In the previous section design related theory was discussed alongside conceptual images. During the process three main design components emerged as the scale of resolution reduced. The first component was a direct interpretation of the urban concept, the manipulation of the site’s surface into usable public space. The second component emerged as the concept ventured into the vertical dimension. It involves the inclusion of an elevated public space and urban rooms within the Maroela flat block. After these two components were in place, the third component was developed to link them. A tower block stretching from the surface to the elevated public space connects the components. To further unite the intervention, the concept of the tree as signifier of public space was utilized. This visual association extends public space from the pavement to in-between the buildings and up to an elevated locale. In this section, the three components will initially be discussed separately.

Technical Investigation

Figure 141
Diagram illustrating main components of the technical investigation: Surface; Elevated Locales; Linking Tower.
Author, 2006
Figure 143
Site plan illustrating different ground levels beginning at the level of Walker Waterway. Note how the elevated platform in front of Tambotie flat block becomes the intermediary level in the main space between the Karee & Kiepersol blocks. Also included are the main public pedestrian routes.

Author, 2006
Site plan illustrating the proposed brick enclosure walls. These walls define the new boundaries between public and semi-private space. Existing amenities such as the laundry, above ground parking spaces, lobbies, post boxes and administration offices were taken into account. The parking in the north-eastern corner was moved and De Rapper street converted into a one-way access route, affording the area a better interface with the street and with the Walker Waterway to the north. Also included are the new resident access points (*). 

Author, 2006

Site plan illustrating raised platforms situated on the northern side of Tambotie, Karee & Kiepersol flat blocks as well as on the southern side of the main public space’s enclosure wall. The platforms, 220mm concrete slabs are supported by the existing underground parking columns (and have been designed in accordance with them) and represent rest areas from the main through routes with public furniture and lighting. They also act as interaction zones for the new workshop and retail spaces on the ground floor of the existing flat blocks. Access is gained to these platforms by means of ramps and staircases. There is a 380mm void between the bottom of these platforms and the top of the underlying level. This allows for natural ventilation for the underground parking as well as providing atmospheric lighting for the public spaces at night.

Author, 2006

Site plan illustrating planted areas within public spaces. (1.) On the western boundary where the underground parking has caused a level difference between the site and the street, planters act as retaining walls and provide shelter and privacy from the street. They have been interspersed with access stairs and a ramp. (2.) Concrete sculptural planters 1500mm high (2000mm in total) allow for medium sized trees in the main public spaces and have been placed in accordance with underground parking columns. The planters define quiet zones and have built in concrete seating. Atmospheric lighting is provided by fixtures attached to the underside of the furniture. (3.) Shallow planters for creeping plants. The creepers soften the imposing nature of the enclosure walls. (4.) Undulating planters house medium to large trees. Again, they soften the enclosure walls.

Author, 2006

Site plan illustrating new amenities. (1.) In between the piloti rentable retail, restaurant and workshop spaces will live out onto the public spaces, improving the interface between public and private. (2.) Public ablution block. (3.) Public basketball court with lighting and seating amphitheatre.

Author, 2006
Figure 148
Site plan illustrating the materiality of the site design. For the most part, hard surfaces were chosen over soft. This allows for minimal maintenance and maximum robustness, important design considerations for the Sunnyside context. Most of the public surface is paved with 1000 x 150 x 150 precast concrete paving blocks (1.) These represent the busier circulatory zones. The quieter zones are paved with brown brick in a herringbone pattern (2.), they are accompanied with cast in situ sculptural planters and vegetation. The elevated platforms and their ramps are cast in situ concrete (3.). A large sculptural grass berm (4.) contains the space leading to the Walker Waterway.
Author, 2006
Figure 149

View looking east towards Leyds street showing the basketball court, sculptural planters and raised platform between Soetdoring and Kiepersol flat blocks.

Author, 2006
Figure 150
View looking north along Leyds street showing the retaining planters defining the staircase threshold into the public courtyard behind the Kiepersol flat block. The space between the piloti is now rentable kitchen space.
Author, 2006

Figure 151
View looking south along Leyds street. Retaining planters are interspersed with staircases and a ramp which lead into the public space between the Soetdoring and Kiepersol flat blocks. (pg 148, 149).
Author, 2006
Figure 152

View looking west into the main public space between Tambotie and Maroela flat blocks from Bourke street. The spaces between the sculptural planters become quieter zones while the periphery with the raised platforms become the activity and circulation areas.

Author, 2006
Figure 153
View looking from Bourke street towards the eastern corner of the Maruela flat block. Retaining planters, a circulation ramp and the eroded corner of the tower create a sheltered public space leading to the public elevator and the Walker Waterway.
Author, 2006
Figure 154
View looking south towards the eastern corner of the Maroela flat block showing the paved sloping plaza, the eroded corner of the tower and the grass berm.
Author, 2006
2: Elevated Locales

Figure 155 (right)
Axonometric and 3d rendering showing an exploded view of the elevated public space. The programmatic elements have been arranged in order to create permeability in the space, permitting diffused northern light to the public space below. Not included are the restaurant, the bathrooms and the main seating area.
Author, 2006

Figure 156 (left)
3d rendering showing a northern perspective view of the elevated public space.
Author, 2006

Free-standing public elevator shaft. The shaft is cast in situ concrete and is aligned with four columns in the existing grid.

