

6. DESIGN  
DEVELOPMENT

■ “More varied than any landscape was the landscape in the sky, with islands of gold and silver, peninsulas of apricot and rose against a background of many shades of turquoise and azure.” - *Cecil Beaton (1904-1980)* ■ “For me, the summer will be pure gray - mother-of-pearl gray. To me this is the big statement for summer. Then we have light blue, light turquoise, lots of pink.” - *Gianni Versace* ■ “There were hot pink things and turquoise things and bright orange. The only thing that mattered to us was the gray-sale value, and if you really walked through the set, it looked a little jarring.” - *Jan Pascale*

6.1 FACTORS INFLUENCING SITE SELECTION AND PROGRAMME CONCEPTS





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## 6. DESIGN DEVELOPMENT

### 6.1 FACTORS INFLUENCING SITE SELECTION AND PROGRAMME

The figure-ground map of the study area indicates an undefined and illegible urban fabric, where a definite need for intervention on this north eastern edge of the city is necessary. As already mentioned, this area is characterized by major road networks which connect at a very important gateway intersection of the city of Pretoria. Due to

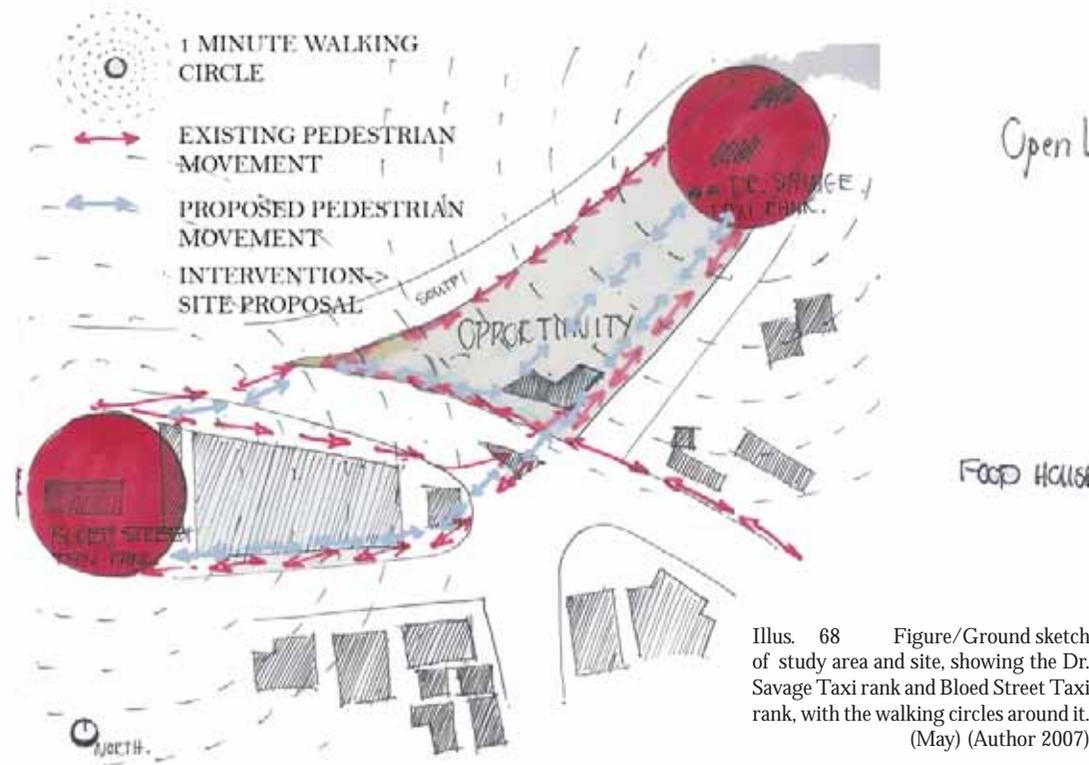
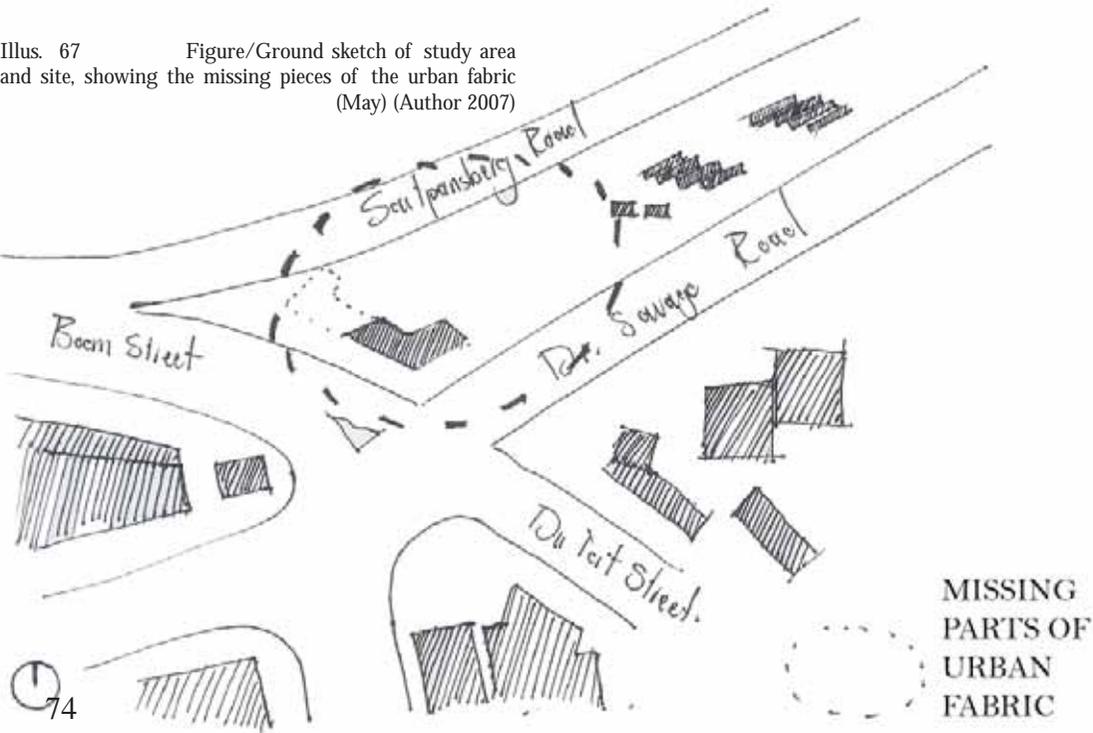
the demolition of houses on the proposed site, as well as the demolition of part of the Carbonatto building, leaving it with its current form, the figure-ground map indicate not a missing piece of the urban fabric, but rather several missing pieces of the fabric. (illus.67) As a result, the existing building stands alone, alienated, like a torn piece from a canvas, eager to be threaded into the rest of the city canvas. This creates a need to connect the site to the urban city grid, which would hopefully be the start of an activity corridor connecting the rest of Pretoria North and surrounding

Townships to Pretoria CBD. This need gave rise to a programme, which identified the elements from which the project took its form. (DEWAR ET AL 1991: 15) The idea of creating an activity corridor along the major connecting route to the north, contributed to the need of the site to be connected to the inner city grid. The surrounding context gave the idea of the activity corridor a specific place to connect from. (DEWAR ET AL 1991: 15) The proposed site, which is sandwiched in between busy incoming and outgoing routes, is in close proximity to the TUT Art Campus,

the Prinshof Primary School and the UP Medical Campus and Academic hospital. These contextual factors gave a reality to the idea, after which several design responses followed.

