CHAPTER 8_DETAIL DESIGN

8.1 Masterplan

The masterplan consists of the following main zones:

- Place i - proposes maximising the slope and creating subspaces on, and next to the slope.
- Place ii - enhances the existing waterway as part of a greater ecological system and as a feature. In order to enhance the existing dumping mounds this zone uses the contaminated soil to shape the earth and create mounds that are characteristic of the dumping mounds. The amount of contaminated soil needed in this area is 5116.7 m^3.
- Place iii - enhances the sculptural elements in the area. It proposes a raised walkway that provides views onto the existing used railway lines. Lighting is proposed to further enhance the concrete boxes. Place i, ii and iii fall under the definition of enigmatic landscapes. They are classified as a *third nature* (see Chapter 2, page 14 and 15). They are designed to enhance, and add adventure and exploration for man.
- Place iv - is proposed as urban farming that will be run by the POP-UP organisation and used by the community of Salvokop. This zone is laid out on a linear grid that relies on stormwater being caught and moved from the retention pond in place ii, through swales to the irrigation dam in place iv. From the irrigation dam the stormwater moves through pipes into a sluice system that relies on gravity to flood irrigate the farming. Any excess water thereafter will flow into another dam that will be used for aqua culture. Reeds will be grown in this dam, in order to provide POP-UP and its art workshops with reeds for arts and crafts. This zone is classified as *second nature* (see Chapter 2, page 14 and 15), due to its productive and agricultural value. In addition, place iii and iv together are designed as a linear urban balcony that look onto the railway lines.
- A wilderness zone - this zone will be where nature dominates over man and therefore becomes *third nature* (see Chapter 2, page 14 and 15). This zone will use 2560.62 m^3 of contaminated soil for the shaping of the earth.
- A development zone - where a proposed development will be implemented after the wilderness zone is complete. This emphasises landscape urbanism principles where the landscape attracts, dictates and directs development.

This masterplan shows how landscapes should dictate the orientation and location of buildings.

The stormwater forms a large part of the layout for this masterplan. This stormwater system (see illustration 156) focusses on catching and using all water that falls on and around the site. Furthermore, this masterplan is a proposed vision for the future that should not be looked at as a once-off completed project, but rather as an on-going long term solution (see pages 192-195).

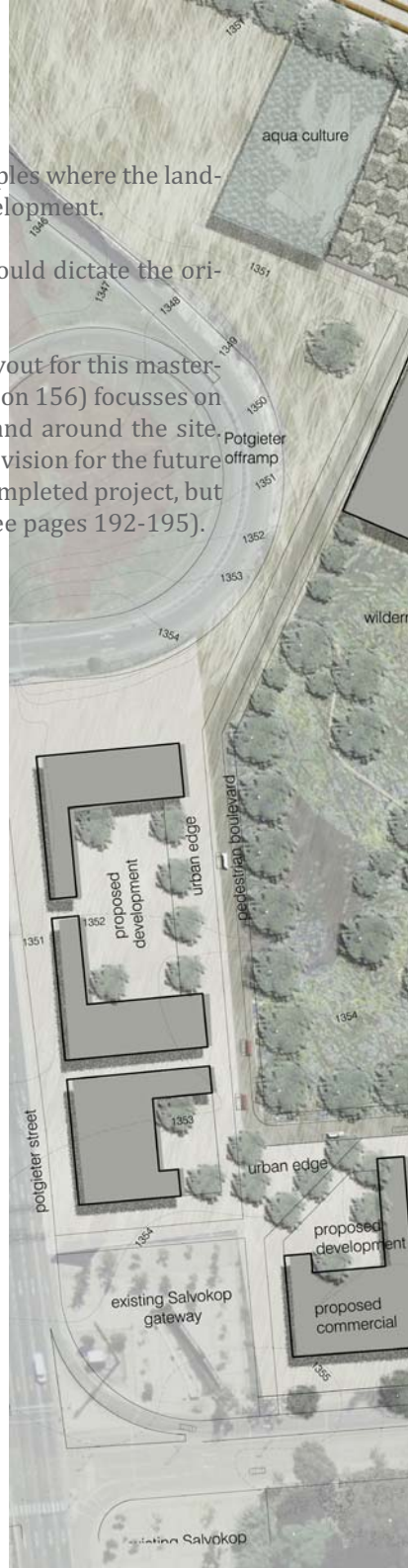


Illustration 149: Masterplan. Not to scale


UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
urban balcony
existing railway lines
orchard
POP-UP
tree avenue
nursery
urban farming
furrow
sluice
earth walls
retention irrigation dam
planted swales
rehabilitation point
proposed parking
artists studio
raised walkway
existing sculptural concrete boxes
existing road
deck
berm
forest
retention pond
water edge
mound
detention ponds
forest room
craft shop
pedestrian boulevard
proposed road
urban edge
seating walls
bridge
proposed development
proposed commercial
activated street edge
storm water corridor
sculptural mounds
pergola
viewing room
book store
restaurant
cafe
forested slope
existing bridge
skietpoort avenue
koch street
Salvokop Square
existing heritage buildings

8.2 Chosen site for further investigation

The author has chosen to focus on places i and ii for the detail design chapter (see illustration 150). The two zones were selected due to its close proximity to the proposed Salvokop square. The Salvokop square is an already existing point of energy, although currently informal, many people pass through it each day. A sketch plan; contours and heights plan; lighting and paving plan; sections; details and perseptives will be drawn up for these two zones.

Illustration 150: Chosen sites for detail design - i and ii

8.3 Sketch plan development

With the two places selected, a sketch plan can now begin to be developed in detail. Illustration 151 to 153 show the sketch plan in its developing and progressing stages.

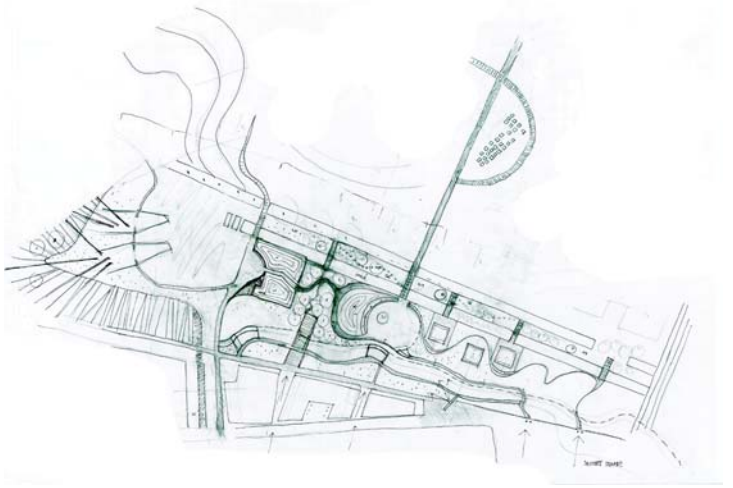


Illustration 151: Sketch plan version 1

Illustration 152: Sketch plan version 2

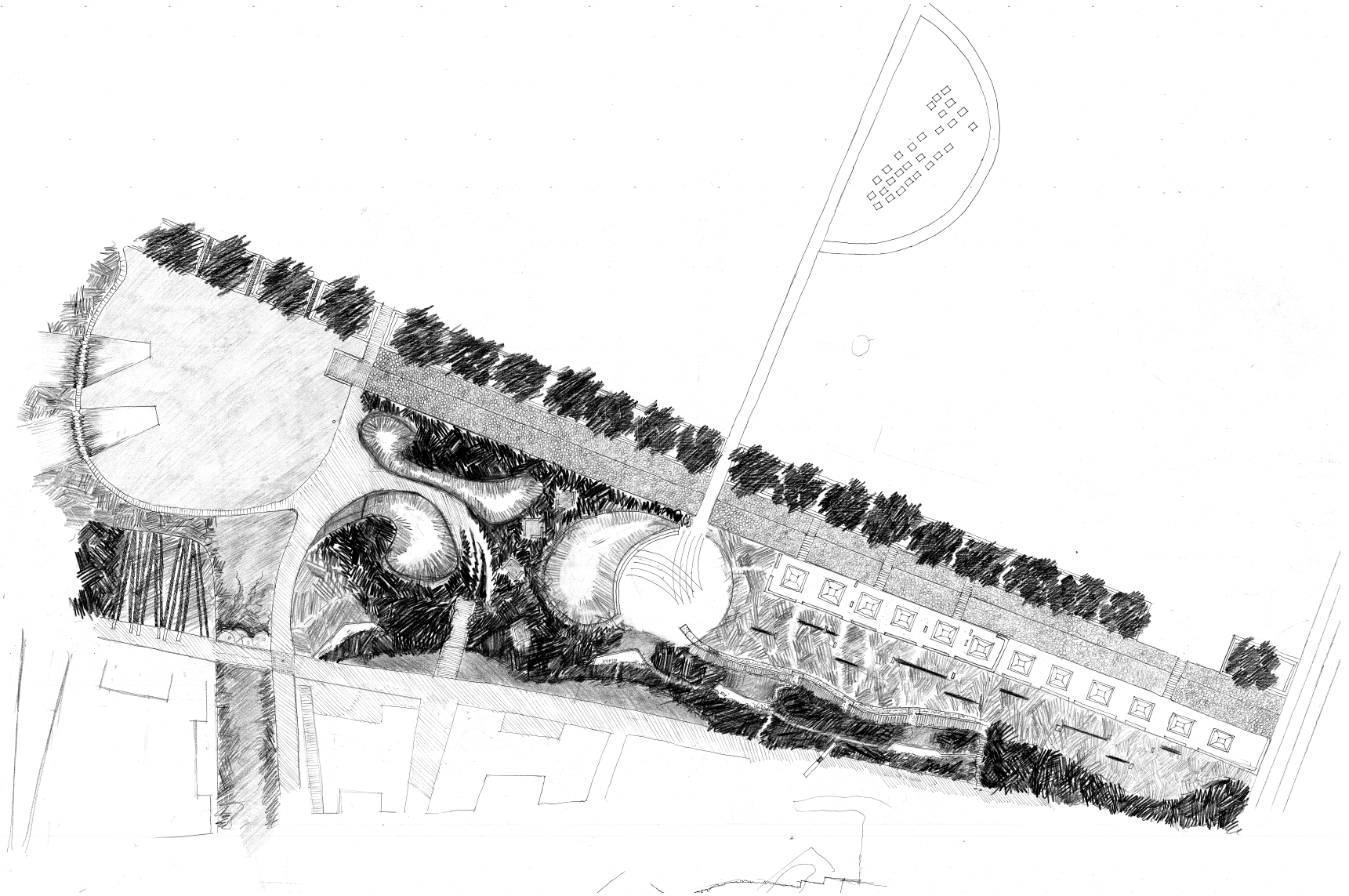


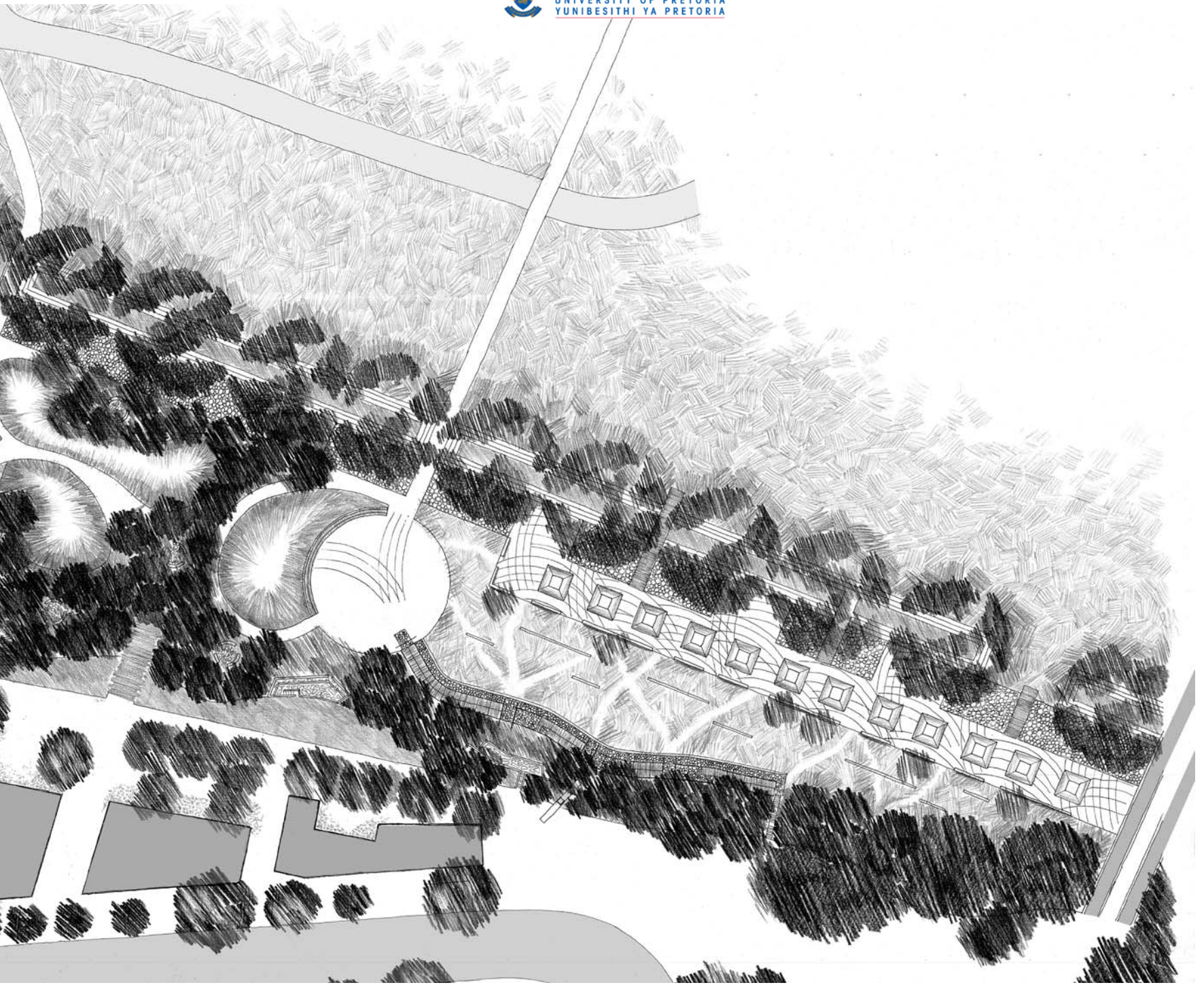
Illustration 153: Sketch plan version 3

8.4 Sketch plan

Places i and ii were designed to focus on the concept of enigmatic landscapes where adventure and exploration is encouraged, and where the unpredictable and uncontrolled is reinforced. The sketchplan aims to enhance the existing potentials of the site. A long pergola tunnel runs along the edge of the forested slope. This enhances the slope, taking one away from the controlled city and preparing one for the enigmatic landscape ahead. At random intervals the pergola tunnel opens to views of mounds that can become bases for sculptures. One can escape the tunnel and move across the veld grass to the sculptural mounds freely as there are no strict pathways that one must follow. Pathways have not been assigned to certain areas, due to the unpredictable chaotic pathway system that exists currently on the site. The omission of pathways allows people to wonder at liberty through the landscape, to landmarks and moments in the design. Hidden patterns in the veld grass are exposed after the seasonal veld grass burning takes place. The narrow pergola tunnel ends with an expansive view of a circular paved area hugged by a large mound. One moves from an enclosed and narrow space to an open, large and vast space. Illustration 176 on page 158 and 159 is a series of vignettes that demonstrate the experience of the pergola tunnel. The paving in the vast area as well as where the harsh sculptural mounds are, will be an exposed concrete aggregate. While the concrete is still wet, a truck will drive through and leave tyre imprints in the concrete, illustrating the process of transporting and moving contaminated soil to specific locations. Existing dumping mounds in the area are represented by mounds created from contaminated soil. Mounds are also used to hide views and open up views which create moments in the landscape. The bridges next to the sculptural mounds become playful but functional elements in the landscape. The bridges are placed over pockets of rocky swales type detention ponds surrounded by veld grass. The swales send stormwater through pipes to the irrigation dam north of the site. The forested areas create dense interesting places in contrast to the open vast spaces in the design. The forests also enhances the overgrown character of the wasteland

Illustration 154: Rendered sketch plan. Not to scale

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



where nature dominates. On route, through the pathless forest and large mounds, a water body comes suddenly into view with a dead eucalyptus tree lying in the foreground. The existing waterway is transformed into a retention pond which in turn becomes a feature. Different interesting public and private spaces have been designed along the water's edge. The public open area next to the retention pond reuses concrete covers found on the site in a paving detail. The openings of the covers will be planted, contributing to the overgrown character of the wasteland. A tree avenue runs along the entire site strenthening the linearity of the site and forming a main axis. This tree avenue will use the tallest indigenous tree species which will be visible from the city. This main axis will, in future, link two developments on opposite sides of the wasteland.

Existing waste bins will be retained and placed at public areas on the site. Unchanged and untreated, they become sculptures and physical reminders of the past. The southern part of the design sits on an urban edge next to proposed development. The building footprints have been orientated and located according to the landscape. On this edge the landscape bleeds into the buildings. Here the design provides seating, lawn and access to hidden outdoor rooms that have been cut into the steep slope. These spaces provide views onto the enigmatic landscape. A viewing deck is also designed on this urban edge. The deck allows one to move from an urban edge into a dense forest canopy.

In terms of safety, the design uses passive surveillance. With a variety of heights, views over the site are not obstructed. Furthermore, the site is adjacent to an existing energetic square, and the proposed development on the urban edge will increase users and surveillance over the site. Development around the intervention will include restaurants and other night-time activities. Together with lighting, the enigmatic landscape will become an intriguing active landscape at night.

The sketchplan focusses on creating different experiences and moments in the landscape.

The following four elements will be designed in detail:

- an outdoor room on the slope;
- bridge2 above the detention pond;
- the tunnel along the slope's edge; and
- the deck.

The detail designing and technicality of these elements will be further investigated to show how the characteristics and concepts of an enigmatic landscape can be reflected in the design to a detailed level.

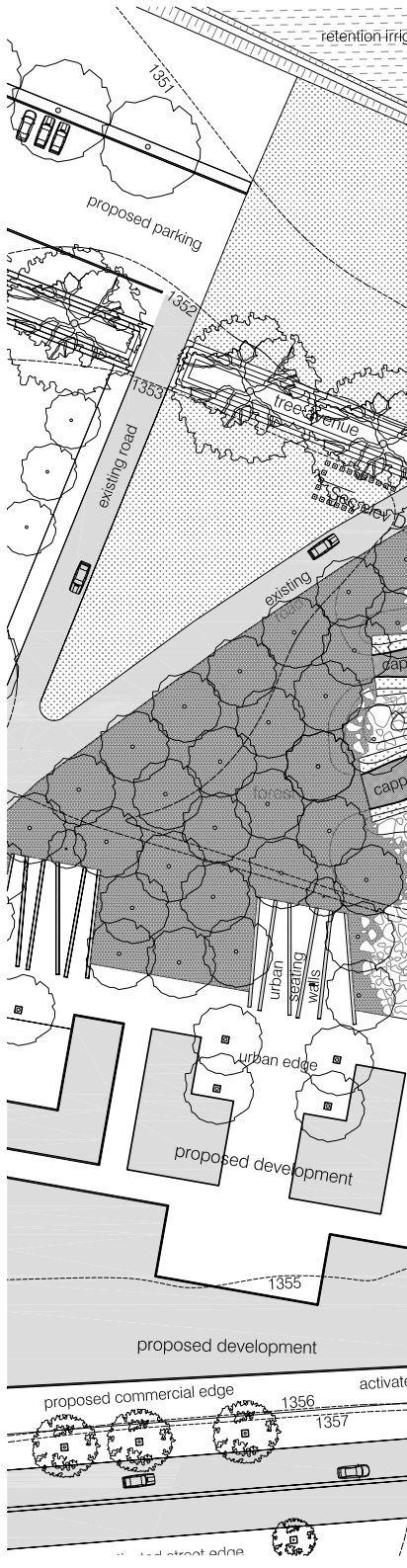
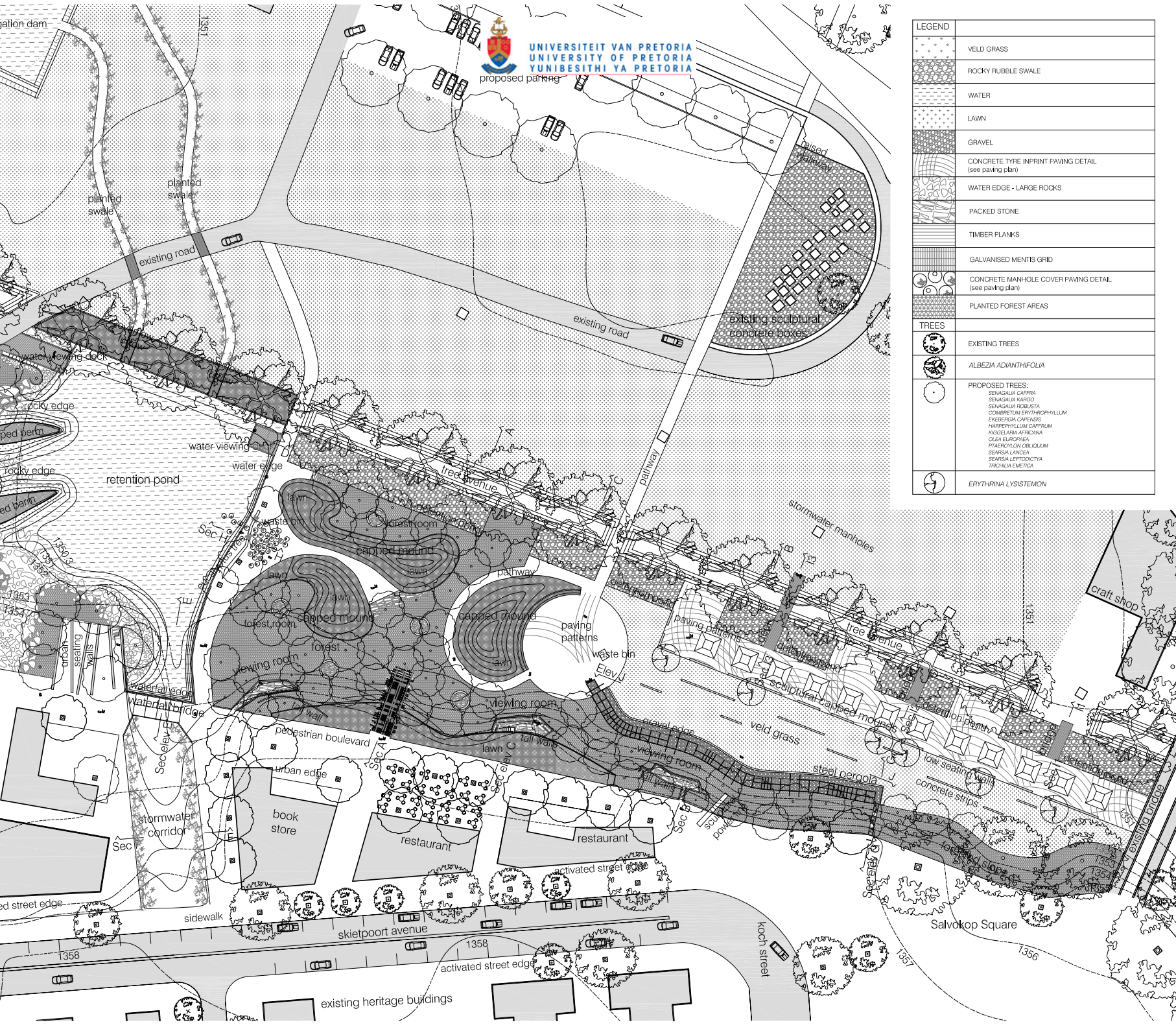


Illustration 155: Sketch plan. Not to scale



LEGEND	
	VELD GRASS
	ROCKY RUBBLE SWALE
	WATER
	LAWN
	GRAVEL
	CONCRETE TYRE INPRINT PAVING DETAIL (see paving plan)
	WATER EDGE - LARGE ROCKS
	PACKED STONE
	TIMBER PLANKS
	GALVANISED MENTIS GRID
	CONCRETE MANHOLE COVER PAVING DETAIL (see paving plan)
	PLANTED FOREST AREAS
TREES	
	EXISTING TREES
	ALBEZIA ADIANTHIFOLIA
	PROPOSED TREES: *SENAGALIA CAFFRA* *SENAGALIA KAROO* *SENAGALIA ROBUSTA* *COMBRETUM ERYTHROPHYLLUM* *EKEBERGIA CAPENSIS* *HARPEPHYLLUM CAFFRUM* *KIGGELARIA AFRICANA* *OLEA EUROPAEA* *PTAEROYLON OBLIQUUM* *SEARSIA LANCEA* *SEARSIA LEPTODICTYA* *TRICHILIA EMETICA*
	ERYTHRINA LYSISTEMON

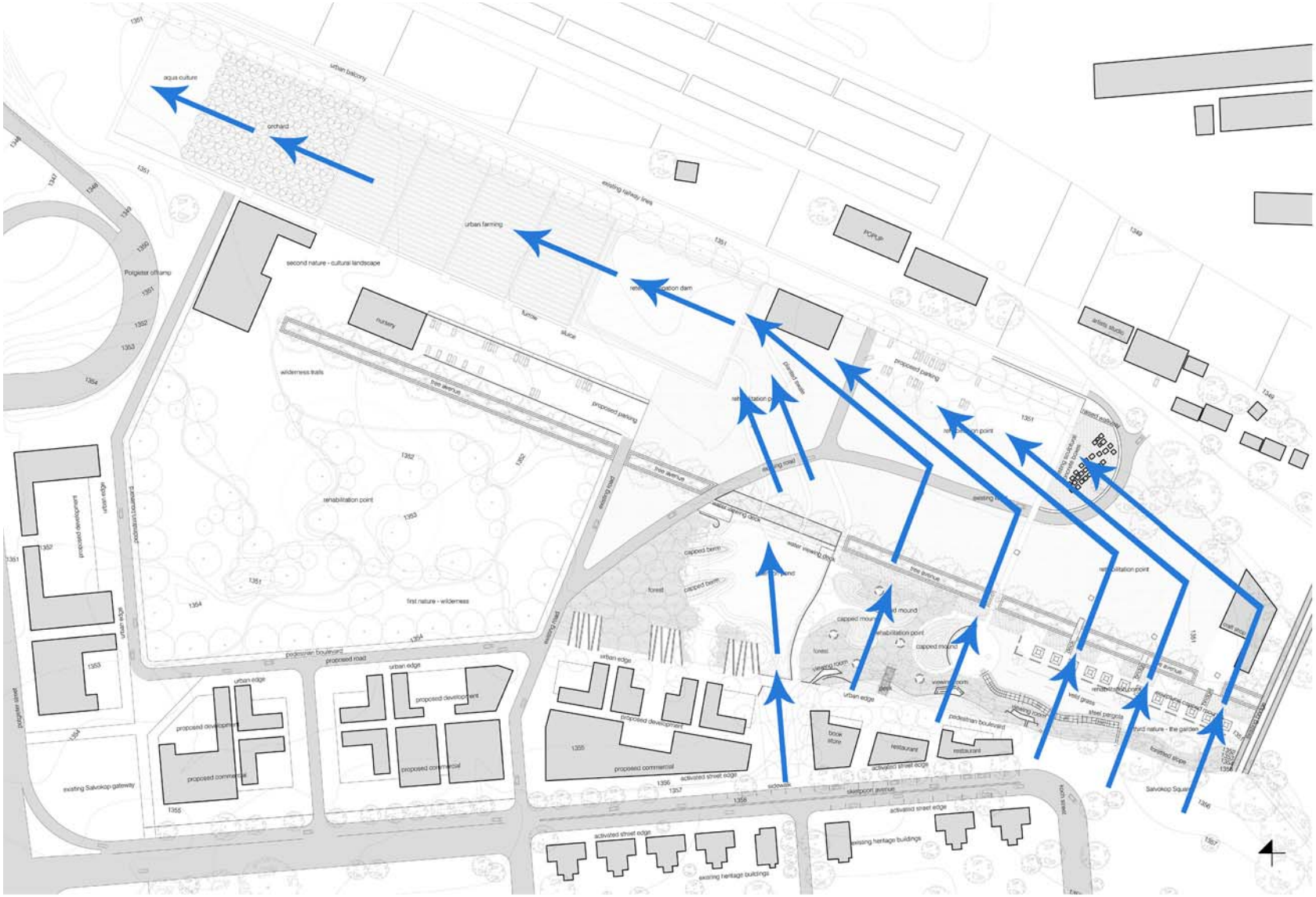


Illustration 156: Stormwater diagram

8.5 Three natures

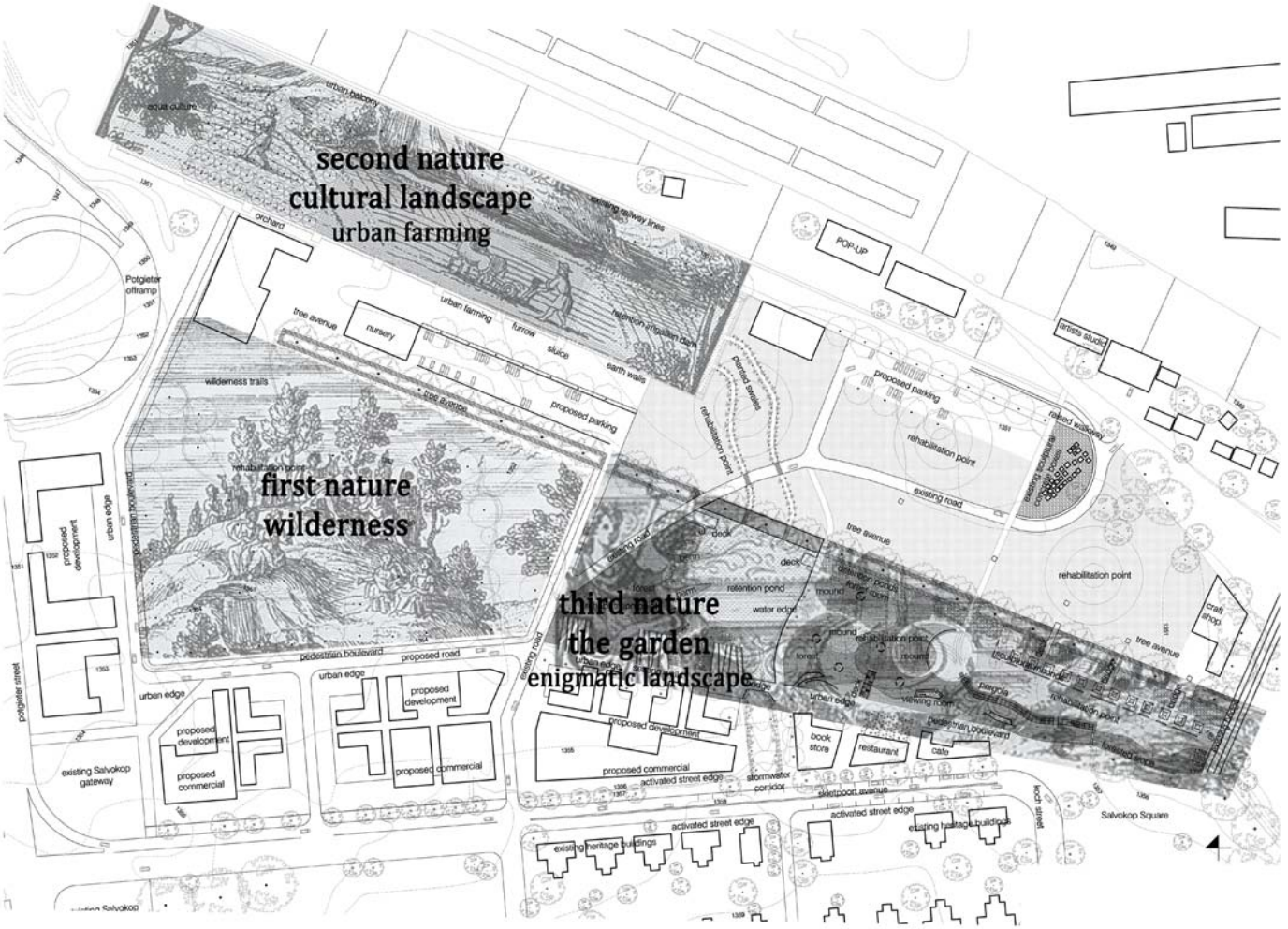


Illustration 157: Three natures in Salvokop

8.6 Planting strategy

According to Howette (1987:109) plants grow differently in a designed landscape than in nature. In the English countryside, Nan Fairbrother (as cited by Howette, 1987: 109-110) pointed out that:

> "In natural growth the layers of the vegetation intermingle, with tall herbs growing through low shrubs and shrubs merging with trees, with no definition and with no gaps between them [.] Simply therefore to separate vegetation into grass, shrubs and trees immediately creates an unnatural effect [.] It is also unnatural if we omit a layer, as with trees in grass [;] or if we change the order of the layers, as by growing trees and shrubs with grass between them [.] Whatever the actual plants these common modifications of natural growth produce a garden effect".

