit Lydenburg, and it is therefore included as a prerequisite for the proposed intervention. The site is to house art from local institutions, as well as permanent landscaping installations. Workshops that encourage handcraft are proposed, but innovation must always take precedence to guard against the mindless reproduction of artifacts without value added to the craftsperson.

.4.4.5. SUSTAINABILITY

Sustainability is more than a trendy buzzword; the author identifies this element as part of the holistic framework for Lydenburg. This is principally because of Lydenburg's location within the larger Gustav Klingbiel Nature Reserve. Developing a sustainable environment is also a need identified in the needs assessment in the introduction of this dissertation.

.4.5 CONCLUSION : LYDENBURG'S BRAND IDENTITY

.4.5.1. BRAND IDENTITY

The author used the above criteria to put together a brand identity for Lydenburg as well as for the proposed development that will be the public interface of that identity or brand personality.

.4.5.1.3. UMBRELLA CONCEPT

Growth

.4.5.1.4. SUB CONCEPT

Masising: place of the long grass (differentiates it from other places

.4.5.1.5. STORY TELLING

History of Lydenburg to be retold in the succession of installation in echibition facilities.

Retainining and restoring architecture of historical and aesthetical value to form a visual story board of the history of Lydenburg.

.4.5.2. OTHER ELEMENTS OF THE BRAND

.4.5.5.1. Tourism and education

The perception that Lydenburg is a working town, while other tourism-geared towns such as Dullstroom and Pilgrim's Rest attract all the visitors is disputed by the fact that Lydenburg received more click-through's to the AA website in 2004. (1886 compared to 1659 clicks for Dullstroom). (AA Web Survey, quoted in the Dullstroom Local Tourism Organisation –marketing options and membership drive presentation).

A need for a tourism center at which tourists can do bookings and get information

about the area is proposed. An exhibition area and Museum is also to tie in with this need. Exhibitions currently housed in the Lydenburg Museum will be made more accessible if housed in a central location like the proposed development. These exhibitions will aid in general education of the public and will also accommodate school and other interest groups.

An 'Incubation Core' in the form of a business development school is to be proposed, harnessing human capital and will be seen as the first strategical step towards a sustainable knowledge economy.

The focus of tourism will be on the river and on fly-fishing.

.4.5.5.2. Events

A Multi Function Hall is to accommodate Events that might be held in the town. Lydenburg already owns a town hall, leading to the conclusion that the facility need not be a 'performing venue'. A stage is incorporated as well as an open plain which spills over into an amphitheatre. These facilities are envisioned to accommodate and informal need of the community to gather. The amphitheatre is such that it can

accommodate performances and educational events. It is the vision of the author that this will be the place where the community gathers to make decisions, hear important outcomes, celebrate and mourn.

.4.5.5.3. Business (economy)

The Economy of Lydenburg will be positively impacted by the business development school on the premises. The syllabus of the school will be practically applied in retail corridors and units, aimed at generating commerce between pupils of the school, the community and tourists. Another business enterprise, which also ties in with education, is the hotel and catering school, currently active at the local High School. The school will also be part of a fully functional Restaurant, promoting the culinary skills of the pupils and establishing cuisine as part of the Lydenburg identity.

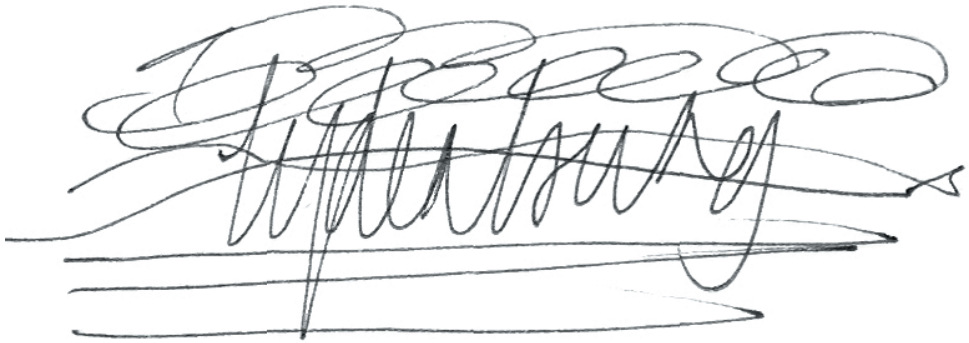
.4.5.5.4. Arts and culture

Art and culture will be promoted through local and national exhibitions held in the exhibition hall. Permanent Landscape art is also proposed to remain as a visual

stimulation to the visitors of the premises. Workshops are to be implemented: one will be joinery in which furniture and fittings will be made for the tourism and resource center. The other will be fine craft workshop, specializing in the tying of flies for fly-fishing. The merchandise made here will be sold in the separate retail units. Some of the fishing gear will be rented out for day visitors.

.4.5.5.5. Sustainability

An ethic of sustainable responsive design is to be implemented in all aspects of design: from baseline criteria influencing decisions up to site works and final working systems within the building. It is important that the building acts as part of a larger ecology, namely that is functions within the greater ecosystem of the township Lydenburg: The operating systems should therefore never by a closed system within the development. The students moving through the education system of the building will be phased out of the building eventually, to be 'weaved' back into the fabric of the town, serving the community, and strengthening the town's economy, in order to create a healthy community.



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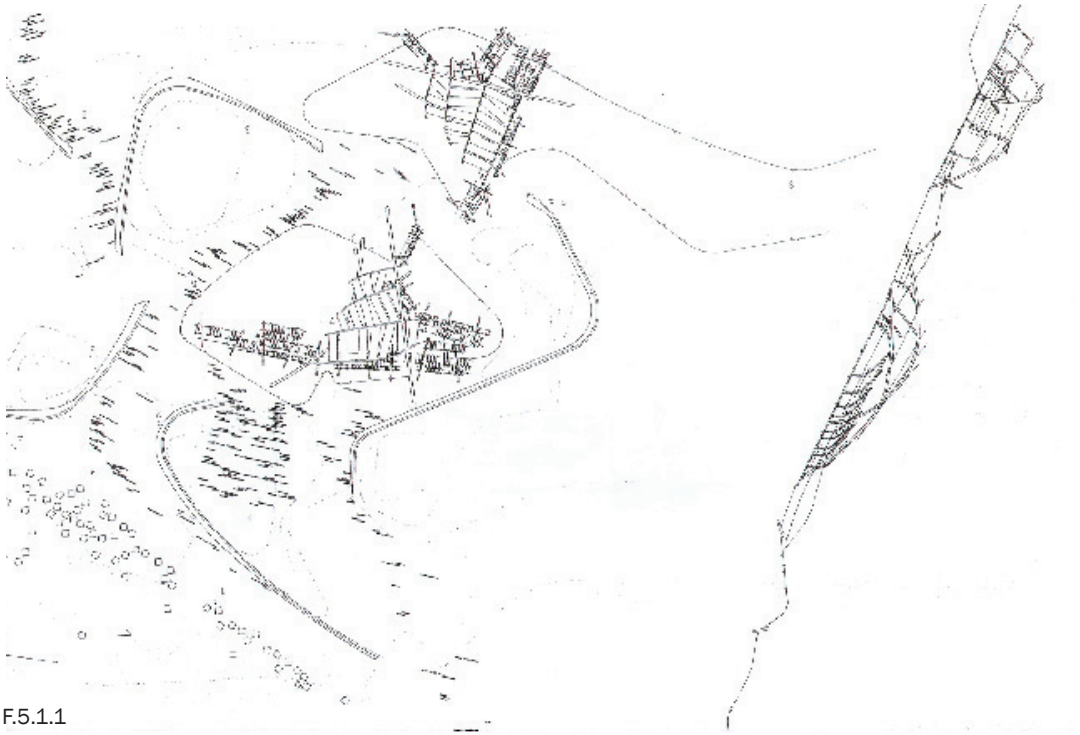


F.5.1.1

.5.1. INTRODUCTION

The problems facing the development of the design for this dissertation include integrating and applying the theory discussed in the previous chapters as well as solving the architectural form within a historical context, without becoming a sentimental parody of style. It is imperative that a local example of architecture be investigated in the light of the local vernacular as well as in its response to the local climate. The specific site chosen for the development requires integration with the landscape and is therefore also investigated in the examples at hand. The solution for this architectural problem calls for a parallel approach, combining intuitive design with the rational and pragmatic. As a result an 'inspiration wall' is put together to serve as stimulation for the initial design concept.

.5.2. DESTINATION BRANDING IN PRACTICE

.5.2.1 Louisiana: capitalizing on music and cuisine

Louisiana experienced a travel industry growth rate of 17.5%, after a re-branding campaign was launched in 1993 (Slater 2004:238). Louisiana's

original brand was revised in 1993 with the tender being won by New Orleans advertising firm Peter A. Mayer Advertising and Partners. According to Peter Mayer, the main focus of the original brand was solely on the food industry. The brand has since incorporated a more holistic approach to the brand package including "Architecture, History, Culture and Music" (Slater 2004:231).

Branding expert David Aaker considers the Louisiana brand to be successful (Slater 2004:228) because it involves the following:

i. A strong brand identity exists where a competitive advantage has been developed: in this case the brand identity drives the association that Louisiana is a unique, historical, cultural, musical and culinary experience
ii. The brand has achieved awareness through consistent and strategic exposure to its core message
iii. The brand has perceived quality in the fact that visitors believe what they read, see or hear about the state, and these expectations are fulfilled once the visit has been made. In addition, the brand delivers on its promise in providing something which is unavailable elsewhere

F.5.2.1

ii. Brand loyalty exists between the visitors repeating visits and the state providing a reason for the return of the visitors, for instance by fests and celebrations

These assets add value to the brand, which, in turn, provides brand equity, generating growth and profits. In planning for future growth, Louisiana included the following areas in a long-term action plan for its ongoing growth in the tourism sector: "technology, infrastructure, marketing, education, training and quality of life" (Slater 2004:239).

The six key areas for growth identified by the Louisiana Tourism Collegiums 2010 can be adopted as a basic framework for Lydenburg with the focus on technology, infrastructure, marketing, education, training and quality of life. The quality of life of the Lydenburg community needs to be strengthened through an increased sense of pride in the town's culture and heritage and the unique experience it has to offer.

.5.3. COMMUNITY DEVELOPMENT AND INVOLVEMENT

.5.3.1 Franschoek

Franschoek is, like most towns in South Africa, a model apartheid town after the French Huguenot refugees settled there in the 1680s. As the majority members of the coloured community were forcefully removed by the Group Areas Act during the apartheid era, restitution was demanded with the demise of apartheid in 1994.

The main focus of land reclamation was the South Commonage, the slopes spanning below the Franschoek pass. This area has been the town's main aesthetical asset. The land was reclaimed, but it soon turned into a sewage farm and rubbish dump and was completely overgrown by invasive alien plants. With the land reform revolution, every previously disadvantaged party wanted his or her rightful share back. The claims lead to heated arguments and a forceful demand. The local authority and

F.5.3.1

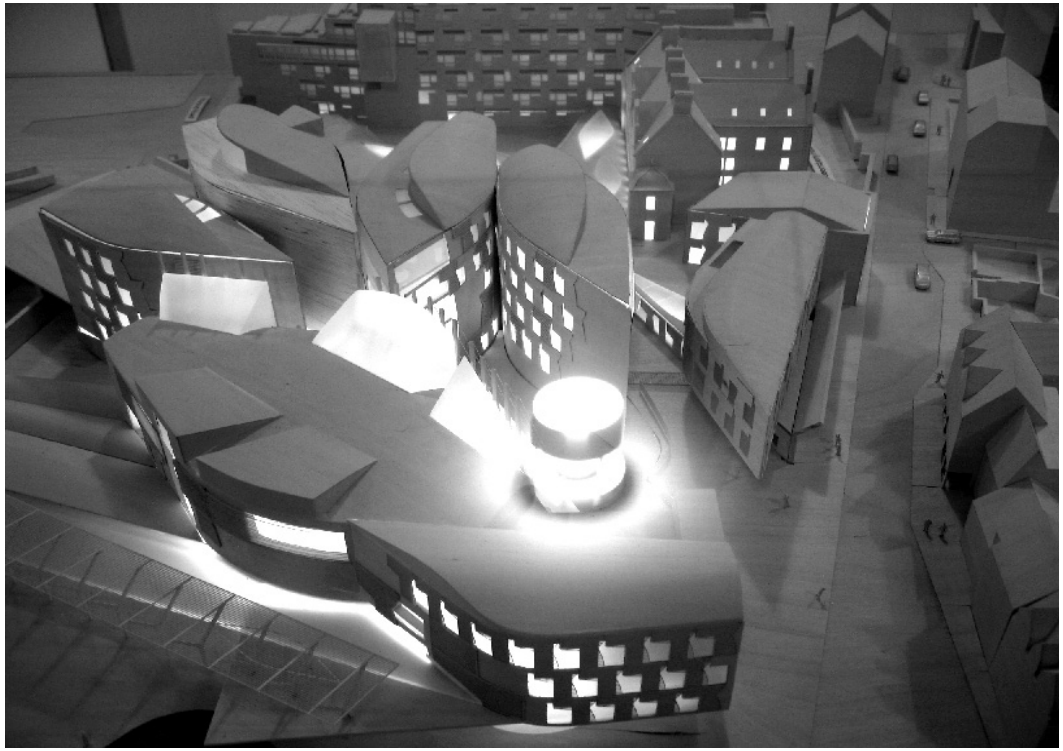
community sat down together, and the Franschoek Social Accord was signed on 16 February 1998; it stated a "willingness to undertake dialogue and cooperation to achieve desired goals for all parties and choosing cooperation over confrontation" (Coetzee and Strydom 2004: 11).

With the social accord's being the first step to bring parties to the negotiation table, a business approach was adopted with the realisation that Franschoek's most important asset was land. It was decided that the most fruitful approach in providing the disadvantaged community with shared access to the mainstream local economy would be to commercialise the Commonage.

- The communication strategy implemented in Franschoek was adapted from Malan's Communication and Facilitation Process (Malan and Grossberg 1998:170), which entails:
  - Consultation
  - Planning
  - Knowledge sharing
  - Participation
  - Evaluation

In devising a strategy for Lydenburg in joining the divided communities, these key issues as identified by Malan will be implemented in the consulting phase right through to the evaluation stage. Community participation is of critical importance in this project.

.5.4 ARCHITECTURE PRECEDENTS



F.5.4.1

.5.4.1 Scottish Pavilion Edinburgh, Scotland (2004-2005), designed by Enric Miralles.

The Scottish Pavilion is a relevant work of architecture for this dissertation in the sense that it addresses the problem of being a flagship, landmark building, signifying progress, but being rooted within a distinctly historical setting. The answer is found in using materials which are readily associated with the location, in this case: Wood, Stone, Granite and Grassland Vegetation.

Subtle Scottish references were employed in the interior such as barrel vaulted ceilings with the Scottish Cross molded into the concrete, as well as the cross-theme also implemented in door frames and windows. Another feature is the way in which a central idea is continuously applied right up to detail level. A grass theme is noted with grass beds fanning from out of the building landscape and repeated with the screens on the windows and the overhead canopy. A repetitive pattern of laminated wooden laths are fixed in such a manner to appear as if it was randomly placed. This is also repeated in a sandblasted pattern etched onto the concrete walls adjacent to the screens fitted to the windows.

.5.4.2 Local Vernacular: House Sydney Press, Coromandel, Lydenburg,, South Africa (early 1970's), designed by Marco Zonusso

House Sydney Press is situated 20 km south from Lydenburg and was commissioned by Mr Sydney Press, owner of the Coromandel Estate, as his family home. Ahead of its time, this house is a regionalist example with modernist and Japanese minimalist influences.

The plan has an H shape, with a pond placed between the different wings of the house. A promenade of stone arches lines the building along its length, framing the view on the north side. The house boasts a cultivated concrete slab roof because, it is said, the owner requested that the house be visible from an aeroplane flying over the area. Windows and openings are set deeply in wide stone walls.

F.5.4.2

F.5.4.3

Thermal mass helps in the climatic regulation of the building. Local stone was used for the walls. An interesting feature is the way in which the environment has assimilated the building. Plants on the roof started spilling over the walls, giving the impression that the building grew from the site. Originally, the owner specified that gardening was only to be allowed within three meters of the boundary wall.

According to legend, Mr Press had a measuring stick with which he walked once a week to measure the length of the veld grass, which had to be a specific length, on the boundary of the “garden”. Natural landscaping in the form of veld grass grows into the building precinct to give the impression that the landscape is reclaiming the land, while the building appears to be slowly encroaching or making an advance towards the river.

The materials used in House Sidney Press, as well as climate control systems such

F.5.4.4

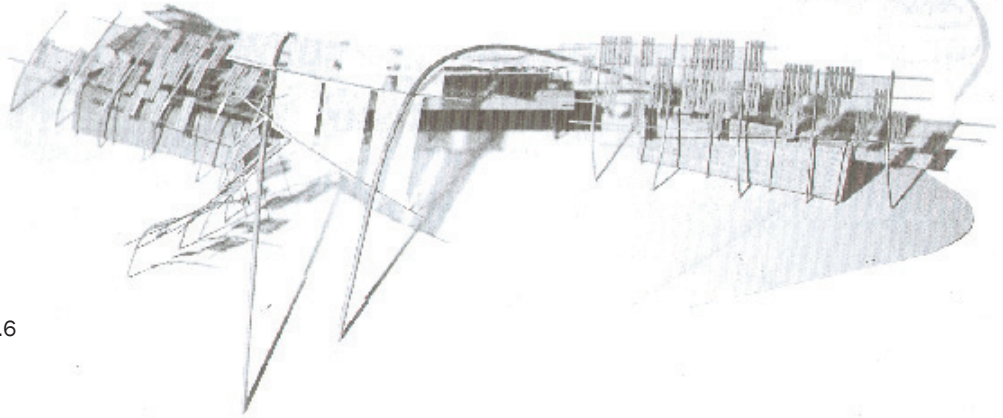
as the water pond that runs through the centre of the house, have been assimilated for the Lydenburg Incubation Node. Due to systems such as the evaporation pond through the house, the cultivated roof, the veranda looking north, the orientation and layout as well as the solid mass structure of the house, House Sydney Press is considered a prime example of regional architecture with respect to climate, environment and available local materials.

F.5.4.5

.5.4.3 Dunar Park , Matalascanas, Huelva, Spain

> “We did not want to introduce anything external, so we looked at the place to find the inspiration that would enable us to start the project. The territory, full of thicket and scrub, made us think about moving by jumping. So these were the first lines that we drew: two arcs. Like animals we will move, crawling over the ground. It will be the place that determines the geometry, not the geometry that transforms the place. Layer upon layer, shade over shade. That is how we hope to achieve the right temperature”
>
> (Carme Pinos, quoted in Cerver 1998:9)

The appeal in Carme Pinos' work lies in the intuitive design approach and the apparent internal assimilation of the site before the design process is commenced. The concept of layering in order to acquire the 'right temperature' evokes a magical sense of lightness in the structure. Dunar Park is one of many of Carme Pinos' work which serves as inspiration for the design concept of the Incubation Node. The image of an aboriginal lean-to shelter comes to mind in the filigree constructed roofs.



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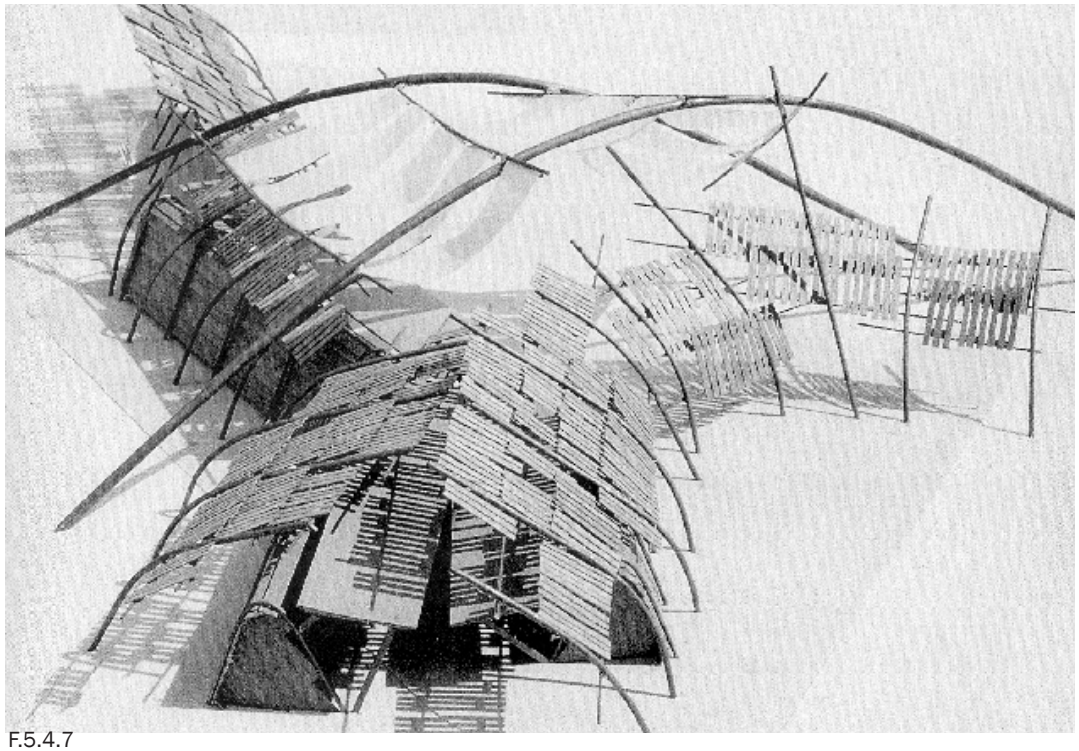

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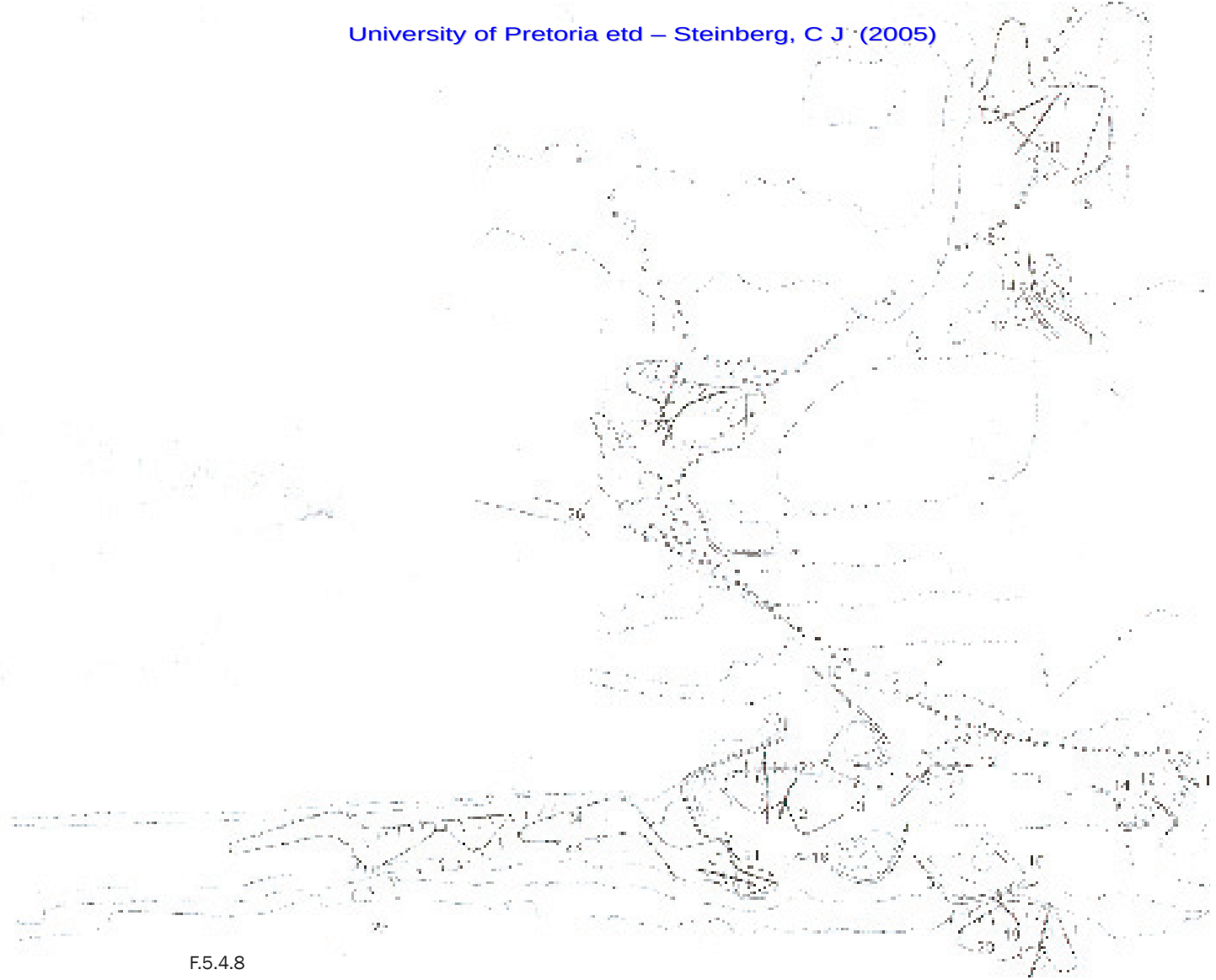

