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PISTONS, PIN-UPS & FISTICUFFS

A GRAPHIC NARRATIVE EXPLORATION
OF ARCHITECTURAL DESIGN.

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requirements for the degree
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PREAMBLE

This investigation forms part of a volume of five books. These are:

BOOK 1 – Hard-boiled Wonderland

by Johann Böhmer, Norbert Koch, Nina Steenkamp and Lewis Wolf

BOOK 2 – Treadmill

by Johann Böhmer

BOOK 3 – Memory and the Wasteland

by Norbert Koch

BOOK 4 – Mediating-Occupying the In-between

by Nina Steenkamp

BOOK 5 – PISTONS, PIN-UPS & FISTICUFFS

by Lewis Wolf

THE SET-UP

The author has always had a keen interest in drawing as well as certain artists' ability to depict emotion, the subconscious and mental images visually.

This dissertation explores relationships between architecture and drawing. It attempts to convey both the experiential effects and the nature of designed space, qualities that may not necessarily be quantifiable. It entails also an effort to derive, inspire and explain design through drawing- a journey and exploration of drawing and making in architectural design.

The book takes the form of a narrative document, a clarified design diary of the authors 2012 MArch[Prof] year. It follows the progression and process, design development and experiments that resulted in the final design.

The architectural response is developed through a graphic narrative that makes use of cinematic techniques, ultimately those of graphic novels and comics.

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OPENING

BACKGROUND

The project plays out here in the Tshwane metropole, on the fringe of the City of Pretoria, in the industrial area of Pretoria West.

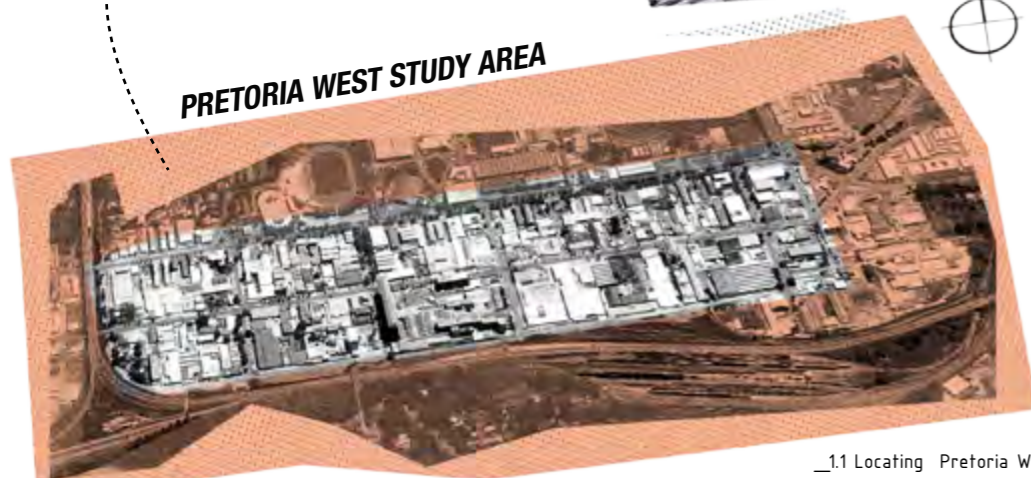
The relation between architectural design and its development through drawing and image-making is explored.

The design project's possibilities within the peripheral condition could lead to a rich and layered urbanism.

The site was discovered first; a neglected, semi-abandoned mill...



PRETORIA WEST STUDY AREA



_1.1 Locating Pretoria West.



_1.2 The Mill 02.

INFORMING ISSUE

| WHY_ VISION

The main problem lies in the industrial edge condition's inability to sustain a rich urbanity. It is a mono-functional area dominated by the automotive industry. There is a certain faithlessness and negative stigma that prevails regarding the future of the area. Probable future outcomes may include urban degeneration and progressive regression.

Urban analysis reveals the study area to be a liminal space. It is in-between, without fixes or certainty. Unburdened by the weight of history, and '...an exemplar of; rotten capitalism and human agency' [Webster. 2012], it is 'post-culture', experiencing an identity crisis and a lack of community.

The study area is in limbo, neither here nor there, with a population disconnected from the site; it is a non-place.

The area's liminal nature however makes it fertile-poised for reintegration and regeneration. Therefore the sub-problem that the author aims to focus on is the lack of vision for the development of the area.

As a response to the current mono-functional nature of the area, the project offers a vision of a **multifunctional** precinct.

The dissertation explores the process of design through 'making', and specifically drawing. Hand drawings and physical model making are used in order to see whether the direct haptic link between the designer and the design process can allow for an existential and embodied architectural response.

As part of this attempt, the project uses a developed story line [an invented reality] in the form of a short graphic '**pulp**' novel in order to inspire and design a culturally specific architecture.

Ultimately, the goal is to define and develop a tectonic architecture, conceptually born out of a narrative study that is based on an exercise in imagining a South African public.



1.3 The blue book, pulp fiction literature from the 1930's.

1 Pulp originally referred to the cheap paper on which this style of literature was printed. It came, however, to define a kind of escapist literature, '**pulp fiction**'. Themes include adventure, horror, mystery and romance.

| 4 W's

| WHEN_ NEXT WEEK

In the HARDBOILED WONDERLAND study [Book 1 appendix] the authors project a timeline of possible development from a point of liminality to a time of certainty (Image 2.10). This evolution of place is a process consisting of three strands or phases, these being *Agency*, *Commodity*, and *Civil Society*.

Civil society is reached via the stepping stones of agency and consumerism, ideally by skipping the second step altogether. The reality is, however, that civil society contains elements of each phase.

This project looks at a time when the elements of agency develop and the enduring character of place [as it can be determined currently] are evolved and intensified: the *first step* in the process.

| WHAT_ DO IT YOURSELF

There are several programmes that correspond to the existing context and the predicted multifunctional precinct. The type of programme is defined by the *strand of individual*. Their sense of self and connection to the act and activity is a common thread.

There is a do it yourself mentality, within which the programme and its character is lived, linked and inspired by its 'owners'.

The combination of programmes includes an independent motorcycle workshop, a boxing club and accommodation, each involving public aspects, events, and private elements.

| WHO_ THE BRAVE AND RECKLESS

The various narratives follow the aspirations of pioneers; the courageous and resolute. Characters emerge and linger in the first phase of evolution and reintegration, anticipating the development of a rich urbanism.

The narrative portrays an imagined civic society to which the architecture will respond- an architecture that explores what the public realm could be.

This *strand of individual* epitomises the actor of human agency's need to claim space and make it their own, ultimately developing a sense of community and of public interface that allows for a sustainable urbanity.

These actors are the live-in mechanics, eccentric artists, bar-keepers, bare-knuckle fighters, and hard-knock journalists.

| WHERE_ 'THE MILL'

The 'abandoned', mostly unused and forgotten space at 145 Carl Street belonged to the old Pretoria West Milling Company.

The site is inhabited by several structures that make for an interesting microcosm of the larger study area, and offer an inspiring platform for the possible future evolution of its context and the redevelopment of existing fabric.

The site's industrial typology, true nature and value go unseen, unnoticed and may be lost in time.

An exclusively mono-functional industrial complex, the Mill was chosen as a platform from which several projects could serve as visions for a dynamic and multi-functional precinct.

[0.005]

METHODOLOGY



PRECEDENT + PROCESS

Previous projects/works that make use of graphic studies and narrative processes are reviewed. Realised works dealing with existing built fabric are also studied. A conscious effort to develop and understand the process and techniques of hand drawing and representation are practiced throughout the project.



APPLIED UNDERSTANDING

The various aspects of the design are understood through the methods of research, observation, and engagement. This internalised understanding is then applied by the designer through a graphic narrative exploration that results in the development of the final design.

OBSERVATION + ENGAGEMENT

Considerable time is spent within the area, attempting various approaches to engage with the context.

Alternative mapping and contextual analysis methods are undertaken in order to better grasp and distill its essence.

Site excursions, including drawing and photography sessions, are undertaken, and found-object models made.

Engagement with the specified programmes is undertaken. This includes time spent in motorcycle workshops, showrooms and boxing clubs.



_14 Methodology.



descriptive

applied

The dissertation follows *descriptive* and *applied* research methods.





HARD-BOILED WONDERLAND

CONTEXT

The Pretoria West industrial area lies between the City of Pretoria and residential areas and communities that are fast becoming cities in their own right.

Hard-boiled Wonderland is a group study and framework for the area within which the authors' chosen site, 'the Mill', is located. The study makes use of alternate methods of contextual analysis and engagement with the city.

These allow for understanding that is both existential and experiential, as well as physiological and historical.

The expectation is to grasp the nature and character of the context and project this forward, informing the individual design responses.

The analysis includes a spatial development plan, designed urban public spaces [allowing for events], and a manifesto for an Urban and Architectural approach.



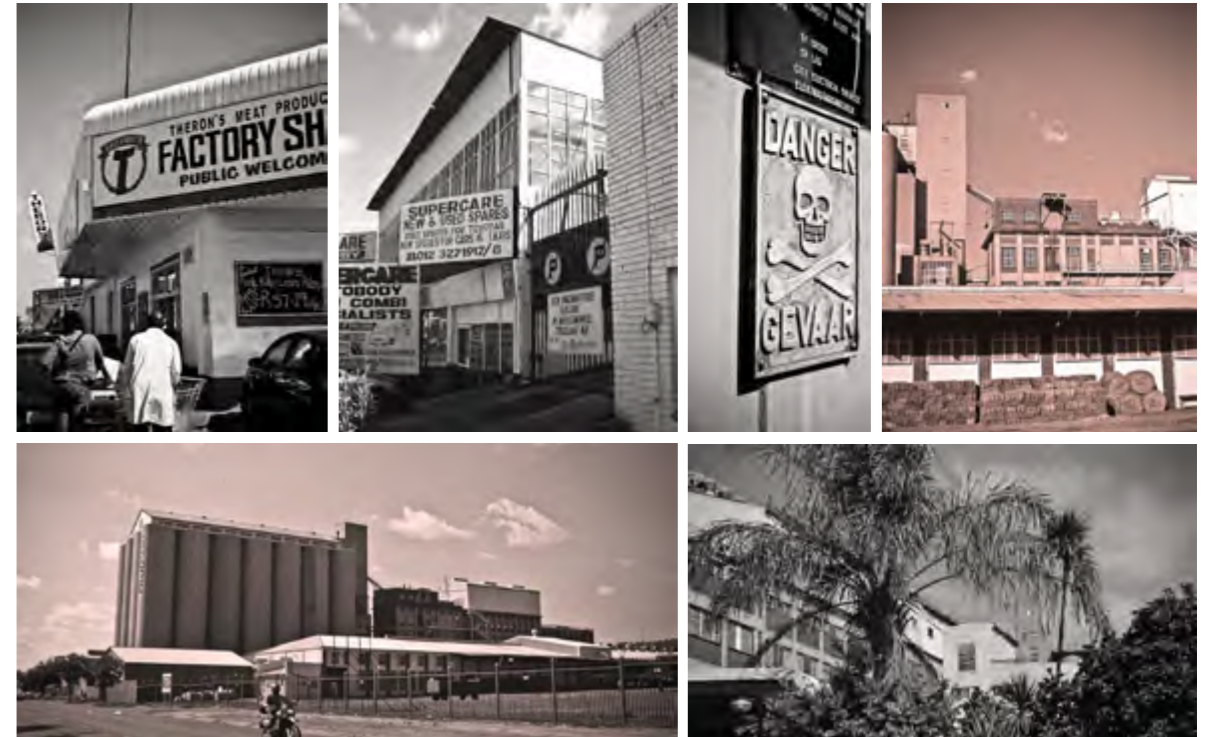
0 1 KM



_2.2 Locating the Mill.

_ CONTEXTUAL CONSCIOUSNESS

Photographs portray the language of context in and off Mitchell street.



_2.3 Photographic study of the surrounding area and visual language of the site.

During the process of engaging with the area - 7 *snoops* [based on the seven walks, as discussed in Raoul Bunschoten's *URBAN FLOATSAM*] were undertaken, after which the authors were able to better understand the *characters* of the area, as well as gain a consciousness of the context and how it currently operates.



_2.4 Sketches, observations & encounters along Mitchell street.

_ IMPRESSIONS

The site - *145 Carl Street* - originally the *Pretoria West Flour Milling Company*, was chosen before an architectural response was considered. All that was decided on prior to its discovery was a willingness to work within an industrial edge condition.

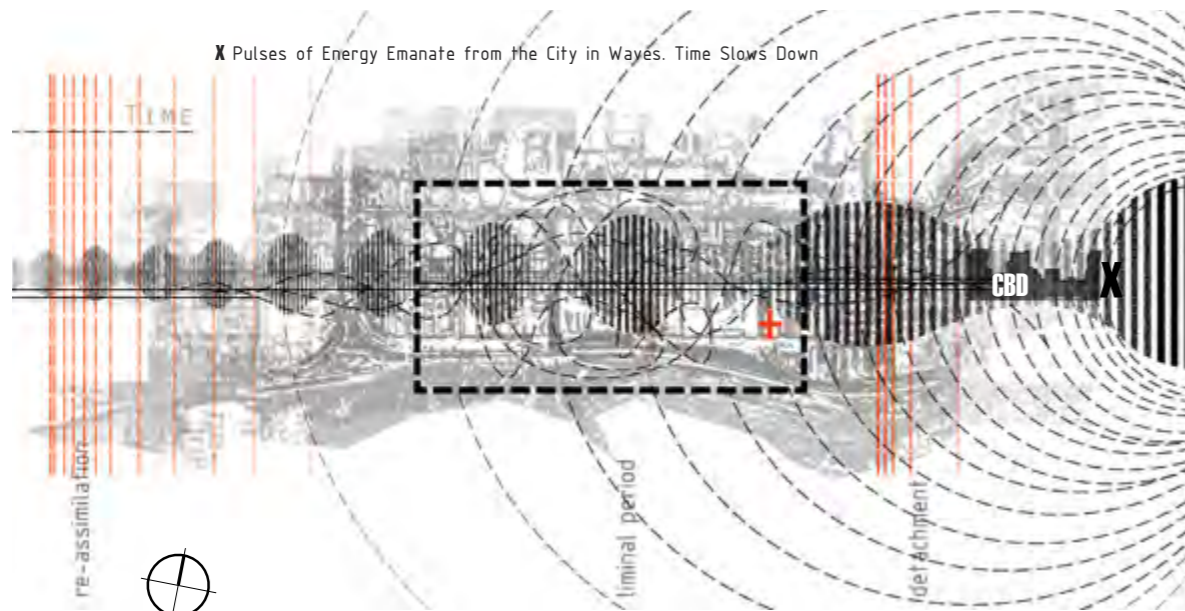


_2.5 Photographic study of the structures and spaces on the site.

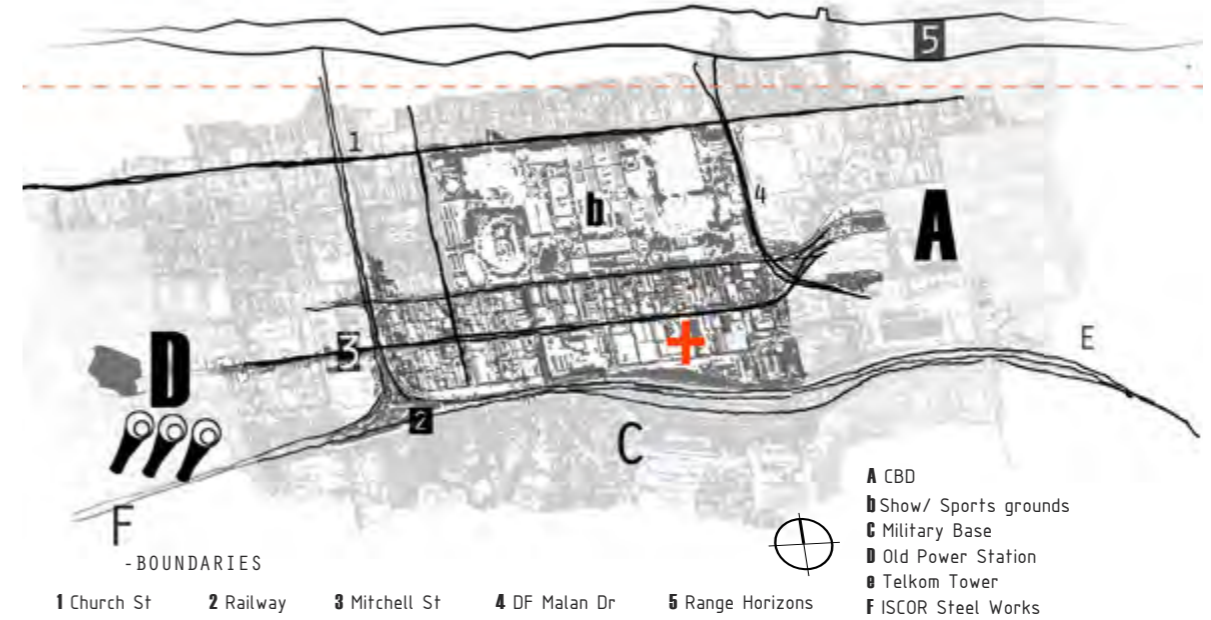


_2.7 The Snitch.

Several observations that were made were confirmed while exploring the study area with *the snitch* [anthropologist Dennis Edward Webster]. The diagram below illustrates how the area was experienced as a liminal space, lost in time and history. The diagram on the right illustrates certainties or fixes that surround the study area. The bottom right image shows the dominance of automotive and light industrial processes in the immediate context.

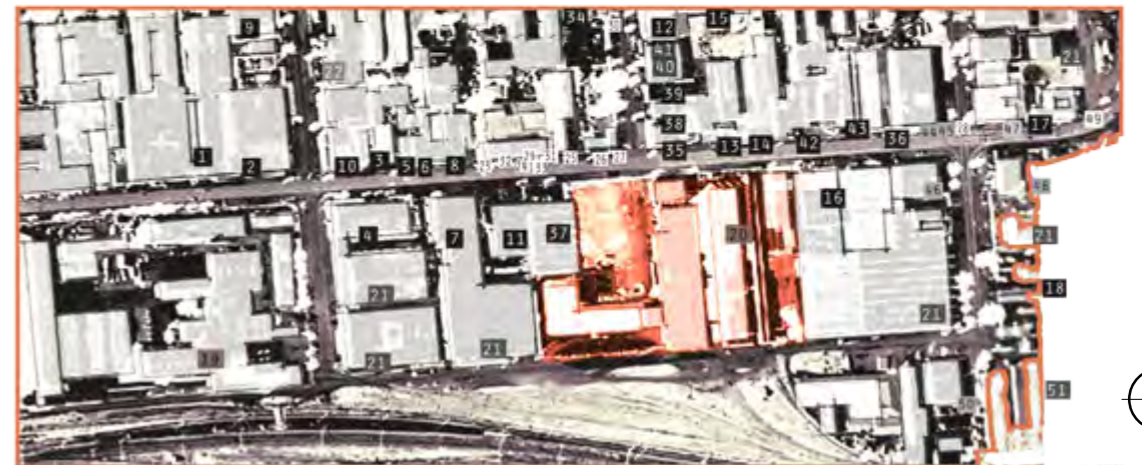


_2.6 Pulses of the city/ Liminal Zone.



_2.8 Certainties and Fixes.

- | | | |
|-------------------------------------|------------------------------------|------------------------------|
| 1. Enzo Panelbeaters | 23. Sodha's Canteen | 39. TV and VCR Repairs |
| 2. Propshaft Pros | 24. Seasonal Trading Store | 40. Book Binders |
| 3. Pretoria Plastic & Bumper Repair | 25. Tobu Trading Shop | 41. Wool Mart wool suppliers |
| 4. Supercare Autobody | 26. Smackeroos Pub | 42. Hudson Rubber |
| 5. Maxiprest Tyres | 27. Smackeroos Fast Food | 43. Rubber Rite |
| 6. Balco Auto Coatings | 28. Kaysies Corner Café | 44. Betting Store |
| 7. Seoul Korean Motor Repairs | 29. Cleaning Chemicals | 45. Cash Loans |
| 8. Honda | 30. Super-Fit Paraffin Distributor | 46. Cellular Price Busters |
| 9. Intercity Paint and Panel | 31. Nigerian Church | 47. Cakery Bakery |
| 10. Autozone | 32. Cash and Carry | 48. Military Surplus Store |
| 11. Korean Motor Spares | 33. Cash 4 Scrap | 49. Western Barrel Hotel |
| 12. E-M Auto Services | 34. Paragon West Electrical | 50. Hoxies Foods |
| 13. Ruto Mills Food Corp | 35. Passeri Power Tool | 51. Municipal Waste |
| 14. Produre | 36. Scroos | |
| 15. Storage | 37. Metrackark | |
| 16. Clyde Ingeneurswese | 38. Inxon Printing | |
| 17. Pro- Beat Autobody | | |
| 18. Jocks Autobody | | |
| 19. Mks Autobody | | |
| 20. Oino Panelbeaters | | |
| 21. Olanne Panelbeaters | | |
| 22. One Stop Auto | | |



_2.9 Precinct Processes.

The table shows the possible development of the area from a point of liminality to one of certainty. This project looks at a time at which the elements of agency start develop.

0 LIMINAL [current]	1 HUMAN AGENCY	2 COMMODIFICATION	0 CIVIL SOCIETY + PUBLIC LIFE
+ Factory industry	+ Craftsmanship	+ Mass production	+ Public factories
+ Limited accommodation	+ Small apartments + Warehouse lofts + Hotel	+ Holiday Inn + Estates + Cluster houses	+ Family row houses + Bigger apartments
+ Private security + No public surveillance	+ Community vigilance	+ ADT + Cameras	+ Police
+ Cafeteria + Cornershop + Convenience store	+ Coffee shops + deli + Bookstores	+ Seattle coffee + Woolworths	+ Library + Restaurants
+ Bottle store + Shebeen	+ Underground bars + Jazz, Kwaito, Metal, Rock, House	+ FTV clubs + MK/MTV	+ Event + Beer hall
+ TV	+ Bioscope + drive In + Theatre	+ Ster Kinekor	+ Touchies + Frisbee + Boxing + Wrestling
+ Car + Taxi + Train + Walk + Bicycle	+ Car + Taxi + Train + Walk + Bicycle	+ Private cars	+ Public transport + BRT + Gautrain + Bicycle
+ Vinyl stickering + Spray jobs + Tattoos + Graffiti + Car customizing	+ Canvas + Design + Album art + Tattoos + Graffiti + Sculpture	+ Arts? + Authenticity?	+ Public gallery + Design Indaba + Museum
+ Sidewalk	+ Small parks + Square	+ Parking lots	+ Event spaces + Parks

_2.10 Strands of development.

URBAN PROGRAMMING

_ PUBLIC EVENT SPACE

Three *Urban Public Spaces* are planned for the area. These are based on a gathered understanding of currently uncelebrated events and occurrences.



_2.11 Kaskar Resies Dag.

The *Racecourse Promenade* recognises the historically located racecourse within the showgrounds creating a town promenade. ①

An overwhelming number of pigeons frequent Carl street, as it used to transport grain. **Asylum Park** encourages and maintains this by creating a green refuge and scheduled feeding event.



_2.12 Asylum Park Temporal Landmark.



_2.13 Locating Urban event space.

Morabaraba is a game played locally. The 'board' is printed on the back of grain sacks, and the name is derived from the Southern Sotho *moraba-raba*, meaning 'mill'. [Wikipedia].

Moraba Square [below & bottom left] The envisioned dual nature of the area is exemplified by nocturnal activity. The public square and surrounding building functions accommodate social, residential, and commercial activities.



_2.14 Approach to Moraba Square. ③



_2.15 Glowing faces play the game.

PISTONS.PINSTripES.FISTICUFFS

3

This chapter explains, the choice of programme and the existing structure. It includes a statement of heritage significance and precedent for the reuse of old structures.

The programmatic response is not predefined but rather 'born of' the current context and a predicted future condition. This project has three programmes.

PINSTripES

[Accommodation/ Dwelling]

One issue the *existential detectives* [Hardboiled Wonderland] identified within the study area was the notable lack of accommodation/ dwelling . In an effort to develop a mixed urbanism [outside of the *mono functional 8am- 5pm current situation*], the project introduces a possibility of one such dwelling type: short to medium term lease apartments. The dwelling type is transient, an in-between space in flux, and signifies different types of space as well as movement.



__3.1 The Temptress.
 Painting by Jack Vettriano.

PISTONS

[Independent motorcycle workshop and showroom]

The idea of the motorcycle workshop is drawn directly from the immediate context: mechanics, automotive workshops and light industrial processes abound in the precinct.

The craft of purpose building motorcycles, as well as the restoration and reinvention of vintage cycles, is currently a growing international and local trend. The programme is a response to the loss of craft, and of the connection between the user and the end product. Similar craft oriented [artisan mechanical] programming is being designed for within the *145 Carl Street Mill complex*.

Events, processes and spaces related to the construction, servicing and sales of motorcycles will be one aspect of the programme. Motorcycles and the culture of riding as a spectacle is the other aspect addressed.

The programme includes the rituals and related events of motorcycling.



__3.2 The Bullet. By Falcon Motorcycles.

FISTICUFFS

[Boxing gym/ Illicit bare-knuckle fight nights]

South Africa has a rich and extensive history in terms of boxing. An egalitarian sport, boxing crosses both social and racial boundaries. Its beginnings on these soils are rooted in bare-knuckle prize fighting before the turn of the last century. Boxing has also played a significant role in the country's sporting, historical, and political development.

A boxing gymnasium in the precinct would add another aspect/ dimension of activity to Pretoria West. The area is projected to be a developing community. Boxing encourages local camaraderie and attracts outside interest. As an activity, the programme allows for spectatorship and becomes its own event. Constituents include a small-scale arena, gymnasium, and related requirements.



__3.3 Kallie Knoetze.



__3.4 Peter Mathebula.

THE EXISTING FABRIC

STATEMENT OF HERITAGE SIGNIFICANCE

THE OLD PRETORIA WEST MILLING COMPANY COMPLEX

[1914-?] [ALTERATIONS 1971-1989]

ORIGINAL ARCHITECTS: UNKNOWN

ARCHITECTS OF ADDITIONS/ ALTERATIONS: JOHANN SMITH
 145 CARL STREET, ERF 1955, PRETORIA WEST,
 CITY OF TSHWANE.

The mill complex comprises a large main mill building, twenty four silos, storage warehouses, and outlying related smaller structures. Parts of the main mill structure may have been built as early as 1914, according to the United Transvaal Directory. Although mostly disused today, the main structures play a key role as a landmark within the industrial precinct of Pretoria West.

The layered agglomeration of built structures across the milling complex have varying degrees of heritage significance.

In terms of a heritage assessment of those parts of the complex that are not older than 60 years and thus not covered by the National Heritage Resources Act [South Africa, 1999], referral to the Burra Charter [ICOMOS Australia, 1999] should be made.

As a typology, the main concrete-framed and brick infilled buildings express the industrialisation and modernisation of Pretoria.

The spaces created within and between the built fabric over time – through *practical and honest* industrial process driven requirements – have acquired a certain beauty and architectural significance.

The majority of machinery and services have all but been removed, and the complex is no longer functioning as a mill.

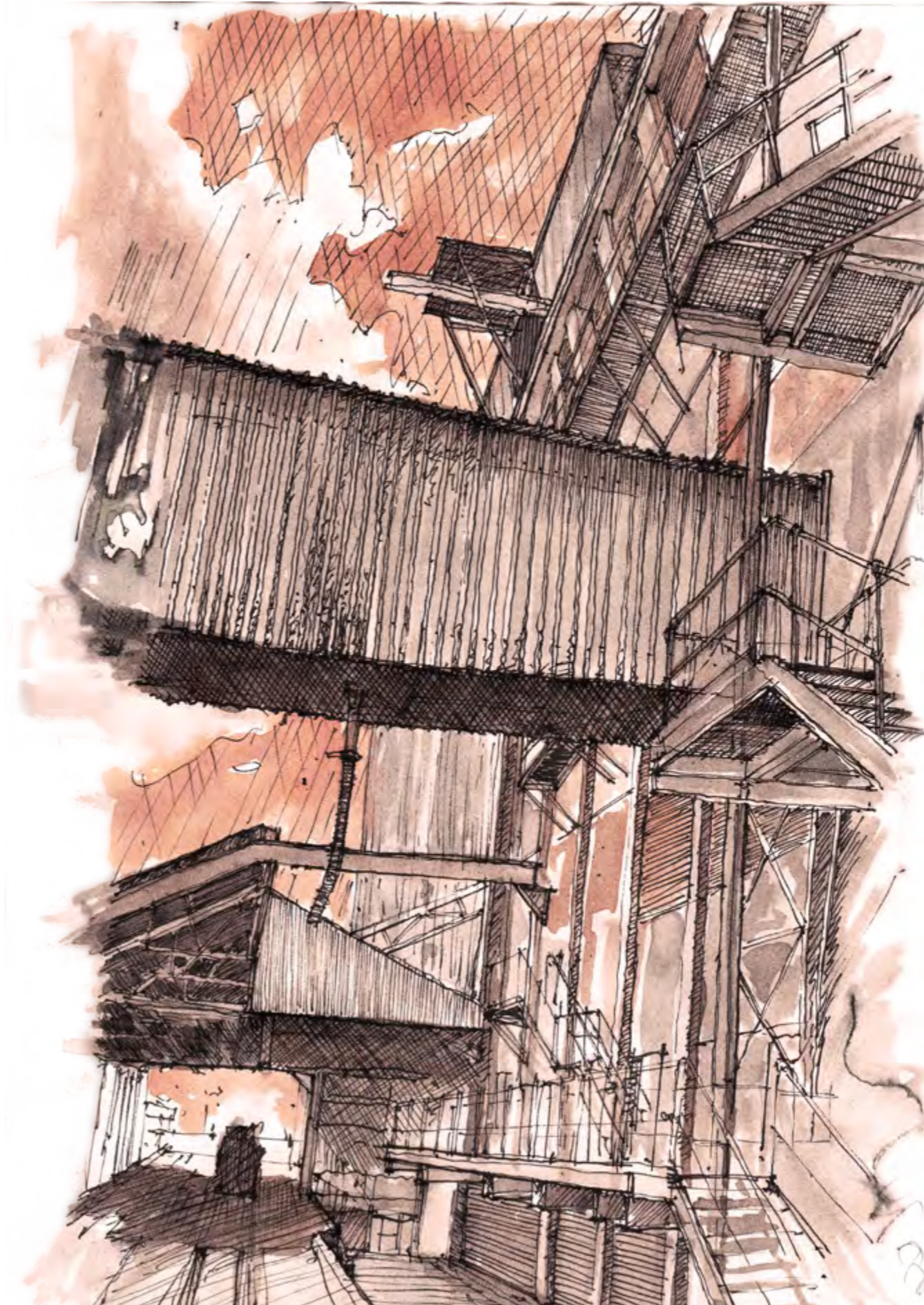
The heritage value however does not lie in the *mono-functional* nature of mill complex, but in the *language* of the structures themselves, the spaces defined through the necessary production processes, as well as in the materiality and the expression of structure.

CONCLUSION

The Mill complex at 145 Carl Street, Pretoria West is significant as an icon of a bygone era.

In terms of presence, the spaces created by related structures have a sense of place unique to the complex. The principal structures are equally important due to their language, expression of construction, structure and materiality. They should thus also be respected as much as possible.

A conservative approach to redevelopment of the site should be taken, whereby significance is maintained through reinterpretation and reuse of the existing.



| ATTITUDE TOWARDS THE EXISTING

The existing *structures* and their use of *materials* in construction are principally significant. New additions and alterations will be interpretations of what has previously been altered or added to the original structures. As a result the memory of growth within the complex of buildings on the site will be respected.

The primary structure is concrete framed with brick infill; additions are steel framed with profile sheet cladding. As the designed intention is to make additions, steel framed structures will be used while respecting the original concrete structures and

material expression. Where material is taken away, the change should be made obvious. New materials should read as new- as interpretations of the existing additions as the building currently stands. Materials [e.g. timber flooring] should be reused if possible.

All new construction should be *attached to*, *placed within* or *fixed around* the original structure. Where part of the structure is removed, a suitable alternative, based on this approach, should replace it.



PRECEDENT

| MILL CITY MUSEUM

[Meyer, Scherer & Rockcastle]

The building that currently houses the *Mill City Museum* complex in Minneapolis, was built in 1874. The headquarters of General Mills [on the banks of the Mississippi] provides a perfect precedent of existing fabric that has been reinvented.

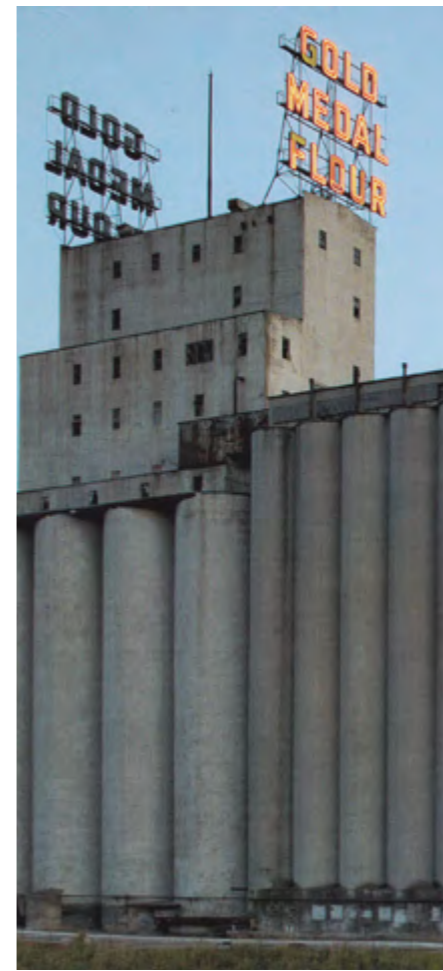
The Mill was declared a site of national interest in 1980. The building had been disused from 1965 and its interior was destroyed in a fire in 1991.

An independent space of glass and steel, the museum is integrated into the remains of the complex.

The project includes the conversion of the factory's old administrative office into shops, small offices and lofts, as well as the reconversion of the silos.

The architects used the project as a connection between the river and the city by adding various access points and walkways.

[PAREDES. 2006]



| 24 ALBERT STREET

[Noero Wolff Architects]

A local example of reuse within existing fabric, the building, originally a warehouse built in 1901, is on the foreshore in Cape Town's city bowl.

Jo Noero [2012] states that the original building consisted of an exterior load-bearing facade, an internal brick firewall and a five-storey, load bearing timber structure.

The mansard roof as well as the dysfunctional stairs and elevators were removed and a new service core added. Contained within the service core are ablutions, vertical ducting, fire escapes and an elevator.

The steel structure is supported both by the exterior walls and timber structure below.

The exterior zinc sheeting reads as a taut skin with punctures [flush windows with minimal frames], vertical glazing protrudes as bay windows.

The new addition was treated as a giant hat fitted on top of the old brick structure.

The window pattern is an interpretation of the old. The importance of the brick base is maintained, with neither the modern nor the historic given a dominating position.



_3.8 24 Albert Street.

DRAWING PICTURES

This chapter investigates the relationship between drawing and architecture, i.e drawing as a design tool, as it relates to imagination, intuition and creativity. Additionally, it considers the use of graphic narratives as tools for the exploration of architectural design and commentary.



DRAWING AND ARCHITECTURE

The use of hand drawing as a means of understanding, developing and describing design has been relied upon by architects since long before the introduction of either photography or computer aided design.

Drawing has its place in the generation and exploration of architectural forms. Architects such as Le Corbusier, Louis Kahn and Alvar Aalto all made use of drawing in their sketchbooks as starting points for their designs.

Drawing has always been the principal means of communicating design ideas to clients, as well as a tool to explore concept and detail. Unfortunately the use of drawings is sometimes pushed aside in favour of verbal descriptions and computer simulation. [EDWARDS, 2008: 1-3].

In his book *The Thinking Hand* Juhani Pallasmaa [2009: 82-96] writes about a seamless and unconscious collaboration between a craftsman's hands, eyes and mind as a single system of reactions and responses.

In an essay on the importance and history of drawing and architecture James Wines [2009] speaks of the role of drawing as the recorder of thought processes within its larger role of design.

Although a supporter of dual skills in graphic ability on both paper and computer, he writes that computers are to be used as tools of confirmation only once ideas have been conceived in drawings. This is based on his belief that:

By focusing exclusively on computer-generated illustration alone, something conceptually profound is forfeited in the design process... when electronic response mechanisms replace the filtration of idea development through tactile means and guiding fingertips, the fertile territory of 'subliminal accident' is lost [WINES. 2009].

These 'subliminal accidents' that Wines refers to are actions such as an unconscious squiggle at the end of a line, a smudge of charcoal, or a splattering of ink that may lead to the generation of an idea. In addition to this, the computer can never offer the calligraphic proficiency needed to draw really well, which he explains as a combination of 'aesthetic instinct and responsive rendition' [WINES, 2009].

Pallasmaa [2009: 97] writes about how our *magnificent, multi-sensory, simultaneous, and synchronous capacities of imagination* are flattened by computer imaging, and how the design process becomes a retinal journey of passive visual manipulation. He states that the computer creates a distance between creator and design, whereas with hand drawing or model making there is a direct haptic connection to the object or space.

In the article *Drawn into Space* [2008] on the relationship between Zaha Hadid's paintings and her work, Lebbeus Woods writes that Hadid's drawings are uniquely important to her idea of architecture, that they carry the entire weight of her intellectual investment, and speak volumes about her outlook.

He goes on to comment that her migration to computer drawing liberated her by making complex and unprecedented shapes possible. On the other hand, he states:

It brought an end to a certain intimacy and feel of tentative, almost hesitant expectancy in her drawings and designs that was part of the intense excitement they generated [WOODS, 2009: 33].

Although in recent years there has been a resurgence in the use of manual drawings in academic and professional practice, the loss of manual drawing skills and the meaning they once had for architects seems evident. This dissertation tries, once again, to make use of drawing as a means of exploration, inspiration, and communication within the process of design.



