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Chapter 5

Design Development



A Personal Design Manifesto

Architecture and the landscape on which it exists should not be seen as separate entities. Rather, the two should be integrated as one through the process of design such that architecture becomes an extension of the landscape, and the landscape, an extension of architecture.

In order to design a successful landscape, a rigorous understanding of the site and its natural processes. After careful analysis and in addition to a well thought out design concept and programme, the outcome of the analysis will assist in directing the designer to a suitably sensitive and appropriate design solution that suits the site and fulfils the requirements of the project.

The landscape should be viewed as an ongoing process. A final product of landscape is unachievable as site conditions are in continuous flux, both above and below the earth's surface. In order to fully understand the site, it needs to be read as a palimpsest, its narratives – cultural, ecological, geographical – need to be exposed, read and understood, for this provides the designer with an indication of the site's functional capabilities and constraints.

I am interested in landscapes that merge into architectural structures, not only cutting into the land, but extending over it creating functional, interacting and multi-layered landscapes. Landscapes should include structural elements - these objects should not be purely functional, but should become sculptures that enhance the overall spatial quality of the design intervention.

The ideal landscape is a functional spatial arrangement providing public, private and transitional spaces. There should be a general interaction between these landscape spaces and an ultimate amalgamation of these spaces with regards to both the landscape and the architecture. A successful landscape enhances the original sites *genius loci* which relates to its past, yet permits and celebrates new and innovative design within it. It is through the layering of various services, functions, users and natural processes, in a contemporary, yet sensitive approach that allows the conception of the ideal or at least, a memorable landscape.

Throughout my approach to design, I search for technologically innovative and sensitive ways in which to merge landscape and architecture, such that landscape becomes an integral part of the urban built environment as a whole and in this way, landscape becomes the integral binding agent of the urban fabric.



Conceptual Framework

In order for the Faerie Glen Nature Reserve to become a safe and vibrant place activity within the boundaries of the site needs to be increased. Access to the reserve needs to be made easier and the main entrance should be more prominent. The reserve as a whole should become more inviting.

Presently, the reserve is used mainly on the weekends, by people living in the immediate surrounding areas. Due to a lack of infrastructure within the reserve, only activities such as walking, dog walking and jogging take place. A few areas are provided for picnicking but none of these are particularly inviting and remain unused. Furthermore, the reserve makes no attempt to provide interest to young families. During the week, the reserve lies dormant and largely unused by people and is thus perceived as a security threat to the surrounding areas. However, from a natural perspective, the reserve remains a 'hive of activity' as is evident from the ecological analysis.

Vision

Provide the Faerie Glen Nature Reserve with a unique identity and program it with spaces which, through ease of access, encourage activity throughout the week so that it becomes a destination not only to the local surrounding residents, but also to visitors from all over the region.

Aims

Through an intervention in the landscape based on ecological design and landscape principles, the author aims to:

- Create a unique identity for the Faerie Glen Nature Reserve.
- Improve safety within the reserve.
- Provide ease of access to the reserve.
- Maintain the ecological importance of the reserve and provide a platform for it to be used as an educational tool.
- Provide spaces for social activities at a variety of scales.

Approach

- Development should be kept to the edges of the reserve, and should, where possible, only take place in areas identified as low ecological sensitivity zones suitable for development in the chapter 3 analysis.
- No development should take place in the 50 year flood line or within 32m from the centre line of the Moreleta spruit.
- Retain and re-use infrastructure presently in the reserve.
- The Bronberg Ridge is a beautiful and ecologically important feature of the site. Any intervention should make full use of the vistas that this ridge provides - both from it and towards it.
- Due to the nature of the site, any intervention should be of a sensitive nature taking the natural environment and sense of place into account.
- Materials used should not compete with the visual aesthetic of the landscape, they should allow natural processes to change their appearance over time.