A more natural style of planting that takes natural competition into account and reflects the way plants grow in nature is a healthier approach. Due to this philosophy, a plant list is proposed for the designed zones. However, a planting plan for each zone will not be done due to the fact that the selected planting strategy takes its inspiration from natural processes, patterns and energies, and by proposing the exact location of exact species in fact goes against this approach. Furthermore, due to the long term rehabilitation of the project, a single planting palette cannot be defined for implementation across the wasteland. The planting list should serve as guidelines for planting.

Tree species used in the wilderness
- *Dombeya rotundifolia*
- *Faurea saligna*
- *Pappea capensis*

Specie used for the tree avenue
- *Albezia adianthifolia*

Forested slope
- *Senagalia karoo*
- *Searsia leptodictya*

Forested areas
- *Senagalia caffra*
- *Senagalia karoo*
- *Senagalia robusta*
- *Combretum erythrophyllum*
- *Ekebergia capensis*
- *Erythrina lysistemon*
- *Harpephyllum caffrum*
- *Kiggelaria africana*
- *Olea europaea*
- *Ptaeroxylon obliquum*
- *Searsia lancea*
- *Searsia leptodictya*
- *Trichilia emetica*

Lawn areas
- *Cynodon dactylon*

Water edges
- *Cyperus prolifer*
- *Juncus effusus*
- *Nymphaea caerulea*
- *Nymphaea capensis*
- *Paspalum vaginatum*
- *Typha capensis*

Shrubs and groundcovers
- *Acalypha angustata*
- *Aloe greatheadii var. davyana*
- *Anacampseros subnuda*
- *Asparagus laricinus*
- *Asparagus setaceus*
- *Asparagus virgatus*
- *Athrixia elata*
- *Berkheya radula*
- *Bonatea speciosa*
- *Gomphocarpus physocarpus*
- *Ipomoea cairica*
- *Side dregei*

Climax veld grasses
- *Cymbopogon excavates*
- *Cymbopogon plurinoides*
- *Hypparrhenia tamba*
- *Hypparrhenia hirta*
- *Melinis nerviglumis*
- *Melinis repens*

8.7 Material palette

In order to create a landscape that brings out the existing character, materials should foremost, where possible, be reused and recycled from the site. If not possible, materials specified should be easliy available, sourced from local manufacturers and have a low embodied energy. Materials selected must have a rough, rustic textured quality that compliments the design and enhances the wastelands' rough and raw characteristics.


158.1


158.2


158.3


158.4


158.5


158.6

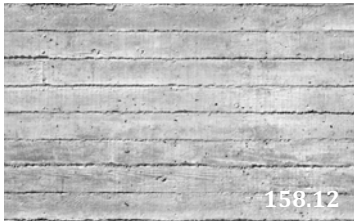

158.7

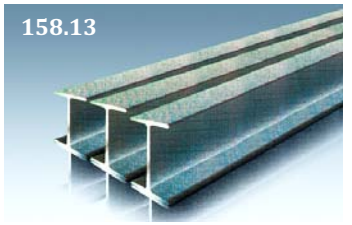

158.8


158.9

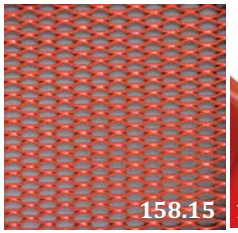

158.10


158.11


158.12


158.13


158.14


158.15


158.16

158.1 Existing concrete raft foundations
158.2 Existing concrete manhole covers
158.3 Existing building rubble and rocks
158.4 Existing scrap metal
158.5 Existing rusted waste bins
158.6 Existing unused railway lines
158.7 Existing railway gravel and steel packaging cut-outs
158.8 Existing steelworks
158.9 Existing rocks and gravel
158.10 Existing concrete components
158.11 Existing concrete components
158.12 Exposed concrete aggregate with brush finish
158.13 Steel I beams
158.14 Timber sleepers
158.15 Red aluminium grating
158.16 Stainless steel red tubing

8.8 Contours and heights plan

This plan illustrates the existing contours and manipulated contours of the proposed design. Heights assist in understanding the topography of the design. The variety of heights in the design allows for views over the landscape and city, and also assists in creating moments, thresholds and surprises in the landscape.

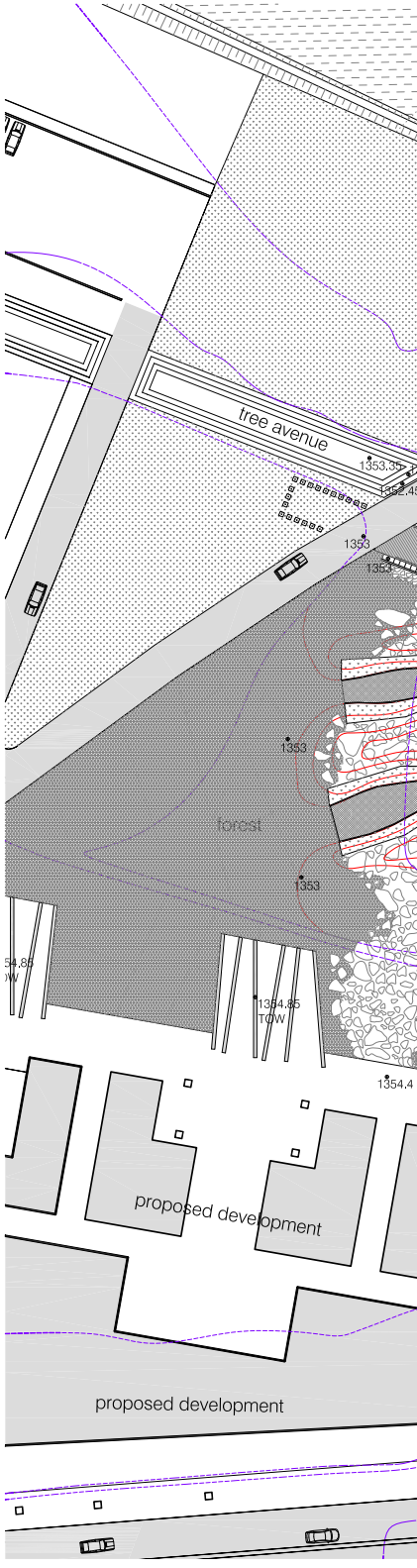
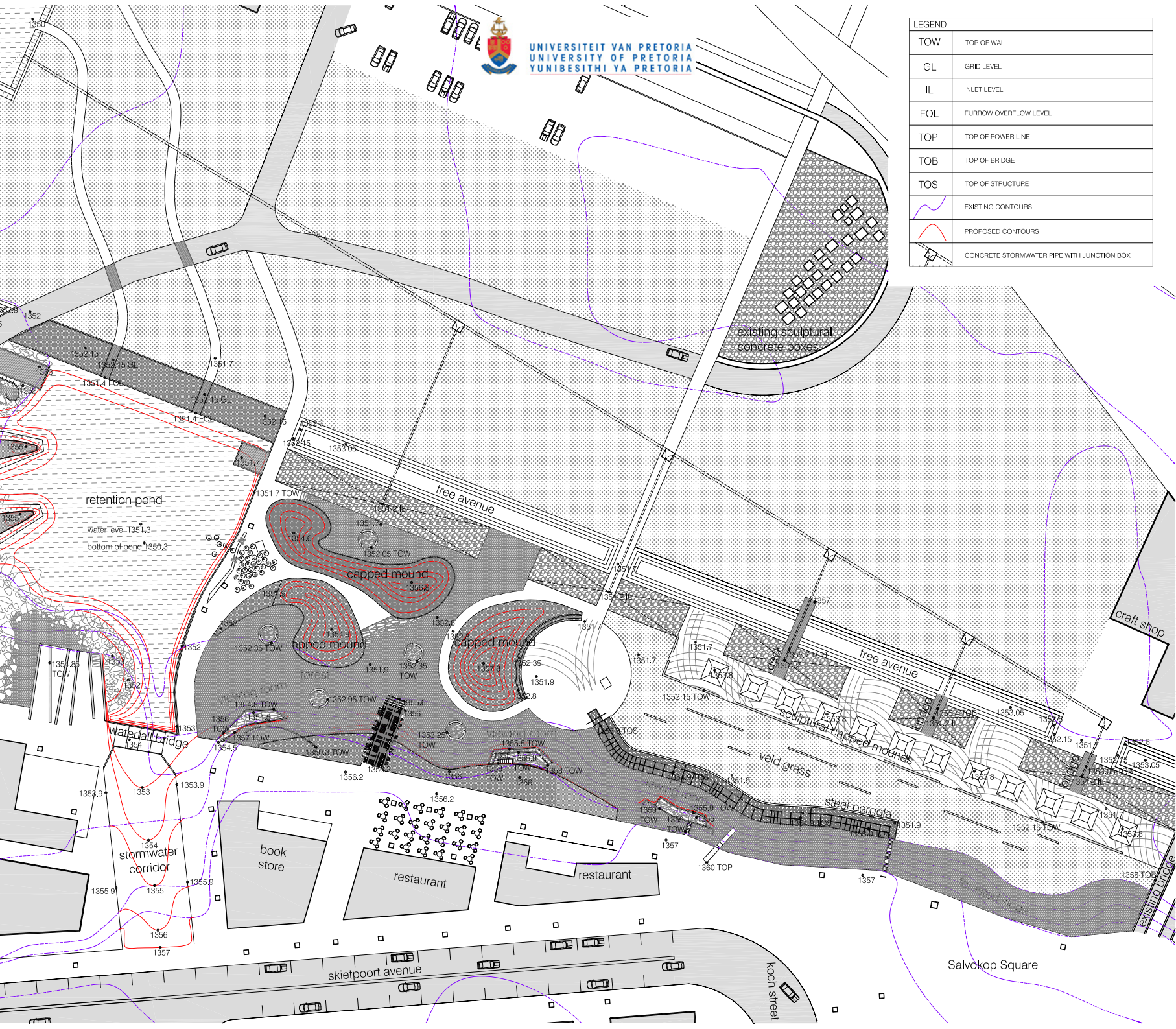


Illustration 159: Contours and heights plan. Not to scale


UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
LEGEND
TOW TOP OF WALL
GL GRID LEVEL
IL INLET LEVEL
FOL FURROW OVERFLOW LEVEL
TOP TOP OF POWER LINE
TOB TOP OF BRIDGE
TOS TOP OF STRUCTURE
EXISTING CONTOURS
PROPOSED CONTOURS
CONCRETE STORMWATER PIPE WITH JUNCTION BOX
existing sculptural concrete boxes
retention pond
water level 1351.3
bottom of pond 1350.3
tree avenue
capped mound
capped mound
capped mound
forest
viewing room
viewing room
viewing room
waterfall bridge
stormwater corridor
book store
restaurant
restaurant
skietpoort avenue
Sculptural capped mounds
veld grass
steel pergola
bridge
bridge
craft shop
existing bridge
Salvokop Square
koch street

8.9 Lighting and paving plan

Lighting is used to enhance important features of the design, such as the steel pergola and the tree avenue. This allows the landscape to be safely used at night and to accentuate different parts of the design at different times of the day.

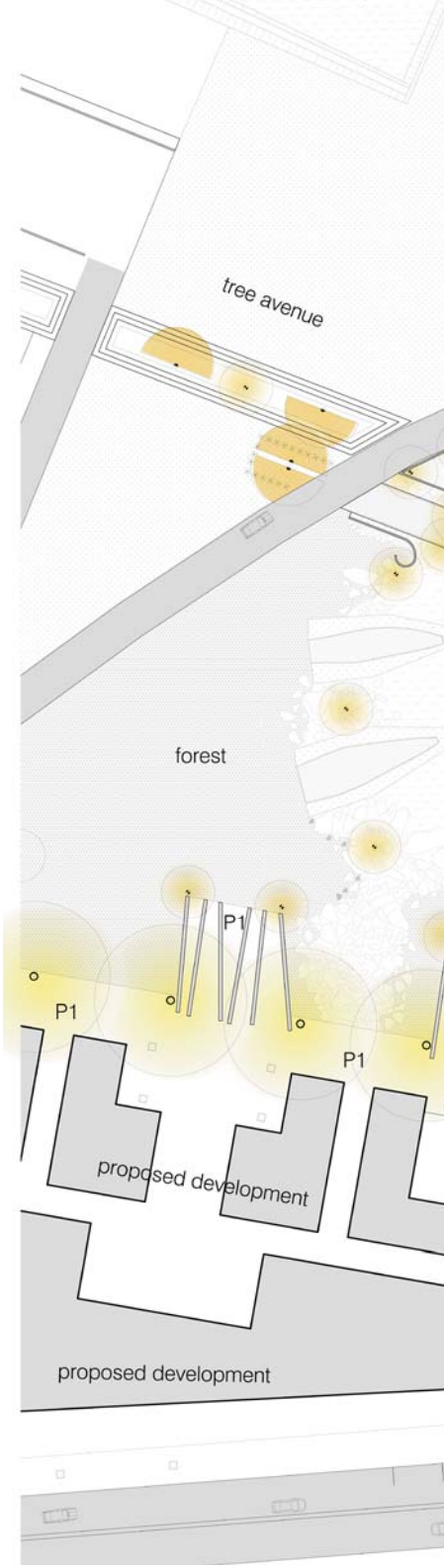
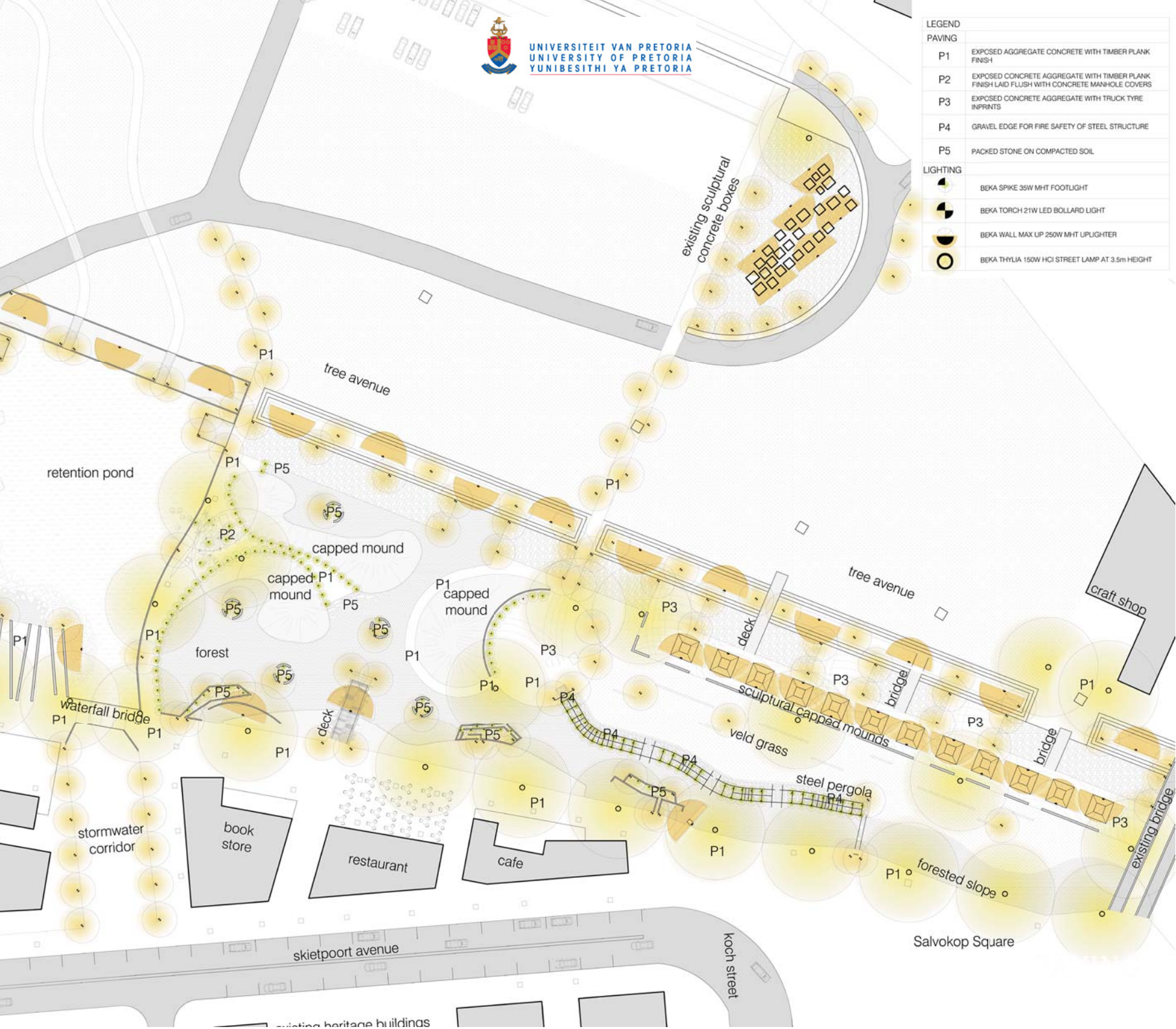


Illustration 160: Lighting and paving plan. Not to scale


UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
LEGEND
PAVING
P1 EXPOSED AGGREGATE CONCRETE WITH TIMBER PLANK FINISH
P2 EXPOSED CONCRETE AGGREGATE WITH TIMBER PLANK FINISH LAID FLUSH WITH CONCRETE MANHOLE COVERS
P3 EXPOSED CONCRETE AGGREGATE WITH TRUCK TYRE INPRINTS
P4 GRAVEL EDGE FOR FIRE SAFETY OF STEEL STRUCTURE
P5 PACKED STONE ON COMPACTED SOIL
LIGHTING
BEKA SPIKE 35W MHT FOOTLIGHT
BEKA TORCH 21W LED BOLLARD LIGHT
BEKA WALL MAX UP 250W MHT UPLIGHTER
BEKA THYLIA 150W HCI STREET LAMP AT 3.5m HEIGHT
existing sculptural concrete boxes
tree avenue
retention pond
capped mound
capped mound
capped mound
forest
waterfall bridge
deck
deck
tree avenue
craft shop
bridge
bridge
sculptural capped mounds
veld grass
steel pergola
existing bridge
forested slope
Salvokop Square
stormwater corridor
book store
restaurant
cafe
skietpoort avenue
koch street
existing heritage buildings

8.10 Sections and details

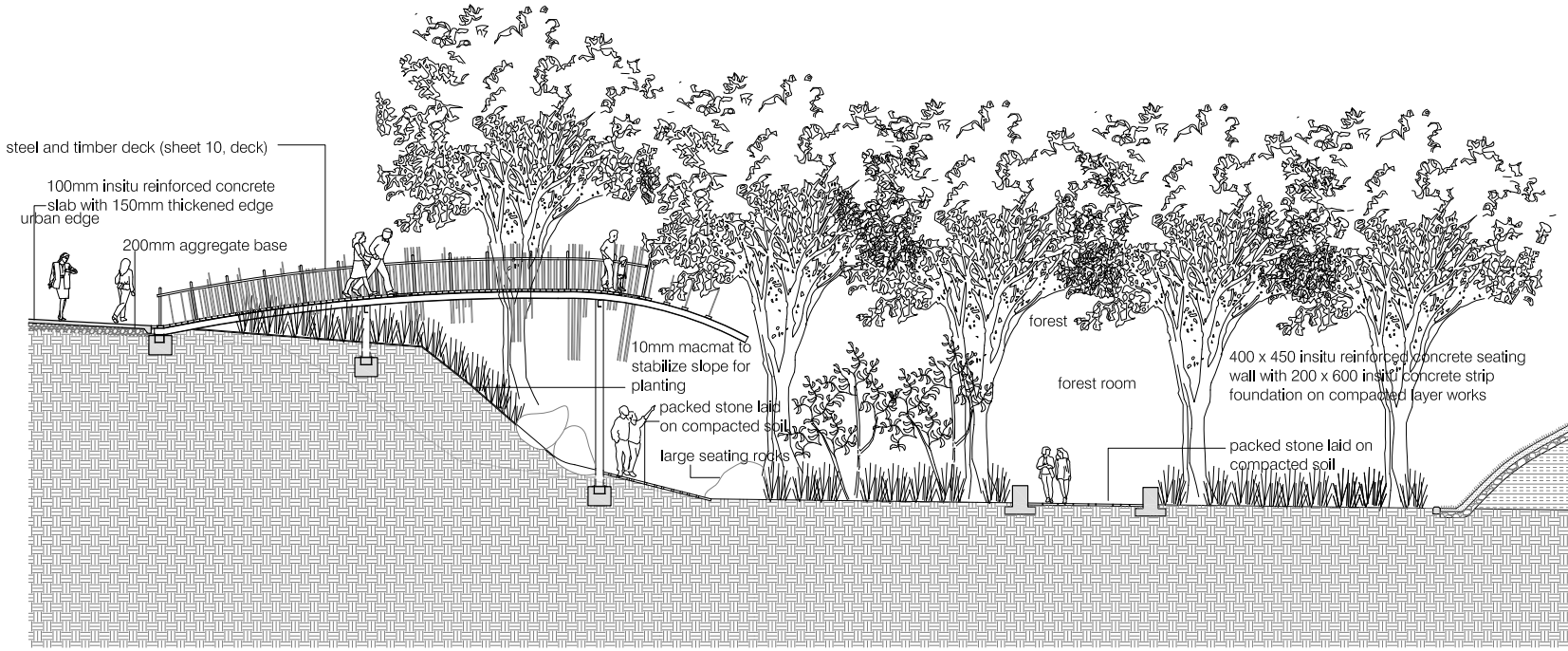
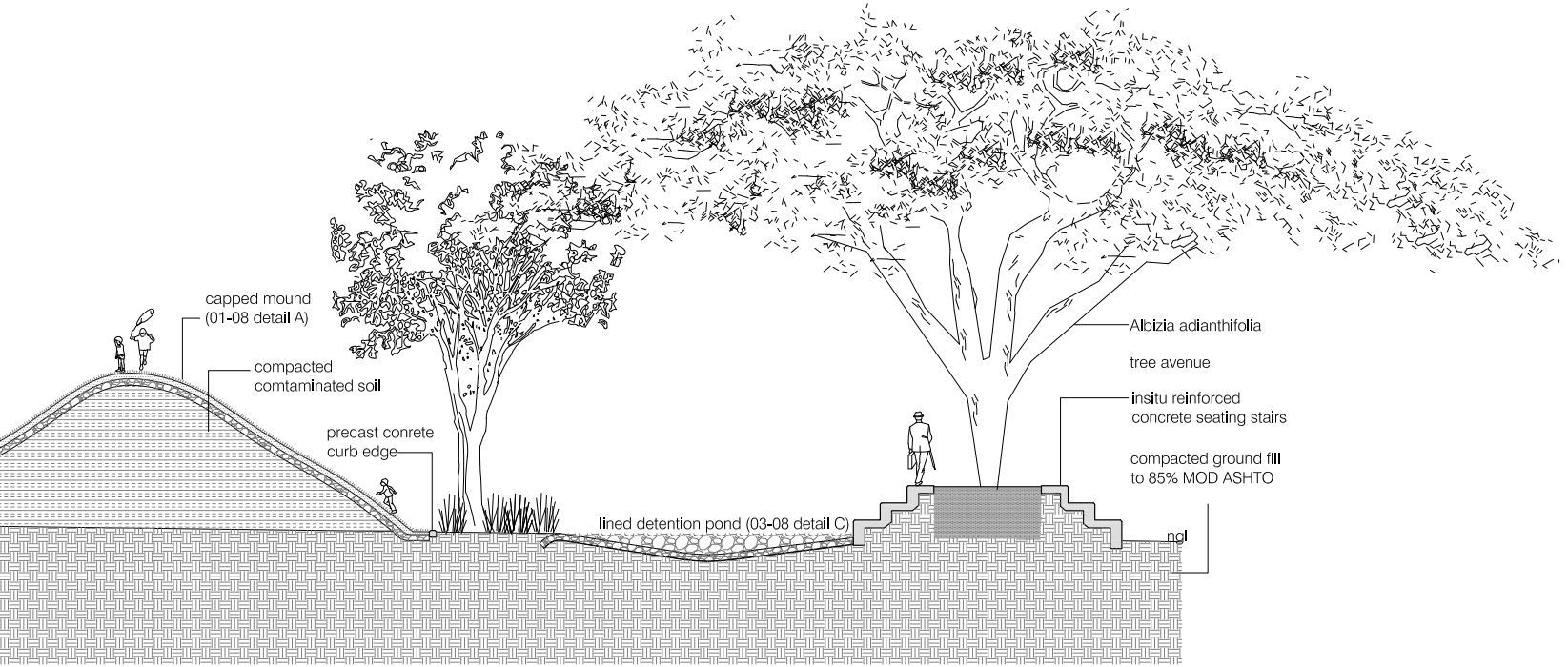


Illustration 161: Section A. Not to scale


capped mound
(01-08 detail A)
compacted
comtaminated soil
precast conrete
curb edge
lined detention pond (03-08 detail C)
Albizia adianthifolia
tree avenue
insitu reinforced
concrete seating stairs
compacted ground fill
to 85% MOD ASHTO
ngl

