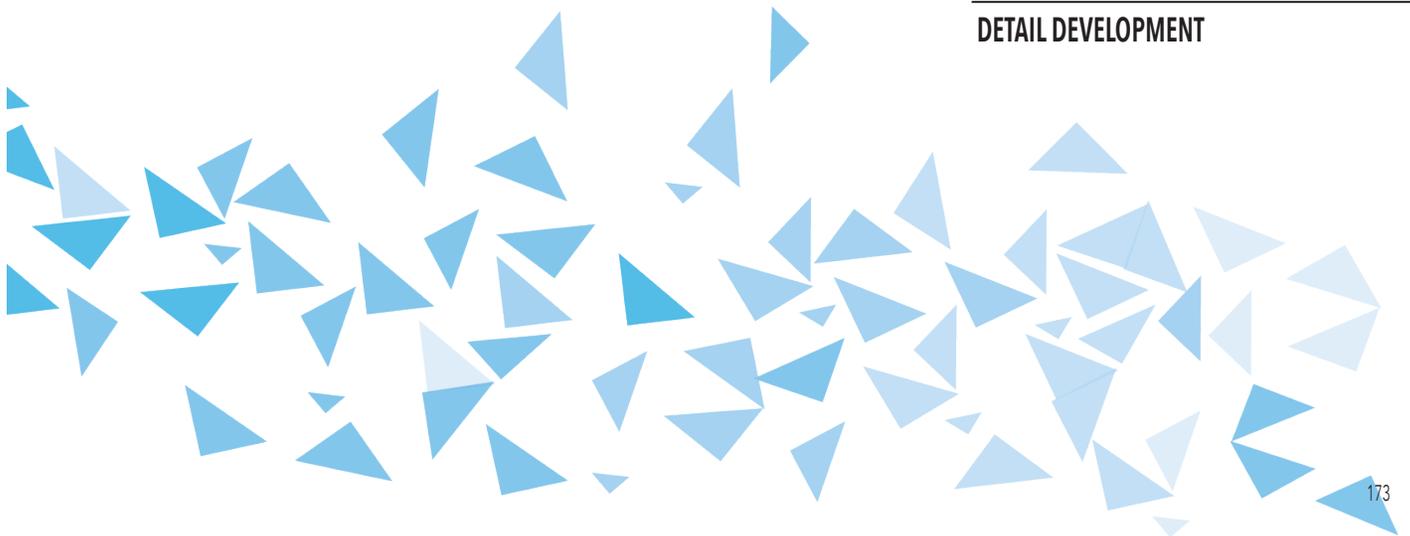


# CHAPTER 9

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## DETAIL DEVELOPMENT





## 09.01 INTRODUCTION

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This chapter investigates technical details of construction and material of the sketch plan. Various investigations will be done in order to find the best required solutions. The investigations will keep in mind the theory of carnivalesque and freedom of expression.

## 09.02 TECHNICAL INVESTIGATIONS

### 09.02.01 INVESTIGATION OF SKATEPARKS

Skateparks were investigated, since it has become quite a popular sport among the youth. Manipulated surfaces are ideal for skateboarders and therefore the decision was made to ensure that opportunity for this is possible, if skateboarders would be interested to express themselves within this landscape.

Various park administrators have claimed that skateparks are usually one of the most popular recreational facilities (Public Skatepark Guide, 2015).

For a skater to use a space for skateboarding, a large flat surface with a few benches with smooth and hard edges will be successful. Of course there are more and less successful skateparks (Søren Enevoldsen, 2015. URL: <https://fakiehillbomb.wordpress.com/2015/08/14/small-gestures-that-go-beyond-mere-function-discussing-denmark-chinese-plazas-and-jim-greco-with-soren-enevoldsen/>).

General functional concerns within a skate area is drainage, access, capacity, seating for resting and visibility. Seating around the skatepark is also important, so that spectators are able to watch. In terms of the skaters, speed, difficulty and visibility are important (<http://publicskateparkguide.org/design-and-construction/factors-of-skatepark-design/>).

Main design considerations (according to Anthony Gembeck):

- Flatbottom
- Transition
- Lips, edges, curbs, steps and coping

Surface for skating is the most important aspect. For acquiring speed, a long, smooth surface (flatbottom) is required. Appropriate materials for flat surfaces, or flatbottom as the skaters call it, are: concrete; granite; or smooth tar, which are all hard and durable surfaces. Transition relates to the type of ramp, from the flat surface. Two types can be designed, one is curved with a radius and the other a flat, bevel like, with a smaller transition point. Ramp surfaces are more flexible in material choice and materials like concrete, wood, brick, steel or granite can be used. To make a skatepark more interesting, a combination of materials can be used (Enevoldsen, 2015).

Lips, edges and coping allow the skater to slide with the skateboard. The most appropriate material for these edges are either a round steel pipe or a steel corner coping (see figure 04.xx). Steps, curbs and railings also encourage skateboarding. Usually steps made of a very hard material with a steel corner coping.

