

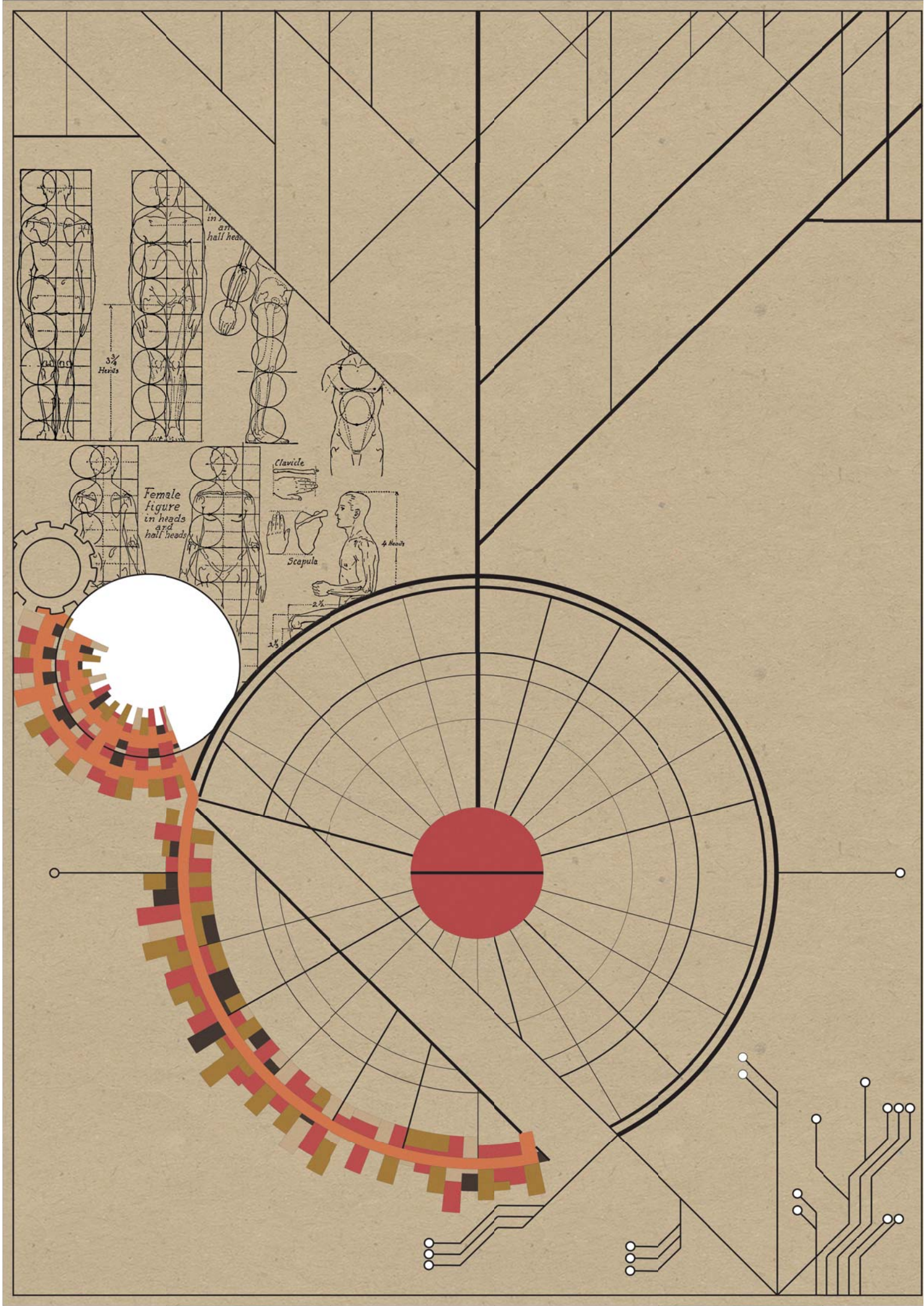
[CONNECTIONS/DISCONNECTION]

Student Number: 454 646
A. GORDON
27-3-2017

[CONNECTIONS]

THE VALUE, APPROPRIATE DESIGN AND CONTRADICTIONS OF CONTEXTUAL CONNECTION.

Student Number: 454 646
A. GORDON
27-03-2017



CONTEXT

Depending on or relating to the circumstances that form the setting for an event, statement, or idea.

[]

CONNECTIONS/DISCONNECTION

A relationship in which a person or thing is linked or associated with something else/ A State of lack of connection.

CONNECTIONS/DISCONNECTION

Connections and disconnections to context

[CONNECTIONS/DISCONNECTION]

Integrity Declaration

This Document is submitted in partial fulfillment for the degree: Masters in Architecture (professional) at The University of the Witwatersrand, Johannesburg School of Architecture and Planning

I Angus Hamilton Gordon (Student number :454646) am a student registered for the course: Master of Architecture (professional)in the year 2016. I hereby declare the following:

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- I confirm that ALL the work submitted for assessment for the above course is my own unaided work except where I have explicitly indicated otherwise.

- I have followed the required conventions in referencing the thoughts and ideas of others.

- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signature:

Date: October 2016



CONTEXTUAL CONNECTIONS IN ARCHITECTURE

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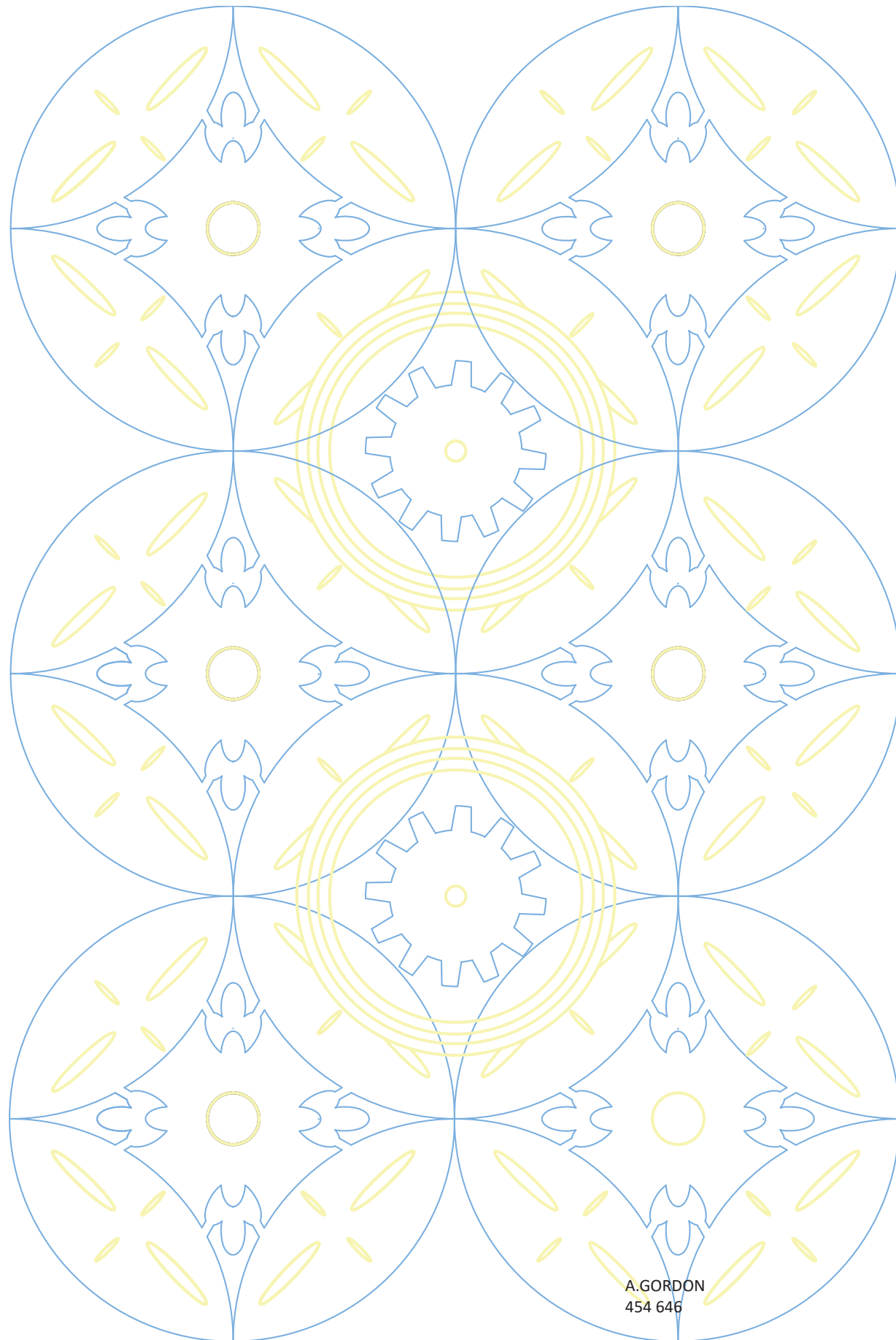
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Thank you to my family, teachers and friends

2. Site

3. Response



Abstract

Architecture can achieve meaningful value through the appropriate design of connection to physical contexts.

This paper attempts to put into working perspective: the value of a contextual connection, how these connections can be designed and the tensions that exists in the task of connecting architecture to context by examining how one can mediate these tensions and ,in doing so , create meaningful architecture.

This is done through the review of current literature which relates to thresholds, edges, entrances, people and environments, personal observations on the subject and a study of existing precedents which show exemplary connection with physical contexts.

By prioritizing well executed connections ,and indeed dis-connections, to context that appropriately mediate any tensions that might arise, a building can add meaningful value to any environment. Considered connections and disconnections between space, people, and environment will contribute in the crucial creation and preservation of place and community, creating Architecture which best meets the requirements of Its users and enriches our environments.

This paper will table a theoretical discourse, and an example of an architectural design which is driven by the recommendations made by the discourse. The architectural design will be a production, exhibition and learning facility for metallic crafts . Drawing a parallel between the title of connections and the connective process of craftsmanship. The facilities design uses contextual connections to add value and enrich the users experience of the building .

The Facility will be sited on old railway sidings in Newtown Johannesburg, a site with appropriate current and historical connections to: it's surrounding contextual culture, its surrounding urban fabric and the industrial, artistic and educational nature of the designs programme.

INTRODUCTION

Research Issue: This paper attempts to put into working perspective, the value of a contextual connection, how these connections can be designed and the tensions that exist in the task of connecting architecture to place, examining how one can mediate this tension and in doing so create meaningful architecture.

Architecture can achieve enduring value, through the appropriate design of connection to physical contexts.

By placing an emphasis on apt connections to itself and to its surrounding, in the intellectual nucleus of an architectural design, architecture can both add and gain great value. Provided that the tensions that arise are mediated.

This body of work examines the value, the appropriate design and the tensions (including the tensions appropriate mediation) of contextual connections.

Conceptual notions such as, high level connectivity, network thinking, integration, and global systems have improved peoples lives' and advanced human progress. These concepts have gone so far as to define an era : *"the age of information."* Thus, this thesis argues that the architect must embrace inter-connectivity; the architect must understand the system and "plug into it" to make contextual connections.

However, the architect must be aware of, and responsive to, the tensions that exist in the connections that are made to a building's context.

Connection to context, in architecture, is a paradox, as disconnection is basic to architecture. The shelter is built to disconnect, to create a new and different space or protect and fortify, be it from the elements or from others. Connections can also be nostalgic and out-dated standing in the way of progress.

Thus connections must be appropriate and mediated with disconnections, be it through a gentle, layered, transition or clever adaptation.

Through the process of research, this discourse has identified two categories of contextual connection that it finds pertinent:

Inter-spatial contextual connection – Threshold treatment as a means of contextual connection.

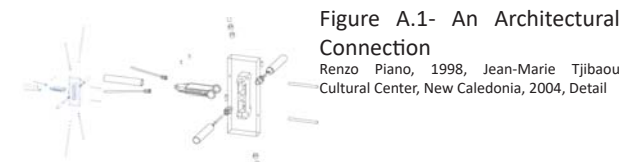
Greater contextual connections- Response to contextual culture and nature, as a means of contextual connection.

In each category this discourse examines :

-The value of the contextual connection

-How these connections can be designed and

-the tensions that exists in the task of connecting architecture to place furthermore, the discourse shall explain how one can mediate these tensions, which is the disconnection. The discourse delineates several tensions and their related mediations however it focus's particularly on the most pressing tension in each category.



PART 1

INTER-SPATIAL CONTEXTUAL CONNECTION

THRESHOLDS.

"Every day we cross a number of spatial boundaries, moving from one zone to the next. We live in transition. Architecture builds on transition" (Boettger 2014 pg. 11).

The creation of threshold is perhaps the most literal of architectural connections; however, a literal interpretation of a threshold, being simply a doorsill, is not a suitable definition for the purposes of this paper.

Instead this discourse argues that threshold is a powerful architectural tool which can be used to connect or disconnect sequential spatial entities. Thresholds connect by facilitating and controlling inter-spatial movement. Movement is crucial in our comprehension of space (Boettger 2014). As James J. Gibson mused "sensation is passive but perception is active". (Boettger 2014 pg.19). Perception requires exploration, as Le Corbusier says "An architecture must be walked through and traversed if we are to know it." (Boettger 2014 pg.18) Thresholds, being either spaces of motion or static boundary, aid us in the formulation of our perceptions of space's and exist as points of heightened awareness.

The architectural theorist Till Boettger claims that threshold must have at least one of three characteristics: a threshold must either separate space or connect space, it can be transitional spaces that provide a spatial preference to the functional spaces that follow, or it can be an experience or formality that one must encounter through the act of moving from one space to another. (Boettger 2014)

This discourse will analyse the threshold as three sub-categories examining the threshold of edge, the threshold of entrance and threshold as a sequential spatial phenomenon.

THE EDGE THRESHOLD

If the creation of space implies the division of a smaller space from a larger space, then the Edge and the boundary are the tools of spatial creation (Boettger 2014). The formation of an edge results in an inside and an outside, however, to only employ the edge as a simple two dimensional boundary is spatially detrimental.

Architectural theorists speak of edge as a condition; Architectural edges have an appearance, a quality and a working order. The threshold edge is a crucial flashpoint, it is where we establish our initial point of connection and generate a first impression.

At a macro scale, the threshold of edge could be examined as an urban phenomenon. The extent of the urban edge is often difficult to identify. To help give it a form this discourse will narrowly define the urban edge as *"places which mark the transition between different regimes or systems"* (Batty and Longley 1994 pg. 164). Importantly, an edge is never finite instead it is always a point of negotiation (Borden and Rendell 2000).

The value of an inter-connected Urban edge is that it can help create universally beneficial social development. According to architectural theorists Edward Blakely and Gail Snyder *"a connected urban experience is the very essence of civitas"* (Blakely and Snyder 1997 pg. 200). Indeed connected edges within districts and neighbourhoods can help society grow, connect and harmonise (Blakely and Snyder 1997).

A well-designed urban edge should facilitate inter-connectivity, allowing for an ease of movement, which can facilitate civic, social and economic growth.

Analysing the edge between urban, sub-urban and rural districts, Joel Garreau, in his book *Edge*

Cities, predicates that in most post-industrial cities everything significant happens at the Urban Edge. It is a charged point of expansion, connection, conflict and opportunity (Batty and Longley 1994). It is for these reasons that particular tensions are observed at the urban edge. Despite often being the logical point of expansion, the urban edge has limitations. As a general trend, urban edges are not well served by mass transit and have lower roadway linkages and capacities (Garreau 1992). This compounded with a tendency for people to resist expansion for either nostalgic, environmental, traffic, noise or crime related concerns (Garreau 1992) means that the urban edge can become a highly controversial and conflicted urban element.

This discourse is aware that all edges are dynamic. When these edges are expanding, as is usually the case, it advocates purposefully slow expansion of urban edge and thus prescribes, when possible, densification and regeneration within the limitations of a current urban edge, and is wary of the disjointed, unsupported, environmentally taxing and muddled nature of rapidly expanding boundaries.

The architect who designs an urban edge that is intended to exclude or disconnect must be fully aware of the consequences of such an action. Separation and exclusion is very often a functional necessity of built environments and thus is highly justifiable. However, the urban enclave, gated communities, the shopping mall and office park (which are essentially the privatization of the high street) promote urban edges which oppose inter-connectivity, architecturally and socially, encouraging exclusivity, separation and privilege.

Furthermore, the commodification of the edge and boundary, or the effect capitalism has had on edge contradicts inter-connectivity. Road Tolls and admission fees are becoming more and more prevalent, advertisements cover almost all surfaces often towering above us on billboards or on buildings, blemishing our landmarks, and

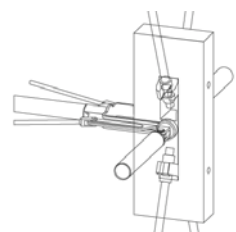


Figure A.2- An Architectural Connection
Renzo Piano, 1998, Jean-Marie Tjibaou Cultural Center, New Caledonia, (2004) detail

in some case's becoming landmarks.(Borden and Rendell 2000). Indeed, as it becomes more and more expensive just to exist, money (and whether you have it) is becoming an economic spatial boundary and threshold which is detrimental to creation of place and social growth (Borden and Rendell 2000). The architect must resist unnecessary physical or economic exclusion from spaces that could function without such limitations on access. (Blakely and Snyder 1997)

Routes of transport are crucial in creating inter connected urban edges. The capacity, accessibility and variety of these routes must be as high as possible to favor connectivity. Importantly these routes must always prioritise the pedestrian when connecting two urban edges (Frontiero and Margaret 1986). The pedestrian commuter must feel safe, comfortable and afforded orientation through landmarks and views.(Frontiero and Margaret 1986)

In-between connective space at larger urban scales become dead space (Blakely and Snyder 1997). Buffer zones at a large urban scale are not appropriate methods of dis-connecting or connecting indeed these space's becomes non-place and unless done for safety purposes should be avoided (Garreau 1992).

To avoid the occurrence of a buffer zone that becomes a non place, urban edges should either be firmly polarised (to disconnect) or firmly homogenised (to connect). (Frontiero and Margaret 1986)

At a finer scale, the architectural edge (or edge of building) is also crucial in making valuable connections to context.

The value of a well-designed architectural edge is that it can become something more than a boundary. By connecting to its context, the edge, can enrich and animate a built fabric, and because of this can generate not only defined space but also a sense of place.(Frontiero and Margaret 1986) An Architectural edge, particularly the edge between street and building, connects not only with those who inhabit the building but also with passers-by. Indeed they form our urban spatial experiences. According to the Architectural theorist Kevin

Lynch: edges and perceived boundaries are crucial factors in the way we perceive, mentally map and remember cities (Lynch 2005). It is true that one remembers a city as the spaces in-between the buildings rather than as a collection of buildings visited or individually considered. This coupled with a logical assumption that more people will pass by a building then visit it, all indicates that: the edge of a building (its façade and boundaries)will in all likelihood, be the most influential element of a building on a city and a greater public.

It would be preposterous to suggest any priori design imperatives in regard to appearance of edge, however it is possible to attempt to delineate strategies for a working order and quality of edge.

We must be careful not to establish a false dualism between building edge and social function. As Iain Borden writes *"There is an inclination to either view the building edge and our interaction with it as a result of a design or conversely that the building and its edge are objects of social history and thus the backdrop for everyday life. Neither view is entirely correct or incorrect"*(Borden and Rendell 2000 Pg.224).

To quote Bernard Tschumi: *"Can one attempt to make a contribution to architectural discourse by relentlessly stating that there is no space without event, no architecture without programme? ...Our work argued that architecture - its social relevance and formal invention - could not be dissociated from the events that (planned, or not that)'happened' within it."*(Borden and Rendell 2000 Pg.224).

We must therefore view the edge as a constantly evolving architectural dialogue between space, individuals, ideas and objects.(Borden and Rendell 2000) We can design events at our edge but never truly control how people will interact with it and so must anticipate and prepare for this ambiguity.

The edge should be considered to be a complex composite of several elements. *"many parts compounded to form a beautiful whole"*(Majiet 2012)

Aldo Van Eyck wrote about architectural edge : *"The edge may be two dimensional, like the plane of the wall, or composed of several elements being layered to create a three dimensional connection*

and, when required disconnection"(Majiet 2012 pg. 18).

A three dimensional edge can artfully facilitate the interplay between Public and private space. It is through this approach that the building edge, and point of connection, can become a celebration.

Van Eyck observed that *"a ledge on the edge of a street, can spontaneously become a third space, and through occupation, can become a point of interaction"* (Majiet 2012).

Edge might be transparent; the expectation of edge and boundary is that it must be recognisable and apparent, which is not the case (Boettger 2014). As an example, consider a display window in a shop: the transparent nature of the window means it cannot be directly recognised as a boundary, a transparent edge thus sits in-between being a threshold edge and threshold entrance (Boettger 2014). The transparency enables the perception of multi-dimensional edge but organises the space in a hierarchy of access (Boettger 2014).

Furthermore, Invisible edges, those hewn from cultural and social conformity and the boundaries fabricated through electronic surveillance, simultaneously have interesting psychological consequences and deter individuals, making one aware of one's presence and rites of access within a space, and sometimes due to the mischievous human nature can unintentionally encourage access (Boettger 2014).

The aforementioned two dimensional architectural edge (such as a simple wall) is unfavourably described by Van Eyck as a singular *"brutality"* between inside and out-side.(Majiet 2012)

The notion of an Architect purposefully designing a singularly brutal separation between two spaces is not inconceivable, be it for function or dramatic impact, but it would certainly be alienating and detract from any architectural experience, if it occurs in any design without full consideration. It would also be advisable that the architect consider the sensory attributes of architectural edge. We must not underestimate the effect this aspect of architecture has on the individual.

Consider, if you will, the floating (often tinted)

glass edges so common in contemporary high-rise office block. The reflectivity of the glass makes the individual self-conscious. To quote Michel Foucault “the mirror, that, as the space between the utopia and the heterotopia, acts to both create the unreal space of the reflection, and to project an effect back on to the place of occupation” .This is to say that suddenly the individual becomes aware not simply of the space but also of ones presence within the space, enforcing the concept of where one is, the role one plays there (and thus if one belongs there). An apt edge, in these exclusive enclaves of privileged access.

The architect must understand that all materials will have their own particular effects and consequences, of which can greatly effect one’s experience of edge.

One can apply five strategies to create meaningful three dimensional contextual connection and dis-connection at architectural edges. (Frontiero and Margaret 1986)

- 1.“Adjustment of levels and terracing to either connect or disconnect.
- 2.Consider the tactile and visual opacity, transparency, mass and reflectivity of boundaries.
- 3.The Layering or lack of layering of processional formalities and minor boundaries.
- 4.Cover and shading.
- 5.Building position relative to path setting a building back or forward.” (Frontiero and Margaret 1986).

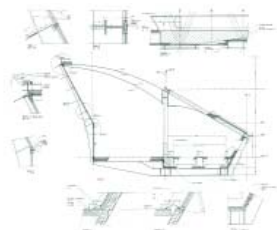


Figure A.3-
An Architectural Connection
Santiago Calatrava , 1994, TVG station, Lyon,
(2012), detail

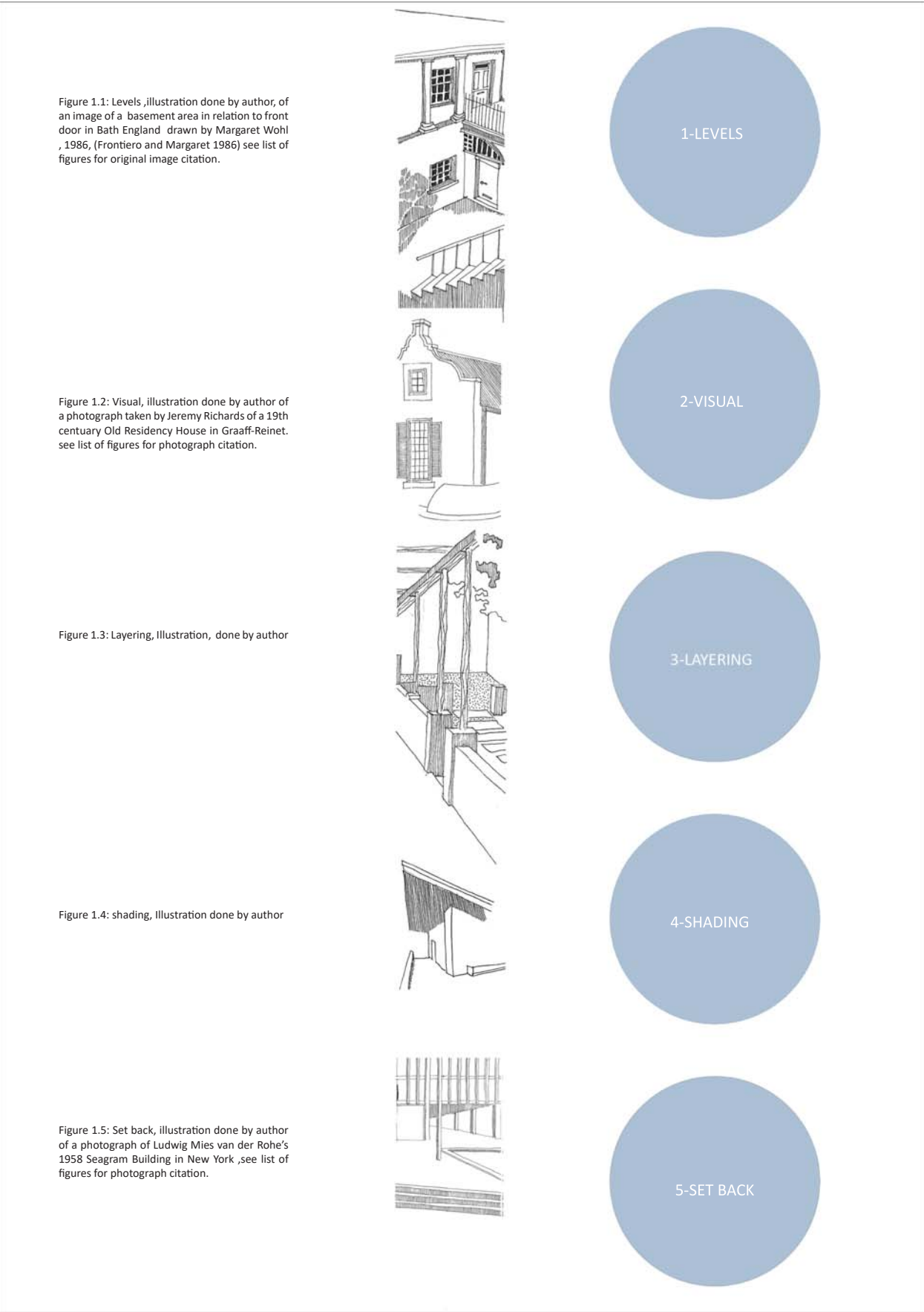


Figure 1: wohl ,frontiero 1986 Diagram of edge treatment (Frontiero and Margaret 1986)

THRESHOLD OF ENTRANCE

The next connection this discourse will examine is the threshold of entrance.

Entrance is how architecture can facilitate transition (Johnson 1965). Like, an edge, an entrance is a condition and thus must have an appropriate appearance, working order and quality, if it is to establish valuable connections.

A potent way of cultivating an exceptional quality of entrance, is with a proceeding sequence of complementary processional spaces. It is for this reason that connection through procession will be considered, in the study of entrance.

The American architect Philip Johnson said of procession:

“the design of space, massing, and even organizing volumes is only an auxiliary consideration to the main point of Architecture, the essential implementation of processional organization” (Johnson 1965 pg. 168).

Johnson argued that we experience architecture, not as a static experience, like a two dimensional drawing or photograph, but as temporal fluid experience that flows through spaces and spatial sequences, and thus Architecture must be designed with this in mind (Johnson 1965).

Procession affords the architect an opportunity to direct a series of connected spatial experiences, an opportunity which when manipulated correctly, can be a powerful tool to evoke sensation. It is through design of a processional approach that the architect can direct, like a film, a memorable lived experience of a building. The architect must always fully consider the building as an experience.

“One must ensure that beauty is found in how one moves from space to space” (Johnson 1965 pg. 168).



Figure A.4
An Architectural Connection
Ludwig Meis Van Der Rohe, 1968, drawing of chair (2005)

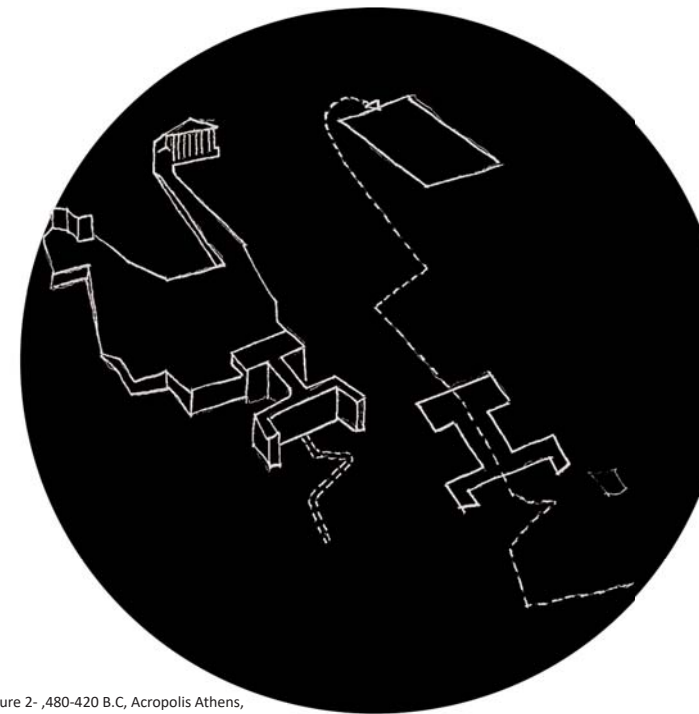


Figure 2- ,480-420 B.C, Acropolis Athens, Threshold analysis illustration by author of a diagram from (Boettger, 2014) see references of citation



Figure 3-480-420 B.C, Acropolis Athens, Photograph see references of citation

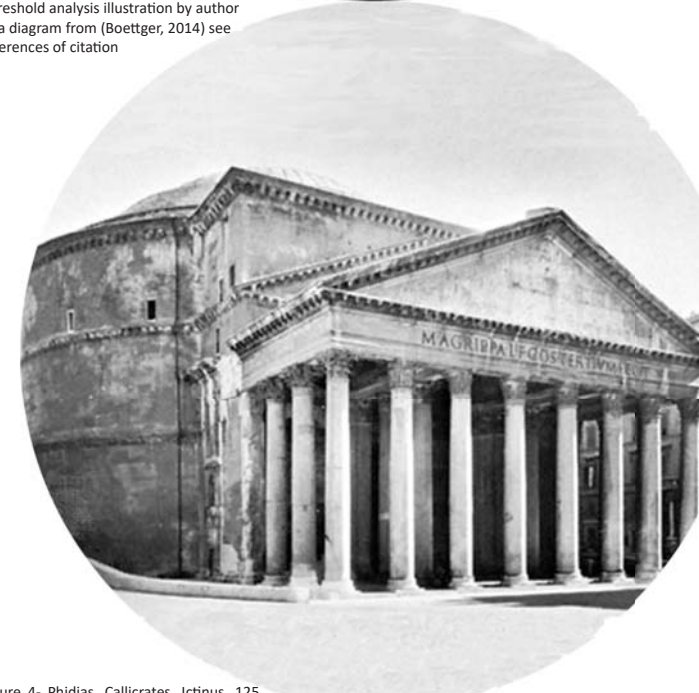


Figure 4- Phidias, Callicrates, Ictinus, 125 AD, Pantheon ,Rome, photograph by Federico Arborio Mella, see references for citation

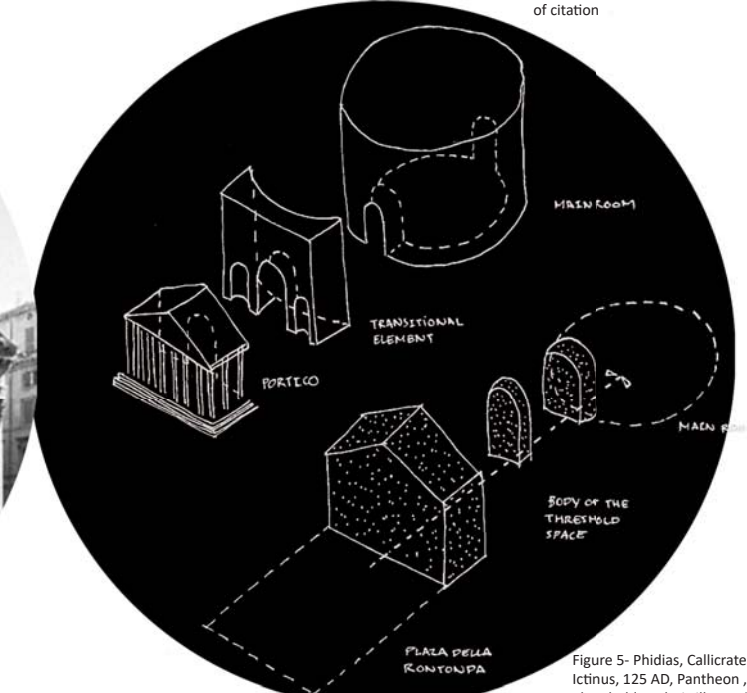


Figure 5- Phidias, Callicrates, Ictinus, 125 AD, Pantheon ,Rome, Threshold analysis, illustration by author of a diagram from (Boettger, 2014) see references for citation

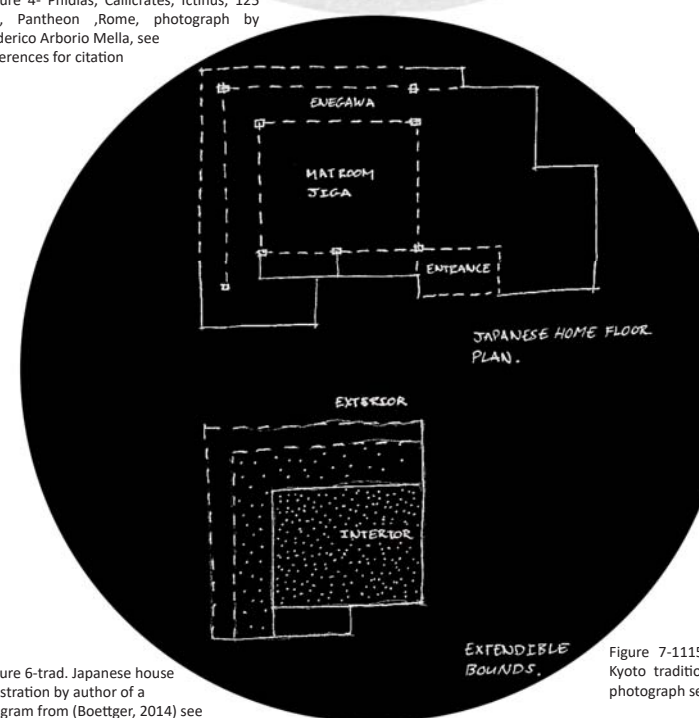


Figure 6-trad. Japanese house illustration by author of a diagram from (Boettger, 2014) see references for citation



Figure 7-1115 ,Omote Shoin, Sanboin, Kyoto traditional Japanese thresholds , photograph see references for citation

As Le Corbusier States” *equipped with his own two eyes and looking straight ahead, our man walks about and changes position, applies himself to his pursuits, moving in the midst of a succession of architectural realities. He re-experiences the intense feeling that has come from that sequence of movements. This is so true, that architecture can be judged as dead or living by the degree to which the rule of movement has been disregarded or brilliantly exploited.*”(Boettger 2014 pg. 18)

Thresholds are fundamental in a processional experience. Threshold punctuates procession. Structuring and dictating the entire phenomenon. Organizing procession is the art of organizing thresholds.

When one considers procession one should constantly ask oneself:

“Would one be lost?”

Would one enjoy the corner?

What would be overhead?

How long would it take to get to the end?

What would one see if one looks back?

How would one feel about an opening or a closing?

How would one feel about verticality or the horizontal?”(Johnson 1965)

A meaningful architecture would surely have a fully developed processional experience.

When designing a processional sequence to an entrance the correct approach must be apparent and intuitive. Clarity is key to any element of procession.(Johnson 1965). One should always positively be able to identify “from whence and

from whither”.(Johnson 1965)

Approach can help users understand a building. As mentioned, perception and motion are firmly linked. There is no better way to understand spatial organisation then to move through or around the spaces in question.(Boettger 2014)

A school of Ancient Greek builders believed that you one should never have to approach a building head on (Johnson 1965). Rather that the approach should occur from an angle so that the building can be viewed as a three dimensional entity, informing (albeit in a limited manner) a buildings depth and size. This processional sequence reveals aspects of the building’s plan and elevations, potentially improving the user’s experience of the building, possibly negating the chance of getting lost or disoriented.

As aforementioned, Clarity is key to any element of procession.(Johnson 1965).

The architectural theorist, Till Boettger is of the opinion that space is “*the sum of consecutively experienced connections between points*”(Boettger 2014 pg.18).This experience is dependent on “*perception enabled by movement through a space within the confinements of a particular time constraint.*” (Boettger 2014 pg.18). Thus procession is the manipulation of movement, spatial connections, time and the connection between the these three elements

Boettger outlines seven phases which one might consider when designing a procession and an entrance. (Boettger 2014)

1. **“Consider recognition:** Distinguishing where the entrance is.
2. **Consider Approach:** how, after recognition, one might approach the entrance.
3. **Consider Reaching:** A gesture of Arrival.
4. **Consider Arrival:** transition between in and out.
5. **Consider Orientation:** where is the next destination.
6. **Consider Monitoring:** for security.
7. **Consider Exit:** exit can be richly designed using much the same theoretical approaches discussed in regard to entrance “(Boettger 2014)

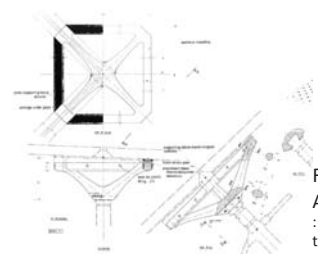


Figure A.5
An Architectural Connection
: leoh Ming Pei, (1984), Paris, (2011)Detail of the top glass brackets louvre entrance.

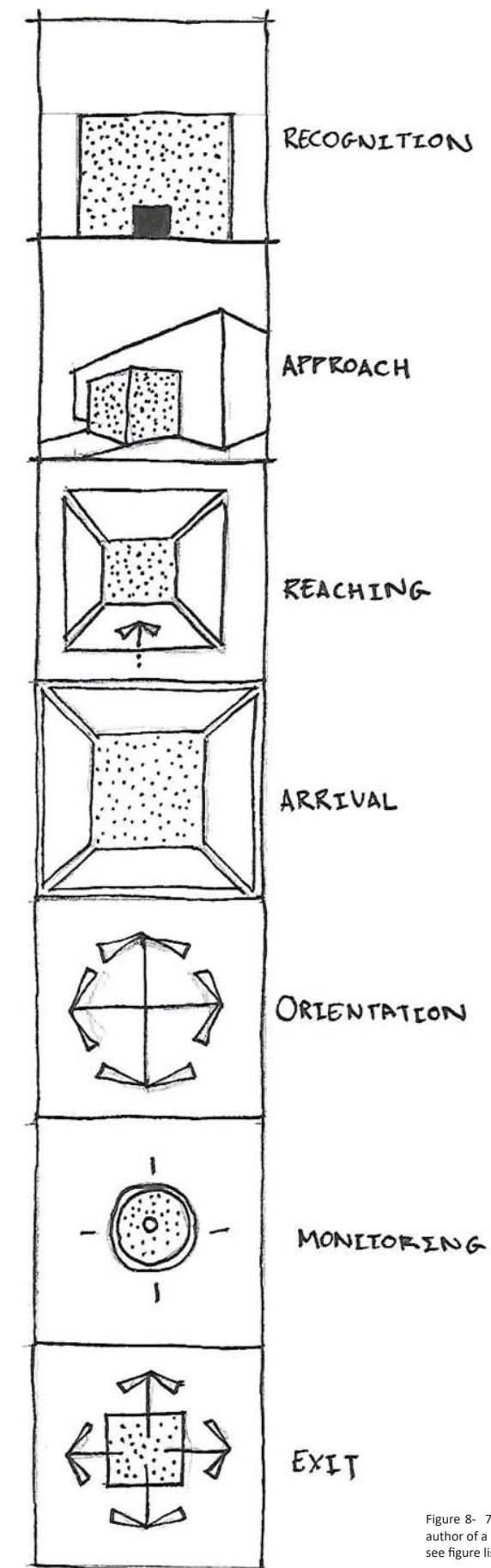


Figure 8- 7 phases of threshold illustration by author of a diagram from (Boettger, 2014) see figure list for citation.

The value of well-designed approach is perhaps best explained by Philip Johnson:

"It is known to the well-travelled tourist how much more he enjoys the Parthenon because he has to walk up the Acropolis, how much less he enjoys Chartres Cathedral because he is unceremoniously dumped in front of it" (Johnson 1965 pg. 168)

Any processional sequence must, naturally, incorporate the entrance or "doorway". When considering the entrance doorway it is noteworthy to consider what Aldo Van Eyck observed:

"The greater reality of a simple door is that it is the localized setting for a wonderful human gesture: entry and departure. That is what a door is; something that frames one's coming and going. It is a vital experience not only for those that use the entrance, but also for those encountered or left behind. A door is a place made for an occasion, a door is a place made for an act that is repeated millions of times in a life time between the first entry and the last exit, and I think that's symbolic. So then what is the greater reality of a window?" (Majiet 2012 pg. 18)

Notwithstanding the rather obvious value of the connection at entrance, one must appreciate that the entrance is a "buildings handshake". The connection is tactile and intimate. At the entrance the user's curiosity is peaked, in this state of hyper awareness the Architecture is inevitably thrust into consideration.

By making this crucial connection a pleasant, mediated and gentle experience one can add timeless value to any building.

The architect Herman Hertzberger devised 5 strategies for appropriate design of entrance, which aptly connects and dis-connects to context.

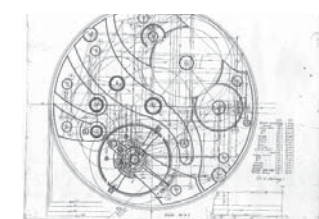


Figure A.6
An Architectural Connection,
(2012), clockwork

From the thesis Impending efficiency (Majiet 2012):

- "A significant approach to the building's entrance
- A raised Platform.
- The use of lower walls to define edge.
- A material change.
- An implied enclosure." (Majiet 2012)

Additionally the architect must consider the technicalities of the energy, insulation and ventilation requirements in our thresholds.

THRESHOLD AS A SPATIAL PHENOMENON

The consideration of edge and entrance enables the Architect to start designing thresholds as a spatial phenomenon.

What is apparent in both the design of the edge and of entrance is how both are vastly improved by the design of a "third dimension". This enrichment by the addition of "layers in-between" is certainly, a general rule for architecturally scaled thresholds (but not at urban scales). The portico, the vestibule, the foyer: The idea of a third space connecting the inside and outside is a tried and trusted formula.

In-between or third space is described by Van Eyck as: the space used to mediate and facilitate the transition between public and private. (Majiet 2012) Additionally the "third space" allows for the user to process and acknowledge spatial transitions, nuances and flows. (Majiet 2012). In-between space grants the architect a tool to exaggerate variation or similarities in two sequential spaces, furthermore it grants the designer the chance to facilitate the speed and nature of inter-spatial flows and ebbs. (Majiet 2012)

Van Eyck was such a champion of third spatiality that he rather radically, encouraged the use of "In-between space" to split all programmatic features. (Majiet 2012)

The concept of "In-between space" is strongly related to what the Japanese architect and architectural theorist Kisho Kurokawa calls "Engawa" a half way space neither inside or outside. (Majiet 2012)

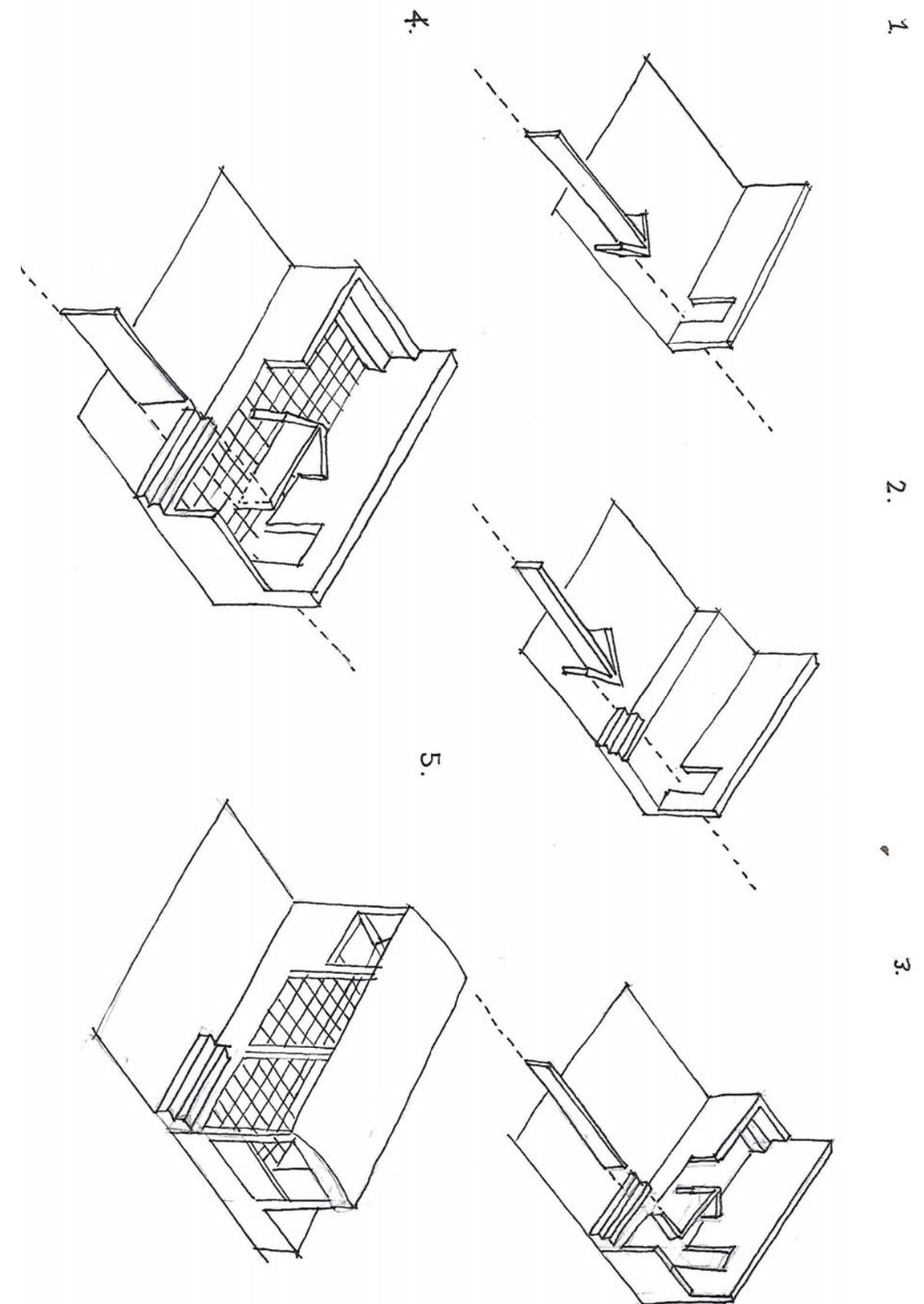


Figure 9- 5 elements of entrance illustration by author of a diagram from (Majiet, 2012) see figure list for citation

Kurokawa also uses the term “jiga” which is programmatic space .(Majiet 2012)

According to Kurokawa good architecture facilitates a connection between “jiga” and “Engawa” as often as possible.

The “Jiga” and “Engawa” should overlap. (Majiet 2012). The overlap of “Engawa” and “Jiga” is described as Semi-public, semi-private space. (Majiet 2012). The value of “Engawa” is that it alleviates the bludgeoning severity of the polarised “in and out”, insuring that a user can reap comfort, functionality and joy from a middle ground.

To quote Kurokawa “ *Engawa has a relationship with both inside and outside but is neither.* (Majiet 2012 pg.24) It is safe, social and gives back to a place, connecting private functions to public amenities.(Majiet 2012).”

When one designs the third space (or Engawa) one should be aware of the third spaces co-dependency on a “first and second space”. Fittingly, effective and valuable “Engawa” requires the establishment of a connection with both, the space before it and the space that proceeds it (Majiet 2012).

One would be well advised to acknowledge, that “Engawa” is a space in its own right (Majiet 2012) . Van Eyck and Kurokawa both argue that we must, perhaps in an unintuitive fashion purposely design unashamedly programmatically vague spaces in juxtaposition with event spaces.

Notably, the third space is most effective (as a self-standing space and as a complimentary space) when it is placed between spaces that are either complete opposites or highly similar (Majiet 2012).

A well designed third space,as Aldo Van Eyck asserts

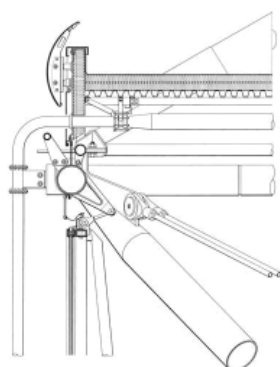


Figure A.7 An Architectural Connection
Foster and Partners , (1991). Stansted airport,Stansted Manchester, (2013) Detail.

allows for similar, hierarchal or contradictory spaces, as assessed in terms of their: programme, formal expressions (such as scale, lighting and proportions) and /or privacy levels to come together as a greater whole than the sum of its parts (Majiet 2012).

One should ,through spatial sense and intuition, mediate the dualism between threshold/journey and event/programme incorporating both but insuring that neither detract from the other (Majiet 2012).

We must be careful to remember that a space devoid of event is not devoid of value however, when the scale is larger than what this discourse has termed as an architectural scale (such as the scale observed in thresholds at an urban scale) the in-between space becomes too vast, the connection of the third space and the proceeding and following space is lost and thus such space which is often called “buffer space” becomes a non-place.

As a way of designing and analysing in-between threshold space one might consider the six essential parameters for threshold analyses , which Till Boettger outlined in his book, Threshold spaces: transitions in architecture:

- 1. Spatial definition:** how we define the threshold and differentiate it from functional spaces strongly relating to aforementioned edge (Boettger 2014).
- 2. Spatial sequence:** the path of movement through the space strongly relating to aforementioned procession (Boettger 2014).
- 3. Spatial structure:** the organization of the space, and volumetric geometries (Boettger 2014).
- 4. Spatial situation:** what space does the threshold define, and what are the thresholds surrounds (Boettger 2014).
- 5. Spatial materiality:** The lighting, contrast, transparency, atmosphere and colouring of the threshold (Boettger 2014).
- 6. Spatial furnishing:** what is the space’s function, or lack of function how is the equipment used to compliment the space’s (Boettger 2014).

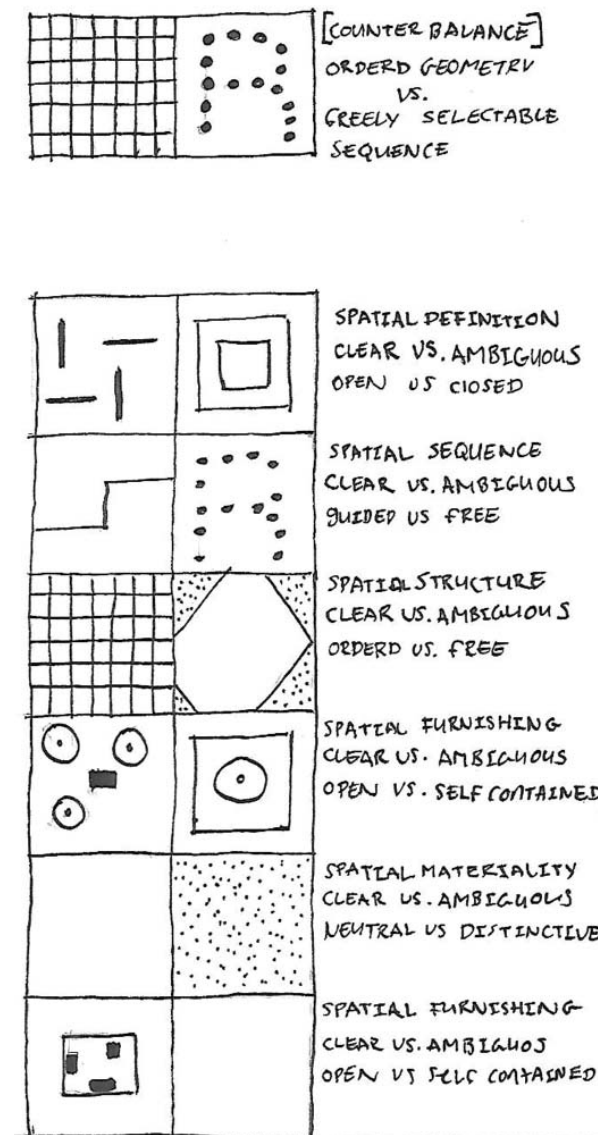


Figure 10- Essential parameters for threshold analysis and the concept of counter-balancing illustration by author of a diagram from (Boettger, 2014) see figure list for full citation.

Boettger noticed that for each of his six parameters the architect must chose a conceptually polarised position on the parameter, either making the parameter rigidly clear and formal or making it free and ambiguous.(Boettger 2014)

Boettger noticed that often successful threshold space’s alternated between formalisation and ambiguity. Such as the Juxtaposing of a rigid spatial structure (parameter 3) with a free spatial sequence (parameter 4.) It is believed that this brings a balance and richness to the threshold space.(Boettger 2014) Boettger called this Counterbalancing ambiguities.

Thus through the artful heading, design, and manipulation of the inter-connectivity of these parameters one is able to design timeless thresholds spaces.

This discourse asserts that the most prominent tension that exists in the design of threshold is the clash between public space and private space, as indeed our thresholds must connect but importantly they must also disconnect.

As declared, a disconnection is basic to architecture, the shelter is built to disconnect, to create a new and different space or protect and fortify, be it from the elements or from others. In reality, the architect must consider the need for defensible space.

This inevitably raises the question, at what point is it acceptable for promotion of: place, community , urban liberty and social growth to get mediated and compromised in lieu of: the need for functionality, security and solitude.

Bjarke Ingels is quoted in saying “ *We are not here to build for other architects we are here to build for people, we design for their dreams and desires and priorities*”(Bjarke Ingels: Advice to the Young Architects 2015)

This is to say, that the architect should carefully consider and acknowledge what people want, and only ignore such desires with the utmost caution, consideration and nobility of cause.



Figure 11 - Martin mull , 2010, Tea party , oil on canvas
Defend-able space and stewardship-the fortified suburbs - see
list of figures for full citation

If one is to look at the current architectural trends in South Africa security, privacy and exclusivity dominate the urban and suburban fabric.

It is not uncommon to see buildings and urban entities markedly disconnect from the street. This, is primarily a sociological issue with architectural consequence or in the words of Georg Simmel *“Edges , boundarys and disconnections in architecture should not be critiqued as spatial facts with sociological consequences but rather as sociological facts with spatial consequences.”* (Borden and Rendell 2000 Pg. 225). However Simmel also noted that: *“Architectural and urban boundaries make social orders concrete, more intensely experienced and clear”* (Borden and Rendell 2000 Pg. 225).

This discourse is that architecture might also be able to erode such boundaries, soften them or at least question them. It will begrudgingly accept that when the architect is commissioned to design a home, a form of privacy (engineered by the application of tall walls and the most severe of obstacles, barbs and barriers), is a requirement that is commonly un-negotiable.

However it will not condone such brutal edges in high-rise, public, office and commercial buildings, contending that such disregard for urban place is unbearably detrimental to a cities spatial quality (Borden and Rendell 2000). *“The “cubist inspired” modernist urban planning of the 20th century characterised by differentiated urban spaces which are articulated and exemplified by the gate , the wall , the buffer zone and the urban enclave”*(Cullen 1995 pg.134) must give way to a more integrated urbanism defined by the architect Kevin Lynch as A *“fine mosaic of public and private spaces”* (Lynch 1984 pg. 68).

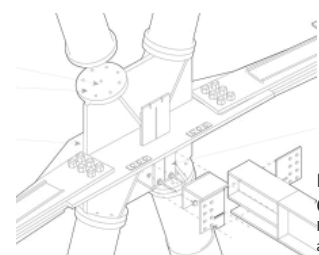


Figure A.8 An Architectural Connection
Foster and Partners , (1991), Stansted airport, Stansted Manchester ,(2013) Detail.

Peter Rowe insists that *“social patterns and spatial structures that insulate us to such an extent that we can no longer grow (in our understanding of others unlike ourselves) are not only socially destructive but individually debilitating.”*(Rowe 1991 pg. 43)

The use of “In-between” spaces (and the aforementioned strategies for edge and entrance treatment) compounding softer boundaries and thresholds to mediate hard disconnections are certainly well-advised strategies, to help neutralize the detrimental effects of the brutal boundary.

Even the most gentle and subtle of boundaries, provide in our own minds, as we pass through them, the questions: Why am I here? And do I have right of passage(Borden and Rendell 2000)? Indeed, the architecture asks us to regulate ourselves (Borden and Rendell 2000). As we walk through these thresholds we tend to construct and confront ideas of decorum, space, being and identity. Even the softest of thresholds *“provide a view of oneself playing a role within an architecture”*(Borden and Rendell 2000 pg.233) urging one to reconfigure oneself and to comply, creating an ambiguous ambience of control.

The Layering of In-between spaces has particular significance in internal residential spaces. Where In order to reinforce the desired exclusivity of one’s own private space, we tend to want semi-private spaces, exclusive enough so we can have control over who our guests are, but public enough so as to not to infringe on our desired privacy.(Boettger 2014)

If one considers Boettger Counterbalancing Ambiguities (Boettger 2014) , one might notice that an open and free In-between space can be used to counterbalance a space which requires and demands extreme privacy (Boettger 2014). Put simply, by placing an open/public area in front of a closed off/private area, one can establish “a give and take” equilibrium.

Even if this counterbalancing space is only visually accessible, such as a picket fenced around a yard before a house, it will still go a long way in the humanisation of our urban and suburban environments.

Furthermore , we might also examine other strategies , all of which by no coincidence relate to connection, which might help deconstruct the brutal “thick edge”(Borden and Rendell 2000).

In his book *“Design Guide Lines for Creating Defensible Space”* Oscar Newman theorised that if we plan spaces and spatial systems that enable and cultivate a sense stewardship among those who closely inhabit those spaces, we would be able to create open space that is both safe and importantly, a deterrent of antisocial behaviour (Newmam 1978).

Newman, after noticing how crime statistics were better in single story social housing projects than in high rise social housing areas , surmised that when residents had an intimate connection with their front yards, streets, and neighbourhoods that defensible space, as well as space that defends, will be created (Newmam 1978).

Newman asserts : *“ connecting dwellings with the public realm, merges the public realm within the sphere of influence of the user”*(Newmam 1978). *In a somewhat animalistic manner, space should be designed to become territory without it being physically exclusive”*(Jacobs 1992 pg.134) .

