



OPEN SPACE FRAMEWORK






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7.1. INTRODUCTION

VEHICULAR MOVEMENT







-  Proposed ring road
-  Pedestrian crossing
-  secondary roads

PEDESTRIAN MOVEMENT





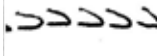

-  Unsupervised route
-  Supervised route
-  Connecting routes

-  Acces points
-  Lookout points
-  Bird hides

PROPOSED LAND USE

-  Active & social
-  Outdoor rooms & productive gardens
-  Agricultural (Herbs and cut flowers)
-  Lawn with scattered trees (park)
-  Wilderness
-  Semi-private

BOUNDARIES

-  Berms
-  vegetation screen
-  permeable boundary
-  appropriate fencing
-  ha-ha
-  palisade fencing



The open space framework serves as a guide for developing the open spaces at Weskoppies to have healing benefits. For security reasons the public will only be allowed to use the open spaces at Weskoppies on weekends when security will be strengthened.

Fig. 7.2 (Opposite page): Proposed open space framework indicating land uses, vehicular movement, pedestrian movement and boundaries (Author 2009)

The open space framework will aim to:

- Establish a social and active centre which will become the heart of Weskoppies.
- Improve vehicular and pedestrian circulation
- Give Weskoppies a positive identity
- Provide a unique attraction on Saturdays in the city.
- Provide all the users with a variety of therapeutic experiences and activities.

The framework will be explained under nine subheadings, these will include:

- A summary of guidelines from the context analysis.
- specifications for vehicular routes.
- a guide for the pedestrian movement system.
- A proposal for soft boundaries to distinguish public areas from semi-private areas around wards and staff housing.

Different new land uses that contributes to creating a healing hospital environment with a variety of experiences will be proposed. These include:

- The active social area which will be the heart of Weskoppies.
- Outdoor rooms around buildings.
- Areas suitable for cut-flower farming and the process of cut flower farming
- A wilderness area with a hiking trail and lookout points.
- Wetland areas consisting of retention dams for irrigation with bird hides.

7.2. ANALYSIS SUMMARY (refer to fig. 7.3)

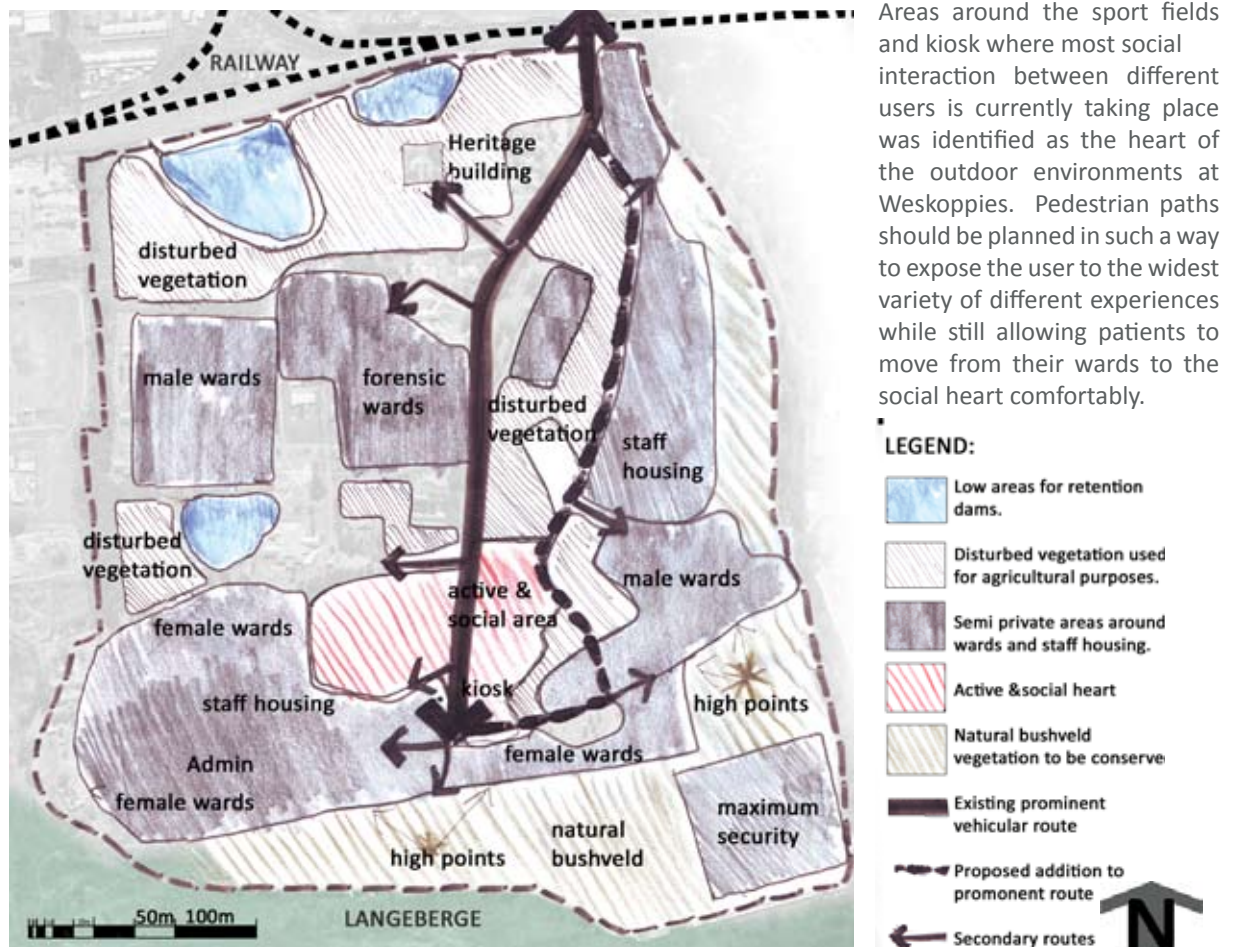
Areas with disturbed vegetation and other areas with low ecological value will be either rehabilitated or used for agricultural and recreational purposes. The existing bushveld vegetation area on the eastern and southern edge of the site should be protected and will be used for a hiking trail. Because this area is also situated on the highest part of the site it is the ideal place for lookout points. From there people can have a view over the whole site, the city in the distance on the northern side and have a view of the Langeberge on the southern side.

Three lower lying areas on the site was identified as potential wetland areas where storm water from the site and will be captured in retention dams and used for the irrigation for the proposed landscape and cut flower farm.

Areas around the wards and staff housing was identified as semi-private areas with appropriate soft boundaries where the public is not welcome. These areas will be outdoor rooms as an extension of the building.

The Highlighted road was identified as the most prominent and ends at the kiosk area. The kiosk area can therefore become the arrival or destination point. The secondary routes that leads to more semi private areas are only attached to this route on the left side of the road. Semi private areas on the right side of this route is not connected to it. This route can continue to become a ring road to link with semi private areas on the right side.

Fig. 7.3: A summary of how the context analysis influenced the development of the open space framework (Author 2009).



Areas around the sport fields and kiosk where most social interaction between different users is currently taking place was identified as the heart of the outdoor environments at Weskoppies. Pedestrian paths should be planned in such a way to expose the user to the widest variety of different experiences while still allowing patients to move from their wards to the social heart comfortably.

7.3. VEHICULAR MOVEMENT

The existing vehicular movement system at Weskoppies is illegible and haphazard with no hierarchy. There is no safe pedestrian crossings on vehicular routes. The proposal for an improved system is a hierarchy of routes which includes a primary route with secondary routes attached to it. Some unnecessary vehicular routes will be pedestrianised. To improve legibility, access and pedestrian comfort the following guidelines should be applied.

