

design discourse

concept and design development



The intervention aims to create an experience based exhibition, with the five senses as the basis for the exhibition spaces. The exhibition links to the museum to become an additional exhibition space. Although the insect was investigated as subject for the exhibition, the reality of the museum context caused this decision to be altered, so that the insect collection is still an influence in terms of design decisions and the thinking towards the general exhibition, but would not be detailed in the exhibition.

It is important for the user to have something in the experience to relate to, or that connects with his frame of reference. Experience is perceived through the senses. We know our senses, live with them, use them and know what the sensory organs look like. It might be expected that insects have senses more or less the same as human senses, but insects have very different and interesting ways of seeing, tasting, smelling, touching and hearing.

Human senses will be dealt with in the new exhibition in Genesis 1 (Vermaak 2010). The exhibition should be arranged in such a way that human senses are emphasised in advance of the user encountering the insect collection. This establishes a link, and contrast, between the human senses and those of the insect.

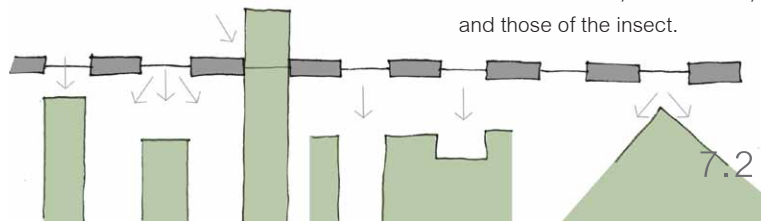


Figure 7.1: Window looking out on vault structure from Genesis 1
Figure 7.2: Illustration of possible reactions to windows

7.1 Reaction to existing elements

Within the existing building and structure there are certain elements that need reaction from the intervention. These reactions should be specific to the existing elements and connect these elements with the intervention as well as the exhibition within the intervention.

In Genesis 1 the windows looking out onto the volume and intervention should look onto and react with parts of the intervention that will create curiosity in the user.



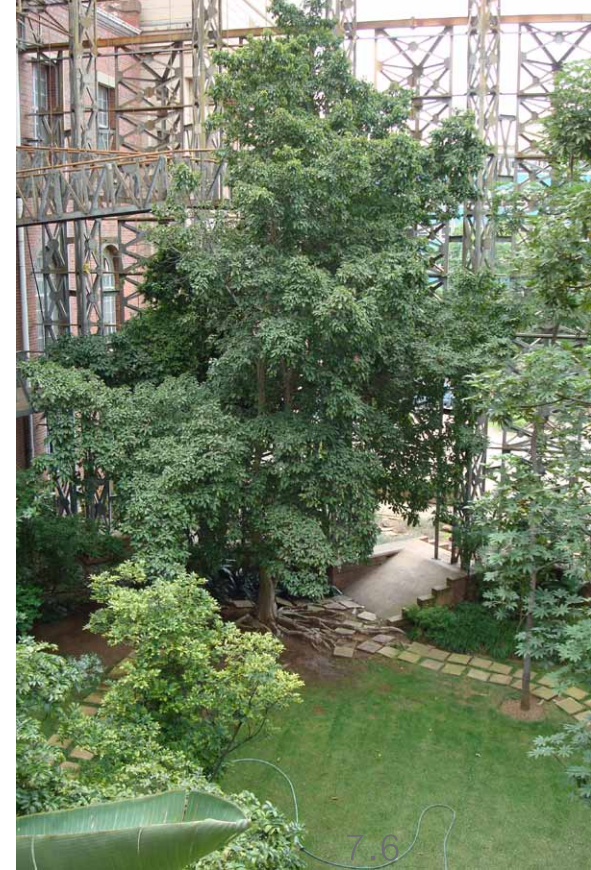


7.3

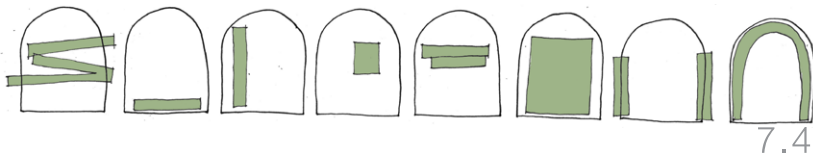
The entrance to the volume becomes the only direct connection between building and intervention. This becomes the user's first encounter with the space, and should be treated accordingly.

In certain areas the volume should be experienced without interruption, so that the height within the structure has a powerful impact on the user. The height of the volume gives the user the opportunity to go up from entrance level, so that a height can be reached from which the surrounding areas can be seen. Specific reaction to the surroundings will be necessary if the height is reached and a view point is established on the surrounding area (figure 7.4).

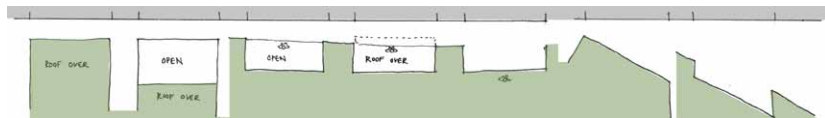
The wild fig tree is an important element in the space and reaction towards it is required. Specific reaction will show the existing habitat within the structure and the contrast between structure and tree (figure 7.5).



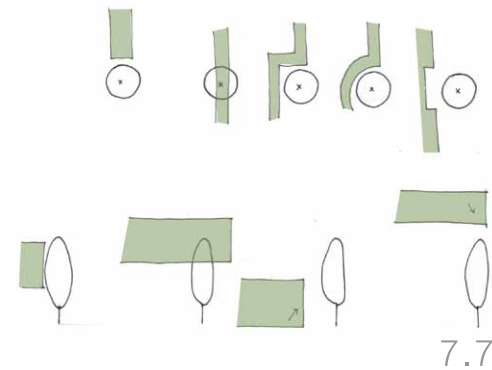
7.6



7.4



7.5



7.7

Figure 7.3: Entrance into vault structure from Genesis 1
Figure 7.4: Illustration of possible reactions to volume
Figure 7.5: Illustration of possible reactions to tree
Figure 7.6: Wild fig tree
Figure 7.7: Illustration of possible reactions to tree



On the northern facade of the building within the structure, there is a large wall without windows. The bricks form a harsh wall onto which, for example, a film can be projected. This will link the existing building strongly with the exhibition in the intervention to follow and eliminate the harshness of the wall to a certain extent.

To acknowledge the existing, a reaction to the balcony is required. The balcony overlooks the volume and is accessed from an office space in the eastern leg of the building.

For the user to be able to appreciate the volume from the ground, the intervention will have to connect with the ground. The ground plays an important role, along with the tree, in terms of the contrast between the building and the volume within the structure.

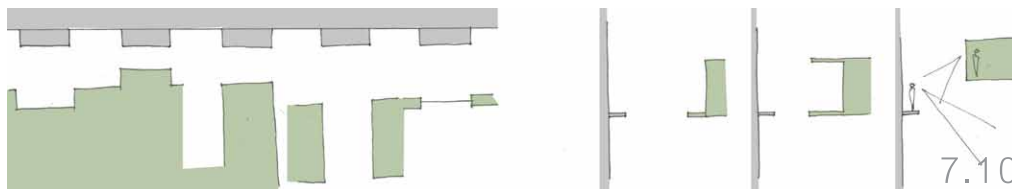
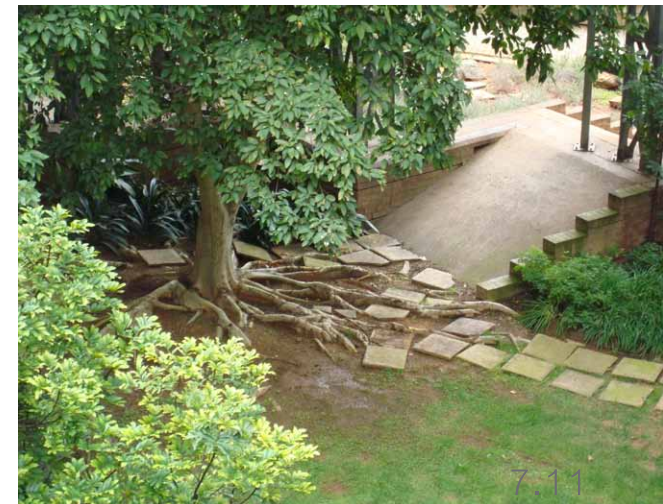