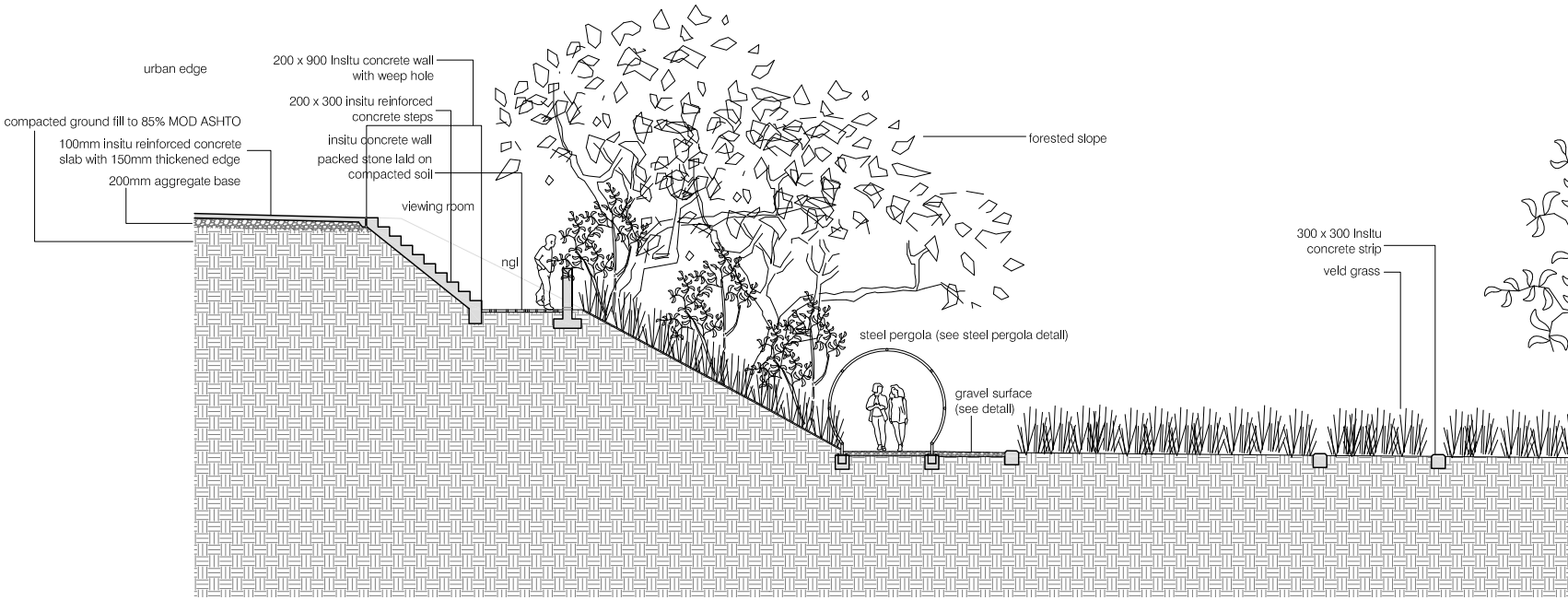
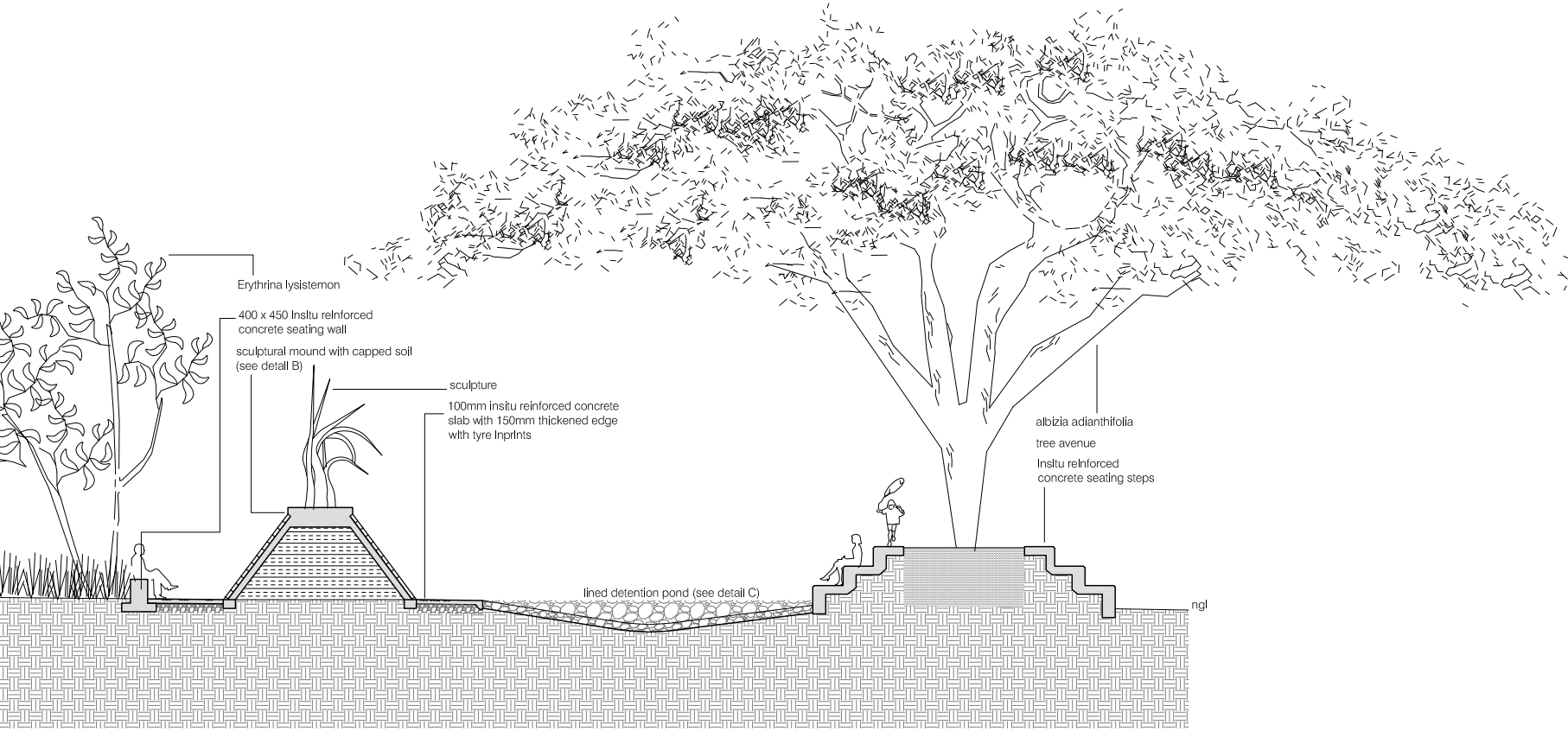


Illustration 162: Section B. Not to scale


Erythrina lysistemon
400 x 450 Insitu reinforced concrete seating wall
sculptural mound with capped soil (see detail B)
sculpture
100mm insitu reinforced concrete slab with 150mm thickened edge with tyre inprints
albizia adianthifolia
tree avenue
Insitu reinforced concrete seating steps
lined detention pond (see detail C)
ngl

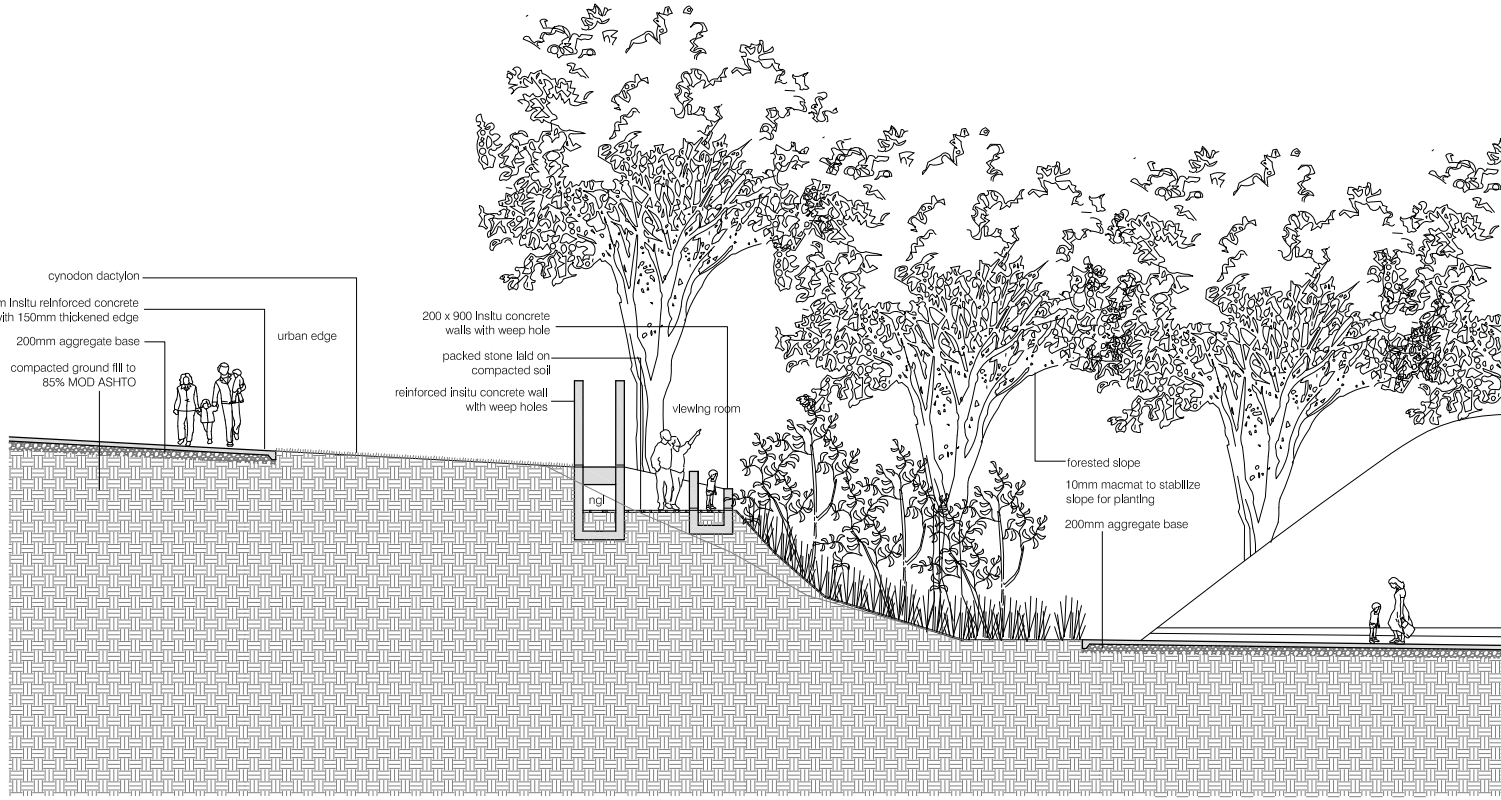
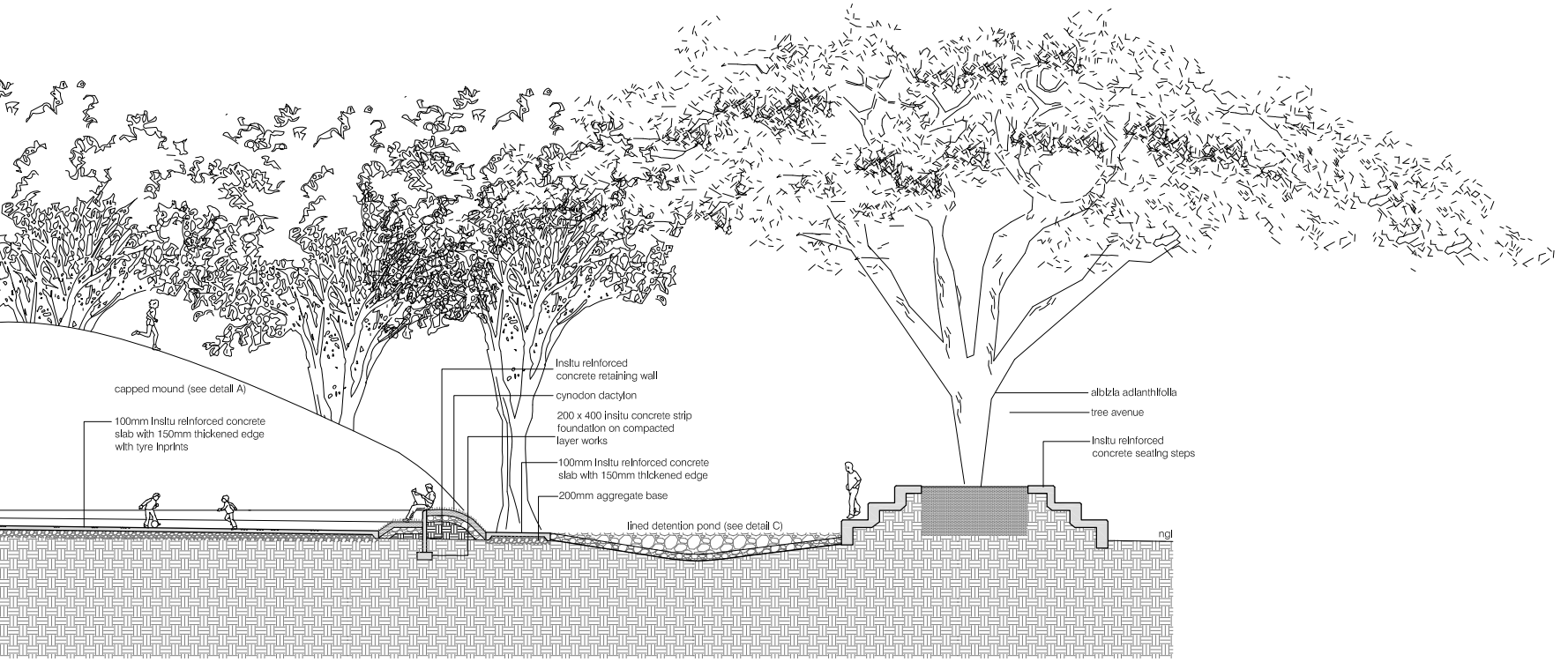


Illustration 163: Section elevation C. Not to scale


capped mound (see detail A)
100mm Insitu reinforced concrete slab with 150mm thickened edge with tyre inprints
Insitu reinforced concrete retaining wall
cynodon dactylon
200 x 400 insitu concrete strip foundation on compacted layer works
100mm Insitu reinforced concrete slab with 150mm thickened edge
200mm aggregate base
lined detention pond (see detail C)
albizia adianthifolia
tree avenue
Insitu reinforced concrete seating steps
ngl

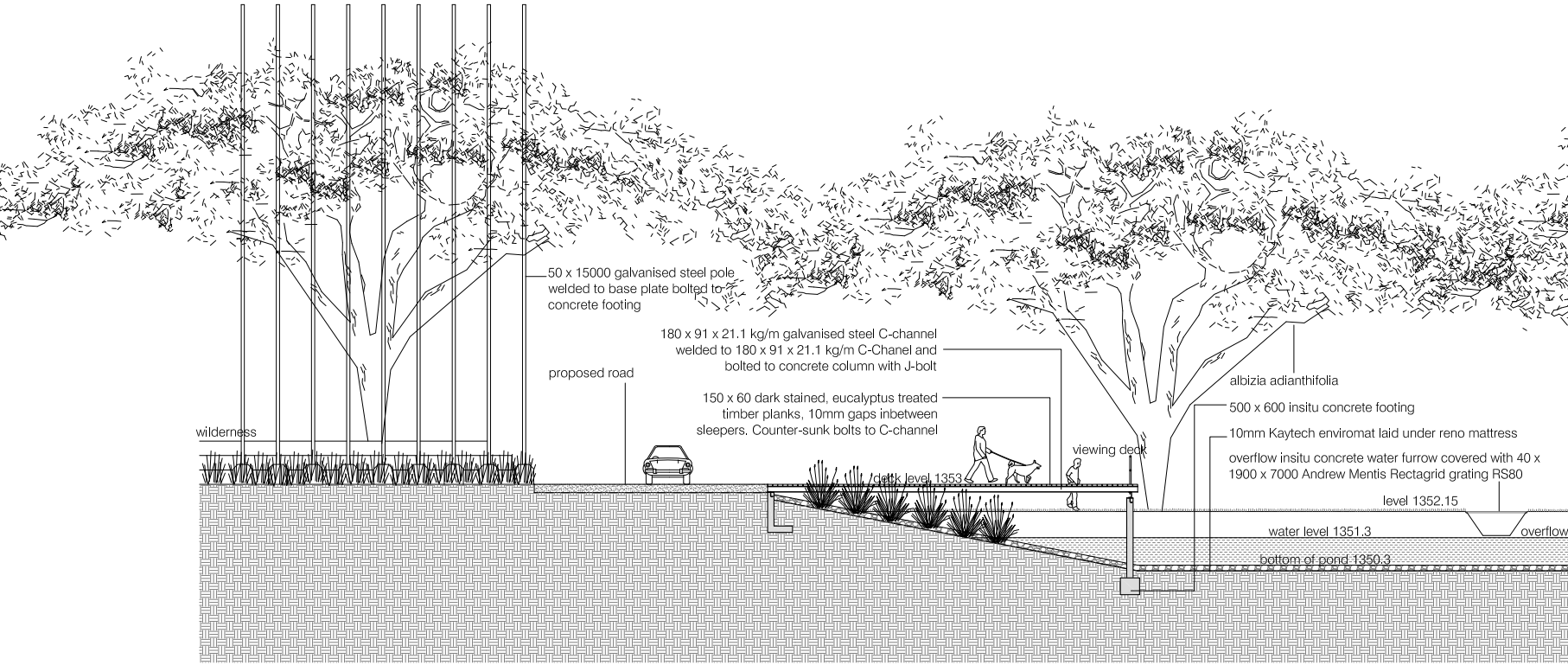
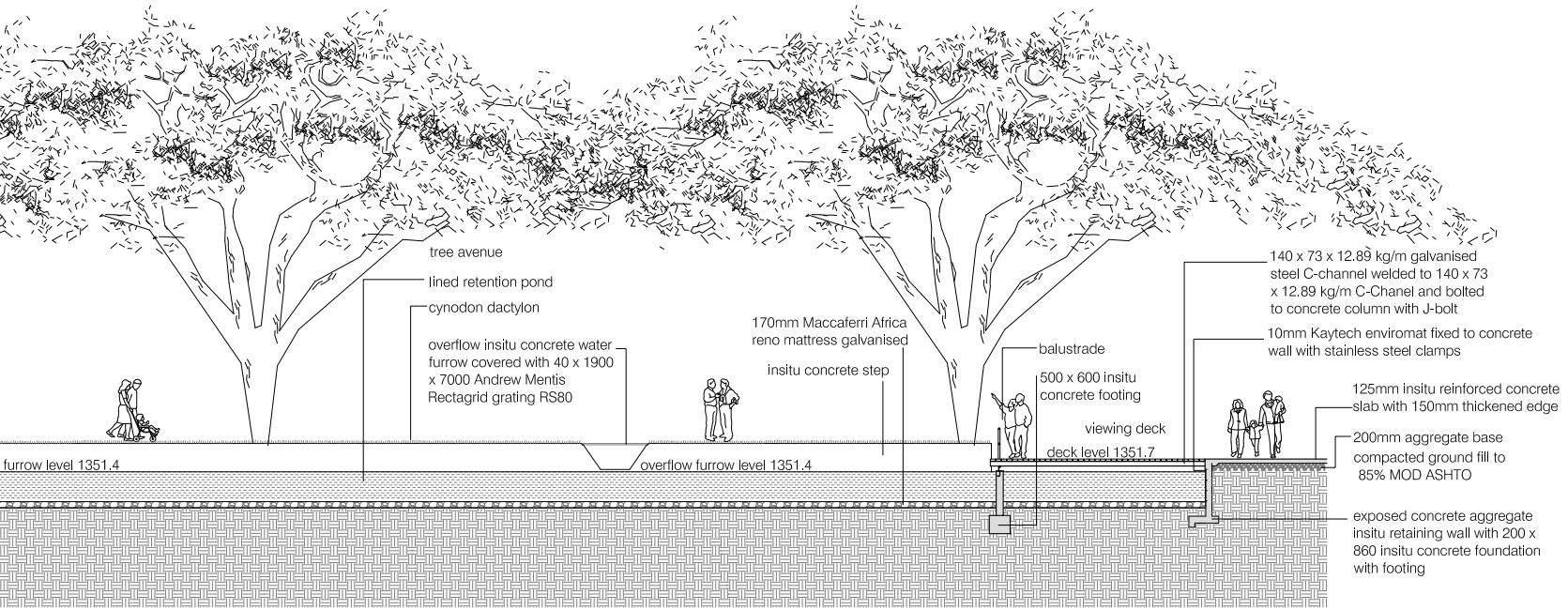


Illustration 164: Section elevation D. Not to scale


tree avenue
lined retention pond
cynodon dactylon
overflow insitu concrete water furrow covered with 40 x 1900 x 7000 Andrew Mentis Rectagrid grating RS80
170mm Maccaferri Africa reno mattress galvanised
insitu concrete step
balustrade
500 x 600 insitu concrete footing
viewing deck
deck level 1351.7
140 x 73 x 12.89 kg/m galvanised steel C-channel welded to 140 x 73 x 12.89 kg/m C-Chanel and bolted to concrete column with J-bolt
10mm Kaytech enviromat fixed to concrete wall with stainless steel clamps
125mm insitu reinforced concrete slab with 150mm thickened edge
200mm aggregate base compacted ground fill to 85% MOD ASHTO
exposed concrete aggregate insitu retaining wall with 200 x 860 insitu concrete foundation with footing
furrow level 1351.4
overflow furrow level 1351.4

