CHAPTER 6_DESIGN DEVELOPMENT

6.1 Introduction

This chapter includes the process of further discovery and decision making. Precedent imagery influences the design development and detail design. From the site analysis completed, very different zones with different characteristics can be identified in the wasteland. These zones now need to be explored according to the design process proposed, first spatially and then on a planning level. Once completed the four zones need to be combined and developed to form a masterplan for the site.

6.2 Precedent Imagery

The precedent imagery evaluated provide visual stimulants of:

- Landscape designs implemented on wastelands;
- Projects that combine nature and wilderness with the city;
- Structural forms;
- Inclusion of natural processes and rehabilitation;
- Sculptural landscape interventions in the landscape;
- The use of materials and textures; and
- Place-making in the landscape.

121.1 Parc Andre Citroën, Paris, France, 1992 by Gilles Clément and Alain Provost.
121.2 Seattle Gas Works Park, Washington, USA, 1975 by Richard Haag.
121.3 Toronto Waterfront, Canada, 2006 by West 8.
121.4 Forum Homini, Sterkfontein, 2003 by Green inc.
121.5 The Hakone Japanese Tea Gardens.
121.6 Pedestrian bridge in Texas, USA. by Miro Rivera architects.
121.7 Lurie Garden, Millenium Park in Chicago, USA, 1998 by Kathryn Gustafson, Piet Oudolf, and Robert Israel.
121.8 Eggum, Lofoten, Norway, 2007 by Snøhetta Architects.
121.9 The Garden of the Anterior, 1975 by Bernard Lassus.
121.10 Three Bridges of Borneo/Sporenburg, Netherlands by West 8.
121.11 Tomba Brion - Vega by Carlo Scarpa, 1978.
121.12 Conical Tower, Great Enclosure, Great Zimbabwe Ruins, Zimbabwe.
121.13 and 121.14 Byxbee Park in California, USA, 2005 by Hargreaves Landscape Architects and Planners.
121.15 Mill Race park, Columbus, Indiana, 1992 sculpture by Stanley Saitowitz.
121.16 and 121.17 Buenos Aires Reserva Ecologica, 1918 by Hargreaves Landscape Architects and Planners.
121.18 Botanic Bridge, Gwangju by West 8.


121.1


121.2


121.3


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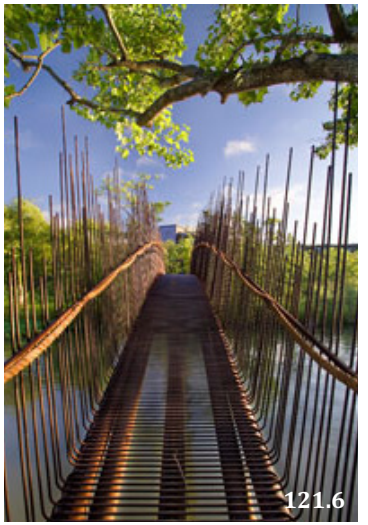
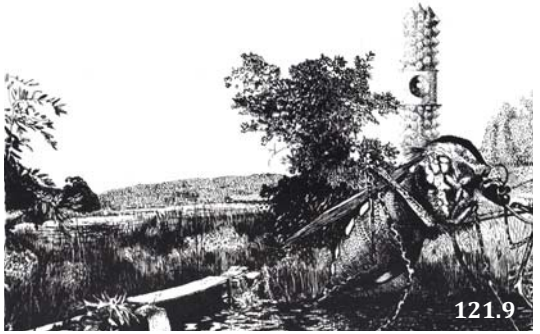
121.5


121.6

6.2.1 Precedent design imagery


121.7


121.8


121.9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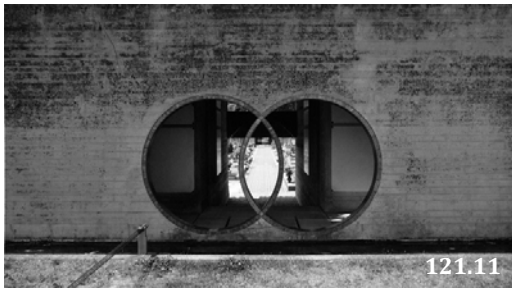
121.11


121.12


121.13


121.14


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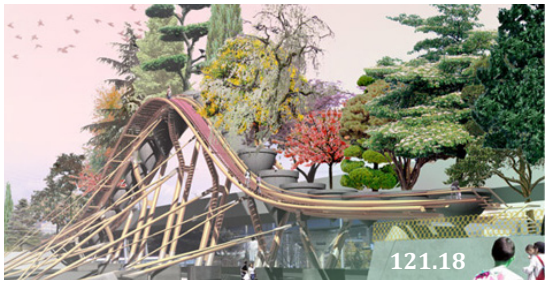
121.16


121.17


121.18

6.3 Four places

As a result of the site analysis completed, which included the mapping of the poetry and character of the site, four main zones (see illustration 122) can be identified (namely i, ii, iii, iv). Each zone will be further explored in terms of the found objects in that zone, and thereafter, spatial and planning explorations will be completed for each. In addition, this exercise proposes a planting and material palette that responds to and originates from the character of each place.

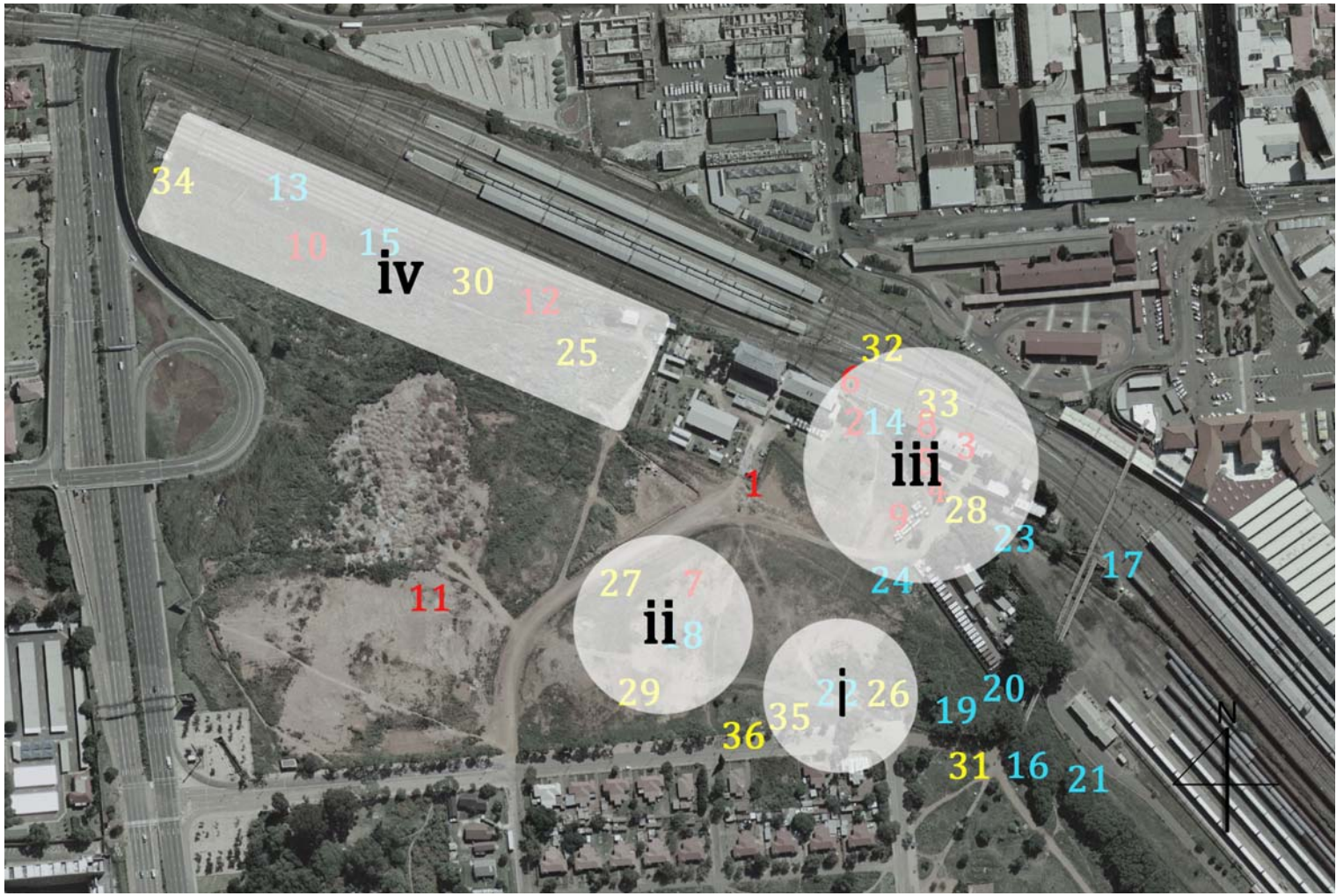


Illustration 122: Four places of poetry indicated

6.4 Place i

Found objects in this area include (see illustration 123):

- **dense vegetation**;
- **steep slope**;
- s**culptural powerline**; and
- **found materials**.