_4.2 Open House. Coop Himmelblau.
Collage of a plan and a sketch.



_4.3 Re-Ruined Hiroshima. Arata Isozaki. Perspective Ink and Wash.

DRAWING AND INTUITION

Juhani Pallasmaa speaks of creative work being the result of two simultaneous stimuli- the world and the self- and that every profound work is essentially a microcosmic representation of the world and an unconscious self-portrait at the same time. During the creative act, the boundary between the artist and the world becomes penetrable and allows the world to flow into the artist and the artist into the world [2009: 124].



4.4 Artist/World boundary

In *The Eyes of the Skin* [1996: 12] he writes that:

When working, both the artist and the craftsman are directly engaged with their bodies and their existential experiences, rather than focused on an external or objectified problem.

Once again, when speaking of tacit engagement with a design task, Pallasmaa writes in *The Thinking Hand* that the designer's entire personality and body become the task and that this is lived rather than understood:

...an existential exploration in which the architects professional knowledge, life experiences, ethical and aesthetic sensibilities, mind and body, eye and hand as well as his/her entire persona and existential wisdom eventually merge [2009: 109].

This synthesis of input makes design decisions difficult to explain in terms of a rationally structured argument or classical approach based on a proven hypothesis.

In his book *Zen and the Art of Motorcycle Maintenance* Robert M. Pirsig quotes Einstein on arriving at universal laws through intuition and sympathy. Einstein states that it is through phenomena that the theoretical system is determined, in spite of the fact that there is no bridge between phenomena and theoretical principles [1974: 107].

Under the section *Architecture: physical fabric or cultural phenomenon* in his book *Architecture and its interpretation* [1979: 12], Juan Pablo Bonta also discusses this in terms of a parallel understanding of architecture. This understanding is made up of scientific knowledge on the physical reality of architecture and the non-scientific conceptions of architecture. These are assumptions on the values symbolised by architecture, their significance and ideological connotations.

The distinction between what form *is* and what form *means* to any particular social group is key.

This difference between what form means, structurally, technologically, and materially in a classic, scientific sense, and what form comes to mean through non-scientific or romantic connotations is *pervaded* by our own humanity [past experiences, preconceptions, and beliefs].

This brings to light the importance of a common language in terms of communicating architectural ideas, which are often not understood by individuals without an architectural background. This is also frequently the case between what the designer is attempting to communicate [if anything] and what the critic comes to believe is being communicated [Bonta, 1979: 226- 227].

In his essay titled "New Architectural Horizons" Juhani Pallasmaa writes on the detachment of architecture from experiential, embodied, and emotive ground through over-intellectualisation. He writes about the application of theories to the field of architecture often causing more confusion than actual understanding of its specific essence. In the essay, he writes how architects should:

...design through his/her entire personality instead of manipulating preexisting knowledge or verbal rationalisations.

He also states that artistic and architectural responses are *encountered* rather than intellectually resolved and that in truly creative work, prior experience and knowledge has to be forgotten altogether [2007: 18].

Woods, when speaking of Zaha Hadid's written statements, writes:

...[these] are, frankly blandly descriptive, betraying little of her philosophy and even less of her aspiration to employ her architecture as a unifying force in the world [2008: 30].

This issue is dealt with by Pallasmaa when he writes that verbal statements by artist or architects should:

...usually not be taken at their face value, as they often merely represent a conscious surface rationalisation or defence, that may well be in sharp contradiction with deeper subconscious intentions giving the work its very life force [1996: 12].

One of the aims of this dissertation is to achieve communication of intent, concept, and experience through the medium of drawing.

| AN EXERCISE IN IMAGINING

Architecture is the art of social dialogue. It is the architect's ability to master the art of entering into dialogue with real beings, creating informed clients and spaces that are more interesting than their own ideas [DE LA PORTE, 2011].

This is an ability to imagine a 'for whom' and to constantly bridge the divide between the artisan and the spectator; it is an imaginative dialogue with the self.

The theme of the architectural response is derived through an attempt at dialogue with the imagination.

It is an embodied architecture explored through a short graphic novel where design is developed and unpacked in a parallel narrative, each explaining and enforcing the other.

DRAWING COMICS

The exploration of architectural design through the medium of a graphic novel achieves several things.

It provides a platform for direct and tactile engagement with the design through drawing, letting the character of the design and spaces emerge in a manner that is natural and free from the constraints of a completely rational design process.

It is also a means of exploring an imagined client and user in spaces that they then use and embody through actions. Thus becomes an architecture of adjectives, which is lived by the characters in the story.

It allows for the embodied and sensory experience of paper architecture to be made more possible, as it is explored through scenes.

The spaces within the drawings of a graphic novel let the creator convey his/her ideas to others - who then have a more direct means of engaging with the designer's intentions - in a visual way.

The haptic action involved in drawing these scenes, engages the designer directly - mind to paper - and enables the depiction of cultural landscapes.

Graphic narratives work in much the same way as film, as the effect of time - the forth dimension of architecture - is easily manipulated and depicted. Both film and architecture are experiential in nature. Architecture has adopted terminology taken from movie making: terms such as montage, narrative, serial vision and storyboarding. Using cinematic techniques in architecture is an approach to design a method providing a means for the investigation and exploration of design, space, structure, aesthetics, time and identity [OTS, 2011: 102].

Working in terms of a graphic narrative or comic is as much about describing, exploring and experiencing the design as it is about inspiring and developing it. The method enables a sequential understanding as well as simultaneous engagement on all of its levels.



_4.5 L'assassino. Tsutomu Nihei.

PRECEDENT

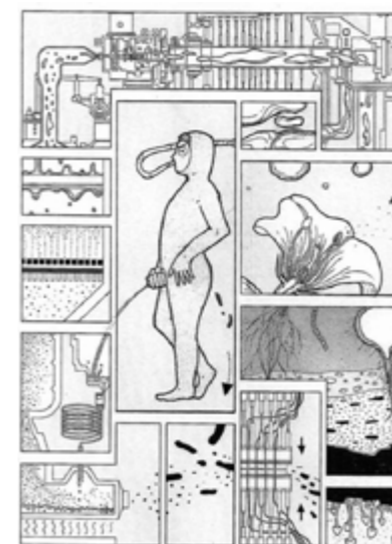
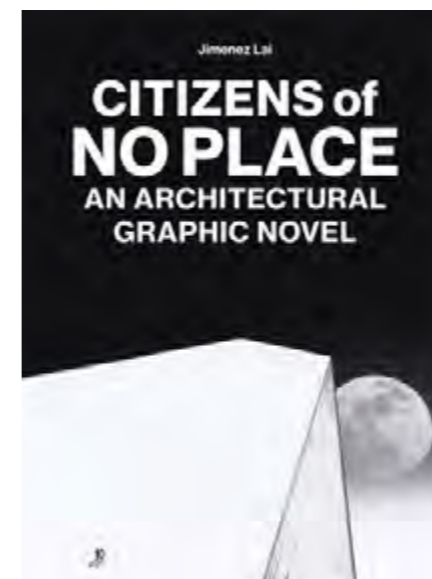
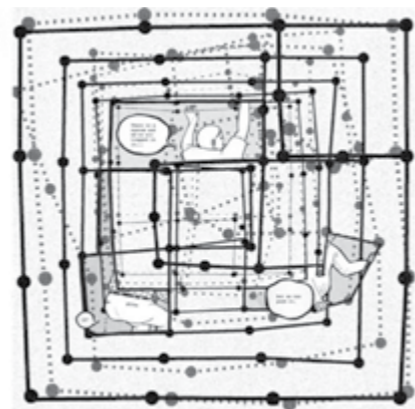
| CITIZENS OF NO PLACE

Citizens of No Place is a recent graphic novel that explores different aspects of space, architecture and urbanism.

Jimenez Lai uses a collection of comic short stories to unpack his thoughts on architecture.

The combination of manga-style storyboards coupled with architectural theory and critique is a unique approach to the language that architects use to envision and articulate their ideas.

The style makes it possible to bridge the gap between architecture and fiction, creating a new place for paper architecture [ARCHDAILY, 2012].



_4.6 Citizens of No Place. Images by Jimenez Lai.

| MR.X

Mr. X is a comic from the early eighties in which art and storyline lean heavily toward architectural commentary.

The plot features an architect fuelled by the drug *insomnalin* which enables him to function without sleep. The story follows his attempts to rectify the architecture of the *Radiant City*, his own design.

After the mysterious death of his partner, fellow architect Simon Myers, Mr. X is the only practitioner of *psychitecture*, architecture which enhances its inhabitants' well-being, but after some mistake is now causing citizens to go mad.

The basic concept has similarities to Fritz Lang's *Metropolis*, Aldous Huxley's *Brave New World* and Ayn Rand's *The Fountainhead*.

The dystopian municipality features a mixture of Art Deco and Modernist structures.

...a wonderful illustration of how one man's dream of utopia can become another man's nightmare...

[CRILLY, 2001].



_4.7 Mr.X. Images by Dean Motter.

CHARACTERS

The individuals represent the various parts and programmes of the built design. They are also the characters around which the graphic novel is created

and through whom the architecture is lived. They embody the character of the building and its nature, as well as being representative of the architecture and the elements contained therein.

THE MILLS

[Forgotten History/ Heritage Fabric]

The sketch is representative of the original owners of the Pretoria West Flour Milling Company, M. Myers and S. Selesnick. The characters themselves do not feature in the comic as such. However the existing architecture they personify, forms the basis and starting point of the set design [new interventions].



_4.8 The Mills.

THE PUBLIC

[Public Element/Event/Spectator]

Unnamed extras that make up the main substance of programmed space, a space that is as varied and diverse as is as the race and culture of its public, resulting from an understanding and interpretation of the urban nature of the context. The comic imagines possible future interactions, events and urban activity for the site and context.



_4.9 The Public.

JANE FRANCIS_ PINSTRIPES

An investigative journalist, Jane arrives at 145 *Carl Street Complex* to escape a life she is now disillusioned with. While staying in an apartment at *Pinstripes* she explores the various parts of the building and by so doing explores facets of the design.



_4.10 Ms. Francis.

SOLOMON BARRY_ FISTICUFFS

Solomon is an ex-boxing champion who owns and runs *Fisticuffs Boxing Academy*. Stemming from modest beginnings as a young man in the township of Alexandra, Solomon elevates himself through boxing into a respected pioneer within the now reinvigorated precinct of Pretoria West.

He represents quality, skill and workmanship.



_4.11 Blaze.

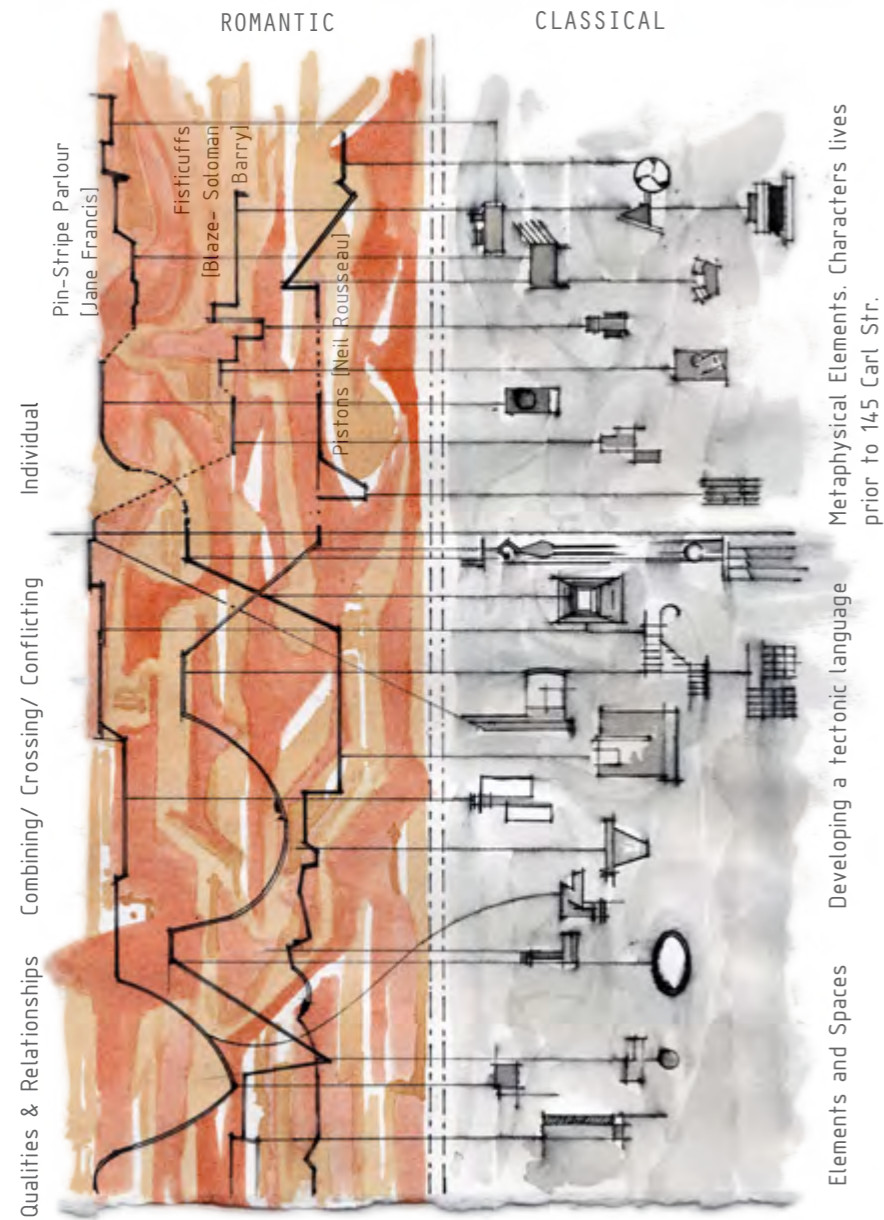
NEIL ROUSSEAU_ PISTONS

A maverick mechanic who enjoys his craft and embraces it as a lifestyle. Owner, founder and designer of *Pistons Independent Motorcycles*, his background is relatively unknown.

He represents design, craftsmanship and detail.



_4.12 Neil.



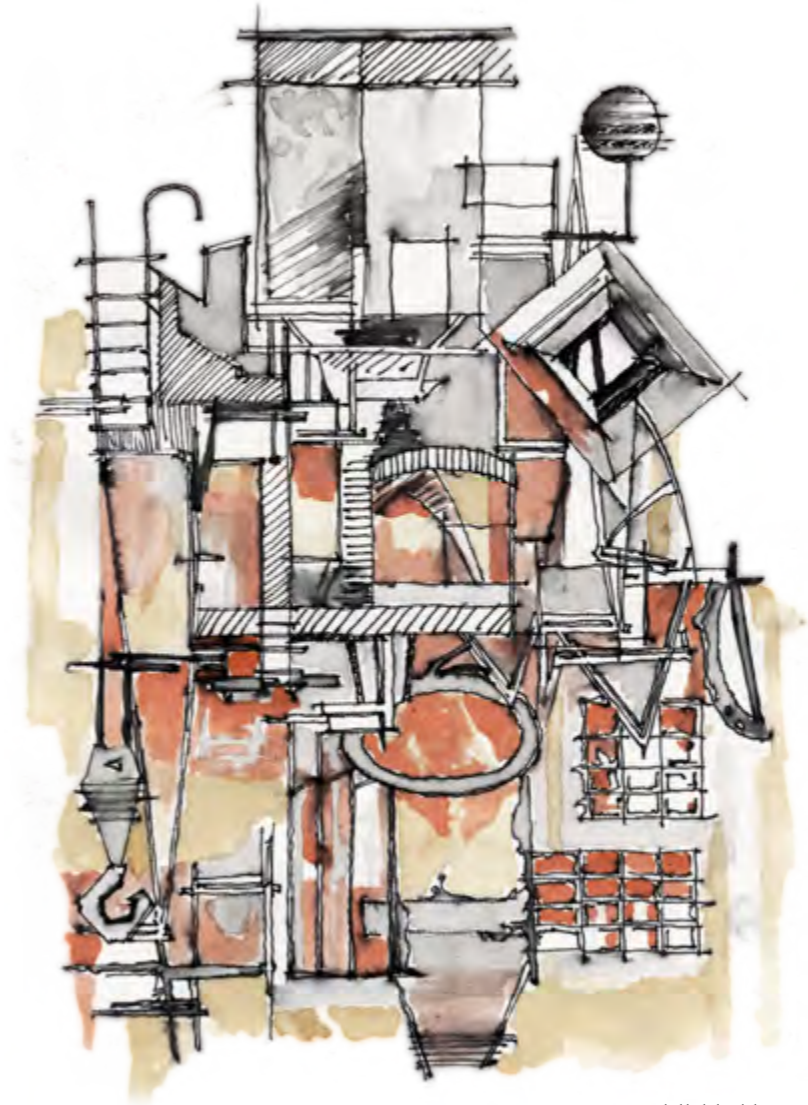
_4.13 Parallel Narratives.

This is the predicted progression of a dual narrative [Romantic & Classic¹] within the graphic novel. As the story unfolds, design elements, spaces and a tectonic language should develop.

¹ [Pirsig, 1974: 65] Phaedrus' world of underlying form; the Romantic understanding of appearance and gestalts and the Classic or rationalistic understanding in terms of underlying form and details.

INKING IMAGES

The images illustrate the initial concept for the use of a graphic novel/ comic to facilitate architectural design.



_4.14 Inked Images.

This is a conceptual framework image for the final design. The rationale was that design elements would develop within the panels of the comic; the

relationships between the elements and spaces would then form the basis of the design. This is then the comic's point of completion.

DESIGN DEVELOPMENT

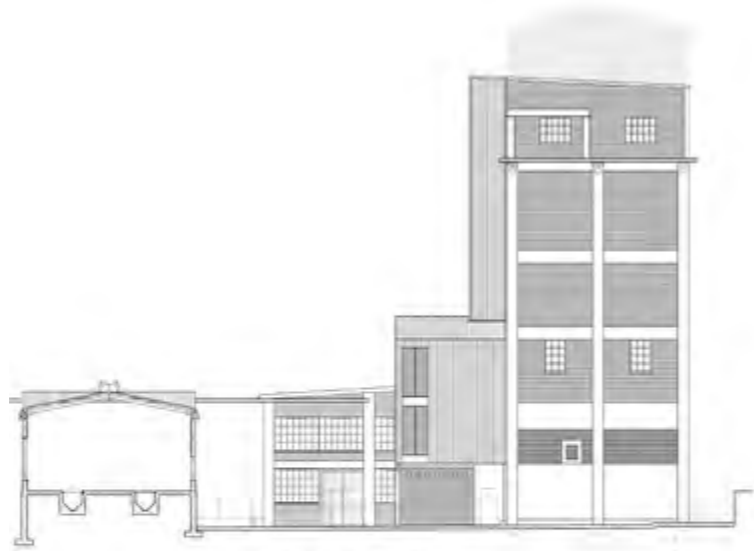
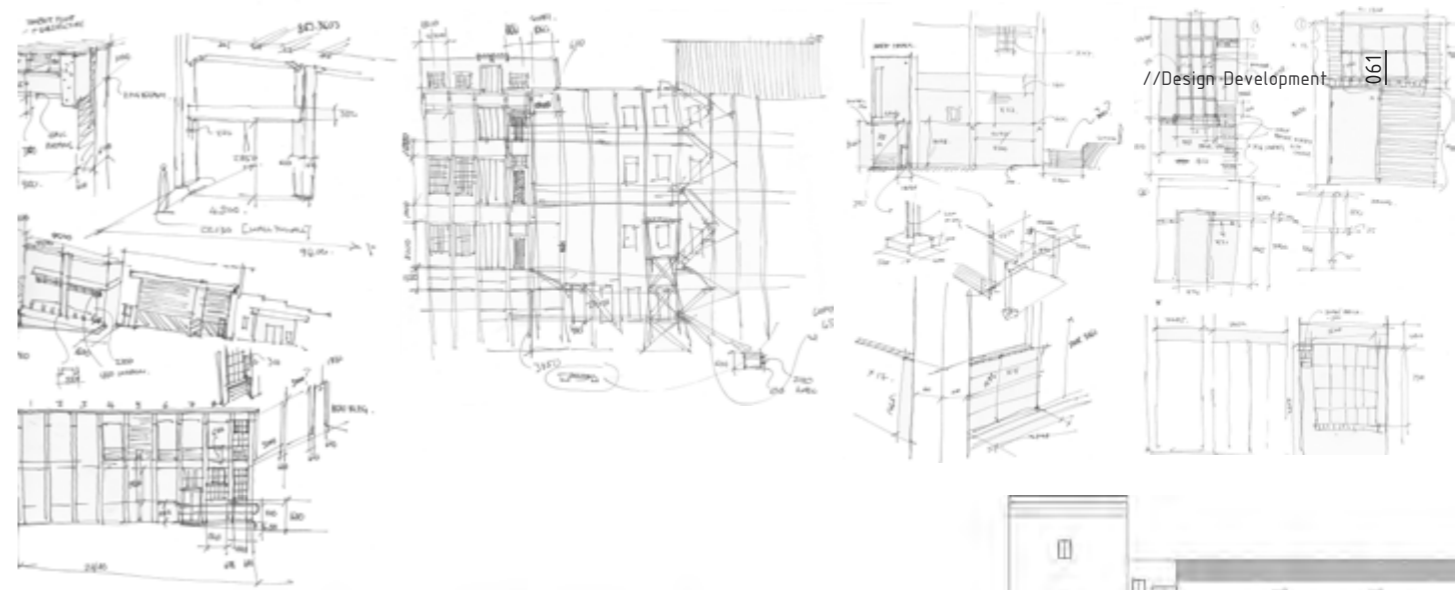
SKETCHBOOK

5

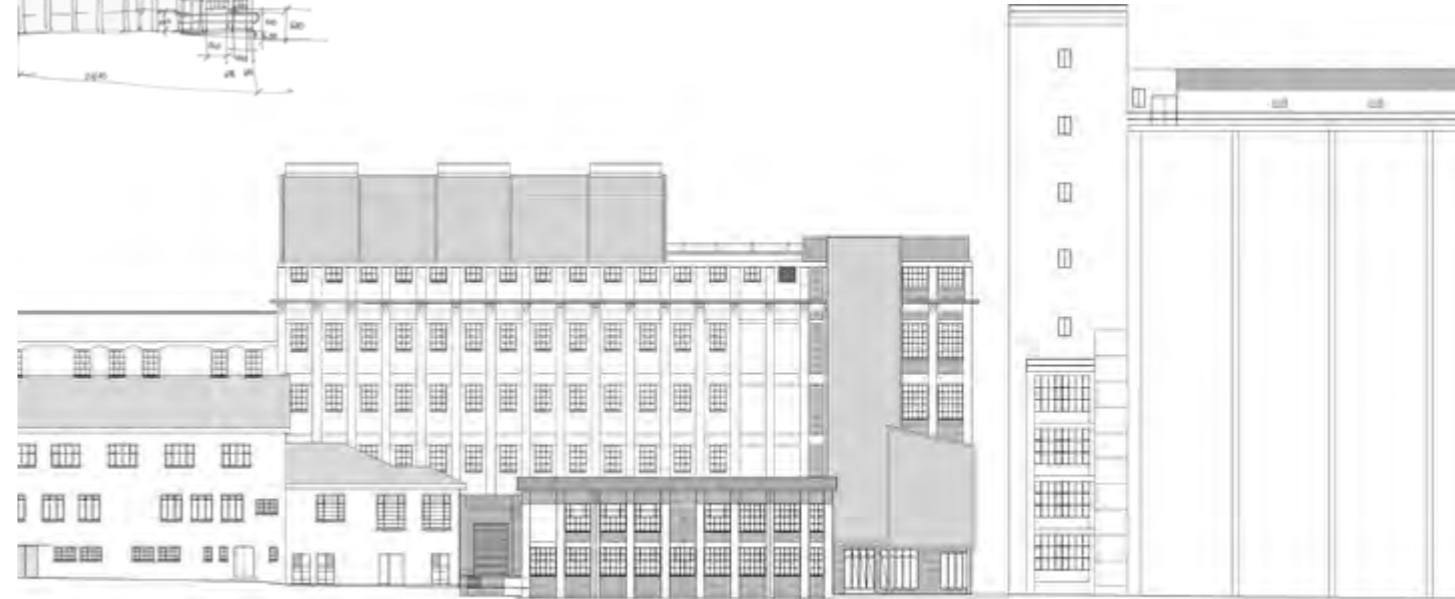
This chapter follows the design process from sketches through to a roughly hewn form.

The process was not linear. The layout that follows is none the less ordered in a sequence that attempts to make sense of the progression.

It began with drawings. Site measurements and sketches of existing buildings were compiled in CAD into a base set of plans, sections and elevations.



NORTH ELEVATION NTS

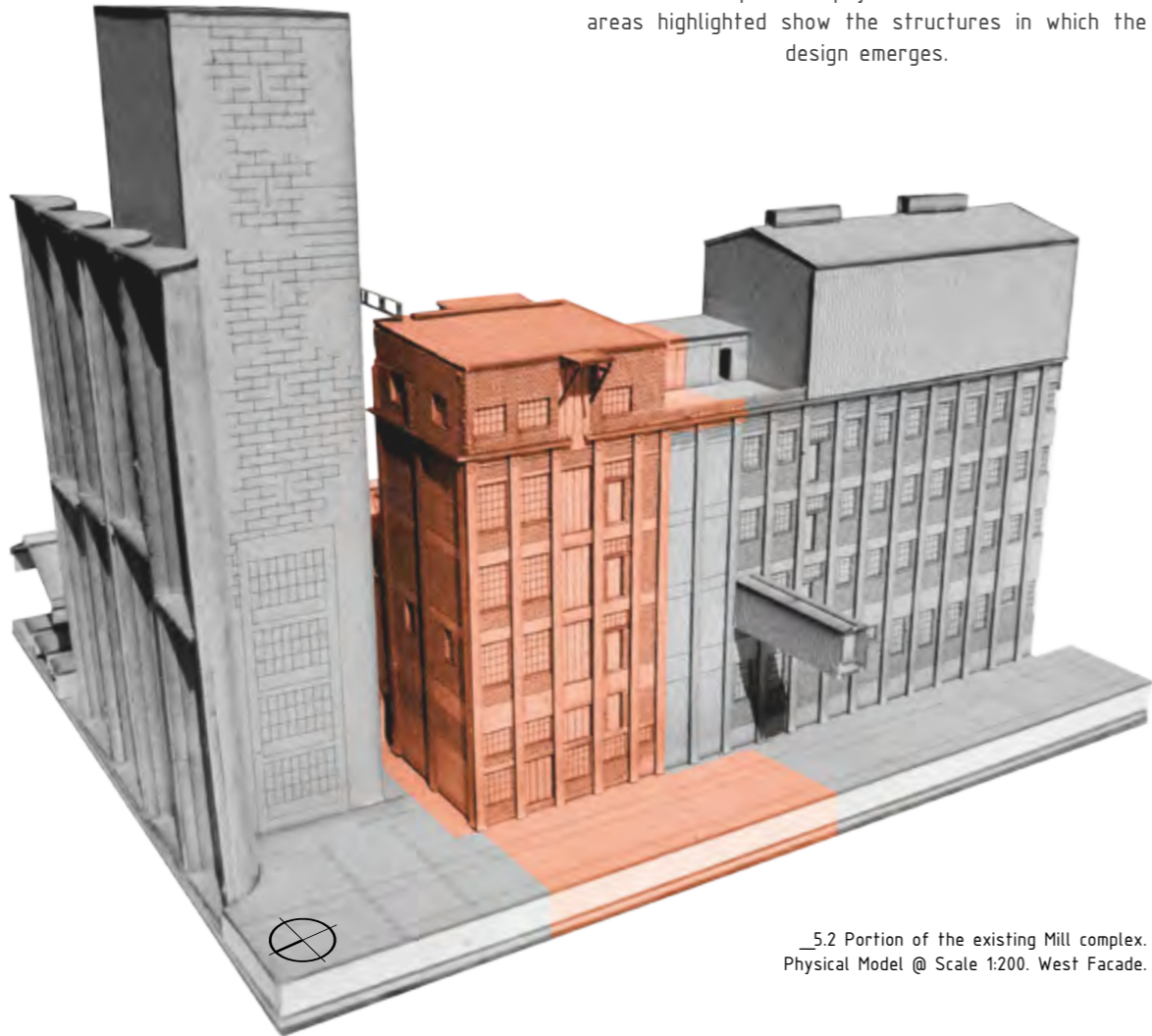


EAST ELEVATION NTS

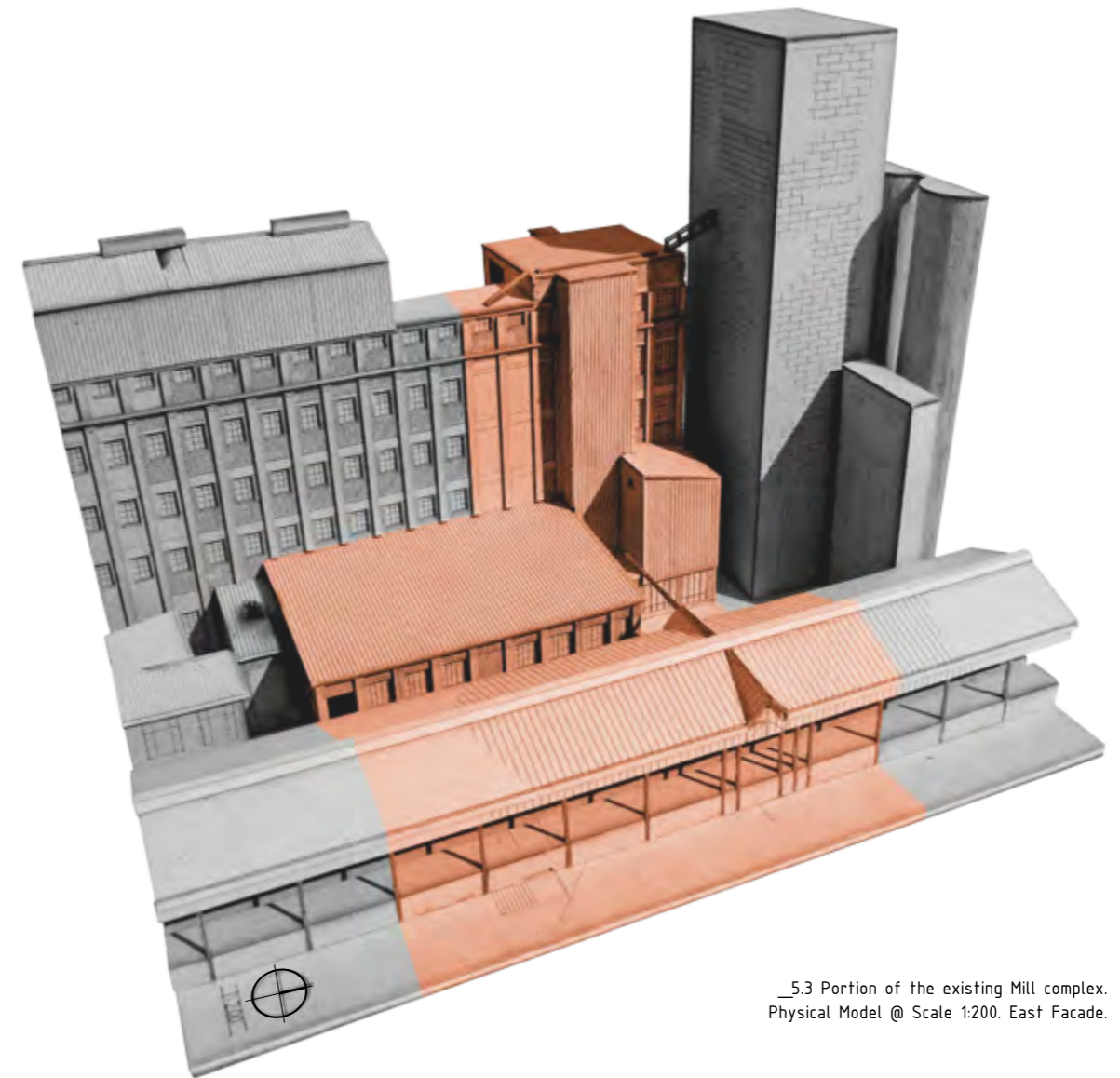


WEST ELEVATION NTS

In order to better illustrate and grasp existing volumes and spaces a physical model was built. The areas highlighted show the structures in which the design emerges.

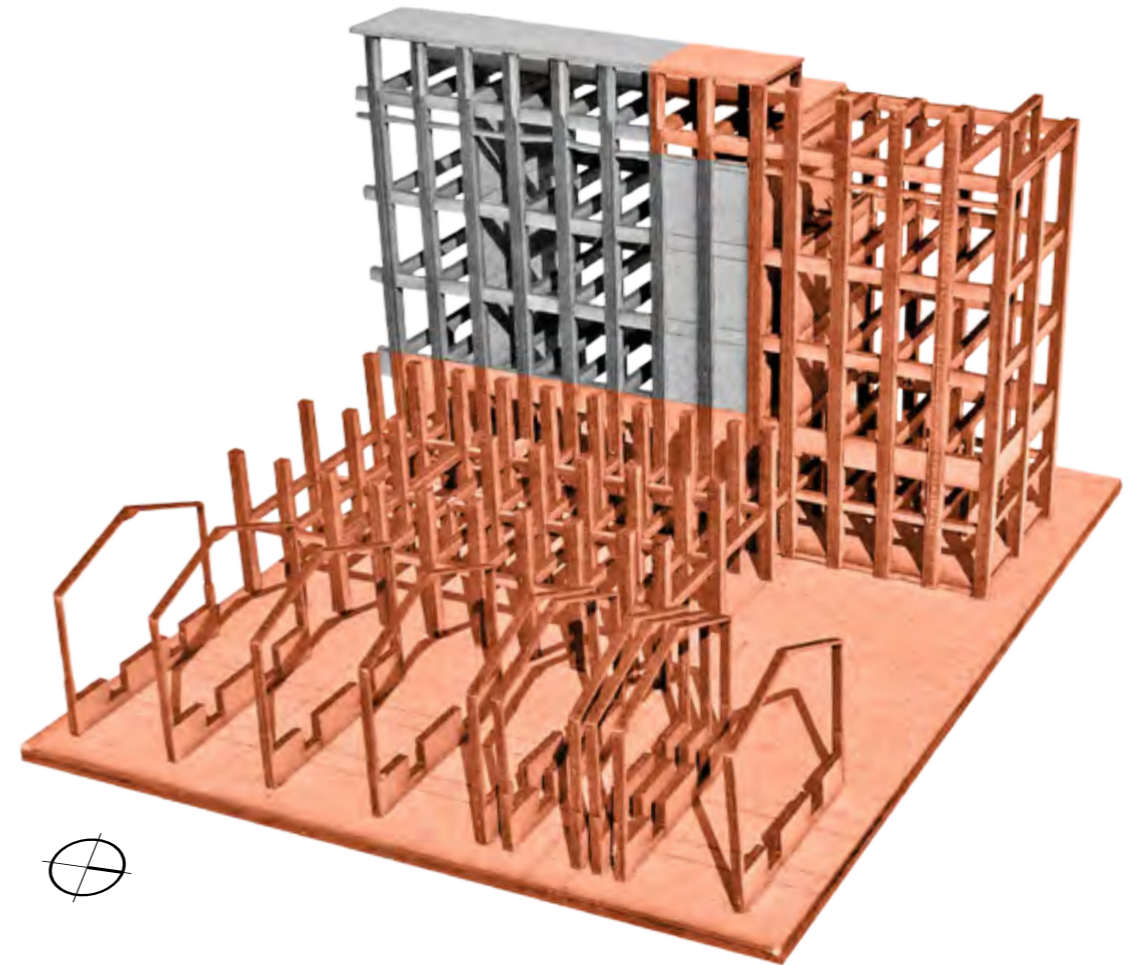
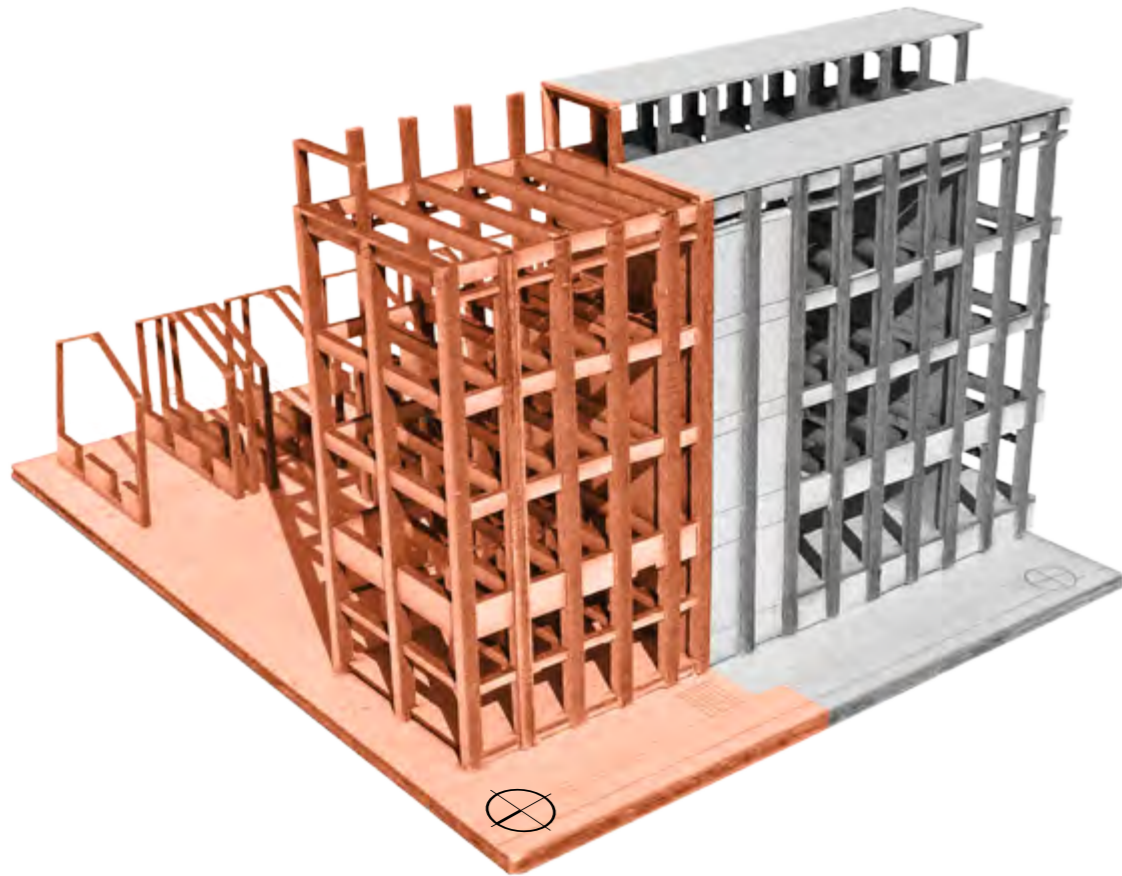


_5.2 Portion of the existing Mill complex.
Physical Model @ Scale 1:200. West Facade.



