

04

Diepsloot Nature Reserve Framework

4.1 Landscape vision for the Diepsloot Nature Reserve

The vision for the DNR is a clearly demarcated and protected reserve, which is dynamic and multifunctional. One of the functions of the nature reserve, and the most important one for this thesis, is the proposed burial site that disposes of corpses in a sustainable manner and takes the user through a narrated landscape. In order to design the burial site inside of the DNR, a framework for the entire reserve has to be in place.

Figure 48 illustrates the proposed framework for the DNR. The goal of the framework is threefold. The first goal is to upgrade the reserve to a site worthy of being a proclaimed reserve. This is achieved through the rehabilitation of the Egoli Granite Grassland, purification of the Diepsloot stream, removal of dumped rubble, proper fencing, and the addition of wildlife, such as antelope and zebras. The second goal is to provide formal and proper access to the reserve, and the final goal is to create a dynamic and utilized landscape through alterations and additions to the programme of the reserve. (The burial site being one of the additions)

4.2 New nature reserve boundary

Due to excessive sprawl into the reserve from Diepsloot township the boundary of the reserve has been altered. The new boundary, Figure 49, excludes the informal addition of the township, as well as the Diepsloot cemetery. Proper fencing will be erected to prevent further illegal rubble dumping and keep the game inside of the reserve.

4.3 Addition of low-income housing

According to Wilkins (2011), once the Diepsloot cemetery has reached its burial capacity, it will be utilized as a neighborhood park. A successful neighborhood park should be central and surrounded by residences. The Diepsloot cemetery is currently surrounded by open veldt and residences only in the distance. Without the addition of residences adjacent to it, the cemetery, like numerous other cemeteries in Johannesburg, will become abandoned. It will not be a quaint neighborhood park. Passive cemeteries in Johannesburg are unsafe for users. Many murders and rapes take place in cemeteries close to informal settlements

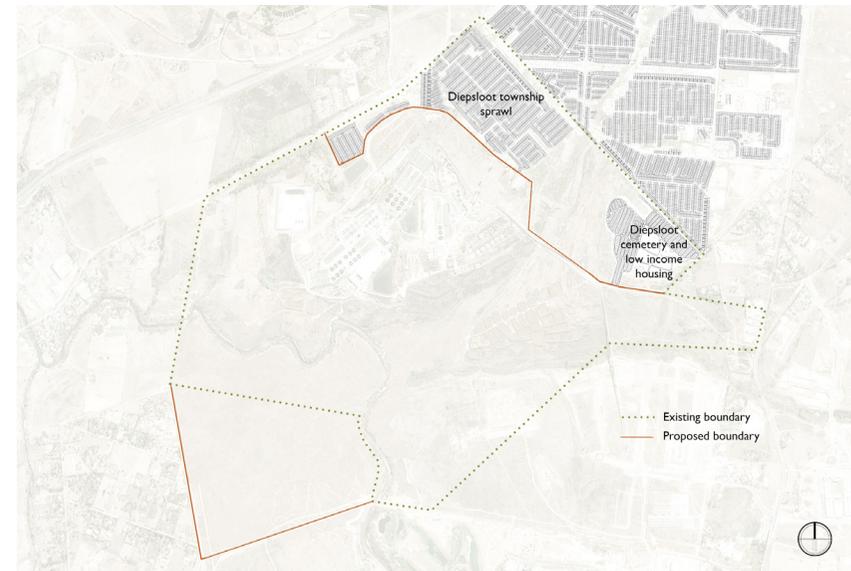


Figure 49. Existing and proposed nature reserve boundary (Author 2015).

due to a lack of passive surveillance (Johannesburg City Parks 2008).

To transform the soon to be passive Diepsloot cemetery into a park, instead of a criminal hotspot, formal low-income housing units are proposed adjacent to it. This extension is proposed in the area where the second phase of the Diepsloot cemetery would have been implemented. The roads for phase two has already been laid and is therefore used to structure the new housing development, Figure 51.

