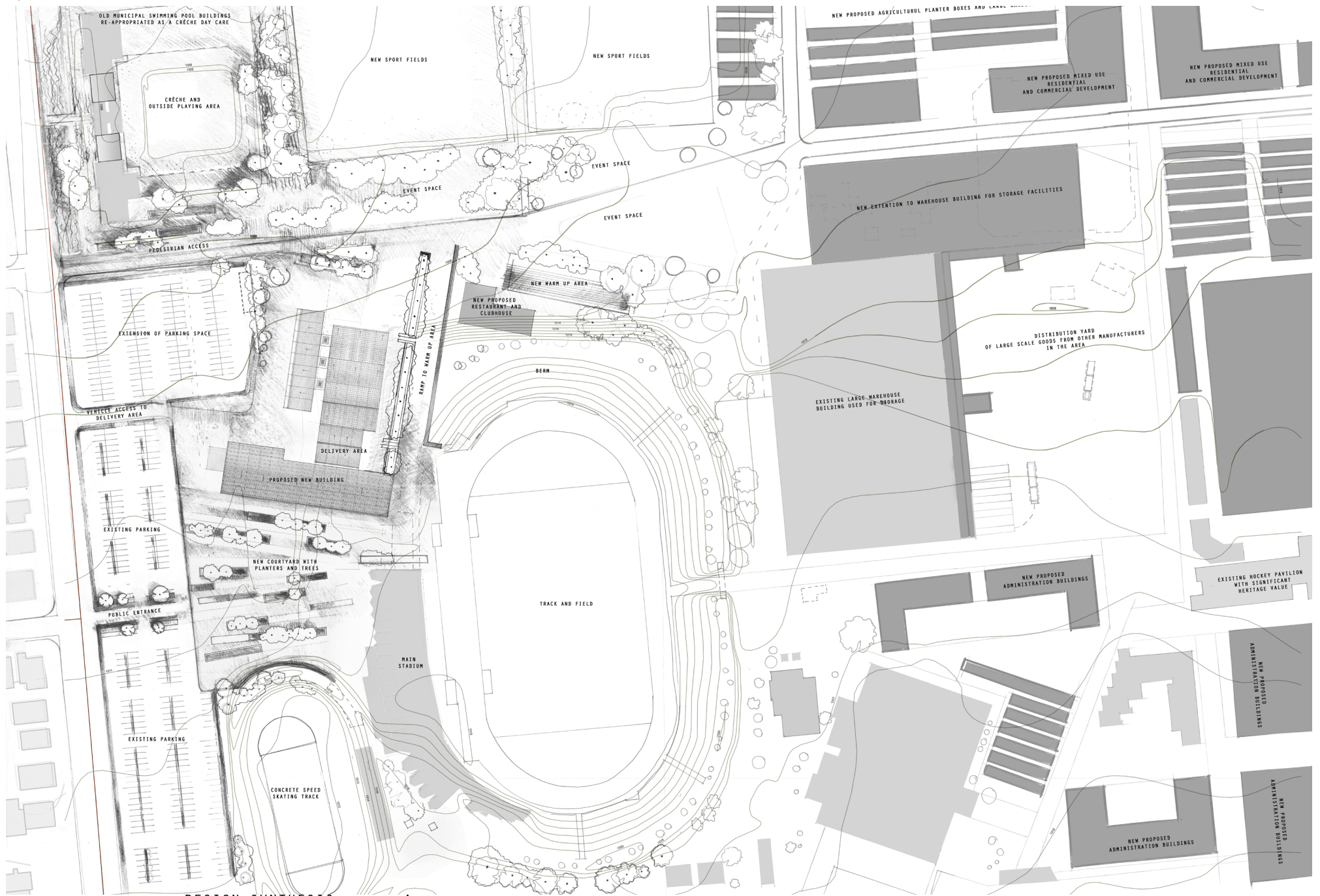


07

CHAPTER 07

DESIGN SYNTHESIS

FINAL DESIGN AND TECHNICAL RESOLUTION
FINAL PRESENTATION
REFLECTION

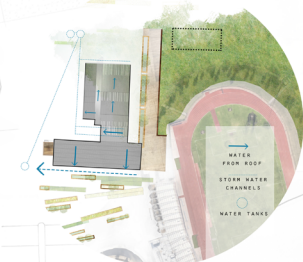
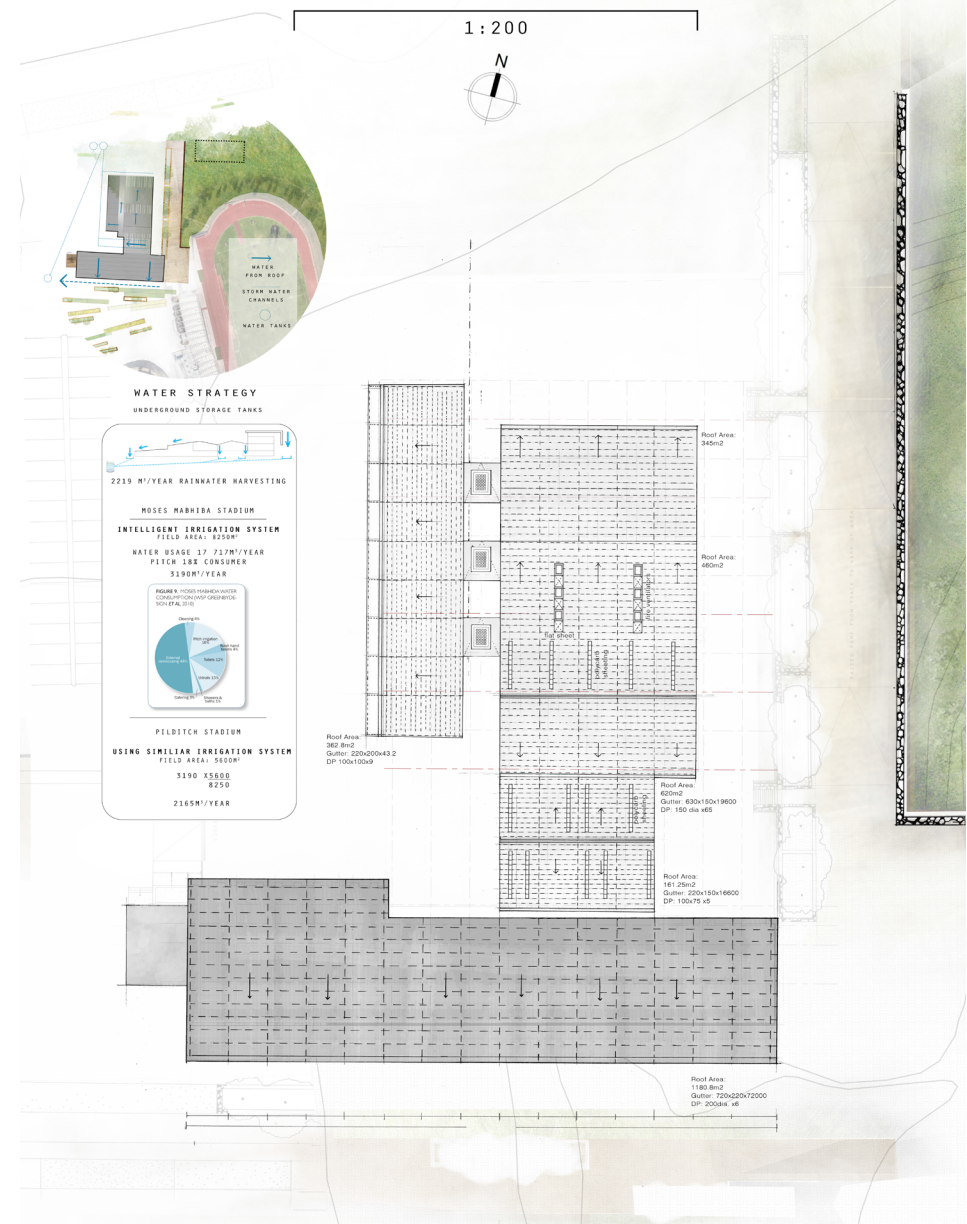


DESIGN SYNTHESIS

06

ROOF PLAN
WATER MANAGEMENT STRATEGY

1 : 200

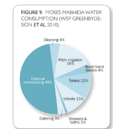


WATER STRATEGY
UNDERGROUND STORAGE TANKS

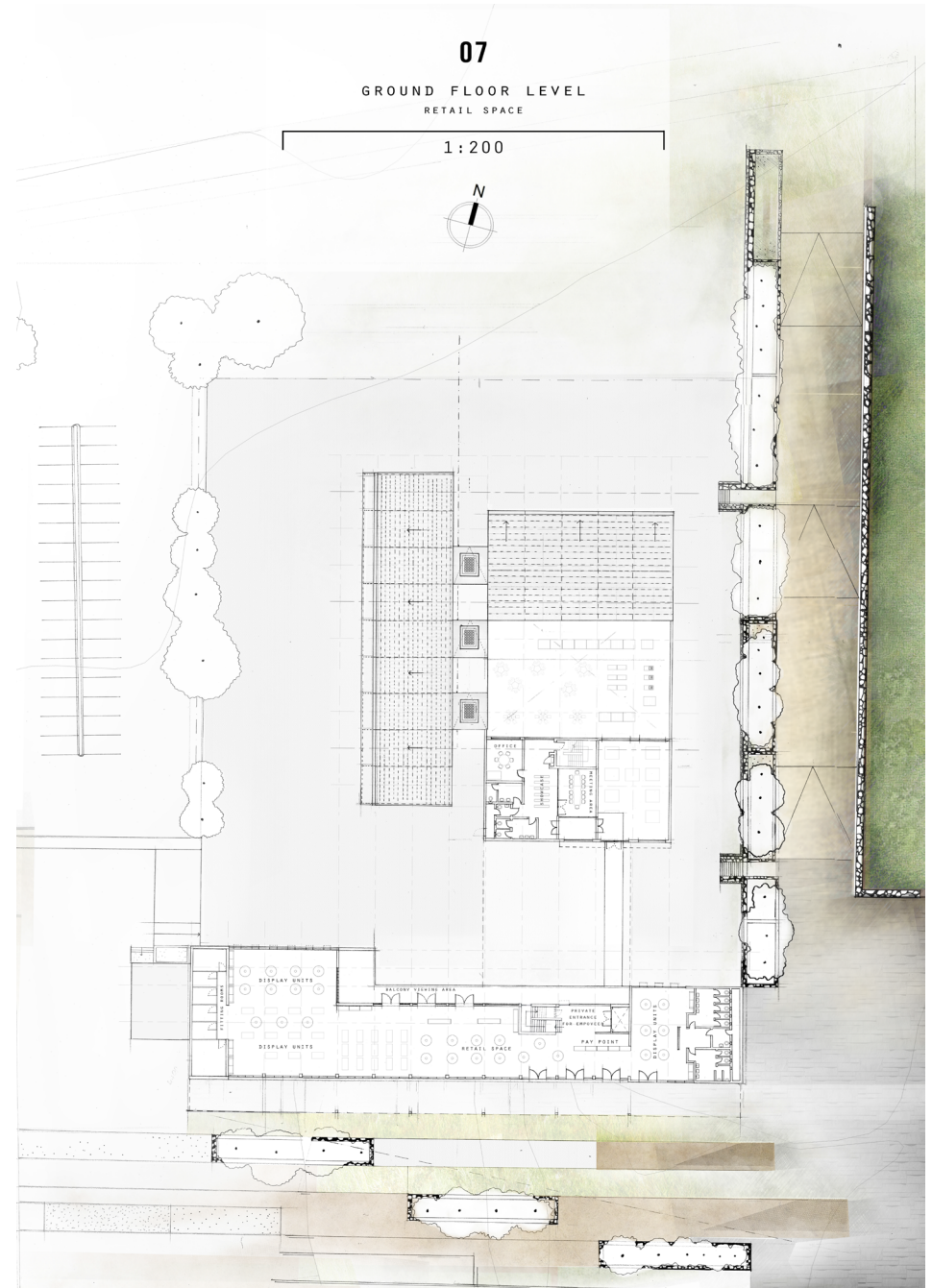
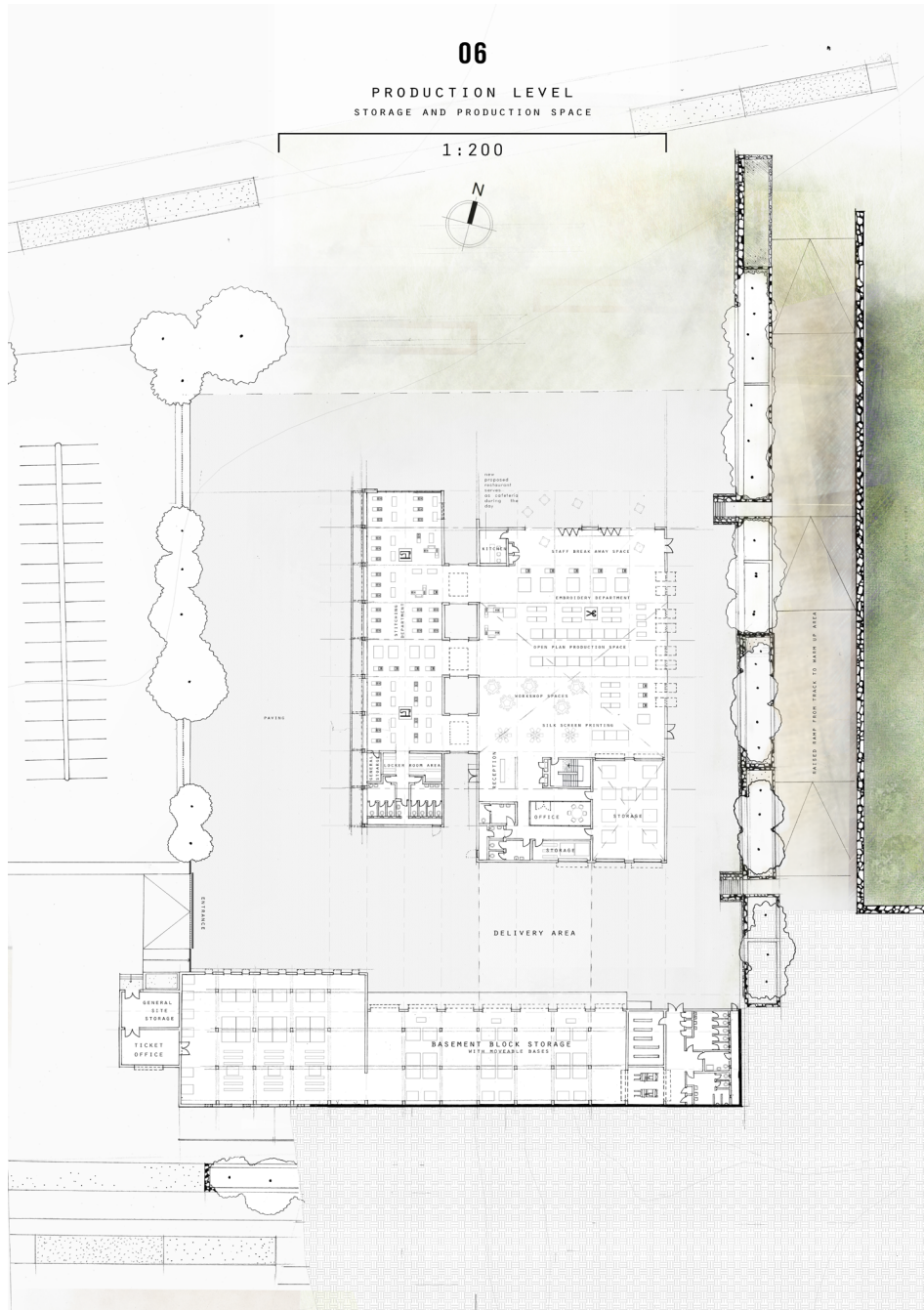


