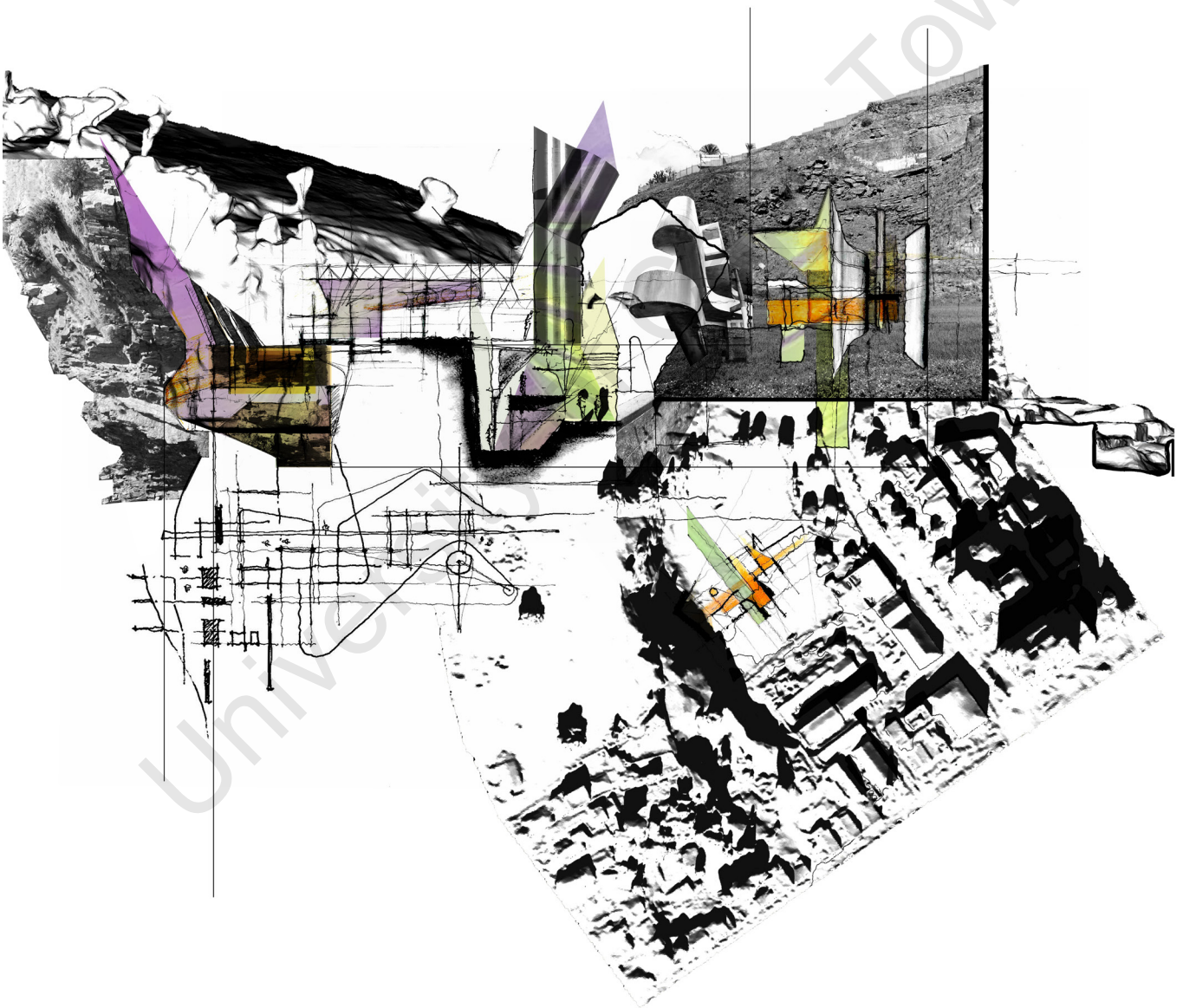


DESIGN DISSERTATION

STEREO-TECTONIC

CHOREOGRAPHY:
A SCULPTURAL
[RE]SURFACING OF AN ENIGMATIC GENIUS LOCI



GABRIEL_CHAMES_CHMGAB003
SUPERVISOR: ALTA_STEENKAMP
OCTOBER 2023

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01_A POSITION_PREFACE

Situating this research has been a process of reflection - it has been a way to try and find the very source of my architectural interests. My journey into this study can be traced to my early experiences of working with my father as a young child; as a model maker he developed a unique scope of making experience over decades, embodied with rich understandings of the material spectrum. It is an osmosis of his teaching that has been invaluable.

