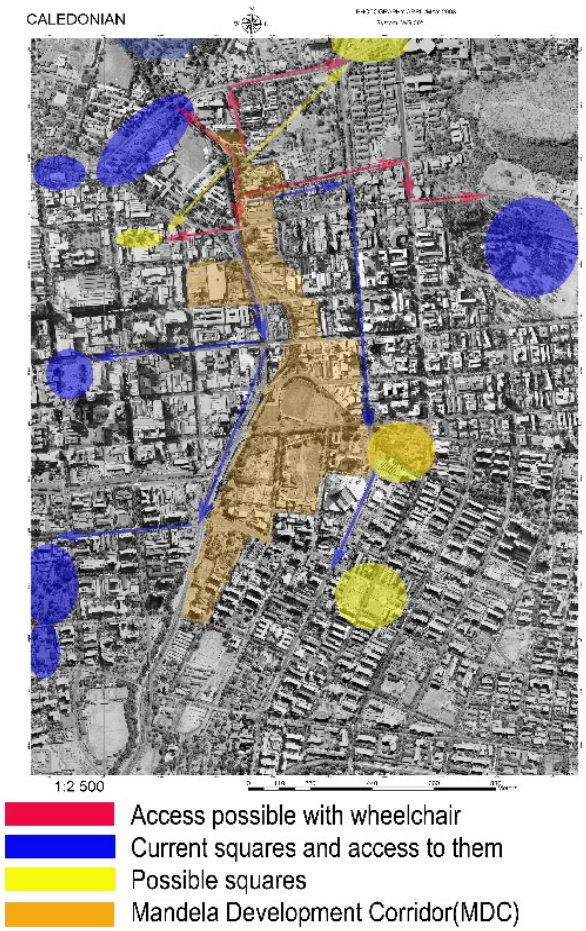



Fig. 41 Access and squares

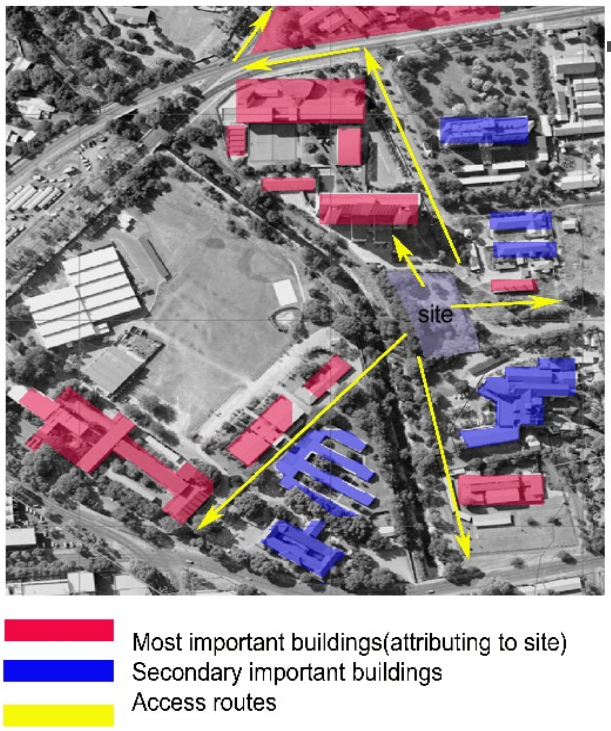



Fig.42 Building importance and Links

The framework proposes that the focus of the links shift from mainly vehicular to mainly pedestrian. It would however be more viable to strike a balance between the two. Including access for the disabled will aid in reaching the overall social aims set out by the framework.

6.2.2 Historic elements and destinations:

The historical elements of inner city of Pretoria contributes to the sense of place present in the city. The framework proposes that these historical elements be used as memory elements within the corridor.

It is very important to make use of memory or destination points throughout the corridor in order to aid in spatial organisation. The framework lacks the necessary consideration of the northern sites' role in organizing space around, and movement through destination points. The selected site next to the nursing college has the potential to serve a destination and dispersion role. The site will fulfill this role to the rest of the hospital precinct.

The Apies River serves as the boundary of the MDC and also represents a historical element. The problem with the Apies River as identified by the framework is that it has become uninviting, lifeless and mismanaged. The framework thus aims to enrich the urban fabric by restoring the river to its natural state and incorporating it into the corridor. This incorporation into the MDC goes hand-in-hand with the creation of tranquil spaces where people can escape to. There is afterall a definite need for social as well as private spaces within the urban setting. This need is in accordance with the programme of the Psychosocial Adjustment Center which states exposure to both social and private environments.

6.2.3 Current challenges:

The framework speaks of the importance of urban open space where people can see and be seen, access amenities as well as interact with others. The framework addresses this importance by means of perimeter blocks, which will provide secure, semi-private, open space for public interaction.There is the possibility that this type of approach might become too monotonous since very little room is left for completely open, yet secure, public open space.

The removal of the park-like nature of open space from the MDC might prove detrimental to the whole development. Park-like open space is essential to the psychological health of everyone, not just disabled people.

6.3 Architectural spatial vision:

The key points set out in the following sub headings can be interpreted in a number of ways. The way in which it has been done here is in terms of the needs of disabled people.

6.4 A balanced movement network:

•The city as movement economy:
Economics is based upon expenditures and gains or savings. The very same can be applied to movement economy. Energy used must be balanced with energy saved. An out-of-balance system would lead to over utilization and underutilization respectively. It should be noted that there is a difference between the energy expenditures of an able and a disabled person. The balancing of movement economics thus requires further division into disabled and able-bodied economics.