Figure 7.8: Photo showing brick wall on northern facade
 Figure 7.9: Photo showing balcony on eastern facade
 Figure 7.10: Illustration showing possible reactions to balcony
 Figure 7.11: Photo showing ground level of volume



7.2 Exploration of form

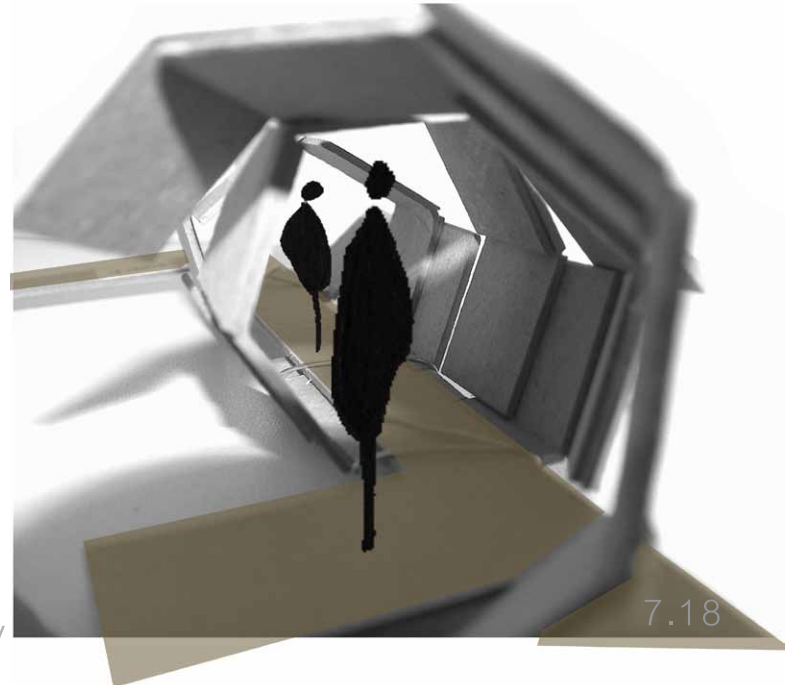
In the above models, size, placement and form of the intervention were explored. Two options for the exterior form of the intervention were considered. One option is a more permanent basic structure which forms a walkway onto which exhibition elements can be added. This would result in a changing interior and exterior environment.

The second option is to design a more enclosed structure and focus on the interior. It might be easier to change

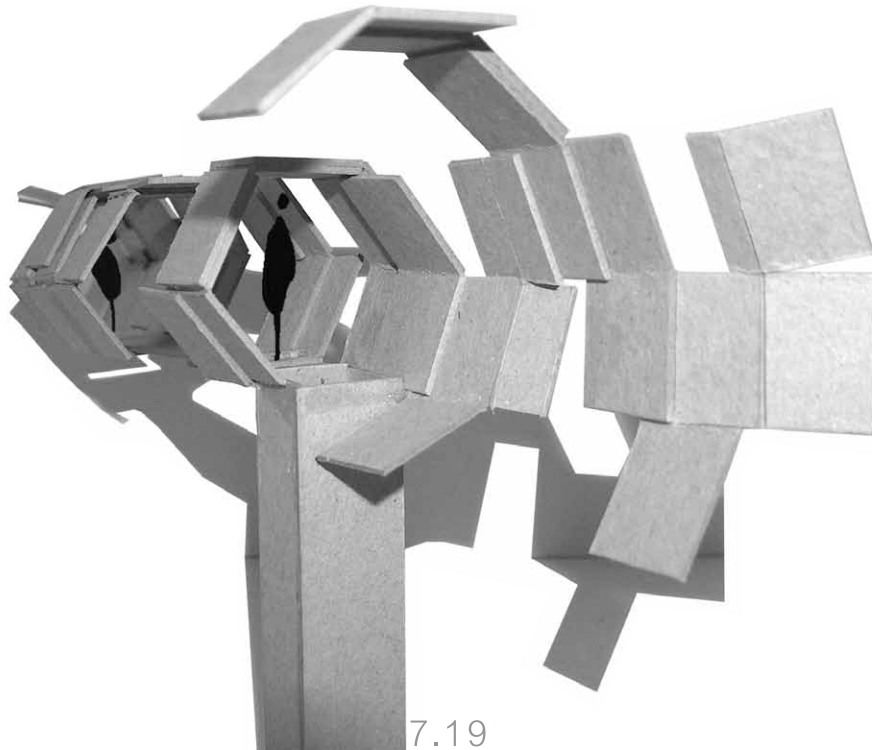
the exhibition if the interior configurations are based on a system, which is an important consideration because of the hesitance of the museum to change exhibitions.

Option one was explored for quite some time, before option two was developed into the final design.

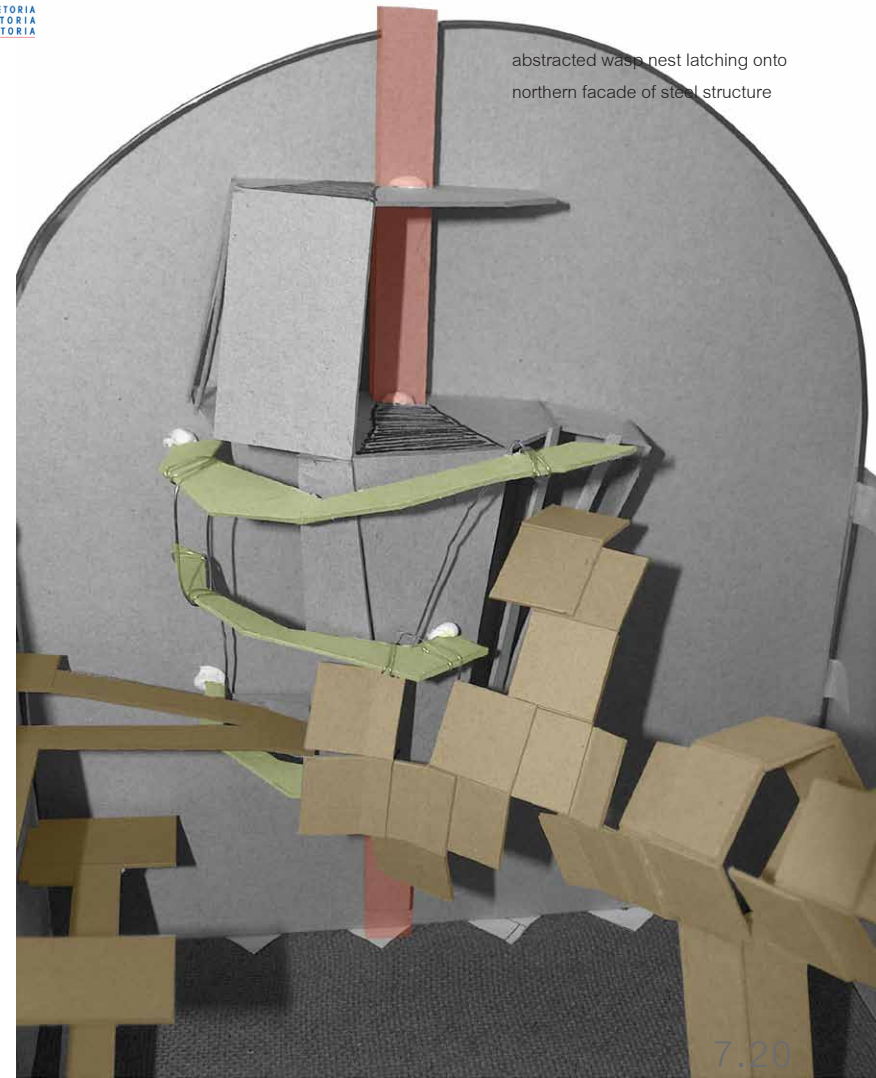
Figure 7.12-7.16: Models showing exploration of form
Figure 7.17-7.18: New element wrapping around existing ramp structure
Figure 7.19: Elements forming different interior spaces through different compositions
Figure 7.20: Wasp nest latching on to existing structure