I grew up in and around the workshop quite literally - first a separate entity to my home, a warehouse in Paarden Eiland forms my earliest memories - the raw metal floor grates, the high top lit ceilings, the tool rooms - the operator Freddie, the smells of burnt wood, of adhesive sprays and paints, sounds of cutting, grinding and machining, the blinding light of welding through a yellow transparent curtain, the weight and mesmerising motion of the green lathe; later a string of memories are of the workshop which became tied to home - a smaller dynamic situation, timber machining, sawing, routing, joining, loose assembling, gluing and installing - the hand tools, the power tools are sounds of the background, distinguishable from one another in my associations of their nuanced functions and high pitch whines, cracks and hisses.

Here two lives reside in that memory, the earliest of which are mine as a toddler the latter as a teenager and young adult. They represent the formation of my interests in the world of objects, things fashioned, things mechanical, things with motion and things weighted with meaning and material - they are assemblages of my reality, they have defined and synthesized my interests in architecture.

They are memories that have taught me to appreciate an attention to detail, to look after things, to make things last - they have framed an ocular embedded in a resourcefulness and transformation of physical matter.

As a reaction to the interests forged in my youth, I orient this piece in relation to the essence of that learning. It is the material parts and social environment of the studio and workshop that provide the place from which I begin and thus serve as the basis of the architectural investigation going forward. By drawing on my time spent in both places - visceral experiences are the phenomena that have lasting effects on my design psyche - the act of quickly drawing a large perspective, placing the last piece of a model and then feeling the bite of the glue as it kicks, discussing a complex concept with classmates and then finally getting a grip on the meaning - frame these heightened points of revelation and enjoyment. It is an architecture that transcends these concentrated encounters, that this inquiry intends to uncover and develop.