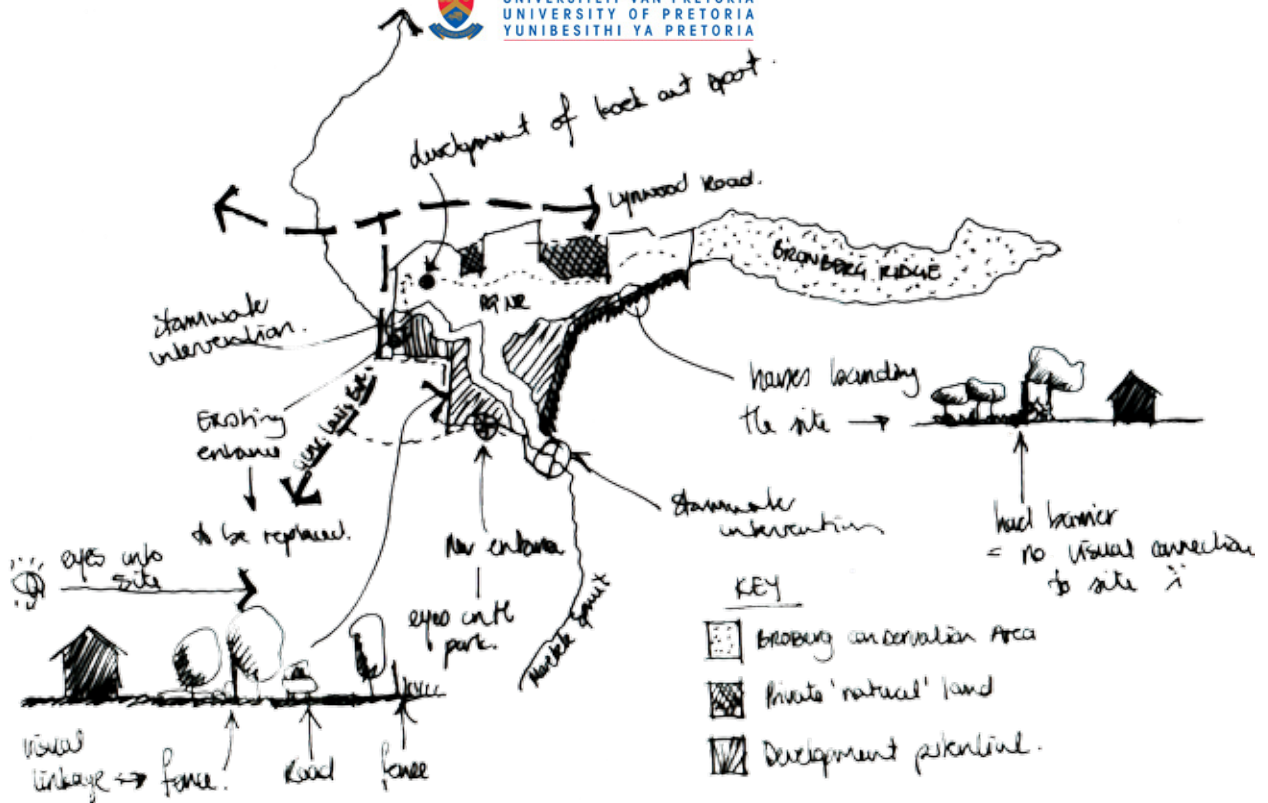


Figure 5.1 Conceptual framework diagram

Through this approach the author intends to create a place that respects and celebrates the landscape in which it lies, a place that is further shaped over time by environmental factors.

Figure 5.1 presents an initial framework concept drawn soon after an initial site visit in the early planning stages of the project. Although it notes various problems that may not have been addressed, on the whole it provides a good parti which later became the concept for the development framework for the reserve.

A further simplified version, Figure 5.2 becomes a parti diagram for the overall masterplan.

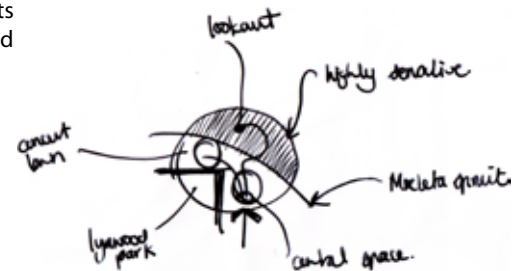


Figure 5.2 Parti diagram for masterplan

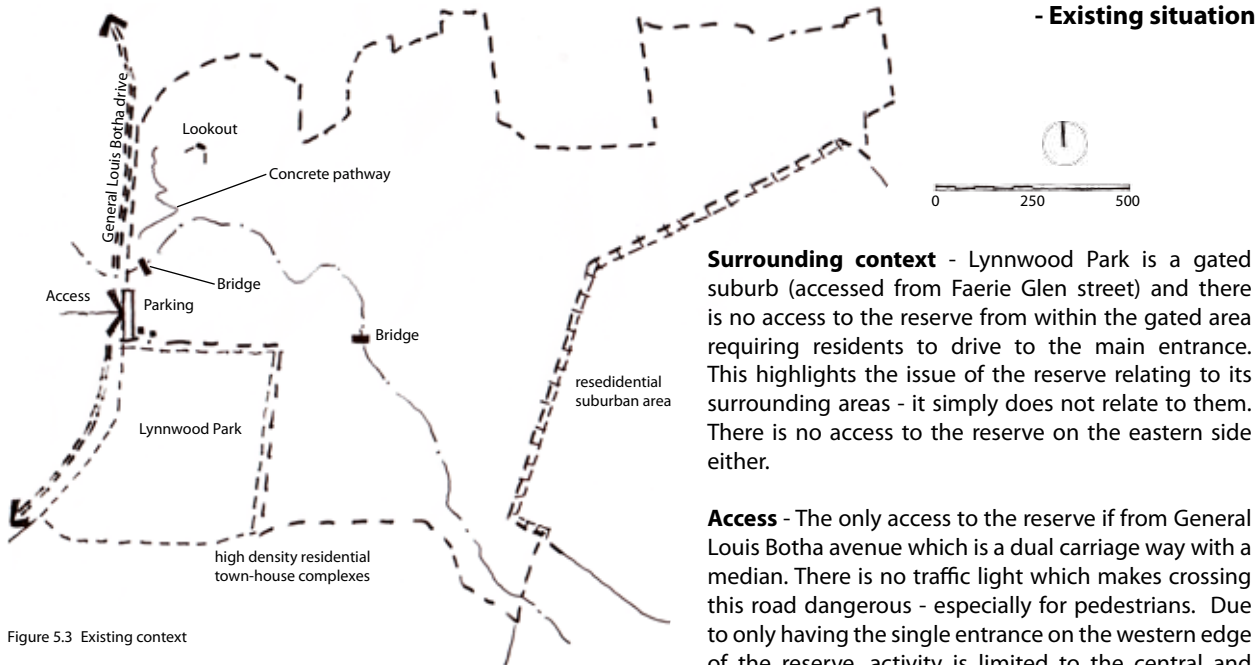


Figure 5.3 Existing context

Surrounding context - Lynnwood Park is a gated suburb (accessed from Faerie Glen street) and there is no access to the reserve from within the gated area requiring residents to drive to the main entrance. This highlights the issue of the reserve relating to its surrounding areas - it simply does not relate to them. There is no access to the reserve on the eastern side either.

Access - The only access to the reserve is from General Louis Botha avenue which is a dual carriage way with a median. There is no traffic light which makes crossing this road dangerous - especially for pedestrians. Due to only having the single entrance on the western edge of the reserve, activity is limited to the central and western parts of the reserve resulting in quiet areas which become unsafe.