•Natural movement and city layout:
Movement, be it by wheelchair, car or foot, is a natural action, which entails that the layout of a development be done in such a way as to enhance and compliment natural movement.

- Places for people to walk:

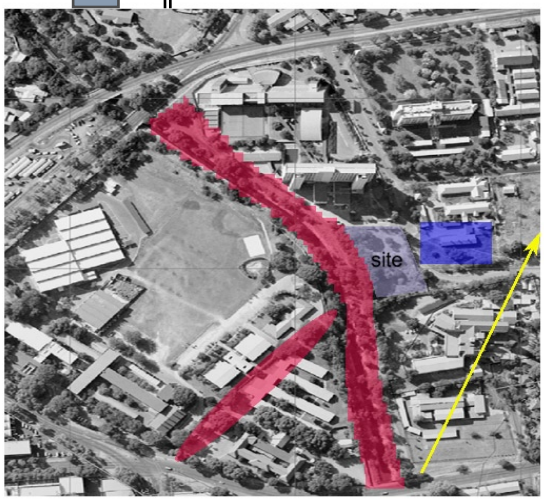
Disabled people, especially those in wheelchairs, interact much better with pedestrians than with people in cars. An environment that enables people to walk wherever they need to be makes that environment accessible to a greater number of people. Places for walking should however be designed while bearing in mind that walkable spaces are not neccesarily spaces accessible by wheelchair.

- Variety of routes to facilitate a variety of functions:

A wide variety of available functions are essential to the functioning of a Psychosocial Adjustment Center for it provides for the much-needed movement and social interaction of patients.

- Grid of streets:

A proper grid of streets aids in easier orientation for the users of urban space, irrespective of bodily functions. A grid of streets further entails shorter travel distances due to the defined city blocks created. The connection between the centre and the city blocks will be based upon movement principles. The movement from one block to anotyher is often destination based. The same principle will be used in guiding movement to and from the centre.

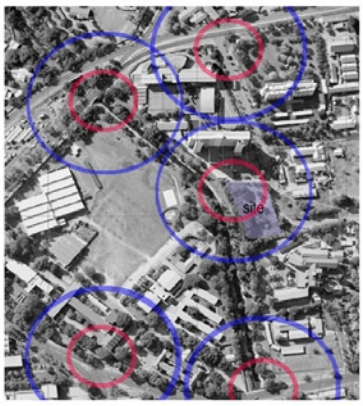



Proposed pedestrian spine
Regeneration of old buildings
MDC extention

Fig. 45 Proposed development


Primary traffic flow
Secondary flow (to site)
MDC proposition

Fig. 43 transport routes




100m radius( wheelchair maximum travel)
400m radius(maximum walking distance)

Fig. 44 400m radius

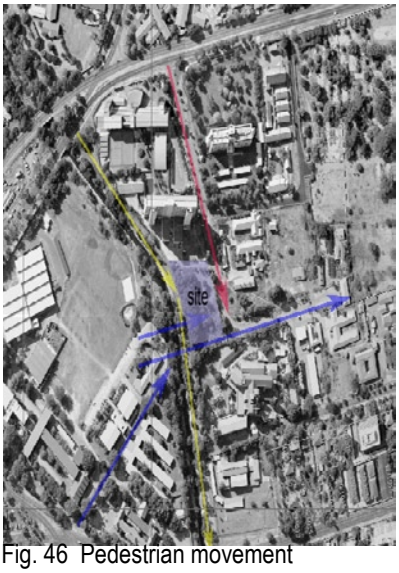



Fig. 46 Pedestrian movement

6.5 A local district network:

•Precincts as finite places
This has the advantage of the collection of functions within an easily recognizable area. Orientation and access to precincts would also become easier. A defined area (primary precinct) for functions benefits disabled people greatly since traveling distances is limited greatly.

- Opposing single-use complexes

Single use complexes tend to draw a minority crowd, only interested in the particular use housed. Enriching social interaction is thus limited if existent at all. The Psychosocial Adjustment Center must also be of a multi-functional nature in order to draw a hgreater variety of people who can then disperse to the northern regions.

- 24 hour cities

Areas that are dangerous to able-bodied people are twice as dangerous to disabled people due to their limited self-protection resources. The site for the center, in its current condition, becomes extremely dangerous at nighttime and this will only change if the site, as well as surrounding areas, become 24-hour activity zones. A 24-hour city will also have the advantage that nocturnal functions can be housed that will aid the economy, security and social interaction. The movement facilitated by the Psychosocial Adjustment Centre will provide a setting for 24 hour activity due to the larger influx of people into the area.

- Seamless developments

This term has much in common with the links previously mentioned. The only difference being that the links refer to a larger context,namely the MDC as a whole.The respective local districts should also be properly connected with each other by means of access routes etc.

6.6 Investment in the public realm:

- Creating memorable urban spaces

Memorable urban spaces can make a positive or negative impression upon the user. The creation of positive spaces that stimulates the physical and psychological needs of the user, becomes very important. A person in the process of adjusting to a physical disability will greatly appreciate any environment that leaves a positive impressiojn on him/her. The requirements for such an environment can be simple, it should merely be one with as little inherent stumbling blocks as possible.