7.3.1. PRIMARY ROUTE GUIDELINES

The following guidelines are applicable to the proposed primary route:

- The primary vehicular route should be more prominent visually by having trees on both sides of the road.
- A pedestrian path should be accommodated on at least one side of the primary route.
- Lighting should be provided along the primary route for safety and legibility
- Signage should be provided along the primary route.
- Pedestrian crossings should be raised to slow down traffic.
- Bus stops should be placed along the primary route. The bus stops should have comfortable, sociable waiting areas that adjacent to it.

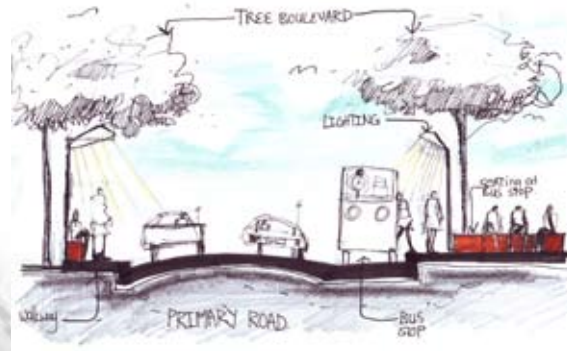
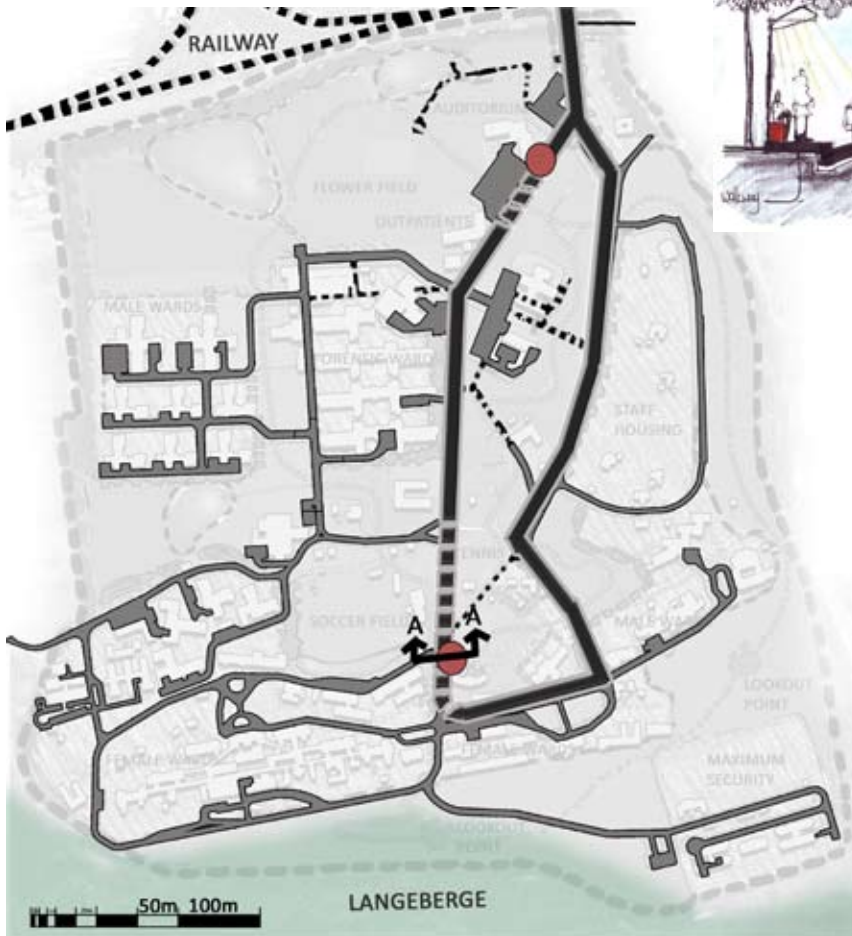


Fig. 7.4: Section A-A through the primary road with a tree boulevard, walkway, lighting, bus stop and seating areas (Author 2009).



7.3.2. SECONDARY ROUTE GUIDELINES

The secondary vehicular routes are connected from the primary route and leads mostly to the semi private areas. They are less prominent and pedestrian paths are only accommodated where necessary. Different tree species should be planted along each secondary road to give it an identity and make it more legible.

LEGEND:






-  Proposed Ring Road
-  Pedestrian crossing
-  Secondary Roads
-  Pedestrianised roads
-  Bus stop

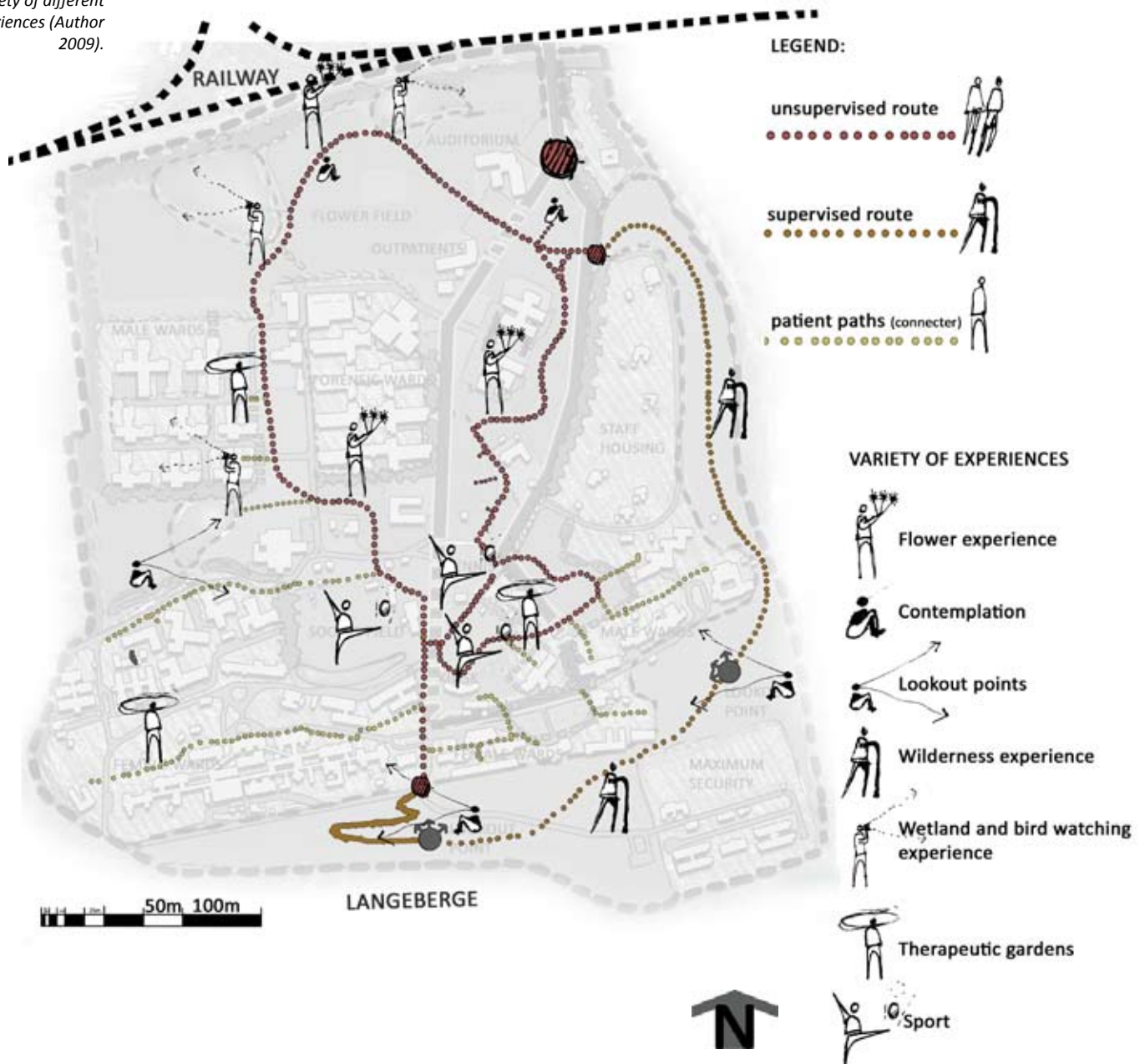
Fig. 7.5: Map indicating the proposed primary and secondary vehicular routes with bus stops (Author 2009).