Public circulation and viewing platforms wrapped around elevator shaft and linked to staircase and urban room. Cast in situ concrete with steel and expanded metal balustrades.

Four flight public staircase. Steel frame structure with timber decking at landings and expanded metal stairs.

Viewing deck on top of urban room. Precast concrete blocks inserted between steel framing structure.

Concrete structural wall cantilevering past existing building perimeter.

Concrete 1500mm Planter with concrete staircase to viewing deck on top of urban room.

Urban room cantilevering 5m past existing building perimeter. Steel framed and braced structure with concrete floors, roof and mezzanines. Copper cladding inside and out with fluorescent lights on inside.

Expanded metal and steel mesh screen attached to front of staircase, steel structure of the urban room and concrete elevator shaft.

Planter with ramp down from elevator.

Existing column grid underneath reinforced floor slab.

Figure 157
3d rendering showing an exploded view of the bottom part of the elevated public space. Not included are the restaurant, the bathrooms and the main seating area.
Author, 2006
Figure 158
View north from the triple volume urban room situated in the elevated public space. The copper clad steel precipice can also be used for public installations.
Author, 2006

Figure 159
3d rendering showing an exploded view of possible programs accommodated on the western wall of the elevated public space.
Author, 2006
Figure 160
Northern elevation and section DD.
Author, 2006
Figure 161
Section BB.
Author, 2006
A 2700mm deep steel truss in 5 x 3600mm sections.

305 x 305 x 158 Galvanised steel H-beams and 203 x 203 x 45 H-columns aligned with existing columns above.

Suspended steel platform for maintenance and lighting.

All other members PFC 160 x 65 Galvanised steel SA parallel flange channels.
**I.**

30 x 80 x 3 Galvanised Steel Unequal Angle with Long Leg Bent Back and Bolted to Concrete Elevator Shaft with M10 Rawl Bolts

**J.**

30 x 80 x 3 Galvanised Flatened Expanded Metal Screen Welded at Edges to T Sections Off Site

30 x 80 x 3 Galvanised Flatened Expanded Metal Screen Welded at Edges to T Sections Off Site

2 x 150 x 75 x 10 Galvanised Steel Unequal Angles Welded to Form 150 x 150 T Section with Web Cut to Taper Towards Top of Screen

**K.**

Screen Detail N.T.S.

**L.**

Staircase Detail N.T.S.

**Figure 165 (left)**

Detailed axonometric of expanded metal and steel screen.

Author, 2006

**Figure 166 (above)**

Staircase detail.

Author, 2006
Figure 167 (above)
Digital Collage of tree as signifier of public space.
Author, 2006

Figure 168 (right)
Urban room and planter detail.
Author, 2006
As was mentioned previously, the tower was conceived as a linking element to unify the public spaces on the ground plain and the elevated public locales. It affords the intervention cohesion. The concept of eroding the corner of the Maroela flat block (pg 120,121) was transferred over to the bottom two storeys of the tower. The entrance into the tower sits within this corner. The rest of the tower consists of 5 double volume spaces with: These can be used as home offices, private offices, flat extension(studio space etc.) or private flats. A vertical garden separates the tower from Maroela flat block. These double volume exterior spaces can be used as balconies for the new private flats/offices or as circulation routes from existing flats into the new private office/flat extension.

A public roof garden, accessible by means of the existing Maroela elevators, links the tower with the elevated public space.

Figure 169

(1.) Illustration showing the structural members present within each unit.
(2.) Illustration of the tower’s structural frame. The tower is attached to the existing flat block by means of 2 x 254 x 254 x 107 H-beams. Pin joints at the columns allow for deflection of the new structure. The tower effectively ‘leans’ on the existing structure. (3.) Concrete cast in situ floors between the H-beams provide rigidity in the horizontal plane, while the steel bracing channels do so in the other two directions. (4.) 3D rendering of completed tower showing solar control on the northern facade and eroded bottom corner. (5.) With vertical garden.

Author, 2006
Figure 170
Section AA.
Author, 2006

Figure 171
Window and custom shutter system detail.
Author, 2006
Figure 172
Section CC and connecting planter detail.
Author, 2006
Figure 174
Plans of elevated public space and tower
Author, 2006

Figure 173
Facade section details of tower block
Author, 2006
Figure 175
Plans of elevated public space and tower
Author, 2006

Figure 176
Plans of elevated public space and tower
Author, 2006
Fig. 177

Digital Collage of tower and elevated public space in Maroela flat block.

Author, 2006