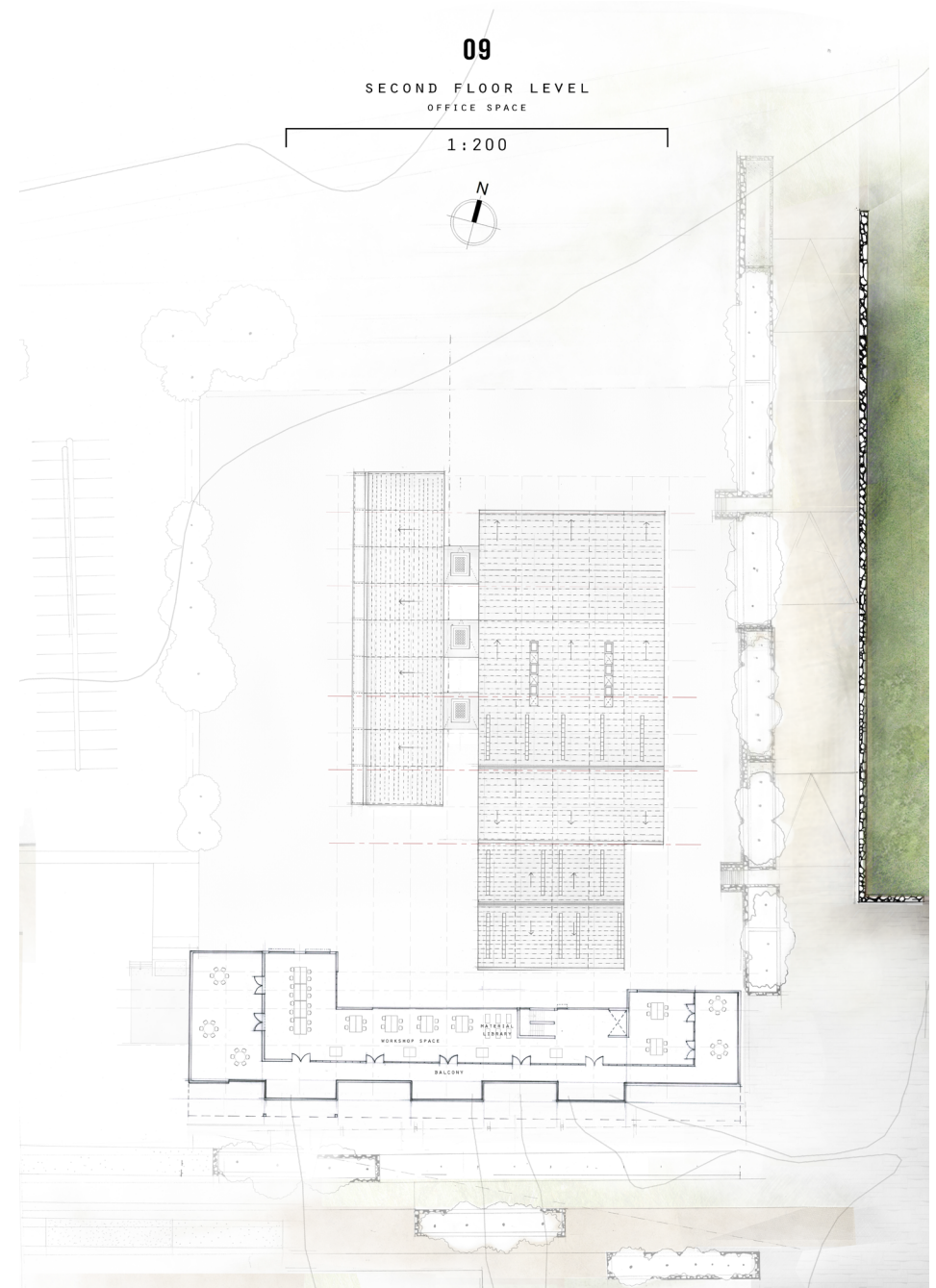
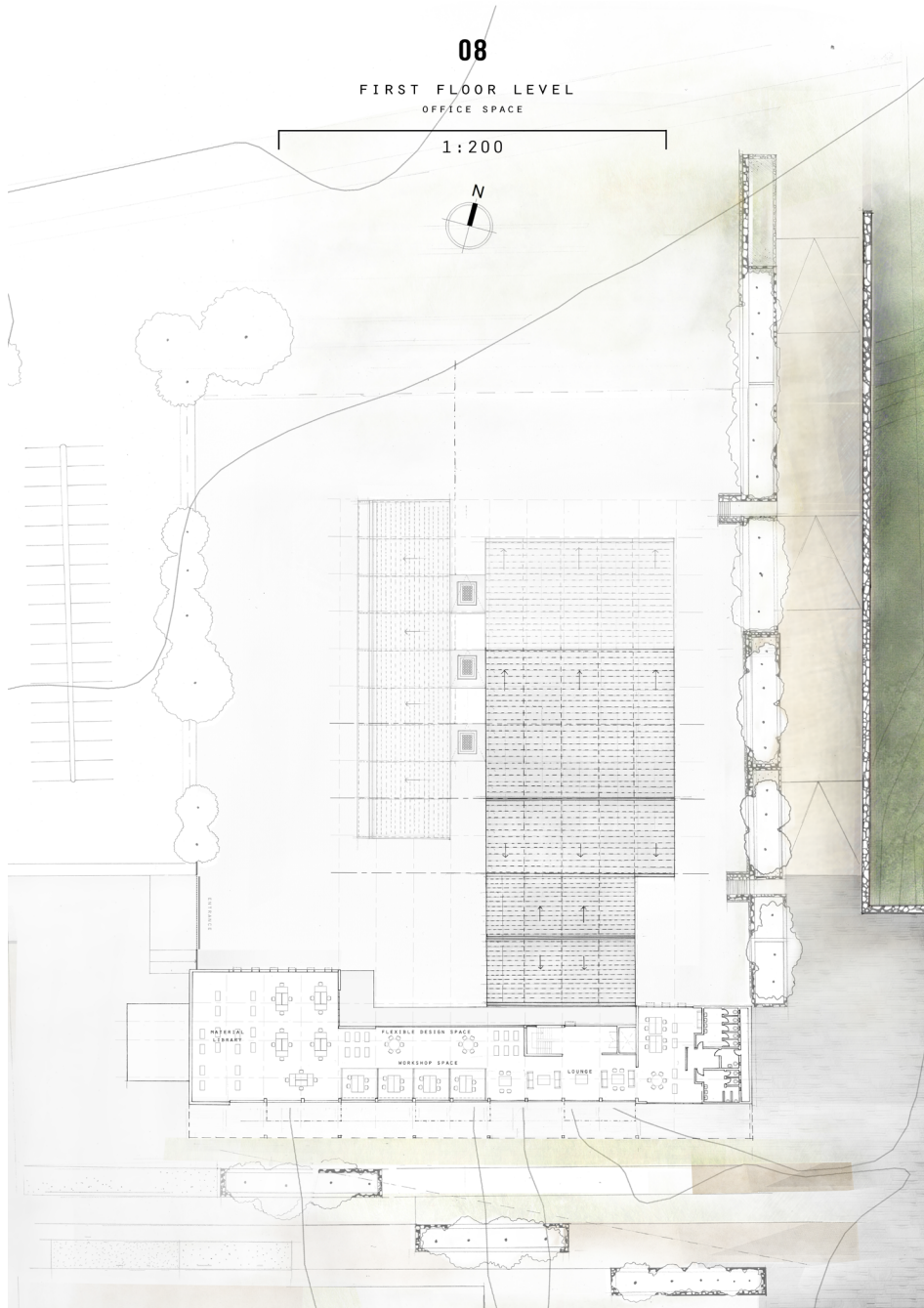
2239 M³/YEAR RAINWATER HARVESTING

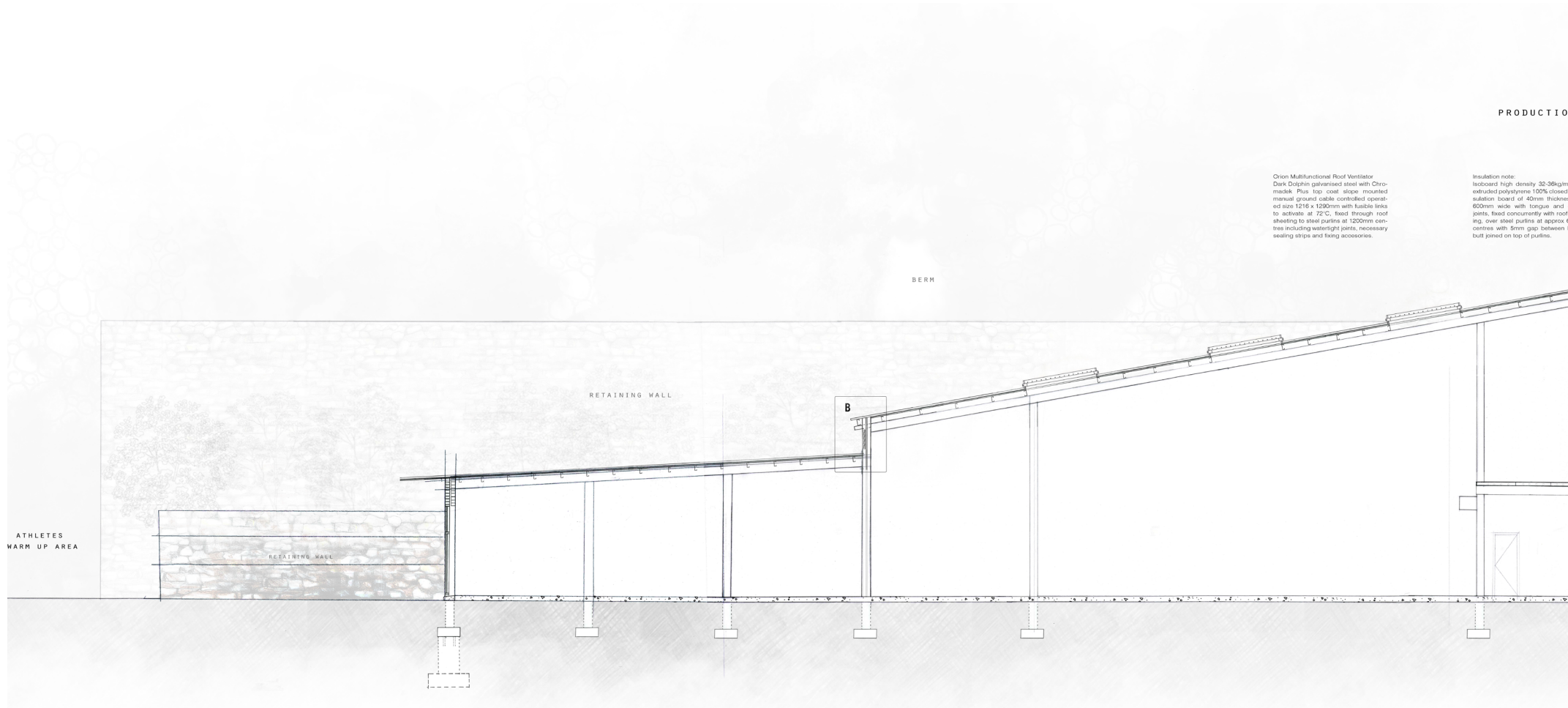
MOSES MABHEBA STADIUM
INTELLIGENT IRRIGATION SYSTEM
FIELD AREA: 8250M²
WATER USAGE 17.737M³/YEAR
PITCH 18% CONSUMER
3190M³/YEAR