7.4. PEDESTRIAN MOVEMENT

There is currently no formalized pedestrian movement system at Weskoppies. The proposed pedestrian route should be accessible to people with different abilities (refer to 5.2.1). The pedestrian movement system will fulfill the function of getting pedestrians safely from one place to another while also functioning as a experiential route that exposes the pedestrian to a variety of experience (refer to 5.4.5).

Fig. 7.6: Pedestrian movement system. The pedestrian is exposed to a variety of different experiences (Author 2009).



7.4.1. UNSUPERVISED ROUTE

This route is at all times accessible to staff, public on Saturdays, visitors and patients in open wards. It exposes the pedestrian to the widest variety of experiences but doesn't include the Wilderness experience, except on Saturdays when this area will be open to the public, staff and patients.

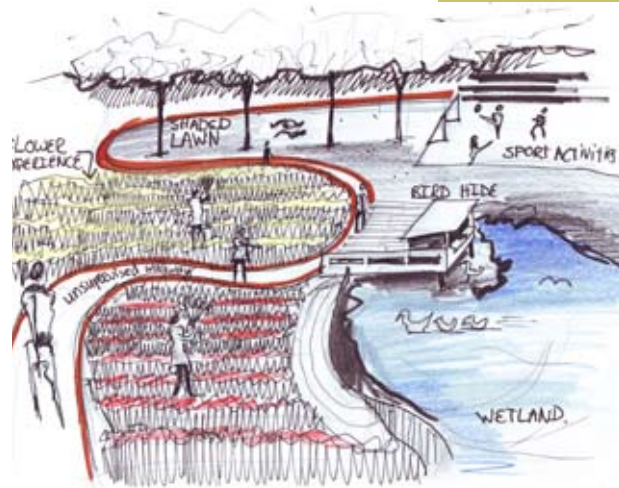


Fig. 7.7: The unsupervised route exposes the pedestrian to a variety of experiences. The sketch shows how the walkway connects to the flower experience, wetland, bird hides, shaded lawn and sport activities (Author 2009).



7.4.2. SUPERVISED ROUTE (HIKING TRAIL)

This route goes through the Wilderness area and is connected to the unsupervised route. It has controlled access and can only be used by patients under the supervision of a staff member. The reason for this is because the natural existing vegetation at the Wilderness area does not allow open views and can be a breeding ground for illegal activities. On Saturdays there will be a guided walk by a wildlife expert or volunteer for patients and visitors. Due to the steepness of the site this area will only be accessible to wheelchair users from the southern access point.

Fig. 7.8: The hiking trail needs to be used under the supervision of a staff member or educational guide (Author 2009).

7.4.3. CONNECTING ROUTES

The function of these routes is to serve as connector routes between the different wards and the social heart of Weskoppies. These routes will be narrower than the other pedestrian routes

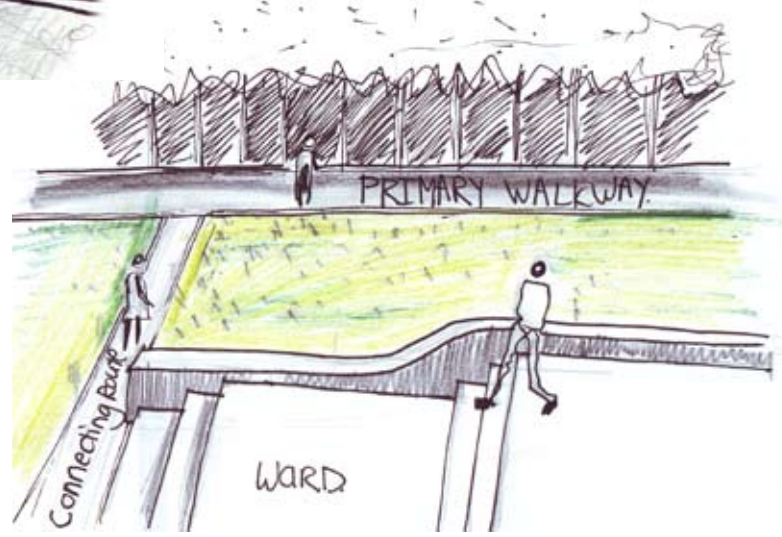
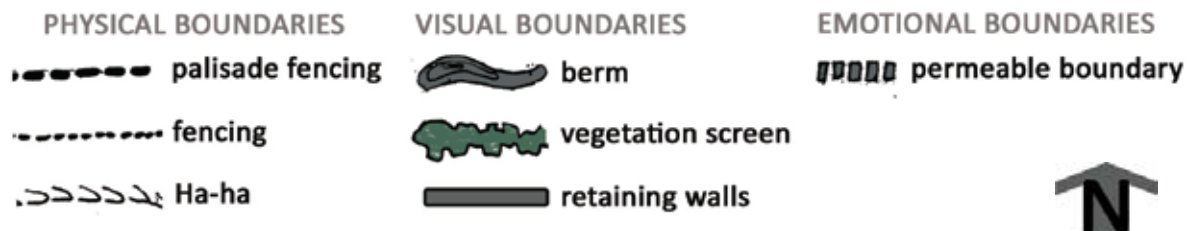


Fig. 7.9: A narrower connector route connects the wards to the primary walkway (Author 2009).



Figure 7.10: Boundaries map: The proposed position of different kinds of boundaries on the site to distinguish semi private areas from public areas. (Author 2009)



7.5. BOUNDARIES

The framework specifies that boundaries should be soft whenever possible. Patients must not feel caged in, but for security and privacy reasons semi-private areas will still be distinguished from private areas. Three different kinds of boundaries are proposed. They include: physical boundaries, visual boundaries and emotional boundaries.

7.5.1. PHYSICAL BOUNDARIES

Physical boundaries should be soft whenever possible by making use of ha-ha's (fig7.11). Fencing will only be used where it is absolutely necessary. The palisade fencing at the site boundary will remain. The Wilderness area will be fenced off with visually pleasing fencing. The fences will be softened with vegetation as much as possible.

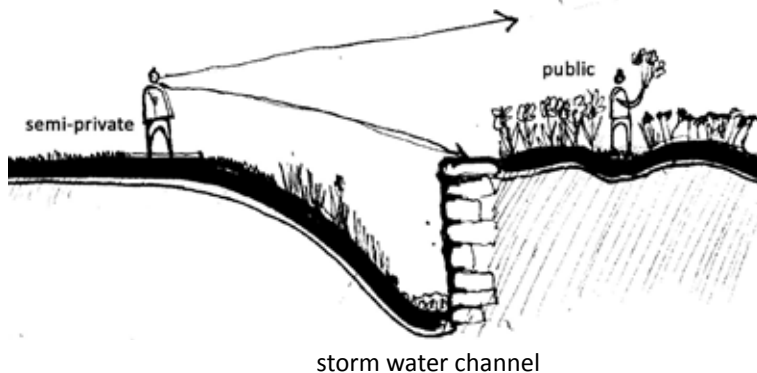


Fig. 7.11: Ha-ha physical boundary. Although a person cannot physically cross this boundary, the person will still have an unobstructed view to the other side. (Author 2009)

7.5.2. VISUAL BOUNDARIES

To achieve a sense of privacy at the areas around the wards and staff housing visual boundaries will be implemented. These will include berms, vegetation screens and retaining walls.