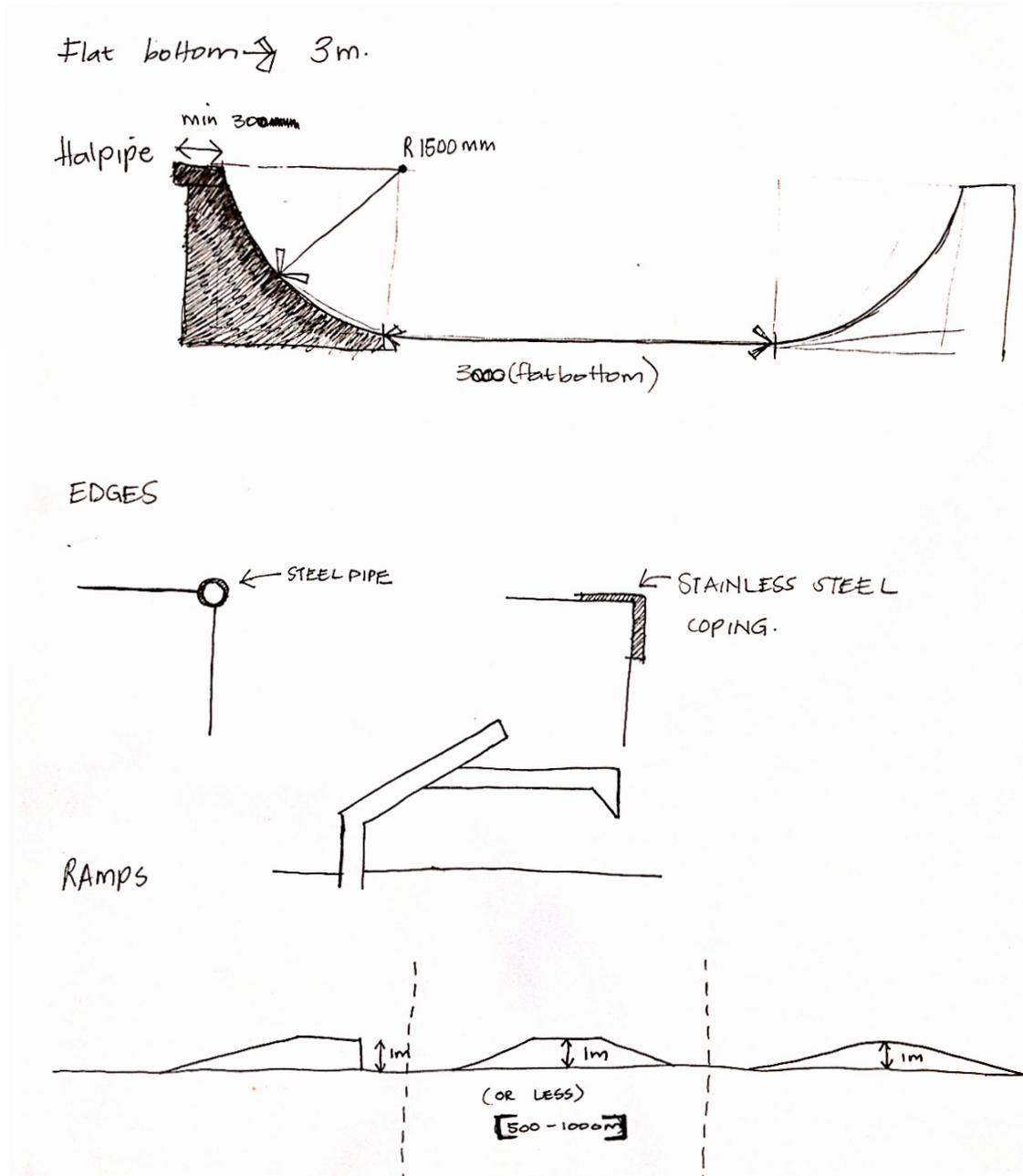


Figure 09.01: Investigations of surface angles and requirements (compiled through various reading by Author, 2015)

## 09.02.02 RELEVANCE OF BRICK AS MATERIAL

Sir Herbert Baker came to the then Transvaal Province after the Anglo-Boer War and it was due to his influence that many industries such as bricks and tiles gave rise (Fisher, 2006:75).

First, Baker appreciated the colouring of kopje stone and after that he explored possibilities of how indigenous materials can be used to its fullest extent. Mostly due to him and some of his co-workers, a domestic architecture has begun. Baker closely followed the tradition of architecture that was established in the Cape, but also studied domestic architecture further afield, in countries with similar climatic conditions to Pretoria. The domestic architectural style originated from the so-called Spanish Mission style (Fisher, 2006:75).

Norman Eaton (1902 - 1966), born in Pretoria, did his education in Pretoria and went on to study at the Diocesan College in Cape Town from 1915-1921. Eaton enrolled at the University of the Witwatersrand in 1922 for a diploma in architecture (Artefacts, 2015). Eaton had an appreciation for materials and detail. He transformed the concept of wall surface and the quality thereof, in South Africa. Brick was used in a simple way, yet in all its forms and variations.

The Kirkness Brick Factory was once the greatest producer of bricks in the country. John Johnston Kirkness, born 1 April 1857 on the Orkney Islands in Britain, obtained his diploma in building sciences at the Heriot Watt College in Edingburg and worked as craftman in Glasgow, England.

In 1879 he came to South Africa, landed in Port Elizabeth and worked in Durban, Bethlehem and on the Barberton gold fields. Finally in 1887, he and his wife settled in Pretoria in Muckleneuk and he started the Groenkloof Brick, Tile and Pottery Factory, later Kirkness Brick Works (Pretoria News, 1988-10-21).

The Kirkness bricks, with engraved 'Kirkness' on them, drew attention across the world as 'face-bricks' and were used by Sir Herbert Baker for the interior of

the Union Buildings. The Grootte Schuur Hospital in Cape Town, the Harare Post Office, the Ou Raadsaal in Pretoria (see figure 03.01), the Old Arts Building at the University of Pretoria, the State Artillery and until around 1940, most houses in Pretoria were built with the Kirkness bricks. He also made floor and roof tiles and pots that were used on the terraces of the Union Buildings (Pretoriana, November 1986 nr 90:7).

The Kirkness factory closed down in 1958 and the site was used as a refuse dump by the Pretoria City Council. Today, the UNISA Campus is on top of the refuse dump. Because of Kirkness' brick-making tradition, Pretoria is still a "city of brick" (Fisher, 1997:78).

