

## 2.2.2 Inclusive Environments

Buildings can be designed to accommodate everyone, or specially designed buildings need to be provided. Ensuring that buildings are inclusive supports sustainability as replication is avoided and change of use supported.

### - Transport

Sustainable architecture on an urban scale must be designed to promote public transportation. Thousands of individual vehicles moving in and out of area with the daily commuting creates congested smog, congested traffic, and require parking.




#### Target (4)

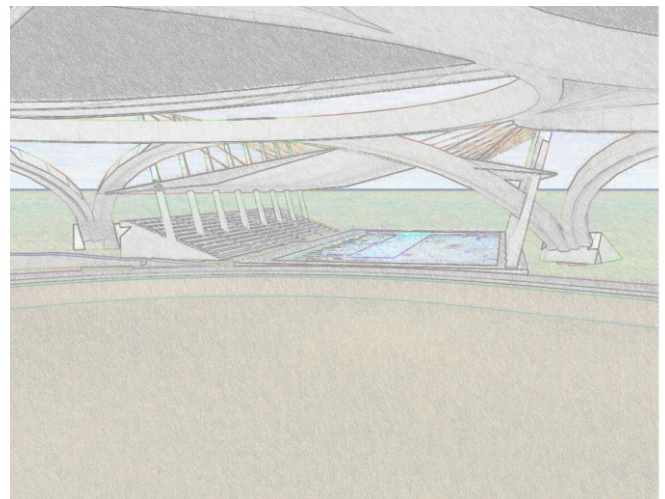
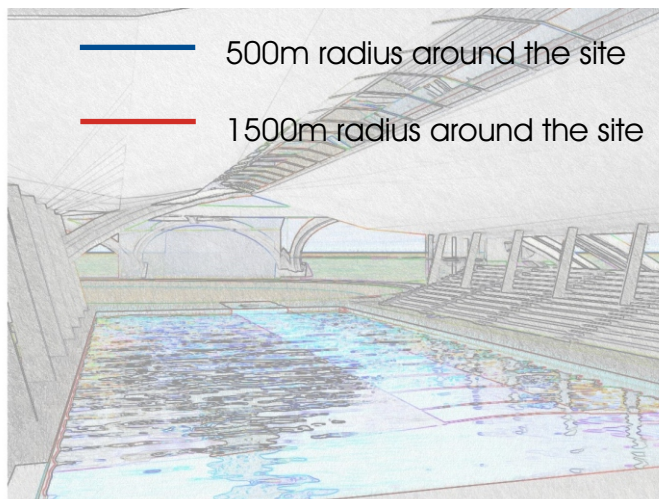
The building must be located in a radius of 500m from public transport. The design must be pedestrian friendly and be easily accessible for bicycles.

#### Assessment (5)

A bus terminal is allocated 700m from the site in John Voster Drive (see fig Fig.56). There is also a taxi drop-off point at the Pannevis and Southstreet T-junction. The HPC will also have a shuttle service from the HPC to desired destinations for the visitors. This shuttle service can also be used for the transportation of disabled workers from the transportation node to the HPC. The Gautrain Station is preposed to be situated on the northwestern side of SuperSport Park.

Access to the site is from:

-  - South Street and Pannevis T-junction, allocated for pedestrian access for people using public transport or bicycles
-  - Main entrance to site: South Street
-  - Primary entrance to developing sports hub: West Avenue





Site map with distance and access indicators.