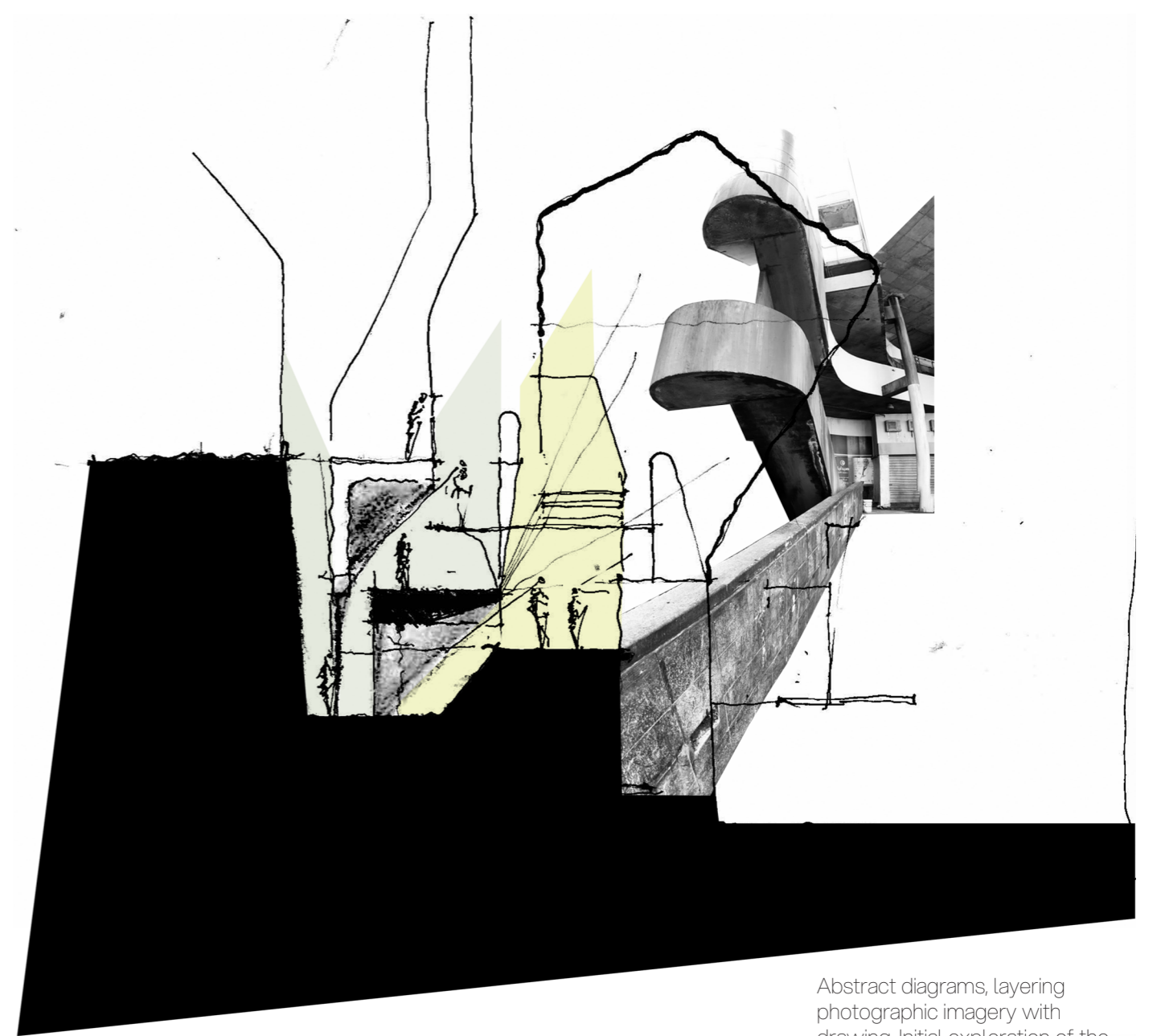
02_INTRODUCTION

This inquiry draws on architectural pieces - collages and models - that explore the tactile and spatial world conceptually. I have a broad interest in the mechanical world and the processes of assembling and disassembling. The making of the pieces and my fascination with the medium is manifested through this. Photography, physical modelling and drawing serve as a conceptual generative methods to explore architectural space, materiality and form. It is this curiosity developed through my hands and the material that has served as a tooling in uncovering and sourcing intuitive work - the binary rationale of which lies in a knowing of possible applications and configurations.

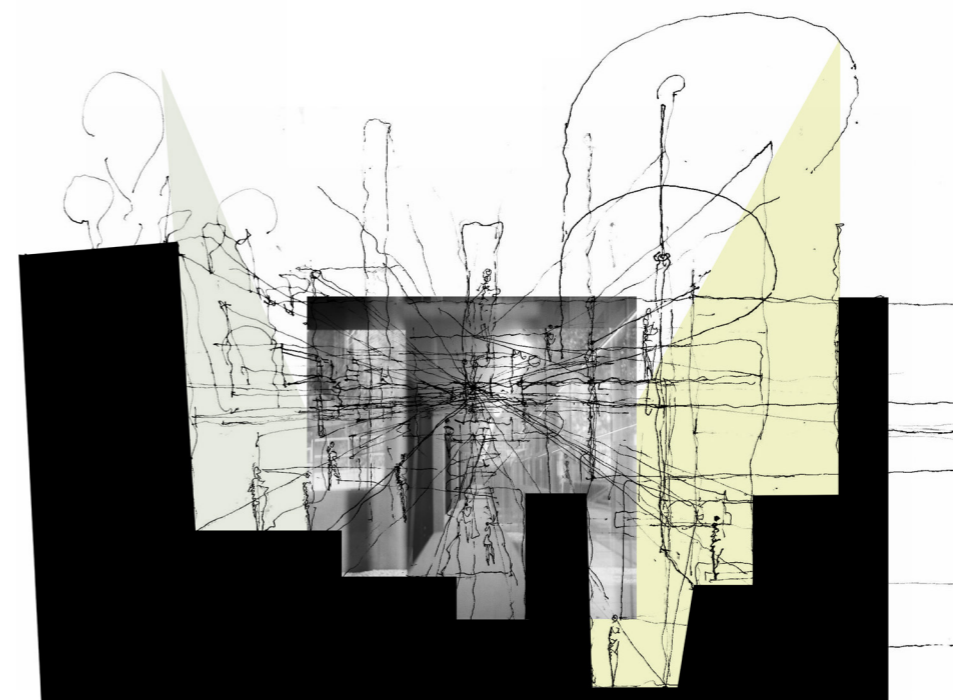
These intrinsic connections to material, and its expansive capacity for an ordered logic are underpinnings of a thread that serves to clarify and give value to sculpture and form as generative design entities. Identifying a place and praxis where these processes coalesce - the ground, the stereotomic and the tectonic - offer measures for a siting, constructional and architectural syntax.

In denoting the earth underfoot as the chromatic medium through which this inquiry embeds and travels, the nature of the groundline is tested as a dynamic entity - a mark that separates the built and the natural - but also one that receives, permits and mediates spatial relations between human, space, site, memory and atmosphere. Herein a sensorial and optic-haptic architecture is seeded, and the growth of its form traced and developed through phenomena of the physical and metaphysical.