PELDITCH STADIUM
USING SIMILAR IRRIGATION SYSTEM
FIELD AREA: 5550M²
3190 X5600
8250
2165M³/YEAR





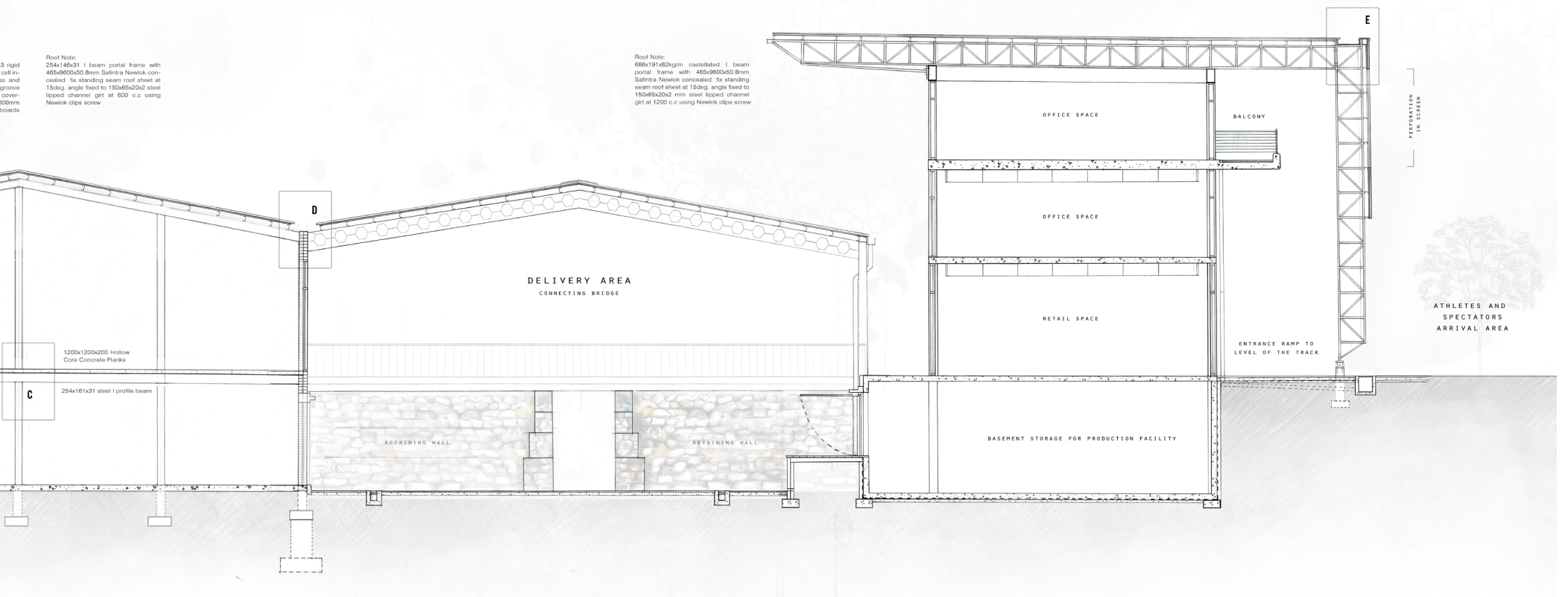


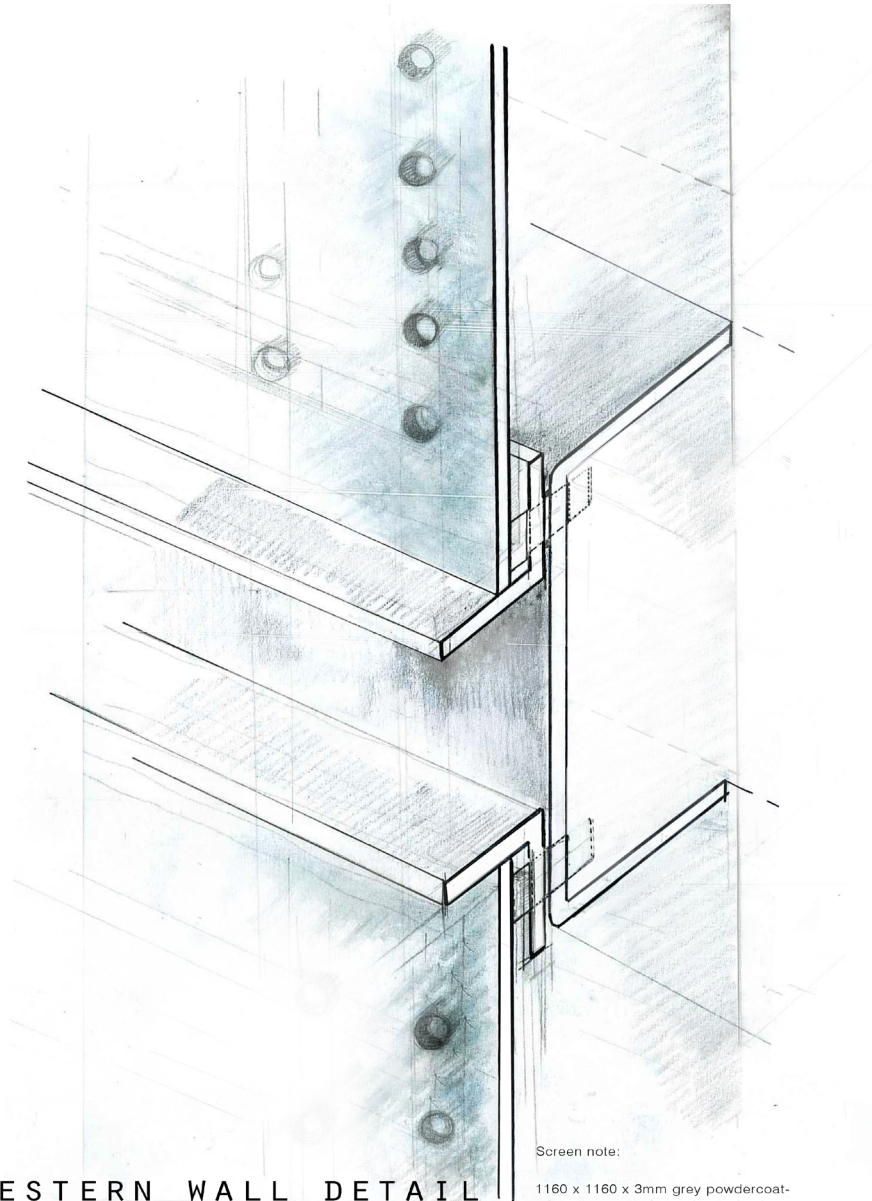
Orion Multifunctional Roof Ventilator
Dark Dolphin galvannead steel with Chromadek Plus top coat slope mounted manual ground cable controlled operated size 1215 x 1200mm with fusible links to activate at 72°C, fixed through roof sheeting to steel purlins at 1200mm centres including watertight joints, necessary sealing strips and fixing accessories.

Insulation note:
Isoboard high density 32-36kg/m³ extruded polystyrene 100% closed cell insulation board of 40mm thickness 600mm wide with tongue and joints, fixed concurrently with roofing, over steel purlins at approx 600mm centres with 5mm gap between butt joined on top of purlins.

N HOUSE

DESIGN HOUSE





WESTERN WALL DETAIL
PRODUCTION HOUSE

Section not to scale (Author, 2016)

Screen note:

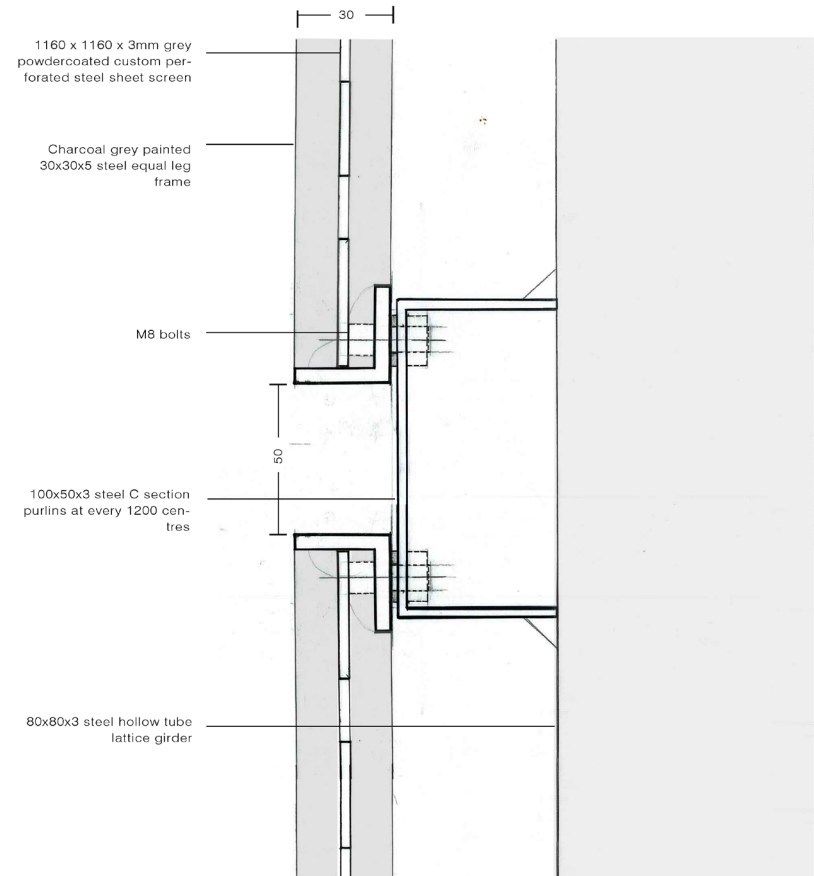
1160 x 1160 x 3mm grey powdercoated custom perforated steel sheet screen fixed to charcoal grey painted 30x30x5 steel equal leg frame bolted with M8 bolts to 100x50x3 steel C section purlins welded on site to 80x80x3 steel hollow tube lattice girder welded to 305x165x46 steel I profile at 4800 centres.

WESTERN WALL DETAIL
PRODUCTION HOUSE

1 : 1

Screen note:

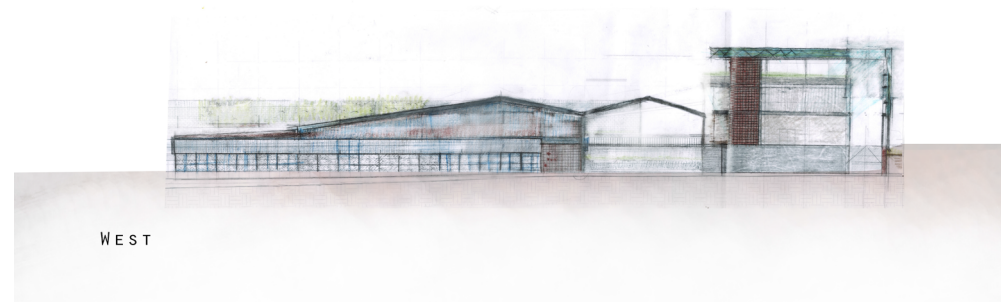
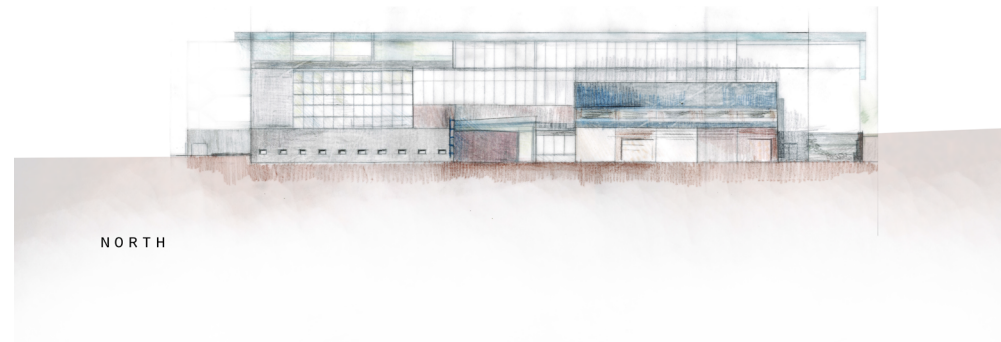
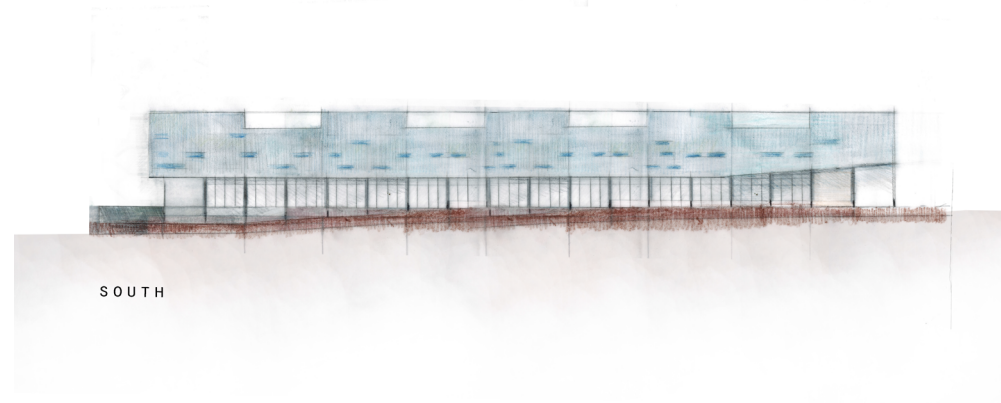
1160 x 1160 x 3mm grey powdercoated custom perforated steel sheet screen fixed to charcoal grey painted 30x30x5 steel equal leg frame bolted with M8 bolts to 100x50x3 steel C section purlins welded on site to 80x80x3 steel hollow tube lattice girder welded to 305x165x46 steel I profile at 4800 centres.