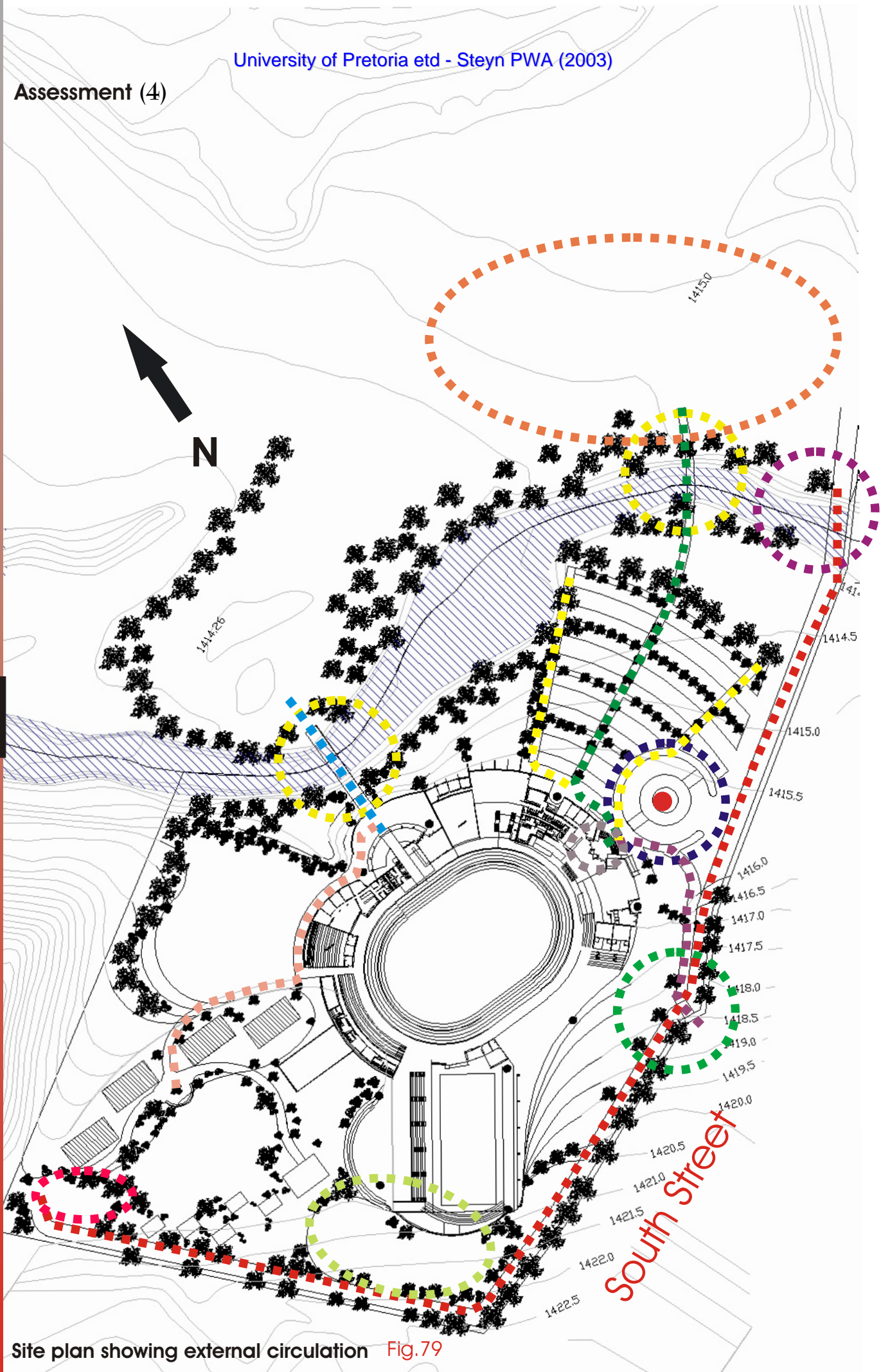
Fig.78

**- Entrance and external circulation**

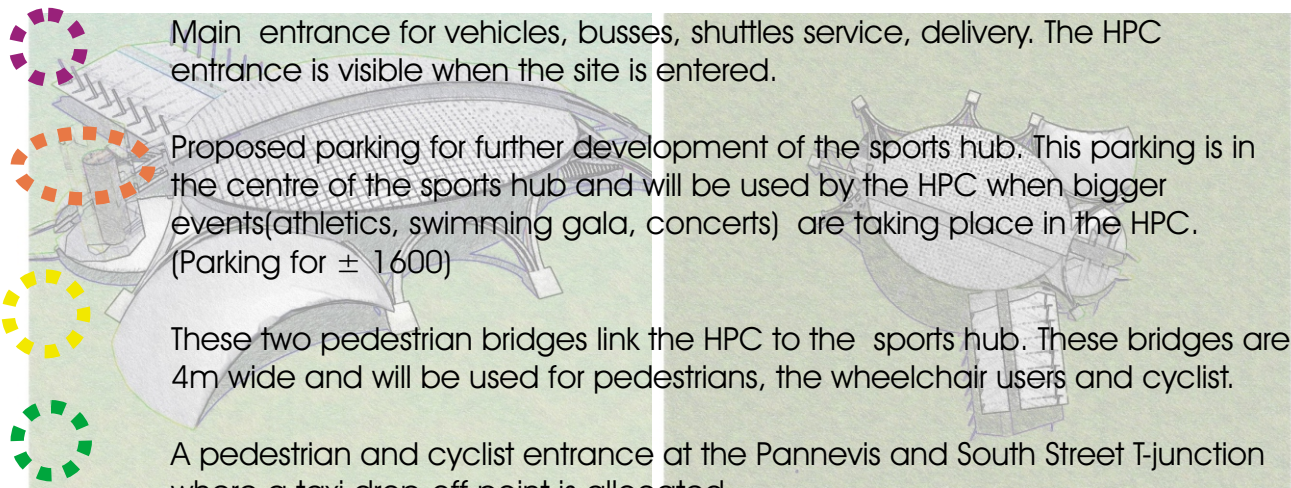
**Target (4)**

An entrance of the building must be designed in such way that it is visible from the street and connects with the parking. Adequate ramps and access for disabled is of critical importance.

The distance between the disabled parking and the building should not exceed 20m. Adequate parking must be provided for bigger events like a swimming gala, athletic meetings and concerts. Spaces provided within the site for school buses to drop-off and pick up must be provided. Services parkings for restaurants, shop and garbage disposal must be provided. Pedestrian footways with occasions of interest along them must be provided between sports hub, parking and HPC combined with a cycle track. Secure bicycle sheds must be provided near the building for cyclists.



Site plan showing external circulation Fig. 79



Main entrance for vehicles, busses, shuttles service, delivery. The HPC entrance is visible when the site is entered.

Proposed parking for further development of the sports hub. This parking is in the centre of the sports hub and will be used by the HPC when bigger events(athletics, swimming gala, concerts) are taking place in the HPC. (Parking for ± 1600)

These two pedestrian bridges link the HPC to the sports hub. These bridges are 4m wide and will be used for pedestrians, the wheelchair users and cyclist.