Eaton befriended a Viense architect-engineer, Robert Schmickl (1903 - 1977), in 1936 and employed him as a backroom assitant during the war years. Although he was not as enthusiastic as Eaton about innovation, he



Figure 09.02: Kirkness Yard, believed to be taken in 1892 (Pretoria News, 1988-10-21)

also supported the use of alternative materials. Bricks that were misformed or over-fired and discarded, was used for cost-cutting measures at first, but Eaton and Schmickl saw it as an opportunity to use in various ways and became quite fashionable (Fisher, 1997:79).

The use of local materials went hand-in-hand with the use of local craftsmanship. Gustav Preller, a South African artist (1875-1943), used black assistants to build a wall and do the paving around his home and studio in Brits, north-west of Pretoria. Eaton advised Preller in the design of the brickwork. The brick paving design of Eaton's Greenwood House was inspired by



Figure 09.03: 1952 Advertisement (Artefacts, 2015)

this and he used the same craftsmanship. The Little Theatre of UNISA was also designed by Eaton and found its inspiration there as well (Fisher, 1997:83).

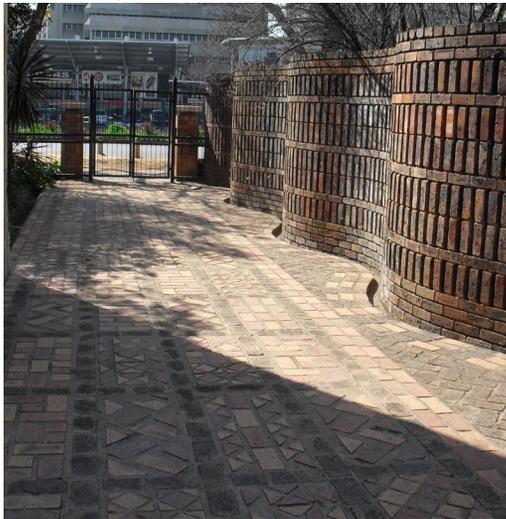


Figure 09.04: Little Theatre, UNISA, Pretoria



Figure 09.04: The Preller House in Pelindaba, Hartbeespoort dam

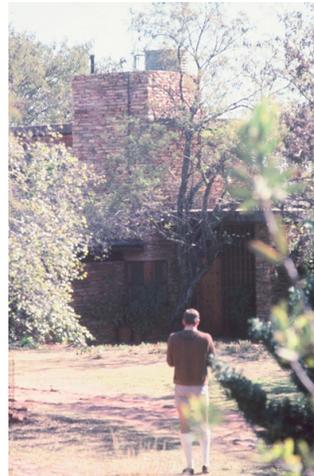


Figure 09.05: Eaton's Greenwood House (photograph taken by Dick Latimer, 1967)

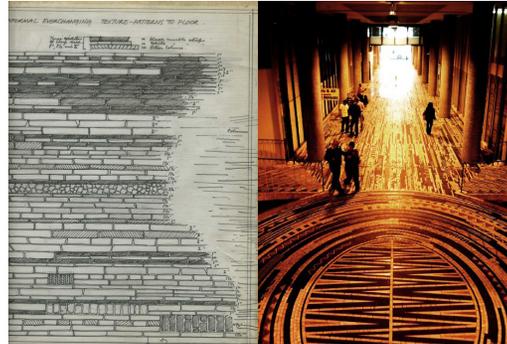


Figure 09.06: Polley's Arcade floor patterning designed by Norman Eaton

Eaton also used patterns in Polley's Arcade, which was built with hand-cut marble mosaic tiles, which was laid out in a complex manner to provide a uniquely spatial experience (ABLE Wiki, 2015).