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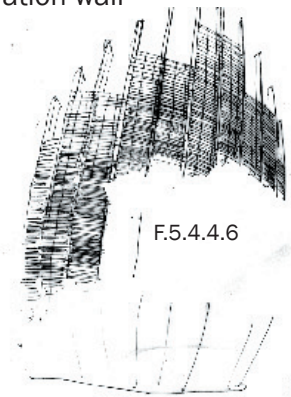
.5.4.4 Inspiration wall


F.5.4.4.5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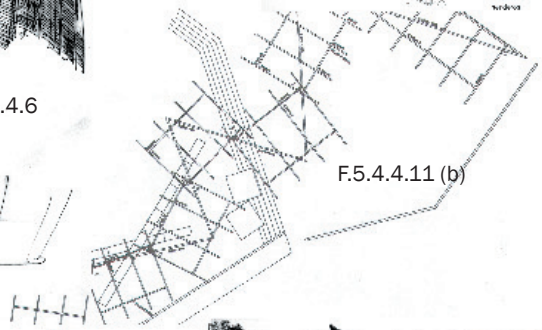
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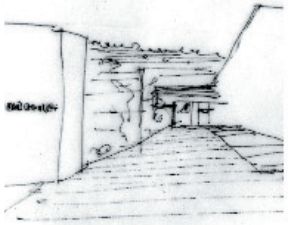
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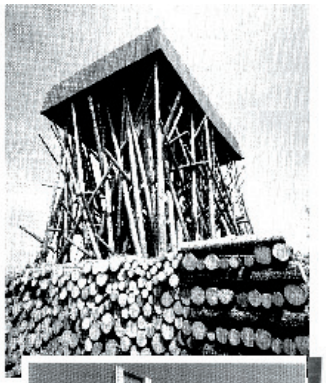
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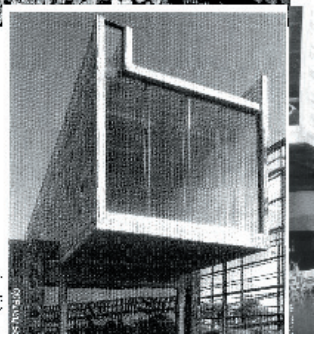
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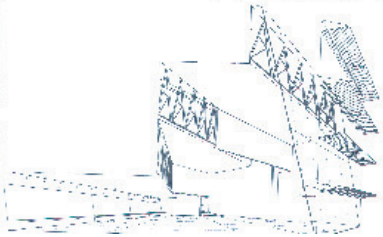
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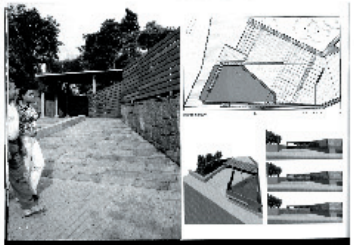
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F.5.4.4.2 (c)

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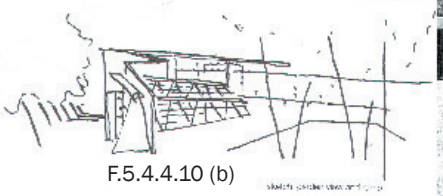

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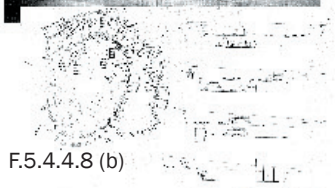

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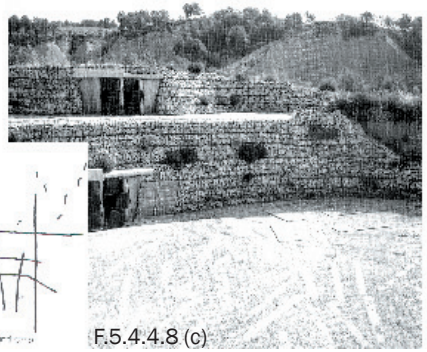

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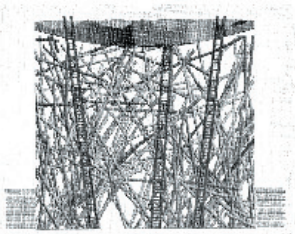

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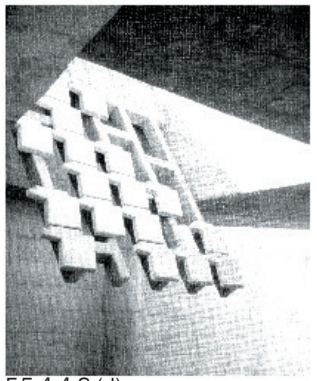

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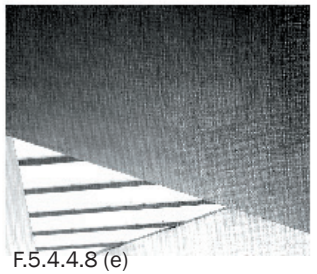


F.5.4.4.8 (e)

.5.4.4 Inspiration wall

.5.4.4 Inspiration wall

.5.4.4.1. Botanical Garden, Córdoba, Argentina (1999), designed by Monica Bertollino and Carlos Barrado

.5.4.4.2. Water Park (Park del Agua) (2003), designed by Lorenzo Castro Jaramillo and Juan Camilo Santamaría Delgado

.5.4.4.3. Secret Garden, Malmö, Sweden (2001), designed by West 8

.5.4.4.4. Dear Valley Rock Art Centre, Arizona (1996), designed by William Bruder

.5.4.4.5. Dunescape- designed by ShoP

.5.4.4.6. Jean- Marie Tjibaou Cultural Centre, New Columbia (1992-1998), designed by Renzo Piano

.5.4.4.7. Olympic Archery Range (1989-1990), Barcelona, designed by Carme Pinos and Enric Miralles

.5.4.4.8. Igualada Cemetery (1985-1986) Barcelona, Spain, designed by Carme Pinos and Enric Miralles

.5.4.4.9. Garau Augusti House (1988) Barcelona, Spain, designed by Carme Pinos and Enric Miralles

.5.4.4.10. Civic Centre (1986) Hostalets de Balenya, Spain, designed by Carme Pinos and Enric Miralles

.5.4.4.11. Plaza Mayor Sunscreens (1985), Parets del Valles , Spain, designed by Carme Pinos and Enric Miralles

.5.4.4.1. Botanical Garden, Córdoba, Argentina (1999),designed by Monica Bertollino and Carlos Barrado

Materials with opposing qualities such as concrete, glass, wood and water have been applied to compliment each other. The use of varying walkway levels creates points of interest and demonstrate innovative ways to frame the landscape and views. The courtyard, which opens up into a fan of concrete fins, acts as a filter when viewed from one side, but seems to be a wall when viewed perpendicularly. The play of solidness, mass and lightweight structures is appealing, as well as the application of different textures such as the smoothness of water and the

coarseness of stone (Paris, 2004:52-59).

.5.4.4.2. Park del Agua (2003), designed by Lorenzo Castro Jaramillo and Juan Camilo Santamaría Delgado (Paris, 2004:68-77).

The entrance of the park that acts as a narrowing funnel draws the visitors intuitively into the heart of the building. The same principle is applied in the Incubation Node as one enters the plain from underneath the lightweight canopy, as it twists towards the South- East of the Exhibition Hall.

Another element that addresses problems encountered within the context is the raised walkways of the Water Park. Through these elements, access to the Garden is granted, without damage to the ecosystem. Lightweight walkways are applied in the same manner to the landscape of the Incubation Node, so as to not disturb the natural environment that is rehabilitated.

.5.5. CONCLUSION

.5.5.1 Analysis: site and contours

When exploring the work of especially Carme Pinos and Enric Miralles, an analysis of the buildings in relation to their site contours reveals a pattern of perpendicular lines running along the natural lines of the terrain. This approach is a subtle way in which to integrate a building within its landscape, without losing a sense of order and structure. This is especially applicable in the development of the Incubation Node, where the complex is to fragment and dissipate into the landscape.

.5.5.2 Roofs

.5.5.2.1 Cultivated Roofs

The cultivated roofs used in the Scottish Parliament as well as house Sidney Press serve as a climate control device (retaining heat in winter due to its mass) and also extends the building into the landscape, integrating it with its surrounds. Cultivated roofs are to be implemented for this same

F.5.5.1

reason in the Incubation Node.

.5.5.2.2. Filigree construction roofs

The intuitive, multi-layering of light-weight structures such as wood, allows for light penetration and ventilation of the interior spaces. The textured roof as shown in Dunar Park (Cerver 1998:8-10) is a point of departure for the Incubation Core for Lydenburg. Although there will be primarily be made use of solid massed objects for the main construction, it is the roof that will create an interplay between light and shadow, heat and cool and protection and vulnerability. The apparent arbitrariness of the structures adds to the overall excitement of the design. Excitement is an integral part of the design concept for the Incubation Node in order to generate initial interest of visitors

F.5.5.2

and residents alike

.5.5.3 Screens

The screens devised for the Scottish Pavilion serve as inspiration for climatic control measure in the Incubation Node.

The repetitive pattern of apparently randomly placed wooden slats serves as inspiration in applying the theme of grass in an abstract way in the design of the

F .5.31.

F.5.5.3

F .5.32.

F .5.33.

proposed building.

.5.5.4 Landscape articulation

Landscape articulation is to be derived from the natural contours of the site, as per Enric Miralles and Carme Pinos. The introduction of grass into the building, on

F.5.5.4

roofs and into the site as a whole will also serve this purpose.

.5.5.5 Details

Attention was paid to the detailing of architectural elements, such as screens and canopies in carrying through the central concept. This same concept is relevant to

F.5.5.5

F.5.5.6

F.6.1.1

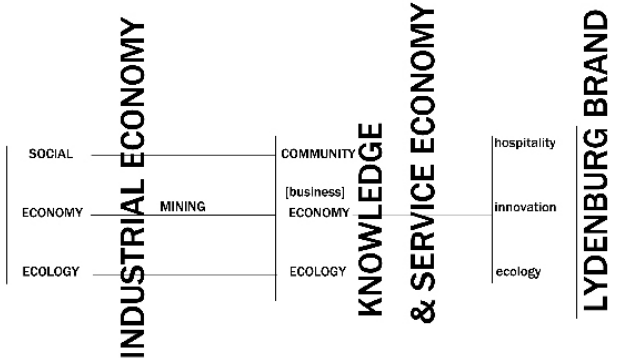
.6.1 INTRODUCTION

This dissertation adheres to a philosophy of flexible use and the accommodation of growth. This theory is applied in a primary solid construction order, is filled in with secondary structures which can adapt to programme requirements and programme changes in the life cycle of the building. The constructional detailing of the project was executed with the current skills resources available in Lydenburg held in mind. The same holds true for the materials that were chosen for the built form, therefore specifying materials locally found. The building is to be viewed as a 'work in progress', which would change over time in accommodating new needs.

In developing a conceptual building form, an intuitive approach was adapted in response to the site and the surroundings of the terrain. This was in conjunction with the rational and systematic approach which led to the resolution of the building programme.

.6.2 PROGRAMME

The programme for the Incubation Node was developed from the branding exercise. Three elements of the Lydenburg brand were identified, to which specific programmes were granted. The process in resolving the programme was as follows:



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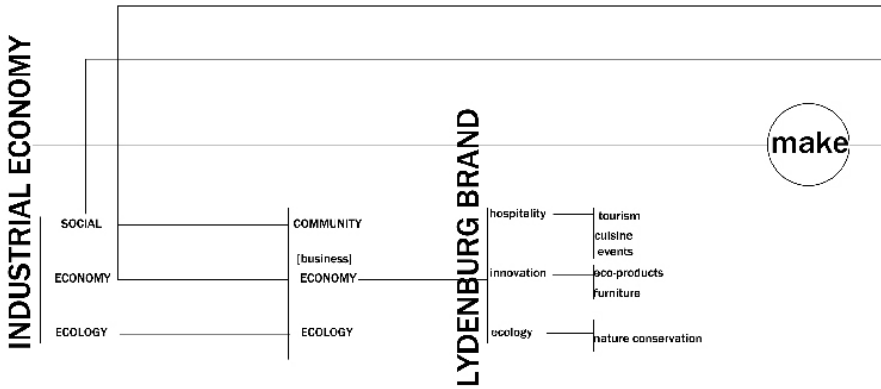

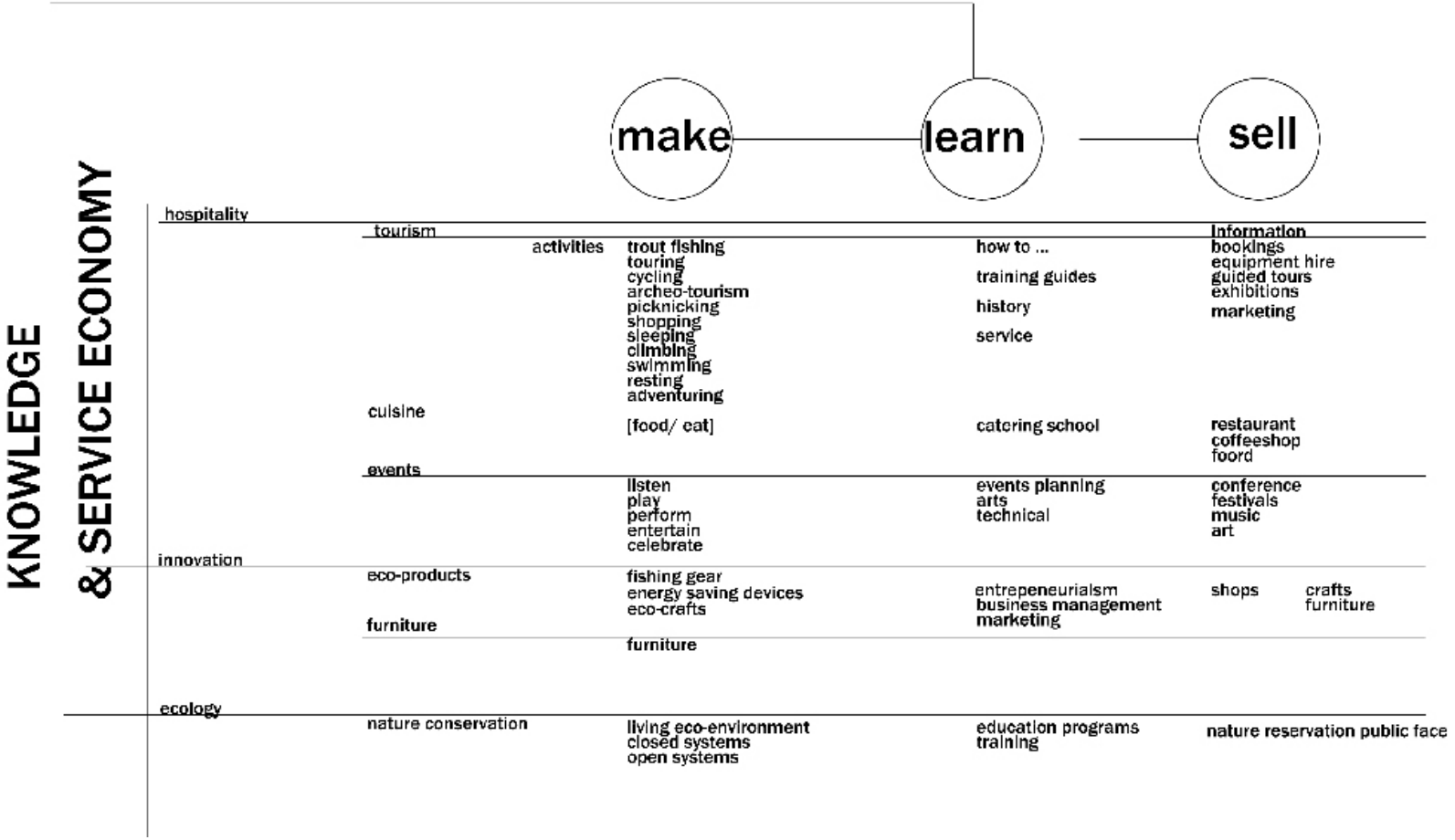

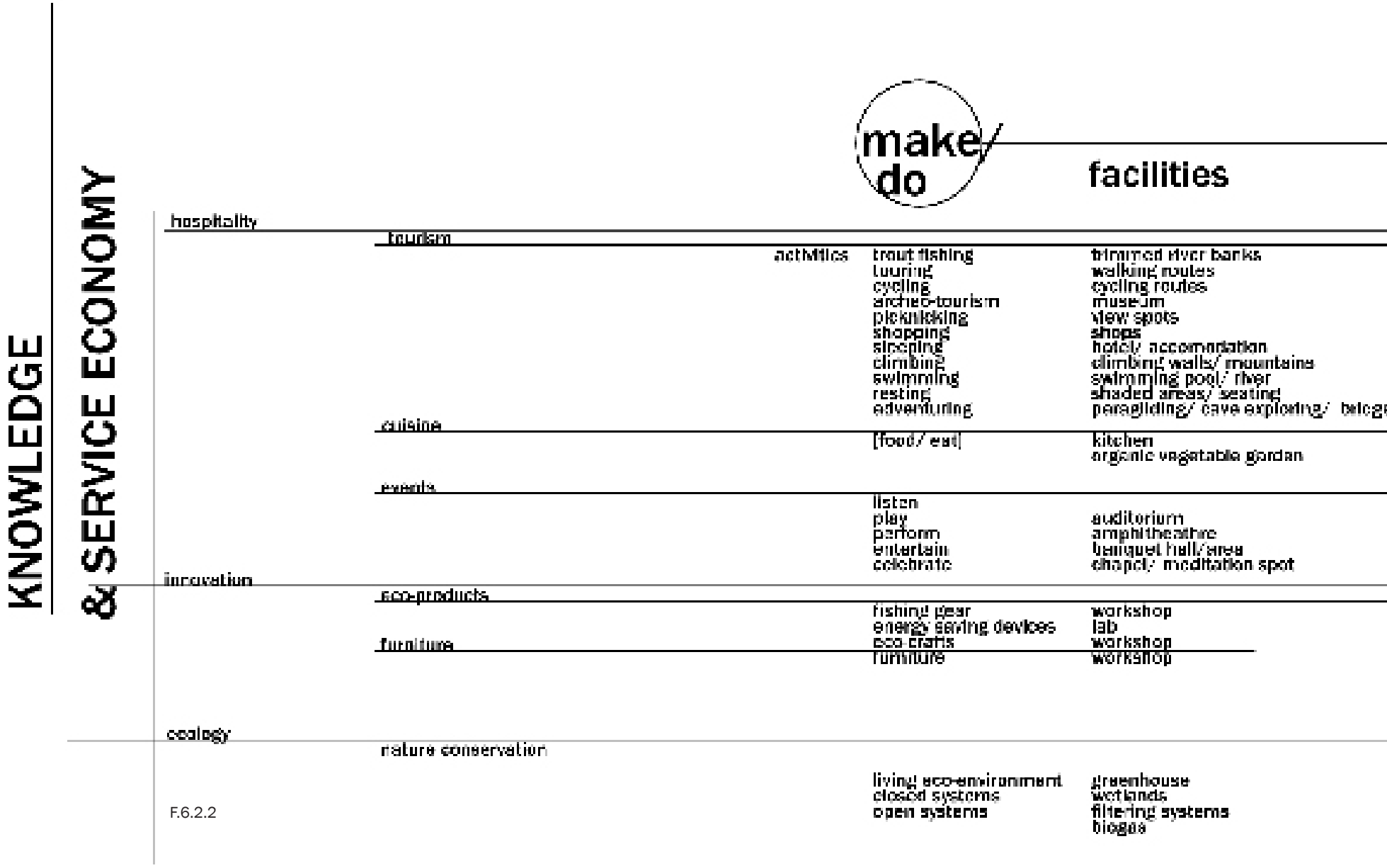
KNOWLEDGE
& SERVICE ECONOMY
make/ do
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hospitality
tourism
activities
trout fishing
touring
cycling
arched-tourism
picknicking
shopping
sleeping
climbing
swimming
resting
adventuring
trimmed river banks
walking routes
cycling routes
museum
view spots
shops
hotel/ accomendation
climbing walls/ mountains
swimming pool/ river
shaded areas/ seating
paragliding/ cave exploring/
cuisine
[food/ eat]
kitchen
organic vegetable gardan
events
listen
play
perform
entertain
celebrate
auditorium
amphitheatre
banquet hall/area
chapel/ meditation spot
innovation
eco-products
fishing gear
energy saving devices
eco crafts
workshop
lab
workshop
furniture
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ecology
nature conservation
living eco-environment
closed systems
open systems
greenhouse
wetlands
filtering systems
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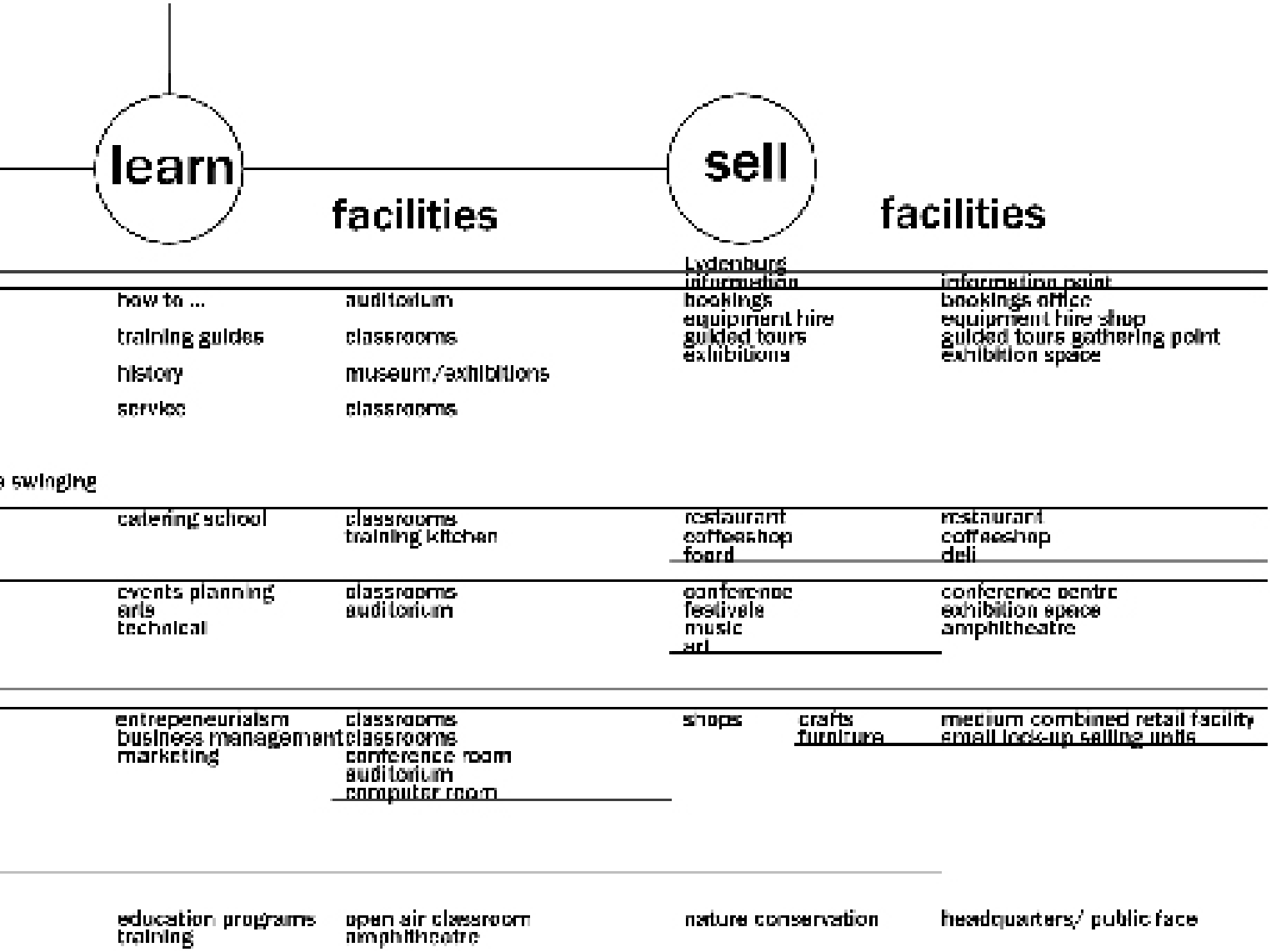