The basis for this experiential architecture, manifests out of the need to exalt the Strand Street Quarry site in which it is conceptualised. The program emerges as exhibitive, a response toward the barren and forgotten natural landscape, in a proposition that serves to uncover and permit the spirit of the current and former place in space. A museum for the City frames the architectural layer, and forms the agent surface through which a rich social and public engagement with the site can ensue.

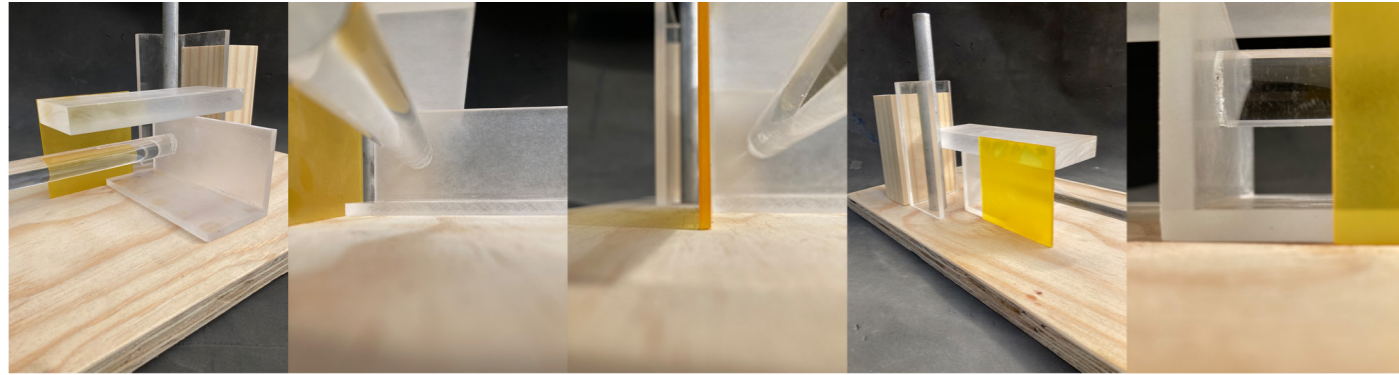


Abstract diagrams, layering photographic imagery with drawing. Initial exploration of the subterranean realm - a colourful illustration looking at the human scale in relation to levels and dense planes of structure. Elements rise up as beacons and then fall down below the groundplane.

