

2.0 UNDERSTANDING THE PROBLEM

2.0 INTRODUCTION

General design objectives for the Centre were investigated, identified and highlighted during interviews with the community, the construction industry community and other projects with similar concepts and principles. Further objectives were identified and generated through applying appropriate architecture (sustainable) and technologies with regard to site –specific conditions; community needs, climate, topography, vegetation, use of local labour and materials, construction and implementation. The following objectives were identified as relevant to this thesis in trying to achieve:

2.1 ART FOR THE PEOPLE

Awareness of art in South African culture lies low on the list of priorities. There are isolated institutions, some producing exceptional works and artists, others at best mediocre. The public in general knows too little to either distinguish between them. This resulted in the so –called ‘high – art’ culture, the untouchable product, exhibited in sterile conditions in a museum or a gallery, aiming at the avant-garde- but divorced from life and not interacting with the needs of the society. No real bond can be established under these circumstances, no understanding and thus no love of art can develop. We need something to relate to, something humane and offering hope.



Fig.6: Cry against war, an example of high art Mixed media artwork (Campbell 1999:7).

The need for human involvement exists in art, as it does in everything else that concerns society. The need is becoming recognized all over the world and right here in the country, the ‘New South Africa’ ideal is the manifestation of it. This can be clearly illustrated in the way the

cultural arts have been incorporated in recent prominent architectural buildings constructed in New South Africa.



Fig.7: New constitutional courts entrance where letters of 11 languages of country are incorporated in wall façade (SA Digest, 2001:10).

It is commonly known that art mirrors the needs and hopes of society; it is a reflection of its fears as well as its dreams. Through art, society’s problems can be recognized, assuming this to be the true function of art. Thus, artists producing art for this purpose form an integral part of society.

For too long, artists have been removed from architecture, which is seen as elitist and above **the everyday needs of the community**. This breach resulted in a society which neither understands nor appreciates art, except as something apart and unconnected. Thus, it is proposed that the whole idea of art and craft training should be extended to the public involving them and making them feel committed through the use of art in construction industry. Society must understand art, if it is to understand itself as

“Architecture is produced when a building and culture come into contact, and connect in such a way that something valuable happen” (Ballantyre: 2003:115).

The awareness of applied arts in Mamelodi, is through the Arts and Crafts Centre run by the Department of Arts and Culture. According to Matlatsi (2006), the centre is failing to perform its mandate of preserving and training young people in arts and crafts because of the lack of funds and equipments.



Fig.8: Traditional African Artwork. (Campbell 1999:39).

Therefore, the Centre's art workshop facility will act as an alternative to the Government run facility in the area to develop, research, and pass on the skills of applied arts to more people especially the young generation to ensure continuity of cultural practices and source of income.

2.2 ART AND ARCHITECTURE

It can be said that it is only relatively recent that architecture and art become independent from one another in the Western World. Initially, art and sculpture as well as other crafts were considered as enhancement to the buildings, all working together towards common expression rather than the masterpieces in themselves.

On the other hand, in African cultures, that separation has never really set in. Art and religion, religion and nature, art and nature, art and architecture are all still aspects of each other.



Fig.9: Mosaic done by community worker (SA Digest, 2001:97)

The aim of blending the arts with architecture is not to diminish the importance of either. Architecture can be a canvas for human expression, as it is for artistic activities. The building in itself will become an artwork to be admired by all and pulling the focus to the inside of the building, making you aware of similar activities inside.

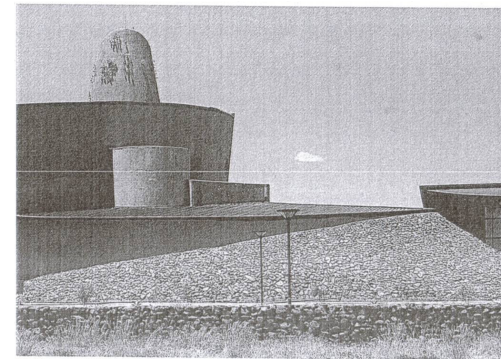


Fig.10: Northern Cape Legislature: sculptural elements and rich earthy colours decorated in beadwork and scarification form a complex interpretation of traditional responses (SA Digest, 2001:38).