A pedestrian and cyclist entrance at the Pannevis and South Street T-junction where a taxi drop-off point is allocated.



Parking bay for school. This parking bay will be used for pickup and drop-off of school children. Parking is also available for swimming galas. (Parking for ± 72)



Parking bay for hostels. This parking bay will be used for pickup and drop-off of school children and athletes. (Parking for ± 15)



Main road entering HPC from sports hub.



Secondary entrance for HPC from sports hub and hostels.



3m wide walkways from parking bay to HPC. Parking for 170 cars is provided, five fo disabled. Disabled parking within 20m of HPC.



Turning circle for busses and shuttle service for pickup and drop-off of athletes.



4m wide walkway from sports hub to HPC. Adequate benches and trees are provided along all pedestrian walkways.



The main entrance to HPC which is visible from South Street and parking bay. The entrance is provided by adequate ramps for disabled.

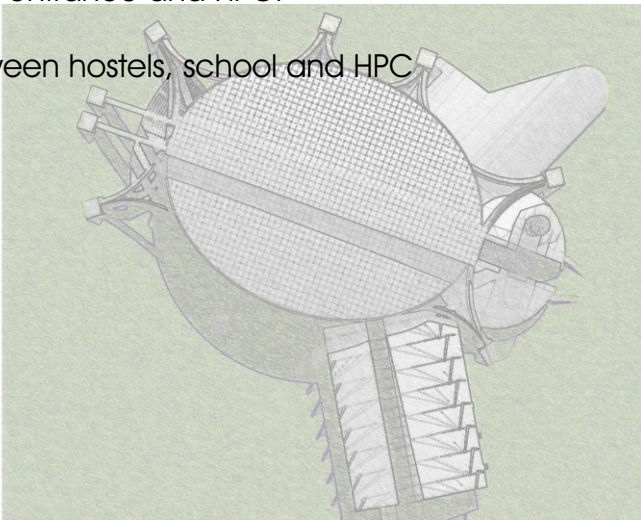


4m wide walkway from pedestrian entrance and HPC.



3m wide pedestrian walkway between hostels, school and HPC

Sculptured rock climbing wall



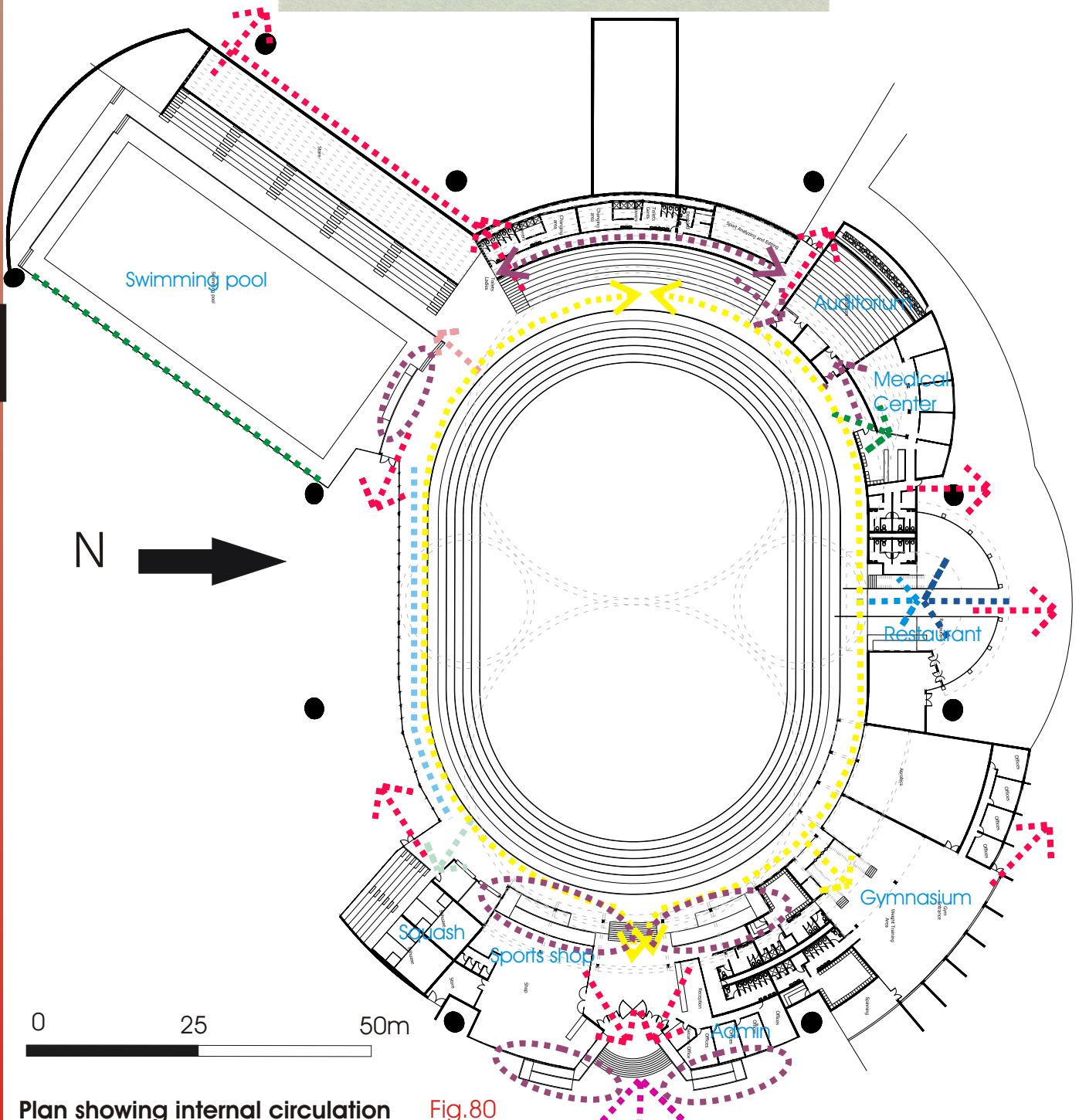
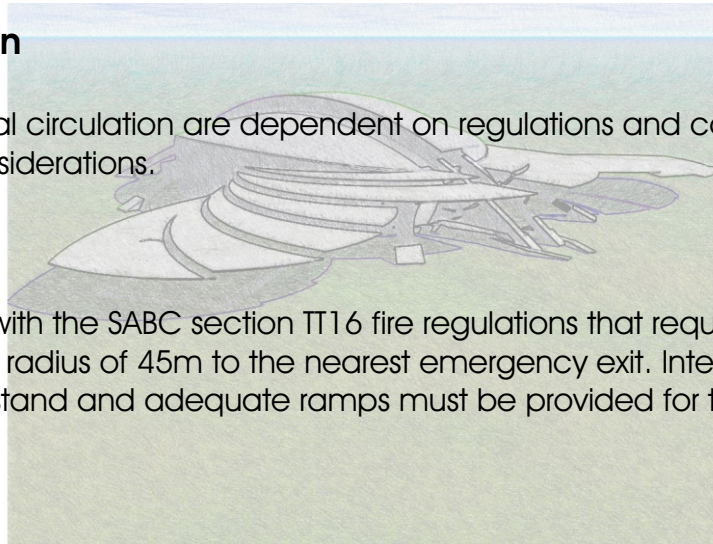
### - Internal Circulation