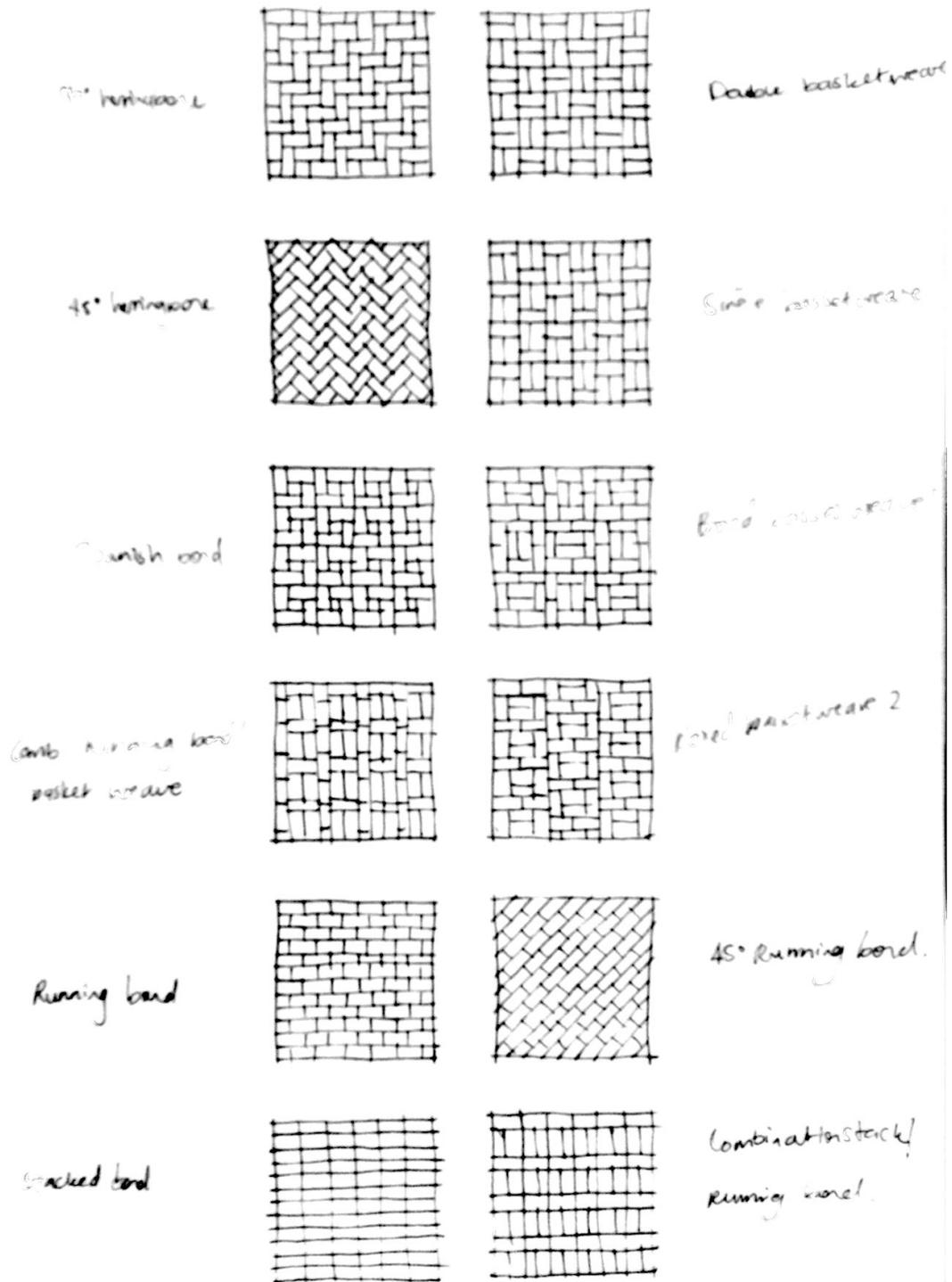


Figure 09.07: Typical brick patterns



Figure 09.08: Investigation of brick as patterns (Author, 2015)

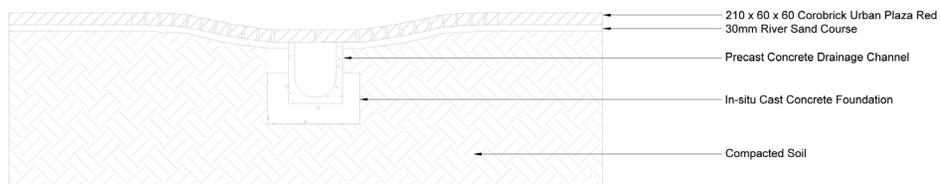
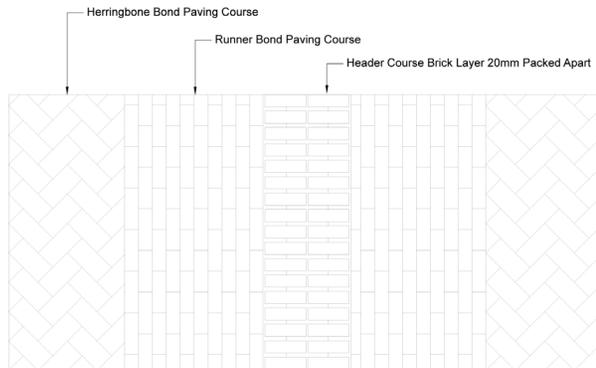


Figure 09.09: Drainage channel where certain patterns of bricks are used to indicate the service (Author, 2015)