It would be naive to suggest that territorial well surveyed open space’s would completely hinder unwanted or criminal activity, but it would go a long way in deconstructing the “brutal boundary” which Newman asserts would improve our civic environments.

One of the methods that one can use to enable local and desirable spatial stewardship is the maximisation of general visibility, connecting people and space through sight.

As Newman States *“The connection of interior private dwellings with exterior public spaces as well as the implementation of windows, so that residents could naturally survey public areas, will undoubtedly result in users taking stewardship of place ”*(Newmam 1978 pg.67).

The thresholds of: porch, front yard, foyer, entrance and particularly window (the threshold which sits between edge and entrance) can and should serve in addition to their conventional purpose, as points of passive surveillance and should be designed with this in mind. Moreover space which lies in the public realm should be designed with consideration of quality of lighting and general visibility (Newmam 1978).

Another measure to encourage users to take stewardship is by involving the community in the design process. Implemented community input in architectural design creates a robust sense of belonging and ownership. (Brady 2016) By connecting those who use, visit work in, govern and fund a building to the design process a sense of stewardship can be cultivated (Brady 2016).

Furthermore, a building and its inhabitants might exaggerate the extent of stewardship influence through good standards of maintenance and the provision of desirable amenity encouraging use of the public realm by those who inhabit the surrounding spaces (Newmam 1978).

PART 2:

Greater connections- response to contextual culture and nature, as a means of contextual connection.

It can be argued that architectural design is, in itself, an exercise in response. Architecture becomes inherently connected to what the architect is responding to, the more successful the response, the greater the connection.

One would be hard pressed to argue that tropical modernism is not thoroughly connected to its context, despite modernism being born in the grey cold cities of Germany and Holland (Barreneche 2003).

A place is never “*tabula rasa*” (Foster 2002). Thus any building can respond to its context, and through response formulate a valuable connection.

This response can be anything, from something as simple as a response to programmatic brief to something as complex as a response to a political agenda.

It is in this connection that “brick and mortar” can come to represent the intangible.

There are two context specific elements that have architectural significance: “Natural factors and cultural factors”(Paoletta and Quattrone 2007), both of which shall be separately analysed.

Through thoughtful response to such elements one can make an architecture that is sustainable, beautiful, unique and culturally significant.

This “connection” allows for the building to obtain enduring value, not only through the provision of (sustainable) functional benefits but also through an engagement with society.

That is to say, when architecture responds to place-specific aspects of its surroundings, the architecture is notably able to connect with that place, which results in the architecture becoming representative of the value we bestow upon the contextual features (that the architecture connects to).

Architecture provides us with, what Lewis Mumford calls “*form and order to what we prize most in our civilisations*” (Lefaivre and Tzonis 2003 pg. 138).

This discourse hopes to show that even in this era where user mobility and diversity has reached unparalleled heights (Lefaivre and Tzonis 2003), that there is still value in establishing contextually specific connections.

The concept of response (and connection) to context has been stylistically, loosely categorized, as Regionalism. Regionalists not only integrate regionally apt features but also oppose an architectural order that claims universal application (Lefaivre and Tzonis 2003).

Crucially, many of the concepts, motivations and tensions that this discourse will address are similar to those observed in regionalism, however this discourse rejects the authoritarianism and impracticality of stylistic constraints. Instead contextual connectivity is asserted to be a universal truism ingrained in the DNA of good architecture regardless of style. Indeed, architecture of any style can be enhanced by making appropriate and considered contextual connections.

CONNECTIONS TO NATURAL CONTEXT

Wonderfully, (unlike in the case of contextual cultures), it is reasonable to assume a degree of constancy in many natural features, thus whatever value such a response has today; it will continue to have tomorrow.

Some natural factors which an architect might respond to when designing a responsive building include topography, light, humidity, temperature and natural aesthetic (Barreneche 2003).

The art to an architectural response, to a topography, is ensuring that the response embraces the topography and acknowledge it as a component of “place”. The architect should work with the topography rather than against it.

To quote the architectural theorist Kenneth Frampton “*The bulldozing of an irregular topography into a flat site is clearly a tectonic gesture which aspires to a condition of absolute lack of place*” (Foster 2002 pg. 27).

Frampton is in favour of “cultivating” a site, similar to Swiss architect Mario Botta’s concept of “*building a site*” (Foster 2002 pg. 27).

This is to say that, it is through the responsive layering, preservation and cultivation of the idiosyncrasies of a site, without falling into sentimentality (Foster 2002) that architecture can establish timeless and valuable connection to context.

For example, if the architect opts for a gentle terracing of a sloped site, in favour of bulldozing the site level. The architect can “in-lay” (into a form) the site’s prehistory, natural amenity and beauty while simultaneously embodying the site’s subsequent cultivation and formation. Establishing a connection between building and context (Foster 2002).

What is evident in the suggested design approaches towards topography is that a symbiotic response is favoured (the architecture compliments the natural context and “vice versa”)

Similarly the architect can establish a contextual connection to the climate, in what is known

in architectural jargon as “Passive design” or “Environmental determinism”

What is evident is that a connection through response to climate will result in an environmentally appropriate, and thus, to use a platitude “sustainable” architecture.

Buildings that provide contextually appropriate, fenestration, ventilation, shading, insulation, heating, lighting and lifestyles obtain what this discourse calls “significant appropriateness”. This aptness of design renders the building part of the context; it becomes intrinsically linked to a place’s identity and culture, and is able to adopt the value people place on such factors.

This significant appropriateness can be intensified when climatic elements are manipulated in ways that are not only functional but are also poetic.

Imagine if you will, how through the use of carefully monitored natural top lighting instead of synthesised lighting, to illuminate and display art, one is able to suddenly connect place to art and art to architecture. (Foster 2002).

An architect can also respond to context by incorporating it, physically, intellectually and dare I say aesthetically. Architecture, being such a universally encompassing discipline has always had the ability to incorporate aspects of the world around it rather well.

There is a plethora of practical advantages of incorporating natural contextual elements in any architectural endeavour, from the ancient Greeks to the pioneers of Art Nouveau, architecture has always had a celebrated history of incorporating nature. (Pearson 2001)

Over the ages the architect has devised many ways to facilitate this incorporation, integrating materials, bio-intelligence, flora and the natural vistas.

Consider the impact, of incorporating regionally sourced materials. As a general rule this would include any materials which can be made or collected within a 500 km radius of site, the more localised the better.

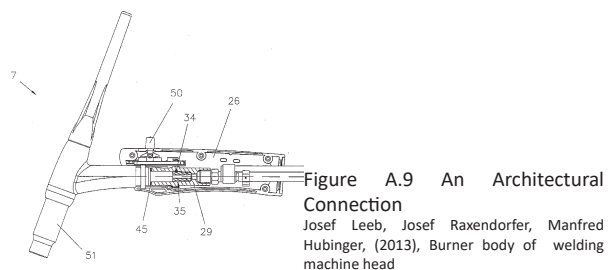


Figure A.9 An Architectural Connection
Josef Leeb, Josef Raxendorfer, Manfred Hubinger, (2013), Burner body of welding machine head



Figure 12 - Nature , metal and architecture-A brutal steel security bar, shaped in the form of a flower is intertwined with a dead vine - authors own picture and design, 2016

Crucially, if the architect wishes to connect to a context through the use of regional materials, the architect must endeavour to make connections that are fruitful, progressive and innovative. If the connection is either notably limiting or a hollow theme it should be jettisoned immediately.

Rather obviously, by reducing the need for transportation, a process which both produces carbon pollution and additional costs, a regionally sourced material can obtain environmental and (possible) economic advantage over its alternative (Regional Materials: Benefits and Advantages n.d.).

Moreover, the tactile quality of material , qualities which can only be understood through a direct personal connection (Foster 2002) [The connection being crucial.] Have the capacity to stimulate the non-visual senses.

Ill-advisedly, contemporary architecture has become increasingly all to fixated with a normative visual experience. (Foster 2002) This, according to Keneth Frampton, is partly due to the pollination of the western (European) propensity to interpret the world through perspectival means (Foster 2002).

Etymologically, perspective refers to rationalized sight or clear seeing, which Frampton presupposes is a conscious suppression of smell, hearing taste and indeed atmosphere (Foster 2002). This neglect of the holistic human experience is what Heidegger calls *"a loss of nearness"* (Foster 2002 page 25) .

By considering not only how a building looks, in a magazine or photograph, but also how it feels, smells and sounds the architect is able to realize a far greater architectural entity (Foster 2002).

Furthermore it is through the treatment of this material, or the realization of the tectonic, that a material can further absorb and therefore connect to its context.

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The Tectonic, as defined by Frampton: *"is not a referral to the activity of making a material into a requisite construction, but rather it is a referral to the activity that raises this construction to an art form , It is a play between craftwork, material and gravity"* (Foster 2002).

It is when the architect embraces bespoke

responsive tectonics that an architectural entity can be injected with human creativity, consciousness and spirit.

This connection makes the building identify with users; it becomes a representation of the place and culture, and therefore, through the worth people place on such things, obtains value.

A *"standardisation of elements predetermined by the imperatives of production"* (Foster 2002 pg. 27) , the phenomenon of global universalization with its economic implications , *"biased"* preconceptions and a global aesthetic standard, has made it increasingly more difficult for the architect to use locally sourced materials.

The art to connecting materials and contextual tectonics is to establish what Victor Schklovsky called *"defamiliarization"* (Lefavre and Tzonis 2003 pg. 127).

Defamiliarization is using the contextual connection to create a renewed rather than atavistic sense of architecture and place (Lefavre and Tzonis 2003).

Thus the architect should draw upon the creative nucleus of a place to create unfamiliar architecture that remains rooted in place.

An architect might consider the incorporation of natural intelligence, through mimicry

Through mimicking place specific biological traits, architecture can inherit advantageous forms, principles and behaviours.

David Pearson writes *"From nature, architecture can adopt organic principles of growth and change, or metamorphosis if you will, the architect should embrace the notion of design from within where each design starts as a seed and expands outwards, more than this, nature , encourages us to view buildings as an organism or as an indivisible whole, with its users as part of nature not above her"* (Pearson 2001).

The Architect Kendrick Bangs Kellogg stated *"above all, lessons from nature, should constantly remind us not to take Mother Nature for granted – work with her and allow her to guide your life. Inhibit her, and humanity will be the loser"* (Pearson 2001

Nature can also be incorporated into architecture in a more literal fashion through the implementation of what this discourse will broadly term as “landscaping “

By foregrounding indigenous landscapes the architect can establish a lot of positive connections. Both visually and spiritually, plants heighten and enhance a sense of place. The beauty, prominence and variation of plants will always be part of what makes place unique (Importance of Native Plants n.d.).

Plants bring vast value to any environment,not only do they promote and sustain physically healthy environments for humans to exist in, plants also have substantial psychological benefits to the human condition(McHarg 1992).

It has been documented that a connection with nature reduces stress ,improves moods and results in overall improved wellbeing (Velarde, Fry, and Tveit 2007).

It is thus evident that by the juxtaposition between the informality of nature with formality of Architecture and planning, gives the urban dweller crucial opportunity for respite (McHarg 1992).

The more verdant and lush a landscape, the more “nature” comes to metaphorically represent health well being, freedom and joyfulness (Lefaivre and Tzonis 2003).

Even when access is restricted to a park or a garden, just having a visual connection can be physiologically beneficial(Frontiero and Margaret 1986) .

In the spirit of civitas, any space with verdant living “landscapes” should attempt to offer all souls who pass by the opportunity of at least viewing the life within.

Incorporating fauna in architecture does present the architect with certain challenges.

Maintenance will always have to be carefully considered, it is possible to re-establish indigenous ecosystems which, by default, require very little maintenance (but it is near impossible to design completely maintenance free landscapes) .Notably, it has been shown that when landscapes are visibly unmaintained they can have a detrimental effect on the human condition.(Bell 2009)

Due to the cost of maintenance,when incorporating nature in architecture the architect must be well aware of scale, choice of species and budget.

A reductive set of five strategies for connecting to natural context trough response would be as follows:

- Respond to topography by preserving and acknowledging its qualities, without detracting from function or falling into sentimentality
- Respond to climate: allow the climate and the suitable passive responses’ to it dictate the design, as it creates universal appeal,
- Contextual Materials have wondrous qualities which can be enhanced through bespoke tectonic treatments, this connection must be progressive and innovative making the architecture unfamiliar but apt.
- Learn from a context, take heed of the hard won adaptations and lessons of the natural world.
- Incorporate regional fauna, and establish a therapeutic connection

CONNECTIONS TO CULTURAL CONTEXT.

An architect can incorporate the cultural idiosyncrasies of a region to establish a greater connection to place.

Culture originates from the Latin word “colere” which among other things means to, grow, worship, and architecturally significantly, to inhabit (Bragg n.d.).

Presently, culture is defined as: “that complex whole which includes, traditions, knowledge, language, beliefs, arts, morals, laws, Identities, customs and other capabilities and habits acquired by humans as a member of society” (Bragg n.d. min. 3).

Cultural factors of a place are subject to change, as time progresses (Paoella and Quattrone 2007). Thus to respond to the culture of the day (in a purely reactionary sense of the word “respond”) might not provide the same value in the years to come, however, this does not mean that a response to an immediate context will not have future worth.

If an architectural response to a cultural context is no longer valid (due to contextual changes over time) the response can still have value. The value is derived from the out dated response having a temporal connection. These temporal connections allow for the architecture to become a “memory machine”, relating to a time and culture from the past (Lefaivre and Tzonis 2003 pg. 131).

Buildings have longevity and a voice-fullness that has pertinent value, society needs architecture to remember, it is a fragment of a past superimposed on the present. The present and past become singular ,thus making the past more accessible (Lefaivre and Tzonis 2003).

In the words of John Ruskin “there are two strong conquers of the forgetfulness of men, poetry and architecture , and the later includes the former, and is mightier in its reality, it is well to have not only what men have felt and thought but what their hands have handled, their strength wrought and their eyes beheld, all the days of their lives”(Lefaivre and Tzonis 2003 pg.131).

Importantly, Architecture will always have timeless historical value. It is as a custodian of memory. It

is through these memories, and the progressive lessons that we might extract from such memory, that the architecture of yesteryear has value. It is uncertain if such value merits eternal preservation, the value of architectural heritage, is debatable, subjective and varies from case to case but the value exists nonetheless.

This is not to say that connection made through a contextual response will only ever have historical significance.

In the words of Swiss architect Mario Botta “Architecture will always live beyond its function” he continues “ I think architecture is a civil duty that relates to mankind, a social duty that concerns society and an ethical duty, as architecture can represent values related to the way we live”(Mario Botta – Philosopher Architect 2008 pg.1).

Clearly, a sensitive cultural responsiveness in design would aid architecture to fulfil these duties, enabling the building to accumulate, albeit temporarily , a certain social and political currency.

Architecture, being an integral part of culture, might also cultivate, expand or create culture. It is evident that Architecture makes culture concrete , gives it form and allows it to be clearly experienced .

One of the most controversial connections architecture can make to a regional culture (so as to connect to a place) is the adoption of methodologies and aesthetic sensibilities from “traditional” Architectural vernaculars.

Often this type of connection is hackneyed and obviously sentimental, as Peter Eisemman states ” To stand the Doric order against the atom bomb is trivial”(Design and Spring 1988). However, Bernard Rudofsky, in his book *Architecture Without Architects* asserts that there is a value to be extricated from this connection.

Indeed, Traditional vernaculars enable the architect to adopt the hard-won knowledge that a culture has gained over the fullness of time, much of which, not coincidentally, connects to place and thus bequeaths architecture “significant appropriateness”.

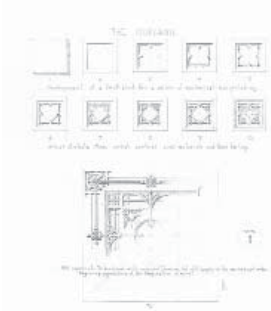


Figure A.10 An Architectural Connection
Paul Knight, 2010, Pencil on paper, Illustration of Louis Sullivan's "the inorganic"

As Rudofsky asserts: “ *there is much to learn from architecture before it became an experts’ art*”(Rudofsky 1987 pg.3)

Rudofsky continues to claim that “*the untutored builders of past time and space, demonstrate an admirable talent for appropriately fitting their buildings into their surrounds*”(Rudofsky 1987pg.3) he proclaims “The shape of a dwelling , sometimes transmitted over hundreds of generations, seem eternally valid”(Rudofsky 1987 pg.3).

The lessons of traditional architecture have a pragmatic beauty and a purity in intention, unsullied by the architect’s desire for prestige or the imperatives of modern production(Rudofsky 1987).

It is important to state that the contemporary Architect must not relinquish any of the advantages of modernity.

Any tradition that an architect draws upon to inform a design must be challenged and indeed developed through processes of constant internal critique.

The architect Kenzo tange alleged that tradition can and must be developed by challenging its own short comings(Lefaivre and Tzonis 2003), this is applicable for any aspect of culture.

When emulating vernaculars the architect must not focus so much on “the how”, but rather “the why”.

As an example the architect should ask: “Why does this traditional building have wide eaves? Why does this create a more suitable internal condition? What are the scientific principles and empirical mathematics of the situation?”

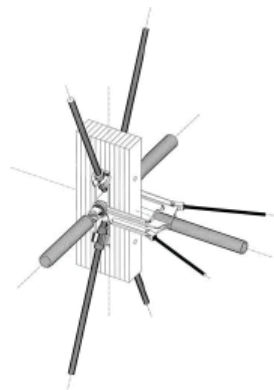


Figure A.11 An Architectural Connection
Renzo Piano, Richard Rogers and Gianfranco Franchini, (1971), POMPIDOU CENTER STRUCTURE, Paris ,(2015) detail

The architect should then use modernity, in all its wisdom, to push and realize “the how”.

There is far more to the culture of a place than tradition; the architect can also connect to a contextual “High culture”.

High culture is : “*the sweetness and light*” It is *the pursuit of perfection and a state of High-mindedness*”(Bragg n.d. min. 6). High culture is progressive and represents the most advanced of human capabilities.

A contexts “High culture” is particular to a specific and finite period; it is the “spirit of the time” what some might call the Zeitgeist. (Hegel 1998) Thus High culture and its resultant Zeitgeist , has always affected the cutting edge of contemporary Scientific, mathematical, Artistic, humanitarian, political, and indeed architectural thought.

There is great value in connecting to “high culture”. It enables the architect to inscribe an intellectualism and relevance into a design.

A robust bond between high culture and architecture has always been a part of the Intellectual value societies have given to architecture ,indeed “the more clearly a building connected with an era’s “zeitgeist ” or “high culture” the more significant it later was deemed to be (Sánchez Vidiella, Rodríguez Cánepa, and Korniusza 2011).

The issue with connecting a design, conceptually, to the cultural Zeitgeist of a place, is that, in our contemporary age, it is rather difficult to identify what a place’s dominant “high culture” is.

Until recently, at least in the cannon of western art and architectural history, the architect had a template or style. The Intellectual grounding of these styles were developed and refined, rigorously, through practice and academia

Thus through the implementation of styles such as but not limited to , Classicism, Humanism, Romanticism , mannerism, modernism and post-modernism(Sánchez Vidiella, Rodríguez Cánepa, and Korniusza 2011). The architect could insure a connection to a legitimised high culture.

This way of understanding and implementing high culture in architecture, as distinct movements, is less reasonable in today’s world.

The internet, or high levels of systemic connectivity, has created cultural fluidity. A state of affairs that authors Bruce Sterling and William Gibson call an age of “*atemporality*”(Puschak 2015 min 3.).

In a state of “atemporality” Information is easily accessed and quickly disseminated. Ideas and movements arise and fade too quickly to become manifest in our greater cultures(Sánchez Vidiella, Rodríguez Cánepa, and Korniusza 2011). Thus there is no dominant style (or stylistic incorporation of high culture) in our networked society, at least not yet (Puschak 2015).

It is because we are without a template and standard intellectual position with which to connect to our architecture, that the Architect must now endeavour to identify exactly what intellectual notions are worthy of connection.

This makes the architect’s job unnervingly complex; however it does liberate the designer. It means that the Intellectual nucleus of the design can be chosen. And if, for example, the goal is to create a connection to place, this intellectual notion is both legitimate and allowed to be interpreted without any restrictive preconceptions and stylistic norms.

When attempting to connect to a context’s “high culture” the architect must question not only how to make connections but also what to connect to. In the age of “atemporality” the answer is subjective but what is definitive is that these choices are of the utmost importance and should always support the aforementioned civil, social and ethical duty of architecture.

A connection to high culture might also be interpreted as architecture connecting to the cutting edge of engineering and technology.

Throughout history we observe new technologies and materials completely revolutionising architectural design. The arch, the vault, the steel frame and more recently digital fabrication and engineered materials such as CLT (cross laminated timber) (TIME n.d.) have historically , all enabled the architect to design not necessarily better, but

certainly more efficient architecture.

If we are to use the cutting edge of technology it should be for capability and efficiency rather than for prestige. Over the fullness of time we have always appreciated innovation but status is never timeless.

Responsive contextual connections are not without significant tensions. Establishing responsive connections to both nature and culture requires bespoke design input.

This discourse asserts that negative universal standardization is the most pressing tension that resists responsiveness to culture and nature(foster 2002).

Responsive bespoke design is being made increasingly more challenging, primarily because we reside in an era which is defined by what Ernest Mandel ominously branded as “*late stage capitalism*”(Mandel 1999). A stage characterized by: exclusivity, aggressive marketing, commodification of everything, enigmatic “financial service” based industries, omnipotent conglomerates, globalisation and internationalization of business”.(Mandel 1999) In a late capitalistic society, it is not uncommon for design, including architectural design,to place profit above all other considerations, taking every measure possible to maximise it.

An aspect of maximising profits is to create standardised, mass produced, one size fits all architectural products and designs(foster 2000). Often it looks good when photographed, so as to sell but is often inappropriate in application.(foster 2000).

This is problematic because both the incessantly advertised and thus popular (yet inappropriate) design, and the universal, one size fits all standardization of design oppose this discourse’s design philosophy which prioritises bespoke contextual responsiveness.

Despite the fact that standardisation contradicts the case by case responsive design preference of this discourse, it is important to state that standardisation as a concept is not entirely without merit. However, standardisation driven by short

sited economics , greed, ignorance or bureaucracy is problematic and is what this discourse calls negative standardisation or a negative universal condition.

A negative universal condition leads to the deprivation of place and community (Lefaivre and Tzonis 2003). Kenneth Frampton in his essay titled *“Towards a Critical Regionalism”* speaking about the architectural consequence of negative standardization declared : *“the modern building is now so universally conditioned by optimized technology, that it wholly limits any urban form”*(Foster 2002 pg.27). Indeed this *“universal conditioning”* would limit not only form, but also an architects ability to respond to any of the specificities of place.

Frampton states: *“whenever they occur, the fixed window and the remote controlled air conditioner are mutually indicative of the malignant domination of universal technique”*(Foster 2002 pg. 27).

Frampton continues *“I fear that architecture is being reduced to the manipulation of an ever decreasing range of standard elements predetermined by the imperatives of production”*(Foster 2002 pg.27).

Paul Ricoeur, who like Frampton is a critical regionalist, in his book *“History and Truth”* laments how universalization has resulted in the loss of a creative nucleus at the centre of a regions culture (Ricoeur 1977 pg. 276).

Ricoeur goes as far as to say that *“we have cultivated and spread a mediocre global culture”*(Ricoeur 1977 pg. 276).

This discourse’s resistance to the modern trend of negative standardization and universalization should not be interpreted as a resistance to progress.

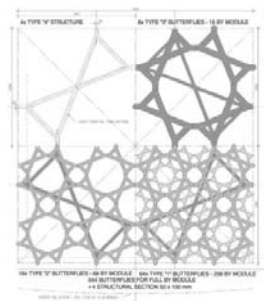


Figure A.12 An Architectural Connection: Jean Nouvel, (1987), Institut du Monde Arabe, Paris ,(2014) detail of screen

Similarly this discourse should not be viewed as a resistance to modern civilization as we know it, unlike Frampton’s Critical Regionalism, which has been dubbed “quasi-radical” and a *“post-colonial revisionary form of imperialist nostalgia”* (Eggener 2013 pg.9) this discourse declares that architecture should avoid modern negative standardization, just as it should resist the tendency to regress into nostalgic, un-progressive thought or the glib decoration of a vernacular style(Foster 2002).

Furthermore, difference, for difference sake is also not endorsed by this discourse. If a standardised reaction is logically rationalised for reasons other than short-sited economics, greed, ignorance, laziness or bureaucracy then it must surely be appropriate.

Indeed, Modernists saw global standardization as a necessary compromise, abandoning complete freedom of design in order to achieve freedom of want in an *“Existence Minimum”*, a concept which arose to prominence with the emergence of the welfare state in advanced industrialized economies (Lefaivre and Tzonis 2003).

It is true that mass production and standardization has made a lot of items more accessible to more people(Mandel 1999), however, it has also led to global corporations monopolising markets (Mandel 1999) and becoming highly powerful and influential (Mandel 1999). Frampton asserts that these global bodies exercise their power and influence to eliminate competition, which strangles and discourages creative design, bespoke reaction and craftsmanship (foster ,2000).

Indeed, greater global connectivity has helped to develop and promote this negative universal standardization, however ironically (as we grow ever more connected in this networked age) we are beginning to see a rejection of the omnipotent corporation (Mandel ,1999). The individual, the community, and the small business now have global out-reach: ideas, products, and services are exchanged more freely than ever before, which is breathing life into the trades and professions that enable reactive bespoke design. (Mandel 1999)

This discourse calls for mankind to use its ever progressing connectivity and industrial capability to make architecture that benefits us all; indeed

technological advancement can enable good design through provision of option and ability.

It will be to humanity’s detriment if mankind only uses its ever increasing connectivity and industrial capabilities for maximum profit at the cost of all else.

Mediation of negative standardization can be achieved by shifting of societal and professional mind-sets.

This mind set adjustment would include: endorsing the design of contextual responsiveness in architecture as proposed by this discourse.

Society must be aware of the values and virtues of bespoke and reactive architectural design. It is true that mass production and Standardisation often have a competitive edge in initial upfront pricing (this is not to say that it is the most cost effective option over the fullness of time). A well informed public would make better decisions when faced with the tricky economics of this issue.

Furthermore , In order to resist this phenomenon of negative universal standardization Kenneth Frampton outlines several rules:

- Favour culture over profit.
 - Encourage the purposeful intellectual gravitation of the arts and avant-garde.
 - Challenge the “demagogic tendencies” of popular-isms and advertisement.
 - Prioritise non-ubiquitous place and form.
 - Consider architecture holistically by balancing the visual with the tactile.
- (Foster, 2002).

When considering contextual connections it is important to acknowledge that the effectiveness of contextual connections are impacted by one’s interpretation of a context. The architect must be aware of the limitations of personal perspective. *“A context, it is often a view of the world of others from one particular place, from one pivotal point of authority, from one social and cultural position”*(Eggener 2013 pg.6).

Thus we must not only connect to context but we must connect to the right context.

The architect can discern what elements of context are worth connecting to and mediate the limitations

of personal perspective through collaboration, research, and training (Foster 2002). Furthermore, the constant testing of ideas, in a Hegelian fashion of thesis, antithesis and synthesis(Solomon 1985) is crucial in regard to counteract the limitations of personal perspective.

Additionally, the architect must disconnect the intellectual nucleus of a design from connections that do not help it respond to its civil, social and ethical duties.

It is important to state that the contextual connections that this discourse refers to have no predetermined political meaning, cannon or purpose. Instead, architectural entities can connect to contextual cultures of all variations (Lefaivre and Tzonis 2003).

It is true that in the past architecture has connected to a culture of oppression that often favoured ideals that were nationalistic, atavistic, sentimental, hallucinogenic and chauvinistic (Lefaivre and Tzonis 2003). The Architecture of the Nazi Heimat stand out as examples of architecture that makes these unwanted connections. However, it is also true that architecture has connected to contexts which oppose an oppressive culture. This discourse sites the architecture of Picturesque Regionalism as an example of an architecture that has connected to a culture of liberation. The architecture of the Picturesque Regionalists became an expression of polemical anti-absolutism, using genius loci to oppose absolutist politics (Lefaivre and Tzonis 2003) or as Alexander Tzonis and Liane Lefaivre state *“The picturesque garden, with its espousal of irregularity, variety and roughness became a privileged vehicle for anti-monarchical movements”* (Lefaivre and Tzonis 2003 pg. 130).

Thus, through a *longue duree* perspective, it is observed that no singular predetermined political agenda can be associated with contextual connections (Lefaivre and Tzonis 2003). The nature of the connection depends on the intentions of the architect. Indeed, establishing contextual connections is a powerful and influential tool, thus it is the duty of the architect to ensure that the connections made in any architectural entity do not favour a specific group to the detriment of others (Lefaivre and Tzonis 2003), and the architect must guarantee that any intellectual approach to

architecture disconnects from concepts which set one group up in opposition to another (Lefaivre and Tzonis 2003). Instead, the architect must favour connections that connect to a universally inclusive and globally identifiable culture which opposes loss of place, loss of community and loss of innovative spirit.

A common critique of connecting to context, particularly within the cultural contextual realms, is that, often the contextual connection becomes nothing more than “*revivalist pastiche*” and an example of cheap nostalgia.(Eggener 2013).

Indeed, cultural or technical connection can, if incorrectly designed become “*counterfeit and indulge a hollow sentimentality*” (Eggener 2013 pg 5.). This Cheap nostalgia arises because of a flawed stylistic approach to Architectural design.(Eggener 2013)

Despite the similarities between the intellectual positions of this discourse and intellectual positions of regionalism(particularly critical regionalism), this discourse rejects predetermined stylistic constraints when establishing connections.

As this discourse previously asserted, A predetermined “Stylistic approach” is flawed because we exist in the age of “atemporality” (Puschak 2015) which, will always be too intellectually fluid to form relevant stylistic languages (Puschak 2015).

Therefore, when designing, the architect must always understand that connecting to a context is never a predetermined style, form or set of aesthetic preferences but rather a rationalized process that is independently realized (Eggener 2013).

In conclusion of this chapter, this discourse quotes Lewis Mumford who stated in his Book “*The South in Architecture*” “*connecting to context is not a matter of using the most available materials, or copying a form of construction used for want of anything better a century ago*”(Lefaivre and Tzonis 2003 pg.137), but Rather “*Contextually connected forms are those which meet the actual conditions of life which most fully succeed in making people feel at home in their environment*”(Lefaivre and Tzonis 2003 pg.137).

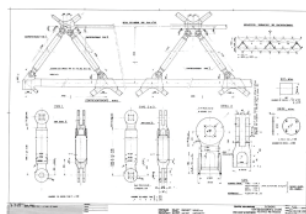


Figure A.13 An Architectural Connection
Renzo Piano, Richard Rogers and Gianfranco
Franchini, (1971), POMPIDOU CENTER
STRUCTURE, Paris, (2015) detail

CONCLUSION

In this document it has been demonstrated that by prioritizing well executed connections and indeed dis-connections to context (that appropriately mediate any tensions that might arise) a building can both gain value and add value to any environment.

By correctly connecting one contextual reality to another, we are able to enrich both realities. Thus, appropriate contextual connections and dis-connections allow for spatial symbiosis. Contextual connections can valuably produce a positive sense of place, a better sense of community and social harmony and growth.

Through the use of contextual connections we can design buildings, and cities, that produce positive experiences for the individual during movement, transition, use and can mediate the tension between private and public spaces without detracting from the users experience of a built environment or the function of architecture.

Furthermore, the use of contextual connections in architecture can build better environments for human habitation and create cities and buildings that respond to our needs, wants and circumstances in the most appropriate way, mediating improper standardization and fostering an innovative spirit thus constructing architecture that is suitable, comfortable and a delight.

The tensions that might arise at points of connection must be mediated through strategic design interventions. The contextual disconnection must be as considered as the contextual connection, as both can add value and help architecture realise positive civic, social and functional duties

Additionally on the topic of architectural connectivity, the sustainable future of our built environment will be hard won through establishing connections to the intricacies of economics, resource preservation, smart technology and food production. These connections would be the next logical fields of study in essential connections and dis-connections in architecture.

What is clear in inter- spatial connections - is that these connections are crucial for civic and social harmony, furthermore, intimate inter- spatial connections are not only crucial in the formation of functional and desirable spaces, but also help to articulate, humanise and improve how we experience, use and move through architecture.

The tensions at edge and entrance that this discourse delineates must be mediated. In particular the conflict between private and public space needs to be addressed, it is argued that the solution to the complex issue of tension between “private and public space” is realised through a combination of threshold elements such as boundary, procession, entrance, a sense of stewardship and In-between space all working together to achieve, a multi-elemental spatial solution that has a civic and social conscientiousness but is still effective.

Through the layering of strategic design interventions on the thresholds of edge, entrance and fenestration; treating these entities as many complex parts to form an equilibrious whole between public and private space (Majiet 2012) we can realize better architecture, and urban space.

Furthermore in regard to greater contextual connections, or connections to contextual culture and natural environment, what has been articulated is that there are many rewards to reap from establishing such connections, some of which comes from architecture being able to inherit, through a connection, the best parts of humanity, culture and environment. Alternatively it creates architecture that directly responds to its users, and thus creating architecture that best suits the context it exists within.

In order to design these connections, architects must embrace informed bespoke design and must dis-connect from the universal, prosaic, nostalgic, glib and inappropriate .

An architect should draw from the spirit of a culture and location but produce “the unfamiliar and the innovative”, this is a calling for buildings with both clear origins and clear originality.

For in the words of Frank Gehry “*architecture should speak of its time and place, but yearn for timelessness.*”(Gross, Stone, and Iovine 1993).

DESIGN RECOMMENDATIONS

This chapter will serve to summarise the design recommendations and drivers delineated in the body of the theoretical discourse to establish architectural connections and disconnections.

Treatments of Urban Edge as a connection.

The following is necessary in designing appropriate urban edge:

1. Path, view, landmark, and boundary must all be geared to the pedestrian commuter. There must be several different paths and the views and landmarks and boundary should all serve to orientate and guide. (Frontiero and Margaret 1986)
2. Urban Edges should be either be firmly polarised (to disconnect) or firmly homogenised (to connect) in-between connective space becomes non-place. (Frontiero and Margaret 1986)
3. Buffer zones at a large urban scale are not appropriate methods of dis-connecting and unless done for safety purposes should be avoided. (Frontiero and Margaret 1986)

Treatment of Building edge as a connection.

The following is necessary in designing appropriate building edge:

1. Adjustment of levels and terracing to either connect or disconnect
2. consider the tactile and visual opacity, transparency, mass and reflectivity of boundaries.
3. the Layering or lack of layering of processional formalities and minor boundaries.
4. Cover and shading.
5. building position relative to path setting a building back or forward.”(Frontiero and Margaret 1986)



Figure A.14 An Architectural Connection
Renzo Piano, Richard Rogers and Gianfranco Franchini, (1998), essays - Jean-Marie Tjibaou Cultural Center, Tjibaou, (2014) detail

Treatment of building entrance as a connection.

The following is necessary in designing appropriate building entrance:

1. “Consider recognition: Distinguishing where the entrance is.
2. Consider Approach: how, after recognition, one might approach the entrance.
3. Consider Reaching: A gesture of Arrival.
4. Consider Arrival: transition between in and out
5. Consider Orientation: where is the next destination.
6. Consider Monitoring: for security
7. Consider Exit: exit can be richly designed using much the same theoretical approaches discussed in regard to entrance “(Boettger 2014)

The third space.

The following is necessary in designing appropriate building connective third space:

1. Third space must be designed as a space in its own right (Majiet 2012) A building should consist of both ambiguous and event spaces (Majiet 2012)
2. The nature of a third space should be determined by the relationship of its proceeding and flowing space and should be used to manipulate the users sensation of the: (a) similarity or differences [in programme, lighting, scale, texture etc.] (b) hierarchal arrangement and (c) privacy levels. (Majiet 2012)
3. Third space should be used to control flow and ebb as a visitor moves through a building (Majiet 2012)

Threshold space.

The following should be considered when designing appropriate connective threshold space:

1. Spatial definition: how we define the

threshold and differentiate it from functional spaces strongly relating to aforementioned edge(Boettger 2014)

2. Spatial sequence: the path of movement through the space strongly relating to aforementioned procession. (Boettger 2014)
3. Spatial structure: the organization of the space, and volumetric geometries.
4. Spatial situation: what space does the threshold define, and what are the thresholds surrounds. (Boettger 2014)
5. Spatial materiality: The lighting, contrast, transparency, atmosphere and colouring of the threshold(Boettger 2014)
6. spatial furnishing: what is the space’s function, or lack of function how is the equipment used to compliment the space’s(Boettger 2014)
7. Counter-balancing these parameters, designing some as structured and formal and others ambiguous has proven to enhance the threshold space.

Mediation of tension

The following should be considered when attempting to mediate the tensions of inter-spatial connectivity

1. Consider space’s In-between, to gradually transition from Private to public
2. Consider counterbalancing private with public
3. Cultivate stewardship of public and in-between spaces, through enabling passive surveillance, positive territorialism, ample amenity, easy maintenance and community involvement and stake in the design process.

Treatments of natural environment connectivity .

The following is necessary in designing appropriate urban connection to the natural environment :

1. Respond to topography by preserving and acknowledging its qualities, without detracting from function or falling into sentimentality
2. Respond to climate: Allow the climate and the suitable passive responses’ to it dictate the design, as it creates universal and timeless appeal,
3. Contextual Materials have wondrous qualities which can be enhanced through bespoke tectonic treatments, but this connection must

always be progressive and innovative making it unfamiliar but apt, considering Victor Schklovsky “defamiliarization”

4. learn from a context take head of the hard won adaptations and lessons of the natural world.
5. incorporate regional fauna, and establish a therapeutic connection.

Treatment of connection to connection to culture and people.

The following is necessary in designing appropriate connections to culture and people:

1. Emulate the “why” rather than the “how” of vernaculars and traditions in architecture
2. The atemporality of high culture determines that the architect must decide what exists in the intellectual centre of design, however this idea should never be at odds with the civil, social and ethical duty of architecture

The following should be considered when attempting to mediate the tensions of connectivity to people and culture.

1. Avoid standardization of modernity as well as the tendency to regress into nostalgia, unprogressive thought or glib decoration of a vernacular style”(Foster 2002).
2. Favour culture over civilisation, Encourage the purposeful intellectual gravitation of the arts and avant-garde, Challenge the “demagogic tendencies” of popular-isms and advertisement, Prioritise of non-ubiquitous place and form, And Balance the tactile with the visual. (Foster 2002)
3. Reject and question the constraint of any prior style.
4. oppose the loss of: place, community and innovative spirit and reject any form of connection that does not encourage these goals

In the words of Lewis Mumford Contextually connected forms are those which meet the actual conditions of life which most fully succeed in making people feel at home, in their environment, not merely utilizing the soil but reflecting the current condition of the culture in the region”(Mumford 2007)

REFERENCE -BIBLIOGRAPHY

Barreneche, Raul A.
2003 Tropical Modern. London: Thames & Hudson.

Batty, Michael, and Paul Longley
1994 Fractal Cities: A Geometry of Form and Function. London: Acad. Press.

Bell, Andrew
2009 [Psyche]. University of the witwaterstrand.

Bjarke Ingels: Advice to the Young Architects
2015. Vimeo. <https://vimeo.com/116246644>, accessed October 5, 2016.

Blakely, Edward J., and Mary Gail Snyder
1997 Fortress America: Gated Communities in the United States. Washington, D.C: Brookings Institution Press.

Boettger, Till
2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser.

Borden, Iain, and Jane Rendell, eds.
2000 Intersections: Architectural Histories and Critical Theories. London ; New York: Routledge.

Brady, Angela
2016 Guide to Localism Opportunities for Architects Part Two: Getting Community Engagement Right. RIBA. www.architecture.com.

Bragg, Melvyn
N.d. Culture and Anarchy. The Value of Culture. <http://www.bbc.co.uk/programmes/b01phf4c>, accessed April 27, 2016.

Cullen, Gordon
1995 The Concise Townscape. Oxford ; Boston: Butterworth-Heinemann.

Design, Joseph Giovannini; Joseph Giovannini, A., and Architecture Writer For The Times Spring Is Working On A. Book, the Deconstructivists,” To Be Published Next
1988 BREAKING ALL THE RULES. The New York Times, June 12. <http://www.nytimes.com/1988/06/12/magazine/breaking-all-the-rules.html>, accessed September 7, 2016.

Eggener, Keith L.
2013 Placing Resistance: A Critique of Critical Regionalism. Journal of Architectural Education 55:4: 228–237.

Foster, Hal, ed.
2002 The Anti-Aesthetic: Essays on Postmodern Culture. New York: New Press.

Frontiero, Wendy, and Wohl Margaret
1986 Thresholds-Landscape, City and Building Edges. M.I.T.

Garreau, Joel
1992 Edge City: Life on the New Frontier. 1. Anchor Books ed., 6. print. New York, NY: Anchor Books.

Gross, Kim Johnson, Jeff Stone, and Julie V. Iovine
1993 Home. 1st ed. Chic Simple. New York: A.A. Knopf : Distributed by Random House.

Hegel, Georg Wilhelm Friedrich
1998 Phenomenology of Spirit. Delhi: Motilal Banarsidass.

Importance of Native Plants
N.d. THE NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO. <http://nativeplantsocietyneo.squarespace.com/importance-of-native-plants/>, accessed May 15, 2016.

Jacobs, Jane
1992 The Death and Life of Great American Cities. Vintage Books ed. New York: Vintage Books.

Johnson, Philip
1965 Whence & Whither: The Processional Element in Architecture. Perspecta 9/10: 167–178.

Lefavre, Liane, and Alexander Tzonis
2003 Critical Regionalism: Architecture and Identity in a Globalized World. Munich: Prestel.

Lynch, Kevin
1984 Good City Form. Cambridge, Mass: MIT Press.
2005 The Image of the City. Nachdr. Publication of the Joint Center for Urban Studies. Cambridge, Mass.: MIT PRESS.

Majiet, Ziyaad
2012 Impedning Effeciancy. UCT.

Mandel, Ernest
1999 Late Capitalism. 6. impr. Verso Classics, 23. London: Verso.

Mario Botta – Philosopher Architect
2008 Design Build Network. <http://www.designbuild-network.com/features/feature1561/>, accessed June 28, 2016.

McHarg, Ian L.
1992 Design with Nature. 25th anniversary ed. New York: Wiley.

Mumford, Lewis
2007 The South inArchitecture. Read Books.

Newmam, Oscar
1978 Defensible Space: Crime Prevention through Urban Design. New York: Collier Books.

Paoletta, Adriano, and Giamila Quattrone
2007 Design Principles & Practices: An International Journal Volume. DESIGN PRINCIPLES AND PRACTICES: AN INTERNATIONAL JOURNAL 1(3): 17.

Pearson, David
2001 New Organic Architecture: The Breaking Wave. Berkeley: University of California Press.

Puschak, Evan, dir.
2015 Atemporality: Our Relationship To History Has Changed. Entertainment. youtube.

Regional Materials: Benefits and Advantages
N.d. <http://www.buildings.com/article-details/articleid/15165/title/regional-materials-benefits-and-advantages/viewall/true.aspx>, accessed May 14, 2016.

Ricœur, Paul
1977 History and Truth. Evanston [Ill.]: Northwestern University Press.

Rowe, Peter G.
1991 Making a Middle Landscape. Cambridge, Mass: MIT Press.

Rudofsky, Bernard
1987 Architecture without Architects: A Short Introduction to Non-Pedigreed Architecture. Albuquerque: University of New Mexico Press.

Sánchez Vidiella, Àlex, Virginia Rodríguez Cánepa, and Andrea Korniusza, eds.
2011 The Sourcebook of Contemporary Houses. 1. ed. New York, NY: Harper Design/HarperCollins.

Solomon, Robert C.
1985 In the Spirit of Hegel: A Study of G. W. F. Hegel’s Phenomenology of Spirit. New York: Oxford Univ. Press.

TIME
N.d. TIME.

Velarde, MD, G Fry, and M Tveit
2007 Health Effects of Viewing Landscapes – Landscape Types in Environmental Psychology. Urban Forestry & Urban Greening 6(199–212).

Vilkka, Leena
1997 The Intrinsic Value of Nature. Amsterdam; Atlanta, GA: Rodopi.

REFERENCES -LIST OF FIGURES

Figure 1- Diagram of Edge treatment, content from: Frontiero, wendy, and Wohl Margaret diagram of edges 1986 Thresholds-Landscape, City and Building Edges. M.I.T. Page 152

Figure 1.1 - Illustration done by author, of an image of a basement area in relation to front door in Bath England drawn by: Margaret Wohl , 1986, Original image citation: Frontiero, wendy, and Wohl 1986 Thresholds-Landscape, City and Building Edges. M.I.T. Page 95

Figure 1.2 : Illustration done by author of a photograph taken by Jeremy Richards of a 19th century Old Residency House in Graaff-Reinet. Photograph citation: Jermeý Richards, (2008), Stock Photo - Old Residency House in Graaff-Reinet, Eastern Cape, South Africa Historic building, built early 19th century in classical Cape style Now a museum [ONLINE]. Available at: http://www.123rf.com/stock-photo/cape_dutch_architecture.html?mediapopup=13338327 [Accessed 8 June 2016].

figure 1.3: Layering: Illustration done by author

figure 1.4: Shading: Illustration done by author

figure 1.5: illustration done by author of a photograph of Ludwig Mies van der Rohe’s 1958 Seagram Building in New York .Photograph citation: N.A, (2003), Seagram Building [ONLINE]. Available at: http://www.123rf.com/stock-photo/cape_dutch_architecture.html?mediapopup=13338327 [Accessed 8 June 2016].

Figure 2-,480-420 B.C, Acropolis Athens, Threshold analysis image from: Boettger, Till, 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [Page 23]

Figure 3-Figure 3- 480-420 B.C, Acropolis Athens, Photograph from: N.A, (2002), ACROPOLIS [ONLINE]. Available at: http://www.greece-athens.com/place.php?place_id=1 [Accessed 12 September 2016].

Figure 4-Phidias, Callicrates, Ictinus, 125 AD, Pantheon ,Rome, photograph citation: Federico Arborio Mella, (unknown), Pantheon [ONLINE]. Available at:<https://global.britannica.com/topic/Pantheon-building-Rome-Italy> [Accessed 8 September 2016].

Figure 5- Phidias, Callicrates, Ictinus, 125 AD, Pantheon ,Rome, Threshold analysis image from :Boettger, Till 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [Page 25]

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thresholds photograph from: unkown, (2012), Daigoji, Kyoto, Japan [ONLINE]. Available at: [https://www.google.co.za/search?q=japanese+temple+in+the+rocks&espv=2&biw=1366&bih=623&source=lnms&tbm=isch&sa=X&ved=0ahUK](https://www.google.co.za/search?q=japanese+temple+in+the+rocks&espv=2&biw=1366&bih=623&source=lnms&tbm=isch&sa=X&ved=0ahUKEwjA8rXIsorPAhXslIMAKHYCKAJIQ_AUIBigB#imgrc=_) EwjA8rXIsor PAhXslIMAKHYCKAJIQ_ AUIBigB#imgrc=_ [Accessed 12 September 2016].

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Figure 11-Martin mull , 2010, Tea party , oil on canvas Defend-able space and stewardship image citation: Martin mull , 2010, Tea party , oil [ONLINE]. Available at: <http://artillerymag.com/martin-mull-seriously/>[Accessed 12 September 2016].

Figure 12-Nature , metal and architecture, authors own picture and design, 2016

Figure A.1: An Architectural Connection Renzo Piano, 1998, Jean-Marie Tjibaou Cultural Center, New Caledonia, detail image from: Renzo Piano, image uploaded (2004), RENZO PIANO JOINT DETAIL [ONLINE]. Available at:<http://cargocollective.com/jonnygotham/Renzo-Piano-Joint-Detail-2004> [Accessed 11 September 2016].

Figure A.2: An Architectural Connection Renzo Piano, 1998, Jean-Marie Tjibaou Cultural Center, New Caledonia, detail image from: Renzo Piano, image uploaded (2004), RENZO PIANO JOINT DETAIL [ONLINE]. Available at:<http://cargocollective.com/jonnygotham/Renzo-Piano-Joint-Detail-2004> [Accessed 11 September 2016].

Figure A.3: An Architectural Connection Santiago Calatrava , (1994) image uploaded (2012), TGV station, Lyon detail. image from: Santiago Calatrava , image uploaded (2012), TGV Lyon det ala sobr (planos) [ONLINE]. Available at:https://en.wikiarquitectura.com/index.php/File:TGV_Lyon_det_ala_sobr_via.jpg [Accessed 11 September 2016].

Figure A.4: An Architectural Connection Ludwig Meis Van Der Rohe, (1968), Chair Design image from: Ludwig Meis Van Der Rohe, Image uploaded (2005), Chair

Design Drawing By Mies Van Der Rohe [ONLINE]. Available at: <http://www.gettyimages.com/license/95777006> [Accessed 11 September 2016].

Figure A.5:An Architectural Connection leoh Ming Pei, (1984), Louvre, Paris, Detail of the top glass brackets image from: leoh Ming Pei, Image uploaded (2011), Louvre, Paris, Detail of the top glass brackets [ONLINE]. Available at:<http://facadesconfidential.blogspot.co.za/2011/10/louvre-pyramids-revisited.html> [Accessed 11 September 2016].

Figure A.6:An Architectural Connection unkown, (2012), clockwork Image from: unknown, (2012), clockwork [ONLINE]. Available at: http://liammurphy-ads4horsestudio.blogspot.co.za/2012/08/like-clockwork_3.html [Accessed 11 September 2016].
Figure A.8: Foster and Partners , (2013), Stansted Airport [ONLINE]. Available at:<https://za.pinterest.com/pin/103512491408143661/> [Accessed 11 September 2016].

Figure A.7: An Architectural Connection Foster and Partners , (1991), Stansted airport,Stansted Manchester, Detail. Image from: Foster and Partners ,image uploaded (2014), Stansted, Swiss Re detail. Structure node [ONLINE]. Available at:<https://za.pinterest.com/pin/103512491408143661/> [Accessed 11 September 2016].

Figure A.8: An Architectural Connection Foster and Partners , (1991), Stansted airport,Stansted Manchester, Detail. Image from: Foster and Partners , image uploded (2014), Swiss Re detail. Structure node [ONLINE]. Available at:<https://za.pinterest.com/pin/103512491408143661/> [Accessed 11 September 2016].

Figure A.9: An Architectural Connection ,Josef Leeb, Josef Raxendorfer, Manfred Hubinger, (2013), Burner body comprising a securing system; tig welding torch comprising such a burner body US 20130134134 A1 [ONLINE]. Available at:<https://www.google.com/patents/US20130134134> [Accessed 11 September 2016].

Figure A.10: An Architectural Connection Paul Knight, 2010, Pencil on paper, Illustration of Louis Sullivan’s “the inorganic” image from: Paul Knight, 2010, Pencil on paper, Illustration of Louis Sullivan’s “the inorganic” [ONLINE]. Available at:<http://www.paullknight.com/portfolio/system-of-ornament/> [Accessed 11 September 2016].

Figure A.11: Renzo Piano, Richard Rogers and Gianfranco Franchini, Built in (1977), POMPIDOU CENTER, paris STRUCTURE, detail image from: Renzo Piano, Richard Rogers and Gianfranco Franchini, image uploaded (2015), POMPIDOU CENTER, paris STRUCTURE, detail[ONLINE]. Available at: <https://za.pinterest.com/pin/496029346435293597/> [Accessed 11 September 2016].

Figure A.12: Jean Nouvel,built in 1987, Institut du Monde Arabe, Paris, detail of screen image from: Jean Nouvel, image uploaded (2014), Institut du Monde Arabe, Paris, detail of screen [ONLINE]. Available at:<http://>

image.slidesharecdn.com/hot-20climate-20double-20fac-c3-87ades-140112090035-phpapp01/95/hot-climate-double-facades-a-focus-on-solar-avoidance-31-638.jpg?cb=1389518357[Accessed 11 September 2016].

Figure A.13: Renzo Piano, Richard Rogers and Gianfranco Franchini, built in 1977, POMPIDOU CENTER, paris STRUCTURE, Detail image from: Renzo Piano, Richard Rogers and Gianfranco Franchini, image uploaded (2015), POMPIDOU CENTER, paris STRUCTURE [ONLINE]. Available at: <https://za.pinterest.com/pin/496029346435293597/> [Accessed 11 September 2016].

Figure A. 14: Renzo Piano, Richard Rogers and Gianfranco Franchini,Built in (1998) , essins - Jean-Marie Tjibaou Cultural Center , Tjibaou , Detail image from: Renzo Piano, Richard Rogers and Gianfranco Franchini,image uploaded in (2015), essins - Jean-Marie Tjibaou Cultural Center[ONLINE]. Available at:<https://za.pinterest.com/pin/573364596291192827/> [Accessed 11 September 2016]

PRECEDENT STUDIES

This discourse will look at 5 case studies all of which exhibit either exceptional or interesting contextual connections of one kind or another. The first three case studies will be structured using Till Boettger's 6 parameters of analysis for threshold spaces.

The last two case studies will be more loosely analysed based on themes of contextual connection namely edge, entrance, culture and people.

CASE STUDY 1: THE CARPENTER CENTRE FOR THE VISUAL ARTS

United States of America, Massachusetts, Le Corbusier, 1961-1964 (Boettger 2014)

The Carpenter Centre for the Visual Arts at Harvard University is used as educational space for several artistic disciplines, each with a dedicated studio. Only the woodworking workshop still operates as Le Corbusier intended, using the principle's of an open atelier (Boettger 2014).

The building has a central rectangular core, which has curved "wing like" masses that extrude from either side of the of it (Boettger 2014). A prominent S-shaped ramp then centrally dissects the building and takes central focus. The building is characterised by its exposed concrete finishing, which sits in stark contrast with the dark glazing of the curtain walls, windows and entrances. (Boettger 2014).

At first Le Corbusier was intent on using the ramp as the main entrance point for all visitors, which would arrive at the third floor, while the ground floor was to be accessed by a side delivery entrance. (Boettger 2014) During the design process a lobby and windbreak was added to the side entrance.

1.Spatial definition

The most important threshold space is the S-shaped ramp.(Boettger 2014). It generates a processional sequence as well as the entrance to

the third floor and acts as the main thoroughfare through the building. The ramp connects with the major pathways within the university. Including direct diagonal connection with Prescott street to Quincy street where the path continues to the Harvard Art Museum (Boettger 2014).

The ramp's has a concrete up stand on the south edge and a simple steel railing on the north edge, which encourages one to look northwards, towards the centre during the ascension of the ramp (Boettger 2014) , (from the ramp, one is afforded views into the exhibition and studios.)

A level platform indicates the spatial centre of the entrance sequence (Boettger 2014) .Broad glass doors offer entrance to this space.

2.Spatial sequence

The ramp is inviting and connects to the street."it advertises itself as a bridge to another world" (Boettger 2014 pg.63). One's movement is controlled as one ascends the ramp. The ramp, being meandering, long and inclined slows one down and gives one time to experience the building. The end of the ramp is the logical entrance giving the procession clarity. One approaches the building at an angle, and thus is afforded as broad a view of the building as possible.

3.Spatial structure

The ramps, which are initially diagonal to the street but slowly curve to face the studios as one ascends, create a predetermined path which allow for one to view the building and its surroundings (Boettger 2014). Both entrances on Quincy and Prescott street are square and cuboidal space's which is said to be a calming element, in the otherwise curvaceous and busy massing (Boettger 2014). The main entrance, a modular white box, is a constriction which then leads to a polarised expansive central space.

4.Spatial situation

The threshold space and ramp in particular creates a new topography, and thus creates an in-betweenness (Boettger 2014). The fact that

the ramps elevates one, which results in the individual getting a higher and thus greater perspective in what Le Corbusier calls a "route ascensionelle" (Boettger 2014).

5.Spatial materiality

The materiality of the threshold, like that of the building, is representative. The heavy beige opacity of the concrete is juxtaposed against the lightness of the glazed walls, entrances and safety barriers. The concrete of the ramp is more porous, then that of the building, delineating the threshold. The ramp is rhythmically lit by floor based lighting on the ramp edge, further defining the threshold. At night it is said that the artificial light from the studio's further illuminates the ramp.

6.Spatial furnishing

The thresholds are generally clear and unobstructed; the safety barriers form seats which are of a modular seating height: 70 cm high and 54cm deep (Boettger, 2014). The glass curtain walling of the entrance allow the space to breath, Thus the spatial contraction is paradoxically not claustrophobic (Boettger 2014).The central interior passage was intended to be planted but is used as additional work space today.

Key points.

S-shaped ramp is a constitutive threshold space, dictating pace, approach and direction, and links the building to its surrounds. (Boettger 2014)

The spaces are attached to the ramp and are almost secondary to it, the ramp is described as "promenade architecturale" (Boettger 2014 pg.68). The ramp is omnipresent and very visible. (Boettger 2014)

The ramp acts as the foyer and in-between space, being both interior and exterior, public and private. (Boettger 2014)

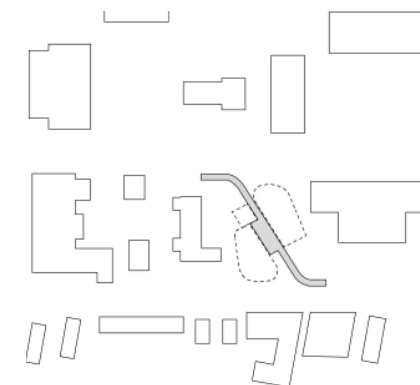


Figure 13- Le Corbusier, 1964, carpenter centre, Mass.,Site plan, image from (Boettger 2014) see list of figures for full citation.

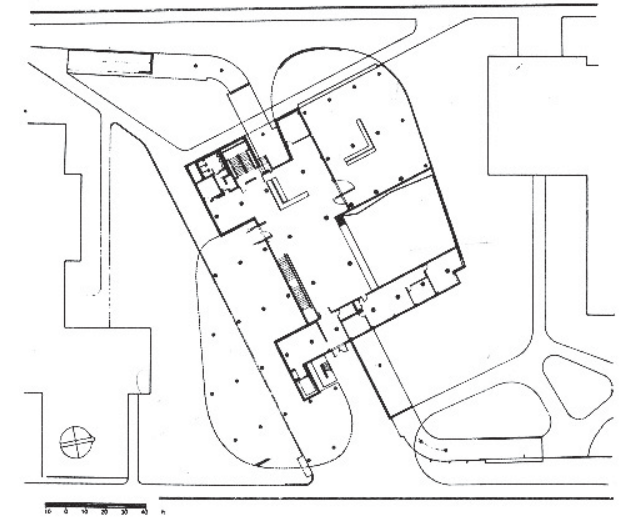


Figure 14 - Le Corbusier, 1964, carpenter centre, Mass., ground floor plan (Boettger 2014) see list of figures for full citation.