The spatial explorations for this zone consists of concept sections and digital images that propose possible design solutions (see illustration 124).

The experiential qualities that the dense vegetation provides to the area need to be maximised. The **dense vegetation** is somewhat reminiscent to an urban forest. The vegetation should define overgrown-like spaces such as an intimate tunnel-type space (see perspective, illustration 124). This enhances the already existing enclosed character of the space. In terms of planting, the best specimen trees will be retained due to their character, adding value while alien invasive category one and two species will be removed. Illustration 124 includes a planting palette of existing species in the zone. Indigenous species should be additionally planted to increase the vegetation density.

With regard to the existing **steep slope**, spatial concepts must focus on retaining and enhancing this characteristic. In addition, the slope should be better utilized by adding interesting sub-spaces at the top and bottom of the slope (see proposed section, illustration 124).

Assuming the 'Proposed Salvokop Framework' will be implemented, the existing powerlines will be removed and placed underground. However, the specific **sculptural powerline** in this zone will be respectfully retained with all cables and wiring removed. This will preserve the character that the powerline contributes to the Salvokop square, indicated in the 'Proposed Salvokop Framework'. The powerline should be used as a sculpture that announces the enigmatic landscape that follows. For the purpose of this study, the square will not be focussed on or investigated as it is not a place that can be explored in terms of enigmatic landscapes.

With regard to **materials,** the existing red shale soil should inform colours for the material palette. Also, materials with rustic qualities should be used in this zone to respect the existing rough palette of textures.

A possible plan and grounding of these spatial responses is proposed in a concept planning exercise that follows (see illustration 125).

6.4.1 Found object

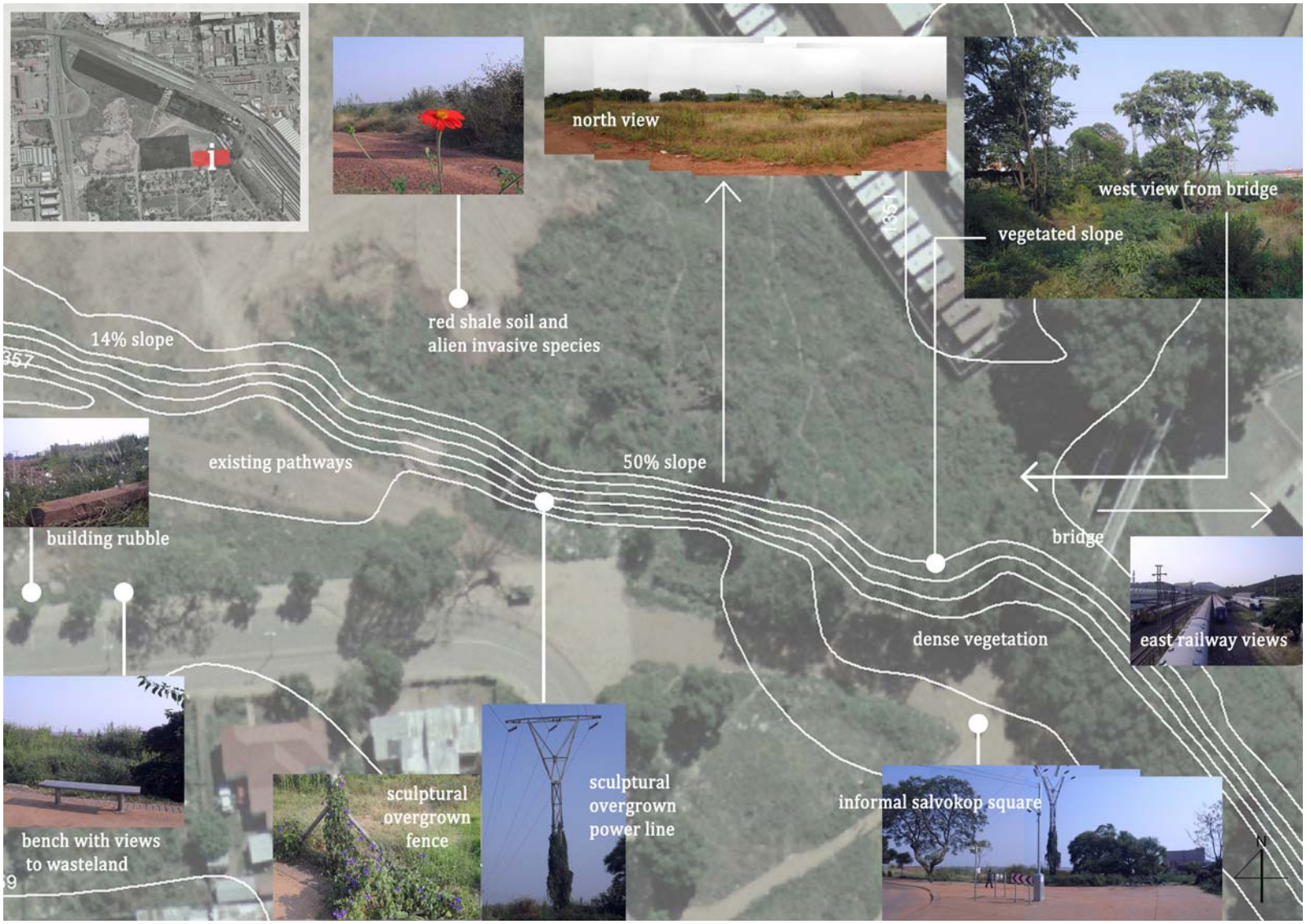
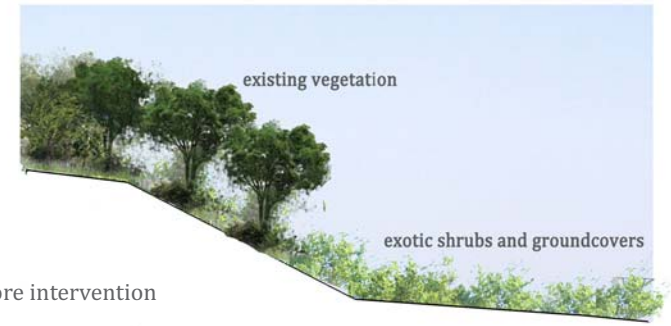
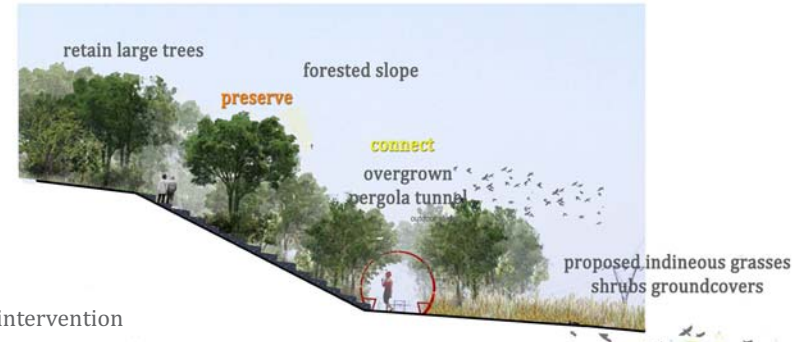