Parking - The existing parking provides 70 bays with no possibility of overflow parking. 50% of the parking lies within the 50 year flood line.

Bridges - There are only two bridges across the Moreleta spruit in the reserve. One bridge is located at the western boundary and one in the centre of the reserve below Weaver pool. The lack of a bridge in the south-eastern area of the reserve limits circulation in this area.

Pathway - The concrete pathway to the lookout runs in close proximity to General Louis Botha avenue (Figure 5.4) and while walking on it you become more aware of the road which distracts from the experience of being in the nature reserve.

Look out - The position of the lookout point does not orientate the viewer to focus on the reserve but rather on the suburban areas west of the reserve.



Figure 5.4 Foot path to look out point

- Proposed framework

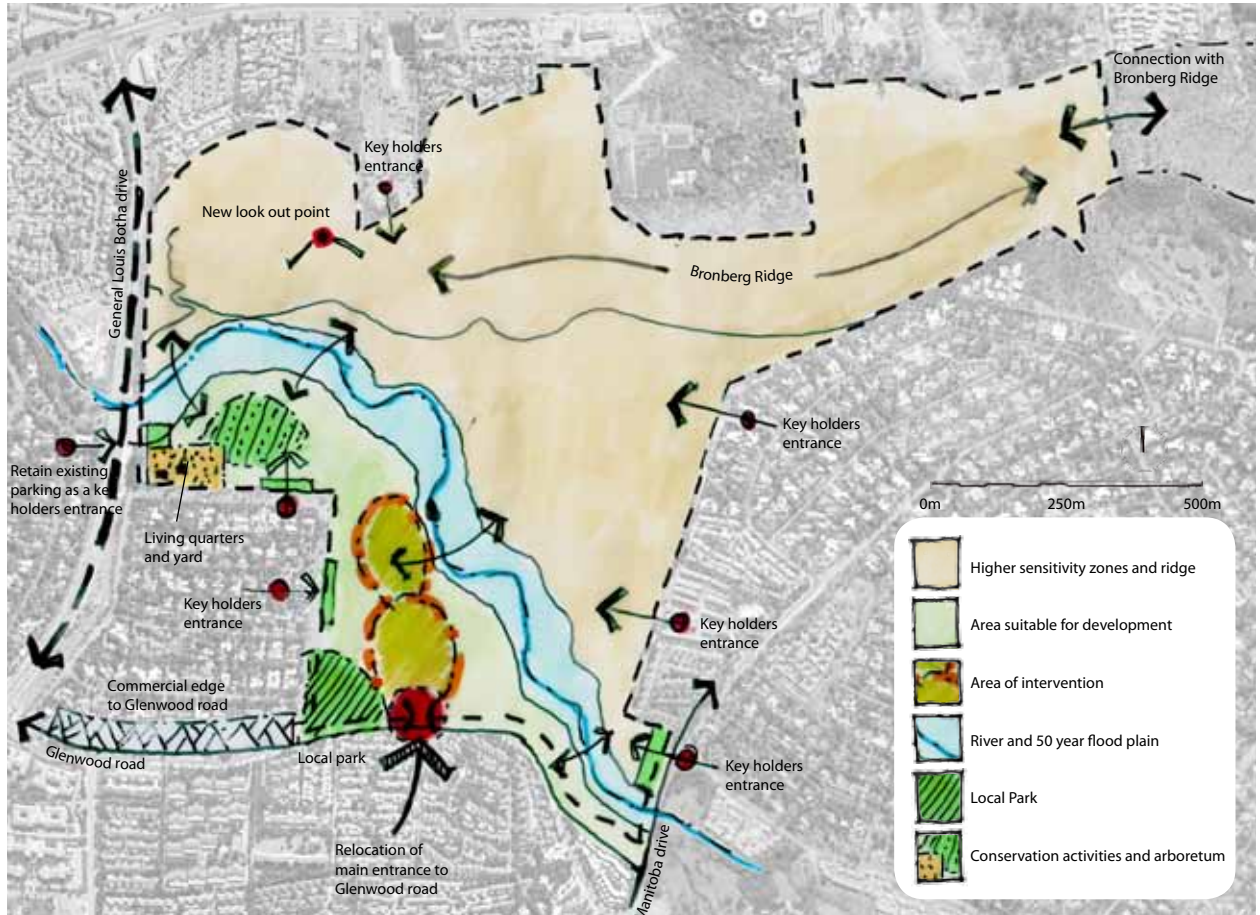


Figure 5.5 Proposed framework

The proposed framework for the Faerie Glen Nature Reserve (Figure 5.5) resolves the issues identified within the current context of the reserve. The most important items to note are that the main entrance to the reserve has been relocated to Glenwood road on the southern boundary and that additional access has been provided to the reserve by means of key holders entrances.

Masterplan Development

Various concept masterplans have been drawn up. Each masterplan is important in the process as it presented a slightly different approach and concept to deal with constraints as they arose in the course of research.

Masterplan concept 1 - This masterplan was based on the concept of a central spine pathway that bisected the lower regions of the reserve. Various activity nodes were positioned along the path. Moving along the central pathway the visitor went through the a central core space containing a small restaurant, crossed the river and then arrived at a concert lawn that was sculpted out of the landscape. An additional entrance on the south-eastern boundary and neighbourhood park are proposed.

This masterplan maintained the original entrance in General Louis Botha drive which was identified as a problem due to the dangerous intersection. The central spinal pathway was also revised as it did not alleviate the problem of concentrated activity in the western part of the reserve.

Masterplan concept 2 - This masterplan introduced a new concept of the patchwork landscape and was seen a land art installation on the landscape which could be viewed from the lookout points at the top of the ridge.