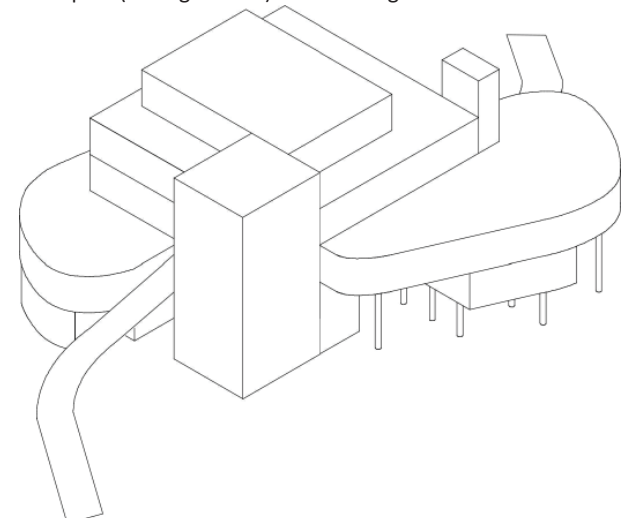


Figure 15- Le Corbusier, 1964, carpenter centre, Mass, 3-D, image from (Boettger 2014) see list of figures for full citation.

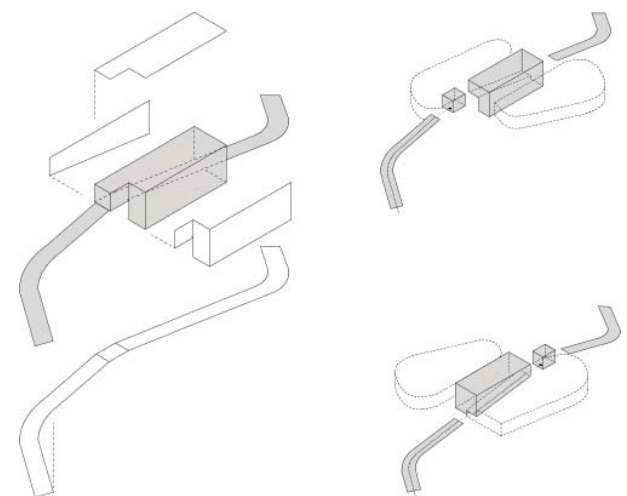


Figure 16 - Le Corbusier, 1964, carpenter centre, Mass., threshold space image from (Boettger 2014) see list of figures for full citation.

CASE STUDY 2: NEURE NATIONAL GALLERIE

Germany, Berlin, Ludwig Mies van der Rohe. 1962-1968 (Boettger 2014)

After world war two there was a need and desire to collect and protect the remaining pieces of art left in Germany.(Boettger 2014). The Neure National Gallerie was intended to be both a gallery and museum and was intended to become part of a drive to create a new cultural centre in Berlin (Boettger 2014).

The building is exceptional for its steel black roof; the roof is 1.8m thick and is made from steel plate girders. The roof spans 5.4 m in all directions from its steel column support.(Boettger 2014)

An 8.4m glass wall separates the interior and the exterior elements of the ground floor plan and forms a protected space which accommodates an exhibition space as well as a foyer , ticket office and cloak room.(Boettger 2014). This space is the primary element of the threshold. The building sits on a raised granite plinth, or stage (Boettger 2014). The slope of the site allows for there to be a lower level, which is accessed by two symmetrical double flight stair case's (Boettger 2014). The stairs lead to, and delineate, a lower level lobby. From the lobby one is lead through a kleiner Raum (small room) and then a grober raum (large room) the latter of which serves a space for the permanent exhibitions.

1. Spatial Definition

The foyer which sits on a raised platform and under the signature roof (both of which are square in plan) , is described as an inter-layer (Boettger 2014). This expansive foyer platform has an urban scale,which links the building to the city. (Boettger 2014). The Glass skin is set back from the edges this along with a set of structural columns and the cantilever roof divides the threshold into three spaces: the terrace, the peristasis and the hall (Boettger 2014) The peristasis is positioned between the terrace and the hall and creates a threshold within a threshold.(Boettger 2014)

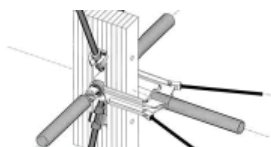


Figure A.15 An Architectural Connection
Renzo Piano, Richard Rogers and Gianfranco Franchini, (1998), essays - Jean-Marie Tjibaou Cultural Center, Tjibaou, (2014) detail

The raised platform sits at 1.2 m high so as to maintain a visual connection between sidewalk and building. On the edge of the raised plinth three sets of steps exist, importantly the stairs are intended to seem part of the base. The stairs ensure a strong connection between the sidewalk and the plinth. Blending the edge of the building with the city (Boettger 2014).

2.Spatial Sequence

The centrality of the design means that irrespective of the direction of approach one is always afforded a processional entrance experience. The raised platform elevates the building's status and has three staircases, which order themselves in a hierarchy based on their width and alignment (Boettger 2014).

As one arrives at the top of the plinth, one is engulfed in a threshold space that is characterised by its breadth and horizontality (Boettger 2014). One must traverse a substantial distance to get to the central body. During this procession one realises the building within its context, as the city forms a backdrop to the building (Boettger 2014). Outdoor Art and sculpture arranged on the plaza prompt one forward and inform one of the artistic delights to come (Boettger 2014). The whole experience guides one to the centre of the building (Boettger 2014).

As one reaches the peristasis, which connects the hall and the terrace, one is given the impression of entrance, this is due to the fact that she or he stands underneath a roof. However, an interesting tension exists in this space as the individual stands between the in-between spaces (Boettger 2014). Two revolving doors inside the recessed glass curtain wall lead straight to the foyer.(Boettger 2014). The doors are very subtle and are not prominent from afar (Boettger 2014). The building relies on a subconscious drive to move to the centre and thus prompts entrance. The atmosphere between the hall and the peristasis only subtly differs, as there is a change in temperature.(Boettger 2014)

3.Spatial Structure

Both the threshold and building demonstrate a connection to the city through its conformity and mimicry of the surrounding cities strict square-like grid layout (Boettger 2014) . Furthermore , the design uses the square, as a common geometrical

element which connects greater planning elements with finer detailing. The most important threshold in the building is formed in plan, by layering square shaped elements within square shaped elements.

4.Spatial Situation

The Raised platform affords one a better view of the surroundings which includes the park and the prominent St. Mathew church to which the building is purposefully aligned (Boettger 2014). The public space that surrounds the building links to it the foyer threshold visually , the threshold serves as a dynamic "soupcon" for what lies within. Furthermore the raised platform establishes a hierarchy as the subtle elevation of the building differentiates it from its surrounds, elevating its status (Boettger 2014).

5.Spatial Materiality

The grey granite platform offers a massive presentation plane (Boettger 2014). The fine steel and glass offer clean uncomplicated lines which defy focus , simultaneously, defining and placating the presence of edge and boundary (Boettger 2014). Depending on your vantage point the glass walls can either disappear or through reflection appear (Boettger 2014). The transparency and disciplined limitation of materiality helps to create a continuous threshold experience.(Boettger 2014)

6.spatial furnishing

The interior was intended to be a space of clarity (Boettger 2014). Thus, furnishing is minimal. The main stair and its sweeping clear central axis determine the position of the internal rooms, they are placed off centre and the walls do not extend to the ceiling of the roof, this helps the foyer space read as one vast volume. (Boettger 2014)

Key points

The buildings use of a peristasis , as one transitions between inside and outside. The transitions are designed to be subtle, each successively self-contained yet connected from start to finish. There is an obvious central focus point drawing the individual within. There is ample space in the threshold to gather , rest or disconnect oneself.

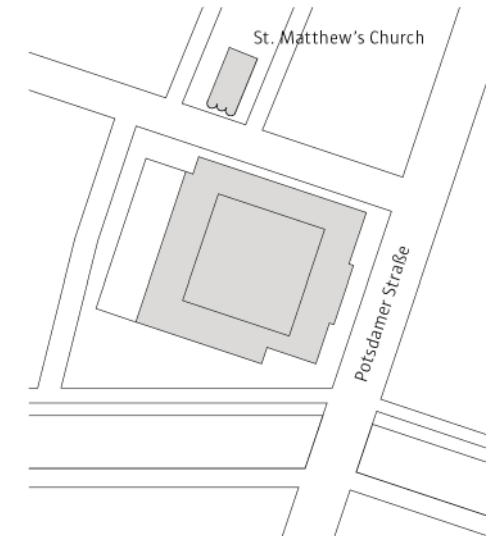


Figure 17 - Ludwig Mies van der Rohe,1968, Neure national Gallerie, Berlin, Site plan, image from (Boettger 2014) see list of figures for full citation.

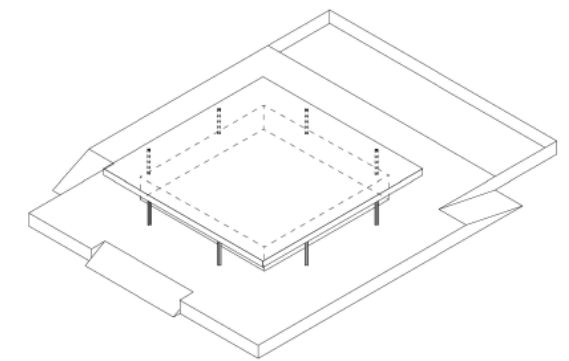


Figure 18 - Ludwig Mies van der Rohe,1968, Neure national Gallerie, Berlin, 3-D image from (Boettger 2014)

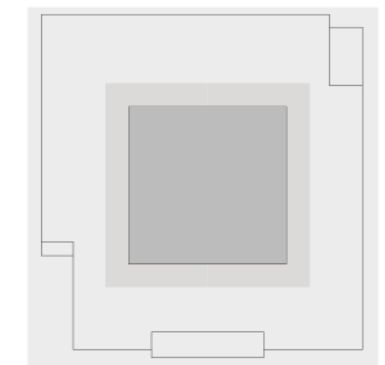


Figure 19 - Ludwig Mies van der Rohe,1968, Neure national Gallerie, Berlin, Gradation of space 's. Image from (Boettger 2014)

CASE STUDY 3 – FONDATION CARTIER

France, Paris, jean Nouvel 1991-1994 (Boettger 2014)

The Fondation Cartier is dedicated to supporting contemporary artistic movements (Boettger 2014). Glass features prominently in the building, the rear, front and side facades are made of glass and steel. (Boettger 2014) The glass and steel is juxtaposed with the cedar of Lebanon trees which were planted by the writer Francois-Rene de Chateaubriand in 1823 (Boettger 2014).

The eight story high building contains 6500 square meters of floor space. The gallery rooms on the ground floor and first basement level form the heart of the building.(Boettger 2014)

1.Spatial Definition

The threshold space in the Fondation Cartier is the park space, which is part of the entrance sequence. The space is divided into four zones by three sets of vertical glass screens. These in-between spaces are designed to encapsulate the historic trees.

The space is bound and defined by the edges of the two adjacent buildings to the left and right of the site, this coupled with the In-between space formed by the screens and trees in the front of the site, creates a clear division between the surroundings and the building. (Boettger 2014).

The glass panels form staggered layers, which enhance a feeling of spatial depth yet allow for the building to be viewed and read from the street. The screens and trees form a rhythmic sequence which prompts inward movement. (Boettger 2014)

The glass panels are said to define almost cubic glass sections (Boettger 2014). The tree forest, and reflectivity of the glass make for an interesting, ever changing and blended visual connection between street and building. (Boettger 2014)

2.Spatial sequence

The area in front of the first glass screen, which precludes the threshold sequence space, is characterised by, the row of tree's which are essentially part of the public boulevard but can be seen to form the first part of the threshold(Boettger 2014).

The reflectivity of the glass panels project the street back into itself and simultaneously offer views of the building poetically connecting both elements (Boettger 2014).

The alternation between the glass panels and trees gives one the feeling of deep immersion. (Boettger 2014). The large cedar trees serve as central points within their spatial confines, legitimising each space in its own right (Boettger 2014).

The first set of glass panels, those closest to the street, are smaller and thus more permeable than the glass panels that follow, indicative of a gradation of boundary.(Boettger 2014)

The threshold is a progression of vertical layers that alternate between trees and glass. Architecture and nature take turns.(Boettger 2014)

The glass façade on the ground floor is on tracks and can be rolled away to open the ground floor to the park, reinforcing an ambiguous relationship between inside and outside.(Boettger 2014)

3.Spatial Structure

The geometry of the glass panels is based on squares (Boettger 2014). The glass panelling progressively gets larger, each panel being a buffer to soften the blow of the ever increasing scale of the next panel (Boettger 2014). Furthermore it generates an inward pull (Boettger 2014).

Symmetry is a very important element in the design and helps create a feeling of sequence (Boettger 2014). The shifting of the main pedestrian door, off the axis of symmetry helps to soften the strict symmetry of the H shaped plan (Boettger 2014).

4.Spatial situation

The cedar tree is the most important element of the thresholds topography (Boettger 2014). The shared relationship the trees have with both the boulevard and the building helps to blend the two elements, furthermore the trees and screens complement each other, affording a visitor magical moments, which enhance the threshold experience.(Boettger 2014)

5.Spatial Materiality

Glass is the most prominent material in this building, as the steel frames are intended to recede and hide (Boettger 2014).

The transparency and reflectivity of the glass is important but no more so than its crystalline, smooth, surgical dissection of space (Boettger 2014). The open glass screens afford ambiguousness of both boundary and ambiguousness of spatial function. This blends and connects each in-between layer to the next acting as a common thread (Boettger 2014).

6.spatial furnishing

The most prominent furnishing, in the threshold, is the addition of an elevator for cars. Without this elevator the architect would have had to dedicate much of the space used in the threshold park to a motorcar ramp.

All other furnishings (like the main door) are stark and simple, so as not to compete with the trees, the park, and their ambiguous glass dividers (Boettger 2014).

Key points

The materiality and vegetation play a crucial role in the feeling of the threshold spaces(Boettger 2014).

The layering and fragmentation of boundary and entrance space's affords the threshold space: depth, separation, gentleness, logical progression and the ability to immerse the visitor (Boettger 2014).

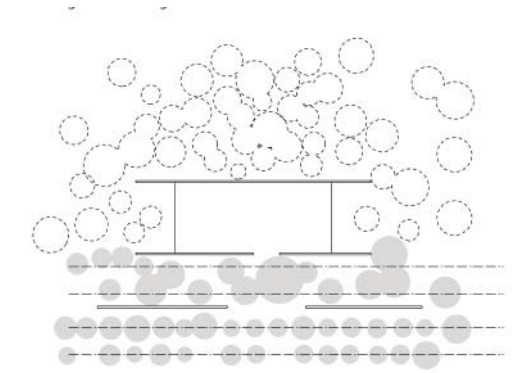


Figure 20 -jean Nouvel, 1994, Fondation Cartier, Paris, Site Plan image from (Boettger 2014)

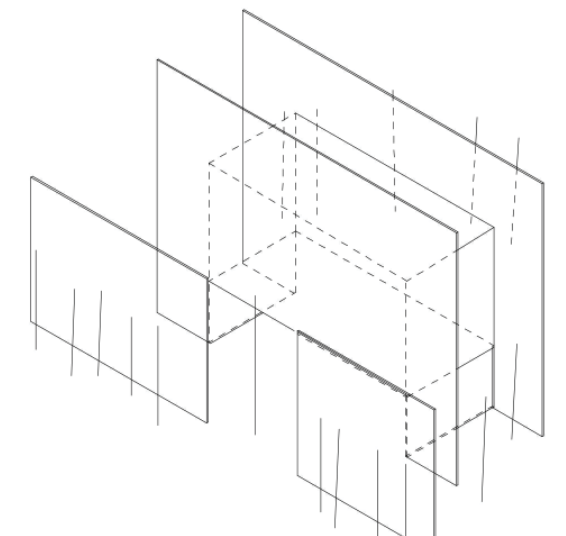


Figure 21 - jean Nouvel, 1994, Fondation Cartier, Paris, 3-D, image from (Boettger 2014)

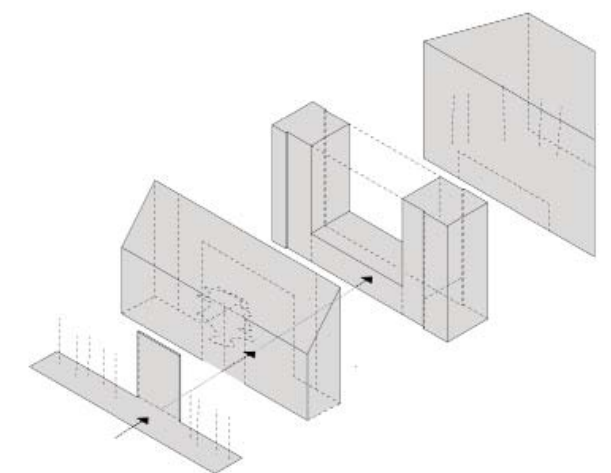


Figure 22 - jean Nouvel, 1994, Fondation Cartier, Paris, Threshold sequence, image from (Boettger 2014)

CASE STUDY 4 - SELECTED TRADITIONAL SOUTHERN AFRICAN RURAL COMMUNITIES PRE 1925

This case study will examine the Traditional Southern African rural communities pre 1925. In particular it shall analyse the design trends seen in selected Amazulu, sotho, tswana and Vhavenda rural settlement and cultures of the time.

Threshold and edge boundary plays an important role in the planning of traditional rural Southern African architecture.

Traditional Southern African rural communities pre 1925 were pastoral, and so had to build settlements that not only sheltered themselves, but also their livestock. There was a great need to create defensible space. (Frescura 1985).

Thus it was common for settlements to be organised around a central space, this social space, which some incorrectly refer to as Kraal, provides a defensible space for not only a select herd of prized livestock, but is also a space used for social gathering, ritual, judgement and even burial (Frescura 1985).

Threshold Edges

Generally the pre 1925 Southern African traditional rural Architecture being studied, has a high degree of specialization of outside space. This is done through defining space with visual signals and territorial gestures such as low walls, kerbs, shelving and decorative textures. Importantly threshold is also intensified by etiquette and custom (Frescura 1985).

Looking at a Traditional AmaZulu settlement that existed in 1891: the settlement is circular in layout, at the settlements head is the homestead of the patriarch.

The settlements “dwelling units” surround and encapsulate the aforementioned central space, thus the dwelling units become part of the thresholds that create a defended internal space. Furthermore the dwellings were enclosed in a double fence or hedge; one of the two boundaries is built around the entire complex, the other surrounding the central space. (Frescura 1985)

Thus we see a layering of thresholds.

We also see interesting application of threshold in traditional Bapedi village. Visitors to a Bapedi settlement would be confronted by a number of dwelling units, each enclosed in low walls, which define areas of privacy and outdoor activity. These walls have an additional use, as they are only built by women after they have had their first child. (Frescura 1985)

A lack of this threshold or boundary implies bachelorhood, and availability for courtship and marriage (Frescura 1985).

Not all traditional rural African settlements follow the circular planning seen in the AmaZulu settlement of 1891. In Sotho and Tswana settlements of that time, it was not uncommon to see a break out of homesteads in a “fan-shape”, spreading in a linear fashion along a contour. (Frescura 1985)

Hierarchy is established by the proximity to the central common. (Frescura 1985)

Furthermore, we see in the Sotho, Tswana and Vhavenda homesteads (see figure 24), a prevalence of a front edge and a back edge (Frescura 1985). In what is called a “bilobial” layout the front edge of the building becomes a more publically social interface while the back edge is very private and is where private family life occurs (Frescura 1985).

Entrance and approach.

The previously discussed traditional rural Amazulu settlement of 1891 was approached from below on an uphill slope, this gradient not only allowed for amicable drainage but also had a defensive application (Frescura 1985). The natural gradation of the land was used to affect approach, slowing one down.

The Amazulu village had a formal entrance. This entrance threshold established a vertical axis, this axis is an important spatial element as it becomes an organisational tool (Frescura 1985).

The entrance Threshold to the “central space” of the 1891 traditional rural Amazulu settlement had an important significance. In pre-Shangan times the entrance faced the Patriarch's homestead symbolically connecting the wealth of livestock that the central space often housed, to the patriarch, but post-Shangan the entrance gates face outwards as if to connect this cattle wealth to a greater Amazulu nation (Frescura 1985).

Below the entrance of the central defended space was the “Ibandla” the space allocated for the

social interaction of men. This layering of processional threshold creates a minor boundary further fortifying the central defensible space and the complex entrance. (Frescura 1985) Placing the men (who traditionally, were responsible for settlement security) in-between the entrance to the settlement and the entrance to the kraal in the in-between space.

Cultural connections

The traditional settlements being analysed cannot be read in isolation of the “cultures and customs” of its designers, during the time of the realization of the settlement.

The architecture was heavily integrated with cultural function and the value systems of their respective communities (Frescura 1985).

To reiterate, the architecture in question, was greatly informed by a Pastoral culture.

The architecture connected to the necessities of this culture, by having centrally located and defended byre. This byre, always manifested as so much more than simply a kraal, it was the cultural heart of a settlement, being the location for social, judicial and religious functions (Frescura 1985).

A general emphasis on social structure is observed, in almost all aspects of the pre 1925 Southern African Rural Traditional Communities that this research paper analyses.

The Amazulu, Sotho, Tswana and Vhavenda, established social hierarchies and divisions, based on gender, age, status, leadership, and familiarity (Frescura 1985). Naturally this culture manifested in much of the architecture. In this Architecture, it is observed that: planning is intensely hierarchical, a prominent left and right spatial division along a central axis (each side with its own affiliated group) is characteristic in most of the planning layouts of the architecture in question (Frescura 1985). Furthermore, status is both reflected and reinforced by proximity to the head homestead and central yard (Frescura 1985).

In most of the examples this case study analyses, the social structures which informed the architecture (and thus spatial and social divisions) was absolute (Frescura 1985). However all members of society were cared for, valued and accommodated for, and the elderly, infirm, and young all had a place and spatial dignity (Frescura 1985).

the social structure is reinforced by the architecture. This social structure perpetuated a way of survival, and relative social harmony and prosperity.

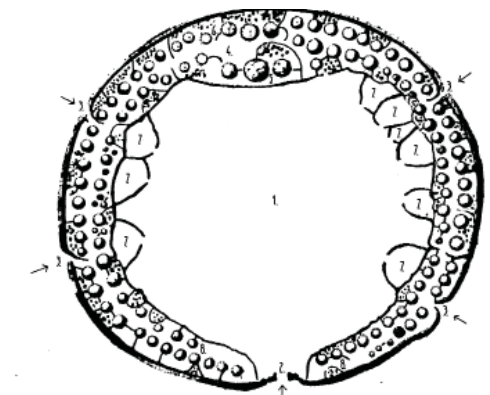
Thus it is through this cyclical self-perpetuating combination of culture informing architecture and architecture reinforcing culture that systems of governance, social interaction, survival and prosperity could be devised and maintained in these pre 1925 traditional rural communities.

Connection to place.

Analysis of how the Rural Southern African architecture prior to 1925 connected to place indicates that the architecture is heavily responsive to climate, vegetation and soils. All of which, influenced the technology and techniques of the builders. In areas where quality timber and good thatch grasses grew a proficiency in carpentry and thatching in the area occupancies it, in the more sparsely vegetated areas brick, stone and earth construction is favoured.

The quality of soil, its clay content, the availability of termite mounds, and cow dung mud also plays a role in whether earth and brick construction is used.

The Southern African region, (particularly its mountainous areas) also has a rich tradition of stone masonry, using a technique of packing irregularly shaped rocks in a manner which is not only air tight but also an aesthetic expression.



LEGEND: After Andrew Smith, 1825.
1. Cattle byre and parade ground.
2. Main axial entrance.
3. Secondary entrance points.
4. Royal quarters.
5. Great hut.
6. Royal wives.
7. Cattle and goat enclosures.
8. Small dwellings for children.

Figure 23 - Frescura, 1985, South Africa Traditional rural AmaZulu settlement pre 1925 (Frescura 1985)

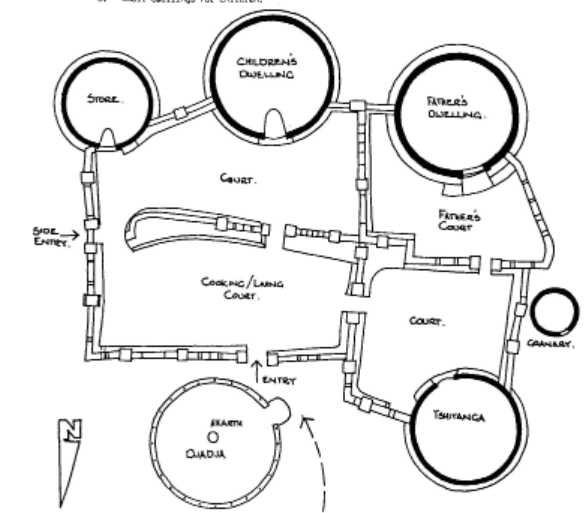


Figure 24 - Frescura, 1985, Traditional rural entrance & Vhavenda spatial sequence (Frescura 1985)

CASE STUDY 5 -CAPE DUTCH ARCHITECTURE-REINET HOUSE

Trends in the planning and design of threshold are clearly observed In Southern African Cape Dutch Architecture.

I shall use the Reinet house in Graaff-Reinet as a case study to examine the threshold design approaches favoured by the style.

Graaff Reinet was the last town established under Dutch rule in what is today South Africa, discounting Uitenhage (Graaff Reinet Museum Graaff Reinet n.d.). The Reinet house built was in 1812 as a parsonage for the Dutch Reformed Church. The building is an example of the Cape H-plan house and may have been designed by Louis M. Thibault(Graaff Reinet Museum Graaff Reinet n.d.)

Edge

In the Reinet house we see the interesting occurrence of the building edge being defined by a moat like lowering of the level between the Reinet house and street, to exaggerate this boundary the front entrance is raised.

However this type of edge separation, which is common in the highly acclaimed architecture and planning of the city of Bath in England, is believed to still retain a high level of connectivity between street and building. As it afford the building a firm boundary allows it to firmly declare a desire for privacy, but also maintains a visual and atmospheric connection with the public realm (Frontiero and Margaret 1986).

The boundary and gap formed by the lowering level between the street and the building and the simultaneous elevation of the entrance is bridged and polarised by a wide over scaled central staircase, which is almost civic in nature and invitingly elevates one to the raised pediment level, further reinforcing an appreciation for contextual connection.

As one ascends the entrance staircase in the Reinet House one encounters the “stoep” or veranda an

in-between indoor/outdoor threshold space.

In Cape Dutch Architecture the *stoep* is often enclosed by a low wall or fence. The height of the *stoep* floor varies from building to building. In some cases there is no level change from the context which reinforces a connection to the street or garden but in other cases’ the stoep can be raised as much as 9 steps high, which is the case in the Reinet House.

It is observed that urban Cape Dutch buildings tend to pull away from the street , just enough to accommodate a stoep or front yard but not so much as to sever a strong connection to the street. This tendency of Cape Dutch architecture to tactfully, and in some cases discretely , retreat from the street creates an intermediate space which aids in a creating a yet another layer between in and out.

It is not uncommon for the *stoep* to be covered with a shading device of some sort, be it a simple timber pergola with a creeper or vine growing on it (seen in the Reinent house)or be it an ornately curving tin roof.

The covering both shades the “stoep” space and helps modulate temperatures of the internal rooms through provision of shading.

Entrance.

As one Approaches the Reinet house one would be remiss to not notices the grand central entrance.

In Cape Dutch architecture Entrance is often emphasised by use of ornate e gables, prominent architraves, elaborate brow mouldings and decorative flourishes (Stellenbosch Conservation n.d.).

In Cape Dutch Architecture, the significant elements of threshold namely: the entrance, the stoep and the stair to the stoep are emphasised by being centrally positioned. They are further highlighted by being the central visual axis from which the symmetry (characteristic of Cape Dutch facades) is mirrored (Stellenbosch-Conservation n.d.).

Threshold is further highlighted through the use of colour, doors and windows are often painted vivid in greens which stand in stark contrast to the white washed walls.

The *stoeps*, and the tactical withdrawal from the street helps create a processional experience which is gentle, layered and gradual.

Culture and place.

As the name suggests the style was originally a southern African adaption of medieval Dutch architecture, but the style also has connections to Germany, England and Indonesia (Fransen 2006). The global reach of the Dutch east Indian company, meant that the cape became a melting pot of African, European and Asian cultures all of which would influence in one way or another the Cape Dutch style.

The style has been found in the Southern African Cape for three hundred years and has become (among other cultures) a prominent part of the historical and cultural heritage of region (Fransen 2006).

The style would come to be representative of a Colonialist and euro-centric Southern African culture. The styles proliferation throughout the region proves that it became representation of an identity, culture and even an expression of nationhood (Fransen 2006).

It is reasonable to assume that the ornate and symmetrical designs and general aesthetic aspirations of Cape Dutch architecture was an attempt at emulating what the colonialists would have felt to be their version of “High culture”. The Architecture would have been a little piece the motherland to give comfort in, and indeed show dominance over, a wild, sparsely populated and often inhospitable cape wilderness (Fransen 2006). Indeed, in this regard, one might argue that architecture made a marked disconnection from context, however this notion fades drastically as one enters a cape Dutch building’s interior. Cape Dutch interiors, are renowned for the common use of the indigenous cape yellowwood. The warm yellowy blonde wood has become and is inherently linked with the region and is commonly used for floor and ceiling boards as well as for furniture. (Fransen 2006) If timber is not used backed mud tiles or polished “mud” floors both of which have strong connections with many other rural traditional vernaculars within the southern African region, are utilized. (Fransen 2006)

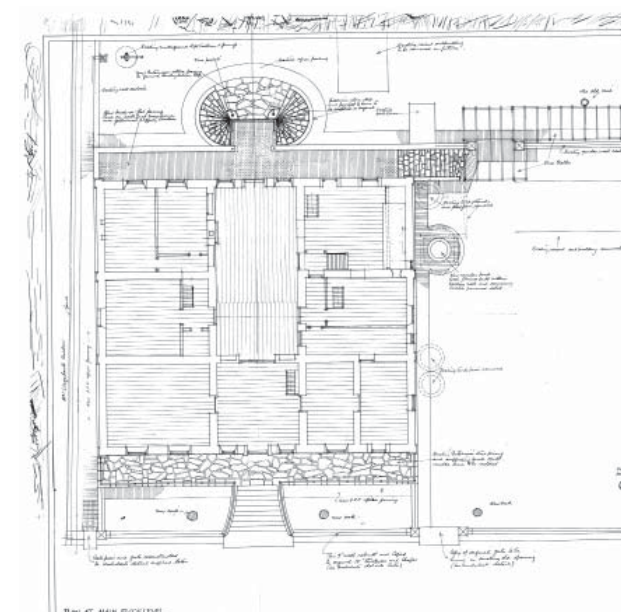


Figure 25 - Norman Eaton, (1952) Reinet House, Graaff Reinet, as built plans, note the third spaces and stairs

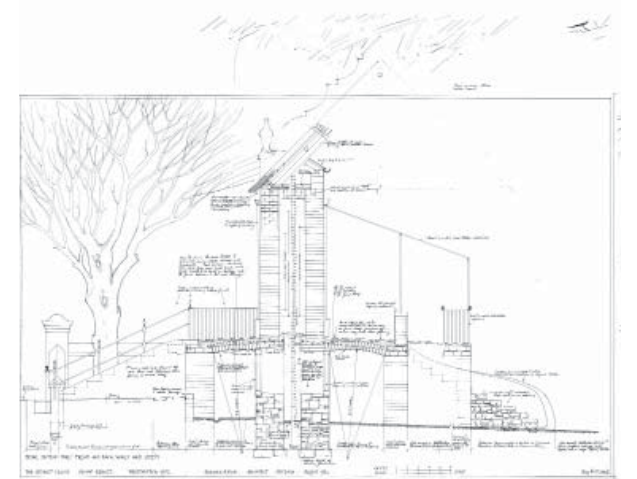


Figure 26 - Norman Eaton, (1952) Reinet House, Graaff Reinet , Reinet House as built section through front back and stoep, note third space 's and stairs

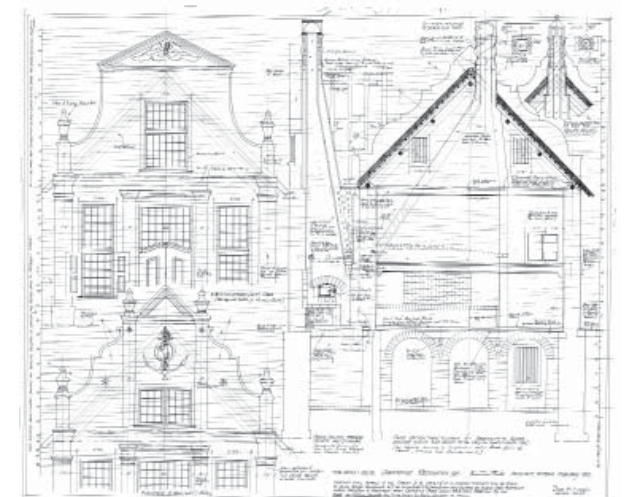


Figure 27 - Norman Eaton, (1952) Reinet House, Graaff Reinet Reinet House as built Elevations, note the gable emphasising the entrance

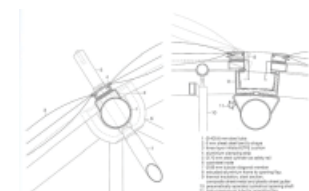


Figure A.16 An Architectural Connection
Nicholas Grimshaw & Partners, (2000), Eden Project, St Blazey, detail (2016)

REFERENCES

Boettger, Till
2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser.

Fransen, Hans
2006 Old Towns and Villages of the Cape: A Survey of the Origin and Development of Towns, Villages, and Hamlets at the Cape of Good Hope, with Particular Reference to Their Physical Planning and Historical Townscape. Jeppestown: Jonathan Ball Publishers.

Graaff Reinet Museum Graaff Reinet
N.d. http://www.graaffreinetmuseums.co.za/reinet_house.html, accessed May 3, 2016.

Frescura, franco
1985 Major Developments of Rural Indigenous Architecture of Southern Africa of the Post Difaquane Period. University of the witwaterstrand.

Stellenbosch-Conservation-Strategy_Part_2.pdf
N.d. http://www.stellenboschheritage.co.za/wp-content/uploads/Stellenbosch-Conservation-Strategy_Part_2.pdf, accessed May 3, 2016.

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Le Corbusier, (1964), Plan 06 [ONLINE]. Available at: <http://www.archdaily.com/119384/ad-classics-carpenter-center-for-the-visual-arts-le-corbusier> [Accessed 8 September 2016].

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Figure 26 – Norman Eaton, (1952) Reinet House, Graaff Reinet , Reinet House as built section through front back and stoep, note third space 's and stairs image from: Norman Eaton, (1952), Detail section through front back and stoep [ONLINE]. Available at:<http://repository.up.ac.za/dspace/bitstream/handle/2263/32619/07257-03s.jpg?sequence=3&isAllowed=y>[Accessed 8 September 2016].

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CONTEXTUAL CONNECTIONS IN ARCHITECTURE

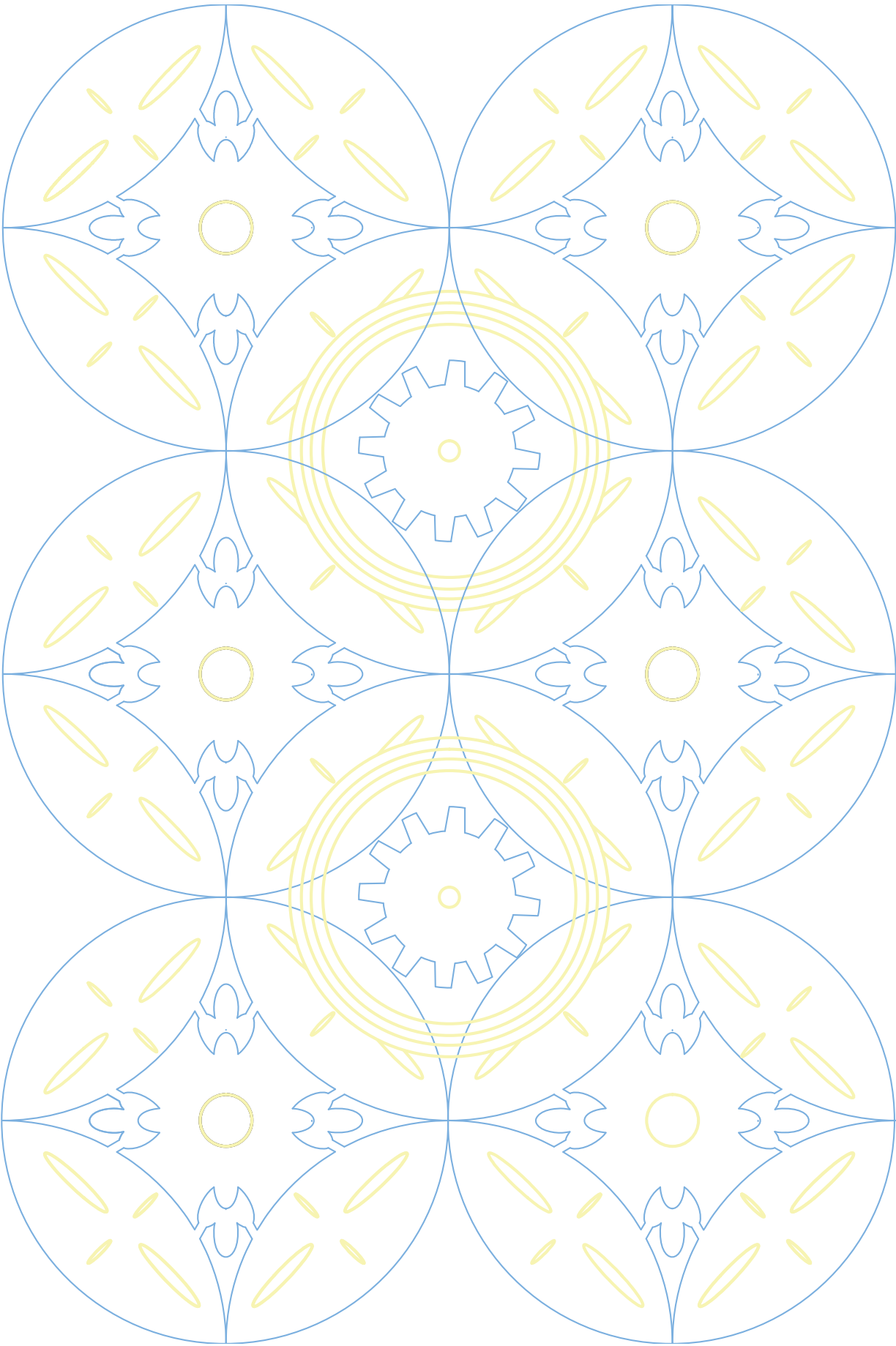
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3. Response



INITIAL REACTIONS AND OPPORTUNITY FOR CONNECTION

The Site is in west Newtown, just south of the railway tracks and high off-ramp and directly west of the De Villiers Graaff motor-way, on Lilian Ngoyi street.

INITIAL REACTION AND ANALYSIS

As one walks the site, the old disused railway sidings immediately grab ones attention. The two sidings run diagonally in relation to one another from west to east. Each siding dissects two city blocks.

The sidings are clearly not part of the road network and upon close inspection one can still see traces of the old railway tracks .The sidings are now pleasantly paved and lack sidewalks which prompt the pedestrian rather than the car to take ownership of the thoroughfare, conveniently the edges are lined with raised loading platforms which are the ideal height for sitting, being 570 cm high and 1000mm wide. Historically, the sidings would have been used to deliver goods to the buildings along its path , thus these buildings sit right up against the siding with only the loading bay as a buffer zone

One notices that people are drawn to the sidings. People tend to gather in them and sit on the loading platforms.

As is common practice, the warehouses and buildings treated the delivery servitude as the back of house. Thus a large portion of the buildings turn their back on the sidings and do not embrace or enhance the ample potential of the siding space.

The buildings along the Sidings generally have an industrial feeling, historically this was their purpose, and today light industry is still prominent in the area. However the site has become a mixed use area and examples of High rise housing, youthful small businesses, night clubs, art studios and coffee shops nestle among the warehouses.

The site also exhibits examples of highly valuable, fascinating and beautiful historical buildings which are periodically scattered along the sidings. These historical layers, superimpose over each other and juxtapose with the contemporary developments giving the site a rich feeling of depth and atmosphere.

The simplicity and honesty of some of the buildings around the site, largely due to their original no-nonsense industrial purpose, mixed with the elaborate designs of the historical buildings and the high rise towers makes for an interesting dialogue within the site.

The scale of the buildings on the site is also interesting, as it varies from very simple single story warehouses to tall blocks of flats. Each scale typology has enough examples scattered throughout the site so as not to seem out of place or alien. The scales thus range from: small enough to feel relatable and unintimidating and big enough to be interesting and vibrant, achieving an amicable mix.

The proximity of Mary Fitzgerald square and the cultural centre that is Central Newton affects the site. I felt a prominent artistic, creative and avant-garde spirit amongst those who inhabit the spaces.

WHY THE SITE WAS CHOSEN.

The old railway sidings are a very attractive spatial element. The sidings are pedestrian friendly, well used and highly social space's that are unusual and interesting.

The sidings also poses qualities which are complimentary to the subject matter of this discourse. The sidings have compelling strong edges which are softened and punctuated by the loading bays which people sit upon. They also poses defined entrance's which have to deal with the spatial and practical transition between motorised road and pedestrianised siding.

The sidings also have a poetic connections. They were literal connections ,as railways are.

Furthermore , the sidings were part of a system connecting the inner working of the city to the national railways.

Another poetic connection exists between the railway sidings and the buildings function, which is to train¹ , exhibit and provide workshop facilities for the craft of metalworking. The railway has close ties with the craft of working with metal and has historically provided jobs for many artisans and smiths in South Africa (forging railway tracks and coach building). There is a reason why the train was colloquially named the Iron horse.

The current and historical industrial, nature of the site fits well with the industrial and artisanal nature of the buildings programme . Indeed, on the South siding is a functioning factory which welds steel window frames.

The site is also fittingly located in one of Johannesburg's cultural district's (Newtown), which is in accordance with the artistically aspirational portion of the facility.

¹that's train as in teach not train as in railway but the connection is amusing



A prominent artistic, creative and avant-garde spirit amongst those who inhabit the spaces.(authors own work, 2016)



(authors own work, 2016)



At the western end of the north siding a gate , the highway and the Shopping centre “Newtown Junction” terminate the sidings and clarify the spatial edge , they also form a covered multi-layered threshold. (Authors own work, 2016)



A bridge , a literal connection spans Quinn street. A Roof covers the entrance of the east north sidings (originally used to keep goods dry during the loading process) and forms an entrance threshold. (Authors own work ,2016)



The threshold space, reinforcing the separation between the north siding and Quinn street. Creating an in-between space. (Authors own 2016)

The sidings over Quinn street, looking at the dry loading bay and the derelict building on the corner of the North siding and Quinn street. (Authors own work, 2016)



The sidings facing Quinn street , looking at the roofed dry loading bay and the derelict building on the corner of the North siding and Quinn street.(Authors own work 2016)

The loading bays on the sidings, sit 570 mm high and 1100 mm deep, which are ideal for sitting. (Authors own work, 2016)



Looking westwards on the north sidings, note: the silos and that people seem to gravitate towards the seating that the loading bays provide. (Authors own work, 2016)

North sidings looking eastwards at the proposed site (seen on the right of frame) and the Highway. (Authors own work, 2016)



A close up shot of the grain silos , and it's ventilation and safety systems . The image is typical of the industrial Palimpsest that is so prominent through out the site. (Authors own work, 2016)



A photograph down the picturesque Quinn street , the area is vibrant with people, activity and life. (Authors own work, 2016)



A gate, an entrance and threshold control which dictates transition into the Southern Siding which is the location of a metal workshop, the scene depicts men stacking steel frames (authors own work , 2016)



A fence, a boundary and a threshold control and dictates transition through the Southern Siding. The scene depicts a man taking a break from work to check his mobile phone, note the prominent light industrial activity seen throughout the greater site.(Authors own work, 2016)



The old railway sidings are still visible across Quinn street ,as a gate threshold obstructs free movement of people through the Southern Sidings. (Authors own work, 2016)



A view eastwards , down Gwi Gwi Mrwebi street , note the decrepit building on the corner, the grain silo', and the high-way.(Authors own work, 2016)

A view westwards , down Gwi Gwi Mrwebi street , looking at Quinn street,.(Authors own work, 2016)



*An example of some of the historic buildings that are scattered throughout the greater context.
(Authors own work, 2016)*



*An example of some of the historic buildings that are scattered throughout the greater context
(Authors own work, 2016)*

South Africa



Gauteng Province



Central Johannesburg Newtown



- 1. SITE
- 2. NORTH SIDING
- 3. SOUTH SIDING



1.the north sidings: this area alongside the boundary of the site, has been identified as a key space. The space exhibits good potential to be a high caliber public space.Also it will serve as the proceeding space before the main entrance.and thus will be the space in which much of the connective theory of procession, boundary, entrance and in-between space is applied.

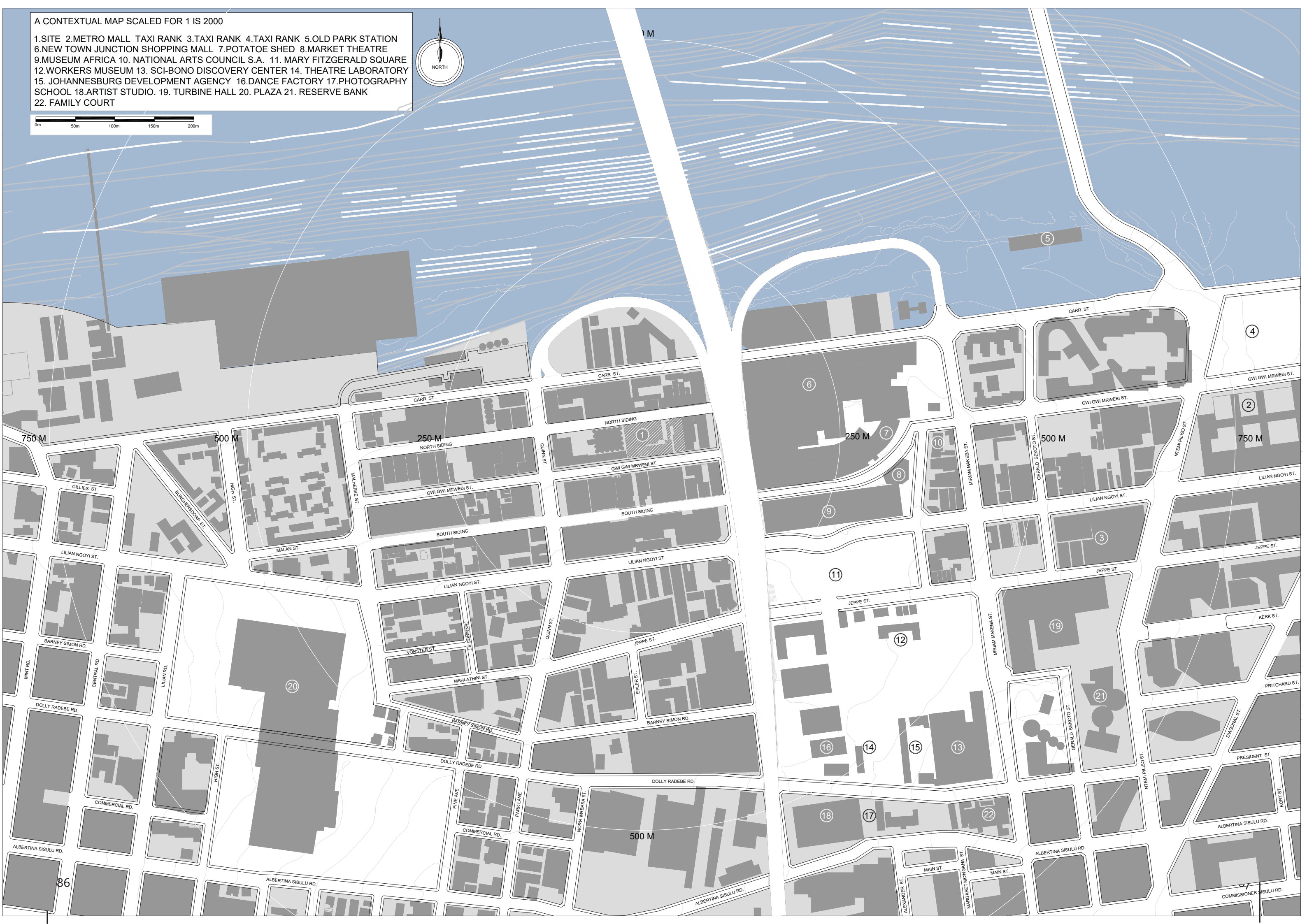
2.The site: This area is composed of a collection of warehouse's. In this scheme it has been earmarked for demolition. This particular part of the sidings was chosen for: its orientation to the sun, its surrounding structures, its proximity to the highway, its justifiability for demolition, and the surrounding atmosphere.

3.The south sidings:The aforementioned potential of the sidings as urban space coupled with the fact that that such spaces are naturally fertile grounds to apply theories of connectivity, boudary,entrance and contextual relationships.means the south sidings are a space I shall thoroughly consider.It is hoped that a more formalized connection can be established between the north and south railway sidings.



A CONTEXTUAL MAP SCALED FOR 1 IS 2000

- 1.SITE 2.METRO MALL TAXI RANK 3.TAXI RANK 4.TAXI RANK 5.OLD PARK STATION
6.NEW TOWN JUNCTION SHOPPING MALL 7.POTATOE SHED 8.MARKET THEATRE
9.MUSEUM AFRICA 10. NATIONAL ARTS COUNCIL S.A. 11. MARY FITZGERALD SQUARE
12.WORKERS MUSEUM 13. SCI-BONO DISCOVERY CENTER 14. THEATRE LABORATORY
15. JOHANNESBURG DEVELOPMENT AGENCY 16.DANCE FACTORY 17.PHOTOGRAPHY
SCHOOL 18.ARTIST STUDIO. 19. TURBINE HALL 20. PLAZA 21. RESERVE BANK
22. FAMILY COURT



A CONTEXTUAL MAP OF THE SITE 1:500

1.SITE 2.NORTH RAILWAY SIDINGS 3. SOUTH RAILWAY
SIDINGS 4.HIGHWAY OFF RAMP 5.MARY FITZGERALD
SQUARE 6. NEWTOWN JUNCTION

0 25m 50m 75m 100m



4

Section A

Section B

Section C

Section D

CARR ST.

North sidings

2

GWIGWI MRWEBI ST.

South sidings

3

LILIAN NYONGA ST.