_april _ may

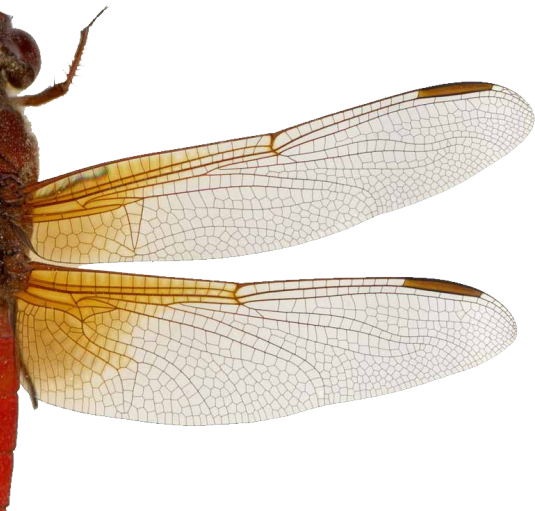


7.19



abstracted wasp nest latching onto
northern facade of steel structure

7.20

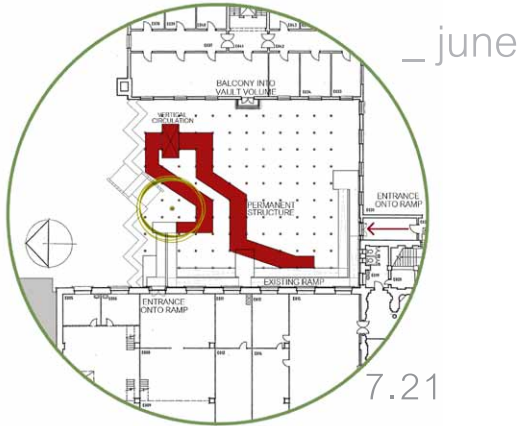


Option one, where the exterior and interior spaces change and therefore experience in both areas change drastically, had the following problems:

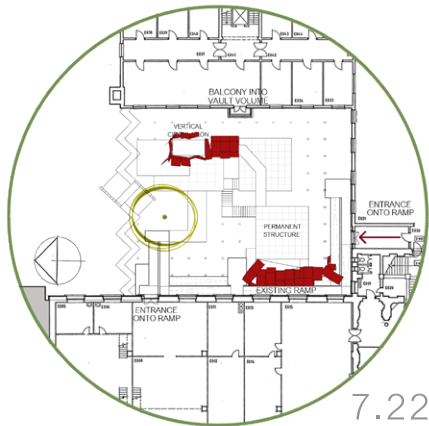
- clarity of form was lost
- difficulty in prescribing guidelines to which future exhibitions must adhere
- no basis space onto or into which exhibition can latch

Positive aspects of option one were:

- changing spaces and experiences result in more variation for frequent visitors
- the intervention becomes expressive of that which it exhibits



In the exploration of option one, the permanent structure formed a route through the volume to experience different aspects and parts of the volume, building and vault structure. The route started on the existing ramp. Columns formed a grid to guide the exhibitions to follow, and create structure for elements added onto the route.



The permanent structure developed into platforms connected through walkways, and were handled in the same manner to form repetitive spaces throughout the intervention. The tectonic language of the intervention became different from platform to platform. The language of the intervention became unclear and the intervention became too much of an obstruction of the volume.

Wellcome Wing, The Science Museum
MJP Architects
London, England, 2003

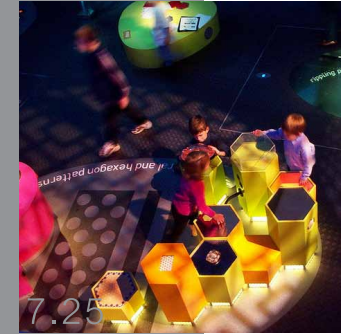


Figure 7.23: Wellcome Wing, blue lights create sense of mystery (Tim_d 2010)

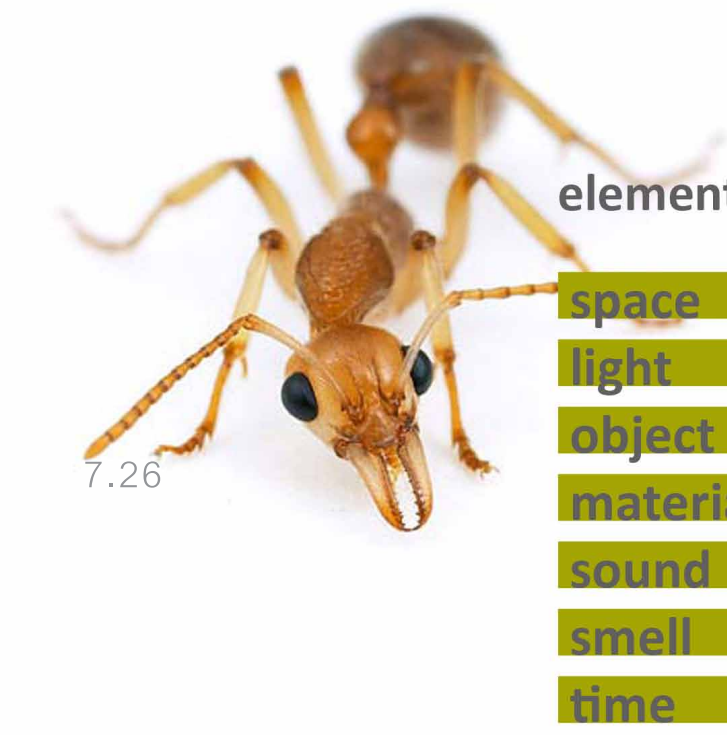
Figure 7.24: Entrance into Wellcome wing flooded with orange light (Mumphaee 2010)

Figure 7.25: Experience based exhibition (Davepatten 2010)

The Wellcome Wing is an addition to the science museum and contrasts with the Victorian buildings of the rest of the museum. The blue light contributes to this contrast and creates a completely different experience to the rest of the museum. This illustrates the element of context as discussed in chapter 5 and 6, especially where the user walks from a space flooded with light through orange panels into a space flooded with blue light (figure 7.10). The blue light suggests a sense of mystery, which hints at the infinite possibilities of science (MJP Architects:sp). This sub-consciously creates an experience which the user probably cannot pin point directly, but enhances the overall experience of the exhibition. The exhibition in the Wellcome Wing is experience based, and engages the user so that education can happen through experience (figure 7.11).

Figure 7.21: Permanent structure with columns on grid to act as guide for temporary experience