Dispersion nodes
Park-like areas (social interaction areas)
Public transport (dispersion means)

Fig. 47 local district layout


Educational
Institutional
Commercial

Fig. 48 zones

The aim of the center would be to create a positive memorable space that serves as a destination within the framework. The centre can afterall only be seen as a destination if the stumbling blocks in the movement towards it is removed.

- Urban form to support exchange

Able-bodied people often pity disabled people. Urban forms should thus be created where disabled people can perform certain tasks and functions that would enable others to perceive them as being both competent and positive.

- Architecture growing from local climate

The Pretoria vernacular made use of responses to various types of contexts in order to create buildings. The same approach will be adopted in the design investigation to ensure that both physical and figurative contexts are taken into account.

- Phasing

The phasing of a development will allow time for inputs from all the parties concerned. This is an essential part of inclusive as well as universal design since the only way to properly design for disabled people is to include them in the process and take note of what works and what does not.

- Equity/accessibility analysis

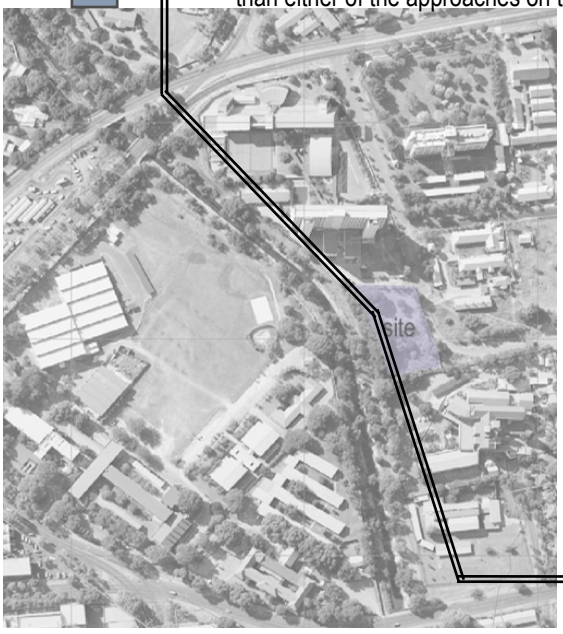
An equity policy along with an accessibility analysis will help determine who is being left out or discriminated against in the urban setting. This is a process not only beneficial to disabled people.

- Inclusive approach (integration of planning activities)

Integrating an inclusive approach with a holistic design approach would have a much more encompassing outcome than either of the approaches on their own.


Fig. 49 important social


Fig.50 views



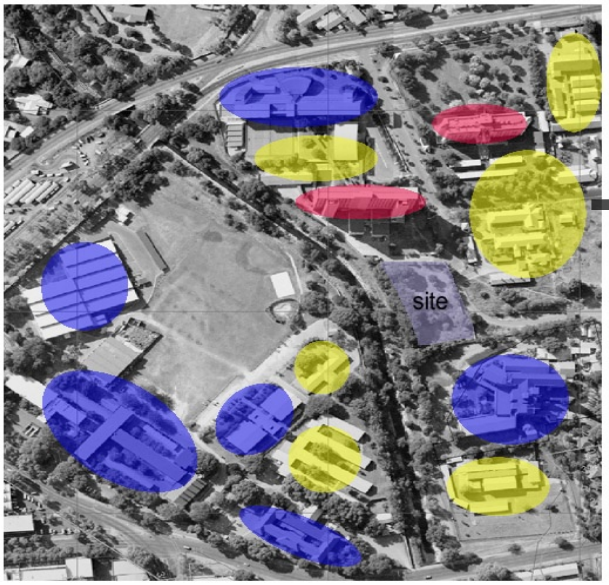



Fig.51 building levels

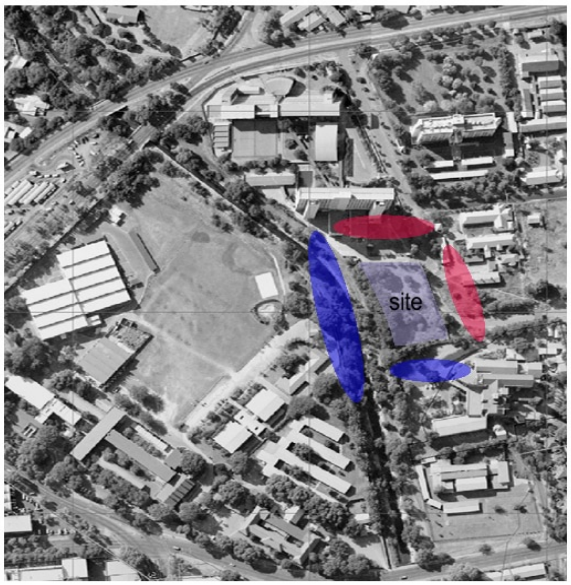



Fig. 52 edge relation

The encompassing outcome will aslo be respresentative of the parties envolved in the design process.

(All bullet headings are as stated in the urban design framework by Urban Solutions)

6.7 Connecting Precincts:

The difference between local districts and precincts lies in the areas they represent. Local districts represent a larger area than Precincts.

There are a number of precincts and development zones identified by the city council of Tshwane:

- The Gautrain
- Museum Mall
- Sunnyside/Esselen Street precincts
- The Arcadia residential precinct
- The Union Buildings Precinct
- The Struben Street Government Boulevard
- The Taxi precinct
- The National Zoological Gardens precinct
- The River Park precinct

Of these developments the Union Buildings Precinct, the Taxi precinct, the National Zoological Gardens precinct and the River Park precinct are relevant to the site chosen for the Psychosocial Adjustment Centre. These precincts would receive primary connection from the chosen site while further away precincts receive secondary connection.