Section A

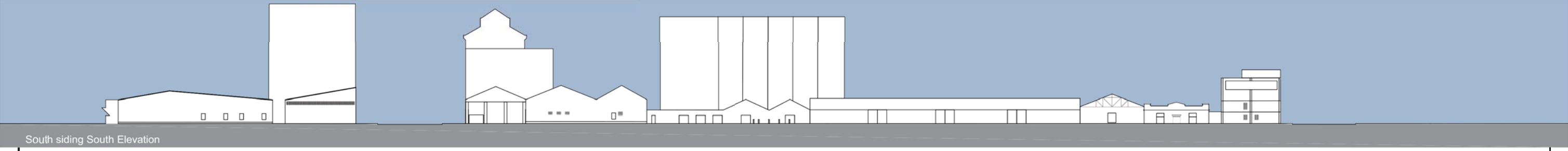
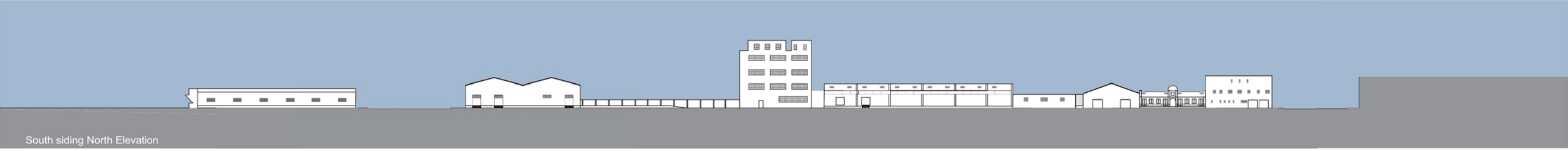
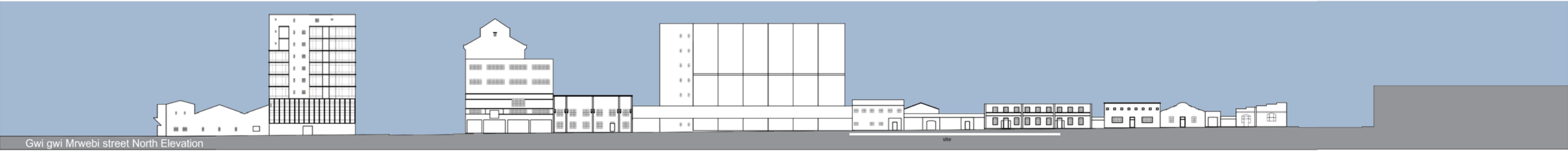
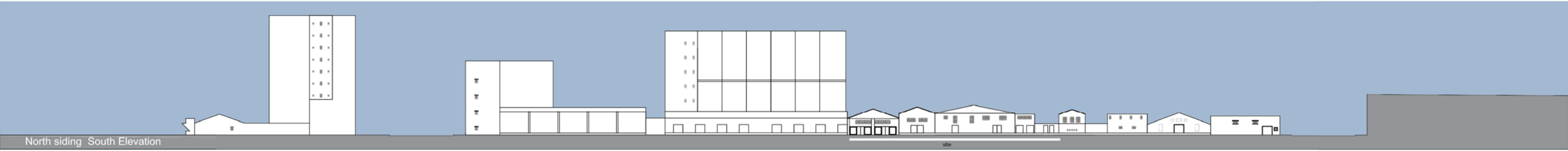
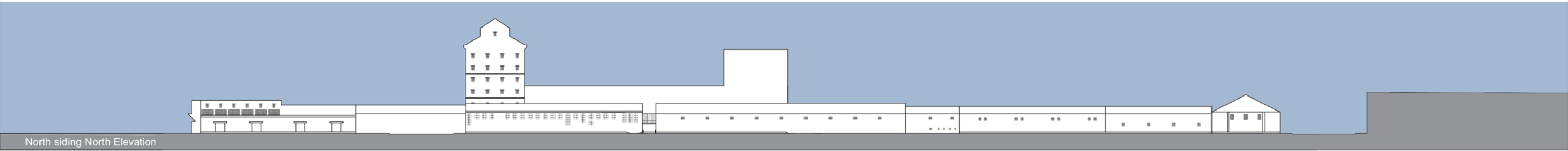
Section B

Section C

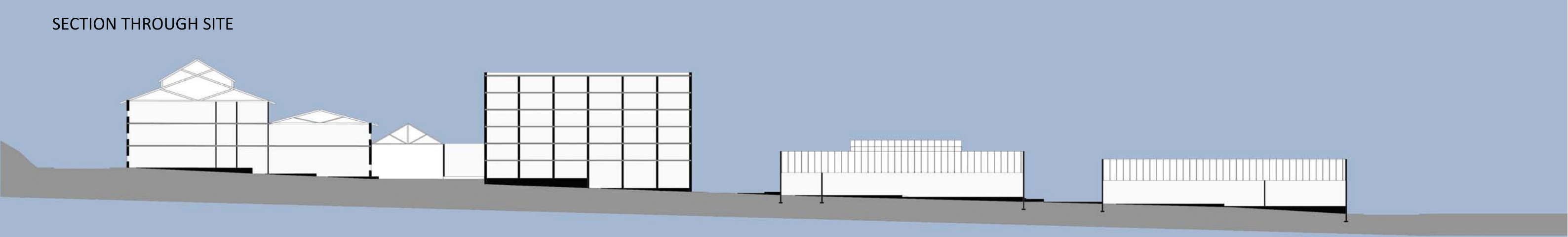
Section D

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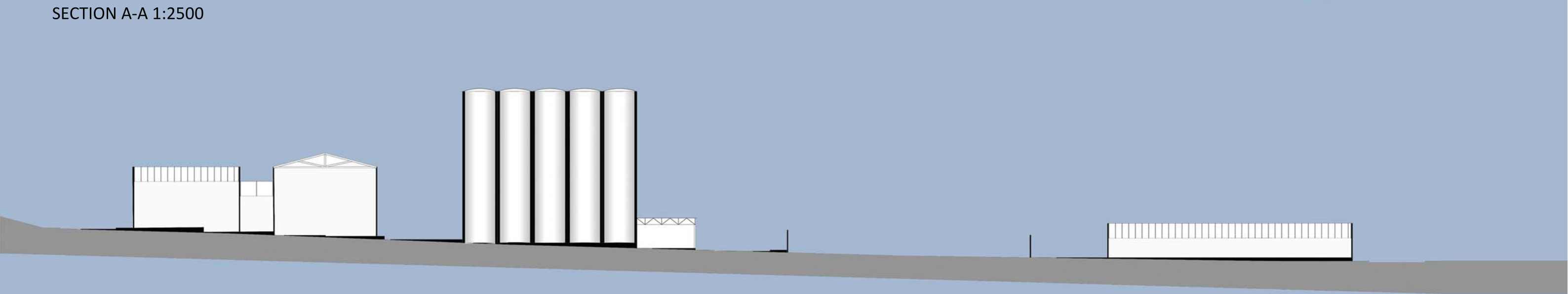
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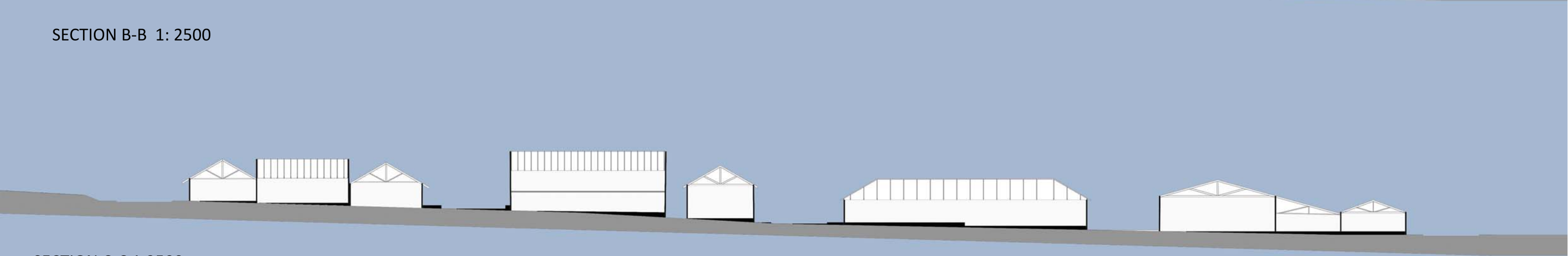
SECTION THROUGH SITE



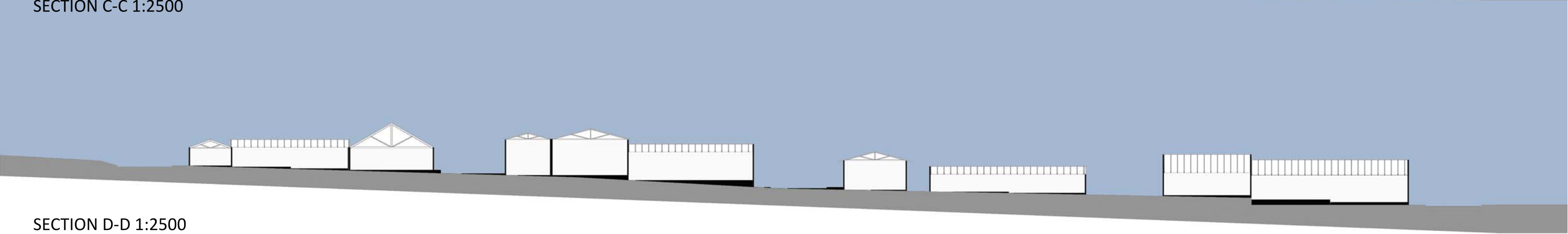
SECTION A-A 1:2500



SECTION B-B 1: 2500



SECTION C-C 1:2500



SECTION D-D 1:2500



figure ground one

PRIVATE INDOORS
PRIVATE EXTERIOR
SEMI-PRIVATE
PUBLIC



figure ground two

PRIVATE INDOORS
PRIVATE EXTERIOR
SEMI-PRIVATE
PUBLIC

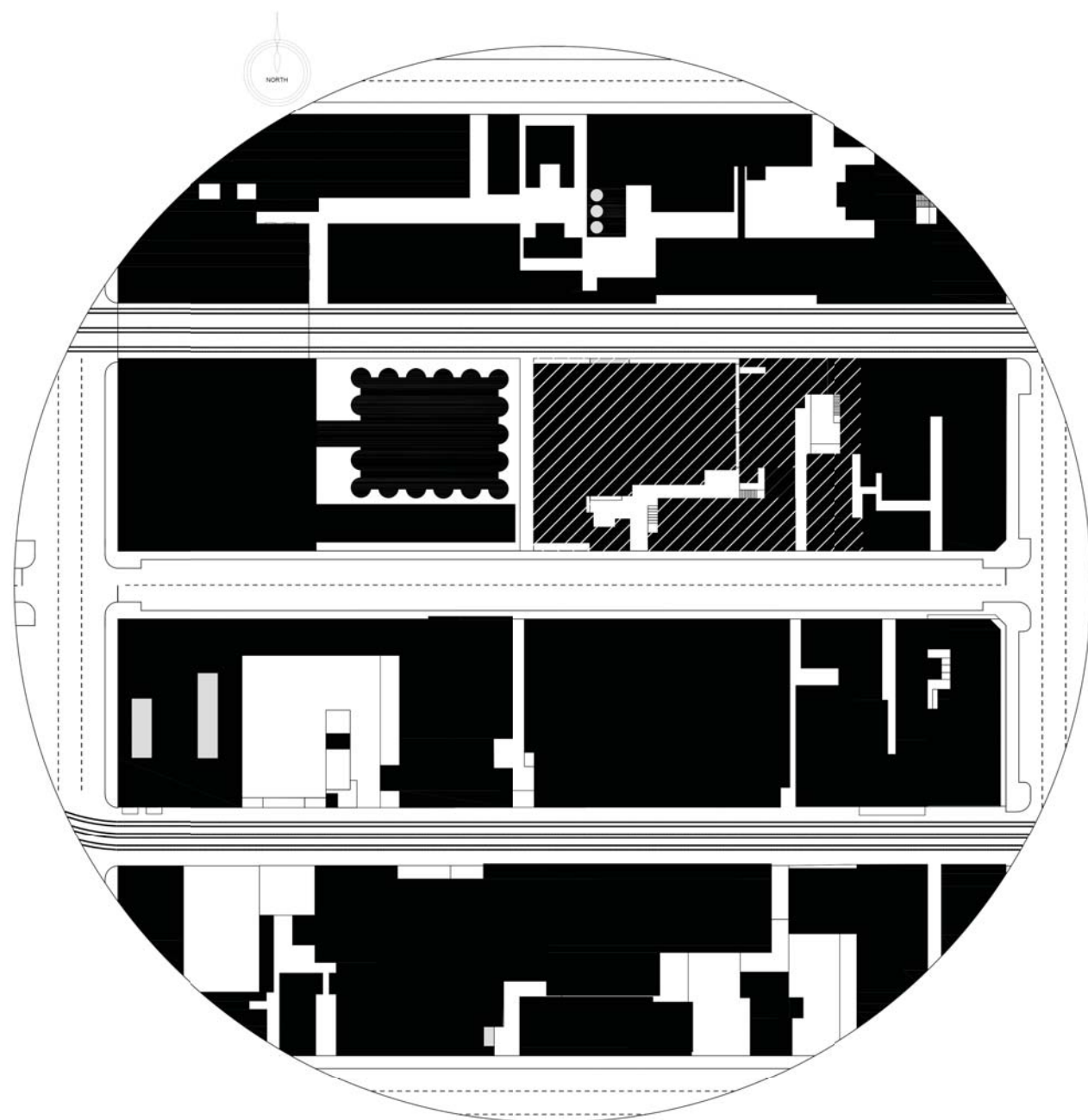


figure ground three - site

■ PRIVATE
■ PUBLIC

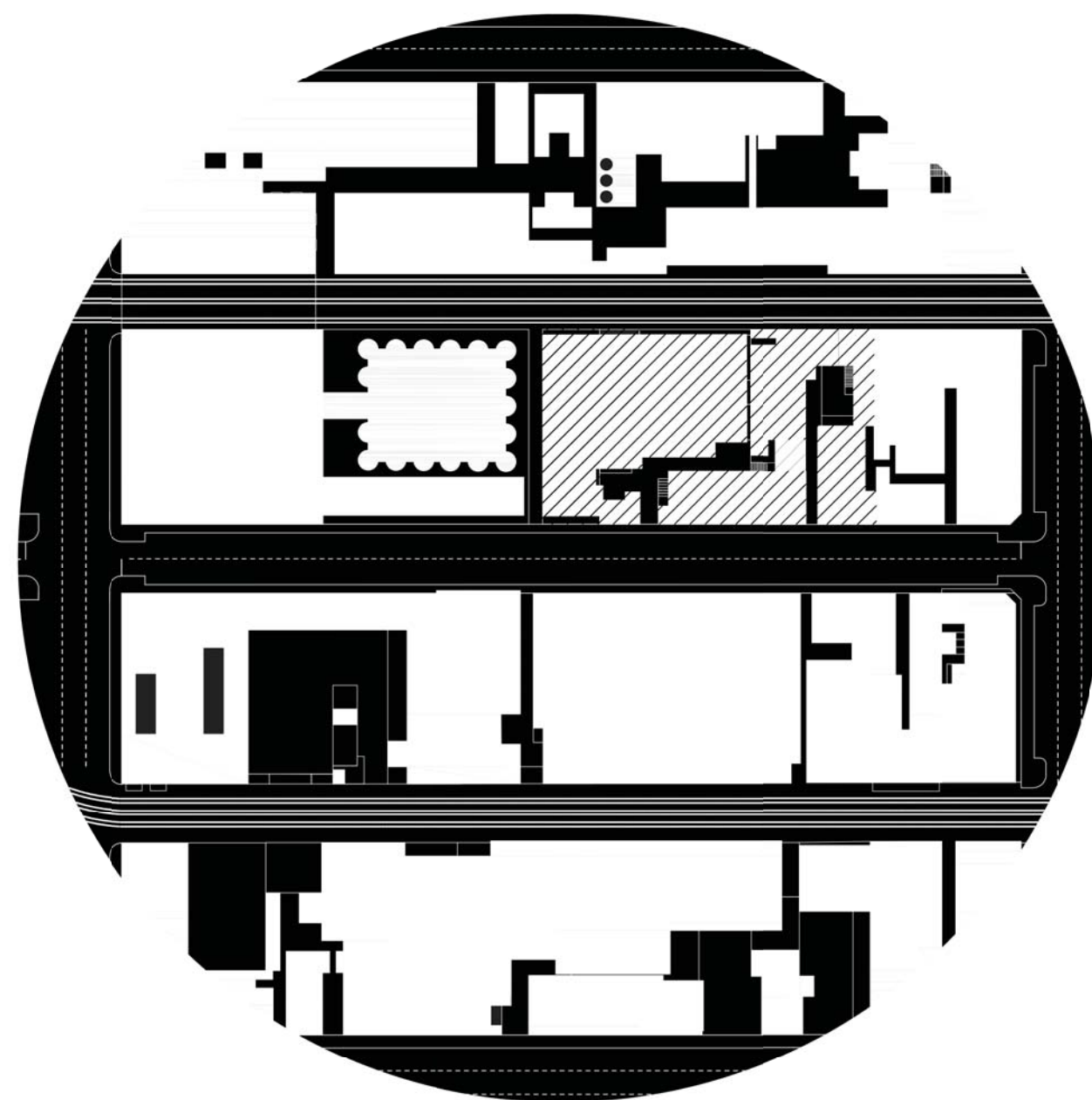


figure ground four-site

■ PRIVATE
■ PUBLIC

VIGNETTE

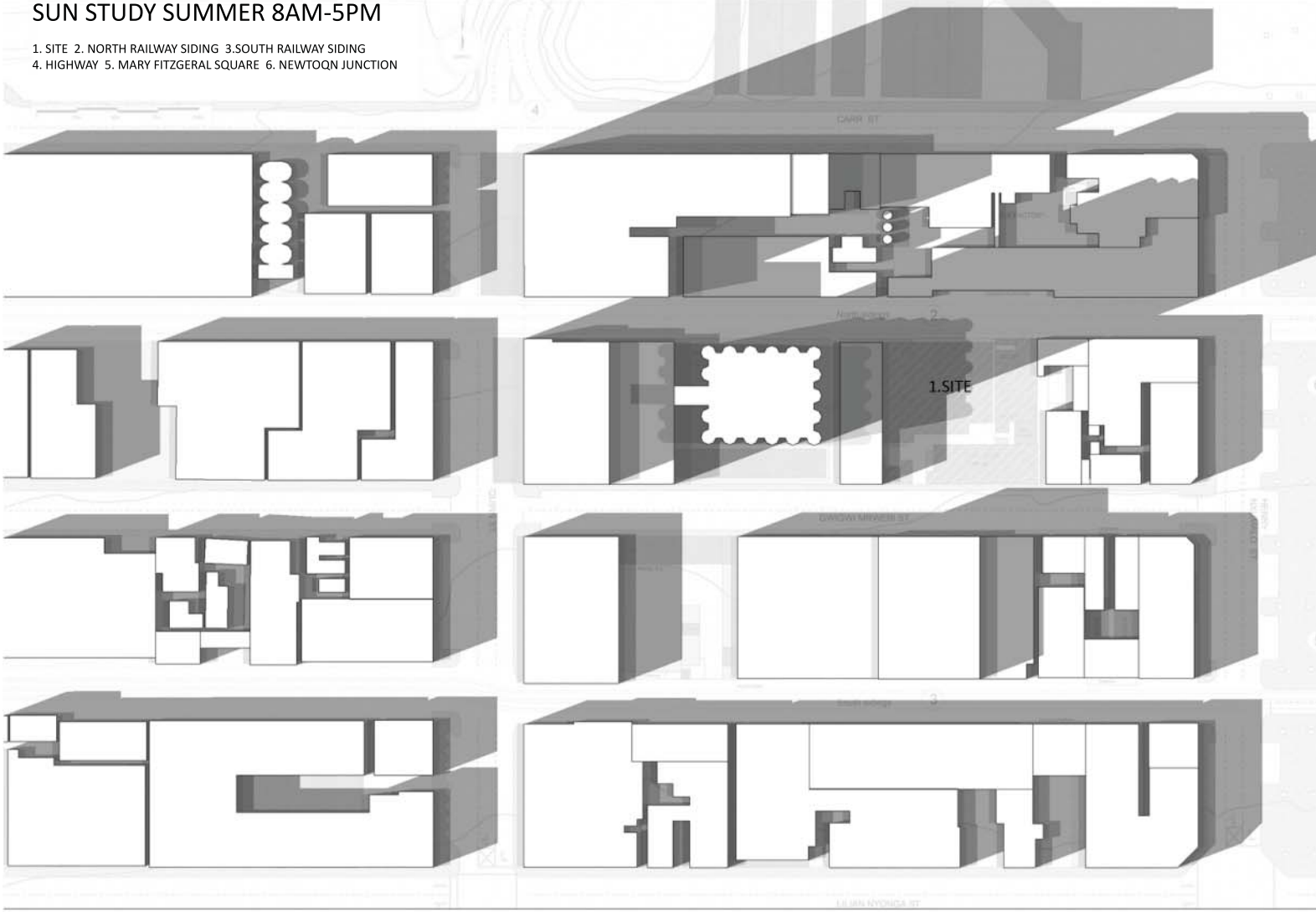
SITE THEMES

1. THE RAILWAY SIDINGS
2. THE MIXED USE , AND LIGHT INDUSTRIAL FEELING
4. THE URBAN AVANTE GAURDE CULTURE
3. THE LAYERS OF NEW AND OLD
5. THE MIXED SCALE'S



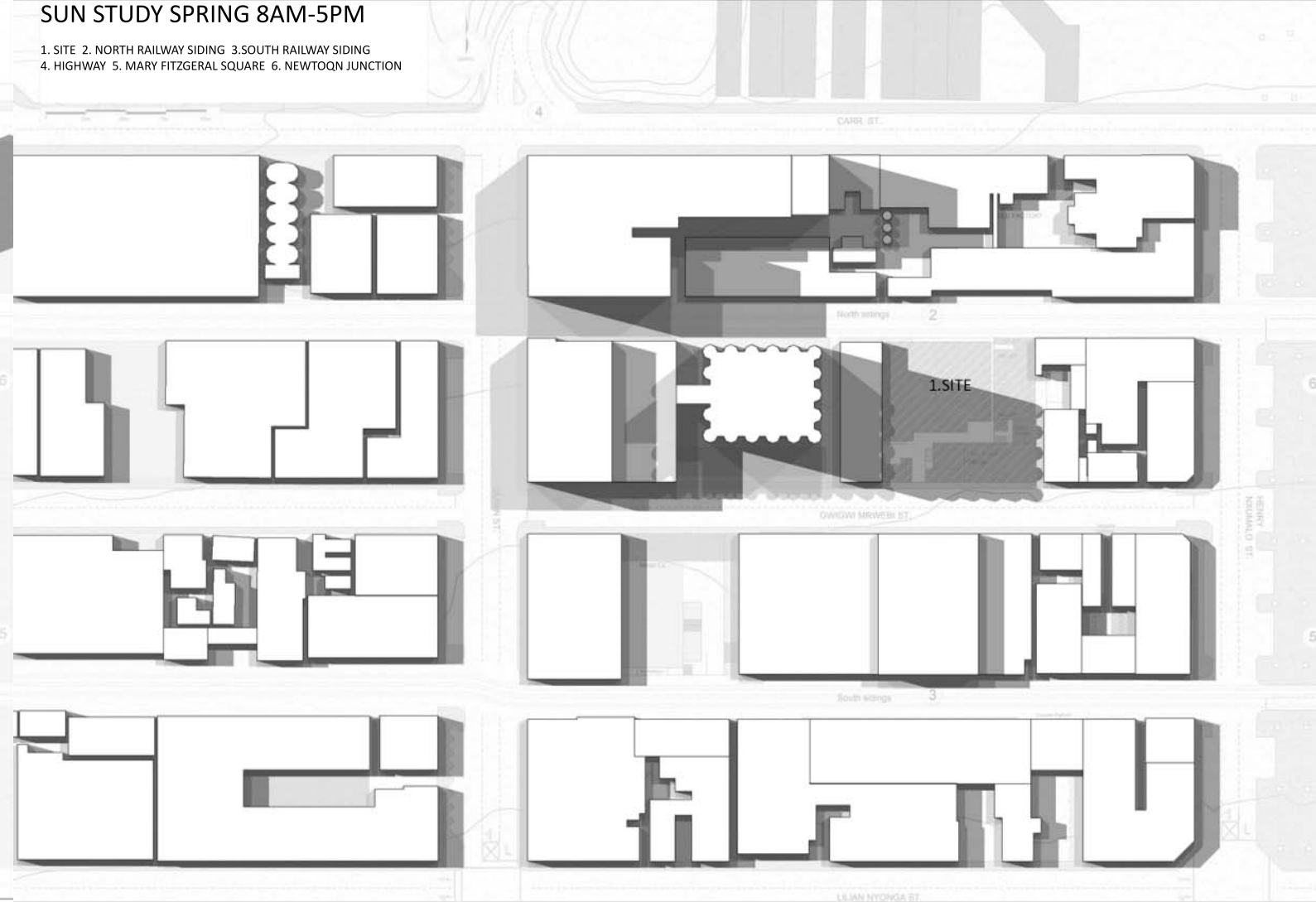
SUN STUDY SUMMER 8AM-5PM

1. SITE 2. NORTH RAILWAY SIDING 3. SOUTH RAILWAY SIDING
4. HIGHWAY 5. MARY FITZGERAL SQUARE 6. NEWTOQN JUNCTION



SUN STUDY SPRING 8AM-5PM

1. SITE 2. NORTH RAILWAY SIDING 3. SOUTH RAILWAY SIDING
4. HIGHWAY 5. MARY FITZGERAL SQUARE 6. NEWTOQN JUNCTION



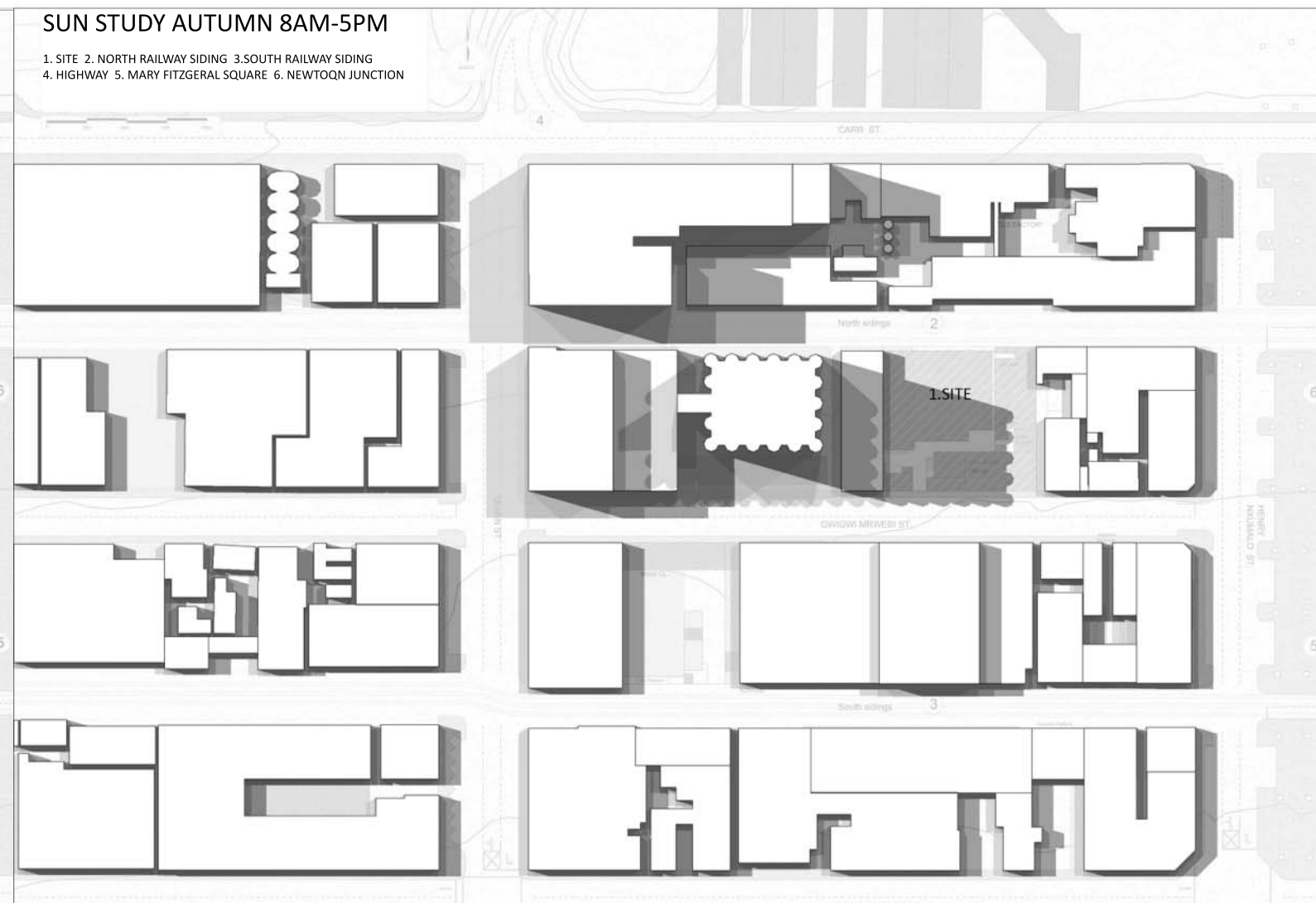
SUN STUDY WINTER 8AM-5PM

1. SITE 2. NORTH RAILWAY SIDING 3. SOUTH RAILWAY SIDING
4. HIGHWAY 5. MARY FITZGERAL SQUARE 6. NEWTOQN JUNCTION



SUN STUDY AUTUMN 8AM-5PM

1. SITE 2. NORTH RAILWAY SIDING 3. SOUTH RAILWAY SIDING
4. HIGHWAY 5. MARY FITZGERAL SQUARE 6. NEWTOQN JUNCTION



Heritage report

This heritage report will help give a greater understanding of the context of which the proposed building sits in and hopes to connect to. Additionally, this proposal would require some buildings to be demolished and, thus a heritage analysis will be compiled to ensure that it does not heinously detract from our shared civic heritage.

A BRIEF HISTORY OF NEW TOWN.

During the 1800's, Newtown was a working class district, Characterized by multi-racial low income shanty housing and the brickfields Brickworks (History of Newtown trail n.t, 2010).

In the late 1890's the brickworks was removed to make way for the Kazerne railway Marshalling yard(History of Newtown trail n.t, 2016).

After the South African war, Johannesburg was intended to be "modernised" by the colonial government (History of Newtown trail n.t, 2010). The racially motivated removal of people of Indian heritage in 1906 would result in the formation of Newtown, intended to be a well laid out industrial extension of the CBD, and a home for the city's main "port" the train yard (History of Newtown trail n.t, 2010).

A produce market, a mill, an abattoir and a power station were constructed, all of which connected to the railway arterials, the area became a hub of agricultural trade, and industrial activity (Newtown trail n.t, 2016).

To serve the market a large public square was built, which in 1930 was renamed the Mary Fitzgerald square. (Newtown trail n.t 2016). Because of the industrial nature of Newtown, Mary Fitzgerald square was notably the location for several historical demonstrations and mass Industrial labour protest which include: 1911 tramway workers strike and

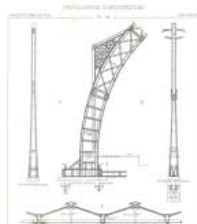


Figure A.17 An Architectural Connection

the 1918 wage Campaign (Newtown trail n.t., 2016).

In 1970 both the market and power station were relocated (Newtown trail n.t., 2016). Soon afterwards Newtown became home to artists, actors and musicians. The Market theatre moved into the eastern part of the old market building, and a number of museums began to establish themselves in the area including Museum Africa, The Workers museum (Newtown trail N. t., 2016) and more recently South African Breweries centenary centre and Sci-bono discovery centre.

Today Newtown is considered a cultural hub in Johannesburg. With several museums and centres, a theatre, schools, restaurants, vibrant urban public spaces , live music, historical sites and bars.

A BRIEF HISTORY OF THE SITE, UPPER WESTERN NEWTOWN.

The western part of New Town which is this discourse's site was, prior to 1904, called the "location" most of the people who resided there were of Indian heritage (Newtown trail n. h., 2010) . In 1904 these people were forcefully removed and the existing shanty town was torched and razed to the ground (Newtown trail n. h., 2010) to make way for the Newtown development.

Today the area is characterised by its semi and light industrial warehousing. The warehouses were serviced by railway sidings that were built in 1911 by the South African rail administration, to connect the Newtown market and the railway systems, (Newtown trail n. h., 2010). The sidings are no longer operational.

This discourses site is just west of the de Villiers Graaf motor way , built in the 1960's (trail n. h., 2010) and just below the railway line and the historic "Old Railway Compound" the site sits in close proximity to Henry Nxumalo street previously Goch street (an important road as "going to Goch" was colloquial slang for being sent to John Vorster square police station and associated with the very real fear of dying in detention during the apartheid era.)

The area is sometimes, referred to as the milling precinct as it was once the location of the Premier

Milling Company- (Newtown trail n. h., 2010).

The milling industry in Newtown began In 1906 two years after the forced removal of the people who lived on the site (Newtown trail n. h., 2010), Joffe Marks, the owner of Marks Limited, purchased the land and developed a maize mill (Newtown trail n. h., 2010).

Later in 1914, Premier Milling Company was formed when Marks Limited and Premier Roller Flour mills amalgamated (Newtown trail n. h., 2010) by 1973 the company owned 11 maize mills and 40 bakeries (Newtown trail n. h., 2010). Premier Milling was voluntarily liquidated in 1999 but the original mill closed down in 1994 (Newtown trail n. h., 2010).

The Mills location on the corner of Quinn Street and the North sidings occupies the land that Ghandi's emergency hospital had once stood upon (trail n. h., 2010).

Next to the premier mills building is the Prices Patent Candles Ltd building, another historically significant building in the area.

Edward Price and Co renamed Prices Patent Candles Ltd in 1847 began manufacturing candles in 1830 in Britain. In 1910 Prices acquired its first overseas factory in Newtown. The building we see today was extended in 1923.

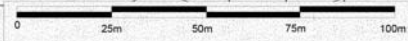
Furthermore West Newtown also has several eclectic examples of Victorian, Edwardian, post Edwardian and art deco buildings that are scattered throughout the area (Newtown trail n. h., 2010).

THE SIGNIFICANCE OF NEWTOWN'S HERITAGE.

Some key factors in the significance of Newtown's and the sites heritage value are:

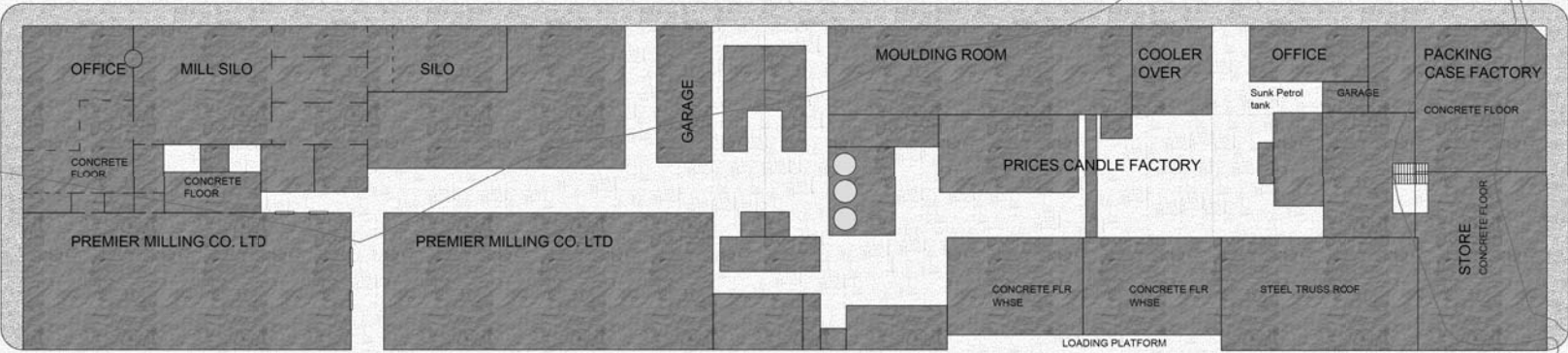
- Key insight in the development of Johannesburg and modern South Africa and its Industrial heritage.
- Key insight in the development of Johannesburg cultural identities, and cultural past.
- Key insight on how political forces came to disrupt and destroy poorer communities from racially mixed backgrounds in Johannesburg.
- Some buildings are older than 60 years of age.

Historical context the site in 1937 31 years after the forced removal, and subsequent re-development of the area.

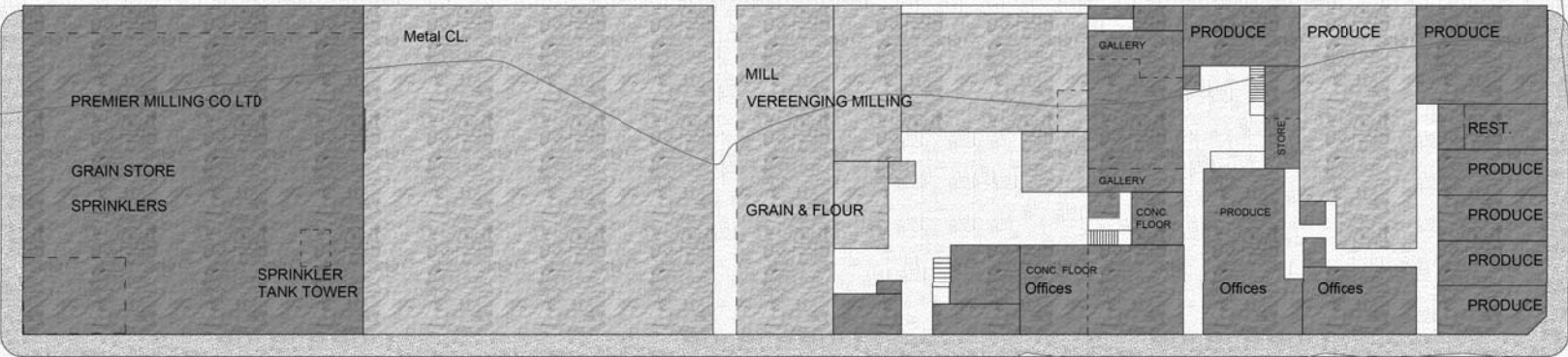


NORTH

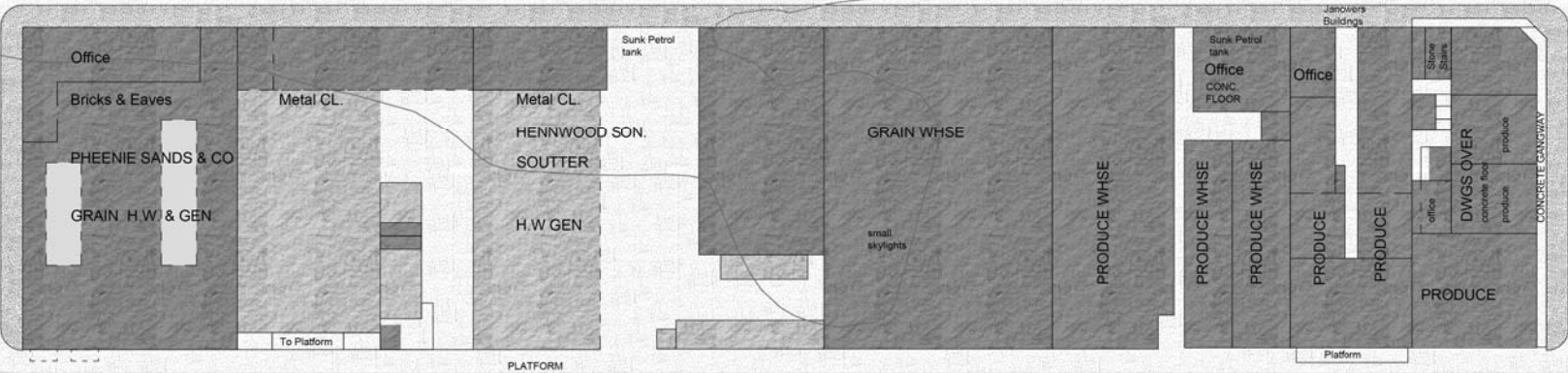
CARR ST.



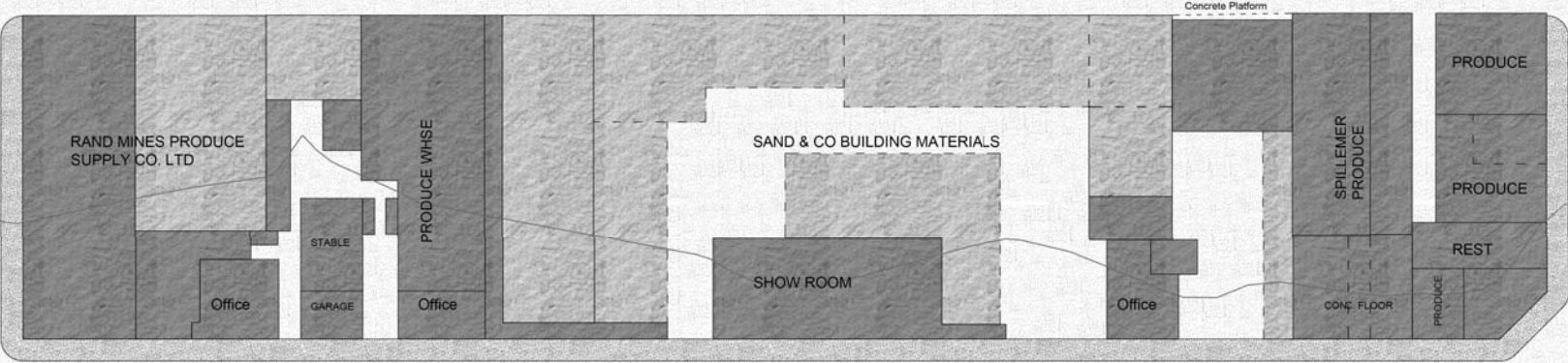
QUINN ST.



PIM ST.



GOCH ST.



BREE ST.

ARGUMENT FOR THE DEMOLISHING OF
ERF 1/577

After cross checking the Heritage registry and analysing the buildings which are proposed to be demolished, which coincidentally do not exhibit high degrees of creativity or capability, it is apparent that the Buildings proposed to be demolished fall under the lowest level of heritage value, or are of grade three status

The primary reason the buildings are considered to be of heritage value is because they have existed for more then 60 years.

From the Johannesburg city council I have found that ERF 1/577 underwent:

- Engineering works after the buildings incurred fire damage in 1955
- Renovations in 1977 including extensive demolitions on the ground floor

Due to lack of information , one can only speculate about the extent of the damage caused by the fire which occurred around the year 1955, however what is known from the council documents is that it was significant enough to also effect the neighbouring building (Erf 82) which also required structural work due to fire damage.

Furthermore upon inspection it is speculated that the building has undergone more recent, unrecorded, refurbishments, to the interior and exterior

This discourse argues that all the aforementioned changes have helped to significantly reduce whatever heritage value the buildings on the site would have possessed due to its age.

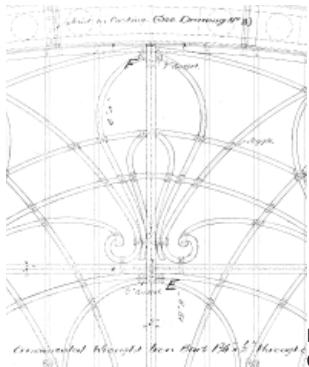


Figure A.18 An Architectural Connection

Moreover I argue that the buildings in question are unexceptional examples of their typology.

Importantly , I have consulted with two qualified and esteemed heritage architects and consultants. Both professionals inspected and approved the proposed demolition.

It is for these reasons that this discourse advocates that the demolition of these buildings would not infringe on any key insights, that Newtown offers, into Johannesburg’s Industrial, cultural or political heritage.

The City’s policy framework for heritage states “heritage worth protecting contributes to an understanding of the impact of the past, and the need to plan critically and creatively for the future and the need to capitalize on the legacy of our history”.

The buildings that this discourse wishes to theoretically demolish do not contribute significantly to our understanding of the past . Moreover the buildings fail to prompt creative and critical future planning.

As stated in the city’s heritage policy frame work: the demolition of a building is *“otherwise acceptable in the light of expected benefits and only subject to approval by the relevant heritage authority”*(Fraser, 2008).

The social and cultural benefits, brought about through the function of the building will surly contribute to making the proposed demolition *“otherwise acceptable in the light of expected benefits”*.(Fraser, 2008)

Additionally, this project is intends to vitalize the area, attract investment and draw in more visitors, users and resources. This discourse asserts that this development, particularly its urban scheme, will increase the state, longevity, use and appreciation of the rich heritage that resides in the area, and will equate to a being more beneficial than detrimental to the heritage of the site and its surrounds.

REFERENCES

Newtown trail, n. h. (2010). The history of newtown. Retrieved August 29, 2016, from newtown heritage trail: <http://www.newtown.co.za/heritage/index.php>

Newtown trail, N. t. (2016). History. Retrieved August 29, 2016, from newtown: <http://www.newtown.co.za/content/history>

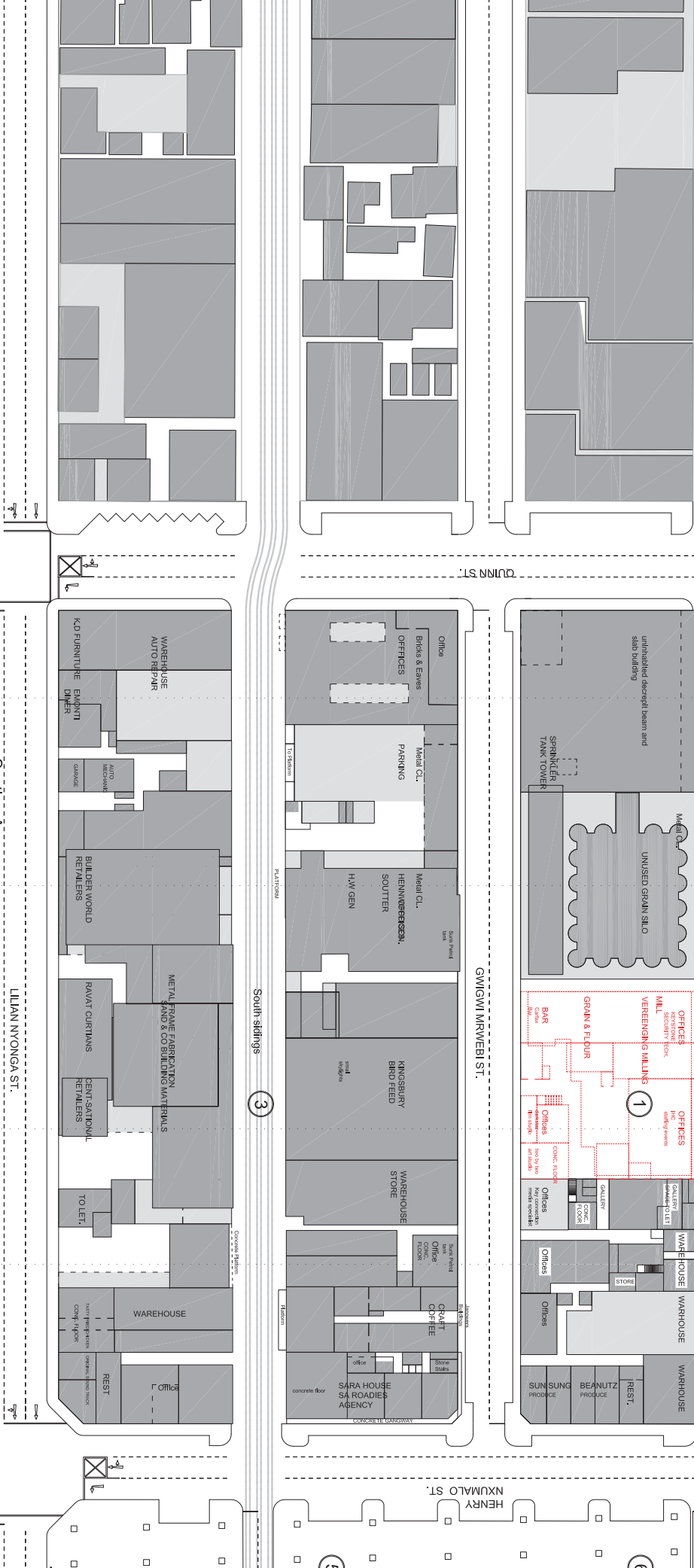
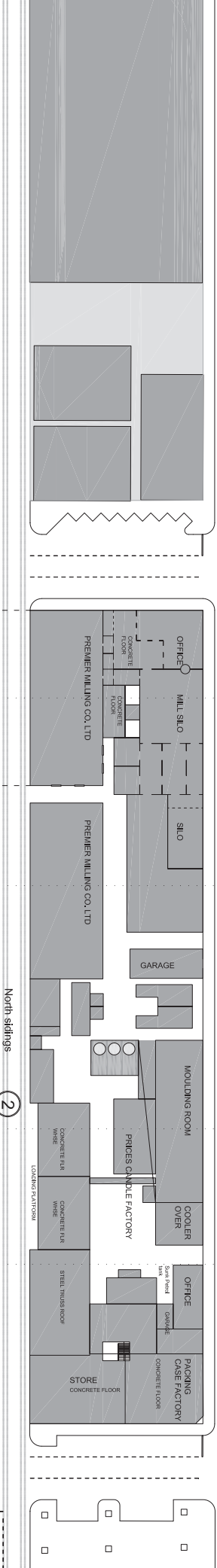
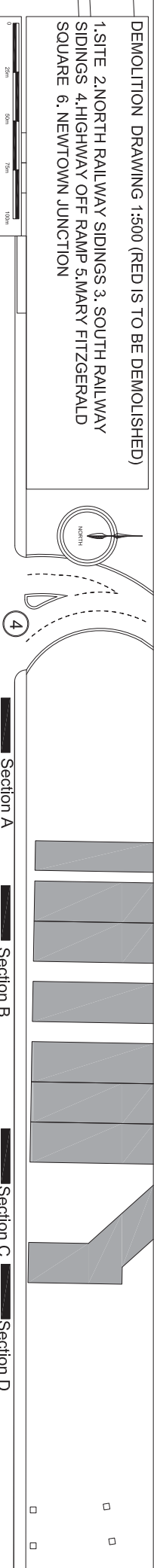
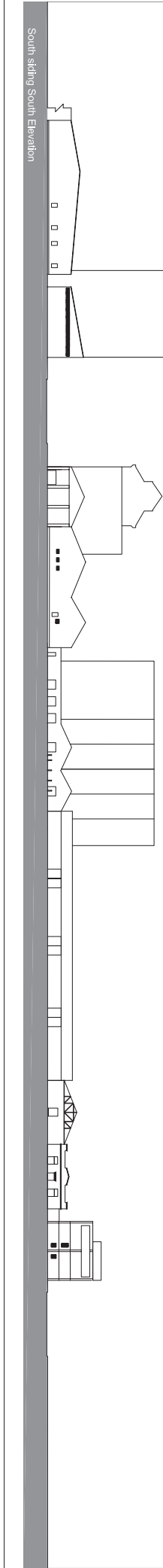
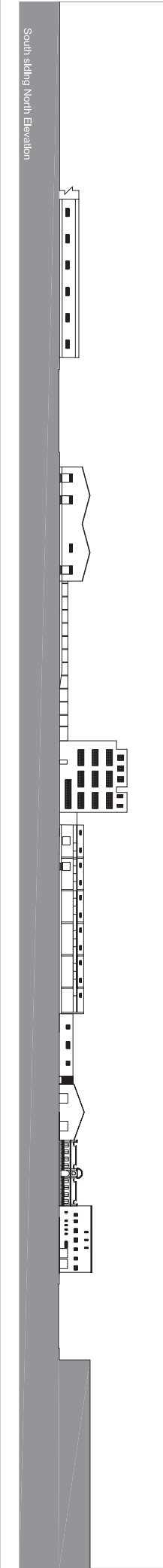
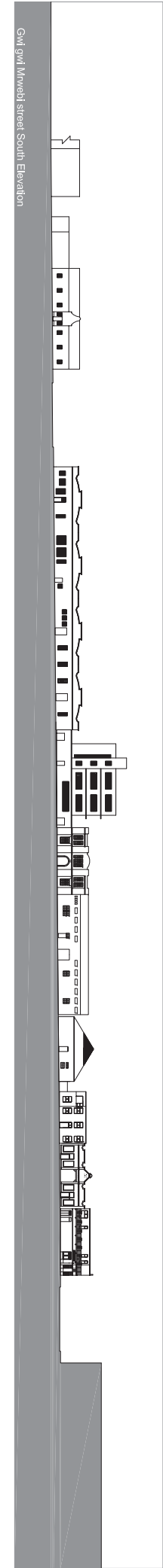
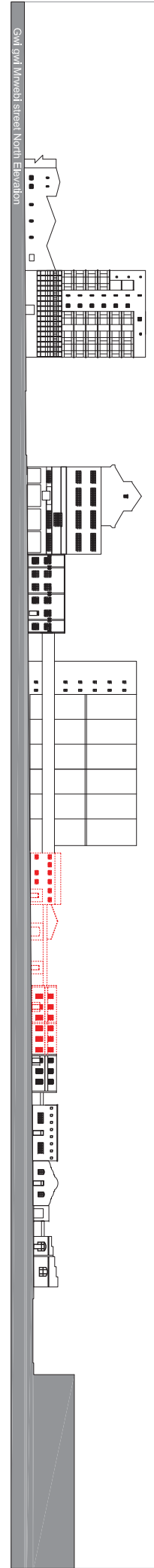
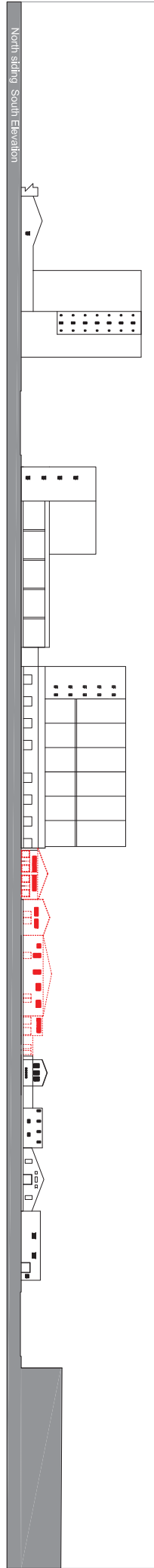
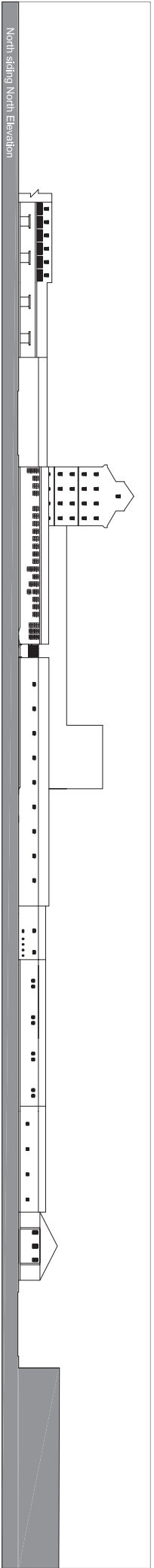
Newtown. (2010). The history of newtown. Retrieved August 29, 2016, from New town heritage trail: <http://www.newtown.co.za/heritage/history>

Fraser, Neil
2008 City of Johannesburg - Manoeuvring through the Heritage Hoops. http://www.joburg.org.za/index.php?option=com_content&id=2338&Itemid=58, accessed October 21, 2016.

list of figures

Figure A.17: unknown, (2015), 1873 architectural drawing of St. Pancras Railway Station [ONLINE]. Available at:<https://za.pinterest.com/pin/292734044505155468/> [Accessed 11 September 2016].

Figure A.18: Isambard Kingdom Brunel, (2012), To the roof of Paddington Station [ONLINE]. Available at:<http://www.sophieontrack.com/the-shiny-new-network-rail-picture-archive/> [Accessed 11 September 2016].





The buildings that are proposed to be demolished view from the north sidings



The buildings that are proposed to be demolished view from the Gwi Gwi Mrwebi street.

CONTEXTUAL CONNECTIONS IN ARCHITECTURE

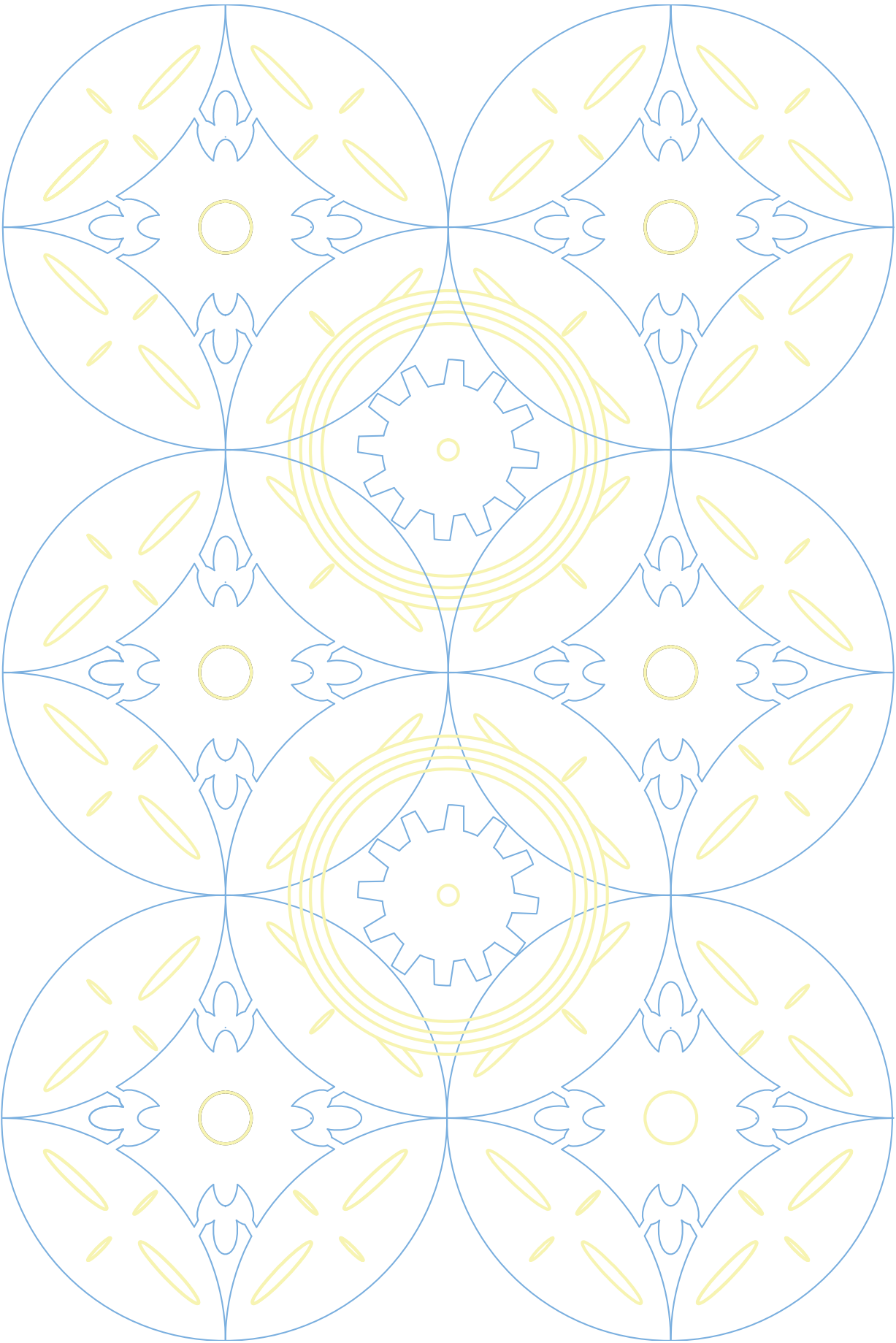
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2. Site

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Brief

THE PROGRAMME

Design a facility to train, exhibit, and provide workshop facilities for the craft of metalworking.

The facility will accommodate for 70 apprentice students and 15 master tutors. The students and tutors will be divided amongst the various specializations which will include: metal casting (such as bronze sculpture), forging (such as blacksmithing), ironmongery, welding (including stick, TIG, MIG and flux cord welding), metallic fabrication. The facility will focus equally on functional marketable skills and artistic endeavours. The facility will also provide exhibition, presentation and public space's which can, amongst other purposes, serve the metalworking focus of the facility. The brief also calls for a basic master planning of the site.

JUSTIFICATION OF THE PROGRAMME

This programme was chosen for four reasons:

- It has a high level of compatibility with the theoretical investigation and allows for the theoretical investigation to be put into working perspective.
- It connects well to the site and vice versa
- It connects to South African society by addressing a need and problem.
- In keeping with the title and theme of the discourse it establishes several poetic connections

PROGRAMMATIC COMPATIBILITY WITH THE THEORETICAL INVESTIGATION

The facility has a wide range of public and private spaces that must harmoniously exist. Metal working is dangerous and thus requires controlled disconnected space's. However to exhibit or indeed sell the metallic crafts, high levels of connectivity will be required. Thus the theoretical explorations of connectivity, dis-connectivity and the mediation of the two can be put into working perspective. Metal work has a very powerful connection with

human culture, it plays an important role in traditional cultures and tectonics. Furthermore, Metals are crucial in the advancement of high culture, particularly in the fields of architecture and technology thus the programme makes a literal connection to the theoretical exploration of connecting to culture.

Craftsmanship plays a vital role in the combating of detrimental standardization, thus the programme helps to reinforce the concepts (championed by the theoretical exploration) of bespoke reactive and connective design

CONNECTION TO SITE

Metal is strongly connected to the country of South Africa and the city of Johannesburg. Furthermore, the site has a fitting semi-industrial nature, with similar types of activity setting a precedent. There are also several poetic connections to the site which this discourse discusses on page 61 in the section “why the site was chose”.

THE NEED AND PROBLEM

There is crucial need for further Industrialization of South Africa's economy to help alleviate gross poverty in the country This discourse, realizes that we must supplement the Mineral and mining backbone of the South Africa's economy with industrial capability, by further processing the metals we extract for greater economic growth. This architectural programme not only further processes raw materials but also is designed to promote skills development and training within industrial fields, pushing them to the point of fine artistry. Furthermore there seems to be a disconnection between the modern human and its ability to “work with its hands” to make, to construct and to understand. Despite the fact that metal has been such a crucial element in the human story and that most will come into contact with it on a daily basis, most people will not know how to properly work it. The tragedy of the modern human generally not having the ability to skilfully craft and make ,means humanity is becoming increasingly more

dependant and impotent.

Furthermore we are simply not realizing our inventive and creative potentials.

This is as much a spatial problem as it is a knowledge and skills issue. In modern life we are spatially excluded from production spaces be it for safety, security, the fact that the product is made in distant lands or even trade secrecy. Thus we are often oblivious to how things are made and how things work. This building symbolically combats these issues.

THE CONNECTION

The connection between humans and metal is self-evident. Indeed Iron, zinc, copper, manganese, chromium, molybdenum and selenium are all essential to human life on a biological level.

But what truly interests my architectural intrigue is the connection between technologies, metal and the human story.

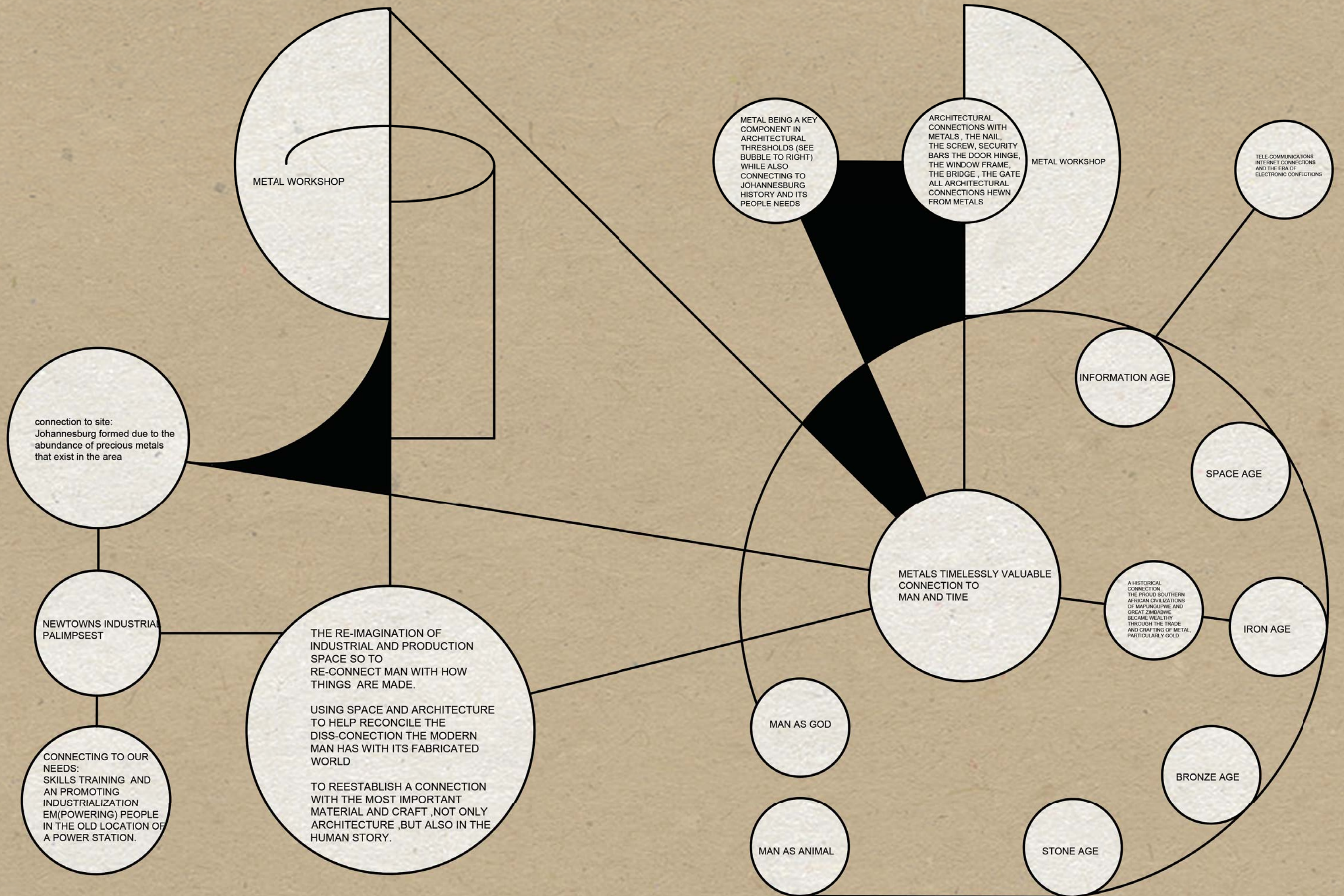
Metal and our mastery over it, has defined the human story we talk of the bronze age ,copper age and the iron age.

A metal workshop in some form or another will always be an inevitable part of human civilisation. Metal, our connection with it, and mastery over it, has allowed humankind to not only survive but also to go to the moon, create computers, the internet and cellular phones, and allow the architect to create skyscrapers, towers and bridges.