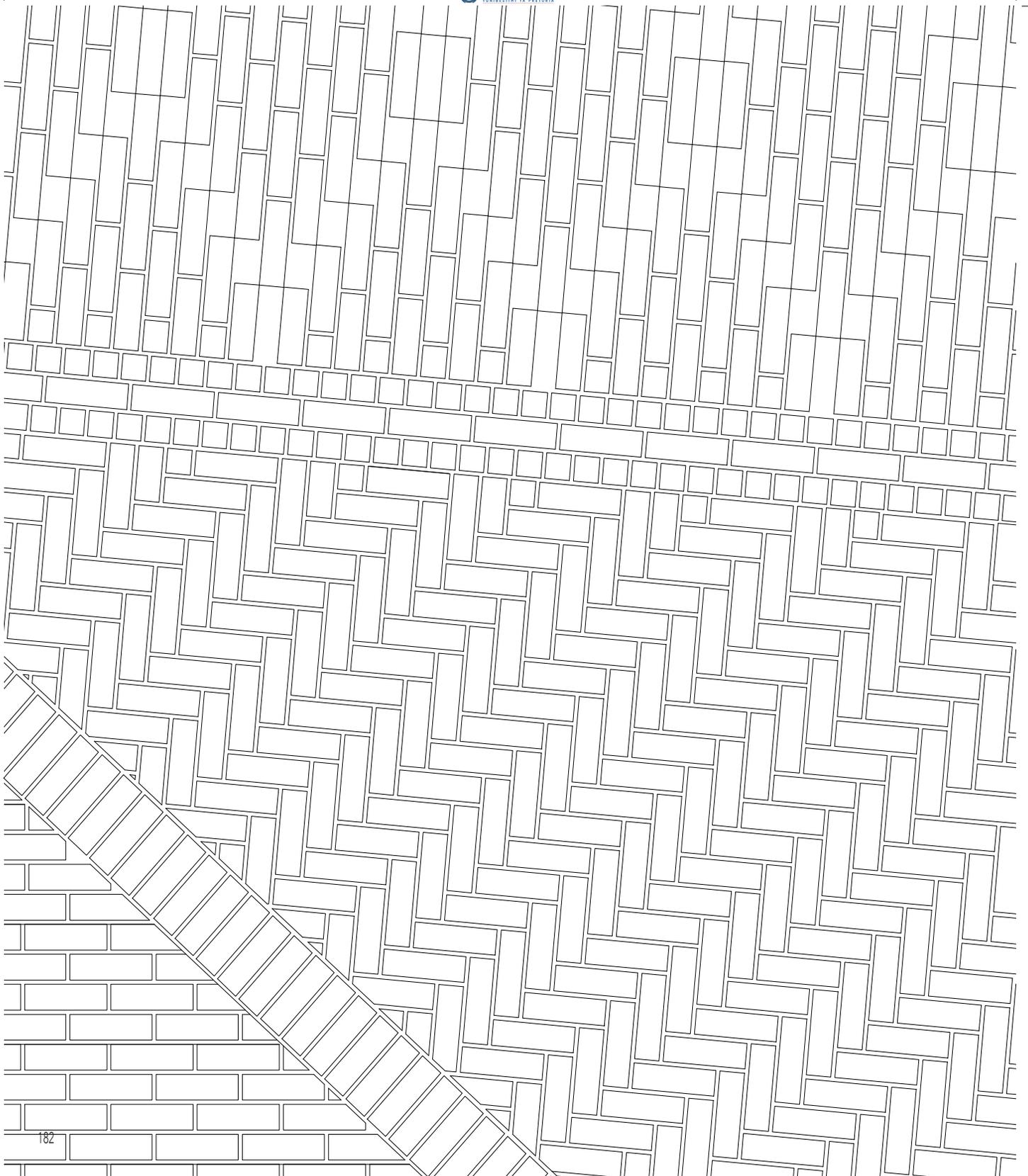




Figure 09.10: Paving detail area - see image on previous page for paving detail (Author, 2015)

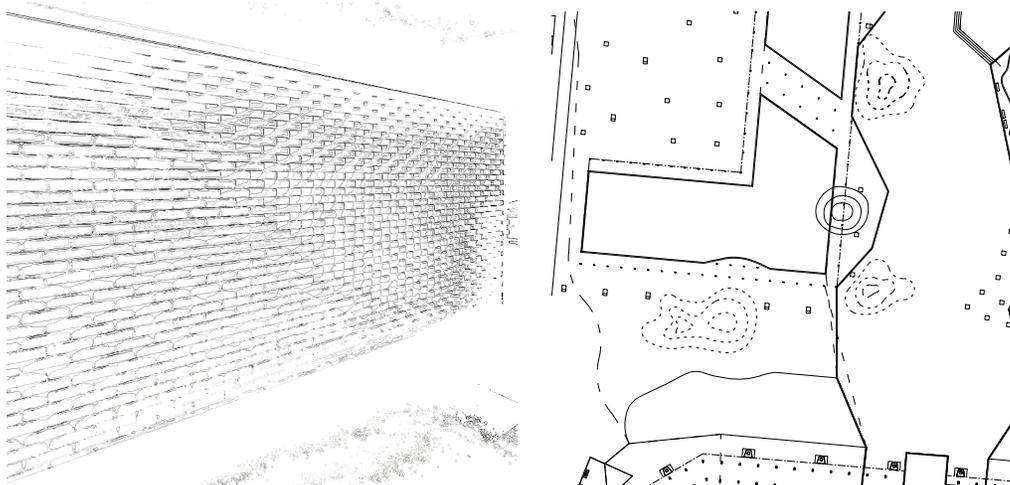


Figure 09.11: Brick pattern of wall of building where the landscape "affects" the architecture (Author, 2015)

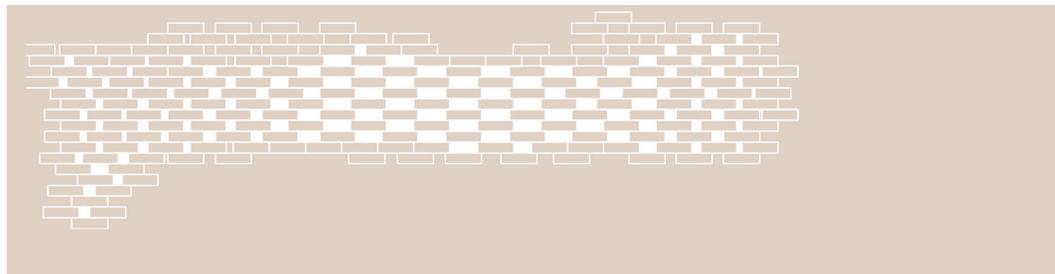


Figure 09.12: Brick pattern, on the surface that go up towards the stadium, with holes in to allow for light to shine through to zone 4 which sits between the surface and the stadium. The pattern was inspired by the Battiss painting that also inspired the sketch plan (Author, 2015)

## INVESTIGATION OF LIGHTING

A lighting investigation was done in order to give some credibility to the Loftus Versfeld stadium and its proposed main entrance. A brick wall is built with (in the first investigation) bricks are at various depths and allows for light to be shone at irregular intervals. The second investigation ensure that light would be shone in a rhythm. The first investigation which creates a non-rhythmical pattern contributes to the idea of carnivalesque and therefore this pattern was seen as the most appropriate for this area.

