

Hartbeespoortdam Butterfly Conservancy

Briefing Document

PART



INTRODUCTION

"...in biosociality, nature will be modeled on culture understood as practice; it will be known and remade through technique; nature will finally become artificial, just as culture becomes natural. The objectivism of social factors is now giving way to...the beginnings of redefinition and eventual operationalization of nature¹."

This anthropocentric view is what adorns our everyday. As the technophilic stance suggests, today's civilization is still dominated by a mechanistic paradigm.

With this discourse I would like to challenge this paradigm and present a project which realises the connectedness of man and nature towards an equilibrium.

A Harvard biologist, Edward Wilson in 1984 proposed the existence of a genetic basis for the human preference towards the natural world. This concept Wilson called Biophilia. His theory proposes a genetic setting which implies an ancestral connection to our roots as hunter/gatherers.²

The need for the fulfilment of this embedded connection to nature is a key reason for closer contact with nature. In the 21st century we are often too busy to venture out into the field and experience nature hands-on. Thus an experience in an environment of which the contexts have been controlled to make the understanding of a natural phenomenon possible, is of great value. This offers the user an educated point of view upon which he/she can base informed decisions on issues relating to the natural environment.

PROJECT RATIONALE

With the destruction of the butterflies' habitat by deforestation, farming activities, pesticide use, urbanization and over collection of butterflies, a situation has arisen where a number of butterflies are on the endangered species list.

"Most people love butterflies; unlike many other insects, they are not regarded with distaste and referred to as 'creepy-crawlies'"³.

With the development of a butterfly conservancy visitors will be provided with a thorough understanding of what butterflies are and how they contribute to the environment. As a mission statement the butterfly conservancy will educate people and provide them with the necessary tools to create habitats in their own gardens, which in turn will contribute to the continued existence of the species.

CLIENT PROFILE

The client, a qualified chartered accountant and horticulturist, is interested in developing a portion of his property. In 1964 the plot was surveyed and took on its present shape. The land encompasses a portion of what is presently a wholesale nursery. The client and his wife have stayed on the plot for 19 years.

The area is evolving into a region with a high growth potential which has motivated the owner/client to re-think the possible function of his/her plot. The owner and his wife would like to secure a venture that they could oversee in their retirement. They also hope to provide economic opportunities for their adult sons. The owner has saved a considerable amount of money, and is financially sound enough to receive a bank loan.

The lower northern quarter of the plot will be made available for the development. The 1,52 hectare plot contains about one million plants consisting of palms, bougainvillaeas, cycads and a variety of trees to name just a few. With the sale of 25% of these plants a substantial capital amount can be realised (+/-R3 125 000-00).

The upper farm is to remain as a wholesale nursery, with emphasis being placed on the indigenous range of plants.

SITE SELECTION



1.01: HARTBEEPOORT DAM

Before 1994 there was not much commercial development around the dam. It was a haven for mountain climbers, a few yachtsmen and boating enthusiasts and the ever popular "Breakfast Run" for motor bike enthusiasts. Water, beautiful scenery,



University of Pretoria etd – Pettey, R P (2005)

wildlife and a couple of small establishments created the context of the area; a peaceful, safe secluded place unaffected by suburban influences. This all changed after 1994. There was a great movement away from “city life” towards the more unspoilt and so called “safer” areas. Thus there was a sudden boom of new townships and a population explosion which challenged all existing infrastructures and services. Today the area is an economic hub attracting hundreds of visitors every weekend.

Nature Conservation will be interested in the conservation aspect of conservancy. With other nature reserves scattered throughout the North West Province, there is already a strong interest in the area.



1.03



1.04

The Department of Environmental Affairs and Tourism have a strong visitor base which will be further enhanced by the conservancy.