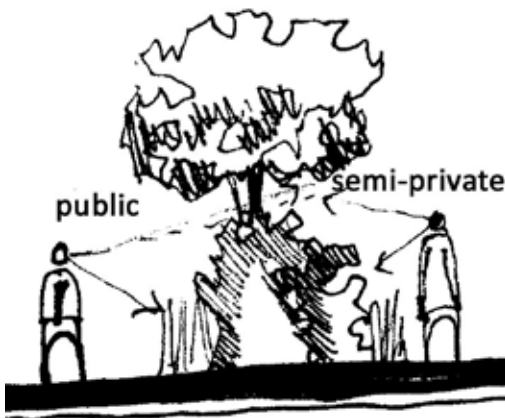


Fig. 7.12 (far left): Vegetation can act as a visual screen where privacy is required (Author 2009)

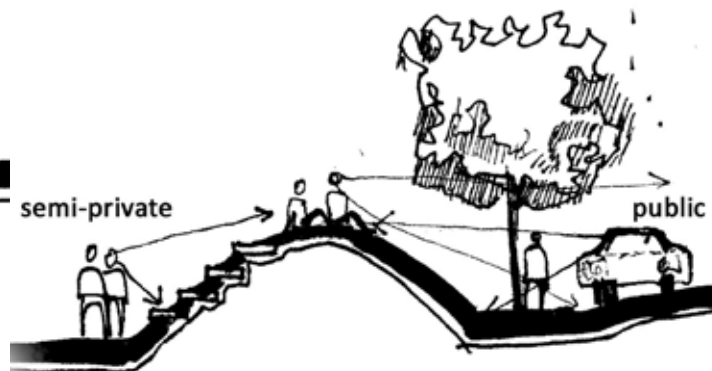
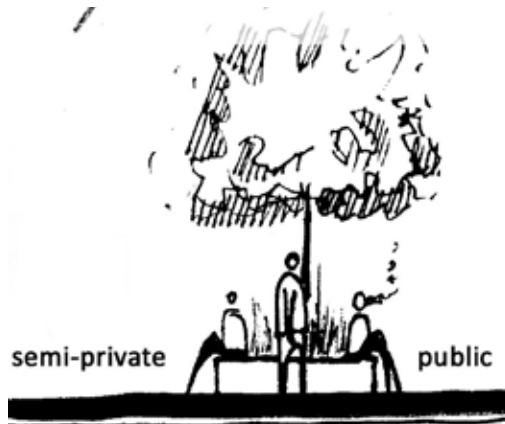


Fig. 7.12 (far right): Vegetation can act as a visual screen where privacy is required (Author 2009)



7.5.3. EMOTIONAL BOUNDARIES

Emotional boundaries involves physical structures in the landscape that is physically and visually permeable but still acts as an edge between semi private and public areas. They function as a territorial boundary and public will feel unwelcome to go beyond these edges. Signage could also discourage the public to enter these areas.

Fig. 7.14 :Structures in the landscape can define semi private areas and act as permeable emotional boundary Author 2009).

7.6. ACTIVE & SOCIAL HEART

The area between the different sports facilities which includes the kiosk was identified as the area that will be developed as the social and active heart of Weskoppies. A sketch plan will be developed for this area to serve as a catalyst for implementing the design guidelines for a healing outdoor environment. Visitors from outside will arrive at this area in the middle of Weskoppies where most social activities will be accommodated from where they will distribute to the rest of the site by making use of the experiential pedestrian route. Patients and staff from inside Weskoppies will meet and gather at this area to participate in sport, social activities, therapeutic activities or casual interaction.

This area was chosen for a detail design intervention due to the following reasons (Fig. 7.15):

- It includes most of the sports fields
- It includes the kiosk where the widest variety of patients, staff and visitors currently interacts with each other.
- It is in a more or less central position on the site, that makes it accessible
- The area is connected to the primary route and becomes a destination at the end of the route.
- The area is in close proximity to the Heritage buildings for visitors.
- This area is somewhat higher than the areas on the northern side and provides views over the landscape.

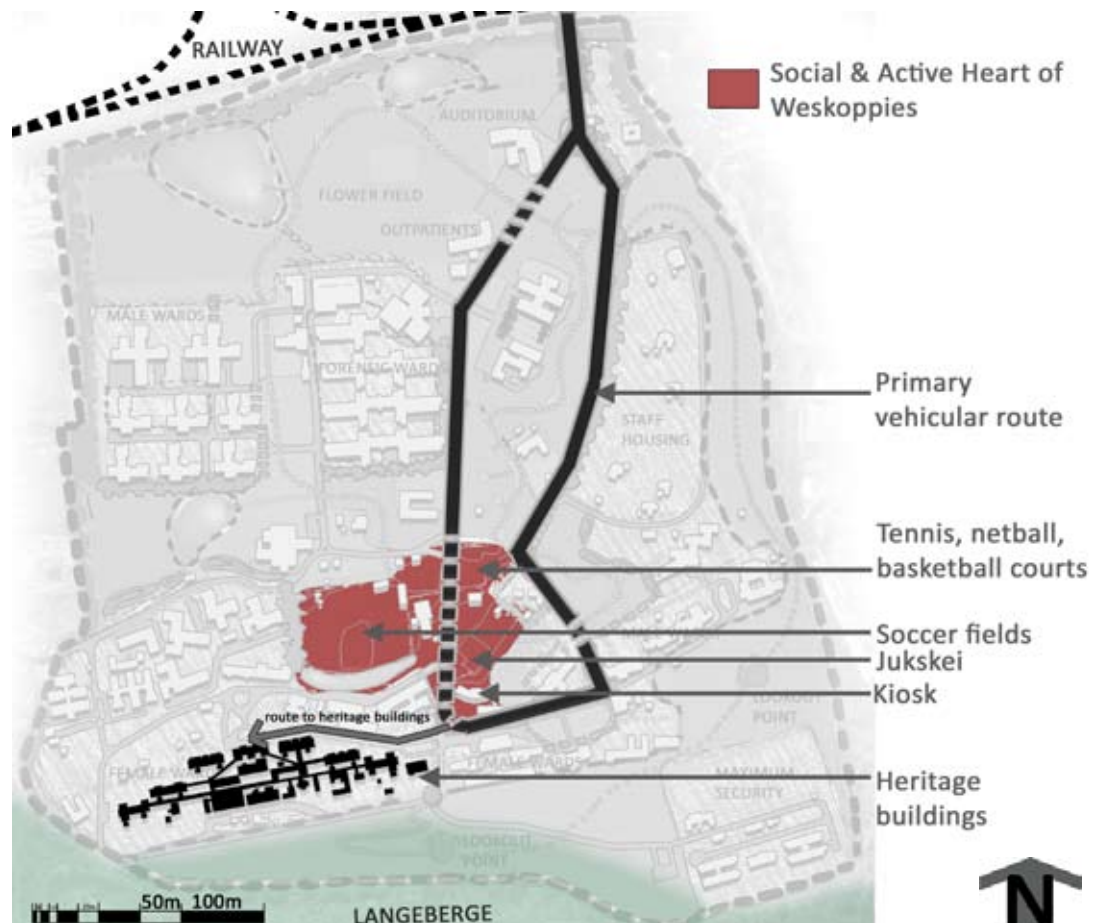


Figure 7.15: Map indicating the position of the active & social heart of Weskoppies which links with the primary vehicular route and includes most sports fields and the kiosk. (Author 2009)

This area will accommodate the following spaces and experiences (refer to 8.4):

- To encourage both formal and informal social interaction between patients, staff and the public and assist in creating a sense of belonging and familiarity (refer to 2.3.1.), an outdoor extension of the kiosk with shaded social seating areas will be accommodated (refer to 8.4.1).
- Other seating areas for social interaction at will also be accommodated at strategic places
- Places for spectators so to sit or lie around sports fields while watching others participate in sport activities. This could motivate and encourage them to get involved with outdoor activities (refer to 8.4.2)
- Horticultural therapy garden as part of the occupational therapy program to create a sense of ownership, responsibility and pride (refer to 5.3.4). This area will also provide the patient with sensory stimulation (refer to 5.4.1) and encourage contact with nature (refer to 5.6.3 & 8.4.3).
- Seating areas that accommodates smaller groups and privacy for individuals in colour pockets between flower fields to satisfy the need for privacy and time alone for reflection (refer to 5.5.1 & 8.4.4).
- Parking area for the public
- An multifunctional sport field in close proximity to the kiosk to accommodate physical activities which is a vital ingredient to maintaining psychological and physical health (refer to 5.7).
- Events open to the public or for Weskoppies patients and staff only.