Illustration 123: Place i - Found objects

6.4.2 Spatial exploration



124.1 Section before intervention



124.2 Section after intervention

124.3 Digital perspective

124.4 Planting and materials

Illustration 124: Place i - Spatial exploration

6.4.3 Planning exploration

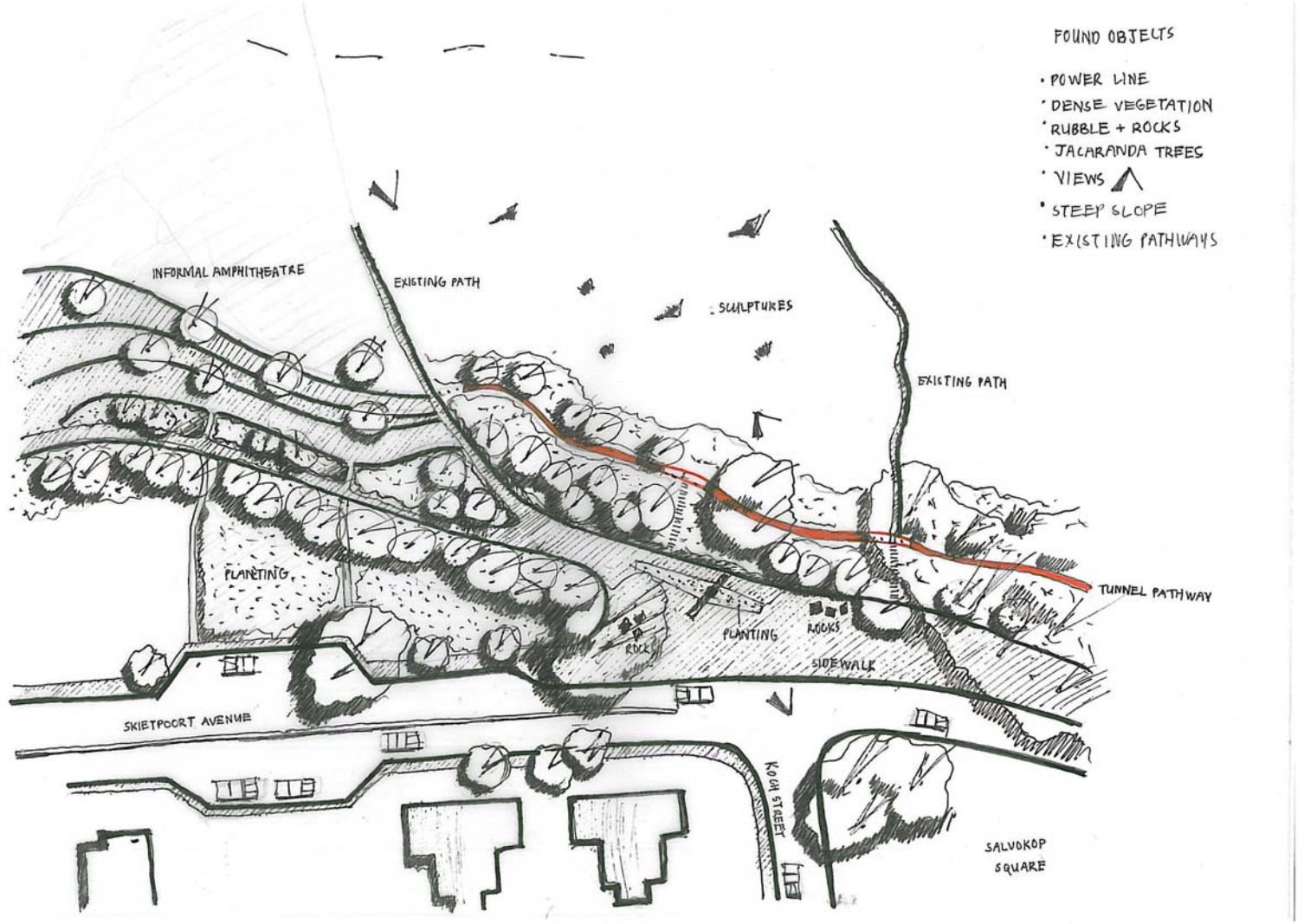


Illustration 125: Place i - Plannning exploration

6.5 Place ii

Found objects in this area include (see illustration 126):

- **dumping mounds**;
- an **existing waterway**;
- **metal rusted rubbish bins**;
- **concrete piping covers**;
- **rubble, rocks and stones**; and
- **harsh conditions**.

The spatial explorations for this zone consists of concept sketches and sections that propose possible designs solutions (see illustration 127).

With regard to the **dumping mounds** present in this zone, one could enhance these by emphasising them as landmarks in the area.

The **existing waterway** should become a landscape feature and be maximised in order to contribute to creating a healthy ecological water system in Salvokop. This system can become an aesthetic landscape feature (see proposed section, illustration 127), and more importantly function as a stormwater catchment that cleans and retains all of Salvokop's stormwater to be used as irrigation for the landscape. By catching the area's stormwater and reusing it, one prevents further downstream flooding and allows for groundwater recharge. The water feature in this zone calls for a more public-type space such as an amphitheatre, however, calls for more intimate contemplative spaces around the water's edge.

The **metal rusted rubbish bins** and **concrete elements** in this zone should be reused and celebrated in the proposed design. The rubbish bins have sculptural qualities and by reusing them in the design, they become physical reminders and hints of the past. Appropriate waste in the area can be used to build tall waste sculptures that can be lit up at night and seen from far.

The **rubble and rocks** in the area can be reused to give a swale and the edges of water interesting textures. The rocks can also be reused to create sub-spaces on the waters edge. Materials used needs to lend to the spatial qualities of the site, which is rough, rustic and textured. By reusing the rubble and rocks one retains the existing textures and feel of the site.

This area has **harsh conditions** in terms of the limited planting that exists. This character should be enhanced in a smaller part of the design, while the rest of the more public area needs to propose additional vegetation for shading.

A possible plan and grounding of these spatial responses is proposed in a concept planning exercise that follows (see illustration 128).

6.5.1 Found object

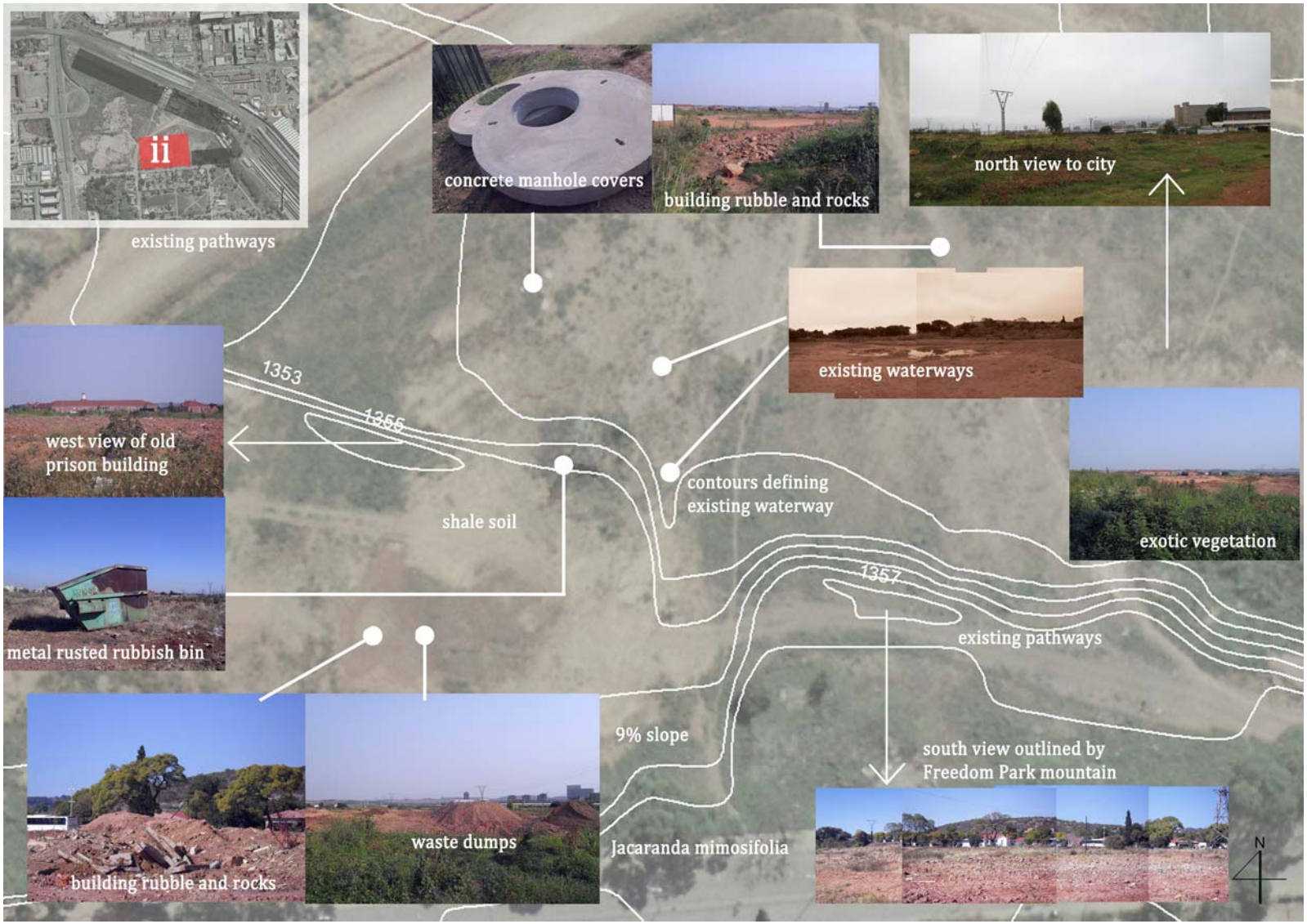
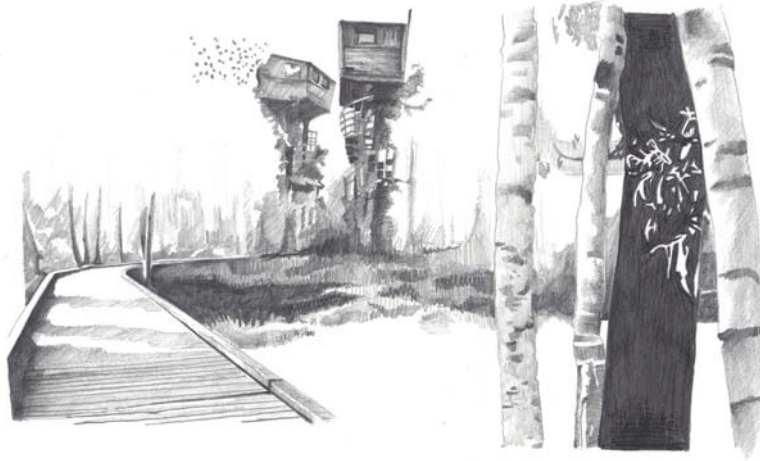