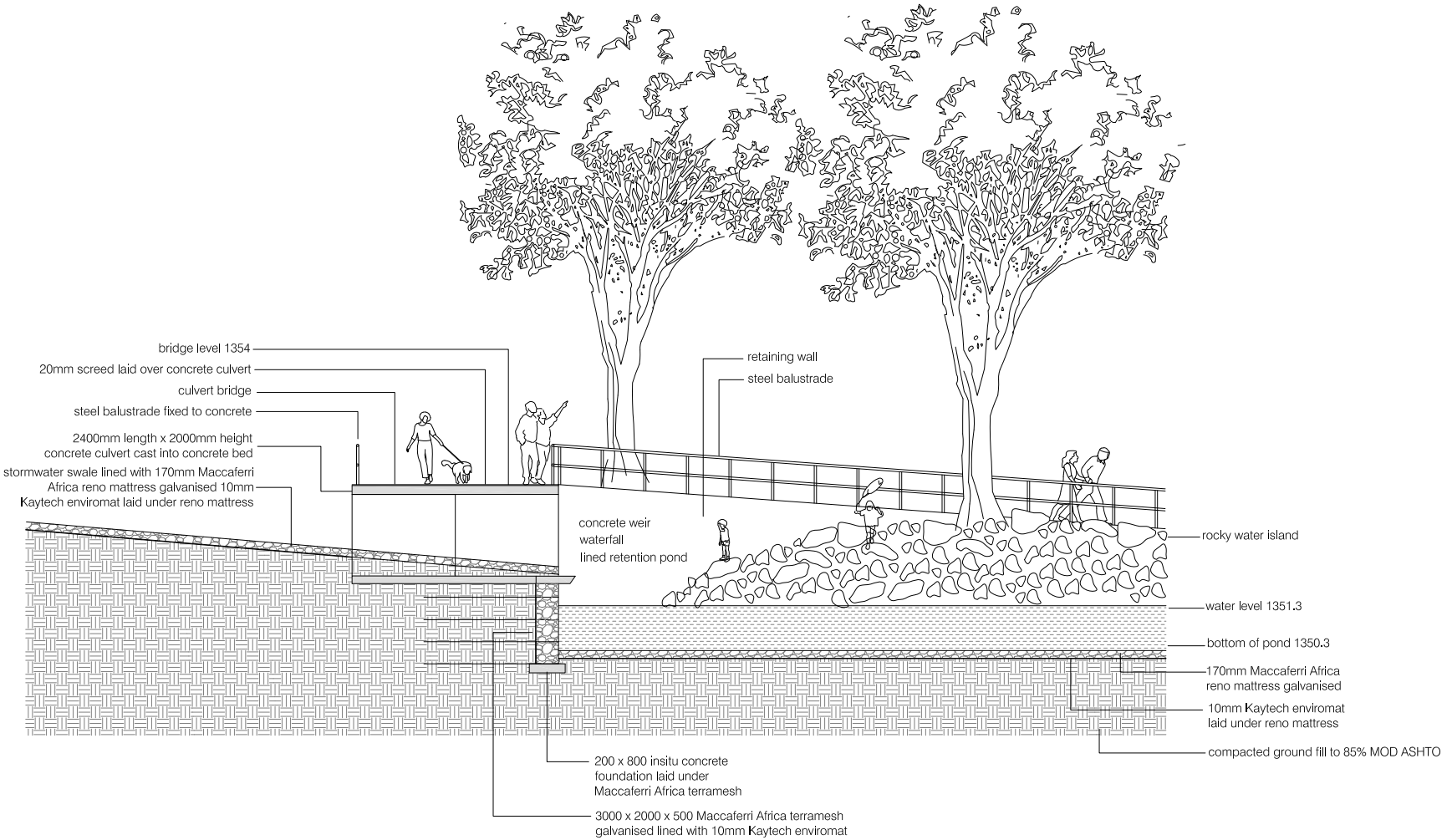


Illustration 165: Waterfall bridge. Section elevation E. Not to scale

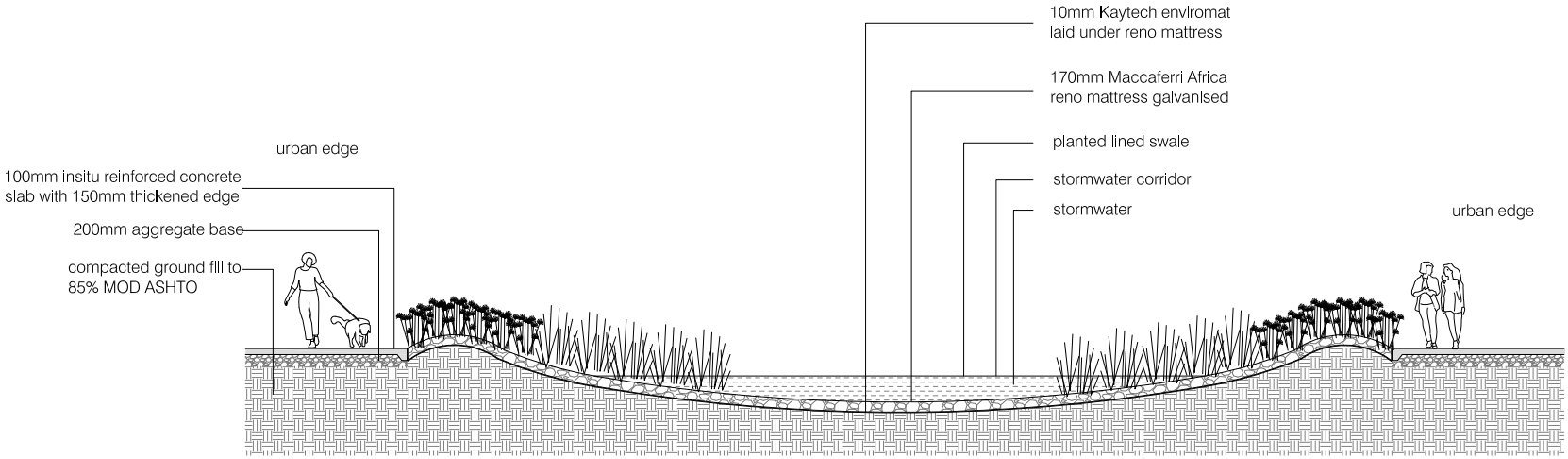


Illustration 166: Stormwater corridor. Section F. Not to scale

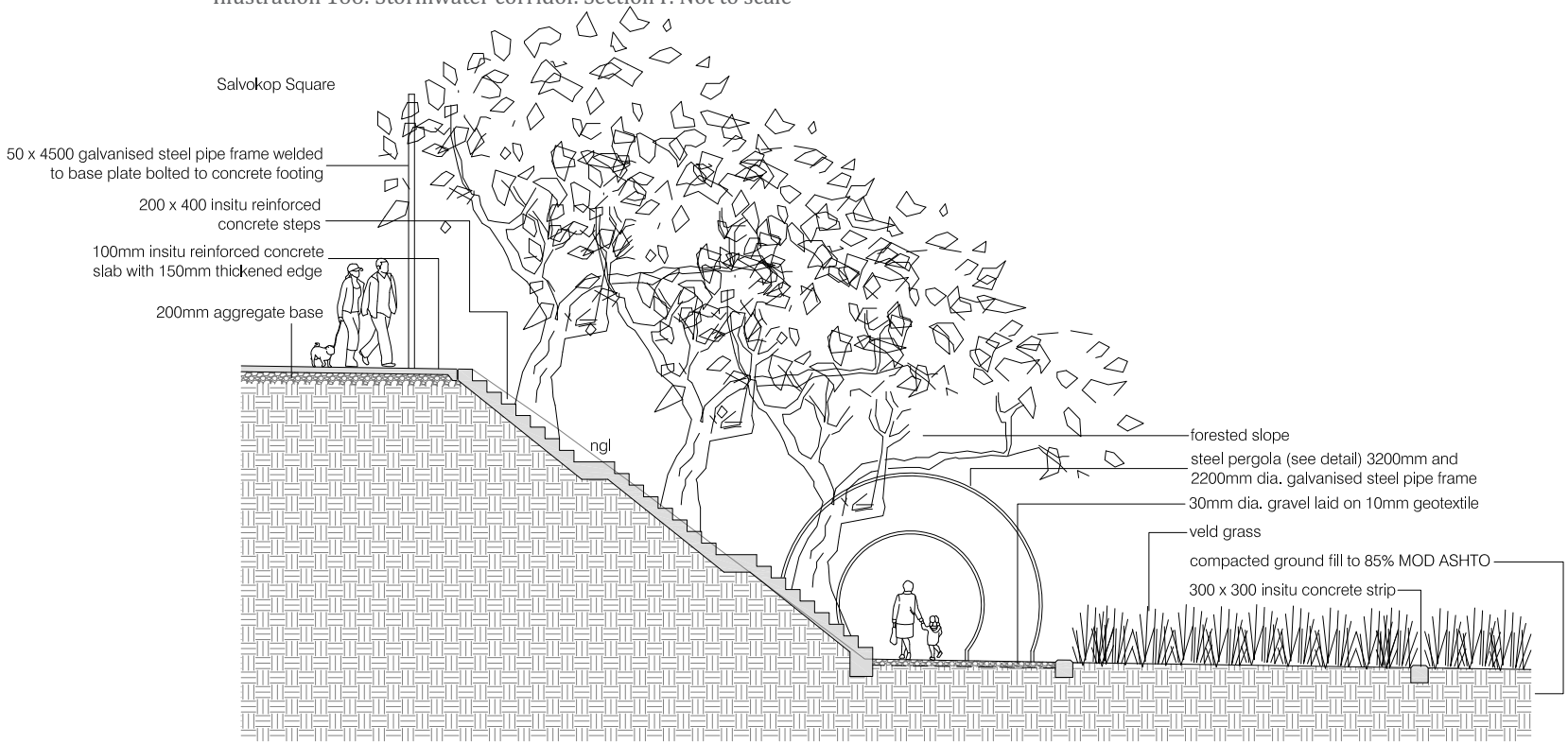


Illustration 167: Section elevation G. Not to scale

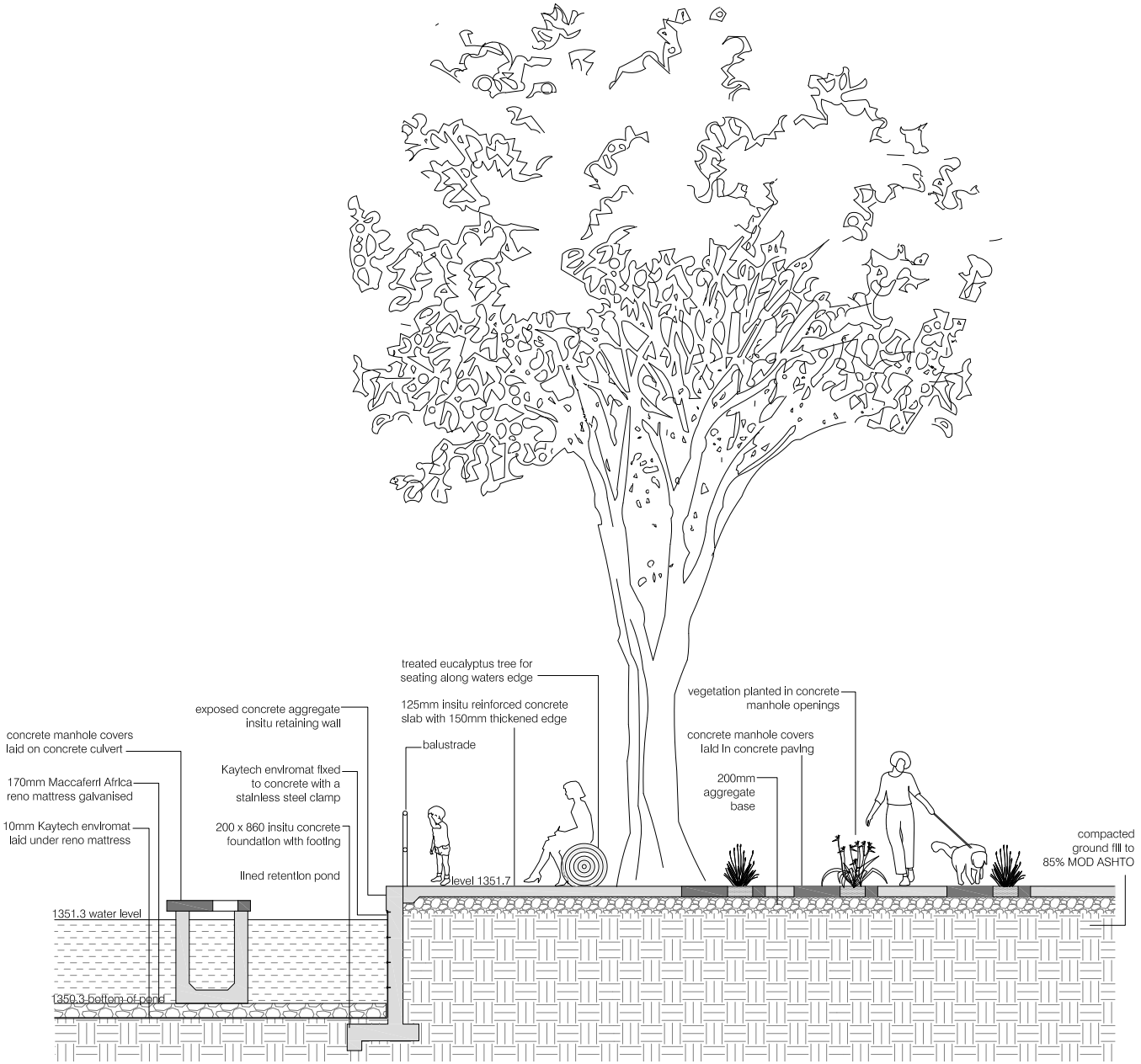


Illustration 168: Water edge. Section H. Not to scale

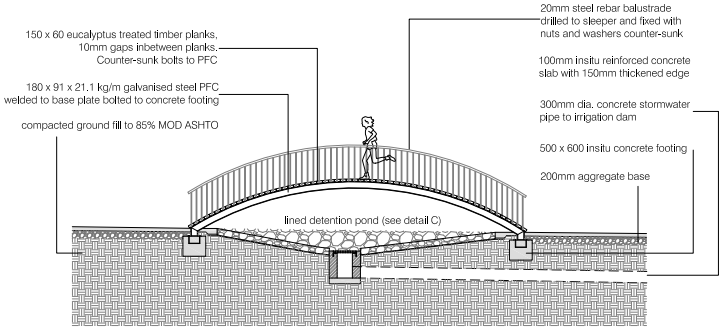


Illustration 169: Bridge 1 - Section I1. Not to scale

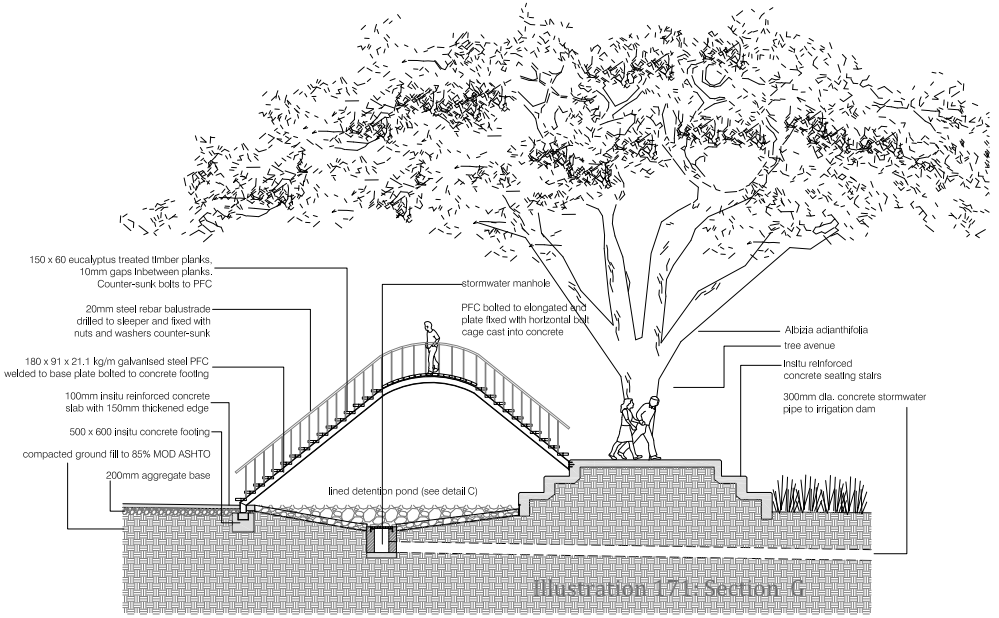


Illustration 171: Section G

Illustration 170: Bridge 2 - Section I2. Not to scale

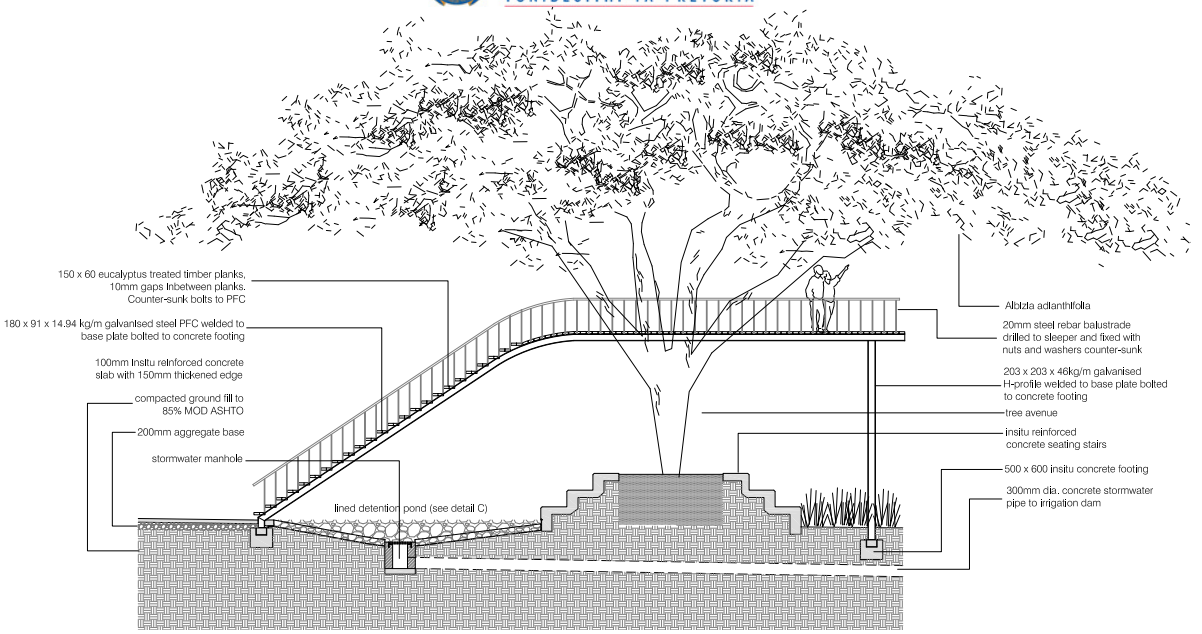


Illustration 171: Deck 3 - Section I3. Not to scale

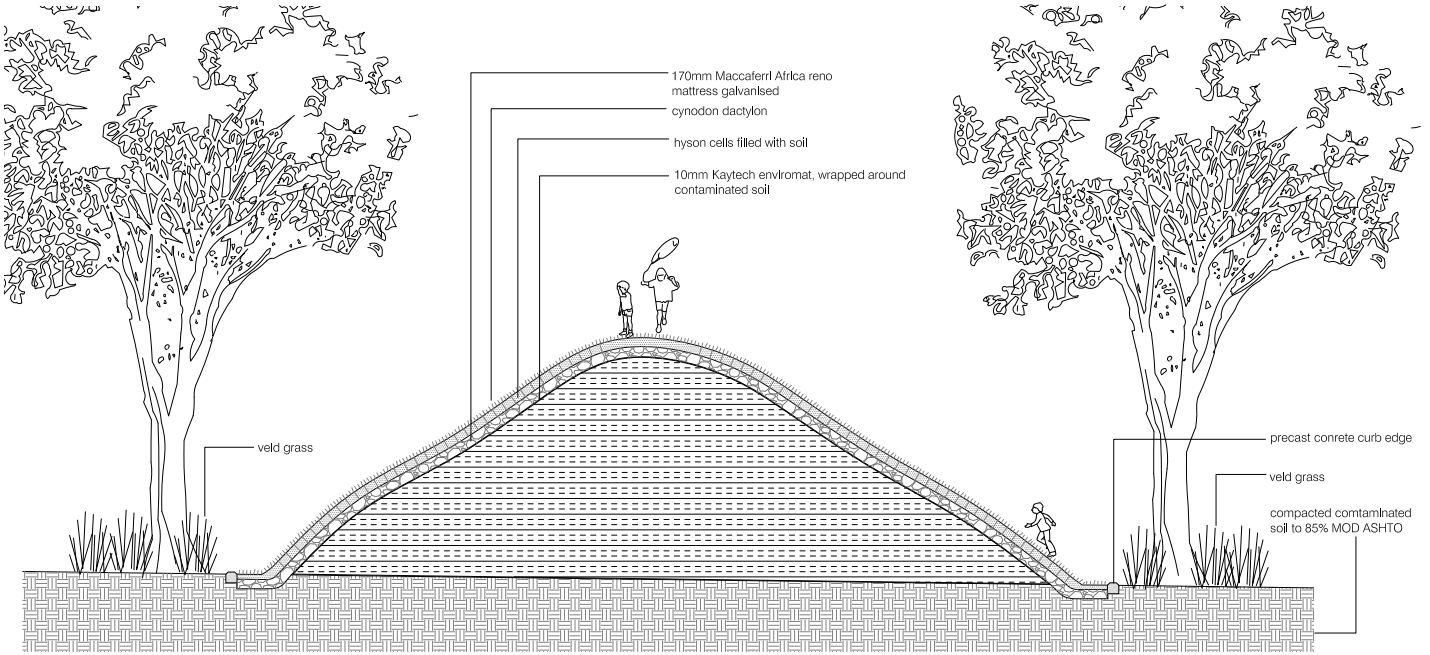


Illustration 172: Capped mound. Detail A. Not to scale

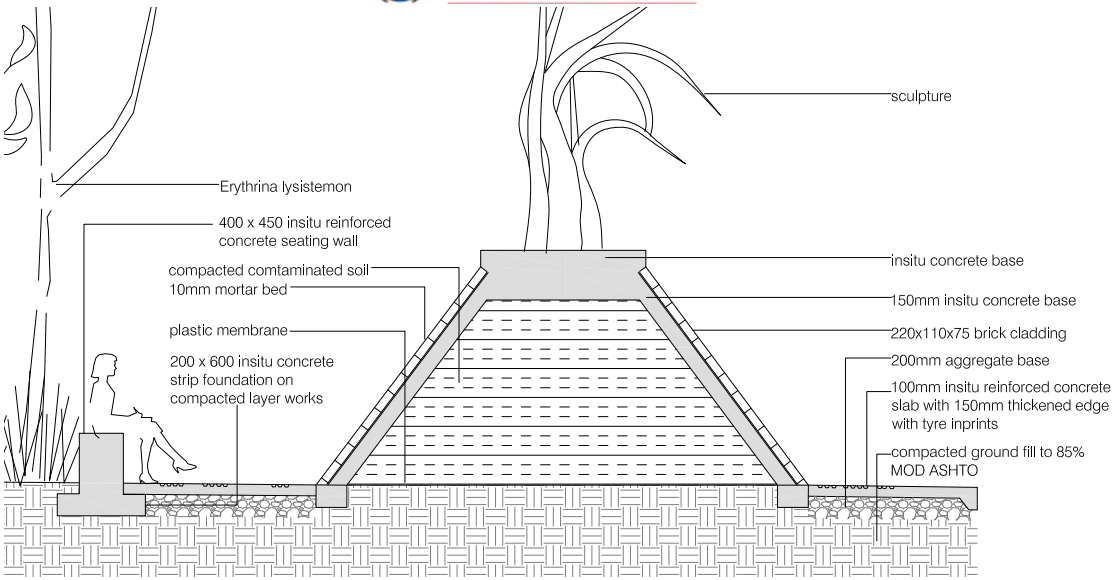


Illustration 173: Sculptural capped mound. Detail B. Not to scale

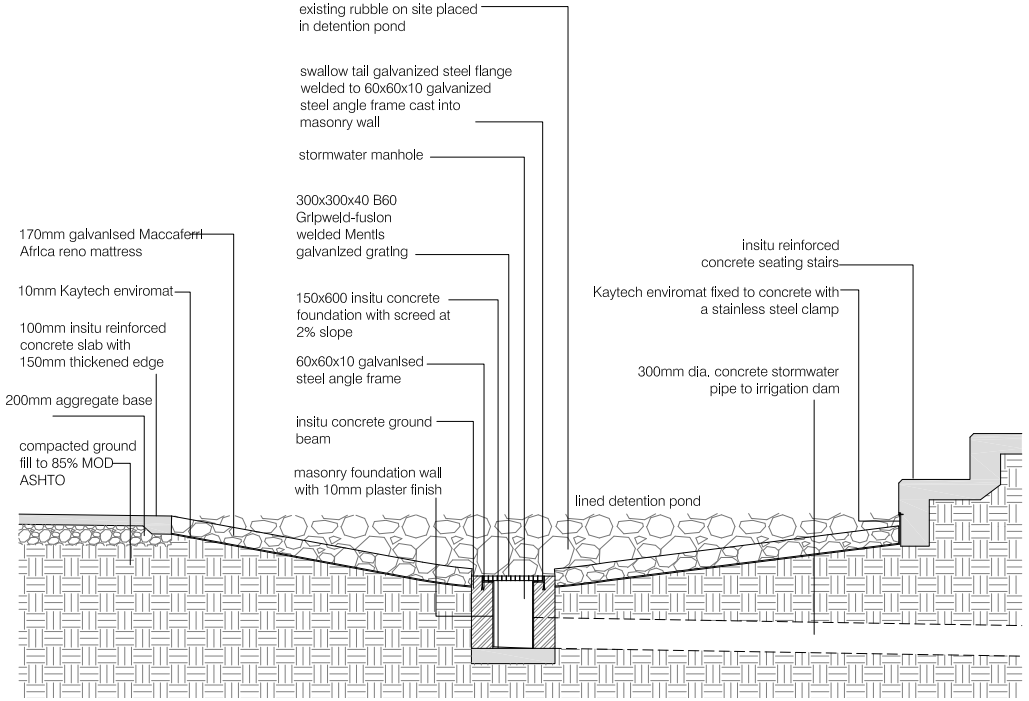


Illustration 174: Detention pond. Detail C. Not to scale

8.11 Steel pergola

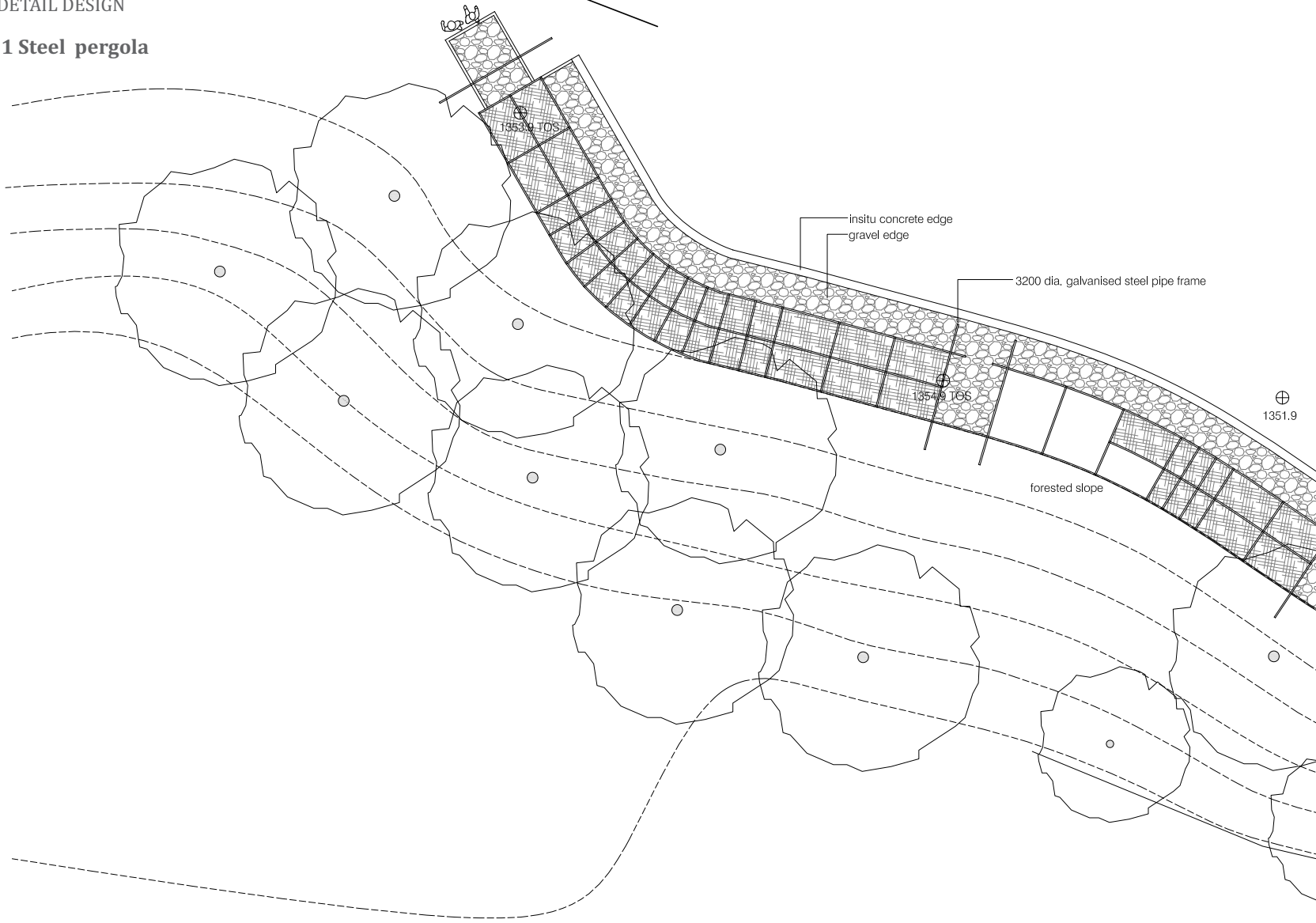
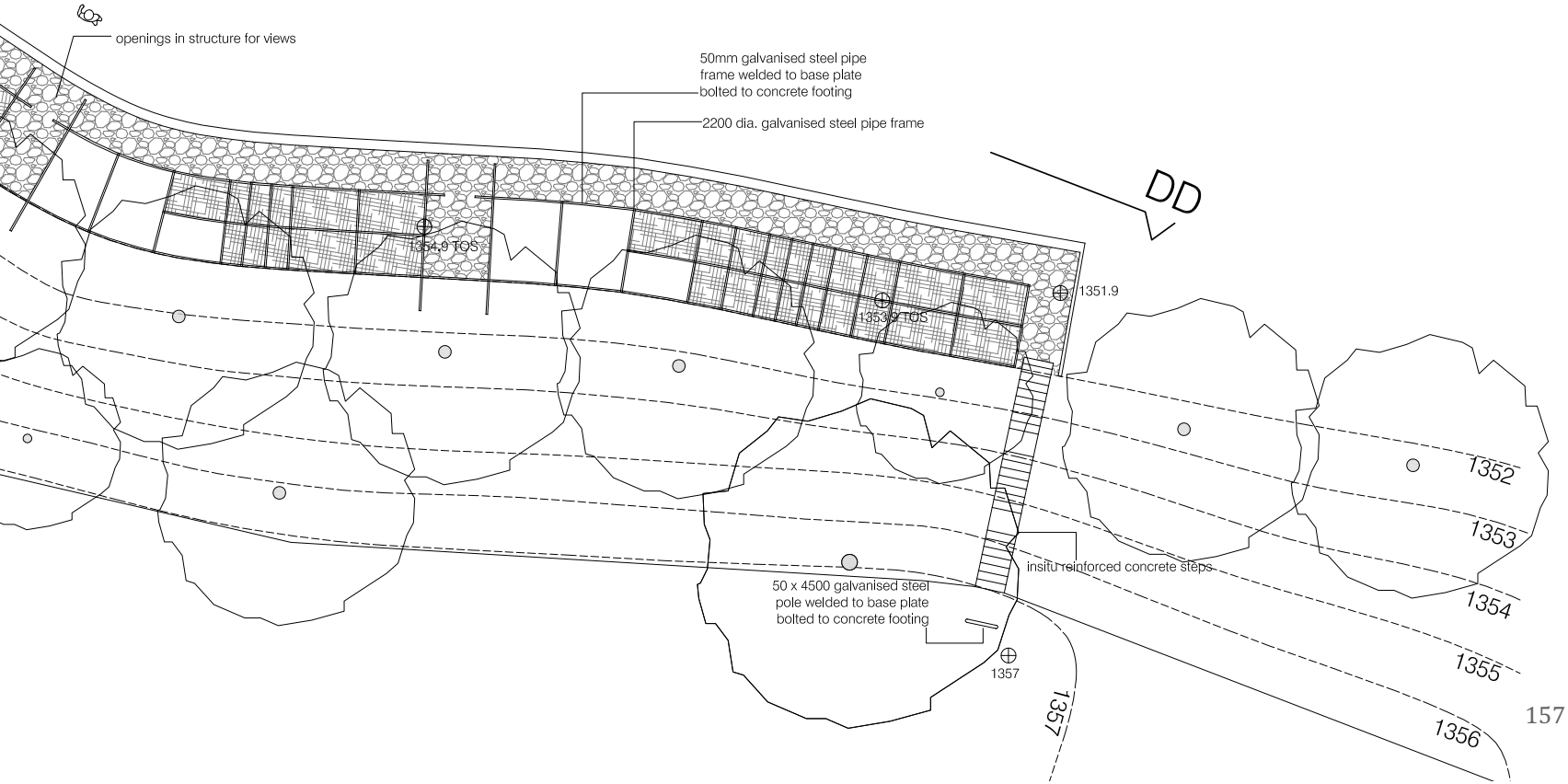


Illustration 175: Steel pergola plan. Not to scale


openings in structure for views
50mm galvanised steel pipe
frame welded to base plate
bolted to concrete footing
2200 dia. galvanised steel pipe frame
DD
1354.9 TOS
1353.9 TOS
1351.9
1352
1353
1354
1355
1356
1357
insitu reinforced concrete steps
50 x 4500 galvanised steel
pole welded to base plate
bolted to concrete footing
1357

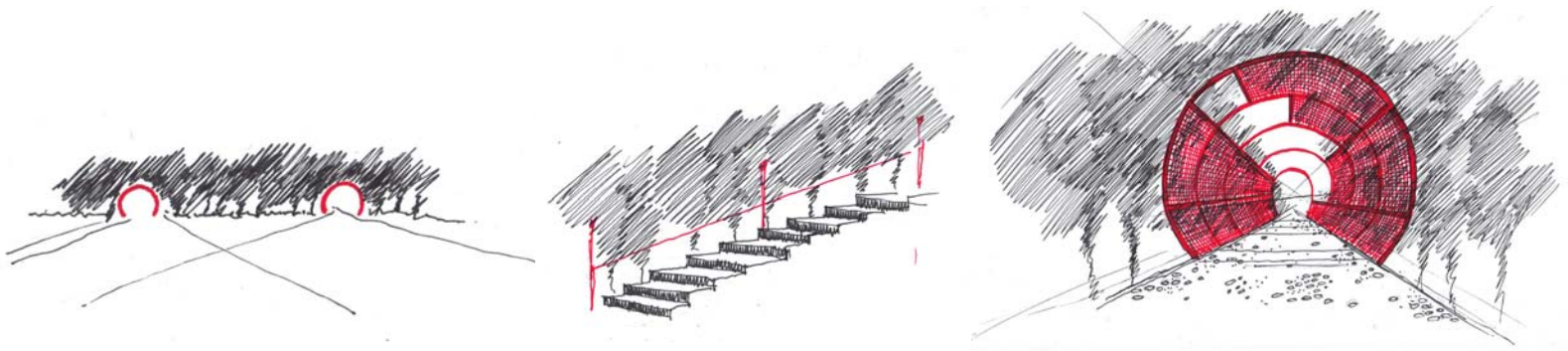


Illustration 176: Steel pergola vignettes

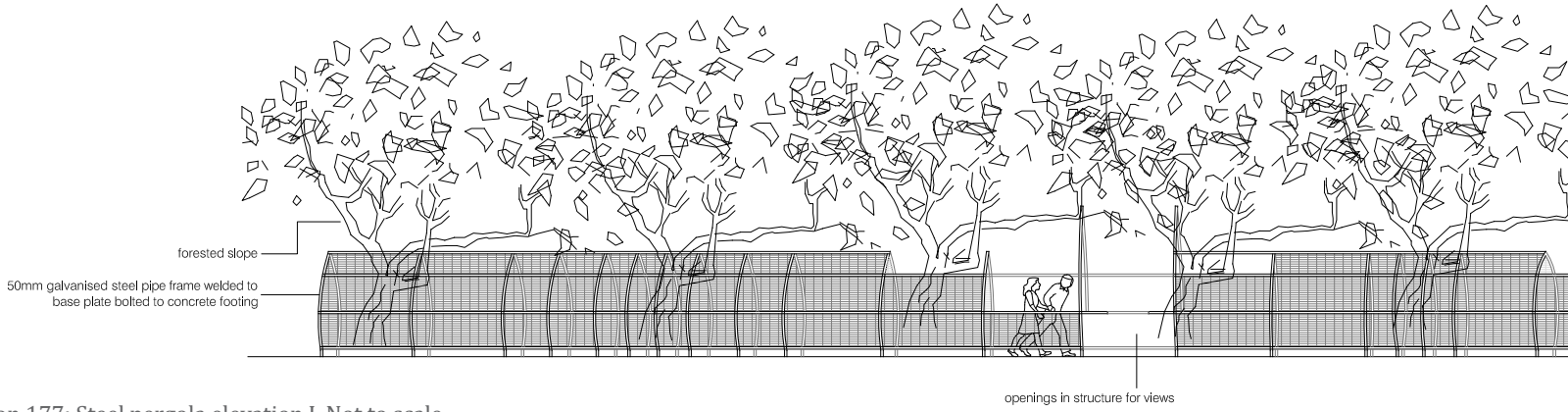
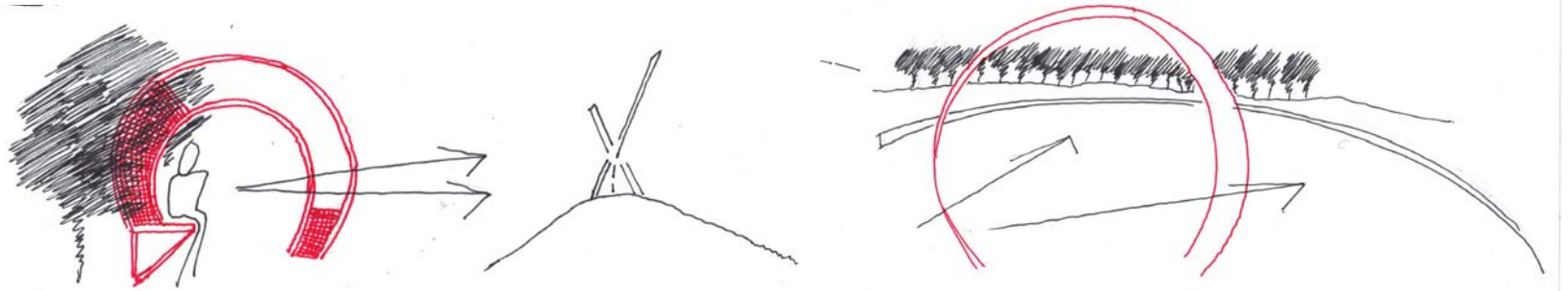
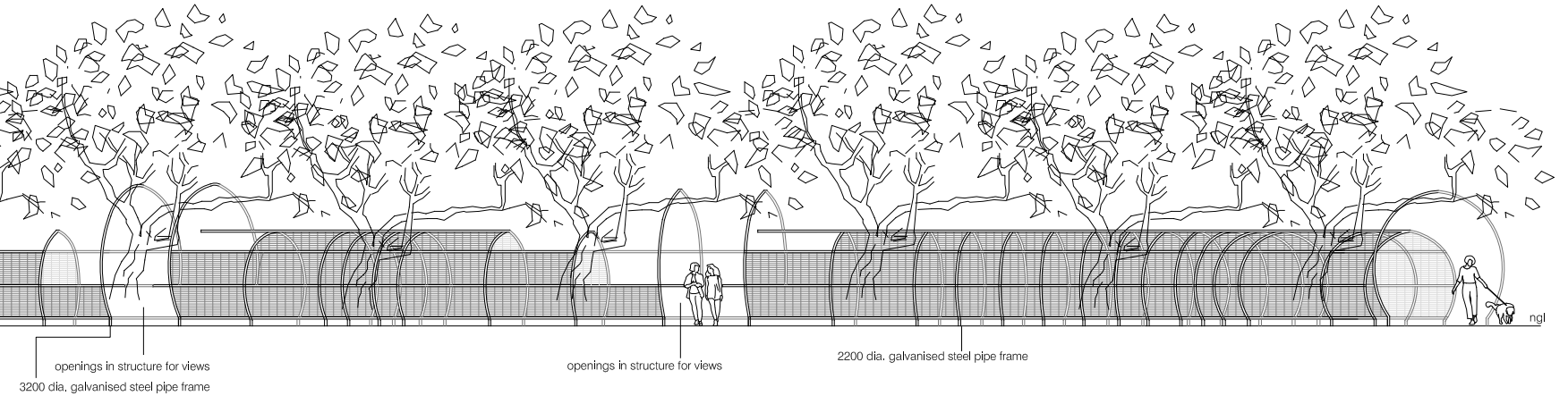