Figure 7.22: Permanent structure developed into platforms



elements of experience

- space
- light
- object
- material
- sound
- smell
- time

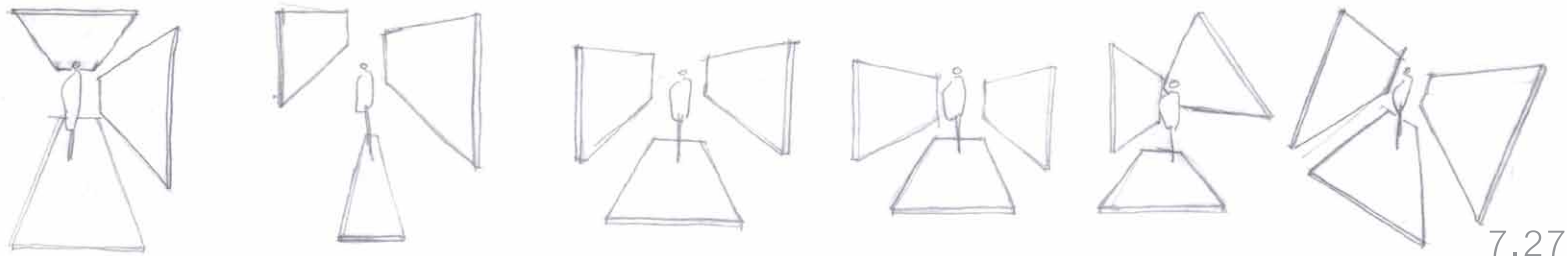
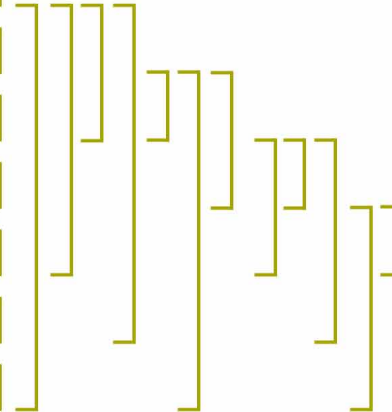
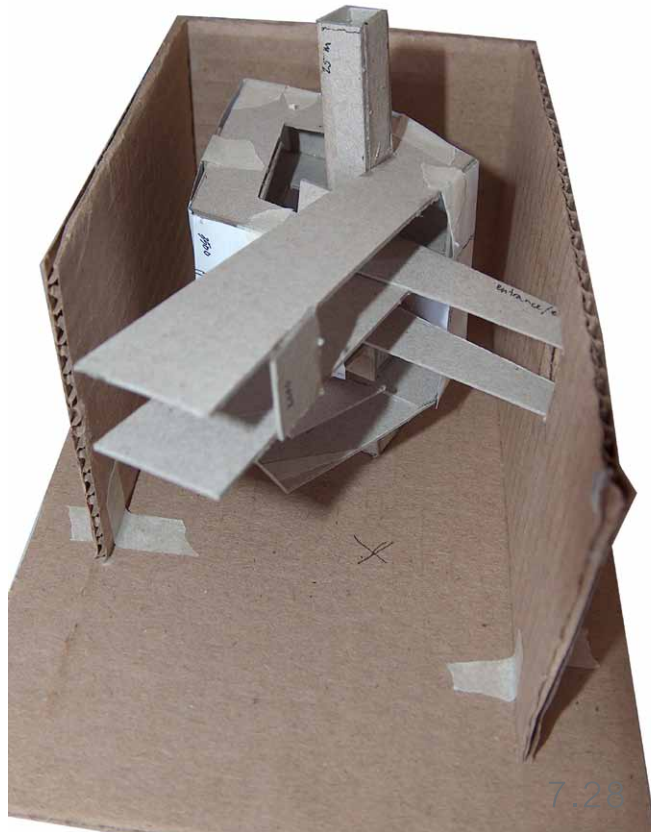


Figure 7.26: Elements of experience and possible combinations thereof
Figure 7.27: Different experiences created through different placements of planes

The decision was made to remove the existing ramp structure so that the user can enter directly from the building into the intervention.

A new ramp structure was introduced for inclusive reasons as well as to facilitate flow of users through the exhibition spaces. The ramp connected the entrance level with the ground, as well as a higher level. The intervention protruded through the steel structure to

create a point at which the user can look out onto the surrounding area from a height above the roof of the eastern flank of the building. The ramp had to reach a minimum height of 15 meters to protrude through the steel structure at a point where the structural integrity of the structure would not be compromised. This, with the ramp connecting with ground level, resulted in a ramp of minimum 180 meters. The intervention filled the volume to such an extent that the volume could no longer be appreciated.



_july

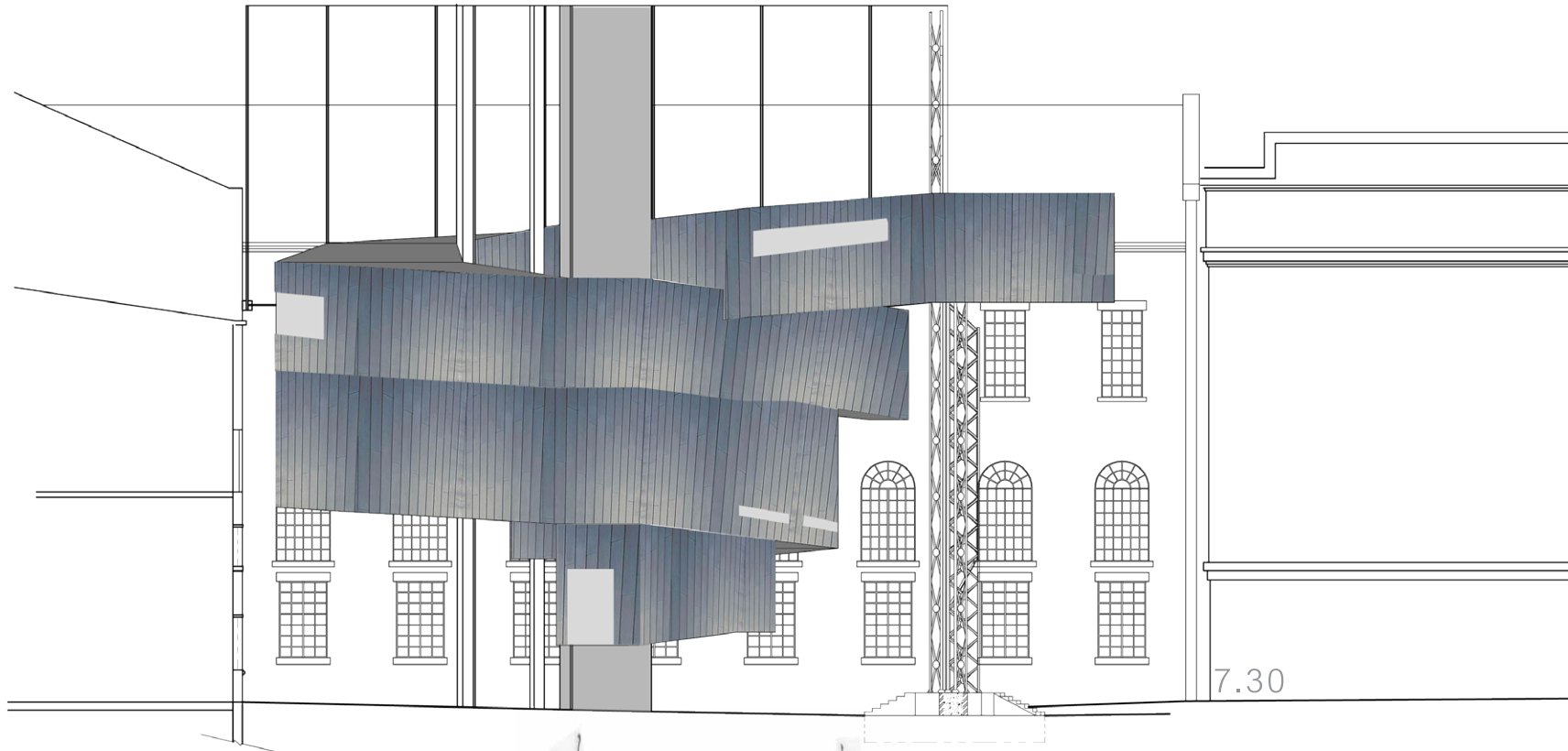
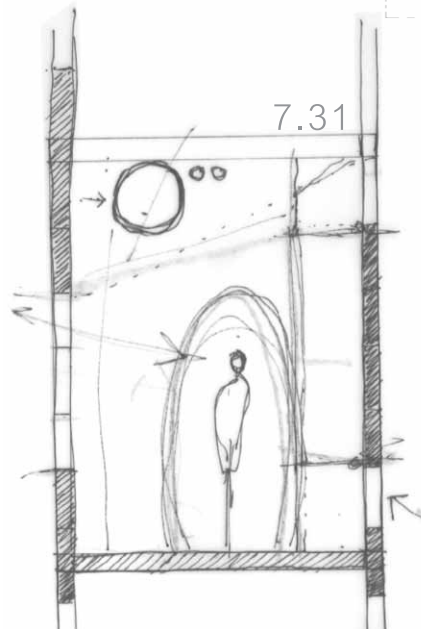


Figure 7.28-7.29: Model showing proposed ramp structure
Figure 7.30: Elevation of cladged ramp structure protruding through steel structure
Figure 7.31: Sketch illustrating change within interior space and exterior cladding responding to that.



The enclosed ramp formed interior spaces that were the same throughout the route. On the exterior the cladding system should have allowed for openings to change with any change in the interior. The exterior systems, although independent from the interior system, reflected the change on the interior. The intention was to have the interior space change completely from area to area and experience to experience.

The lack of connection with the existing building and volume resulted in a change of form and approach.