The connection between metal and man is so strong that, to some people metalwork has got a mythological prestige. In Hindu mythology Tvastar is the blacksmith of Devas , Hephaestus or Vulcan was the blacksmith to the gods in ancient Greek and roman Mythology respectively, Ogun the god of Iron is traditionally worshiped by the Yoruba of Nigeria.

The design will certainly attempt to connect to the greater spirituality of metalwork .

Indeed, the opportunity for creation offered by metal is somewhat celestial and divine, from man's first copper and bronze tools to modern robotics and virtual realities.



Schedule of areas

PROGRAMME

SCHEDULE OF AREAS FOR A METAL WORKSHOP
FOR THE PRODUCTION, TRAINING AND EXHIBITION
OF METAL WORK.

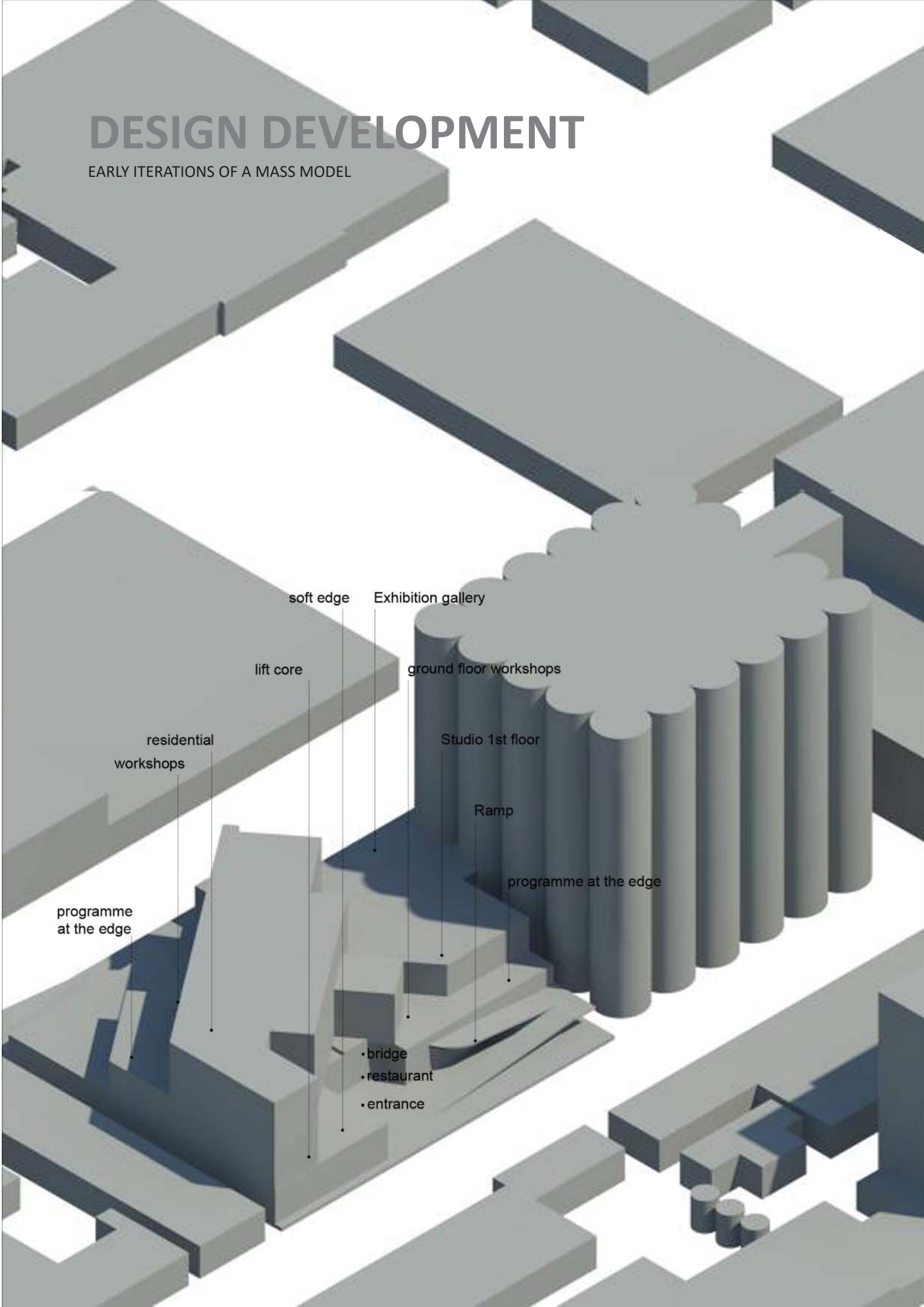
ROOM	QUANTITY	AREA	ROOM	QUANTITY	AREA
ENTRANCE			WORKSHOPS		
Entrance foyer to North sidings	x1	80 sq.m	Woodwork shop	x1	100sq.m
Entrance foyer to GwiGwi Mrwebi street	x1	80 sq.m	Marking and cutting		
Gallery spill out	x1	80 sq.m	Surface treatment		
Gallery Entrance gesture	x1	40 sq.m	Assembly		
Sales office and public interface	x1	30 sq.m			
Event space foyer	x1	60 sq.m	Clay and moulding workshop	x1	100sq.m
PUBLIC AMENITIES			Smith-shop	x1	200 sq.m
			Forges		
Male pubic toilets	x1	30 sq.m	Anvils		
Female public toilets	x1	30 sq.m	Vices		
Restaurant dining	x1	50 sq.m	Work benches		
Male First Floor toilets	x1	30 sq.m	Welding shop	x1	200 sq.m
Female First Floor toilets	x1	30 sq.m	stick welding		
Siding treatment			T.I.G. (Tungsten inert gas) welding		
			M.I.G (gass metal arc) welding		
			Flux cord welding		
PRIVATE AMENITIES			Machine Shop	x1	200 sq.m
			Mark up		
Break room	x1	20 sq.m	bending and shaping		
First Aid	x1	20 sq.m	locksmith machining		
Male change rooms	x1	40 sq.m	assembly and work bench		
Female change rooms	x1	40 sq.m	Cutting		
Male First floor toilets	x1	30 sq.m	Grinding, polishing and cleaning abutting edges		
Female First floor toilets	x1	30 sq.m	Digital fabrication studio	x1	125 sq.m
Outdoor smoking/ break area	x1	40 sq.m	laser cutting		
ADMINISTRATIVE			3-D printing		
			Engineering Studio	x1	150 sq.m
Studio care taker office	x1	20 sq.m	work desks		
Open plan office			out door work space	x1	60 sq.m
Facility secretary desk	x1	15 sq.m			
Facility Head office	x1	20 sq.m			
Facility admissions	x1	20 sq.m			
Filing and tea facilities	x1	-10 sq.m			

ROOM	QUANTITY	AREA
SERVICE SPACES		
General store	X1	90 sq.m
sheet metal store		
metal rods store		
angles and pipes store		
timber ,clay and products		
fuel store		
Tool store	x1	30 sq.m
Plant room	x1	25 sq.m
Restaurant / coffee shop kitchen	x1	40 sq.m
Cold store	x1	8 sq.m
Delivery yard and turning circle	x1	
ADDITIONAL FACILITY SPACES		
Meeting rooms	x 2	35 sq.m
Computer lab	x1	70 sq.m
Drawing rooms	x1	40 sq.m
EXHIBITION SPACE		
Exhibition space	x1	400 sq.m
EVENTS SPACE		
120 Seat auditorium	x1	130 sq.m
ACCOMMODATION FOR ARTISTS IN RESIDENCE		
Kitchen	x4	12 sq.m
Dinning	x4	14 sq.m
Office	x4	9 sq.m
Bedroom	x4	12 sq.m
Living	x4	12 sq.m
Balcony	x4	20 sq.m
PARKING		
motor car bays	x12	
Bicycle		40 sq.m

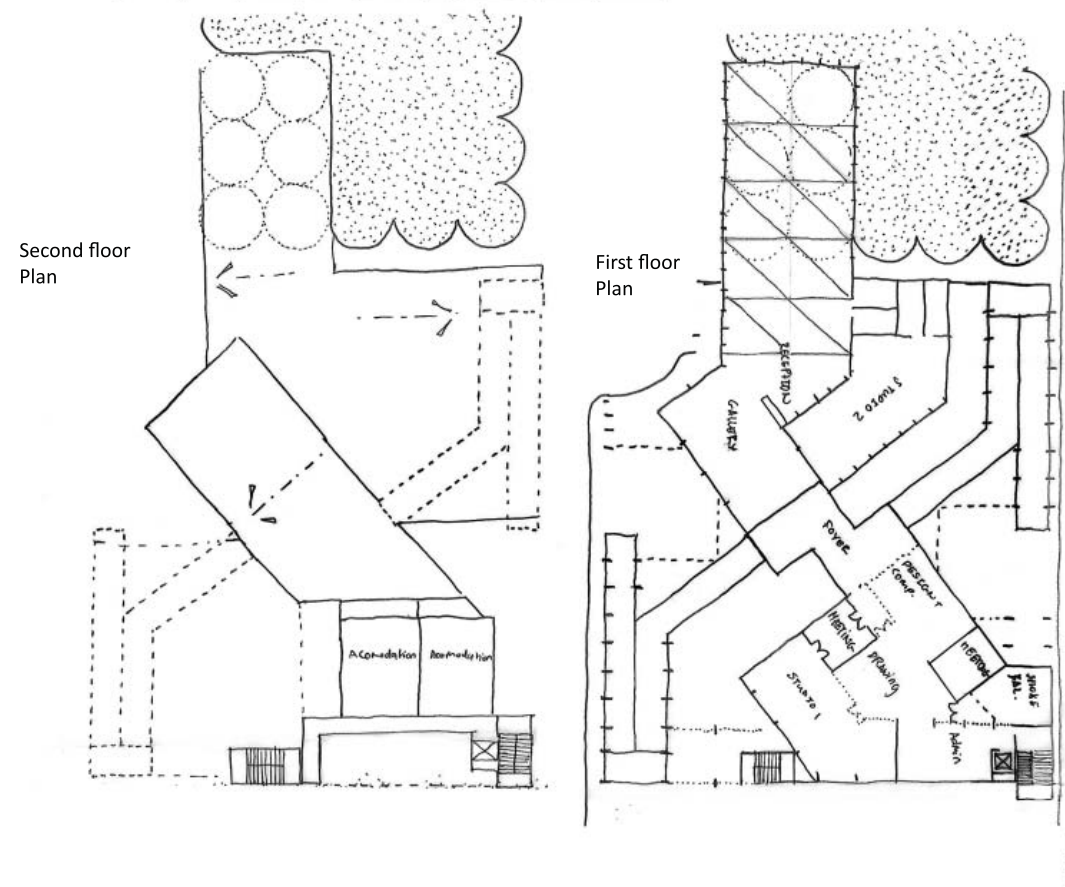
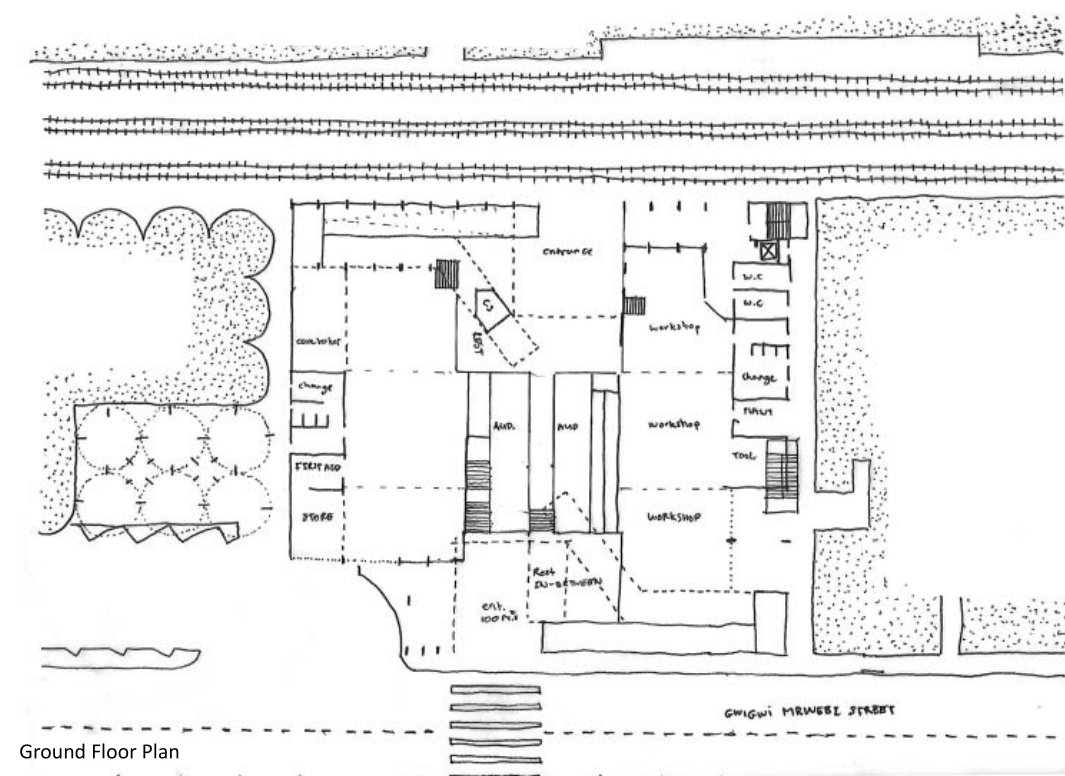


DESIGN DEVELOPMENT

EARLY ITERATIONS OF A MASS MODEL

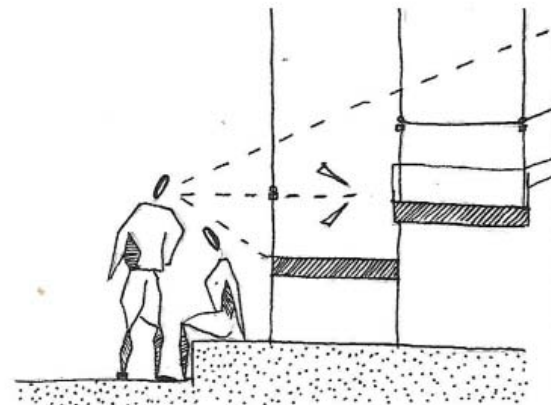


EARLY SKETCH PLAN.



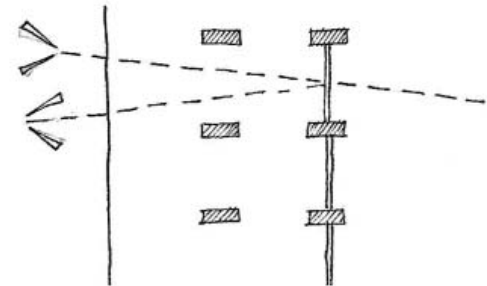
Implementation of theory

DEVELOPMENT OF A BUILDING EDGE



1. Adjustment of levels and terracing of the edge:

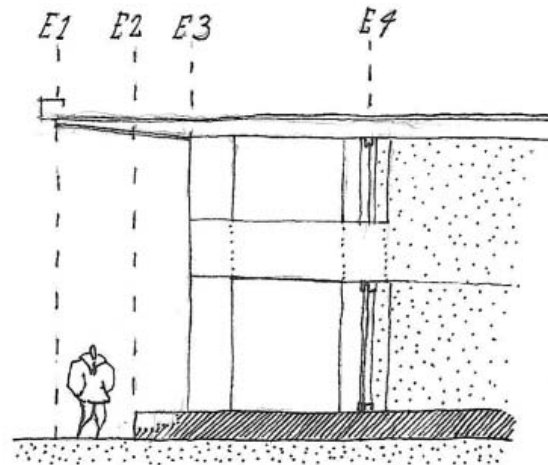
The design will retain and continue the existing elevated loading bay. ramps , a literal connection, are placed at the edge, making a terraced "3 dimensional" edge. The ramp design will allow for views into the building within.



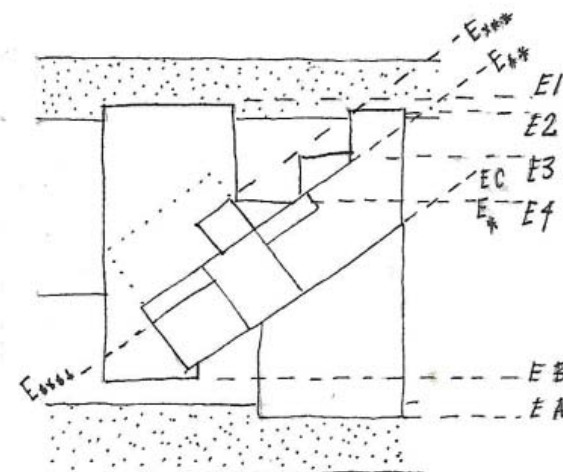
2. Consider the tactile and visual opacity, transparency, mass and reflectivity of boundaries:

Permeable boundaries , In-between space and metal mesh and glass will be used to create layered edges. that allow for as much visual connection as possible.

1st edge (E1), covered space, 2nd edge (E2) change in level, 3rd edge (E3) a colonnade, 4th edge a curtain wall made of metal mesh or glass.



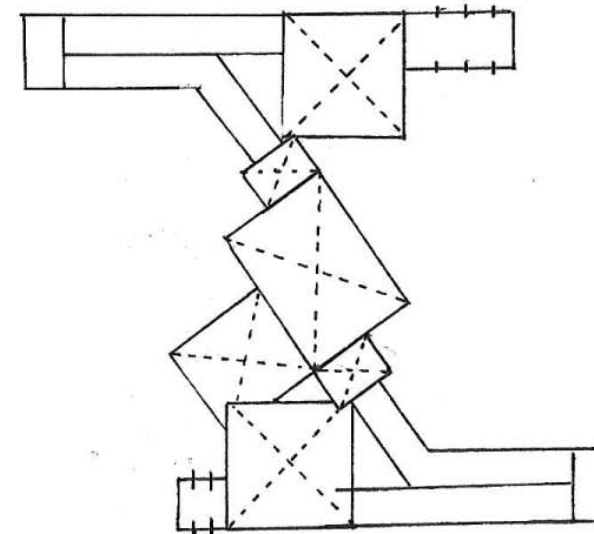
3. the Layering of processional formalities and minor boundaries: Using roof overhangs , the already existing loading bays, permeable edges and visually transparent surface's the design insures, when ever possible, layered and processionally ordered edges.



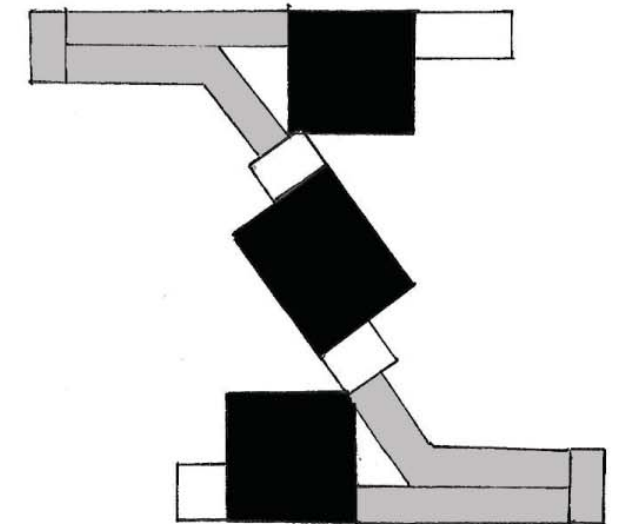
4. Building position relative to path setting a building back or forward:

The building edge pulls away and pushes towards it's relevant paths. The project use's several different edge vs. path positions to create varied degrees of connectivity/dis-connectivity at edge dictated by requirements of dis-connectivity or connectivity

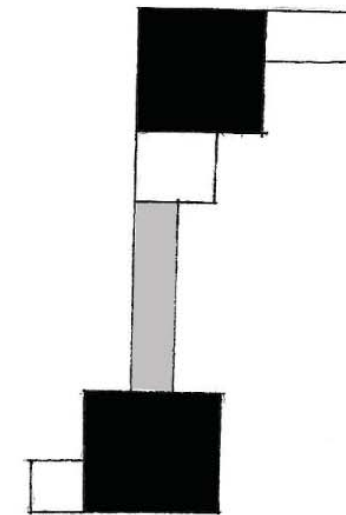
DEVELOPMENT OF CONNECTIVE IN-BETWEEN SPACES



1. In-between Space that is designed as a space in its own right: The design has many In-between space's which will all stand as space's in their own right.

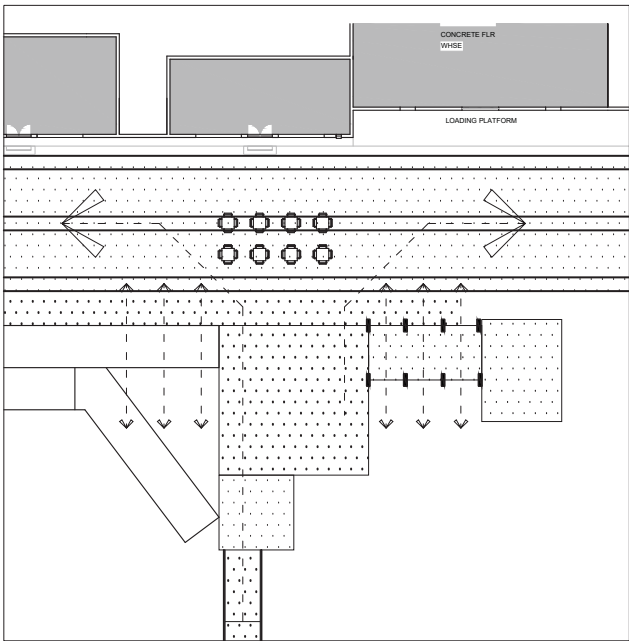


2. manipulating sensation to compliment connected spaces: the design uses cuboid in-between spaces which are juxtaposed with the elongated sidings, the event spaces and the circulation spaces. Constricted In-between spaces (depicted in white) will also juxtaposed with open In-between spaces (depicted in black) The juxtaposition of two spaces allows for both spaces to induce respite from the other, keeping the user interested and stimulated.

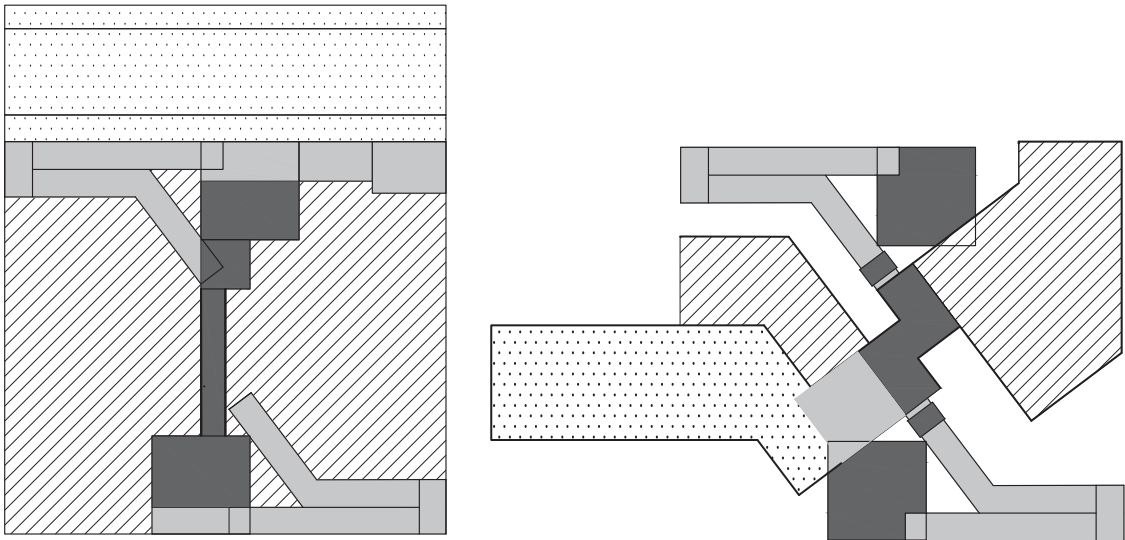


3. The use of In-between to control flow and ebb as a visitor moves through a building: the building uses gradient and constriction to slow movement down when desired. Examining the above diagram depicting the level central space at the top of the ramps : The spaces depicted in grey in the above diagram, are constricted or/and at a gradient and thus slow one down, which in this case, compliments the intentional views into the workshops, the white spaces are level, spacious and fast, encouraging flow. Which in this case encourages movement into the gallery.

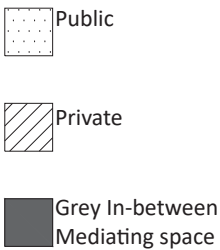
MEDIATING INTER-SPATIAL TENSIONS



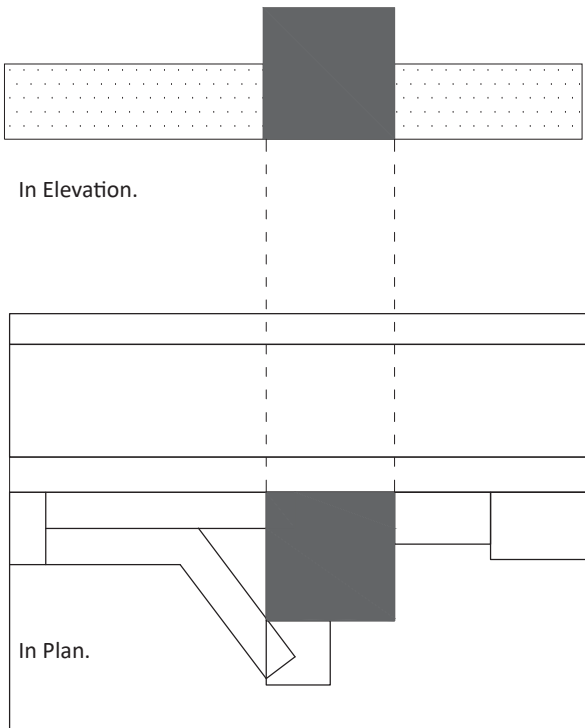
1.The design cultivates stewardship of public space's, by using In-between space ,like the entrance, which purposefully blurs the line between what is building and what is public space allowing the building to flow into the sidings and thus enabling passive surveillance and positive territorial-ism.



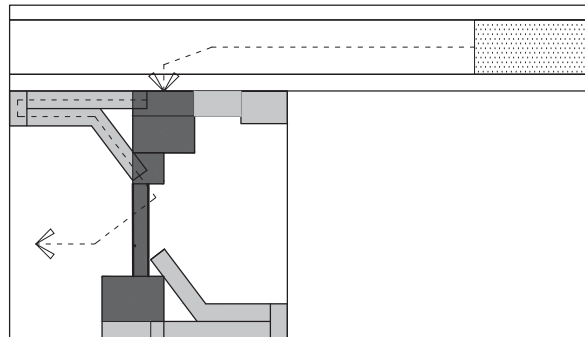
2.the design ensures gradual Transitioning from Private to public:
The dotted hatch is public space, diagonal hatch is private space and the grey spaces are In-between which help to gradually transition between the two.



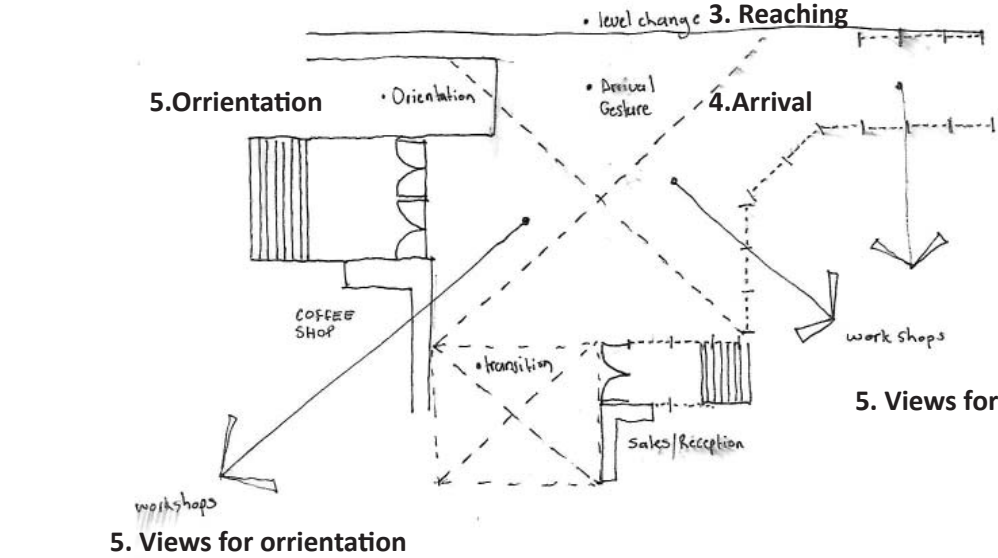
BUILDING ENTRANCE AS A WELL DESIGNED CONNECTION



1. Recognition



2.Approach



Using Bottegger phases of entrance (Bottegger, 2010)

1.Recognition: The design ensures a recognisable entrance by heightening its importance in the planning hierarchy. This shall be achieved by: placing the entrance roughly on the central axis of the elevation, giving the entrance a scale which distinguishes it and by using the clarity of a rigid cubic geometry to heighten its prominence.

2.Approach:The Railway siding and its pedestrianised linearity is very much part of the approach. At the entrance to the sidings a simple roof covering is placed to symbolise a transition and entrance, the building responds to the east west flow of the sidings in several ways most notably by placing the ramp entrance and it's subsequent flow parallel to the sidings.

3.Reaching: The Cubic Entrance space is a spacial gesture of arrival, which is juxtaposed and thus complimented by the approach.

4.Arrival As seen in edge treatment , the layering of soft edges such as covered out door In-between space is used to transition inside form outside.

5. Orientation: The use of a spatially prominent and clearly visible ramp makes the next step in the processional sequence highly obvious.

6. Security: The arrival space has by design high levels of visibility into the event spaces. This visibility was designed primarily for the interest of the visitor, but has an agreeable side effect , allowing for passive surveillance from the event spaces. The Arrival space is never locked but the spaces that feed off it can be disconnected from it ,if so required.

THRESHOLD ANALYSIS

Using Bottegger Threshold Analysis (Bottegger, 2010)

SPATIAL DEFINITION:

The most important Threshold in the building is the ramp. It is a passage, a metaphorical mine shaft and generates the entrances at both the ground floor and first floor levels. The ramp creates a direct connection with the North Sidings by creating a parallel connection which continues on to connect to GwiGwi Mrwebi street.

The ramp space is defined by its structural supports and rails which ,importantly allow for views into the rest of the forge.

The ramps lead one into a level platform “foyer”which offers views into the workshops and gallery.

The level platform represents the spatial centre of the building, intended to be a “panopticonal” space. The space is defined by two transition spaces at the apex of each ramp (which are constricted space’s).A glass roof delineates the ceiling of the enclosure , creating an expansive space , which is juxtaposed with the aforementioned constricted transition spaces.

SEQUENCE

The ramp feeds of the siding , it is highly visible and prominent , crucially, the pre-set route ensures that the user gets time , space and vantage points to experience the building. The various spatial entities that compose the building can be walked around and thus become apparent.

Spatial Structure

The ramp forms an axis of loose symmetry. The ramp space is self contained and cuts through the building much like a mine shaft.

The cube like In-between spaces punctuate the thresholds and signify , through a shared commonality, spaces of transition.

The constricted spaces at the apex of the ramp have the same cubic shape as the central level landing (being roughly 1/4 of the size) which creates a logical geometrical language and sequence.

Spatial Situation

The threshold space differentiate’ s its self from its surrounding by having a diagonal thrust. The diagonal tilt is also a gesture of connection making the building more responsive and visually connected to the siding and Highway.

The ramp helps one become immersed within the building like drawing a metaphor for mineshaft.

the space is envisioned to be exceptional in it surroundings being intended to be as much architecture as topography in a orthogonal , ordered relatively flat site.

MATERIALITY

The materials will be in accordance with the rest of the building ,consideration of reflectivity and degrees of transparency play a major role in the choice of materiality and the material tectonics of the space.

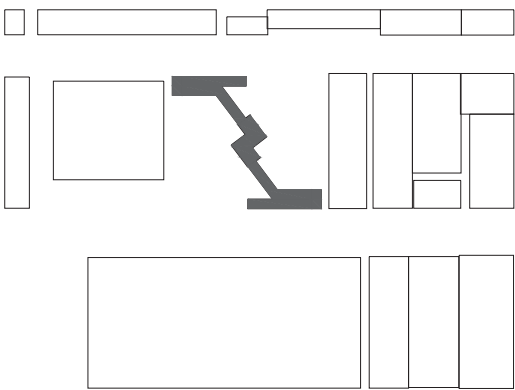


Diagram of ramps as a pivotal spatial definition

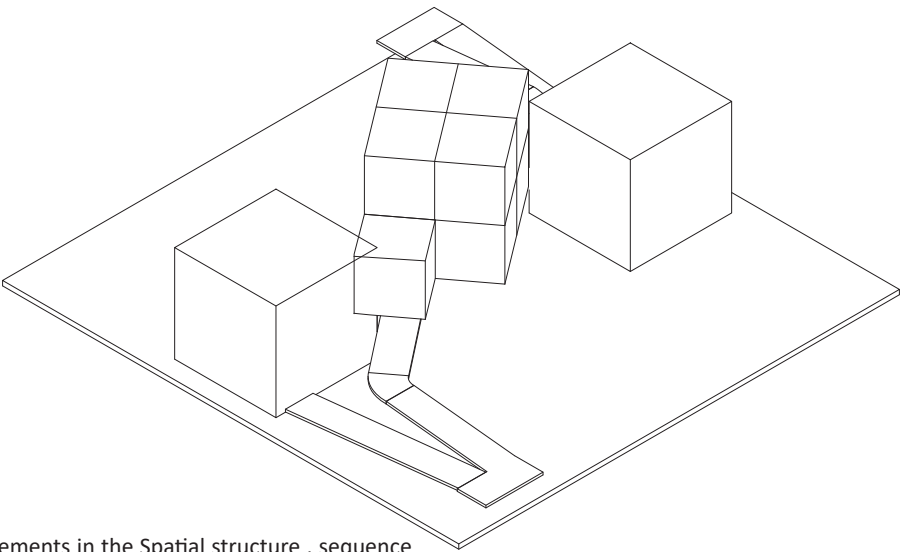


Diagram of key elements in the Spatial structure , sequence and situation-note the cubic in-between spaces.

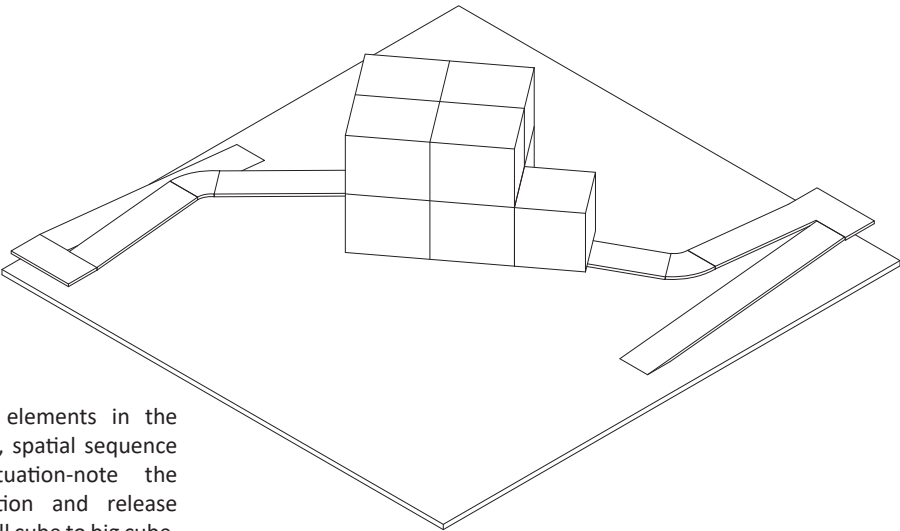


Diagram of key elements in the Spatial structure , spatial sequence and spatial situation-note the gradual constriction and release from ramp to small cube to big cube.

CONNECTIONS TO CULTURE.

EMULATING THE “WHY” RATHER THEN THE HOW

The best example of emulating the why rather than the how , in this project ,is the use of the concept of a protected central social space.

The spatial complexities that exist regarding “the connection and the disconnection” in a defended central social space was brought to the attention of the author of this discourse during the Case study of traditional rural Southern African space’s pre 1925.

This spatial device has a pleasing connection to some of the architectural heritage of its greater context.

However it was the interesting dialogue that this type of space prompted that was seen as interesting and valuable , thus the connection was made for these reasons rather than nostalgic sentimentality .

The centrality of such a space makes it highly connected but also highly protected (a dis-connection) , as its surrounding spaces sit in-between it and the public realm , much like a rib cage would around a heart.

The social nature of the space also makes it connective. However this is juxtaposed against the dis-connection made from the social decorums associated with entrance and the act of moving into the spatial centre of a building.

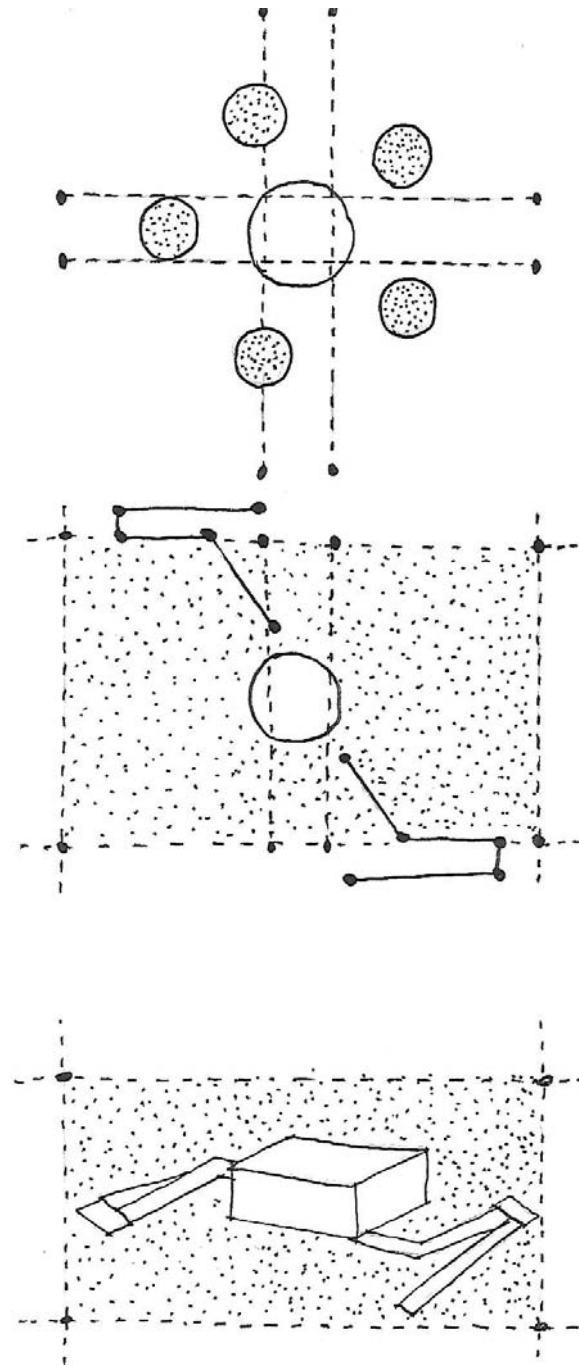
Thus , at times such a space can obtain a “best of both’ scenario, where it exhibits the wanted qualities and mediates the unwanted qualities of connected and disconnected space.

THE INTELLECTUAL CENTRE OF THE DESIGN

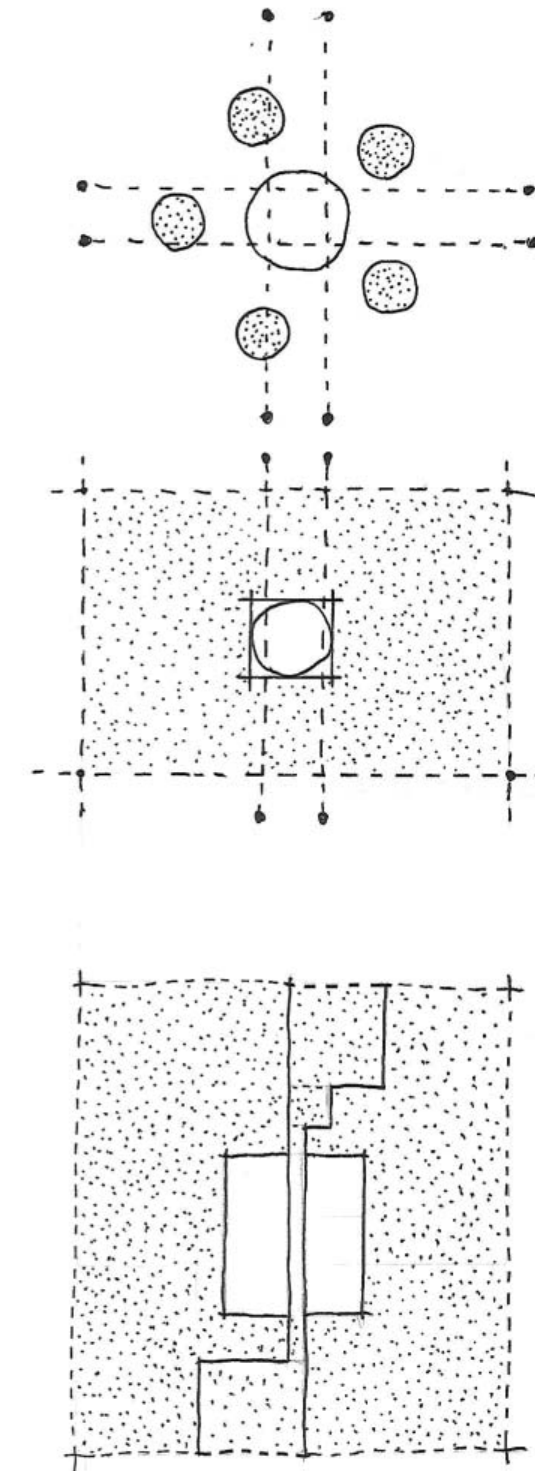
Contextual connection is at the centre of this design, It is believed that through connection the architecture can achieve its civil, social and ethical duties.

The consideration of connection and dis-connection can provide better, more responsive more humane more comfortable and more universally useful architecture.

Furthermore, the provision of accessible amenity And educational stimulation, which is provided through connecting people to the often vague but crucial processes of production, all contributes to the required response to civil, social and ethical duties that all buildings should attempt to have.

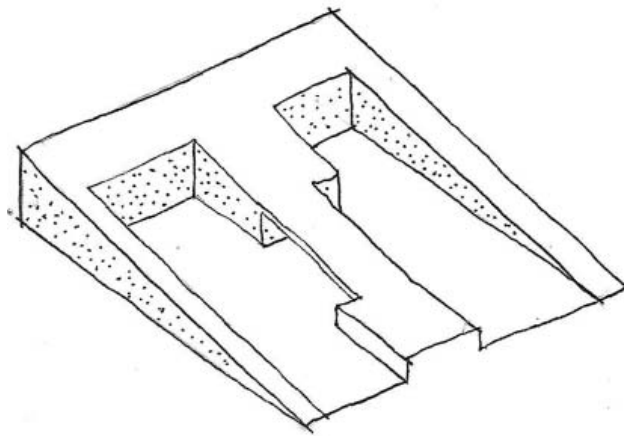


Central social space at the landing of the ramps

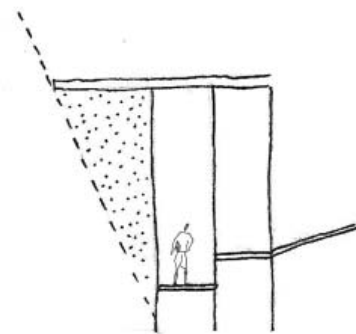


Central social space on the Ground floor

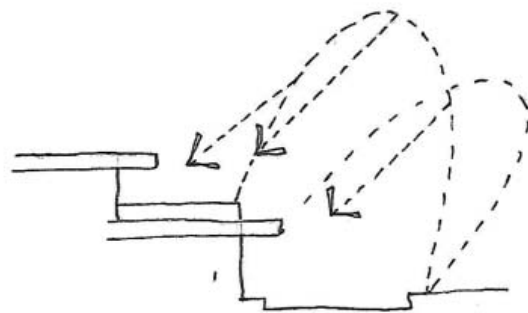
RESPONSE TO NATURAL CONTEXT.



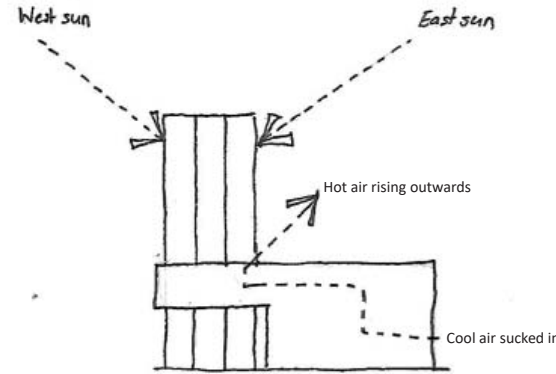
Topography: The design is intended to work with the topography using it to create high ceiling heights but maintaining, through the central passage its form and memory.



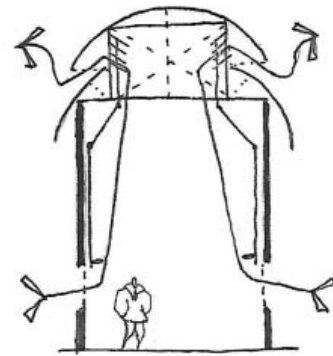
wide eaves will be used not only to keep the building cool but also to provide cover for those inhabiting the building edge.



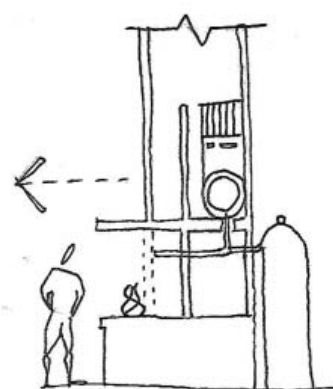
The building has been specifically designed to have a prominent northward orientation



The Grain silo's due to their thermal mass and scale will become hot spots (trombe masses). By connecting ventilation routes between the building and the silo's passive ventilation and air flow can be encouraged. In winter the ventilation routes can be shut, and the trombe silos can heat the building.



The workshops will have adjustable, roof based, ventilation louvres which people can open, close or adjust to their requirements.



The heat that the forges produce will be transferred into electricity through steam power generation. Helping to power the building and its surroundings

DESIGN CONCEPTS

CONCEPT: CONNECTION THROUGH MATERIALITY

The building will feature the red-brown face brick that is common in the greater area.

This is because face bricks are hardy and robust and can withstand the hard impacts and wear that is inevitable in a workshop environment.

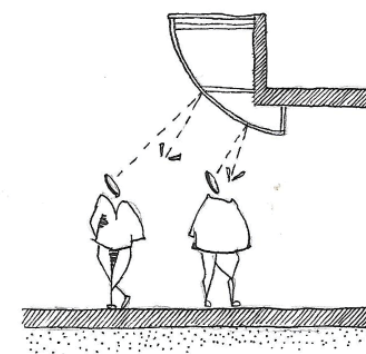
Furthermore, a face brick finish will establish an aesthetic contextual connection as well as a historical contextual connection as Newtown used to be the location of a Major Brickworks.

The building will also utilize metal when possible to connect to its function, as a metal craft school.

This discourse strives to create a design that explores and utilizes the potential of metal as a material.

What this discourse finds particularly pertinent about metal as a material is that after it is processed into its various finished forms, metal products can become a powerful tool in the design of edges and thresholds.

Be it in the form of a woven mesh where it can become a hard yet transparent edge, or be it in the form of polished sheets where through the materials reflective nature it can not only make a literal visual connection, but also become a threshold, through reflection, making one aware of one's presence in a space and thus naturally leading one to question one's permission to be in or move through that space.



CONCEPT: A LITERAL CONTEXTUAL CONNECTION.

The most important literal contextual connection made in this design is the connection between the building and the grain silo.

The design will fittingly use a steel structure to connect the facility with the silo's, the space that exists within this structure will be the exhibition gallery.

Importantly, the connection is made on the south west end of The Grain Silo's (the least desirable corner in terms of orientation to sun). So that the silo's might be developed into something else in the future.

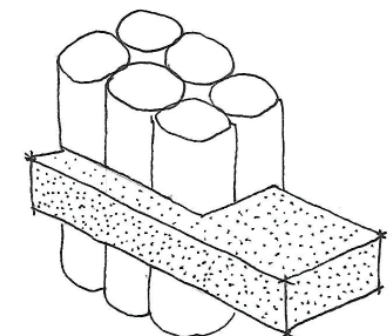
This connection physically ties the building to the site and its industrial heritage.

As the final part of the main processional ascension the silo/gallery space is intended to be exceptionally grand and dare I say spiritual, with the great tubes enticing the user to look up at the heavens.

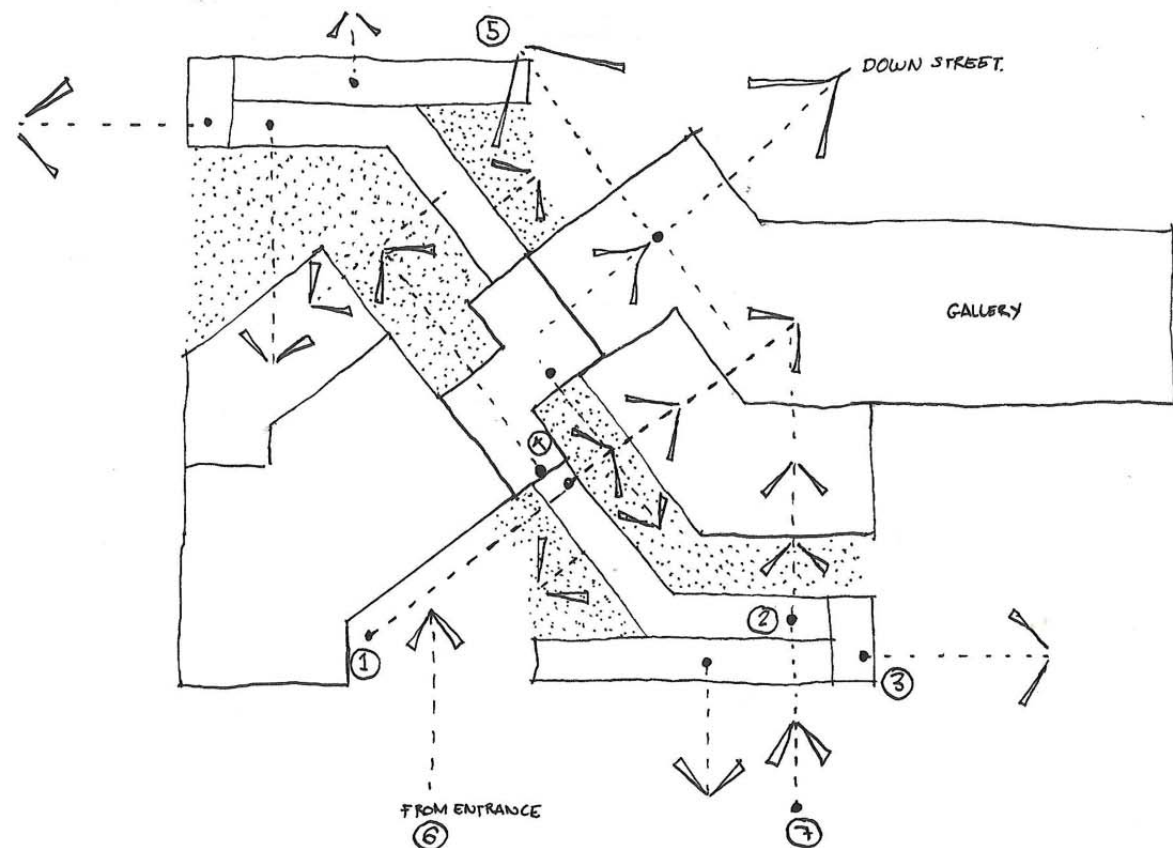
It was Aldo Rossi who said that "grain silo's are the cathedrals of our time" (Mahar-Keplinger, 1993 Pg. 7).

This connects the final stage of the processional ascension with the ascension to enlightenment.

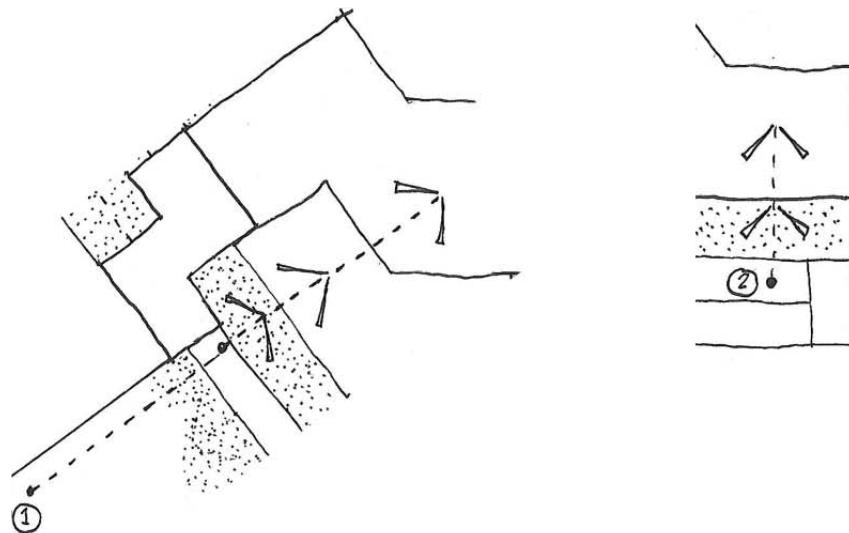
It also likens the ability to create metal objects with the abilities of creation some believe deities possess. A reasonable concept, especially when one considers robotics and artificial intelligence.



CONCEPT: VISUAL CONNECTIONS

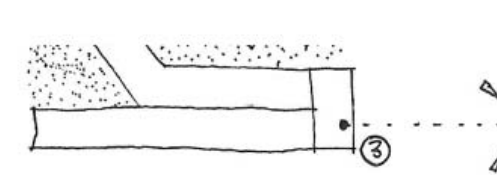
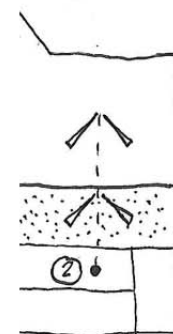


Master diagram 1, of 1st floor : The Building is designed so that the user can establish visual connections with important elements in both the spatial experience of the building, and the processes involved in the metallic crafts. Each dashed line accompanied by a pointing arrow indicates an intentionally designed view.

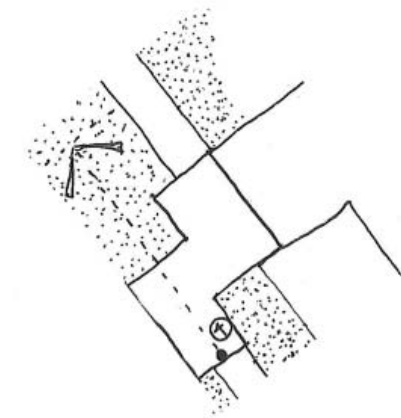


View 1 -see Master diagram 1 for reference: from the entrance one is given a view of the ramp, and the gallery, indicative of the processional sequence

View 2 -see Master diagram 1 for reference: as one ascends the ramps one is slowly engulfed into the belly of the building, throughout this process one is given views across into the first floor studio and downwards into the ground floor workshops

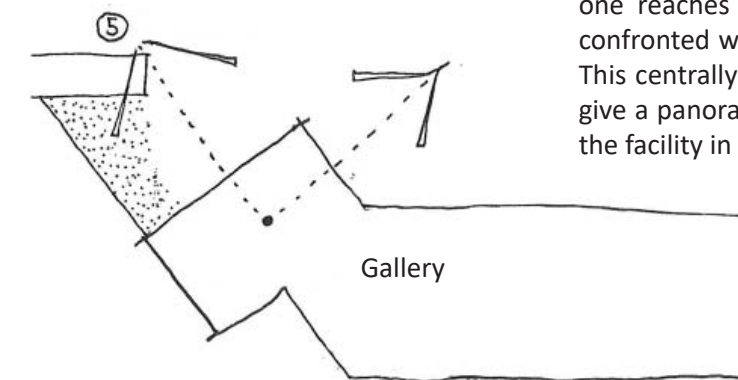


View 3 -see Master diagram 1 for reference: as one reaches the "dog leg" of the ramp one is given a view down the North Railway Siding establishing an important connection between siding and building

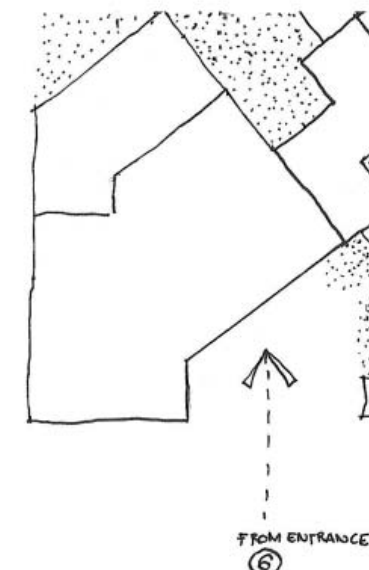


View 4 -see Master diagram 1 for reference: as one reaches the level apex of the ramp one is confronted with a view down into the workshops. This centrally placed level landing is intended to give a panoramic view serving as viewing deck for the facility in its entirety.

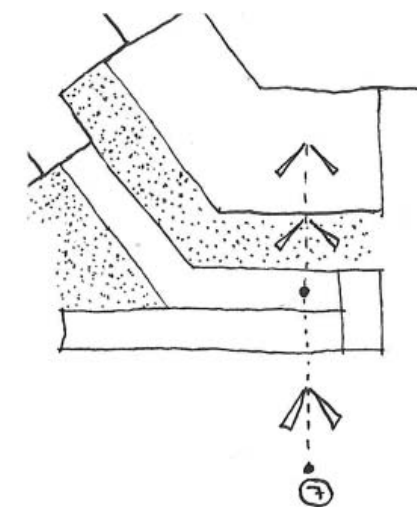
Highway



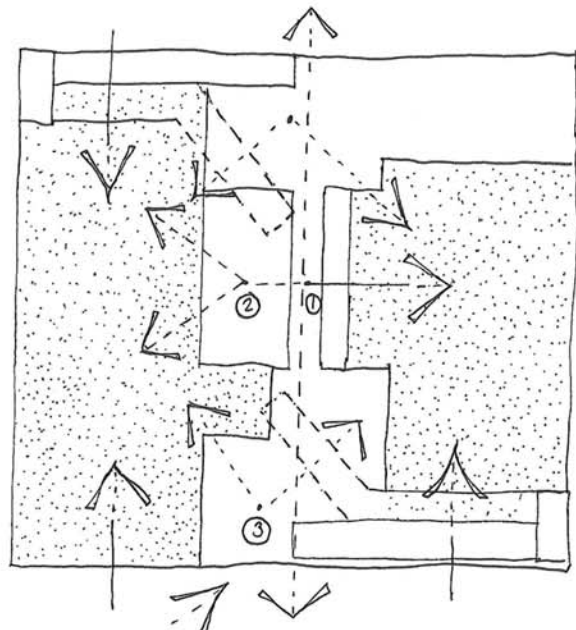
View 5 -see Master diagram 1 for reference: the gallery contorts in response to the high-way and sidings offering views into its depth to those heading northwards along De villiers graaff motor way



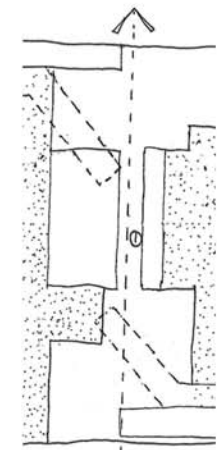
View 6 -see Master diagram 1 for reference: from the Old north Railway sidings one is given views into the ground floor workshops.