_5.3 Portion of the existing Mill complex.
Physical Model @ Scale 1:200. East Facade.

A physical model of the underlying structure was also made. The model illustrates the regular heavy concrete frames as well as the rhythm and placement of steel portal frames demarcating the eastern railway siding.



PISTONS, PIN-UPS & FISTICUFFS

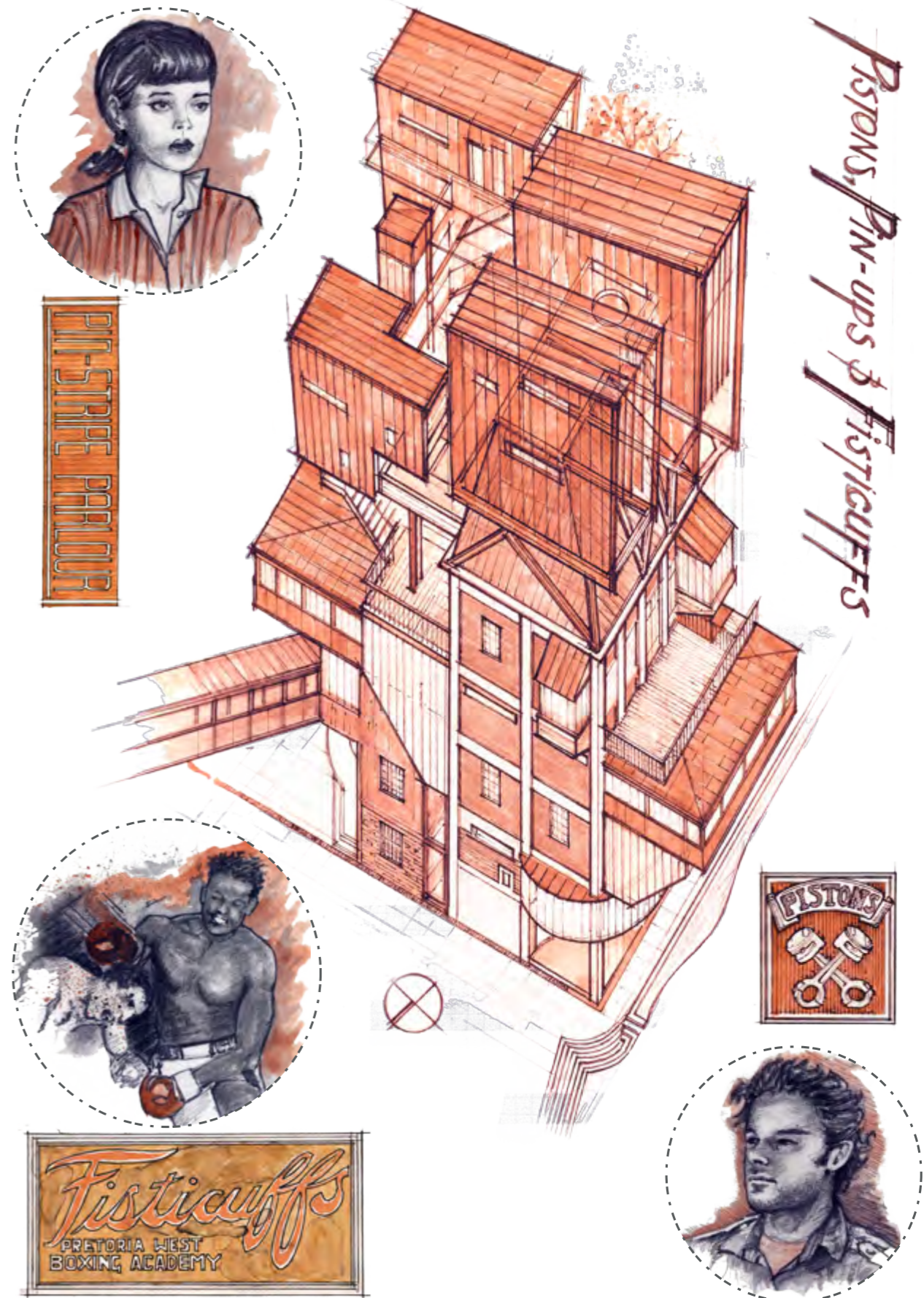
What follows is the short comic *Pistons, Pin-ups & Fisticuffs*.

The storyline itself is not what is important; actually its a bit of fun and rather pointless...

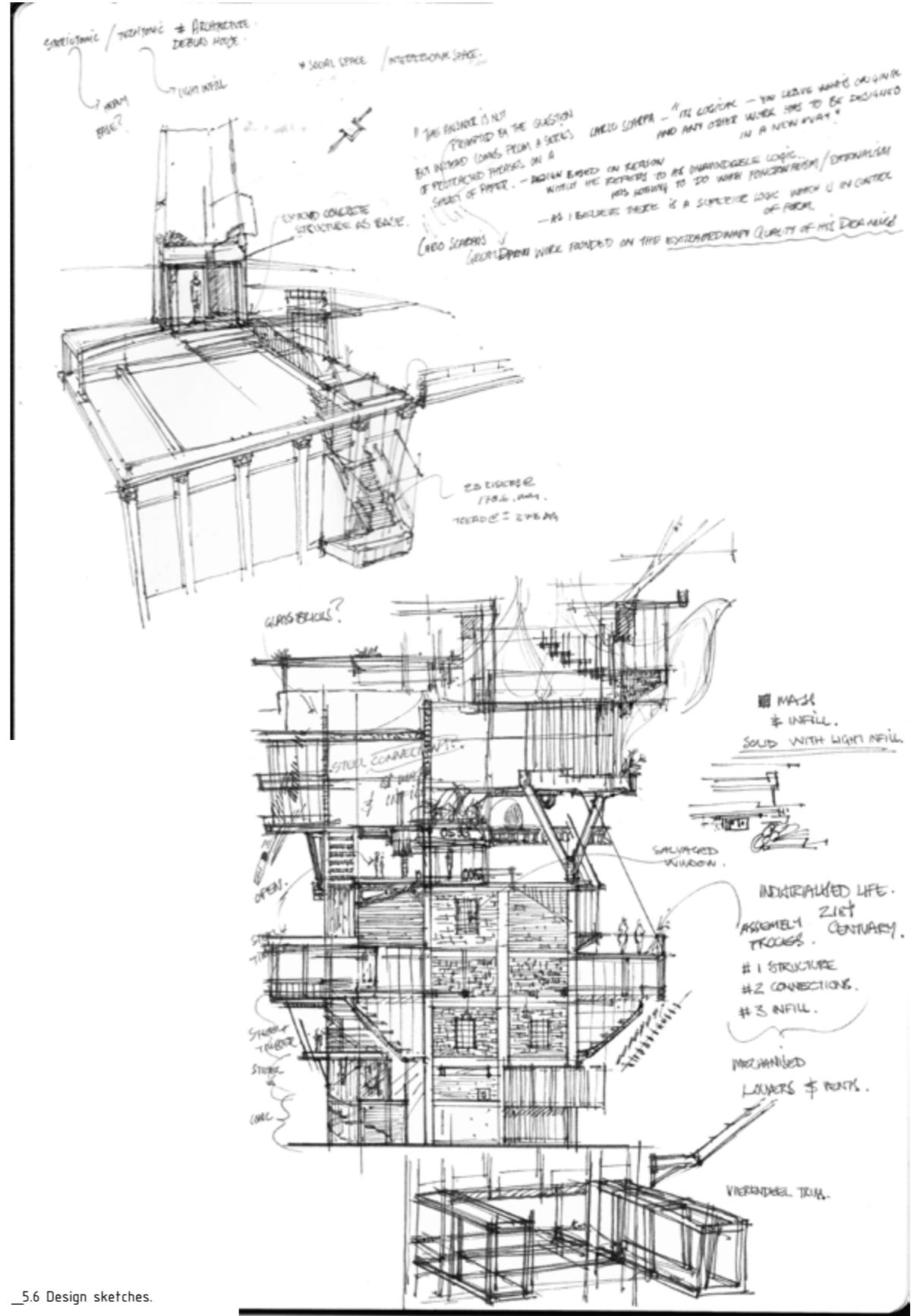
However, it is noteworthy that its use enables a subjective perspective on design. The architecture forms the set and backdrop within which events unfold.

Parallel to the progression of the storyline, the process of illustrating the scenes formed the platform for the development of the architectural design. Pages and sketches are interspersed in the comic that illustrate this progression.

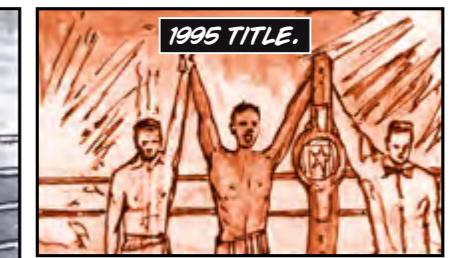
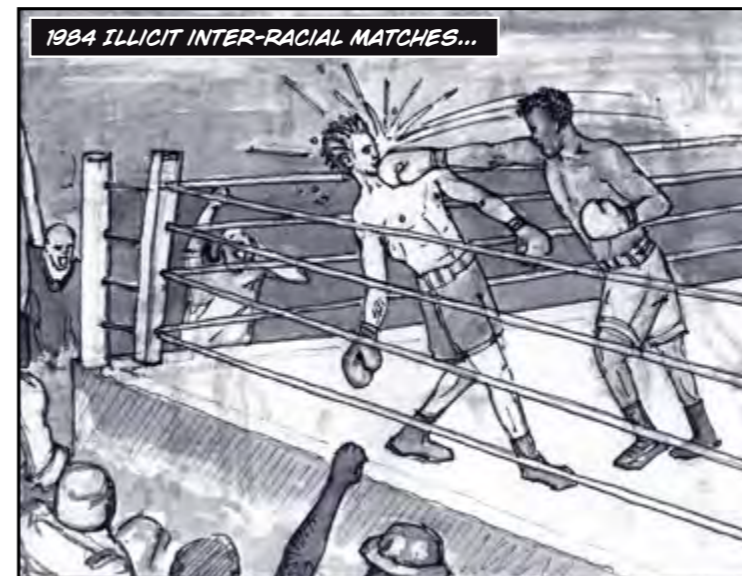
Some of the unedited and process drawings for the comic are also included. They show the exploration and design of spaces and the development of a tectonic.

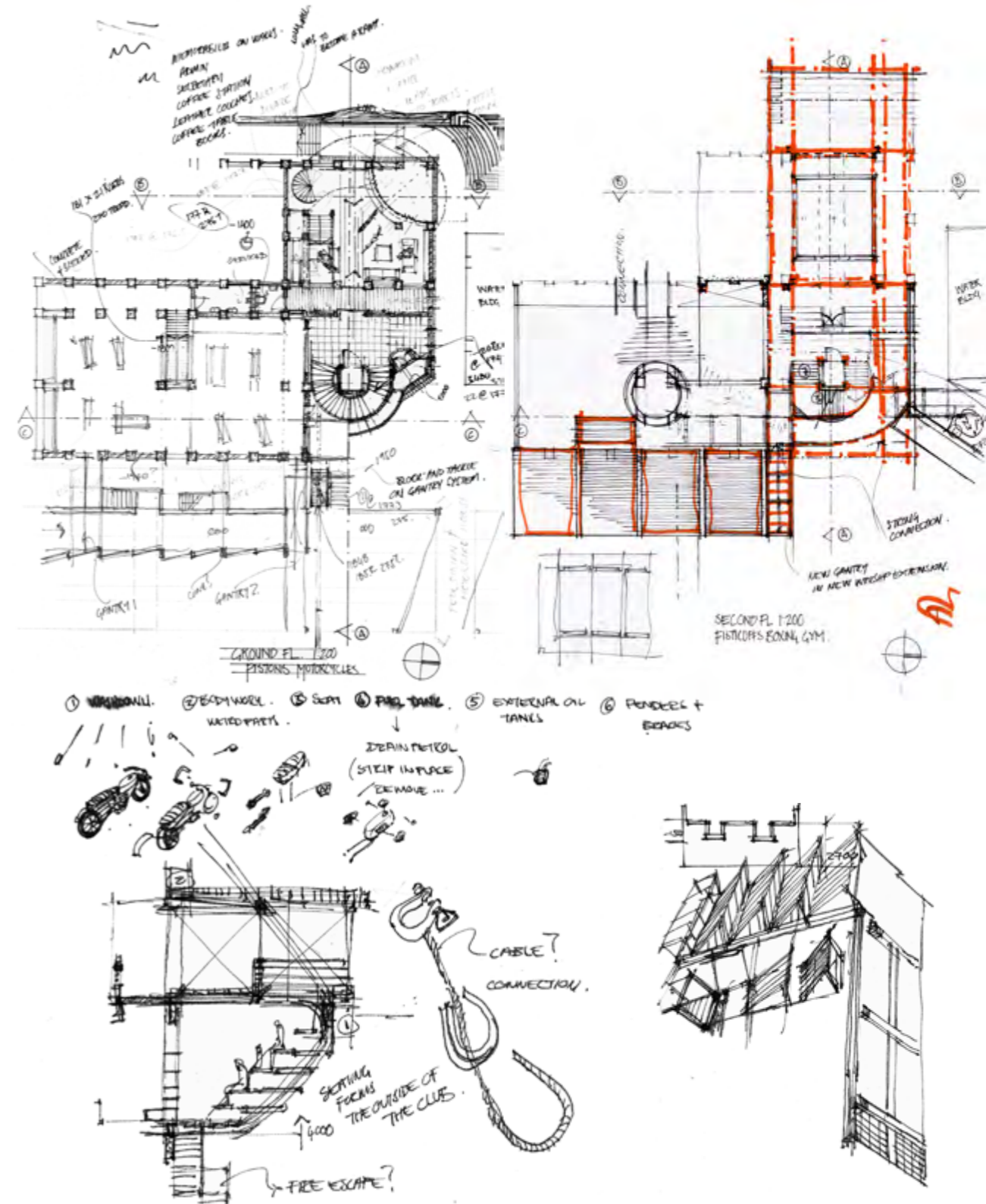


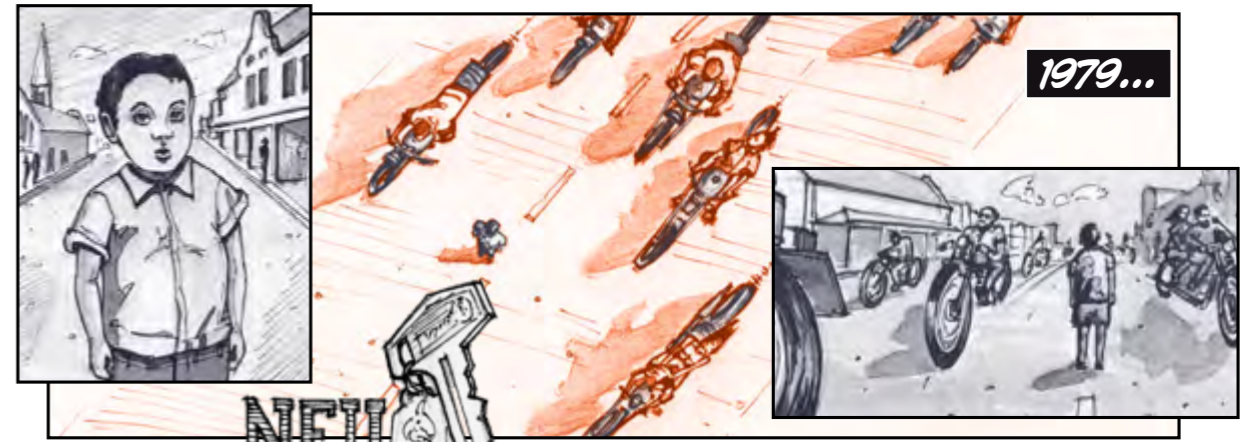
Right & the following 10 pages.
_5.5 Pistons, Pinups & Fisticuffs comic.

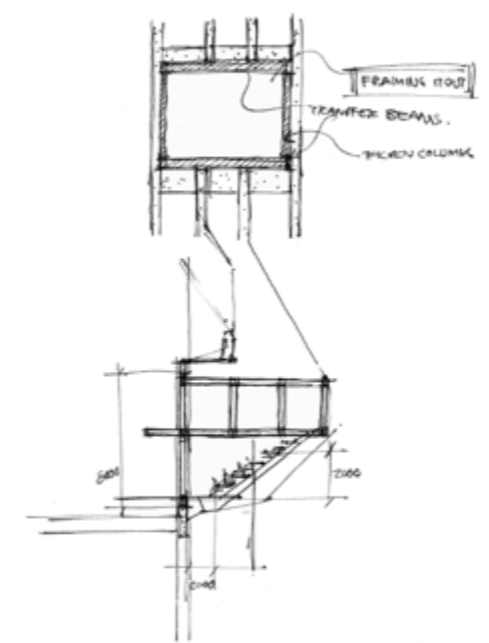
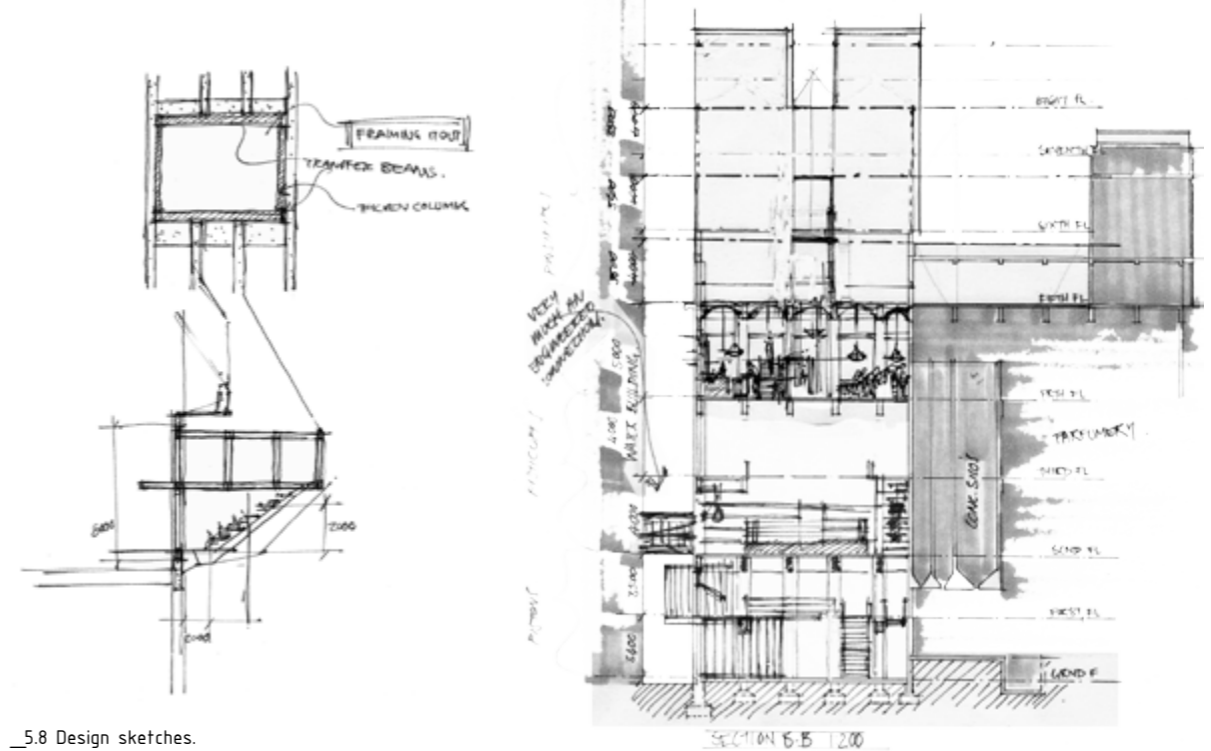
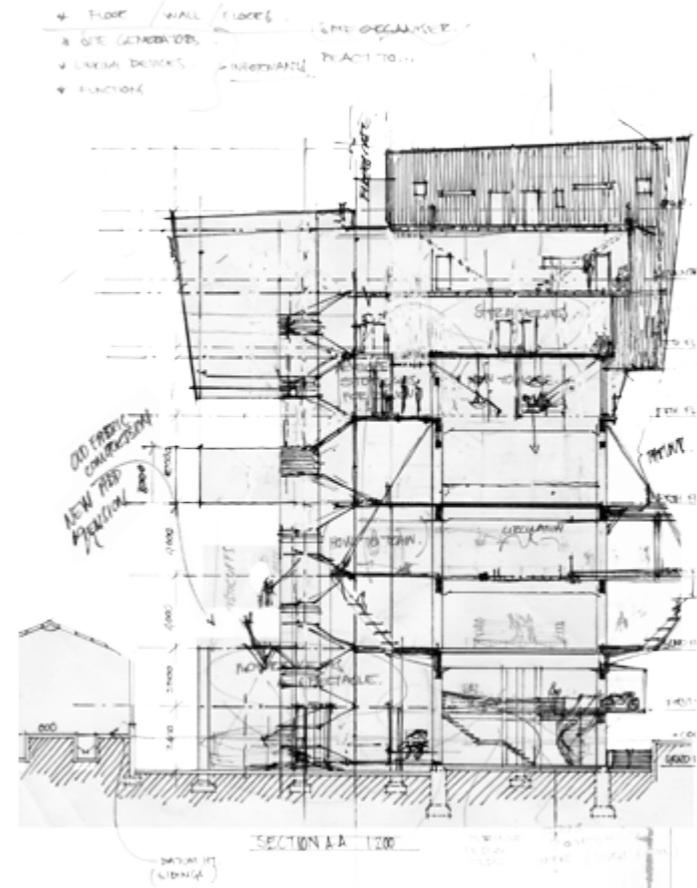


_5.6 Design sketches.

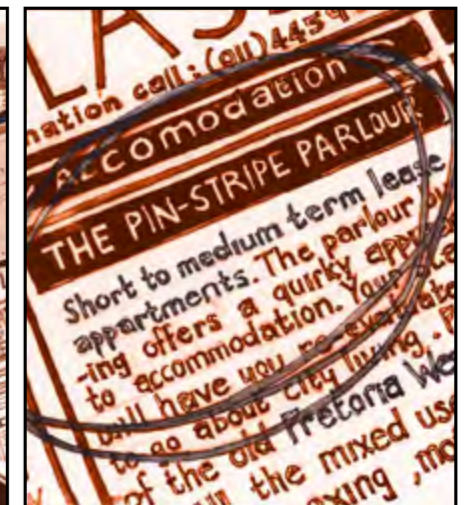


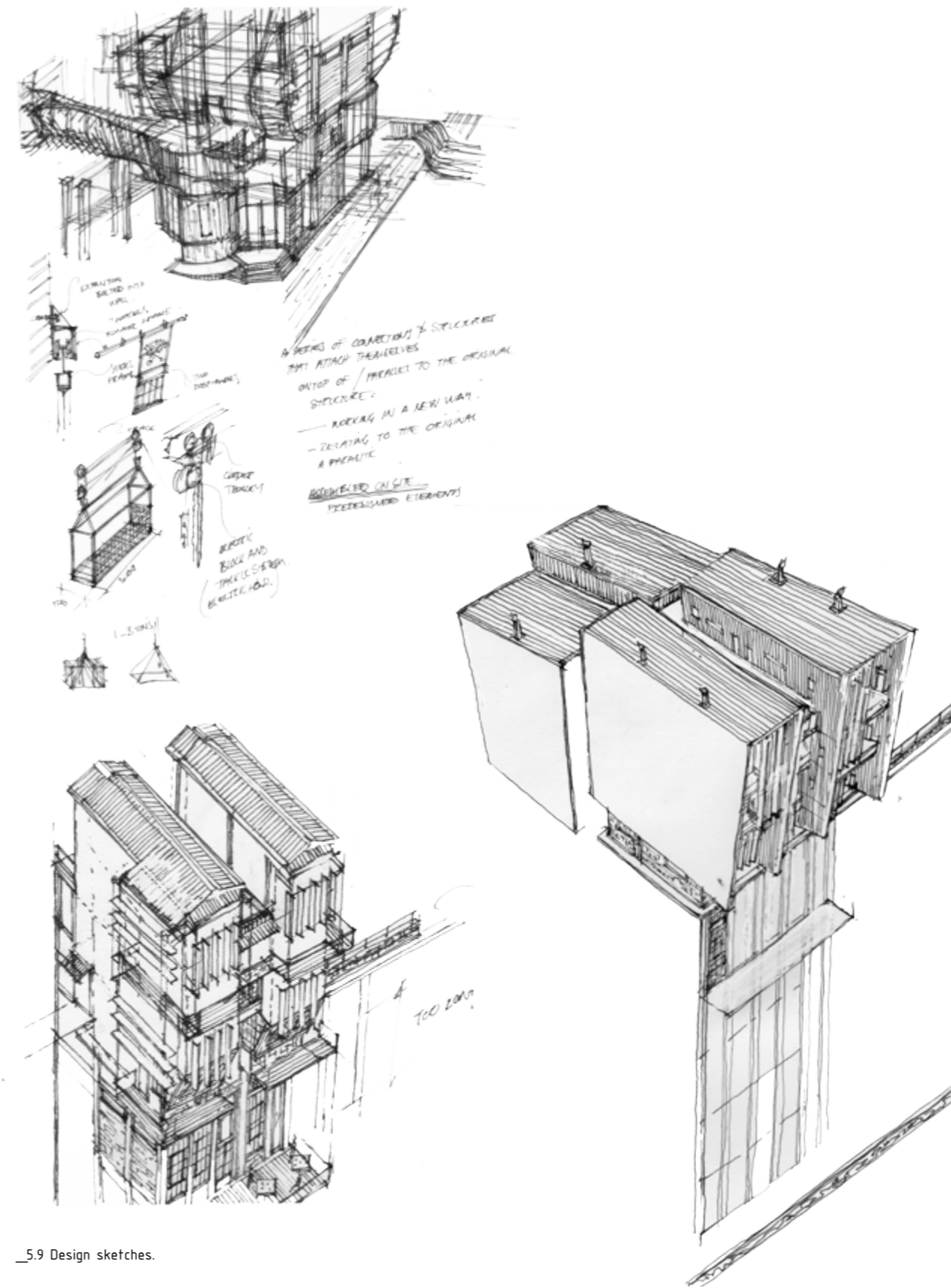




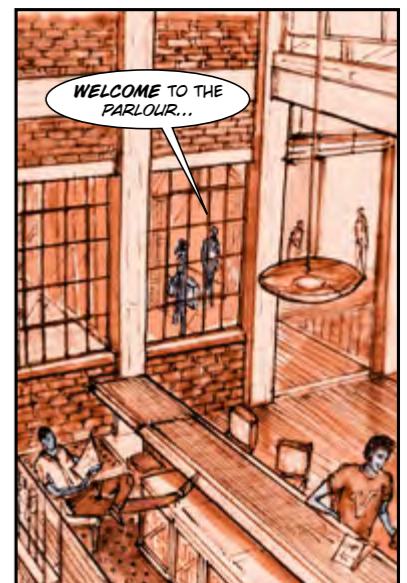
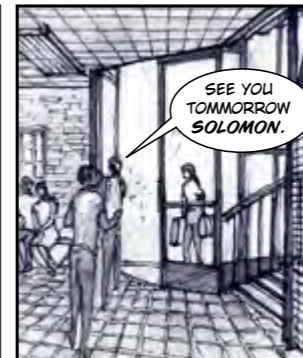
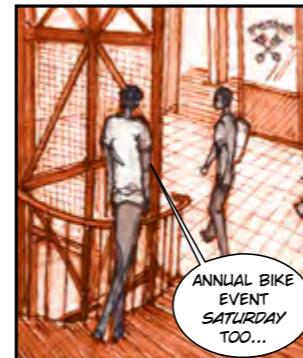
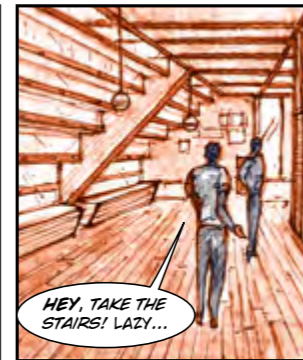
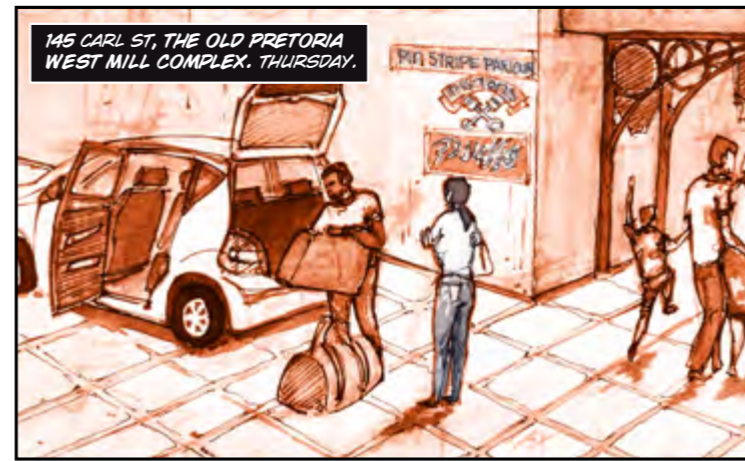


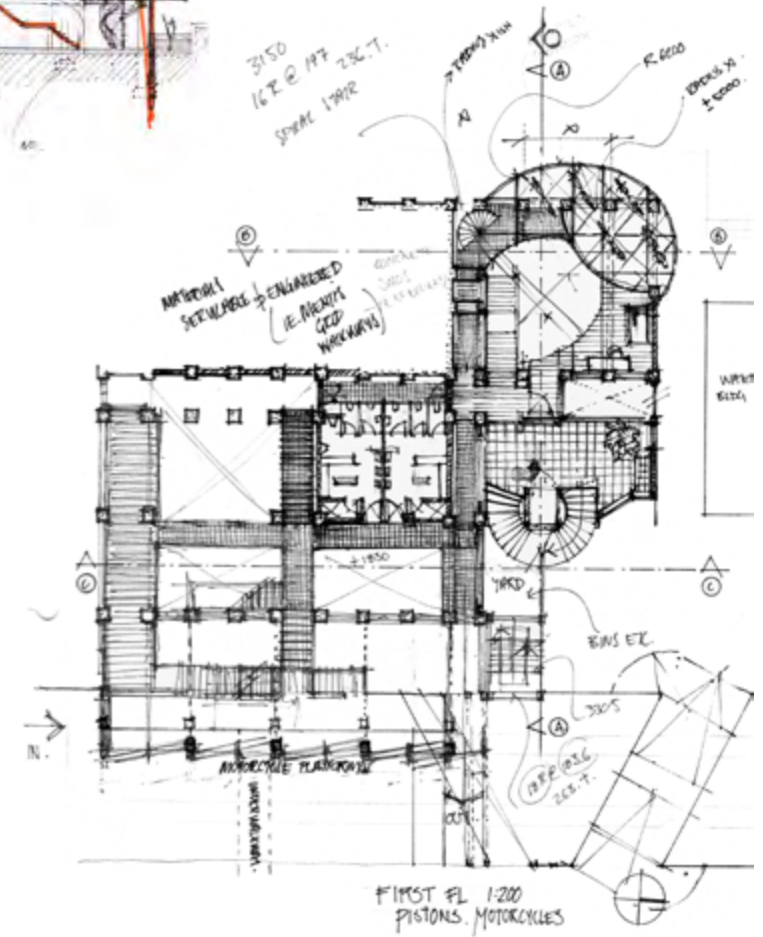
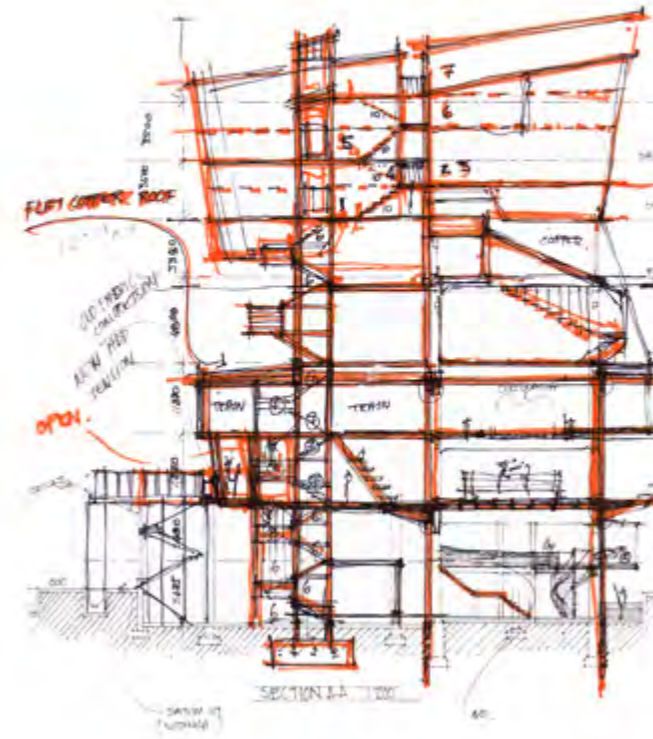
_5.8 Design sketches.



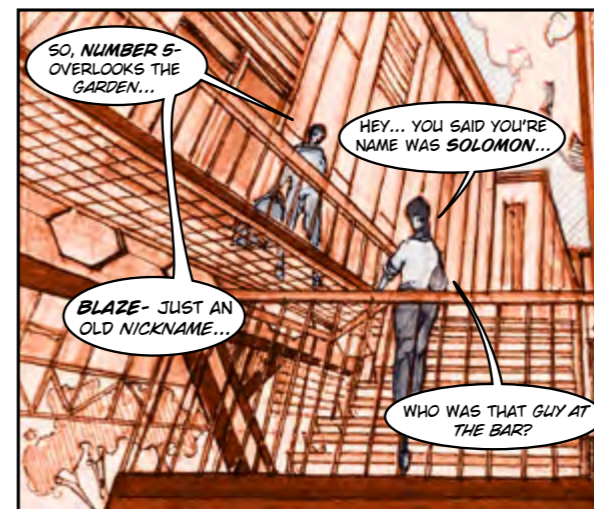
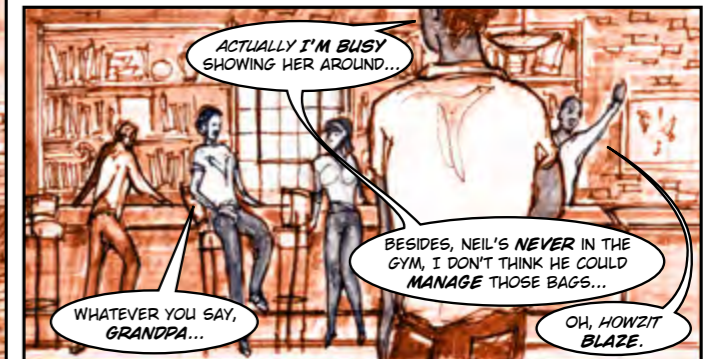


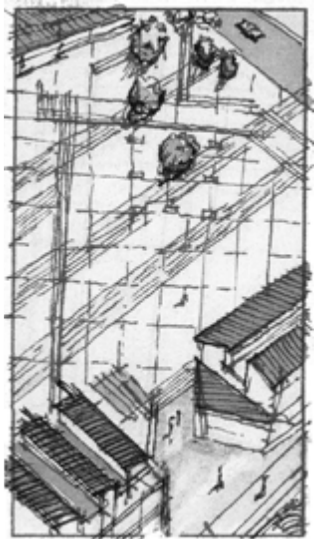
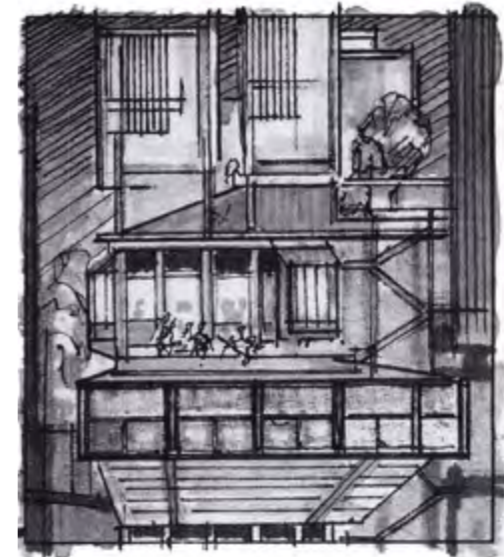
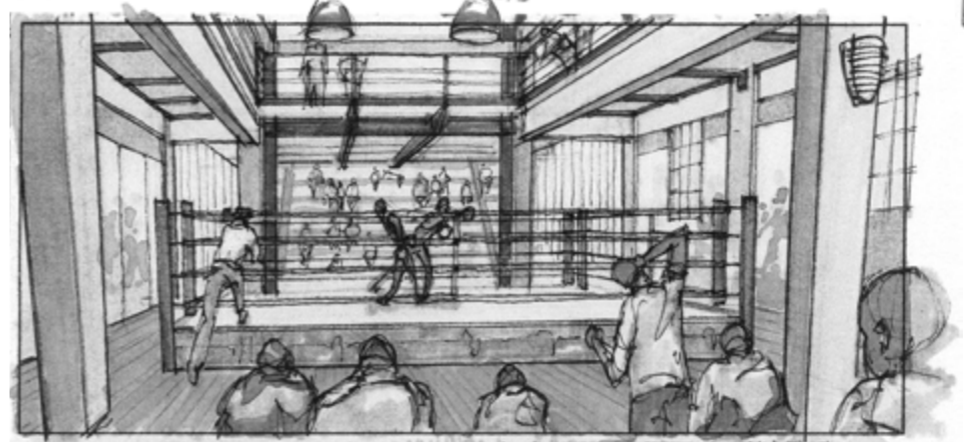
_5.9 Design sketches.