Illustration 177: Steel pergola elevation J. Not to scale




openings in structure for views
3200 dia. galvanised steel pipe frame
openings in structure for views
2200 dia. galvanised steel pipe frame
ngl

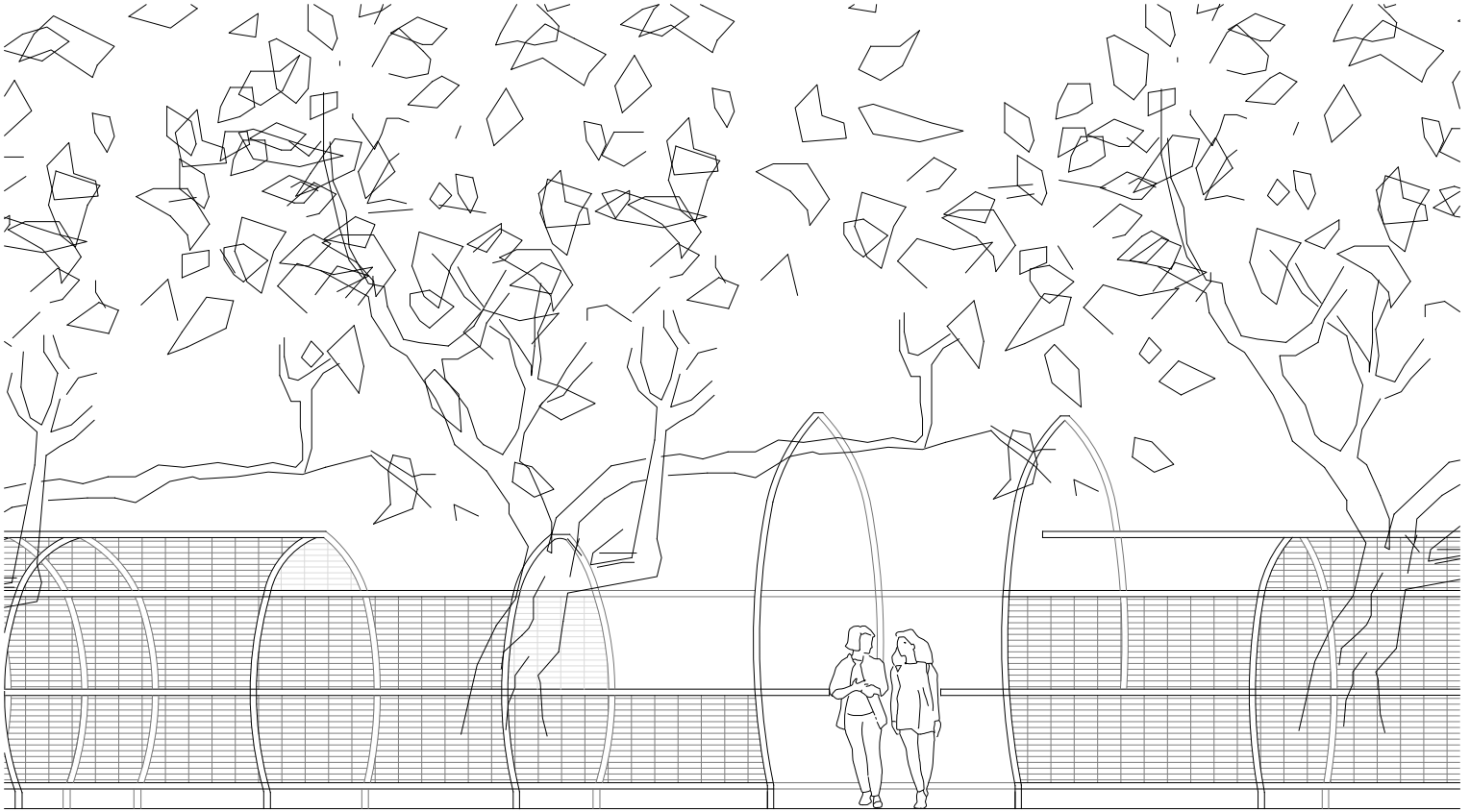


Illustration 178: Steel pergola detail elevation. Not to scale

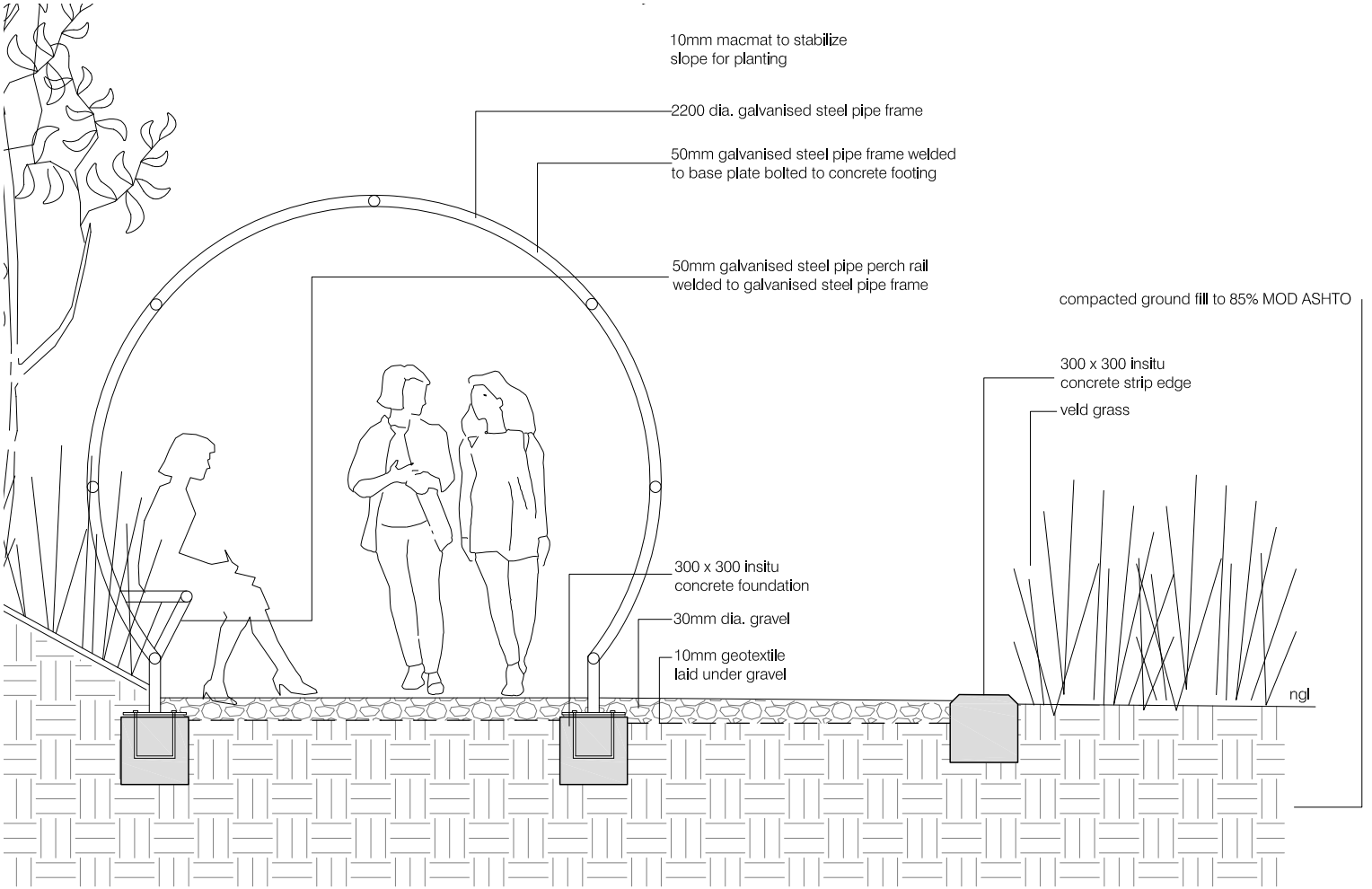


Illustration 179: Steel pergola detail. Not to scale

8.12 Deck

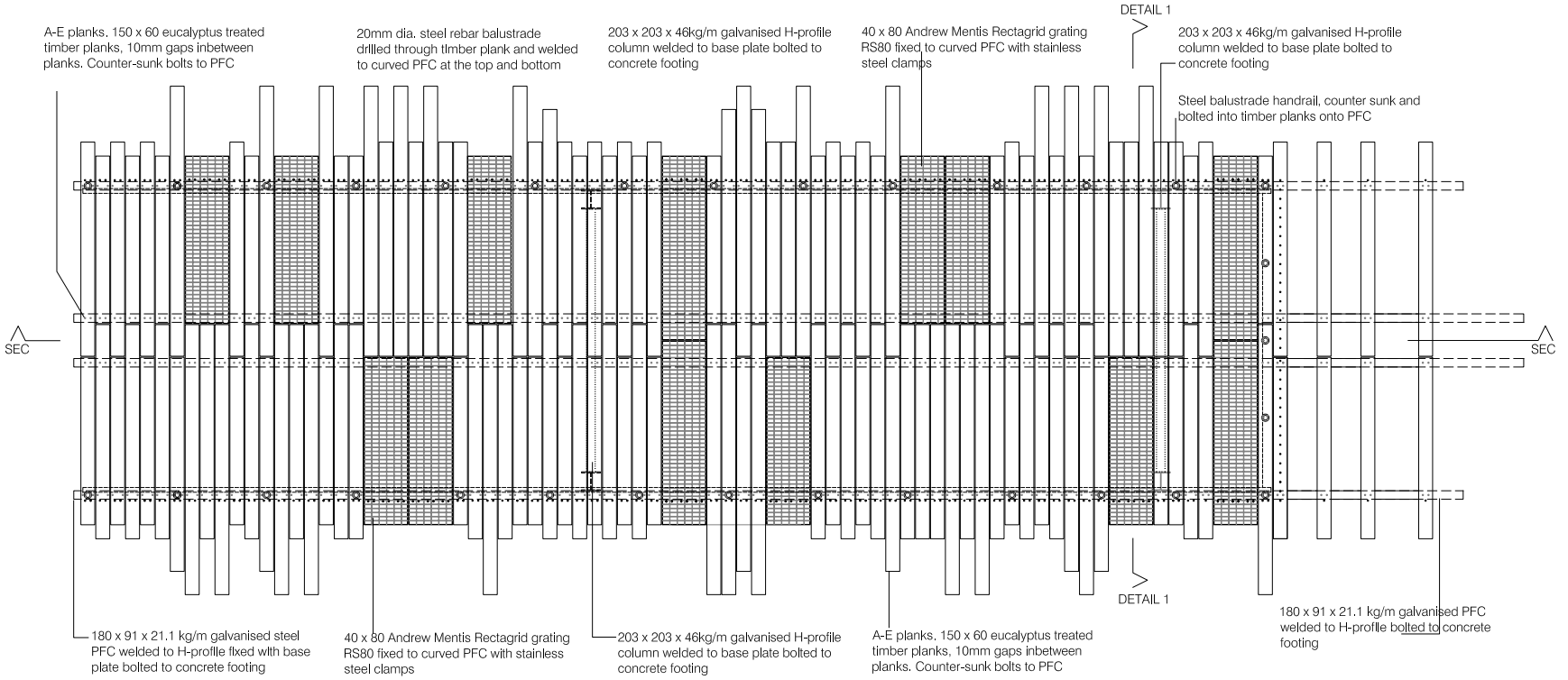


Illustration 180: Deck plan. Not to scale

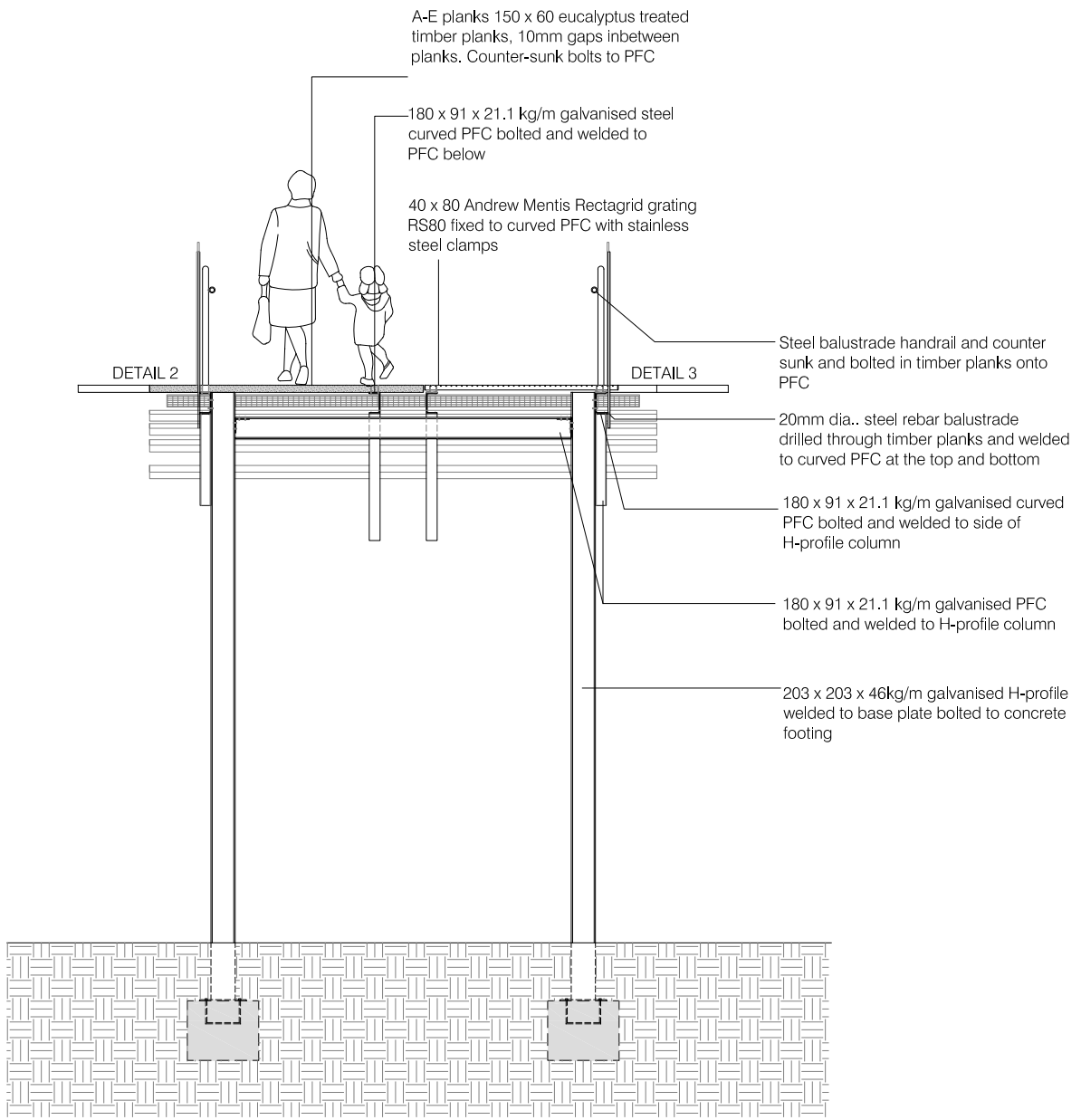


Illustration 181: Deck detail. Not to scale

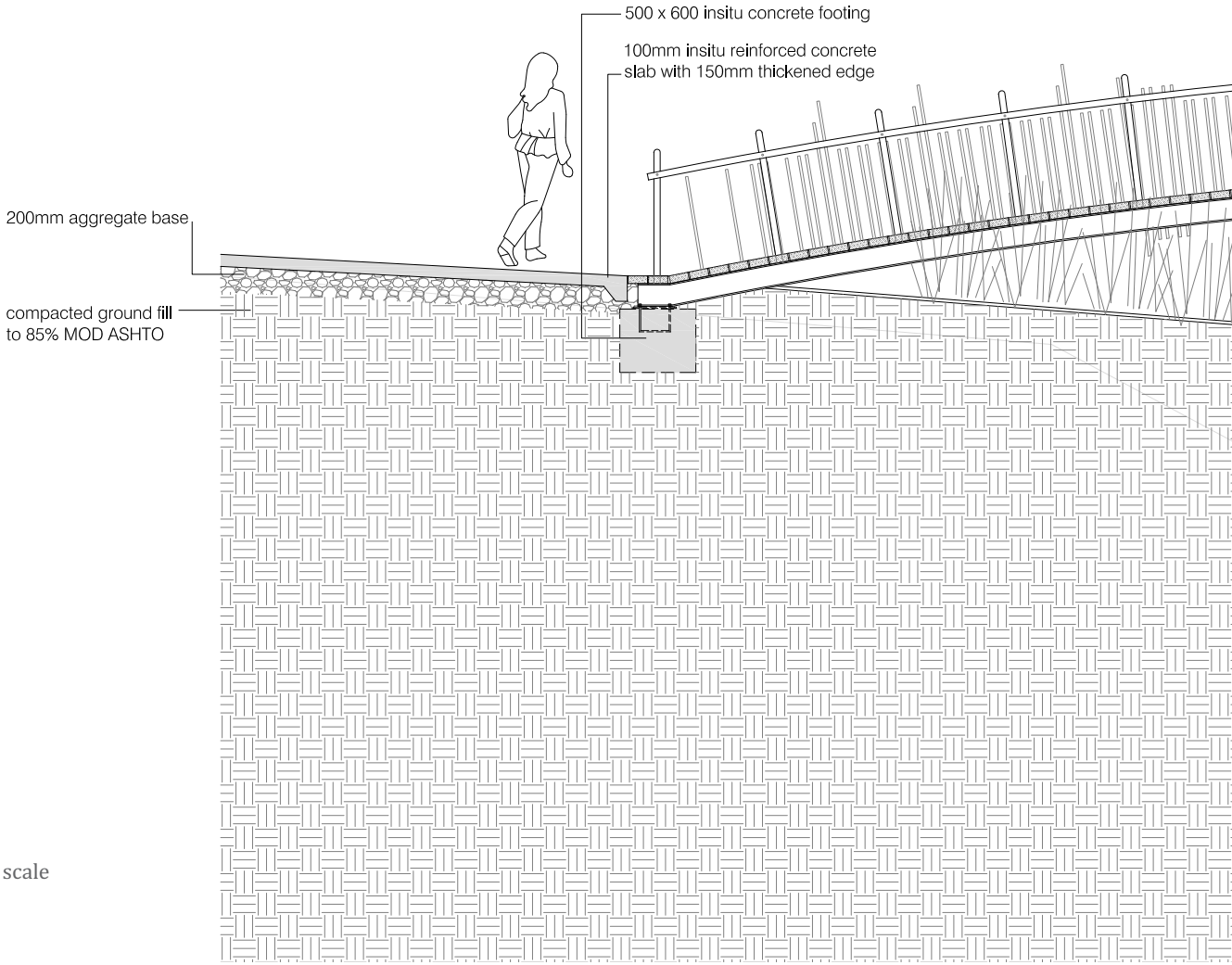
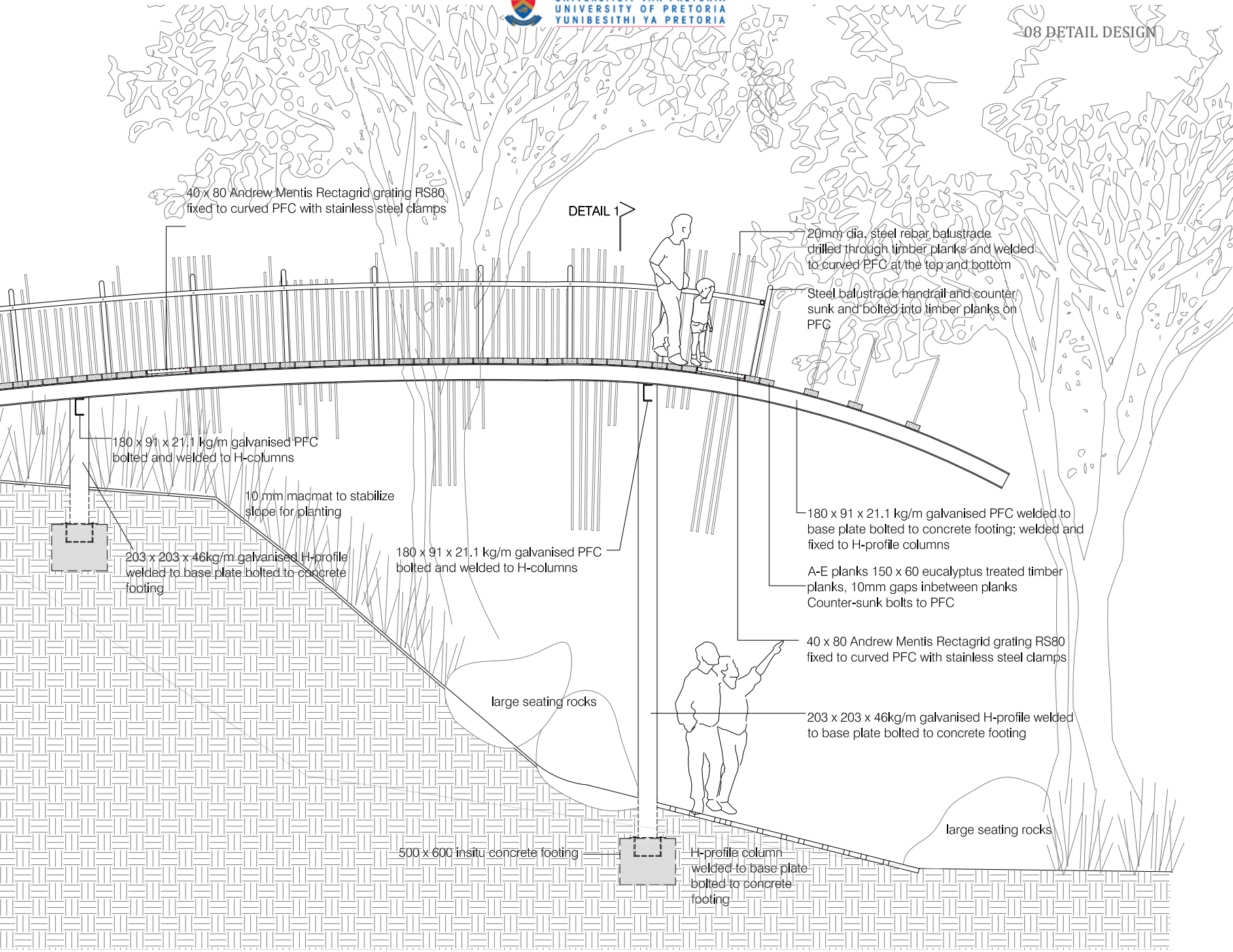


Illustration 182: Deck section. Not to scale


40 x 80 Andrew Mentis Rectagrid grating RS80 fixed to curved PFC with stainless steel clamps
DETAIL 1
20mm dia. steel rebar balustrade drilled through timber planks and welded to curved PFC at the top and bottom
Steel balustrade handrail and counter sunk and bolted into timber planks on PFC
180 x 91 x 21.1 kg/m galvanised PFC bolted and welded to H-columns
10 mm macmat to stabilize slope for planting
203 x 203 x 46kg/m galvanised H-profile welded to base plate bolted to concrete footing
180 x 91 x 21.1 kg/m galvanised PFC bolted and welded to H-columns
180 x 91 x 21.1 kg/m galvanised PFC welded to base plate bolted to concrete footing; welded and fixed to H-profile columns
A-E planks 150 x 60 eucalyptus treated timber planks, 10mm gaps inbetween planks Counter-sunk bolts to PFC
40 x 80 Andrew Mentis Rectagrid grating RS80 fixed to curved PFC with stainless steel clamps
large seating rocks
203 x 203 x 46kg/m galvanised H-profile welded to base plate bolted to concrete footing
large seating rocks
500 x 600 insitu concrete footing
H-profile column welded to base plate bolted to concrete footing

8.13 Rendered drawings

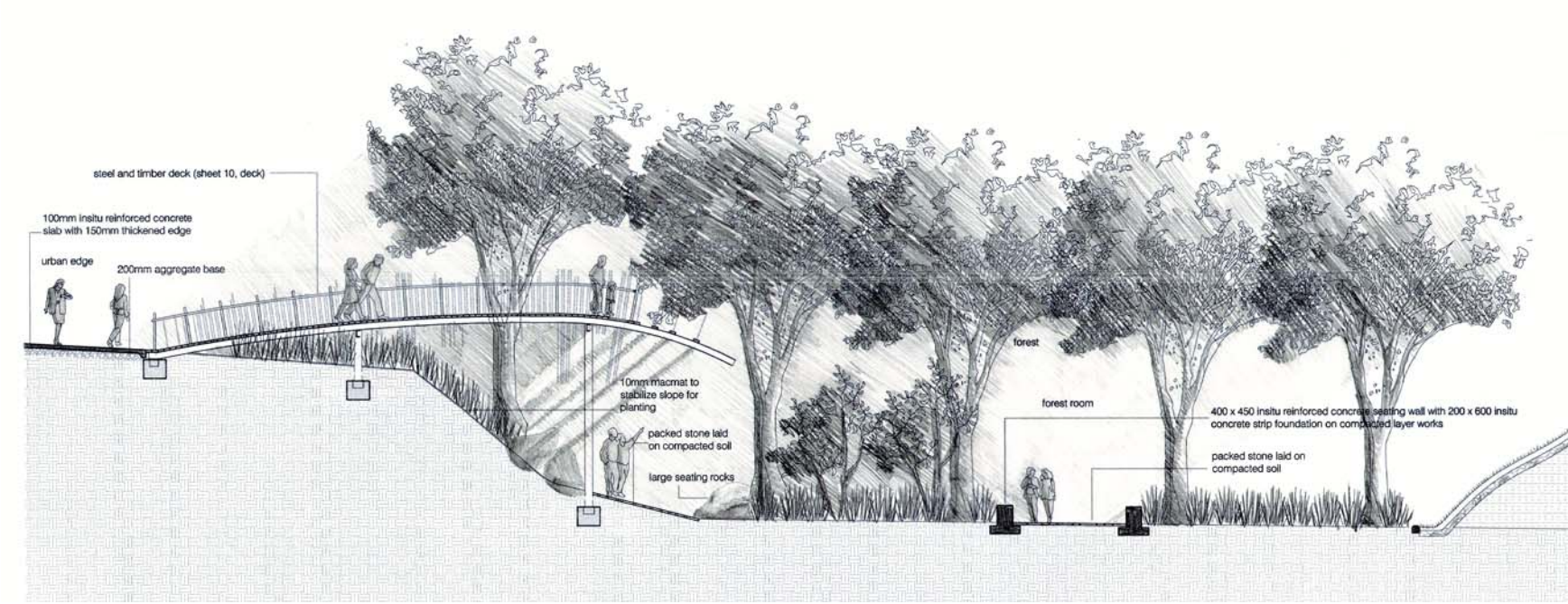
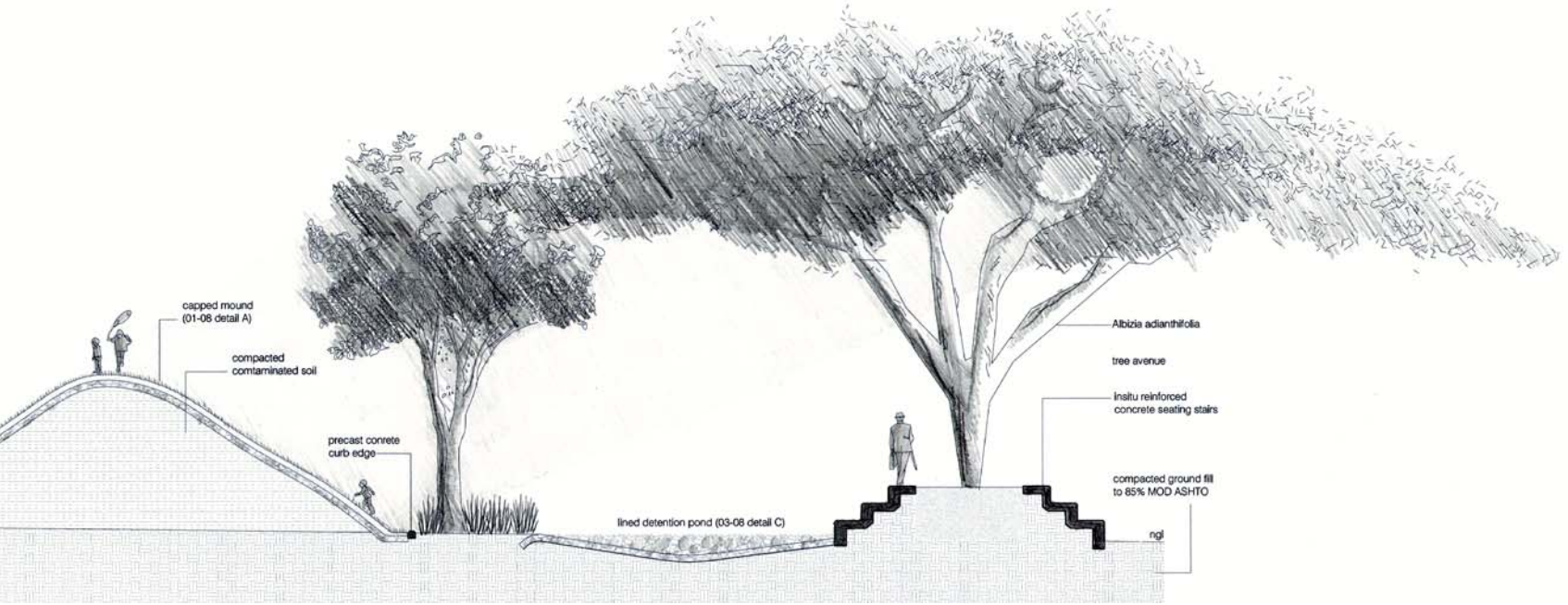