Fire breaks were burnt into the landscape in order to form the structuring element of the masterplan. Various activity spaces were created by the placing patches which consisted of different types of planting, hard surfaces and sports surfaces.

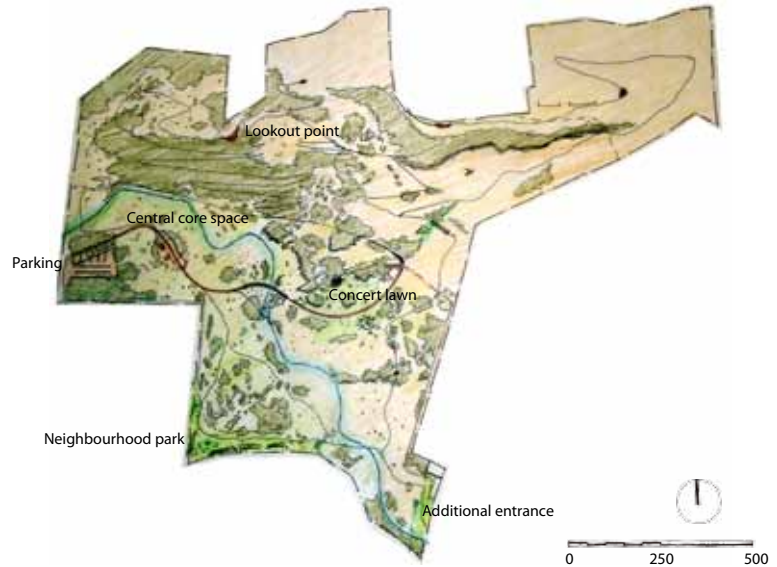


Figure 5.6 Masterplan concept 1

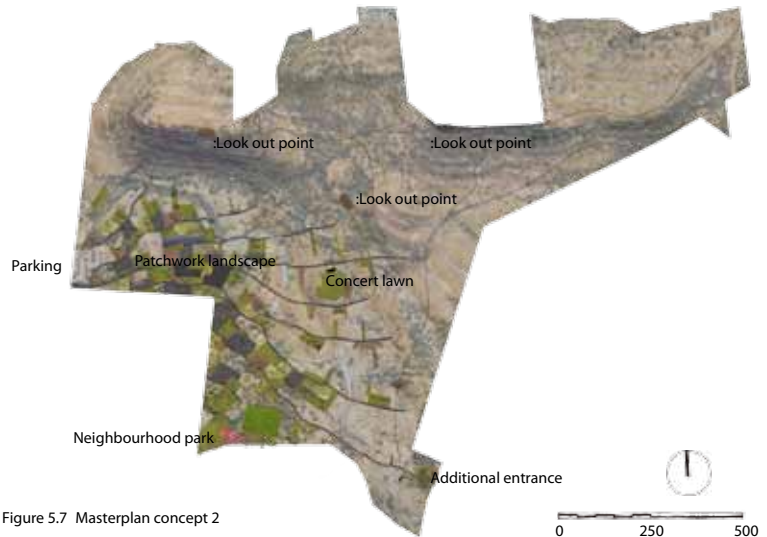


Figure 5.7 Masterplan concept 2

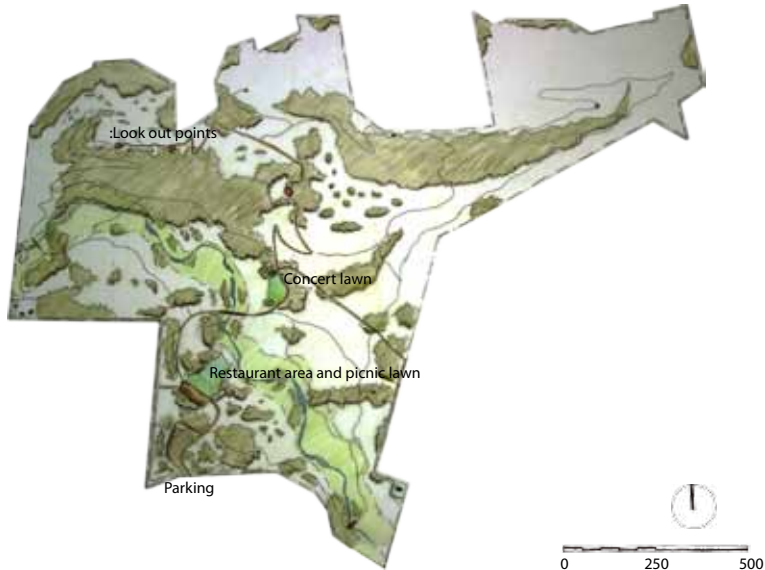


Figure 5.8 Masterplan concept 3

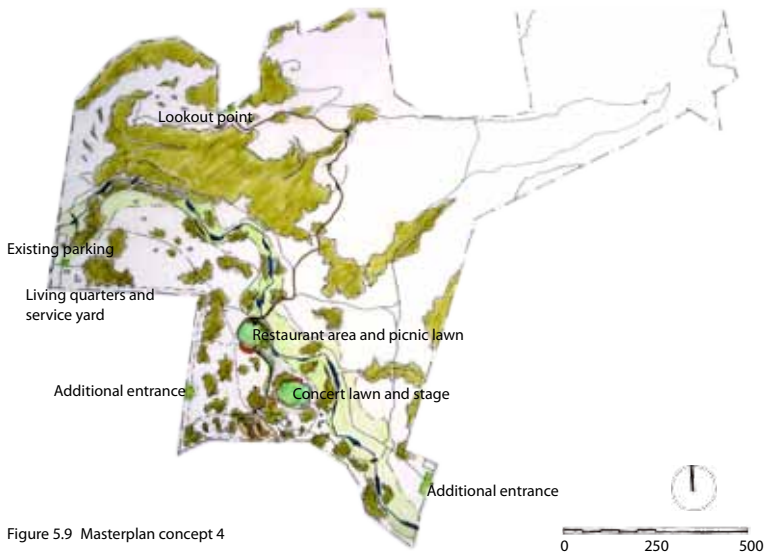


Figure 5.9 Masterplan concept 4

This concept was viewed as a 'brutal' intervention on the landscape for 'arts sake' and largely disregarded the ecological sensitivity of the reserve.