The introduction of artistic poetry in architecture in the form of mosaics, sculptural elements, detailed surfaces, and earthy surfaces, is hopefully reminiscent of beadwork, basket weaving and traditional skin decoration (scarification). The use of these elements is a way of making the handmade surface an integral part of the buildings. This serves to connect the public with the buildings as narrative structure that they can identify with and through this create a set of buildings representative of their land and future and not a handful of edifices borrowed from schemes of the past (Malan & McInerney, ed, 2003).

Architecture offers an important mirror to a given culture. It is, therefore of great importance that architecture be showcased in the society. Architecture has an important role to play in the growth of South Africa as a young democracy and greater public awareness of architecture should be actively promoted.

Through the Centre, which will incorporate art, mosaics and other related artistic work in its design; it is expected that the students training in arts, crafts and construction will not only put their individual mark on their environment and thus assimilate their spaces, but also surround themselves, as well as the public with sources of inspiration and ownership of all artistic work done on a building. Art should not only be

seen, it should be about the experience, inspiration, stimulation, familiarization and communication.

2.3 ROOTS OF CRAFTS

Crafts is the practice of making decorative or functional objects, wholly or partly by hand, which requires both manual and artistic skill. The term crafts also refer to objects made in this way. Crafts today predominately comprise weaving, basket making, embroidery, quilting, pottery, wood making, and jewellery making. They are made by amateur craftsmen/women at home, as a hobby with minimum equipment and by professionals with regular outlet for their product.



Fig.11: Beading work by rural woman (Malan & McInerney, ed, 2003: 27).

Crafts can also be used as occupational therapy. For example, patients may be taught crafts to strengthen weakened muscles, or to help in gaining the use of artificial limbs. Emotionally disturbed people are also taught crafts as an outlet for their feelings. Crafts also provide the disabled with an occupation that diverts attention from their handicaps. This aspect will be incorporated in the design in form of occasional workshops held for these people.

Crafts are as old as human history. Originally fulfilling utilitarian purposes, they are now a means of producing aesthetically appealing handmade objects in a world dominated by mechanization and standardization. Among the earliest basic crafts are basketry, weaving, straw –work, and pottery. Nearly every craft now practiced can be traced back many hundred years or even thousands of years.

For years, this traditional skills and talents has been passing on from parent to child in rural areas as a source of income and livelihood but with new a western style of living, the tradition set up of passing on skills and talents is almost not there. Hence, the need for the Centre to develop these talents and skills to match international standard for good income and exposure.



Fig.12: Cultural artifacts hand made to be sold to locals and visitors (<http://www.museums.org.za>).

There is also a need to bring the traditional crafts from the rural areas to urban areas where people will appreciate it much as a source of income and cultural heritage. Cultural crafts are associated with people living in rural areas but there are many people living in urban areas with the same skills and talents. Providing them with resources and a place to develop their skills in an urban environment is the great challenge of the Centre. Therefore, the Centre will have workshops for wood and crafts, sewing, painting and braiding.

2.4 LOCAL, RESEARCHED MATERIALS AND CONSTRUCTION TECHNOLOGY.

RECYCLED MATERIALS

The informal housing (shack dwellers) is the biggest producer of housing stock in most of developing countries. Most of it is illegal and built through self help construction process. The sector is characterised by insecure tenure, poor quality environments, small units, high density inadequate physical and social services and unavailability of finance and credit services.

On the other hand it is affordable and presents not only problems but also solutions to housing shortages and problems. There is possibly no better starting point for the sustainable agenda in the developing world than the shack.

This building type is predominant in all cities of the developing world and it is a highly paradoxical phenomenon. The informal housing (shack) is perfect example of resource efficiency that most of developing countries are struggling to achieve- its use of local materials and full re-use and recycling of building materials and components.



Fig.13: Informal housing showing the use of locally available materials and recycling /re-use of materials –Mamelodi (photo by author, 2006).

A conventional shack can consist almost entirely of re-used materials and components sourced close to the site. Since they are self built, shacks exploit the most abundant skills and technology available within the community and household.

With more people living and coming to live in these informal settlements, lack of materials within reach are scarce such that materials are collected far and are expensive. Most of these materials are industrial waste dumped far away. It will be one of the duties of the Centre to avail industrial waste to the community by establishing new or reinforcing existing re-cycling centres and doing research on innovative ways of using industrial waste in informal housing. The Centre will also use some of the recycled materials in non load bearing walls like partitions and external walls as one way of showing the community the use of recycled materials. A re-cycling yard within the Centre will be established as model to aspiring local recycling yards within the community.



Fig.13: The Centre will reinforce the existing re-cycling yard as above in the area (photo by author taken on 12th May, 2006).