Many aspects of internal circulation are dependent on regulations and controls arising from the fire safety considerations.

#### Target (3)

The HPC must comply with the SABC section TT16 fire regulations that require that any occupant must be in a radius of 45m to the nearest emergency exit. Internal circulation must be easy to understand and adequate ramps must be provided for the disabled.

#### Assessment (4)



Plan showing internal circulation Fig.80



The main entrance of the HPC is on the eastern side connecting the parking with HPC. This entrance will mainly be used by visitors to the HPC.



This is the main internal walkway surrounding the indoor open space. All of the facilities connect to this 4.25m wide walkway.



The gymnasium has one main entrance from where different activities take place. The aerobics, spinning, toilets, loose weights and offices are situated on ground floor. The VIP area is separated from the circuit and cardiovascular training area on the first floor with separate staircases.



The restaurant has two entrances, one from outside and the other from the main walkway. The kitchen, toilets and seating are on the ground floor that opens up to the outside. One stair case leads to the first floor.



The medical centre has one entrance from the main walkway with its own toilets and change room.



The auditorium has two portal entrances on both sides for sound isolation.



The path underneath the pavilion is for access to the toilets and changing rooms.



The swimming pool connects to the main walkway and opens up to the western and eastern side. The swimming pool is 500mm lower than the walkway with adequate stairs and ramp.



The squash courts have one entrance from the main walkway.



Emergency exit complying with the SABC section TT16 fire regulations. Any occupant anywhere in the building will be in less than 45m to the nearest exit.



Secondary entrance from the sports hub and hostels. This entrance will mainly be used by sportsmen who stay in the hostels.

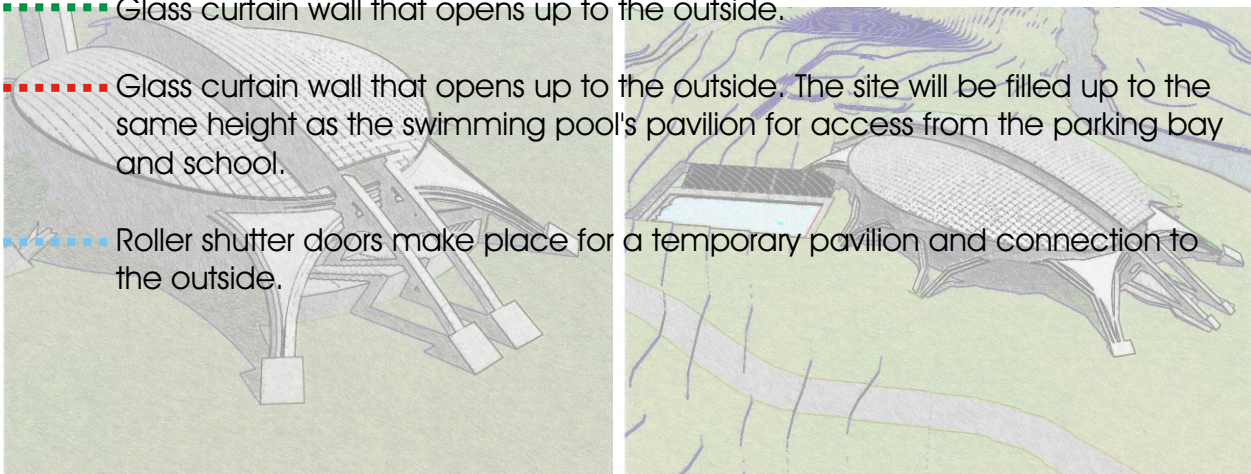


1:12 ramps for disabled to comply with SABS section SS2

..... Glass curtain wall that opens up to the outside.