Masterplan concept 3 - In this masterplan, the main entrance and parking have been relocated to Glenwood road. The concert lawn remains on the northern side of the Moreleta spruit while the restaurant area is moved to the south-western part of the reserve.

An investigation into the construction of the concert lawn as a wedge sculpted out of the landscape proved it to be an unsustainable option requiring the mass import of fill material into an area of intermediate ecological sensitivity in the reserve.

Masterplan version 4 - In this masterplan both the restaurant area and the concert lawn are placed in the south-western area of the reserve. These areas are lower in ecological sensitivity. The main entrance remains in its relocated position on Glenwood road.

Additional key holders entrances are provided for ease of access for residents in the surrounding area.

This concept masterplan is used as a basis for the final masterplan.



Figure 5.10 Landscape masterplan



- Final Masterplan

An understanding of the inherent landscape narrative has led to the development of a programme that emphasises the importance of the natural features and processes in the reserve.

The masterplan for Faerie Glen Nature Reserve provides places for social interaction in order to encourage an increase in the usage of the reserve and heighten the experience of visiting the reserve. It introduces a hierarchy of pedestrian circulation – visitors may move through the reserve to the main activity areas using the main pathway or move through the natural areas of the reserve using the nature trails which intersect with the main pathway at various places.

Activity nodes have been limited to the least sensitive areas of the reserve, and existing infrastructure has been adapted and re-used. Interventions in the landscape are located and orientated to gain maximum effect of the vistas provided by the Bronberg ridge in order to expose the story of the landscape and enhance the visual experience of the reserve, thus creating a more memorable landscape.

An explanation of each item on the masterplan follows:

Main vehicular entrance and parking (1) - The relocated entrance is in Glenwood road. The parking area is laid out around existing tree clumps and consists of paved roadways. The parking bays are paved with permeable grass blocks. An area of informal overflow parking is provided by means of a mowed veld grass. This parking area will be dealt with in more detail in the next chapter.

Arrival plaza (2) - This area consists of an arrival plaza and the main entrance building. This area will be dealt with in more detail in the next chapter.

Pause junction (3) - Located at the junction where the main pathway splits, one leading to the concert lawn and the other to the restaurant area and picnic lawn, this area provides information relating to reserve. This area also allows the first directed view of the Bronberg ridge. This area will be dealt with in more detail in the following chapter.

Concert lawn and stage (4) - A sculptural stage and an informal concert lawn provide the ideal area for Sunday picnic concerts or small musical

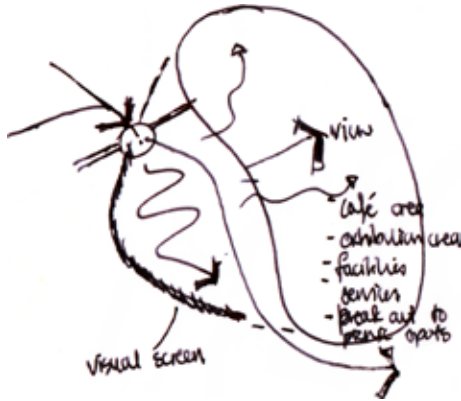


Figure 5.11 Restaurant area concept drawing

reviews. A plaza area and ablution facilities are provided to one edge while a sculpted lawn berm contains the other. This area will be dealt with in more detail in the next chapter.

Restaurant area and picnic lawn (5) - This area consist of a 'landscaper' building which is pushed down into the landscape. Natural vegetation grows over the roof and conceals the building preventing it from visually impacting the beauty of the reserve. This area includes a small restaurant, a kiosk and ablution facilities. This area will be dealt with in more detail in the following chapter.

Timber deck and bridge (6) - A timber deck spans the 50 year flood plain which falls into the high sensitivity zone. A small pause deck with a bench provides a place to quietly sit and enjoy the scenery as the Bronberg ridge is reflected in the surface of Weaver pool. This area will be dealt with in more detail in the following chapter.

Bird hide (7) - There is an existing bird hide at the Weaver pool. This bird hide is to be retained as a quiet pause area with a bench (Figure 5.12).

Main pathway (8) - This pathways runs as a central axis on the masterplan from the main entrance (1) and terminates at the main look out deck (9). In sloped areas, the pathway maintains a maximum slope of 1 to 15 with landing for every 1.5 metre rise. This pathway is laid out based on existing vegetarian clumps, items of interest and vistas (Figure 5.13).