Illustration 126: Place ii - Found objects

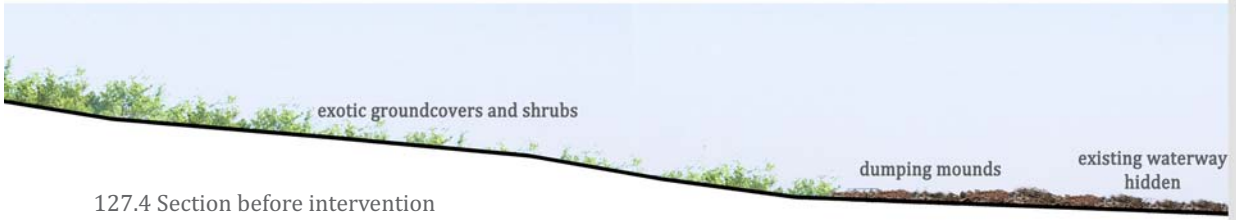
6.5.2 Spatial exploration



127.1 Perspective sketch

127.2 Perspective sketch

127.3 Perspective sketch



127.4 Section before intervention

127.5 Section after intervention

127.6 Planting and materials

Illustration 127: Place ii - Spatial exploration

6.5.3 Planning exploration

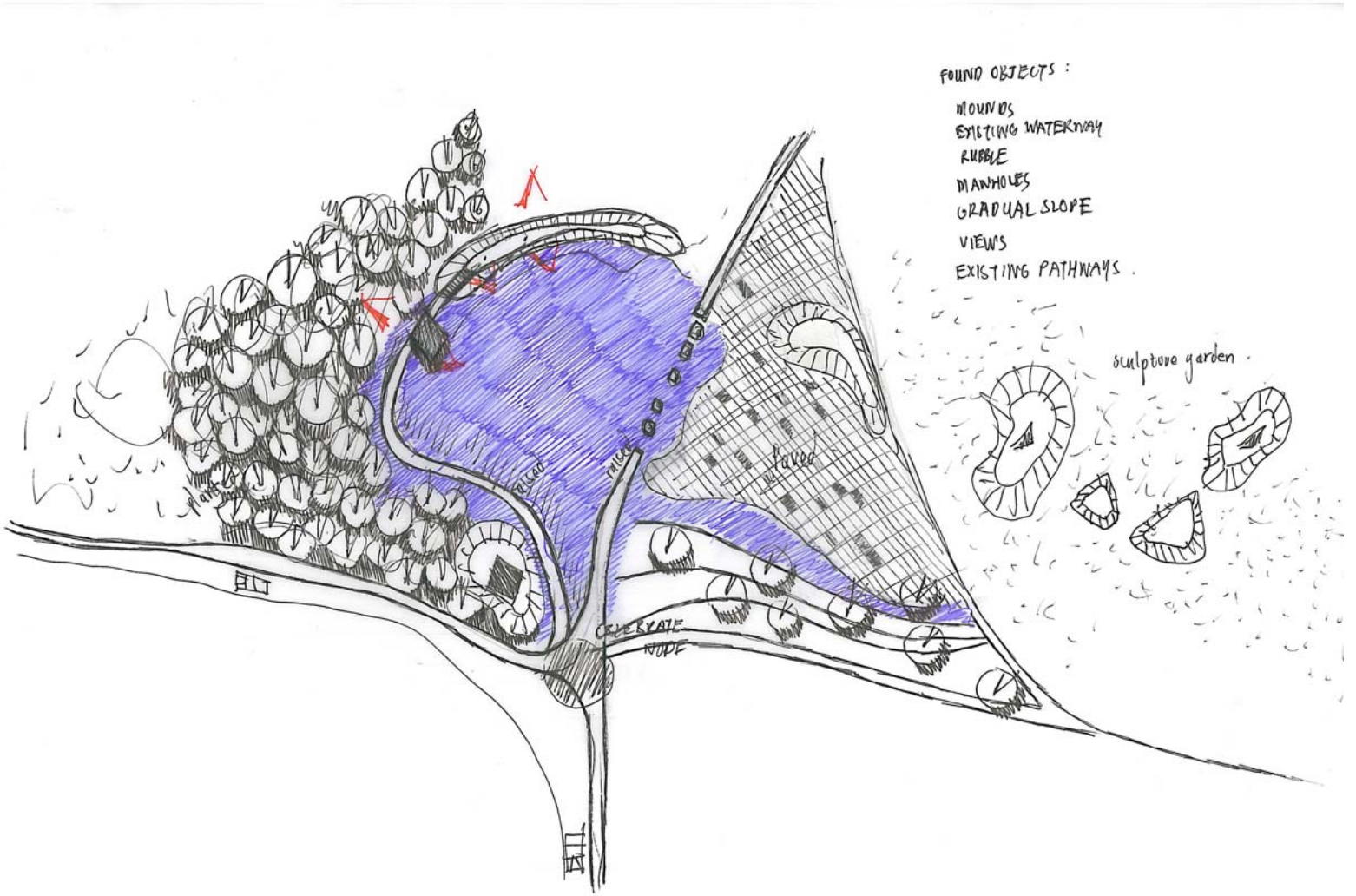


Illustration 128: Place ii - Planning exploration

6.6 Place iii

Found objects in this area include (see illustration 129):

- **a delipidated shed** with heritage significance, currently being used for storage of concrete elements and as shelter for the homeless;
- **old steelwork**: fences and an old railway water storage tank;
- **concrete boxes** storing cables;
- **unused railway lines**; and
- **POP-UP** (People's Upliftment Programme) training facility; and
- **found materials**.

The **abandoned shed** should be restored and reprogrammed to become a utilised space. The eerie character of the shed and its abandoned quality should however be enhanced in the restoration.

Old **steelworks** and **concrete storage boxes** should be used as sculptural elements in the landscape. These can be enhanced with lighting and paving patterns (see section, illustration 130). Where possible, waste in the area should be reused and recycled. The engine, for example, can be reused as part of a waste sculpture and the **unused railway lines** can be reused in a paving design.

The **POP-UP training facility** should become an integral part of what happens on the entire wasteland. This is an existing organisation that can run and overlook the proposed landscape and its functions. The skills training in POP-UP includes activities such as admin, cookery and art workshops. This opportunity with its existing energy needs to be used to its full potential. For example, urban farming in the area can be overlooked and run by POP-UP. The vegetables and herbs produced from the urban farming can be used in cooking workshops and also be sold to other people and organisations to generate an income.

Materials in the area are also to be specified as rough, rustic and textured. Reuse and recycling of existing elements is needed. Furthermore, materials selected should reflect materials used in the shed's structure (this includes corrugated iron which give it an old rough and rustic feel).

A possible plan and grounding of these spatial responses is proposed in a concept planning exercise that follows (see illustration 131 and 132).

6.6.1 Found object

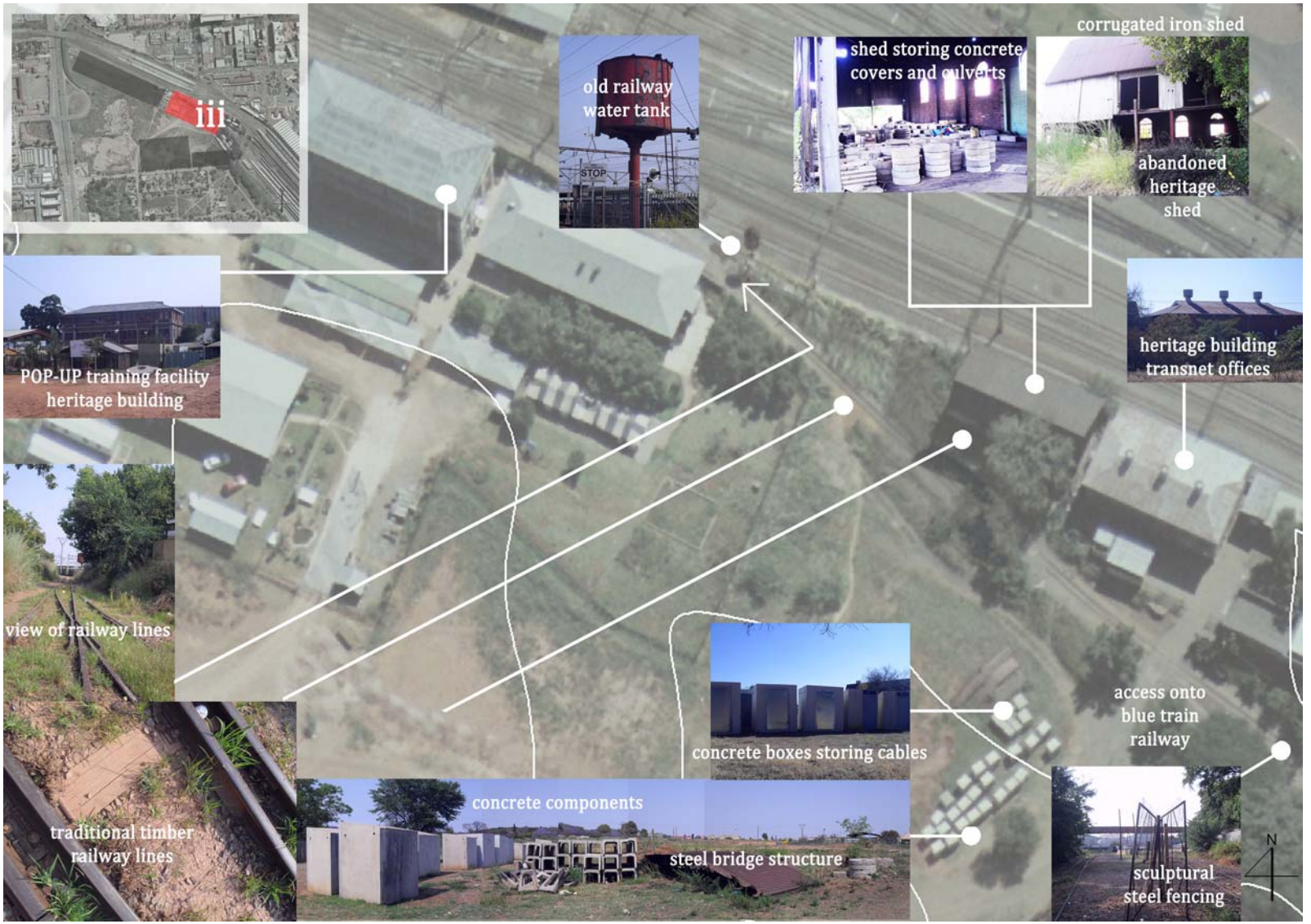
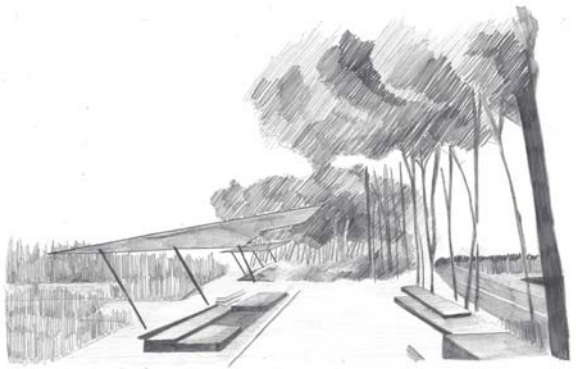