7.3 Final proposal

Taking the existing building and volume into account, the intervention became less enclosed, with openings placed specifically to react to the existing building and surroundings.

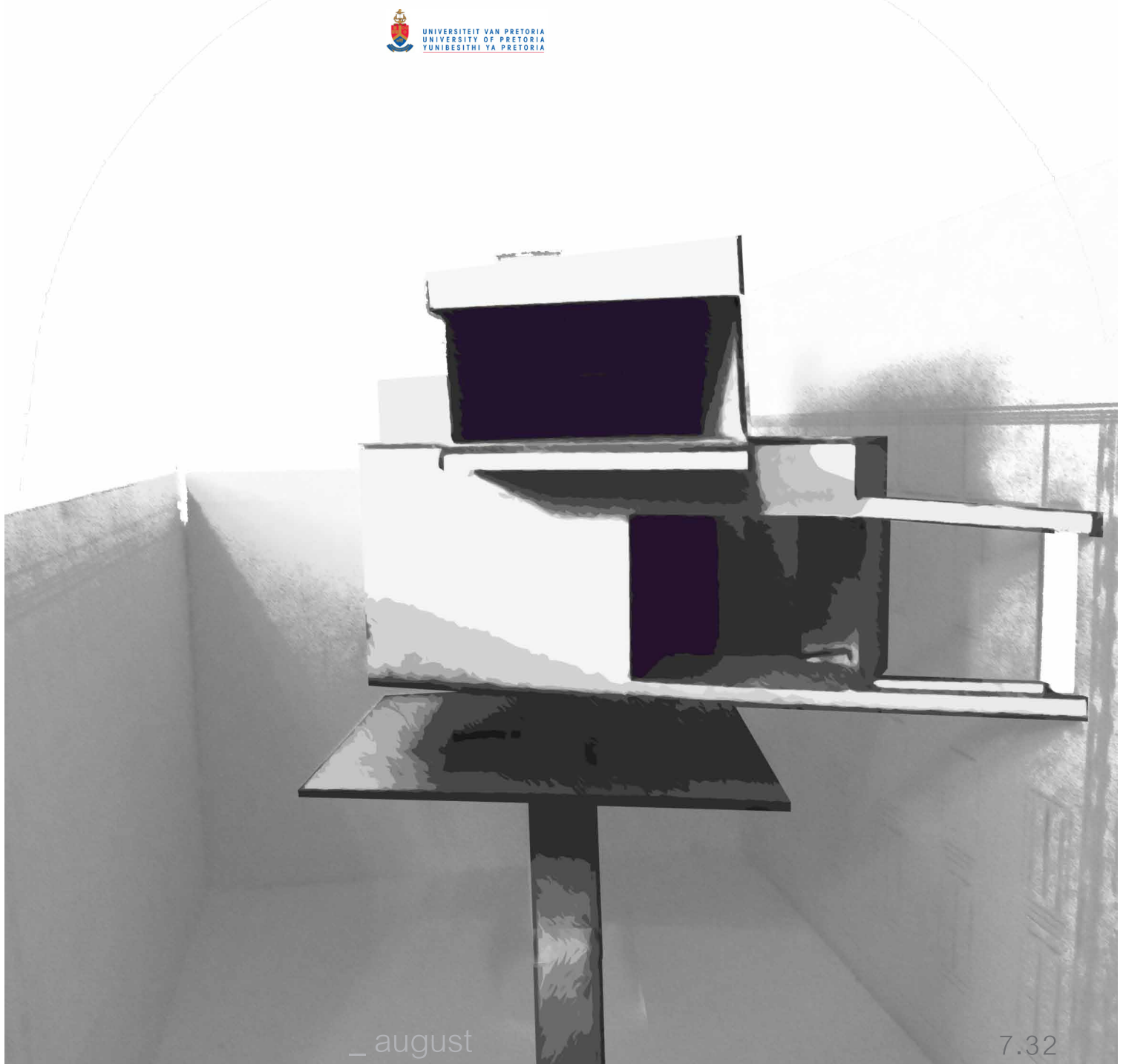
The structure of the intervention is supported by the lift that becomes the core structure. From the core, the rest of the intervention cantilevers, so that the only other support and therefore connection with the building, is the entrance into the volume. To keep damage to the building to a minimum the connection of the new structure happens where the old ramp structure connected to the building.

Entering from the museum building into the volume, the user experiences the volume for the first time. The walkway is therefore kept open on the sides, so that the user can start experiencing the space. The roof of the walkway should be solid roofing material, to provide cover from rain, and to house services that connects the main unit to the split units in the intervention.

The different spaces in the intervention are sense specific to create a base layer, which create guidelines for future exhibitions. The introduction to the exhibition and the 'touch' space is on the entry level. The lift at the core of the structure as well as stairs to either side of the lift, connect the different levels. One level up from Level 0 - Touch is Level 1 - Hear, with the highest level being Level 2 - See. One level down from the entry level is Level -1 - Taste and Smell. The interior of each of these spaces should be developed to make the user aware of the specific sense it focuses on. Figure 7.35 - 7.61 explain the various spaces in a bit more detail.

The structure form the basis of the exhibition and will remain sense specific for a longer period of time. The more temporary exhibition will fill the spaces to make them specific to the content for example insects. The exhibition will change annually and will always react to the basis space and specific experiential qualities embedded within each space.