..... Glass curtain wall that opens up to the outside. The site will be filled up to the same height as the swimming pool's pavilion for access from the parking bay and school.

..... Roller shutter doors make place for a temporary pavilion and connection to the outside.



## - Furniture & Fittings

One aspect of sustainable design is longevity. Buildings that are durable and adaptable are more sustainable than those that are not. This adaptability includes accommodating people of different ages and physical conditions. The more people that can use a building, the longer the building's useful life.

### Target (4)

All ramps, stairs, bathroom furniture and fittings must be designed to accommodate the disabled and elderly.

### Assessment (5)

All ramps comply with SABS section SS2 for disabled people. Doorways comply with SABS section SS4 for doorways for disabled. All the toilets comply with SABS section SS5 for the disabled. The HPC has a disabled toilet for ladies and gentlemen within each toilet area. The auditorium complies with SABS section SS8 for auditoriums and SABS section SS8 for parking. All staircases are designed to accommodate elderly people with steps with 150mm rise and 300mm tread with adequate hand railings that comply with SABS section MM2 and MM3. The HPC is designed to accommodate all age groups and people with disabilities.

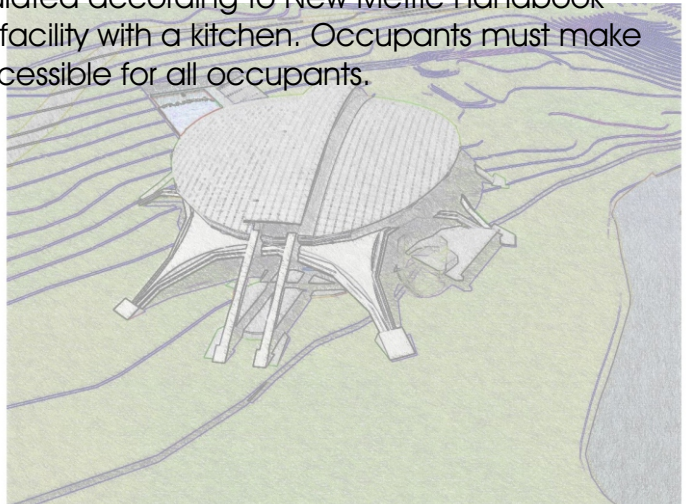
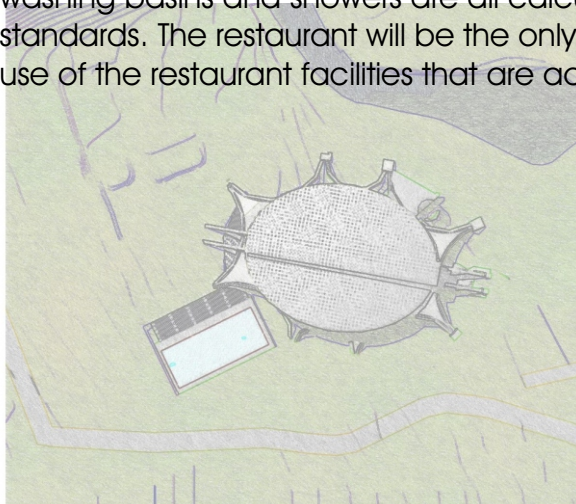
## - Toilets and kitchens

### Target (4)

All occupants must have equal and adequate access to toilets and kitchen facilities in the HPC.

### Assessment (4)

The entrance & reception, gymnasium, restaurant, medical centre and swimming pool are all provided with adequate toilet facilities within their respective area. The auditorium will make use of swimming pool toilet facilities. The amount of toilets, disabled toilets, washing basins and showers are all calculated according to New Metric Handbook standards. The restaurant will be the only facility with a kitchen. Occupants must make use of the restaurant facilities that are accessible for all occupants.



## 2.2.3 Access to Facilities

Conventional living and working patterns require regular access to a range of services. Ensuring that these services can be easily accessed in environmentally friendly ways supports sustainability by increasing efficiency and reducing environmental impact.

### - Childcare

#### Target (2)

Childcare must be provided in the building or within 3km.

#### Assessment (4)

Knikkie Knakkie Nursery School & Day care centre is within a radius of 3 Km from the HPC.

### - Banking and Retail

#### Target (3)

Banking services (i.e. ATM.) and grocery, items required on a daily basis provided in building or close by (within 3km)

#### Assessment (4)

The HPC will have two ATM's in the main entrance which is accessible to the public. The HPC is provided with a sports shop for state of the art sports accessories. The CBD is also within a radius of 1.5 km where a variety of banks and retail services are situated.