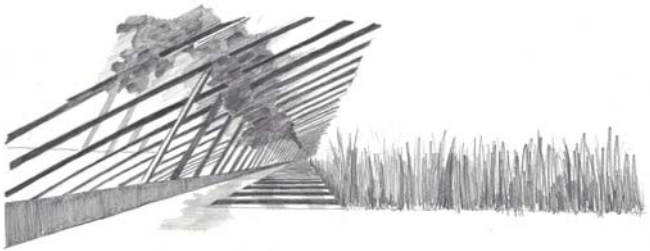
Illustration 129: Place iii - Found object

6.6.2 Spatial exploration

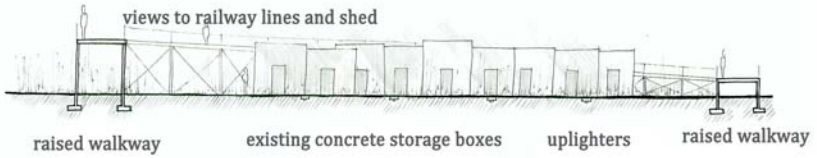
130.1 Digital perspective



130.2 Perspective sketch



130.3 Perspective sketch



130.4 Section after intervention

130.5 Planting and materials

Illustration 130: Place iii - Spatial exploration

6.6.3 Planning exploration

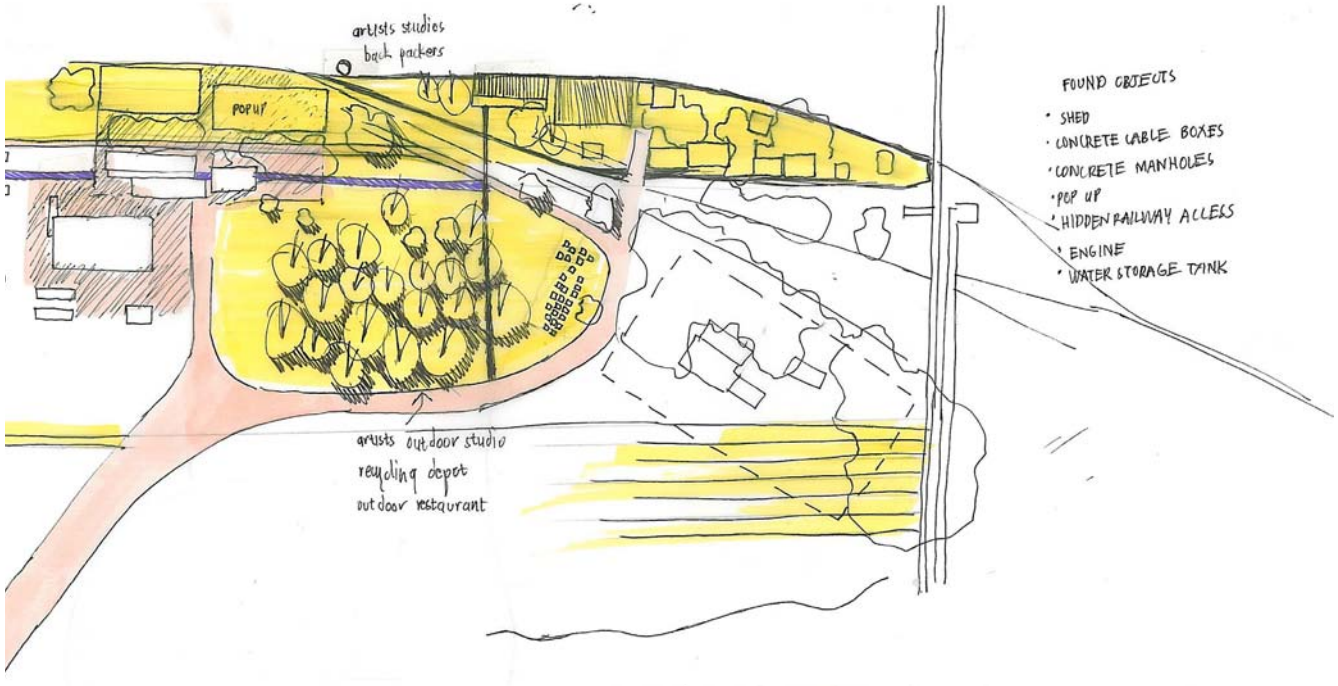


Illustration 131: Place iii - Planning exploration A

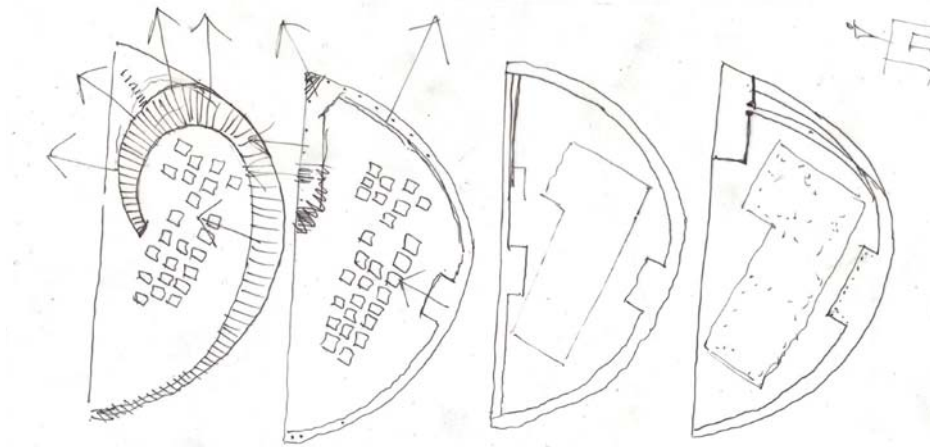


Illustration 132: Place iii - Planning exploration B

6.7 Place iv

Found objects in this area include (see illustration 133):

- **hidden unused railway lines**;
- **building rubble**;
- **views** onto the used railway lines that run from the Pretoria Station;
- a **linear railway space**; and
- **found materials**.

Existing **unused railway lines** are hidden under vegetation. These add a historic layer to the site and can be exposed and excavated. Their rhythm and proportions need to be repeated in the proposed design (see proposed sketches, illustration 134).

Building rubble can be reused on the site to add interesting textures or as outdoor furniture elements. For example, the concrete raft foundations can be used for seating in this zone or be stacked to create a feature (see proposed sketches, illustration 134).

Existing views onto the railway lines should be maximised. One can enhance these views by creating and designing an urban balcony that looks onto the railway lines and the city of Pretoria.

The **linearity of the space** also identifies it as a possible urban balcony with seating along its edges, as well as a movement space (see proposed sketches, illustration 134). The linearity of the site is additionally appropriate for urban farming, which is the lowest point of the entire site and therefore practical to catch water for irrigation. This is an informed and practical decision also due to its close proximity to the POP-UP training facility (as discussed previously). A long term vision includes a nursery for the site that will generate an income. In this area, structures used for the selling of plants and for a nursery can be positioned and shaped to respond to the linearity of the site (see proposed sketch, illustration 134).