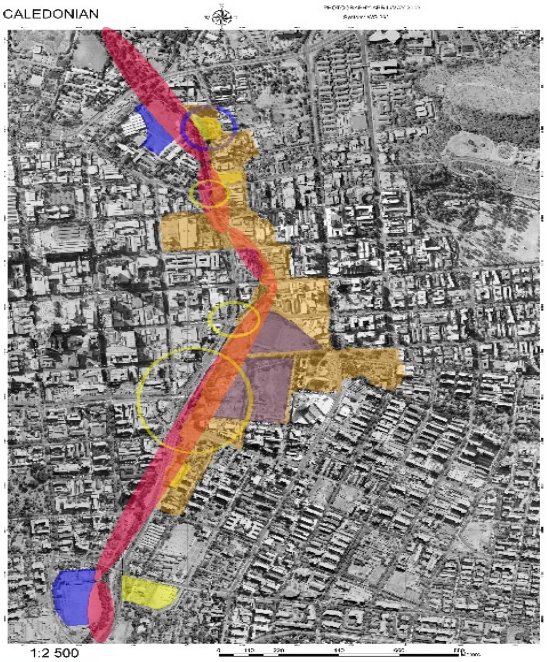
The framework proposes that the patterns of use compliment each other. This would aid the first time user of the MDC to be more aware of his/her environment. The framework places further emphasis upon the hierarchical importance of the gateways and the public space as well as buildings that front them.

The importance of hierarchical spaces and buildings within a larger development lies therein that it aids in the creation of more legible environments. The northern part of the MDC has a definite problem in this regard since there is no hierarchical node or some other form of reference that guides the user from the T-junction of Edmond and Nelson Mandela Streets.

The Psychosocial Adjustment Centre will play a role in this regard by providing a visual node and active reference point at the northern end of the MDC. The term active refrence point refers to a point that represents more than mere visual orientation.

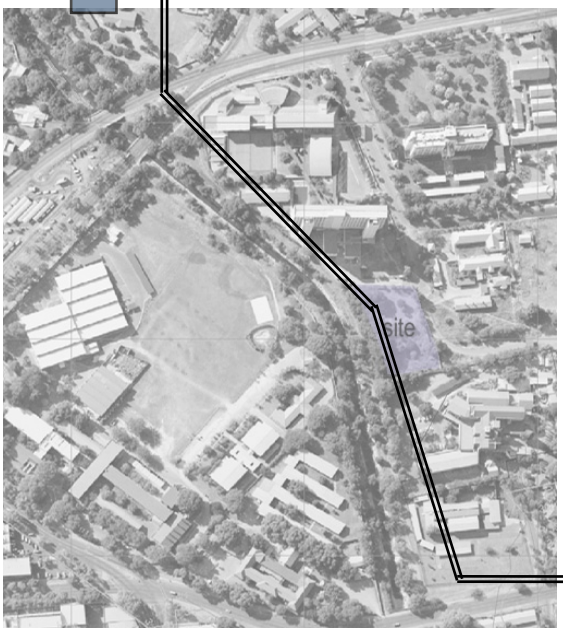

Primary nodes(Access to greater city)
Secondary nodes(Dispersion from site)

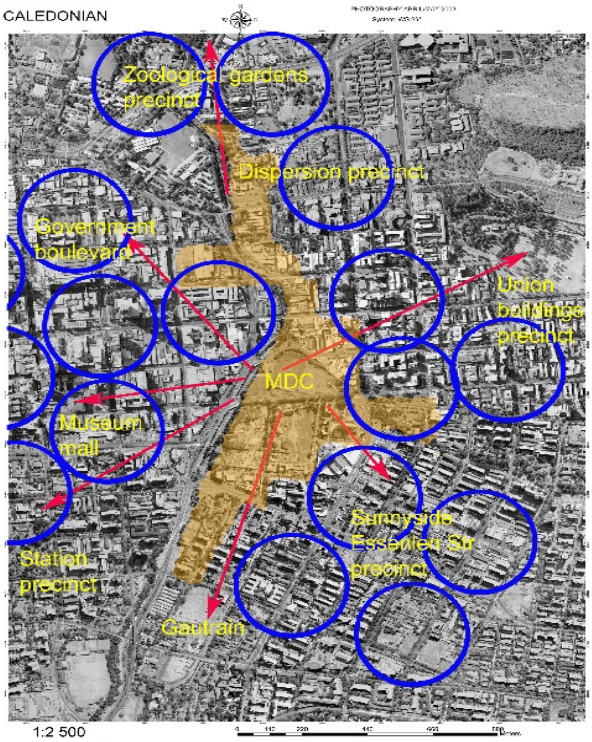
Fig. 53 Transport nodes




MDC Spine
Used open spaces (circle = chosen site)
Un-used open spaces and possible destiniations
Mandela Development Corridor(MDC)

Fig.54 Role in the city




Access and links to local districts
local districts extents
Names of local districts
Mandela Development Corridor(MDC)