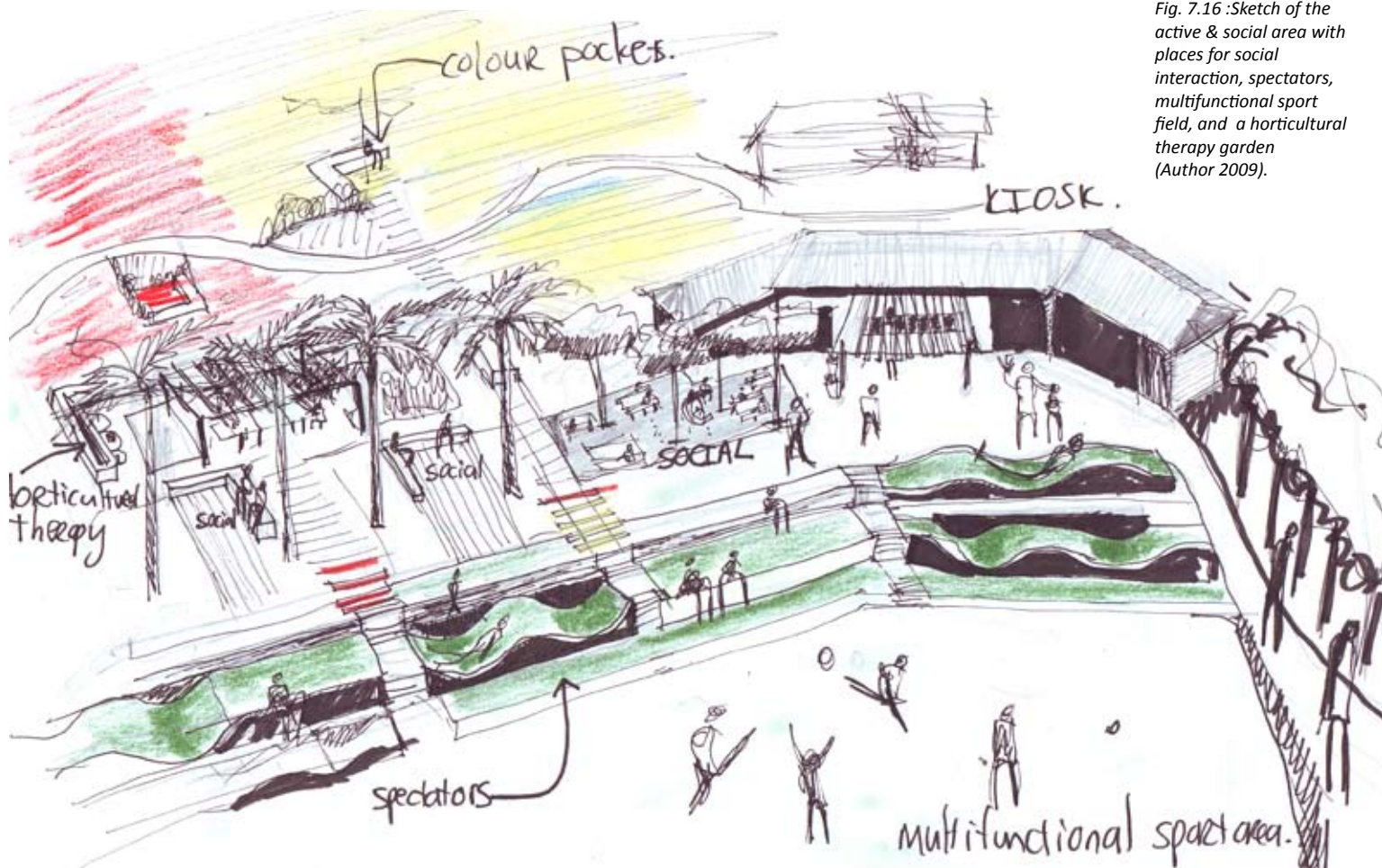


Fig. 7.16 :Sketch of the active & social area with places for social interaction, spectators, multifunctional sport field, and a horticultural therapy garden (Author 2009).

7.7. OUTDOOR ROOMS

Areas around the wards, staff housing and other treatment facilities that requires privacy was identified as areas which will be designed to be outdoor rooms and an extension of the buildings. These areas will be semi-private and be distinguished from the public areas by making use of soft boundaries as specified in 6.7.

Patients will feel safe and comfortable in these areas when they do not feel like participating in public events and don't want to be seen by the public. Staff members need privacy and need to get away from the public activities and stressful situations with patients to regain composure and strength to continue their work (Tyson, 1998:35).

By making use of passive surveillance the outdoor rooms will be visually blocked from by passers while still accommodating areas where occupants can have open views to the landscape and surrounding activities when they choose to.

The outdoor rooms should be specifically designed with the occupants needs or conditions in mind. Seating areas for socializing in groups or pairs should be provided as well as private seating areas for individuals. Outdoor rest should also be accommodated in these areas.

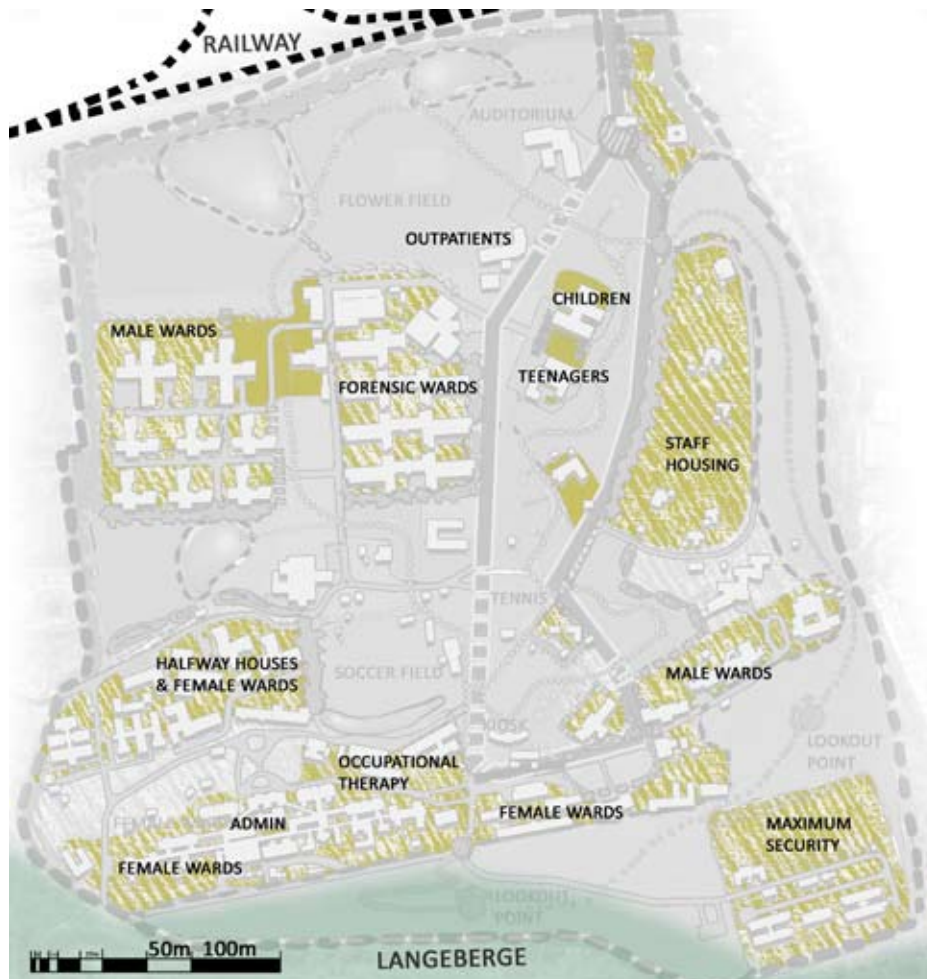


Figure 7.17: Map indicating the areas around wards, staff housing and private facilities that were identified as semi private and should be designed as outdoor rooms defined by soft boundaries. (Author 2009)