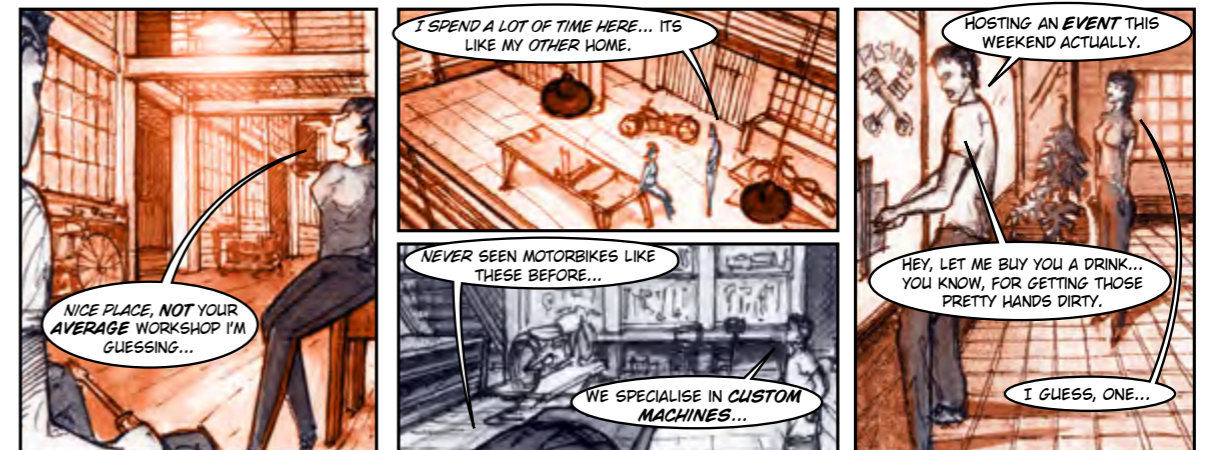
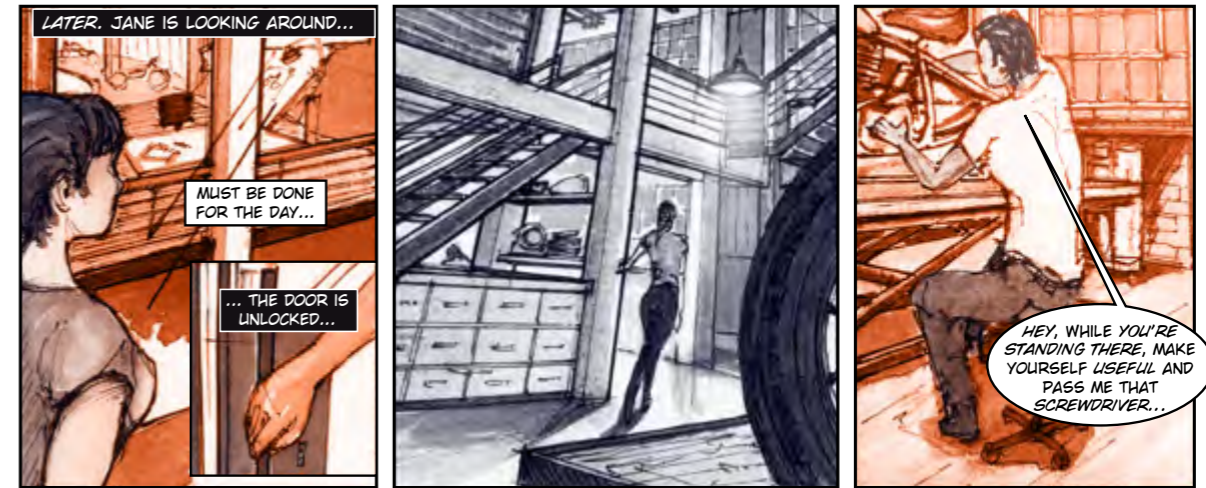
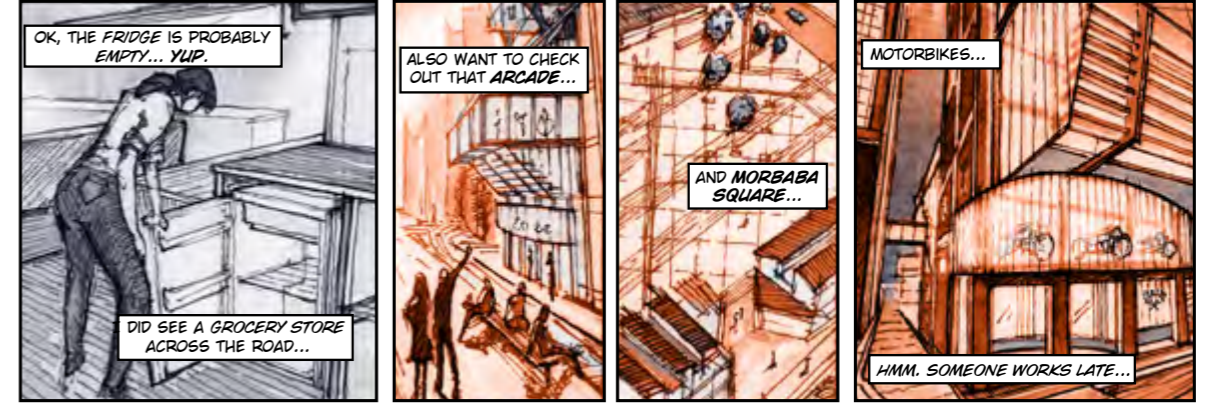
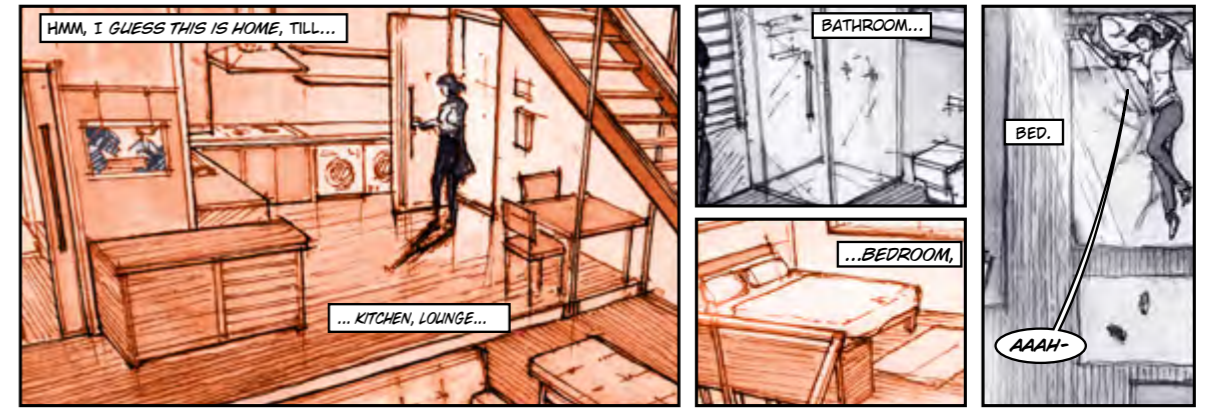


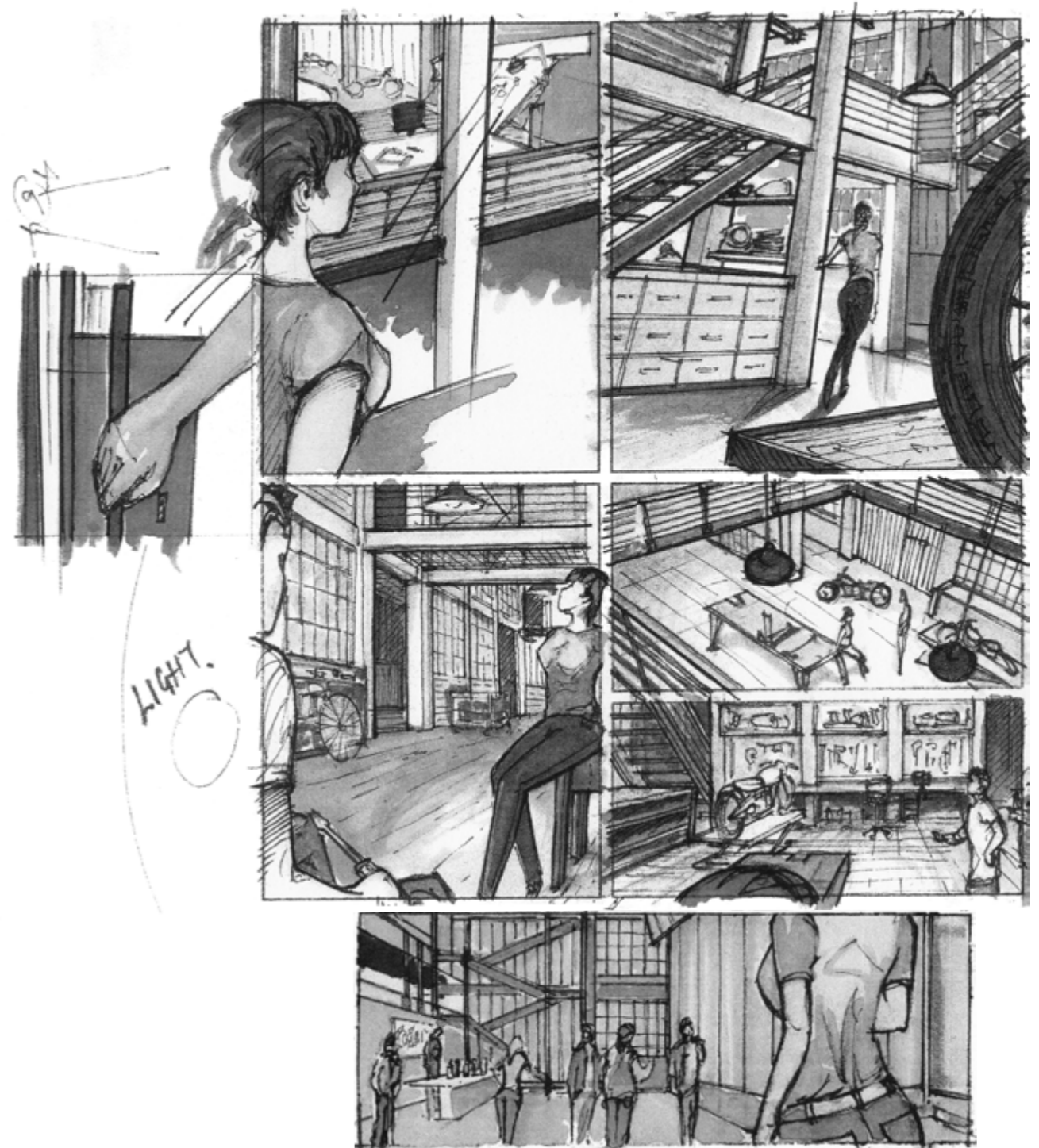
_5.10 Design sketches.

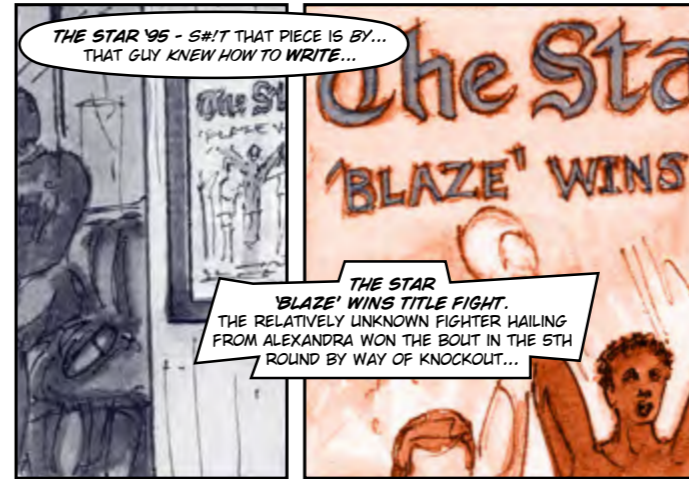


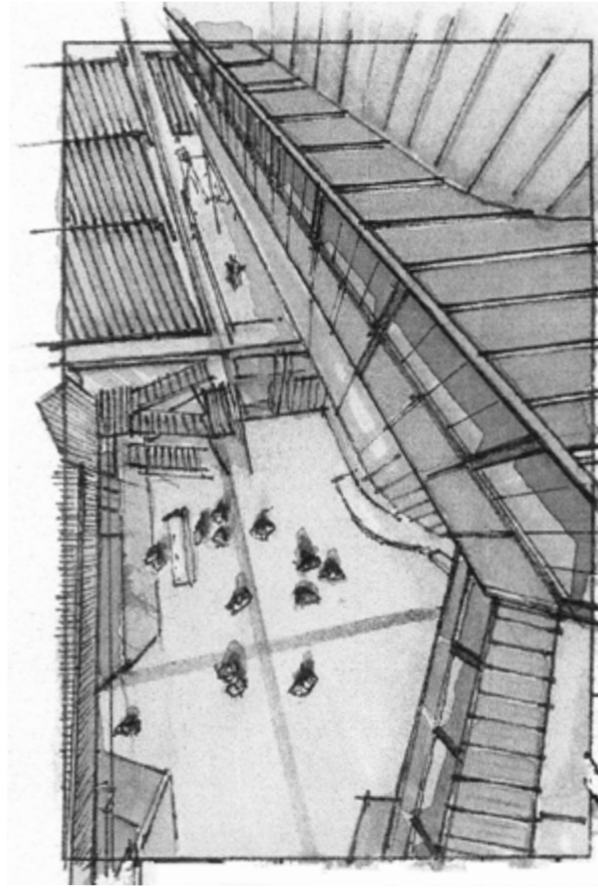


_5.11 Perspective shots.









_5.13 Perspective shots.



SATURDAY MORNING, JANE REFLECTS ON THE ROOF OF PIN-STRIPES... WITH A SLIGHT HEADACHE AFTER A NIGHT OUT AT THE EMERALD OWL...



CLOUDS & PIGEONS PASS BY OVERHEAD...



EX- CHAMP'S PRETORIA WEST GYM NURTURES LOCAL TALENT... GROWING SUPPORT... SEVERAL WELL ATTENDED MATCHES... OLD MILL COMPLEX.

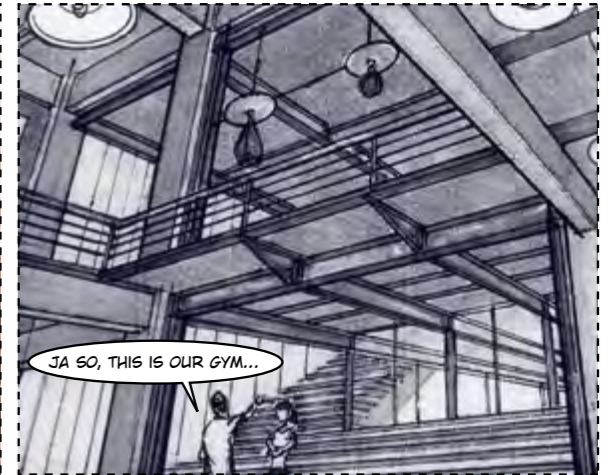
OWNER'S INTERESTING PAST... DISADVANTAGED... STREETFIGHTING...



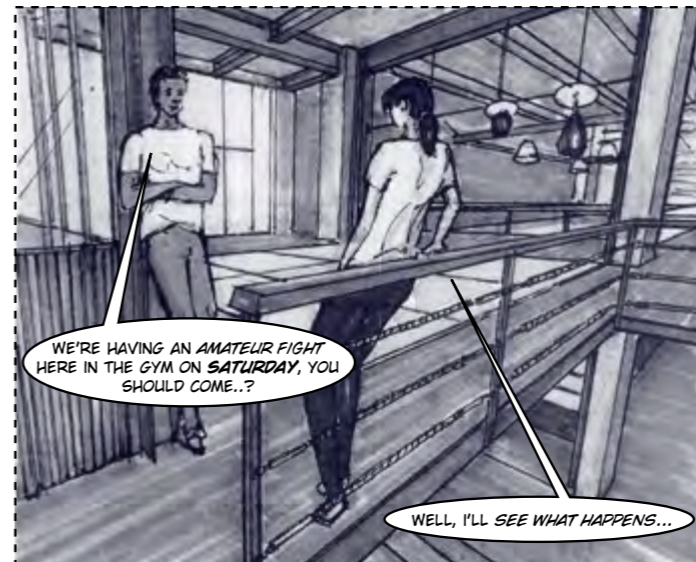
FISTICUFFS



OH, HEY JANE. GIVE ME A SECOND...



JA SO, THIS IS OUR GYM...



WE'RE HAVING AN AMATEUR FIGHT HERE IN THE GYM ON SATURDAY, YOU SHOULD COME..?

WELL, I'LL SEE WHAT HAPPENS...

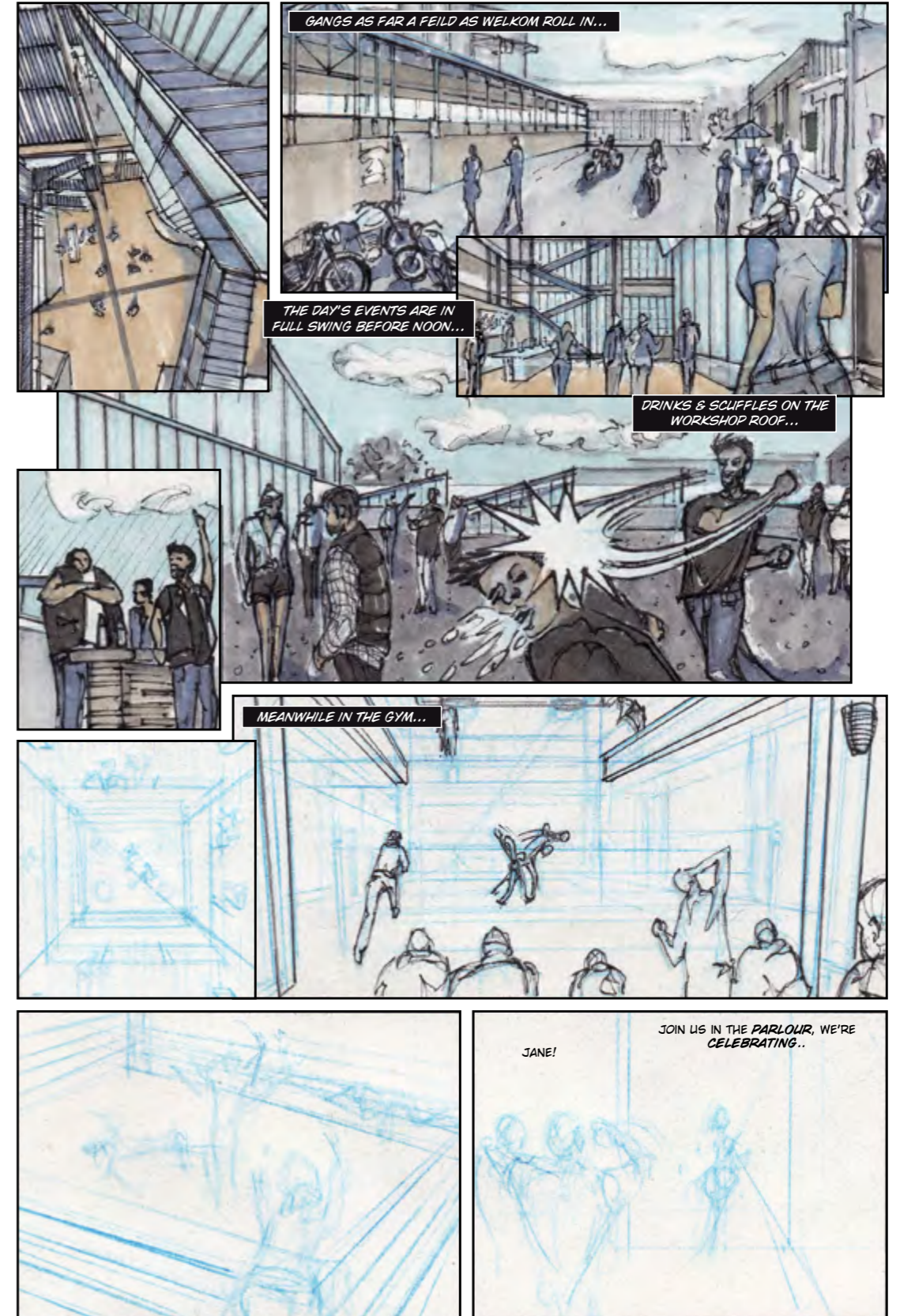


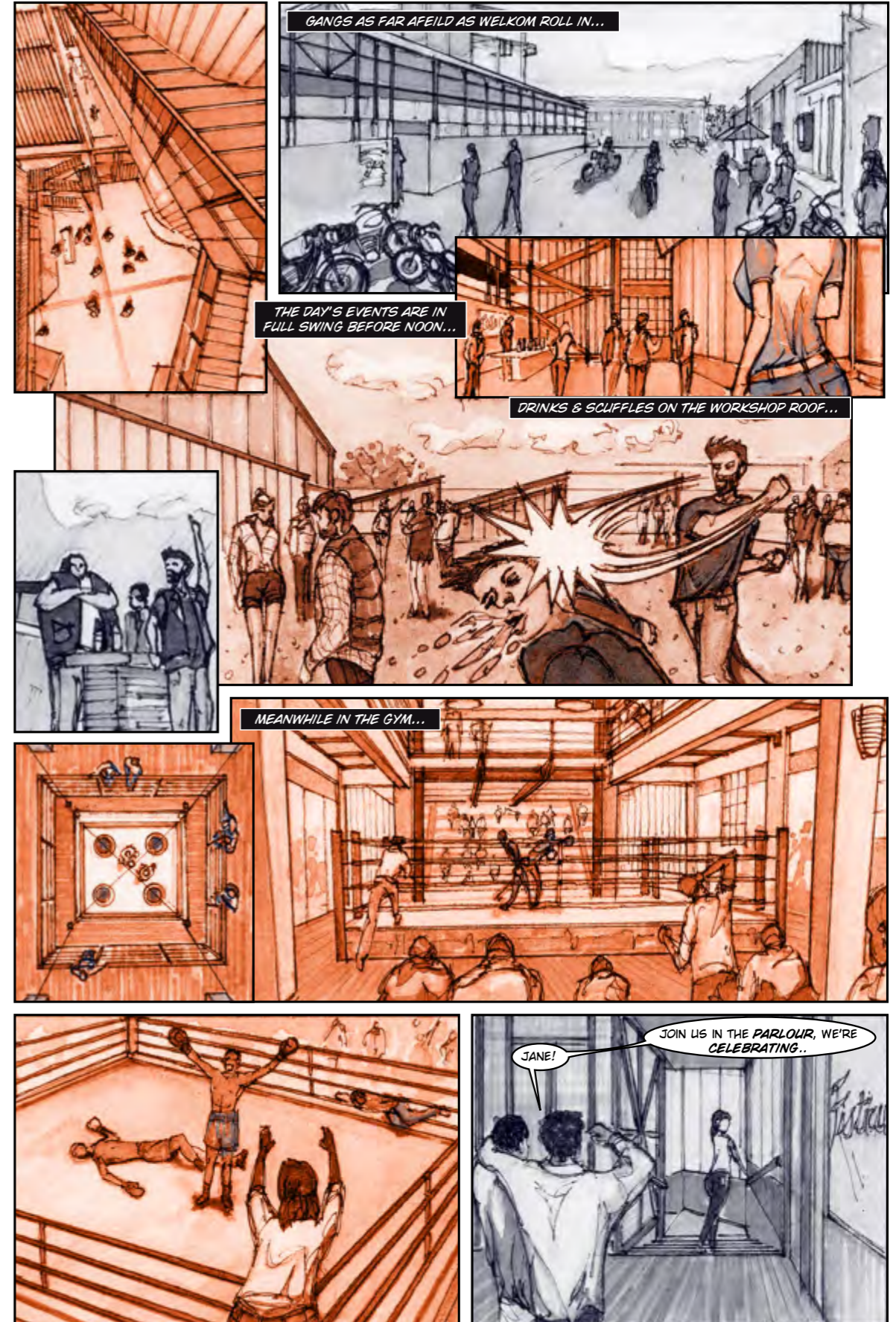
NEIL, ALSO WORKING HIS WAY THROUGH FAMILAR SATURDAY MORNING EXPERIENCE...

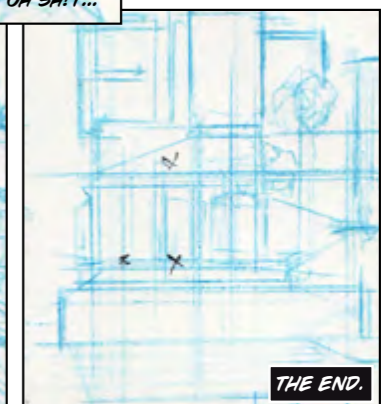
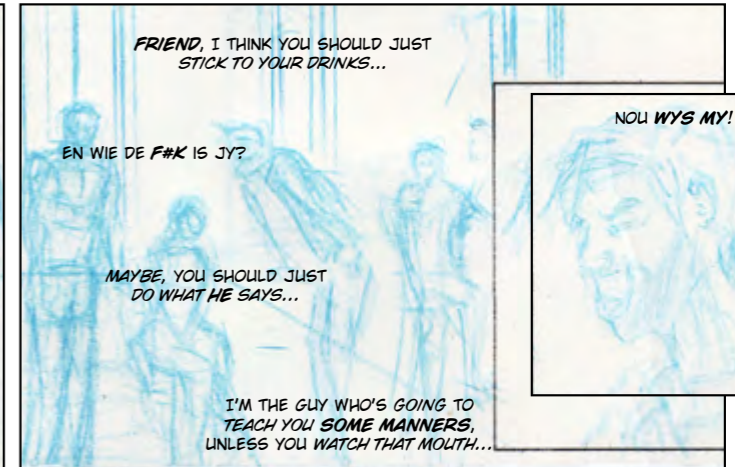
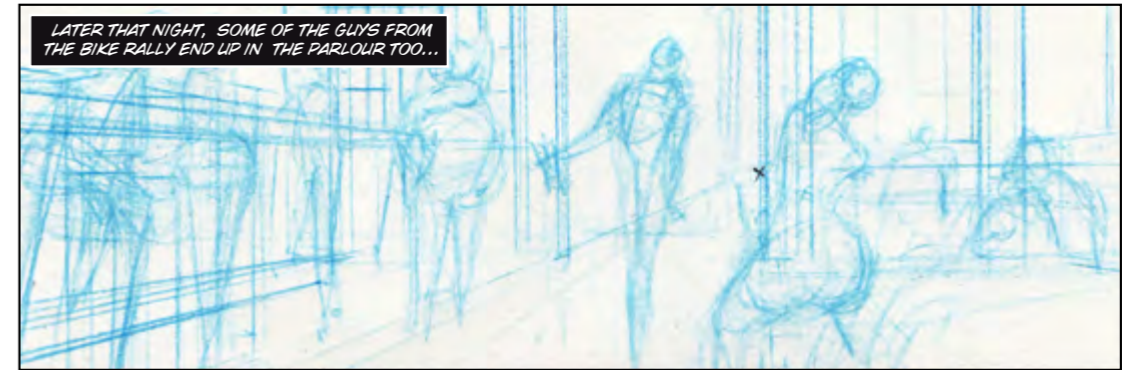
F#%K I'M HUNGOVER.

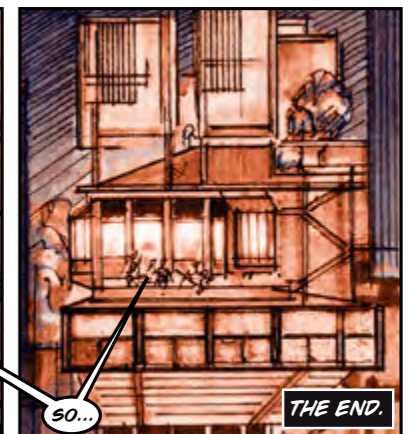
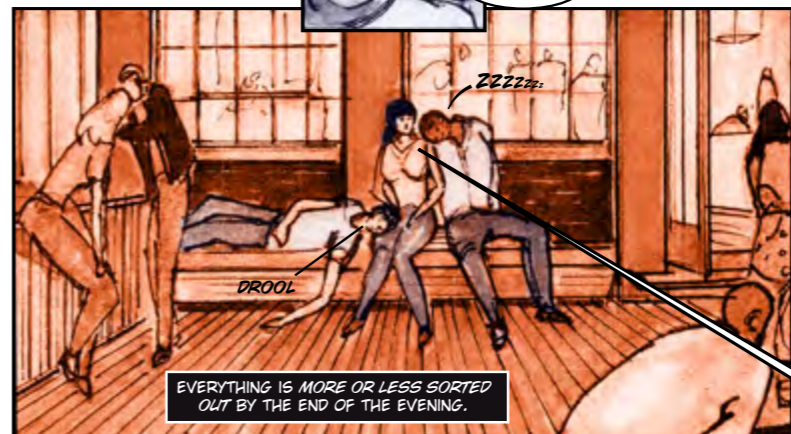
CAN'T GET THAT WOMAN OUT OF MY HEAD

PRETTY SURE SHE DOESN'T EVEN KNOW SHE'S IN THERE...

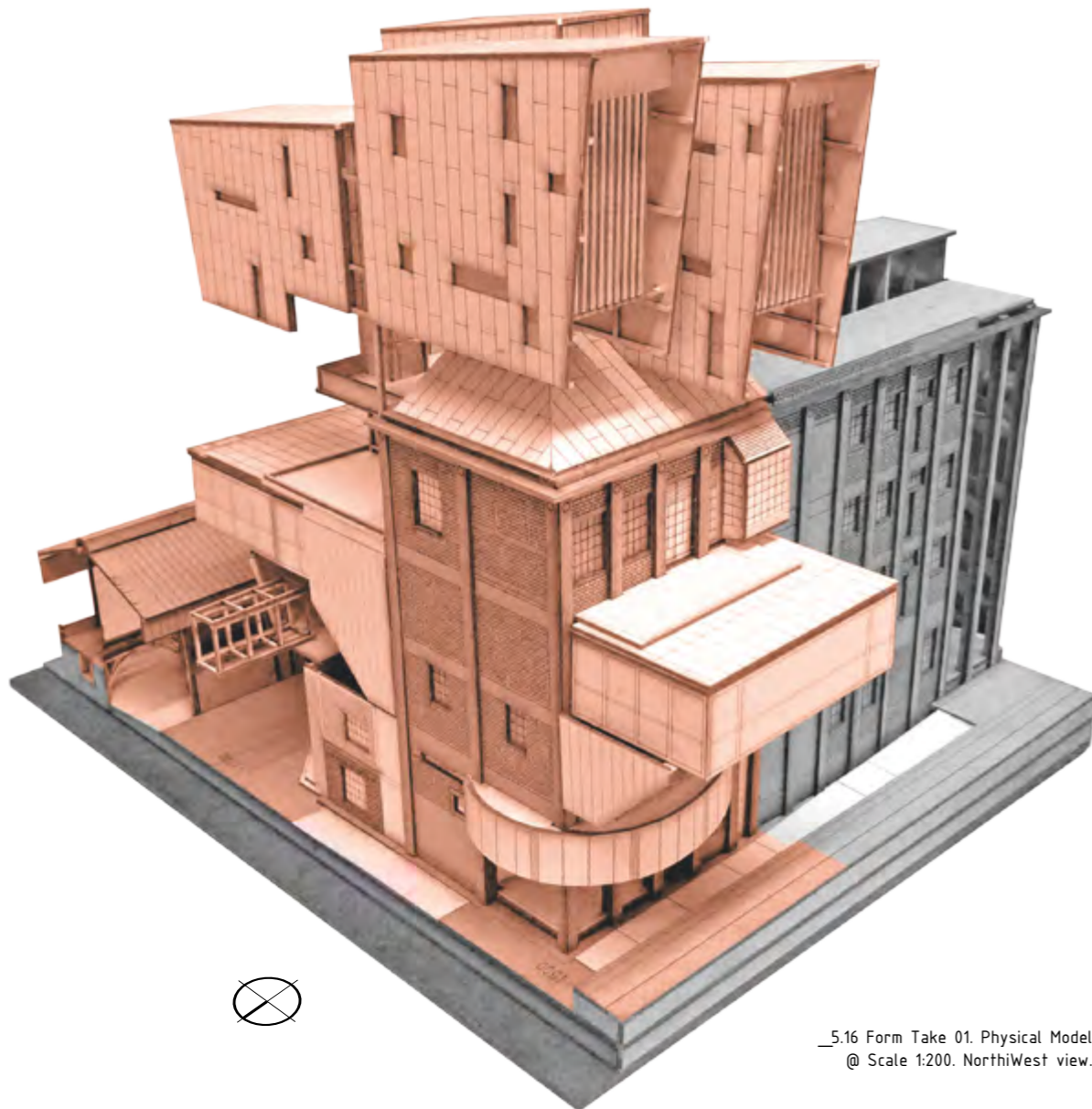




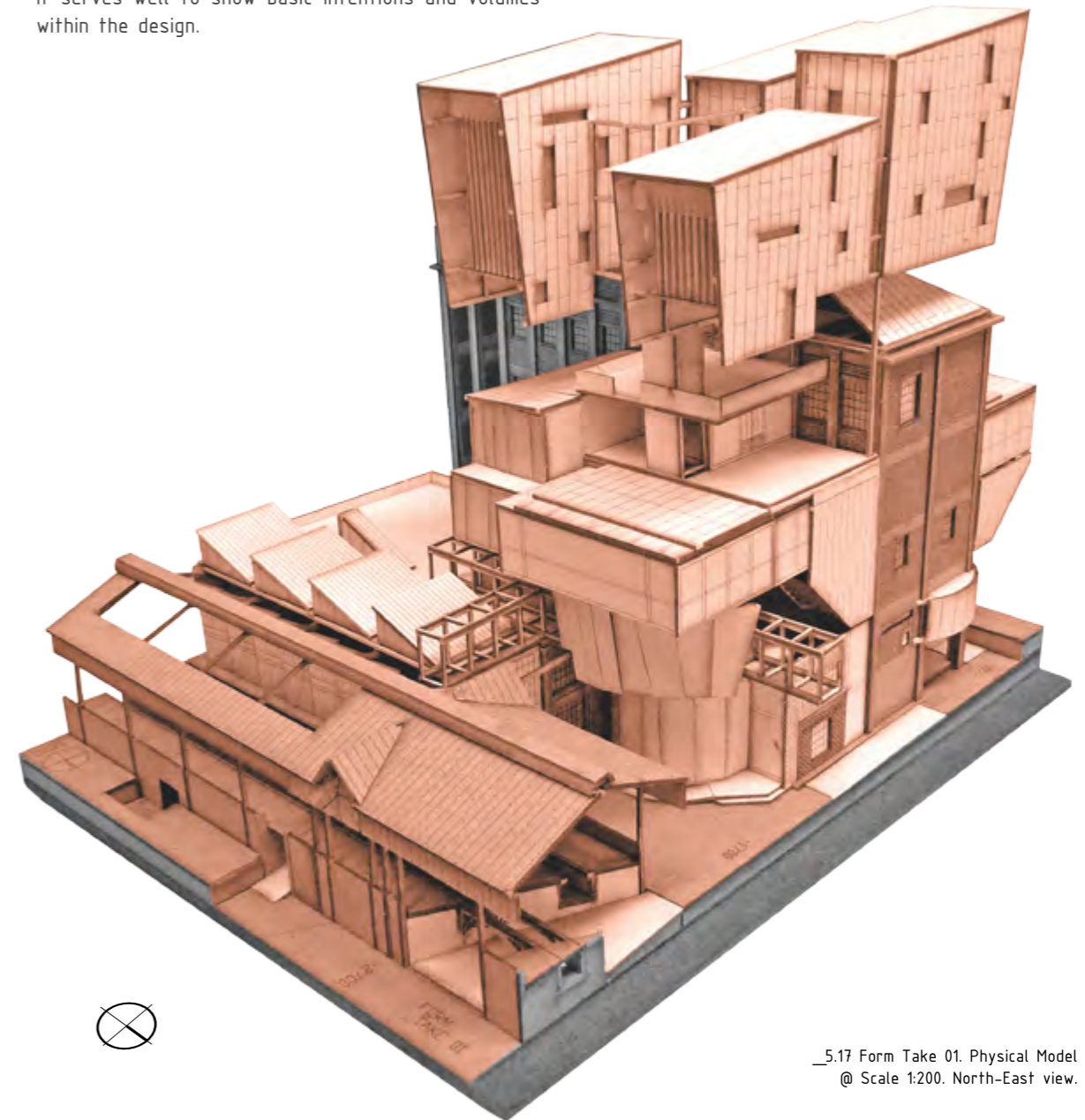




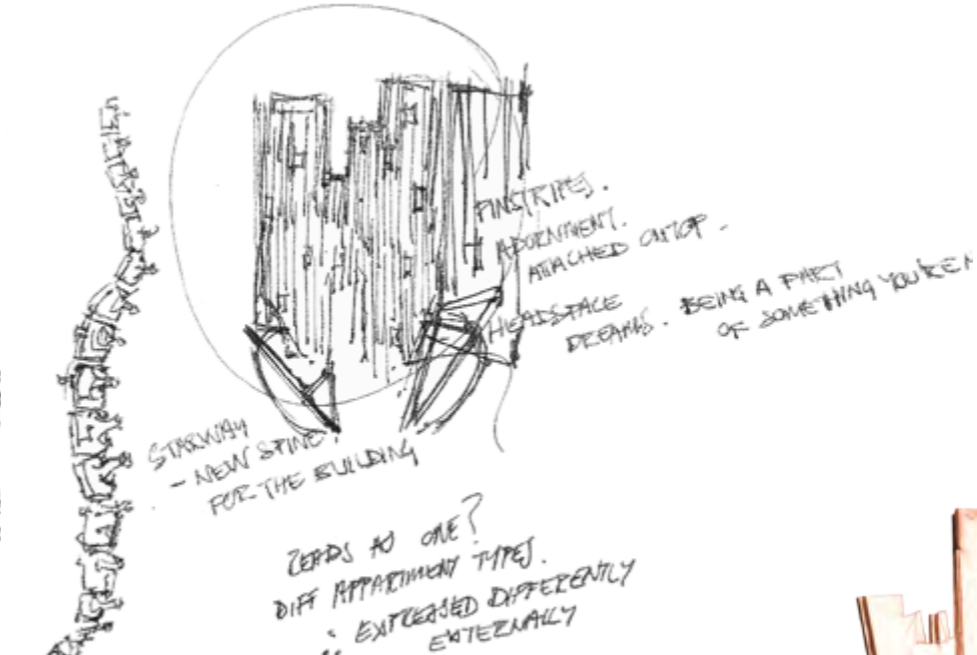
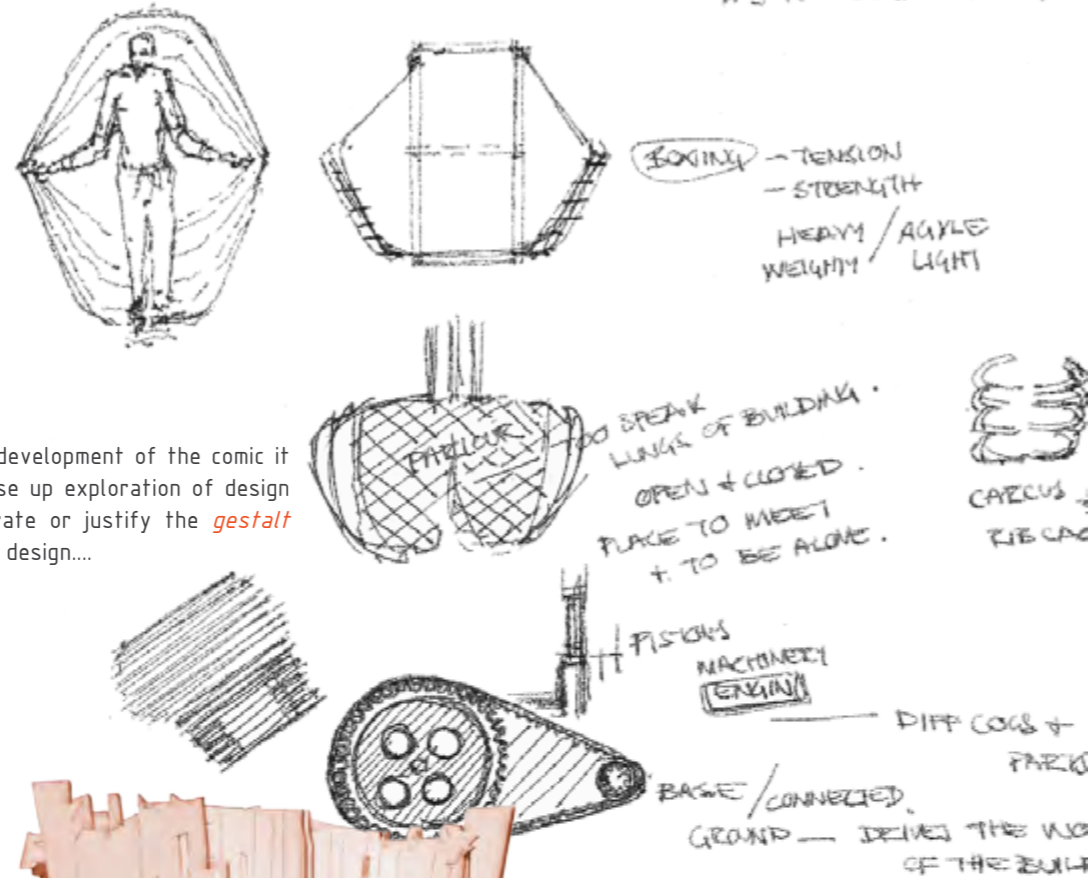
At this stage [although having started building while working on the comic] a physical model of the design was finished. It is called *Form Take 01* as it is intended as the first take on the physical form of the design. It serves well to show basic intentions and volumes within the design.