19

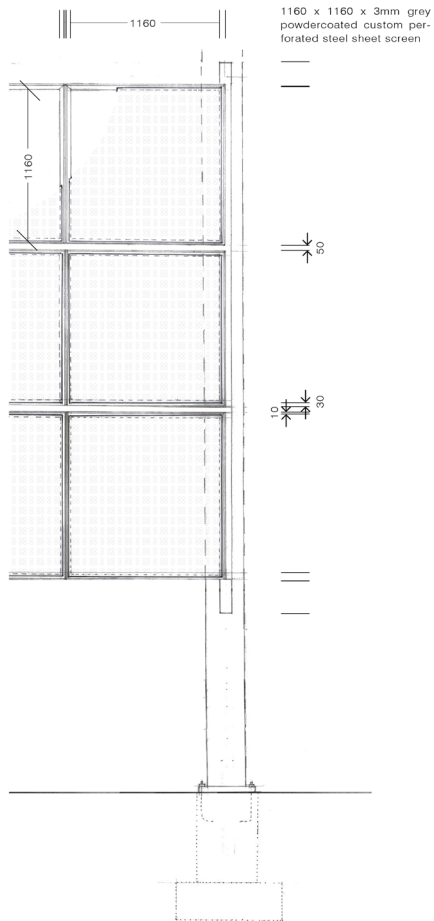
ELEVATIONS
DESIGN AND PRODUCTION SPACE

1 : 200



WESTERN WALL SCREEN
PRODUCTION HOUSE

1:20



DESIGN SYNTHESIS **A**

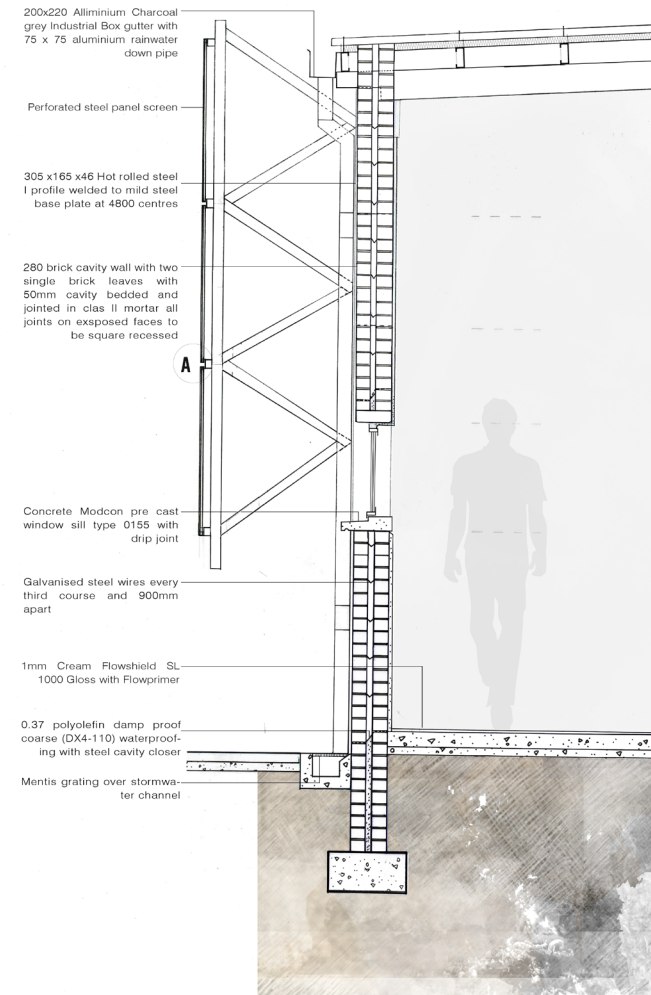
WESTERN WALL SECTION
PRODUCTION HOUSE

1:20

Screen note:
1160 x 1160 x 3mm grey powdercoated custom perforated steel sheet screen fixed to charcoal grey painted 30x30 steel equal leg frame bolted with M8 bolts to 100x50 steel C section purlins welded on site to 80x80 steel hollow tube lattice girder welded to 305x165x46 steel I profile at 4800 centres.

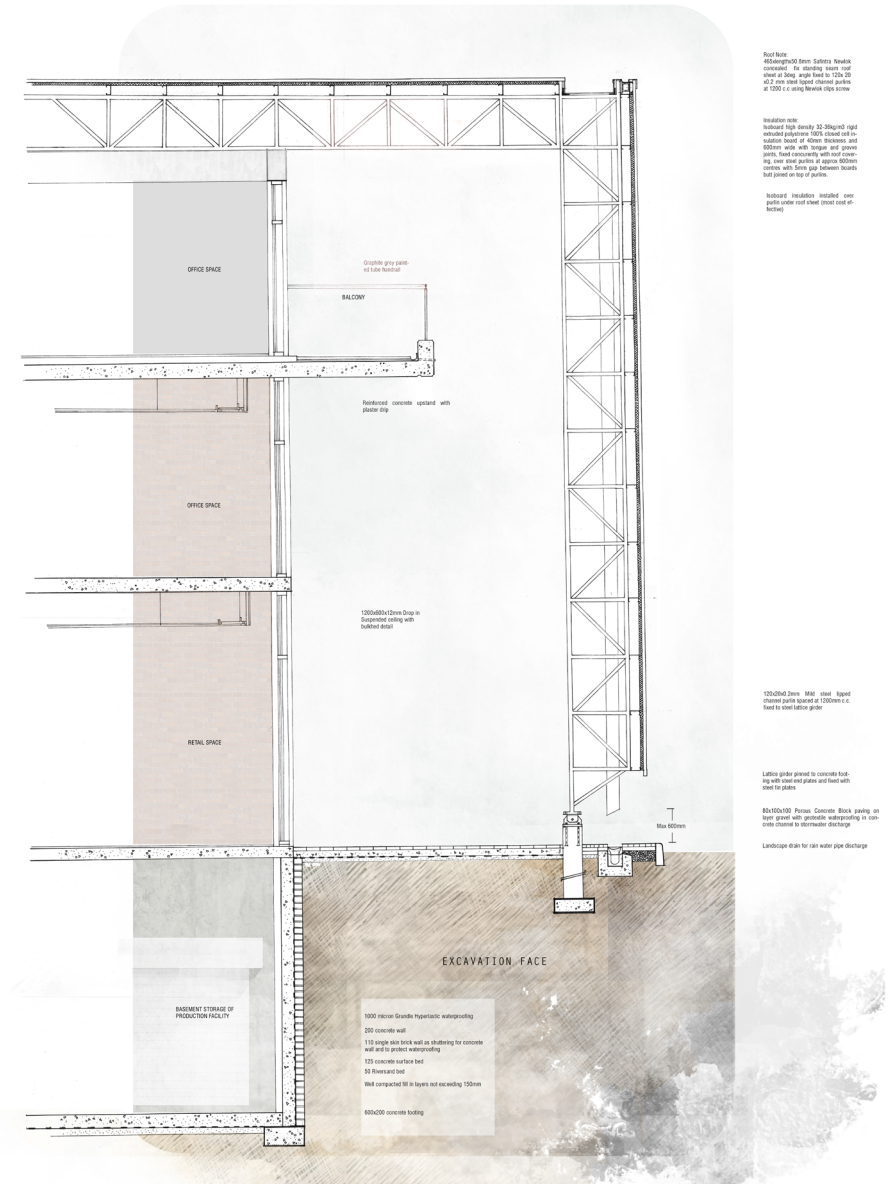
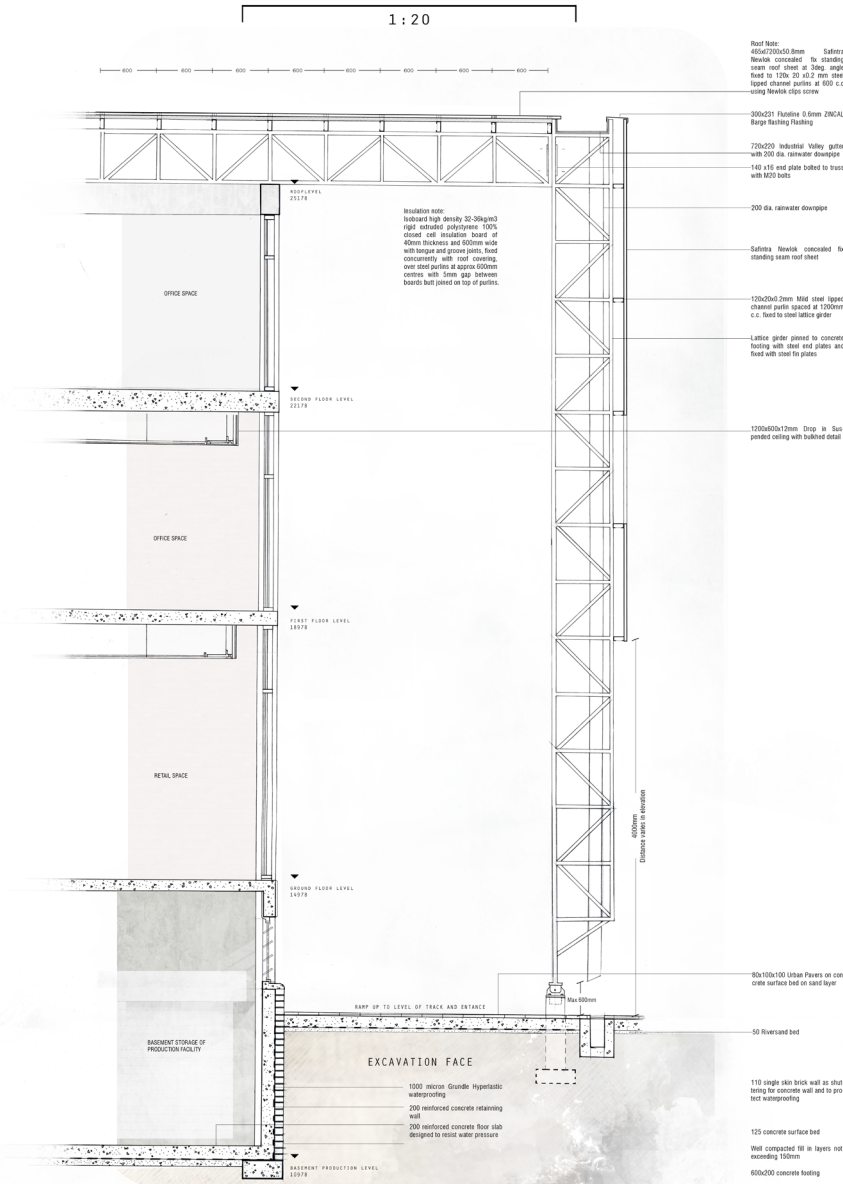
Insulation note:
Isoboard high density 32-36kg/m3 rigid extruded polystyrene 100% closed cell insulation board of 40mm thickness and 600mm wide with tongue and groove joints, fixed concurrently with roof covering, over steel purlins at approx 600mm centres with 5mm gap between boards butt joined on top of purlins.

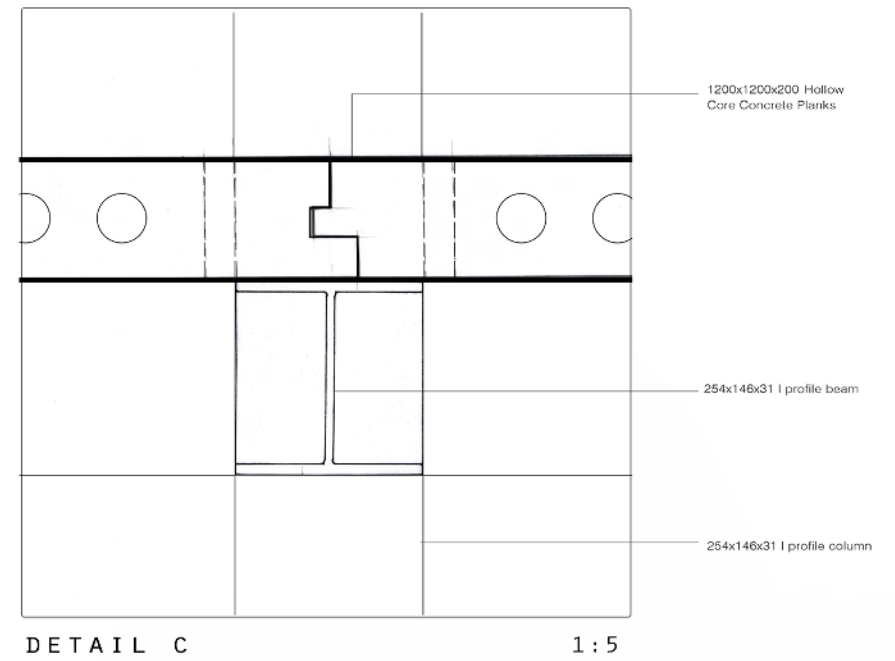
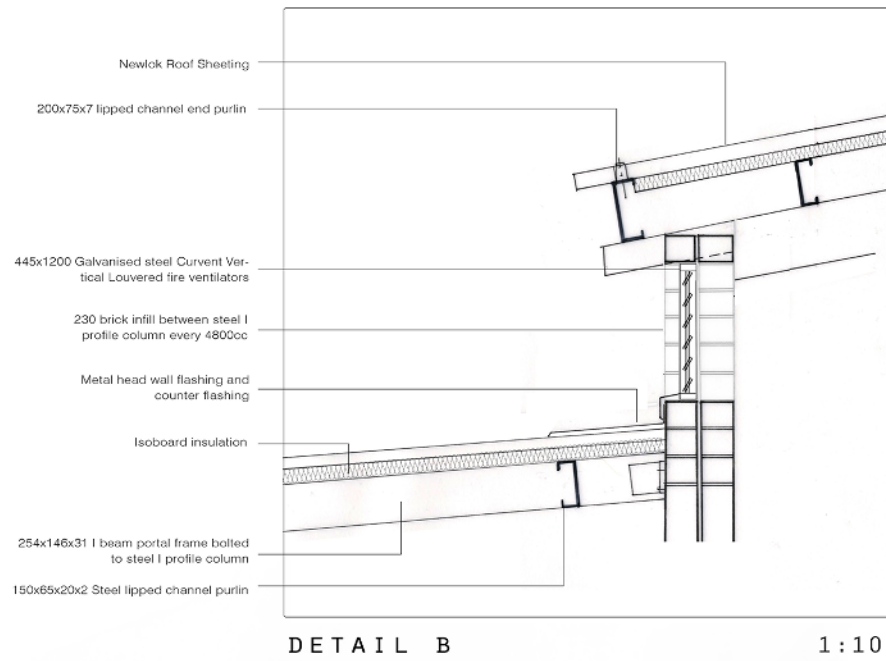
Roof Note:
465x9600x50.8mm Safintra Newlok concealed fix standing seam roof sheet at 3deg angle fixed to 150x65x20x2 mm steel lipped channel girt at 600 c.c using Newlok clips screw