7.8. WETLANDS

Storm water from the site will be captured and retained in three retention dams at lower lying areas on the site. The water will be used for irrigating the designed landscape and the flower farm. The retention dams can be a safety hazard and drowning should be prevented by securing the retention dams. People can still be allowed to come closer to the water and the wetland system through bird hides. This will also get people in contact with nature and natural systems. The storm water system will be as open and natural as possible to allow contact between humans and natural systems while still considering safety. The wetlands also contributes to the ecological sustainability of the project. The Storm water management system will be explained in more detail in the technical chapter.



Fig. 7.18: (far left) A raised walkway to the bird hide with reeds and water plants on the side (www.nma.gov.au/.../slideshow_2_4.html).

Fig. 7.19: (middle) The bird hides brings the user safely closer to the water and bird habitats (www.huntsdc.gov.uk/Leisure+and+Culture/Parks+...).

Fig. 7.20 (top left): The openings at the Bird hides should be at the right height to accommodate wheelchair users. (www.sanparks.org/.../birders/knp_bird_hides.php).

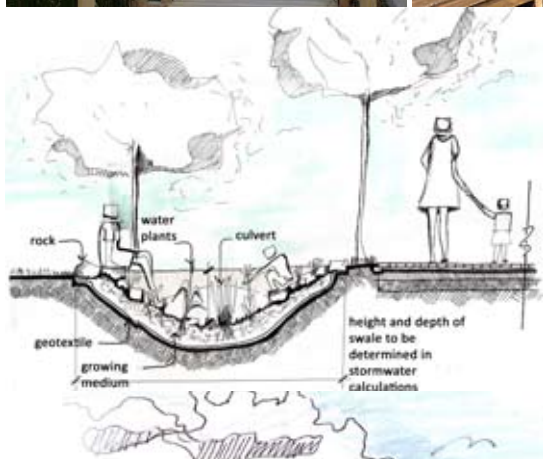


Fig. 7.21 (far left middle): Section that illustrates a swale as part of a natural storm water system that brings people closer to natural systems (Author 2009).

Fig. 7.22 (left): Map indicating the position of the retention dams on the site (Author 2009).

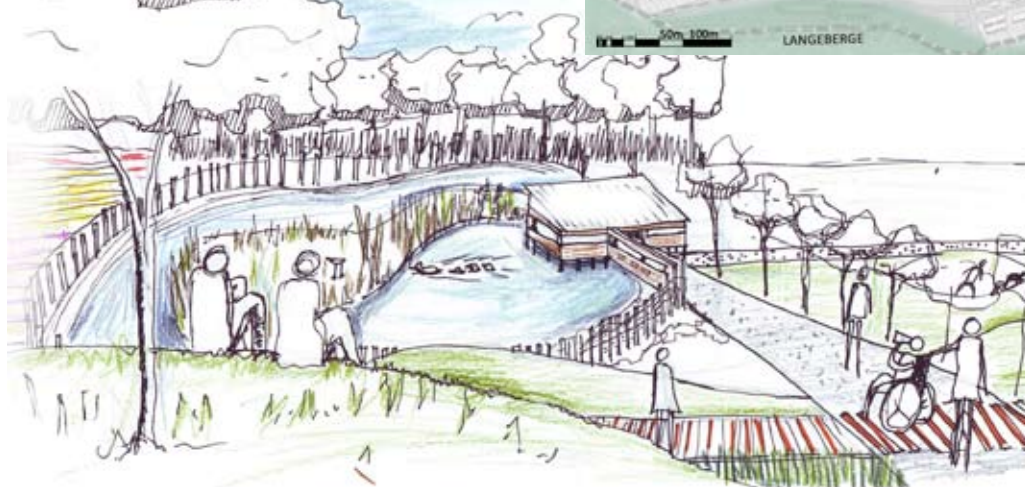


Fig. 7.23 (left) :The retention dams as a habitat for birds . The Dam is secured and people can get closer to the water in bird hides. (Author 2009).

7.9. CUT FLOWER FARM (AGRICULTURAL)

Due to its isolated position within the city (refer to context analysis) and the stigmatization associated with Psychiatric hospitals, Weskoppies will only be recognized as part of the open space system in the city if it provides the public with an unique experience which will make it worthwhile for people to explore on weekends. Due to the vast open spaces at Weskoppies and the sites position on the ridge of the Langeberge the author proposes a cut flower farm. A cut flower farm will not only result in an attractive hospital environment for staff and patients but will also provide work opportunities for the local community and patients. It will also attract the public by presenting them a unique experience within the city. When the public see mentally ill people working amongst healthy individuals from the surrounding community, fulfilling “normal” social roles it can result in changed attitudes and perceptions of mental illnesses and reduced stigma as stated in 2.4.4.



Fig. 7. 24:Map indicating the areas suitable for agricultural use that can be developed as cut flower fields. The experiential route with picnic pockets are also shown on this map (Author 2009).

The flower fields will also help to establish a new positive identity that Weskoppies will be associated with. Humans attach many different meanings to flowers, mostly positive meanings. The extensive use of flowers in the landscape of an psychiatric hospital will enhance the mental healing process of patients as a result of the inherent ability of flowers to uplift the human spirit. According to Janick (1990: 23), “flowers still retain extensive ceremonial use in the expression of joy, affection, welcome, gratitude, sympathy, celebration, grief, friendship, marital union or spiritual contemplation”. Flowers also accentuates the seasons and stimulate the senses with their colour, texture and fragrance (refer to 5.4.1. & 5.4.2).

The experiential pedestrian route includes a flower experience. The user can walk along this route to pick flowers or to just experience the aesthetic of the flower fields. Small pockets of open spaces with lawn and seating will be situated along this route where people can rest and view the flowers or have a picnic.

Fig. 7. 25: Sketch showing open areas between flower fields along the path for picnicking etc. (Author 2009).