_5.16 Form Take 01. Physical Model
 @ Scale 1:200. NorthWest view.



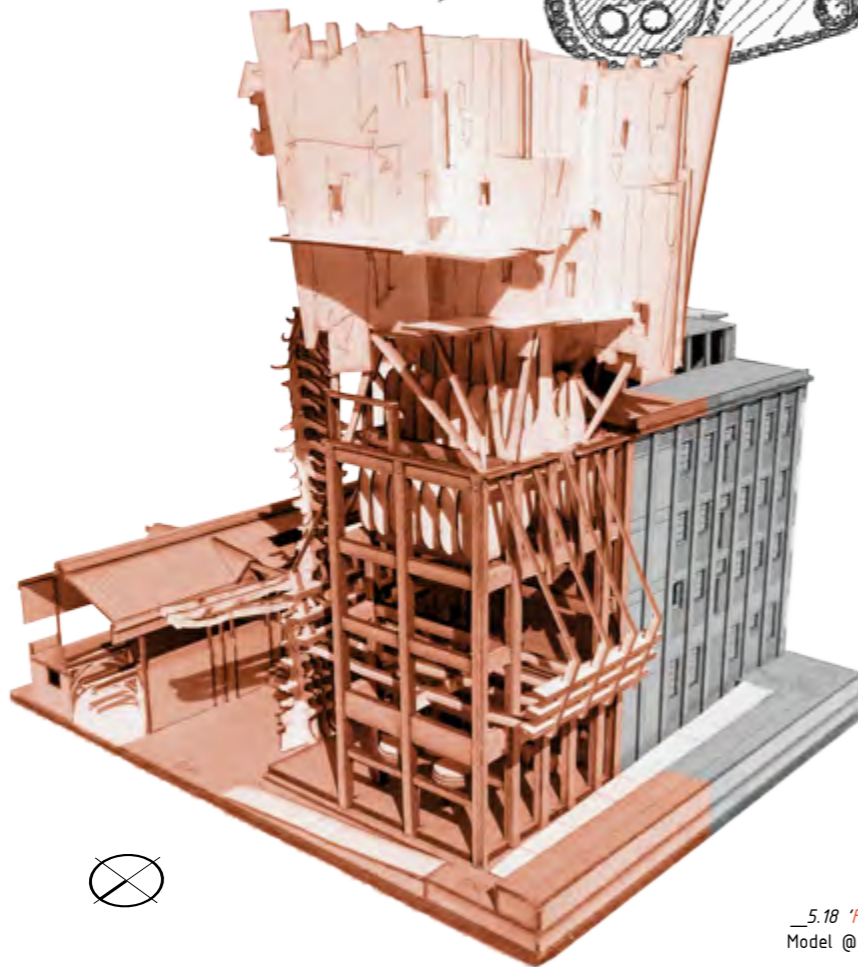
_5.17 Form Take 01. Physical Model
 @ Scale 1:200. North-East view.



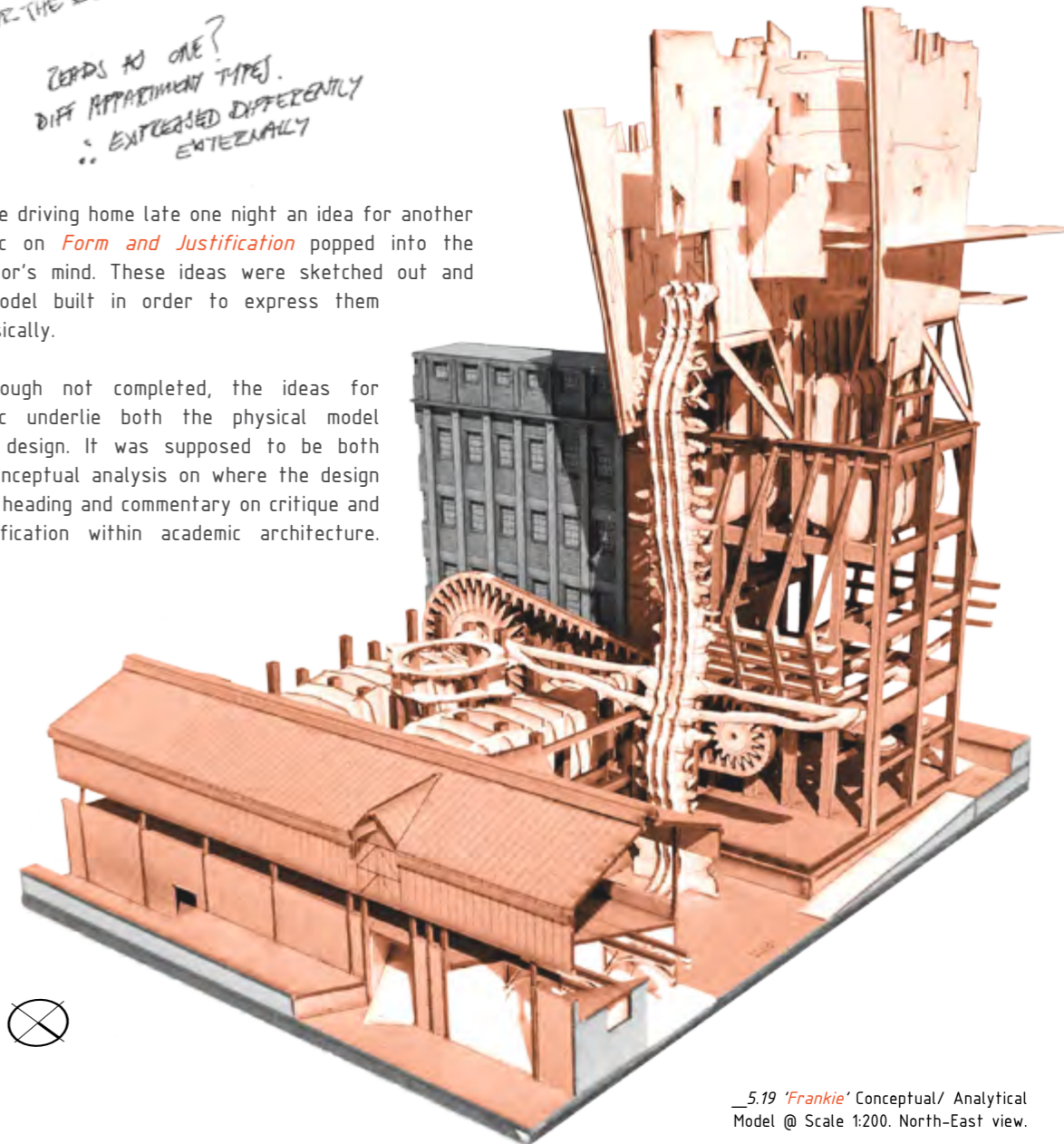
At some point during the development of the comic it became clear that the close up exploration of design was not enough to illustrate or justify the *gestalt* and ideas behind the final design....

While driving home late one night an idea for another comic on *Form and Justification* popped into the author's mind. These ideas were sketched out and a model built in order to express them physically.

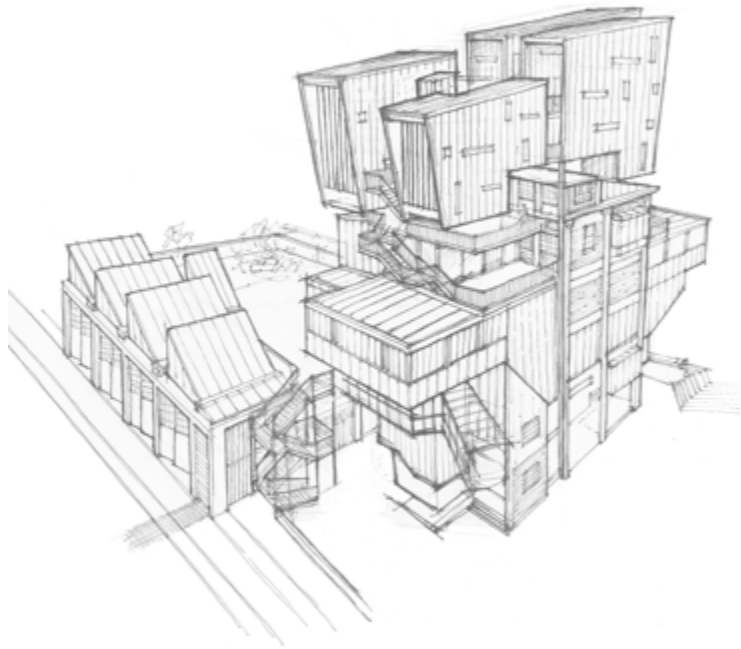
Although not completed, the ideas for comic underlie both the physical model and design. It was supposed to be both a conceptual analysis on where the design was heading and commentary on critique and justification within academic architecture.



_5.18 'Frankie' Conceptual/ Analytical Model @ Scale 1:200. North-West view.

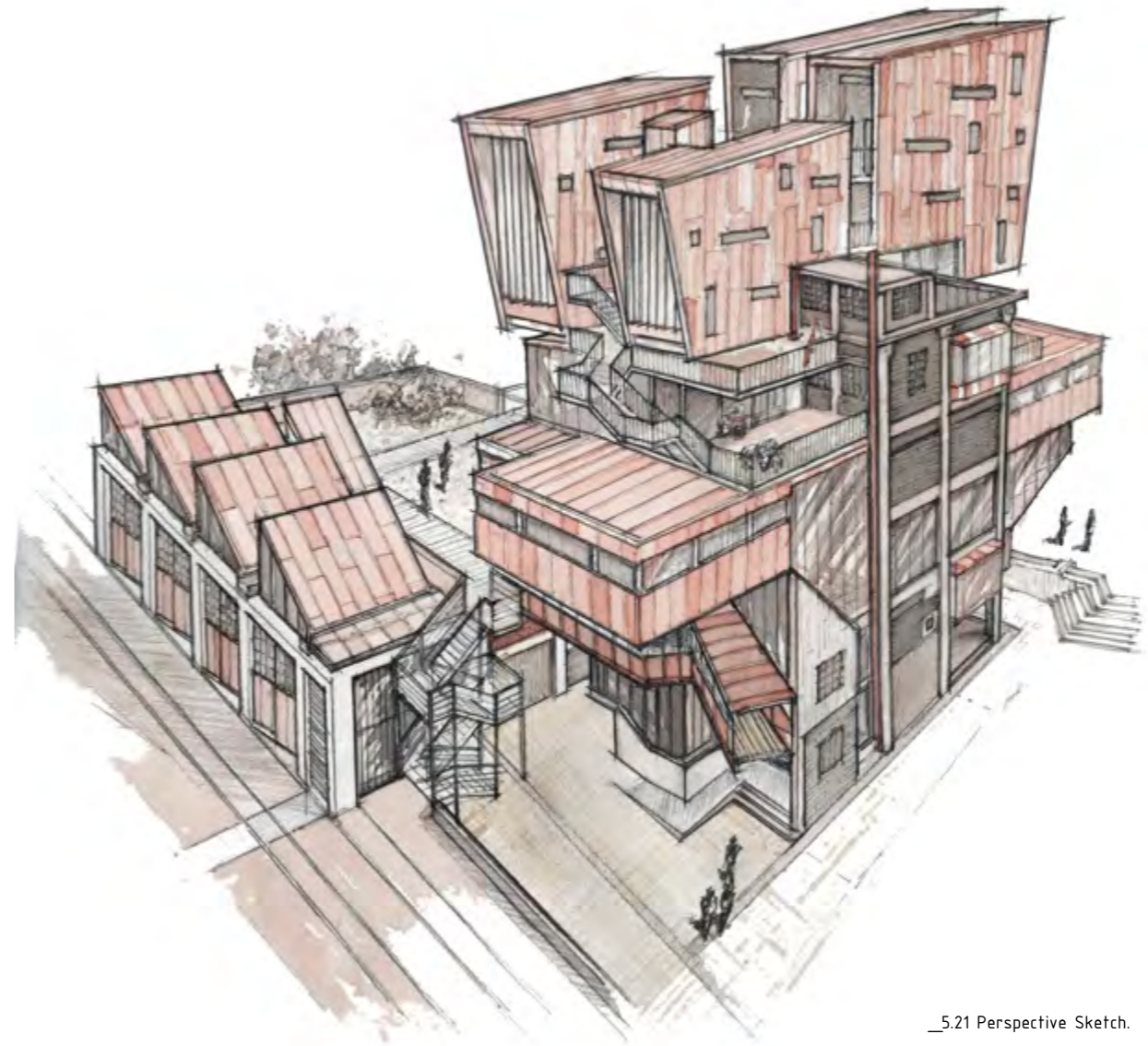


_5.19 'Frankie' Conceptual/ Analytical Model @ Scale 1:200. North-East view.



_5.20 Frankie. Base Perspective Sketch.

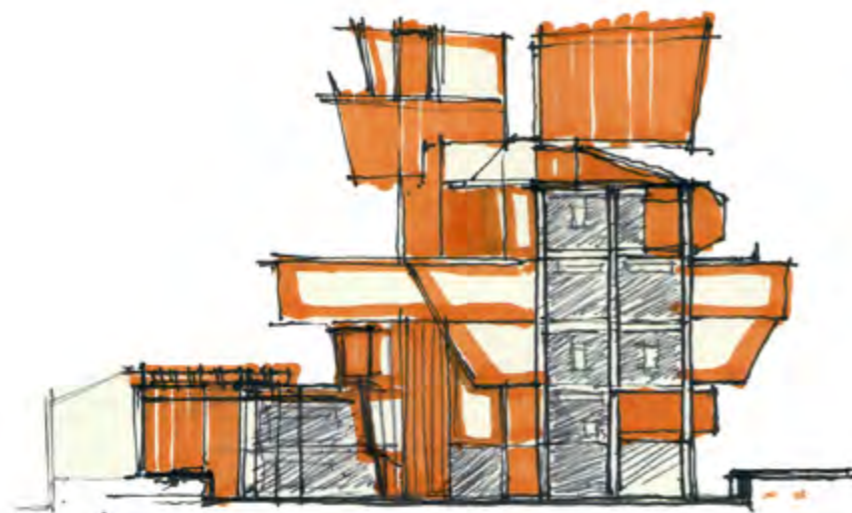
The design as it was before technical development.



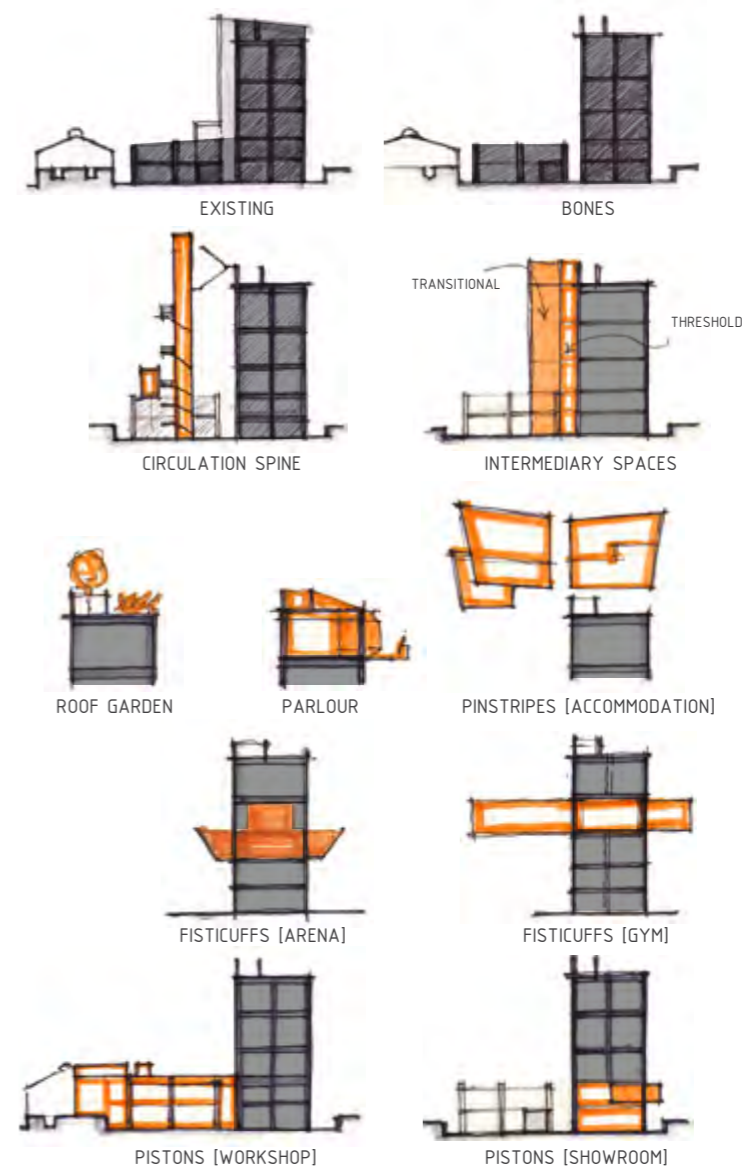
_5.21 Perspective Sketch.

DESIGN DEVELOPED

DESIGN & TECHNICAL APPROACH



_6.1 Design elements combined.



_6.2 Design elements.



_6.3 Existing Materials.

MATERIALS APPROACH

EXISTING

Material choices are based on an interpretation of the existing, how new materials relate to old while fulfilling their role in the new, functionally, conceptually and aesthetically.

The main mill buildings are structures comprising thick concrete frames and brick infill. Later additions and alterations to the complex [storage sheds, roofing, circulation, railway sidings] are steel framed and profile sheet clad [steel or fibreglass]. Interior flooring is of timber and fenestration consists exclusively of steel framed windows with small panes.

NEW

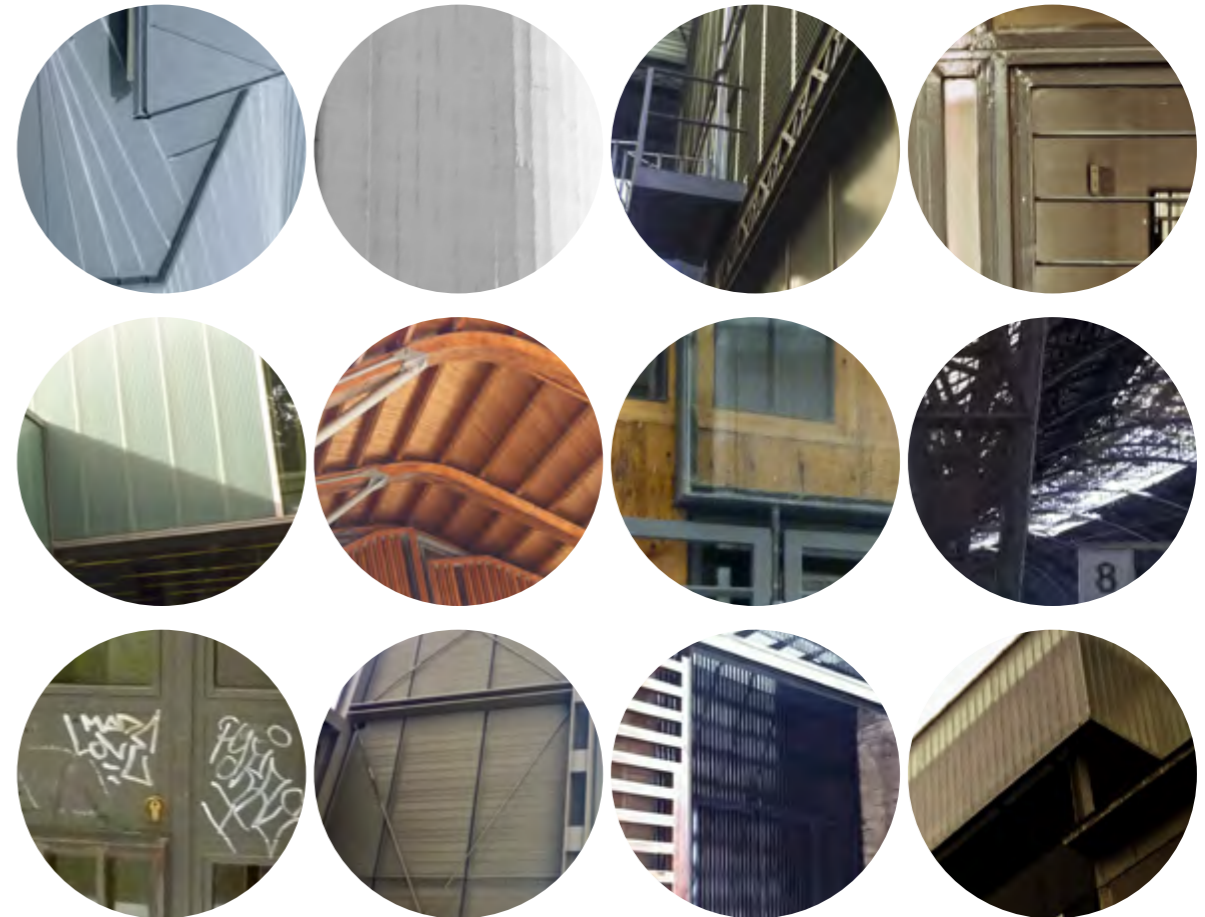
Concrete is also used for the primary structure in several areas as needs required, and connected to masonry. The concrete will read as new through a linear shuttering treatment.

On the whole, as an addition to the existing, the new structure is steel. Steel columns and beams make up the structural spine and frame the intermediary, circulatory and additional elements.

Existing timber will be salvaged and reused where possible in flooring and detailing. The majority of new flooring will comprise composite concrete/ steel slabs fixed to the steel structure.

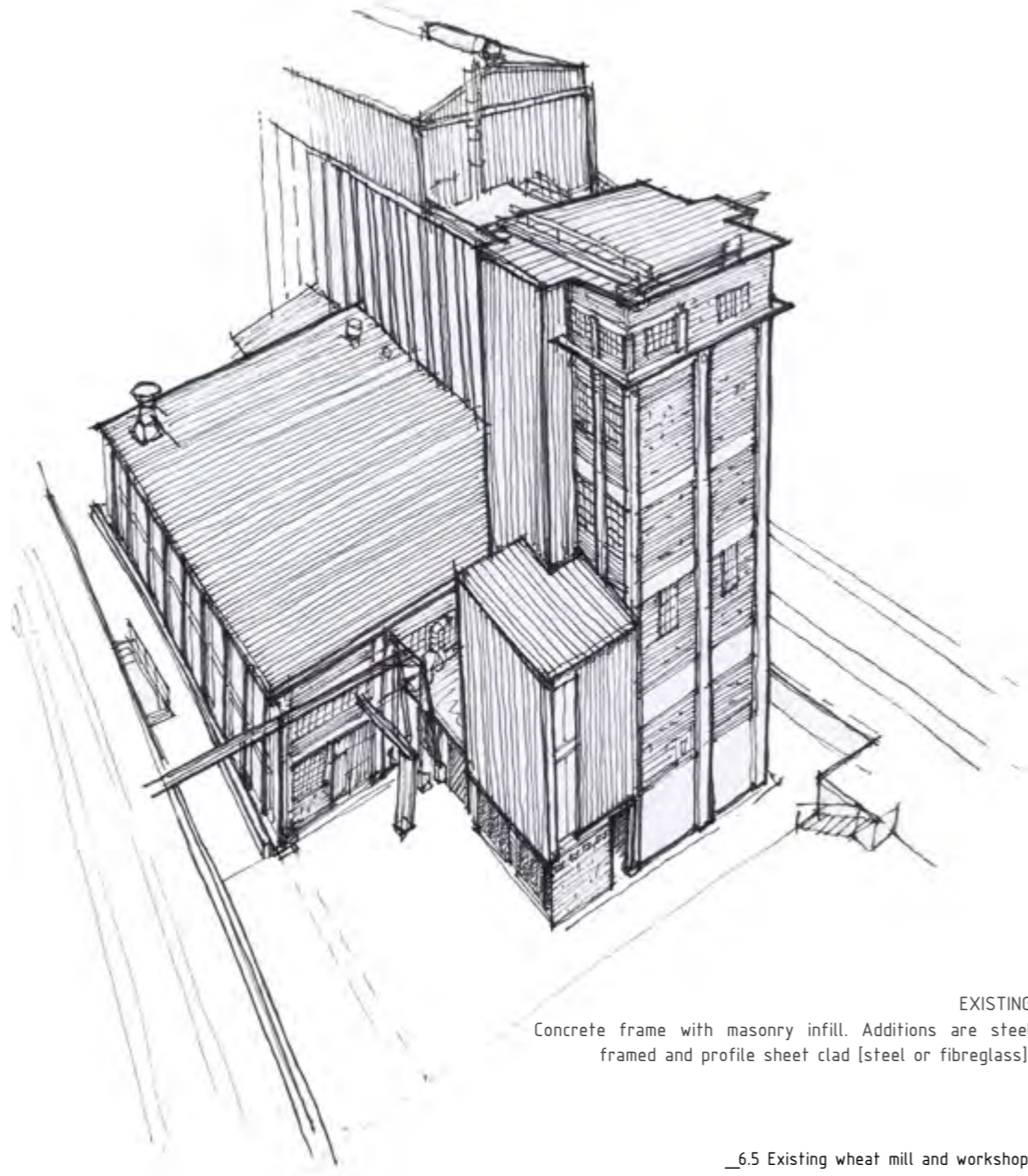
The walls and roofs of the new additions are a layered system consisting of the steel primary structure, secondary timber joists and plywood panelling with zinc sheeting as a finish. Fenestration will also comprise steel framed glazing and Dampalon panelling.

MATERIALITY

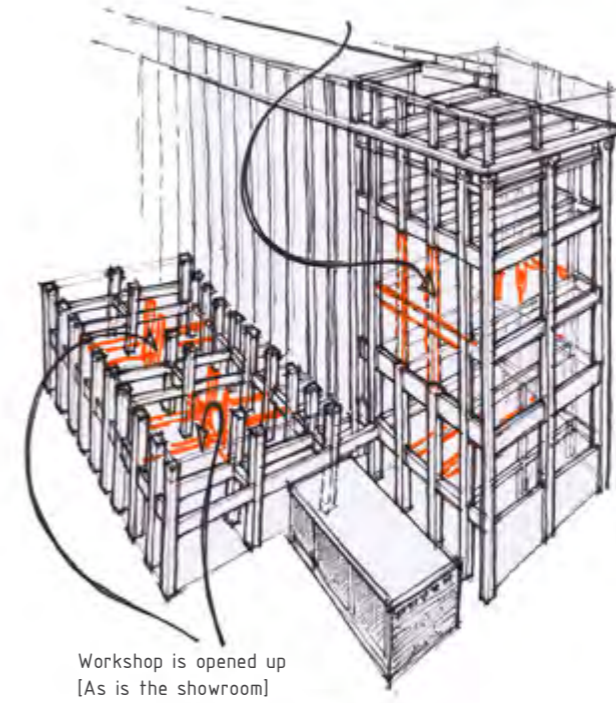


ZINC, CONCRETE, STEEL, TIMBER, GLAZING, DAMPALON.

_6.4 New materials palette.

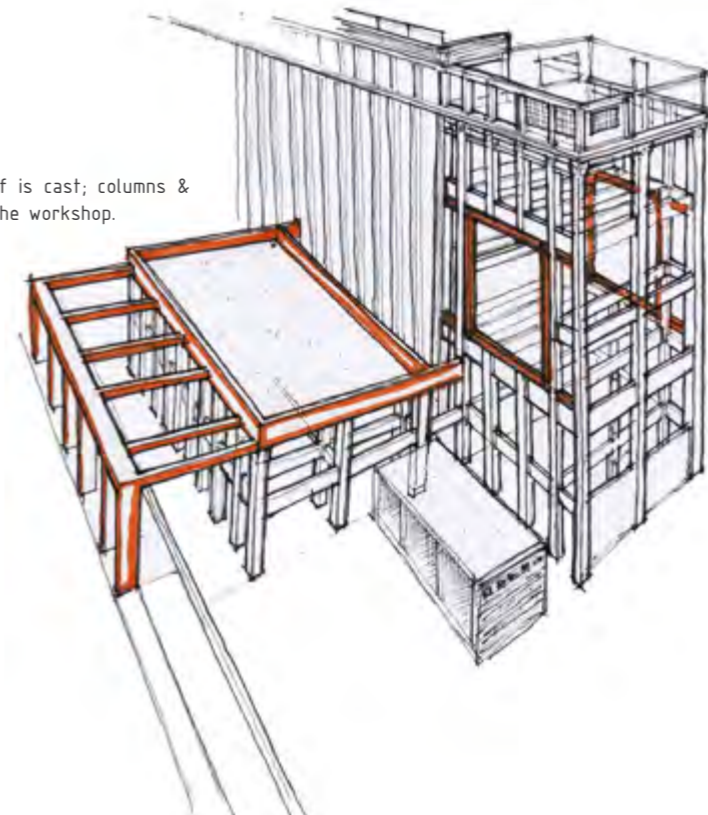


Sheeting & steel frame removed as well as select columns & beams [new programming] existing brickwork & windows remain intact as much as possible

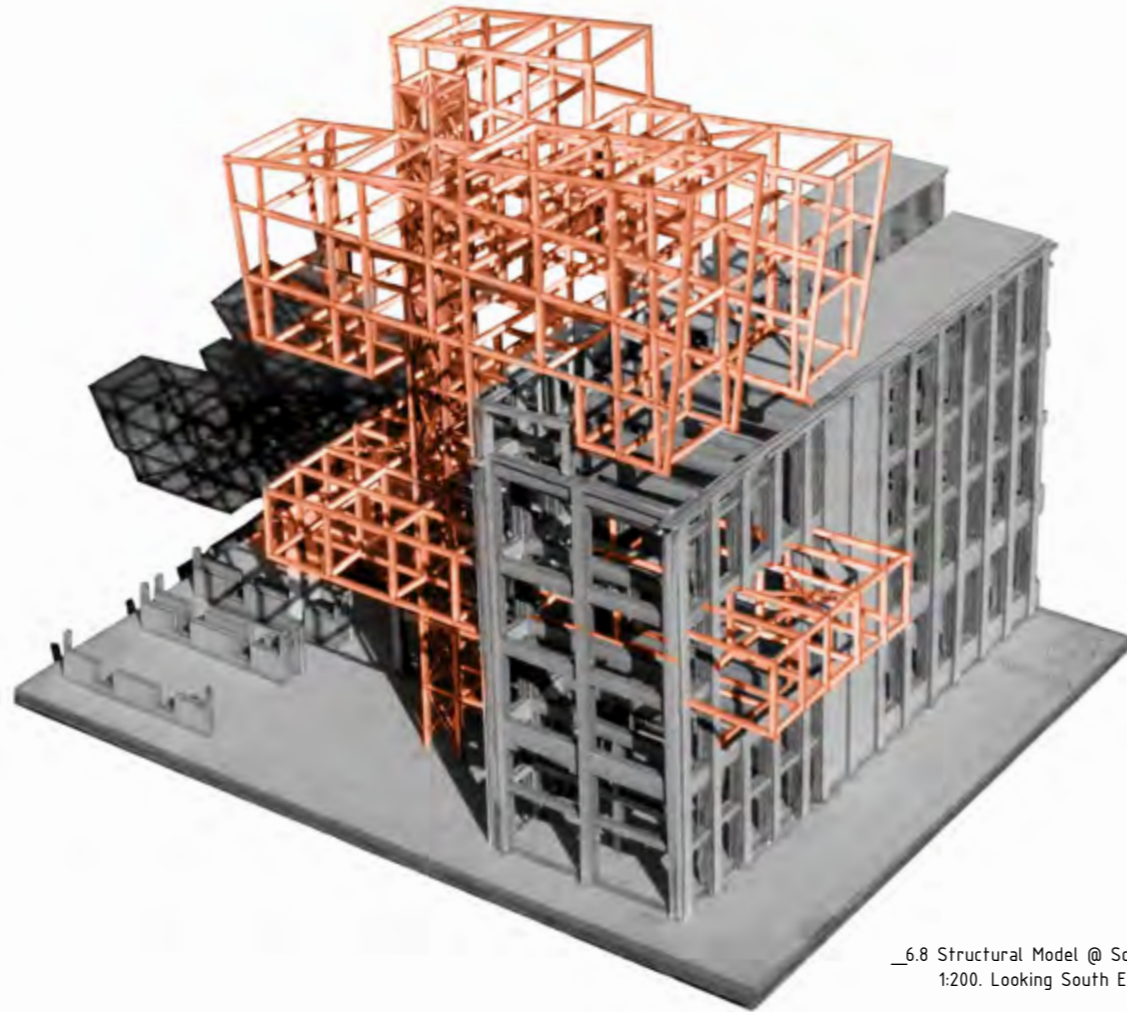


_6.6 Concrete structure & subtraction.