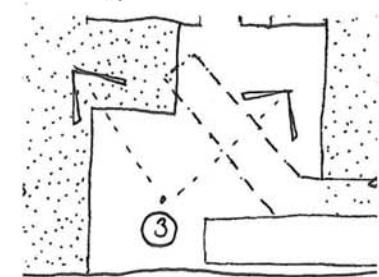
View 6 -see Master diagram 1 for reference: from the Old north Railway sidings one is given views into the ground floor workshops.



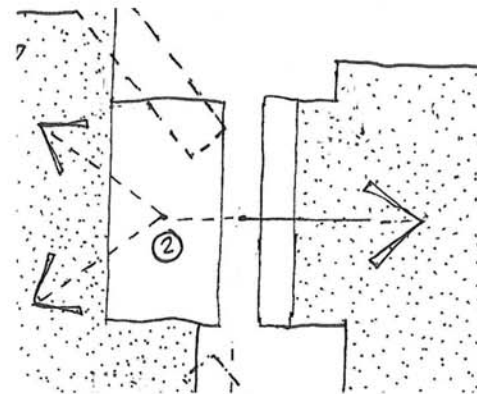
Master Diagram 2, of ground floor plan:
The Building is designed so that the user can establish visual connections with important elements in both the spatial experience of the building, and the processes involved in the metallic crafts. Each dashed line accompanied by a pointing arrow indicates an intentionally design view.



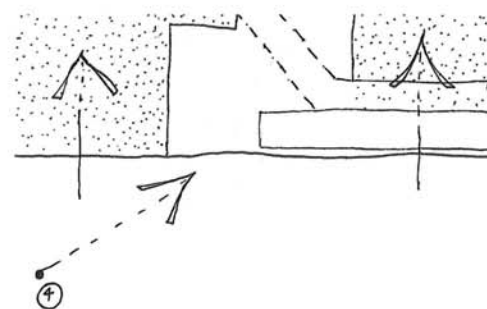
View 1-see master Diagram 2:
A View through the building connecting the Old north sidings to GwiGwi Mrwebi street.



View 3-see master Diagram 2:
the entrance has visual connection into the workshops

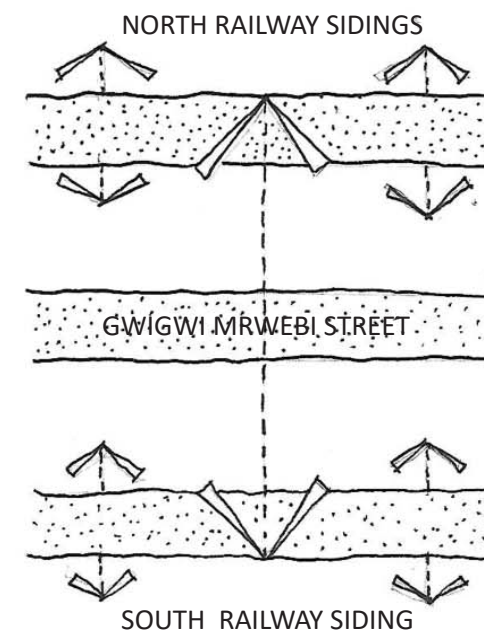


View 2-see master Diagram 2:
visual connection between the auditorium space and the workshops connecting the theoretical with the practical

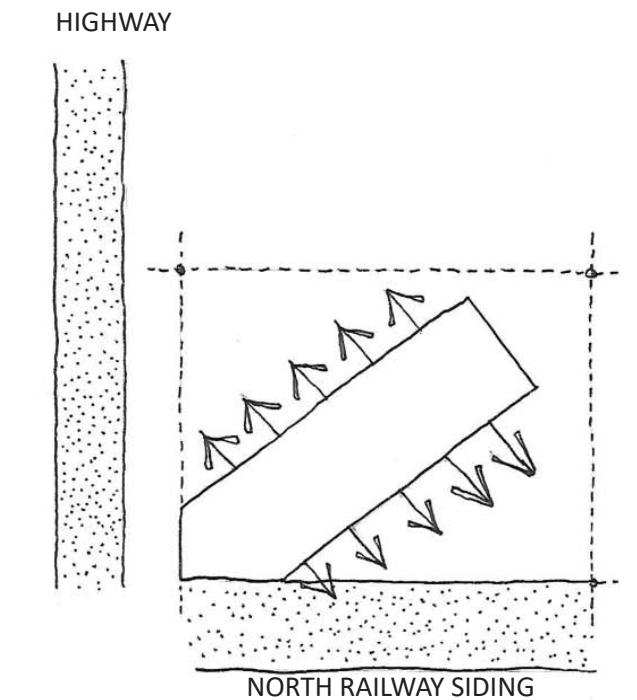
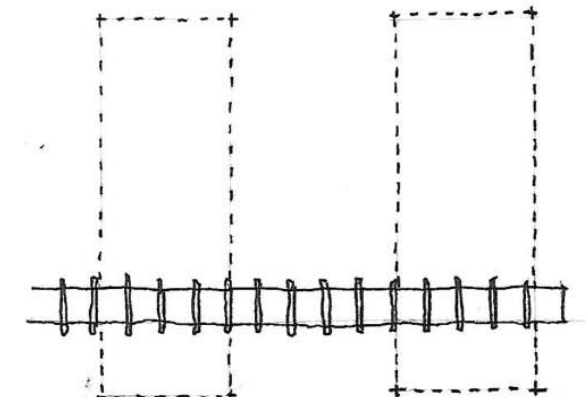
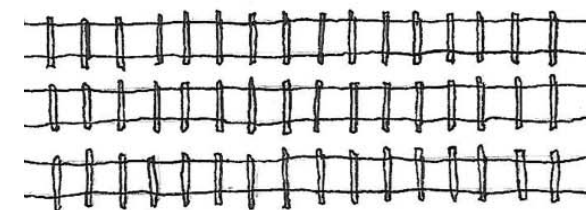


View 4 see master Diagram 2:
visual connection to facility from the old north sidings

CONCEPT: CONNECTION TO PATHWAYS



The building is intended to become an integral part of a new connection between the Old North Railway Siding and the Old South Railway siding



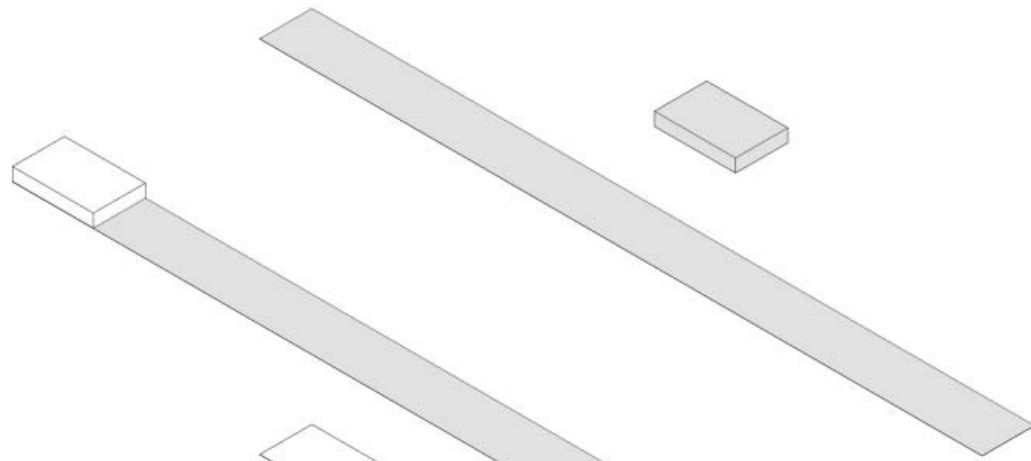
By rotating the building, the building creates a visual connection to the highway and down the length of the Old North Railway Siding. Additionally the contorting structure aids in the processional sequence creating a dynamism that encourages movement up the similarly contorting ramps. Furthermore, by pulling the structure away from the edge one creates a three dimensional edge, which appears to the person on the street to be at a similar scale to the rest of the buildings along the siding, despite being slightly taller in nature.

The linear west-east direction of the tracks that can still be seen on certain parts of the old disused railway sidings is mimicked by a track and girder system within the building used to move heavy metal objects into and from the workshops, connecting to the railway sidings, past and present.

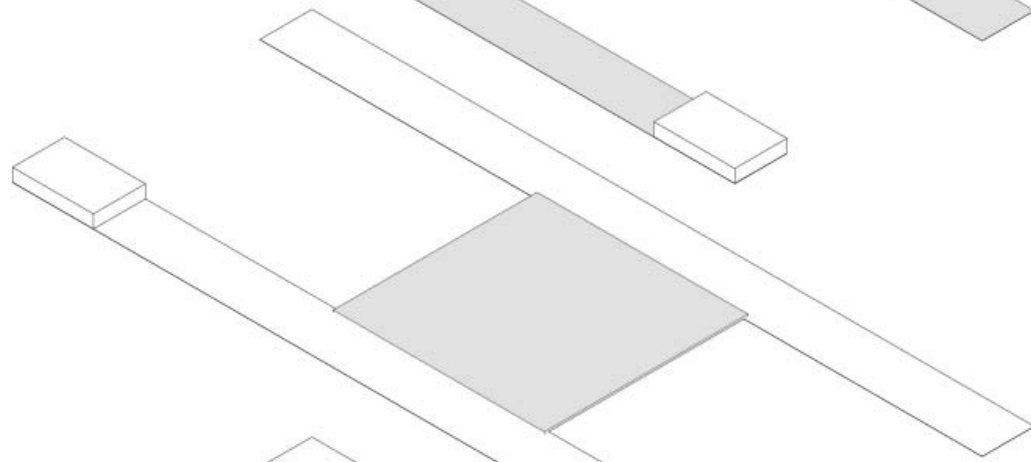
1



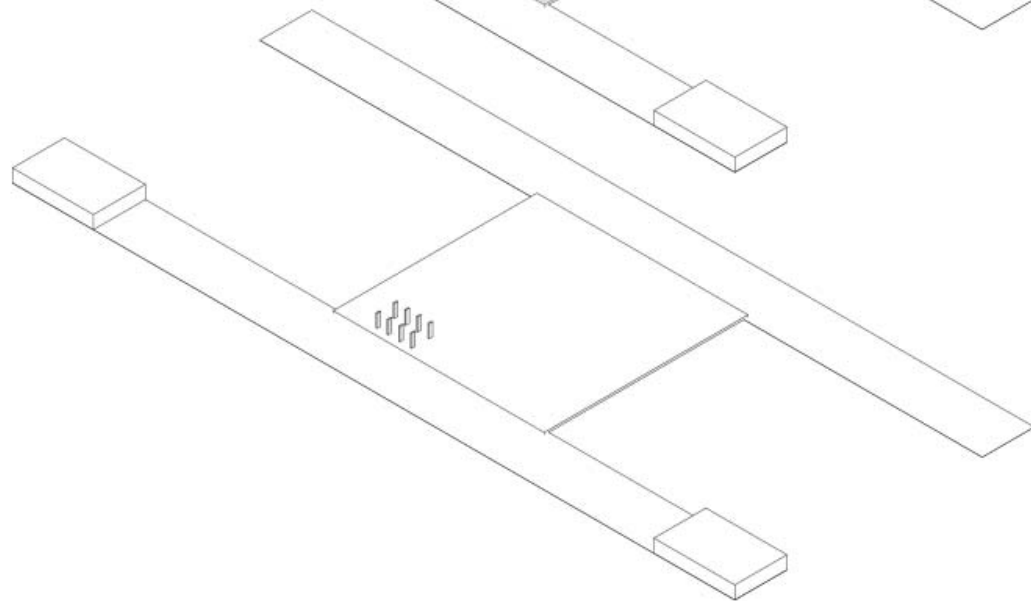
2



3



4



CONCEPT: CONNECTED PROCESSIONAL SEQUENCE

The most important processional order in this building is the procession from the street into the facilities grand exhibition space.

Starting on Henry Nxumalo sStreet coming from the Newtown Taxi Rank heading westwards.

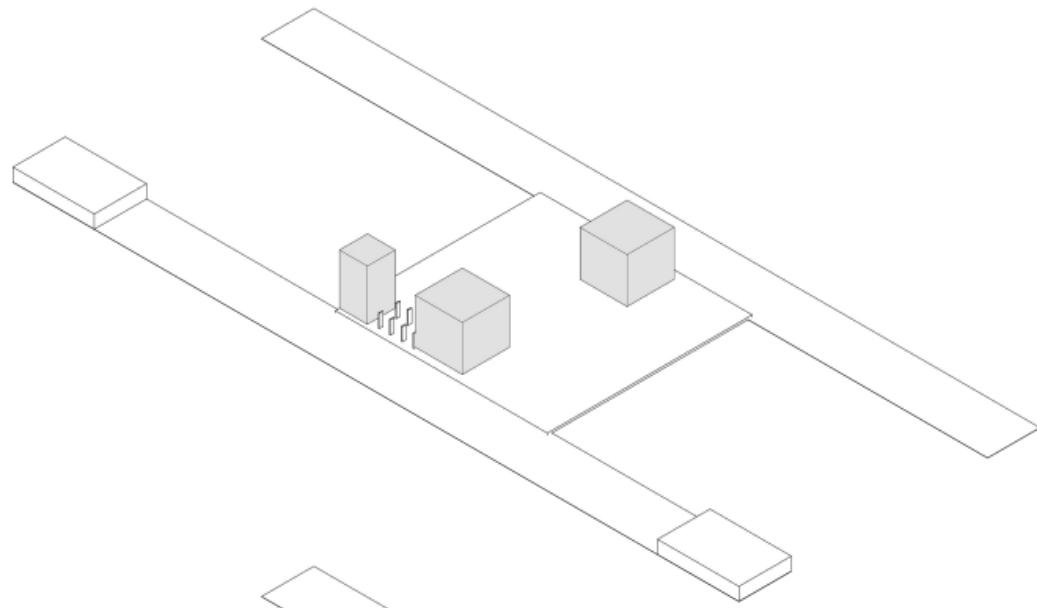
1. Covered entrance: At the corner of Quinn street and the North Siding ,west of the site, is an existing covered section of the North siding. This covered section was built so that the goods and produce could be off loaded in dry conditions regardless of the weather. Today the covered section serves as an unintentional yet pleasing threshold between street and siding ,this threshold holds the siding space , transitioning it from the street and adding value and charm . This covering is to be duplicated at the East entrance to the North siding off Henry Nxumalo street. It shall be a simple lightweight economical well-designed roof structure that will help to define the siding by indicating spatial change and entrance.

2.The Railway sidings: The old railway siding with unintentionally ergonomic loading bays along its sides that serve as seating and the buildings that sit along the sidings edges are very much intended to be part of the processional spatial experience. By incorporating this element into the sequence ,the user is able observe the charm and vibrancy of the sidings, improving the overall experience of the facility . Furthermore it serves as a non-head on approach to the building.

3. The raised platform: The raised platform is a continuation of the loading bays ,this platform adds to the amount of seating options on the sidings, making the sidings a more sociable and comfortable public space. Furthermore, the raised platform serves as the first element in the transition from public to private and is indicative of the start of the building entrance. Furthermore, it slows the flow of movement down offering a brief pause before engulfment.

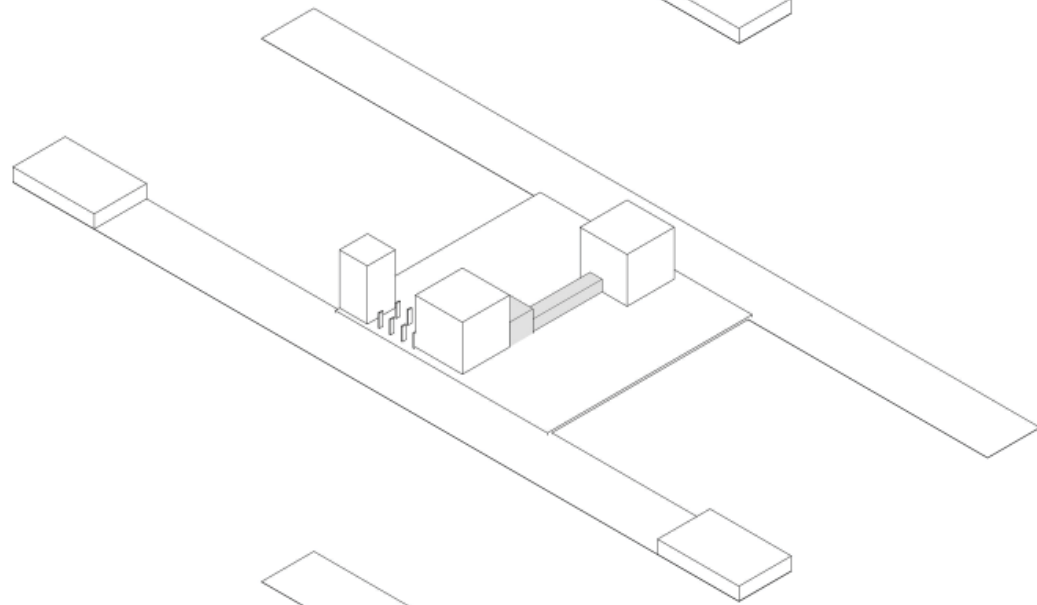
4. Permeable layers of soft edges: multiple layers of soft permeable edge and “Space In-between” allow for a gentle separation and transition form public to private.

5



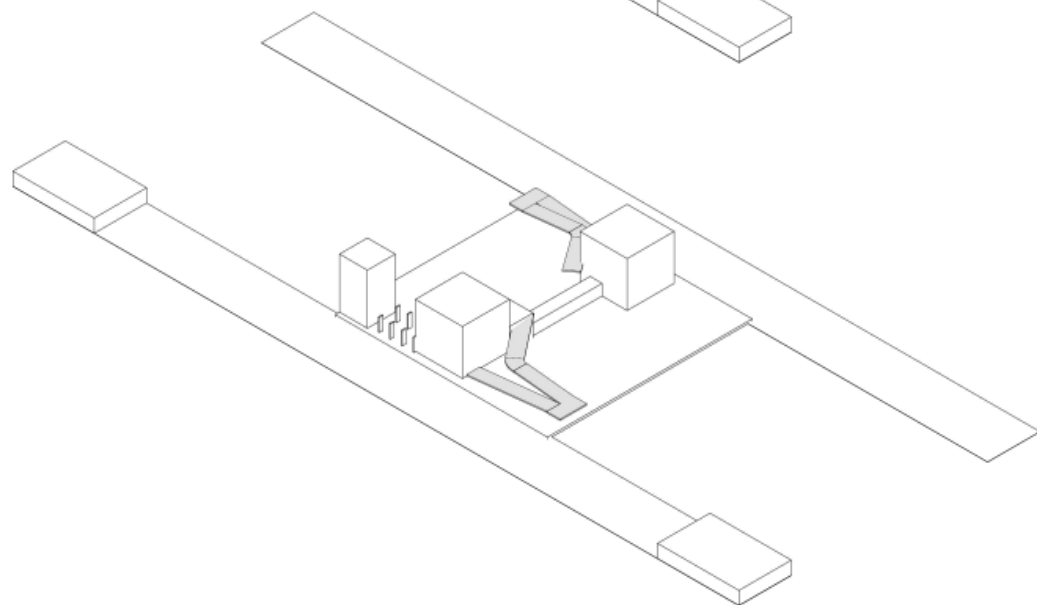
5. The buildings entrance space: the entrance foyer is intended to be a generous gesture of arrival. It is loosely cubic in spatial shape which, in the language of this building, signifies spaces of transition. The entrance foyer is highly visually connected to the rest of the building and the rest of the processional sequence.

6



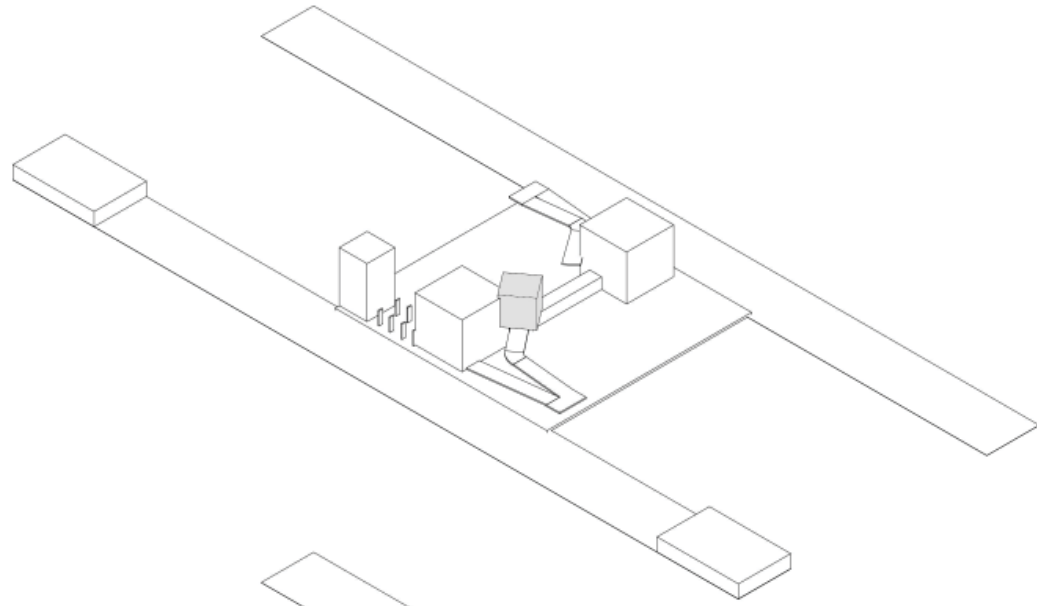
6. The bridge through the workshops: One might attend a post exhibition lecture or wish to further examine the workshops, to do this one would head into an In-between space , cubic in shape indicative of transition and then onto a bridge, a literal connective element, which spans over the auditorium space and is part of the route which connects the North siding to GwiGwi Mrwebi street and eventually the South siding. From the bridge heading south one enters another cubic grand entrance foyer (servicing those coming from Gwigwi Mrwebi street) which is also the spill out space for the auditorium.

7



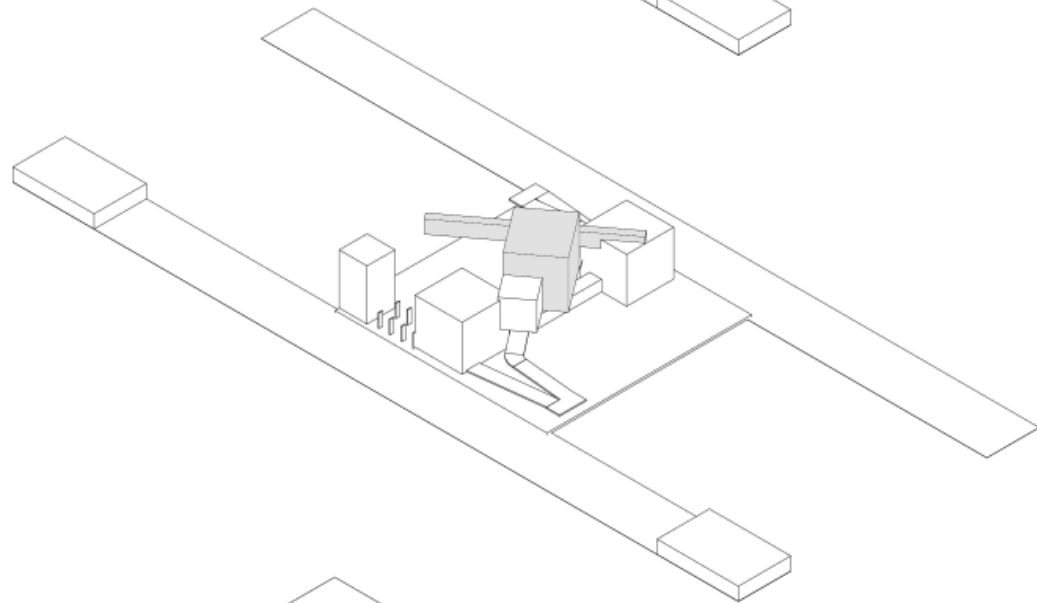
7 The ascending ramps: the ramp , a metaphorical mine shaft, elevates one into the heart of the building. Its initial flow and direction is parallel to the direction of the sidings and so responds to the flow of westward movement. The ramp is visually prominent , and loudly encourages one to climb it. As one moves up the pre-set route of the ramp one is made to experience, and observe the nature of the site and the buildings design, giving one a greater contextual understanding. The ramp is the most important threshold in the building.

8



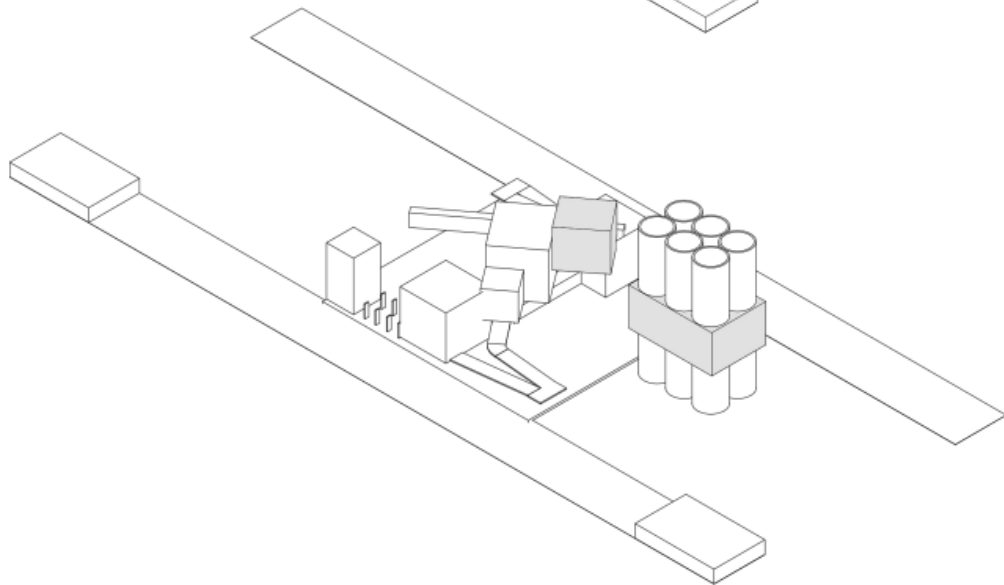
8. Spatial constriction: At the apex of the ramp a cubic space constricts around the user, slowing one down. The space is an in-between space, allowing for a gradual transition. It offers the user a state of impending suspension before the next event.

9



9. The spatial centre: This cubic In-between space is very much the social centre of the building. It has panoramic views into the facility and serves as a spill out space for the gallery. It is a burst of speed, openness and freedom after the slow and pre-set route of the ramp and spatial constriction.

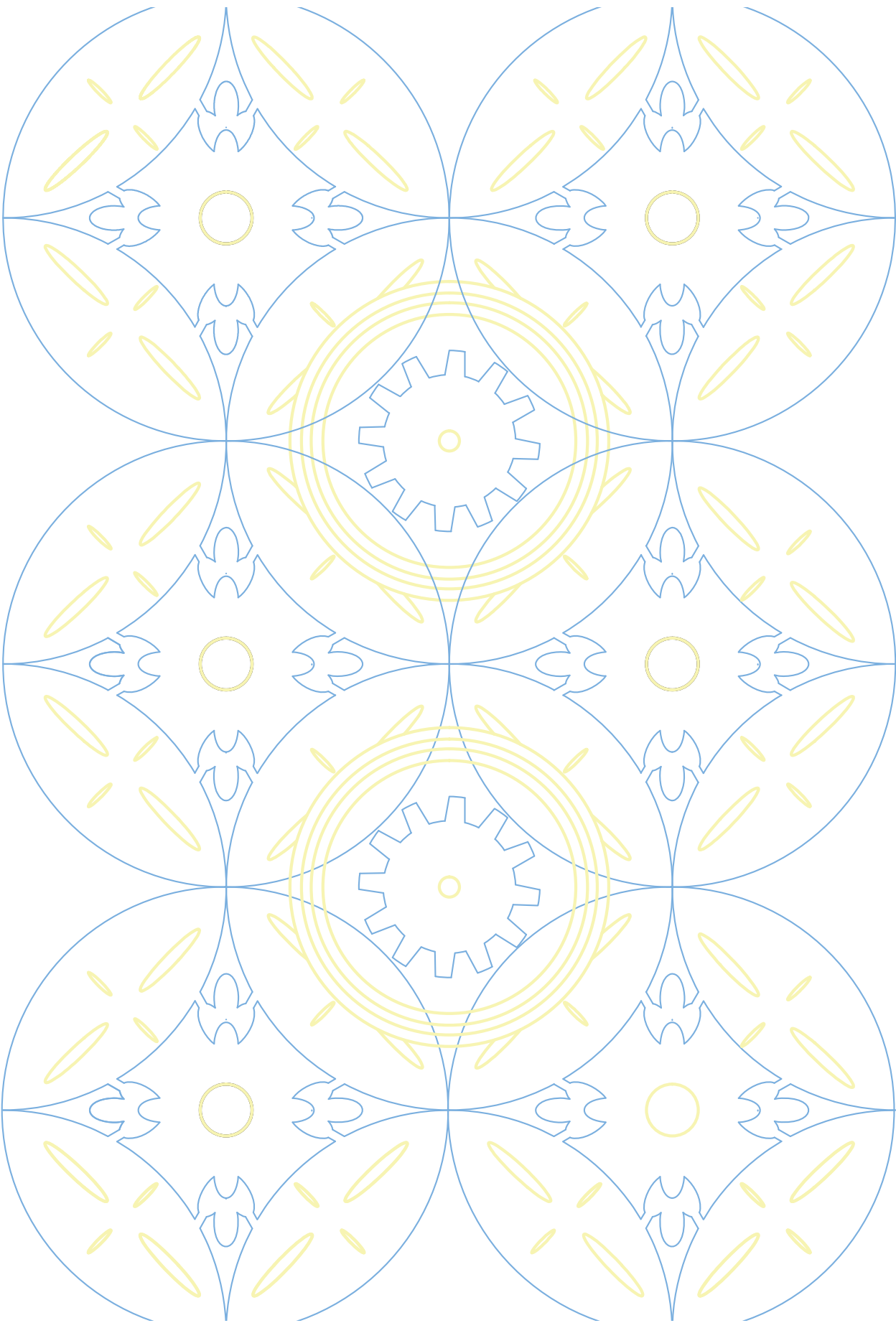
10



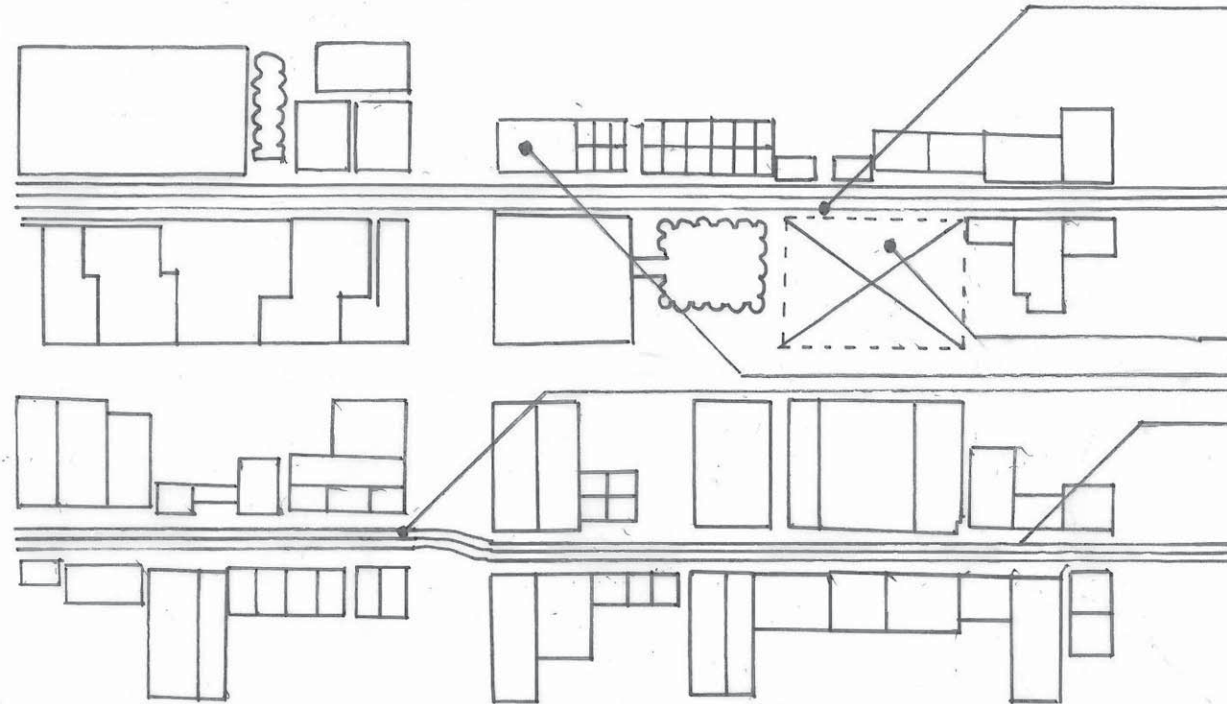
10. The gallery entrance and gallery: The gallery entrance shares the cubic D.N.A of the other transition spaces that came before it. The space is large and open, like the foyer that it connects to. The similar generosity of space and ease of movement that the foyer and the gallery entrance share, encourages flow from one to the other, sucking the user in. The spatial sequence terminates and is reset as one enters the grain silo's, which are intended to be an awe inspiring grand finale to the composition.

DESIGN REACTION

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MASTER PLANNING



Goal 4 - Provision of park. Connecting to people, design the sidings to become better social and public spaces.

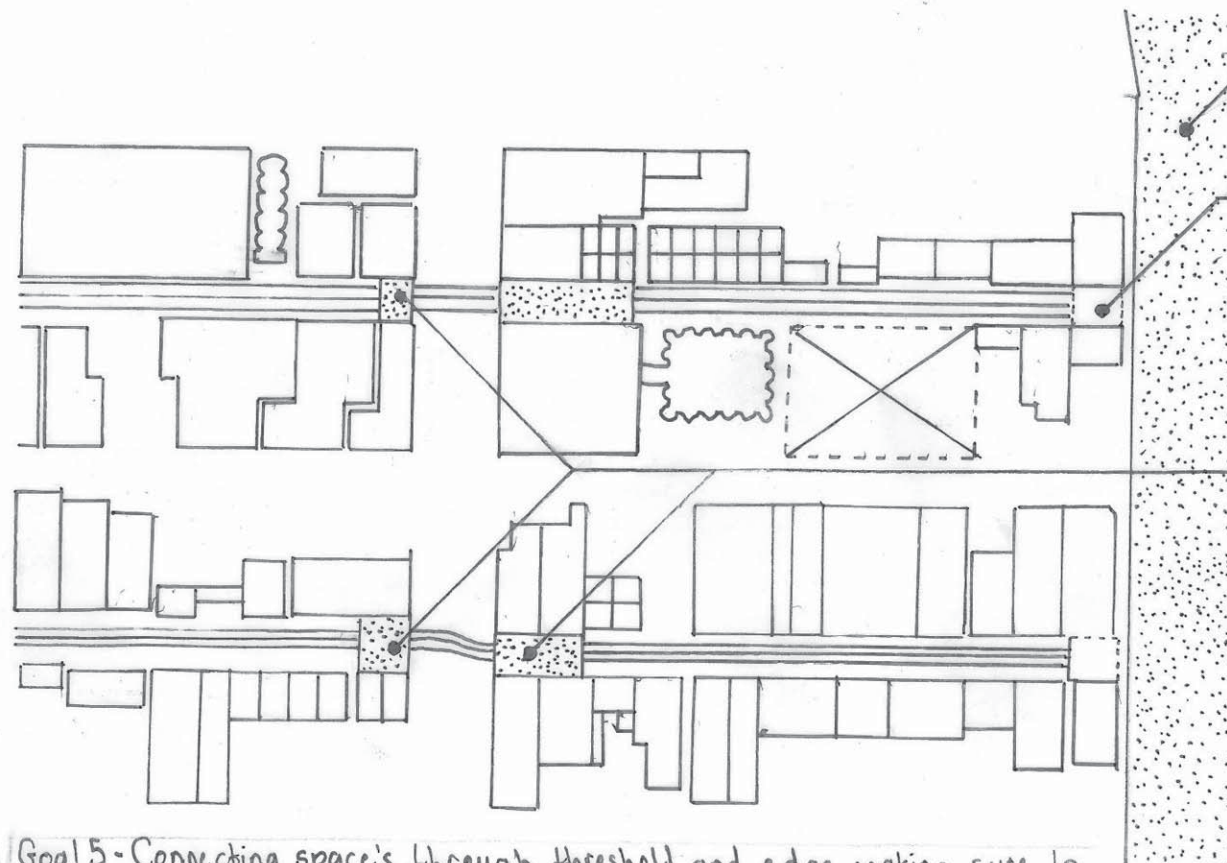
Intervention 5: The retention of the old elevated loading bays as seating and the expansion of seating options along the sidings

Intervention 6: The provision of food and a coffee shop

Intervention 7: The retention of the thriving night-life.

Intervention 8: Removal of illegal access control into public sidings

Intervention 8: installation of street lighting to increase safety and visibility.



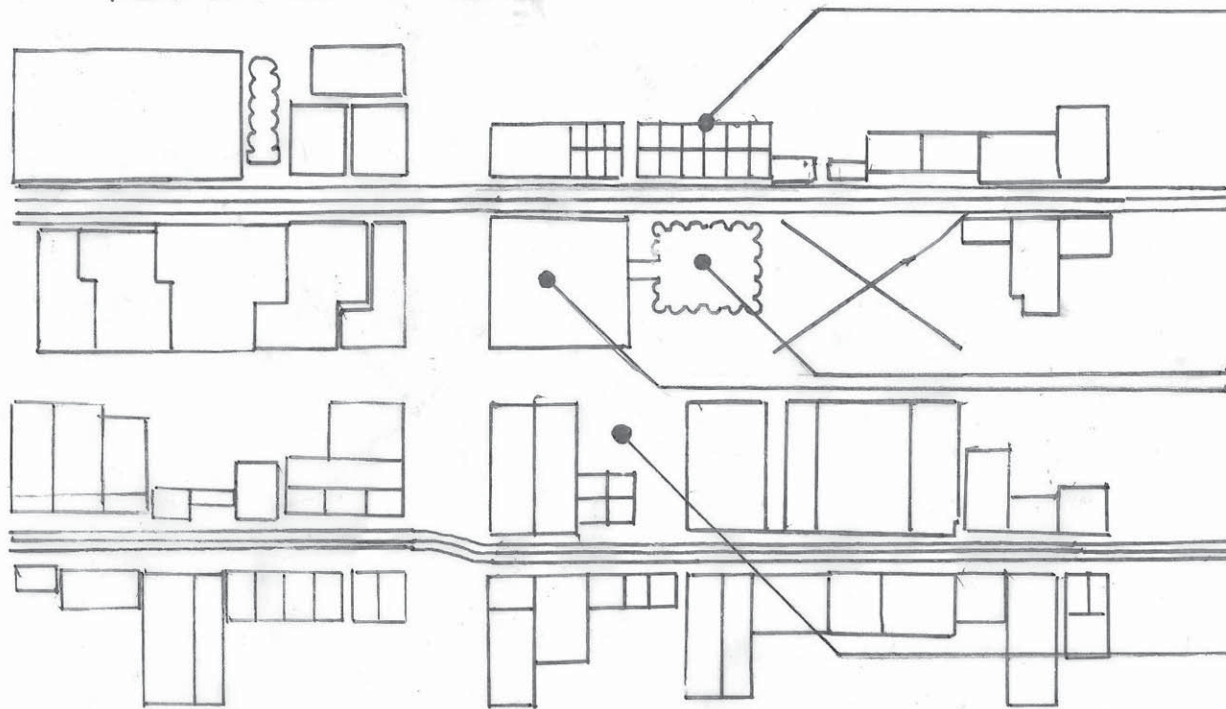
Goal 5 - Connecting space's, through threshold and edge making sure to delineate sidings space.

High-way creates a covered threshold which helps to hold the site as an unique, separate entity

Intervention 10: a subtle change in material in the paving, to assist in the transition into the site. By differentiating the site from its context one creates a connected edge.

Intervention 11: Building simple Roof coverings over the entrances to the sidings of quinn street to emphasise the entrance, and hold the siding spaces

MASTER PLANNING



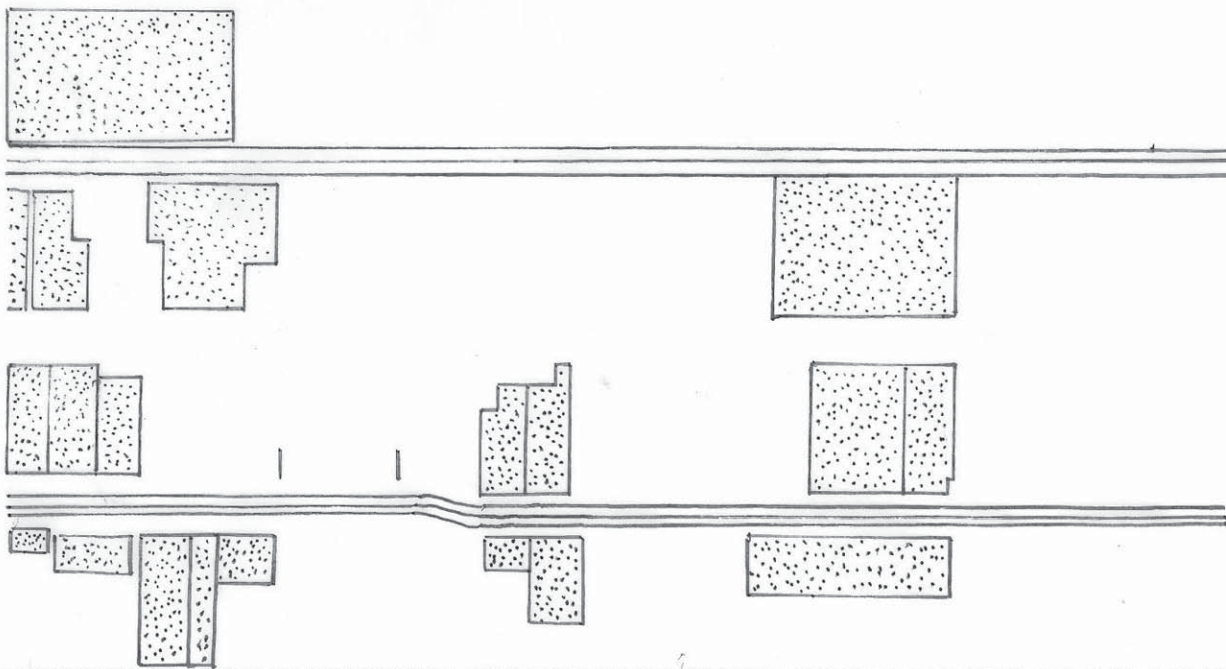
Intervention 1: The strategic partitioning of spaces to ensure a "fine mosaic" of different spaces, the creation of smaller spaces is as important as retaining some of the bigger spaces. The additional spaces will require more doors and windows and thus create a permeated and connected edge.

Intervention 2: Possible re-purposing of the grain silos into residences.

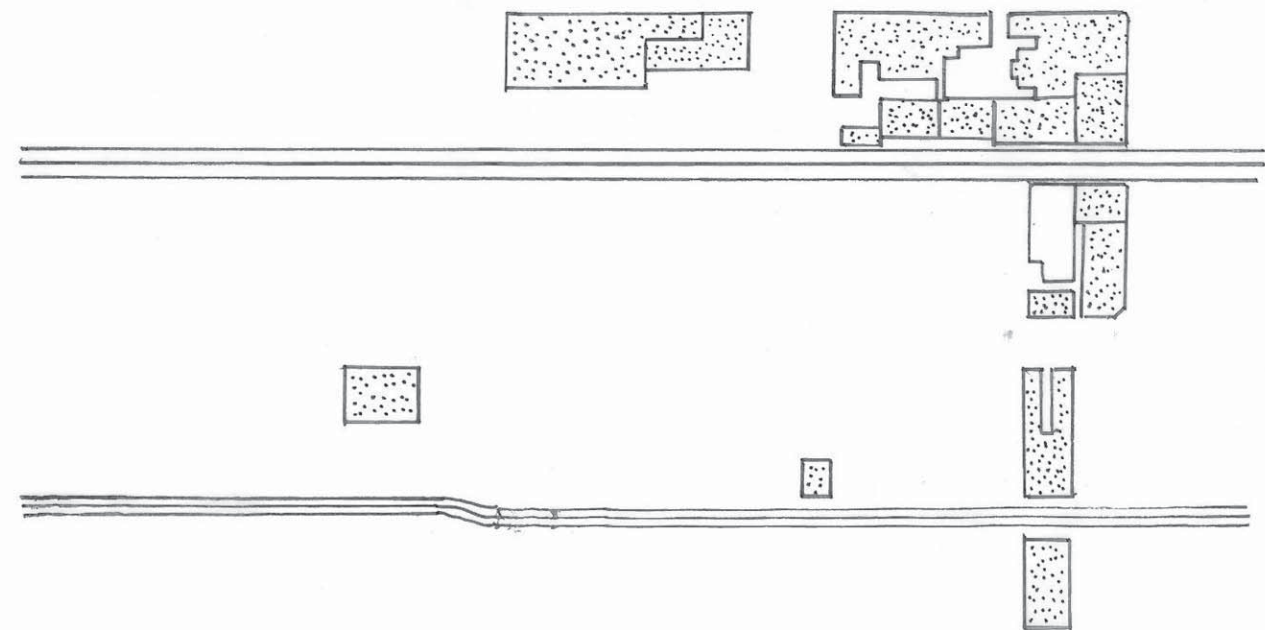
Intervention 3: Refurbishment of the decrepit building at the corner of Quinn street and the north siding (see photo analysis) to become a residential apartment Block.

Intervention 4: The provision of parking to attract visitors. And to alleviate the parking load on the siding edge

Goal 1- Invigorate the edges of the sidings - through regeneration and repurposing of the spaces along the edge of the sidings, without detracting from the character of the site. Invigoration also includes increasing the inhabitants and visitors within and to the site.



Goal 2- Retain the industrial character and industrial heritage of the area, the hatched areas are currently accommodating light industry, in the master planning this industry will be retained and prioritised.



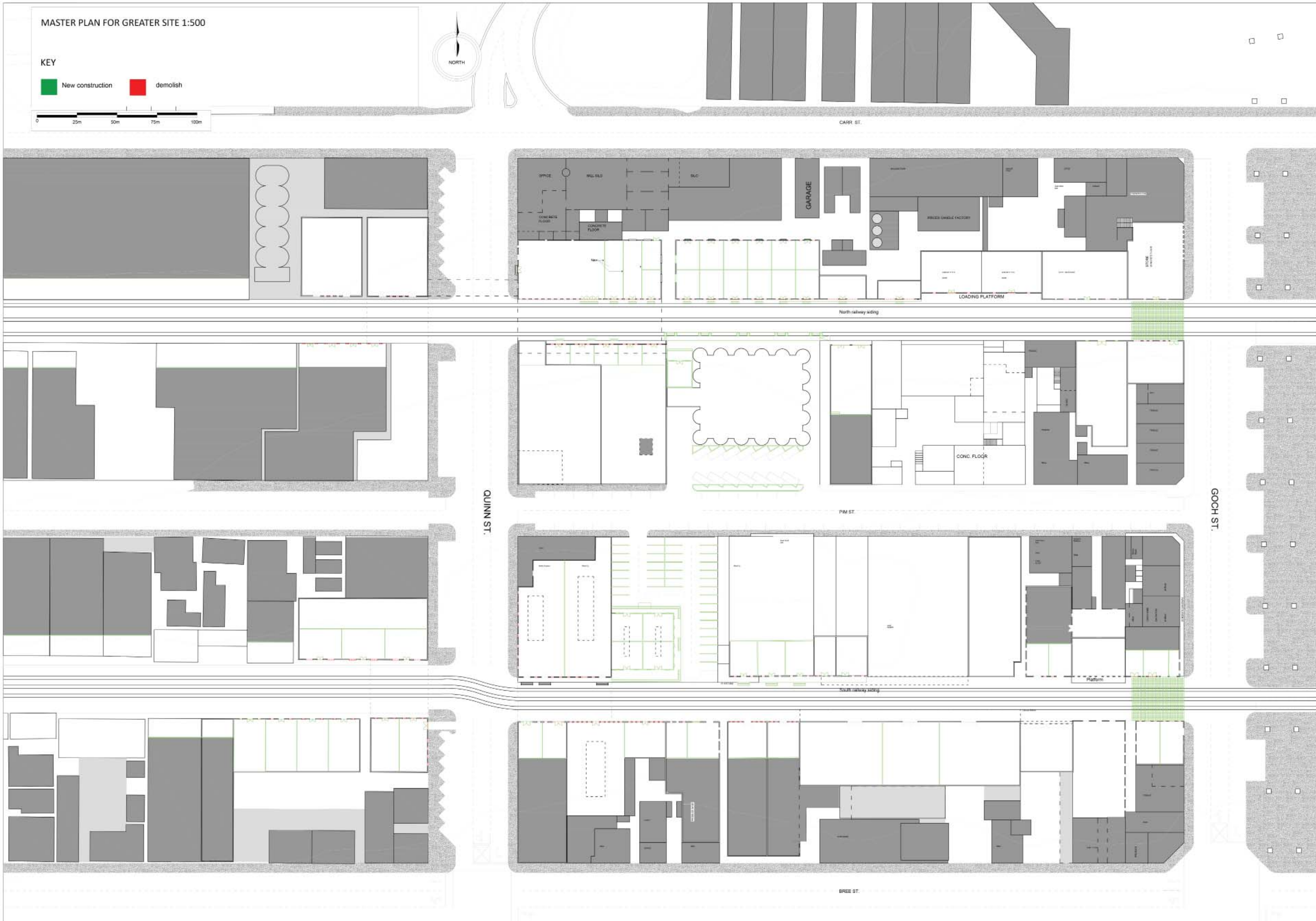
Goal 3- Retain, protect and maintain the buildings of extraordinary historical significance and thus safe guarding the area's heritage. Hatched areas are earmarked as extraordinary.