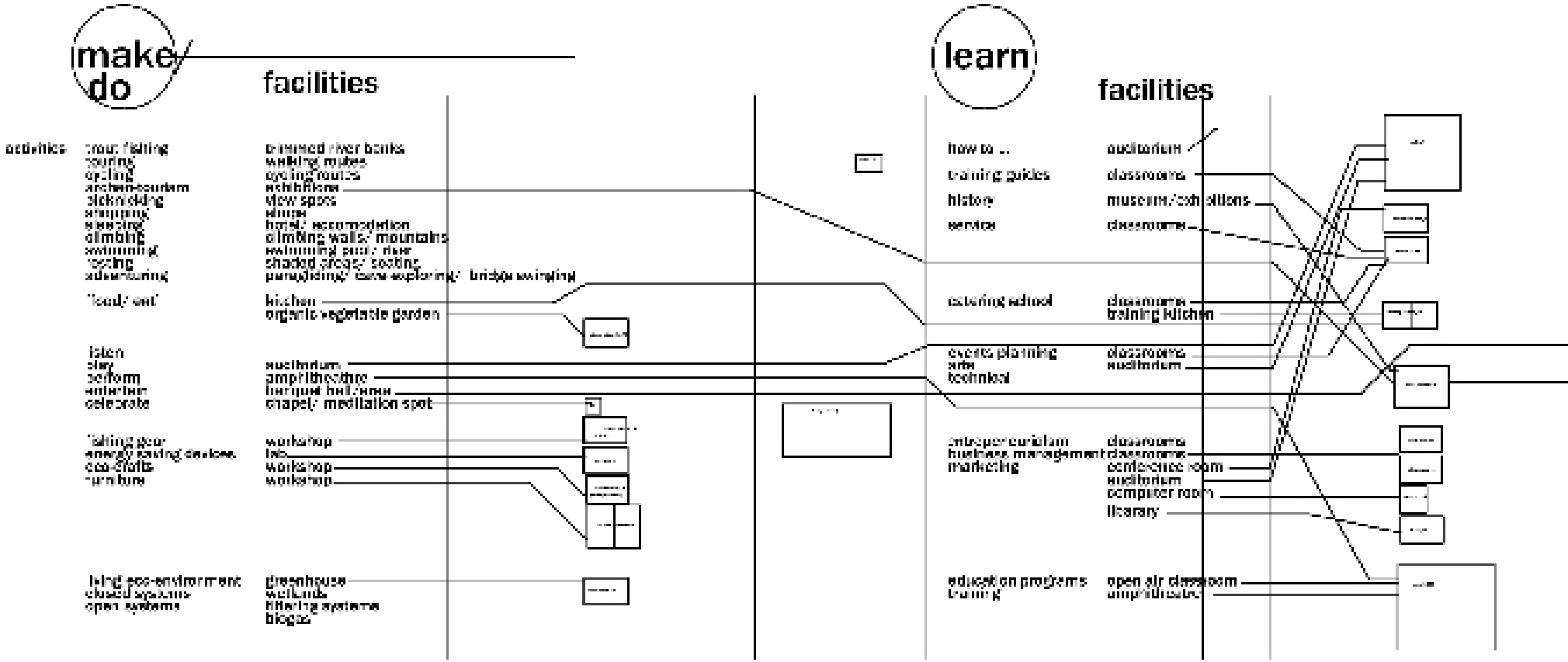
make/ do
facilities
aesthetics
trout fishing
touring
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archery-courses
stick-riding
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sleeping
climbing
swimming
resting
adventuring
'food/ eat'
listen
stay
perform
entertain
celebrate
'taking gear
energy saving devices
eco-crafts
furniture
living eco-environment
closed systems
open systems
planned river banks
walking routes
cycling routes
exhibitions
view spots
shops
hotel/ accommodation
climbing walls/ mountains
swimming pools/ river
shaded areas/ resting
paragliding/ cave exploring/ bridge swinging
kitchen
organic vegetable garden
auditorium
amphitheatre
banquet hall/ area
chapel/ meditation spot
workshop
lab
workshop
workshop
greenhouse
wetlands
filtering systems
biogas
learn
facilities
how to ..
training guides
history
service
catering school
events planning
arts
technical
entrepreneurial
business management
marketing
education programs
training
auditorium
classrooms
museum/ exhibitions
classrooms
classrooms
training kitchen
classrooms
auditorium
classrooms
conference room
auditorium
computer room
library
open air classroom
amphitheatre

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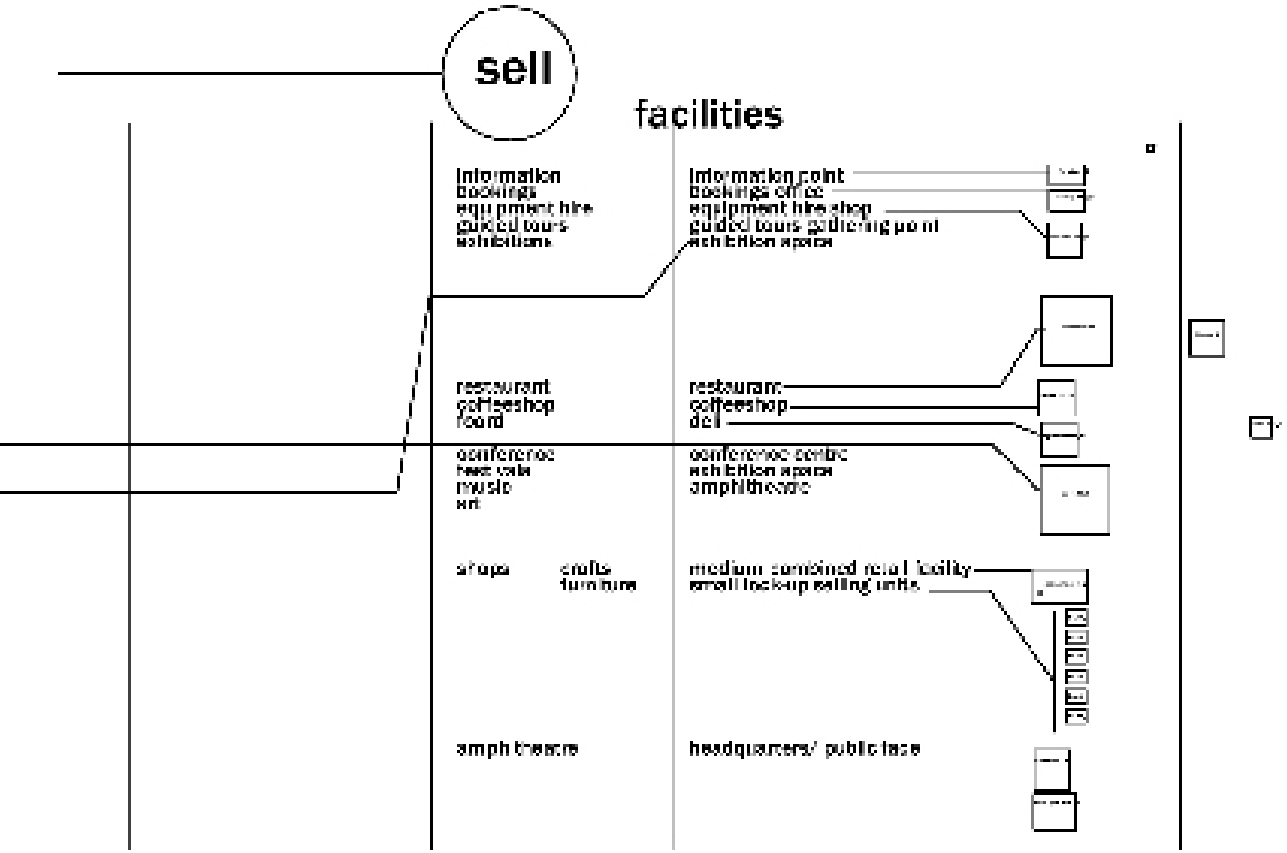

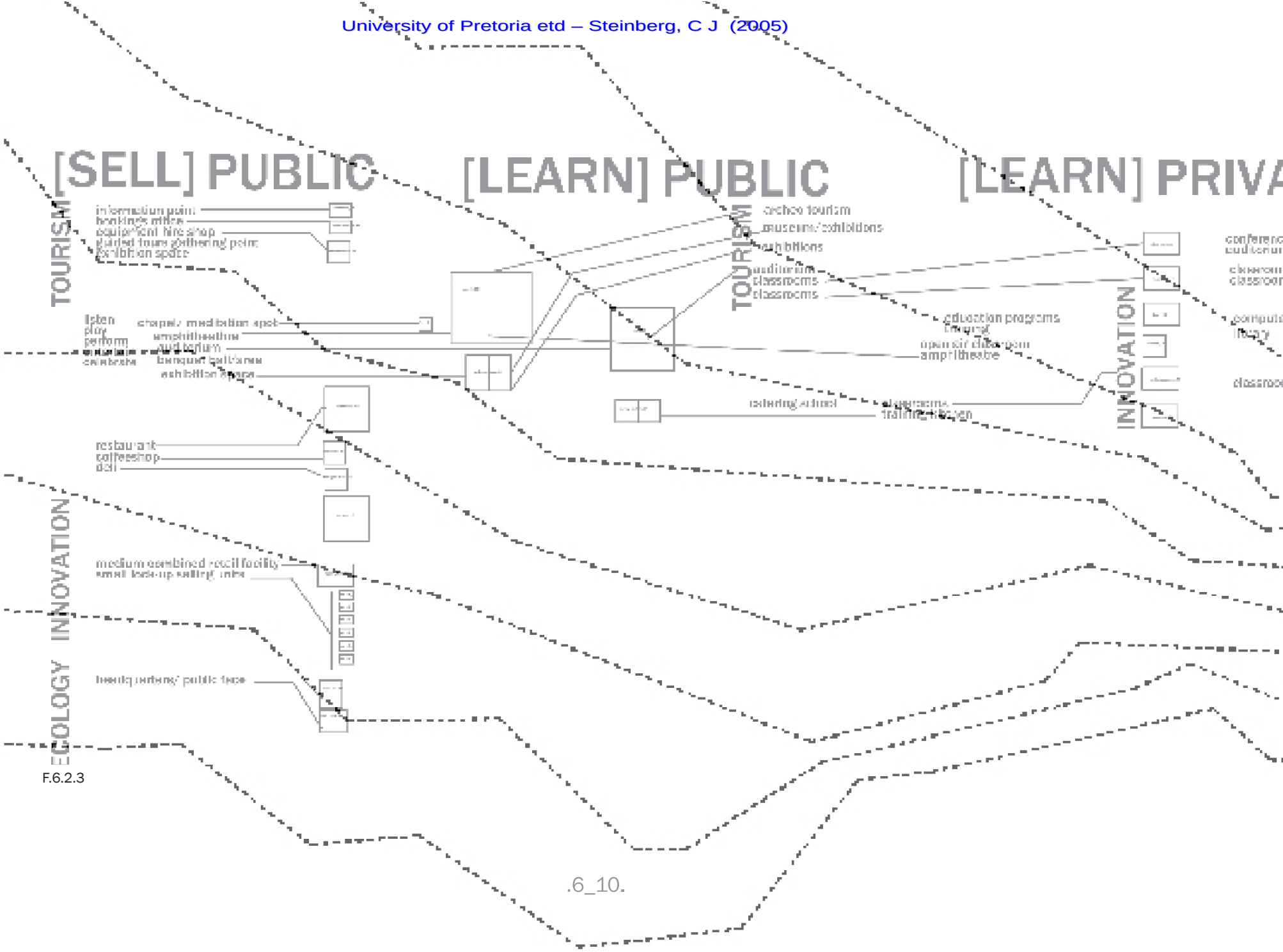

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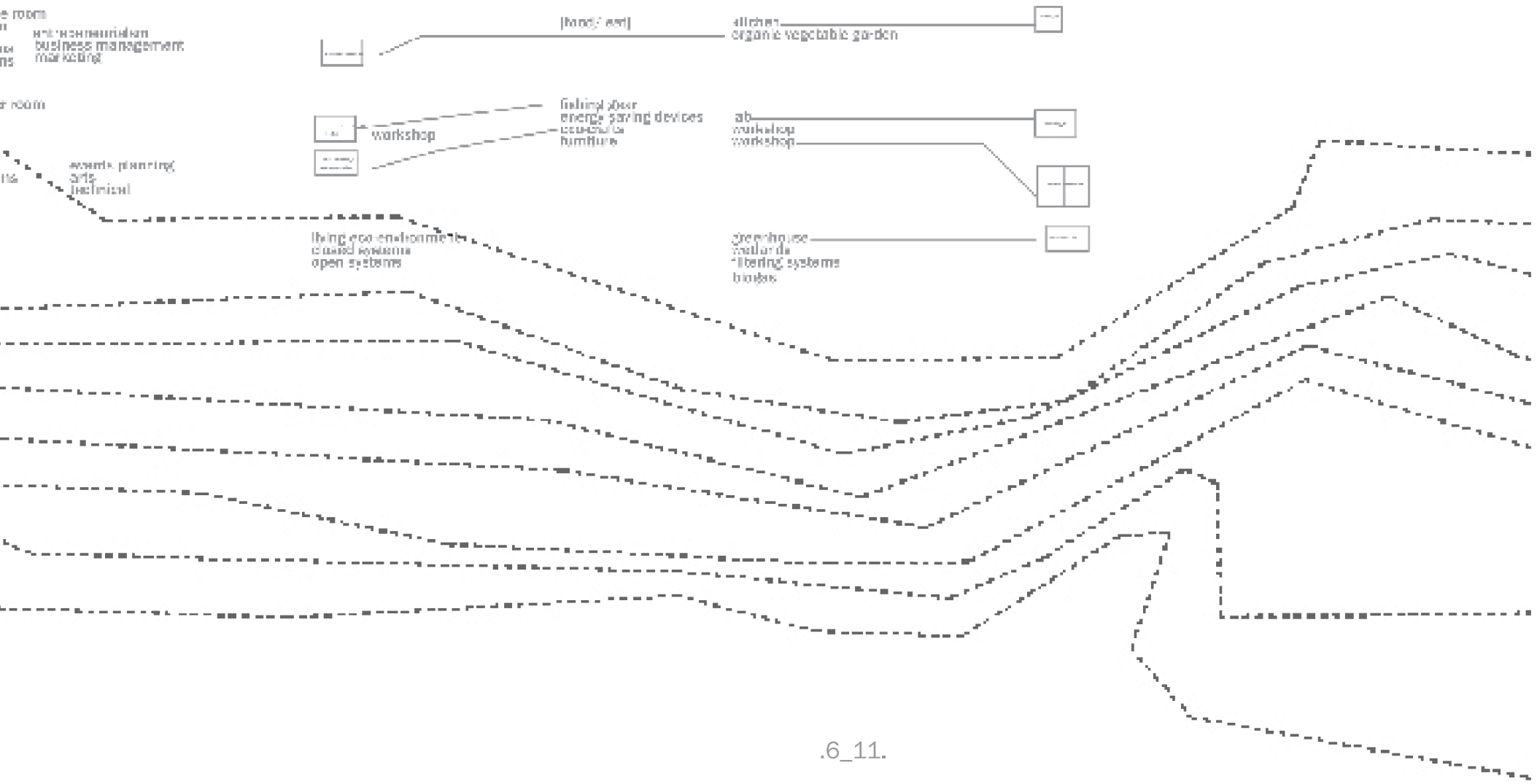


.6.3 SITE USE

In analysing the site, three main influences determined that planning and layout of the node: The first element that had to be taken into account was the significant noise source that was experienced along the north-south axis of Viljoen Street. Another influence was the transition from the urban realm to the natural landscape, while the physical limitations of natural barriers such as the flood lines on the river plain dictated the site use to a large extent as well.

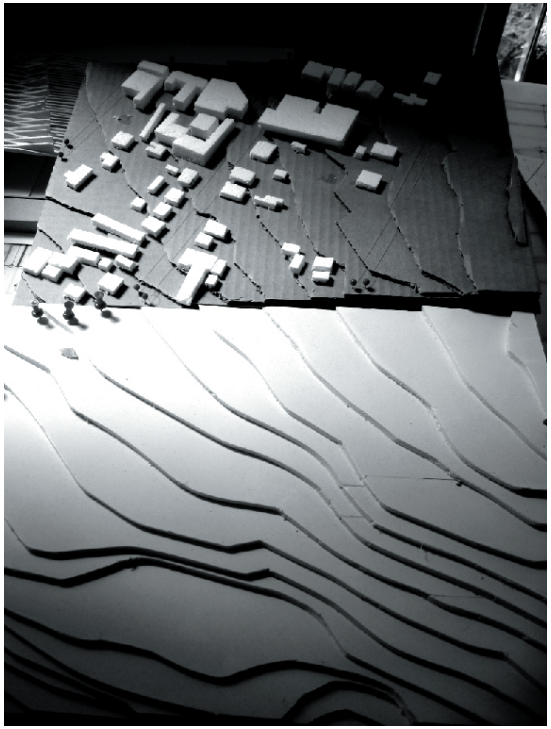
In addressing the noise issue, the site was planned according to mass and structure. The structure of the greatest volume and mass was to be placed next to Viljoen Street, in order to act as a berm and buffer some of the noise from the traffic. With regards to a transitional design it was decided that a canopy structure was to draw visitors from the CBD. This canopy is to rise into the Exhibition Space as the site dips into the valley where the Sterkspruit River flows. The edges of the site bordering

Viljoen Street and Potgieter Street were developed to create a permeable wall along the street edge, in a response to the urban context. The wall is not continuous, in accordance with the loose and fragmented urban fabric.

In communicating the loose grain of the CBD and its fragmentation towards the Sterkspruit River, the structures of the Incubation Node are to start in a densely packed fashion in the north-west corner of the site, and then slowly dissipate into the landscape. This disintegration will be reinforced through a reduction in scale towards the east, as well as spacing the buildings further apart from each other. An analogy of this concept of transitional space would be to take a bucket of paint and to drop it on the western corner of the site. As the paint spatters towards the south-east, the paint spots become easier distinguishable and less dense.

The footprint of the buildings in the Incubation Node echoes that of the meandering

river, and is developed in such a way that it can accommodate floods and in fact assimilates the rising water level in such a way as to seem to have been built with a flood in mind. In 2001 a cloudburst resulted in a flood along the Sterkspruit River which took the lives of four residents and resulted in thousands of Rands of damage. The Incubation Node is instrumental in creating an awareness of working with nature, instead of against it.



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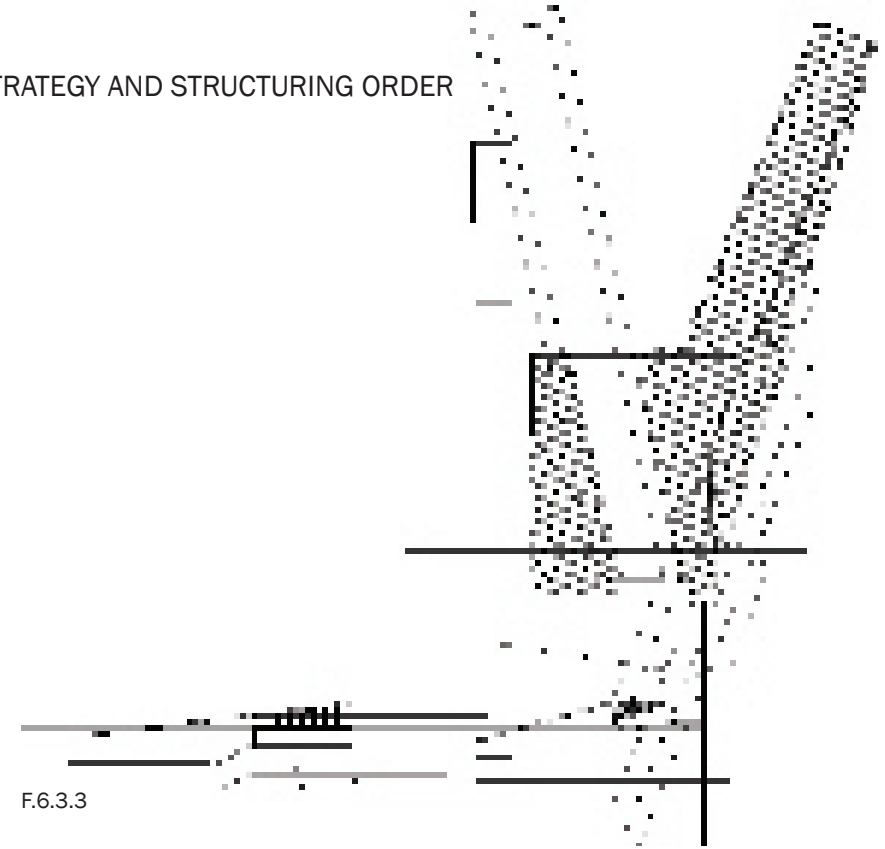

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.6.4.1 EXTERNAL TREATMENT

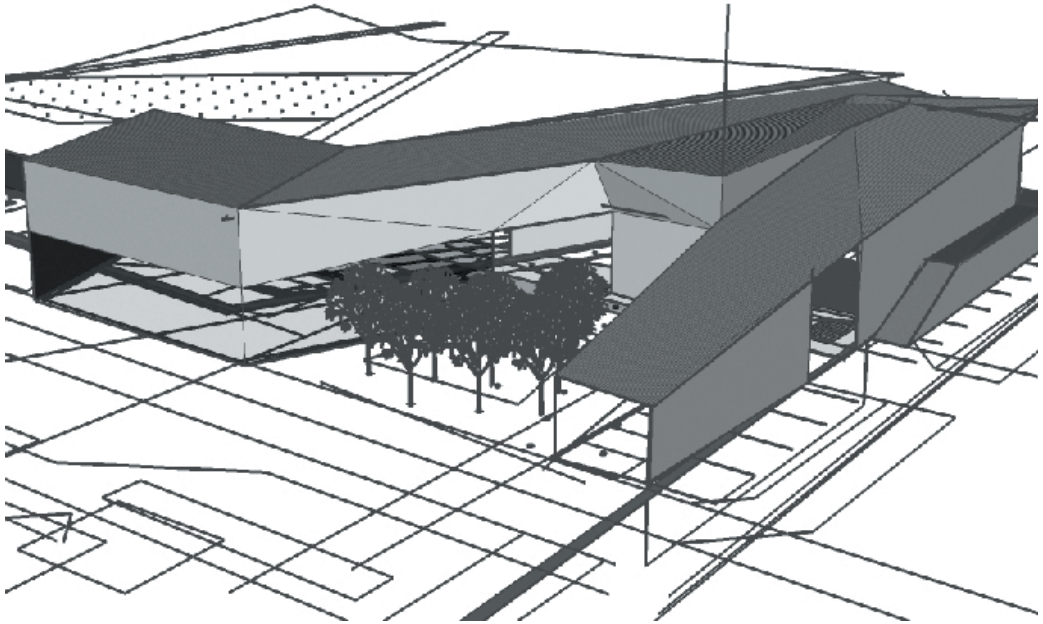
.6.4.1.1. Architectural treatment of the street and other spaces

The main measure of climate control applied is that of internal heat gain through highs massed structures. The implication of this is that the north –facing façade is not to be shaded by trees or a canopy during winter. A space of discomfort is purposely created on this north-facing sidewalk so as to draw pedestrians into the interior corridor of the precinct. The corridor opens up in to public 'pools' of communal spaces, which act as shaded and protected waiting areas as well as play areas for the public. The transport nodes are positioned so as to minimise walking or waiting on the unprotected north facades of the complex

.6.4.1.2. Facades

The northern façade is designed protected from summer heat gain with a roof overhang. The overhang has been deliberately developed to allow for winter heat gains.