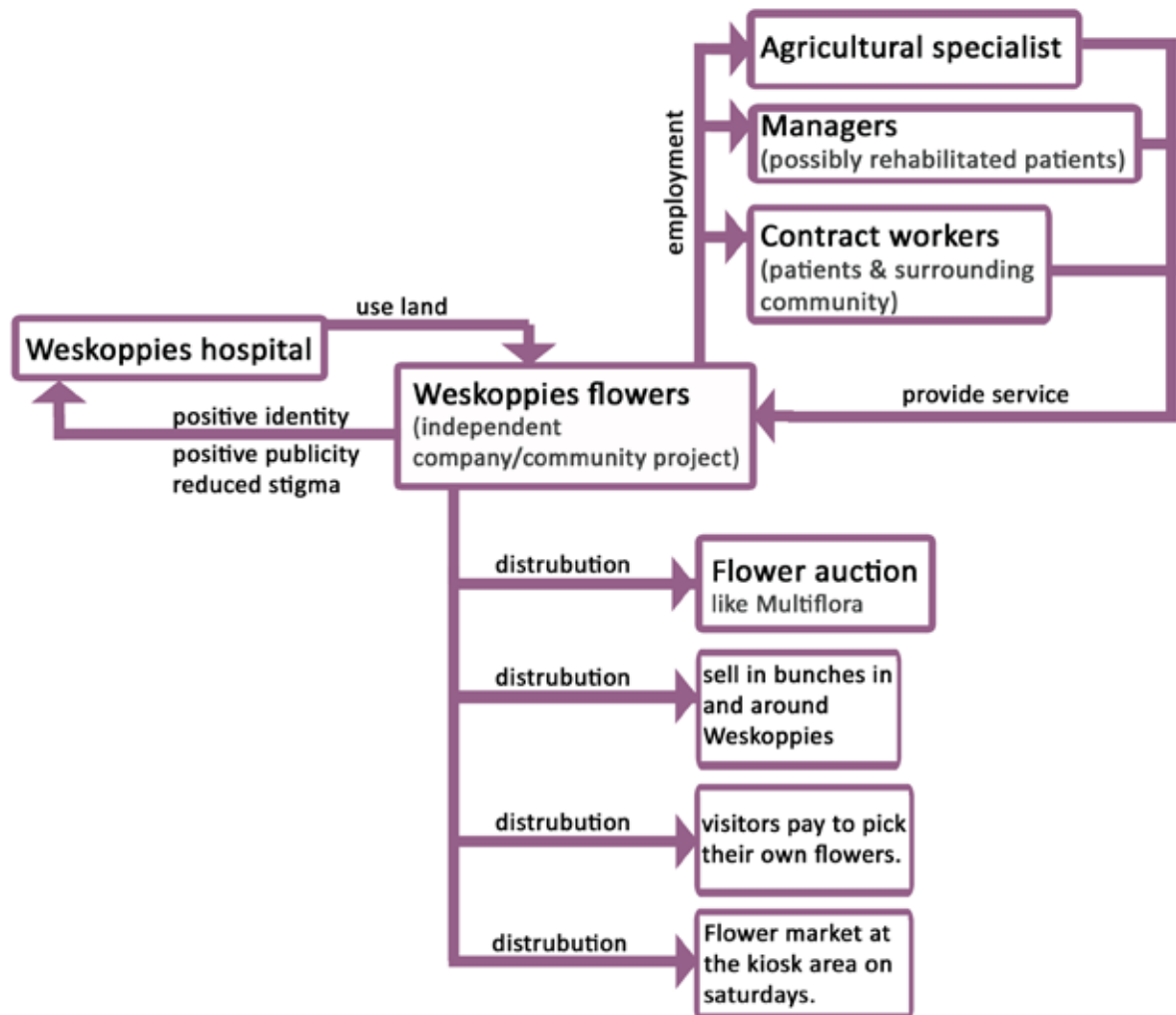


7.9.1. CUT FLOWER FARM STRUCTURE

Weskoppies flowers will be established as an independent company and a community project (fig. 7.26) which will provide new work opportunities not only to Weskoppies patients but also to the surrounding community. An Agricultural specialist should be employed to regulate the process of cut flower production. Capable managers will also assist in controlling the process. The cut flower farm should also provide flexible work opportunities to accommodate patients with fluctuating moods and motivation levels. An example is that patients will be paid according to the amount of flowers they pick and bind or with an hourly rate for other kinds of work. Monetary gain could be a motivation in terms of self worth and empowerment.

Flowers can be sold at flower auctions like multi-flora but could also be sold by patients in and around Weskoppies. There will also be a flower market at the area around the kiosk. This will create awareness and alleviate the stigma associated with mental illness, while establishing a sense of responsibility, purposefulness and pride for the patient selling the flowers. On a Saturday the public can also get the opportunity to pick their own flowers by pay for a bucket at the kiosk. Visiting friends and family can also buy flowers for their loved one and experience the process of flower farming at Weskoppies.

Fig. 7.26 :Diagram that illustrates the structure of a cut flower farm at Weskoppies. (Author 2009)



6.9.2. THE PROCESS OF CUT FLOWER FARMING

The description of the process of cut flower farming is based on a visit to a cut flower farm Semperflora near Brits and conversations with the owner of the farm. The process will be described by making use of photo's taken on the farm. The focus will be on flowers grown outside tunnels in open fields because open flower fields is what the author proposes at Weskoppies.



Fig. 7.27: Preparation of flower beds: The field after being ploughed. The soil is improved with fertilizer and compost (Author 2009)



Fig. 7.28: The flower beds after flower seeds have been sown. Flowers can be sown directly in the flower beds or germinated in seedling trays (refer to fig.7.30) before being planted out in the field (Author 2009).



Fig. 7.29: A wire grid connected is placed over the flower beds to keep flowers in place. The grid will be moved up and be held in position with droppers or other appropriate vertical elements as the flowers grow taller. This is optional and not essential (Author 2009).



Fig. 7.30: Flowers plants can also be germinated in seedling trays or cultivated from cuttings in tunnels (Author 2009).



Fig. 7.31: Young flower plants after being transplanted from seedling trays to the flower beds (Author 2009).



Fig. 7.32: Young sunflower plants in an open field (Author 2009).



Fig.7.33: Blue and pink flowering Delphinium elatum plants with yellow mustard plants (Brassica juncea) in the background. The mustard plants are used as mulch in flower beds to prevent the growth of weeds (Author 2009) The display of different flower colours next to each other results in an interesting landscape. Walkway through such a landscape with pockets of open spaces for resting and picnicking in the flower fields will provide the users with a unique experience.



Fig. 7.34: Flowering blue Delphinium elatum plants with yellow mustard plants (Brassica juncea) in the background (Author 2009).



Fig. 7.35: Flowering blue Limonium sinuatum plants. Note the raised wire grids to keep plants upright (Author 2009).



Fig. 7.36: Flowering blue *Limonium sinuatum* plants with wind breaks made from shade cloths. The flowers are protected from winds that comes from the mountain in the background (Author 2009).



Fig. 7.37: Tall and dense plants also functions as wind breaks (Author 2009).



Fig. 7.38: Labourers picks flowers and puts them in crates from where they will be picked up and delivered to the packing room (De Beer 2009).



Fig. 7.39: The flowers arrive at the packing room where they will be prepared to be sent to the flower market (Author 2009).



Fig. 7.40: The flowers are being trimmed by the laborers and prepared to be putted together in bunches (Author 2009).



Fig. 7.41: The flower bunches are placed on a machine where they are strung together mechanically (Author 2009).



Fig. 7.42: Labourers prepare flowers (Author 2009). Working with flowers can have an uplifting effect on the human spirit.



Fig. 7.43: flowers are ready to be distributed and stored in a cold room (Author 2009).



Fig. 7.44: Flowers are ready and loaded and taken to the flower market (De Beer 2009).