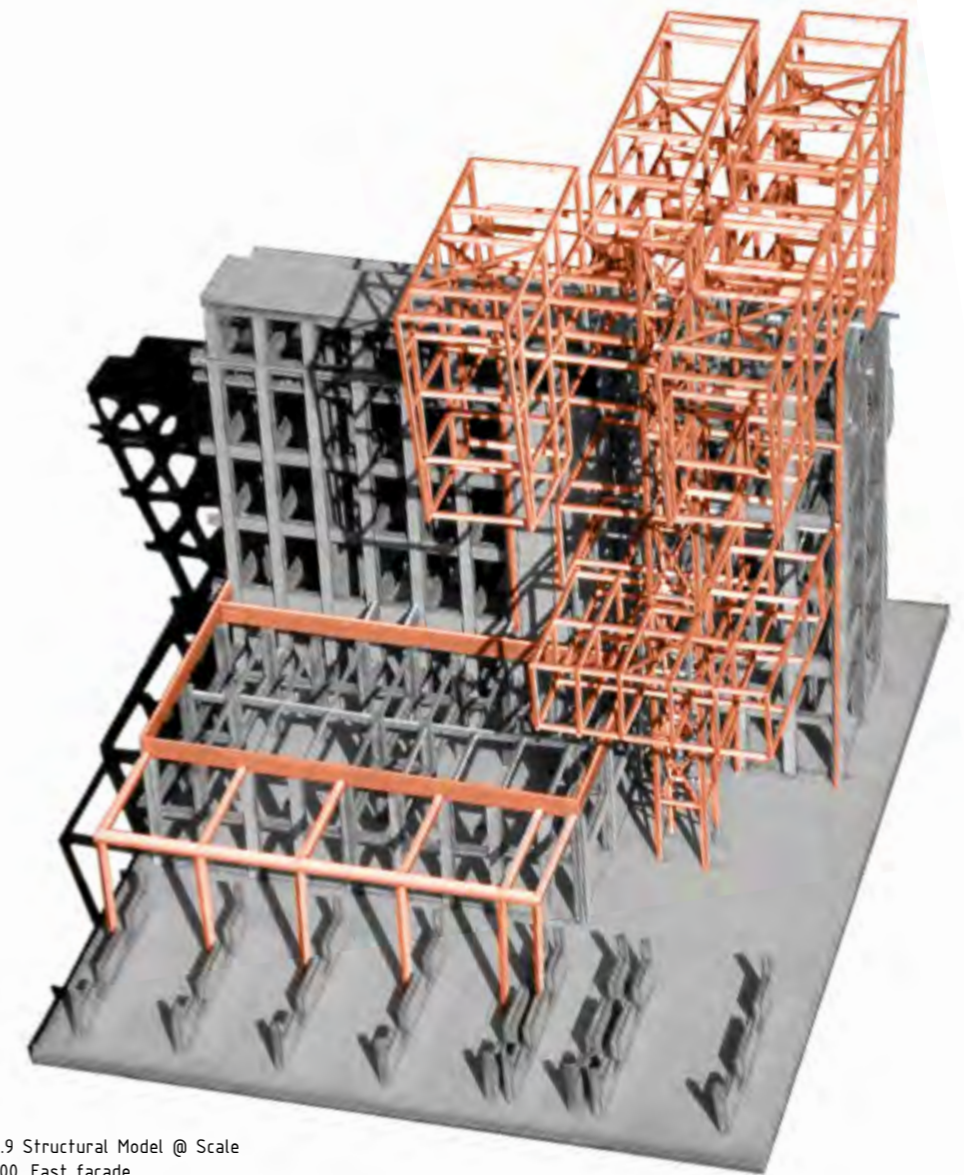
A concrete roof is cast; columns & beams extend the workshop.



_6.7 Additional structure.



_6.8 Structural Model @ Scale
1:200. Looking South East



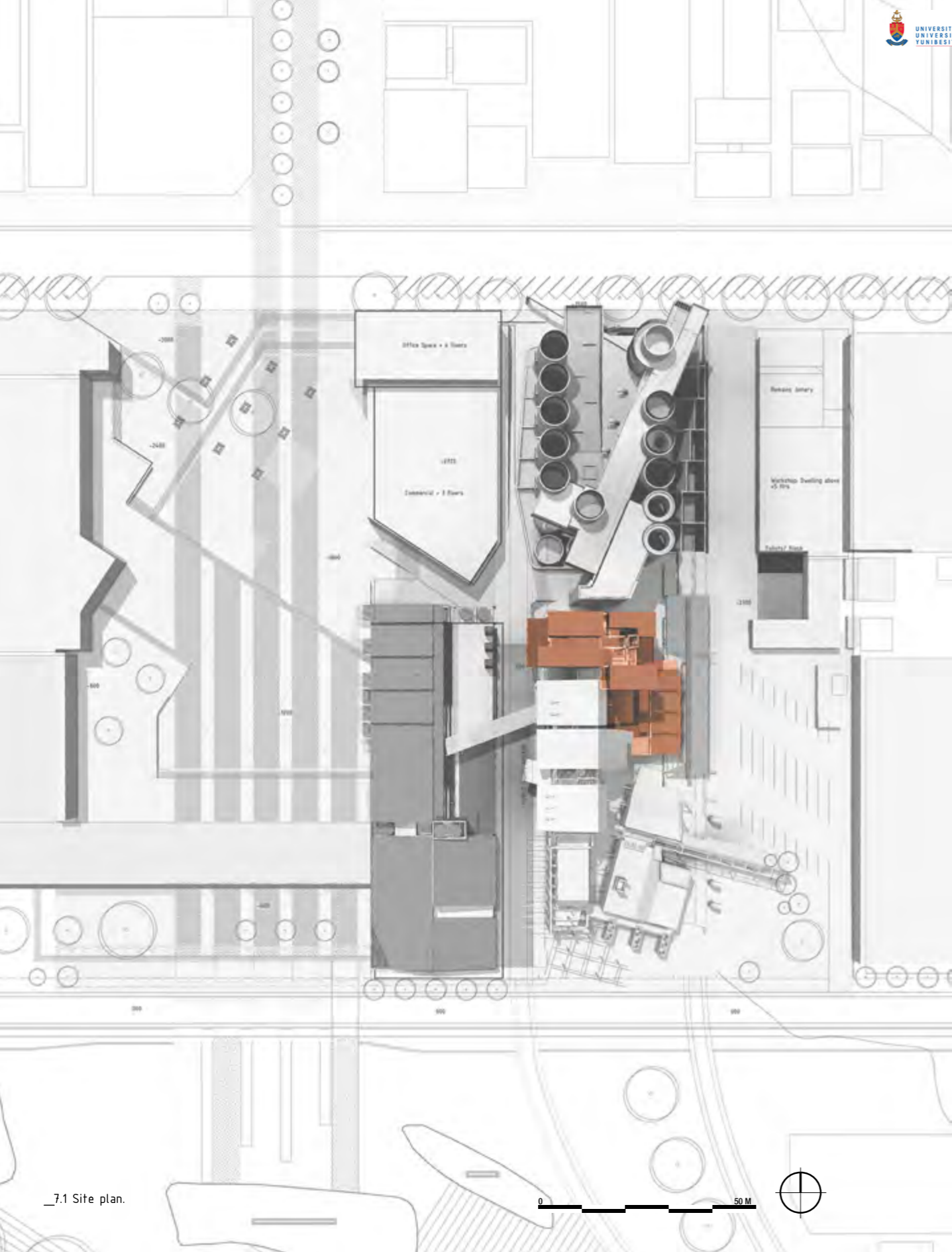
_6.9 Structural Model @ Scale
1:200. East facade

DRAWING BOARD

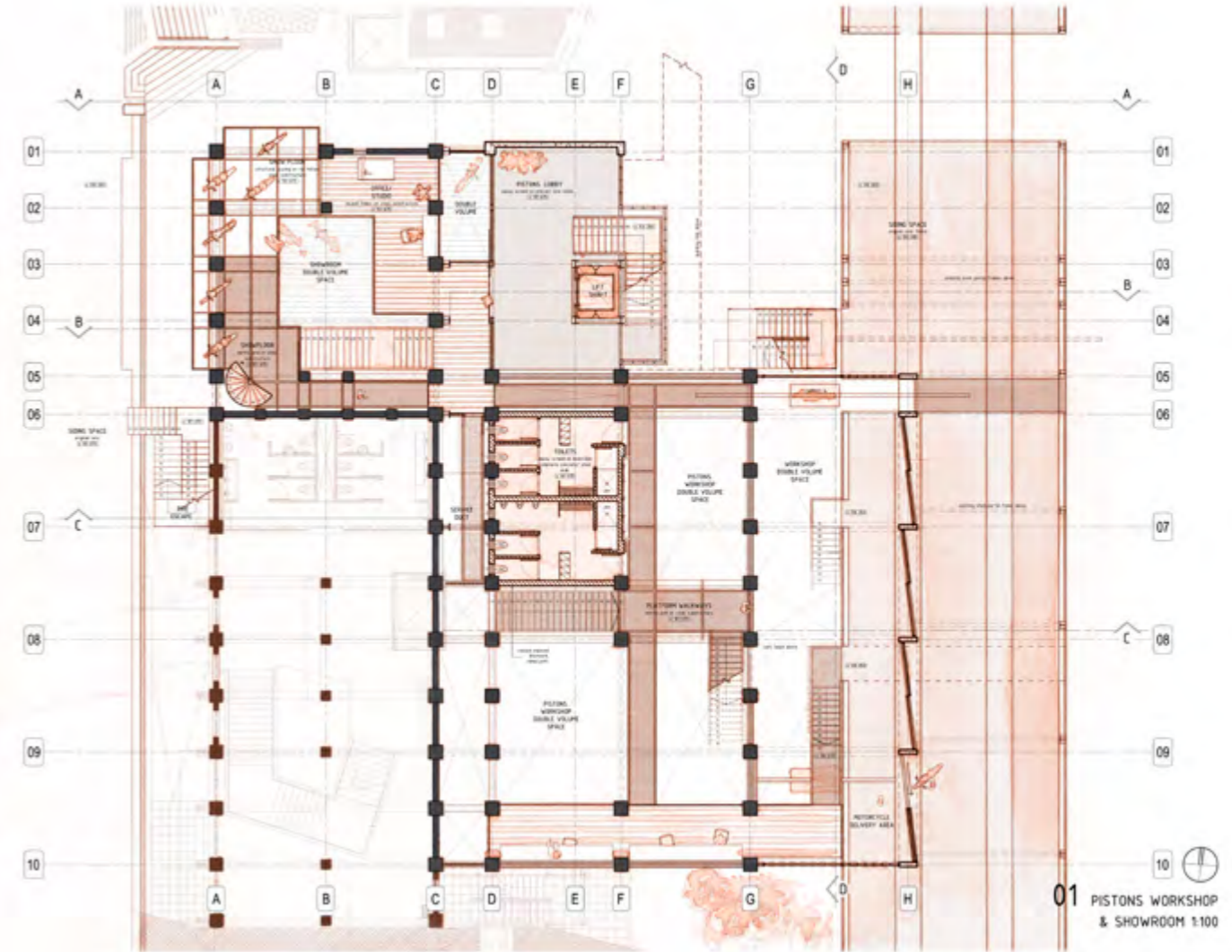
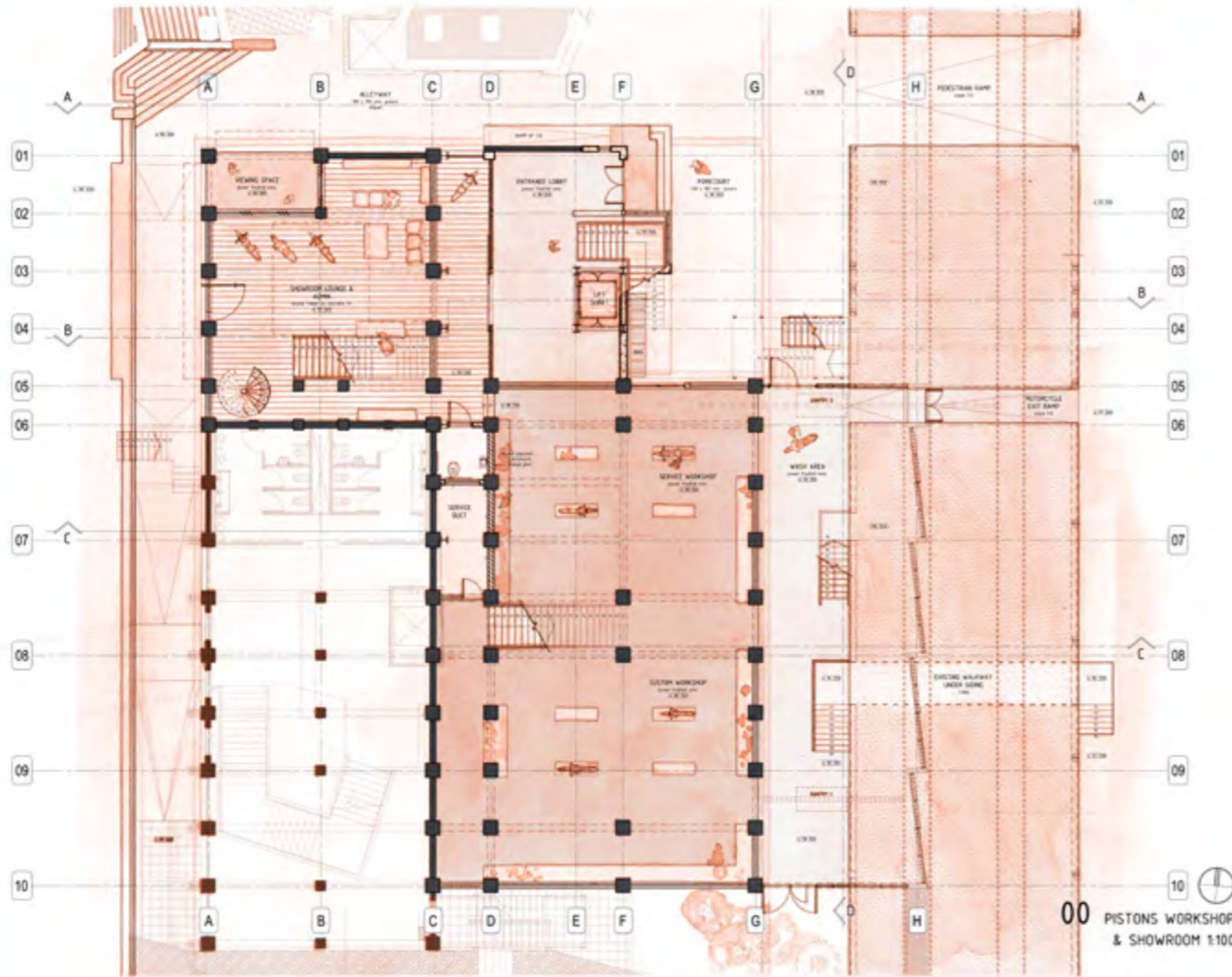
7

FINAL DESIGN & TECHNICAL
RESOLUTION

The chapter contains the
design/ working drawings. Rough
sketches are also included.

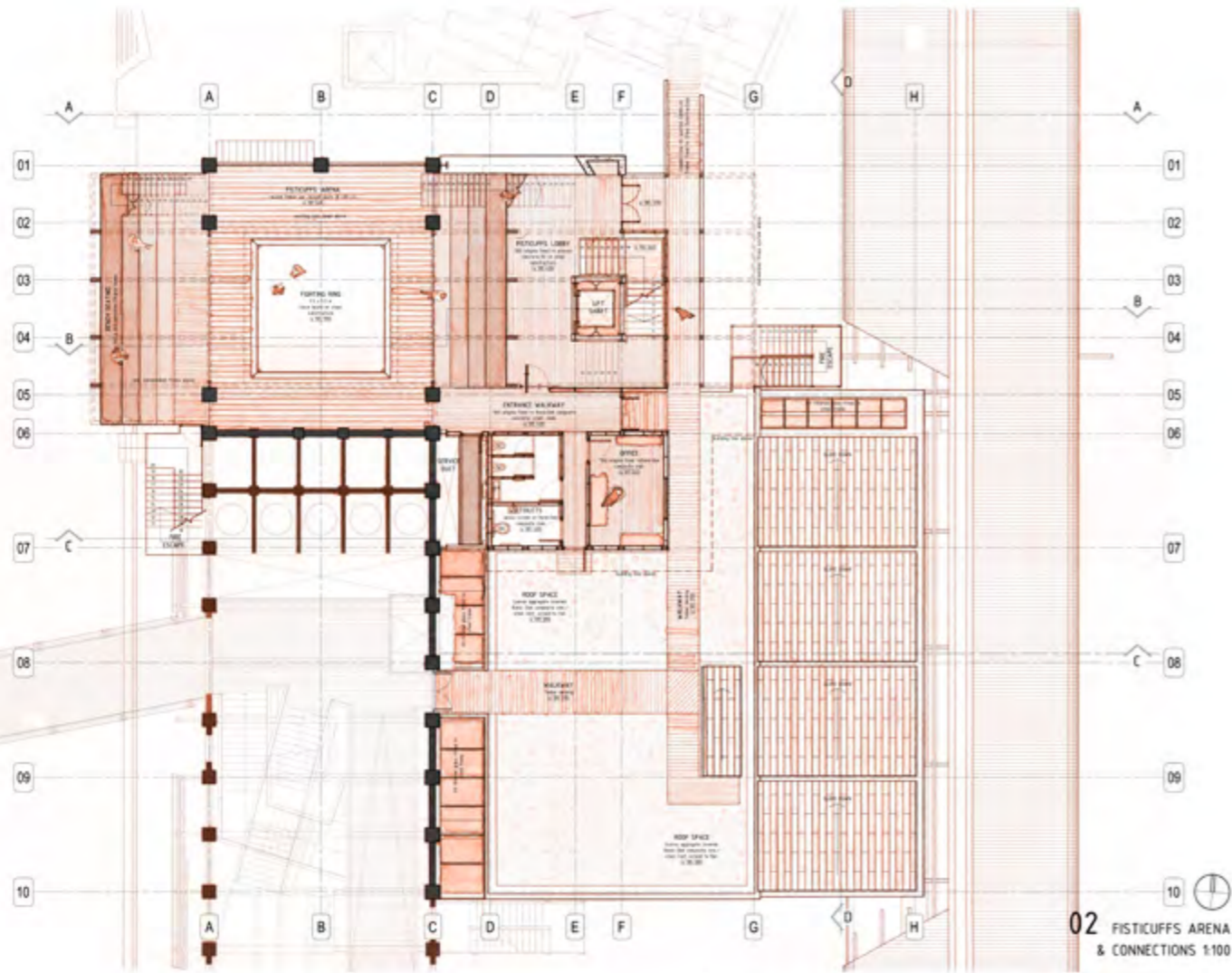


_7.1 Site plan.