The eastern facades are louver systems that have been taken from an analogy of the poplar forest that the south-eastern vies overlook. When these facades are viewed perpendicularly from the side, the wall structure seems solid. When viewed form the perspective of a window, the view of the river and the distinct horizon if Lydenburg is visible. The louvers are to be made of solid Saligna timber planks, locally treated in the joinery workshop with Chromated Copper Arsenate (CCA). This treatment serves as protection against decay, fungi and termites, but is also chosen due to the greenish patinated tint it lends to the wood: The louvers are to be fixed to large profiled steel frames, threaded to resemble a large scale abacus. The effects of the wooden louvers catching the sunlight at different angles will be similar to that of the



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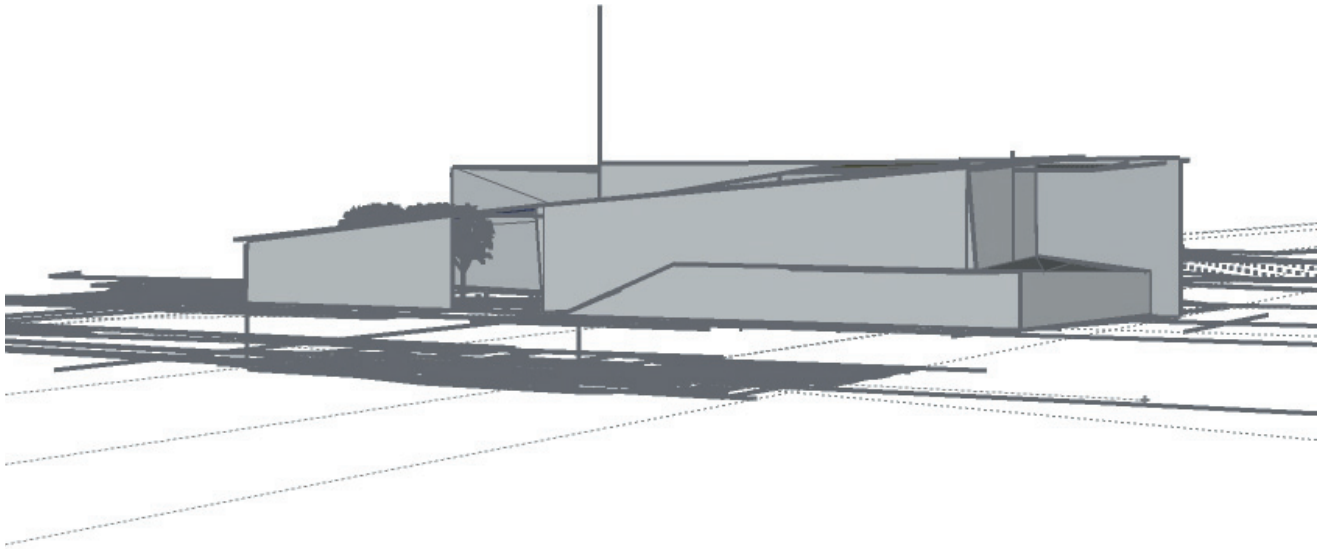

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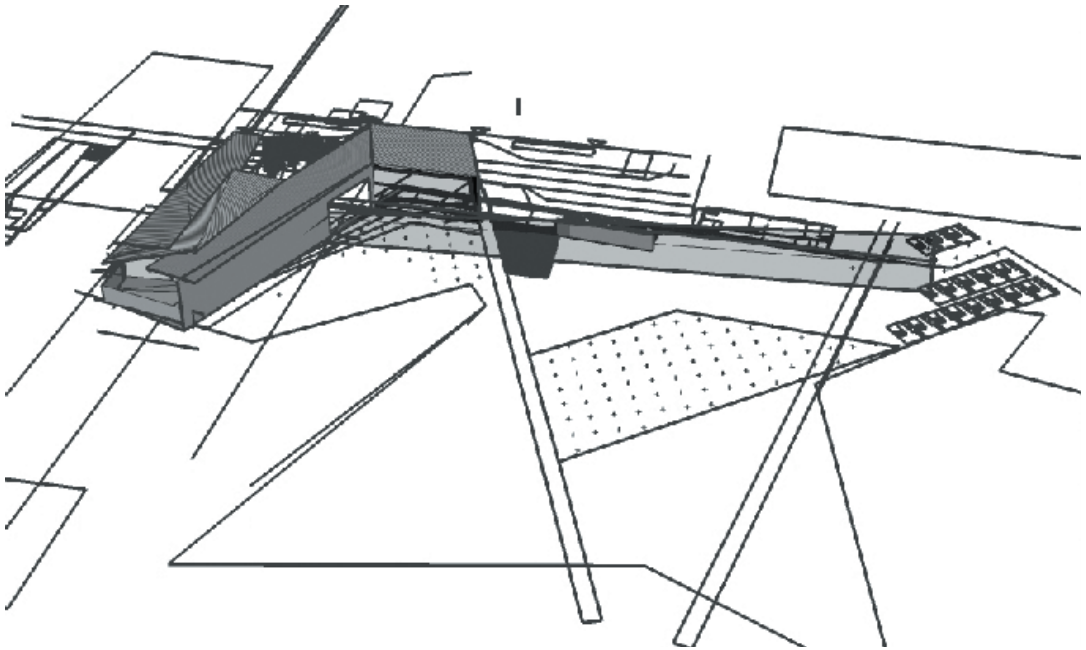
poplar forests leaves shimmering in the sun. This is another way in which the building is to compliment the site.

The western façade consists of a three layered system to accommodate the occupants of the building at different times: the first layer of occupant protection would be the balustrade, specifically designed to communicate the Lydenburg brand. The second layer is a series of abacus-like louvers, in the same vein is the louvers placed on the eastern facades of the building. The last layer is a series of sliding doors, specified to be double glazed and treated in order to block out western sun glare and the noise form the trucks which frequent Viljoen Street. This layering system will allow the occupants to exert control over the climatic environment, and will allow for discretional use such as allowing light penetration while excluding noise, or alternatively to open all the layers up in creating a balcony overlooking the street and the western part of the river.



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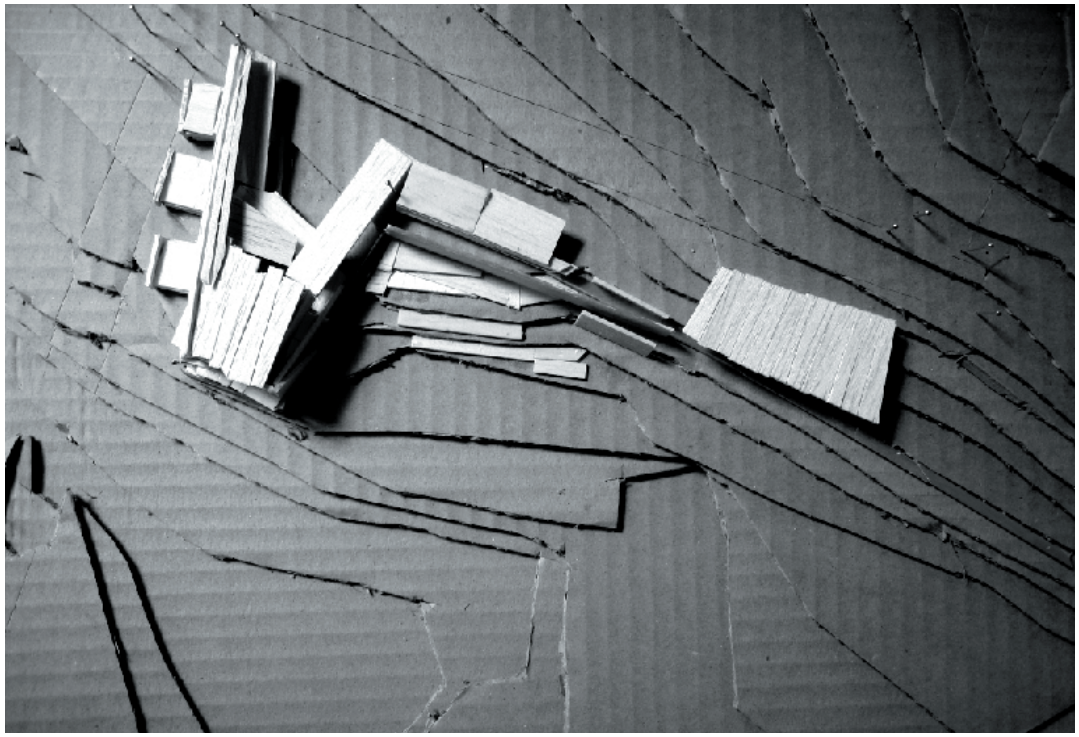
.6.4.1.3. Roof form

The roof form is a defining architectural element for the Incubation node, as it acts as a dissolving agent for the solid structural order, and also knits the whole precinct together as a whole. The roof proved to be the most problematic of the design, and was investigated through a series of 1:500scaled models. The results were the following:

.6.4.2 CONSTRUCTION ARCHETYPES AND STRUCTURING ORDER

.6.4.2.1. Filigree Construction

In Constructing Architecture, the materials, processes and structures handbook, Deplazes and Wiezer distinguishes between the two primary construction archetypes: Solid construction (stereotomy) and filigree construction (tectonics). According to Deplazes and Wiezer, all subsequent forms of construction are derived from these archetypes. The origin of the term “filigree construction” denotes the way that these slender forms are constructed. Since the 17th century the noun “filigree” (or alternatively



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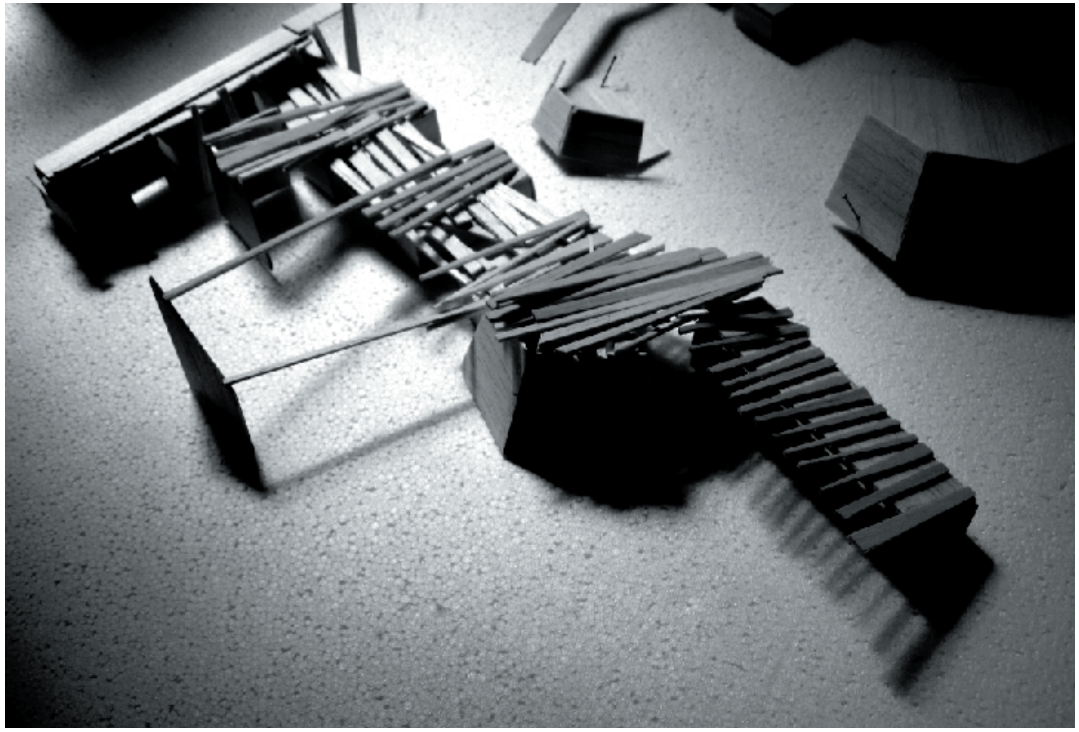

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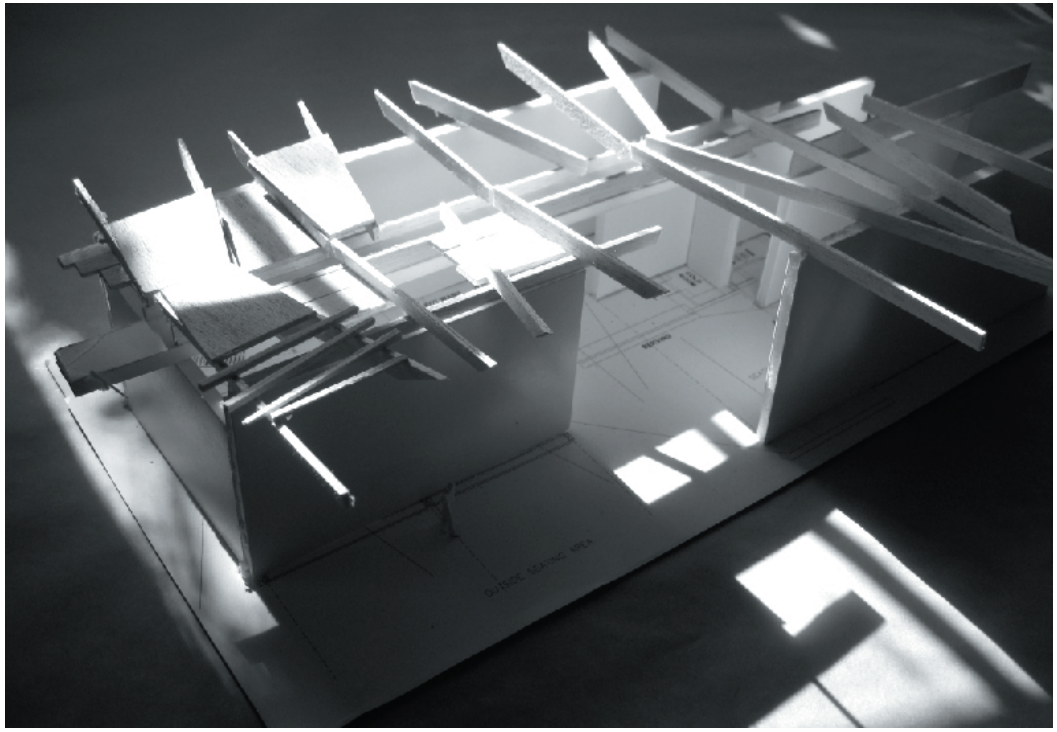

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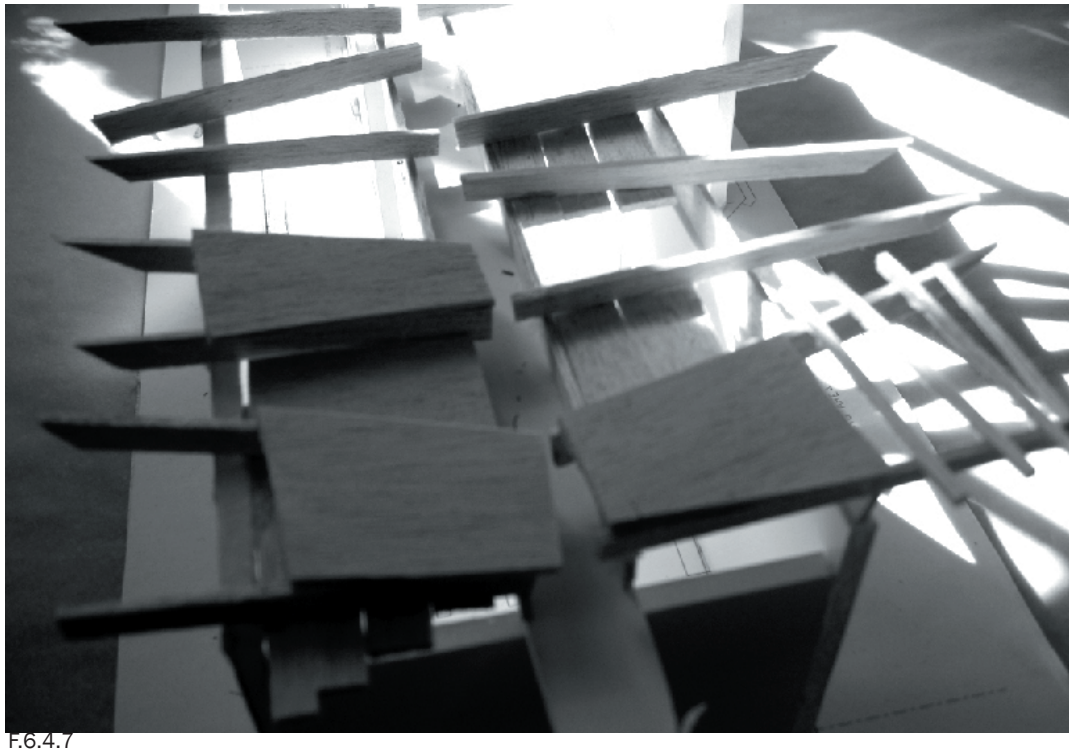
spelled “filagree”) stood for an ornamental work of fine metallic (normally gold or silver) wire, twisted, braided or soldered into intricate openwork designs. It is understood that these words are derivations form the latin words filum (thread) and granum (seed). (Constructing Architecture, 2005:14) A filigree construction is thus a construction of “slender members, a weave of straight of rod-like elements assembled to forma planar or spatial lattice in which the load bearing and separating functions are fulfilled by different elements.” (Constructing Architecture, 2005:14) Deplazes draws attention to the fact that this static framework consists of many openings (“voids”) which needs to be closed in order to create an “architecturally defined space”. The differentiation between the inner and external parts of the building is therefore achieved through derivative elements, and not through the load bearing construction itself.



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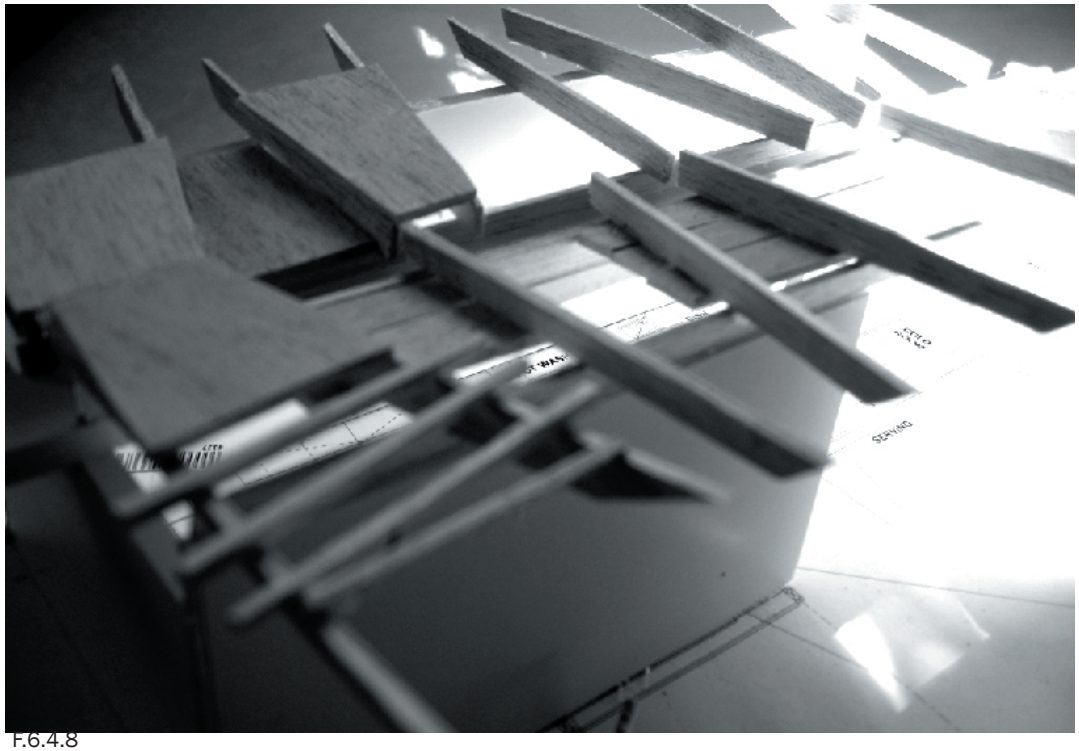

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.6.4.2.2. Solid Construction (Stereotomy)

Solid construction (stereotomy), as opposed to filigree construction, signifies heaviness and compactness, resulting from a primary element such as a massive wall made up of a construction method of “casting and layering”. (Constructing Architecture, 2005:14) According to Deplazes stereotomy stands for the art of cutting stone into measured forms so that the simple layering of dressed stone and the pull of gravity are sufficient for the stability of the structure. Because solid constructions can only handle compressive forces, and not tensile forces (like filigree construction), the load bearing and enclosing functions are identical. Therefore the structural shell corresponds to that of the final structure with limited openings as a result in order not to weaken the load bearing qualities of the wall. The author is sympathetic to the fact that all such walls are without structural hierarchy in that functions are limited to load bearing and enclosing tasks. With all parts tending to be of equal importance, the wall stands as a symbol of creating balance and equality and as being a part of

a larger interdependent system. However, in order to preserve a matter of flexibility and movement, an interior column system is employed, in order to facilitate larger openings within the wall system.

These two elements are employed in the design of the project as archaic elements, and signify a rootedness in history as well an embrace of freedom. The massiveness of stereotomy expresses an archaic and monumental character, while the space-drawn sublimation of massiveness of filigree construction renders an ethereal quality to a volume. (Constructing Architecture, 2005:13)

.6.4.3 ENVIRONMENTAL ISSUES

.6.4.3.1. Natural Lighting

Natural light is incorporated through two principles, firstly through the interior corridor in the core of the building, and secondly through the roof structure, of which two kinds are implemented. The first type of roof structure is a fragmented apparently 'arbitrary' structure of laminated timber beams, which are placed at odd angles to generate interplay of light and an unpredictability of structure. This apparent arbitrariness is achieved through the repetition of a pattern of angled beams. The second roof type is a concrete slab roof, applied in the smaller, loose-standing buildings as well as the berm-structure at the western edge of the site (the office block) which has glass-covered slits cast into it through which the light is filtered. The slits resemble the scattered ness of the laminated roof beams in being at odd angles in relation with each other. This effect is also echoed in the slits built into the floor of the plain, which resemble the water furrows originally part of Lydenburg's street character, and will in

parts be fitted with lights for orientation and ambience at night.

.6.4.3.2. Sun control and ventilation

The interior corridor has a split in the roof to effect, through which sunlight is filtered through horizontal louvers. Overhangs have been designed so that summer sunlight is barred, but winter sunlight penetration allowed for heat gain. The depth of the buildings does not exceed twelve meters, and the buildings are placed perpendicularly towards the predominant wind directions to facilitate optimal natural ventilation.

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IN-CU-BATE

An architectural investigation in branding: accommodating growth within a global context

An architectural investigation in branding: accommodating growth within a global context

"Perhaps the major challenges facing architecture today is one of identity." (Farmer, 1993:3)

Lydenburg, a town in Mpumalanga is set for large-scale expansion as a result of the opening of more than five platinum mines in the area. The frantic development is putting stress on infrastructure and services. New developments are proposed on the periphery of the town, but these services will have to be provided by the mine in order to speed the process up.

This sudden growth is shifting the dynamic of the town from being a largely farming community, into an industry driven economy.

One of the dilemmas arising out of rapid development is one of identity. This happens because of the changing economical climate, which remodels and changes the dynamics of the town. A previously quiet settlement which has always been popular as a retirement village, suddenly can find itself becoming a hustling and bustling growing location, attracting new businesses and younger, dynamic newcomers. The identity of a place not just connected to the physical qualities of town, but also in its functional value regarding its demographical make-up. A younger community will be reflected in the amenities that are hosted within it, as well as activities that are related to the place. This also holds true for the socio and economical demographics.

The physical architectural quality of Lydenburg has not been a priority in the planning of this expansion so far. The quickly constructed group housing schemes that are already grading the Lydenburg townscape has added to the architectural incoherence found within the town fabric. Architectural quality relates to the stylistic architecture found in the town, but also refers to the general town layout and planning. This needs to be addressed to create a sense of coherence and in doing the identity, character and a sense of history, or 'story' across to the visitor.

Another problem that is identified from this expansion is the nature of the economy that is promoting this growth. As this community is thrown into a second industrial economy, the rest of the world is trading in the dominating knowledge and service economy. The question arises as to whether Lydenburg will be able to take part in a larger, global economy after the mines get to the end of their life expectancy. A community with a sole economical dependency on a primary industry is undesirable. This is proven by towns like Welkom, Kimberley, and more recently Stilfontein. These are all towns that were once thriving mining communities, only to be left desolate after the closure of the mines.