ALTERNATIVE MATERIALS

In search for alternative materials which meet the expectations of the population as well as the housing and environmental requirements, the technology which use raw earth, timber from sustainable managed sources and other organic products such as straw and bamboo as raw material present great potential.

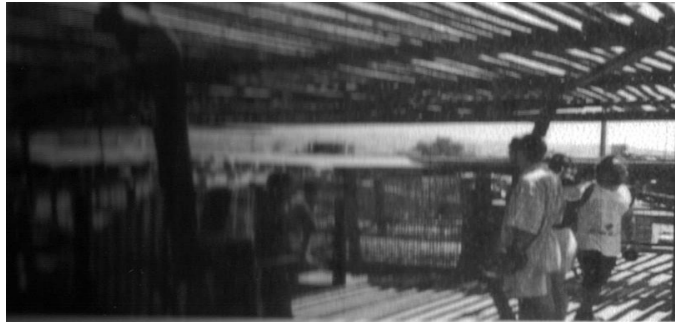


Fig.14: The Centre will use combination of steel and reed (timber) cladding as done at African Market-Durban (KZNA Journal, 2001:31).

Although there is currently much resistance to the utilisation of these materials, they have been used in developing countries since time immemorial. Some of these techniques are deeply rooted in the culture of different regions, and if they were to be used in a technically correct and economically viable way, it would be possible to restore the confidence of the government, construction industry and the users.

Each construction technique becomes unfavourable went into disfavour mainly due to the technological changes brought on by the Industrial Revolution and the consequent new demand on the market. It remains one of the major problems of the traditional rural construction methods, which are environmentally friendly. This has been adapted in urban housing and is mostly abandoned in urban development because of the false idea of being modern.

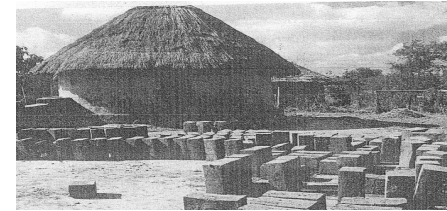


Fig.15: Traditional house and sun dried earth blocks, Limpopo Province, South Africa (Du Plessis, 2002:47).

Most of informal settlers are migrants from rural areas, using their cultural skills in construction will be useful and easy. With community participation, it will be easier to use these talents/skills in the use of improved traditional materials (du Plessis, 2002:28).

Building materials absorb most of the cost in house construction – closely related to labour use and construction techniques. Therefore development and use of alternative locally available cheap materials appears to be the key solution to the problem.

Community or beneficiaries participation in production of locally available improved building materials can contribute to economic and social life of the area. Some of the technology used to produce these alternative materials can be hard to be adopted by the private sector. Community participation is vital in this case as it require more unskilled labour and can greatly increase sense of ownership. Alvar Aalto combined ideas from the Modern Movement with the traditional and the classical to find a fitting architectural expression in Finland; South Africans architects can also reformulate modernism to fit local conditions. Therefore, the centre will use some of the alternative materials instead of the normal building materials and will have workshops and laboratories to research on materials and construction technologies.

MODULAR/OPEN PLAN PRINCIPLES

The concept of modular expansible design could be proved to be pivotal for achieving housing with a flexibility to respond to changing needs and incomes. The beauty of modular housing – itself a Modern Movement concept – is that the *same* house design offers suitable

options for persons of varying incomes or even for the same person whose income might vary over time.

Peeters and Osman (2005) investigated the construction of portable shacks in Mamelodi, locally known as 'Zozo' and proposed a modular system. The modular system will make the Zozos easy to assemble and transport and most importantly it will increase its structural capacity. The proposal was suggested to one of the local 'Zozo' construction yard owner's near the proposed site. Mabogoane (2006) agreed that, indeed the parts of the 'Zozo' they are making are heavy to transport and they are not structurally stable. They are standing today because the shacks are close to each other such that they act as one unit to adverse wind. He however, said they can not afford to make small parts as suggested in modular system because it will require more material, thereby increasing the price. He further said that although most of the materials are free (industrial waste), the transport cost is high as all industries are located far away from the townships.

The above problem comes back to the involvement of the private sector, in this case, by helping out to dispose their industrial waste where it is needed for recycling. The City of Tshwane can also help in designating industrial waste sites that could be useful to the communities and near the communities. The Centre will also form partnership with industries whose waste is needed in the community and establish many re-cycling yards.