Dewar and Uytenbogaardt see pedestrian movement as the primary definition of scale of urban development. Distance is the primary physical barrier to ease of access and therefore, the best situation arise when people can gain access to their daily activities by foot. (DEWAR ET AL 1991: 17) As the proposed site sits within five walking minutes from both

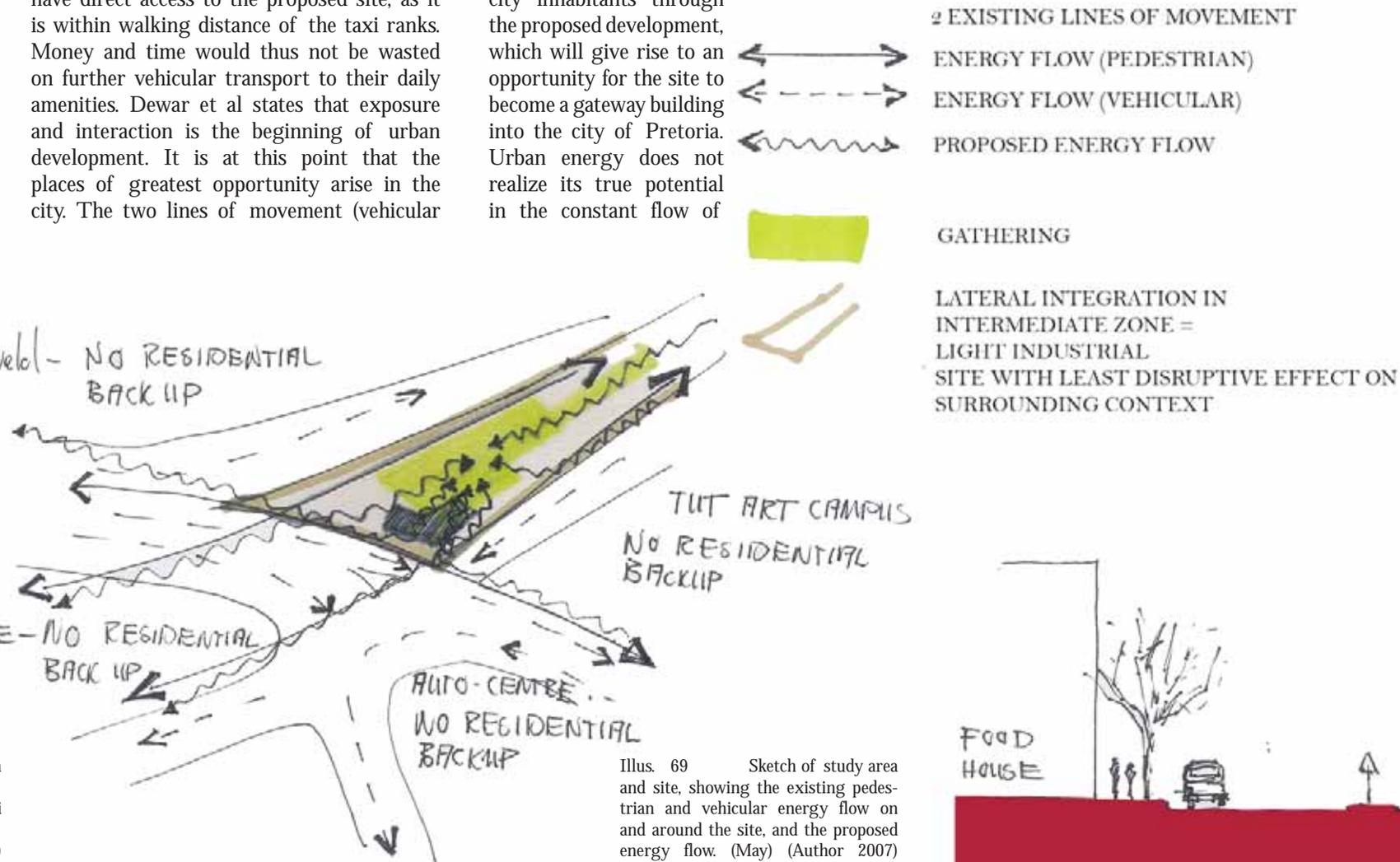
Illus. 67 Figure/Ground sketch of study area and site, showing the missing pieces of the urban fabric (May) (Author 2007)



Illus. 68 Figure/Ground sketch of study area and site, showing the Dr. Savage Taxi rank and Bloed Street Taxi rank, with the walking circles around it. (May) (Author 2007)

the Bloed Street Taxi Rank and Dr. Savage Taxi rank, the site is easily accessible. (illus. 68) Workers for the proposed development that have to come into the city, therefore have direct access to the proposed site, as it is within walking distance of the taxi ranks. Money and time would thus not be wasted on further vehicular transport to their daily amenities. Dewar et al states that exposure and interaction is the beginning of urban development. It is at this point that the places of greatest opportunity arise in the city. The two lines of movement (vehicular

and pedestrian) on and around the site could create ample exposure as well as interaction amongst the city inhabitants through the proposed development, which will give rise to an opportunity for the site to become a gateway building into the city of Pretoria. Urban energy does not realize its true potential in the constant flow of



Illus. 69 Sketch of study area and site, showing the existing pedestrian and vehicular energy flow on and around the site, and the proposed energy flow. (May) (Author 2007)

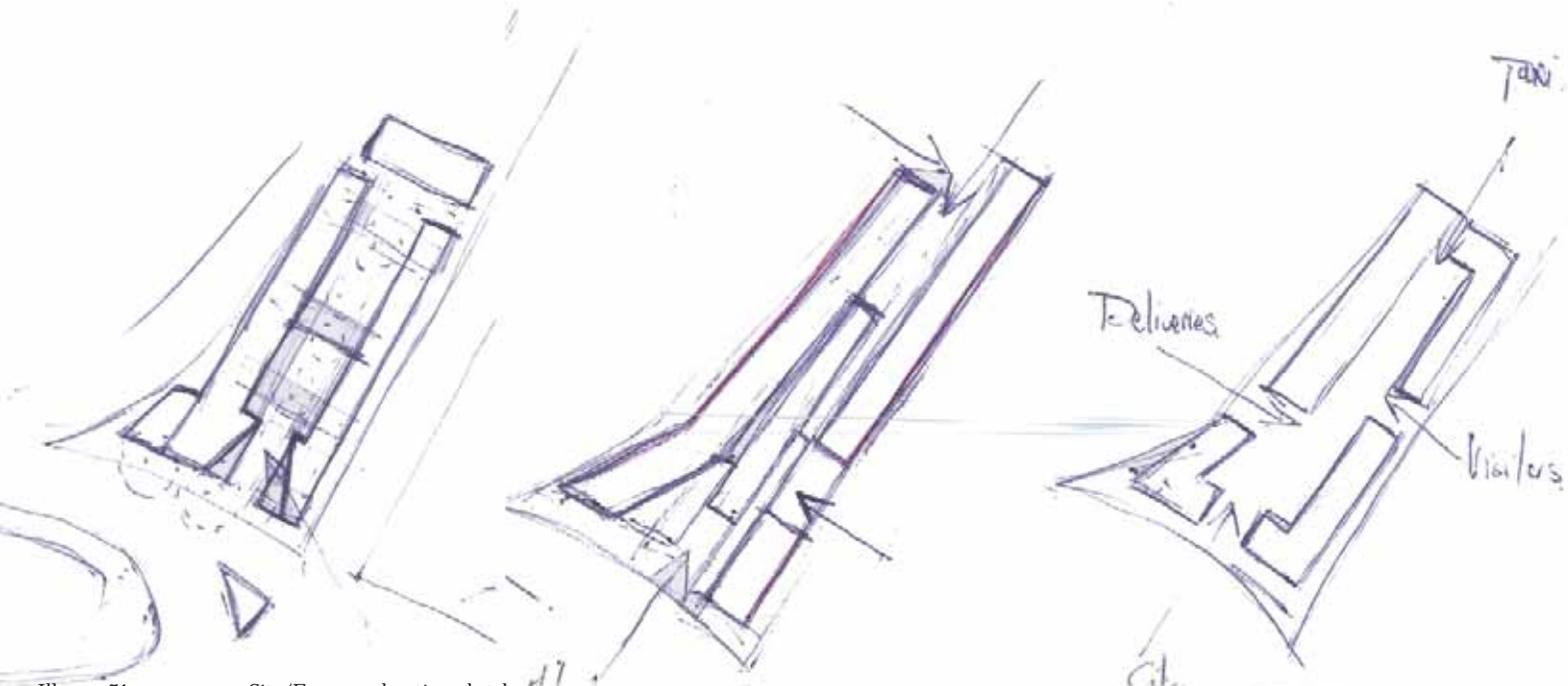
pedestrian movement along and through the site, so that gathering occurs. (illus. 69) This could be achieved by drawing the pedestrian's attention by means of colour and light into the site to promote gathering, whether it is to rest, to wonder, to dream or just to observe.