1.2. OBJECTIVE

The objective of this dissertation is to investigate the concept of "branding" and "destination branding" and to consider the role played by architecture in it. The proposed development is to generate a source for a new economy and paradigm, without turning its back on the history of the community. Lowenthal states that (Lowenthal, 1993:181): 'We can use the past fruitfully only when we realise that to inherit is also to transform: what our predecessors have left us deserves respect, but a patrimony simply preserved becomes an intolerable burden: the past is best used by being domesticated- and by our accepting and rejecting that we do so.'

The program of the proposed development is to be derived from a study of current and global economic trends so as to determine the relevant development from which Lydenburg will benefit. This program will be re-evaluated as needs change. As a result, the building becomes a threshold which signifies change, accommodates change and growth, and is a changing entity itself. It is also f resourcetimportant to note that this dissertation supports a holistic view in determining the kind of 'product' Lydenburg is required to be in the eyes of the nation and the globe.

1.3.PROBLEM STATEMENT

1.3.1. CHARACTER & IDENTITY

Branding, according to Kotler and Gertner (2004:39) is an important focus of marketing, and also a key component of foreign and domestic policy, international relations and economic and cultural development, trade and tourism.

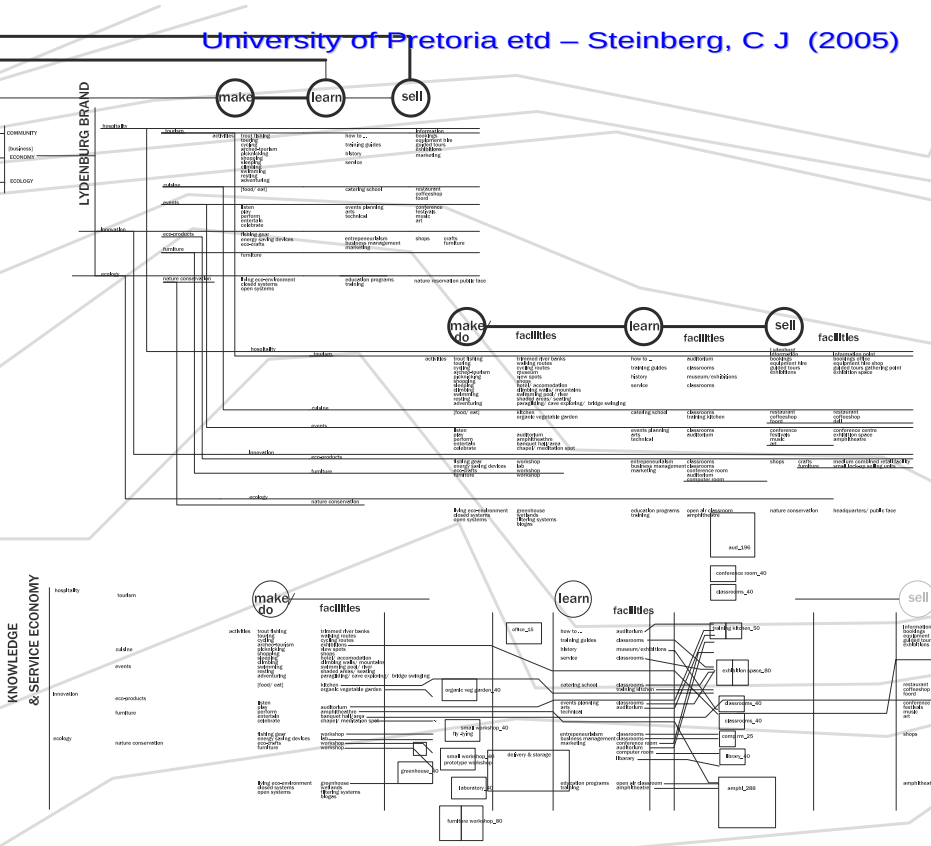
Branding, Character and Identity are components of Economy, but also relate to social and ecological issues in order to create a sustainable economy, environmental sustainability and a sustainable society should also be achieved in order to reach equilibrium. Character is an existing element of the town, while Identity is viewed as a chosen perception that the town wants to project to the outside world.

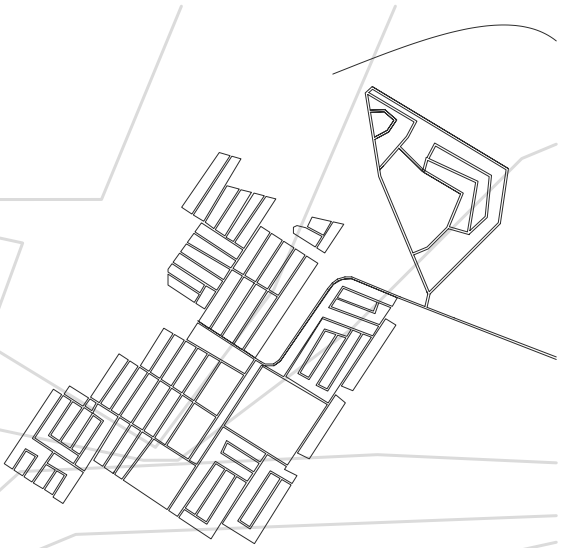
A strong identity creates faith in a product, which in this case will be Lydenburg. Faith in Lydenburg will lead to investments made which in turn will encourage economic growth. Lydenburg's original character is largely determined by the natural environment and location. In order to preserve this character, the visitors and residents in the town alike should be made aware of the natural environment within the town. This is why the site chosen is located between the very busy intersection between the two main axes, and the river that meanders through the town, which is currently fenced off and inaccessible to the local community.

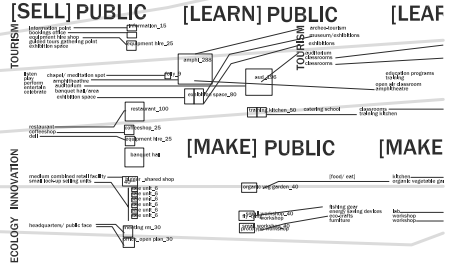
It is important that the public must be made aware of their built environment and that initiatives to get the community involved should be staged. This will ensure a greater awareness of the influence that identity and character can have on the economical prosperity of a settlement and create a sense of involvement from the community. Chapter 4 will discuss the current Architectural character of Lydenburg.

An analysis of the current architectural character of the town will be made to determine the direction that should be taking in the course of the rapid new developments to follow.

BRANDING STRATEGY DIAGRAM







1.4.SUB PROBLEMS

1.4.1. ECONOMY

Service Economy and Knowledge

"A principal feature of contemporary society is disaggregation; it follows that resultant technologies are essentially concerned with decentralization. We live in a society with rapidly diminishing heavy industrial base and an increasing service economy" (Smith, 2004:261)

"In all the major developed cities of the world, core growth is based on the knowledge industries. The metropolis has been replaced by 'ideopolis' in which economic prosperity and competitiveness depend not on the ability to make things, but on generating ideas that can be sold to the world. In this age of intellectual capital both insight and innovation is more highly prized than physical wealth or infrastructure'. (Gilmore, 2004: 176)

It should be noted that this dissertation will be focusing on strategy, rather than just economics. According to Dorrian (2005:3) economic thinking should be seen as a part in a holistic framework, and not seen as the only force behind national development.

De-Industrialization, Industrial Restructuring and Post-Industrialism

The disaggregation of the industrial economy is described by Gilmore (2004:174): "following industrial restructuring and employment reform many middle-aged workers were forced to early retirement because of a lack of formal skills and adequate schooling." An education, skill development and schooling system put into place now in Lydenburg could lead to a more sustainable economy for Lydenburg inn the future. This is also why one of the focuses for the proposed development will be on promoting a cul

1.4.2. COMMUNITY

Commit resourcecommunity Fragmentation

Lydenburg is a typical post-apartheid town, fragmented into four main settlements, which are also sub-divided among themselves. The elements buffering these communities from each other are the river flowing through the main town, creating a buffer on the western edge, and the industrial area, also on the western side. These fringe communities have no access to independent economical activity, except on a small scale on a local level, or by traveling into the main town. This leads to dependence on trans

1.4.3. ECOLOGY

Awareness of Natural Environment

Lydenburg has a unique quality in that it is built within a Nature Reserve, the Gustav Klingbiel Reserve. This natural environment reveals itself through the river that meanders through it. Although it plays an important part in its character and identity, recent years has seen the properties along the river's edge sold by the council to private developers, who have in turn fenced the properties off. The town has turned its back on the river, and its existence is not acknowledged anymo

ACCOMMODATION SCHEDULE

1.5. LIMITATIONS AND DELIMITATIONS

The theme and sub-themes namely: Branding and Identity, Urban planning, Economical trends and Social and Sustainable Development will each be treated within context and relevance to the proposed project. The investigation will therefore be limited only to information which can be directly applied to the intervention regarding program and outcome.

The ultimate limitations for this project is seen in the light of Farmer's statement (Farmer, 1993:3) that: 'Traditionally architecture can be seen to be place-, time-, and culture- specific with logic, practicality and purpose being of central importance and with resource vision, organizational ability, talent and available technology as the ultimate limitations'.

1.6. NEEDS ASSESSMENT

1.6.1. ECONOMY

Local and Global Economy

A sustaining economical system needs to be built, providing for a thriving human and natural community today and for future generations by:

? Encouraging local ownership by building skills and encouraging entrepreneurial innovation
? In considering distant ownership, seeking business people who have demonstrated good citizenship in their local communities
? Building local capacity to support financing of sustainable economic activity
? Consider the full environmental and social impacts of economic decisions
? Promoting ecologically sustainable businesses
? Encouraging and giving priority to businesses that add to the economic value of regional agricultural and other resources , instead of exporting unprocessed resources to be developed elsewhere
? Capitalizing on the economic opportunity presented by Lydenburg's proximity to nature reserves and natural pristine environment as well as panoramic aesthetic for the tourism sector

Based on the Charter of Sustainability for New Pattonsburg, Missouri, (Beatly and Manning, 1997:104)

The development proposed is a project that will serve the community and act as a catalyst in creating a shift towards a more sustainable economy. This is not in direct competition with the mining industry, but should create another avenue of revenue and development for the town. The theme of this dissertation will focus on branding (coupled with identity and image) but only in conjunction with tourism, as in destination branding. This will be addressed in the program of the building, in the materials used, an

1.6.2. COMMUNITY

Community Fragmentation

A sustainable society 'restores preserves and enhances nature and culture for the benefit of all life', present and future. A sustainable society recognizes the fact that we are ecologically, socially, culturally and economically interdependent with all of humanity. Sustainability, in the context of this interdependence requires partnership, equity and balance among all parties. Buildings and the built environment play a major role in the human impact on the natural environment and on the quality of life, sustainable

Charter of Sustainability for New Pattonsburg, Missouri, (Beatly and Manning, 1997:104)

Lydenburg is a fragmented community, divided by man-made and natural boundaries. Where a sustainable society recognizes interdependence within a framework, Lydenburg needs to create partnership, equity and balance among all parties.

The river must become the joining factor that knits these separated societies together. Developments along the edges of this river are proposed as the potential of the town will expand and grow. This will create equal opportunities for previously disadvantaged and marginalized communities in creating a level playing field in strengthening the economical muscle of the individual through entrepreneurialism.

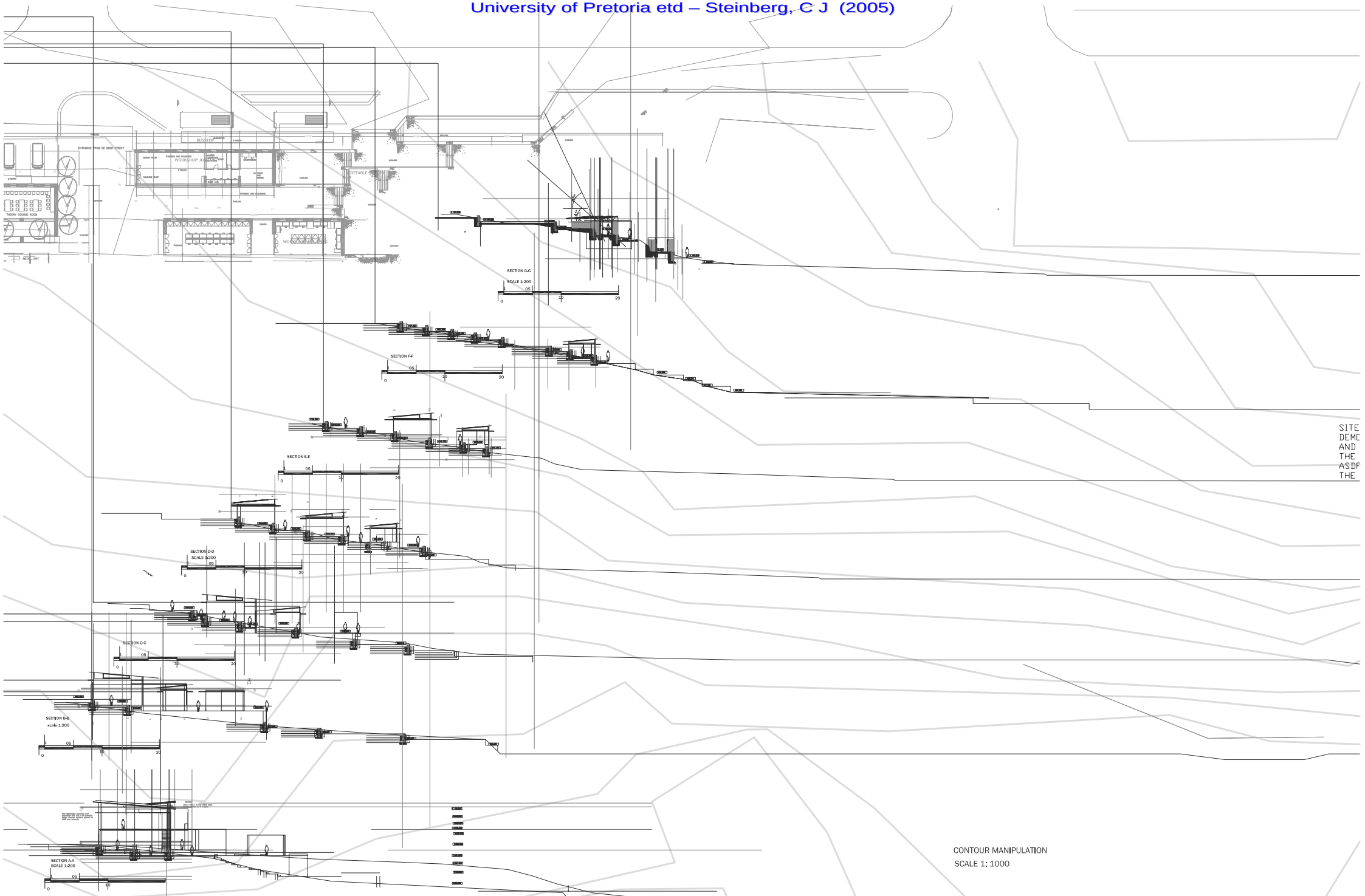
1.6.3. ECOLOGY

Awareness of Natural Environment

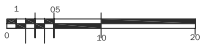
A sustainable ecological system needs to be put in place, providing equitably for a thriving human and natural community today and for future generations by:

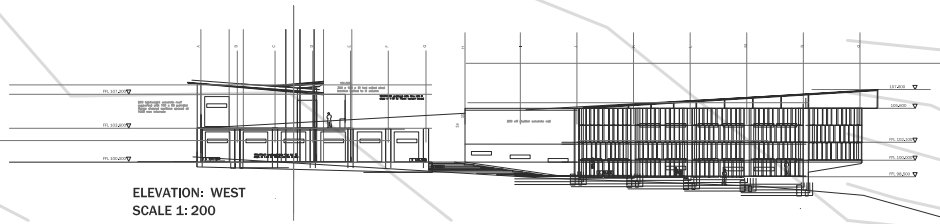
? Preserving the character and health of Lydenburg's natural environment, using and reusing the materials, energy and water needed as efficiently as possible and eliminating waste
? Utilizing clean, renewable resources extracted and processed within the community whenever possible
? Preserving and expanding the choices of present and future members of the community , providing information and design alternatives that encourage use of sustainable resources, technologies and methods suitable for our environment and culture

Based on the Charter of Sustainability for New Pattonsburg, Missouri, (Beatly and Manning, 1997:104)