Fig. 55 Precinct relation

**7 The question now is, how?** (How to approach inclusive design)

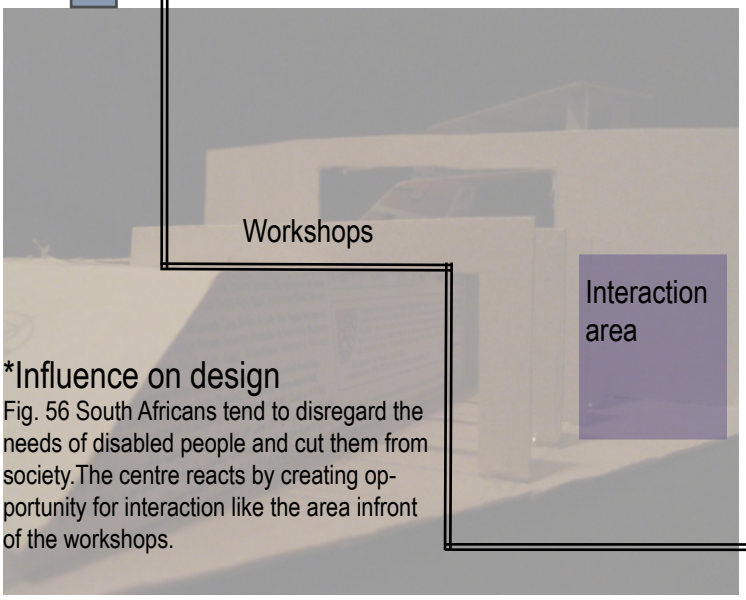
The sources of the exclusion of disabled people from our environment have intrinsic links of which the policies, practices and values of the professionals involved in the design process represent a few. These developers have pre-determined ideas of what a family and other users should be like in terms of both physical and psychological stature. It must however also be mentioned that disabled people represent the minority and therefor they cannot easily contribute to a change in pre-determined ideas.

The people in this minority community are often dependent on assistance to move from one place to another and in some instances to do anything at all. Architects, in a poor response to this tend to perpetuate aesthetic ideas and practices that are based upon one-dimensional conceptions of the human form. These ideas are preoccupied with aesthetic pleasure rather than with functionality.

When we take a good look at the history of the architectural profession we will find that various attempts at putting the social at the centre of design theory have been silenced in order to maintain an image of professional theory associated with a depoliticised fine art. Louis Mumford (Rybczynski, W., 1992:25) noticed that modern design had become characterized by its estrangement from desires, emotions and needs of people. Frank Lloyd Wright once said (Rybczynski, W., 1992:40) that the so-called “plan factories” stands at the centre of the architect’s loss of contact with the individual and his/her needs. Social architecture can thus be described as a range of ideas, which are committed to design which creates a culture that is capable of nurturing life in all its forms. This is what the aim of architecture should be if it is to be inclusive.

**7.1 Social exclusion and the development process:**

Mobility is fundamental to the liberty of the human body and the lack thereof become defining features in the lives of people with this shortcoming. The defining features of able people differ largely from that of disabled people and it is often this difference that offers the greatest design and social challenge.




*Influence on design
Fig. 56 South Africans tend to disregard the needs of disabled people and cut them from society.The centre reacts by creating opportunity for interaction like the area infront of the workshops.

Fig. 57 Scenario 1-pure commercial construction. Mostly disregards context

Fig. 58 Scenario 2- Rural or constrained construction.A context responsive approach

The socio-institutional dynamics and the contribution it can make to the removal of physical barriers the disabled person has to confront had been largely ignored.

Third party participation in the design process is not common practice anymore and property values depend largely on profit signals and opportunities and not on the provision of non-profit uses and provision.

The fact that property developers are more prone to the provision of inclusive facilities in new facilities is due to the technical and cost restraints. Other factors that may influence the level of provision of inclusive facilities are the differences in local legislation from country to country, the attitudes and practices of key actors in the development field (like the general inclination towards inclusive design held by Architects) and the level of activity of local organizations for the disabled. It is evident that the whole provision problem is an intricate one and that it can only be remedied if all the players become aware that they can up the level of their game even further.

The larger spectrum of property development needs to be grasped before one could critique the system at all. Attitudes and other inclinations towards inclusive facilities only represent one aspect of the problem despite the fact that some can probably see it as the major root of the problem.

Specific buildings and functions are provided for at different stages of urban development and these buildings differ in the required level of inclusiveness. Each of the provision networks is demand and market specific and it responds to historically specific institutional and other social relations.

Property development needs to be provided with proposals and precedents in order to realize the possibilities. The property development system does not need direct answers.

**7.2 Determinants of developer's response to requirements:**

There are three basic aspects implicated in the estrangement of disabled people from the property development and building processes:

- The economics of real estate
- The legal frameworks underpinning the actions of developers
- The technical discourse and knowledge systems of real estate

Developers see the inclusive design of a facility as placing a limit on the marketability of the property and with this, the provision of ramps for instance is seen as giving an institutional feel to the development. This is partly what this dissertation is all about, proving that the provision of inclusive facilities need not give an institutional feel to a development. In doing this, a proper precedent will be established which will serve as a baby step to the eradication of such thought.

The provision of legal frameworks for the provision of inclusive facilities has taken place in most countries but South African frameworks tend to be very vague and misleading while also being one sided and lacking in the provision of statutes in terms of pragmatic requirements. Developers tend to get away with little or no consultation with disabled people in the provision of facilities. The legal system does little to force developers to do more than the very basics.

### 7.3 Defining disability in South Africa:

Previous definitions of disability have been limited to the medical model, which stresses the physical differences between disabled people and other people in society. Such definitions failed to recognize the nature of interaction that an individual might enjoy with society as well as the diversity of the human condition.