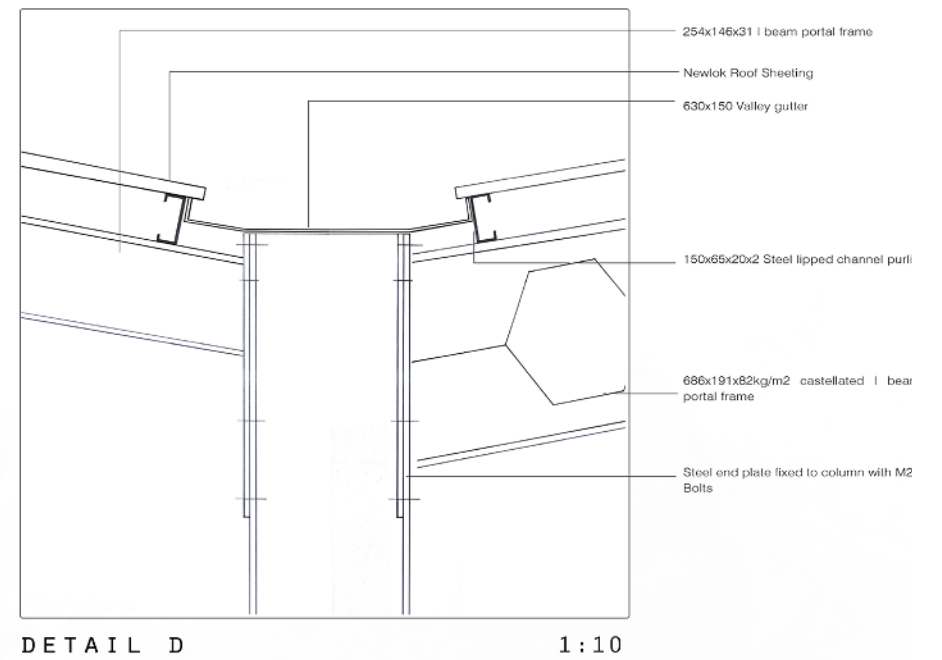


TECHNIFICATION
WALKWAY FACADE SECTION

1:20



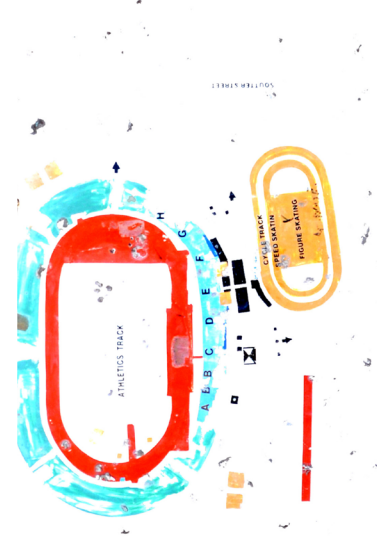




00

THE EVERYDAY AND EVENT
RE-IMAGINING THE URBAN INDUSTRIAL EVENT SPACE OF

PILDITCH STADIUM



01

URBAN CONTEXT INVESTIGATING INDUSTRIAL PLACE MAKING

REGENERATION OF THE WEST



DESIGN SYNTHESIS

PERCEPTIONS OF THE WEST "BACKYARD" OF PRETORIA



1.

Urban issue The discarded landscape of the West

The West is perceived as the "backyard" of the capital city. Large parts of West are misused, underutilised and degraded, which has led to the subsequent disregard of the Western quadrant of the city, especially from private investment.



2.

Pretoria West as a Roadhouse

The experience of place is reminiscent of a posttime or a place "disconnected" or "lost in time" (Sreenkamp, 2013:11). It is dominated by movement and communication and is a harsh environment for pedestrian.

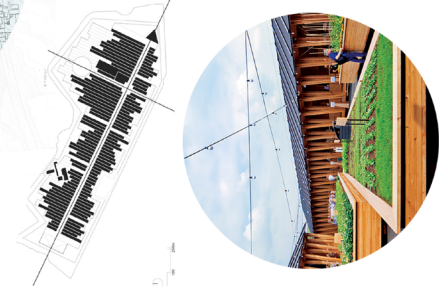
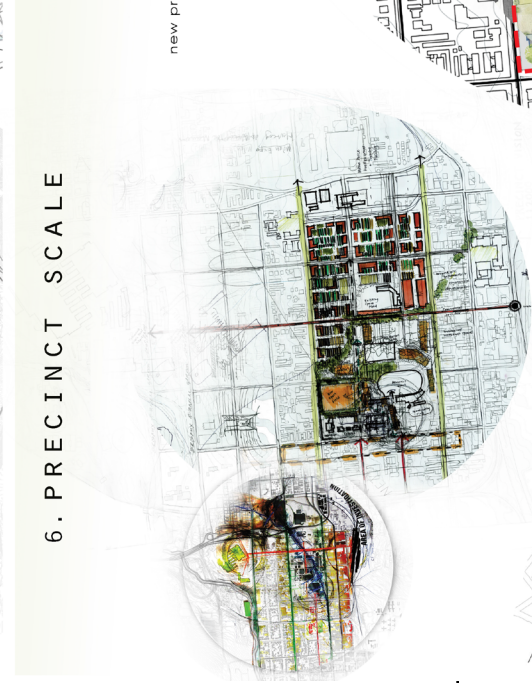
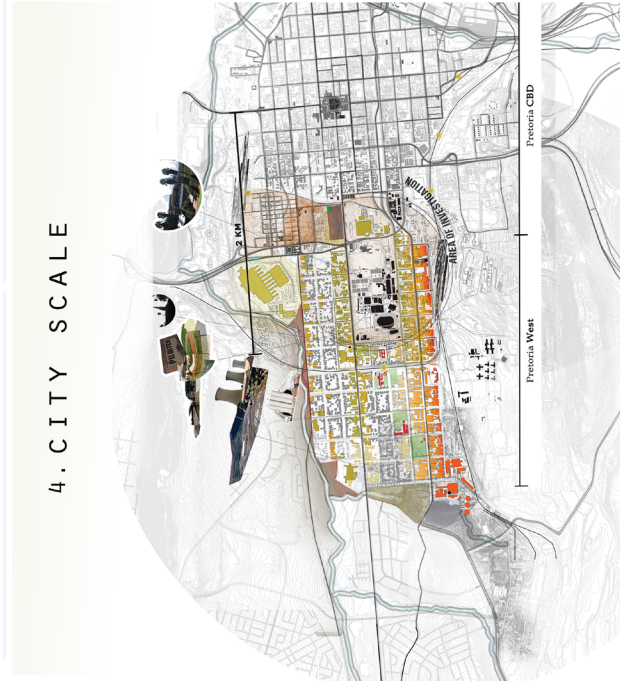
OPEN SPACE NETWORK

DEGRADED BUILT FABRIC

3.

The intermediate space

As a support system for the broader functions of the city and its close proximity to the city, the regeneration of Pretoria West holds the potential to become an essential component to revitalise the city centre.



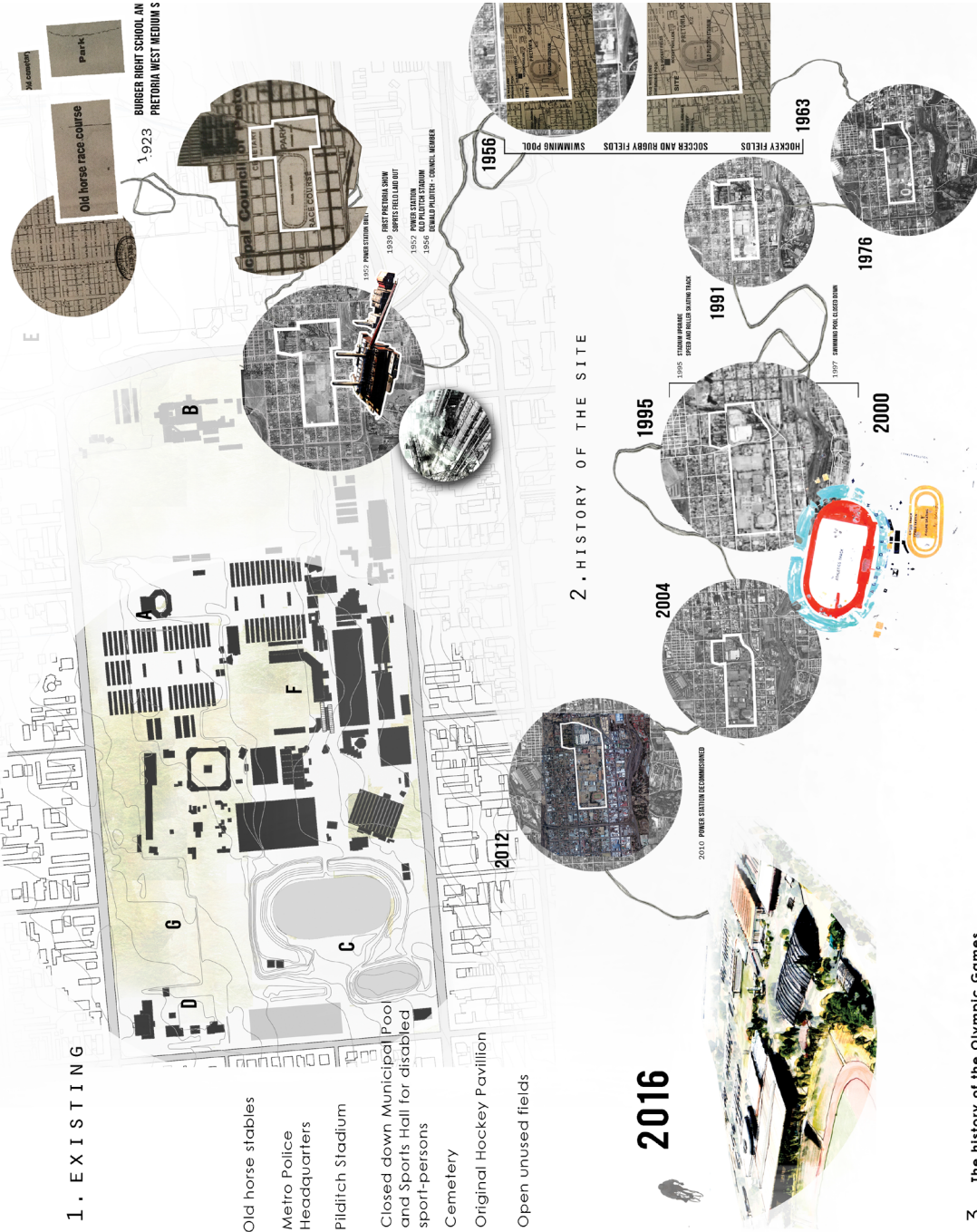
PRECEDENT
Milan Trade Fair
HERZOG AND DE MEURON ARCHITECTS
Milan, Italy

new proposed sporting belt
existing buildings
Stadium
large event spaces retained