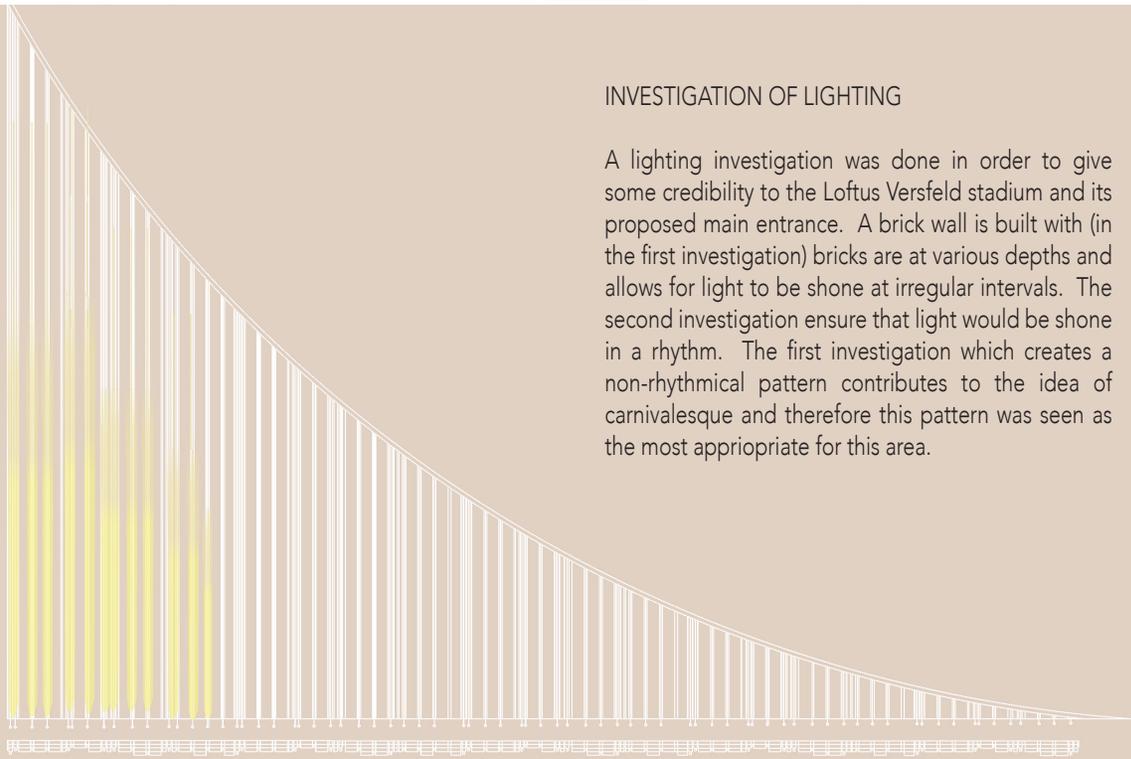
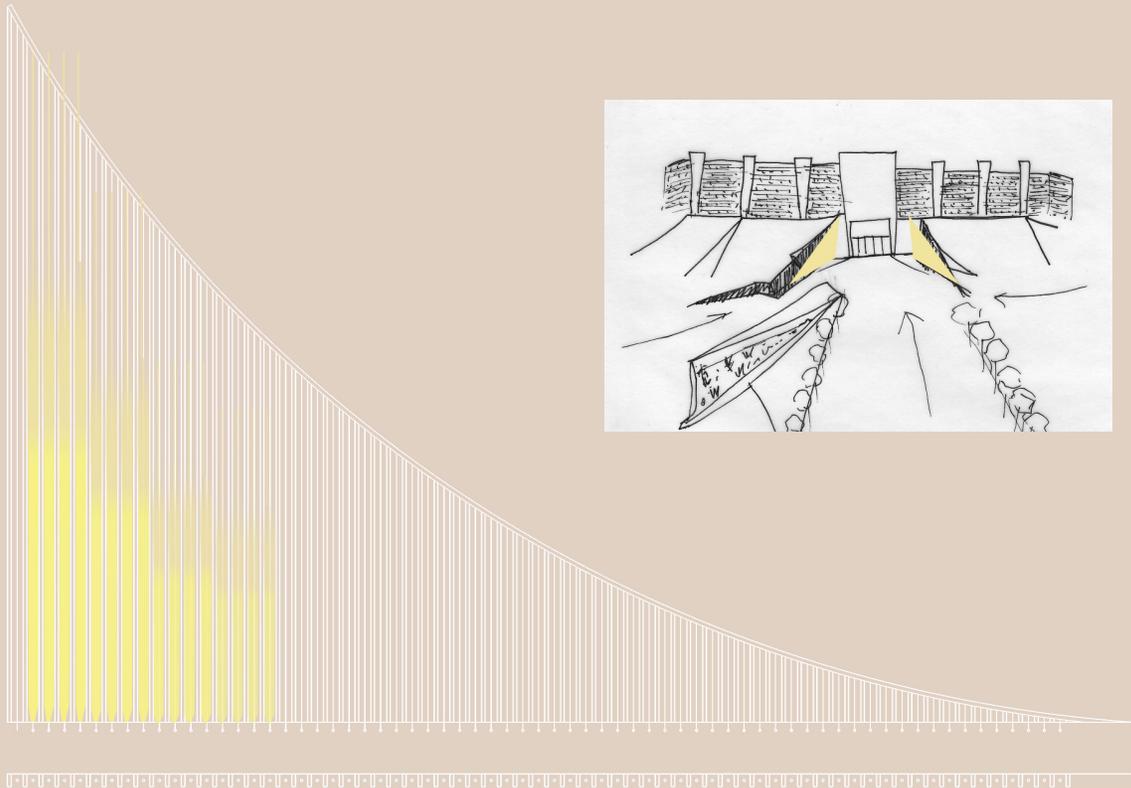


Figure 09.13: Lighting investigation with brick (Author, 2015)



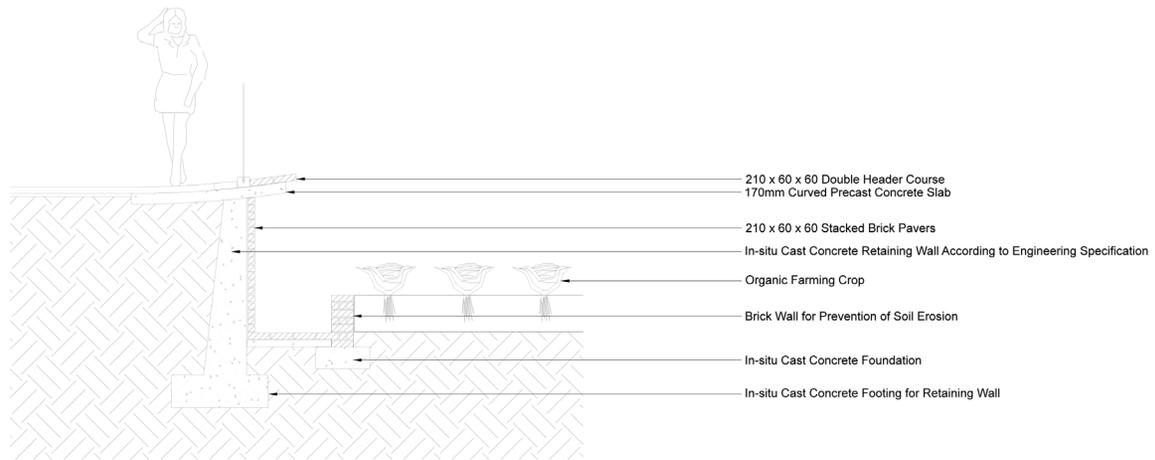


Figure 09.14: Edge to organic farming - pedestrian can look out over the farmland (Author, 2015)