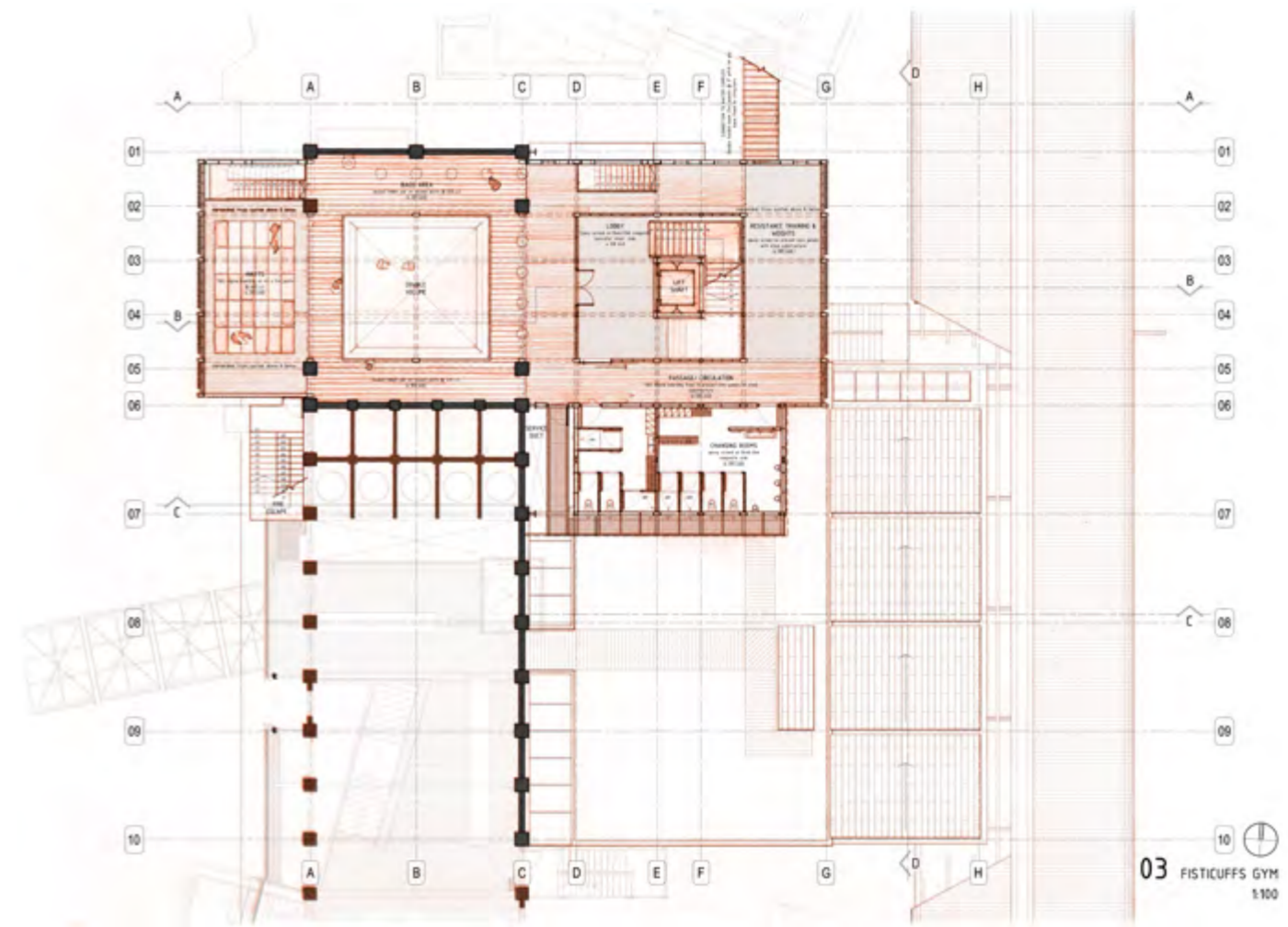


_7.2 Ground Floor Plan. NTS

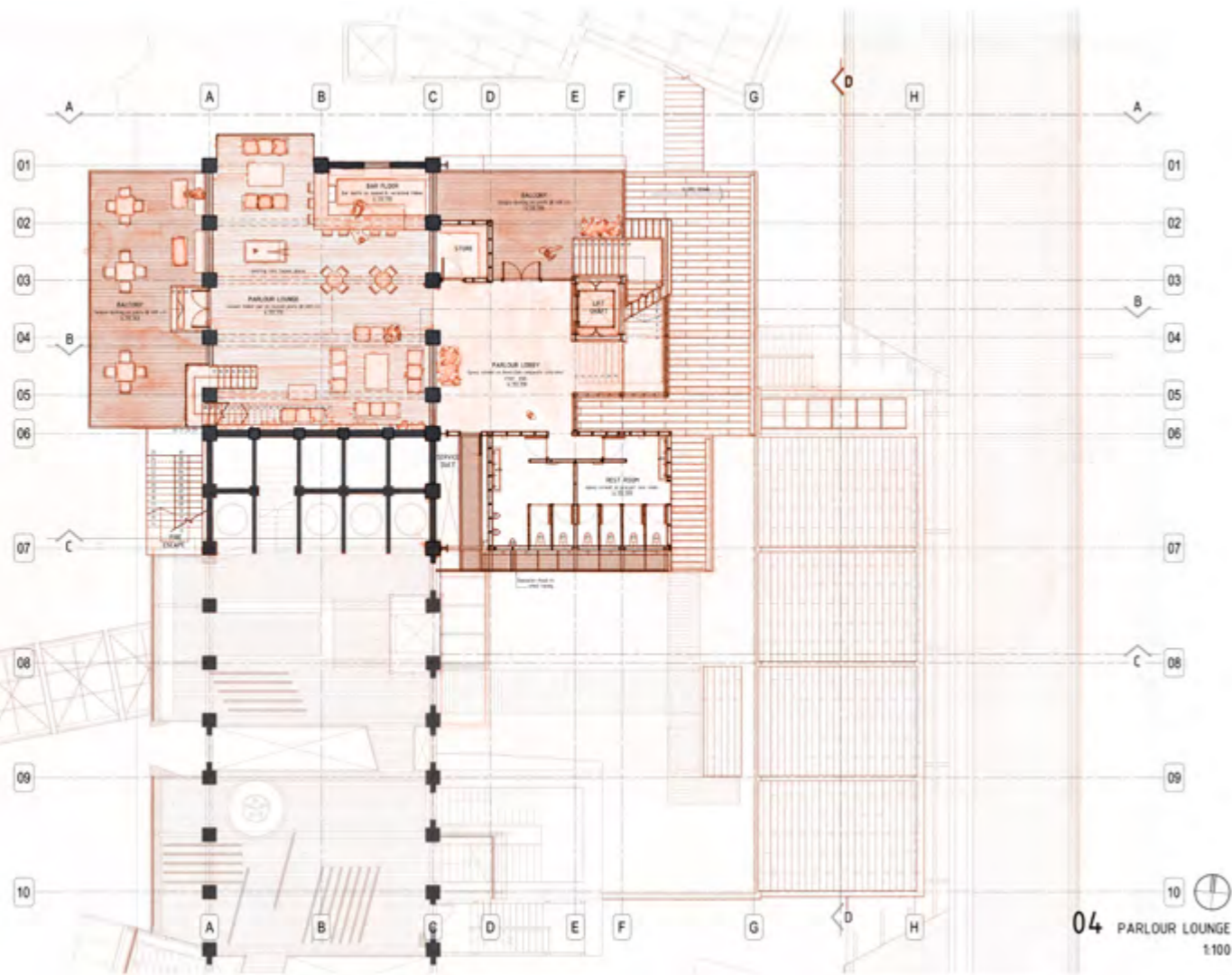
_7.3 First Floor Plan. NTS



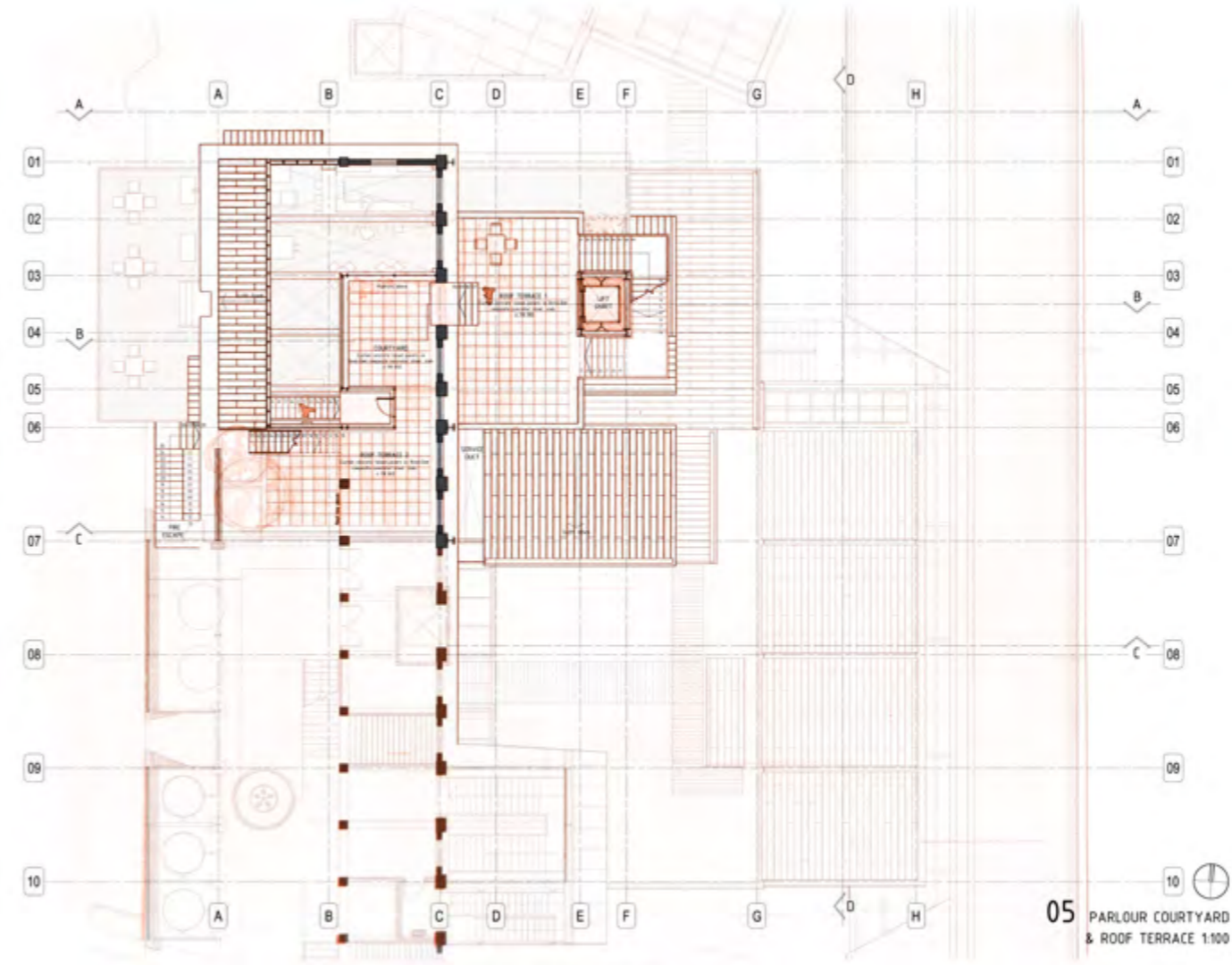
_7.4 Second Floor Plan. NTS



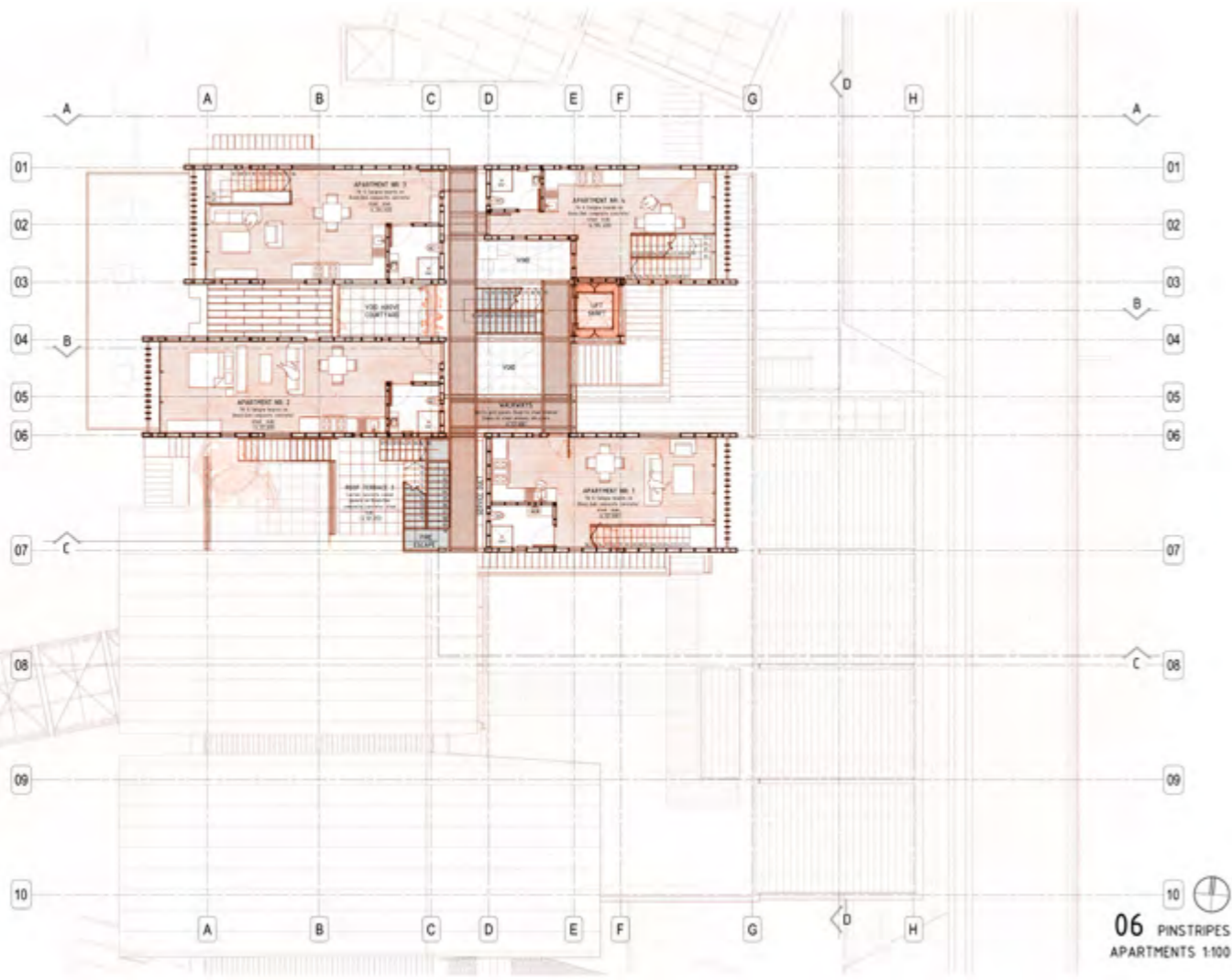
_7.5 Third Floor Plan. NTS



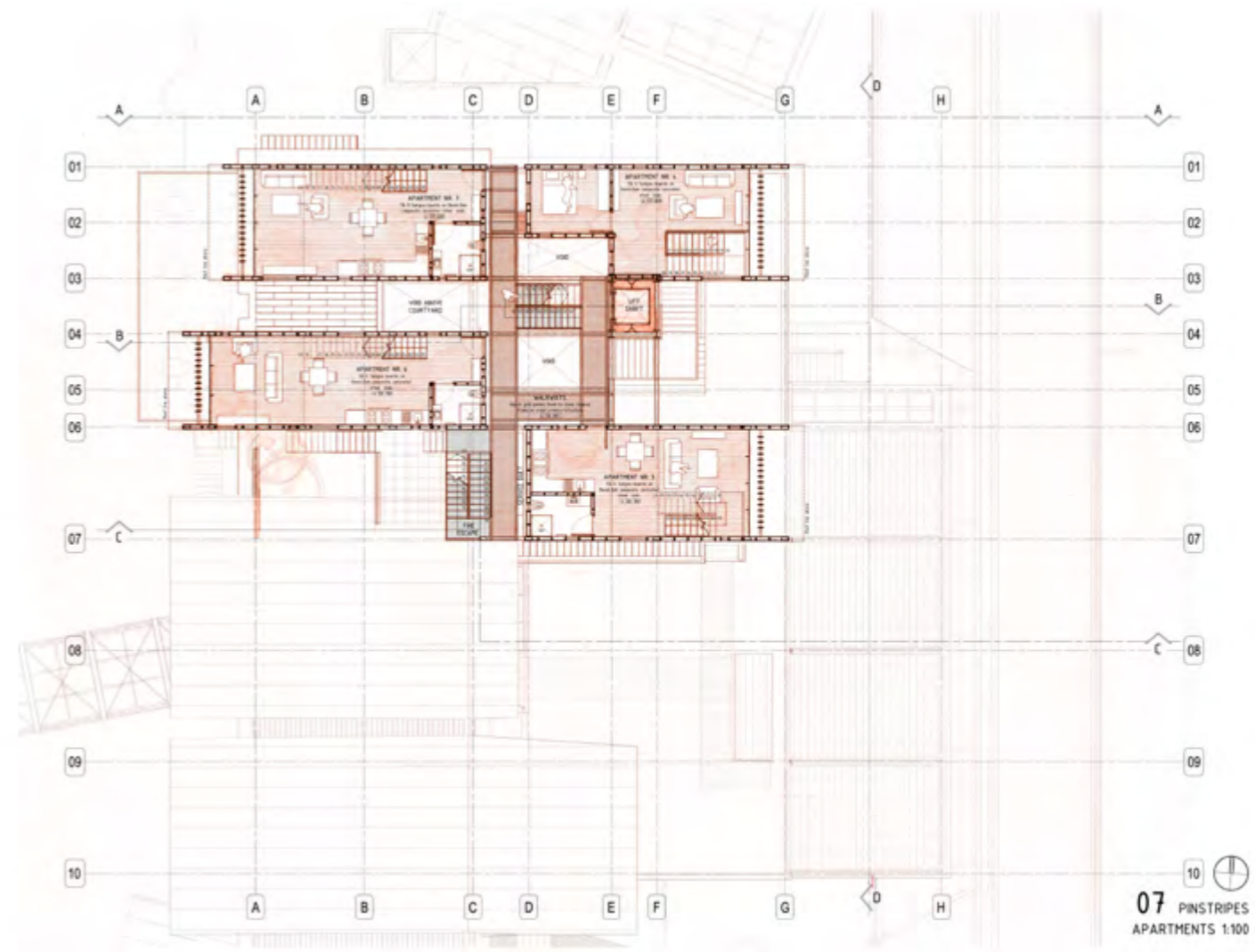
_7.6 Fourth Floor Plan. NTS



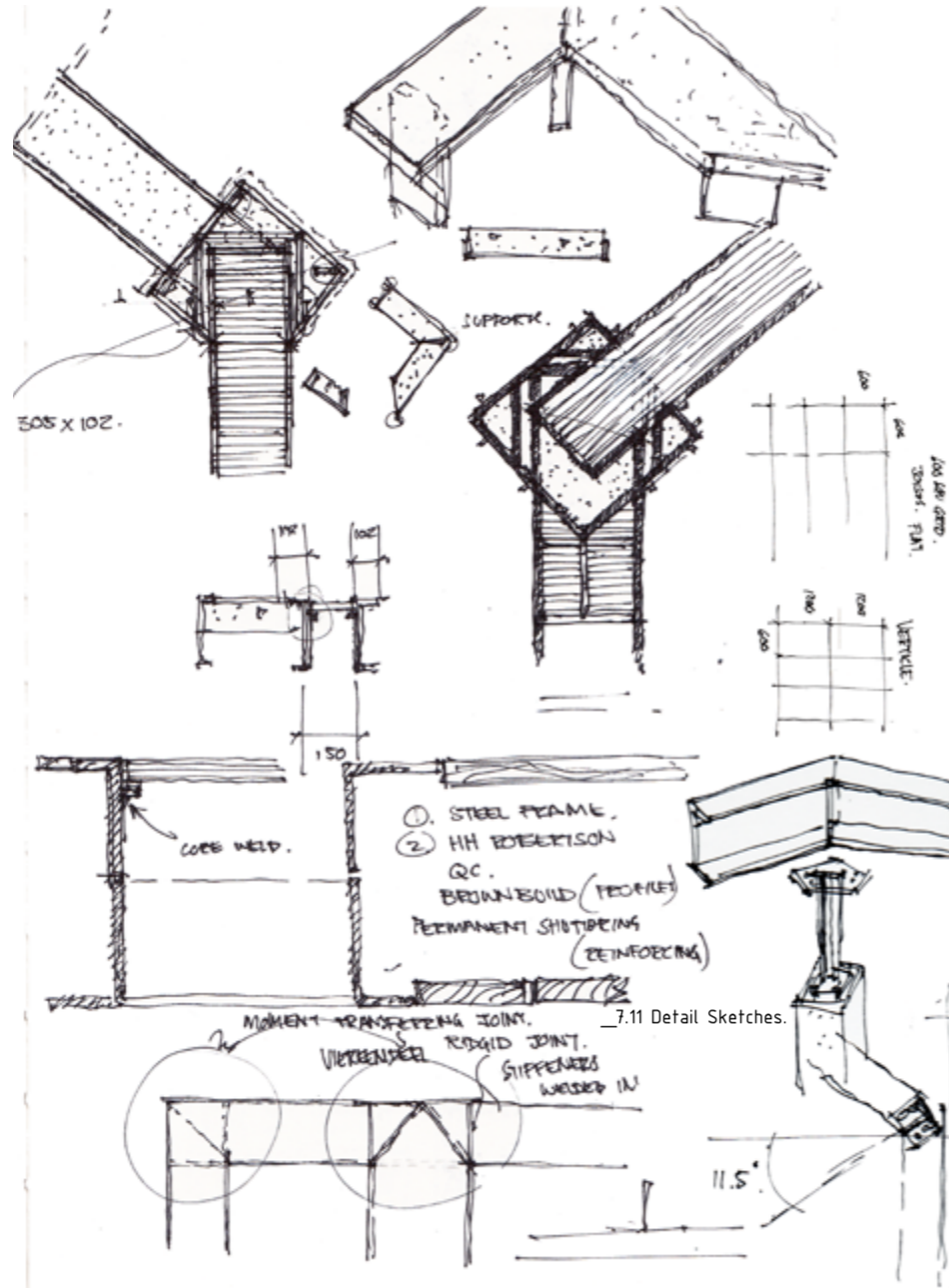
_7.7 Fifth Floor Plan. NTS



_7.8 Sixth Floor Plan. NTS

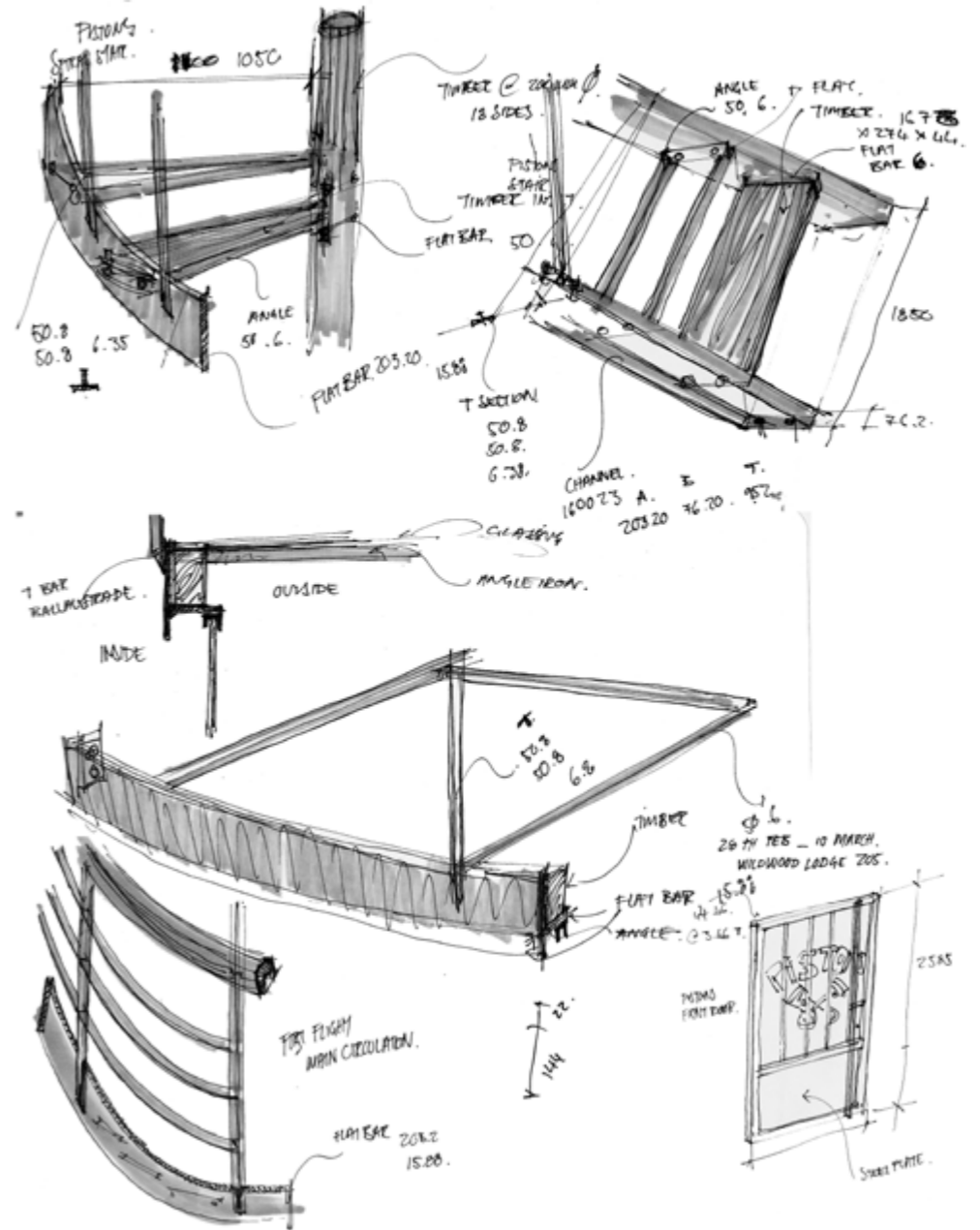


_7.9 Seventh Floor Plan. NTS

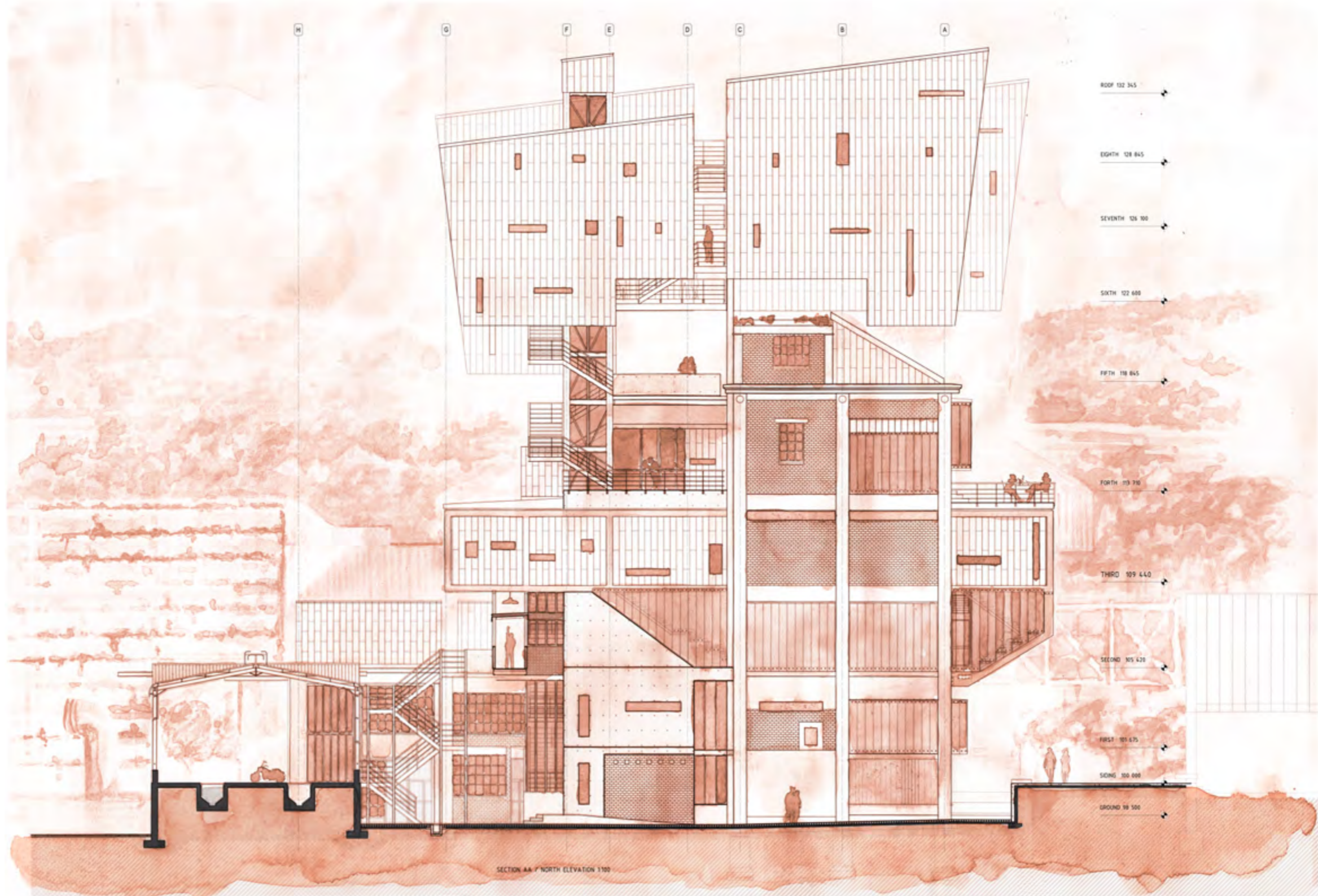


_7.11 Detail Sketches.

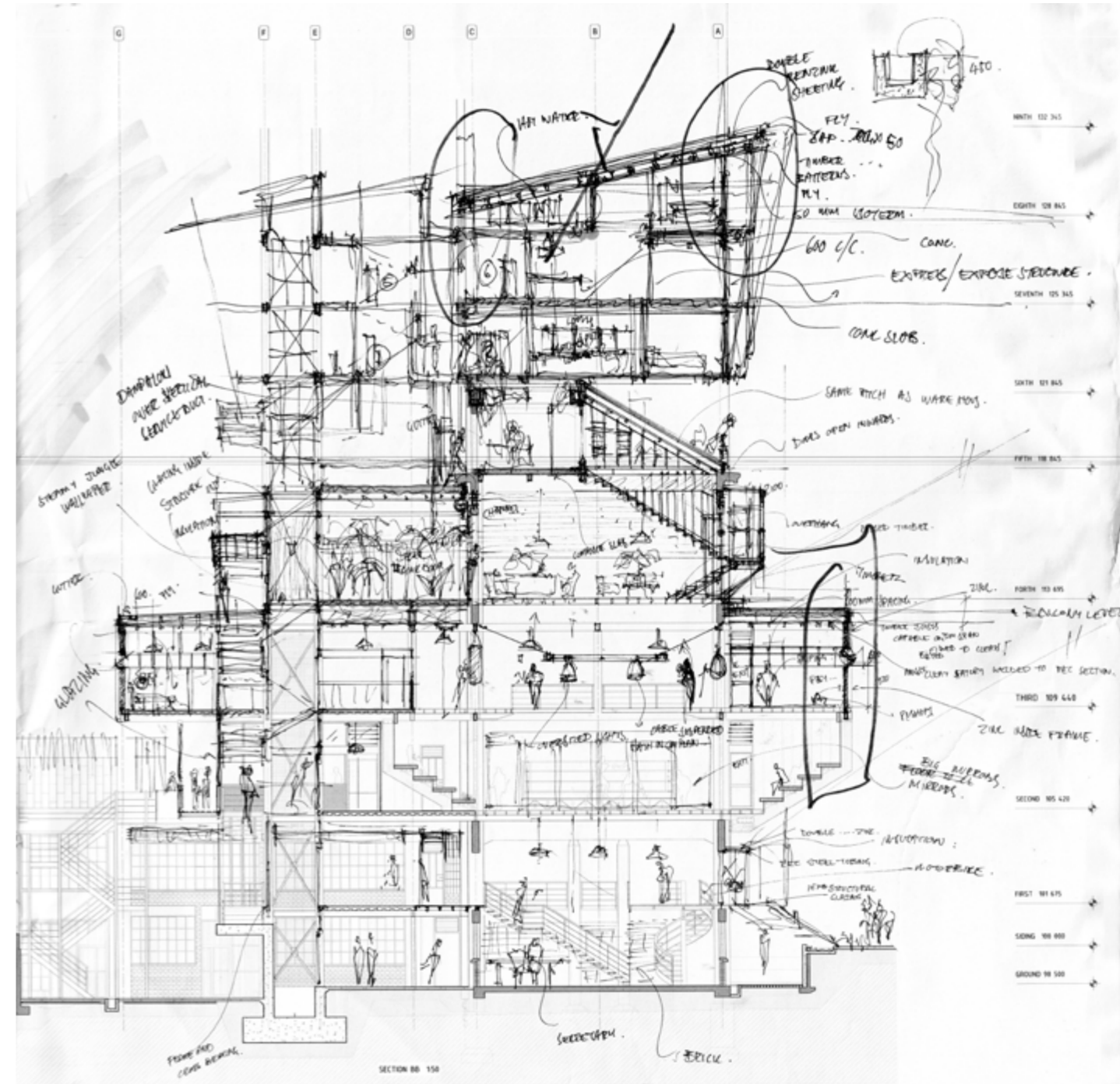
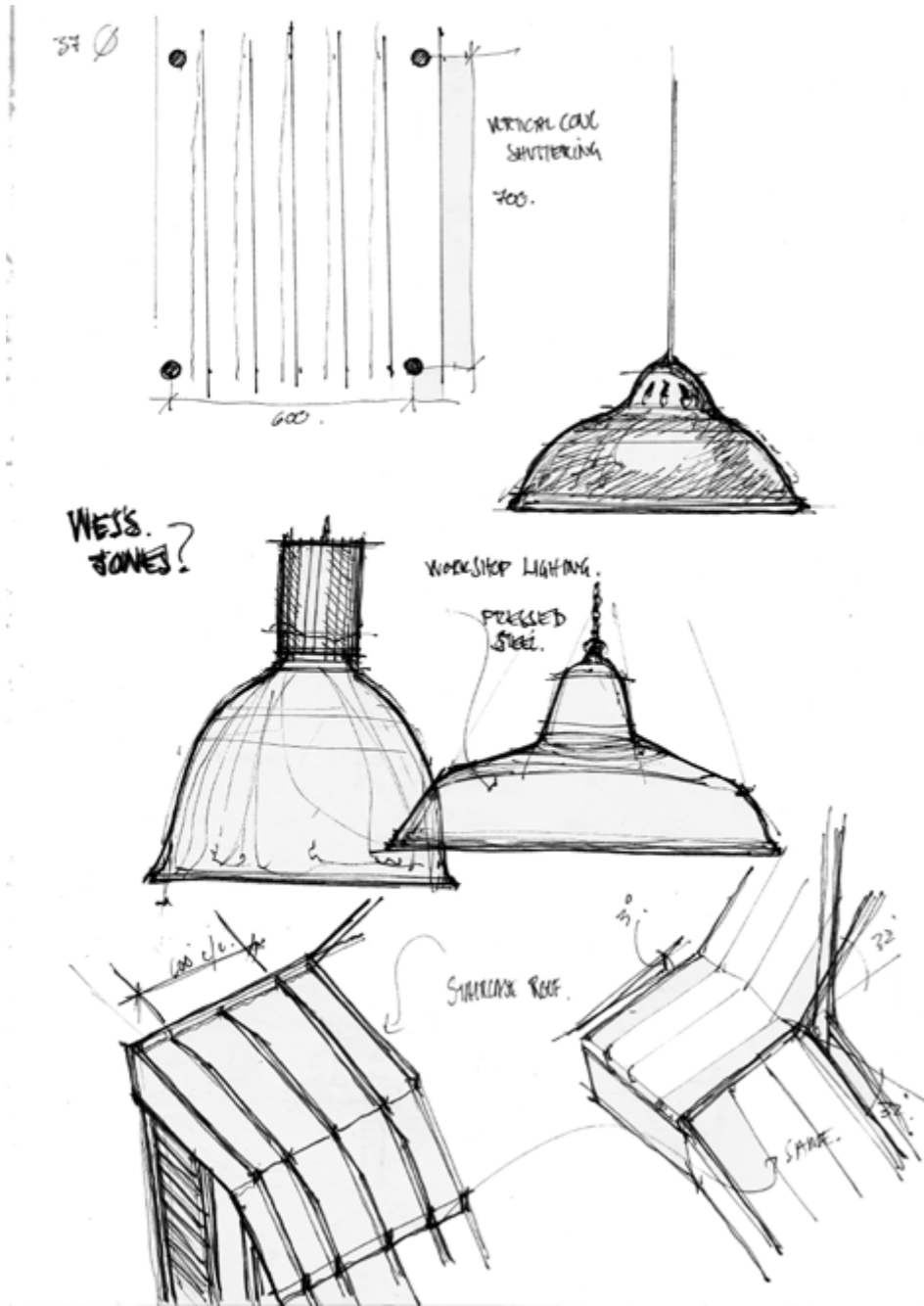
_7.10 Detail Sketches.



_7.12 Detail Sketches.

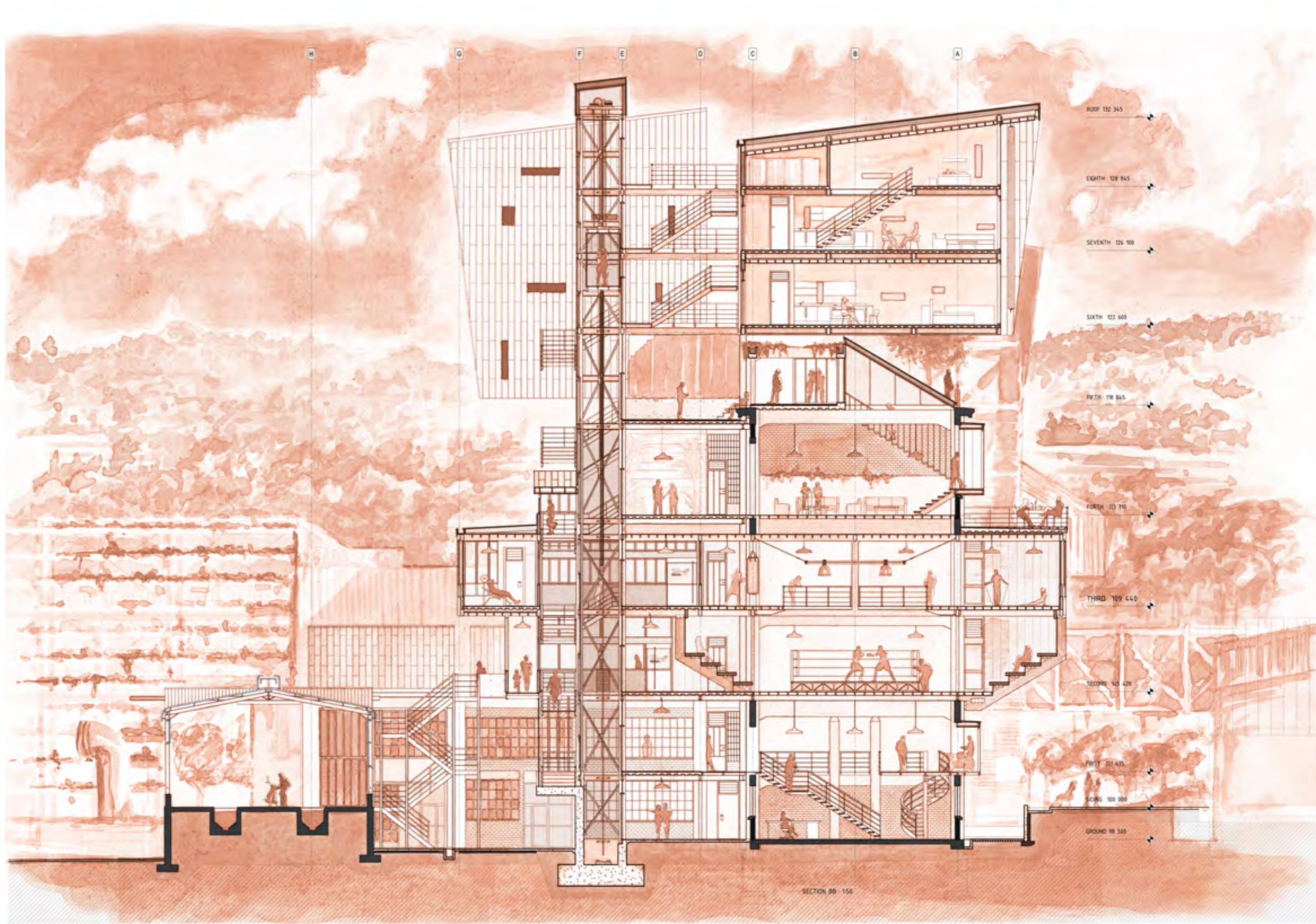


_7.13 Section AA. NTS

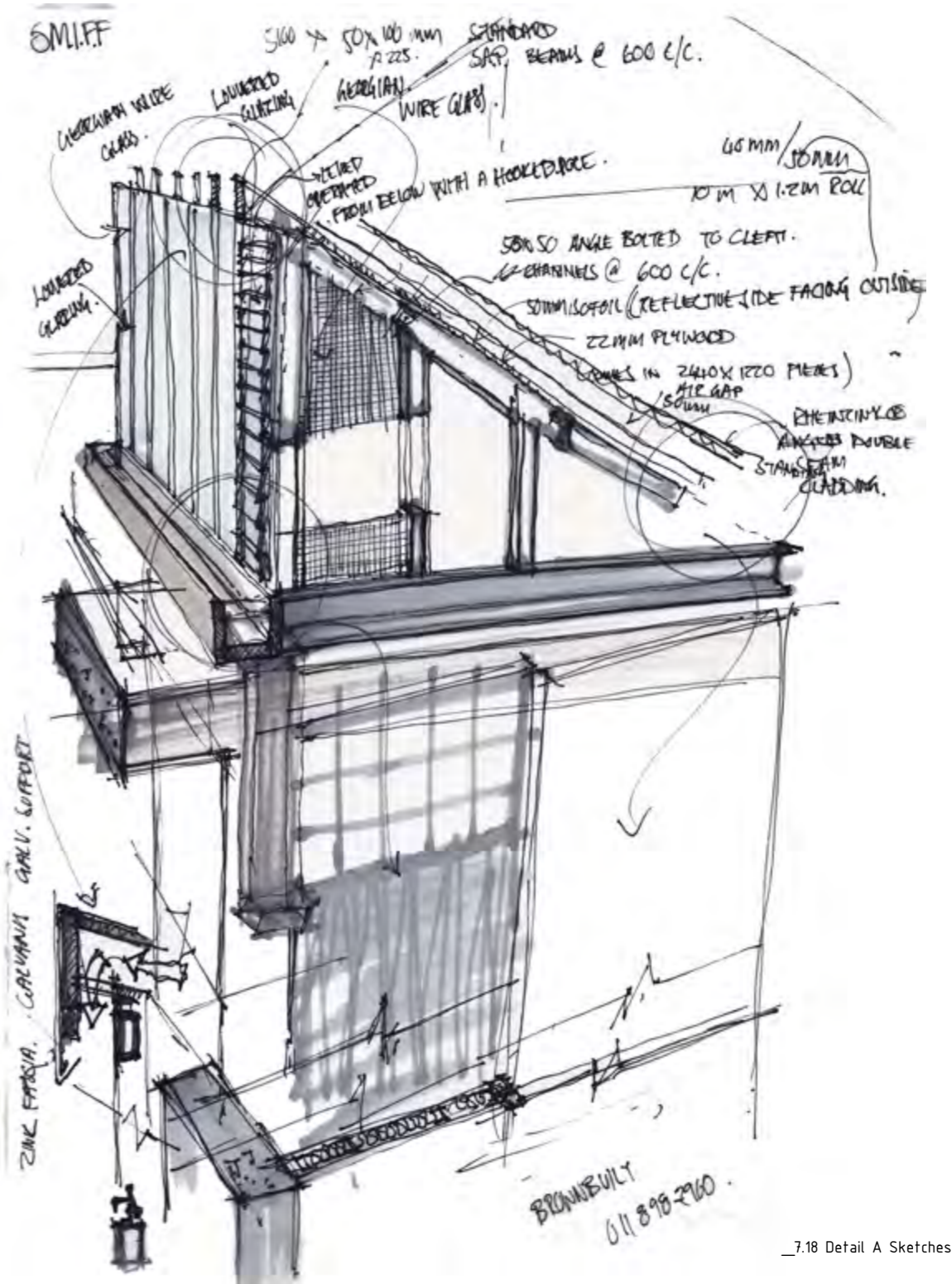
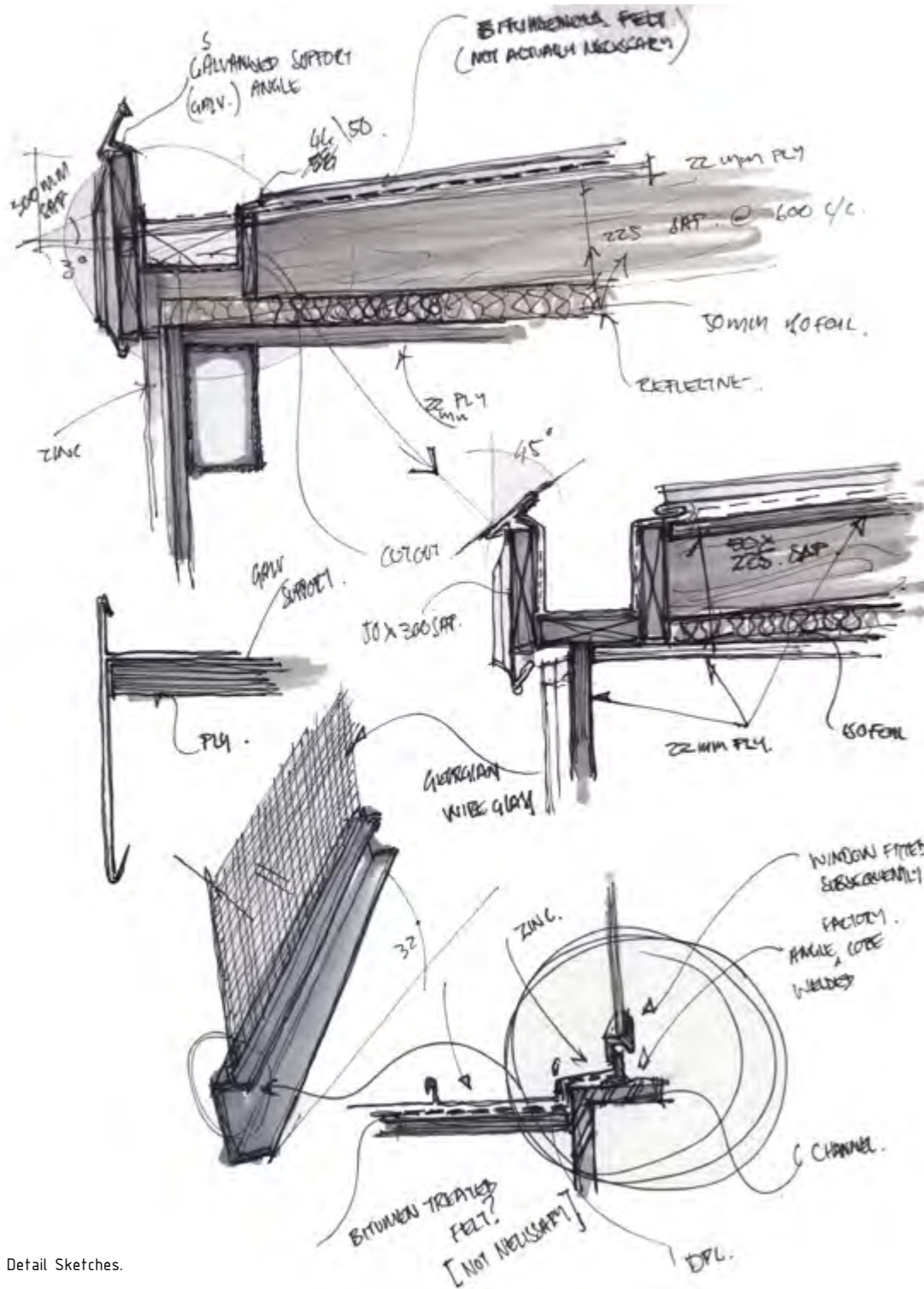


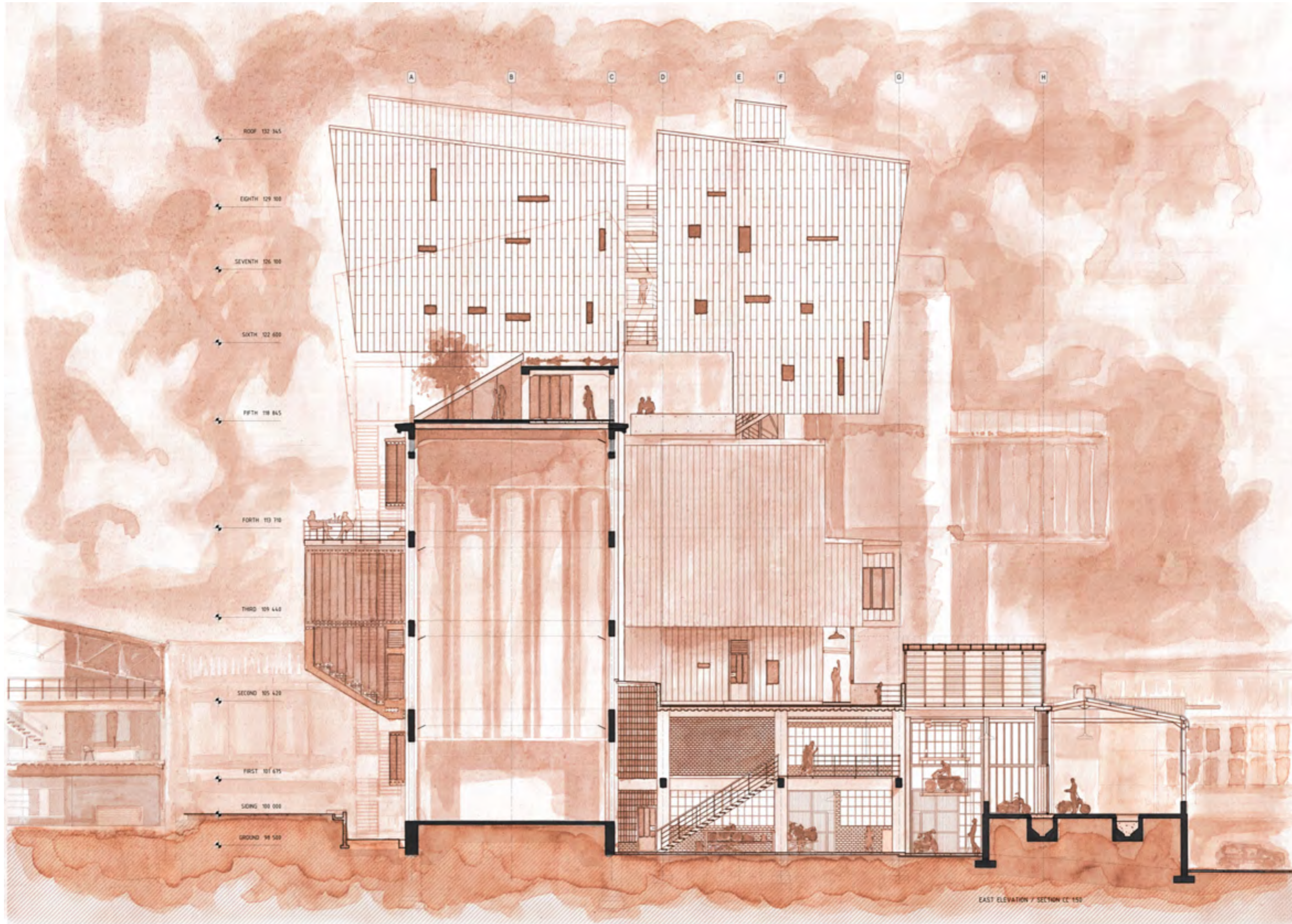
7.14 Detail Sketches.

7.15 Section BB Sketches.

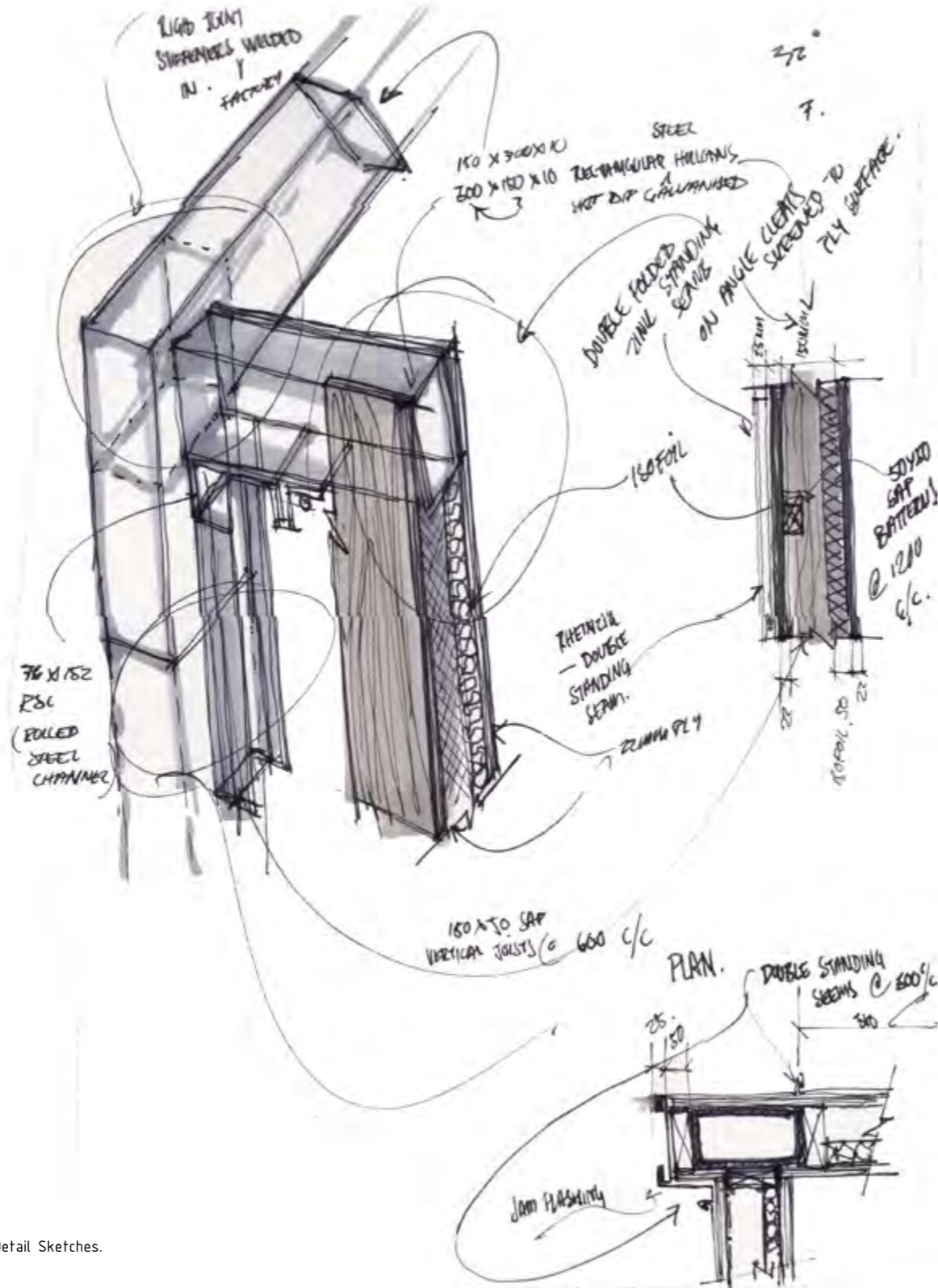


_7.16 Section BB. NTS.