Illustration 183: Section A. Not to scale


capped mound
(01-08 detail A)
compacted
comtaminated soil
precast conrete
curb edge
lined detention pond (03-08 detail C)
Albizia adianthifolia
tree avenue
insitu reinforced
concrete seating stairs
compacted ground fill
to 85% MOD ASHTO
ngl

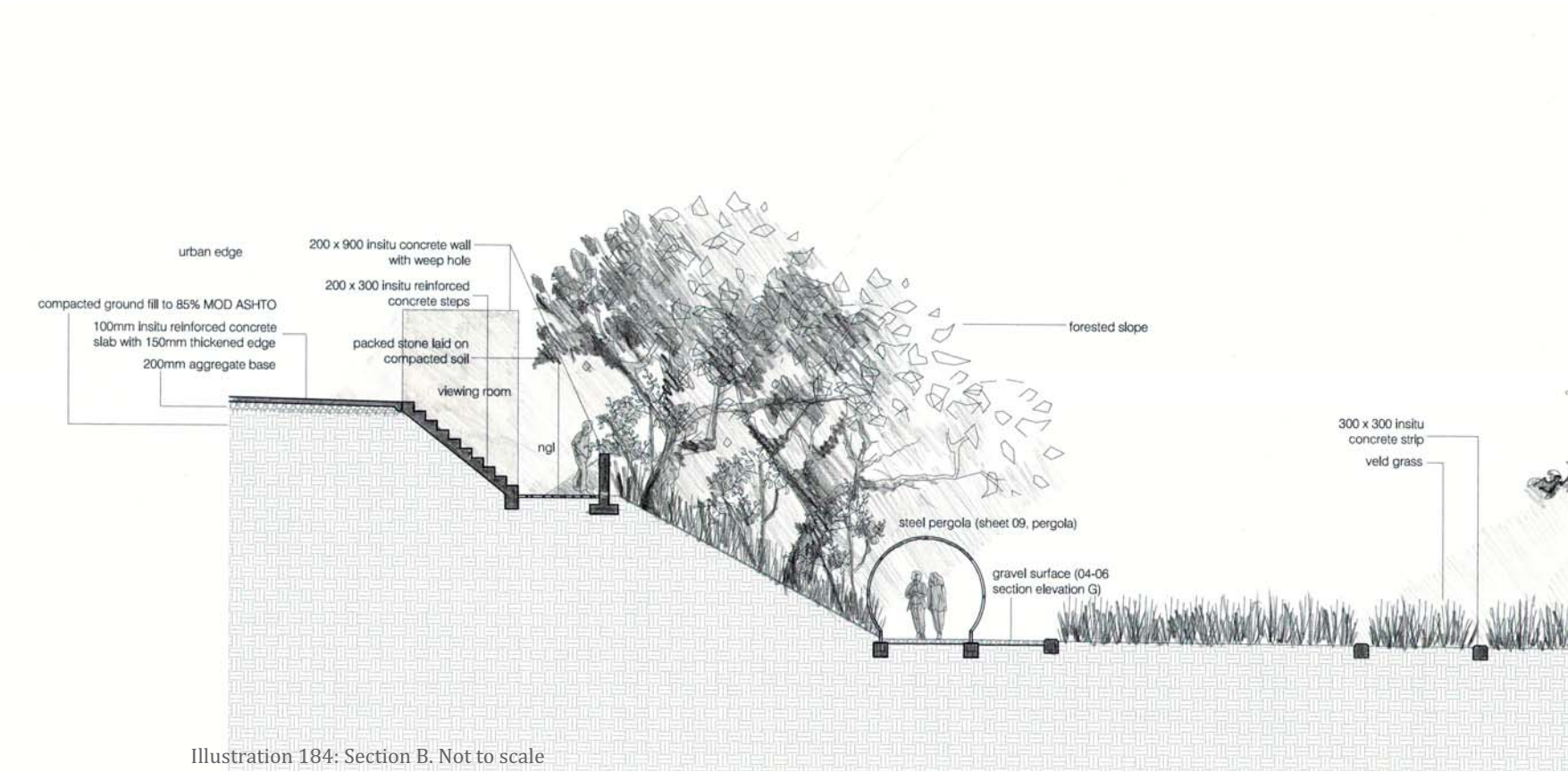
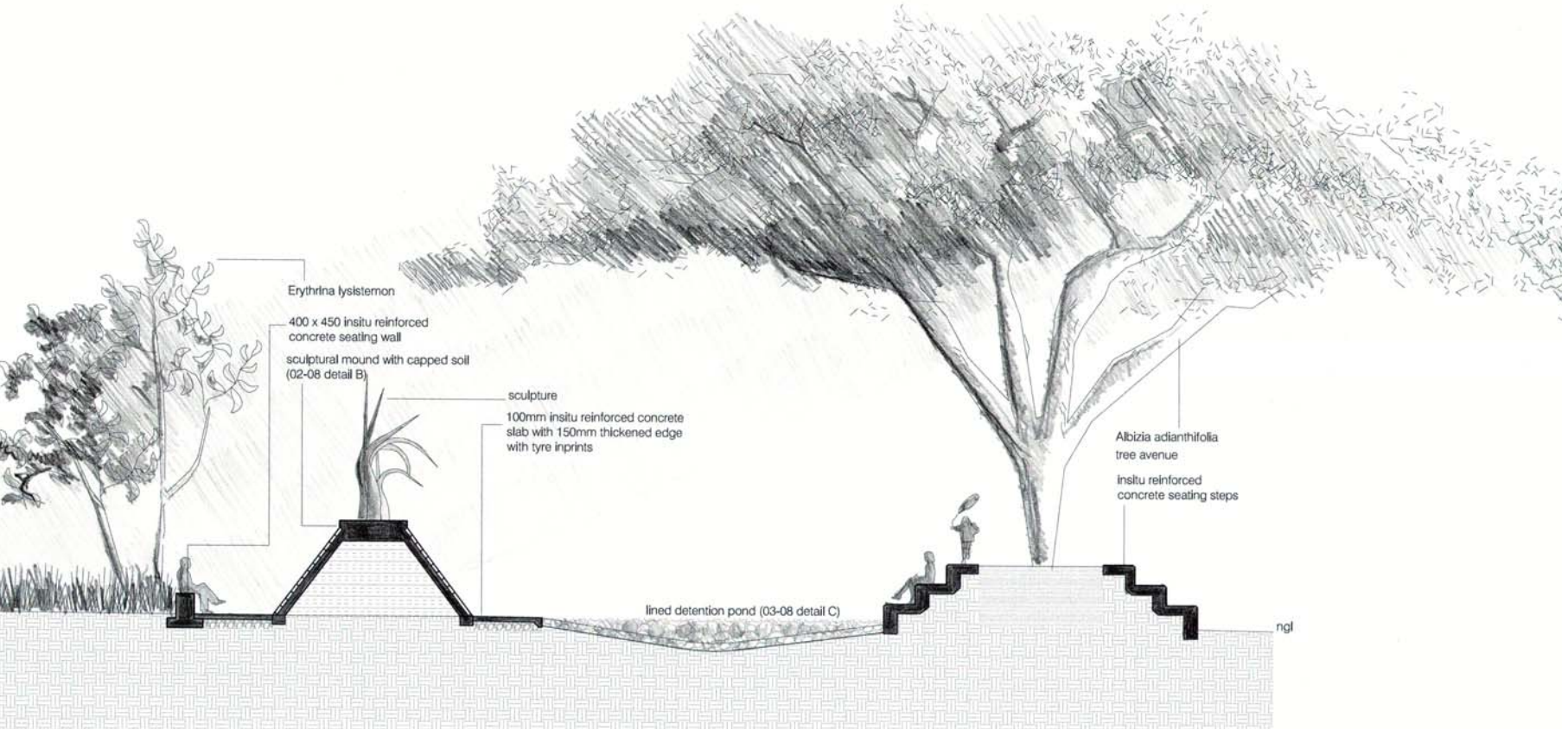


Illustration 184: Section B. Not to scale


Erythrina lysistemon
400 x 450 insitu reinforced concrete seating wall
sculptural mound with capped soil (02-08 detail B)
sculpture
100mm insitu reinforced concrete slab with 150mm thickened edge with tyre inprints
Albizia adianthifolia tree avenue
insitu reinforced concrete seating steps
lined detention pond (03-08 detail C)
ngl

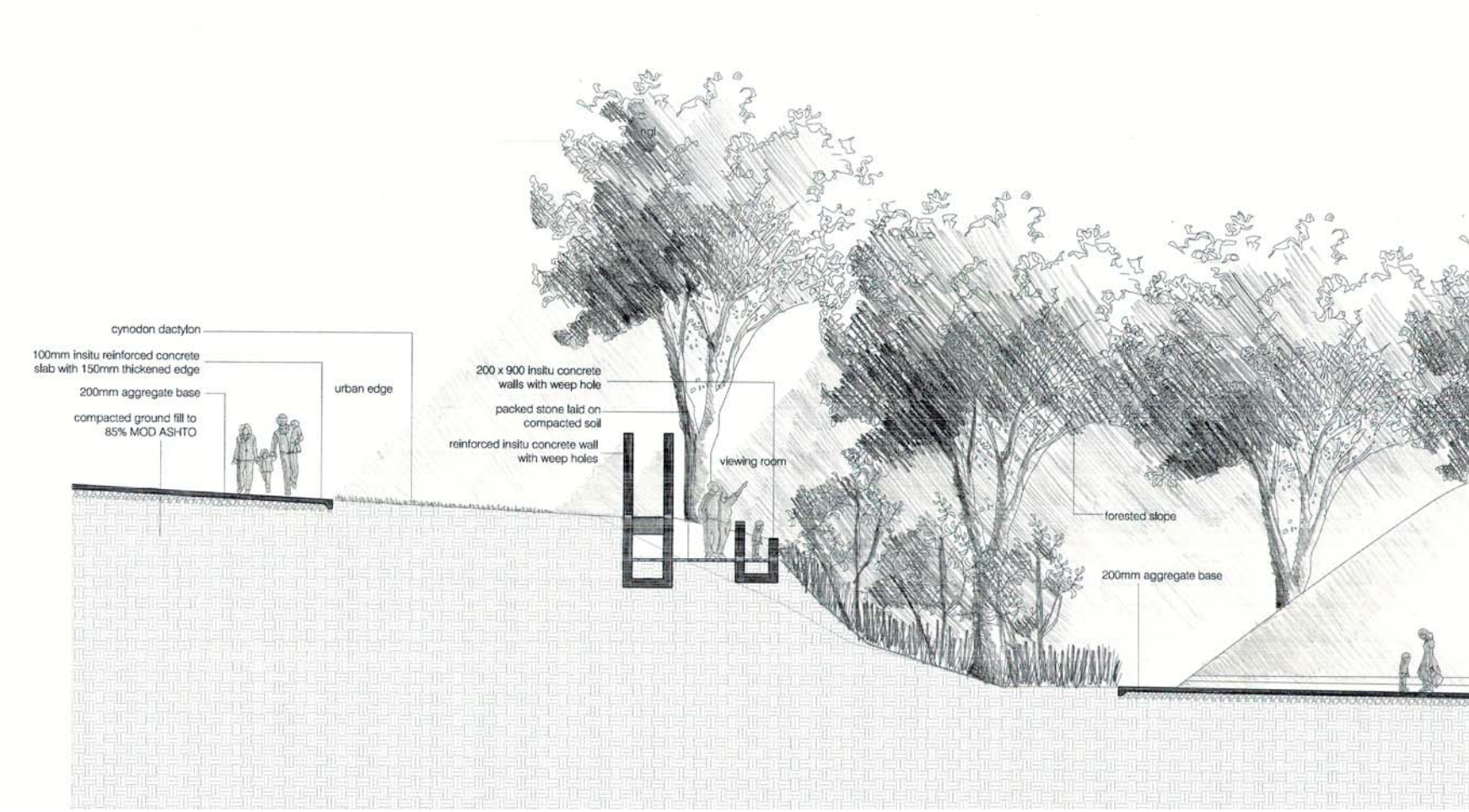
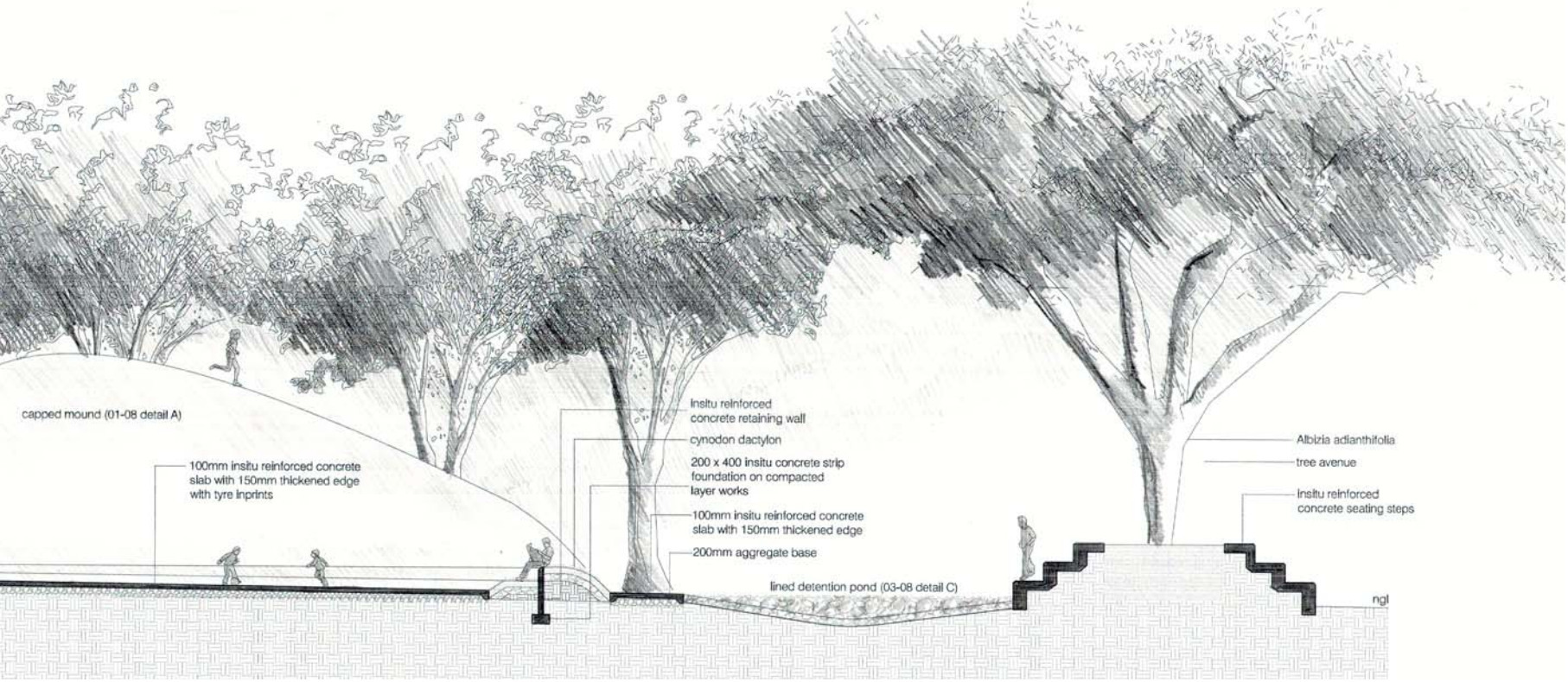


Illustration 185: Section elevation C. Not to scale


capped mound (01-08 detail A)
100mm insitu reinforced concrete slab with 150mm thickened edge with tyre inprints
insitu reinforced concrete retaining wall
cynodon dactylon
200 x 400 insitu concrete strip foundation on compacted layer works
100mm insitu reinforced concrete slab with 150mm thickened edge
200mm aggregate base
lined detention pond (03-08 detail C)
Albizia adianthifolia
tree avenue
insitu reinforced concrete seating steps
ngl

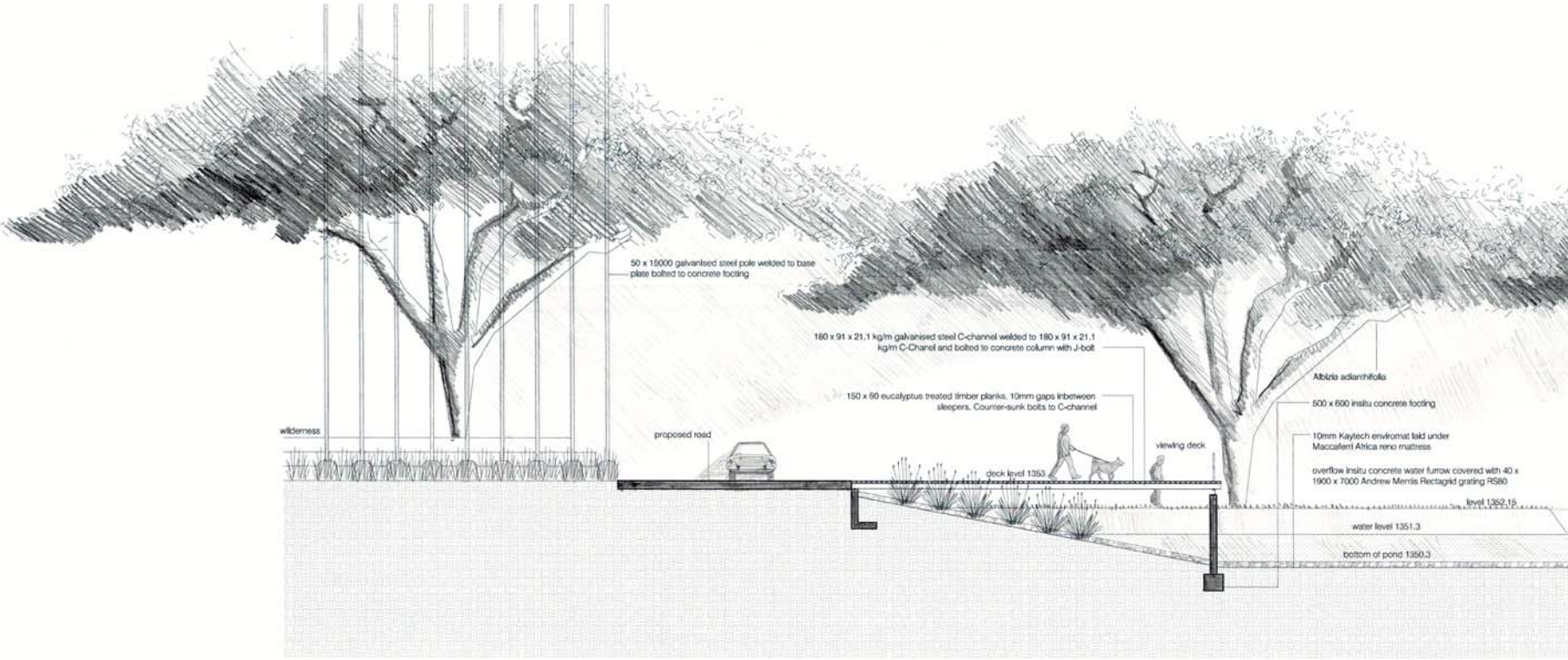
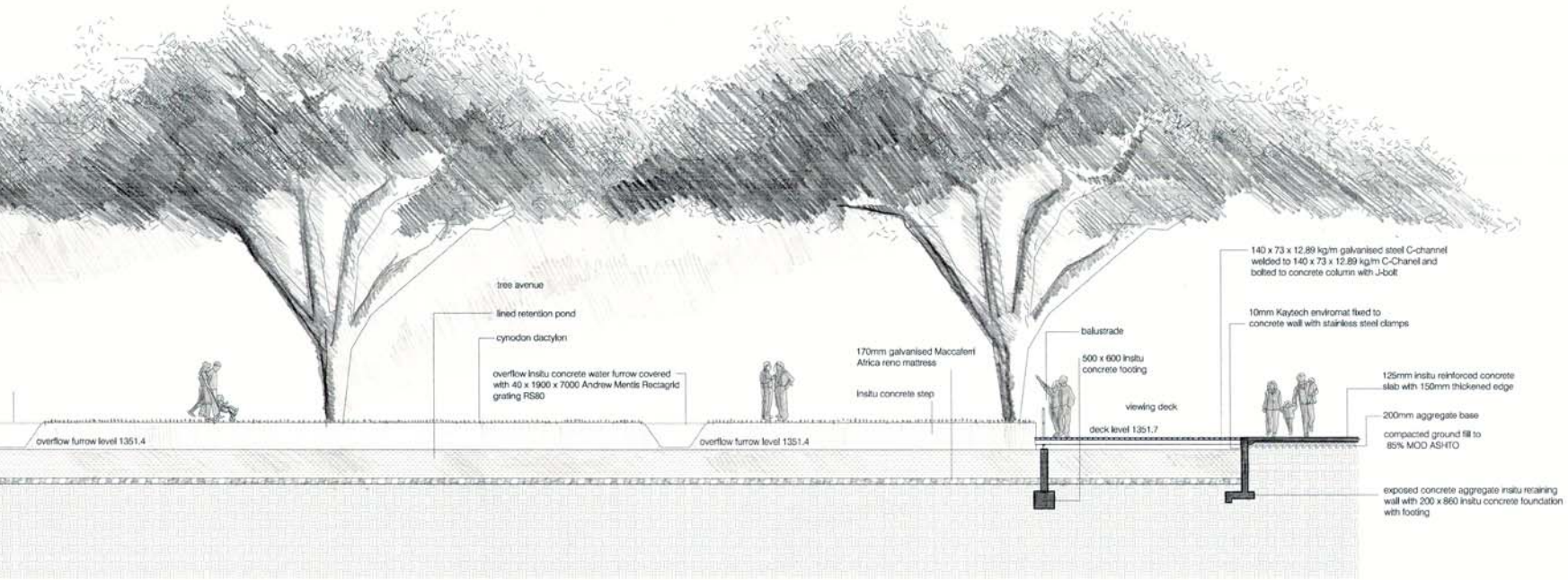


Illustration 186: Section elevation D. Not to scale


tree avenue
lined retention pond
cynodon dactylon
overflow insitu concrete water furrow covered with 40 x 1900 x 7000 Andrew Mentis Rectagrid grating RS80
overflow furrow level 1351.4
overflow furrow level 1351.4
170mm galvanised Maccaferri Africa reno mattress
insitu concrete step
balustrade
500 x 600 insitu concrete footing
viewing deck
deck level 1351.7
140 x 73 x 12,89 kg/m galvanised steel C-channel welded to 140 x 73 x 12.89 kg/m C-Chanel and bolted to concrete column with J-bolt
10mm Kaytech enviromat fixed to concrete wall with stainless steel clamps
125mm insitu reinforced concrete slab with 150mm thickened edge
200mm aggregate base
compacted ground fill to 85% MOD ASHTO
exposed concrete aggregate insitu retaining wall with 200 x 860 insitu concrete foundation with footing