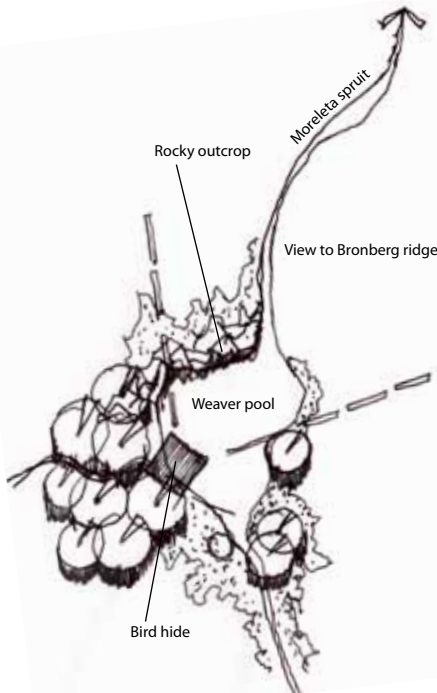


Figure 5.12 Bird hide and Weaver pool

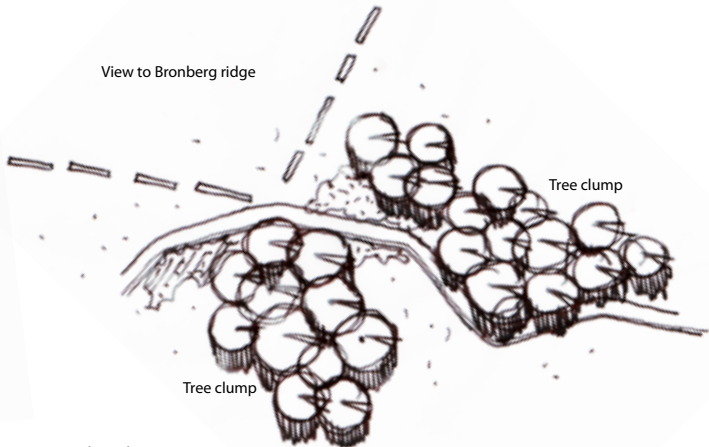


Figure 5.13 Pathway layout

Main lookout deck (9) - This deck forms the termination point of the main pathway and provides a rest area with views over the reserve, the landscape 'canvas' (16) and southwards as far as Centurion. Existing vegetation clumps and rock outcrops were taken into account while placing it due to the high ecological sensitivity of the ridge.

Look out decks (10) - This is a series of small decks that provide a pause area with a view over the landscape 'canvas' (16). These decks are situated between existing vegetation clumps and rock outcrops taking into account the high ecological sensitivity of the ridge and provide a bench which is shaded by established trees (Figure 5.14).

Concrete footpath (11) - There is an existing narrow concrete footpath which runs from the pedestrian bridge (12) up to the look out decks (10) at the top of Faerie Glen Hill. The path was constructed to prevent erosion caused by the high usage of this trail. This trail will be retained and integrated into the nature trails.

Pedestrian bridge and stormwater intervention (12) - There is an existing pedestrian bridge and stormwater intervention where the Moreleta spruit exits the reserve below General Louis Botha drive. These items are to be retained and the pedestrian bridge integrated into the revised nature trails.

Existing parking and key holders entrance (13) - The author has decided to retain the existing parking area off General Louis Botha avenue. This parking area will provide access to the living quarters, service yard, arboretum and conservation centre in addition to providing parking for a key holders entrance to the reserve (Figure 5.12).

Living quarters and service yard (14) - Two buildings are presently situated in this area - one is the building used in the past as the Plumbago tea garden which is currently used as the main entrance to the reserve. The other building is a newly constructed reserve manager's dwelling. The author proposes that a fence be erected around this area forming a service compound in which the reserve manager lives and in which all equipment necessary for the day to day running of and maintenance of the reserve is stored (Figure 5.15).

Arboretum and conservation centre (15) - There is an existing arboretum in the reserve which was started by the Friends of the Faerie Glen Nature Reserve. It is located next to the current main entrance. This arboretum showcases tree species that grow naturally in the Faerie Glen area. The author

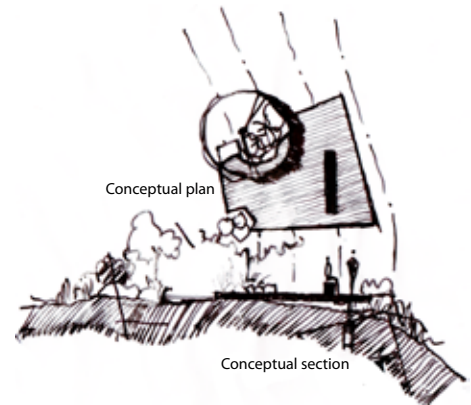


Figure 5.14 Viewing deck

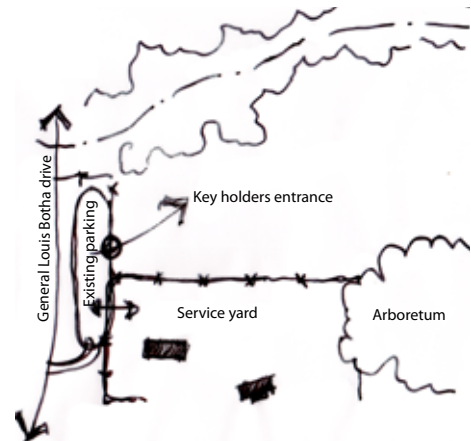


Figure 5.15 Existing parking, key holders entrance and service yard

proposes that a conservation centre is constructed in this area to promote the active conservation of endangered plant species found within the reserve - at present there are at least three identified red data plant species present in the reserve. The centre's position is determined by the location of the arboretum, its proximity to the service yard and access from General Louis Botha drive. The building should be built as high as possible above the 50 year flood line while retaining a visual buffer zone of vegetation between itself and the residents of Lynnwood Park (Figure 5.16).