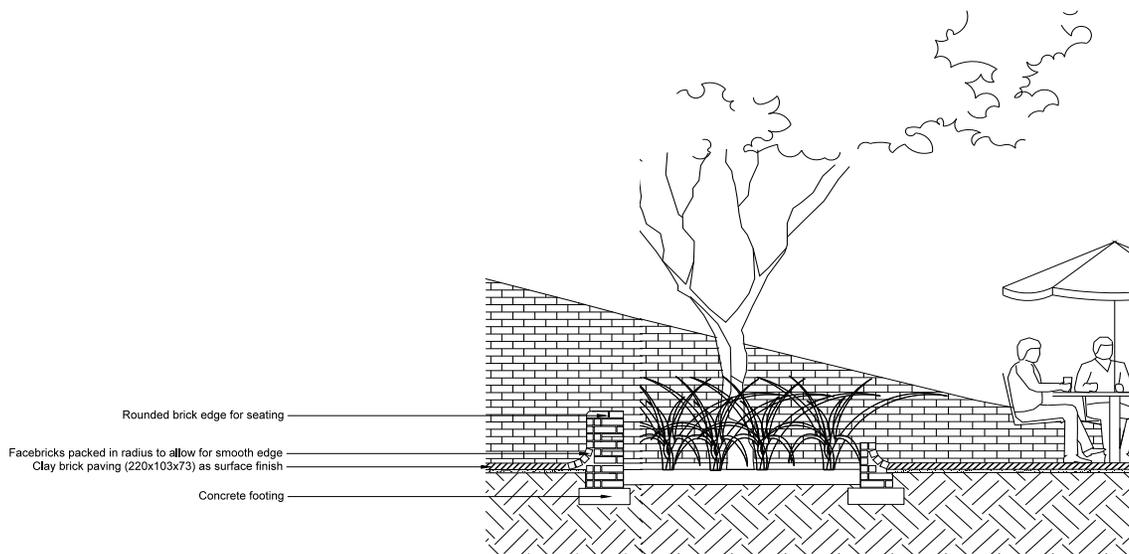


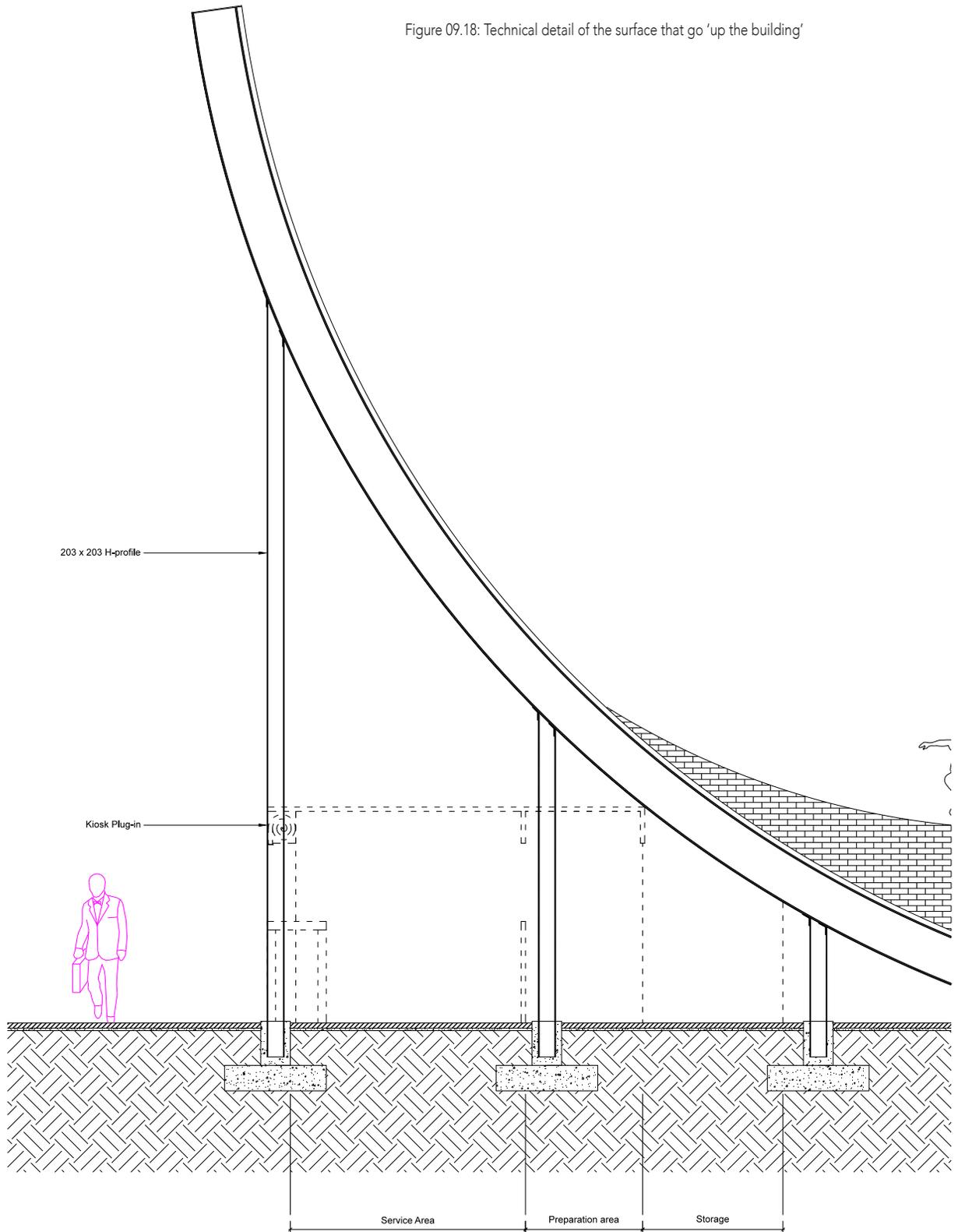
Figure 09.15: Bench and planter edge detail (Author, 2015)