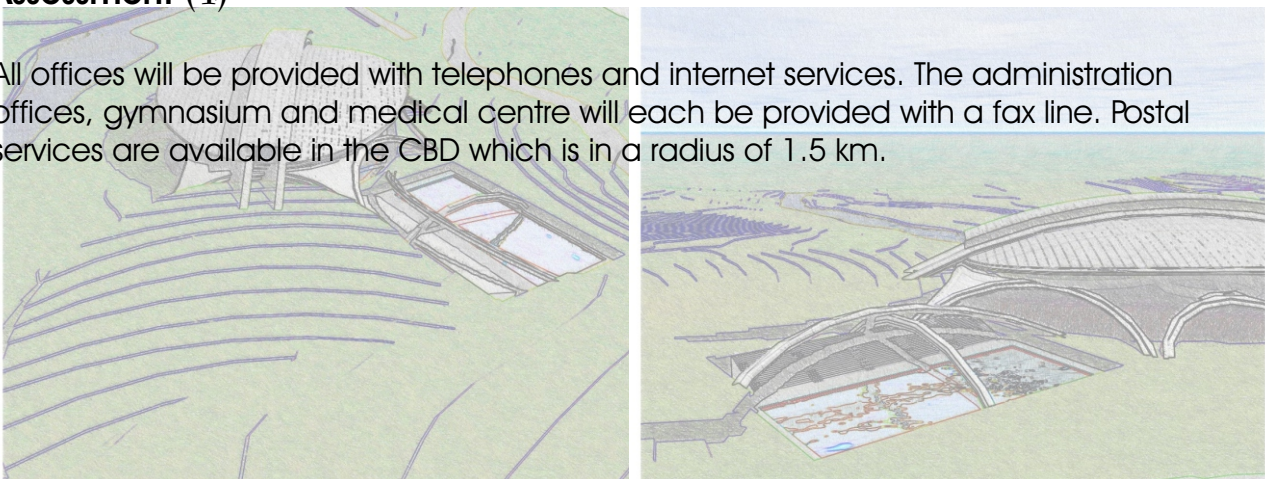
### - Communication

#### Target (4)

Postal, telephone or e-mail facilities are provided in the building or within 3km.

#### Assessment (4)

All offices will be provided with telephones and internet services. The administration offices, gymnasium and medical centre will each be provided with a fax line. Postal services are available in the CBD which is in a radius of 1.5 km.





## 2.2.4 Participation & Control

Ensuring that users participate in decisions about their environment helps ensure that they care for and manage it properly. Control over aspects of their local environment enables personal satisfaction and comfort. Both of these support sustainability by promoting proper management of buildings and increasing productivity.

### - Environmental control

#### Target (3)

Users of the building should have reasonable control over their environmental conditions, this should include opening windows and adjustable blinds.

#### Assessment (3)

All the office window openings and internal blinds will be manually controlled according to the occupants comfort. The rest of HPC will make use of a Building Management System(BMS) that will control the lighting, windows, air vents, louvers, security systems etc. The reason for this is because the HPC makes use of different systems (airconditioning, rock storage, extractor fans and natural ventilation) and these systems must be managed to achieve the maximum efficiency in different areas. Lighting will also be controlled by BMS according to light requirements.

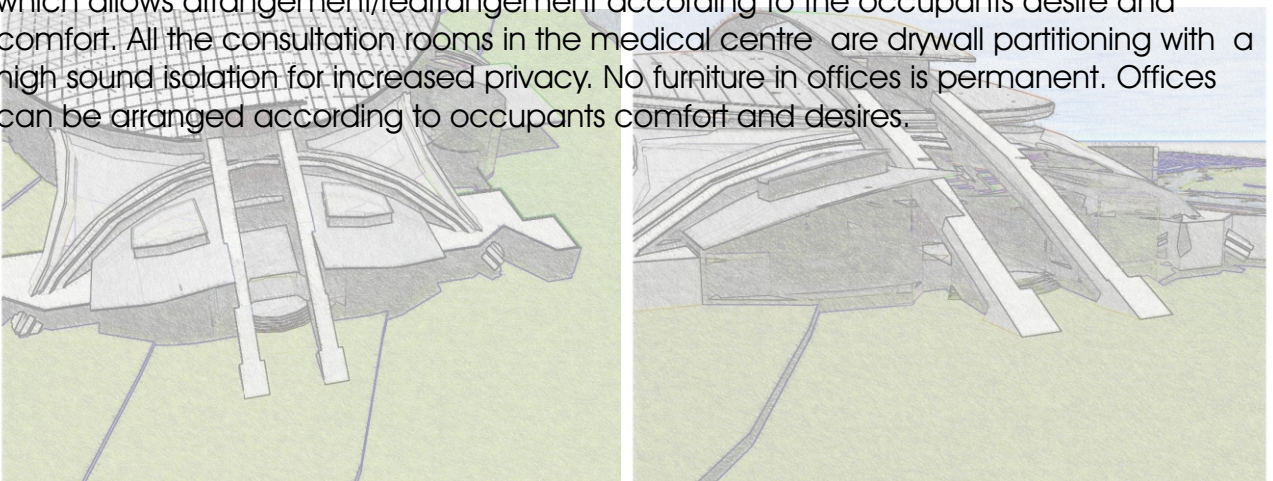
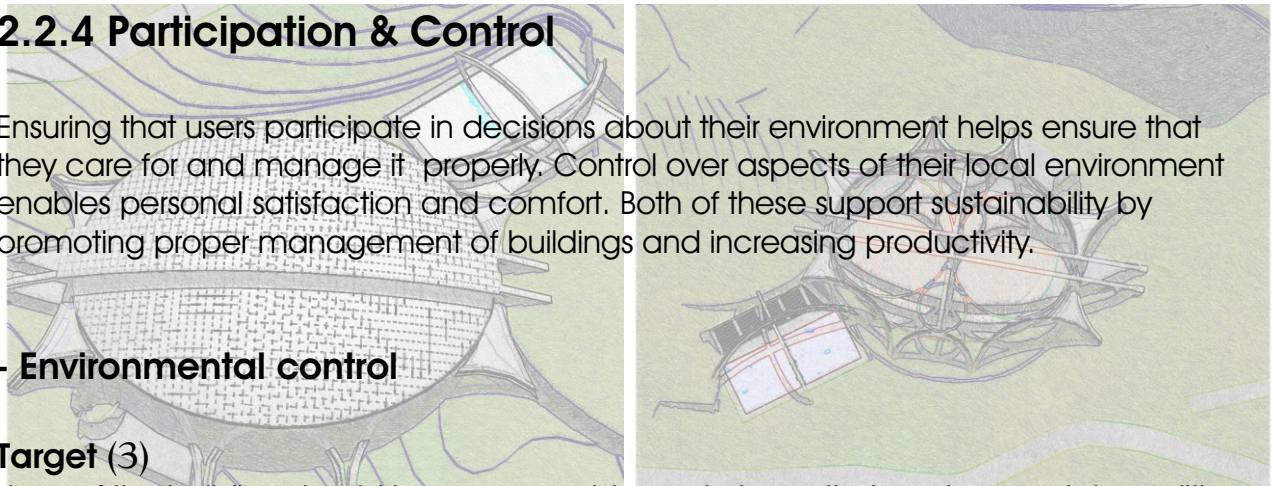
### - User manual/training