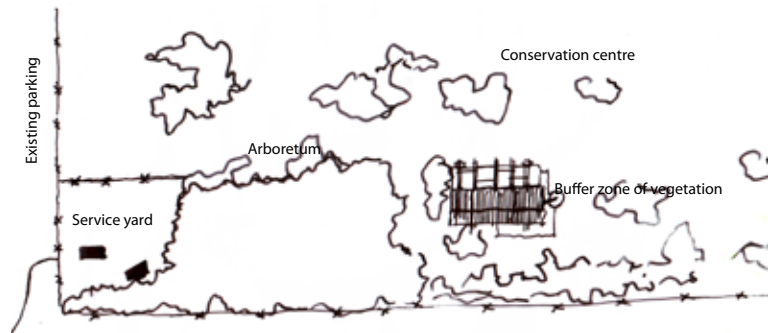


Figure 5.16 Location of conservation centre

Landscape as 'canvas' (16) - This area has been identified as a location for land art installations to take place due to its gradual slope, low ecological sensitivity and disturbed patches of vegetation. These installations will be partly visible from General Louis Botha drive (attracting visitors) but the main

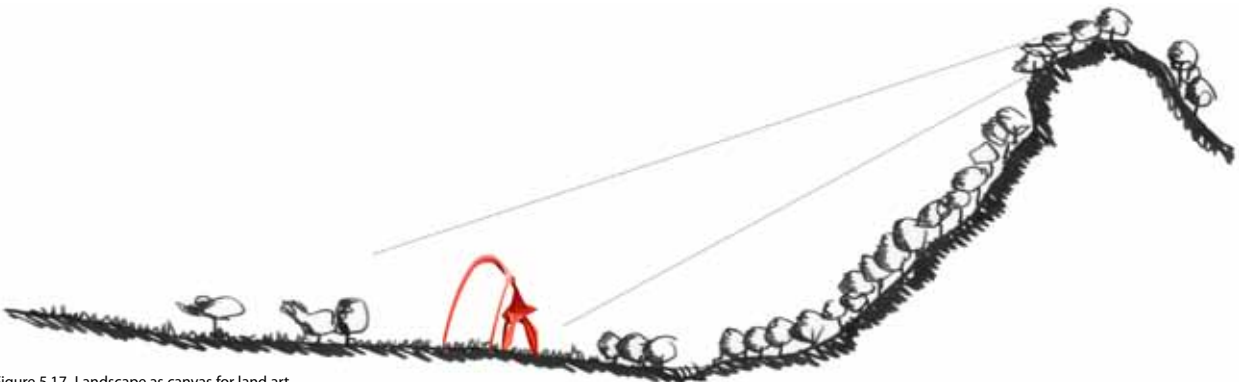


Figure 5.17 Landscape as canvas for land art

view will be from above, from a series of look out decks along the ridge (Figure 5.17).

Informal river crossing (17) - This is an existing crossing where the river is crossed by stepping on rocks. This crossing will be retained as part of the nature trail system.

Key holders entrance (18) - In order to obtain ease of access to the reserve the author proposes key holder entrances on the south-western and western boundaries. These entrance points, which are recessed slightly into reserve, will be provided with limited parking. Doubling as rest spots, these areas will be landscaped with benches, and a small lawned area, paved pathways and naturalistic planting (Figure 5.18).

Local park (19) - The south-western corner of the reserve is proposed as a local park which provides a public open space for the use of the surrounding residents. Limited parking will be provided. This park, partly located within the current fence line of the reserve and forms a buffer zone between the streetscape of Faerie Glen street and Glenwood roads and the new parking area for the reserve. A security check point into Lynnwood Park in Faerie Glen street will provide a secure eye over this park (Figure 5.19).

River crossing (20) - An additional river crossing is provided here in increase ease of pedestrian circulation through the site.

Key holders entrance (21) - In order to obtain ease of access to the reserve the author proposes key holder entrances on the south-western and western boundaries. These entrance points, which are recessed slightly

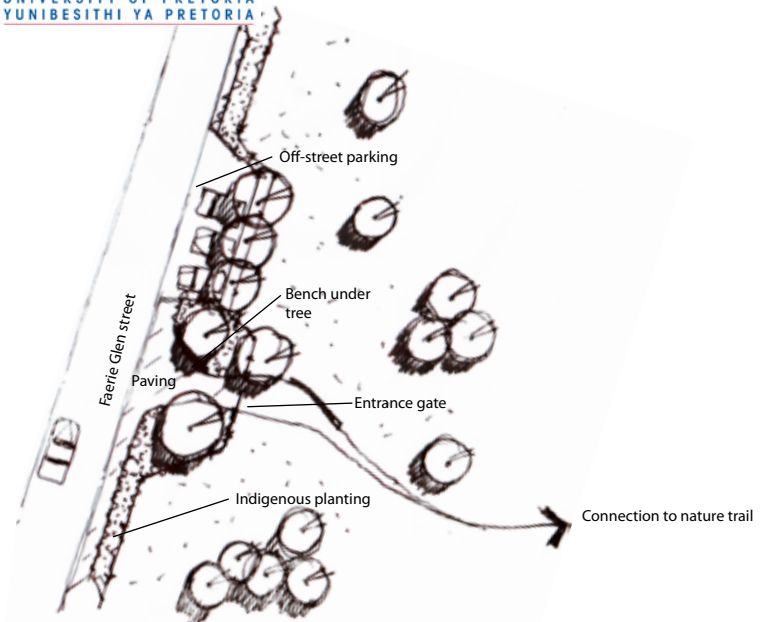


Figure 5.18 Key holders entrance

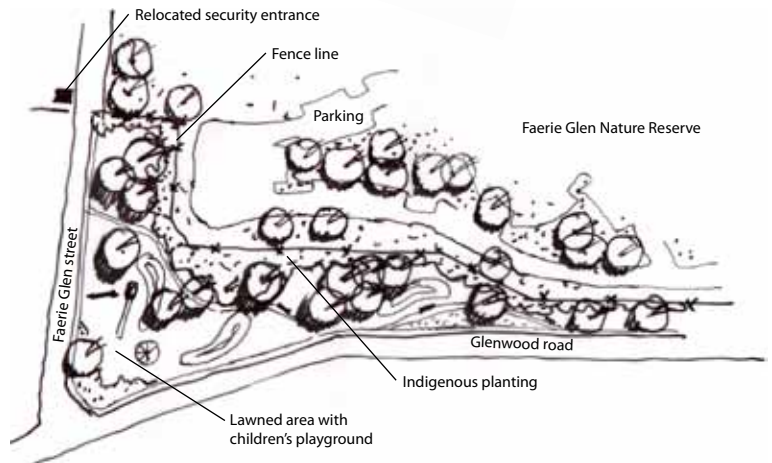


Figure 5.19 Local park



into reserve, will be provided with limited parking. Doubling as rest spots, these areas will be landscaped with benches, and a small lawned area, paved pathways and naturalistic planting.