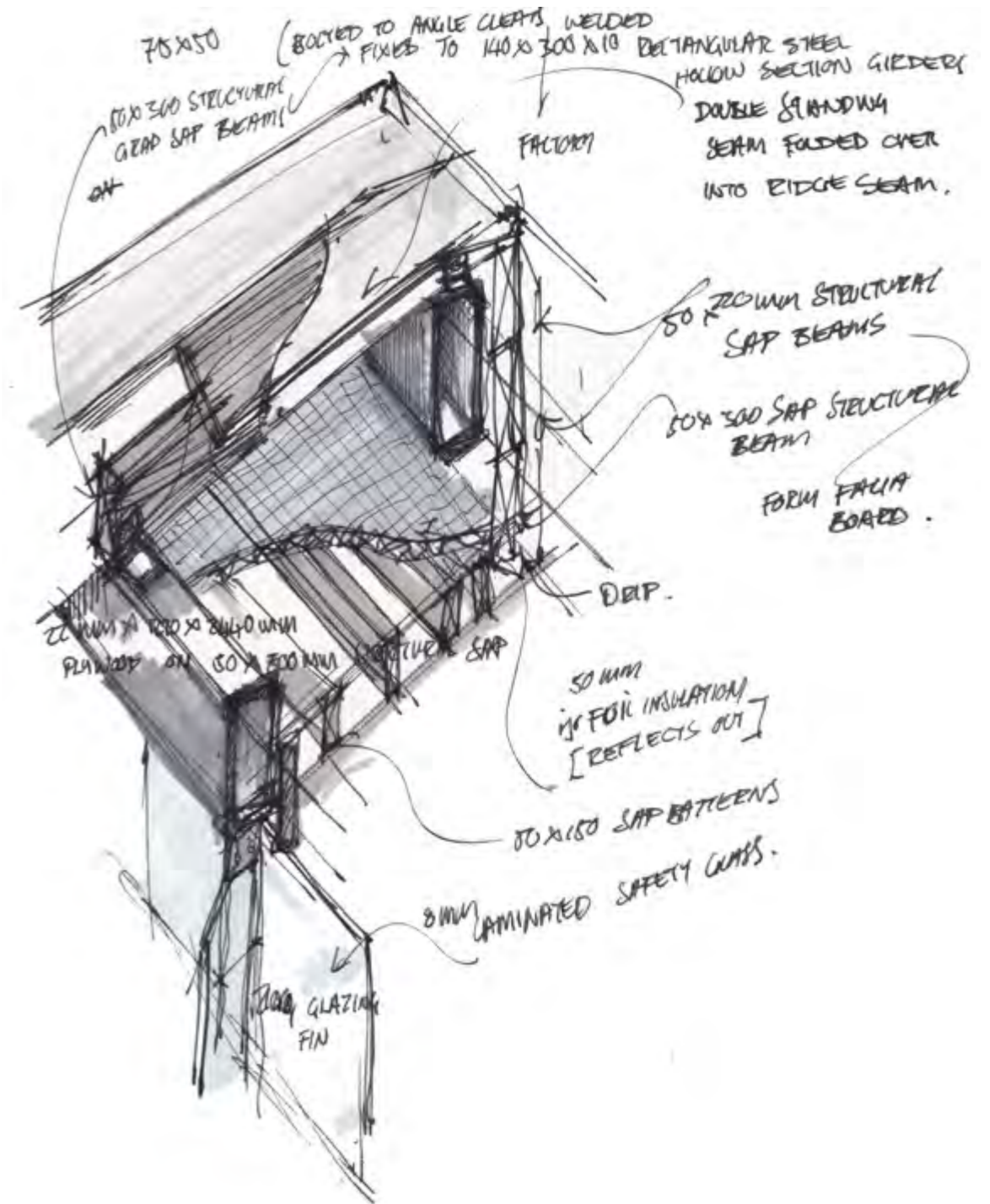




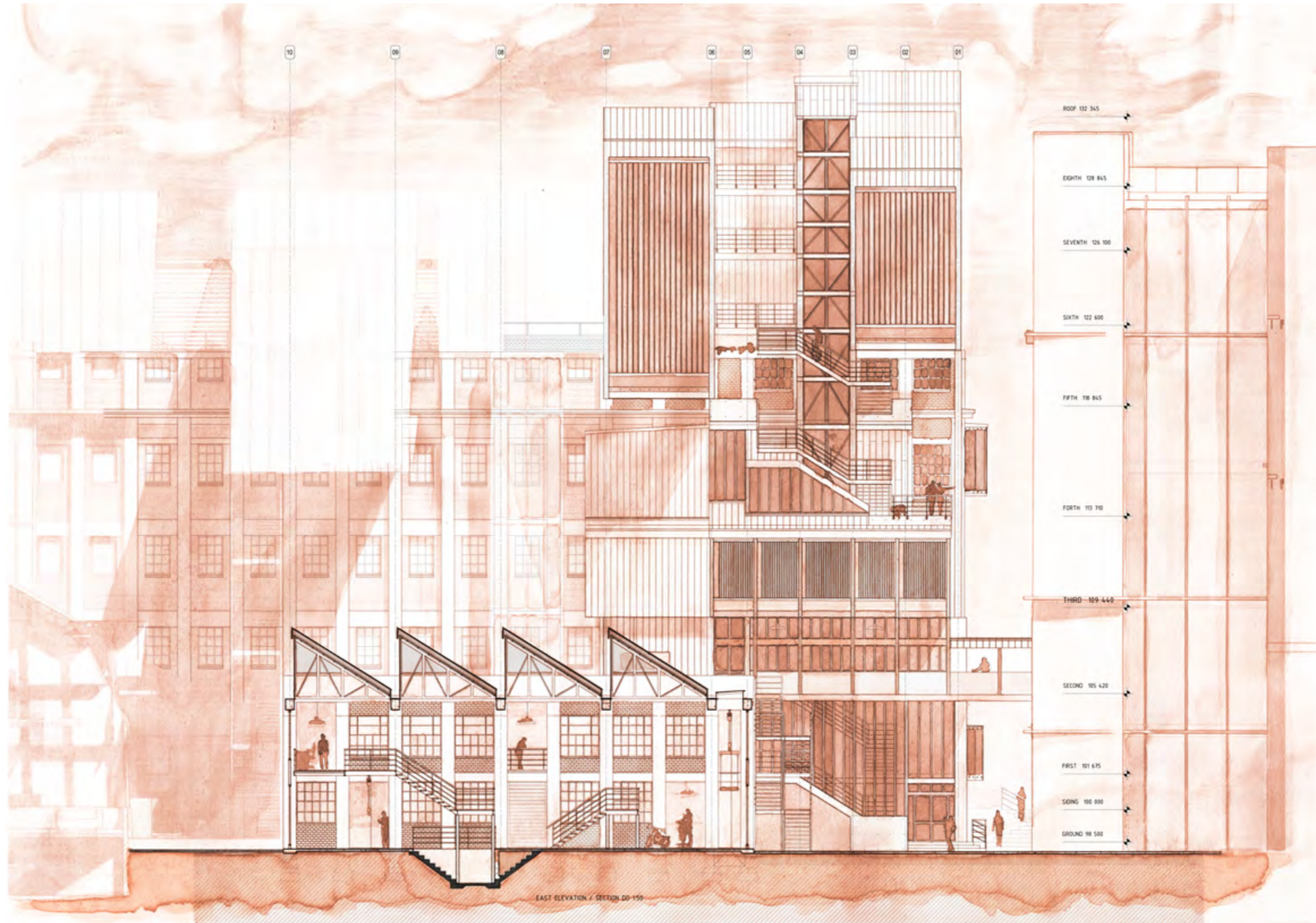
_7.19 Section CC. NTS



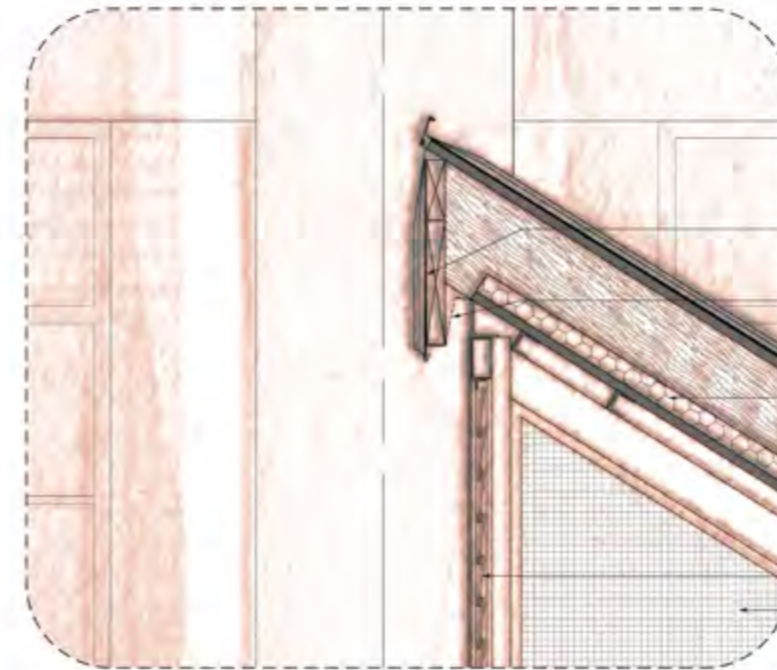
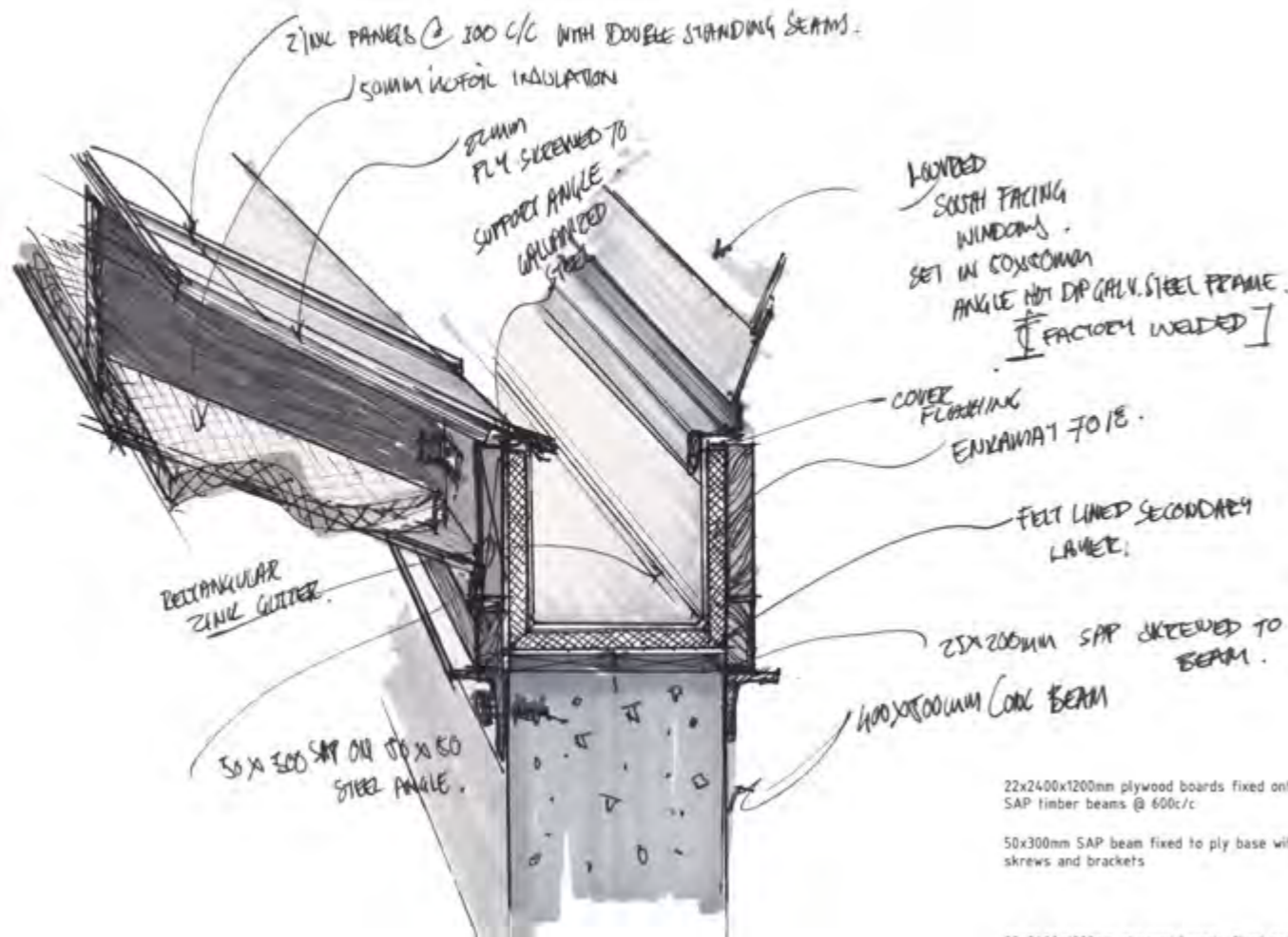
_7.20 Detail Sketches.



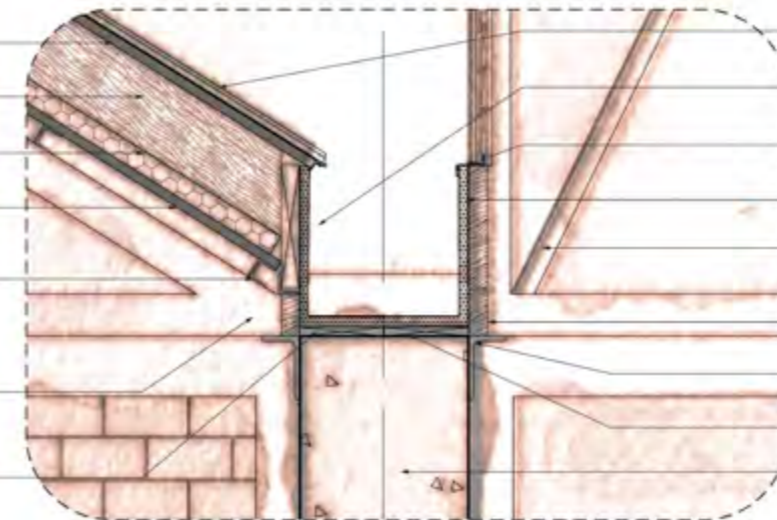
_7.21 Detail A Sketches.



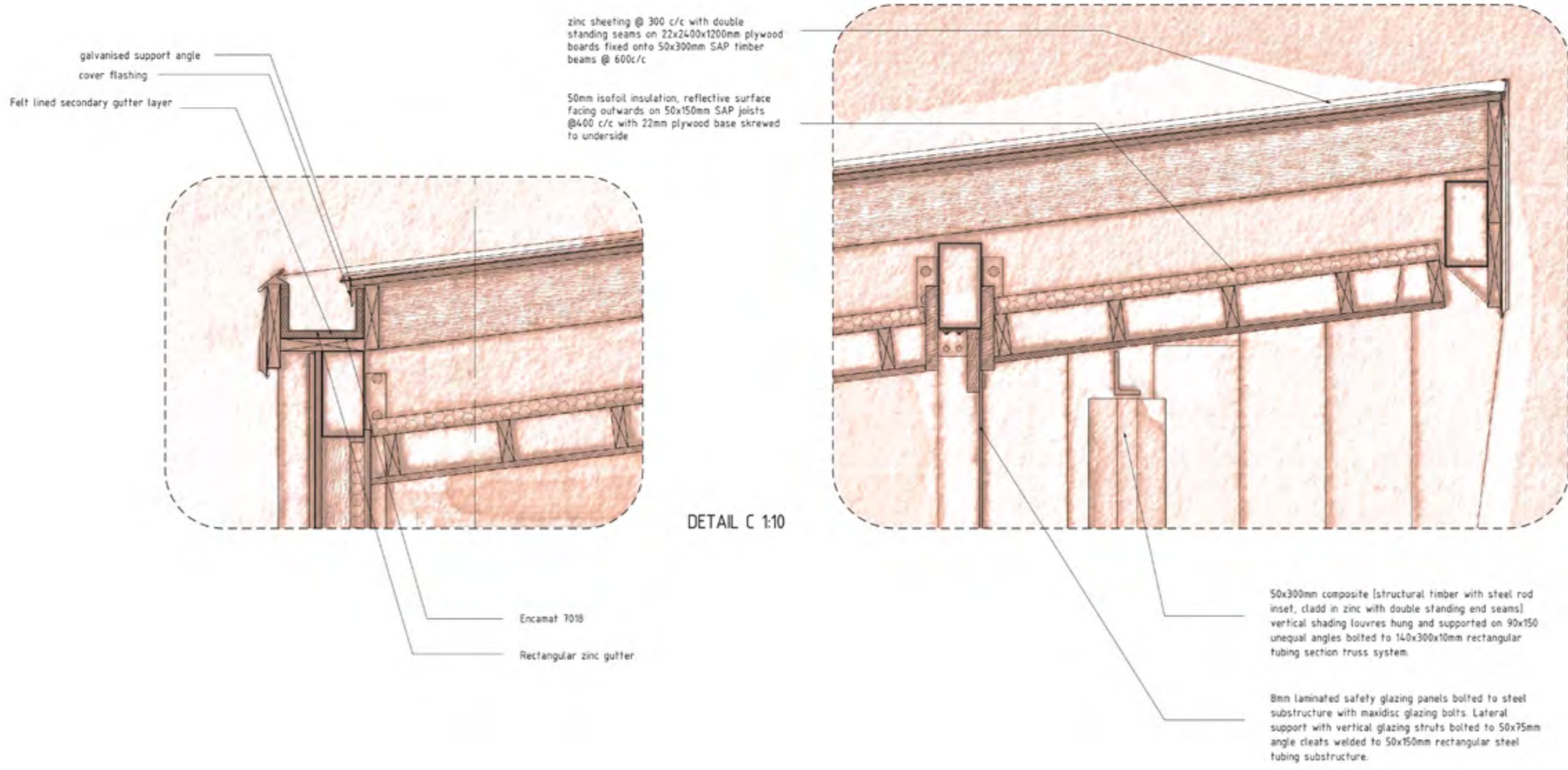
EAST ELEVATION / SECTION DD-150

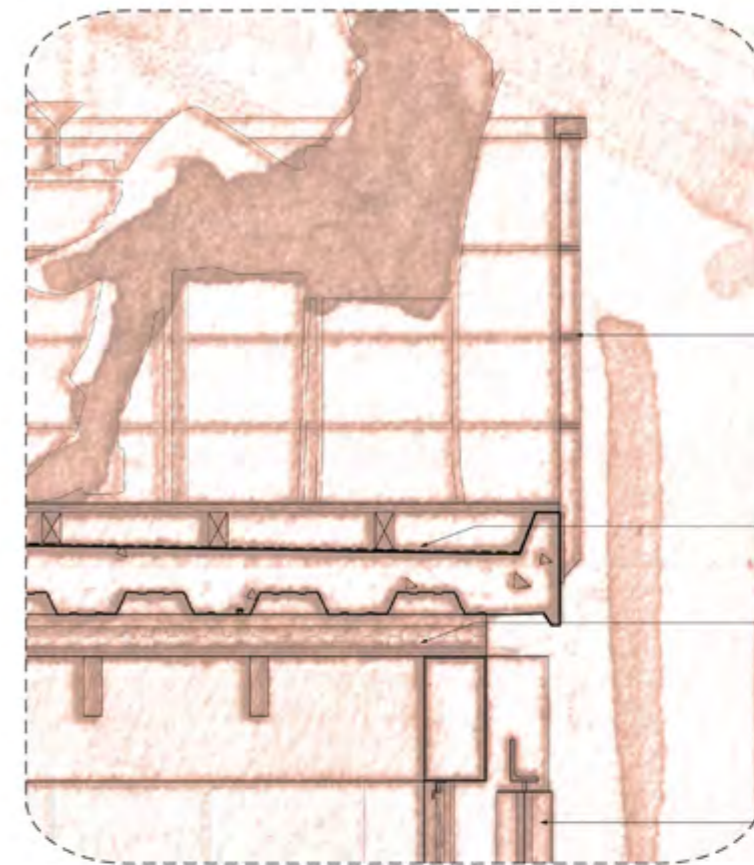


- 22x2400x1200mm plywood boards fixed onto SAP timber beams @ 600c/c
- 50x300mm SAP beam fixed to ply base with screws and brackets
- 22x2400x1200mm plywood boards fixed onto purlins with screws
- 50x50x5mm mild steel angle purlins @ 600c/c bolted to 50x50x5mm mild steel angle cleats core welded to 50x100x4mm rectangular mild steel tubing truss
- 50x100x4mm rectangular mild steel tubing sections factory core welded to make up trusses. Bolted to 50x75mm unequal leg steel angle cleat
- Felt lined secondary gutter layer



DETAIL A 1:10





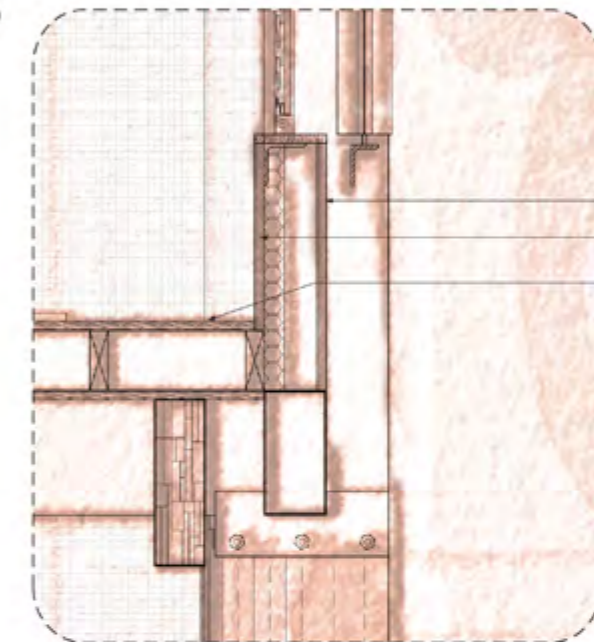
10x50mm hot dip galvanized flat bar steel section as railing factory core welded to balustrade of equal size expansion bolted at base to slab

Torch on derbigum according to specialist specifications on screed to fall @ minimum 1:70 to fullbore gutter. Bond- Dek composite conc./ steel roof bolted to steel substructure

50mm isofoil insulation, reflective surface facing outwards on 22mm plywood base screwed to 44x144mm PAR saligna joists @400 c/c

50x150mm composite [structural timber with steel rod inset, cladd in zinc with double standing end seams] vertical shading Louvres hung and supported on 90x150mm unequal angles bolted to 140x300x10mm rectangular tubing section truss system.

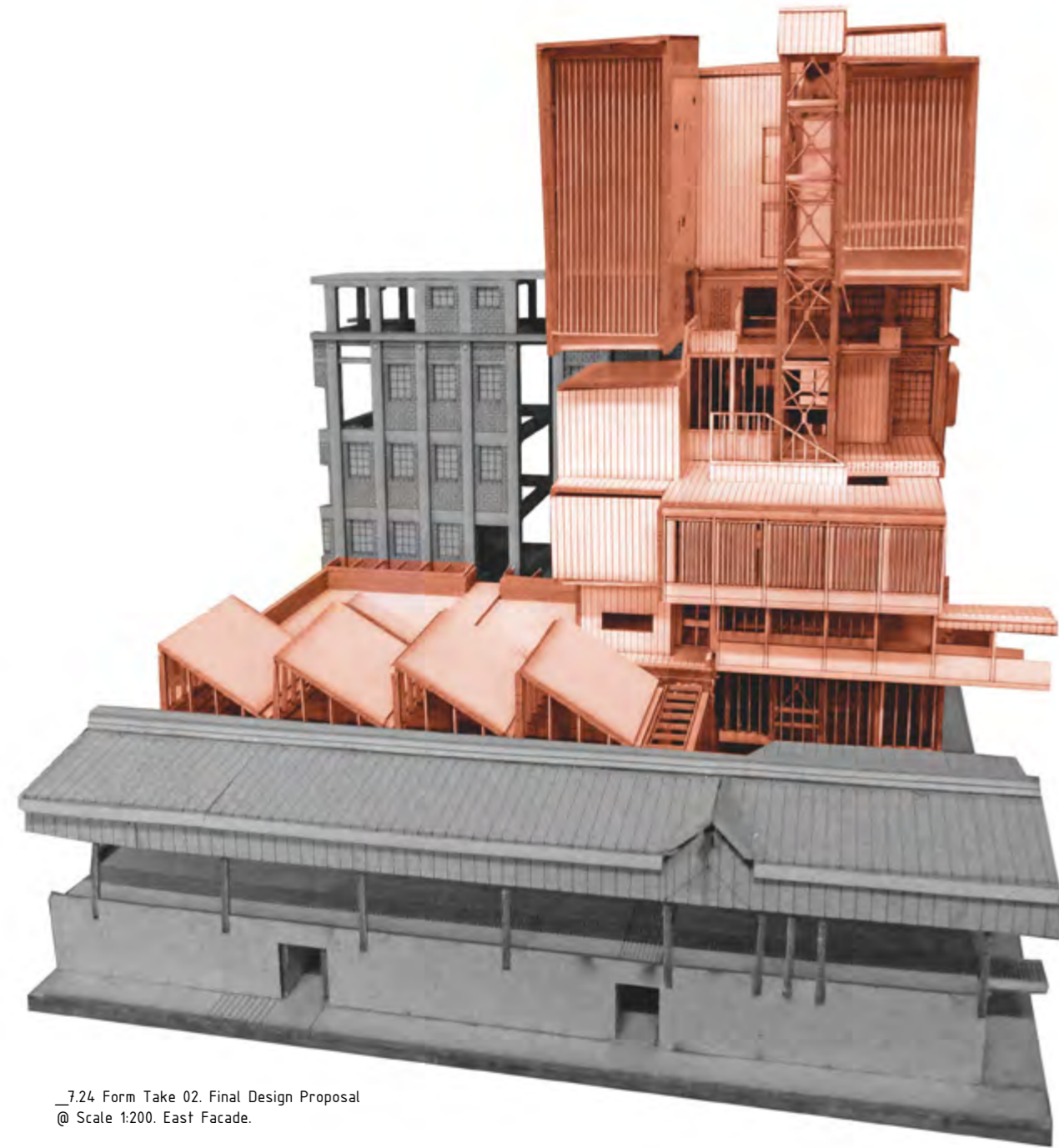
DETAIL B 1:10



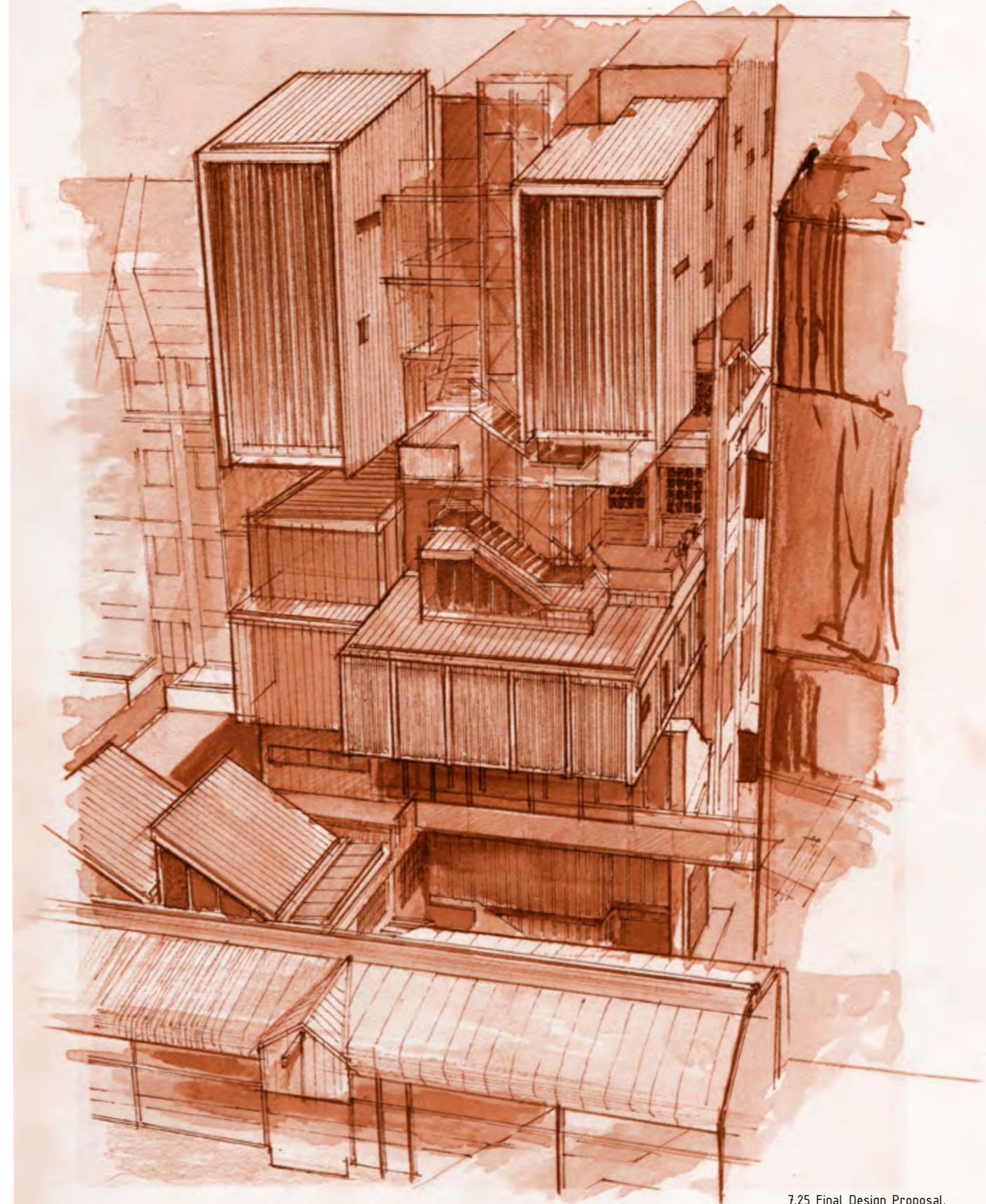
22mm plywood base screwed to 50x150mm SAP studs @600 c/c

50mm isofoil insulation, reflective surface facing outwards on 22mm plywood boarding

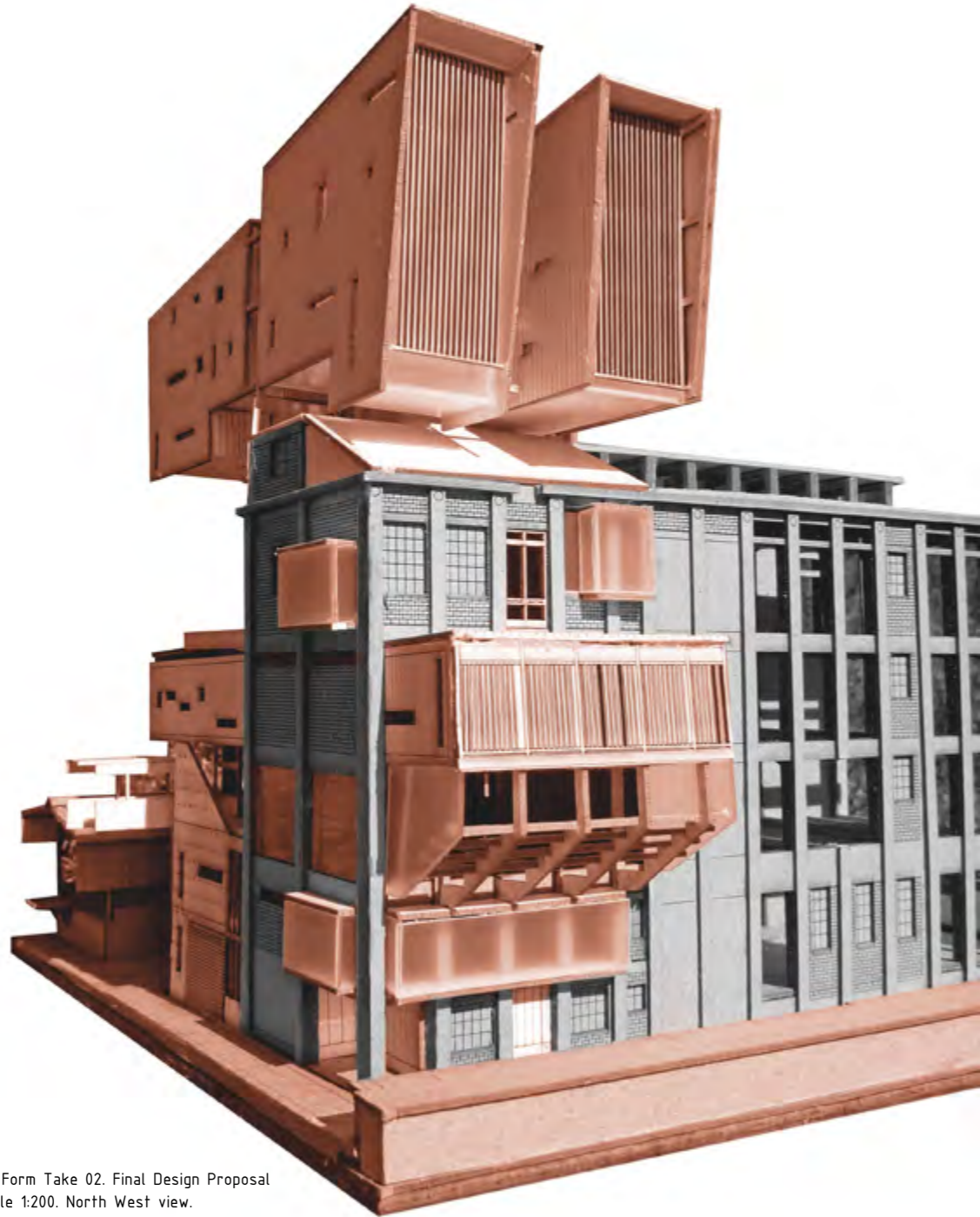
22x144mm PAR treated saligna screwed to 50x150mm SAP joists @400 c/c



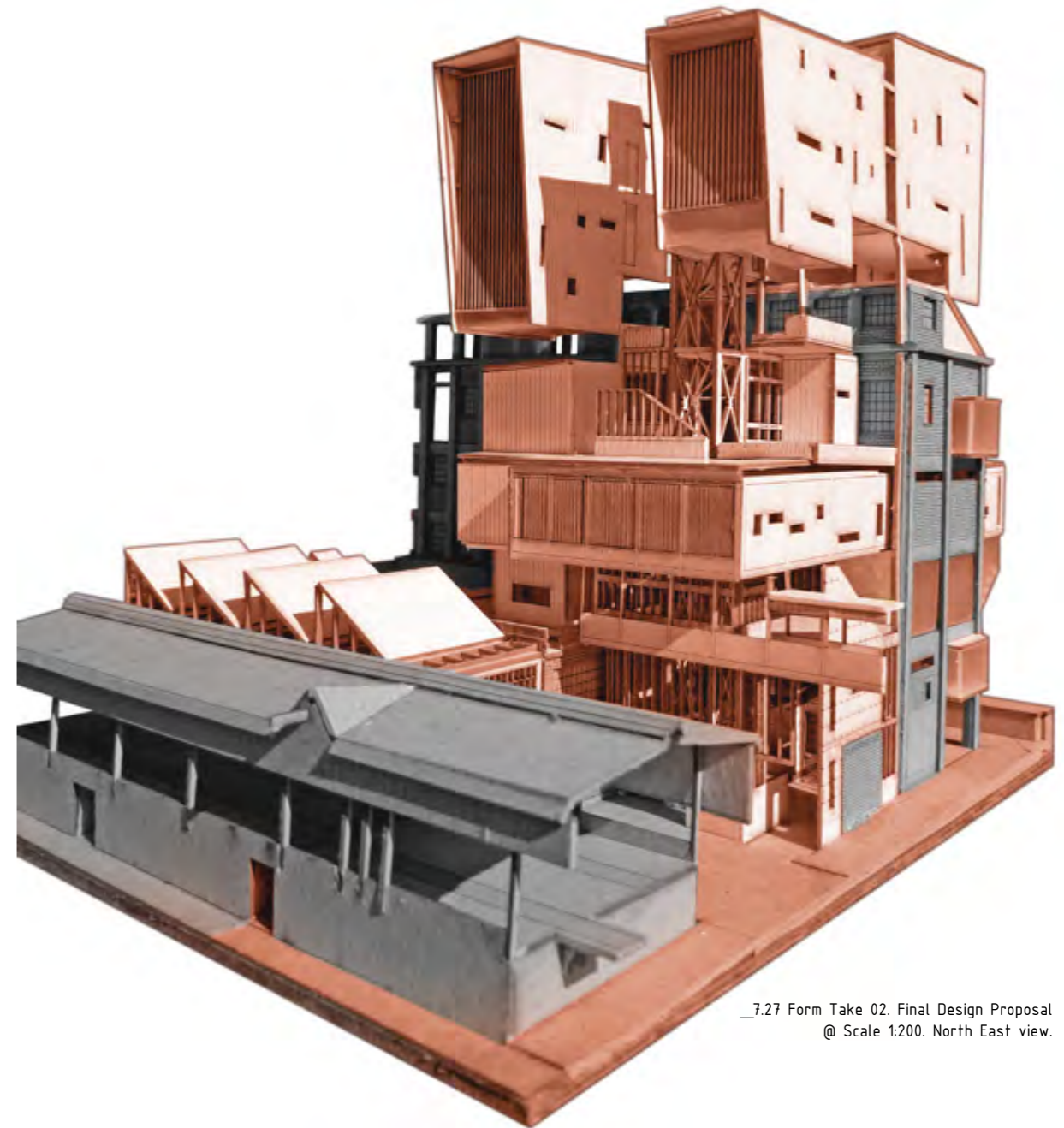
_7.24 Form Take 02. Final Design Proposal
@ Scale 1:200. East Facade.



_7.25 Final Design Proposal.



_7.26 Form Take 02. Final Design Proposal
@ Scale 1:200. North West view.



_7.27 Form Take 02. Final Design Proposal
@ Scale 1:200. North East view.

CLOSING

8

Design is a process and there is no single formula to use. The process is dynamic and requires constant renegotiation. Design is not a premeditated exercise, but rather a dialogue or a synthesis of different approaches, each more appropriate to different circumstances.

The aim of the project was to use a graphic novel to inspire an architectural design. The initial idea was to investigate the individual characters within the novel so that they would come to define the various elements of the architectural design. This proved difficult and the characters and plot acted out with the architecture becoming more of a set, a space for the events to unfold. Rather than being completely defined by the storyline the design formed the backdrop, designed in parallel to the panels of the novel.

Although the aim was partly achieved, it is my belief that the integration of the comic with design development may have been better accomplished. An improved process would be a comic that allows for continual design evaluation rather than dictating the architectural space, such as in Jimenez Lai's *Citizens of no place* [50]

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[Note: unless otherwise stated all images are by the author]

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

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

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



Lewis Wolf
October 2012