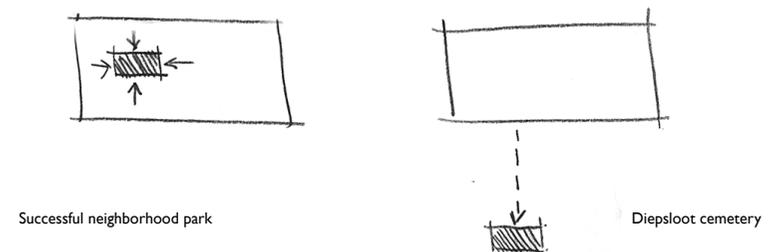
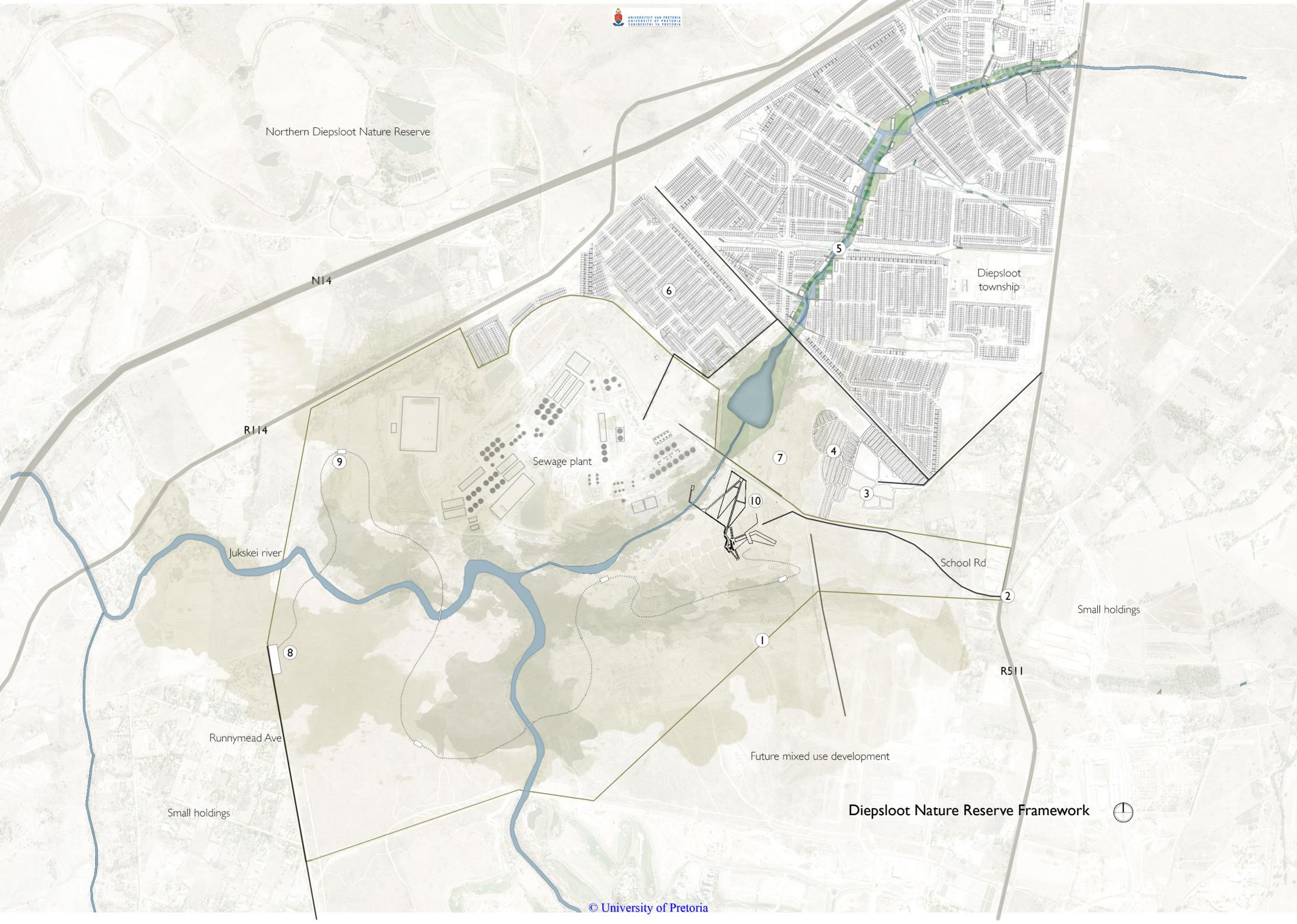


Figure 50. Relationship between a residential area and a neighborhood park and the Diepsloot cemetery's situation (Author 2015).