Figure 7.32: Model of final proposal for intervention



_ august

7.32

1
HEAR

2
SEE

introduction
to exhibition

entrance

0
TOUCH

-1
TASTE AND
SMELL

7.33

GROUND



Figure 7.33: Eastern elevation of intervention

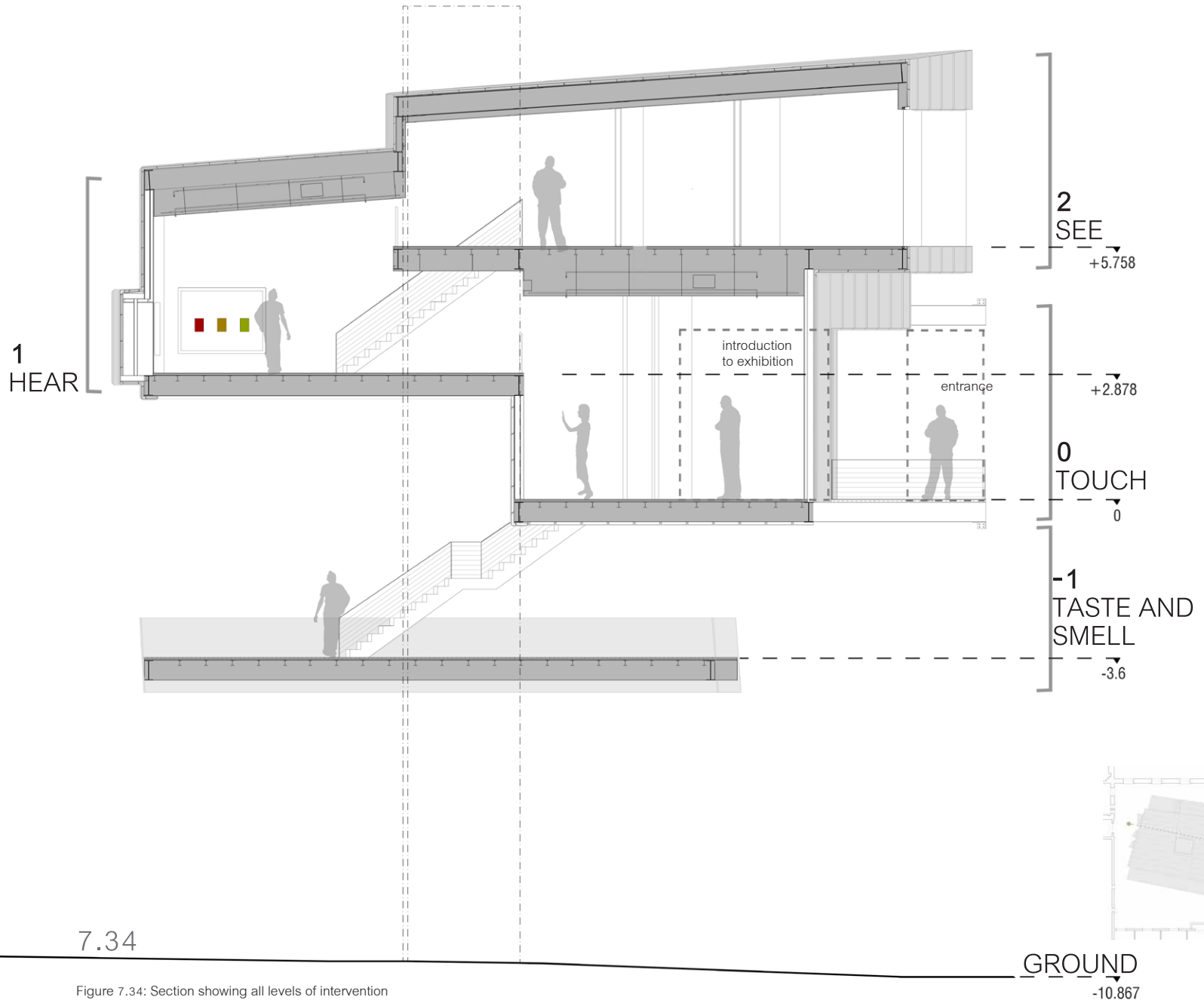
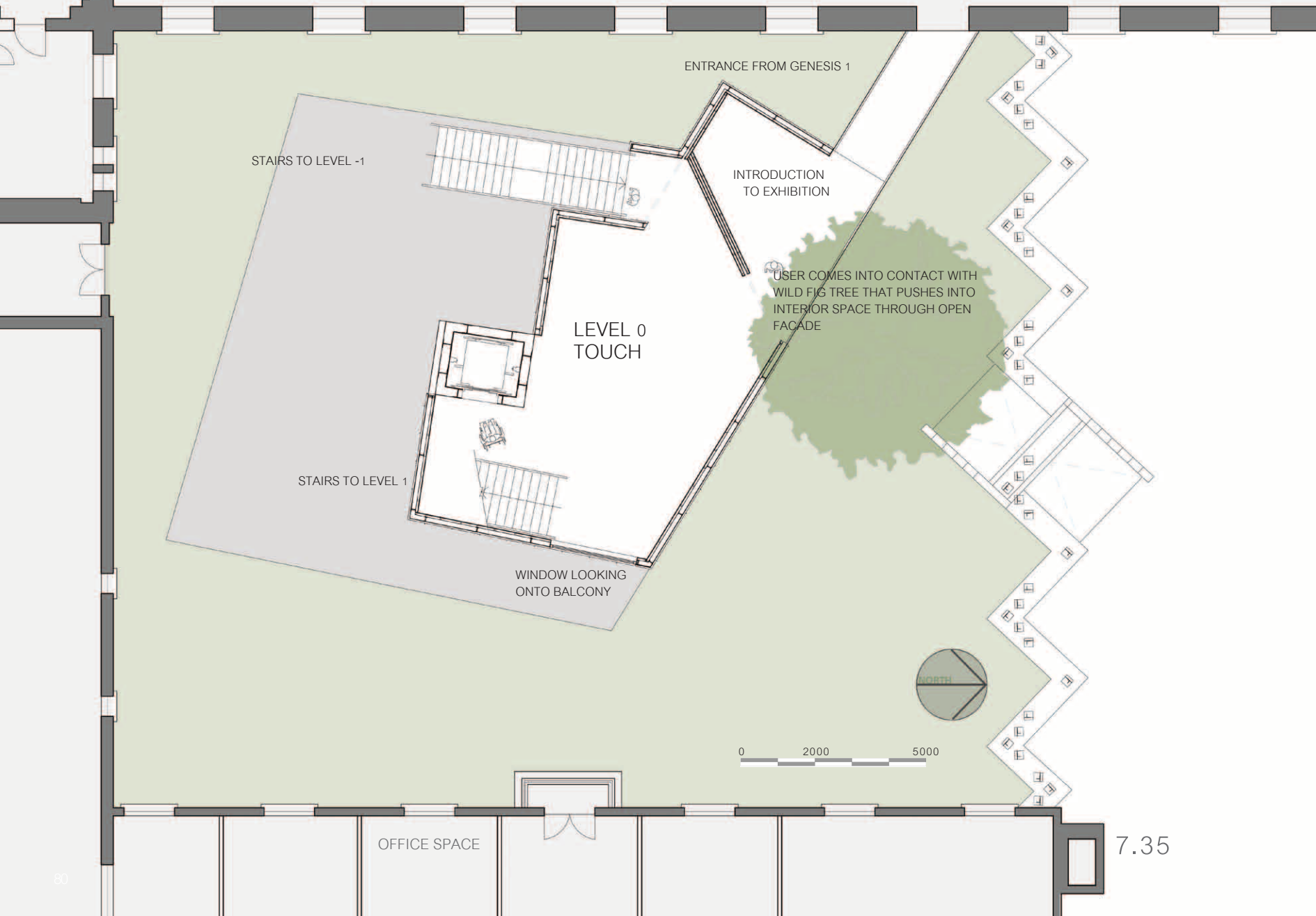
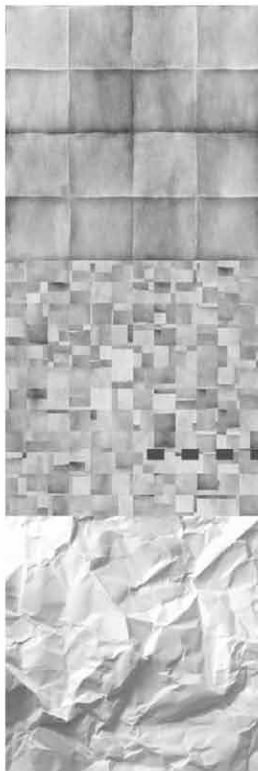


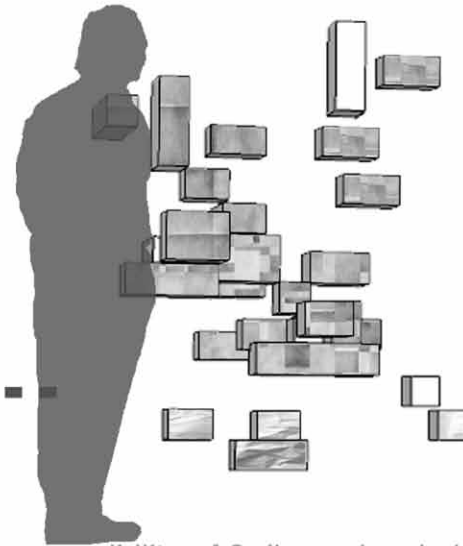
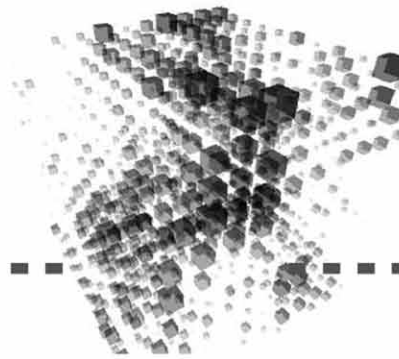
Figure 7.34: Section showing all levels of intervention

GENESIS 1





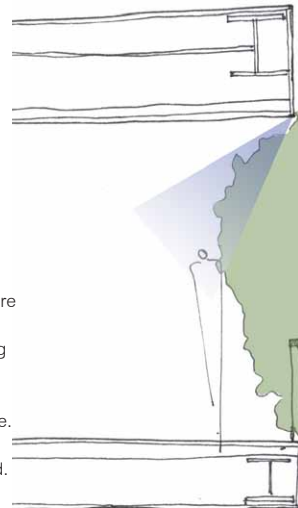
7.36



possibility of 3 dimensional object portraying texture in exhibition

touch and being touched

the tree and mist touching the user makes the user more aware of touch



7.38

Figure 7.35: Plan of Level 0 - Touch

Figure 7.36: Illustration of interpretation of texture for exhibition

Figure 7.37: Illustration of floor finishes creating texture

Figure 7.38: Illustration of the tree touching the user, the user touching the tree. A light water spray will make the user more aware of being touched.