A central need in an urban city is the sense of wholeness, where the invisible is revealed. Through the revealing of something which is otherwise hidden from the city environment, the viewer would be interested and engaged which would eventually lead

LATERAL INTEGRATION IN  
 INTERMEDIATE ZONE =  
 LIGHT INDUSTRIAL  
 SITE WITH LEAST DISRUPTIVE EFFECT ON  
 SURROUNDING CONTEXT

Illus. 70 Section through Boom street, showing the four-lane vehicular movement and pedestrian movement on the southern edge of the site, with the existing Carbonatto building. (May) (Author 2007)





Illus. 71 Site/Form exploration sketches.  
(May) (Author 2007)

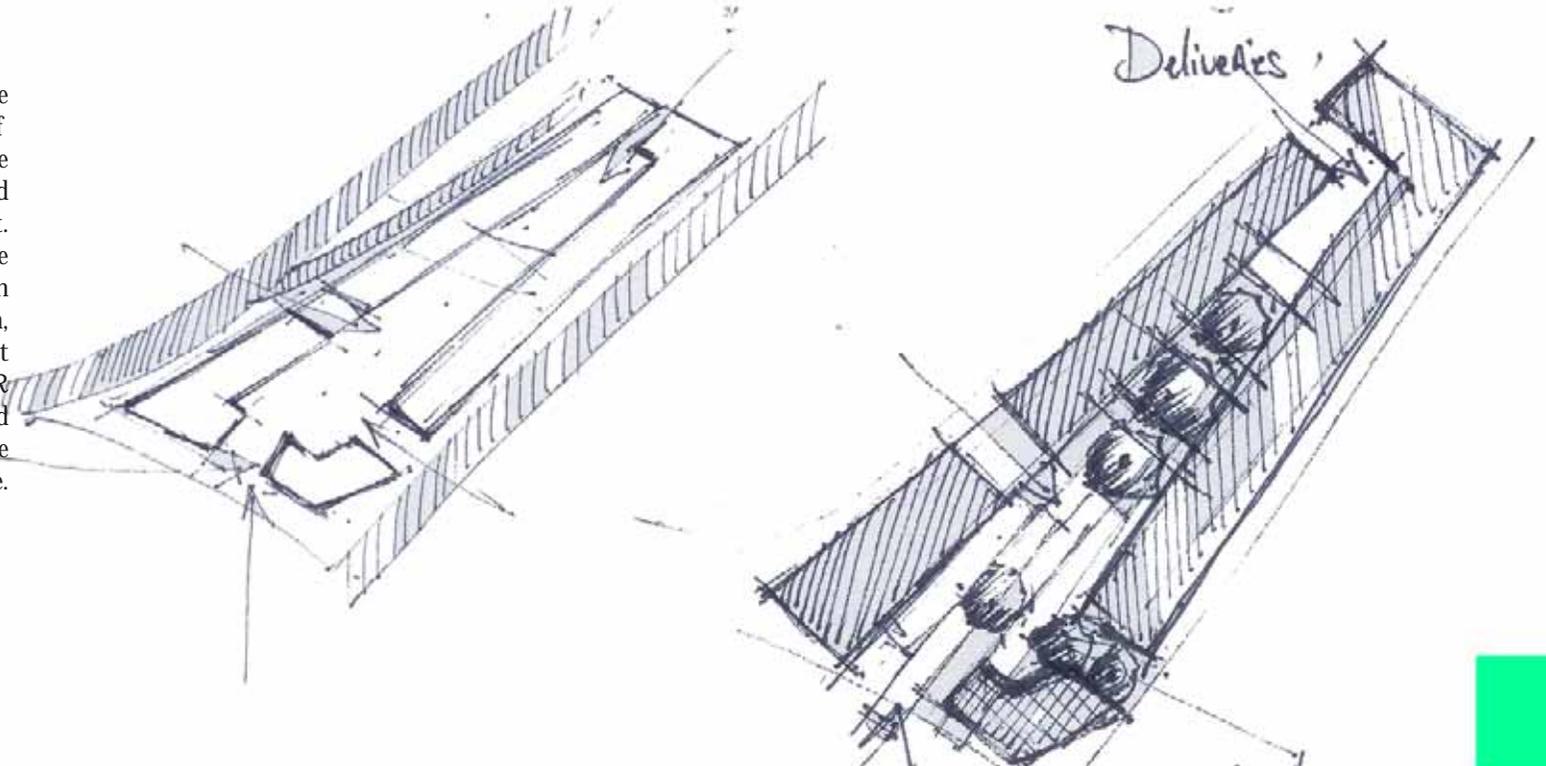
to a form of gathering, while an underlying sense of wholeness is experienced. CRANE 1960: p.280) The revealing of a specific process which is fundamentally part of our everyday lives, was one of the basic inspirations for the proposed development as a colour production hub, which would give pedestrians and visitors an opportunity to gather inside and around the space.

According to Dewar et al, industrial as well as space-intensive activities tend to occur where metropolitan accessibility is still high, with less residential back up. (illus.68) (DEWAR ET

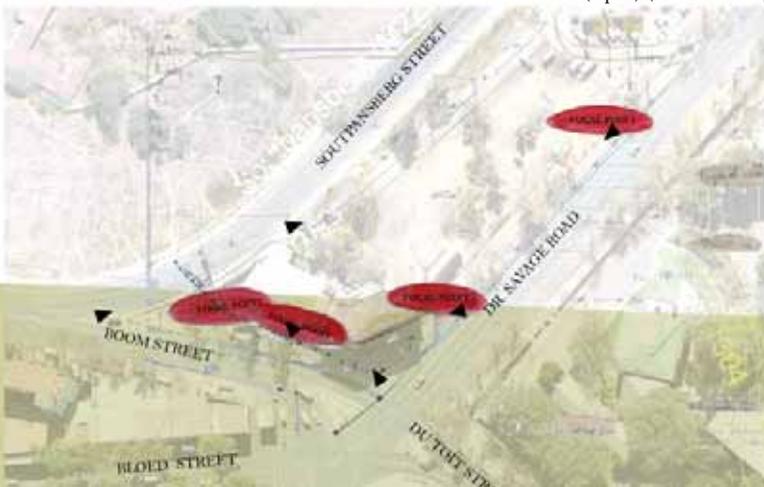


Illus. 72 North-South section through site.  
(April) (Author 2007)

AL 1991: 50) The proposed site is accessible on a city scale, with a definite lack of residential buildings in the area, making the light industrial programme of the proposed development feasible in the city context. The line of vehicular movement around the proposed site gives the space that forms in between an opportunity of lateral integration, where, according to Dewar et al, light industrial activities frequently occur. (DEWAR ET AL 1991: 50) This was also considered to be a main factor in the proposal for the development to be of a light-industrial nature.



Illus. 73 Site exploration sketch, showing the focal points onto the site. (April) (Author 2007)



Illus. 74 Site exploration sketch. (April) (Author 2007)







6.2

CONCEPTS

Through the site analyses it was established that the south western edge of the site would be best suited for the light-industrial paint production, as this programme has a definite need for deliveries of raw material, which would be possible from the taxi rank access road onto the site. The specific materials involved in the process of paint production created the need to be sheltered from direct exposure to sunlight and weather elements. These areas were placed on the western edge of

the site, which would require protection from harsh western sun under any circumstances, as this is the longest edge of the site. The analysis also showed that the south western point of the site is best suited to announce the function of the building, as this area is where the major focal points from vehicular roads converge. The line of site of the approaching traffic from Boom Street turning either onto Soutpansberg Street or down Du Toit/Prinsloo Street, is also on this southern point of the site, making the façade ideal for imagery or