The United Nations Standard Rules on the Equalization of opportunities for
Disabled People incorporate the World Health Organization's definitions, as they would appear in its Programme for Action Concerning Disabled People. The standard rules defines disability in the following way: The term disability encompasses a great number of functional differences and limitations that might occur in any population People may be permanently or non-permanently disabled, be it physically, mentally or sensory.


Fig.59 discriminatory regulations

### 7.4 Disabled people and human rights:

The policies and practices set out by the Apartheid government served to ignore the rights of minority groups like the disabled. It also set out mechanisms to further the abuse and discrimination against these groups. The advent of democracy brought with it the introduction of mechanisms like the bill of rights, the human rights commission and the constitutional court, which all have the ideal to eradicate past inequalities.

The constitution:
(Equality Clause: Section 9:3 of The Bill of Rights:)

The Constitution automatically accepts that discrimination against a disabled person on the basis of their disability is unfair; it is therefore not the responsibility of the disabled person to prove the unfair treatment.

Fig. 60 access being denied to people in wheelchairs to to the use of steps as the only means of rising

The standard rules of equalization:

The rules provide a framework for the creation of equal opportunities for all disabled people that form part of society. These rules specify that in order for disabled people, as members of their societies, (to) exercise the same rights as other people, they have a moral and political obligation to remove the barriers that prevent them from exercising the same rights as any other person. The rules also state that the needs of every individual are of equal importance. These needs should be made the base for the planning of every society. The employment of resources also should be done in such a way as to ensure equal participation of everyone in a particular society.

Key focus areas:
(Legislation:)

South Africa's legislation fails to acknowledge and protect the rights of disabled people, thus discriminating against them. There have been some attempts to remedy this past discriminatory legislation, but all has been in vein since most of the previous legislation concerning disabled people still remains within our statutes. The four main areas within our judicial system that still remains discriminatory are the statutes, the interpretation of legislation, inappropriate administration and new legislation.

*Influence on design
Fig. 56 South Africans tend to disregard the needs of disabled people and cut them from society.The centre reacts by creating opportunity for interaction like the area infront of the workshops.

Socio-economic rights:

The basic and key social rights such as right and the denial thereof to a majority of disabled people have lead to widespread poverty and all that ensues thereafter.

Barriers to these rights (employment, education, housing, welfare services, health care, transport and social security) still prevents disabled people from becoming active members of the mainstream of society and its economic activities.

Vulnerable groups:

Certain segments of society like disabled children, women, elderly people as well as rural people are more vulnerable to discrimination. The nature of the barriers can often be seen as a lack of access, be it access to transport, information, rehabilitation, psychological help or social interaction. It is this lack of access that is addressed within the planned psychosocial adjustment center for it is here where disabled people will learn how to go about in assuring better access to the things they really need.


Fig. 61 The actions one does may one day lead to injuries that can cause disability


Fig. 62 The actions one does may one day lead to injuries that can cause disability

**7.5 The nature of spinal cord injuries in South Africa:**

Defining the disability:

The spinal cord consists of quite a number of nerve fibres that gives it the same function as a two-way communications cable that carries messages from the brain to the body. An injury to the spinal cord may result in loss of sensation, movement as well as bladder and bowel control. Such an injury might also affect breathing, sexual function as well as temperature control. These losses in bodily function should receive consideration in the design stage of any building for disabled people.

Damage to the spinal cord occurs when either the blood supply to it is cut off or it is severed or bruised by bone fragments. The spinal cord as a whole can also be severed or crushed, a fact that will lead to more permanent damage. The degree of the injury will determine the functions lost to the person. Complete injuries (quadriplegic) represent a complete loss in movement and sensation while an incomplete injury(paraplegic) represents a lesser amount of loss in movement and sensation.

The incidence of spinal cord injuries:

There are no specific statistics that states the nature of spinal cord injury in South Africa but it has been estimated that between 400 and 500 South Africans sustain spinal cord injury every year. Most of these people are between 15 and 29 years of age. There are also 5 injured males for every injured female.

The causes of spinal cord injuries:

The causes of spinal cord injury fall into two main categories namely traumatic and non-traumatic of which the most is traumatic. Statistics gathered from the USA and elsewhere indicate that the most common traumatic causes of spinal cord injury are:

- Violence 3.1%
- Rugby 2.5%
- Motor Vehicle, Motorbike and Pedestrian accidents 51.1%
- Falls 19.8%
- Water Sport 13.0%
- Crush Injury 5.3%
- Horse Riding 0.6%
- Other Sport 1.2%
- Other Trauma 3.4%

The South African situation is very similar to the above with the only real difference being that crime and political violence adds to the list.

The effects of spinal cord injuries:

- The Inability to sense when the bladder is full thus failing to empty it voluntarily
- The Inability to feel when the bowel is full thus failing to empty it voluntarily
- Muscle spasms below the level of injury
- Men often have erection problems as well as a decrease in fertility.
- The Inability to move one's limbs
- The ability to sense pressure, heat or cold in parts of the body below the level of injury diminishes. The blood supply to these areas should be monitored so as to prevent skin damage and bedsores.
- Too Low or high blood pressure.
- People with quadriplegia are not able to regulate body temperature below the level of the injury.
- The person's self-esteem and self-image changes severely.

The effects of spinal cord injuries:

People with spinal cord injuries will be unable to do to work, study, go home, cook meals or do most of the things they were used to. This will be the case for many months for a person with paraplegia. A person with quadriplegia on the other hand will find him or herself in this situation for anything from 4 to 12 months and even longer.