TOUCH

BOXES EXTRUDING FROM FACADE PROVIDING SPECIFIC SPACES FOR SOUND BASED EXHIBITION AND ESTABLISHING VISUAL LINK WITH EXISTING BUILDING

WINDOW AND SOUND BOXES TO ESTABLISH VISUAL AND SOUND CONNECTION BETWEEN EXISTING BUILDING AND INTERVENTION

LEVEL 1
HEAR

SOUND REFLECTIVE SPACE

SPACE TO EXPERIENCE SOUND REFLECTION
ALL FACES TO BE OF SOUND-REFLECTIVE MATERIAL.
ALUMINIUM PLATE FLOOR COVERING



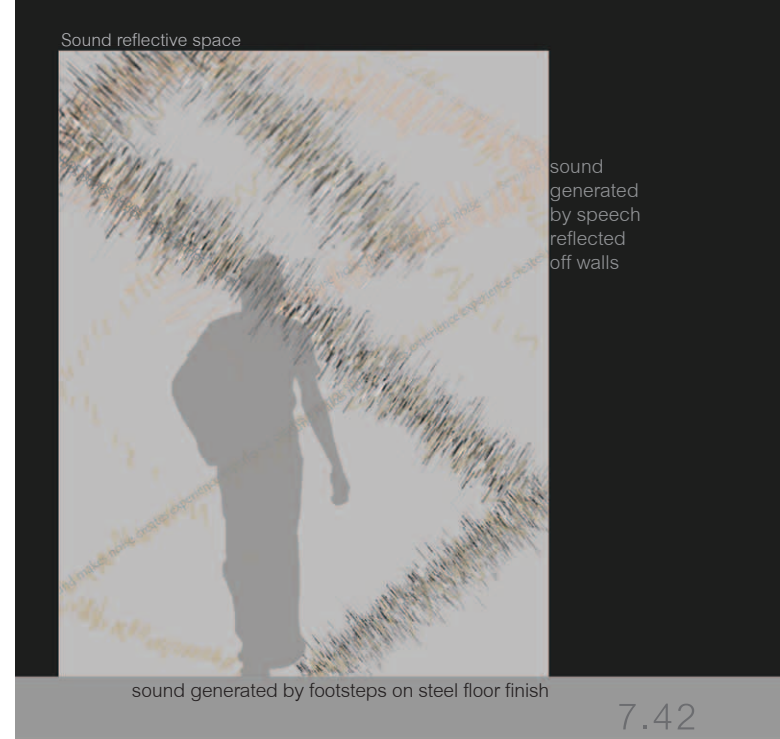
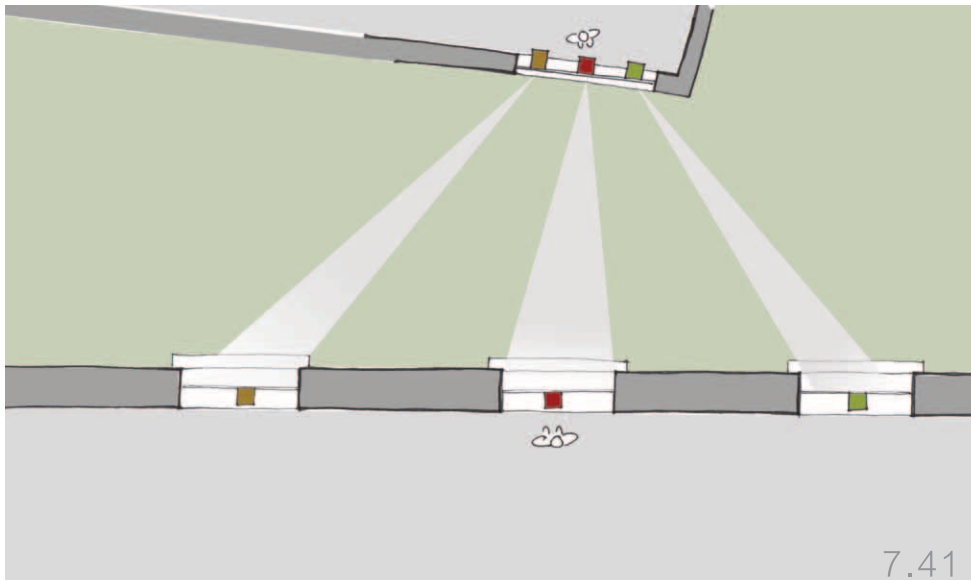
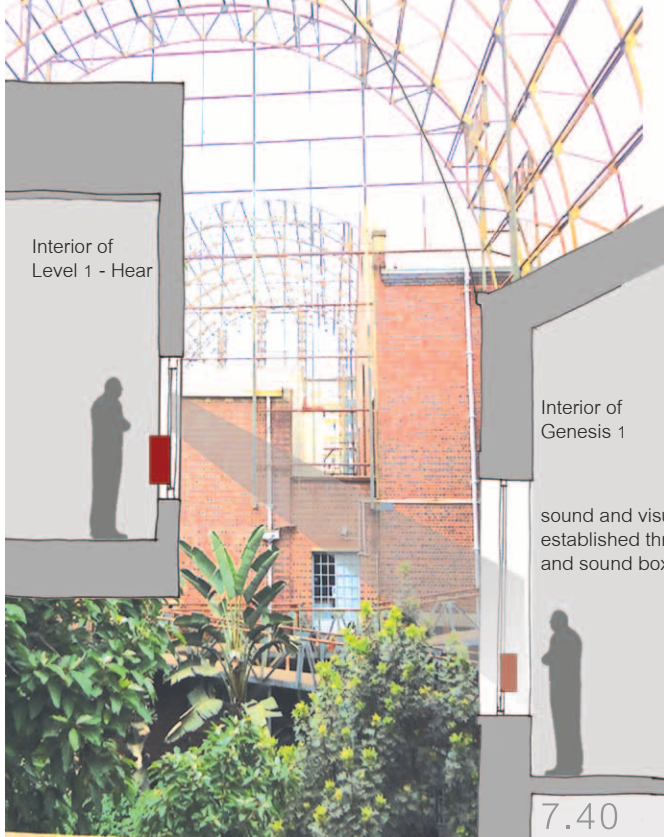


Figure 7.39: Plan of Level 1 - Hear

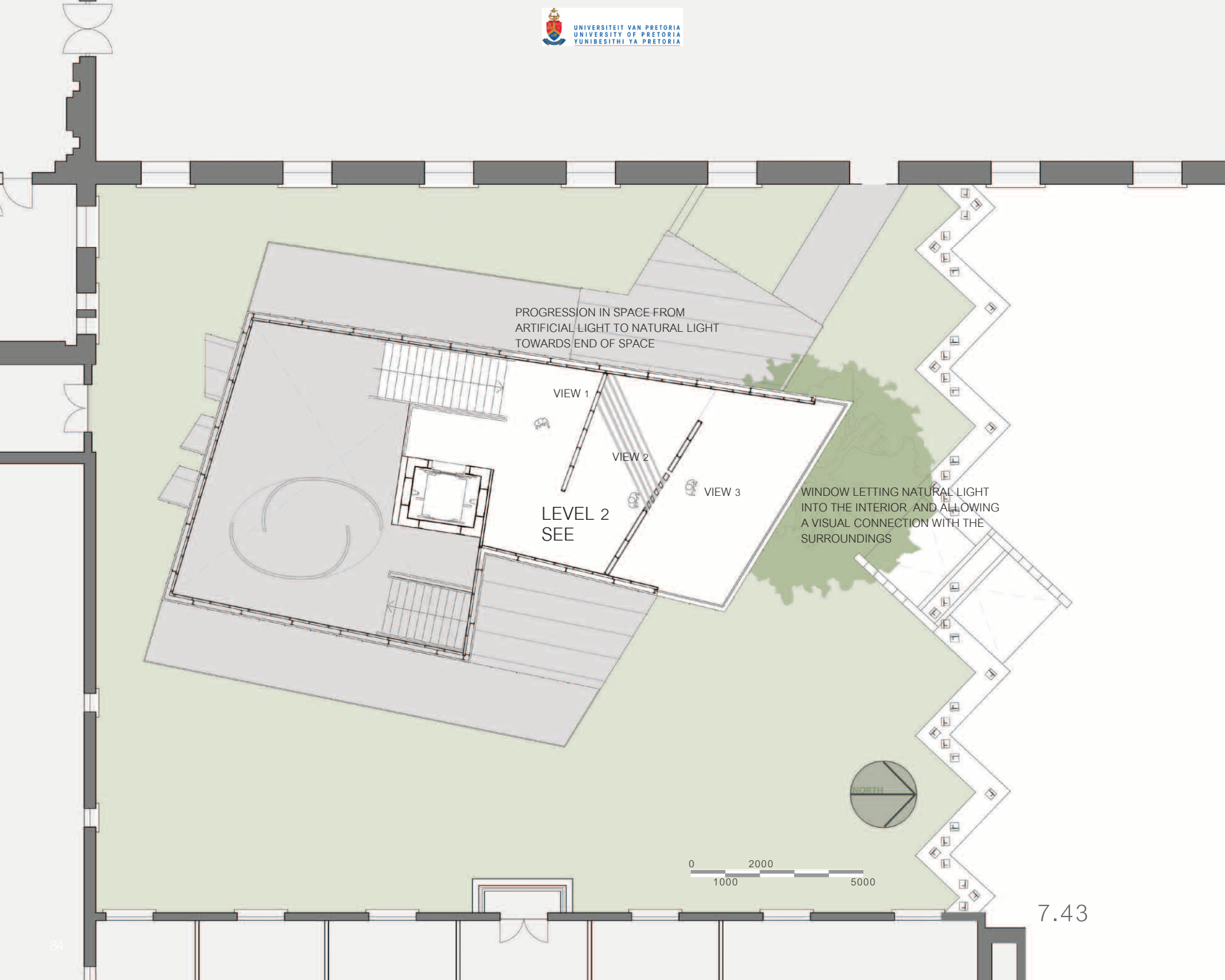
Figure 7.40: Illustration of connection between Level 1 - Hear and Genesis 1 - section