Northern Diepsloot Nature Reserve

N14

Diepsloot township

R114

Sewage plant

Jukskei river

School Rd

Small holdings

Runnymede Ave

Future mixed use development

Small holdings

Diepsloot Nature Reserve Framework

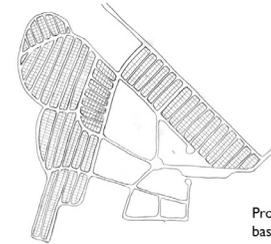
Diepsloot Nature Reserve Framework

1. New fenced nature reserve boundary
2. Main entrance to the reserve
3. Existing Diepsloot cemetery
4. Proposed low-income housing next to the Diepsloot cemetery
5. Proposed upgrade of the Diepsloot stream to provide the reserve down stream with clean water
6. Existing township extension formalised and excluded from the new reserve boundary
7. Rehabilitated grassland (old agricultural field)
8. Second entrance into reserve to non-burial site visitors. Consists of a small parking lot and access to the nature reserve trail.
9. Wheelchair friendly nature trail with hides to view wildlife.
10. Proposed core (activity hub). Consists of an information centre, coffee shop, venue and the burial site with associated activities.
11. New access road to Diepsloot township, Diepsloot extension, and the sewage treatment plant

Figure 48. Diepsloot Nature Reserve framework (Author 2015).



Existing first phase of cemetery with roads constructed for phase two



Proposed low-income housing based on the existing roads



Cemetery is no longer isolated and can be used as a neighborhood park



Figure 51. Proposed low-income housing to turn the soon to be passive Diepsloot cemetery into a neighborhood park (Author 2015).

4.4 Diepsloot cemetery

Within the next five to ten years, the Diepsloot cemetery will reach its burial capacity (Johannesburg City Parks 2008). Once a passive cemetery it can be used as a neighborhood park by the residents of the proposed low-income houses adjacent to the cemetery. The Diepsloot cemetery was designed to look like a park instead of a traditional cemetery; tombstones are flushed with the natural soil level, there are large lawn areas, benches, ponds, and drinking fountains (Wilkins 2011).

4.5 Diepsloot stream

The DNR is a proclaimed nature reserve; therefore, any water body in it should be clean and add value to the reserve. There is has one river, one perennial stream, and one seasonal stream running through the reserve. The perennial stream's catchment area is the entire Diepsloot township, thus the stream is highly polluted. In order for the stream to be clean enough for consumed by game and other wildlife, a water management system needs to be implemented in Diepsloot township. If the problem is not resolved upstream where the township's run off flows, the water will not be clean when it reaches the nature reserve. This system, marked number 5 on the framework plan, Figure 48, is discussed in detail in chapter seven as part of technification.

4.6 Main entrance: School Road

The main entrance to the reserve and the activity hub of the site is School Road. It directly connects to the upgraded R511. The intention of placing the entrance to the reserve next to an active street and commercial hub is to draw people in. School Road also has magnificent views of the reserve and impressive overhead sewage lines, Figure 52 and 53.

4.7 Core/ activity hub of the reserve

Fenced off nature reserves in suburbs are often not fully utilized. Due to its mono-function of being an area of undisturbed natural vegetation and its residential location, the user demographic is limited to weekend hikers, daily joggers, and dog walkers who live in the vicinity. Figure 54 illustrates this: protected nature reserves



Figure 52. View from School Road as one enters the Diepsloot nature reserve. (Author 2015).



Figure 53. view of sewage pipe with power plant in the background (Author 2015).

often only serves the residents adjacent to it. If a core, or activity hub, were added to the reserve, it would appeal to more users. Figure 54 illustrates how the addition of a core, with commercial, educational, or recreational value would bring in a larger diversity of users.

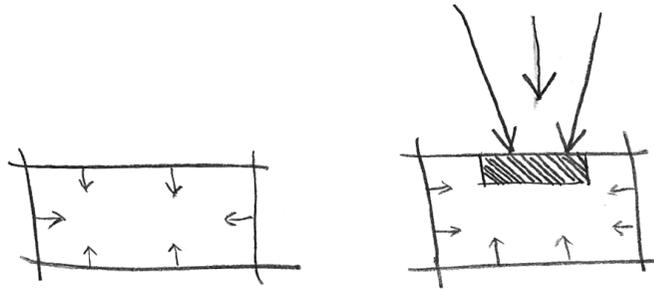


Figure 54. A nature reserve without and with a core/ activity hub (Author 2015).