Dependence:

People with spinal cord injuries are highly dependent upon the acceptance and aid from others granted that they, the disabled person, have control over everything being done for and with them.

**7.6 Employment Equity:**

The South African Employment Equity Act that was passed in 1999 stipulates that any company with a number of employees larger than fifty should also employ people with disabilities.

This act will create a favourable environment for employers to realize the potential of disabled employers. Disabled people will also gain from the act since they should receive more opportunities to work in the mainstream environment. There is however a problem that arises from the act. This problem is one of skills since a lot of disabled people lack the skills to do mainstream work as well as the access to institutions that teaches these skills.

*Influence on design

Fig. 56 South Africans tend to disregard the needs of disabled people and cut them from society.The centre reacts by creating opportunity for interaction like the area infront of the workshops.

Access and transport once again prevails as the main problem generator in the environment of disabled people. Disabled people without proper access to the mainstream and its activities are in a sense more disabled than disabled people with access. It is this very lack of access to training that makes disabled people difficult to employ.

"So, I am still trying to discover
while I am in my wheelchair, where is this disability? A bit of lateral thinking will make you realize that the very object that identifies someone as being "disabled" is actually the object that minimizes or negates the disability. "(http://www.independent living.org/docs5/SANatlDisStrat2.html
visited on 25 February 2005 at 09:55)

The above statement gives a clue as to how the problem of employment equity for disabled people should be approached. Designing the access to various amenities needed by disabled people, one will enable them to be just as profitable as any other person for once their accessibility are catered for on the same level as other employees, they are just as able as any other.

One can after all only see employment as equal when one strives to employ the skill of the prospective employee and not the body of that person.


Fig. 63 Unequal employment leaves some peopple without the basics needed in order to survive

Fig.64 People might surprise their employers upon a mere opportunity to work

Fig. 65 Blind people especially need a sense of safety,hence the enclosed areas for ex.

Fig. 66 Avoiding stark contrasts between outside and inside benefits all users.

Fig.67 Proper access is universally neccessary

## 8 Universal design:

### 8.1 The popularisation of universal design:

The messages of social architecture are political and process oriented, and demand changes to physical infrastructure as well as to the social, political and attitudinal structures. Much of the radicalising edge of social architecture has eventually been blunted by other ideas, which have ascended to pre-eminence in the various debates about designing for the needs of the disabled. One of these other ideas is the idea of universal design.

| *Principle* | *Description* |
|---|---|
| Simple and intuitive use | The use of the design is easy to understand regardless of the user's experience, knowledge, language skills or concentration levels. |
| Equitable use | The design does not disadvantage or stigmatise any groups of users. |
| Perceptible information | The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. |
| Tolerance for error | The design minimises hazards and the adverse consequences of accidental or unintended fatigue. |
| Flexibility in use | The design accommodates a wide range of individual preferences and abilities. |
| Low physical effort | The design can be used efficiently and comfortably and with a minimum of fatigue. |
| Size and space for approach and use | Appropriate size and space is provided for approach, reach, manipulation and use, regardless of the user's body size, posture or mobility. |

Source: Center for Universal Design, 1995.

Fig. Imrie, Hall (2001:15) *The basics of universal design.*

Universal design is a social movement concerned with the production of goods and buildings that are usable to the greatest possible range of people.

The proponents of universal design are often very critical about compensatory architecture where otherwise inaccessible buildings are made accessible in order to somehow compensate disabled people for the buildings' lack in functionality.

This so-called additive design is seen as drawing too much attention to the physical disabilities of a person, which in turn may lead to stigma and social exclusion. Design should not be additive in nature in order to be inclusive, it should much rather use inclusive principles from the beginning of the design stage. Design


Fig.69 Differing needs for different disabilities
Werner, D., 1998:1

*Influence on design

Fig.68 Design elements like lifts can be used by all of the users of the centre irrespective of their physical state.

should thus be more than accessible, for accessible design acknowledges that people have a right to access of the built environment but it doesn't go far enough in expressing social integration for this in its own has more than a mere physical element. Universal design counteracts this idea by seeking the integration of disability with the basics of design. The objective is to draw attention away from impairment as a source of possible social ostracism. The fact that the needs of people are never static is also recognized along with the fact that designs should enhance different personal qualities rather than inhibit them.

Universal design is seen as a complex system, which requires a team approach in order to transcend any one of many possible individual viewpoints. The focus also lies in saving as much energy as possible thus unnecessary expenditure of effort needs to be eliminated. This can be achieved by means of designing devises and organizing spaces in such way that their usage becomes simpler and their function more legible.

The psychosocial needs of disabled people would have to be designed for if universal design is to be successful in the quest for an inclusive environment. Disabled people do not often speak up for their psychosocial rights, a fact which may hamper the universal design system severely. The needs of people, including the disabled, change over time which means that designs and developed contexts should be more than inclusive to current needs.

It is also difficult to see how far the transformations in the lives of disabled people will occur without the proper instatement of a social or political programme for change. The core philosophies of universal design are not very helpful in this respect. The basic criteria of universal design is after all apolitical as it does not recognize the underpinning relationships between the social, technical on the one side and political and economic on the other. Environmental problems could for example only be solved with design.

Some people see corrective mechanisms as a means of "correcting" disabled people in order to make them live normal lives. The objective here is social integration and to make people part of the mainstream again. The correct manner of introducing corrective design is to do it in such a way that neither disabled nor able people will recognize the mechanisms in place. These mechanisms should often be of a legal nature.