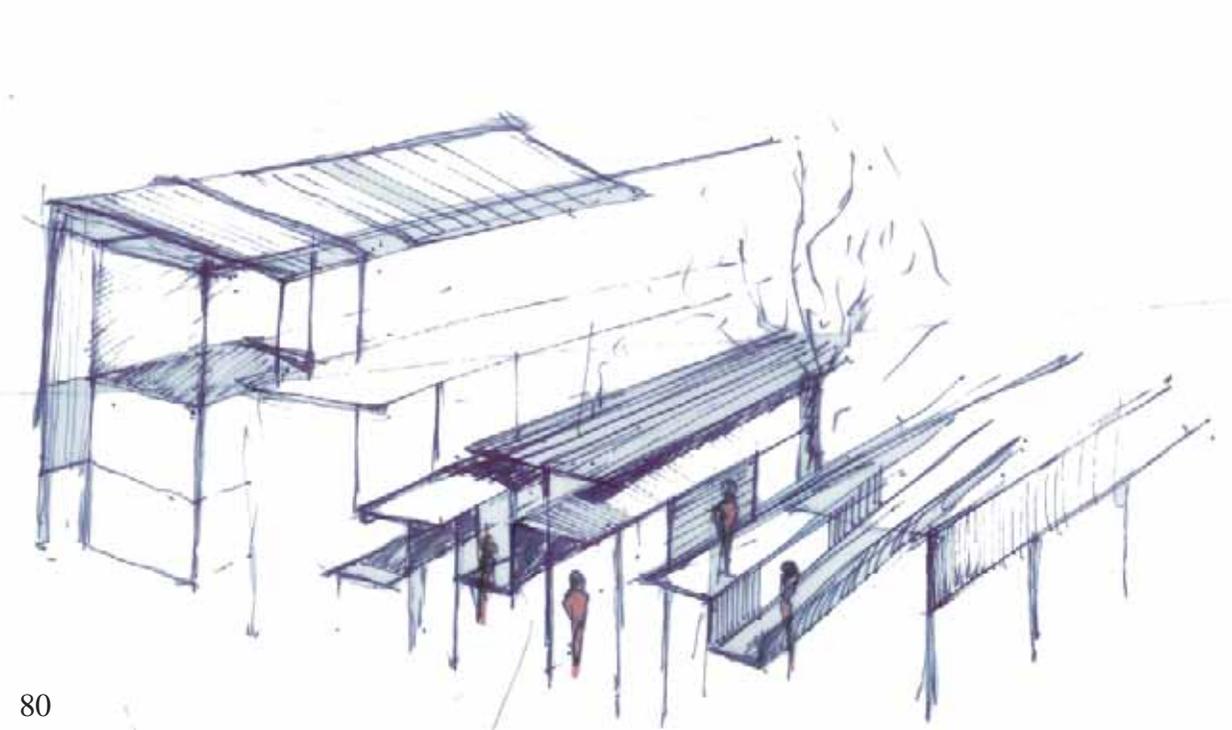
or advertising. The design grew systematically from this southern point of the site.

Pedestrian movement through the site was also a very important design factor from the start, where the concept of platforms and walkways originated. The visual link with these walkways was intended to spread in a fan pattern through the longitudinal site, drawing the observer and pedestrian into the central space between the buildings, through to the taxi rank, and vice versa. At this stage of the design the Carbonatto building's plans have

not been found yet and thus not incorporated into the initial concept. This proved to be a challenge throughout the process of design.

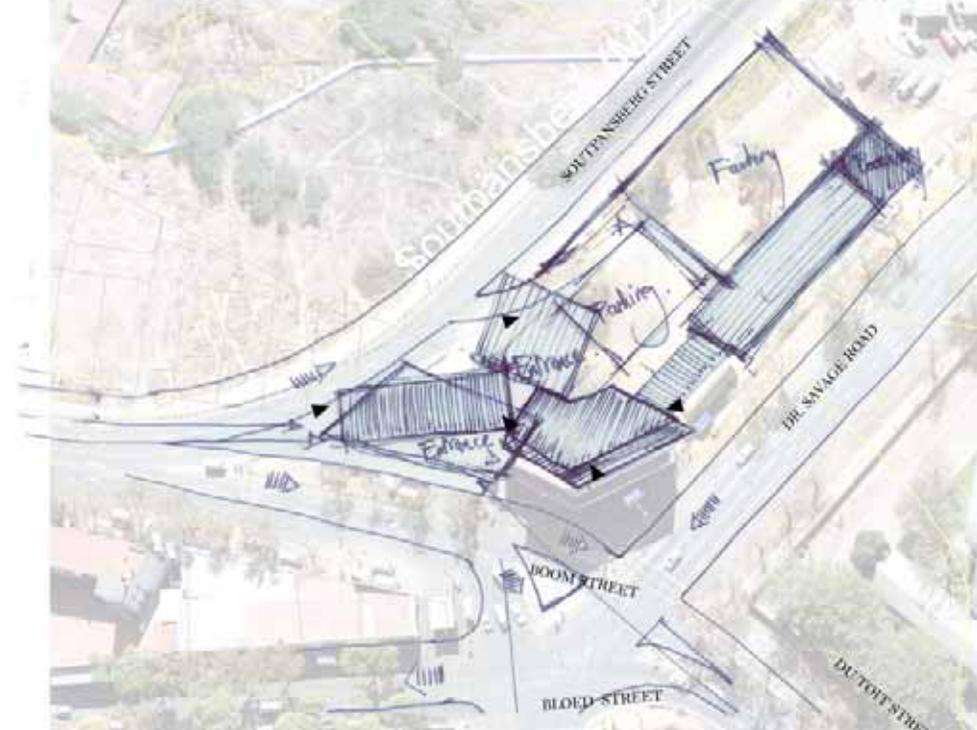
Accessibility to and through the site was a major design factor as already mentioned. The longitudinal nature of the site made this requirement hard to incorporate into the program of the building, as a circular access road is normally employed in industrial buildings of this nature. The use of the taxi rank access road was employed from the second concept onwards, where the access

Illus. 75 Concept sketch. (June) (Author 2007)



Illus. 76a Design Process - planning

(June) (Author 2007)



road split and leads into the main receiving entrance and delivery area. The delivery road turns towards the east on the northern side of the site, moving through an opening in the eastern building and turning into the one directional Dr. Savage Road, leaving the site.

The main program required by the accommodation schedule, including the main paint production processes, was incorporated from early in the concept face. Each main function was allocated a specific colour code to make the program more legible. Red for

colour production, blue for colour therapy and psychology, magenta for the existing building, green for access roads, orange for public space and yellow for semi-public space. From the first concepts to the last design resolution, there is a distinct resemblance between the allocation of the program, with only slight changes occurring where the existing building touches the proposed development, which is indicative of the level of difficulty by which such an existing structure is incorporated into a new design proposal. It was important that the proposed development not overshadow

the existing Carbonatto building, but rather frame the building in a subtle way, so that the heritage and landmark value of the existing structure can be celebrated. The existing building would be refurbished, while completely opening up the ground floor through the removal of infill walls, leaving mainly the column structure. This would be more visually inviting on a pedestrian scale, as a visual link to the gathering space and rest of the development can be established.

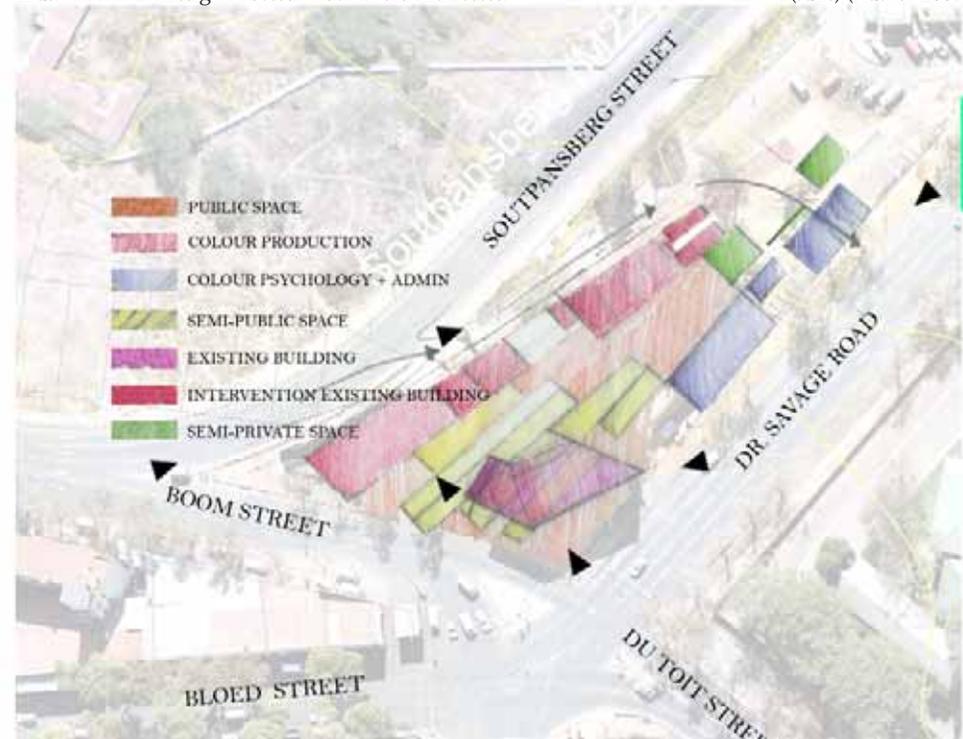
Throughout the concept phases, the initial

concept of the walkways remained central to the scheme of the project. Several design solutions for this concept was explored. It was important that the walkways act as a movement generator throughout the site, as well as serve dually as viewing platforms from where the paint manufacturing process could be observed. Public and semi-public space was also explored, while the security aspect played a big role in the solution thereof. Further in the concept phase, the fall of the site was incorporated to achieve a level of security from the casual observer

Illus. 76b Design Process - planning. (June) (Author 2007)



Illus. 77 Design Process - Focal areas and access. (June) (Author 2007)



by cutting the ground level walkways into the ground surface, creating seating areas around the gathering space which lead back into the building on the eastern edge.