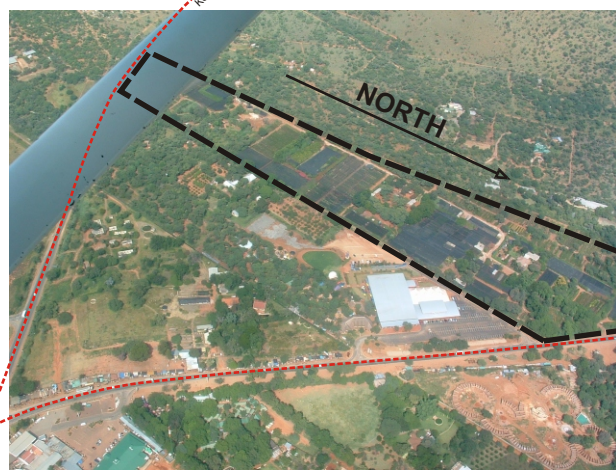


Madibeng Local Municipality

North West Provincial Government

1.05

Possible tenants and interested members of the community (restauranters, artists and craftspeople)



1.02: THE SITE AT THE DAMDORYN NODE

The site being investigated is on the Northern side of the dam in an area referred to as Damdoryn which borders on a new development - Chameleon Village. With encroaching development engulfing the area, it is economically beneficial to develop the commercial street edge. Thus the northern portion of the nursery which was identified as being the most commercially viable, is to be referred to as “the site”. The rest of the property will remain an indigenous wholesale nursery that stocks plants which are utilized by butterflies and their larvae. The existing nursery already has the infrastructure which is required for the successful establishment of an indigenous nursery.

FUNDING/ INTERESTED AND AFFECTED PARTIES.

Primary funding for the development will come from the owner, who will also manage and run the final product.

Different operations within the development will be rented out to interested parties.

KEY USERS

Primary users will include nature lovers, butterfly enthusiasts, tourists en route to Sun City and other surrounding attractions, locals, school groups and other educational institutions. Special consideration will be made for visitors that are physically challenged.

PROJECT BRIEF - ACTIVITY REQUIREMENTS

The primary attraction and also the catalyst, for other operations will be the butterfly conservancy. The architecture for the conservancy will focus on highlighting the experience of viewing butterflies in their “natural” environment.

Secondary activities which will complement and co-exist with the butterfly conservancy will be a gallery, shop, restaurant, laboratory, offices, lecture theatre, activity zone and indigenous garden and nursery. All areas of the conservancy will be multi-functional.

Butterflies belong to the insect order Lepidoptera, meaning ‘scaly-wings’. These magnificent creatures are fascinating in that they undergo a complete metamorphosis consisting of four stages. It is important that the architecture responds to this complexity in as many ways as possible.



As a coherent whole the development should contribute to the requirements of tourism, conservation and education.

PRECEDENT STUDIES

Design which originates from its environmental context will form a design research problem. Implementing this creates architecture which is typical to context and is sustainable, making autonomous functionality possible. The co-existence of man and nature is a prominent point, which through the development of appropriate architecture, can improve. Precedents include design and concept work by Prof. D. Holm and a project in sustainability and user-friendly architecture - IBN-DLO Institute in Holland.

Museum architecture of the 21 century has set an extensive precedent in creating architecture that acts as a vessel for content. The Apartheid Museum is a very good South African example of this concept. It also forms an interesting study of material, texture, durability and movement.

Precedents which satisfy the functional aspects (building types) of the design include restaurants, facilities which encourage hands on interaction, nurseries and other functions that form the buildings programme. The butterfly conservancy in Pietermaritzburg forms the main precedent with regard to the butterfly enclosures and is the best of the two possible precedents in South Africa.

CONTEXT


Site condition will be an interpretation of what is observed on the site (descriptive) which could be substantiated with literature, resulting in a less subjective point of view

Historic surveys of contextual information will include two categories, natural site factors and cultural site factors.

Natural site factors will incorporate aspects such as topography, climate, hydrology, soil types, vegetation and wildlife.

Cultural site factors will encompass existing land use, jurisdictional requirements, economic and social conditions, circulation and traffic, community services, visual conditions and user requirements.

LEGAL AND REGULATORY REQUIREMENTS

Legal requirements will include municipal laws and codes ( SABS National Building Regulations), legislation governing environmental issues, community needs, and other laws that effect the development, its inhabitants and future life cycles.

If the design problem is to be solved in its entirety, cognizance of basic principles need to be taken into account.

Movement - this includes pedestrian, vehicular, sun, water and wind flow.

Construction materials - ideally plants, stone, soil and any other materials found on the site should be reused.

Sustainability - biogas, solar systems, rainwater harvesting and grey water recycling should be incorporated into the design

Comforts/ luxuries - lighting and ventilation requirements should be considered, with limited use of non-sustainable mechanical systems.