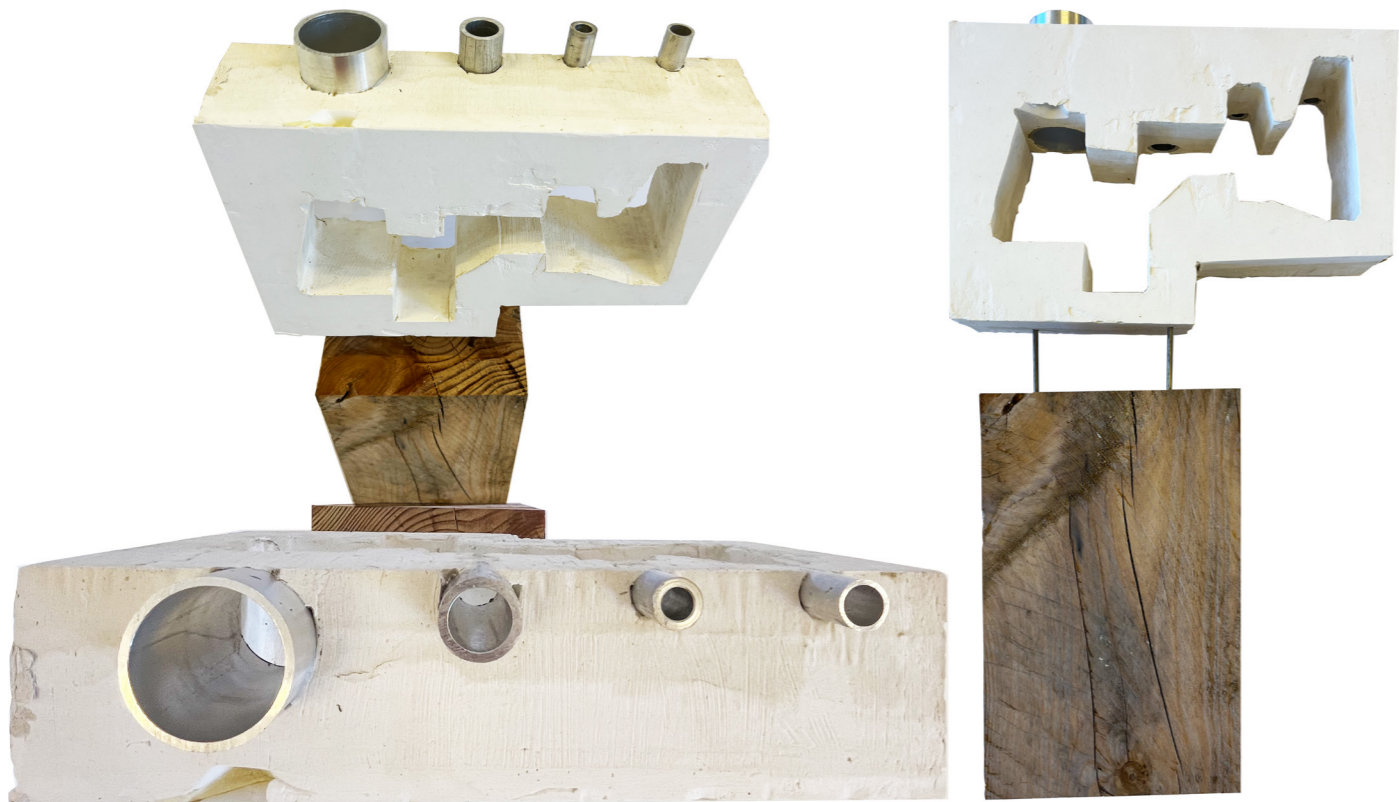


These two pieces begin to define an orientation of the types of architectural forms and representations I use going forward. The layering of mediums here, draws out a movement through a ground and interaction with its density. Lighter drawn lines offer a release from this and start to react a juxtaposed space that invites the heaviness of the ground into a clear relationship with light and structure. I found scale within these illustrations through drawing people. (Figure.1) (Author)

03_THE STEREOTOMIC



Transparency to translucency, penetrating the ground with light. Through ranging opacities, here I began to see how layered screens could induce spatial tension. Alluding to what lies beyond a particular frame without completely revealing a condition - drawn out of this, a means to intersect space at any axis with a shard of glass or beam of light, as the coloured plexiglass does, defining internal boundaries that break up and characterize a chromatic experience. (Figure.2) (Author)



Oculars of the solid ground section - inverting stereotomy in plaster forms. Aluminium lenses inset. Here learning in relation to causing phenomena of light and volume surfaced - where the previous model was more representational - this sectional space uses actual openings to define the light qualities that characterize its volumetric enclosure. It implies a simple understanding of drawing down light into a ground plane. (Figure.3) (Author)

Here a translation of the grounding 'procedures' of building are briefly expanded through the lens of Gottfried Semper - this is foregrounded in analysing the methods and techniques intrinsic to realizing rudimentary forms of space. Semper denotes the idea of 'play' as a key beginning for mediating this humanized and fundamental architecture. Here conceptualization emerges as a combination of 'aesthetic drive' and the way in which I have attempted to digest the realities of a 'hostile' and imperfect site (Semper, 1989). Play is asserted as an instinctual category of making that bridges my understandings of proportionally accurate object assemblies, with the specifics of site and place. It is through this aesthetic likening of form and space to the natural order of a place, that an architecture begins.

There are four primary categories of space that Semper derives in a working manner. Textiles are discovered as 'flexible' yet durable materials 'resistant to tension'. Pliable softer materials define and evolve into ceramics. Lightweight resistive linear members are the tectonic components for carpentry and 'solid aggregate resistant to compression' encompasses the stereotomy or masonry work (Semper, 1989).

The focus here is drawn to the spatial implications of the framing *tectonics* - as the skeletal membrane constituted of light members choreographed into a 'spatial matrix' - and then the *stereotomics* of the 'earthworks' - elements used in cause of fostering conditions of 'mass and volume', via a dense material layering (Frampton, 1995 - p. 5).

It is the etymology of the word stereotomy that articulates a more accurate delineation of application in this inquiry - deriving 'stereos, solid and tomia to cut' from the root term (Frampton, 1995 - p. 5). This surfaces a method of defining bounded space and form through the sculpting and or carving out of a topography, ground or dense material substance.

As an actuation for this theoretical and technical piece, making promulgates as the initial means for surfacing an architectural expression. A piece sought to emulate a groundplane - and incision into earth (Fig. 2). I premised my creative output in the subterranean, an unknown fissure, aiming to illuminate its territory as a readable condition. As such a filling with light sensitive and illustrative components was instituted. Combining translucent plexiglass with solid timber and aluminium members a juxtaposition of matter was used to differentiate between the ground and the inserted elements.