The basic form of the first concept was carried throughout the design process, with the southern half of the building extending and the north eastern half of the building receding. This concept developed as a result of the vehicular movement around the site, with both halves extending toward the direction of approaching vehicular

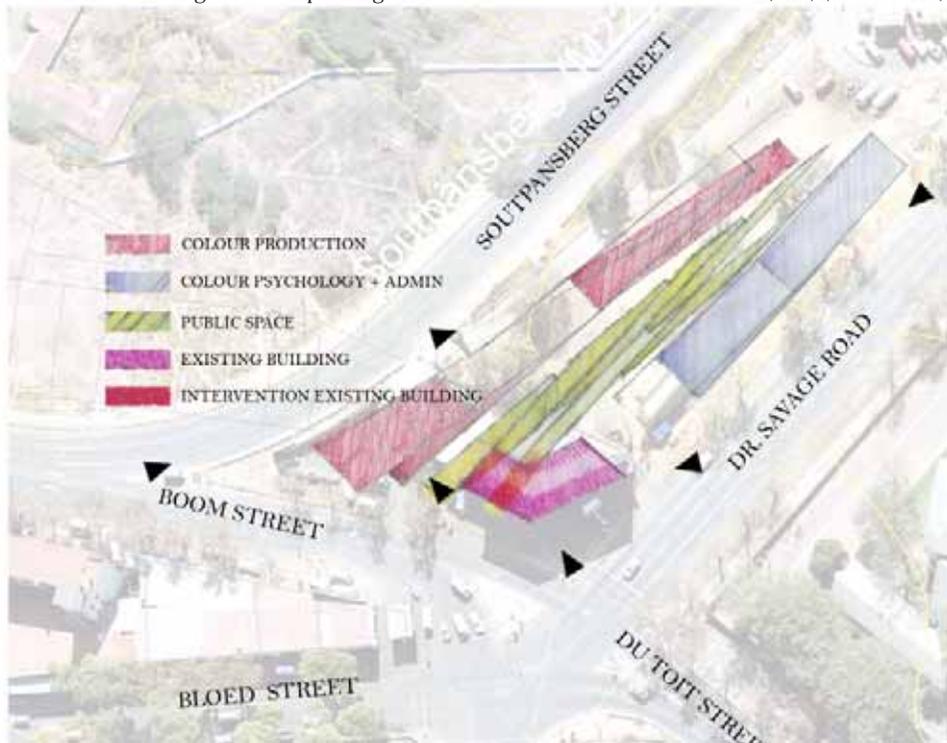
movement. This extending of the two building volumes announces the passer by's arrival into, or departure from the city, almost as if in a hurry to grab their intension while subtly leading their gaze along the façade of the building. Where the building façade opens up, the spectator's gaze would be fixed onto focal areas of importance.

The final design resolution incorporated the notion of revealing the invisible by the distinct hierarchy between solid and transparent surfaces. Where the production process

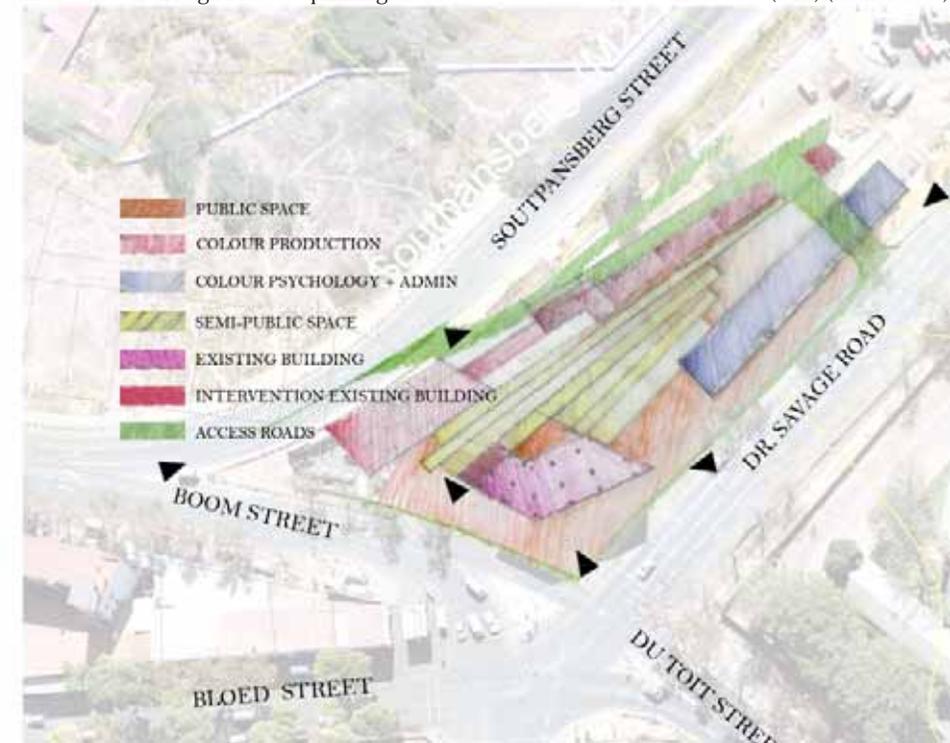
becomes visually important, as well as other areas that denote importance of programme, the façade becomes transparent through the use of glass boxes that penetrate the solid surface of the concrete structure. This form of contrast links with the concept of using raw concrete as main building element, while intervening with painted and coloured areas where light comes into play, to contrast with the shades of grey of the main concrete structure. The building literally becomes a canvas for the exploration of colour and light.

As the theoretical investigation concentrated on the use of colour and light in architecture, this was explored throughout the concept phases. Colour and light became the medium through which legibility of the proposed building could be achieved, by modifying our impression and perception of the building's form and planes. The effect that mainly colour, but also light has on the proposed development, will only be realized and understood with the final design resolution, through the building of a detailed scaled model, as well as through the use of perspectives showing the use

Illus. 78 Design Process - planning (June) (Author 2007)



Illus. 79 Design Process - planning (June) (Author 2007)



of colour. The initial concept models were built with balsa wood, as their function was mainly to explore the building's form and programme, and therefore colour was not explored in these models. The final model and perspectives is yet to be done, with which the application of the theoretical investigation would become evident in creating meaningful architectural space within the city fabric.

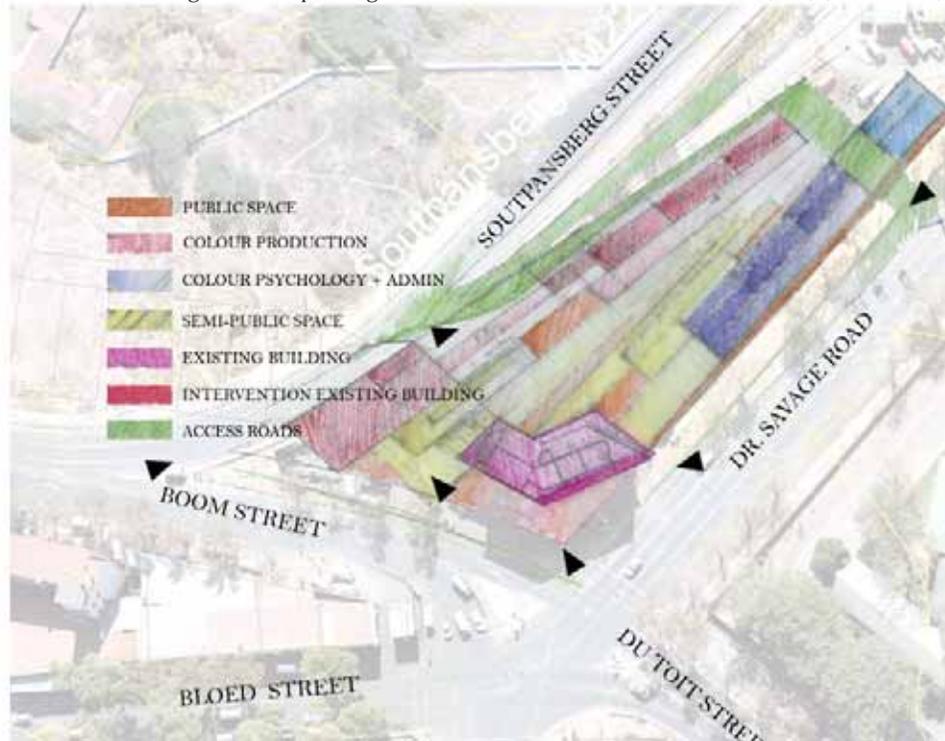
The architectural language of the proposed Colour Production Hub reflects the need of people to see what is concealed under

normal circumstances. This revealing becomes evident in the language of the building by the use of transparent surfaces which offer the individual glimpses into the workings of a paint producing factory. This creates a direct relationship between the building and the individual, where he/she feels involved in the process and therefore involved in the working of the city's identity.