#### Target (2)

Furniture and fittings, i.e. tables, chairs and internal partitions must be designed or specified to allow arrangement/rearrangement by the users. Provision should be made for personalisation of spaces if desired. This may include provision for pin boards, choice of colours, places for plants and personal storage.

#### Assessment (3)

All the office partitions in the administration and gymnasium will be drywall partitioning which allows arrangement/rearrangement according to the occupants desire and comfort. All the consultation rooms in the medical centre are drywall partitioning with a high sound isolation for increased privacy. No furniture in offices is permanent. Offices can be arranged according to occupants comfort and desires.



## - Social spaces

### Target (3)

Design for easy informal / formal social interaction. This could involve a tea room with comfortable seating. Seating provided along regularly used routes. Spaces shared between occupants/users (i.e. photocopying rooms etc.) Must be large enough to allow for comfortable social interaction.

### Assessment (3)

The restaurant is a central social space where occupants can gather together for social interaction. The main entrance on the eastern side of the HPC is provided with touchscreen computers for the public. These computer facilities will have all the latest sports news, results, statics events and history of sports legends as well as sports entertainment for children. This space will become an important social gathering space especially for children. Seating is provided along main walkways. There are different social spaces designed around the HPC with adequate seating along walkways. The climbing wall in the parking area will also become a social gathering space.

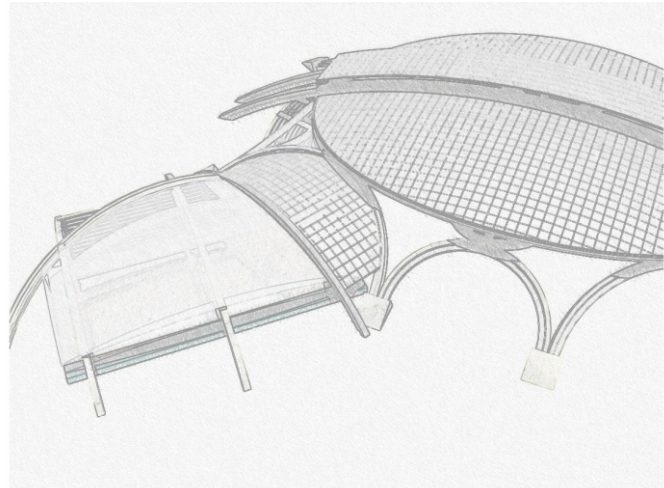
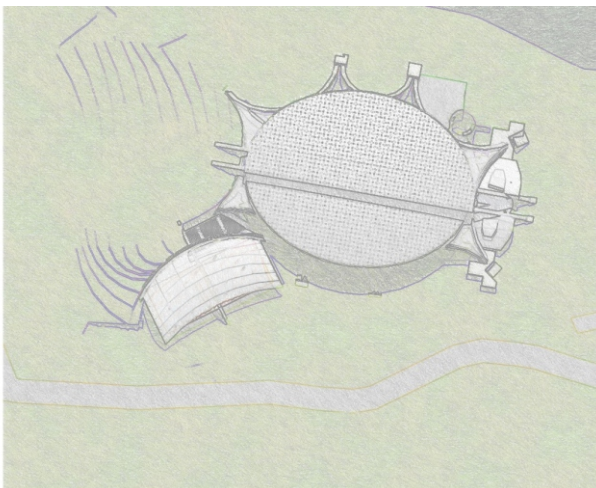
## - Amenity

### Target (3)

Easy access to refreshment facilities (tea point, kitchen, vending machines) and wc's for all users of the HPC.