It is in the surfacing of stereotomy as technique of making and building that further plaster exploration drove a casting of a solid material - an inverted process of deriving form through subtractive measure (Fig. 3). The exercise sought to initiate a sectional space posed within the ground, articulating inset aluminium openings as apertures drawing light into the enclosure. The reality of setting a spatial formation beneath a groundplane began to reveal architectural elements anchored in that realm, and produce the resultant phenomena. The stone-like character of the piece's plaster substance, and its method of construction cultivated and interest in the solidity of place and with that a propositional, integrative and sculptural capacity to build with site, emerged.

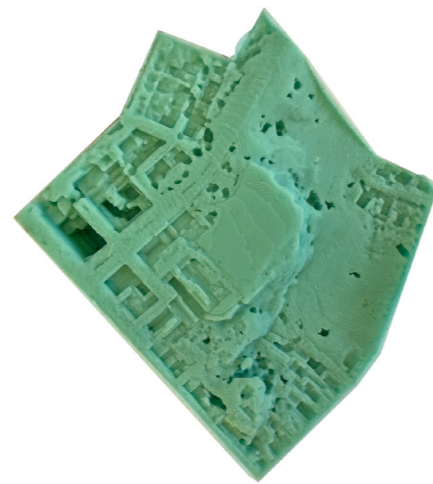
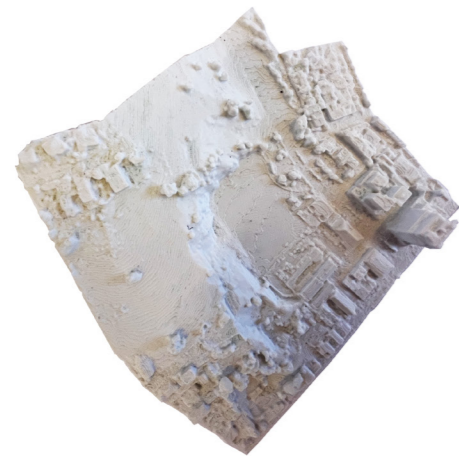
04_SURFACING THE TERRITORY

The journey this inquiry fashions is established with site - the choice of which has postulated from reflective creative practices. Walking and photographing Cape Town actuated and solidified an interest in the city basin - positing various locales of character. Many of these places clarified as grounds for architectural experiment. The industrious milieu of Paarden Eiland, its raw and structured warehouses, its extension into the tighter suburban fabric of Salt River and Woodstock, all surfaced in this search. Collaborative analysis [2022] of the Newmarket into Strand Street zone - surfaced intrigue into the old city, the reclaimed foreshore and the historical grounds that project from the original shoreline (Fig. 8). Here the new and the old, characterized by the culemborg industria, the harbour and the railway, were defined in relation to what was once the ocean. The Castle of Goodhope forms an adjacency to this system and symbolizes an immensity of material in its construction. It is at this point that the lens is pivoted to its material genesis, framing the Strand Street Quarry as a powerful locus and attributive fulcrum to the city centre (Fig. 5&6).

It is the built affect the resource of the mountain served in building the city that reckons a proposition. The site reveals itself as a preceding member of all built attributes in the vicinity, its commissioned excavation traceable to the earliest colonial engagement in the region. In foregrounding the tissue of land as a vital mechanism and object in the formation and transformation of the landscape of Cape Town - the land harvest site unveiled as a concentrated point of departure - to the fore it extrapolates not only as a rich phenomena in presence, as an emphatic edifice of gravitas, but one in limbo - carrying a ghosted and frayed located memory, at the same time evincing a clear diasporic material tenure. It is this dichotomous state of being that posits and reckons an architectural device of mediation and expression - between place, space and the atmospheric componentry and memory sealed in sight and obscurity - the genius loci.