Figure 7.41: Illustration of connection between Level 1 - Hear and Genesis 1 - plan

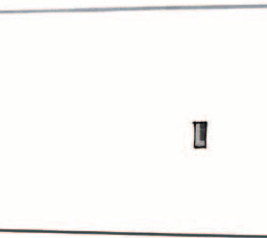
Figure 7.42: Illustration of sound reflective space

HEAR





VIEW 1



VIEW 2



VIEW 3



7.44

As the user progresses through the spaces of Level 2 - See, more of the view is revealed (figure 7.40). In the first space only a small hole in the wall will show the user what is to come (view 1). The wall in the second space has slits from floor to ceiling, which allow the user to see more of the view and let some natural into the space (view 2). In the third space natural light floods the space and the surroundings come into full view (view 3).

VIEW 3

view of building across Visagie Street



Figure 7.43: Plan of level 2 - See

Figure 7.44: Illustration of view being revealed in Level 2 - See

Figure 7.45: View of building across Visagie Street

Leo Bunett Office
Ministry of Design
Singapore, 2009



Figure 7.46 - 47: Perspective painted on ground and facades of building (Dezeen 2009).

Through projecting an image onto different planes and painting the exact forms onto those planes, an image can be created that becomes clear only from a specific view point.

By creating such an image on the building across the street, the image will only make sense from the view point of the user in the See Space. The image should relate to the exhibition and to sight. The specific view and connection with the building will make the user aware of the surroundings.

SEE
S





Parabienta Green Wall
Shimizu Corporation
Toronto, 2009



Figure 7.49-50: Parabienta Green Wall, Toronto (Thegrowspot.com 2010)

The Parabienta system combines panel-type planting units in a green-
ing system that is light weight and low cost. A variety of plants can
be incorporated in the system which, along with the different panel
combinations, allow for flexibility (Thegrowspot.com 2009).

The detailing and plant specification for the vertical garden
does not form part of the project. This will be dealt with by a
specialist in the field. Because of a lack of direct sunlight on
most of the vertical garden, the proposed system incorpo-
rates panels that can be exchanged with panels on a wall
on ground level. This can be done approximately every two
weeks and provides flexibility in terms of the placement of
different plants and the experience it creates. Examples
are given of proposed plants or types of plants that would
stimulate the senses of the user.



_Blueberries



_Goji berries



_Strawberry blossom



_Strawberry plant



_Garlic chives



_Apple mint herb

senses fuse into each other more
clearly on taste and smell level

to be able to experience fully the
senses are dependent on each other

see to touch
touch to taste
smell to taste

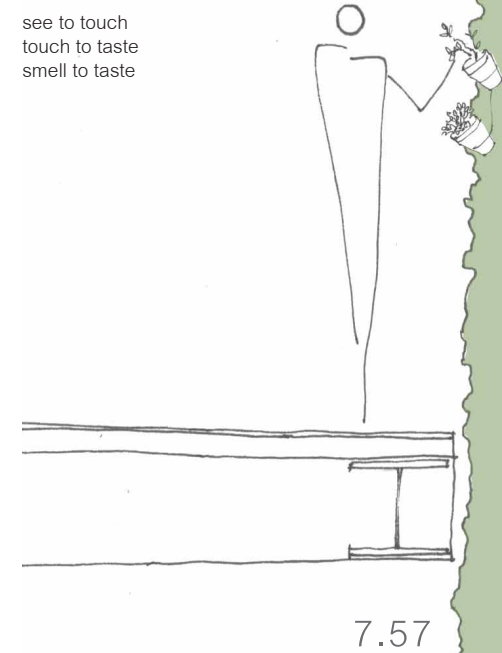


Figure 7.48: Plan of level -1 - Taste and Smell

Figure 7.51: Blueberries (Blueberries for beauty and taste 2009)

Figure 7.52: Goji berries (Tibet Advice 2007)

Figure 7.53: Strawberry blossom (Strawberry Plants.org 2010)

Figure 7.54: Strawberry plant (California Pacific Plant Exports 2010)

Figure 7.55: Garlic chives (Aiden brooks: Trainee chef [sa])

Figure 7.56: Apple mint herb (Free images [sa])

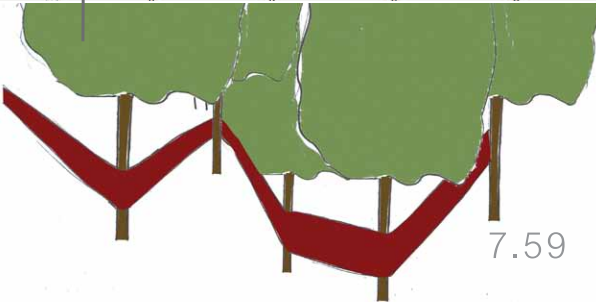
Figure 7.57: Illustration of experience created by vertical garden





The exhibition can continue on ground level, where plants and ground coverings can assist in the experience of the exhibition as well as the volume.

On ground level, walls will provide surface for the panels of the vertical wall to be placed from time to time for sun exposure. This can form an opportunity for users to learn about hydroponics. Although this will probably not fall directly in the subject of the exhibition, it can provide interesting, optional information. Users can use the ground level as pick-nick spot as well, and to relax after the museum experience. The ground level should stimulate sight, taste, smell, touch and hearing.



Some plants can create a high, narrow path from where the volume can be experienced only through the opening above (figure 7.44). This will create a completely different view and experience than an area with no high objects that allows for a 180 degree view of the volume (figure 7.44).

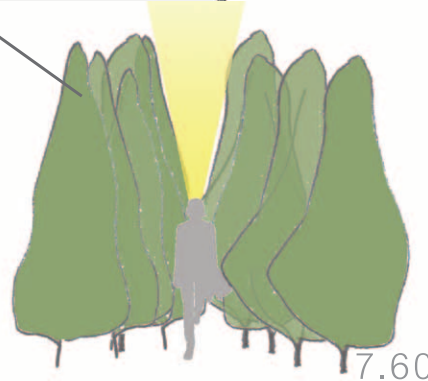


Figure 7.58: Ground level plan

Figure 7.59: Illustration of plants forming basis for exhibition

Figure 7.60: Illustration of trees forming specific view point of volume

Figure 7.61: Illustration of experience created by long grass



GROUND