02

PILDITCH STADIUM THE EVENT AND THE EVERYDAY

EXPOSE INTROVERTED ASPECTS



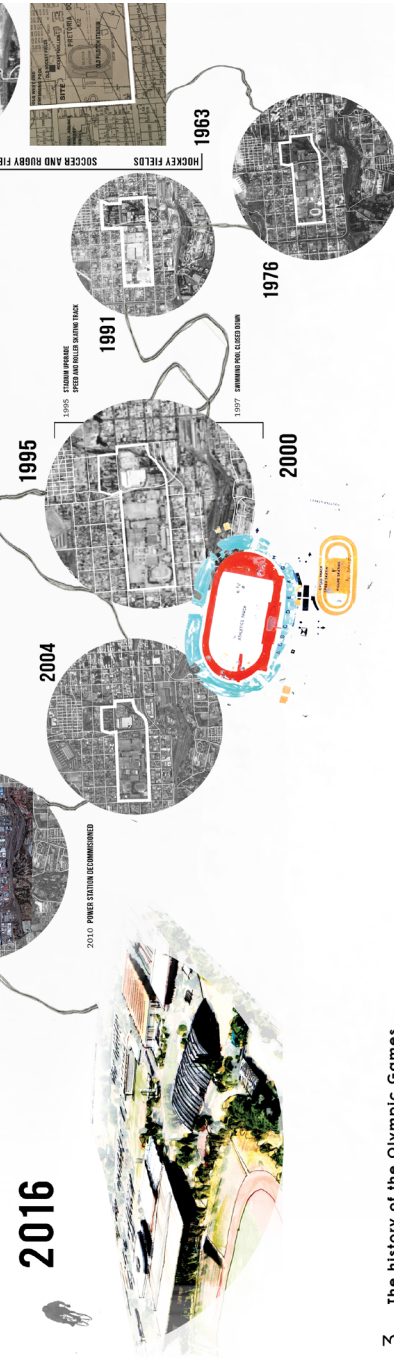
DESIGN SYNTHESIS

1. EXISTING

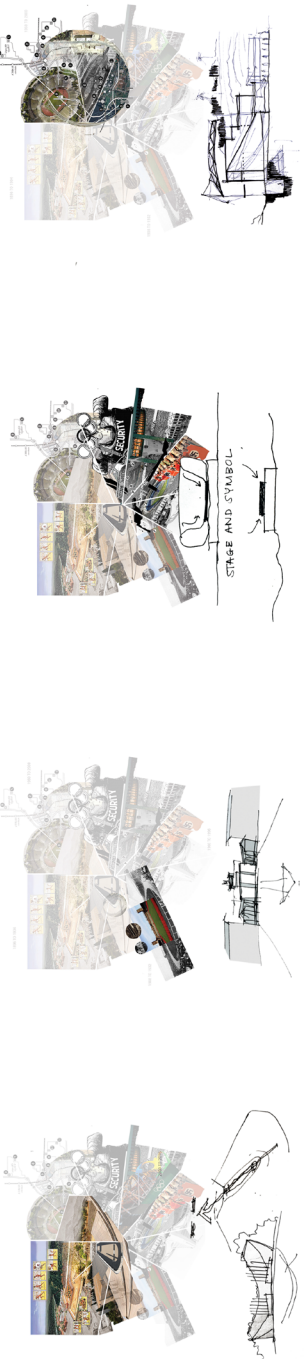
- Old horse stables
- Metro Police Headquarters
- Pilditch Stadium
- Closed down Municipal Pool and Sports Hall for disabled sport-persons
- Cemetery
- Original Hockey Pavilion
- Open unused fields

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2. HISTORY OF THE SITE



3. The history of the Olympic Games







04

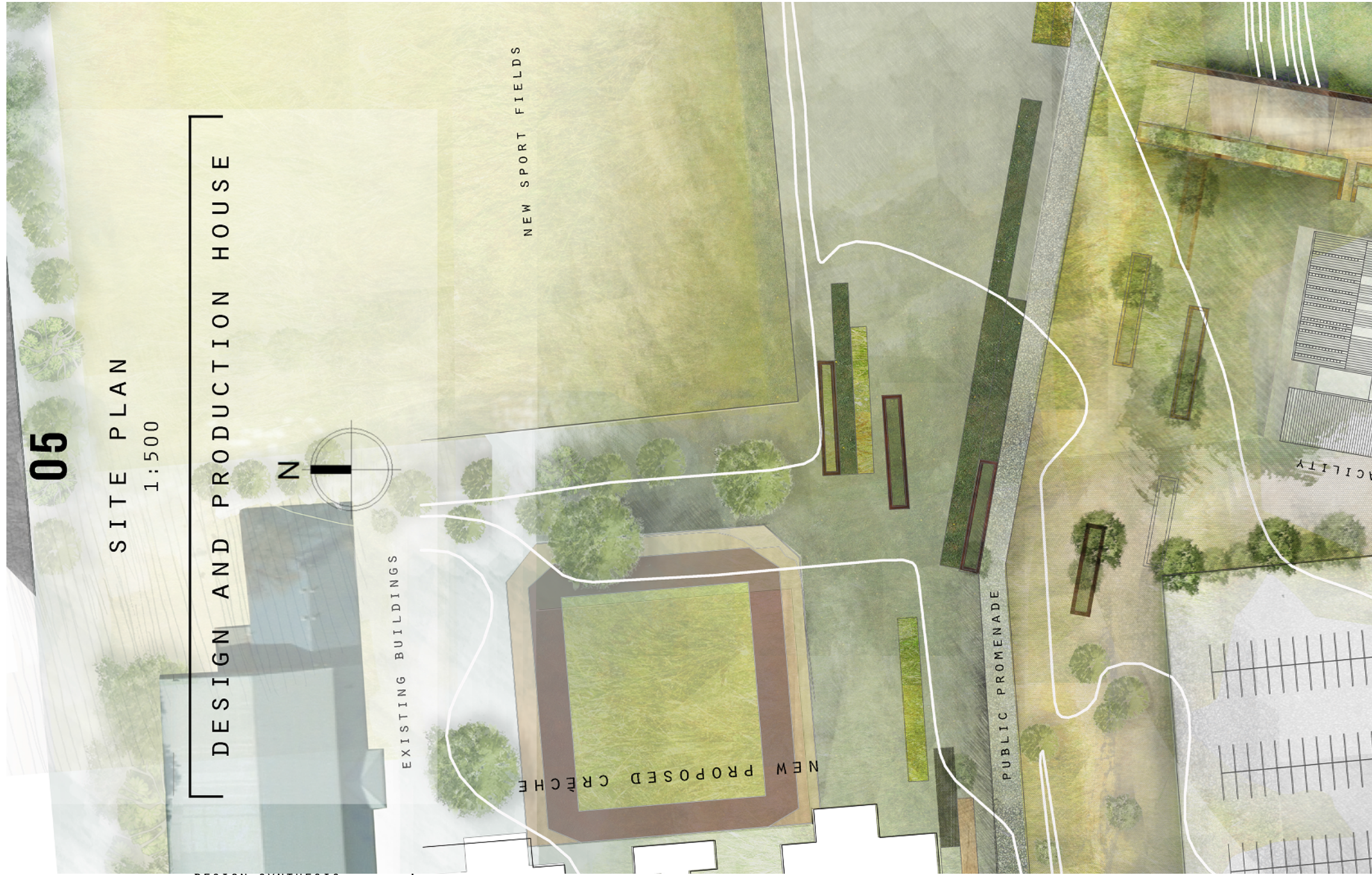
PRECINCT DEVELOPMENT
1:1000

URBAN INTERVENTION

N

DESIGN SYNTHESIS

141



05

SITE PLAN

1:500

DESIGN AND PRODUCTION HOUSE

N

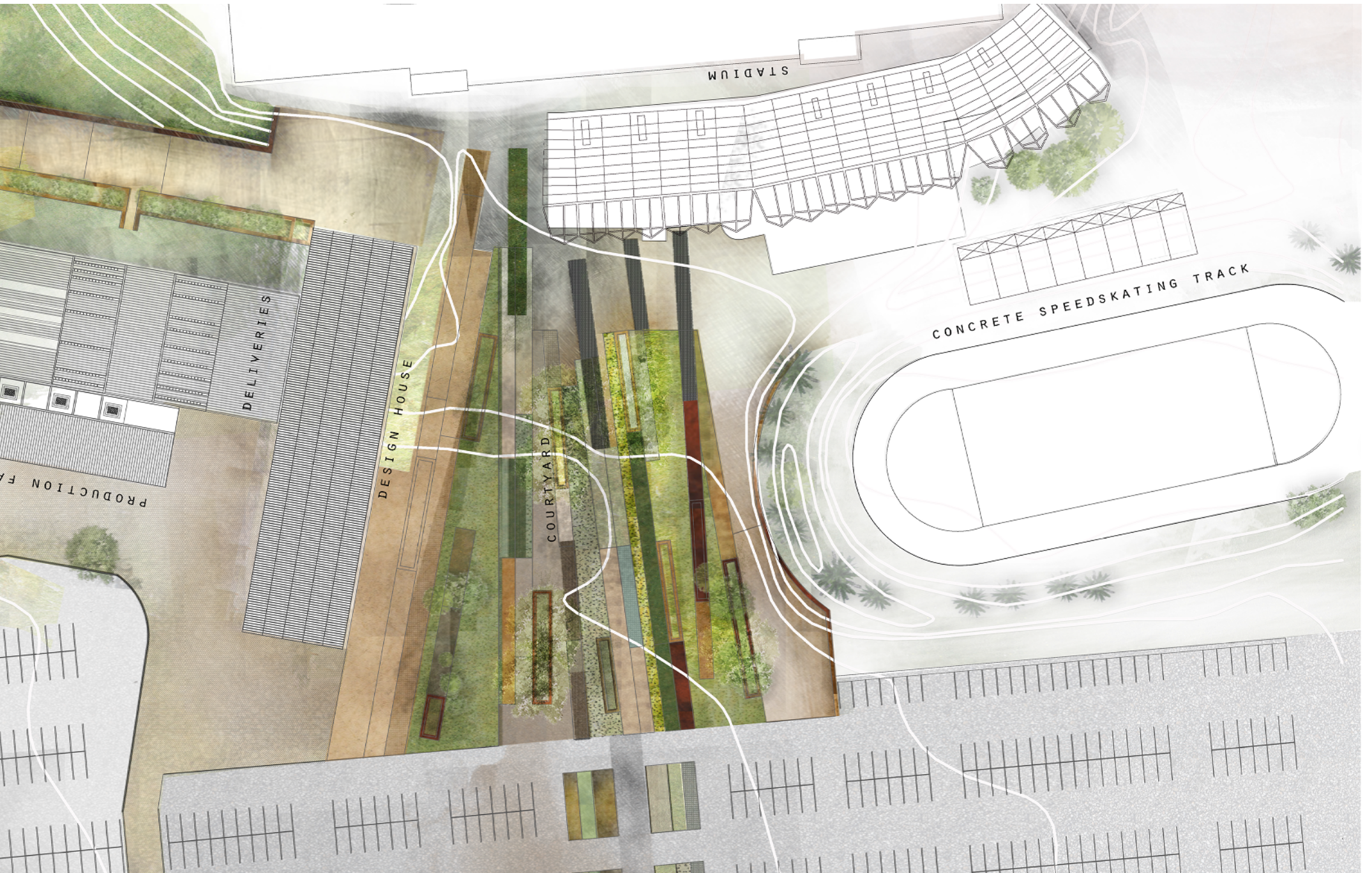
EXISTING BUILDINGS

NEW PROPOSED CRÈCHE

NEW SPORT FIELDS

PUBLIC PROMENADE

ACTIVITY

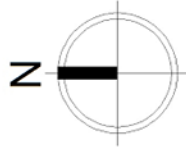


04

PRECINCT DEVELOPMENT

1:1000

URBAN INTERVENTION



[EXISTING]



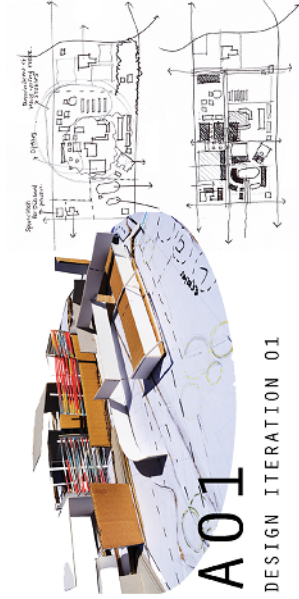
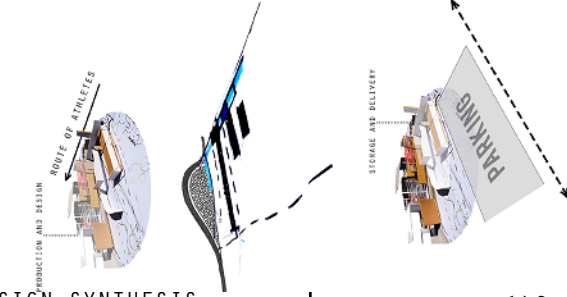
[NEW PROPOSED]

10

PROCESS WORK ITERATIONS

MODEL AND SKETCH DEVELOPMENT

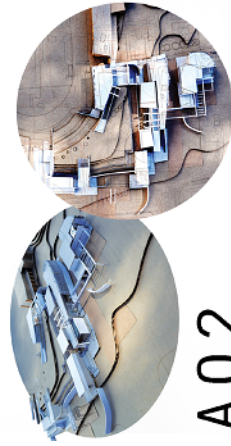
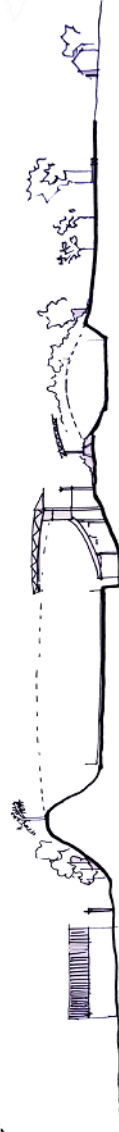
DESIGN SYNTHESIS



Makeette

The intention was connect the berm with the edge of the site, creating an architectural experience into the site. Two main buildings were placed along the route of arrival of the athlete. These two buildings which would facilitate the production and distribution of the textiles. The building closest to the street edge would serve as storage and distribution space, therefore the building was placed with a direct link to the existing parking area. Placing the building along the identified routes (production, community and event), the production and design house becomes a connection between the stadium and the rest of the site, and the route becomes a public connection between the site and the surrounding context.