Materials must be reused in the area and keep to the rough rustic palette. A lack of planting in the area reduces the amount of trees and vegetation that needs to be removed for the urban farming. More planting can be proposed for shade in the public spaces such as the urban balcony where people will sit and observe.

A possible plan and grounding of these spatial responses is proposed in a concept planning exercise that follows (see illustration 135 and 136).

6.7.1 Found object

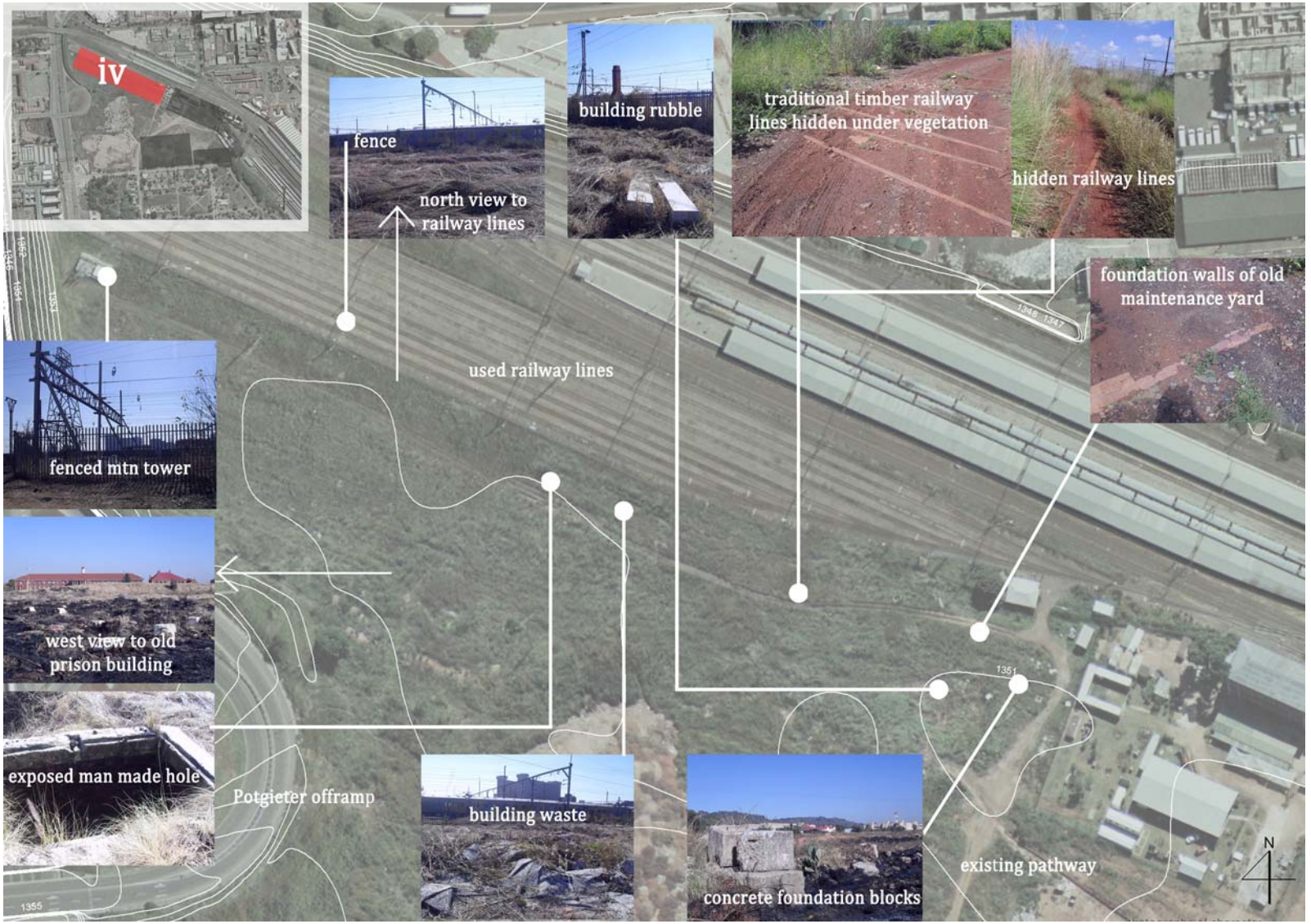
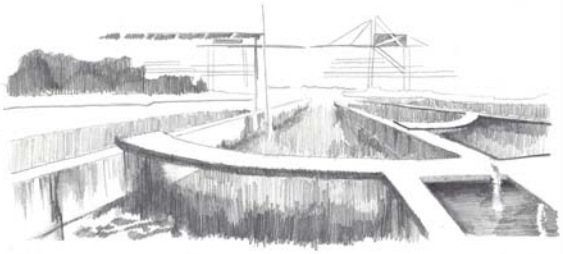


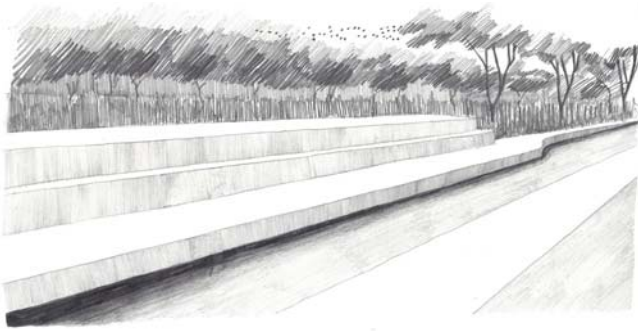
Illustration 133: Place iv - Found object