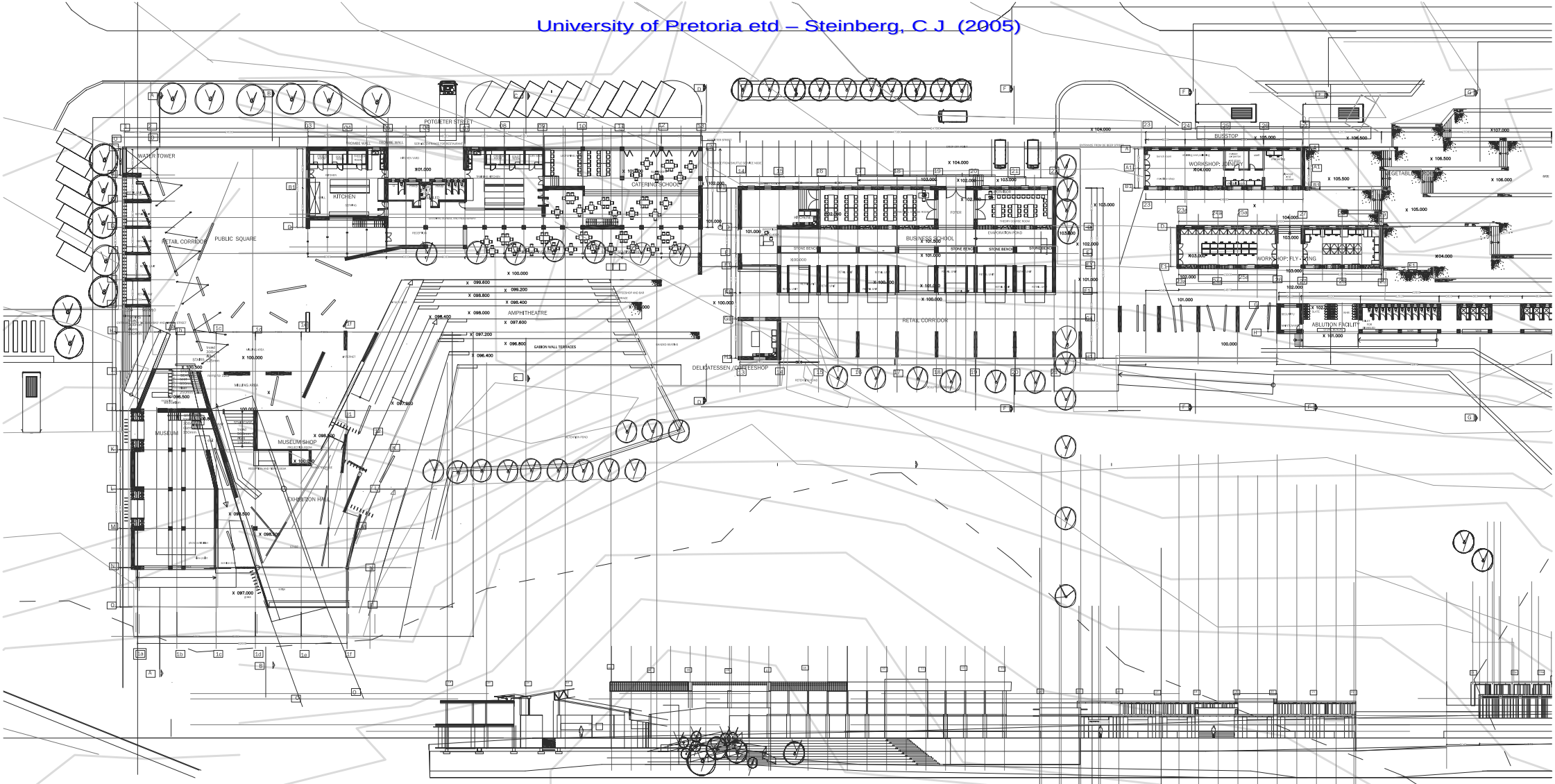


FIRST FLOOR PLAN
SCALE 1: 200



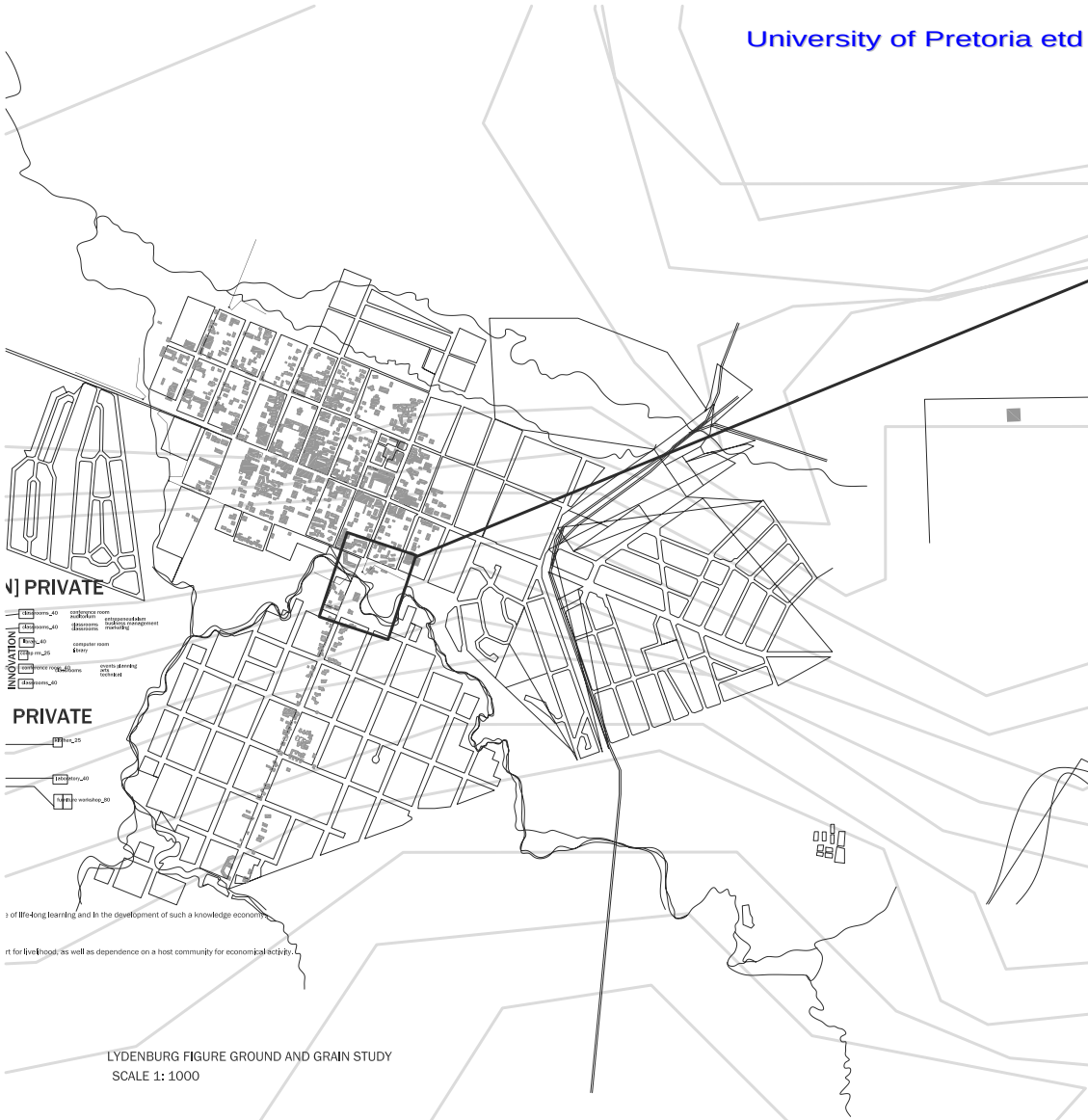


ELEVATION: WEST
SCALE 1: 200

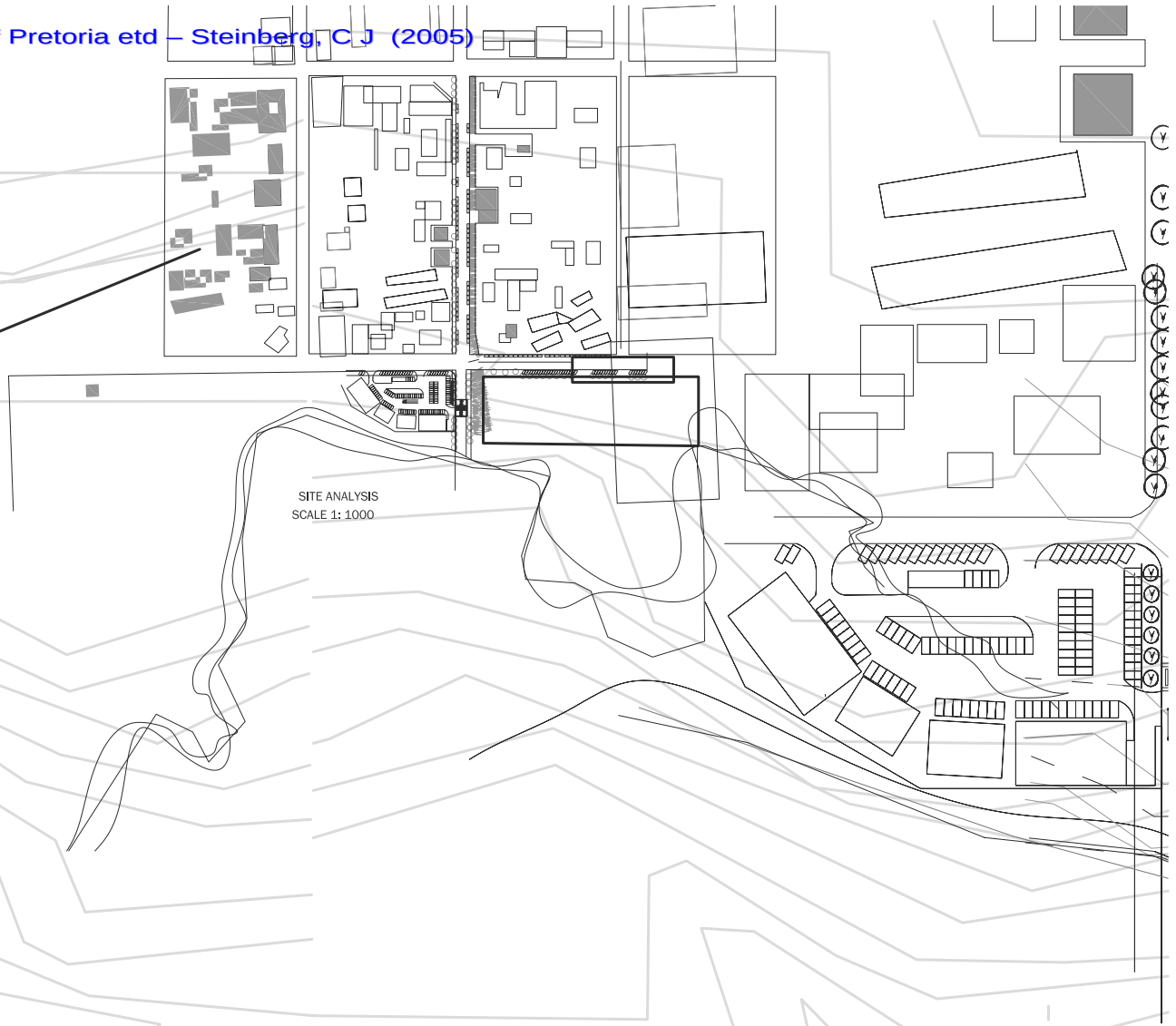


GROUND FLOOR PLAN
SCALE 1: 200

ELEVATION : SOUTH
SCALE 1: 200



LYDENBURG FIGURE GROUND AND GRAIN STUDY
SCALE 1: 1000



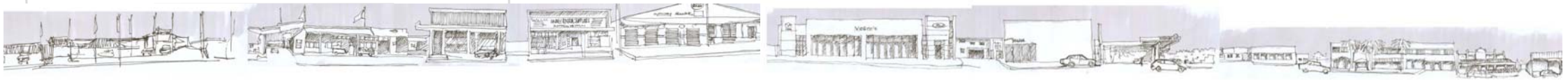
SITE ANALYSIS
SCALE 1: 1000

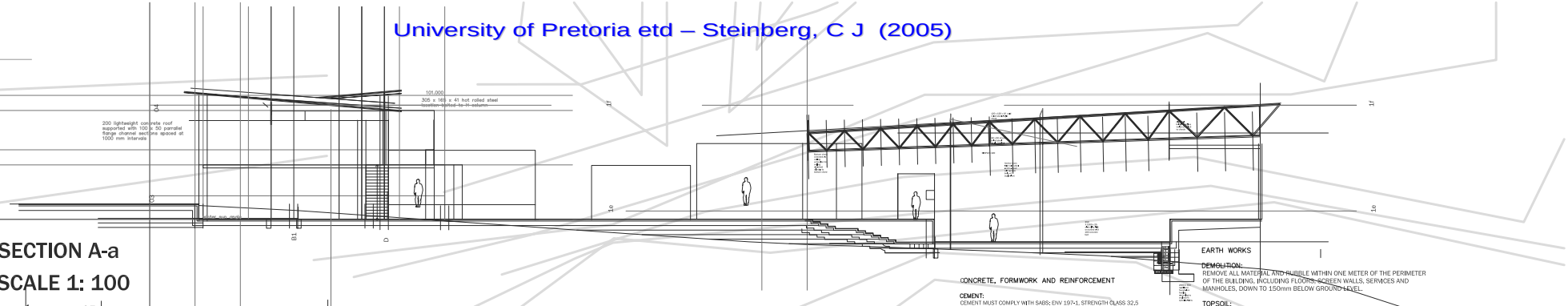
e of life-long learning and in the development of such a knowledge economy.

rt for livelihood, as well as dependence on a host community for economical activity.

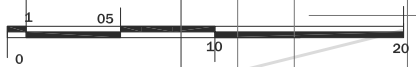
creating a greater awareness of natural environment .Key element of resource characteristic of Lydenburg are identified that act as attractions to make Lydenburg an appealing place to visit, live in or invest in. These can be existing elements, such as the rich history and archeological finds that originate from the town. New elements can also be introduced. These are a combination of global trends and local needs, such as a place to meet (local need) combined with education facilities, which cater for the global trend of knowledge management and the knowledge economy.

esign integrates consideration of resource and energy efficiency, healthy buildings and materials, ecologically and socially sensitive land-use and an aesthetic sensitivity that inspires affirms and ennobles . Sustainable design can significantly reduce adverse human impacts on the natural environment while simultaneously improving quality of life and economic well-being





SECTION A-a
SCALE 1: 100



CONCRETE, FORMWORK AND REINFORCEMENT

CEMENT:
CEMENT MUST COMPLY WITH SABS: ENV 197-1, STRENGTH CLASS 32,5

NO –FINES CONCRETE

No-fines concrete has interconnected voids and low density, making it ideal for use as a drainage layer under basement floors, as an insulating layer, and as damp proofing material

MIX 200 TO 500 ° OF 20 mm STONE TO COMPLY WITH SABS 794 AS SPECIFIED. CEMENT MUST COMPLY WITH SABS-ENV 197-1, STRENGTH CLASS 32,5 OR HIGHER. MIX 5 VOLUMES AGGREGATE TO ONE VOLUME CEMENT, OF 4 VOLUMES OF COURSE AGGREGATE TO 2 VOLUMES OF FINE AGGREGATE TO ONE VOLUME OF CEMENT.

SURFACE BEDS
USE 15 MPa CONCRETE FOR SURFACE BEDS TO BE COVERED WITH A SCREED. CAST TO A THICKNESS OF 75 mm., PLACE, COMPACT, STRIKE OFF LEVEL WITH THE TO OF FOUNDATION WALLS AND LEAVE AS IS. DO NOT TROWEL AS TO PROVIDE GOOD KEY FOR SCREED.

PAVING:

USE 20MPa CONCRETE, CAST PAVING TO THICKNESS AS SPECIFIED
CAST PAVING WITH A MINIMUM FALL OF 1: 100 OR TO LEVELS AS SPECIFIED.
BRUSH THE SURFACE, AFTER THE CONCRETE HAS STIFFENED SUFFICIENTLY, WITH A STIFF BRUSH OR SIMILAR TO LEAVE A COURSE SURFACE.. FORM CONSTRUCTION JOINTS AT 3,5 m MAXIMUM CENTRES IN BOTH DIRECTIONS, ROUND OFF EDGES OF PANELS.

CHANNELS AND SPILL BASINS:

CAST RAINWATER CHANNELS AND SPILL BASINS ON WELL- RAMMED EARTH WILLING TO THE SPECIFIED PROFILE, WIDTH AND THICKNESS.
LAY CHANNEL FLOOR TO AN EVEN FALL OF 1:250 MINIMUM OR AS SPECIFIED. KEEP TOPS OF CHANNEL SIDES LEVEL WITH PAVING.
NEATLY FORM ANGLES AND SWEEPS AROUND GULLEY WITHOUT CHANGING THE CHANNEL PROFILE.
FORM STOP ENDS AT TOPS OF GRADIENTS.

CAST RAINWATER CHANNELS WITH ISOLATION JOINTS AGAINST WALLS AND WITH KEYED CONSTRUCTION JOINTS AT 1,8 m MAXIMUM CENTERS

RINISH RAINWATER CHANNELS WITH 1:3 CEMENT: SAND PLASTER ROUNDED ON SALIENT ANGLES. MAINTAIN JOINTS IN PLASTER OVER JOINTS.

ROOF COVERINGS

SUPPORTED METAL SHEET ROOFING AND CLADDING
MATERIAL
COPPER ROOFING SHEET MUST BE 0,6 mm x 600mm WIDE HIGH PURITY COLD-ROLLED COPPER TO SABS 404.
BOARDING MUST BE 20 / 22mm THICK SOFTWOOD TONGUE AND GROOVE.

ROOFING FELT MUST BE RANGE 111 CONTAINING 80 % WOOL, DENSITY 333 g/m.

Fixing clips must be 0,6 MM X 40mm WIDE COPPER CLIPS.
NAILS MUST BE HARD DRAWN COPPER WIRE CLOUT NAILS , 2,8mm IN DIAMETER x 22 mm WITH BARBED SHANK.

SCREWS MUST BE BRASS SCREWS.

LAYING:

SCREW S.A. PINE BOARDING WITH COUNTER BRASS SCREWS ONTO BATTENS.
NAIL ROOFING FELT WITH BUTT JOINTS ONTO BOARDING WITH COPPER CLOUT NAILS.

LAY COPPER SHEET WITH BOTH EDGES BENT UP 90 ° TO FORM TROUGHS 510 mm WIDE AND FORM DOUBLE WELTED STANDING SEAMS IN DIRECTION OF FALL..

FOLD INTO SEAMS CLEATS AT 300mm CENTRES FORMED OF THE SAME MATERIAL AND NAIL TO BOARDING WITH COPPER CLOUT-HEADED NAILS.

LAY 100- 120 mm WIDE SHEET AT EAVES. NAIL TO BOARDING WITH COPPER NAILS AND BEND DOWN WITH ROOF COVERING TO FORM DRIP.

BEND SHEET UP AT PARAPET WALLS, VENTILATION PIPES AND CHIMNEYS AND COUNTER FLASH WITH COPPER SET IN SILICON SEALER.

FORM GUTTERS AND SPOUTS FROM COPPER SHEET OF THICKNESS AS SPECIFIED. PROVIDE MOVEMENT JOINTS IN GUTTERS EVERY 10 m.

FIX ALL COPPER SECURELY BUT DO NOT RESTRICT THERMAL MOVEMENT. FINISH NAILS AND SCREWS FLUSH WHEN COVERED BY COPPER.

ALL COPPER SHEET WORK MUST BE DONE BY AN APPROVED SPECIALIST CONTRACTOR.

GLASS REINFORCED POLYCARBONATE AND POLYESTER ROOF AND CLADDING SHEETS:

SHEETS:
GLASS REINFORCED POLYESTER LAMINATED SHEETS TO COMPLY WITH SABS 1150 TYPE 2 (WITH WEATHERING PROTECTION ON ONE SIDE), CLASS WF WITH FIRE RETARDANT PROPERTIES., MASS NOT LESS THAN 1,4 KG. m², AND WITH OPACITY AND COLOUR AS SPECIFIED.

POLYCARBONATE SHEETS MUST BE SHEETING GRADE WITH A CO-EXTRUDE LAYER OF UV STABILIZED POLYMER AND A MASS OF 1.6 kg/m².

THE PROFILE MUST MATCH THAT OF THE ROOFING / CLADDING SHEET, OR AS SPECIFIED

STORE SHEETS UNDER PALLETS OR UNDER COVER.

FIXING:
LAY SIDE LAPS AWAY FORM PREVAILING STROM WINDS.

FASTENERS FOR GLASS REINFORCED POLYESTER MUST HAVE MALTHOID OR OTHER APPROVED SOFT WASHERS.

SHEETS LAYED IN SINGLE WIDTH BETWEEN STEEL SHEETS OF SIMILAR PROFILE MAY BE SUPPORTED ON THE SAME PURLINS AS THE STEEL SHEET. WHEN TWO OR MORE POLYESTER SHEETS ARE LAYED SIDE BY SIDE , THESE SHEETS MUST BE SUPPORTED AT NOT MORE THAN 0,8 m AND SIDE-CLADDING AT NOT MORE THAN 1,5 m.

Make holes for polycarbonate sheeting oversize to accommodate for thermal movement.

EARTH WORKS

DEMOLITION:
REMOVE ALL MATERIAL AND RUBBLE WITHIN ONE METER OF THE PERIMETER OF THE BUILDING, INCLUDING FLOORS, SCREEN WALLS, SERVICES AND MANHOLES, DOWN TO 150mm BELOW GROUND LEVEL.

TOPSOIL:
REMOVE TOP SOIL OVER BUILDING AREA DEPT OF 150 mm AND TEMPORARILY STORE ON SITE FOR LATER USE AS GARDEN SOIL.

RECOVER MATERIAL:
RECOVER MATERIALS FOR LATER USE AS SPECIFIED

CLEANING SITE AT COMPLETION:
AT COMPLETION OF THE WORKS, DIG UP CONCRETE OR MORTAR MIXING PLATFORMS, AND CLEAN THE SITE OF ALL SURFACES AND BURIED RUBBLE.

BLINDING MATERIAL:

USE SUFFICIENT AND, IN GRAVEL PR OTHER APPROVED FINE MATERIAL TO FILL VOIDS AND PROVIDE A CLOSE SMOOTH SURFACE OF
HARDCORE, WHICH IS TO RECEIVE CONCRETE
SURFACES WHICH ARE TO RECEIVE DAMP PROOF MEMBRANES AND WHERE THERE IS A LIKELIHOOD THAT THE MEMBRANE WILL BE DAMAGED

FILLING:
SPREAD, LEVEL AND COMPACT FILLING UNDER FLOORS AT OPTIMUM MOISTURE CONTENT IN LAYERS NOT EXCEEDING 150 mm THICK, TO A DENSITY OF AT LEAST 90% MOD AASHTO.

FILL AGAINST THE OUTSIDE OF THE FOUNDATION WALLS WITH A MINIMUM FALL OF 1:30 WAY FROM THE BUILDING OVER A DISTANCE OF AT LEAST 1.5 METERS.

FINISH SLOPING BANKS AT A MAXIMUM GRADIENT OF 30° TO THE HORIZONTAL, OR AS SPECIFIED.

TERMITE CONTROL:

POISON THE SOIL AGAINST THE INSIDE OF FOUNDATION WALLS AND UNDER FLOORS WITH CHLORDANE SOIL INSECTICIDE TO COMPLY WITH SABS 1165:
BY A CERTIFIED PEST CONTROL CONTRACTOR
NOT WHEN SOIL IS EXCESSIVELY WET
DO NOT DISTURB TREATED SURFACE
DO NOT BURY SCRAPS OF TIMBER IN THE GROUND FILL
TREAT FOUNDATION TRENCH BOTTOMS BEFORE CASTING

MASONRY

BRICKS AND BLOCKS

CONCRETE BRICKS AND BLOCKS

CONCRETE BRICKS AND BLOCKS MUST CONFORM TO SABS 285:
COLOUR, SIZE, PROFILE AND SURFACE TEXTURE: AS SPECIFIED.
COMPRESSIVE STRENGTH: 7,0 MPa FOR DOUBLE STOREY STRUCTURAL WALLS.
FREE-STANDING WALLS, AND RETAINING WALLS.
AVERAGE DRYING SHRINKAGE:0,06%

CONCRETE KERBS AND CHANNELS

PRECAST CONCRETE CHANNELS TO COMPLY WITH SABS 972.

IN SITU CHANNELS MUST BE OF 30MPa CONCRETE, TO PROFILE AS SPECIFIED.

RUBBLE WALLING:
STONE
STONE MUST BE APPROVED NATURAL STONE VARYING IN SIZE BETWEEN 150 AND 600mm IN SECTION.
LAYING
BED STONES IN SOLID MORTAR
BUILD IN WIRE TIES AT 3 PER m² WHERE RUBBLE WALLS ARE TO BE JOINED TO BRICK- OR BLOCK WORK. LEVEL UP TOPS OF WALLS WITH SELECTED LONG AND FLAT STONES

KEEP WALL FACES EVEN.

JOINTING:
MAKE JOINTS 25-20 MM WIDE AND DEEP, SQUARE RECESSED.

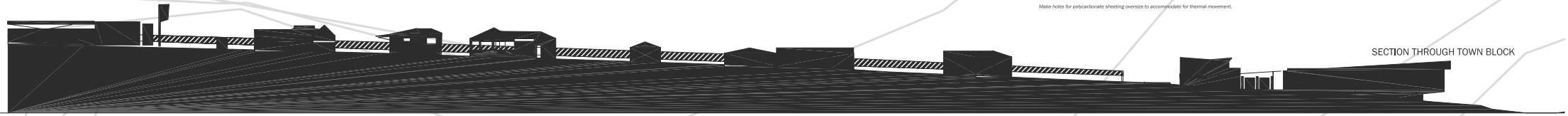
STONEWORK:
SPECIALIST CONTRACTORS
THIS WORK TE IS DONE BY SPECIALIST CONTRACTORS.

SUB–CONSTRUCTION:

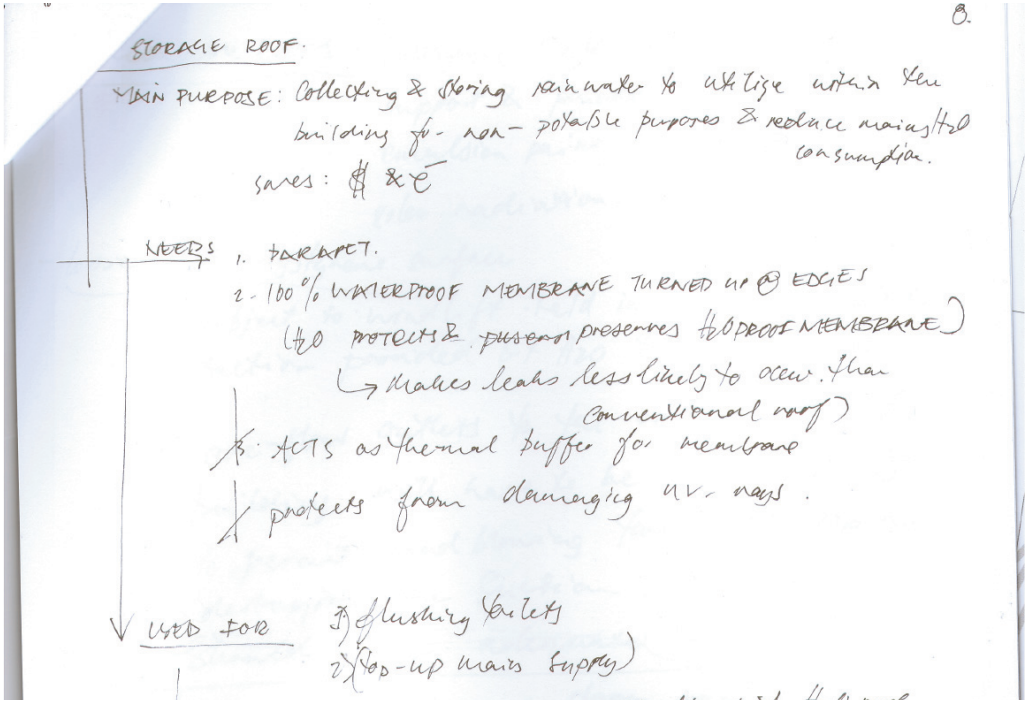
THE STONE CONSTRUCTION MUST BE CORROSION-FREE STRUCTURAL GRADE ALUMINIUM HORIZONTAL RAILS FIXED TO EXTRUDED BRACKETS OF THE SAME MATERIAL AND ANCHORED TO THE BUILDING FRAME

Rail fixed cladding is a better alternative to cramps and mortar. The advantages of this system are:elimidance of staining of the stone face, more reliable support, faster erection, smaller joints and less dependency of on skilled labour. Consult specialist in stonework contractors.

Joints must be sealed to prevent ingress of water and to provide for thermal and structural movement.



SECTION THROUGH TOWN BLOCK



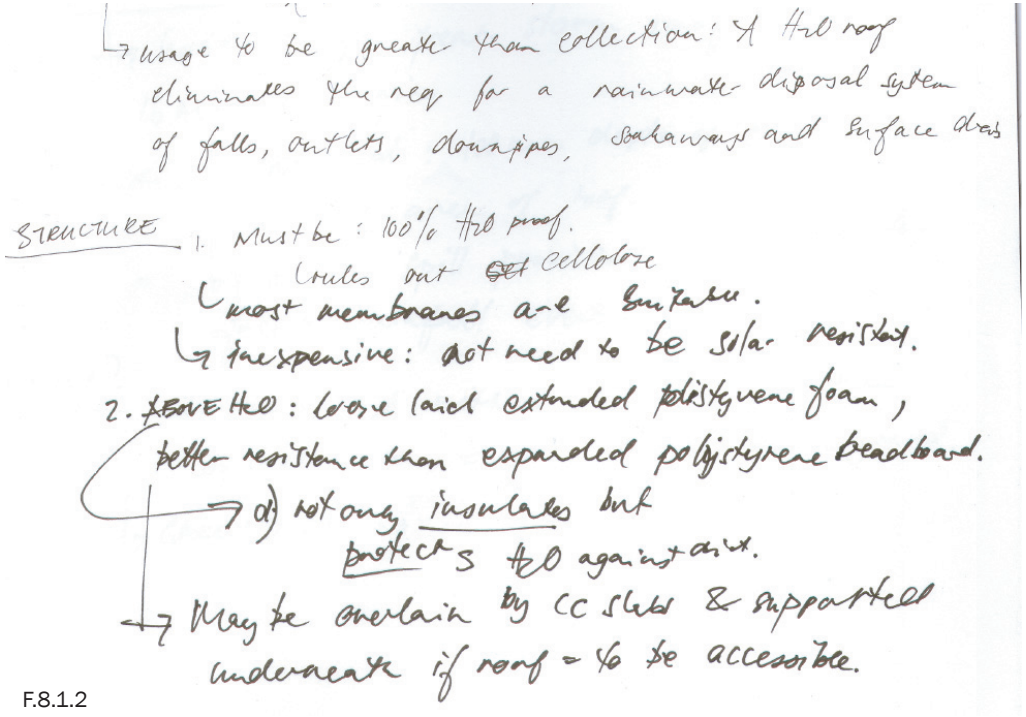
F.8.1.1

.8.1 INTRODUCTION

The vast scope and scale of the project has lead to a technical inquiry which focuses largely on servicing the site as a whole, and to investigate the systems that is called for in order to fulfill the requirements as set out in the baseline document (Addendum .10.1)

Although not the only technical aspect considered, an important part of the site systems development is the recirculation of water. Water as a source of life, as well as a growth agent plays an important role in creating an awareness of the community's dependence on the Sterkspruit River. In developing rivulets that meander through the site and serve the building in that it can cool, purify and feed, the central theme around the importance of the river within the town is reinforced.