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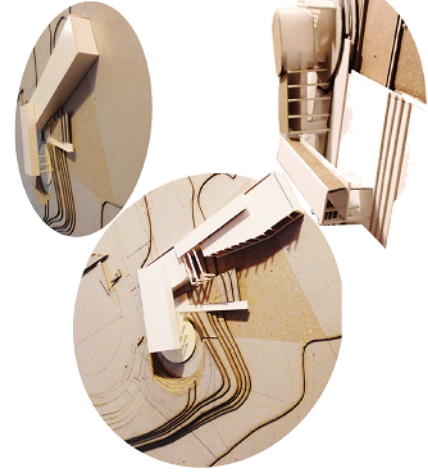
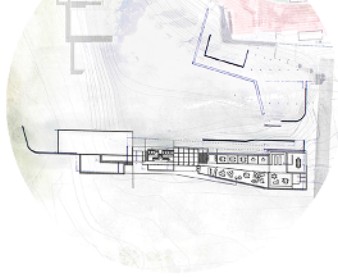
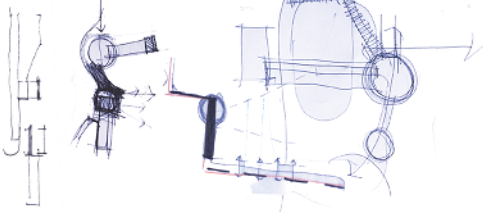


A02

DESIGN ITERATION 02

Makeette

"The idea is to create places where people can meet, randomly or with intent, and where activities of communal interest find place" (Shared space, Herzigberger 2013:19). As described by Lind Pollak, "Because boundaries are where things meet" (Pollak, 1999) they can therefore act as thresholds and barriers of social space—(Steenkamp 2011:32). The proposed routes (that guide the development of site) were laid out to connect the site, with the idea that where these routes crossed, a node could form. Acting as both boundaries and thresholds; this node could, for instance, be a place where production, event and community could form, randomly or with intent.



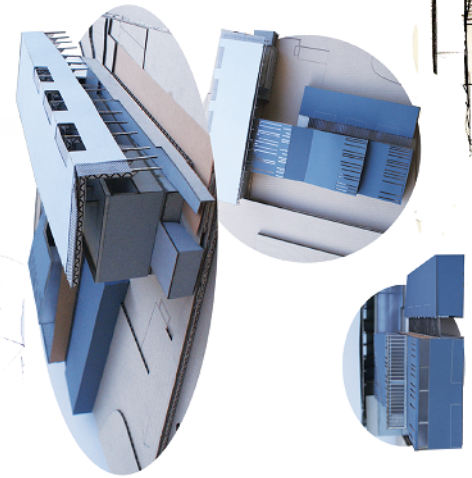
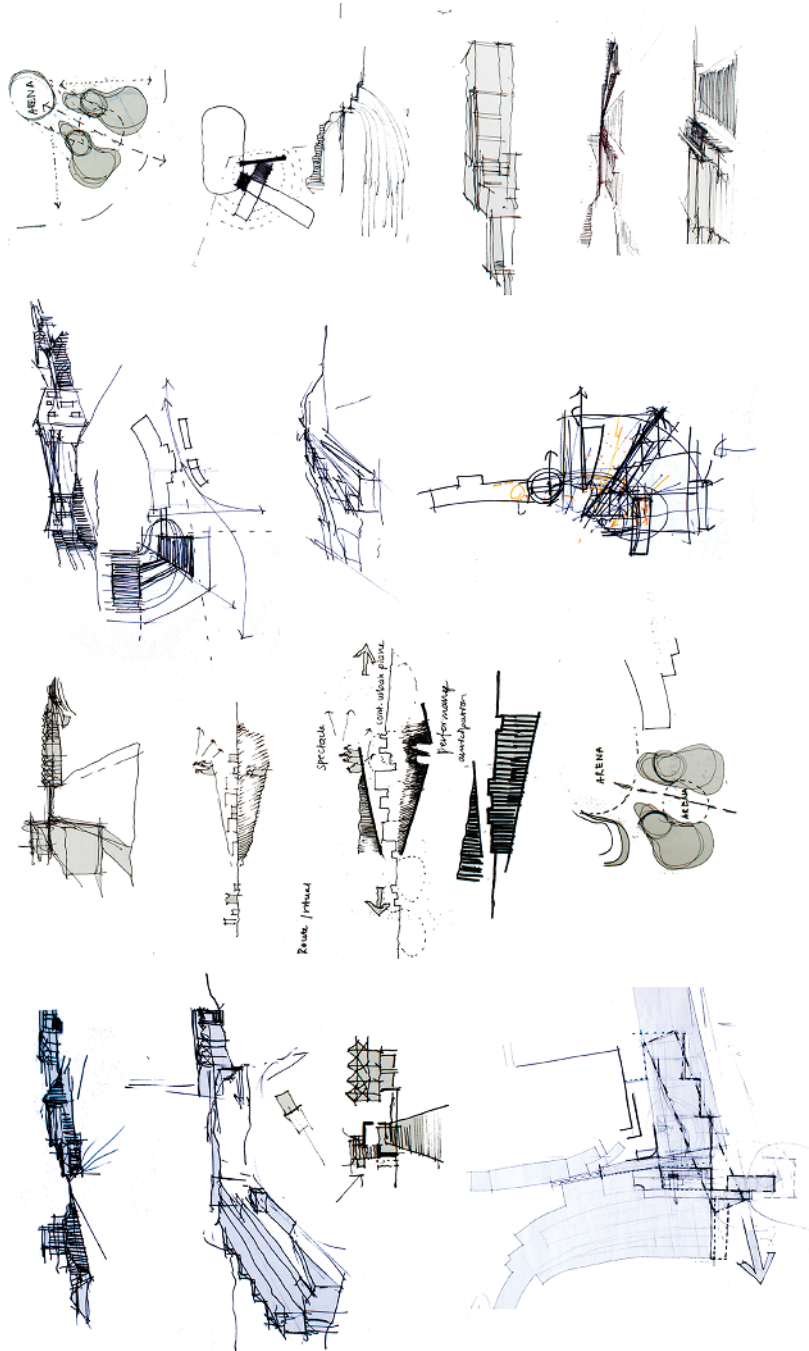
B01

DESIGN ITERATION 03

Makeette

With the first few iterations it was clear that although the routes connected at various stages, the resultant spaces actually ran parallel to one another and never created a shared space, simply adding more incoherent buildings in open space and contributing to the current issue. Therefore the routes were iterated to combine various routes in one shared space at the entrance of the event with the intent that the three components of the design (production, event and community) should have equal right to this space. The second design iteration was also questioned in terms of the orientation and the scale of the buildings. The programs for the production spaces, restaurant and call room were reconfigured in the third iteration. The call room and restaurant was combined at the edge of the berm with a warm up area and additional sport fields. The delivery, production and design spaces were relocated to one building facing North East.





B02

DESIGN ITERATION 04

Makeite

The fifth design iteration presents two distinguishable buildings: a design house and stitching house, extending from one another in a T shape. The architecture attempts to open up the experience of the site to the street and responds to the street edge. The T shape also provides large open outside rooms which responds to various connection points on precinct plan. The building is placed in relation to the stadium, as an extension of the stadium, but distinctly new. Both as a boundary to contain the space and threshold to announce the space, it is placed along the axis into the stadium.



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THE EVERYDAY AND EVENT RE-IMAGINING THE URBAN INDUSTRIAL EVENT SPACE OF