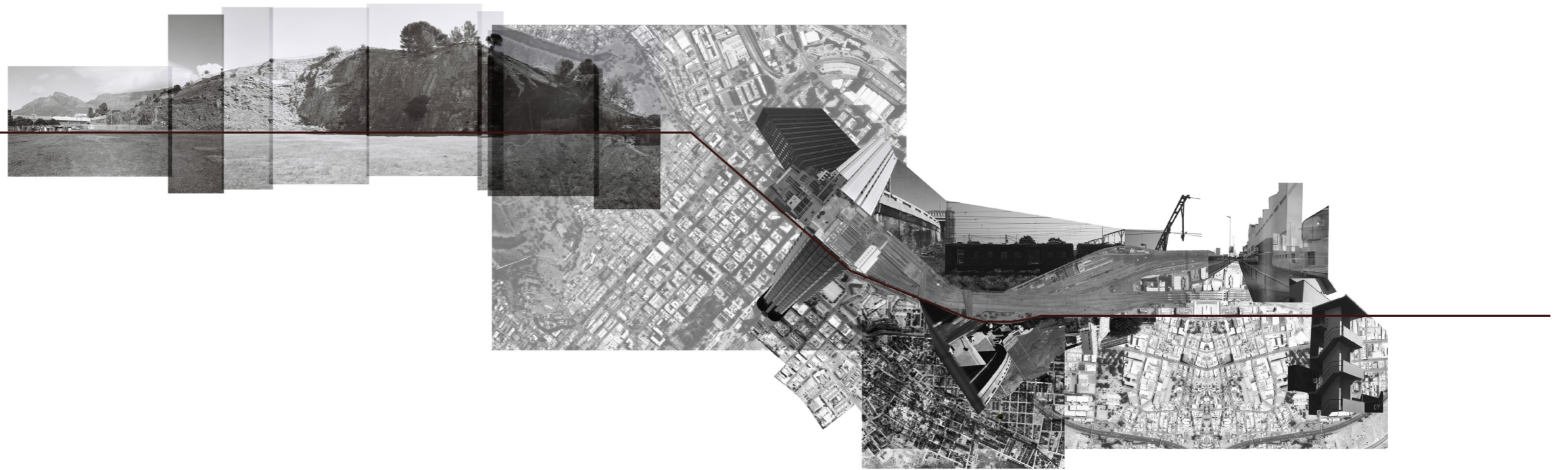
Strand Street Quarry - centre of aerial imagery - 3d model of topographic condition. (Figure.5&6)



Modelling site - 3D print to silicon mould. (Figure.4) (Author)



Plaster cast of site, timber supporting plinth. (Figure.7) (Author)



Framing portion of interest in the city from left to right - this is an adapted collaborative analysis. The collage functions to represent Woodstock funnelling into strand street, pooling at the Strand Street Quarry locus. Its inclusion in this paper is important in defining the parts of the city that I have an interest in and it illustrates parts of the general area that I have visited and photographed - it is a graphic build up to the quarry, symbolic of its important material distribution. (Figure.8) (Author + Rahul Auckloo , Liam Harvey)

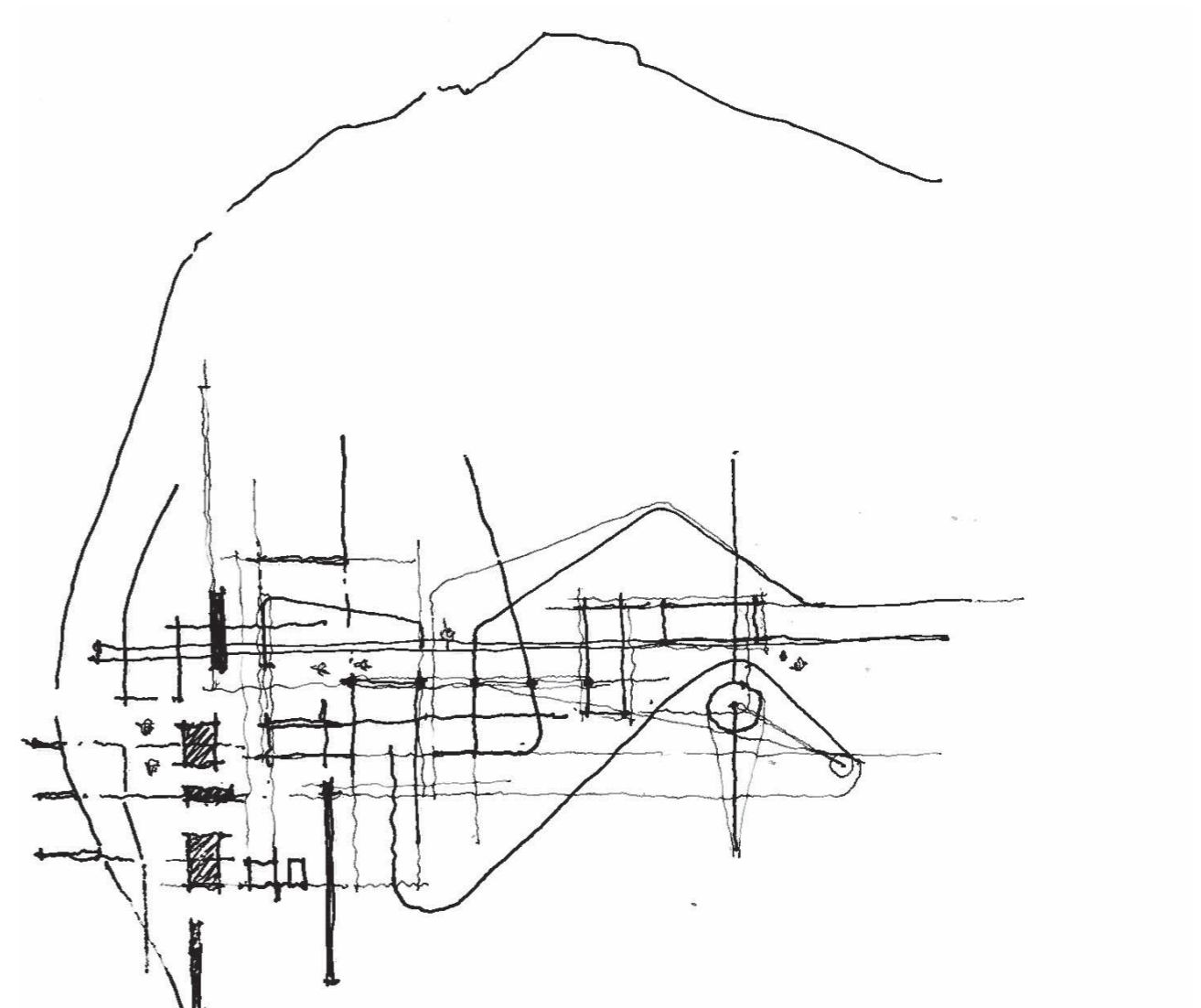
Phenomenal section agglutinated with plan fragment - showing a condition of bounded space. Natural light framed and abstracted as an experiential device. Human illustrative of scale.