6.7.2 Spatial exploration

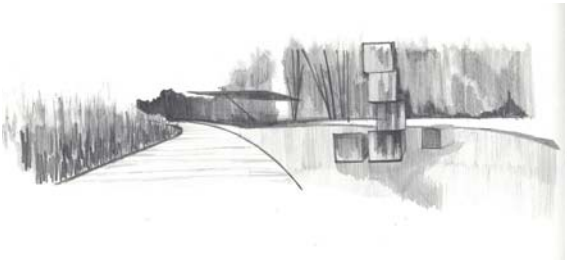
134.1 Perspective sketch



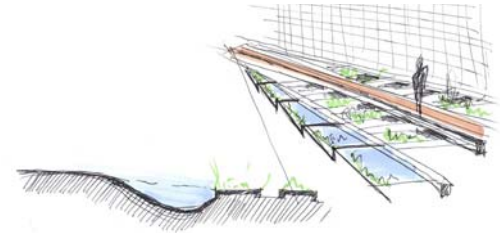
134.2 Perspective sketch



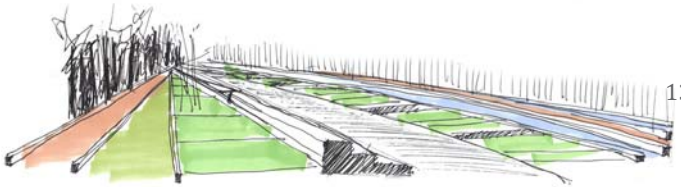
134.3 Perspective sketch



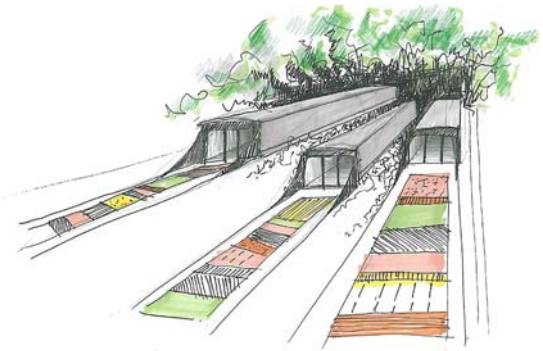
134.4 Perspective sketch



134.5 Perspective sketch



134.6 Perspective sketch



134.7 Perspective sketch

134.8 Planting and materials

Illustration 134: Place iv - Spatial exploration

6.7.3 Planning exploration A

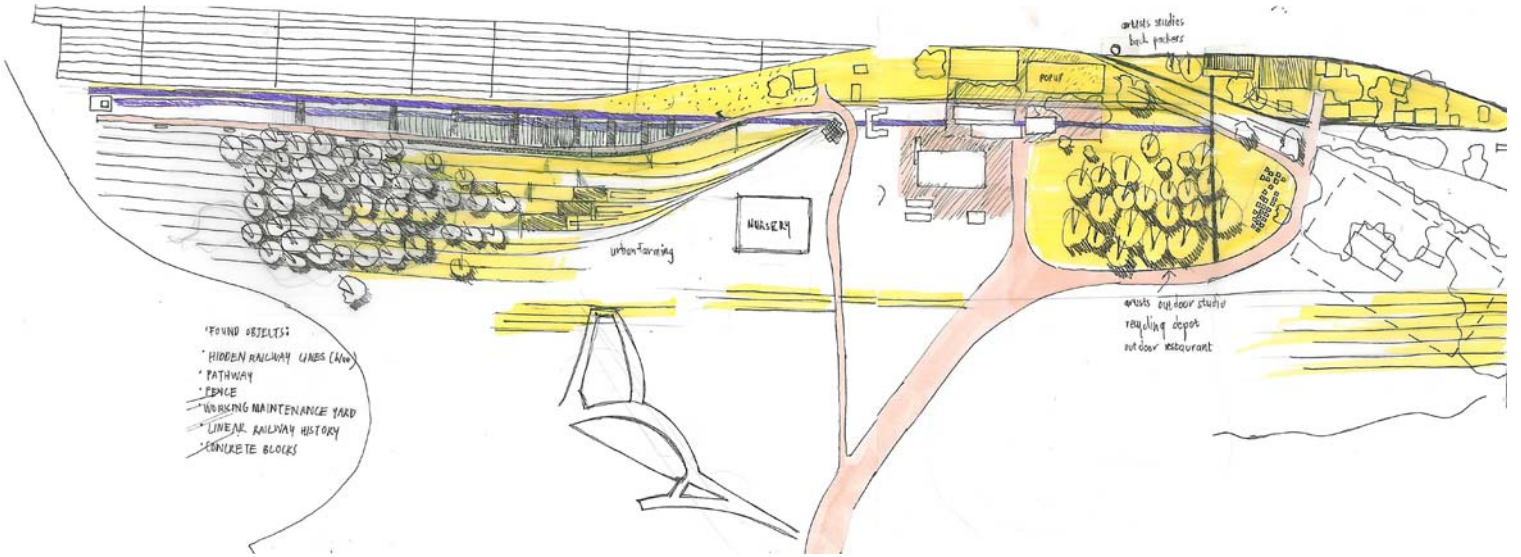


Illustration 135: Place iv - Planning exploration A

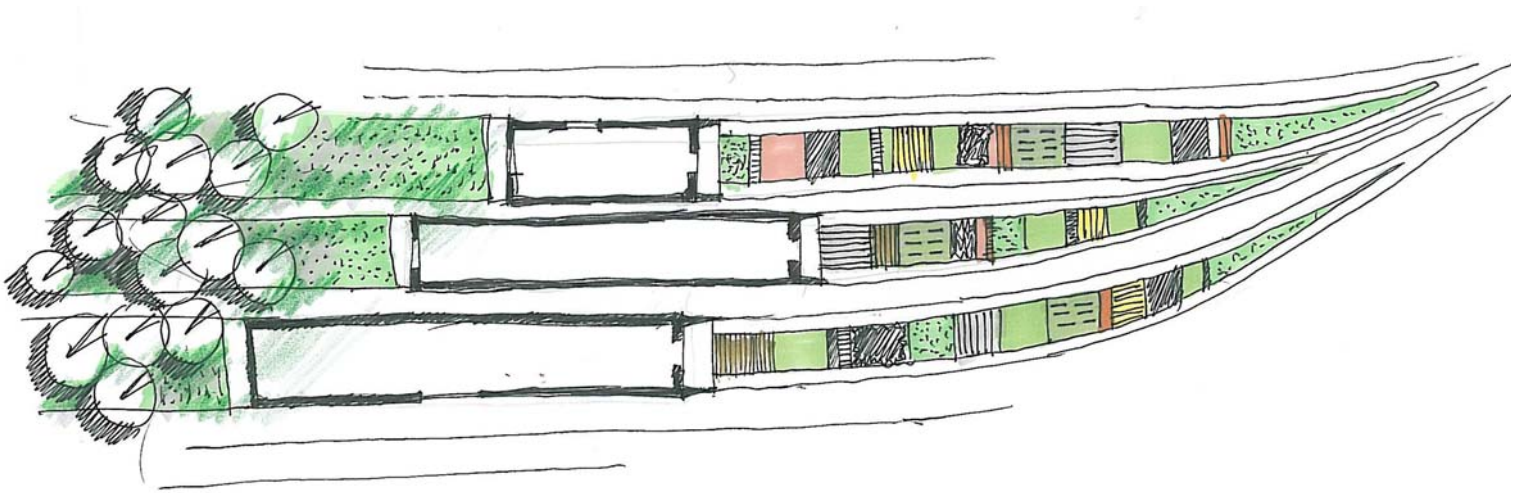


Illustration 136: Place iv - Planning exploration B

6.8 Masterplan development

With each zone recognised and conceptually celebrated, a masterplan can now begin to be developed with possible functions and proposed broadstroke designs for the area. Before going into detail, a zoomed out view assisted in deciding on an overall form that will inform the detail design to follow. Due to the railway history of the site that gave it its linearity, dynamic and almost mechanical form, the design on a masterplan level is intended to resemble these aspects. By studying the railway timeline on page 92 and 93, one will notice the railway lines almost cover the entire site. Rhythm and repetition of lines are used to specifically bear a resemblance to the site's past. Illustration 137 illustrates an exercise done that allowed the site to be looked at from a distance, in order to create a unifying and well-balanced composition for the masterplan to be developed from. These simplified drawings can be referred to as masterplan parti diagrams that show the essence of the broad design. Subsequent to these diagrams, a masterplan can now be developed in more detail while constantly referring to, developing, and reworking the four places identified above. Illustrations 138 to 144 demonstrate, on masterplan level, the design in its developing stages.

6.9 Conclusion

This chapter dealt with the discovery of four spatial places with great potential that resulted in a continually developing masterplan. Landscape architecture cannot primarily work in the spatial and experiential realm and therefore the proposed explorations and responses need to be tested against the needs of the site and the context in order to propose feasible solutions. The proceeding technical investigation will deal with land rehabilitation, stormwater, water budgets and contaminated soil, which will affect the design decisions ahead.