Mainstreaming does however revolve around the standards set by the majority. When looking at universal design ideas from this angle, it appears that disability is something to be eradicated and overcome rather than be accepted as part of the traits of a person.

The proponents of universal design claim to be able to use adjustable design elements in order to accommodate the widest variety of users. Some critique about this statement has arisen. It would for instance be impossible to design for all possible users, thus universal design is not possible, at least in technical terms. It would however be possible to design for a smaller group of disabilities that in total encompasses the needs of quite a large group of disabilities. A set of guidelines could be set up which states the needs and design guides for the most encompassing physical, mental and social disabilities. A form of universal design thus becomes possible.

Fig. 70 Different needs need to be accomodated
Werner, D., 1998:283

Fig.71 Physical states differs from person to person
Werner, D., 1998:236

**9 Inclusive design in development:**

Inclusive design reaches much further than a basic response to the technical needs of disabled people. It is part of a lineage of ideas, which has as its aim the satisfaction of the building users' views and values and to challenge the existing social, institutional and technical values of the design process. The inclusion of the views and values of disabled people into the design process is not a disability issue per se but rather a social equity issue.

Inclusive design has much in common with social design, which has at its aim the working with people rather than for them. Users gain more control over their environments through this manner of designing. The exclusion of any part of society can in fact be seen as a form of environmental injustice. The knowledge of the users in the hierarchical process of property development is rarely considered precious.

People, as well as their uses of the environment are multiple and extremely diverse. Designers should see themselves as part of the greater society and they should recognize the physical link there can be between them and disabled people. The body is an extremely fragile thing. We, designers should learn to understand the physical and psychological links that exist between disabled people and ourselves. I undertook a weeklong simulation experiment where the aim was to simulate as much of the environment of the disabled person as possible in order to gain a better understanding of disability and the correct way of design response to it.

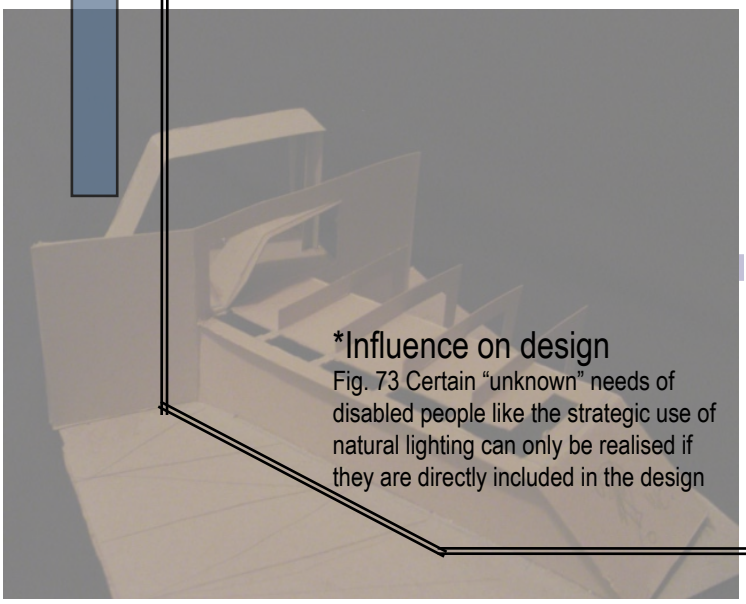
**9.1 Comparing non-inclusive to inclusive design:**

| *Inclusive design* | *Non-inclusive design* |
|---|---|
| Concern with meaning and context | Concern with style and ornament |
| Participative | Non-participative |
| Human oriented | Corporate or institution oriented |
| Client re-defined to include users | Owner as exclusive client |
| Low cost | High cost |
| Grassroots design approaches | Top-down design approach |
| Democratic | Authoritarian |
| Seeking to change design attitudes | Acceptance of prevailing design attitudes |
| Use of appropriate technology | Use of high technology |
| Use of alternate models of the development process | Development process controlled by corporate interests |
| Heterogeneity | Homogeneity |

Fig.72 Imrie,Hall(2001:19)

Inclusive design should not preclude the possibility that it might be necessary to use special or exclusive design methods in order to provide for the needs of those with specific physical or mental impairment. One should after all remember that the safety of the user is of utmost importance in a building, and it is this that sometimes requires exclusive techniques.

It often happens that designers are reluctant to receive feedback from the users of their designs. Designers often do not realize the importance of evaluation and feedback from a completed project. Designers ought to appreciate every possible source of criticism relevant to a project in order to limit the making of the same mistakes in future. The level of participation in design and eventually the feedback will differ from project to project, depending



*Influence on design

Fig. 73 Certain "unknown" needs of disabled people like the strategic use of natural lighting can only be realised if they are directly included in the design

on the social role of the project. Seeing that a psychosocial adjustment centre has a significant social role to play, the level of required participation and evaluation will be high.

There is a significant resemblance between the issues surrounding inclusive and universal design. Both focuses on the inclusion of disabled people with the difference being that universal design has a much needed broad focus which is not specifically stated in inclusive design. The universal design principle of designing for all, results in guidelines that can also be used to address some of the challenges faced by inclusive design.

People often think differently about a certain project. The insights and inputs from various people can enrich a final product with various solutions to obvious problems. The experienced insights given by Jan van Wijk is a very good example of this.

Fig.74 Working in a groups has the advantage of a wide variety of inputs being given.