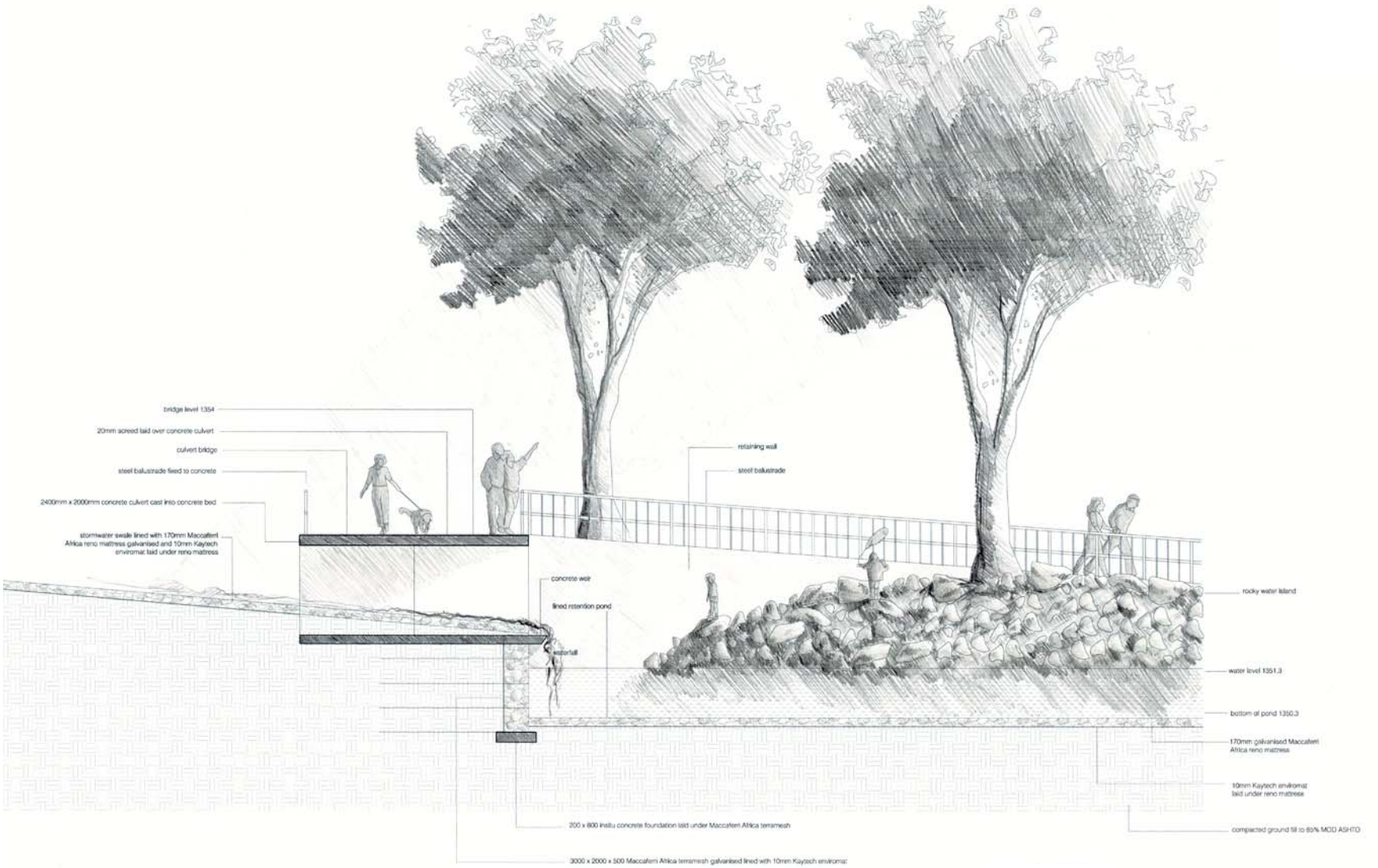


Illustration 187: Waterfall bridge. Section elevation E. Not to scale

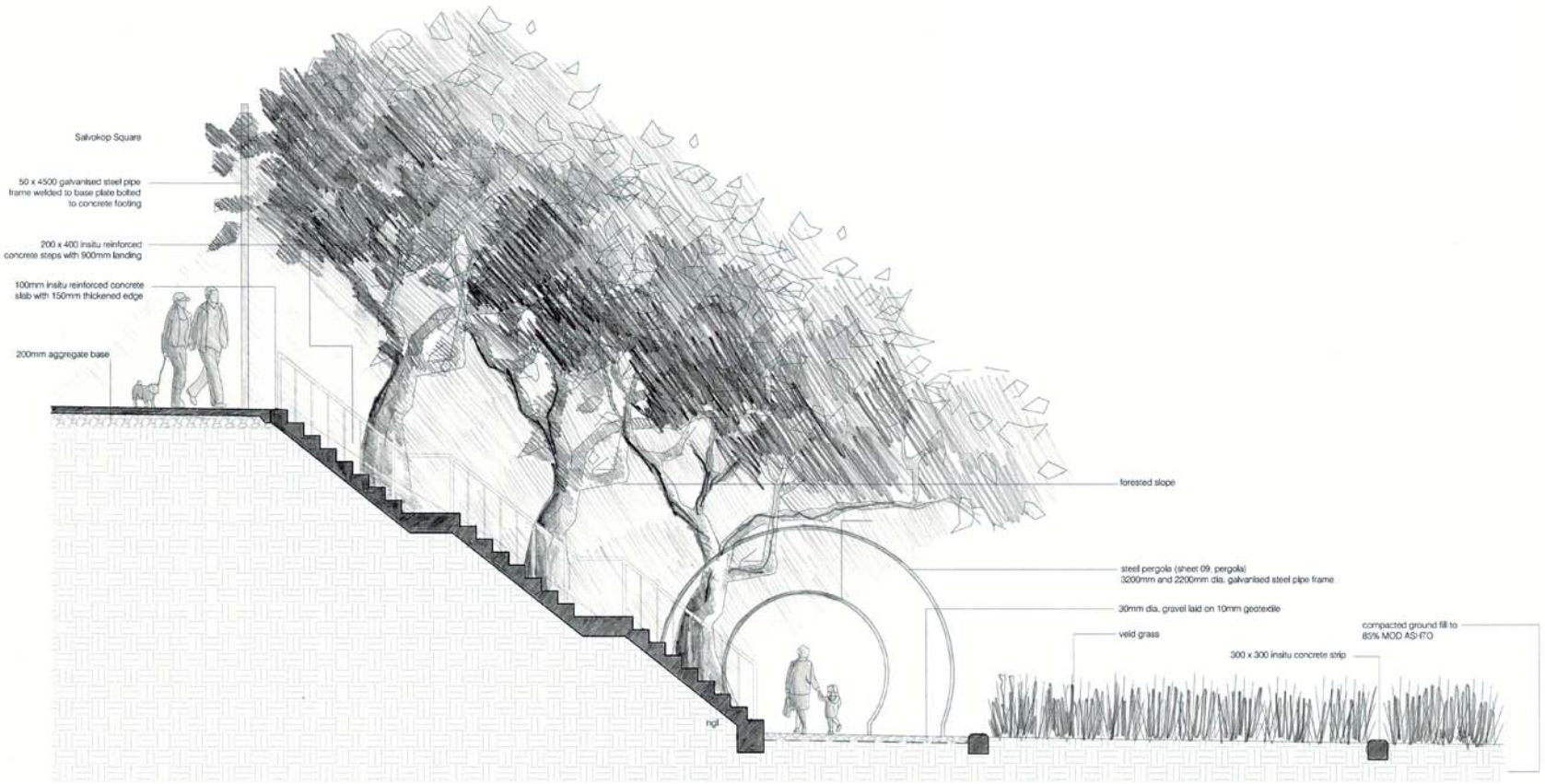


Illustration 188: Section elevation G. Not to scale

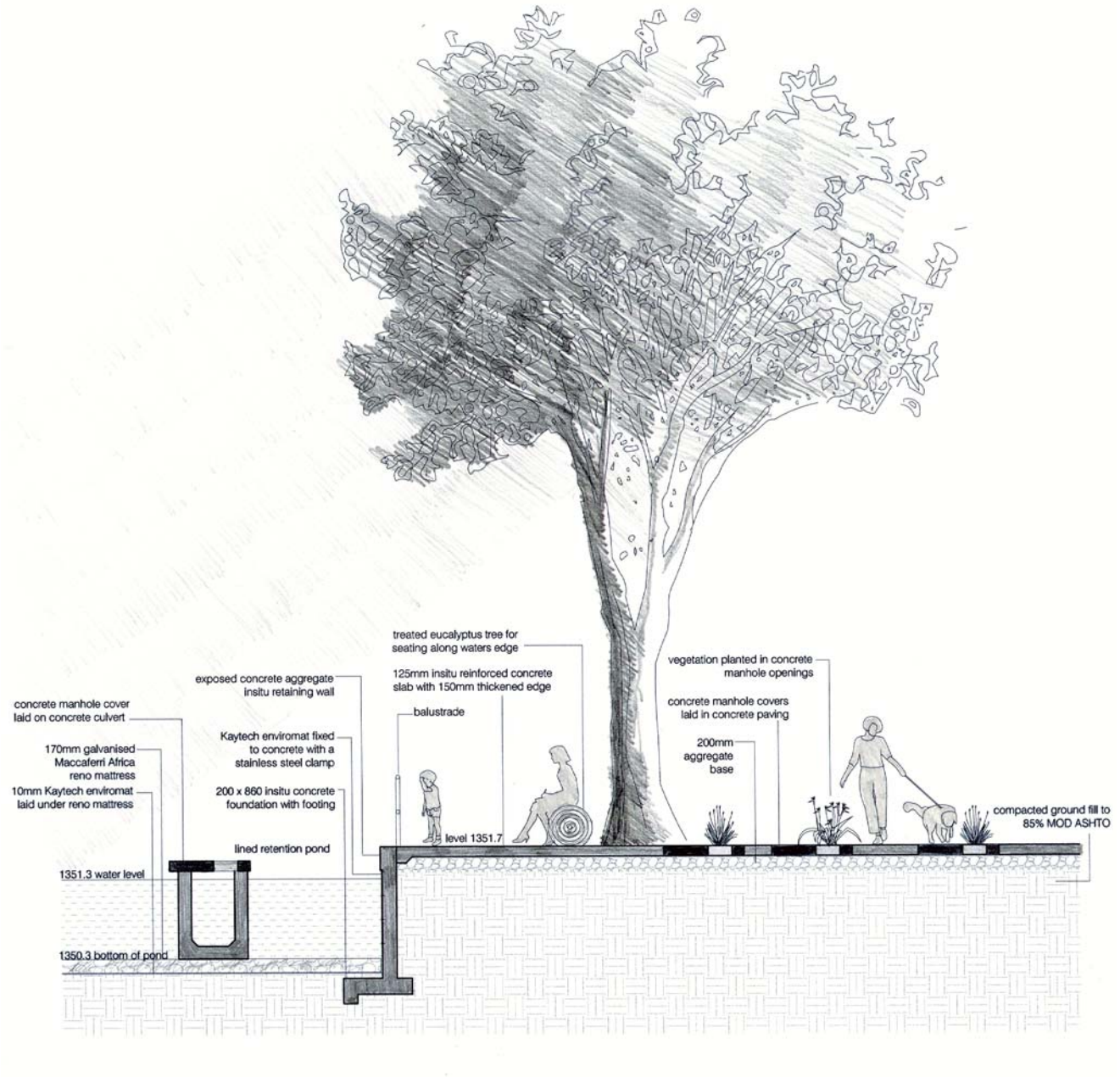


Illustration 189: Water edge. Section H. Not to scale

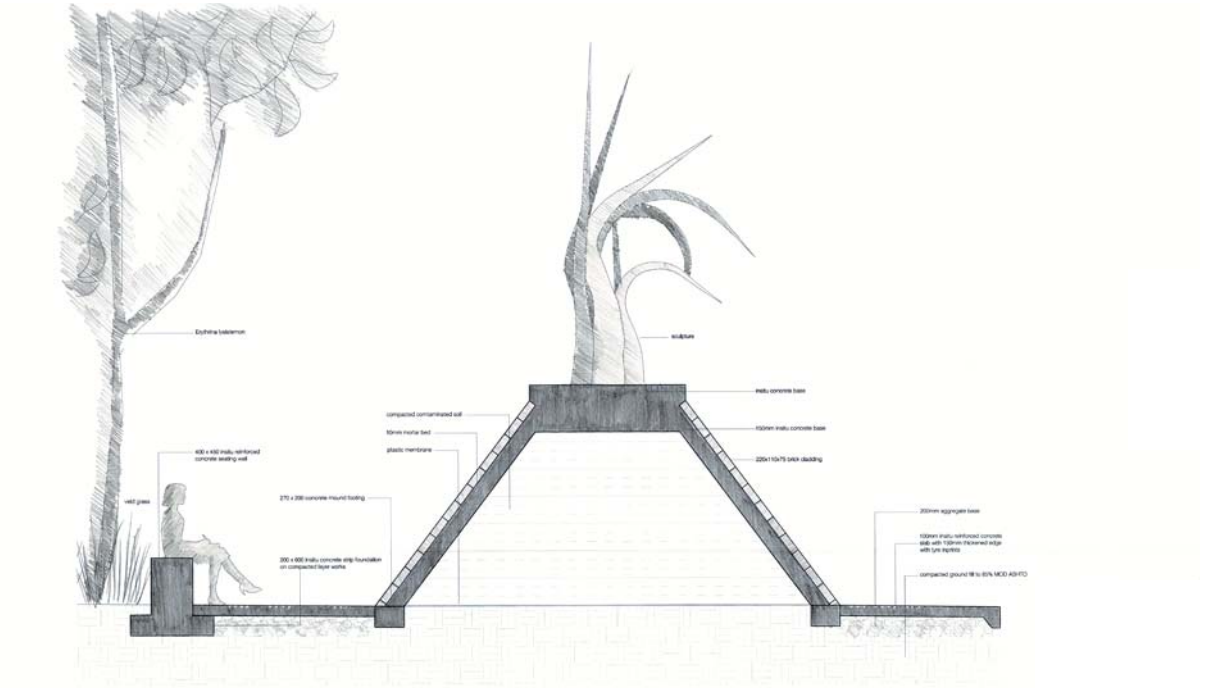


Illustration 190: Sculptural capped mound. Detail B. Not to scale

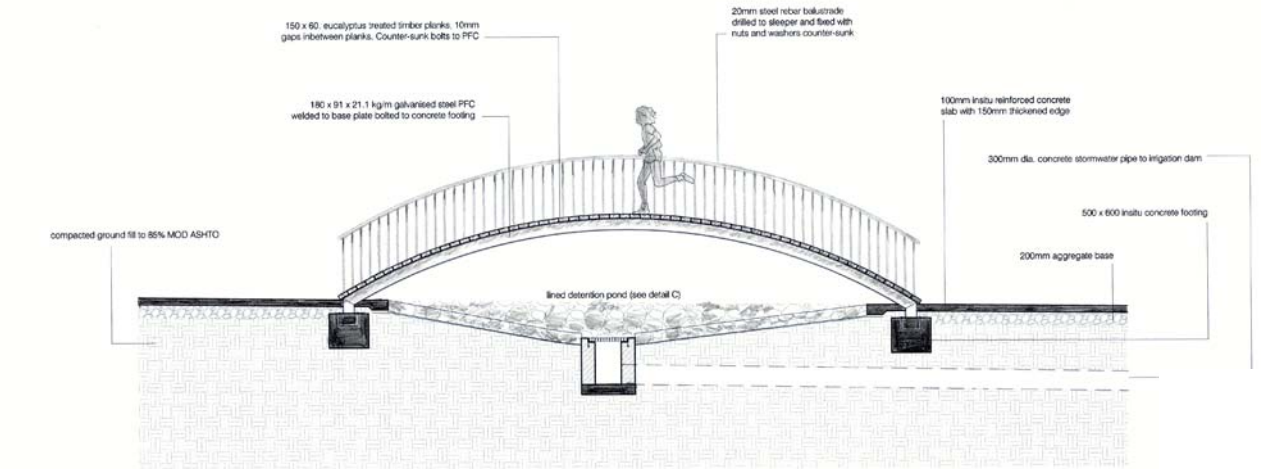


Illustration 191: Bridge 1 - Section I1. Not to scale

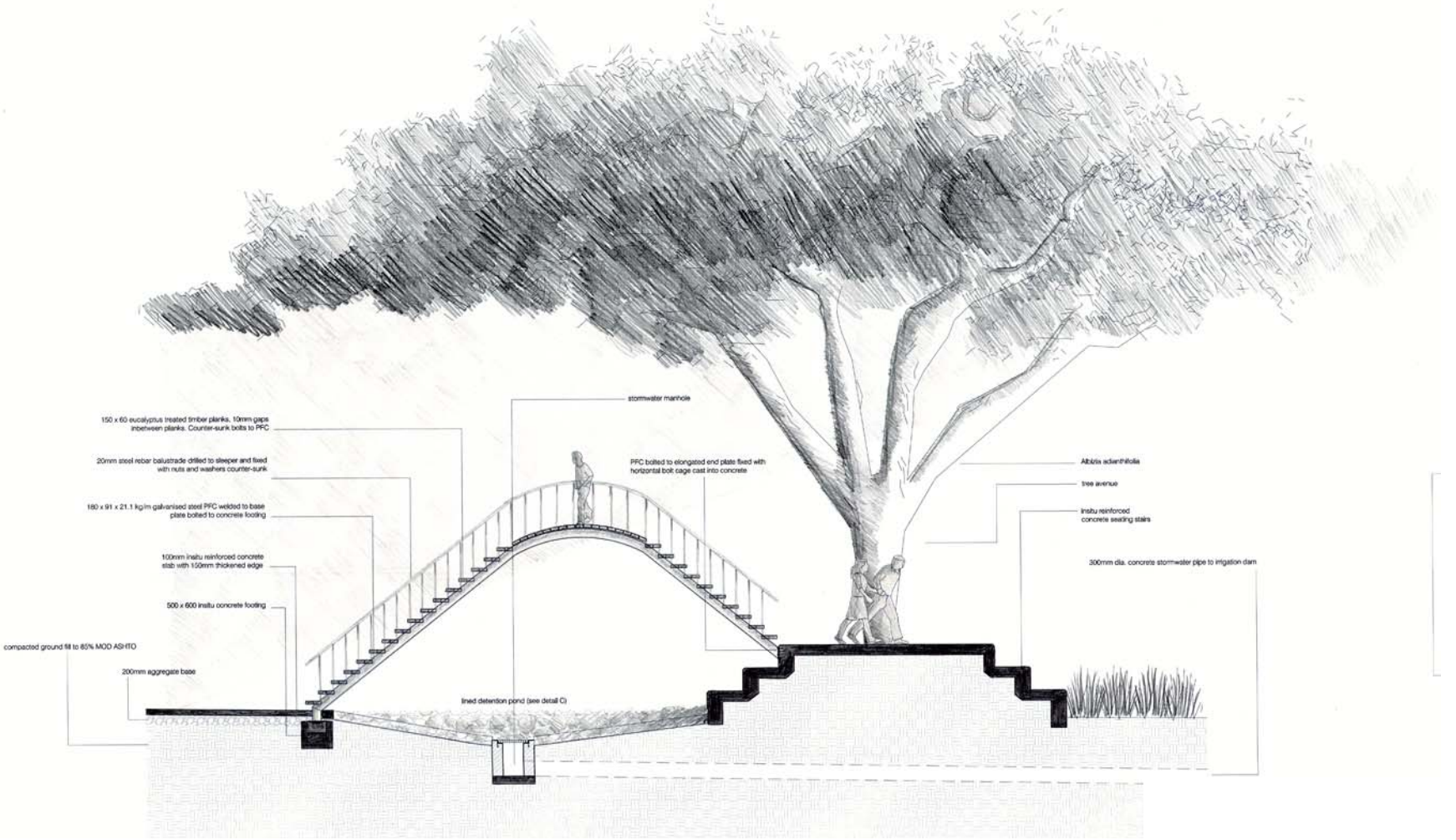


Illustration 192: Bridge 2 - Section I2. Not to scale

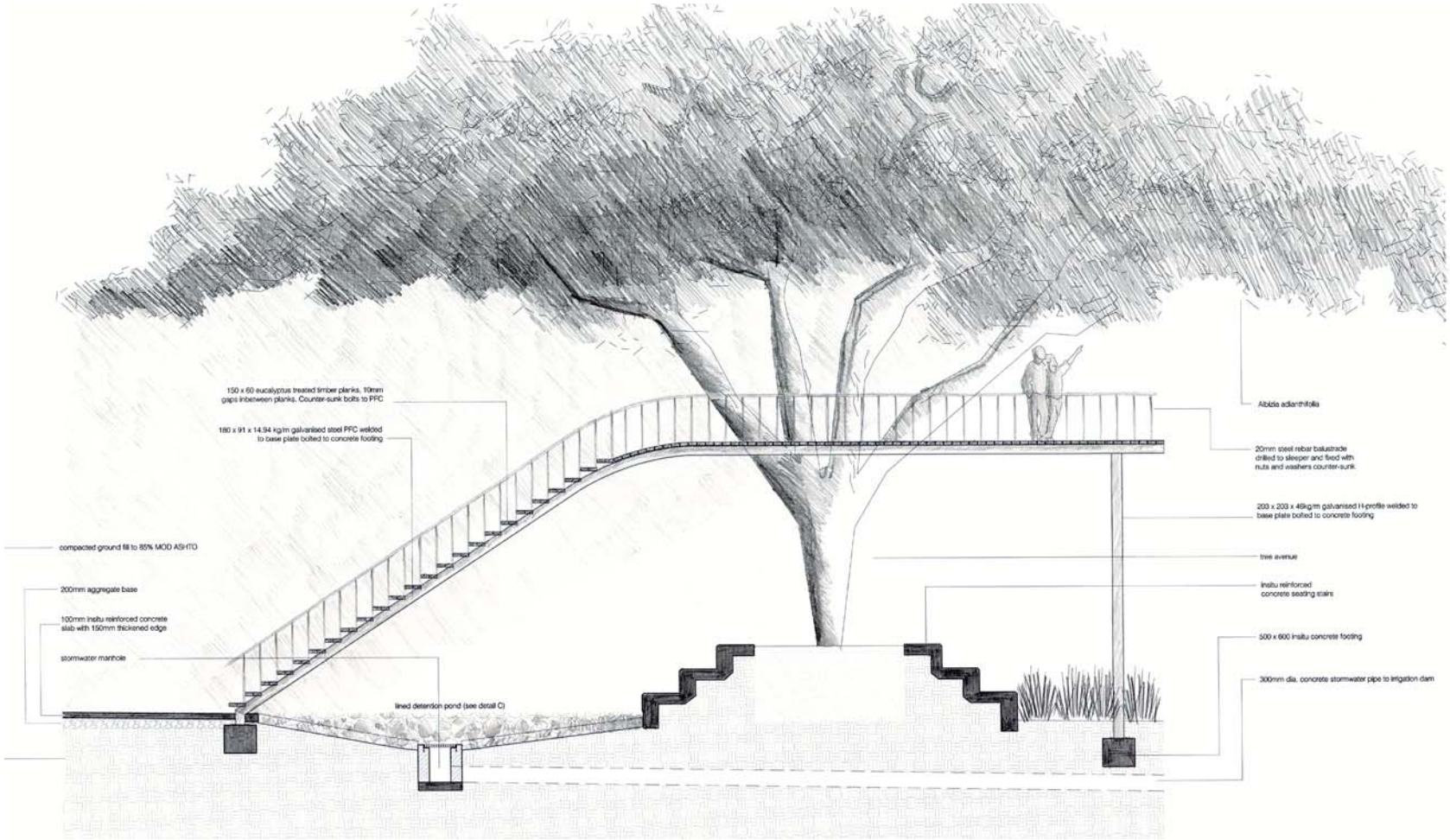


Illustration 193: Deck 3 - Section I3. Not to scale

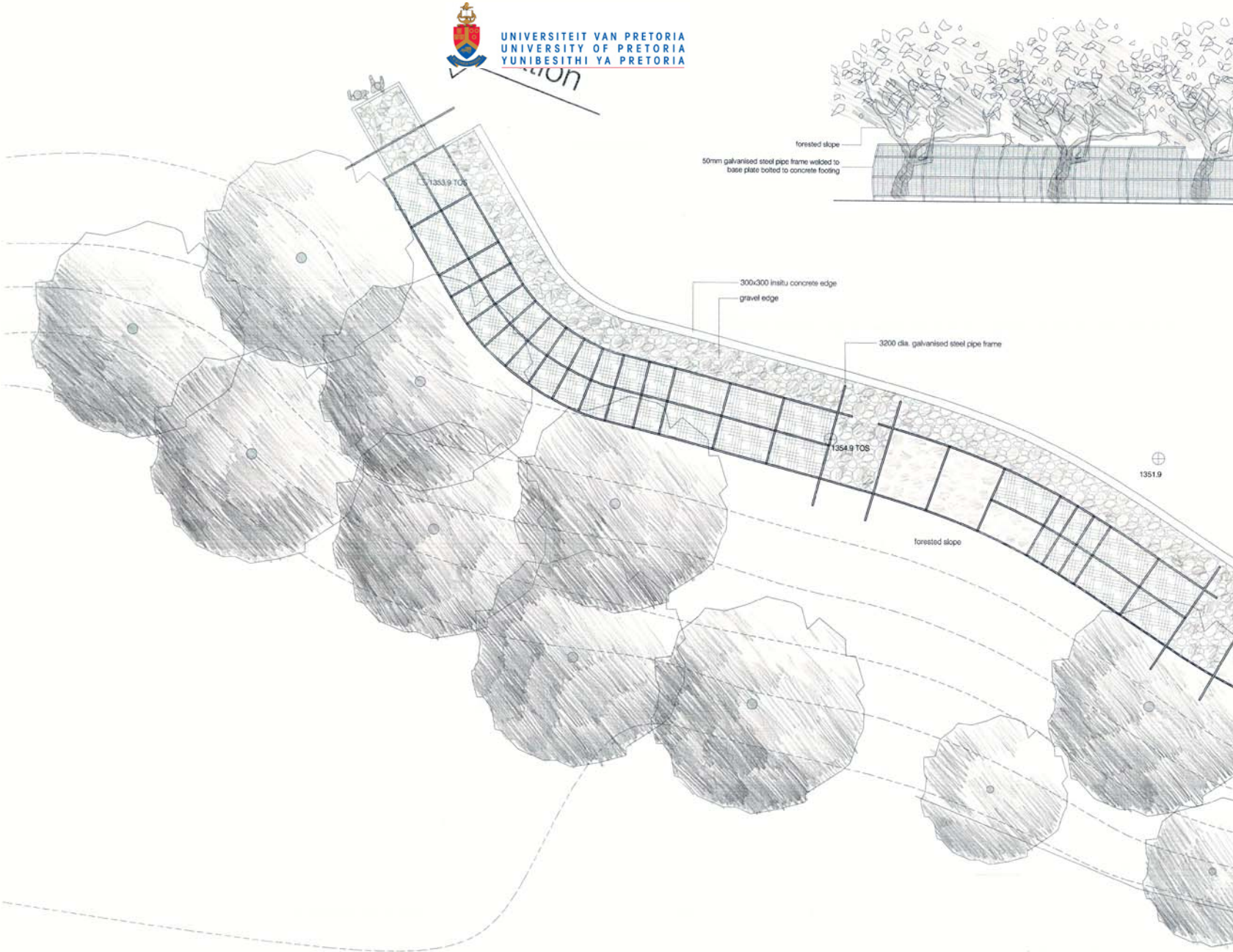
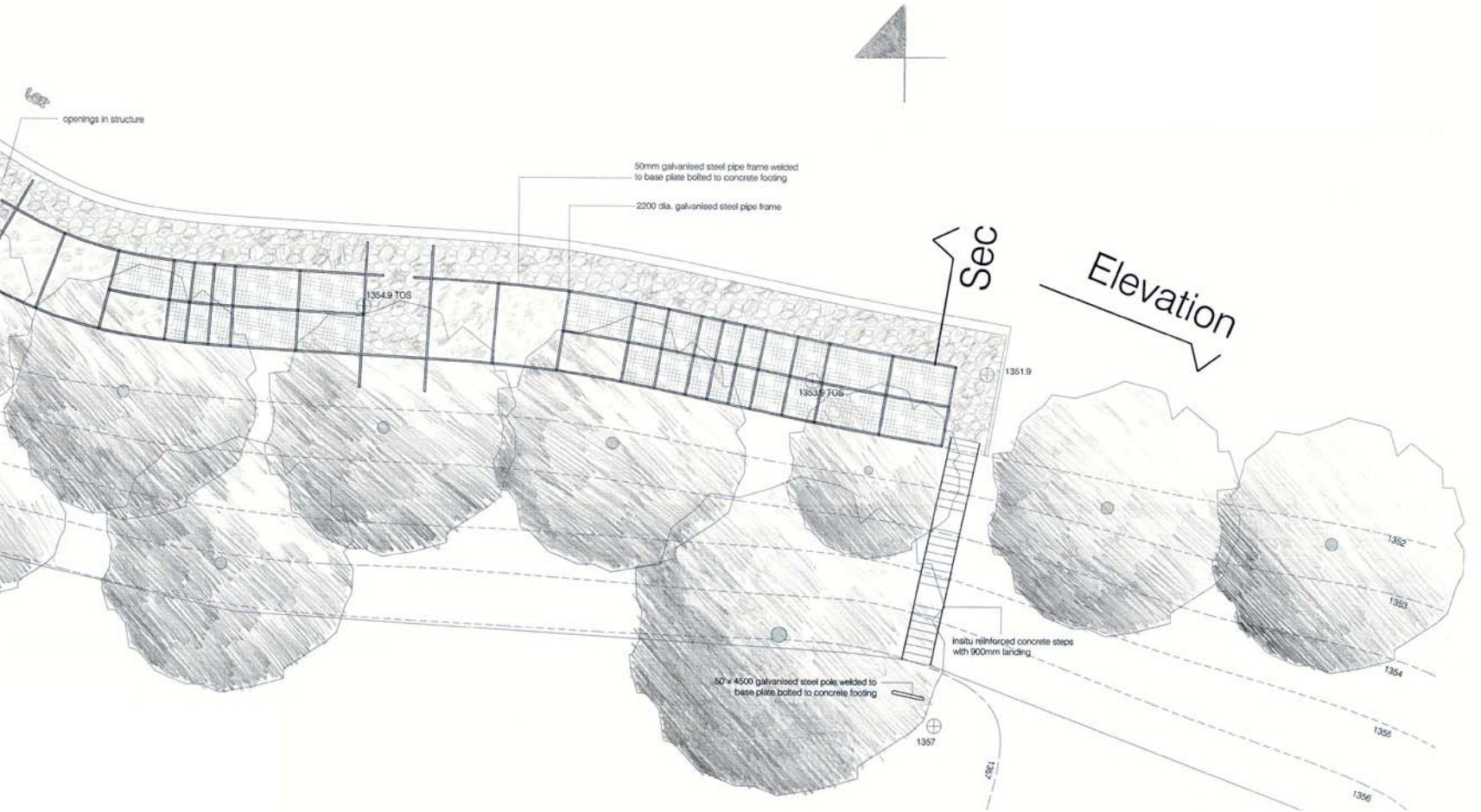