Figure 09.17: Second set of iterations of the surface and its construction method

Figure 09.18: Technical detail of the surface that go 'up the building'



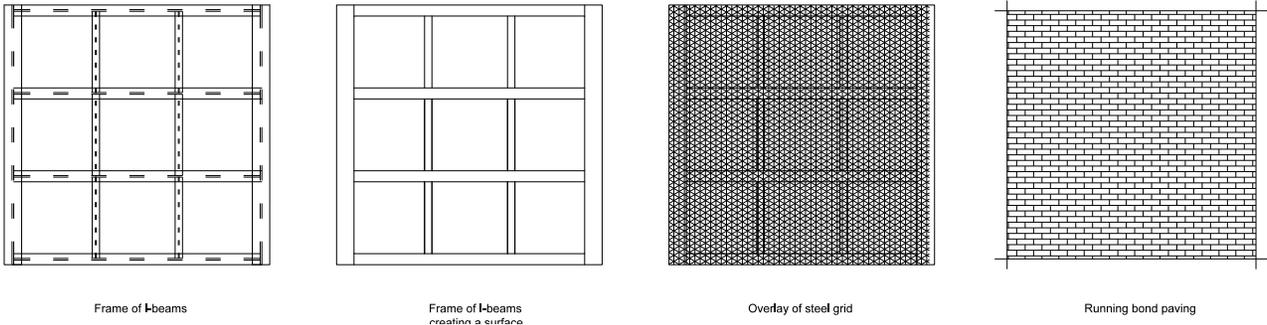


Figure 09.19: Layers for steel surface with paving - front view (Author, 2015)

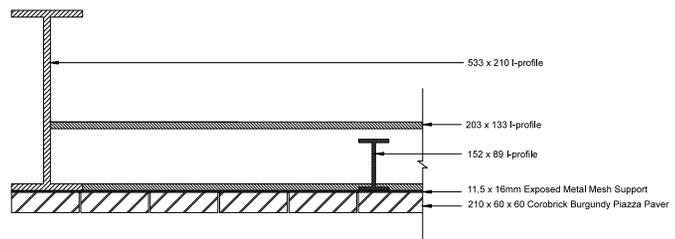


Figure 09.20: Layers for steel surface with paving - top view (Author, 2015)

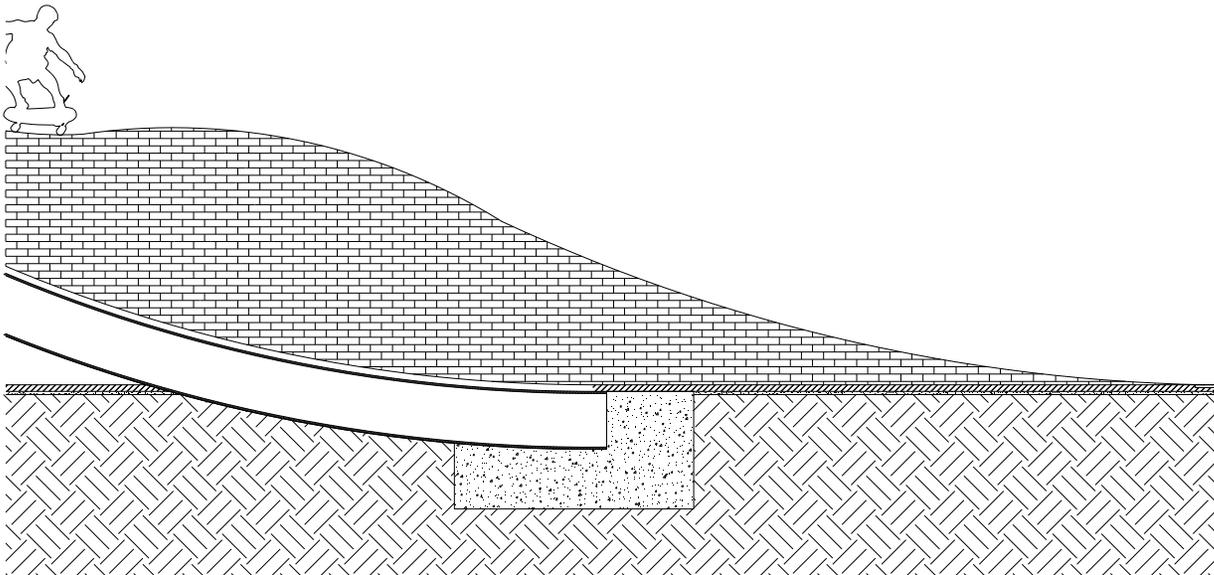






Figure 09.21: Perspective of the surface (Author, 2015)

The study concludes that the manipulation of surfaces can allow people to express themselves and allow for multifunctionality and resilience.

It is also that such a project is undertaken by a multi-disciplinary team of landscape architects, architects, urban designers, horticulturalists and engineers.