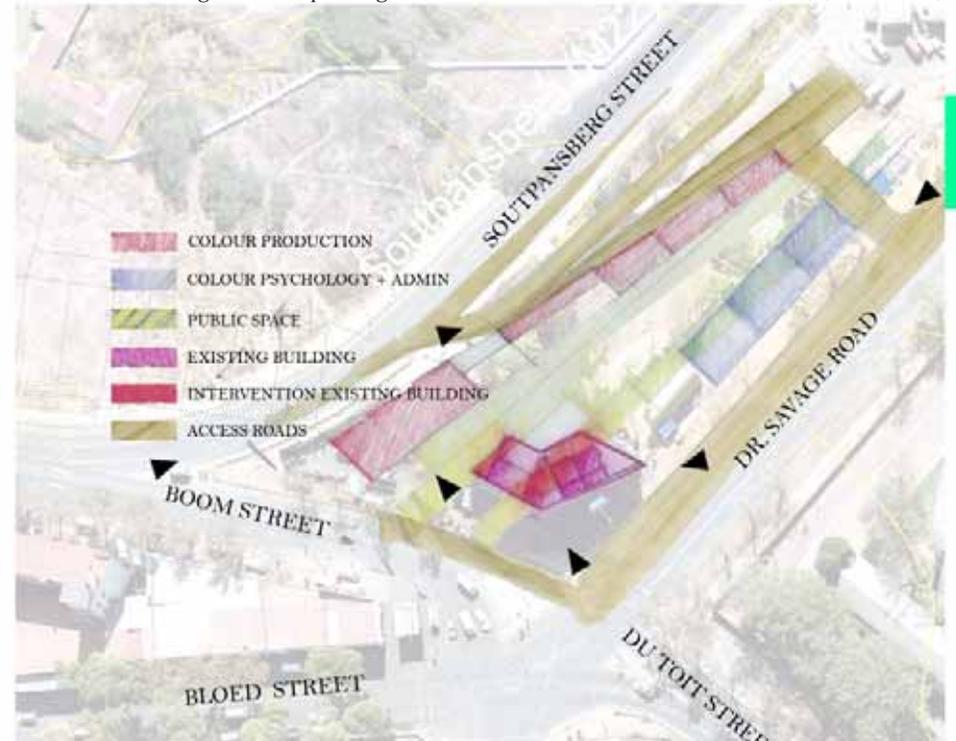
The therapeutic component of the design employs colour on a bigger scale, as the perceiving of colour has a direct

with the individual's psyche. As the individual is constantly bombarded by colour, the emotional response to colour would only be realized by him/her when a definite application of colour is presented to him/her. The design therefore employs this medium that can only be experienced through the existence of light, to enhance the individual's perception of the building, and therefore recognize the importance of the building as a landmark in its context of a gateway, which must be celebrated.

Illus. 80 Design Process - planning. (June) (Author 2007)



Illus. 81 Design Process - planning. (June) (Author 2007)



Illus. 82 Design Process - July crit (Focal points) (July) (Author 2007)



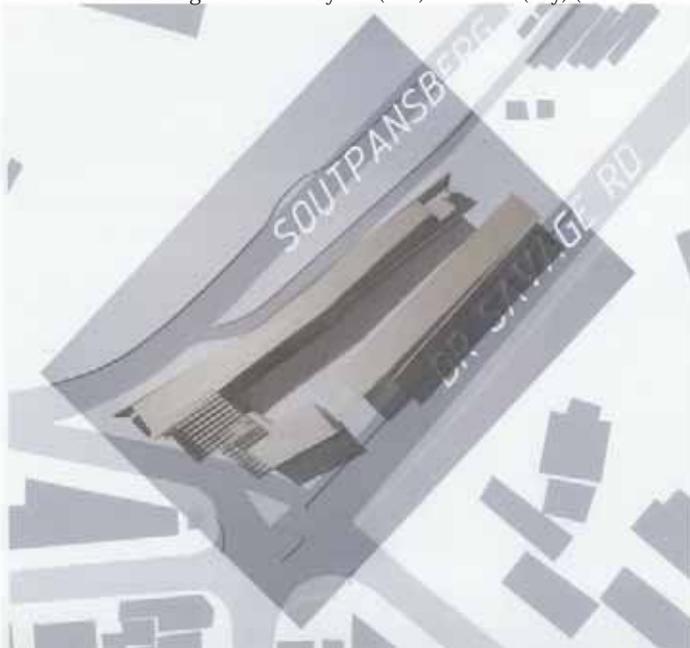
Illus. 83 Design Process - July crit (Primary, secondary, tertiary production) (July) (Author 2007)



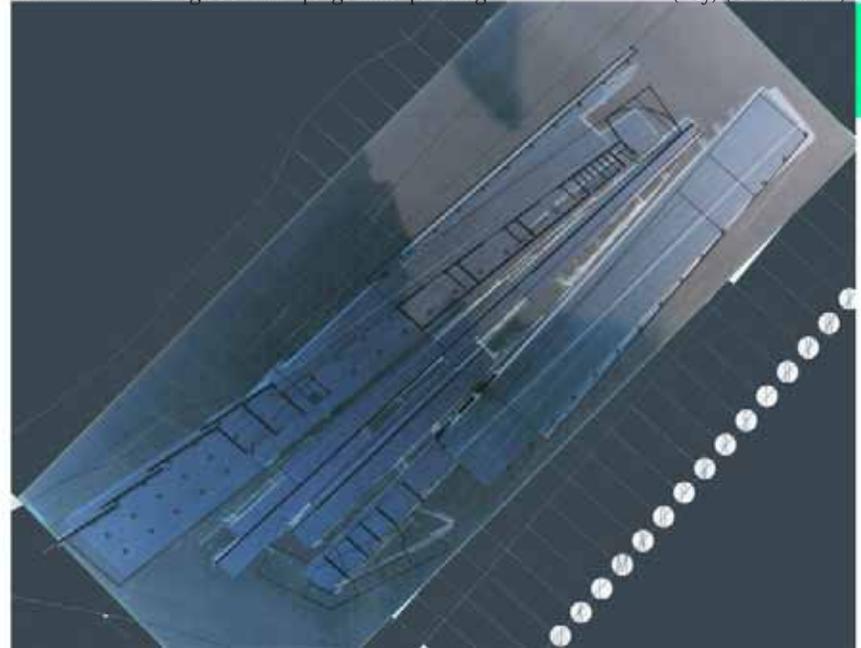
Illus. 84 Design Process - July crit (form) (July) (Author 2007)