MASTER PLAN FOR GREATER SITE 1:500

KEY

New construction demolish

0 25m 50m 75m 100m



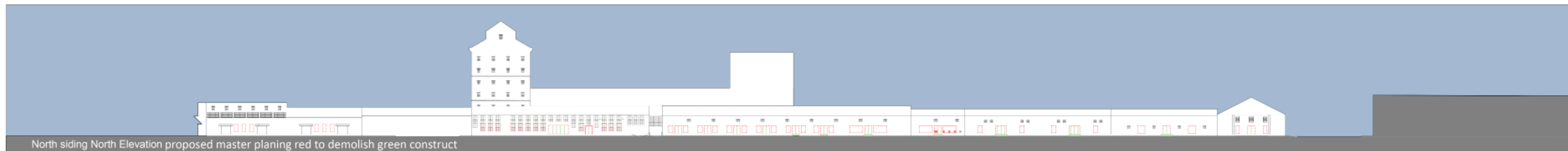
MASTER PLANNING A VISION FOR THE SITE 1:500

KEY

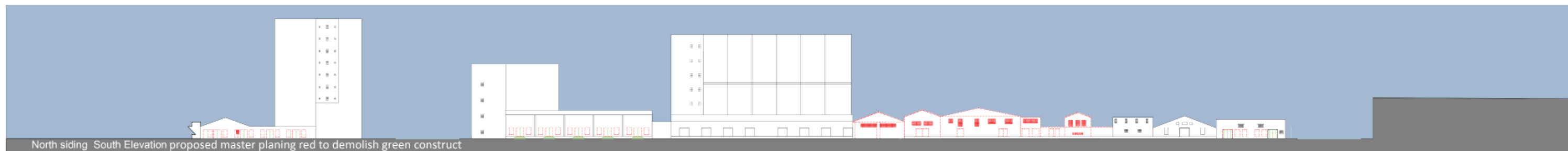
- office space
- residential
- Rest/Bar
- industrial

0 25m 50m 75m 100m

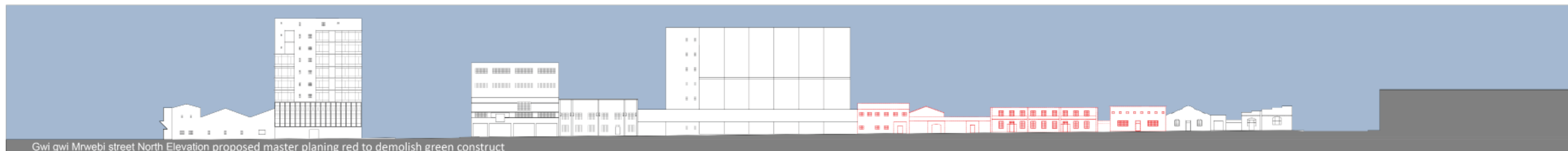




North siding North Elevation proposed master planing red to demolish green construct



North siding South Elevation proposed master planing red to demolish green construct



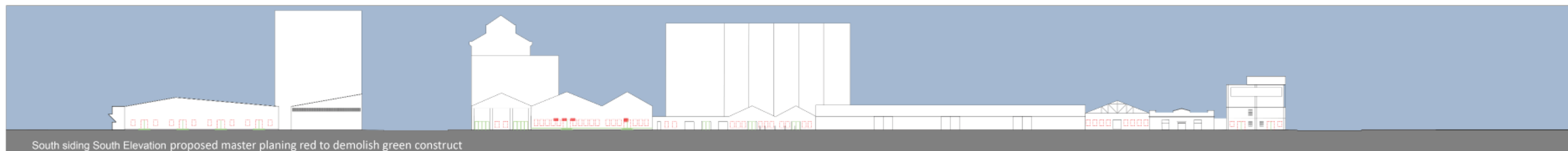
Gwi gwi Mrwebi street North Elevation proposed master planing red to demolish green construct



Gwi gwi Mrwebi street South Elevation proposed master planing red to demolish green construct



South siding North Elevation proposed master planing red to demolish green construct



South siding South Elevation proposed master planing red to demolish green construct



GROUND FLOOR PLAN

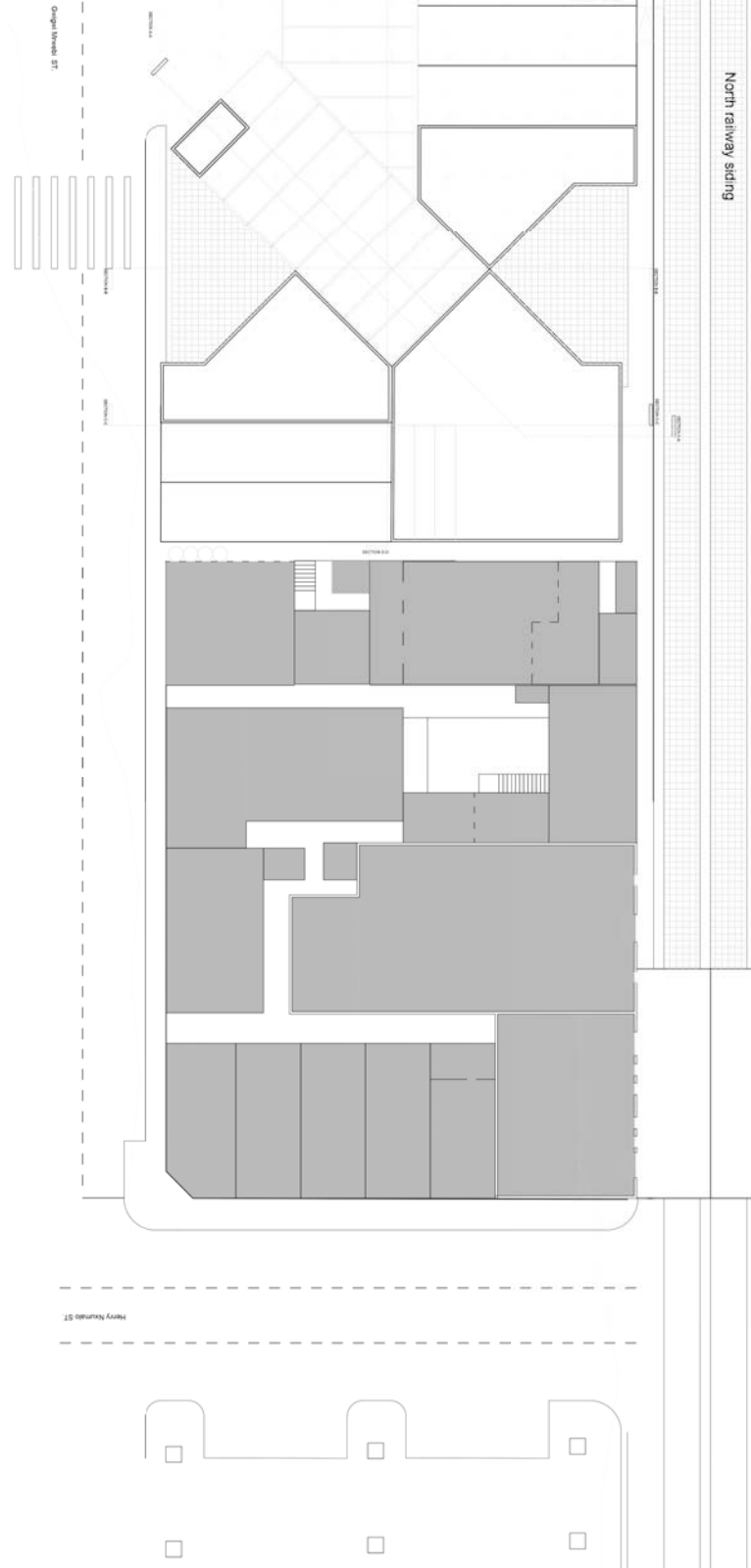


FIRST FLOOR PLAN



SECOND FLOOR PLAN

ROOF PLAN

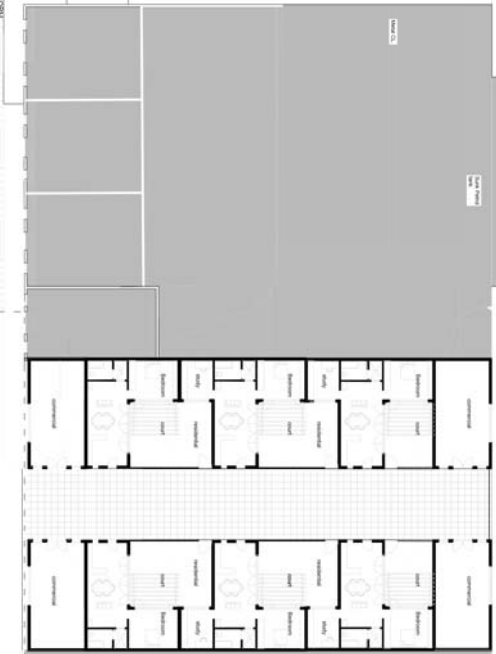
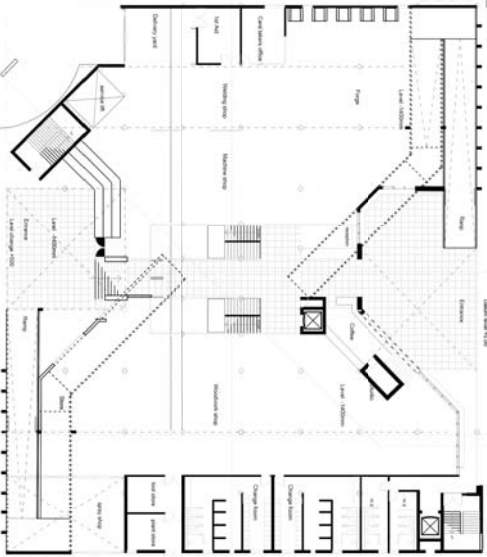


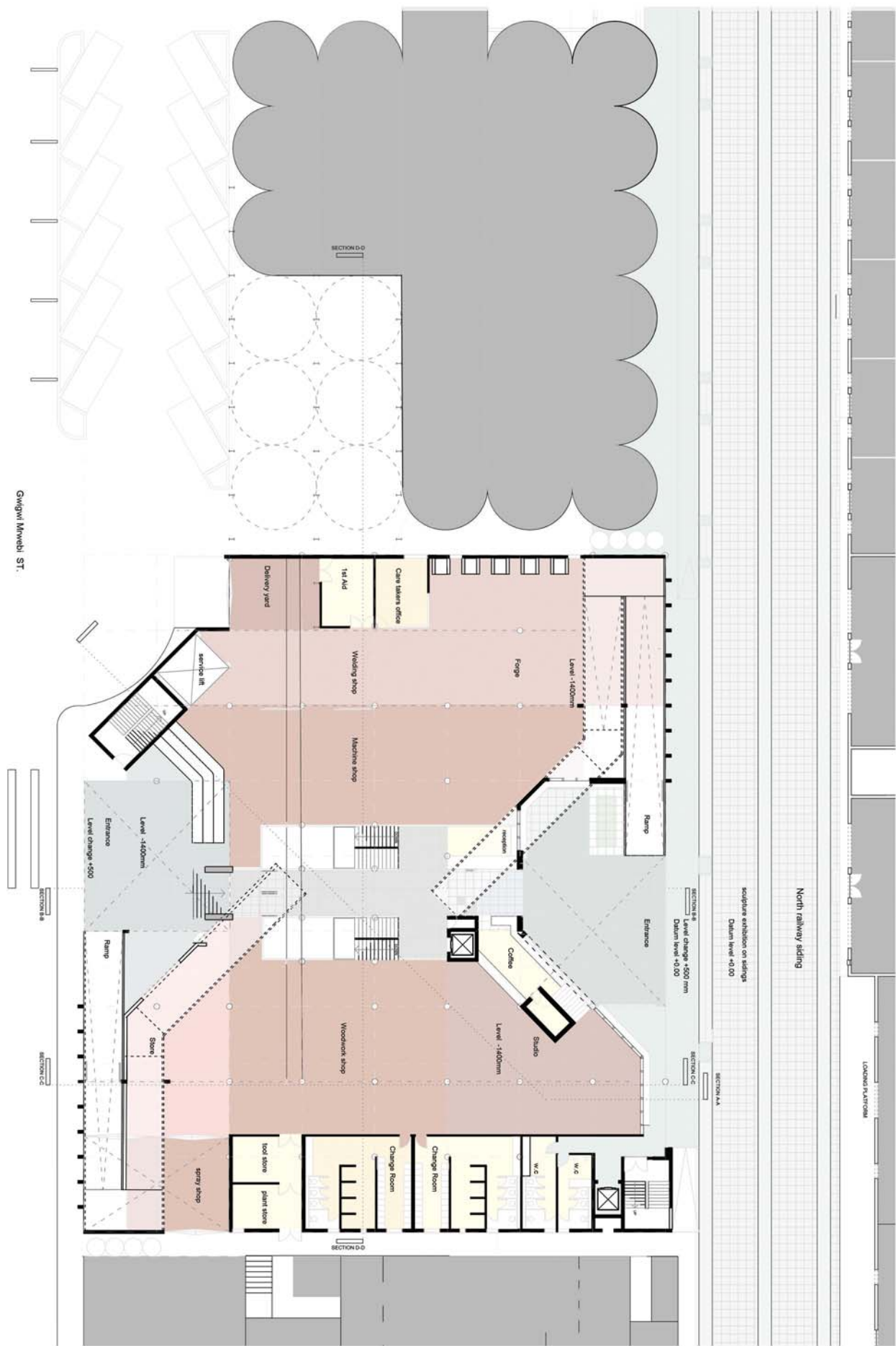
SITE PLAN



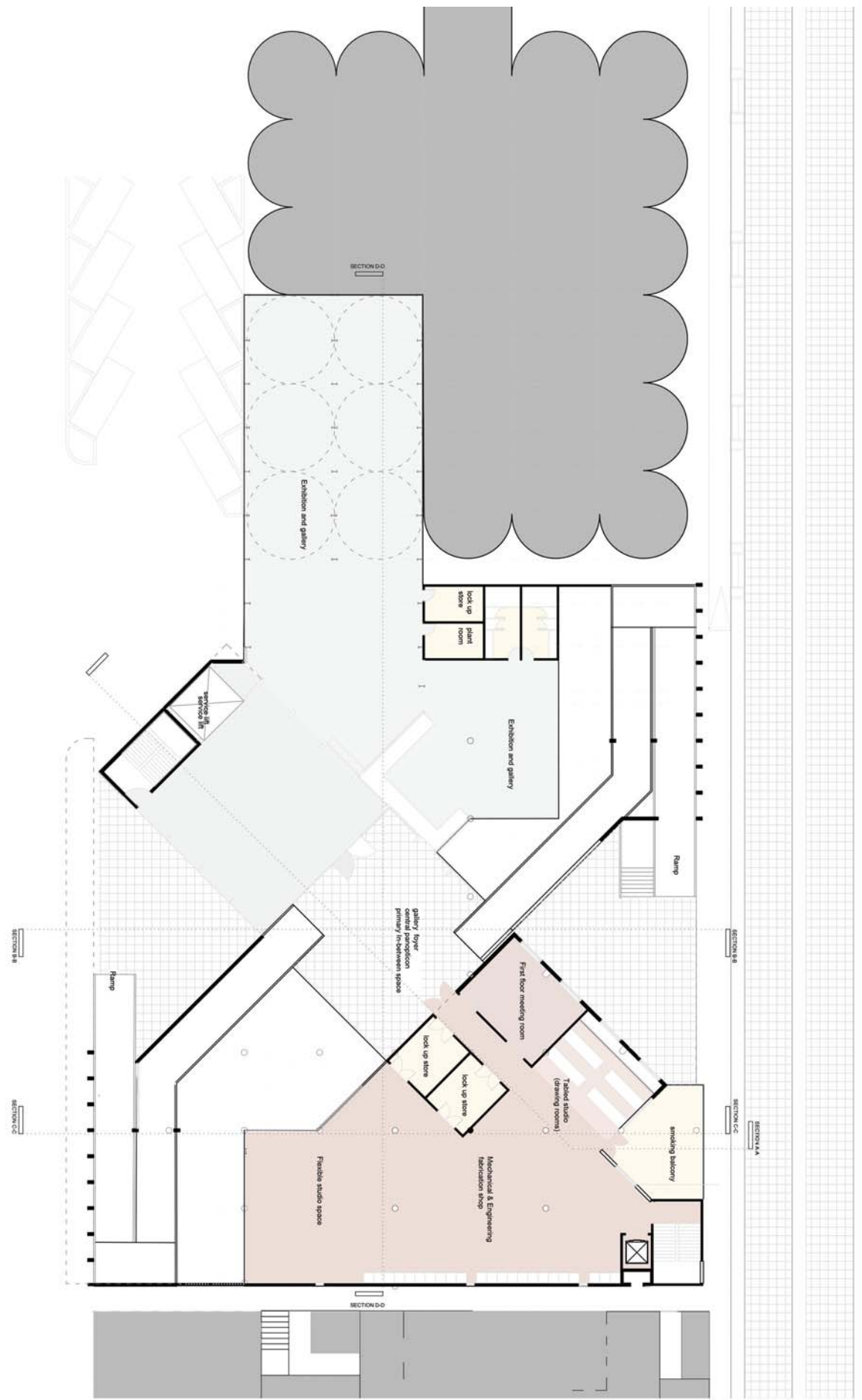
Gough Street

Henry Mounie St



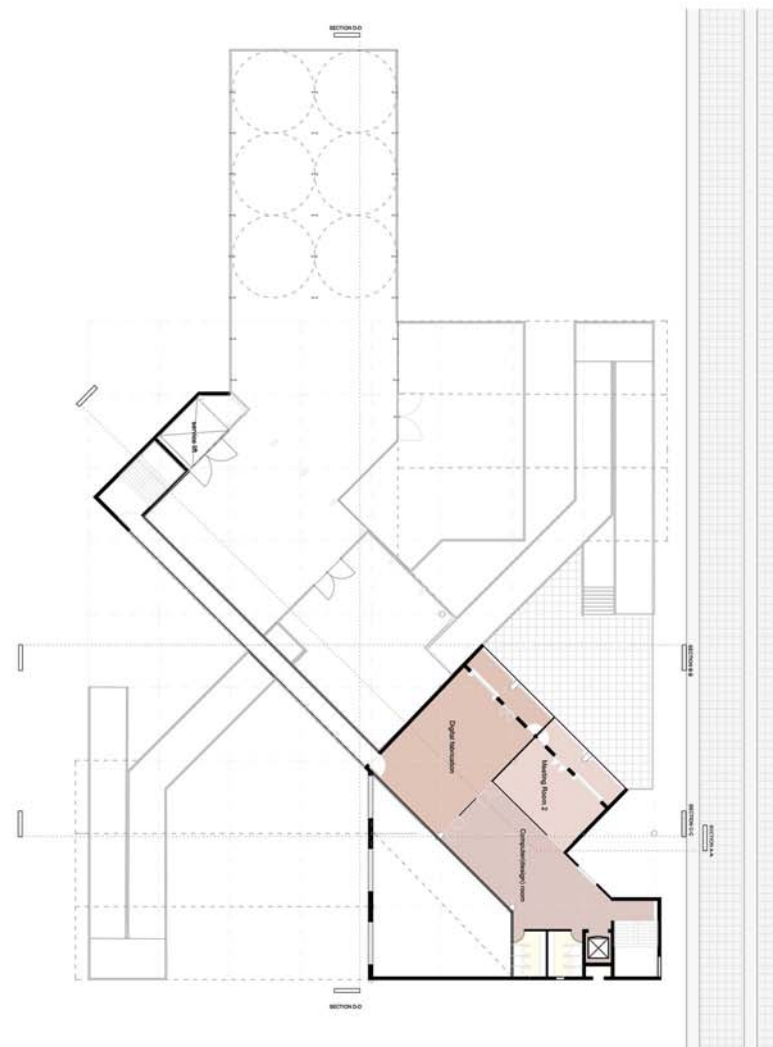


GROUND FLOOR PLAN

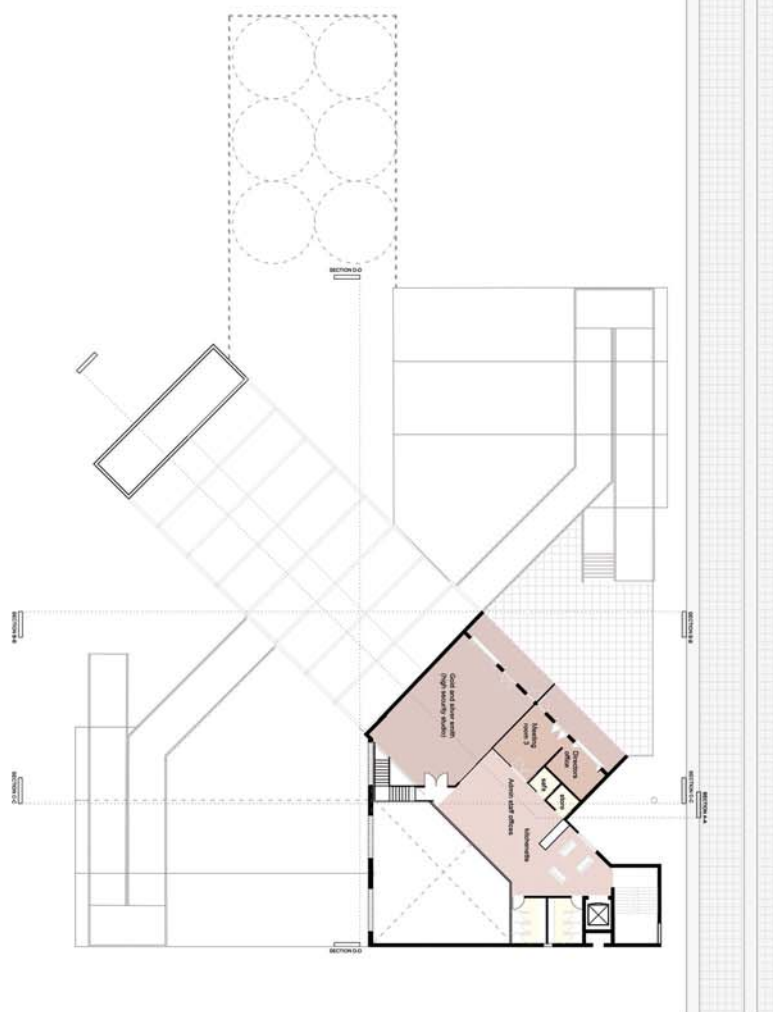


FIRST FLOOR PLAN

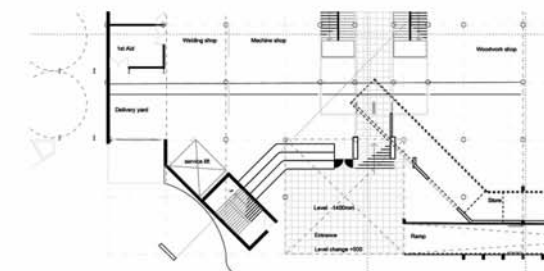




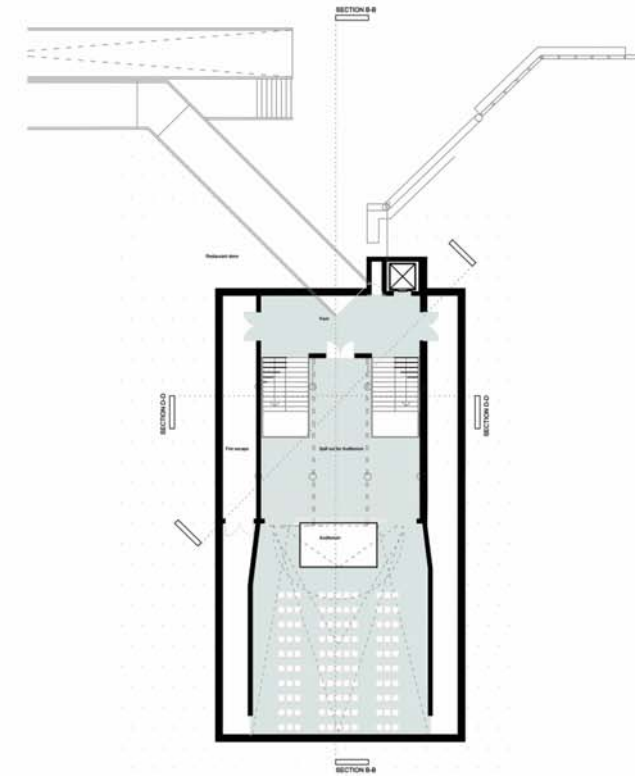
SECOND FLOOR PLAN



THIRD FLOOR PLAN



ARTISTS IN RESIDENCE ACCOMMODATION

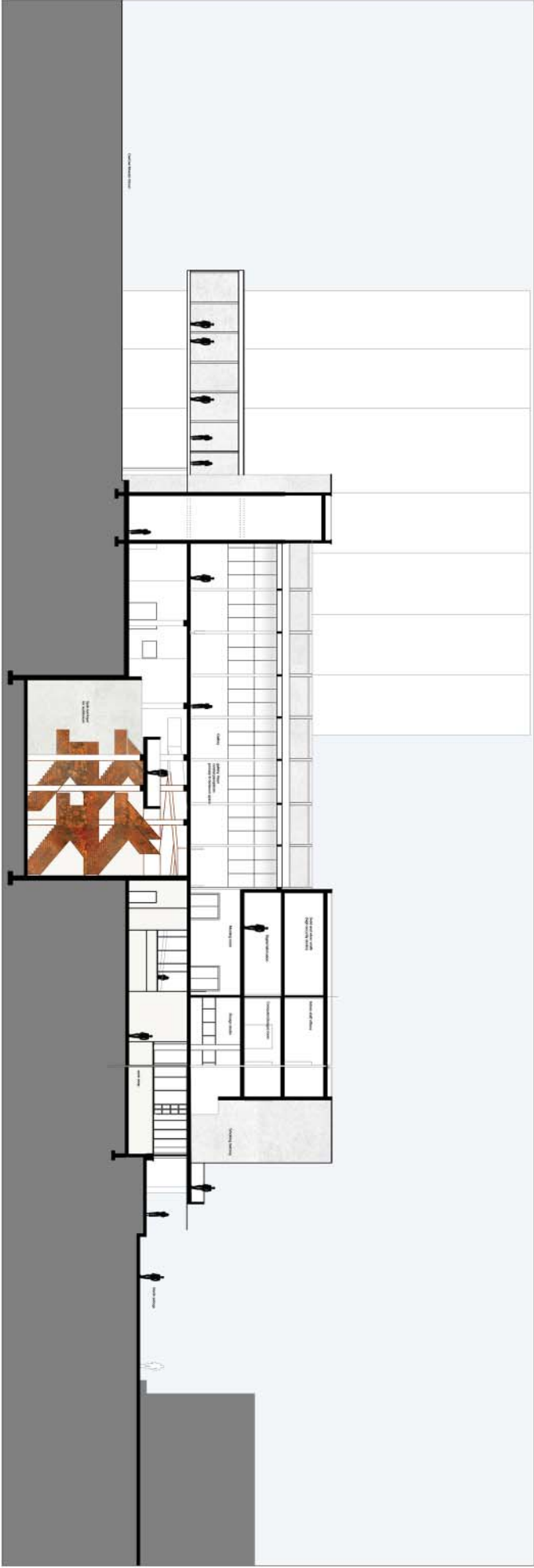


BASEMENT AUDITORIUM PLAN

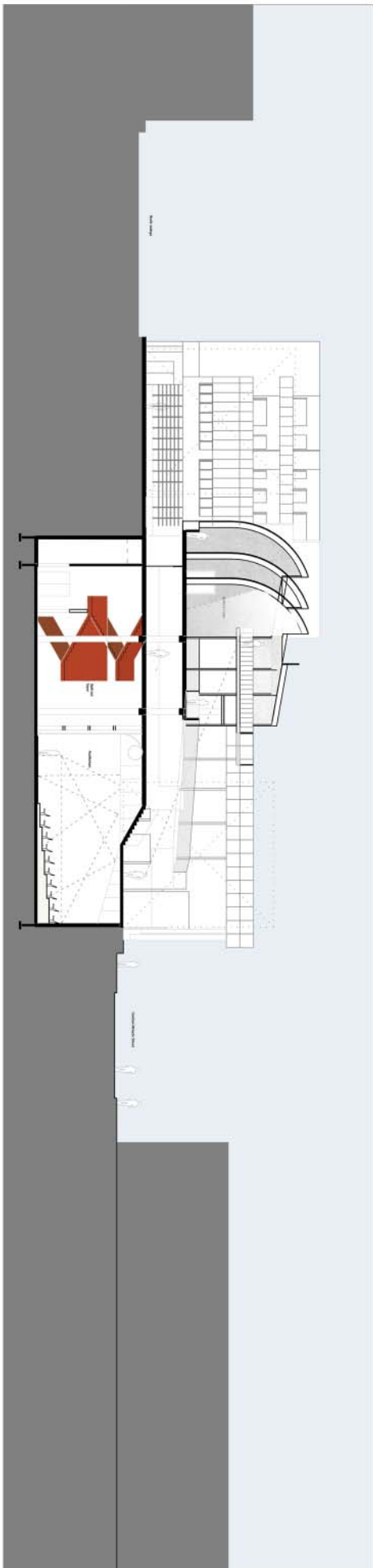




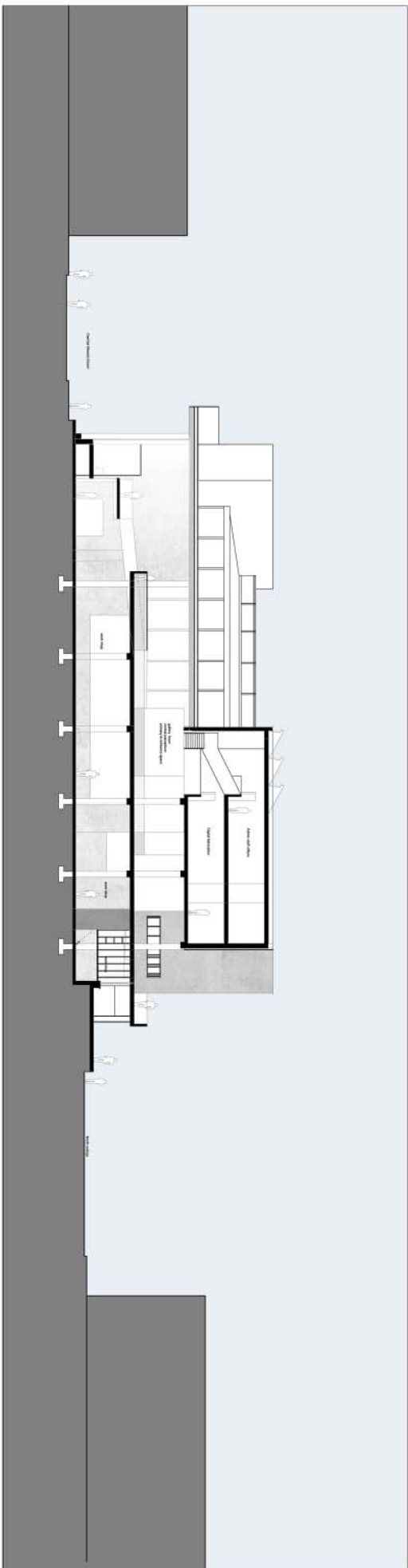
South East Elevation



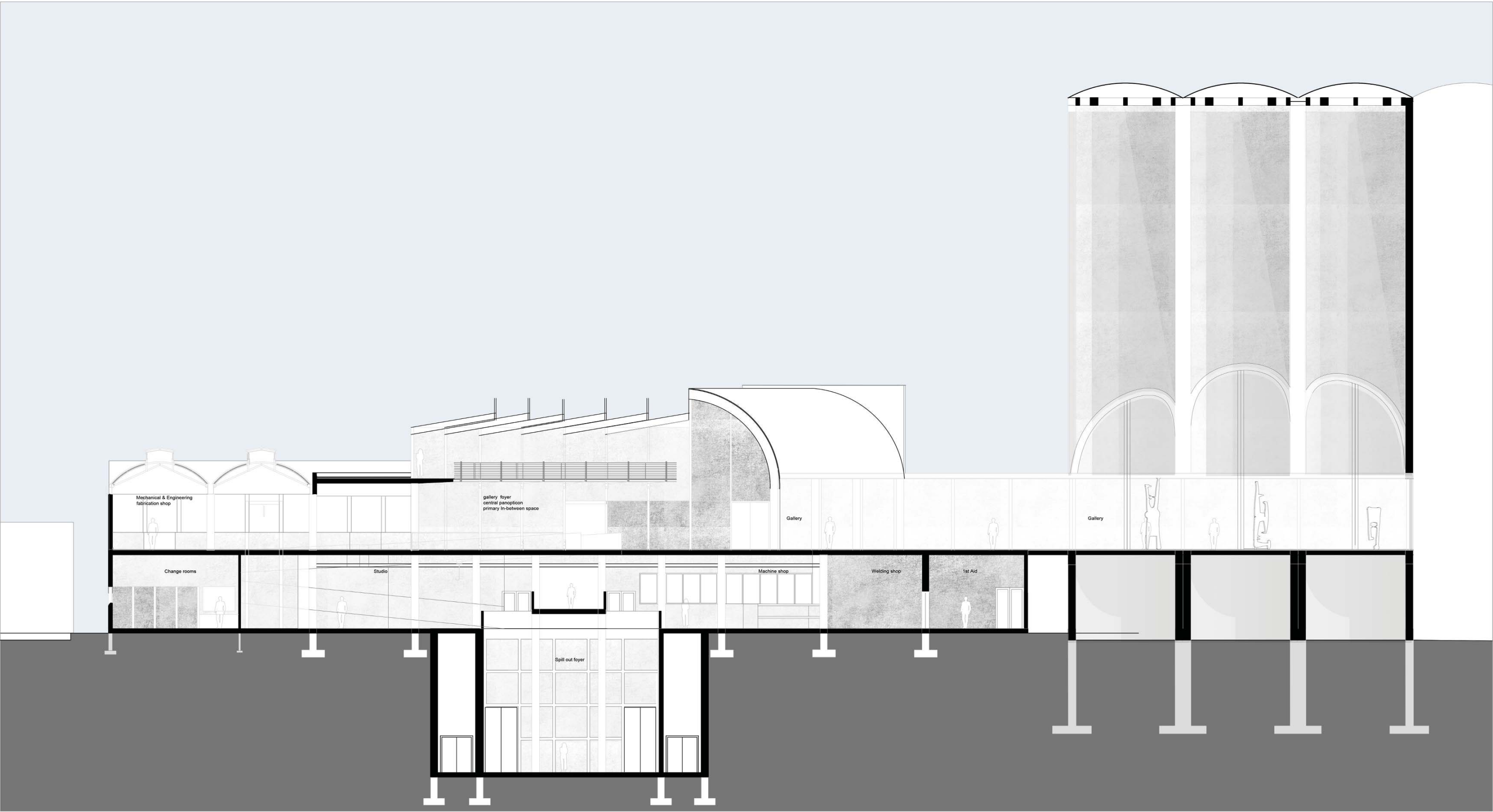
SECTION A-A



SECTION B-B



SECTION C-C



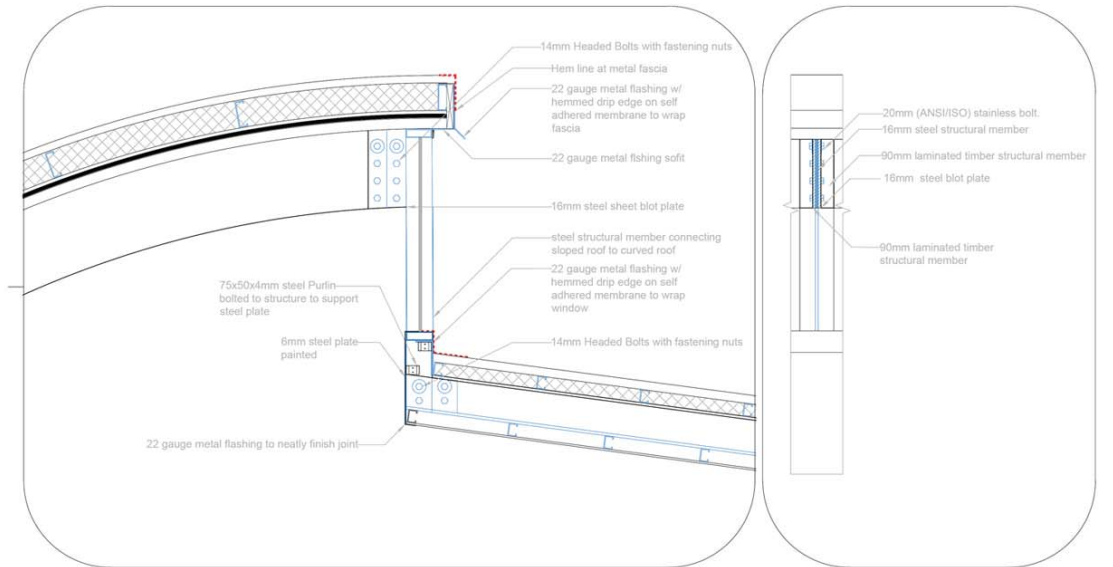
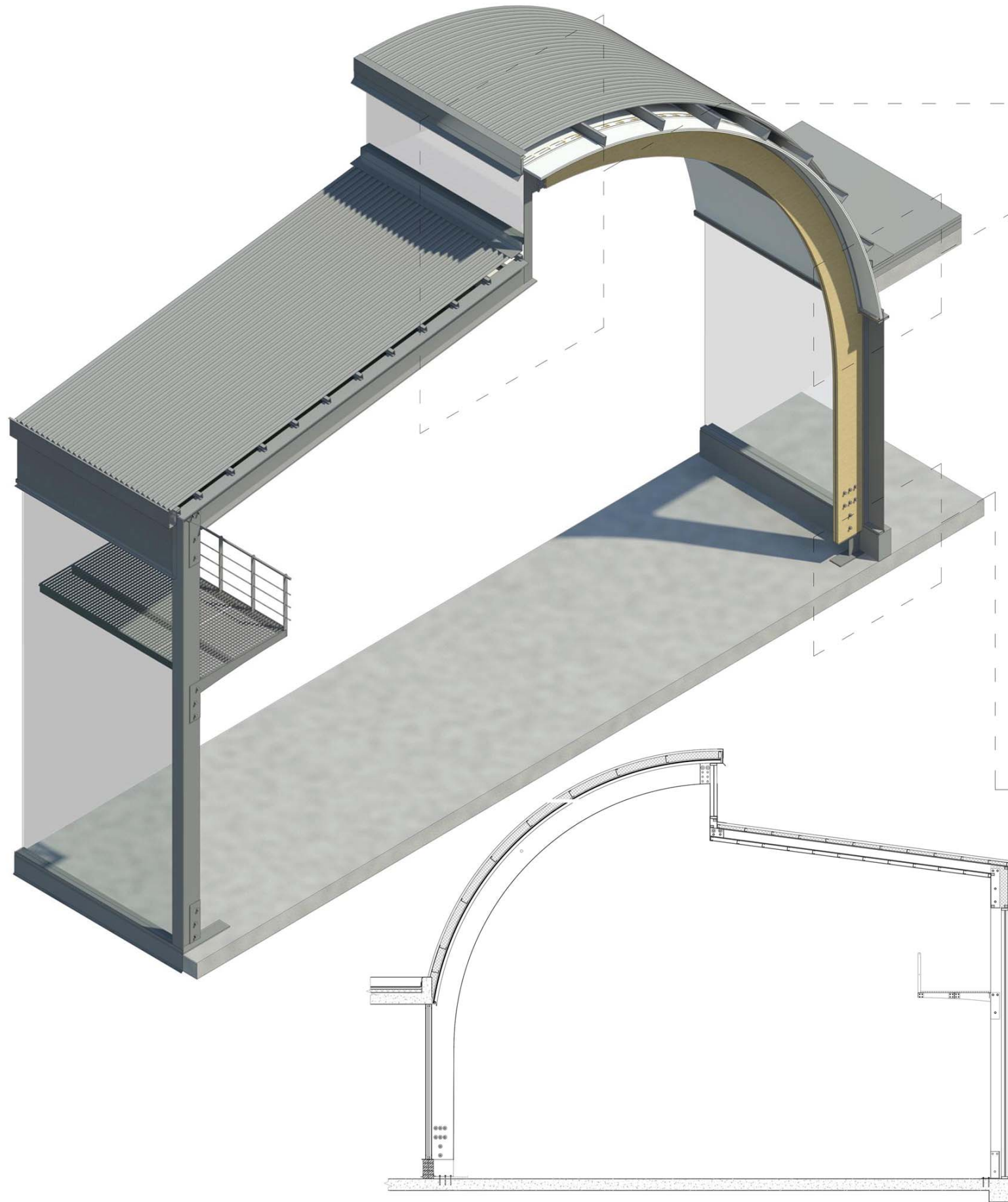
SECTION D-D



NORTH ELEVATION

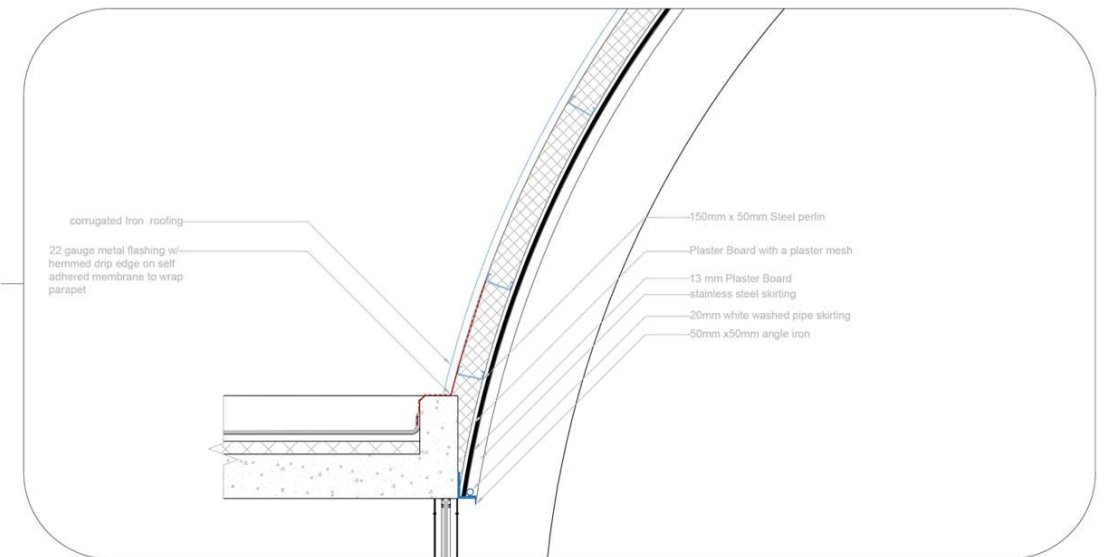


SOUTH ELEVATION

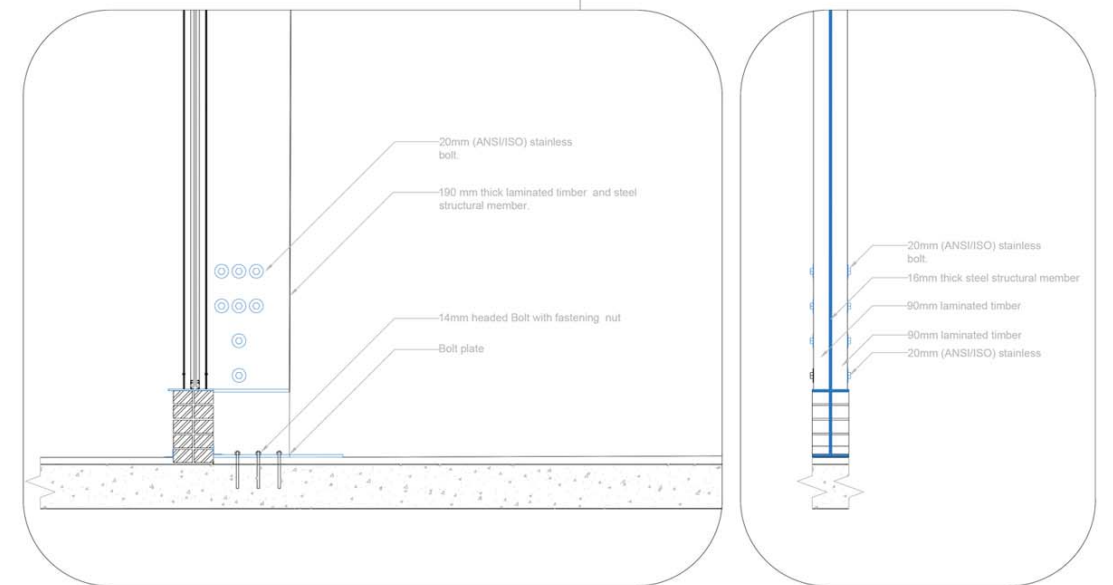


DETAIL 1.1 : CROSS SECTION AA-AA OF HOW THE CURVED ROOF CONNECTS TO THE SLOPED ROOF FROM THE LEFT 1:20

DETAIL 1.2 : CROSS SECTION BB-BB OF HOW THE CURVED ROOF CONNECTS TO THE SLOPED ROOF FROM THE FRONT 1:20



DETAIL 1.3: CROSS SECTION CC-CC 1:20



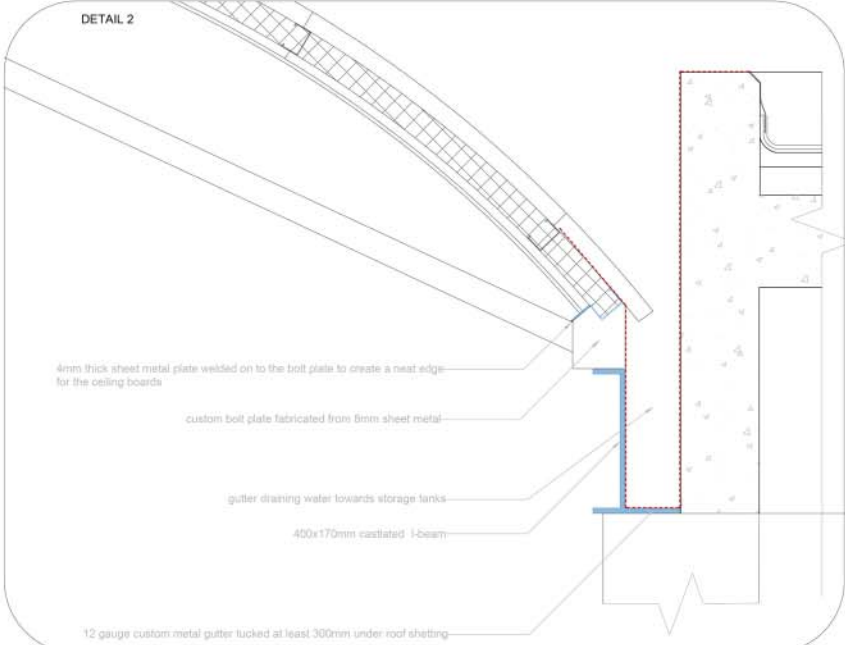
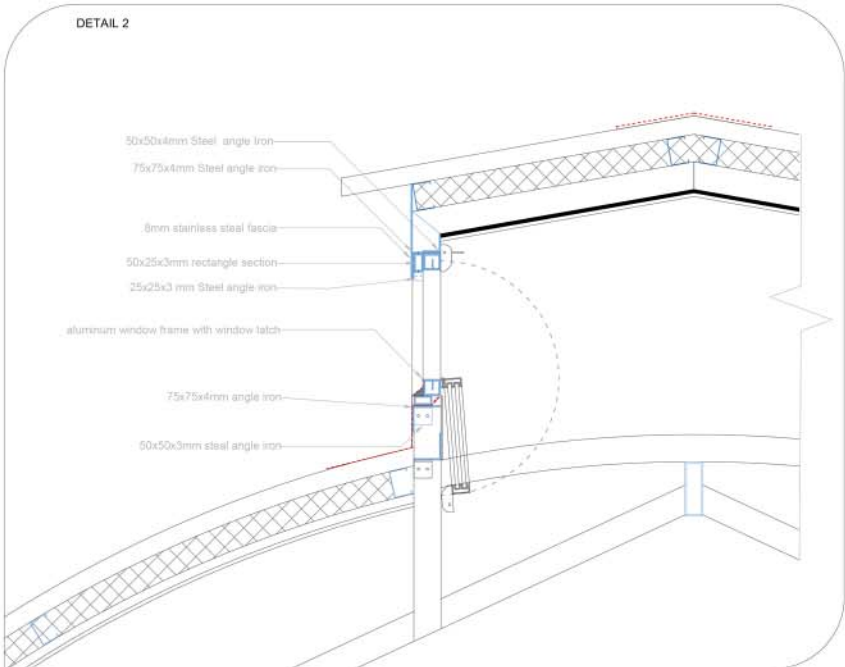
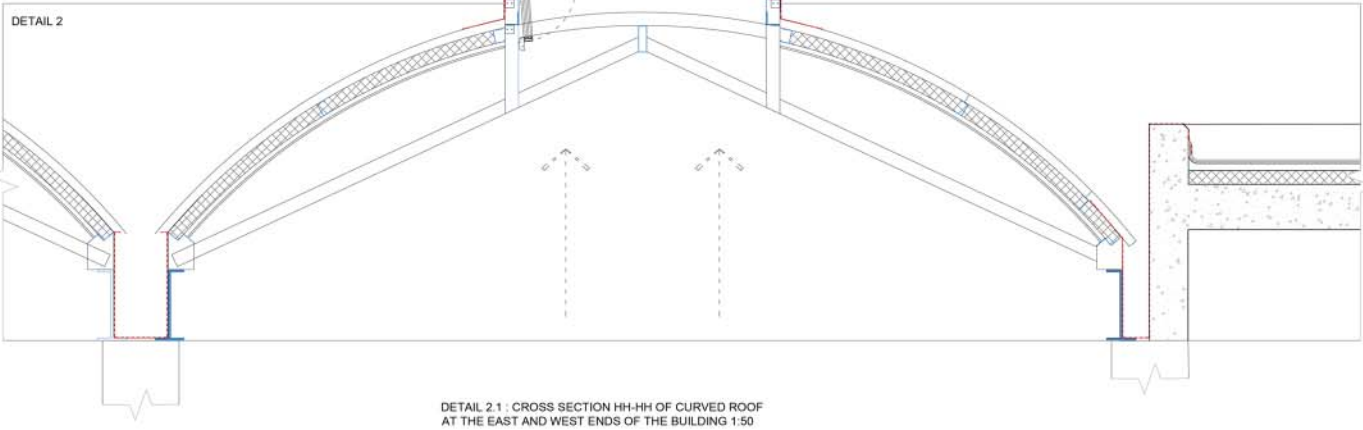
DETAIL 1.4: CROSS SECTION EE-EE OF THE CURVED STRUCTURAL MEMBER FROM THE LEFT 1:20

DETAIL 1.5: CROSS SECTION DD-DD OF THE CURVED STRUCTURAL MEMBER FROM THE FRONT 1:20

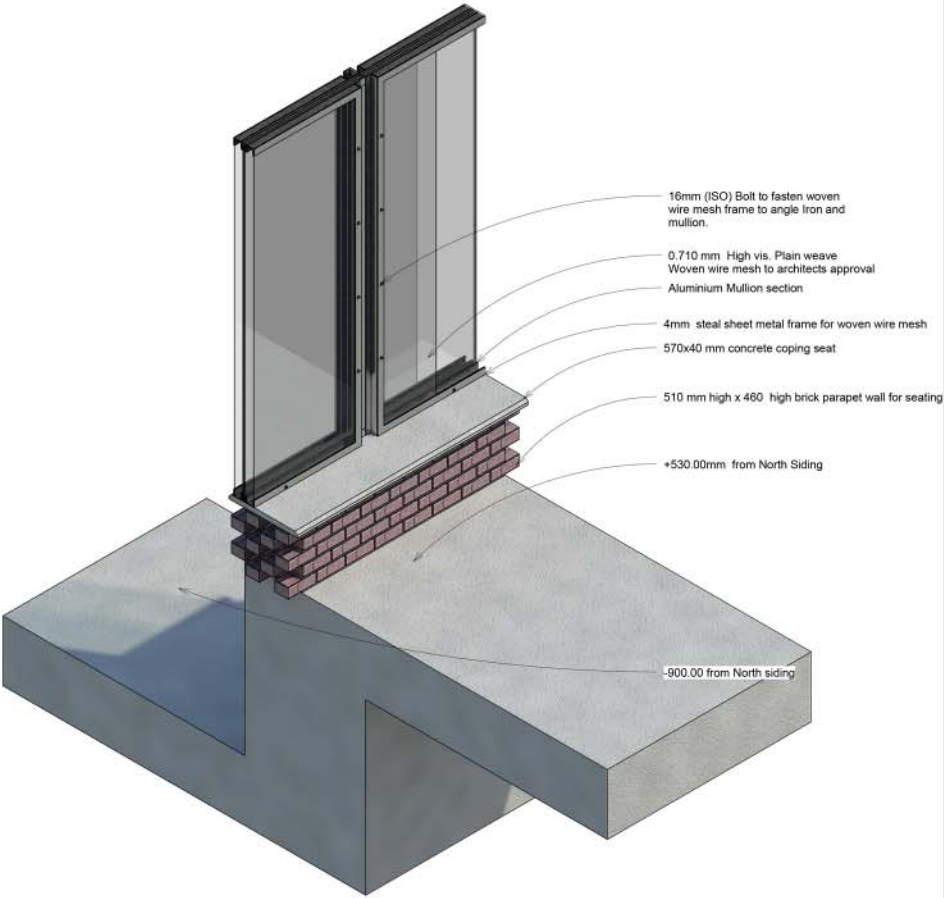
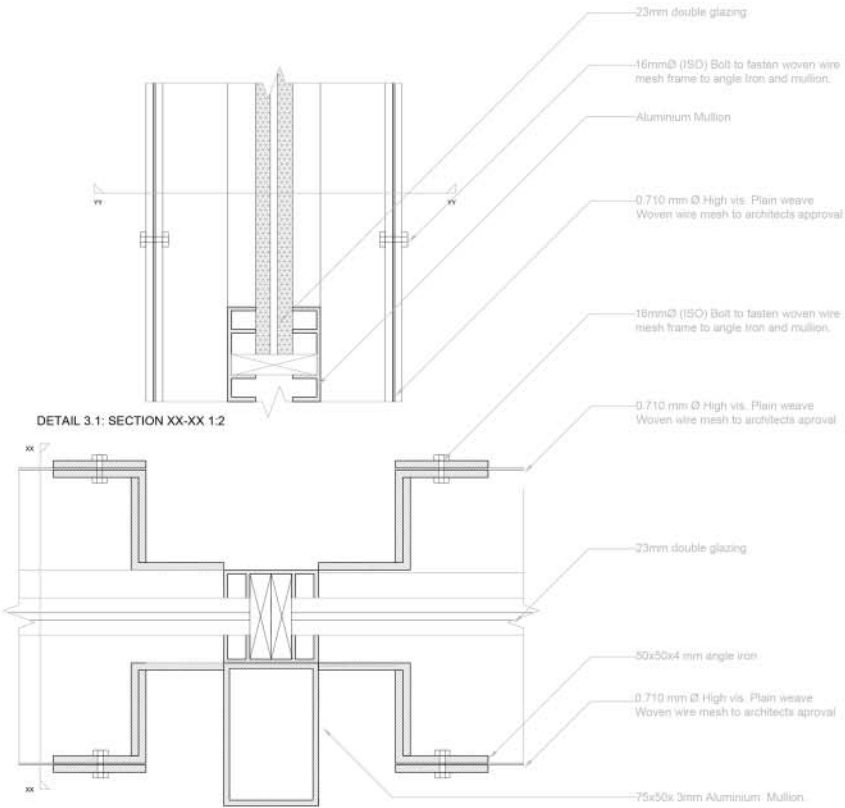
DETAIL 1.7: 3-D CROSS SECTION FF-FF OF THE CURVED GALLERY/THRESHOLD SPACE FROM THE LEFT 1:25

DETAIL 2: Detail of the curved roof at the east and west ends of the building , which can ventilate the workshops if needed

DETAIL 4: THE LOW MAINTENANCE (NO WASHING REQUIRED) LIGHT PROVIDING WALL



DETAIL 2.2 : CROSS SECTION JJ-JJ SHOWING THE DETAILING OF THE CONNECTION BETWEEN THE CURVED ROOF AND THE CONCRETE Roof EMPHASIZING THE DRAINAGE DETAILING

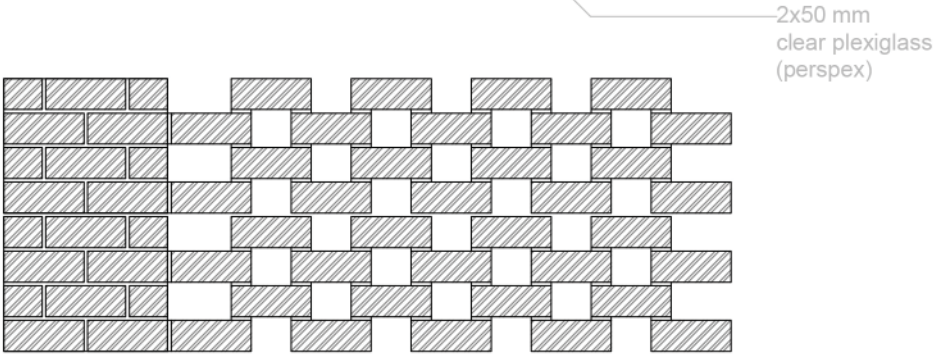
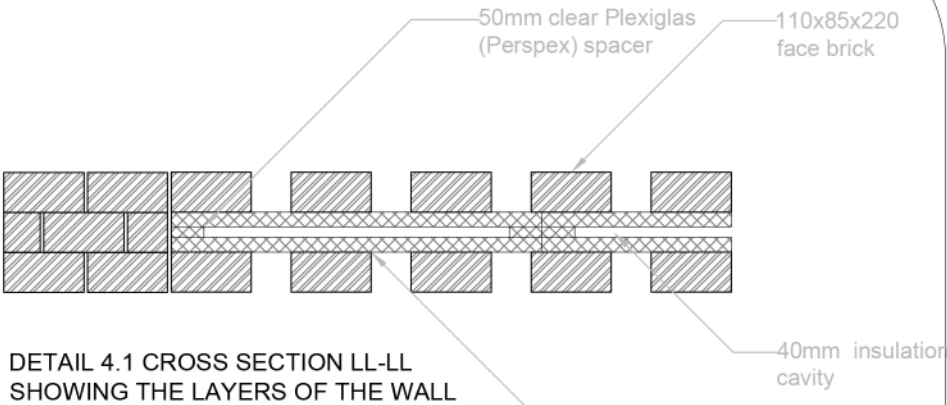


THREE DIMENSIONAL REPRESENTATION 1:20

DETAIL 3: Detail of the bespoke Mullion system which imitates the X arrangement of the plan, the mullion has woven steel screens to protect the glazing from the inevitable wear and tear that could happen in a workshop.