The water cycles that were implemented in the working systems of the terrain included rainwater harvesting, grey water recycling, the use of evaporation ponds and retaining ponds. Other systems that were considered in the technical resolution

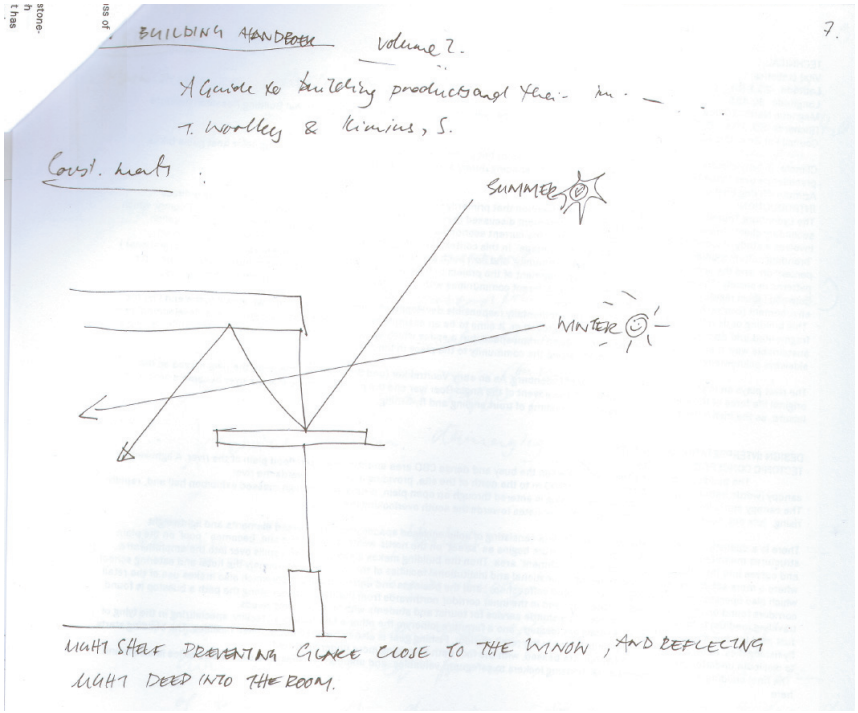


F.8.1.2

of the design are the application of the construction methods as highlighted in the Design Discourse (Chapter.6.) and other thermal comfort systems such as the use of trombe walls, the allowance of winter sunlight for heat gain, and cross ventilation. The light reflecting quality of interior ponds was also harnessed in utilising natural sunlight.

.8.2 SITE USE

The site use is determined by the hundred and fifty year flood lines, the urban influence, as well as the natural drainage patterns of the site. The building footprint superimposed onto the site creates valleys and watersheds that guide the harvested rainwater back into the river. As part of the baseline criteria (building performance criteria) predetermined in Addendum .10.1. It is important that the rainwater channeled onto the site is redirected back into the site and eventually into the river on site as well.


BUILDING HANDBOOK
Volume 7.
7.
A Guide to building products and their
T. Woolley & Kimmins, S.
Const. Health
SUMMER
WINTER
LIGHT SHELF PREVENTING GLARE CLOSE TO THE WINDOW, AND REFLECTING
LIGHT DEEP INTO THE ROOM.

F.8.2.1

.8.3 EXTERNAL TREATMENT

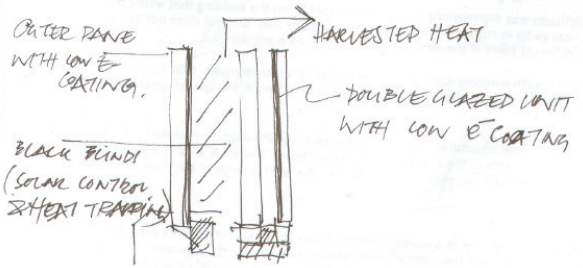
.8.3.1 Facades

In the facades of the north facing buildings (the education facilities and the catering school, as well as the workshops) trombe walls are used as passive climate control systems. The walls are shaded in summer, maintaining coolth in the building, while the angle of the winter sun manages to penetrate the walls which radiate the heat to the interior spaces. In the business school, where incremental heat gains can be expected due to the use of computers, evaporative cooling is applied: the building is designed with a depth of less than twelve meters and place perpendicular to the predominant north-easterly summer wind direction (Holm 1996:64). A pond placed across unobstructed apertures in the inner corridor of the building cools the warm air flowing from the flood plain, and the air is directed through the business school through long narrow slits made in the north-façade trombe wall. The slits can be controlled through a wooden louver system.

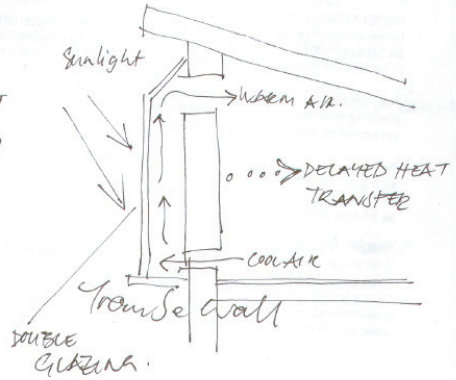
LIGHT SHELF PREVENTING GLARE CLOSE TO THE WINDOW, AND REFLECTING LIGHT DEEP INTO THE ROOM.

PASSIVE E HARVESTING SYSTEMS (TROMBE WALL.

↳ Solar E stored collected & stored by a wall with high thermal mass heated into the room by connecting air flow controlled by vents
(a) night, heat is slowly released into the room as the wall cools.



Heat Harvesting Glazing System.



F.8.3.1

.8.3.2 Roofs

The concrete roof systems are typically 200 mm deep and carries glass covered slits in order to let light through.

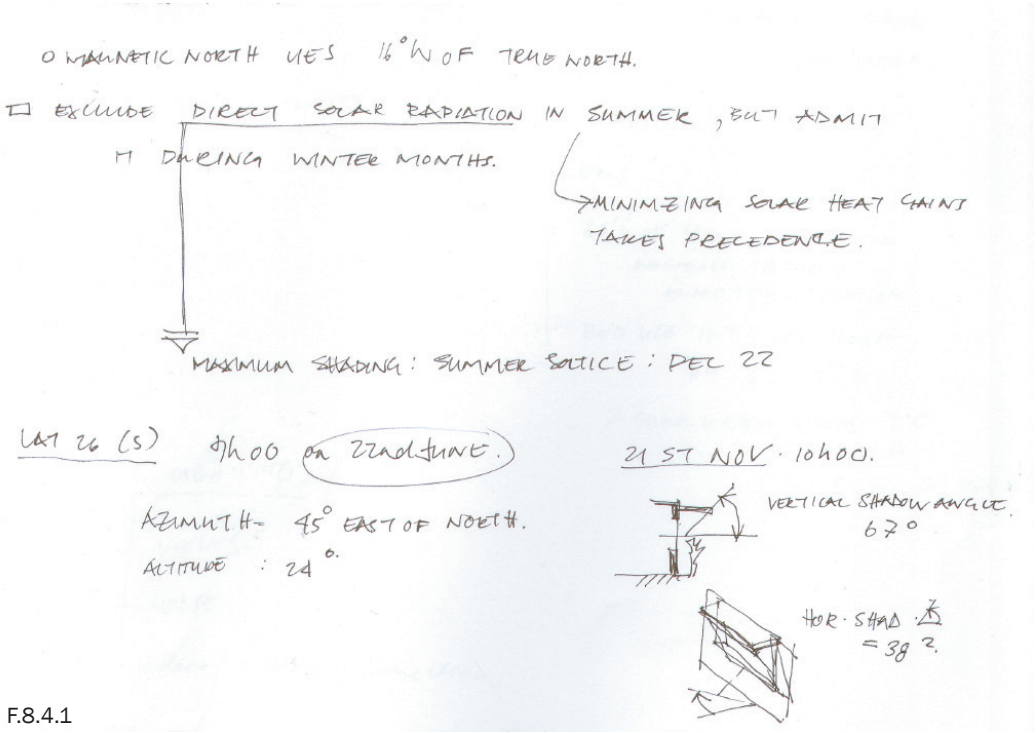
.8.3.3 Landscaping

Indigenous grass species are used as in a layer in conjunction with the water recycling systems. Grass swales are implemented to impede erosion of valuable soil, while the grass also serves an aesthetic function in representing the indigenous name of Masising.

.8.4 ENVIRONMENTAL ISSUES

.8.4.1 Natural lighting

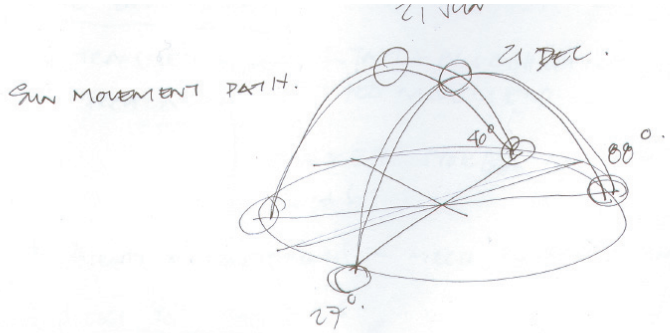
The application of natural sunlight is promoted through large louvered glass panels which face the southern view of the site in the exhibition wall. The evaporation ponds as an internal corridor that run through the business school and the restaurant are positioned as such as to reflect light into the interior of the spaces they run through.



F.8.4.1

.8.4.2 Sun control

With the sun angles being 64.9°on summer solstice (21 March and 23 Sept) and 41.4° during winter, an overhang of 1700 mm is required in order to shade the summer sun completely. This is not feasible from a construction and economical point of view. An additional shading mechanism such as a louver system is required. The louver system is a solid wood construction as described in the Design Discourse (.6.)



F.8.4.2

.8.4.3 Ventilation

Ventilation through the Business School is to be assisted through evaporative cooling in the strategic position of ponds along the length of the building

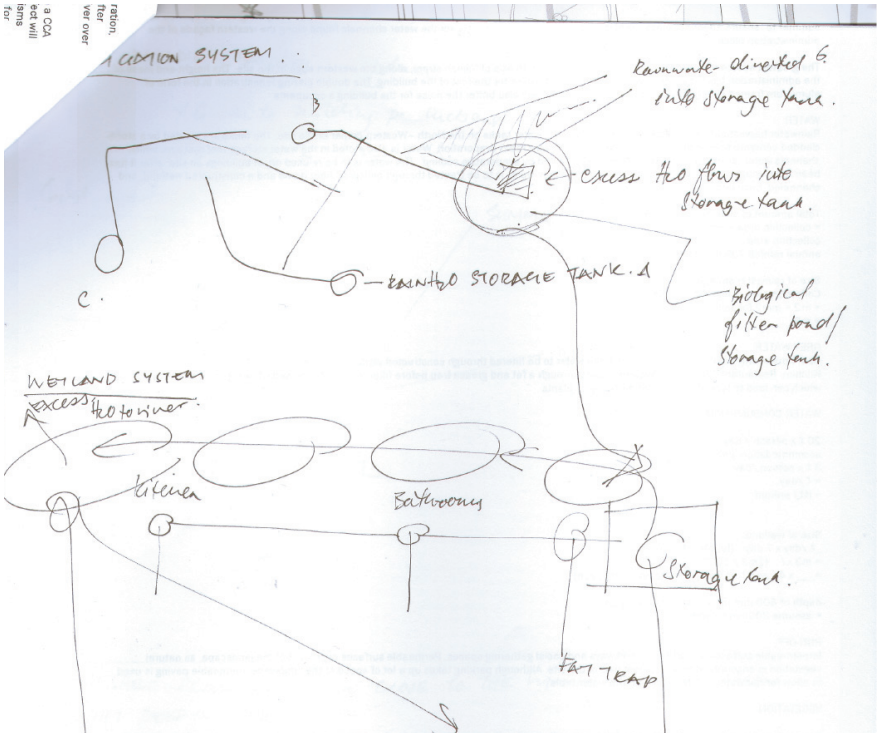
.8.4.4 Water systems

(i) Rainwater

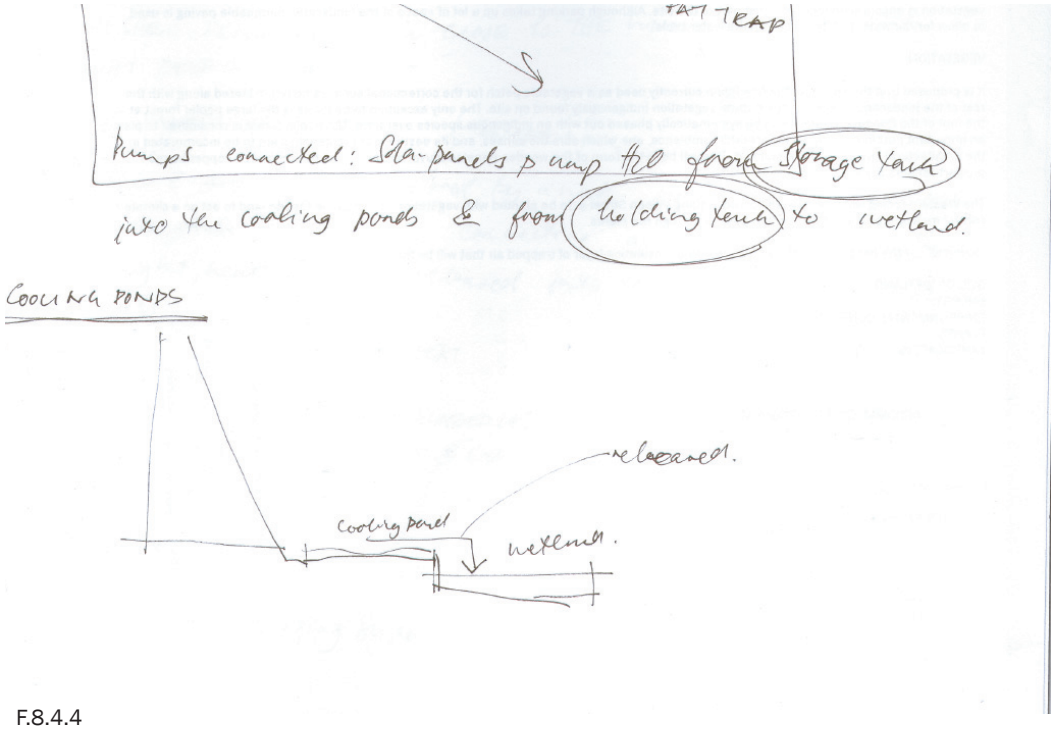
Rainwater is to be harvested through the catchment basins of the roofs and to be stored in the water tank that also serves as an architectural feature on the north-west corner of the site. From the water tank, the water is channeled to the kitchen where it is used for non-potable purposes such as washing.

(ii) Grey water

The grey water from the kitchen area is to be diverted into two tanks, the one to serve as an irrigation mechanism for the landscaped garden on the western façade of the restaurant, and the other to serve as a retaining tank from which the water is pumped towards the inmates' terraced vegetable garden.



F.8.4.3


FAT TRAP
pumps connected: Solar panels pump H2O from Storage tank
into the cooling ponds & from holding tank to wetland.
COOLING PONDS
released.
cooling panel
wetland.

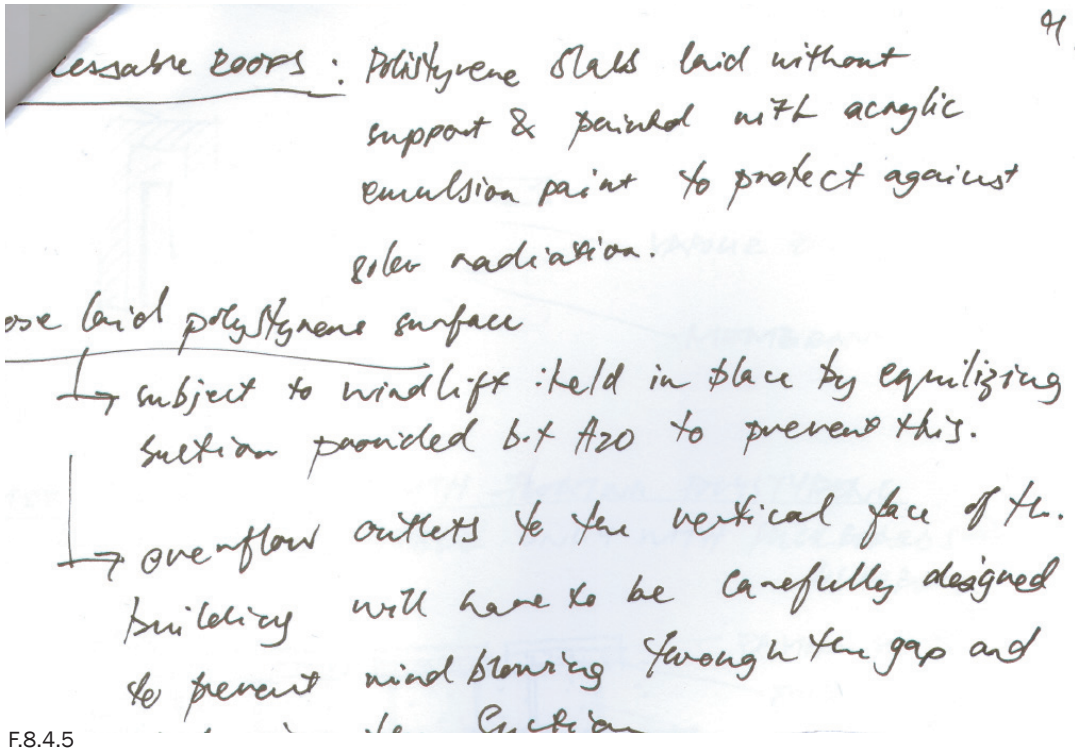
F.8.4.4

(iii) Evaporation ponds

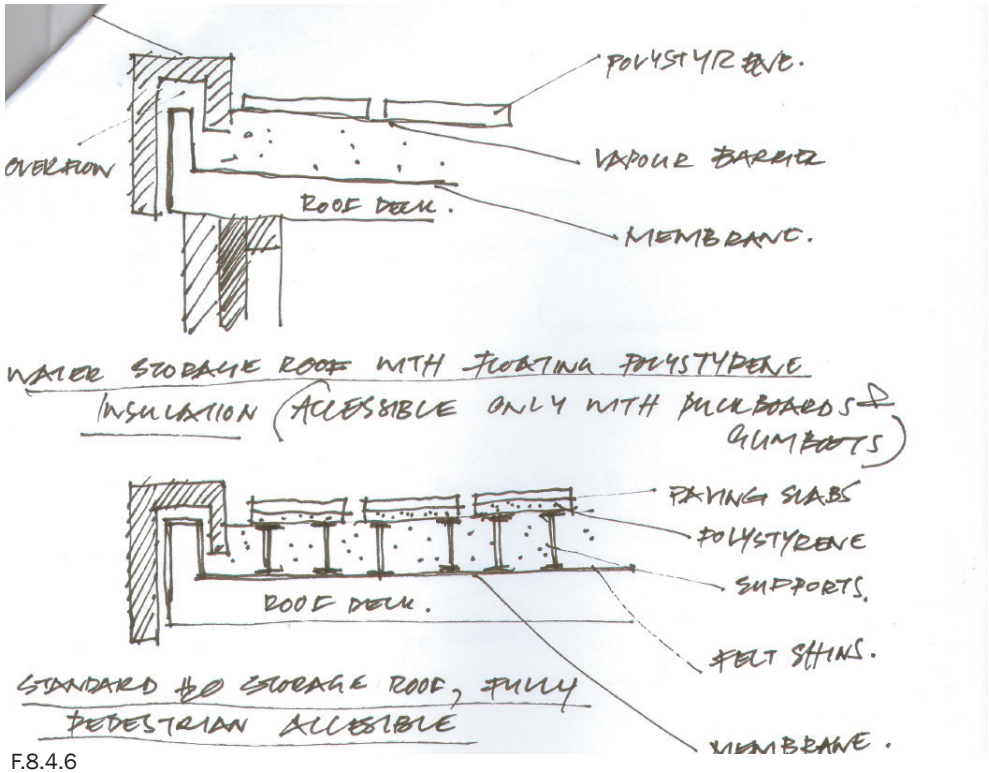
The evaporation ponds are a closed system through which the water is continually recycled. It serves both an aesthetical and climate control purpose.

(iv) Retaining ponds

Retaining ponds are ponds catchment areas designed for the slow release of water back into the natural water cycle such as the river or ground water table. Retaining ponds have been placed in the base of the amphitheatre and the sculpture garden. When heavy rains fall during the summer rainy season, the ponds will be filled with water to be eventually ciphered away or to be channeled through an overflow system. The building is shape allows for water to compliment its shape and is therefore also an aesthetical feature.



F.8.4.5



F.8.4.6

.9. CONCLUSION

.9.1 SCOPE OF STUDY

This dissertation included research on a range of disciplines such as sociology, economics, marketing and branding, which are not traditionally associated with the field of architecture. However, this dissertation and design proposal proves that these disciplines serve to inform and support a convincing design proposal

.9.2 SUMMARY OF STUDY METHODS

In conducting the sociological study, informal interviews were held with the local community of Lydenburg, in order to determine their needs and also their general perception of the large-scale expansion that Lydenburg is facing. Sidewalk surveys were held to grasp the dynamics of the town and its workings. Observations were made regarding the general town layout and research was conducted into the developments proposed by the mining industry as well as the private developers and what they entailed.

The urban layout of Lydenburg was analysed in accordance to urban planning guideline publications. I relied heavily on existing frameworks of similar towns, but also on my own initiative and judgement.

In investigating the history of the town, visits were made to the local museum, informal interviews were conducted with an older generation of Lydenburg residents, and archive - and published material were consulted. The interviews conducted were based on a standard questionnaire in which general questions regarding the resident's view of the new developments were asked. The residents were also asked to determine elements of Lydenburg to which a particular sentimental value were attached. In this instance it was not the published material, but the constructed

memories of residents which proved to be the most valuable in the application of the study.

A study of economics was obligatory in determining the necessity, value as well as programme for the proposed Incubation Node. Published material on the knowledge economy was consulted and the local economy was observed and measured against global economic movement and trends. This was done through observing the general form of business in which the town's residents are engaged and in measuring it against criteria such as how it compared to a culture of lifelong learning, how human capital were nurtured and developed, and how these businesses can be applied in the emerging knowledge economy.

A study in branding, was a direct consequence of the research conducted on the economy. Branding specialists were consulted, as well as branding specialists in

the field of architecture. An inventory was made of distinctive qualities of Lydenburg through observation and consultation with members of the community. An inventory of the architectural character of Lydenburg was also essential in determining an identity for the town: a sidewalk survey was done and historical publications were consulted.

A botanical study was required in determining the species that are most suited to Lydenburg and the site. Site investigations were done and experts in the field of botany and landscape architecture were consulted on this matter.

The design investigation included an analysis of existing architectural features, an analysis of the site, an investigation into the local climate and research into the ideal building form that suits the climate.

.9.3 FINDINGS

The findings in the above mentioned research are as follows:

In observing the dynamics of the community of Lydenburg, it was concluded that the community is in need of a meeting place. The meeting place was to facilitate meeting per chance, through a program of a myriad of other functions and activities. A development in the form of an 'Incubation Node' was proposed as a catalyst in generating chance encounters between the different communities of Lydenburg. The term 'meeting place' in this particular case denotes an informal gathering of people, as formal meeting places exist within the town in the shape of the town hall and the school halls that are made available. The building was designed according to an ordering system of movement corridors and then pools of rest and social activities to accommodate this need.

An observation of the town's general workings and layout led to the conclusion that the Sterkspruit River and the Industrial area act as physical and economical barriers to the previously disadvantaged communities on the western side beyond the river. It was determined that the proposed developments will lead to the decentralisation of the CBD.

The historical study concluded that Lydenburg has a rich pre-historical and historical background that can and should be used to tell this town. It was during the course of this study that I stumbled upon the meaning of the indigenous name 'Masising' for Lydenburg, meaning 'place of the long grass' which played a decisive role in the branding exercise executed for the town. From interviews it was concluded that the older residents attached sentimental value to elements of the town such as the river and the water furrows which used to run next to the sidewalks of the town.

Through the research conducted in the field of global as well as the local economy that the value of a knowledge based economy was recognised. The research material indicated that the re-introduction of an industrial economy for Lydenburg is evident, and that to date no effort is made to phase in a knowledge–based economy. A sole dependence on the mining industry as a source of revenue for the town was deemed short-sighted and unsustainable.

The conclusion drawn from the study of the global economy necessitated the implementation of a branding strategy for Lydenburg. Out of the branding strategies researched, the phenomenon of 'destination branding' was found to be an applicable strategy to the dilemma that the town is facing. The branding experts that were consulted offered an objective view on how to differentiate the brand 'Lydenburg'. A strategy was developed hence forth.

The differentiation exercise in the marketing of Lydenburg as a brand led to the identification of the natural environment, specifically the grass species and the fact that Lydenburg was originally situated inside a nature reserve. The rehabilitation of the terrain is to include species that change seasonally, therefore signifying growth and change which is also to be part of the larger identity of the Incubation Node. Existing plant species, which include the exotic poplar forest in the bend of the river floodplain adds to the ambiance of the place, and is therefore retained. Qualities of the poplar forest are incorporated into the building.

The study made of the historical buildings within Lydenburg revealed that buildings of distinct architectural value should be protected and given importance. Very few buildings that had been built in the last thirty years have been found to be of a high aesthetic quality. The deduction was made that buildings of quality should be retained and that a new vernacular be developed that includes certain architectural

elements identified as distinctive in Lydenburg architecture: the stoep, or veranda, the raised plinth, the use of natural stone and the use of corrugated metal for roof cladding.

