1/TSOGA ENVIRONMENTAL CENTRE

CONTEXTUAL CHALLENGES/OPPORTUNITIES

CAPE TOWN’S INCOME DISPARITY

LEGACY OF Apartheid

GLOBAL WARMING

LIMITED WATER

WASTE CRISIS

SCARCE RENEWABLE RESOURCES

HOUSING & SERVICES CRISIS

URBANISATION

TSOGA

TSOGA’S PRIMARY ACTIVITIES IN Langa & Samora MacheL:

1994

2004

BRIEF FOR THE TSOGA ENVIRONMENTAL CENTRE

DESIGN PHILOSOPHY

PRINCIPLES FOR PRAXIS

THE SITE IS AN INTEGRAL PART OF THE WHOLE

WE HAVE NOT TAKEN THE FINAL STEP OF OUR JOURNEY BUT THE FIRST STEP ON A LONGER & EVEN MORE DIFFICULT ROAD

NELSON MANDELA

NATURAL SYSTEMS

HUMAN CONSCIOUSNESS

THE SITE OF THE ENVIRONMENTAL CENTRE IS IN THE CONTEXT OF URBAN OPPORTUNITY TO INTRODUCE THE NATURE OF TSOGA FTBGRANT TO HOUSE TSOGA’S ACTIVITIES IN SAMORA MACHEL

SANDRA MACHEL

LANGA

CAPE TOWN

WEATHER PATTERNS

SOUTH AFRICA

CAPE TOWN METROPOLITAN

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2/SITE ESTABLISHMENT

OPTIMISE LOCAL RESOURCES & BENEFITS

GROUND WATER

6% of treated water is used on building sites & in gardens

BENEFITS

- Creates employment
- Reduces exploitation of water resources
- Waste disposal
- Energy saving
- Reduced fuel throughput
- Reduced traffic congestion
- Reduced global greenhouse gases
- Reduced aquifer pollution
- Corporate responsibility

WASTE

65% (by weight) of waste produced is demolition rubble

MOUNTAINS OF WASTE IN CAPE TOWN'S FUTURE

The heavy flow of waste in Cape Town's future... (Image of a mountain of waste)

UNEMPLOYMENT

44% employment in sand-based industries

EXCLUSION

77% of construction is demarcated

AN OPEN SAFE BUILDING SITE ENCOURAGES OBSERVATION
USE WASTE AS RESOURCE

WASTE RECOVERY & RECYCLING

DEMOLITION WASTE = BUILDING MATERIAL

> ZERO WASTE

BUILDING WASTE IS RECYCLED BACK INTO THE STRUCTURE

APPROPRIATE TECHNOLOGY

CULTURE & VALUES

SKILLS & TRAINING

EACH COMPONENT IS MULTI-FUNCTIONAL
4/TIMBER WORK & ROOF
SHIFT FROM CONSUMPTION TO REGENERATION

RENEWABLE RESOURCES
FOREST PLANTATIONS MAKE UP 16% OF TOTAL LAND IN SOUTH AFRICA

POLES & FORESTS

REEDS & WETLANDS

APPROPRIATE TECHNOLOGY
VERNACULAR PRECEDENT

SKILLS BASE & CRAFTS

BUILDING METHODS ARE EASY TO GRASP

GALLERY ROOF STRUCTURE
5/SERVICE SYSTEMS
MINIMISE EXTERNAL DEPENDENCIES

WATER & SANITATION
Water supply exhausted by 2025. Severe water restrictions become the norm from 2008.

Brace yourself for a long hot summer
The water service has forecast temperatures higher than normal, with a question mark over water supply levels.

Energy
South Africa contributes 3.5% of global CO2 emissions.

Energy Sources in South Africa
- Coal 97%
- Hydro 0.3%
- Nuclear 0.2%
- Other 2.5%

Cape Town in the dark as Koeburg network trips

Food Security & Health
32% of households in Cape Town survive on less than R50 per day.

VIEW FROM PEDESTRIAN WALKWAY
7/ LOCAL SUSTAINABILITY CATALYST

EACH BUILT INTERVENTION IS A CATALYST FOR MAKING SUSTAINABLE LIVING ENVIRONMENTS THAT PROMOTE WELL BEING

AN INTEGRAL PART OF THE WHOLE

UMNTU NGUMNTU NGABANTU - PEOPLE ARE PEOPLE THROUGH OTHER PEOPLE
- ANCIENT AFRICAN SAYING WHICH ROOTS INDIVIDUAL HUMANITY IN COMMUNITY

QUANTUM SHIFT FROM HYDROCARBON TO WASTE TO CARBOHYDRATE