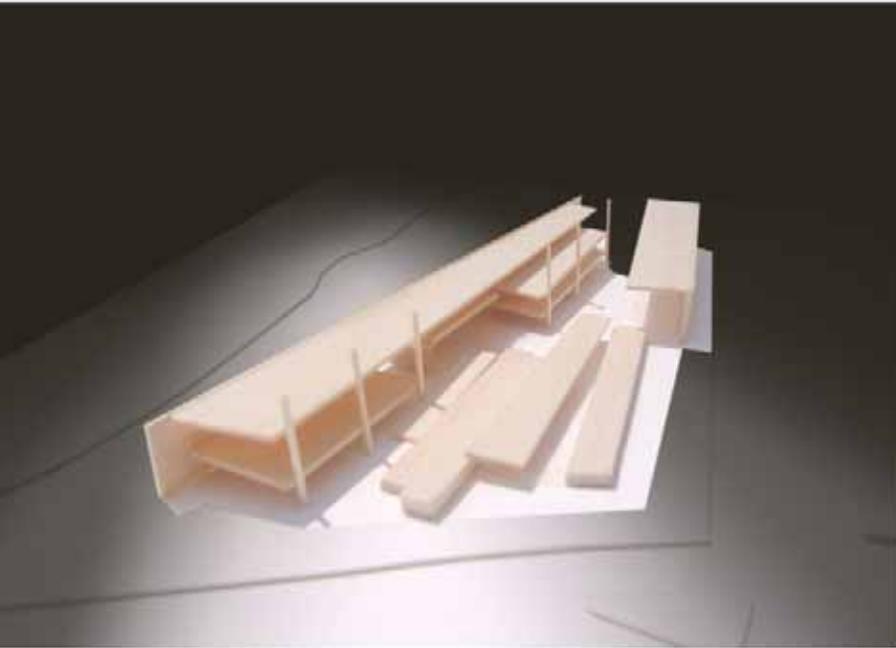


Illus. 85 Design Process - July crit (roof) (July) (Author 2007)



Illus. 86 Design Process - programme planning. (July) (Author 2007)



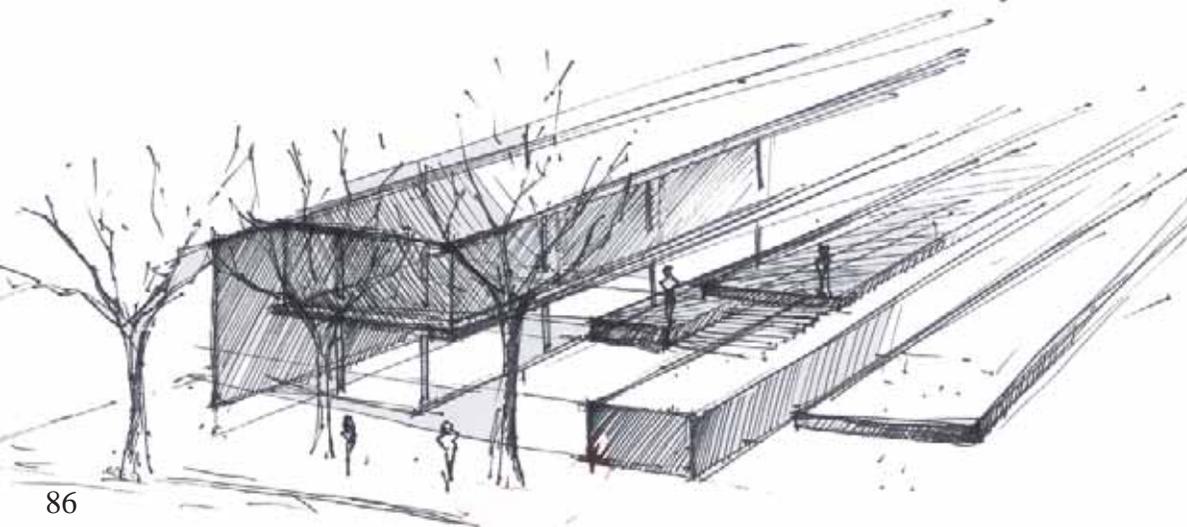


Illus. 87 Concept model 1, April 2007, Balsa wood. (Author 2007)



Illus. 89 Concept model 1, April 2007, Balsa wood. (Author 2007)

Illus. 88 First Concept sketch.

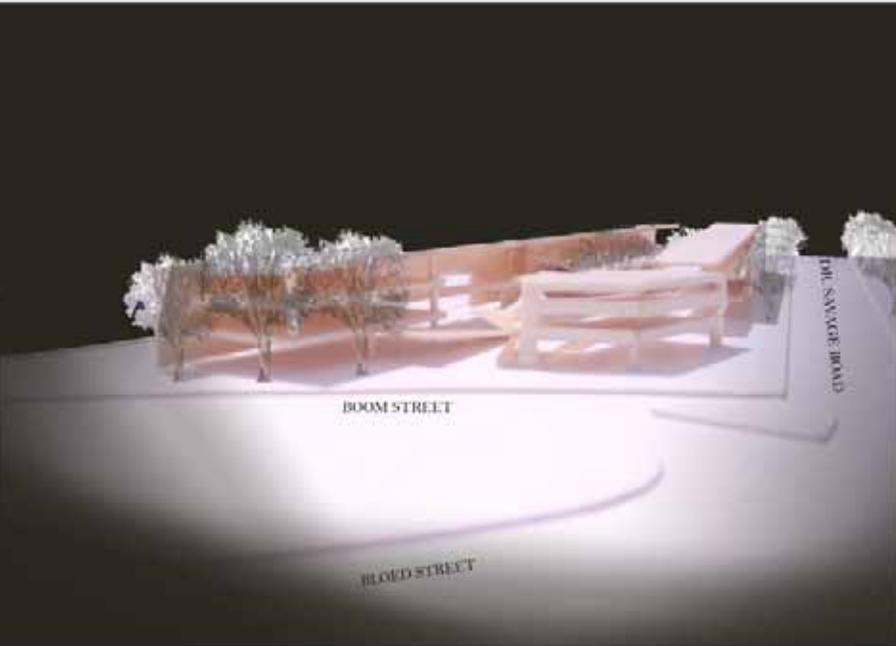


(April) (Author 2007)

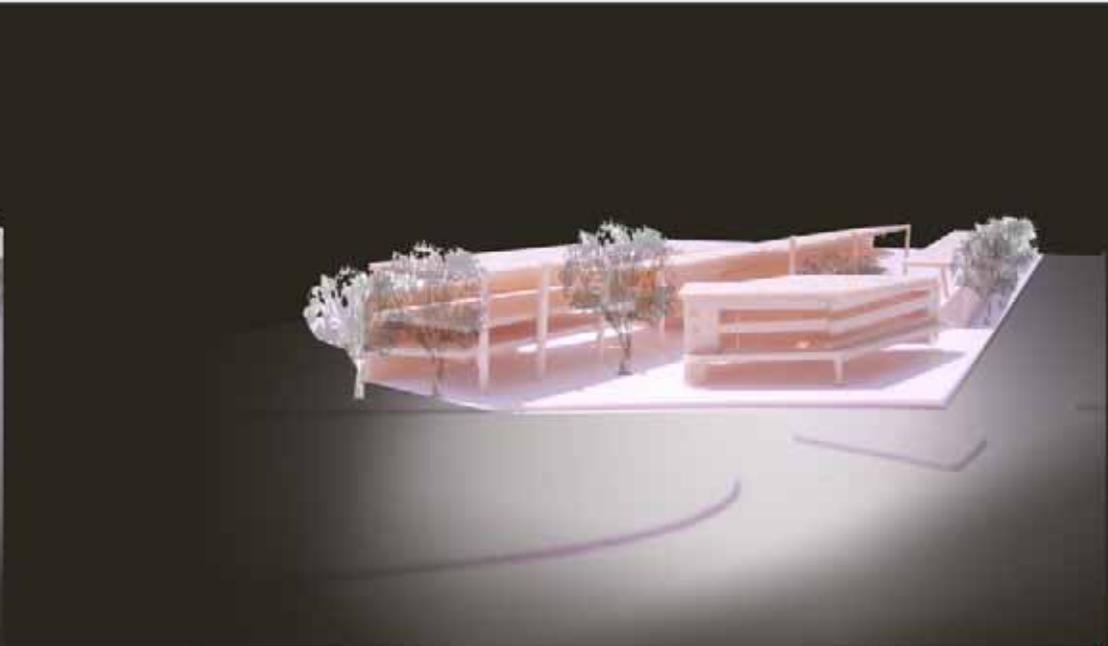
Illus. 90 Concept model 1, Aerial view.