7.9.3. DESIGN CONSIDERATIONS

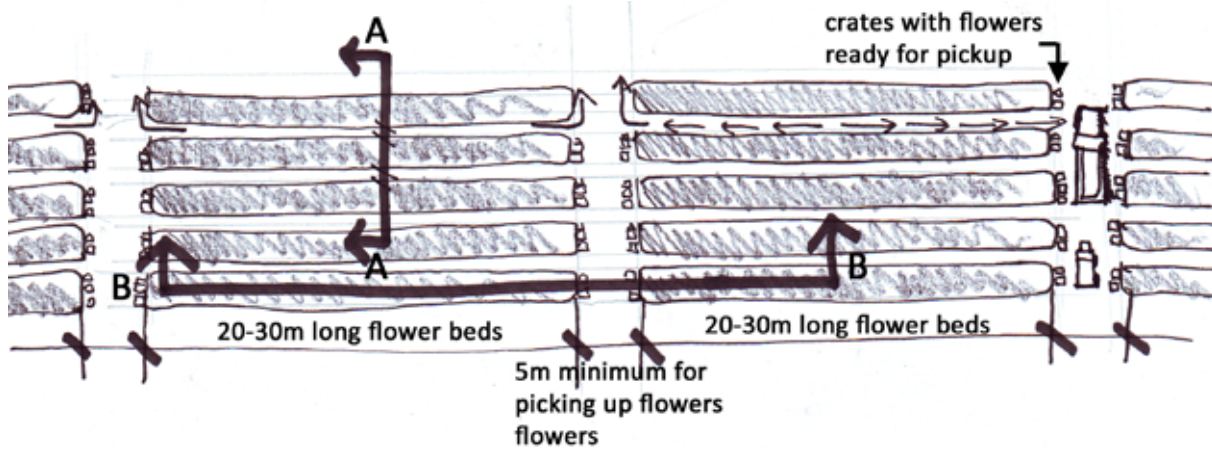
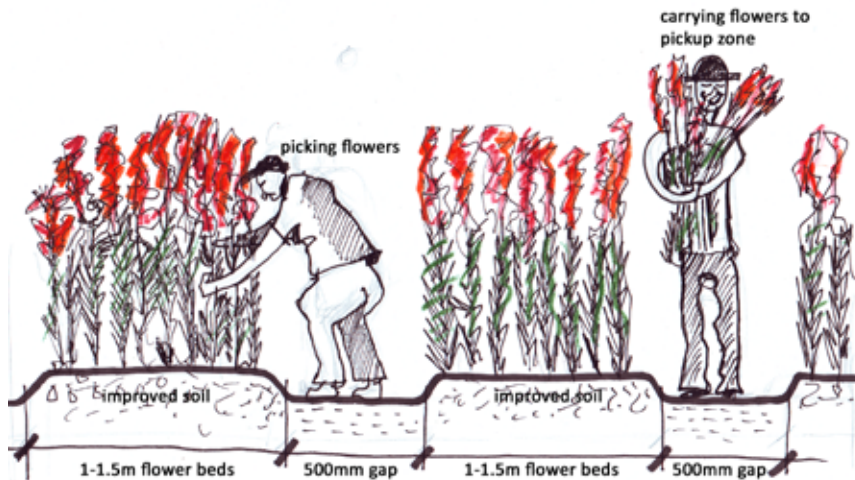


Fig.7.45: Flower beds are between 20-30m long with a minimum gap of 5m that functions as a pickup zone. Flowers from the flower bed will be taken to this point where it will be placed in crates and loaded to be taken to the packing room. (Author 2009).



Infrastructure needed:

- Irrigation system
- Packing room: +/- 15 x 20m
- Cold room in packing room
- Minimum of 1ha open space for a feasible flower farm.
- Tunnel / area with shading net for germination

Fig. 7.46: Layout of flower beds. Flower beds are between 1-1.5m wide with a gap of 500mm in between for walking and picking flowers. The flower beds are between 20-30m long with a minimum pickup zone of 5m (Author 2009).

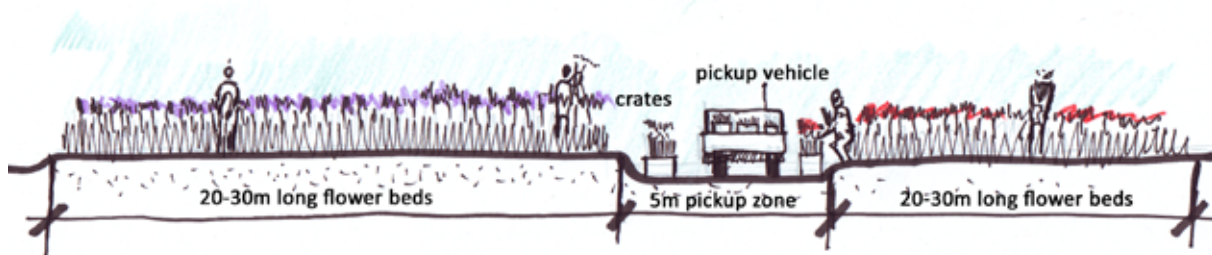


Fig. 7.47: Flower beds are between 1-1.5m wide with a gap of 500mm in between for walking and picking flowers. Picked flowers are then carried to the pickup zones (Author 2009).

7.10. WILDERNESS EXPERIENCE

The area on the eastern and southern edges of the site with existing bushveld vegetation will be conserved (Fig. 7.48). This area is currently a problematic due to the dense natural vegetation that obstructs open views making it a breeding ground for illegal activities (De Beer, 2009: interview). For this reason this area will be enclosed with fencing with controlled access points (Fig. 7.49)).

However this area will have a hiking trail which connects to the pedestrian movement system (Fig. 7.48) which can be accessed by patients under supervision of a staff member and will also be open to the public on Saturdays for educational walks lead by an environmental specialist.

The southern part of this area is the highest point on the site and lookout points will be provided from where the user will have panoramic views over the Weskoppies campus with the Langeberge in the Background (Fig. 7.50) The lookout point at the most southern part will be accessible to wheelchair users by providing a trafficable in situ concrete surface whilst the rest of the hiking trail will be made out of compacted earth with timber poles for steps.

The Wilderness experience will satisfy the basic human need for contact with nature in its pure form as stated in 2.3.3.

Fig. 7.48: Map indicating the area with natural existing bushveld vegetation which will be enclosed and used as a guided wilderness experience with a hiking trail with lookout points. (Author 2009)





Fig. 7.49: Illustration showing controlled access points and a hiking trail. (Author 2009)



Fig. 7.50: Illustration showing the lookout point with a panoramic view over Weskoppies campus and the city in the distance. (Author 2009)

7.11. CONCLUSION

Fig. 7.51: The design matrix illustrates how the open space framework satisfies the design guidelines as set out in chapter 5 (Author 2009)

An improved vehicular movement system and a pedestrian movement system which exposes the user to a variety of therapeutic experiences (refer to 7.6 - 7.10) with soft boundaries between semi-private and public areas, enhances the healing potential of the outdoor environment at Weskoppies. The open space framework successfully addresses the guidelines aimed at developing the outdoor environment at Weskoppies to enhance the psychological healing process. The design matrix indicates how the open space framework satisfies the design guidelines.

OPEN SPACE FRAMEWORK								
	7.3. VEHICULAR MOVEMENT	7.4. EXPERIENTIAL PEDESTRIAN ROUTE	7.5. SOFT BOUNDARIES	7.6. ACTIVE & SOCIAL HEART	7.7. OUTDOOR ROOMS	7.8. WETLANDS	7.9. CUT FLOWER FARM	7.10. WILDERNESS EXPERIENCE
DESIGN GUIDELINES								
5.2. INDEPENDENCE								
5.2.1. Independent functioning								
5.2.2. Freedom								
5.2.3. Privacy								
5.2.4. Choice and control								
5.2.5. Legibility								
5.3. PURPOSE								
5.3.1. Work opportunities								
5.3.2. Motivation								
5.3.3. Positive messages								
5.3.4. Ownership								
5.4. CONSCIOUSNESS								
5.4.1. Sensory stimulation								
5.4.2. Awareness of time								
5.4.3. Change								
5.4.4. Excitement								
5.4.5. Variety of experiences								
5.5. REST								
5.5.1. Reflection								
5.5.2. Relaxation								
5.5.3. Familiarity								
5.5.4. Security								
5.5.5. Comfort								
5.5.6. Sleep								
5.6. CONNECTEDNESS								
5.6.1. Social interaction								
5.6.2. Social support								
5.6.3. Connected to natural systems								
5.6.4. Accessible								
5.7. ACTIVE								