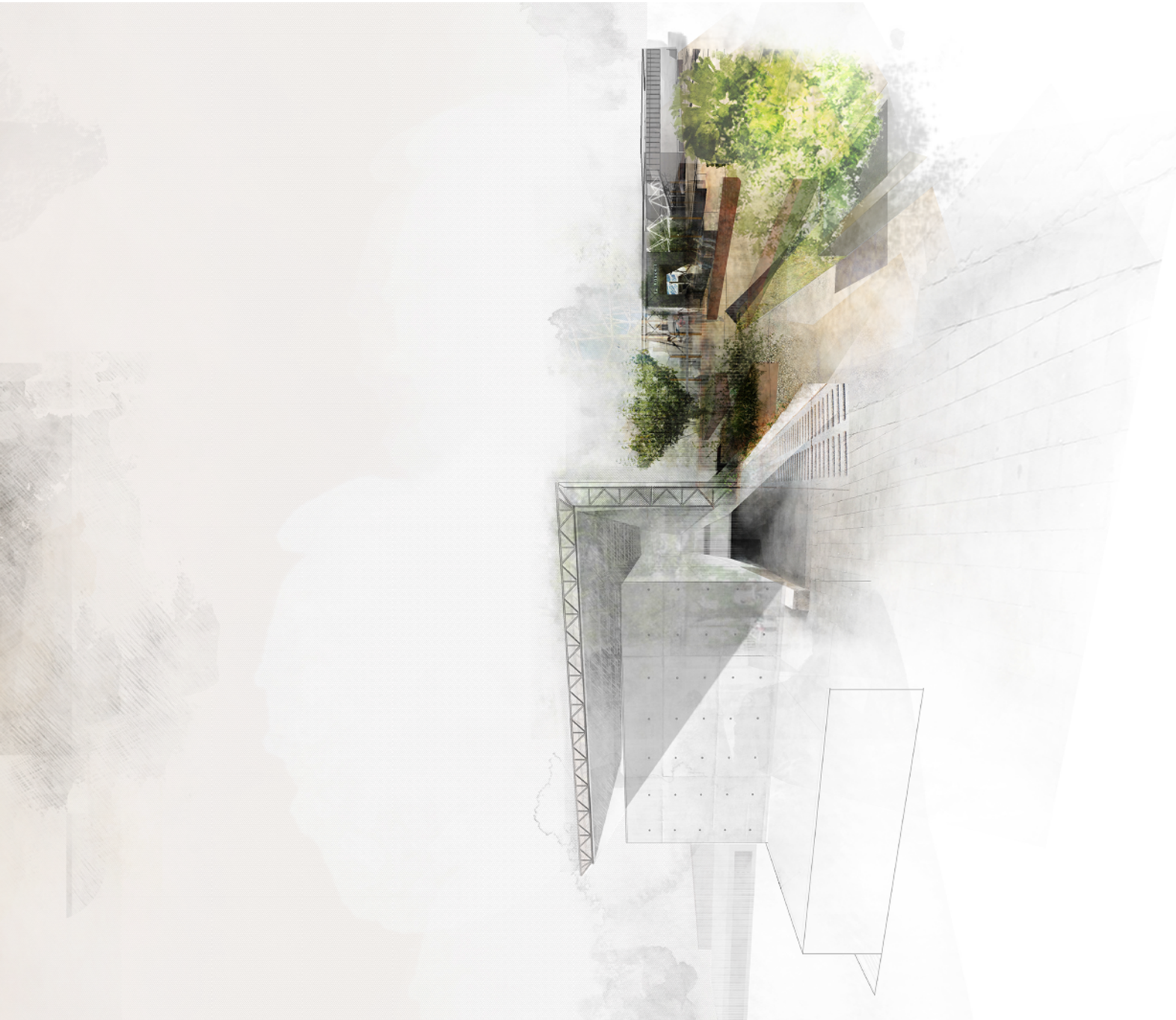
PILDITCH STADIUM

DESIGN SYNTHESIS

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© University of Pretoria

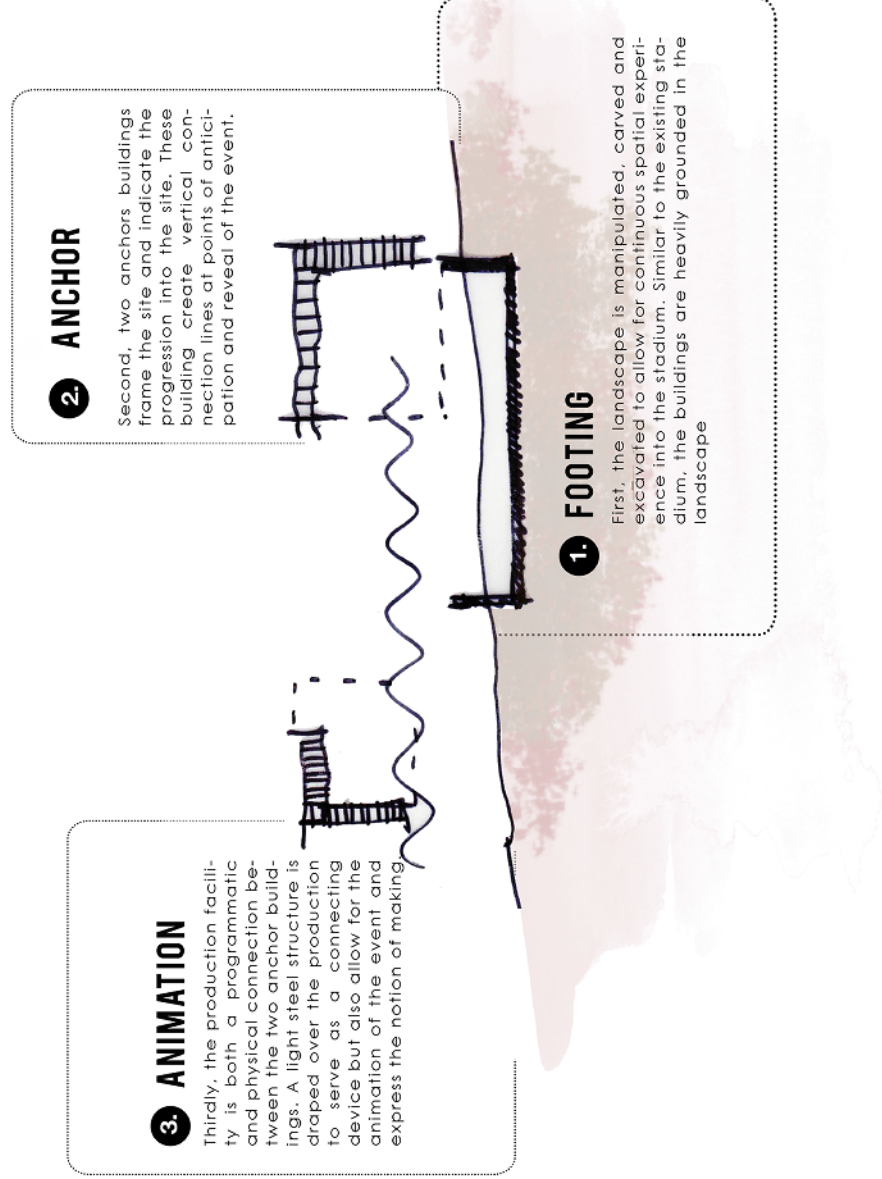




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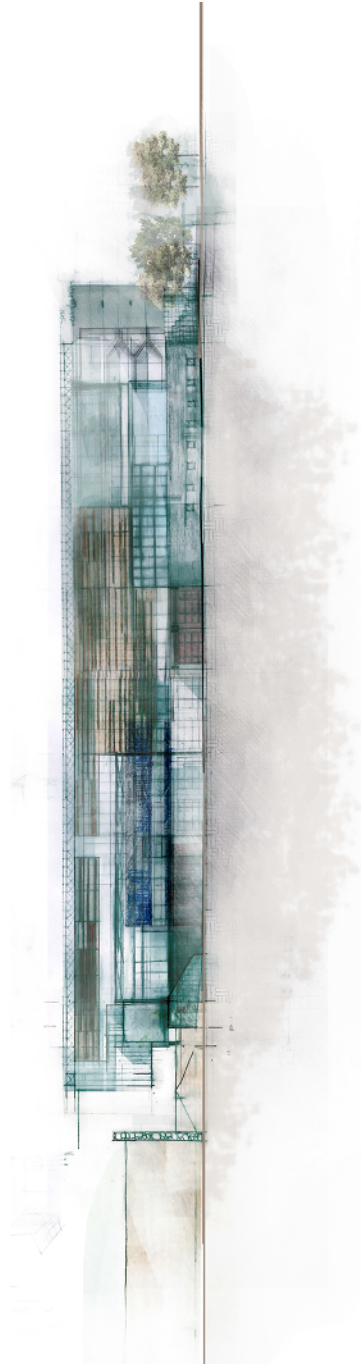
TECHNIFICATION FRAMEWORK FOR TECTONIC DEVELOPMENT

TECTONIC CONCEPT

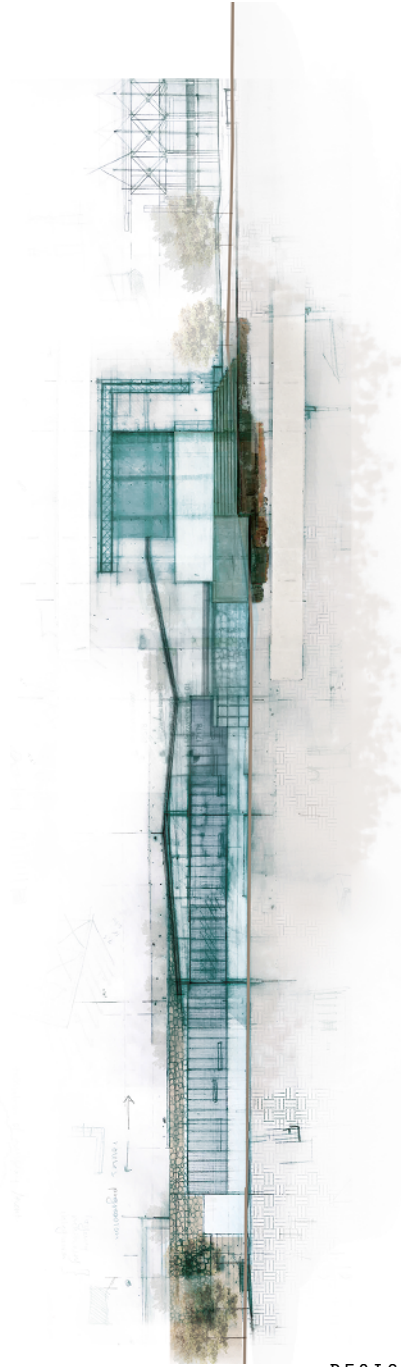


Tectonic Development

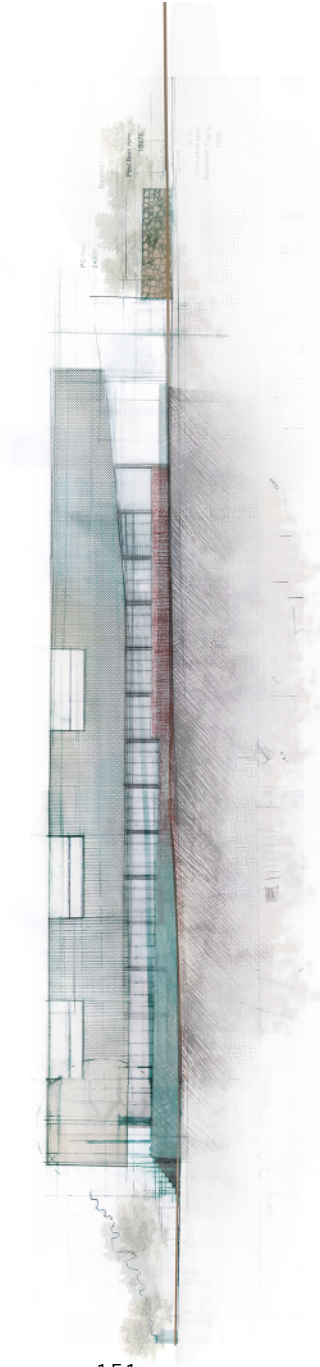
The tectonic concept is derived from an interpretation of the physical features of the surrounding elements and context. Built up by three layers, these layers are an interpretation of navigating and connecting (both) the site with the building, and the two buildings with one another.



NORTH ELEVATION



WEST ELEVATION



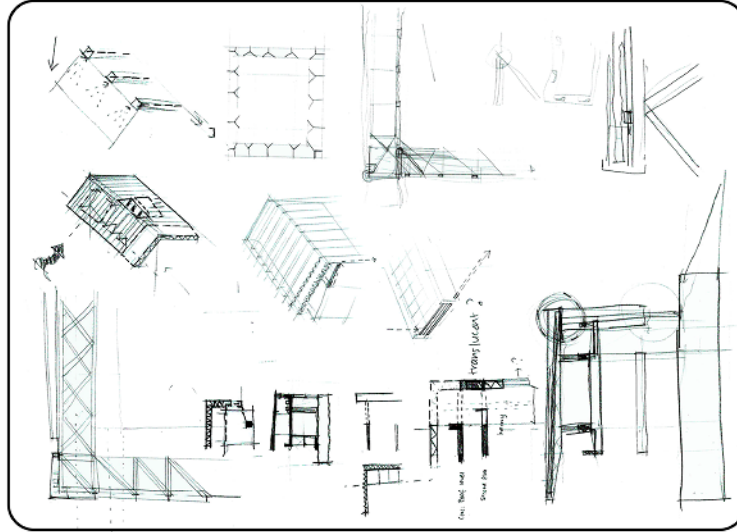
SOUTH ELEVATION

15

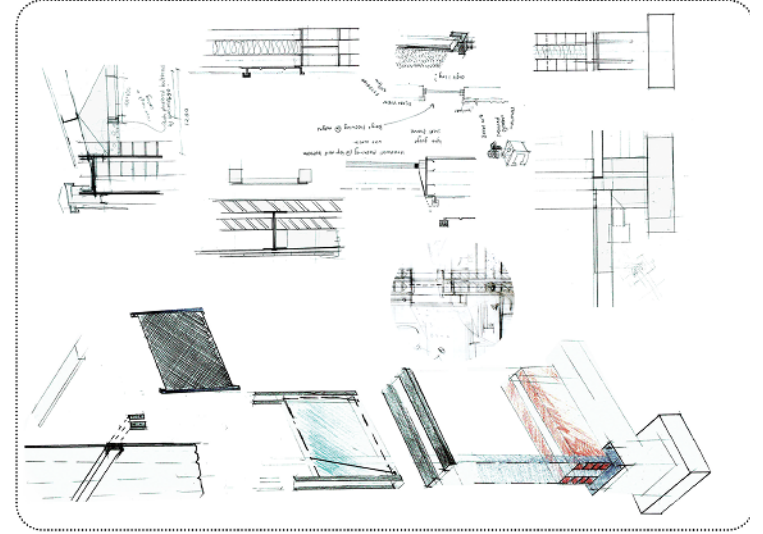
TECHNIFICATION

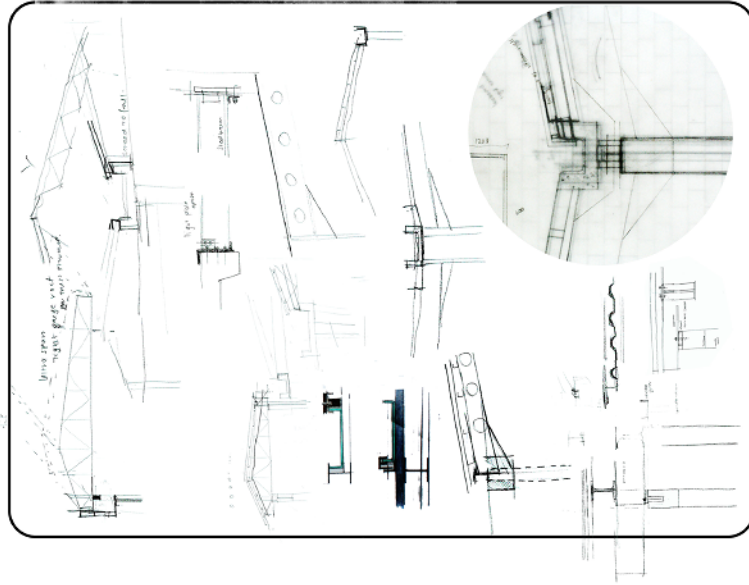
PROCESS WORK

DETAIL DEVELOPMENT

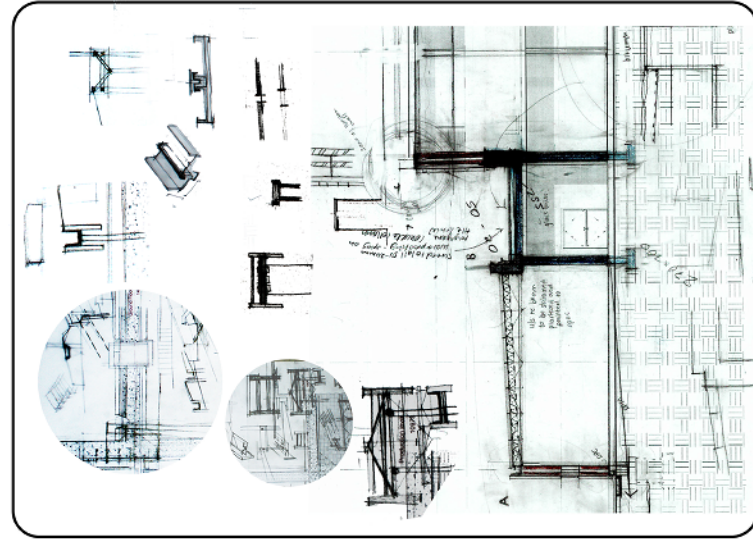


ROOF DETAIL





GUTTER DETAIL



PARAPET WALL DETAIL

CONCLUSION

REFLECTION

This dissertation set out to question (and challenge) the mono functional nature of Pilditch Stadium and present opportunity to re-script the open unused space around the stadium.

The rapid industrialisation of Pretoria West renders open public space as vulnerable elements in the urban grain, but simultaneously highlights the importance of these spaces which presents opportunities for integration. Principles of regenerative development theory informed the approach of this dissertation to create public place which is ingrained in existing networks and energies, and belongs to a community of users.

The departure point for the investigation was to challenge the current development trend of Pretoria. The outcome presents an alternative proposal to the multi-nodal mentality towards development.

The proposed macro scale vision presents network developments that integrate the stadium in a collection of existing public and community places. The site development further presents concepts of production, event and community that generate the stadium an accessible component of the collection, bringing new life to the site. The manufacture of sport equipment and clothing is presented as the connecting platform for exchange for *'the everyday and the event'*.

ACKNOWLEDGEMENTS

My thanks to the following people in particular

My Parents, for their unconditional love and support, physically and emotionally, and the opportunities they have given me, not only throughout my studies, but throughout my whole life.

Our course coordinator, Dr. Arthur Barker, for keeping a calm spirit in chaotic times.

My study leader, Dr. Edna Peres, for your personal commitment to each student you facilitated this year. Thank you for your guidance, thoughtful advice, and sensitive approach to design.

My close friends, thank you for never giving up. I loved every second in our house.

To my best friend and model builder. Thank you for your relentless love, support and strength.

And to the Maker of all things.

Thank you for this opportunity.

Thank you for renewing my strength and leading my path.



DECLARATION

In accordance with Regulation 4[e] of the General Regulations [G.57] for dissertations and theses, I declare that this dissertation which I hereby submit for the degree Master of Architecture [Professional] at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

I further state that no part of this dissertation has already been, or is currently being, submitted for any such degree, diploma or other qualification.

I further declare that this dissertation is substantially my own work. Where reference is made to the works of others, the extent to which that work has been used is indicated and fully acknowledged in the text and list of references.



Danielle Labuschagne
October 2016

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Photos of Pilditch: Architects Celliers, Greyvenstein ACG
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