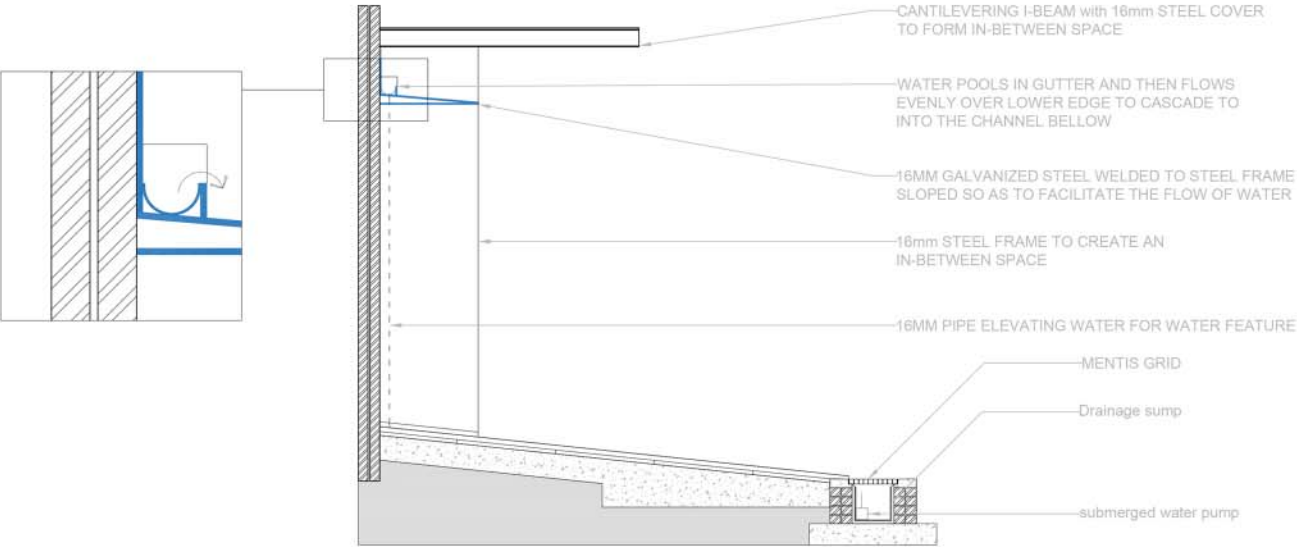
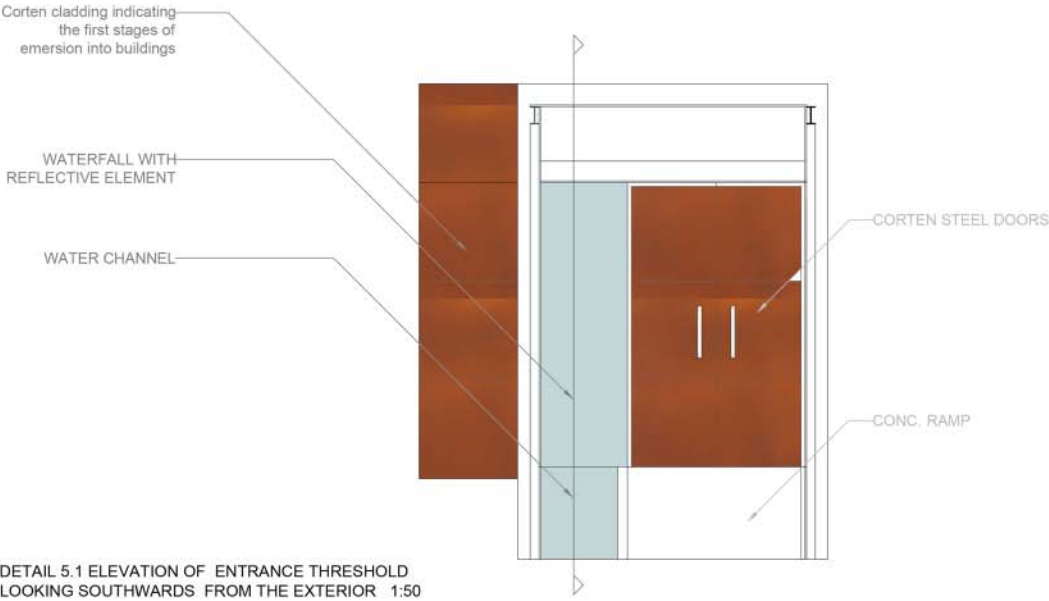
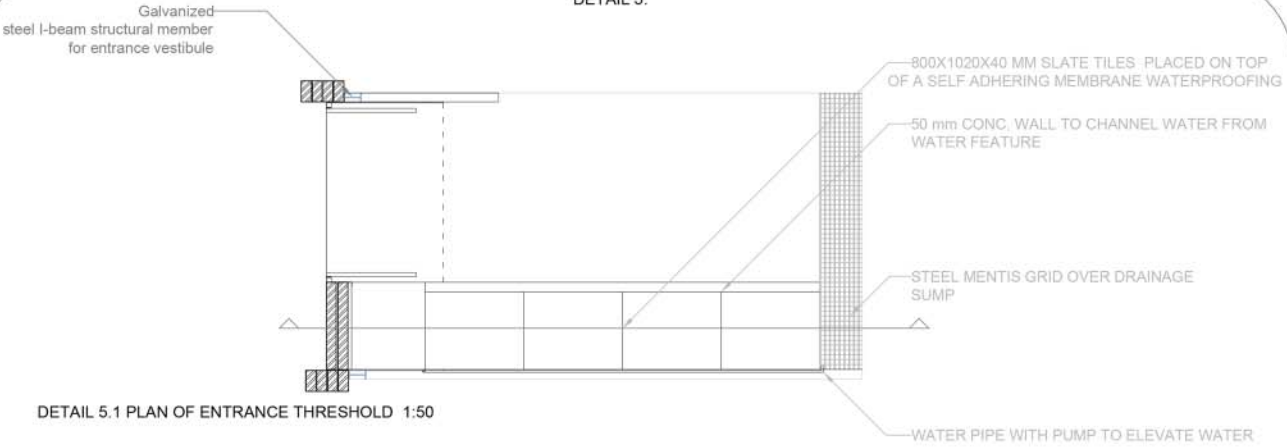
DETAIL 4: THE LOW MAINTENANCE (NO WASHING REQUIRED) LIGHT PROVIDING WALL

DETAIL 4:

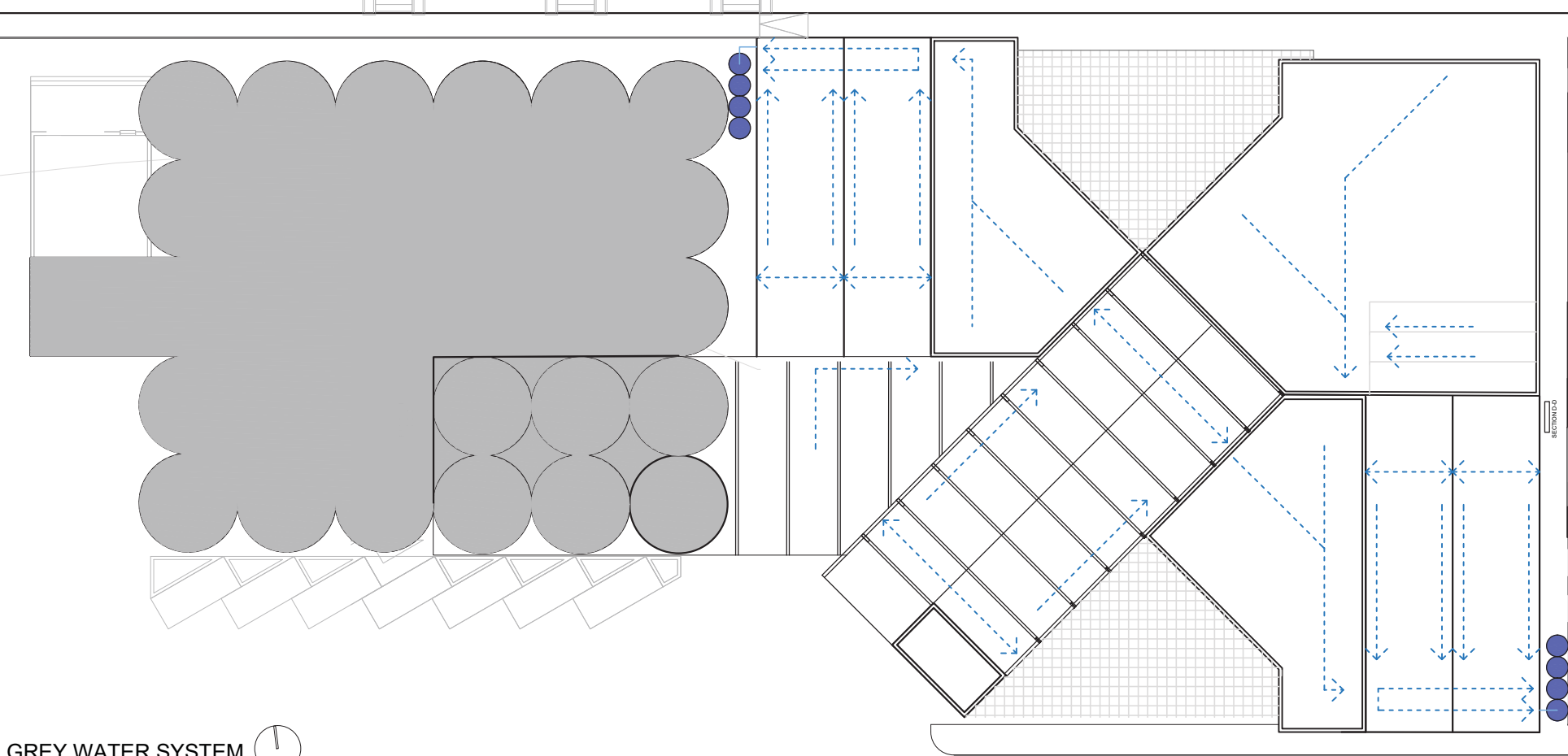


DETAIL 5: Detail of the entrance into the building off the North Siding. It is an in-Between space and includes a water feature which is a cascading waterfall which falls down the face of the entrance , providing one a reflected image of oneself thus making one aware of ones presence and q as one enters

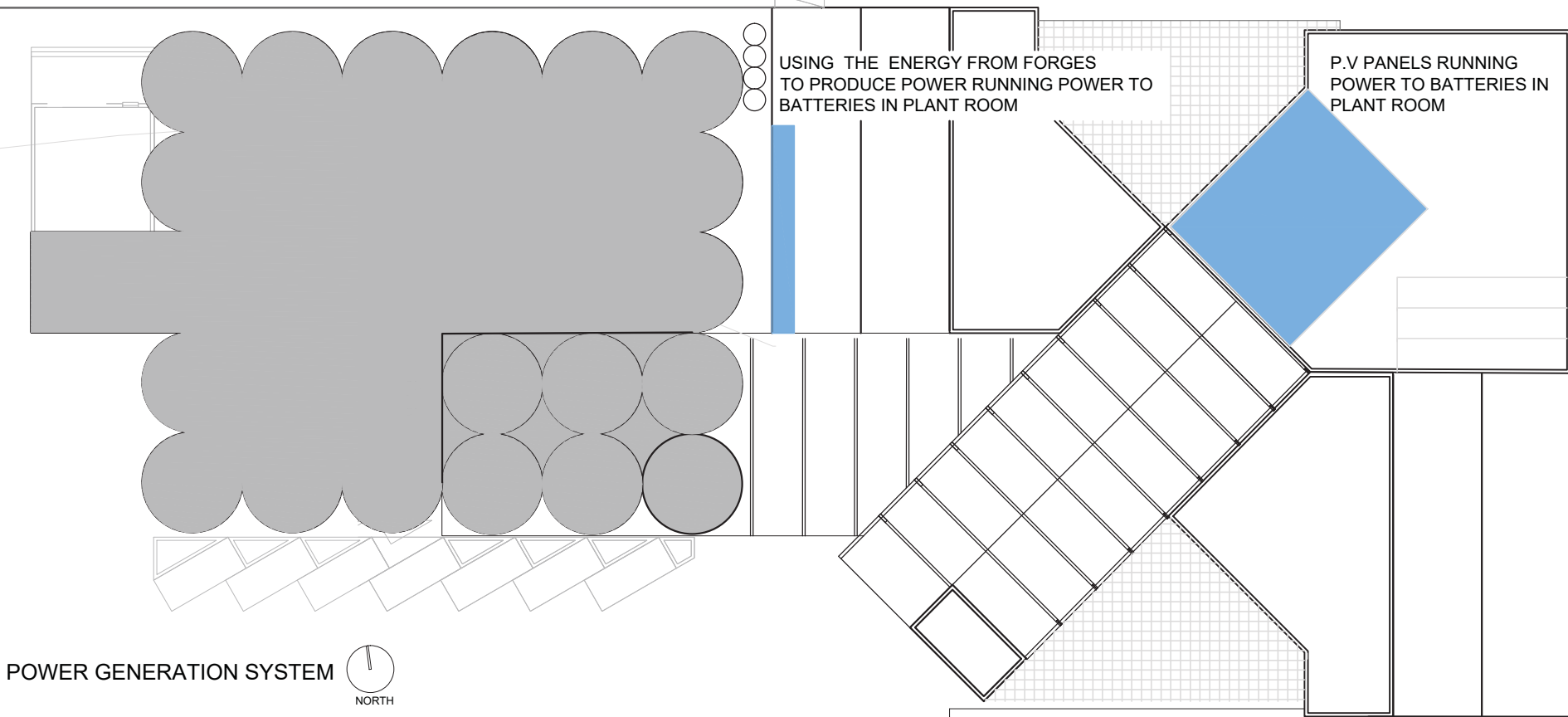
DETAIL 5:

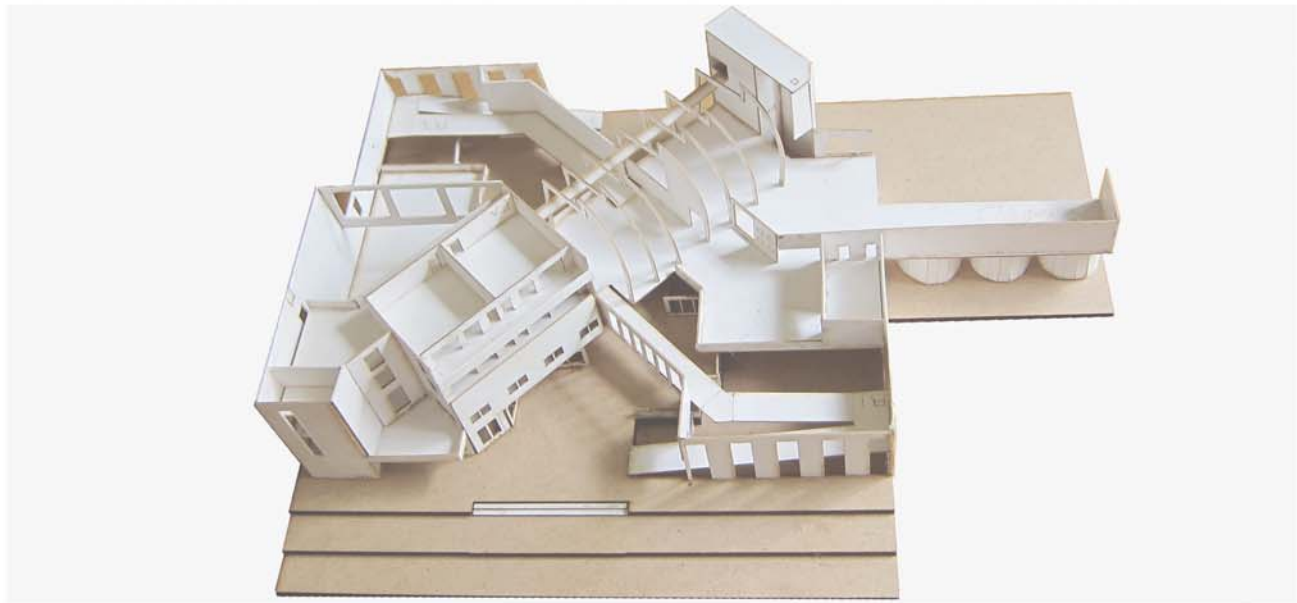


GREY WATER SYSTEM



POWER GENERATION SYSTEM

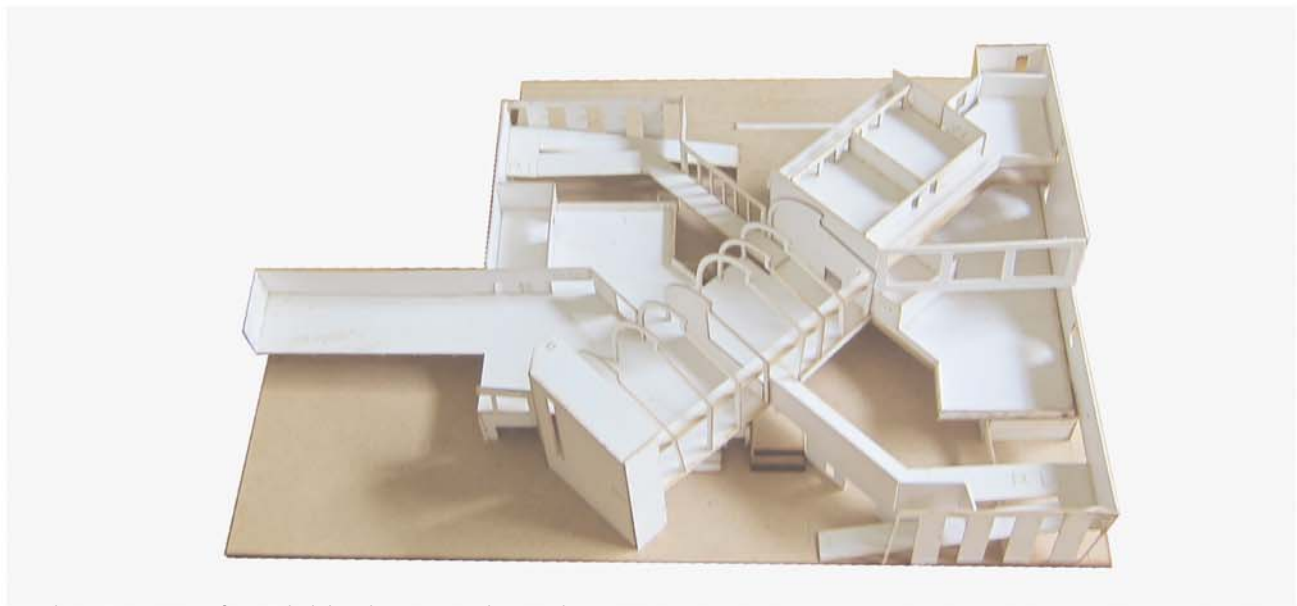




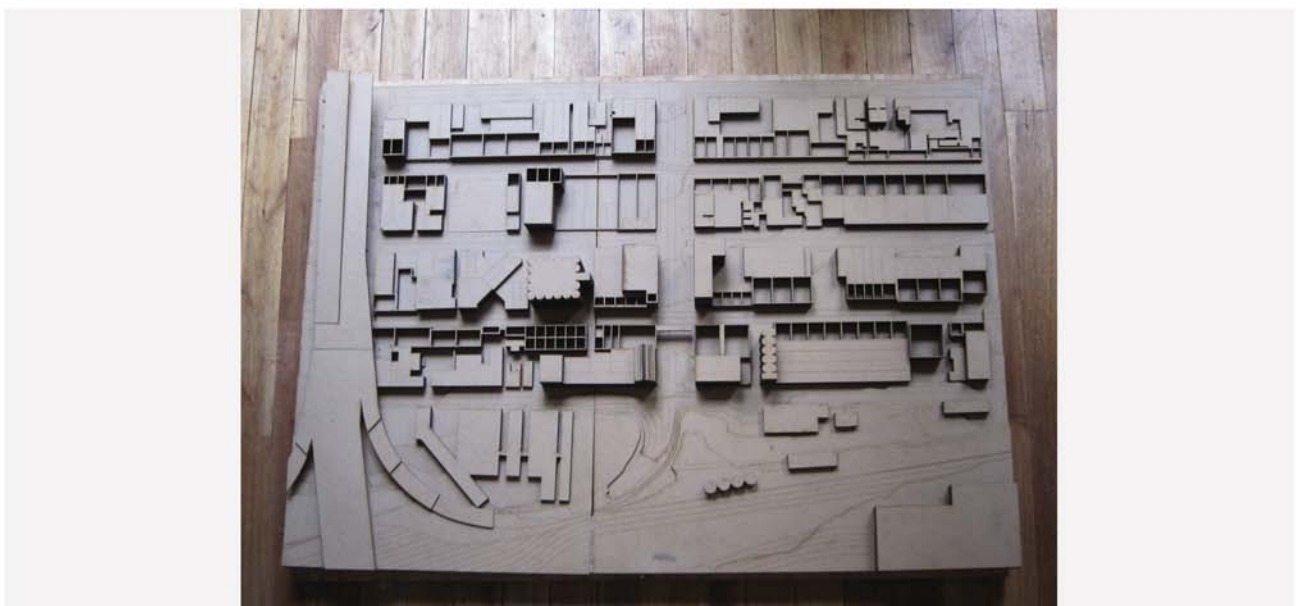
Birds Eye view of model-looking northwards



Birds eye view of models- the south elevation.



Birds eye view of model-looking southwards



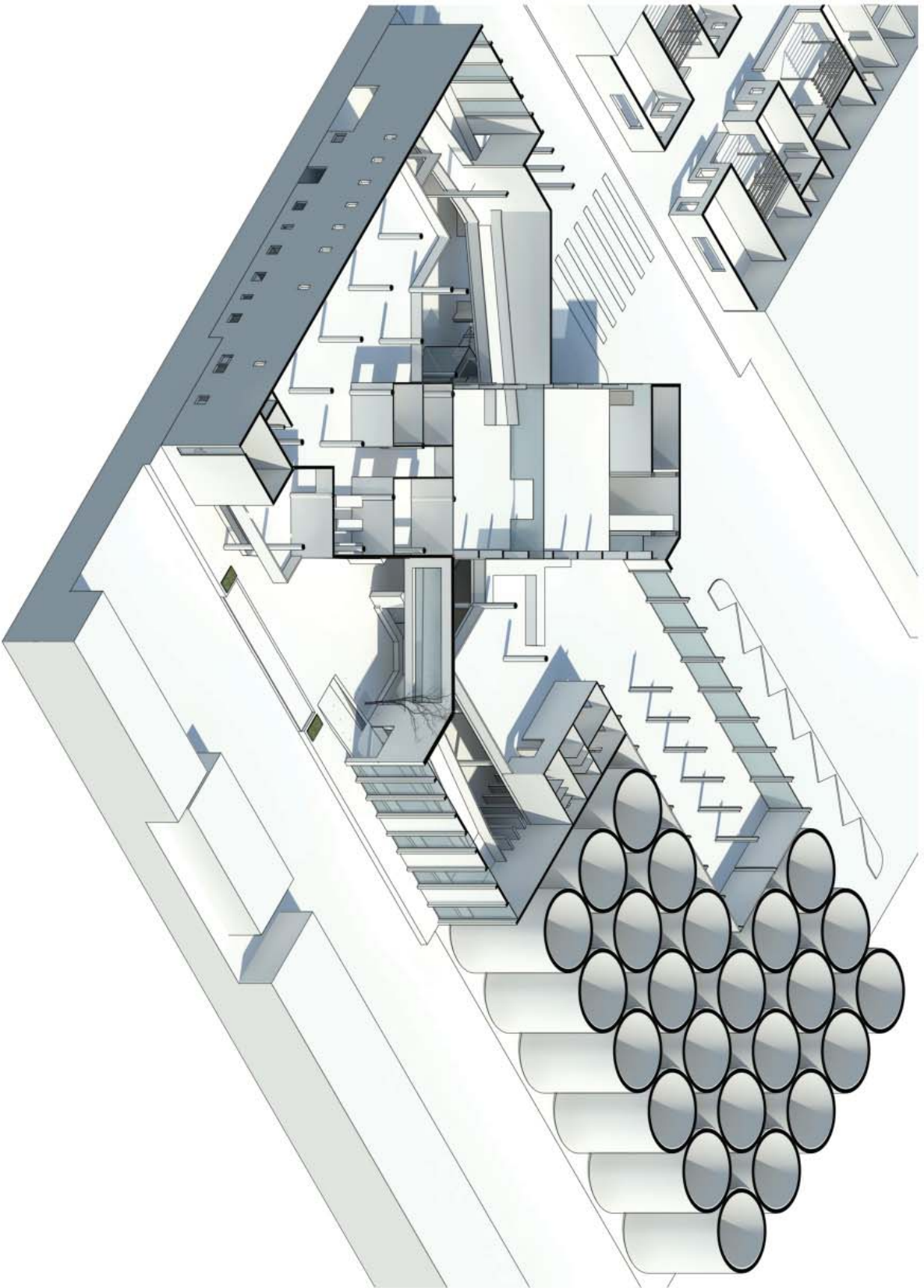
Site model with the proposed new complementary spaces and spatial divisions for the north and south sidings carved out in negative space.



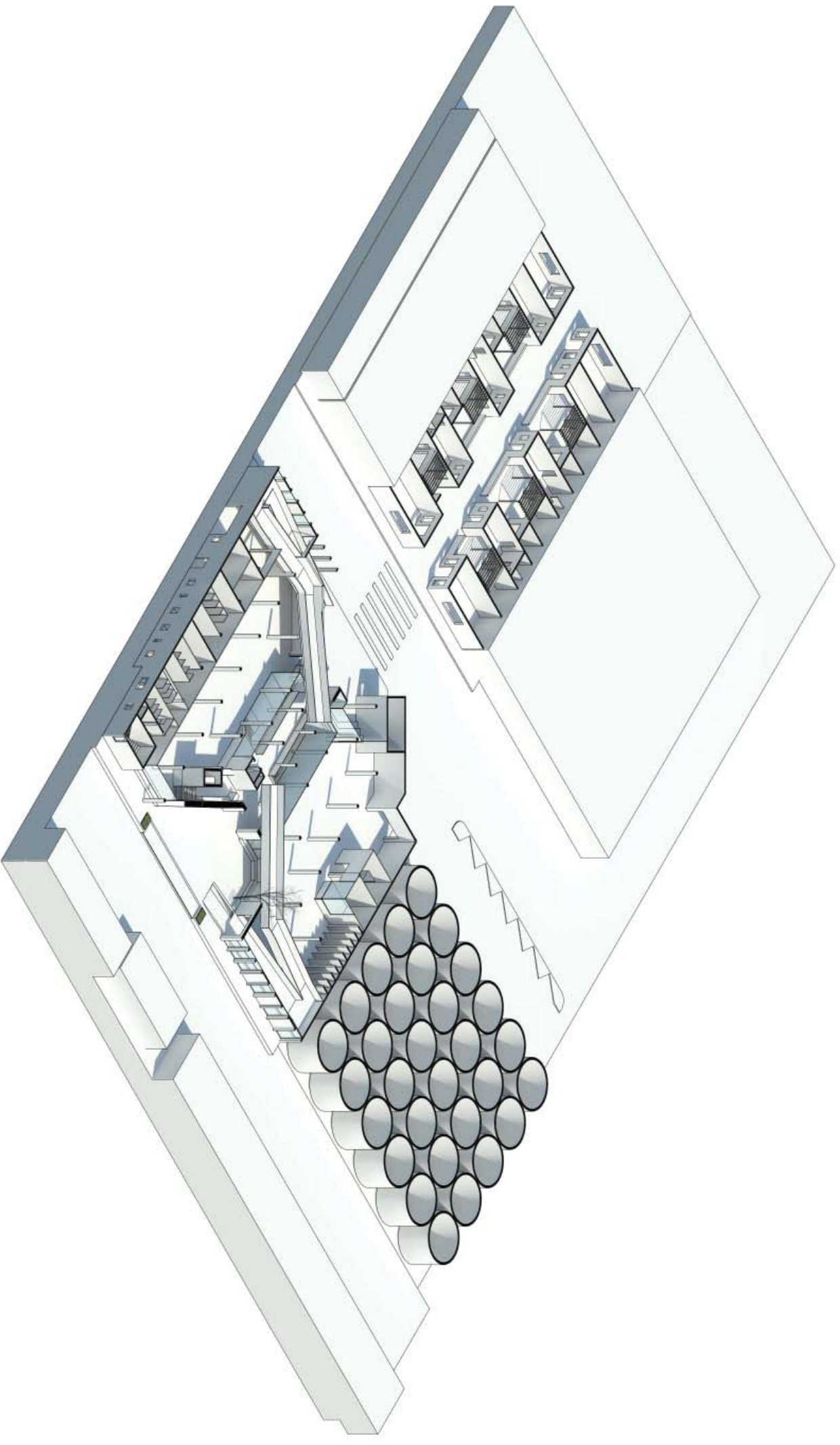
Birds eye view of model with roofing language looking Southwards



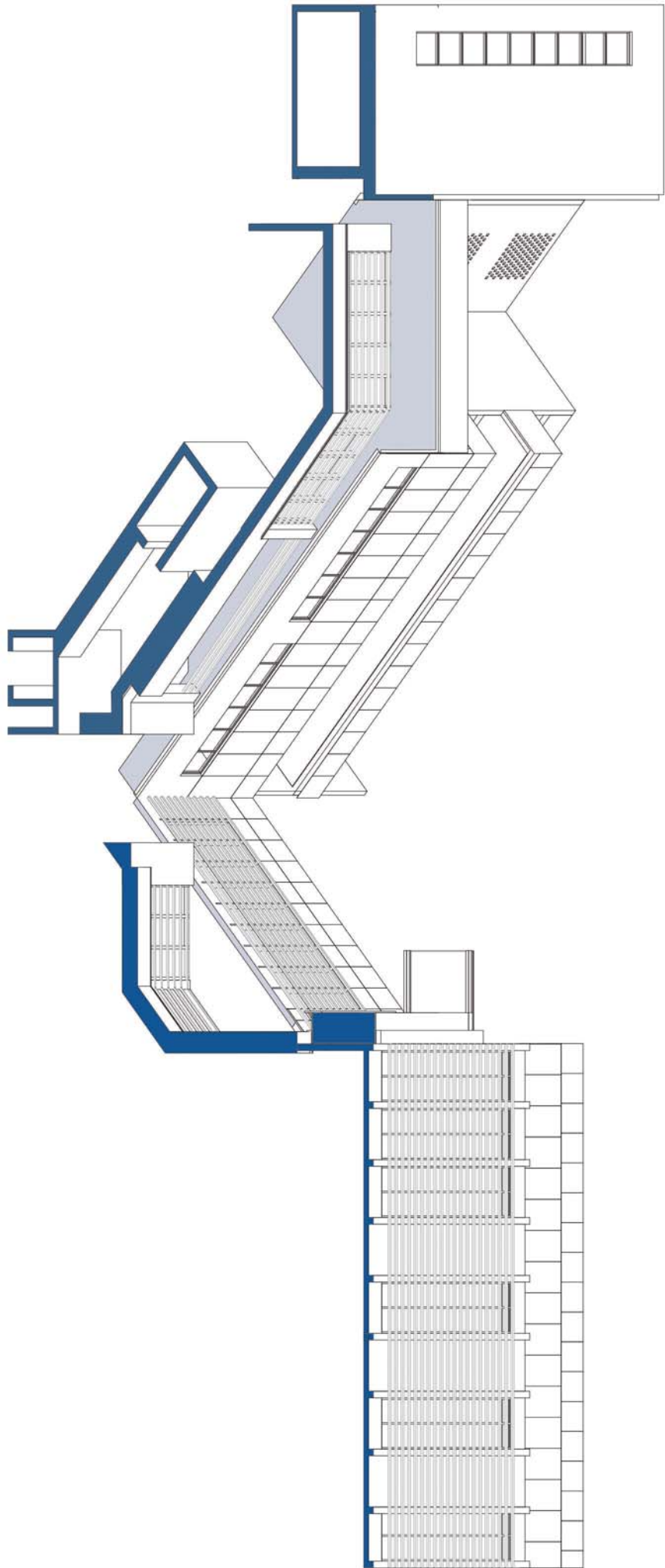
Site model with the proposed new complementary spaces and spatial divisions for the north and south sidings carved out in negative space.



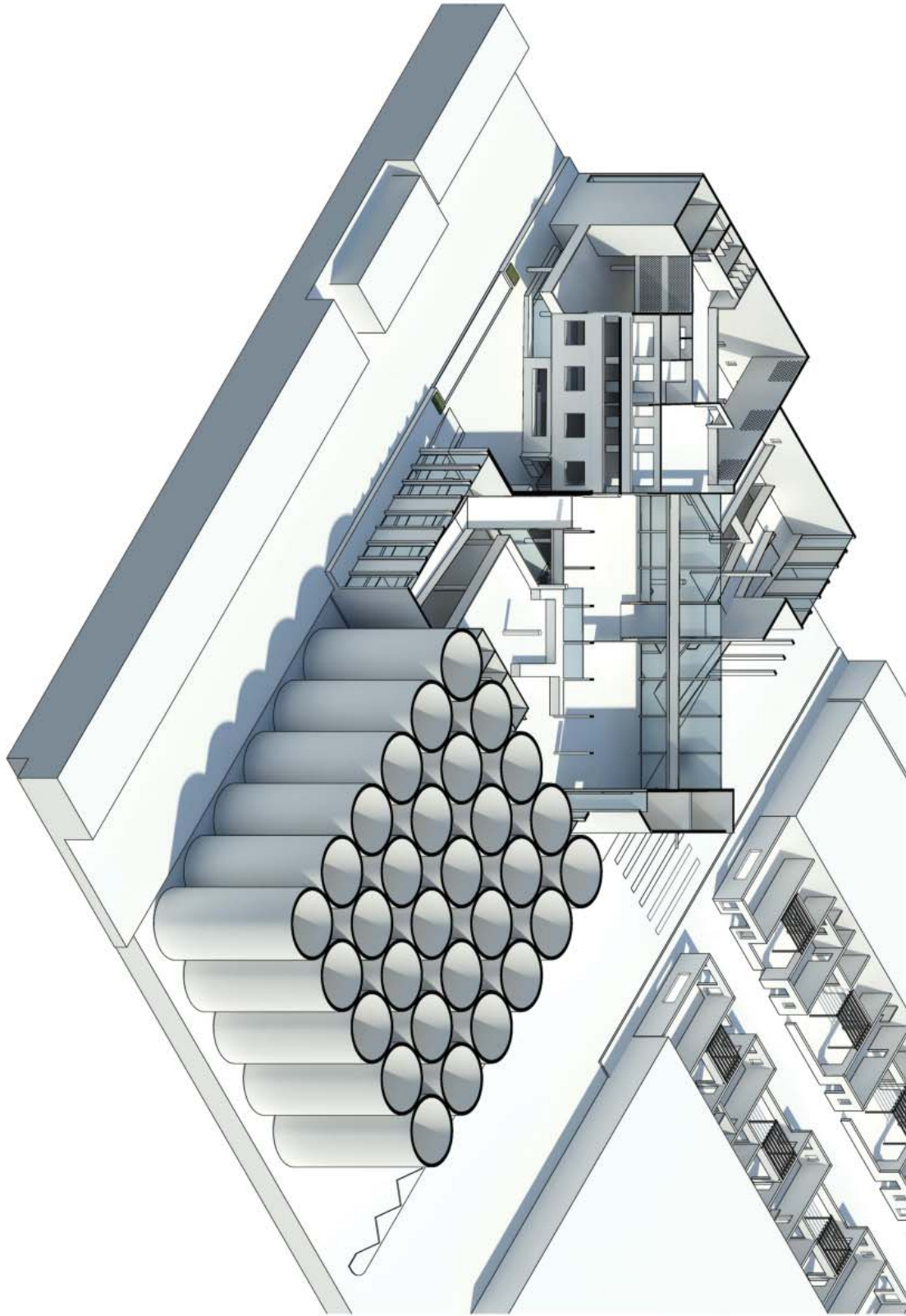
BIRDS EYE VIEW OF THE FIRST FLOOR



BIRDS EYE VIEW OF GROUND FLOOR LOOKING SOUTH WEST



WORMS EYE VIEW OF NORTHERN EDGE



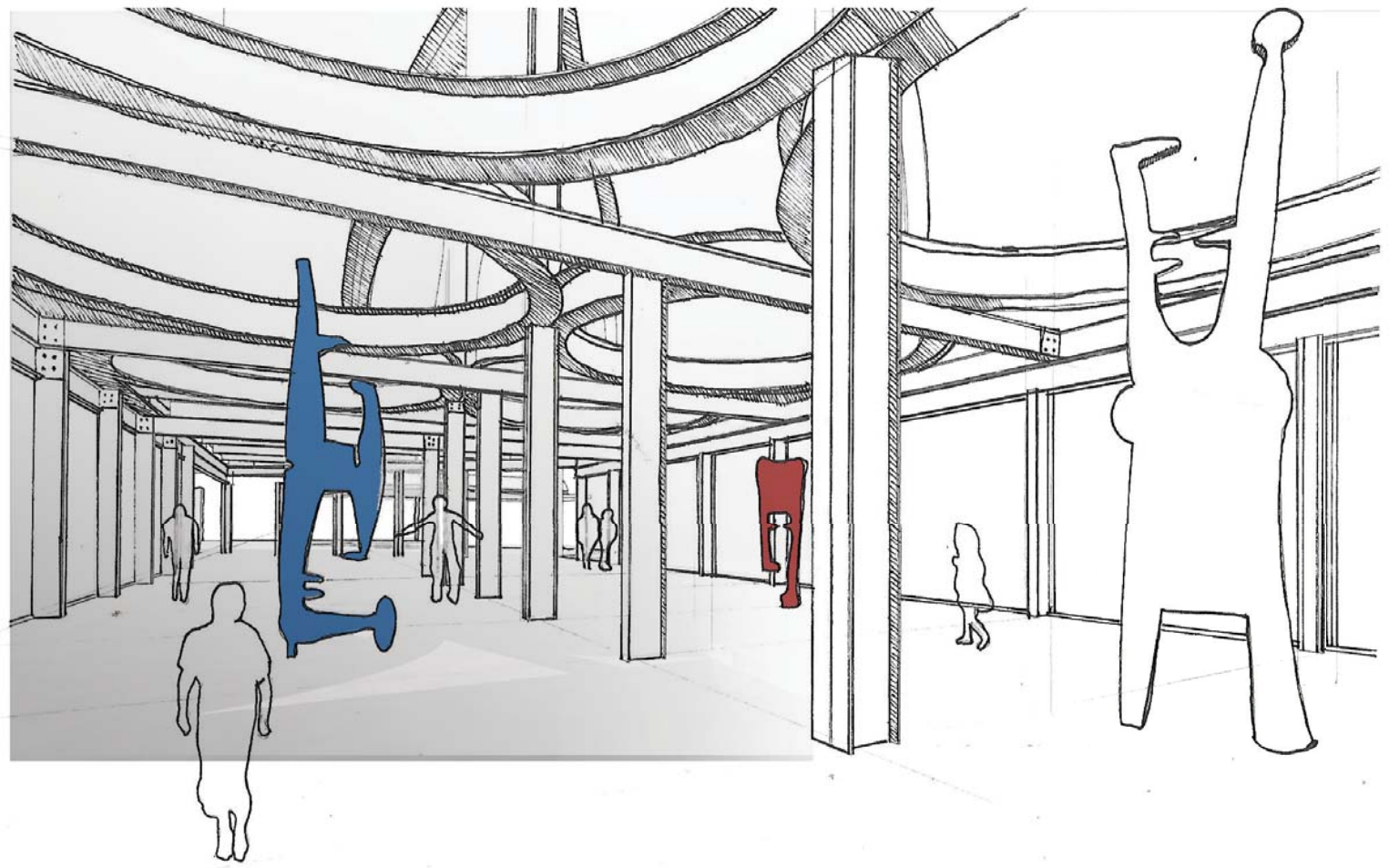
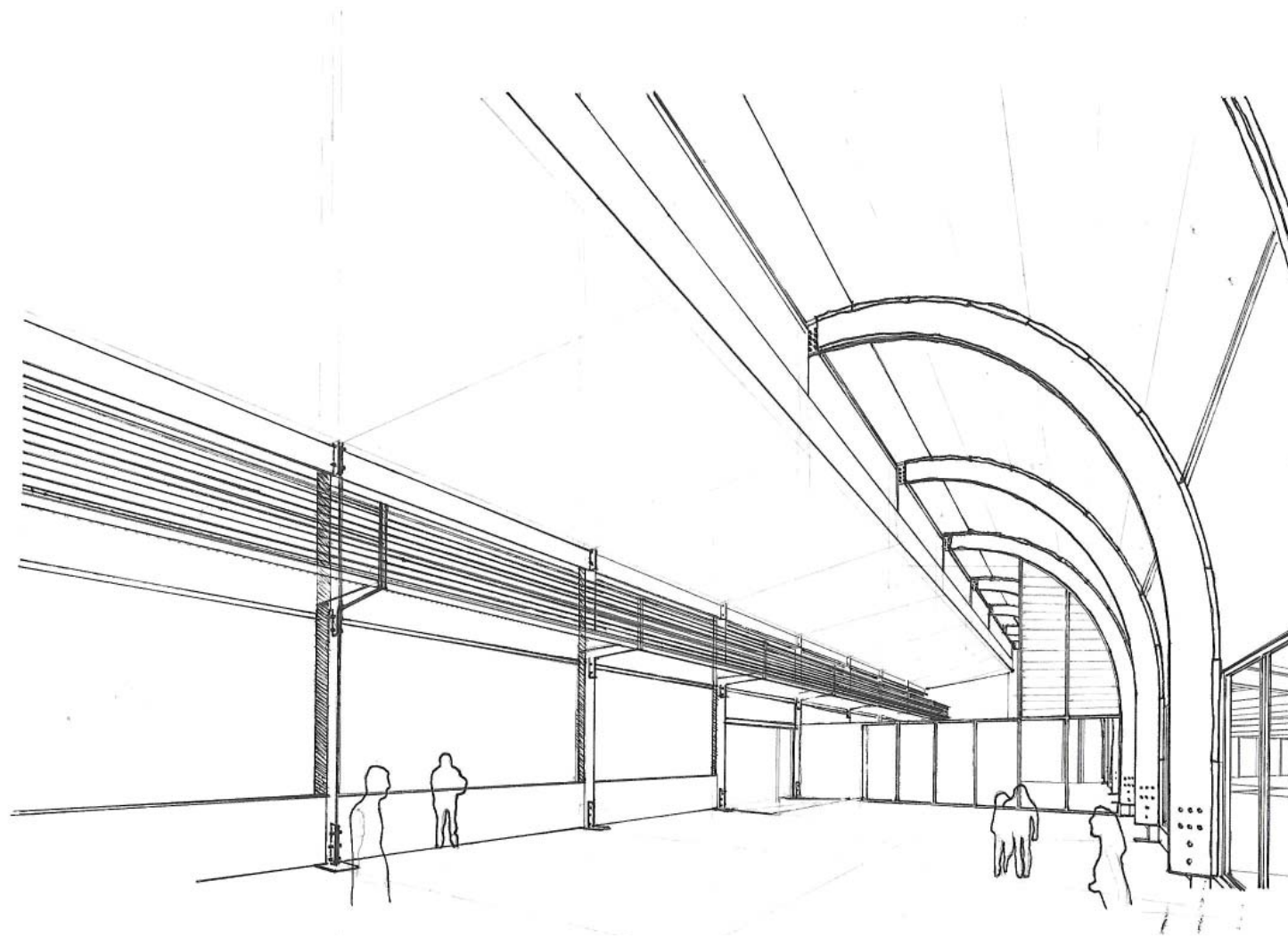
BIRDS EYE VIEW OD THIRD FLOOR LOOKING EAST WESTWARDS



EXTERNAL PERSPECTIVE THE APPROACH FROM NORTH SIDING



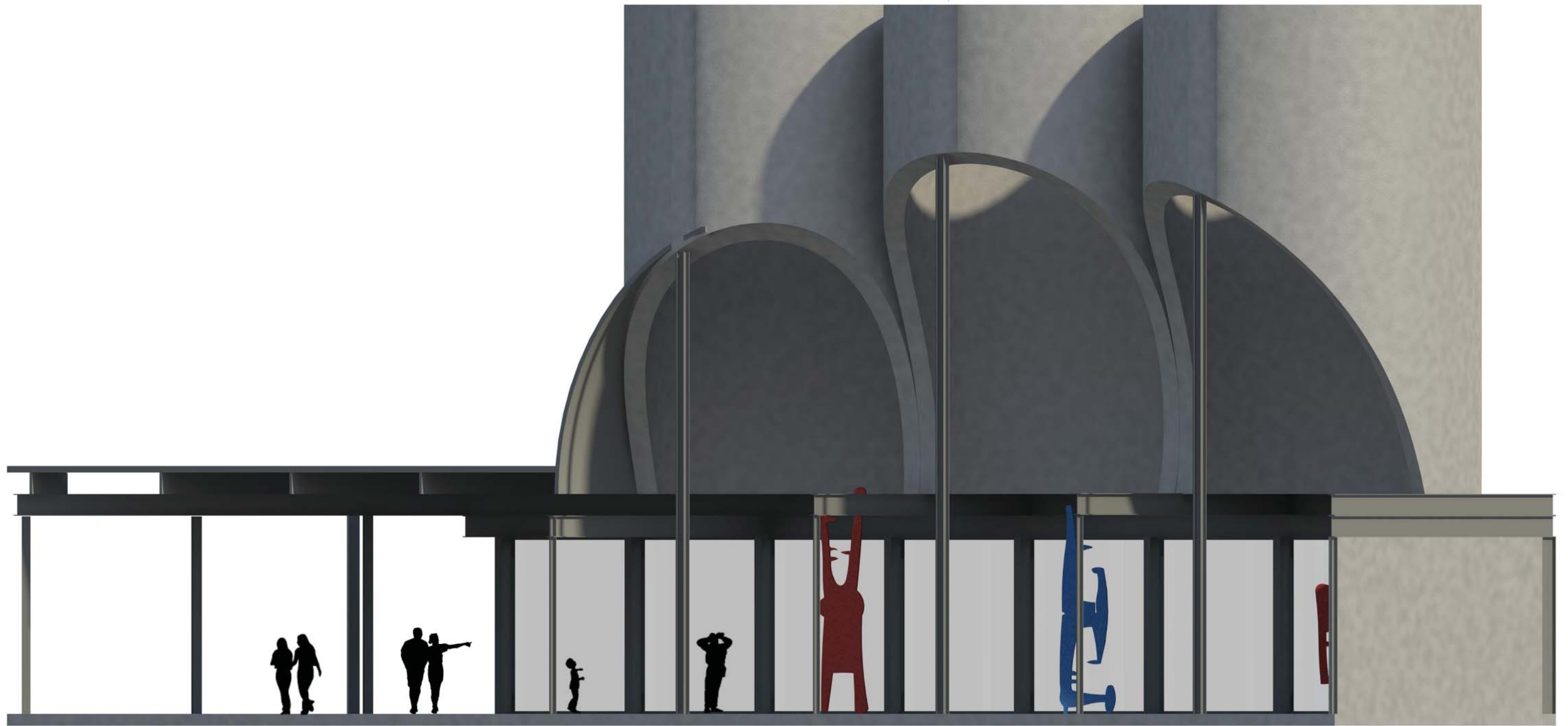
EXTERNAL PERSPECTIVE APPROACH FROM GWI GWI MRWEBI STREET



INTERNAL PERSPECTIVE CENTRAL IN-BETWEEN SPACE AT RAMPS THE UPPER LANDING OF THE RAMPS (ON THE FIRST FLOOR)



INTERNAL PERSPECTIVE INSIDE THE CONNECTION TO THE GRAIN SILO'S



THREE DIMESIONAL SECTION OF THE GALLERY AND GRAIN SILO CONNECTION

REFERENCE -FULL DOCUMENT

- Barreneche, Raul A.
2003 Tropical Modern. London: Thames & Hudson.
- Batty, Michael, and Paul Longley
1994 Fractal Cities: A Geometry of Form and Function. London: Acad. Press.
- Bell, Andrew
2009 [Psyche]. University of the witwaterstrand.
- Bjarke Ingels: Advice to the Young Architects
2015. Vimeo. <https://vimeo.com/116246644>, accessed October 5, 2016.
- Blakely, Edward J., and Mary Gail Snyder
1997 Fortress America: Gated Communities in the United States. Washington, D.C: Brookings Institution Press.
- Boettger, Till
2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser.
- Borden, Iain, and Jane Rendell, eds.
2000 Intersections: Architectural Histories and Critical Theories. London ; New York: Routledge.
- Brady, Angela
2016 Guide to Localism Opportunities for Architects Part Two: Getting Community Engagement Right. RIBA. www.architecture.com.
- Bragg, Melvyn
N.d. Culture and Anarchy. The Value of Culture. <http://www.bbc.co.uk/programmes/b01phf4c>, accessed April 27, 2016.
- Cullen, Gordon
1995 The Concise Townscape. Oxford ; Boston: Butterworth-Heinemann.
- Design, Joseph Giovannini; Joseph Giovannini, A., and Architecture Writer For The Times Spring Is Working On A. Book, the Deconstructivists,” To Be Published Next
1988 BREAKING ALL THE RULES. The New York Times, June 12. <http://www.nytimes.com/1988/06/12/magazine/breaking-all-the-rules.html>, accessed September 7, 2016.
- Graaff Reineth Museum Graaff Reineth
N.d. http://www.graaffreinethmuseums.co.za/reineth_house.html, accessed May 3, 2016.
- Eggenger, Keith L.
2013 Placing Resistance: A Critique of Critical Regionalism. Journal of Architectural Education 55:4: 228–237.
- Foster, Hal, ed.
2002 The Anti-Aesthetic: Essays on Postmodern Culture. New York: New Press.
- Fransen, Hans
2006 Old Towns and Villages of the Cape: A Survey of the Origin and Development of Towns, Villages, and Hamlets at the Cape of Good Hope, with Particular Reference to Their Physical Planning and Historical Townscape. Jeppestown: Jonathan Ball Publishers.
- Fraser, Neil
2008 City of Johannesburg - Manoeuvring through the Heritage Hoops. http://www.joburg.org.za/index.php?option=com_content&id=2338&Itemid=58, accessed October 21, 2016.
- Frescura, franco
1985 Major Developments of Rural Indigenous Architecture of Southern Africa of the Post Difaquane Period. University of the witwaterstrand.
- Frontiero, wendy, and Wohl Margaret
1986 Thresholds-Landscape, City and Building Edges. M.I.T.
- Garreau, Joel
1992 Edge City: Life on the New Frontier. 1. Anchor Books ed., 6. print. New York, NY: Anchor Books.
- Gross, kim Johnson, Jeff Stone, and Julie V. Iovine
1993 Home. 1st ed. Chic Simple. New York: A.A. Knopf : Distributed by Random House.
- Hegel, Georg Wilhelm Friedrich
1998 Phenomenology of Spirit. Delhi: Motilal Banarsidass.
- Importance of Native Plants
N.d. THE NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO. <http://nativeplantsocietyneo.squarespace.com/importance-of-native-plants/>, accessed May 15, 2016.
- Jacobs, Jane
1992 The Death and Life of Great American Cities. Vintage Books ed. New York: Vintage Books.
- Johnson, Philip
1965 Whence & Whither: The Processional Element in Architecture. Perspecta 9/10: 167–178.
- Lefavre, Liane, and Alexander Tzonis
2003 Critical Regionalism: Architecture and Identity in a Globalized World. Munich: Prestel.
- Lynch, Kevin 1984 Good City Form. Cambridge, Mass: MIT Press.
2005 The Image of the City. Nachdr. Publication of the Joint Center for Urban Studies. Cambridge, Mass.: MIT PRESS.
- International Journal Volume. DESIGN PRINCIPLES AND PRACTICES: AN INTERNATIONAL JOURNAL 1(3): 17.
- Mahar-Keplinger, Lisa
1993 Grain Elevators. New York, N.Y: Princeton Architectural Press.
- Majiet, Ziyaad
2012 Impeding Efficiency. UCT.
- Mandel, Ernest
1999 Late Capitalism. 6. impr. Verso Classics, 23. London: Verso.
- Mario Botta – Philosopher Architect
2008 Design Build Network. <http://www.designbuild-network.com/features/feature1561/>, accessed June 28, 2016.
- McHarg, Ian L.
1992 Design with Nature. 25th anniversary ed. New York: Wiley.
- Mumford, Lewis
2007 The South in Architecture. Read Books.
- Newmam, Oscar
1978 Defensible Space: Crime Prevention through Urban Design. New York: Collier Books.
- Newtown trail, n. h. (2010). The history of newtown. Retrieved August 29, 2016, from newtown heritage trail: <http://www.newtown.co.za/heritage/index.php>
- Newtown trail, N. t. (2016). History. Retrieved August 29, 2016, from newtown: <http://www.newtown.co.za/content/history>
- Newtown. (2010). The history of newtown. Retrieved August 29, 2016, from New town heritage trail: <http://www.newtown.co.za/heritage/history>
- Paoletta, Adriano, and Giamila Quattrone
2007 Design Principles & Practices: An

Pearson, David
2001 New Organic Architecture: The Breaking Wave. Berkeley: University of California Press.

Puschak, Evan, dir.
2015 Atemporality: Our Relationship To History Has Changed. Entertainment. youtube.

Regional Materials: Benefits and Advantages
N.d.
<http://www.buildings.com/article-details/articleid/15165/title/regional-materials-benefits-and-advantages/viewall/true.aspx>, accessed May 14, 2016.

Ricœur, Paul
1977 History and Truth. Evanston [Ill.]: Northwestern University Press.

Rowe, Peter G.
1991 Making a Middle Landscape. Cambridge, Mass: MIT Press.

Rudofsky, Bernard
1987 Architecture without Architects: A Short Introduction to Non-Pedigreed Architecture. Albuquerque: University of New Mexico Press.

Sánchez Vidiella, Àlex, Virginia Rodríguez Cánepa, and Andrea Korniusza, eds.
2011 The Sourcebook of Contemporary Houses. 1. ed. New York, NY: Harper Design/HarperCollins.

Solomon, Robert C.
1985 In the Spirit of Hegel: A Study of G. W. F. Hegel's Phenomenology of Spirit. New York: Oxford Univ. Press.

Stellenbosch-Conservation-Strategy_Part_2.pdf
N.d. http://www.stellenboschheritage.co.za/wp-content/uploads/Stellenbosch-Conservation-Strategy_Part_2.pdf, accessed May 3, 2016.

TIME
N.d. TIME.

Velarde, MD, G Fry, and M Tveit
2007 Health Effects of Viewing Landscapes – Landscape Types in Environmental Psychology. Urban Forestry & Urban Greening 6(199–212).

Vilkka, Leena

1997 The Intrinsic Value of Nature. Amsterdam; Atlanta, GA: Rodopi.

REFERENCES -LIST OF FIGURES

Figure 1- Diagram of Edge treatment, content from: Frontiero, wendy, and Wohl Margaret diagram of edges 1986 Thresholds-Landscape, City and Building Edges. M.I.T. Page 152

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Figure 1.2 : Illustration done by author of a photograph taken by Jeremy Richards of a 19th century Old Residency House in Graaff-Reinet. Photograph citation: Jermey Richards, (2008), Stock Photo - Old Residency House in Graaff-Reinet, Eastern Cape, South Africa Historic building, built early 19th century in classical Cape style Now a museum [ONLINE]. Available at: http://www.123rf.com/stock-photo/cape_dutch_architecture.html?mediapopup=13338327 [Accessed 8 June 2016].

figure 1.3: Layering: Illustration done by author

figure 1.4: Shading: Illustration done by author

figure 1.5: illustration done by author of a photograph of Ludwig Mies van der Rohe's 1958 Seagram Building in New York .Photograph citation: N.A, (2003), Seagram Building [ONLINE]. Available at: http://www.123rf.com/stock-photo/cape_dutch_architecture.html?mediapopup=13338327 [Accessed 8 June 2016].

Figure 2-480-420 B.C, Acropolis Athens, Threshold analysis image from: Boettger, Till, 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [Page 23]

Figure 3-Figure 3- 480-420 B.C, Acropolis Athens, Photograph from: N.A, (2002), ACROPOLIS [ONLINE]. Available at: http://www.greece-athens.com/place.php?place_id=1 [Accessed 12 September 2016].

Figure 4-Phidias, Callicrates, Ictinus, 125 AD, Pantheon ,Rome, photograph citation: Federico Arborio Mella, (unknown), Pantheon [ONLINE]. Available at:<https://global.britannica.com/topic/Pantheon-building-Rome-Italy> [Accessed 8 September 2016].

Figure 5- Phidias, Callicrates, Ictinus, 125 AD, Pantheon ,Rome, Threshold analysis image from :Boettger, Till 2014 Threshold Spaces: Transitions in Architecture:

Analysis and Design Tools. Basel ; Boston: Birkhäuser. [Page 25]

Figure 6-trad. Japanese house, Image from: Boettger, Till 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [Page 29]

Figure 7:Omote Shoin, Sanboin, Kyoto traditional Japanese thresholds photograph from: unkown, (2012), Daigoji, Kyoto, Japan [ONLINE]. Available at: https://www.google.co.za/search?q=japanese+temple+in+the+rocks&espv=2&biw=1366&bih=623&source=lnms&tbm=isch&sa=X&ved=0ahUKUwJA8rXIsorPAhXsIMAKHYCKAJIQ_AUIBigB#imgsrc=_ [Accessed 12 September 2016].

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Figure 11-Martin mull , 2010, Tea party , oil on canvas Defend-able space and stewardship image citation: Martin mull , 2010, Tea party , oil [ONLINE]. Available at: <http://artillerymag.com/martin-mull-seriously/> [Accessed 12 September 2016].

Figure 12 - Nature , metal and architecture, authors own picture and design, 2016

Figure 13- Le Corbusier, 1964, carpenter centre, Site plan image from :Boettger, Till 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [page 65]

Figure 14- Le Corbusier, 1964, carpenter centre, ground floor plan image from: Le Corbusier, (1964), Plan 06 [ONLINE]. Available at: <http://www.archdaily.com/119384/ad-classics-carpenter-center-for-the-visual-arts-le-corbusier>

[Accessed 8 September 2016].

Figure 15-Le Corbusier, 1964, carpenter centre, 3-D image from: Boettger, Till, 2014, Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [page 61]

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Figure 17- Ludwig Mies van der Rohe,1968, Neure national Gallerie, Berlin, Site plan, image from: Boettger, Till 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [page 75]

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Figure 21-jean Nouvel, 1994, Fondation Cartier, Paris, 3-D, image from: (Boettger 2014) Boettger, Till , 2014 Threshold Spaces: Transitions in Architecture: Analysis and Design Tools. Basel ; Boston: Birkhäuser. [page 96]

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figure 23-Frescura, 1985, South Africa Traditional rural AmaZulu settlement pre 1925 Image from: Frescura, franco,1985 Major Developments of Rural Indigenous Architecture of Southern Africa of the Post Difaquane Period. University of the witwaterstrand.

Figure 24 - Frescura, 1985, Traditional rural entrance & Vhavenda spatial sequence Image from: Frescura,

franco 1985 Major Developments of Rural Indigenous Architecture of Southern Africa of the Post Difaquane Period. University of the witwaterstrand.

Figure 25- Norman Eaton, (1952) Reinet House, Graaff Reinet,as built plans, note the third spaces and stairs image from: Norman Eaton, (1952), As built Plans at main floor level [ONLINE]. Available at:<http://repository.up.ac.za/dspace/bitstream/handle/2263/32619/07257-02s.jpg?sequence=2&isAllowed=y>[Accessed 8 September 2016].

Figure 26 – Norman Eaton, (1952) Reinet House, Graaff Reinet , Reinet House as built section through front back and stoep, note third space ‘s and stairs image from: Norman Eaton, (1952), Detail section through front back and stoep [ONLINE]. Available at:<http://repository.up.ac.za/dspace/bitstream/handle/2263/32619/07257-03s.jpg?sequence=3&isAllowed=y>[Accessed 8 September 2016].

Figure 27- Figure 27 - Norman Eaton, (1952) Reinet House, Graaff Reinet Reinet House as built Elevations, note the gable emphasising the entrance image from : Norman Eaton, (1952), DWG p240/10 [ONLINE]. Available at:<http://repository.up.ac.za/dspace/bitstream/handle/2263/32619/07257-01s.jpg?sequence=1&isAllowed=y>[Accessed 8 September 2016].

Figure A.1: An Architectural Connection Renzo Piano, 1998, Jean-Marie Tjibaou Cultural Center, New Caledonia, detail image from: Renzo Piano, image uploaded (2004), RENZO PIANO JOINT DETAIL [ONLINE]. Available at:<http://cargocollective.com/jonnygotham/Renzo-Piano-Joint-Detail-2004> [Accessed 11 September 2016].

Figure A.2: An Architectural Connection Renzo Piano, 1998, Jean-Marie Tjibaou Cultural Center, New Caledonia, detail image from: Renzo Piano, image uploaded (2004), RENZO PIANO JOINT DETAIL [ONLINE]. Available at:<http://cargocollective.com/jonnygotham/Renzo-Piano-Joint-Detail-2004> [Accessed 11 September 2016].

Figure A.3: An Architectural Connection Santiago Calatrava , (1994) image uploaded (2012), TGV station, Lyon detail. image from: Santiago Calatrava , image uploaded (2012), TGV Lyon det ala sobr (planos) [ONLINE]. Available at:https://en.wikiarquitectura.com/index.php/File:TGV_Lyon_det_ala_sobr_via.jpg [Accessed 11 September 2016].

Figure A.4: An Architectural Connection Ludwig Meis Van Der Rohe, (1968), Chair Design image

from: Ludwig Meis Van Der Rohe, Image uploaded (2005), Chair Design Drawing By Mies Van Der Rohe [ONLINE]. Available at: <http://www.gettyimages.com/license/95777006> [Accessed 11 September 2016].

Figure A.5:An Architectural Connection leoh Ming Pei, (1984), Louvre, Paris, Detail of the top glass brackets image from: leoh Ming Pei, Image uploaded (2011), Louvre, Paris, Detail of the top glass brackets [ONLINE]. Available at:<http://facadesconfidential.blogspot.co.za/2011/10/louvre-pyramids-revisited.html> [Accessed 11 September 2016].

Figure A.6:An Architectural Connection unknown, (2012), clockwork Image from: unknown, (2012), clockwork [ONLINE]. Available at: http://liammurphy-ads4horsestudio.blogspot.co.za/2012/08/like-clockwork_3.html [Accessed 11 September 2016]. **Figure A.8: Foster and Partners , (2013), Stansted Airport [ONLINE]. Available at:**<https://za.pinterest.com/pin/103512491408143661/> [Accessed 11 September 2016].

Figure A.7: An Architectural Connection Foster and Partners , (1991), Stansted airport,Stansted Manchester, Detail. Image from: Foster and Partners ,image uploaded (2014), Stansted, Swiss Re detail. Structure node [ONLINE]. Available at:<https://za.pinterest.com/pin/103512491408143661/> [Accessed 11 September 2016].

Figure A.8: An Architectural Connection Foster and Partners , (1991), Stansted airport,Stansted Manchester, Detail. Image from: Foster and Partners , image uploaded (2014), Swiss Re detail. Structure node [ONLINE]. Available at:<https://za.pinterest.com/pin/103512491408143661/> [Accessed 11 September 2016].

Figure A.9: An Architectural Connection ,Josef Leeb, Josef Raxendorfer, Manfred Hubinger, (2013), Burner body comprising a securing system; tig welding torch comprising such a burner body US 20130134134 A1 [ONLINE]. Available at:<https://www.google.com/patents/US20130134134> [Accessed 11 September 2016].

Figure A.10: An Architectural Connection Paul Knight, 2010, Pencil on paper, Illustration of Louis Sullivan’s “the inorganic” image from: Paul Knight, 2010, Pencil on paper, Illustration of Louis Sullivan’s “the inorganic” [ONLINE]. Available at:<http://www.paullknight.com/portfolio/system-of-ornament/> [Accessed 11 September 2016].

Figure A.11: Renzo Piano, Richard Rogers and

Gianfranco Franchini, Built in (1977), POMPIDOU CENTER, paris STRUCTURE, detail image from: Renzo Piano, Richard Rogers and Gianfranco Franchini, image uploaded (2015), POMPIDOU CENTER, paris STRUCTURE, detail[ONLINE]. Available at: <https://za.pinterest.com/pin/496029346435293597/> [Accessed 11 September 2016].

Figure A.12: Jean Nouvel,built in 1987, Institut du Monde Arabe, Paris, detail of screen image from: Jean Nouvel, image uploaded (2014), Institut du Monde Arabe, Paris, detail of screen [ONLINE]. Available at:<http://image.slidesharecdn.com/hot-20climate-20double-20fa-c3-87ades-140112090035-phpapp01/95/hot-climate-double-facades-a-focus-on-solar-avoidance-31-638.jpg?cb=1389518357>[Accessed 11 September 2016].

Figure A.13: Renzo Piano, Richard Rogers and Gianfranco Franchini, built in 1977, POMPIDOU CENTER, paris STRUCTURE, Detail image from: Renzo Piano, Richard Rogers and Gianfranco Franchini, image uploaded (2015), POMPIDOU CENTER, paris STRUCTURE [ONLINE]. Available at: <https://za.pinterest.com/pin/496029346435293597/> [Accessed 11 September 2016].

Figure A. 14: Renzo Piano, Richard Rogers and Gianfranco Franchini,Built in (1998) , essins - Jean-Marie Tjibaou Cultural Center , Tjibaou , Detail image from: Renzo Piano, Richard Rogers and Gianfranco Franchini,image uploaded in (2015), essins - Jean-Marie Tjibaou Cultural Center[ONLINE]. Available at:<https://za.pinterest.com/pin/573364596291192827/> [Accessed 11 September 2016]

FigureA.15: Renzo Piano, Richard Rogers and Gianfranco Franchini,Built in (1998) , essins - Jean-Marie Tjibaou Cultural Center , Tjibaou , Detail image from: Renzo Piano, (2014), essins - Jean-Marie Tjibaou Cultural Center [ONLINE]. Available at:<https://za.pinterest.com/pin/344173596495892899/> [Accessed 11 September 2016].

Figure A.16: Nicholas Grimshaw & Partners, (2000), Eden Project, St Blazey, detail (2016) image from: Nicholas Grimshaw & Partners, (2016), eden project details [ONLINE]. Available at:<https://za.pinterest.com/pin/367887863291188280/> [Accessed 11 September 2016].

Figure A.17: unknown, (2015), 1873 architectural drawing of St. Pancras Railway Station [ONLINE]. Available at:<https://za.pinterest.com/pin/292734044505155468/> [Accessed 11 September 2016].

Figure A.18: Isambard Kingdom Brunnel, (2012), To the roof of Paddington Station [ONLINE]. Available at:<http://www.sophieontrack.com/the-shiny-new-network-rail-picture-archive/> [Accessed 11 September 2016].