Having identified ‘growth’ and ‘change’ as a driving factor for Lydenburg’s brand identity, it was deemed important to foster a culture of innovation within the Innovation Node, in order to create an adaptable environment which reacts positively to change. A part of this ‘innovation’ strategy is to be implemented into the new vernacular of Lydenburg and should manifest itself in the architectural character of the contemporary built environment. This is partly an acknowledgement to the wealth that the mining industry is generating towards the community and stresses a theme of progress that is generated by the current expansion.

Progress in the built environment has always been dictated by the strength of the

current economy. This connection between architecture and economics is manifest in programme of the built form. As a 'witness to culture' (Farmer 1993: 3) architecture remains the ever-changing mirror to our societal and economical structure.

.9.4 CONCLUSION

The outcome of this dissertation should be measured against the successful application of the material which was investigated. A distinctive and distinguishable 'brand' has been developed for Lydenburg, and manifests itself in the programme and architectural character of the Innovation Node. This brand is based on tactile knowledge and an inherent truth of the town's cultural heritage, as well as the themes of progress and growth which developed from the expansion of the town due to mining activity. The programme that was developed for the Incubation Node grew from the application of the knowledge gained in the field of economics. The physical planning of this development is designed to not only facilitate change in the

economy of Lydenburg, but also to accommodate change in the physical form of the building in that the structure is based on a permanent order of solid construction (stereotomy) and a secondary, temporary order of filigree construction, which make part of openable and moveable elements which allow for change in the programme of the building.

.10. ADDENDUM

.10.1. ENVIRONMENTAL CRITERIA

.10.1.1.1. WATER

i. Rainwater

Water flow

Excessive water flows experienced during the peak rainy season and the subsequent floods are to be reduced through the introduction of vegetation, such as veld grass, along the run-off course; through permeable surfaces along the fall of the site; and through the rehabilitation of the natural meander of the river. These factors will combat erosion and loss of valuable topsoil.

Water consumption

20 ℓ x person/day

Accommodation: people: 1000 people x .75 (75% occupancy)

20 x 750

=15 000 ℓ

Hot water =3 ℓ x person /day

=3 x 750

=2250 ℓ /day (x 365)

=821.25 kℓ/annum

Wetland size

=2250ℓ /day x 7 days (for absorption)

= 15750 m3 (1m3 /1000ℓ)

=15750 x 4 (add 75% for aggregate and root space)

Depth of 600 mm (max depth of absorption

= 63000 m3

Collected Water

Total amount of collected rainwater

= collection area x annual rainfall

Collection area: 4735 m2

Annual rainfall 709 mm/year

=4734 m2 x 0.709 m

=3356.4 m3 (x 1000 ℓ)

=33.5 kℓ

Size of rainwater storage

Collection area x highest months' rainfall

= 4735 m^2 + 304 mm^2 for January

= 1439.44 m^3

ii. Grey water

Grey water is to be recycled in order to reduce the overall mains consumption. A typical cycle for the water would be the following:

Water collection from roofs and other surfaces into storage> to kitchen or restaurant for cooking, or to the bath house for bathing > to treatment basins like wetland> to toilets > treated through biolytic filter> irrigation for landscape> filtered through the ground back into the river.

Organic soaps should be used in the bath house facility.

The water from kitchen is to pass through a fat and grease trap first before it is filtered through wetland (the grease prevents aeration, which can lead to lack of oxygen and perishing of plants)

The thermal mass of water should be applied in climate control or for heating up

water as the grey water cycle is continuing. Roof ponds can be incorporated into the building design. Roof ponds act as a cooling mechanism in summer, and buffer the building from heat loss in winter.

iii. Water efficient devices

Water efficient devices such as taps, showers, dishwashers and toilets are to be fitted.

Toilets should have use efficiency if below 6 litres of water

All taps to have a flow of below 1.13 to 1.13 litres per second

iv. Runoff

Minimize storm water runoff by implementing porous paving materials, which reduce runoff during peak rainy seasons.) A moisture-retaining surface can also be used

as part of an environmental control strategy via evaporative cooling. Impermeable surfaces are limited to walkways and social-gathering spaces. Permeable surfaces over most of the landscape, such as natural vegetation, are encouraged on the largest part of the site. Although parking takes up a great deal of the landscape, permeable paving is used to allow rainwater to filter back into the water table.

.v. Water storage roof

The water storage roof's main purpose it to collect and store rain water to use within the building for non-potable purposes and reduce mains consumption. The water storage roof needs a parapet with a 100% waterproof membrane turned up at the edges. The water protects the membrane from ultra-violet rays and acts as a thermal buffer. The collected water can be used for flushing toilets. A top-up mains supply should still be provided. The water roof eliminates the need for falls, outlets and down pipes, soakaways and surface drains, as the usage of water will be greater than the

collection. (Woolley and Kimmins, 2000:107)

A 100 mm depth capacity for a roof that collects from an area 5 times bigger than itself should be adequate

Surplus spill provision should also be provided in case of excessive rain.

.vi. Vegetation

The landscape is to be rehabilitated to host only indigenous grass species and trees. An exception is to be made for the exotic poplar forest on the river bank; it contributes to the ambience of the site. The poplar forest is to be systematically phased out and supplanted by an indigenous species.

.10.1.1.2. ENERGY

i. Energy consumption and resources

The building is to be developed in such a way that it can be serviced by public transport and can promote walking and cycling as alternative means of transport. Development patterns encouraging higher densities on transport routes and minimizing private car parks should be encouraged. The parking distance should be no more than 400 m away.

Develop settlements and buildings with emphasis on pedestrians and a reduced dependency on fossil fuels, which can be serviced by public transport, walking or cycling.

Encourage walking through walkways, hiking paths etc.

Prioritise pedestrians, public transport and cyclists.

In coordination with efficient public transport to serve to reinforce less consumptive lifestyles, the rental of bicycles should be promoted.
Minimize and make private vehicle car parking expensive (Camberdine 1994: 73).

ii. Ventilation systems

Mechanical ventilation systems are to be avoided, while optimum environmental comfort is to be achieved through passive systems such as cross ventilations, stack effect, direct gain, indirect gain, cross ventilation, night time cooling. When mechanical ventilation systems are unavoidable, systems should be put in place that can be switched of and manually controlled to reduce energy consumption.

iii. Heating and cooling systems

The minimum requirement for energy is to be used as target:

Use solar heating systems

Use high efficiency water tanks, insulate older tanks

Insulate hot water supply lines

When solar water heating is not an option, use energy efficient alternatives such as heat pumps, high

efficiency electric or gas water heaters.

Use air conditioning only when it is required_by special circumstances such as environmental noise, dust and pollution, very warm micro climates, home offices where heat or humidity control is needed to provide appropriate comfort levels for occupants with special needs. Mechanical air-conditioning is energy-intensive and conservation awareness is needed.

Seal the building envelope if air conditioning is being used to prevent air leaks and loss of cooled air

to the exterior and to control interior humidity levels. Shade windows or use high performance glazing.

Select and design energy efficient air conditioning system.

Insulate and ventilate attic spaces housing air conditioning equipment and ducts.

iv. Renewable energy

Sun energy is to be harvested through the implementation of photovoltaic panels and through the heating of water by solar radiation. The harvesting of wind and water energy as well as of biomass should be investigated.

Investigate wind and water energy harvesting as well as biomass as an energy source

Solar energy: In South African conditions it is important to take full advantage of solar gain. A broad range of technologies exists.
Domestic hot water heaters: These heaters are closed-loop systems used for providing potable hot water to household or commercial facilities.

Medium temperature thermal systems: Typical application for these systems is Air-conditioning or industrial-process water heating.

Photovoltaic Systems: For remote energy generation this system is an attractive option because of low maintenance, ample sunlight, high reliability and widespread support (Camberdine 1994: 73).

Bio-mass and waste utilization: biogas is a by-product of the anaerobic digestion of the solid waste stream; it offers benefits of waste and wastewater processing, methane

production for cooking and refrigeration, and the generations of organics for soil enhancement. The possibility of all energy needs in a sustainable may be met through the use of biogas. It can be used to directly fuel gas refrigerators, stoves, absorption chillers, and water heaters (Camberdine 1994: 73).

v. Solar water heaters.

Solar water heaters can be used to heat buildings, domestic hot water and swimming pools. The most common solar heaters consist of a 2m² flat-plate solar collector and a storage tank. The expensive corrosion-resistant metals of solar collectors can be replaced with plastics. These plastics weigh less, and are more cost – effective to transport, install and connect. The only draw back is that plastics do not conduct heat well. (Deudney & Flavin 1983: 69)

vi. Appliances and fittings

Energy saving devices should be specified for the building. The following reductions in energy consumption can be expected:

	Conventional kW/h	Possible kW/h
Fridge	1900	900
Washing machine	960	540
Freezer	1800	765
Lights	4% efficient	24% efficient and lasts 10 times longer

Table .6.1: Conventional versus Energy Efficient Appliances (Gibberd 2004: 4)

.10.1.1.3. SITE

The site is to be rehabilitated with indigenous veld grass and trees.

Avoid landscaping that requires large-scale artificial inputs

Enforce manual means of maintenance, for example manual grass cutting for resale.

.10.1.1.4. WASTE

Minimize the production of waste and work with neighbouring businesses and institutions to enable recycling.

No mixing of organic and inorganic waste should take place. Recycle organic waste by making compost; by feeding waste to pigs; or by selling it to worm farms.

Inorganic waste includes glass, metal and plastics; and paper that should be sorted in provided bins. Adequate storage should be provided.

The use of local sewage systems to be encouraged such biolytic systems, compost,

aqua privies etc. Water recycling also encouraged in conjunction with these systems

Minimize waste by site monitoring; including clauses in the contract documentation; and designing for minimal waste; for instance, avoid the cutting of components and design according to modular and standard sizes.

.10.1.1.5. MATERIALS AND COMPONENTS

i. Embodied energy

The embodied energy of a material indicates the amount of energy applied in the manufacturing of the product. Materials of a low embodied energy should be specified for the construction. If high embodied energy products need to be used, it should be recycled again when it is replaced.

i. Material and component resources

Maximize the use of materials and components that come from renewable sources such as timber, thatch and rock

Building components should be designed in such a way so that it can be reused

Second hand and recycled materials is to be used

Imported materials are to be minimised.

Keep use of non-renewable materials to a minimum

Use locally sourced materials

Use materials found on site

Use materials which are as close to their natural state as possible (Brewis, 2003: 2).

ii. Manufacturing processes

Ensure that the manufacturing process of components and materials are not

harmful to man or the environment. Reduce embodied energy and resource depletion. Look at factors such as the extraction, manufacture, the carbon content, transport, processing and disposal stages of a products life. Materials are also classified as renewable (organically produced, i.e. timber) and non renewable (i.e. aluminium) of which the renewable materials are the environmentally sound option.

Encourage suppliers to incorporate recycled material in their products. Encourage use of recycled aluminium or steel and cardboard. The material from the existing buildings which are to be demolished should be recycled. The rubble can be used for fill, while corrugated iron roof sheets can be re-used.

Minimize large-scale ground works by designing along the existing contours of the site and design the building in such a way that the minimum material is required.

.10.1.2. ECONOMIC CRITERIA

.10.1.2.1. LOCAL ECONOMY

i. Local contractors

As this project is aimed at sustaining the community economically, local contractors labour and suppliers are to benefit from the construction. This should be kept in mind when materials and systems are to be specified. Concrete Blocks are to be locally made according to engineering specifications to generate employment and skill development. The stone for the wall cladding is available from a distance of approximately 15 km from the site. The saw mill from which the roof beams will be brought is only 2 km away from the site. Labour will be sourced 1.5 km from the site in Masising. The construction elements that are to be sourced the farthest form the site, are the laminated beams for the roof system. There is a company in White River, approximately 90 km from Lydenburg, which manufactures these beams.

ii. Local material and component suppliers

80% of construction materials such as sand, cement and wood are to be locally sourced. Masonry elements in the form of cement brick units are to be manufactured by the community as a community upliftment and employment scheme.

iii. Local furniture and fittings manufacture

Local furniture and fittings are to be manufactured on site in the Joinery workshop. All maintenance and repair are to be dealt with through the joinery, which will employ only local contract workers.

.10.1.2.2. EFFICIENCY OF USE

The use of space is to be maximised through space management, sharing of facilities and the implementation of flexible design through fold-out stack doors and moveable partitions.

All functional spaces are to be managed so as to have an occupancy rate of 30 hours per week. A 24-hour usage cycle is to be employed through the sharing of facilities by different occupants by day and by night.

The sharing of ablution facilities by members of the public and private residents is a practical consideration for efficient use. The business school and catering facility also share classroom facilities, as well as a communal foyer and gathering space. Optimum space employment is to be maintained at all times to ensure economical feasibility. Space use should be under continual scrutiny and be placed on a ontinual space management system as the building program develops with the economy and the needs of the town.

Recycle facilities.

Have facilities serve multiple functions.

Build only the minimum to serve multiple functions

Ease of service to be maintained by making building accessible for repairs and services from the roads' side with least disruption to the natural rhythm of the occupants.

.10.1.2.3. ADAPTABILITY AND FLEXIBILITY

Services are to run through hanging ceilings as well as raised floors.
Servicing for ablution facilities is to be enclosed in an easily
reached shaft with a width accommodating easy maintenance. Services should be placed in such a way that they accommodate future change in use.

Cassette system Air conditioning units are used in the offices and are installed into the ceiling. They are typically square units and require +/- 450mm ceiling space. Individual room control and group control options are available. These are to be individually controlled and should not act as a substitute for the passive climate control measures.

The structure should be designed along a grid to facilitate ease of planning and layout. A modular system also decreases waste of components and space.

Internal partitions are to be custom made by the local joinery shop where applicable, and should be designed to be foldable and stackable.

Vertical circulation and service cores should be placed in such a way that they accommodate change in the building program

.10.1.2.4. ONGOING COSTS

No external surfaces are specified to be painted, leading to minimal ongoing maintenance.

The life cycles of materials are to be considered during the design process.

Site security is to be provided by sufficient lighting at night and egular patrolling of the walkways. A lookout point on which the maintenance and security office is located will add to the surveillance factor. Security at the lockers in the bath–house facility should also be provided.

Electrical and communication systems as well as HVAC and plant are to be placed in such a way that they provide ease of access with minimum discomfort to the building occupants. Access from circulation (movement) areas is more feasible than from stationary areas (“pool” areas). Lift-off panels to vertical and horizontal ducting are to be provided. Masonry shafts are to be employed when ducts are not feasible.

.10.1.2.5. CAPITAL COSTS

The cost of the development is to be shared jointly by the council (the building will be used as a community facility) and private investors (the office space, the restaurant, and the facility will be used to promote private ventures such as adventure courses and trout fishing courses).

Materials of demolished buildings are to be re-used. The largest part of the site is undeveloped; therefore there are no existing infrastructure that can be incorporated into the plan.

Long-term income is to be generated primarily by the tourism sector and by rent generated from private entities for the use of offices and the exhibition areas for functions and events.

.10.1.3. SOCIAL CRITERIA

.10.1.3.1. OCCUPANT COMFORT

i. Thermal comfort

The recommended thermal comfort temperatures for the building are to range from between 20° C and 22° C with humidity levels of 45 -50 % RH. Optimum comfort is to be achieved primarily by implementing passive climate control devices. Occupants should be encouraged to dress according to temperature and season.Cooling and heating systems that have been investigated are the following:

ii. Evaporative Cooling

Evaporative cooling uses the local atmosphere as a heat rejection resource. An adiabatic process achieves evaporative cooling, since no system energy is gained or lost. The heat loss potential of evaporating water to the atmosphere is dependent on the local humidity, as less evaporation will occur in humid conditions. A breeze

over the water surface will ensure that humid air is constantly 'removed' from the evaporation zone and replaced with dry (unsaturated) air, thus promoting evaporation. This system is suited to warm dry climates. In designing a building climate control system utilising evaporative cooling principals, the local precipitation pattern may be used to enable an evaporative pond or to wet building elements that will act as evaporative coolers to the system.

iii. Direct systems

Direct gain systems are the most widely used and generally the most efficient passive heating mechanisms. For example, a typical building with north facing windows allows direct heat gain into rooms, heating the room's atmosphere. Thermal collection and storage are integral with the building's interior. Solar-orientated windows can hence be called collectors.

iv. Indirect systems

Building encasing elements with high thermal mass are orientated to receive direct solar radiation during daytime. Heat is stored in building materials. When the local climate cools down, after sunset, heat energy is radiated back into adjacent internal spaces. The storage and release of heat energy can stretch over seasons if the thermal masses of the building elements are large enough.

v. Isolated system

This system also works with the principal of stored heat in building elements, but these heat stores do not release heat directly to adjacent rooms. The storing mass can either be integral or isolated from space served by storing mass. One way of delivering stored heat to a room is via natural convection. As air is heated in thermal store, it rises and can be channelled upwards to a room where thermal adjustment

is required. Only one collector can serve many rooms, this allows the building to face any direction with only the collector having to face the sun. The thermal store can be charged without affecting the internal climate of the whole building.

vi. Lighting

Minimize electric lighting energy demand and heat gain: Provide ample natural lighting wherever possible, the ambiance and quality is unsurpassed and it is free.

Use low energy electric lighting (florescent) to reduce heat gain and energy demand. “Fluorescents are greatly improved with colour rendition comparable to incandescent and electronic ballasts to totally eliminate perceptible flicker. They use 75% less electricity. Average life is 10 times longer than incandescent, reducing maintenance and transportation costs. In most circumstances, the economic payback for new

fluorescents is under two years. The environmental payback is immediate" (Camberdine 1994: 73).

Don't over light exterior or interior spaces. Use focused or task lighting in preference to whole room or large area lighting.

Use controlled, filtered and indirect day lighting to light interior spaces and reduce electric lighting loads. Increase the effectiveness of day lighting with generous wall openings, open floor plans and light coloured interior finishes.

Extensive implementation of natural day lighting will reduce the use of energy of artificial lighting. Design application includes incorporating ptimum window sizes and room depths; colours; and the orientation of the building, as well as solar ntrol. Sun control devices are to be used, and the maximum amount of daylight is to

penetrate the building. In addition, glare is to be minimized and direct summer sun is to be blocked

Sun control devices are to be used such as moveable louver systems.

Maximum daylight is to penetrate the building through apertures letting light through.

Glare is to be minimized through shading devices such as louver systems and roof overhangs

Direct summer sun is to be blocked through overhangs and louver systems

Standard luminance to be maintained:

Walkways	50	lux
Corridors	100	lux
Loading bays	150	lux
Classrooms	300	lux
Offices	500	lux
Workshop precision assembly (joinery)	1500	lux
Workshop minute assembly (fly tying)	2000	lux

(Metric Handbook,1999:39-12)

vii. Ventilation

Air changes (liters per person per hour)

Minimum fresh air is to be supplied to be allowed as follows:

accommodation	air changes (liters per person per hour)
offices	2-6
kitchens	10-20
public toilets	6-12
restaurant	10-15
storage rooms	1-2
exhibition hall	3-6
class room	3-4

(Metric Handbook: 1999:38-9)

Cross ventilation

Buildings are to be climatically controlled by means of cross ventilation, the stack effect and a rock bin system. To utilise natural ventilation, an uninterrupted building depth of 12 m is required. Potential airflow velocity at crucial areas or locations forms the basis for most air-handling systems. For comfort air-conditioning, dead spots or too high airflow velocity should be avoided. Openings are to be orientated directly towards the ruling wind direction.

Rock-bin ventilation

The rock-bin ventilation system is a layer of rocks underneath the building through which outside air is pumped. The air is cooled due to the low temperature of the rocks, and filtrated through the building. A pump mechanism is necessary for this system. For every 10 m^2 of space that needs to be ventilated, 1 m^2 of rock-bin is

needed.

The Stack Effect

The Stack Effect results from the rising of warm air rising and exiting from high-level openings. The warm air is replaced by cooler air drawn into the building through lower openings. For the stack effect to be effective there needs to be a significant difference between the outside and inside temperature (Outside air being cooler than inside air). The stack effect is therefore more effective during night-time.

Other ventilation mechanisms

Louvers to allow ventilation in summer

Openings are to be orientated directly towards the ruling wind direction

viii. Noise & acoustics

Acoustic control is to be implemented in exhibition facilities (museum, exhibition hall) and the amphitheatre. The restaurant's acoustic qualities are required to be ambient. Low background noise of 40-50 dBa is acceptable. On the western side of the site, a line source of noise is found to be generated by the frequent passing by of trucks along Viljoen Street. The placing of the buildings is such that a buffer or barrier is created to lessen the intrusion of sound.

ix. Views

The views are located on the southern and south-eastern of the site. According to Jeremy Gibberd, occupants must be placed 6m maximum from the windows for optimum occupant comfort (Gibberd, 2004: 6).

x. Access to outside

The building should be easily accessible, from a fire safety point of view, as well as for public transport. Layout is to be legible and intuitive for occupants to orientate themselves

.10.1.3.2. INCLUSIVE ENVIRONMENTS

i. Access

Access to viewing areas and the park area is to be provided via a ramp system.

WC compartments for the disabled and wheel-chair–bound are to be provided on the ground level.

Ramps are to be at a fall of 1:12 (8.3%)

Edges between walls and floors and steps should be well defined

Hand railings and support should satisfy the national building regulations

A minimum exit width of 2.2 m is to be maintained in all instances

ii. Signage

All signage is to be easy to read and should be noted by the image and branding committee and should be incorporated in the design guidelines.

iii. Kitchens and bathrooms

All kitchens and bathrooms should be readily accessible and fitted with the appropriate equipment according to energy consumptions specifications. The location and layout are to be designed for optimal use.

iv. Furniture

Furniture for workspaces should promote ease of use, and movement within workspace should be considered in the design concept phase

.10.1.3.3. ACCESS TO FACILITIES

The development is within comfortable walking distance from residential areas (400 m).

Retail facilities are to be provided on site.

Postal and telephone facilities are within walking distance from facility.

Email facilities are to be provided within the building.

Email facilities are to be provided within building

Banking facilities are found close by (2.5 km) (400 m). No ATM should be accommodated on the site, as to encourage walking to and from the Central Business District.

Childcare is to be provided in the building or in close proximity (within 1 km from site)

.10.1.3.4. PARTICIPATION AND CONTROL

Fittings and components such as windows and louvers should be able to be manually controlled by the users themselves.

It is important that occupants understand the systems of the building, in order to maintain optimum performance of the system. Most of the systems are to be “opened up” and visually observed in order to bring across the concept of interconnected services relying on each other

Spaces for social interaction are to be provided. The building program should also encourage social interaction. This is done by accommodating a sidewalk café culture, a marketplace (both informal and formal), parks as well as unprogrammed spaces in the building with spaces to sit and views to enjoy.

Facilities such as recreation facilities, libraries and sport fields should be shared between different private enterprises, or between the public and these private institutions, and encouragement should be given in this regard.

.10.1.3.5. EDUCATION, HEALTH AND SAFETY

i. Lifelong learning

In light of the current knowledge-based economy era, a culture of lifelong learning should be nurtured. This can be done by including and encouraging access to the Internet; creating programs and spaces for structured courses; providing spaces with learning materials such as books, journals and physical artefacts; and posters.

ii. Fire regulation

Fire escapes are to be designed according to SABS 0400.

The length of the escape route from the furthest point from the exit to the outside is not to exceed 25 m, as stipulated by SABS 0400.

Fire extinguishers are to be provided on every level and in every functional space (exhibition areas, reception, offices, restaurant, kitchen, catering school, coffee shop, business school, workshops and ablutions). Open areas are to be fitted with fire hoses.

iii. Smoking

According to the law, smoking is prohibited in every interior space. Because of the largely outdoor character of the building and site, smoking should be allowed in certain selected areas so as not to expose children and non-smoking users of the building to unwanted smoke.

iv. Security

Users of the development should feel safe and secure at all times, both in the building and on the site. Safety is to be provided by surveillance by having the buildings' "eyes" (windows and view points) face the interior of the terrain and by

supplying adequate lighting. The park areas should also be constantly patrolled, day and night, as the building will run on a 24-hour cycle.

v. Exercise

A healthy lifestyle is to be promoted by the layout of the building. The circulation systems will include cycling and walking routes, while a climbing wall is also to be incorporated. Functions that correlate with each other, such as the hiring of fishing equipment and the acquisition of a fishing day permit, are purposely separated from each other to facilitate movement throughout the building.

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