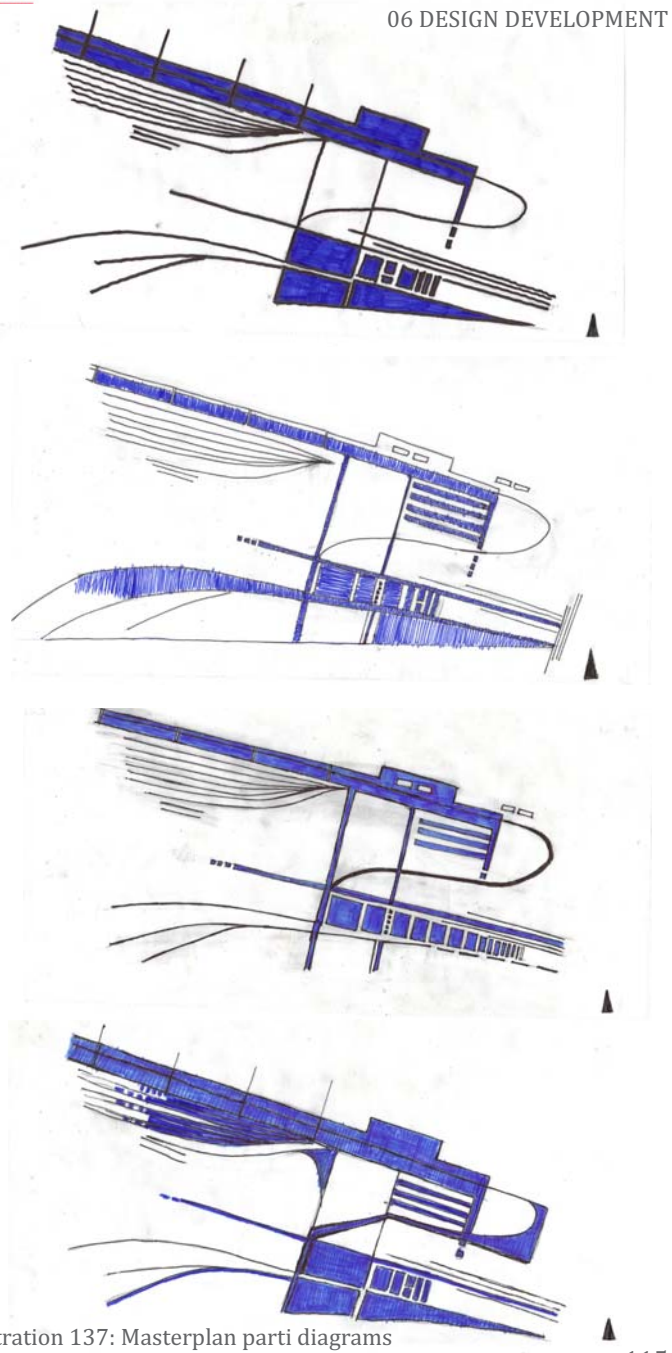


Illustration 137: Masterplan parti diagrams

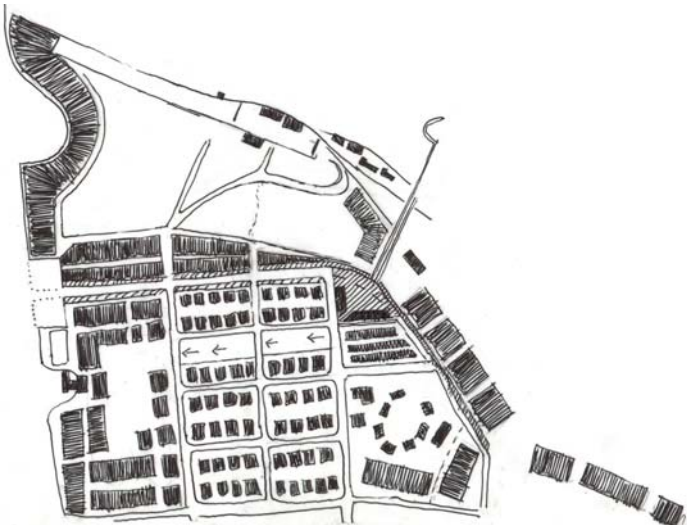


Illustration 138: 'Proposed Salvokop Framework' nolly sketch

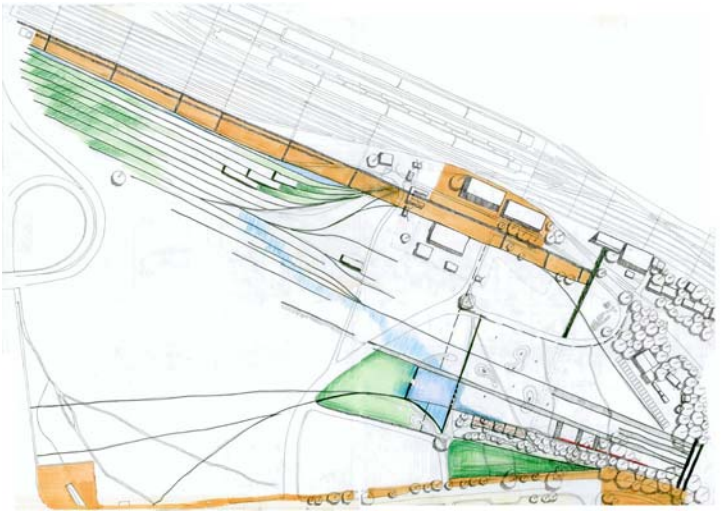


Illustration 139: Masterplan version 1

Illustration 140: Masterplan version 2

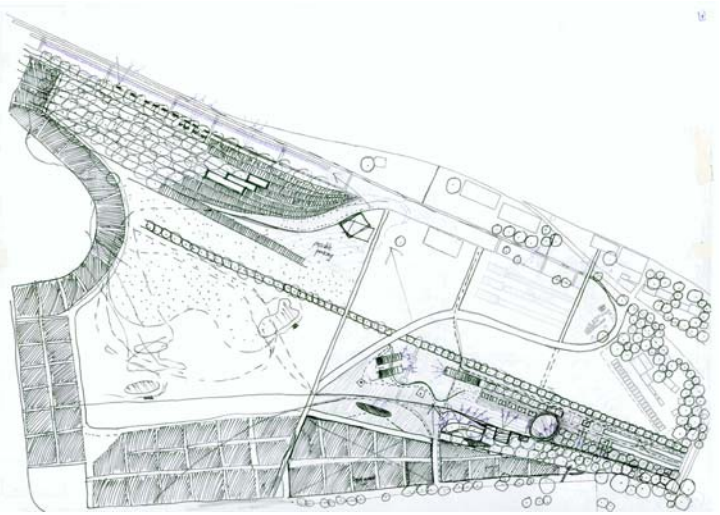


Illustration 141: Masterplan version 3

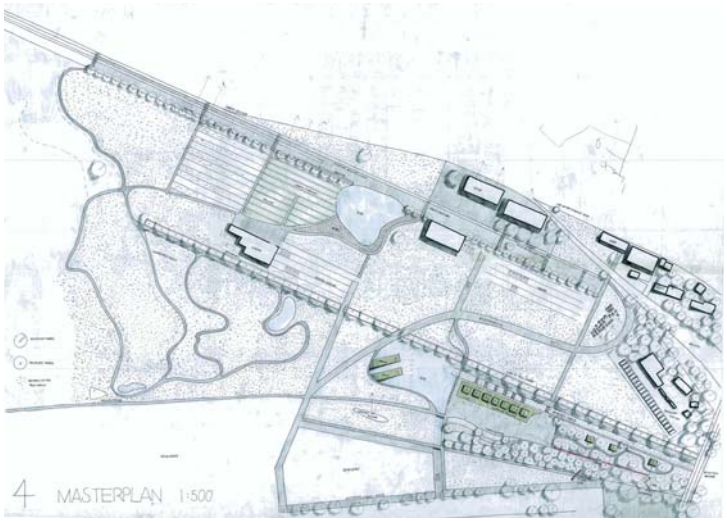


Illustration 142: Masterplan version 4

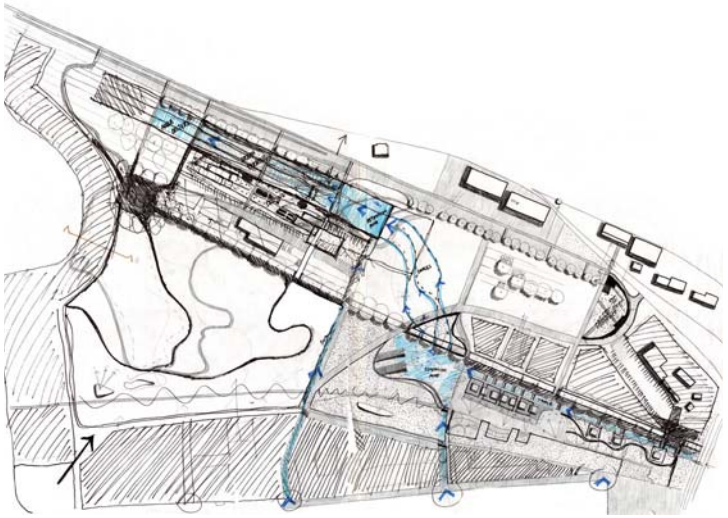


Illustration 143: Stormwater masterplan version 5

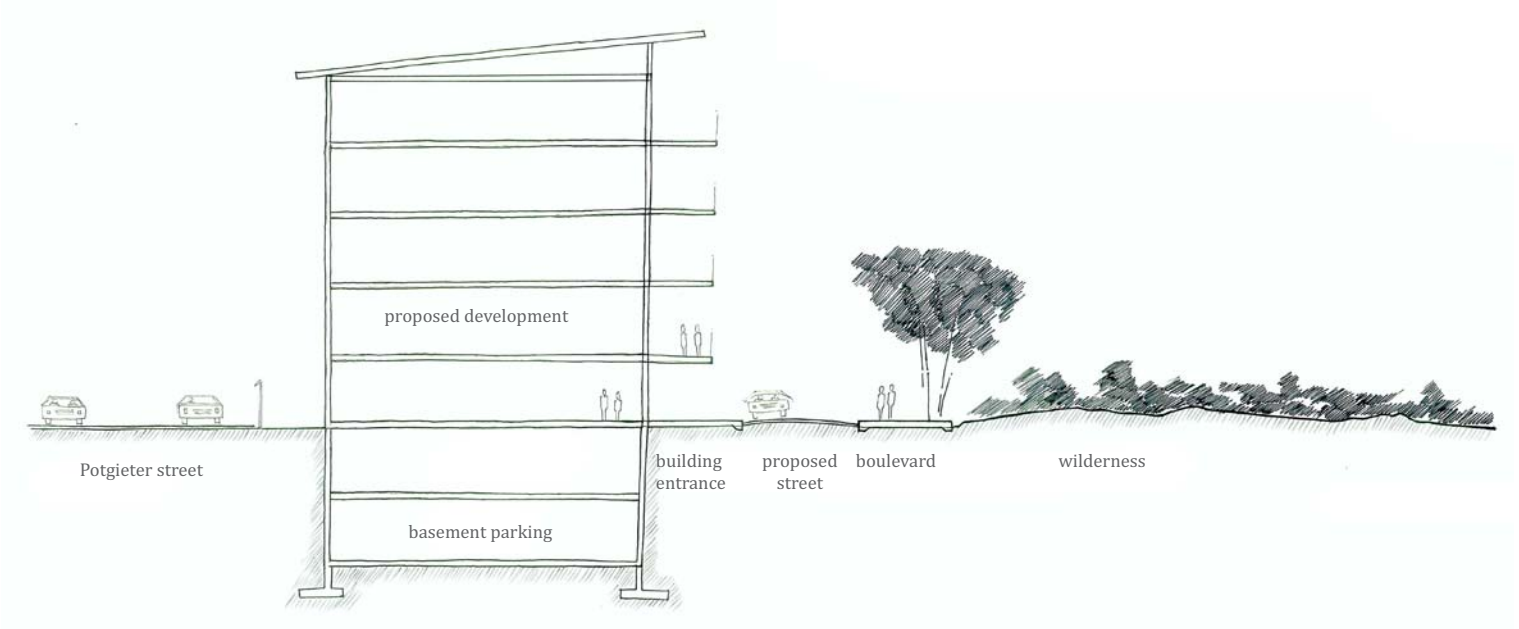


Illustration 144: Section through proposed development and wilderness