Illustration 194: Steel pergola plan. Not to scale

Illustration 195: Steel pergola elevation J. Not to scale



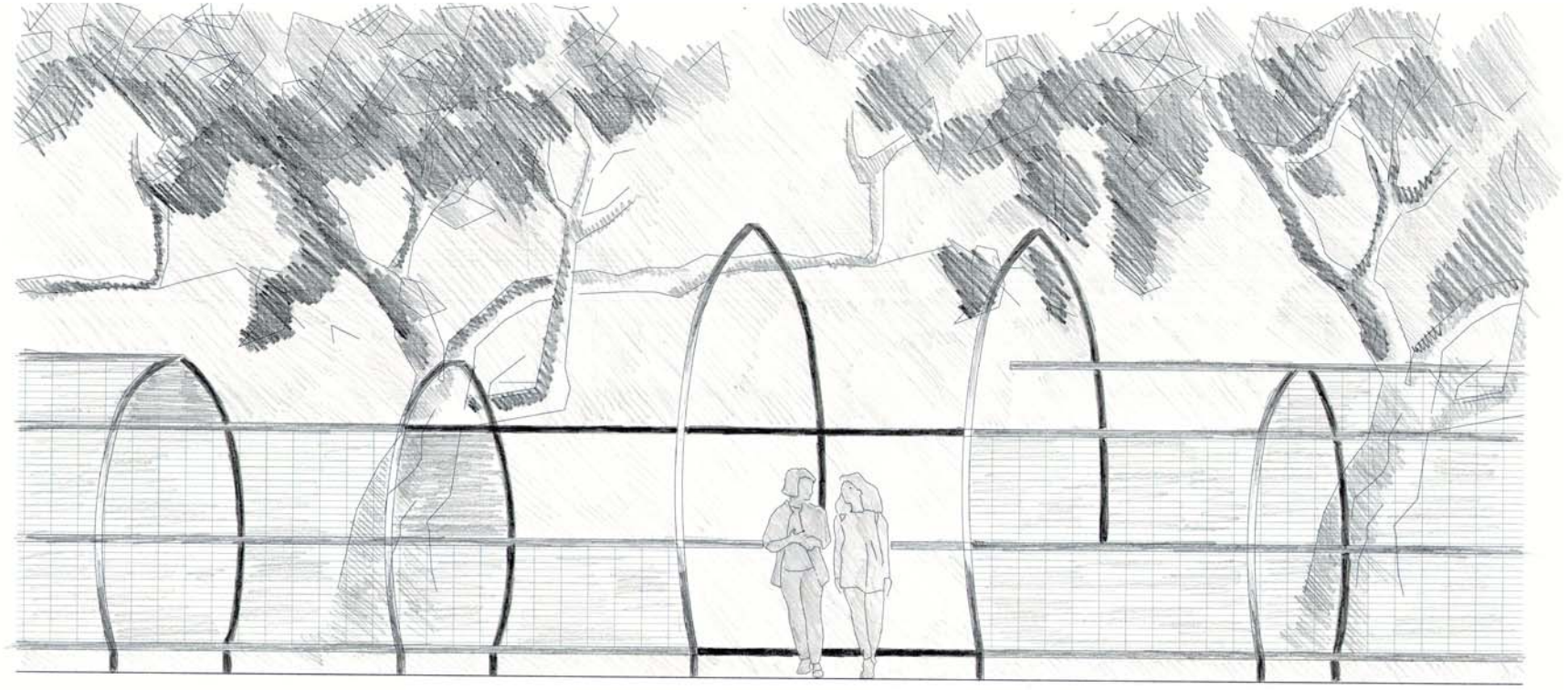


Illustration 196: Steel pergola detail elevation. Not to scale

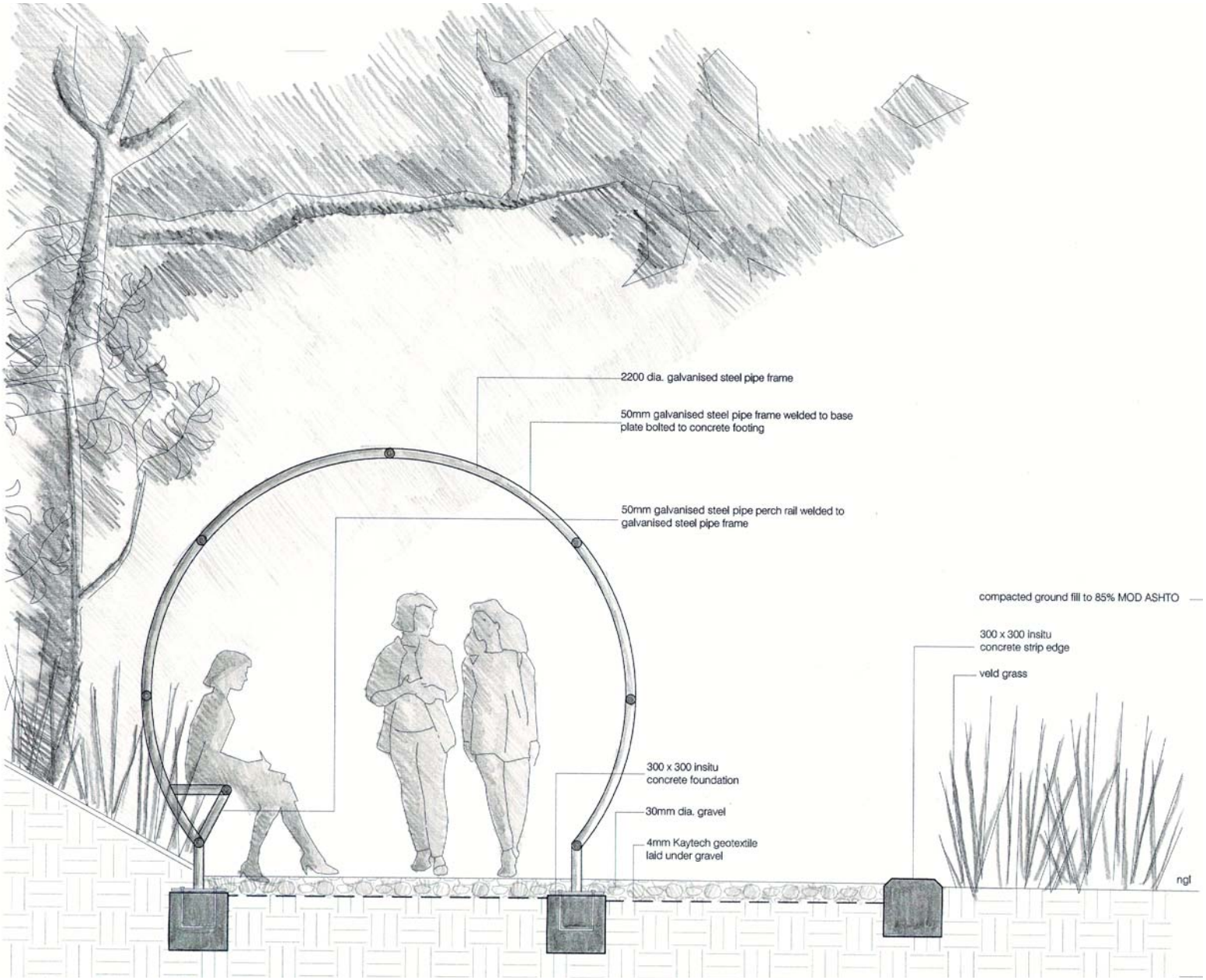


Illustration 197: Steel pergola detail. Not to scale

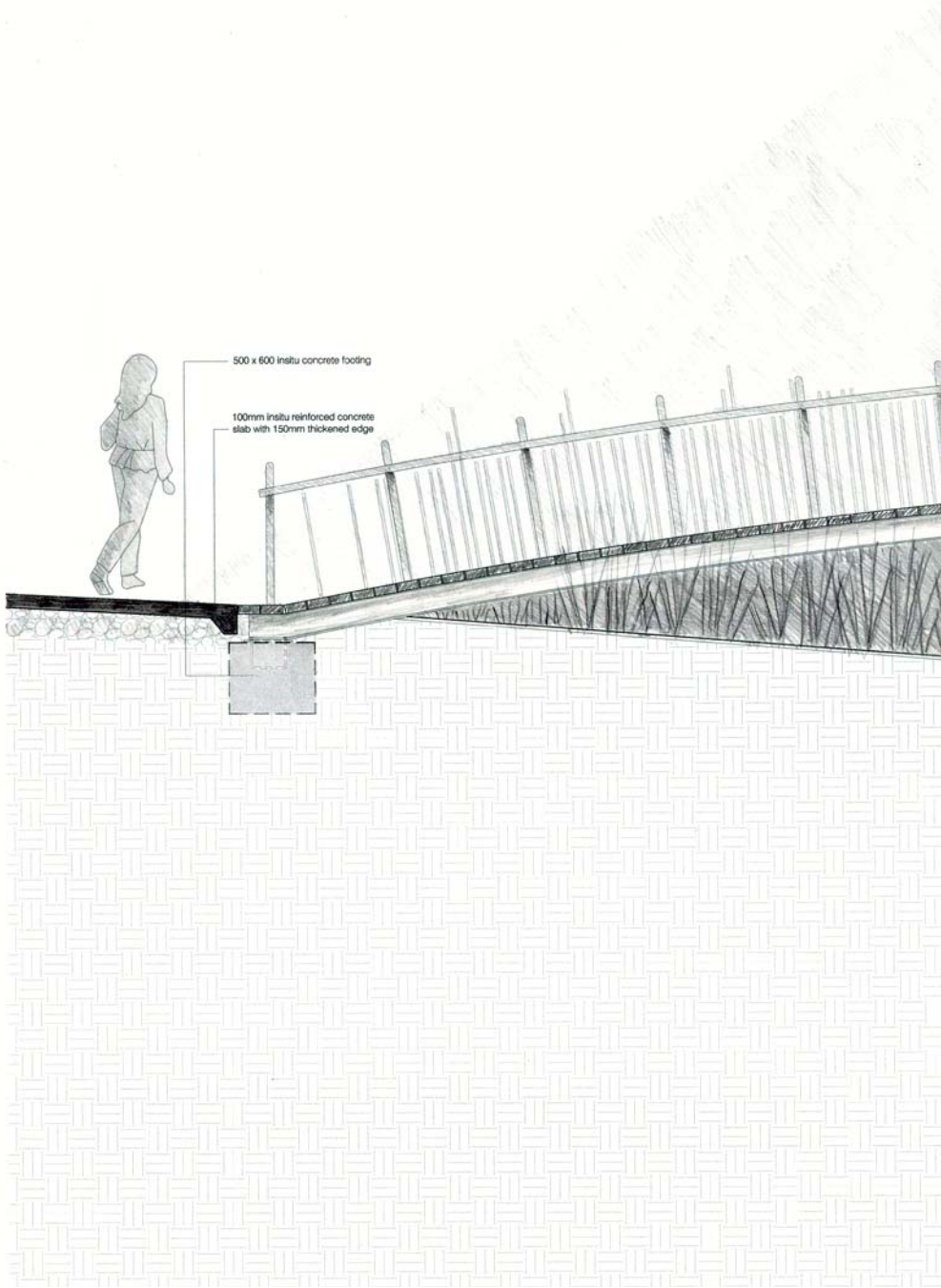
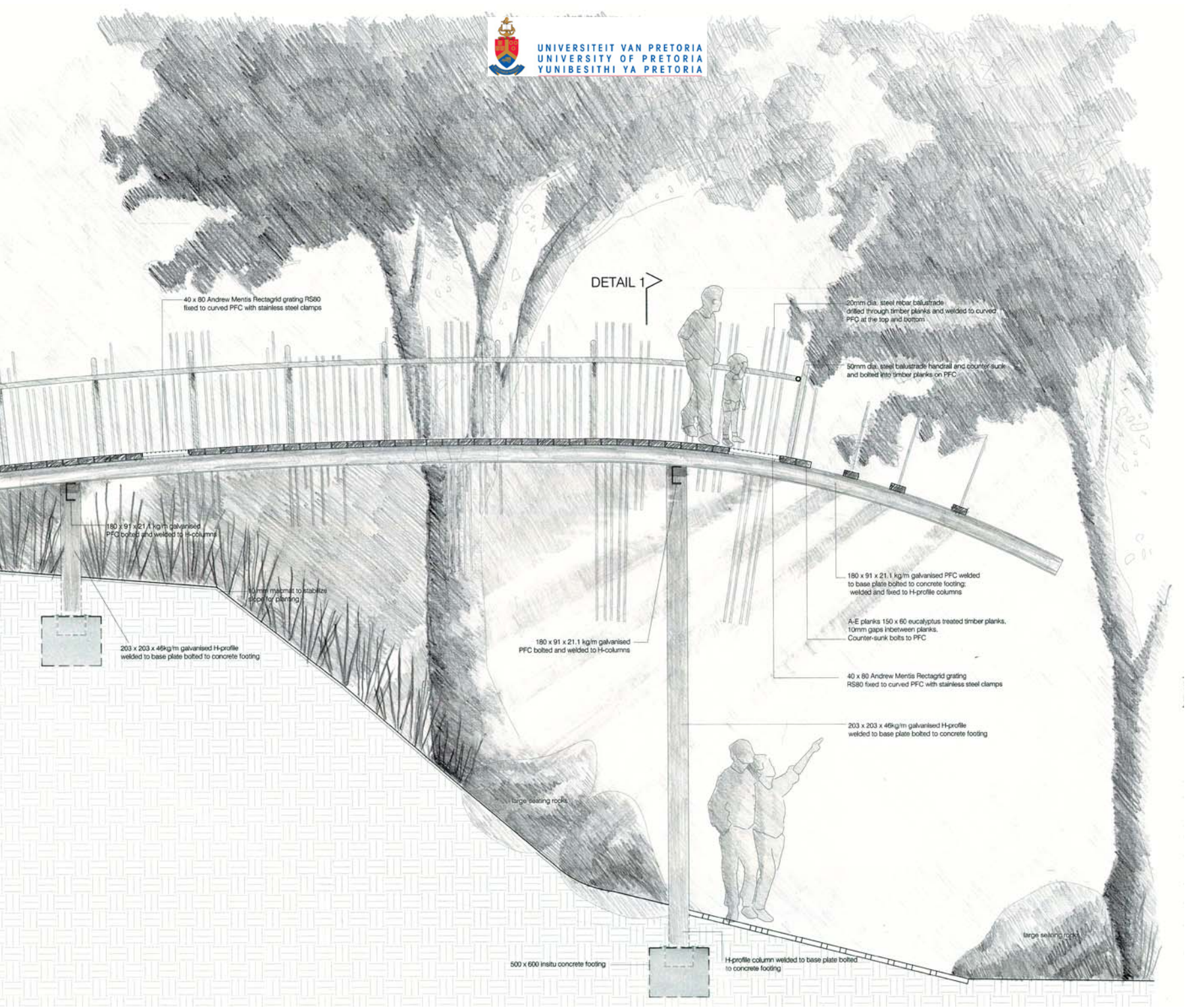


Illustration 198: Deck section. Not to scale


DETAIL 1
40 x 80 Andrew Mentis Rectagrid grating RS80 fixed to curved PFC with stainless steel clamps
20mm dia. steel rebar balustrade drilled through timber planks and welded to curved PFC at the top and bottom
50mm dia. steel balustrade handrail and counter sunk and bolted into timber planks on PFC
180 x 91 x 21.1 kg/m galvanised PFC bolted and welded to H-columns
10mm matcmat to stabilize slope for planting
203 x 203 x 46kg/m galvanised H-profile welded to base plate bolted to concrete footing
180 x 91 x 21.1 kg/m galvanised PFC bolted and welded to H-columns
180 x 91 x 21.1 kg/m galvanised PFC welded to base plate bolted to concrete footing; welded and fixed to H-profile columns
A-E planks 150 x 60 eucalyptus treated timber planks. 10mm gaps inbetween planks. Counter-sunk bolts to PFC
40 x 80 Andrew Mentis Rectagrid grating RS80 fixed to curved PFC with stainless steel clamps
203 x 203 x 46kg/m galvanised H-profile welded to base plate bolted to concrete footing
large seating rocks
large seating rocks
500 x 600 insitu concrete footing
H-profile column welded to base plate bolted to concrete footing

8.14 Perspectives

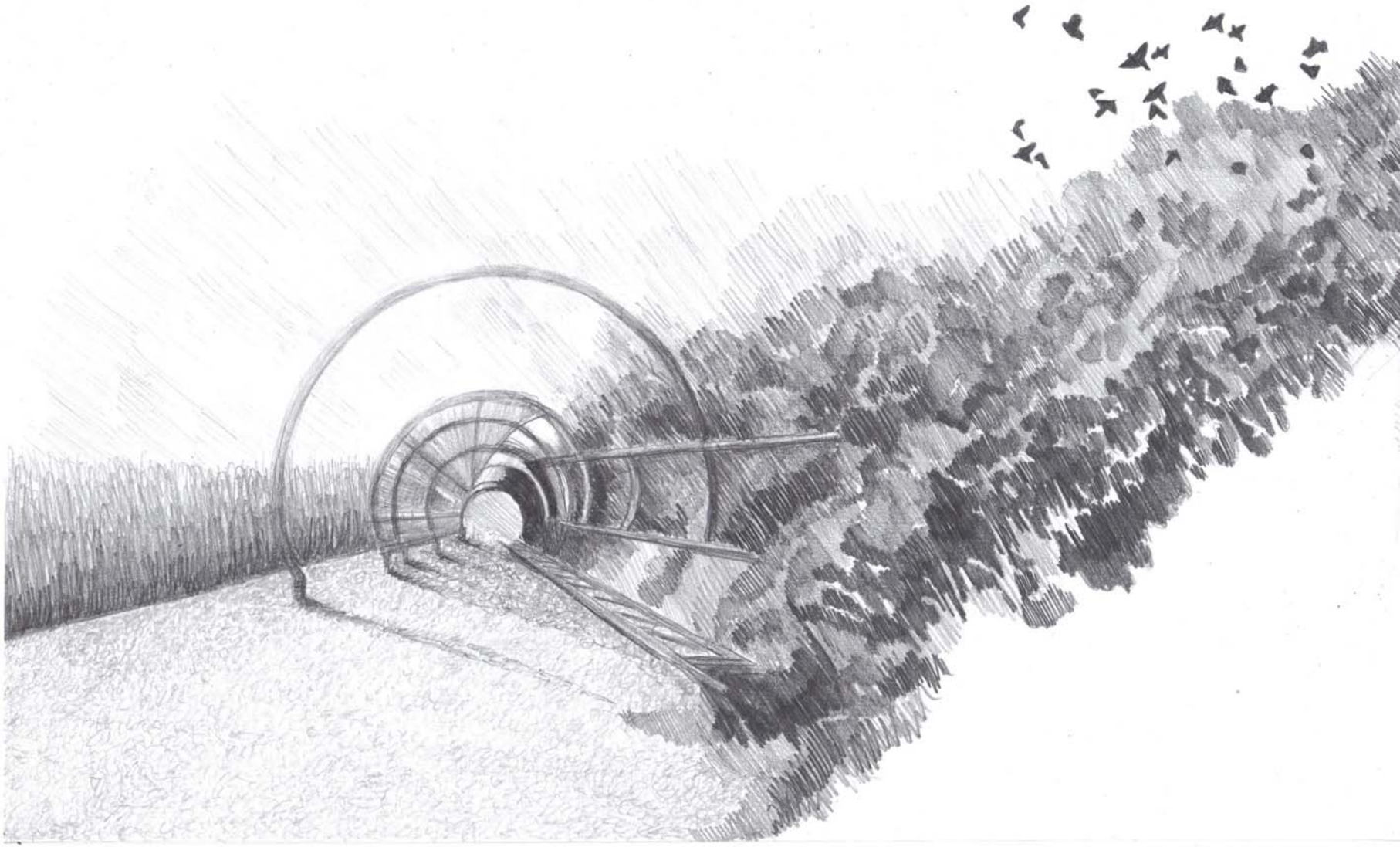


Illustration 199: Perspective

Illustration 200: Perspective

Illustration 201: Perspective

Illustration 202: Perspective

8.15 Design layers

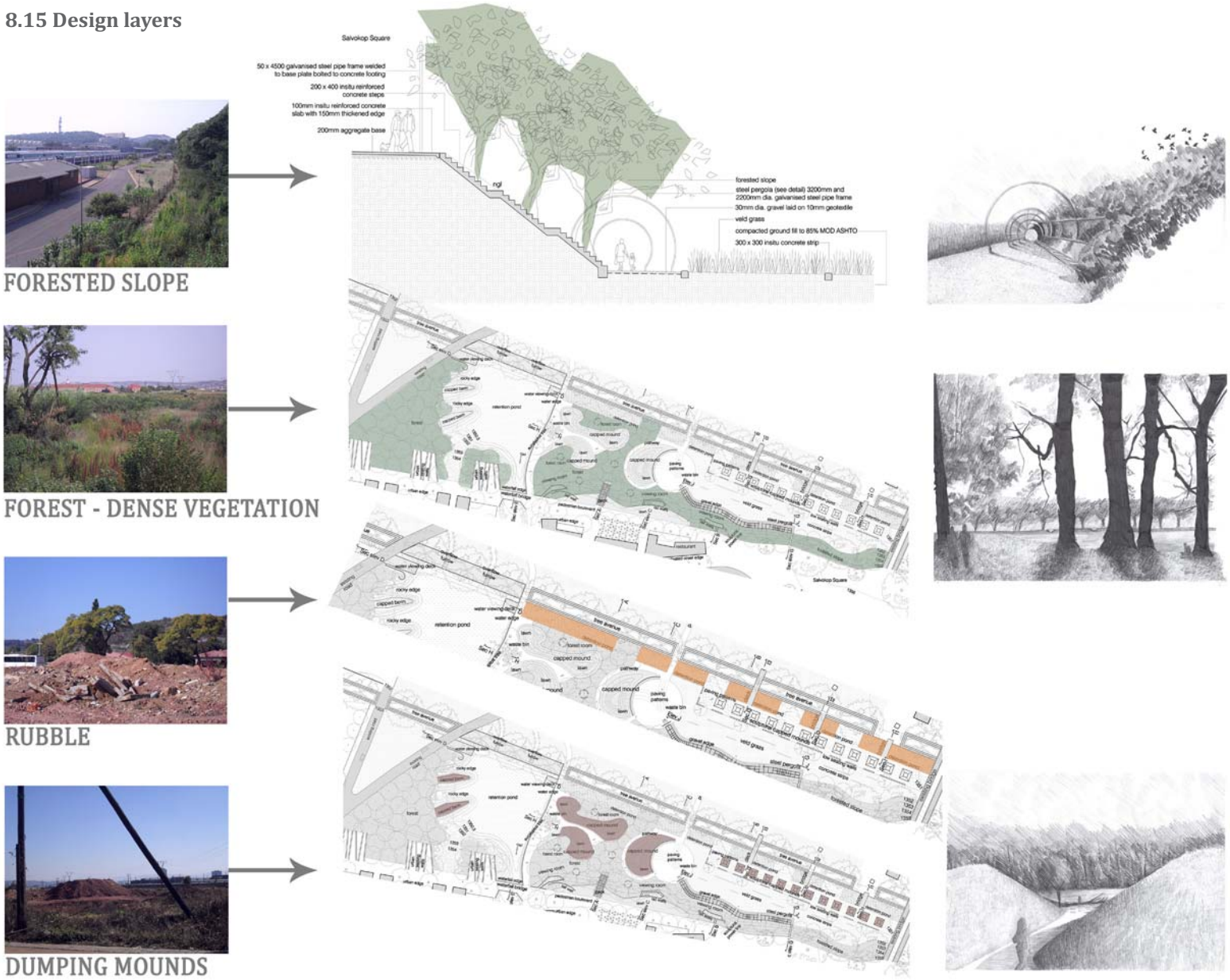
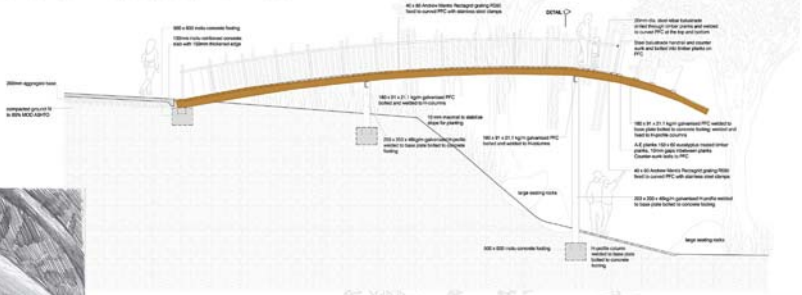


Illustration 203: Design layers

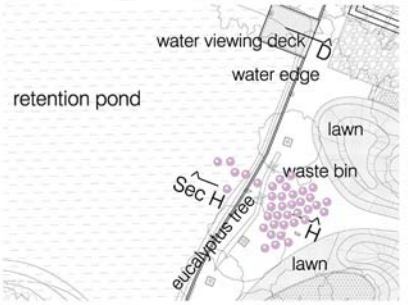
EXISTING WATERWAY

STRUCTURES



WASTE BINS

CONCRETE MANHOLE COVERS



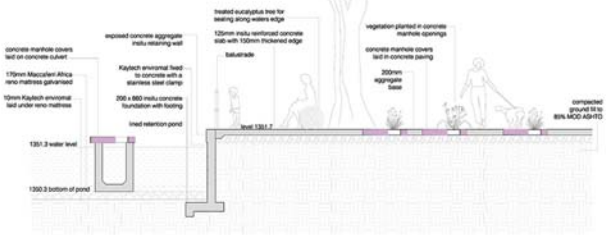


Illustration 204: Design layers

8.16 Masterplan phases

As this project and its theory emphasises long term solutions, the transformation phases of the wasteland become of utmost importance. Figure 5 illustrates a proposed timeline of the phases. Furthermore, illustrations 205 to 207 propose intervention phases, from contaminated soil shifting and land rehabilitation to the implementation of the four places. This allows the design to adapt over time and not remain static. It celebrates indeterminacy and change.

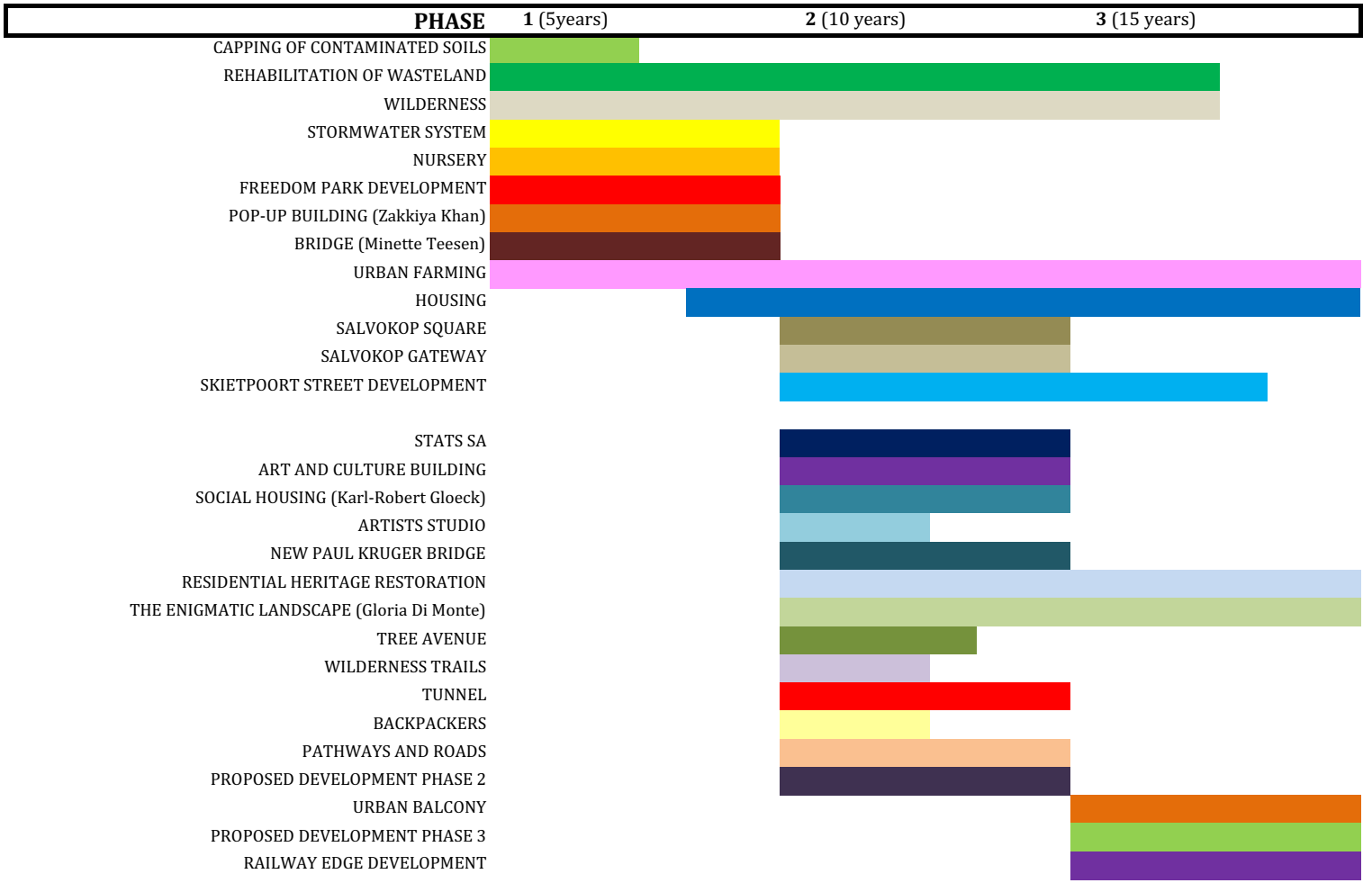


Figure 5: Project phases

8.16.1 Phase one

Illustration 205: Masterplan phase one

8.16.2 Phase two

Illustration 206: Masterplan phase two

8.16.3 Phase three

Illustration 207: Masterplan phase three

8.17 Sustainability rating

The Sustainable Sites Initiative (SSI) tool was used in order to generate a sustainability rating for the proposed Salvokop intervention. The Sustainable Sites Initiative is a partnership of the American Society of Landscape Architects. This tool is used to establish and encourage sustainable practices in landscape design, construction, operations, and maintenance (The Sustainable Sites Initiative: Guidelines and Performance Benchmarks, 2009). The SSI rating system is designed to address three key areas: social, environmental, and economic, "[u]nless all three aspects are equally vibrant, true sustainability is not possible" (The Sustainable Sites Initiative: The Case for Sustainable Landscapes, 2009:9).
According to The Sustainable Sites Initiative (ibid), the Guiding Principles of a Sustainable Site include:

- Do no harm;
- Precautionary principle;
- Design with nature and culture;
- Use a decision-making hierarchy of preservation, con servation, and regeneration;
- Provide regenerative systems as intergenerational equity;
- Support a living process;
- Use a systems thinking approach;
- Use a collaborative and ethical approach;
- Maintain integrity in leadership and research;
- Foster environmental stewardship;

The prerequisites and credits are organized into nine sections that are based on the process of site development (ibid). The Salvokop intervention achieved the following ratings:

1. Site selection: 21/21
2. Pre-Design Assessment and Planning: 3/4
3. Site Design—Water: 44/44
4. Site Design—Soil and Vegetation: 46/51
5. Site Design—Materials Selection: 34/36
6. Site Design—Human Health and Well-Being: 30/32
7. Construction: 20/21
8. Operations and Maintenance: 17/23
9. Monitoring and Innovation: 10/18

The project achieved an overall sustainability rating of 228 points out of a total of 250 points which classifies it as a four star sustainable project (see table 8).

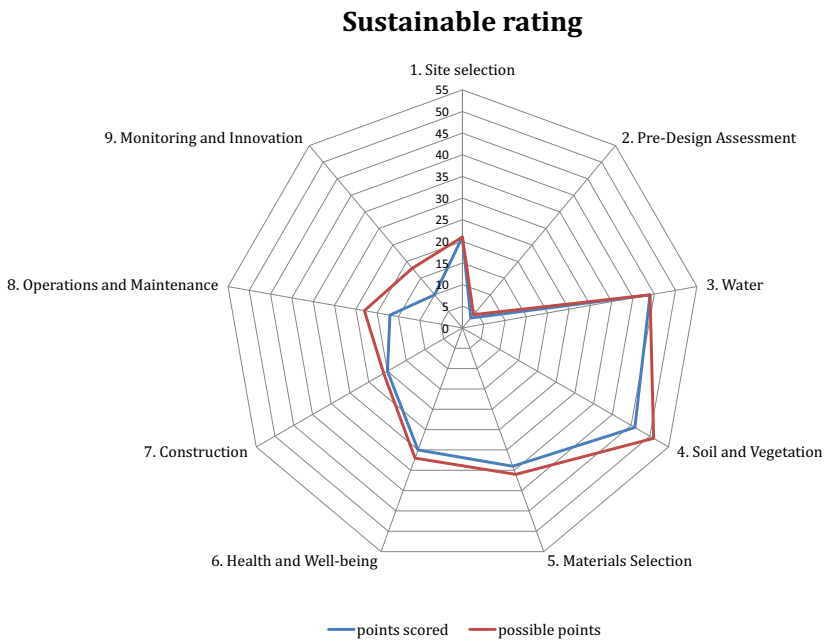


Figure 6: Sustainability rating chart