People utilizing the core's activities will start to filter into the rest of the reserve. Between the core and the undisturbed natural part of the reserve a buffer area, such as a picnic or peaceful bird and game watching area can be designed. At the core there is a high intensity of activities, as the user moves into the buffer zone there are less activities and more recreational facilities and finally low intensity activities, such as walking and observing nature, as the user gets deeper into the reserve where fauna and flora remain undisturbed.

The Author does not dismiss the importance and need for protected natural environments. They provide ecosystem services such as regulating services and habitat or supporting services. Regulating services include erosion prevention, maintenance of soil fertility, pollination, and biological control, while habitat or supporting services include the provision of living spaces for plants and animals, as well as the maintenance of genetic diversity (TEEB 2011). This does however not mean that nature reserves should not have additional commercial, educational, and recreational value. Such additions will not only increase the safety, conservational awareness, job opportunities, and utilization of the reserve, but will also generate an income that can be put towards maintaining the reserve.

The placement of the activity hub depended on access to the reserve, as well as the mapped ecological sensitivity. Conclusions drawn from the site analysis indicated the most appropriate place for a core, Figure 48 at number 10.

4.8 Programme

To fully utilize the DNR, it will not only function as a protected area of natural fauna and flora. The programme of the reserve consists of two main topics: the burial site and the nature reserve.

The programme for the DNR is as follows:

Burial programme	Nature reserve programme
Workshop where caskets are woven/ eco-urns are prepared	Information centre (information on the reserve, conservation, and sustainability)
Promession area (reducing corpse to ashes)	Restaurant
Placing corpse in woven casket or eco-urn	Venue (for conferences)
Final body viewing by family	Picnic area/ lawn
Chapel	Hiking trails
Venue (serving refreshments after service)	Game viewing

These programmes can be interwoven with each other to create a richer combined programme. Instead of the nature reserve's information centre just being about the conservation of natural environments, it can be educational regarding sustainable and environmentally friendly methods to dispose of corpses. To enhance this, the workshop where the decomposable caskets are woven and the eco-urns are prepared can be next to the information centre. Users can see how the caskets are woven or where the seedling and compost are placed in the urns. This interaction will educate users on the importance of alternative methods to bury a loved one.

Certain programmes can not be interwoven with each other; the area where the body is viewed for the last time, and the restaurant can not be placed next to each other. Carrying corpses past users enjoying a picnic would not be appropriate. The programmes have to be grouped according to their sacredness.

Sacred (Private)	Sacred (Public)	Non-sacred (Public)
Promession area (reducing corpse to ashes)	Composting chambers	Information centre (information on the reserve, conservation, and sustainability)
Placing corpse in woven casket or eco-urn	Veldt where people are green buried	Workshop where caskets are woven/ eco-urns are prepared
Final body viewing by family	Forest where eco-urns are planted	Restaurant
Chapel		Venue (for conferences/ (serving refreshments after service)
		Picnic area/ lawn
		Hiking trails
		Game viewing

The site's programme can be grouped into three categories; sacred (private), sacred (public), and non-sacred (public). According to this, the programme will be placed on site at the demarcated activity hub area.

The activity hub is further discussed and designed in chapter six: Design

4.9 Vision images

Figure 55 and Figure 56 illustrate initial intuitive visions of the nature reserve. Figure 55 shows a proper trail turning through the site and Figure 56 the entrance to the activity hub with a type of orientation space overlooking the reserve.

4.10 Landscape vision conclusion

The Diepsloot Nature Reserve will be a clearly demarcated and protected reserve, which is dynamic and multifunctional. Driven by the theme of sustainability, the burial site and nature reserve programmes are interwoven at the activity hub. The burial site remains the focus on this thesis, but how it fits and functions within the activity hub is discussed in chapter six.

In the next chapter, the focus shift from the framework to the concept and design of the burial site.



OPPOSITE PAGE Figure 55. Vision image: Entrance to the core of the site. Showing an information centre with an orientation space and a view overlooking the reserve (Author 2015).
Figure 56. Vision image: Variety of users moving through the nature reserve via a formal wheelchair friendly walkway (Author 2015).