(April) (Author 2007)



Illus. 91 Concept model 2, May 2007, Balsa wood. (Author 2007)



Illus. 93 Concept model 3, May 2007, Balsa wood. (Author 2007)

Illus. 92 Concept model 2, Aerial view. (May) (Author 2007)



Illus. 94 Concept model 3, Aerial view. (June) (Author 2007)



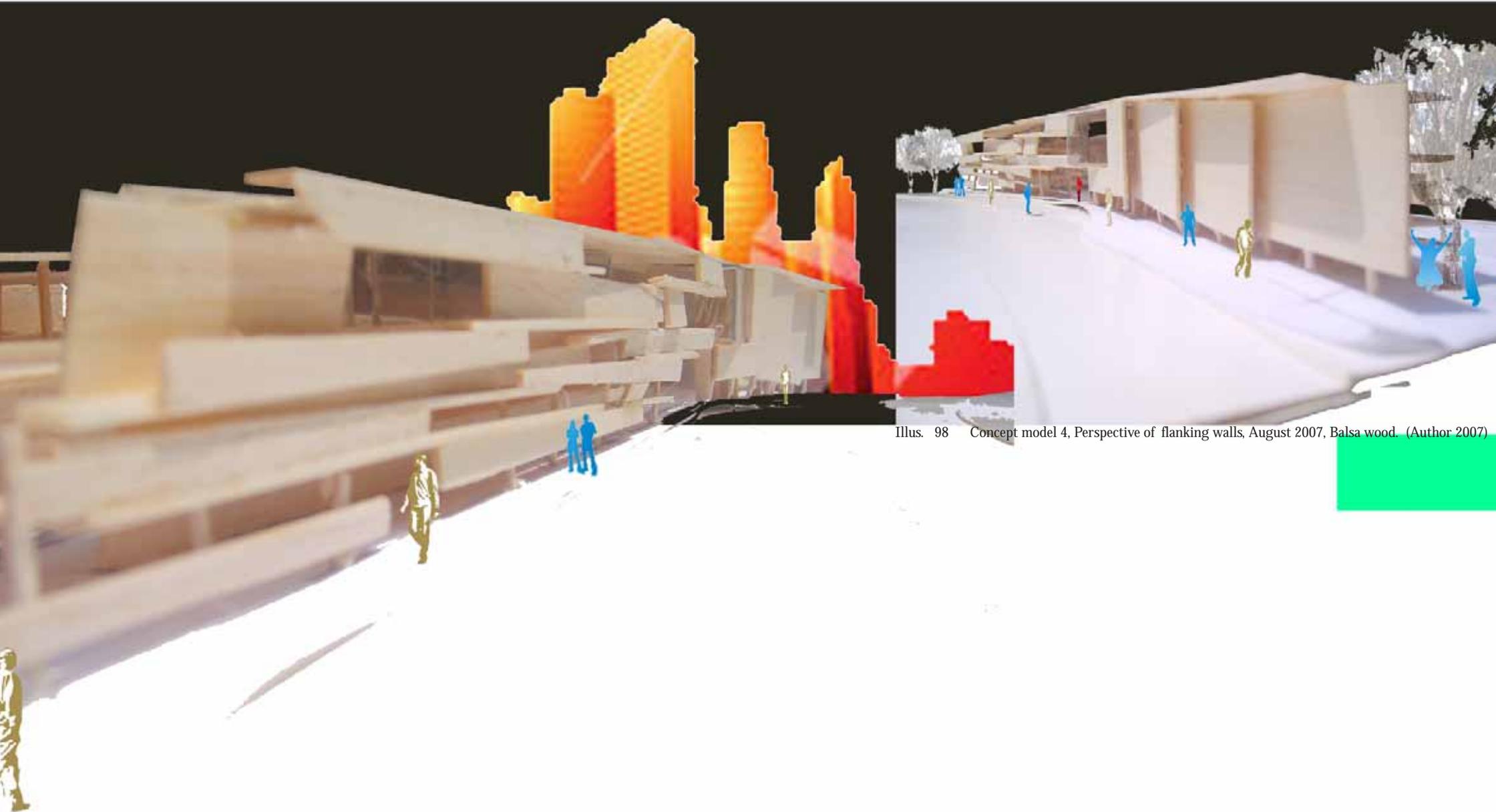


Illus. 95 Concept model 4, Perspective of walkways, August 2007, Balsa wood. (Author 2007)

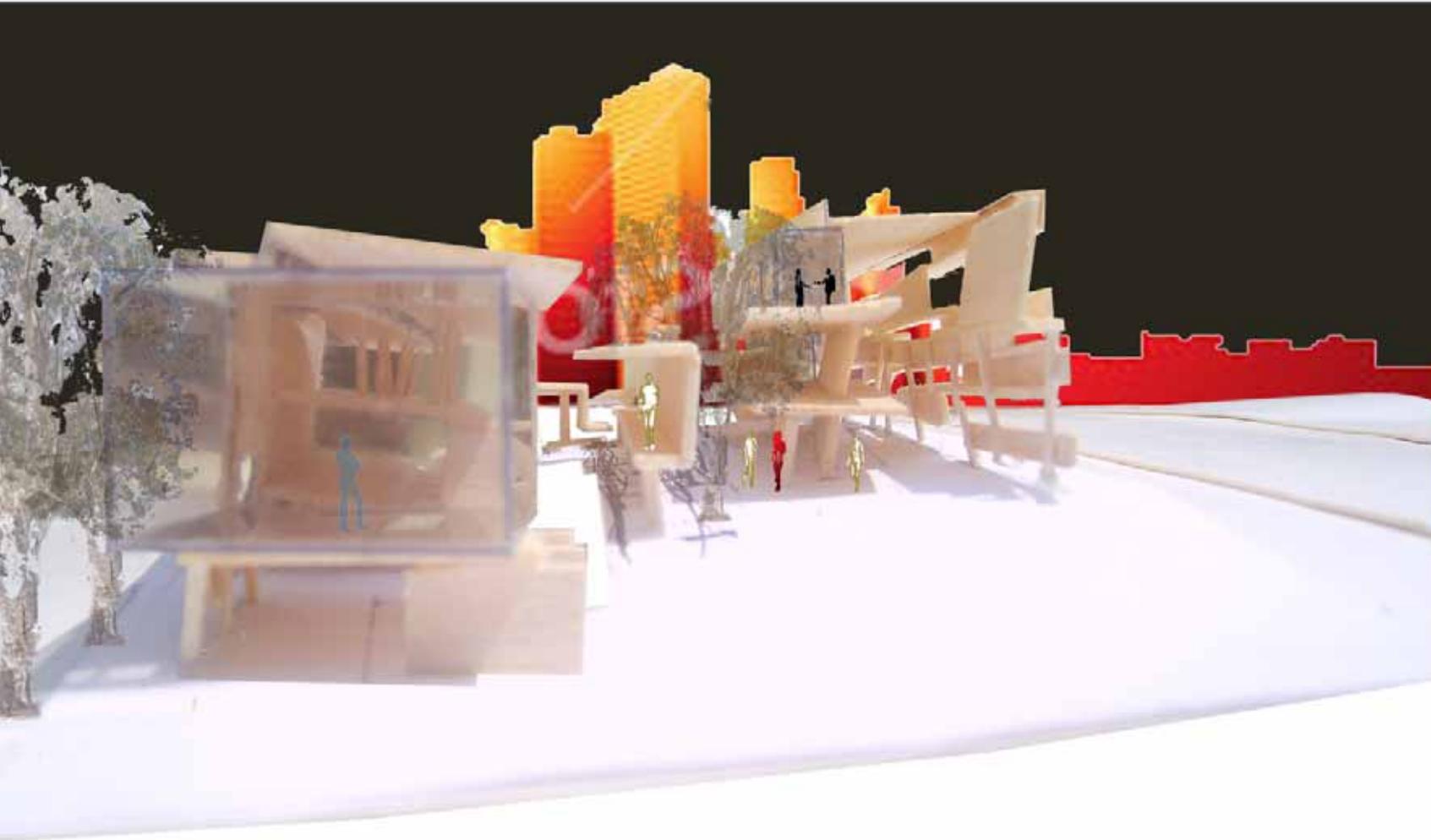


Illus. 96 Concept model 4, Perspective of the southern edge, August 2007, Balsa wood. (Author 2007)





Illus. 98 Concept model 4, Perspective of flanking walls, August 2007, Balsa wood. (Author 2007)



Illus. 99 Concept model 4, view toward the south, August 2011. Photo: J. van der Merwe.



August 2007, Balsa wood (Author 2007) Illus. 100 Concept model 5, View of primary production area, September 2007, Balsa wood (Author 2007)



Illus. 102 Concept model 5, View of art exhibition space, September 2007, Balsa wood (Author 2007)

Illus. 101 Concept model 4, Aerial view. (August) (Author 2007)



Illus. 103 Concept model 5, Aerial view. (September) (Author 2007)