Pause area (22) - A large *Combretum erythrophyllum* tree provides a tranquil and beautiful spot in with to create a small pause area, slightly off the nature trail which has a bench and a water point.

Nature trails (23) - Existing nature trails have been incorporated into the masterplan and link with main pathway. These nature trails allow visitors to move through the reserve without needing to use the main pathway or move through the main activity nodes.

Key holders entrance and small local park (24) - As there is no access to the reserve on its eastern boundary the author proposes that a key holders entrance is established. Furthermore, since there are no local parks in the area east of the reserve, the author proposes that a small local park is established as an extension of the key holders entrance.

Look out point (25) - A small informal lookout point along the nature trail denotes the highest point in the reserve, Renosterkop, at 1482 metres above sea level.

Access to the Bronberg Ridge (26) - The author proposes that a key system could be used in order for visitors to access nature trails across the entire Bronberg Ridge.

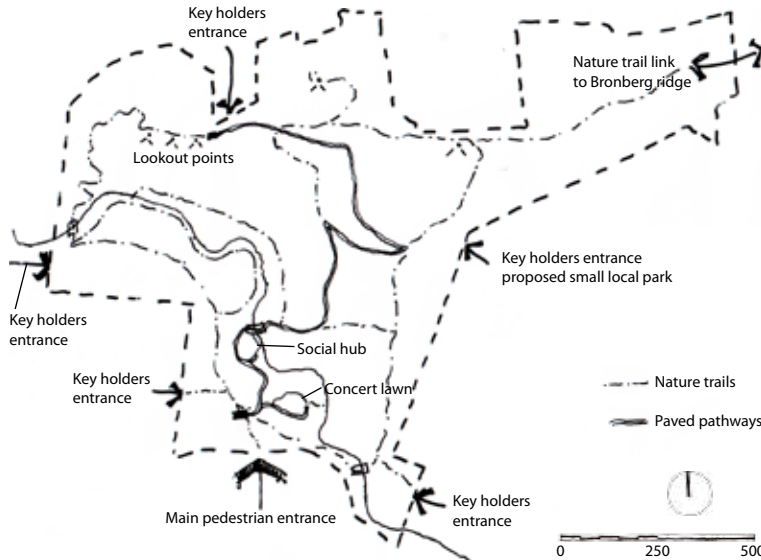


Figure 5.20 Pedestrian circulation



Figure 5.21 Vehicular circulation

- Circulation

Pedestrian circulation - A main entrance is and numerous key holders entrances are provided to gain access to the reserve. A formalised paved pathway is provided from the main entrance to the lookout point at the top of Faerie Glen Hill. Numerous nature trails present in the reserve have been incorporated into the masterplan and link up with the the main pathway.

The nature trails provide visitors the opportunity to move through the reserve without having visit or pass through the main activity nodes within the reserve.

A new nature trail is proposed by the author that links the Faerie Glen Nature Reserve to the broader Bronberg Ridge.

Vehicular circulation - Vehicular circulation within the reserve is limited to the southern and eastern boundaries of the reserve. Parking is provided at the main entrance and at each of the key holders entrances.

A dirt road provides a link between the staff living quarters, service yard, conservation centre and the main entrance and parking area. A similar dirt maintenance road runs along the eastern boundary of the reserve. These dirt roads, in addition to providing vehicular routes, act as fire breaks during the drier times in the year.

A double track paved with grass blocks provides access for deliveries to the restaurant and the to the back of the stage.

Conclusion

The masterplan proposed for the Faerie Glen Nature Reserve heightens the experience of the landscape and make it more accessible to a broader community. By conducting a thorough analysis and adhering to ecological design principles, development in the reserve has been limited to the least ecologically sensitive areas. Use of the site decreases as the conservation value increases (Figure 5.22). By limiting the main activity in the reserve to certain areas, the zones of higher conservation value are afforded an opportunity to be restored and conserved.

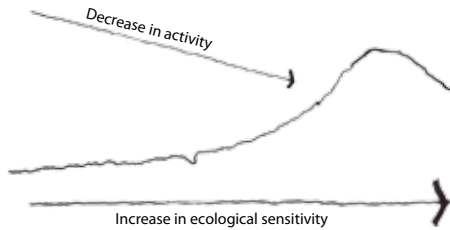


Figure 5.22 Activity on site

Through an understanding of the inherent landscape narrative a programme has been developed and then structures designed that emphasize the importance of the natural features and processes on the site. These highlight the reserve's importance within its context not only ecologically, but socially as well as a restorative and therapeutic place in the built environment for the local community.

Provision of additional entrances improves ease of access to the reserve. This in addition to the development of areas for social interaction at a variety of scales and uses facilitates an increase in visitors who may not be interested in visiting the reserve currently.

Visitors may make use of the main areas, or simply move through the site by means of the nature trails. Either way, they are exposed to the beauty of the site and through experience, memories are created in the landscape.

Through an understanding of the environmental performance, social inclusion and economic development, the implementation of this masterplan at the Faerie Glen Nature Reserve will result in the creation of a landscape that is both memorable and sustainable in the long term.