### Assessment (3)

The HPC is provided with vending machines, restaurant and toilet facilities. Vending machines are located in the main entrance. The restaurant is in the centre of the main walkway and is accessible to the public. Toilet facilities are accessible to all users of the HPC.



## - Community involvement

### Target (4)

Spaces or services must be shared or made available to local community.

### Assessment (5)

The HPC is open for the whole public, all the facilities (gym, auditorium, medical centre, restaurant, squash courts, swimming pool etc.) can be used by the public according to the HPC regulations.

## 2.2.5 Education, Health & Safety

Buildings need to cater for the well being, development and safety of the people that use them. Awareness and environments that promote health can help reduce the incidence of diseases such as AIDS. Safe environments and first aid can help limit the incidence of accidents and where these occur, the effect can be reduced. Learning and access to information is increasingly seen as a requirement of a competitive work force. All of these factors contribute to sustainability by helping ensure that people remain healthy and economically active, thus reducing the costs (to society, the environment and the economy) of unemployment and ill health.

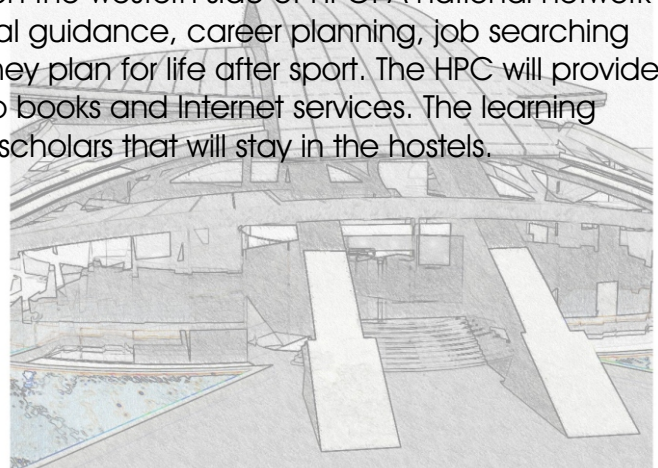
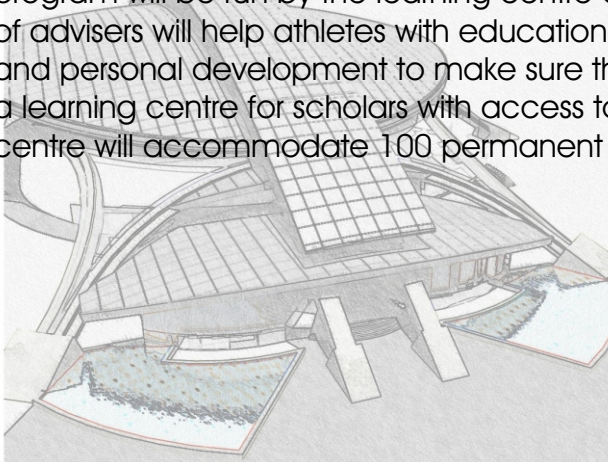
## - Education

### Target (4)

Access to support for learning must be provided. This can be in the form of Internet access, structured courses, or the provision of learning material such as books, journals and newspapers.

### Assessment (5)

Education of athletes will play a very important role in the HPC function. An Athlete Career and Education(ACE) program, will be set up to enhance the personal development and performance of elite athletes through a number of career and education services. This program will be run by the learning centre on the western side of HPC. A national network of advisers will help athletes with educational guidance, career planning, job searching and personal development to make sure they plan for life after sport. The HPC will provide a learning centre for scholars with access to books and Internet services. The learning centre will accommodate 100 permanent scholars that will stay in the hostels.



## - Safety and security

### Target (5)

Measures taken to ensure that areas of the buildings and routes to and from the buildings are safe, and feel safe. Routes and occupied spaces must have clear visual links between each to secure the safety of occupants.

### Assessment (5)

A security office and desk are allocated at the main entrance of the HPC to ensure the occupants safety. Access to the site is divided in two. One vehicular access point allocated on the north eastern side of the site to assure safe parking and control over vehicles. The vehicle access will be controlled by security booms that will be operated by security guards. Pedestrian access to site is minimized to three access points. The two pedestrian entrances at the riverside and the one at the Pannevis/South Street T-junction. All three of these pedestrian entrances will be guarded by security. Access at the T-junction will only be open from 6am to 6pm. The eastern, southern and western sides of the site will be fenced to control access. The HPC has an open plan which contributes to the visual links and safety of the occupants. All facilities inside the HPC are designed with an access control desk at each entrance. The HPC will therefore be a safe and secure environment.

## - Smoking

### Target (3)

No smoking must be allowed in public spaces. Space must be provided for smoking where it will not affect other users, i.e. away from air intakes etc.

### Assessment (3)

No smoking will be allowed in the HPC because of the centre's focus on health. Outdoor smoking areas are provided in the restaurant.

## - Indoor air quality

### Target (3)

Adequate indoor air quality and health requirements must be obeyed.

### Assessment (4)

The ventilation throughout the building is discussed in section 1.2. Adequate extractors are provided in toilets according to mechanical engineers specifications and requirements.

## - Exercise & recreation

### Target (4)

Provision must be made for exercise and recreation.

### Assessment (5)

The HPC's main functions and goals are exercise.