The idea of reflecting the plan into section aimed first to define a spatial boundary and then look at the interaction of the human body with light, mass and volume in the correlating section. Here an engagement with the ground was perceived as thickness in line and the volumes that bore through, derive intimate and direct tactile connections with the earth. The light that seeps into the subterranean, travels below the abstract groundline illuminating an otherwise uncharted place. (Figure.9)(Author)



It is in this vein that I position my stance toward the Strand Street quarry - as a propositional binding of the landscape - anchoring theory and technology in the transformation of an extracted ground. This poses a ligatured architectural resurfacing of the vacant residual quarry. It seeks to regenerate lost pieces of the hollowed artefact as sculptural built form.

In beginning to unpack this stance Kenneth Frampton asserts a means for critical engagement with site and method for an architecture of resistance - facilitating ideations for attuning building to site and culture via the Place-Form principle. Through Martin Heidegger, Frampton elucidates the bounding framework of intervention as the 'essence' of its phenomenological output - that the perimeter and outlying frame of building is not to be seen as a limit to, but rather the initiator of experience (Frampton, 1983, p.25). It is in this light that early drawings begin to work with plan and section, framing loose forms of enclosure on site. This induction between locus and intervention posits a mediatory premise between the physical scale of the quarry and its phenomenological imprint in the flesh - it reacts a liminal condition where an architecture can concentrate and transmute a rich, yet digestible experience to the human (Fig.9).



Plan piece, anchored into face of quarry to west. Testing heavy weight elements circumscribed by light free flowing forms, revealed symbolic lines of movement, and solid to fragmented spatial framing. (Figure.10) (Author)

The spoken of architecture of resistance within this context is one that strives able to subsume the physical data of the quarry in a propositional built work, that exudes a story of the place to the human. It is one that seeks to juxtapose the commodification of a modern system that hides the structural systems of buildings through facadism, seeking to celebrate the technical choreography of the built and stand as a sculptural test of time in a developing city. Through heavyweight material basings derived from place and a clearly depicted, integrative stereo-tectonic, the intervention seeks an ability to retain a static posture with site while the constituents of its making weather and age as a discernible measure of the natural transformation of its locus. It seeks an antidote to the commodity that is replaced and fitted when its relevancy no longer exists. Metaphorically its serves to be a grounded sculptural piece, in a literal sense an intervention residing with the soils of site.



In drawing out the presence of an architecture further, Frampton accesses Heideggers notions of a resistant architecture through the etymology of building, asserting its roots in 'being, cultivating and dwelling' - here the notion of being is predicated on dwelling, the latter of which resides in defined spatiality. Being, tethered in the metaphysical realm, serves as basis of scepticism for this architecture of defiance - however, when conditions of placelessness define a condition, as in the quarry, the implication is that site-strategic enclosures have capacity to manifests this ontological condition (Frampton, 1983, p.25).



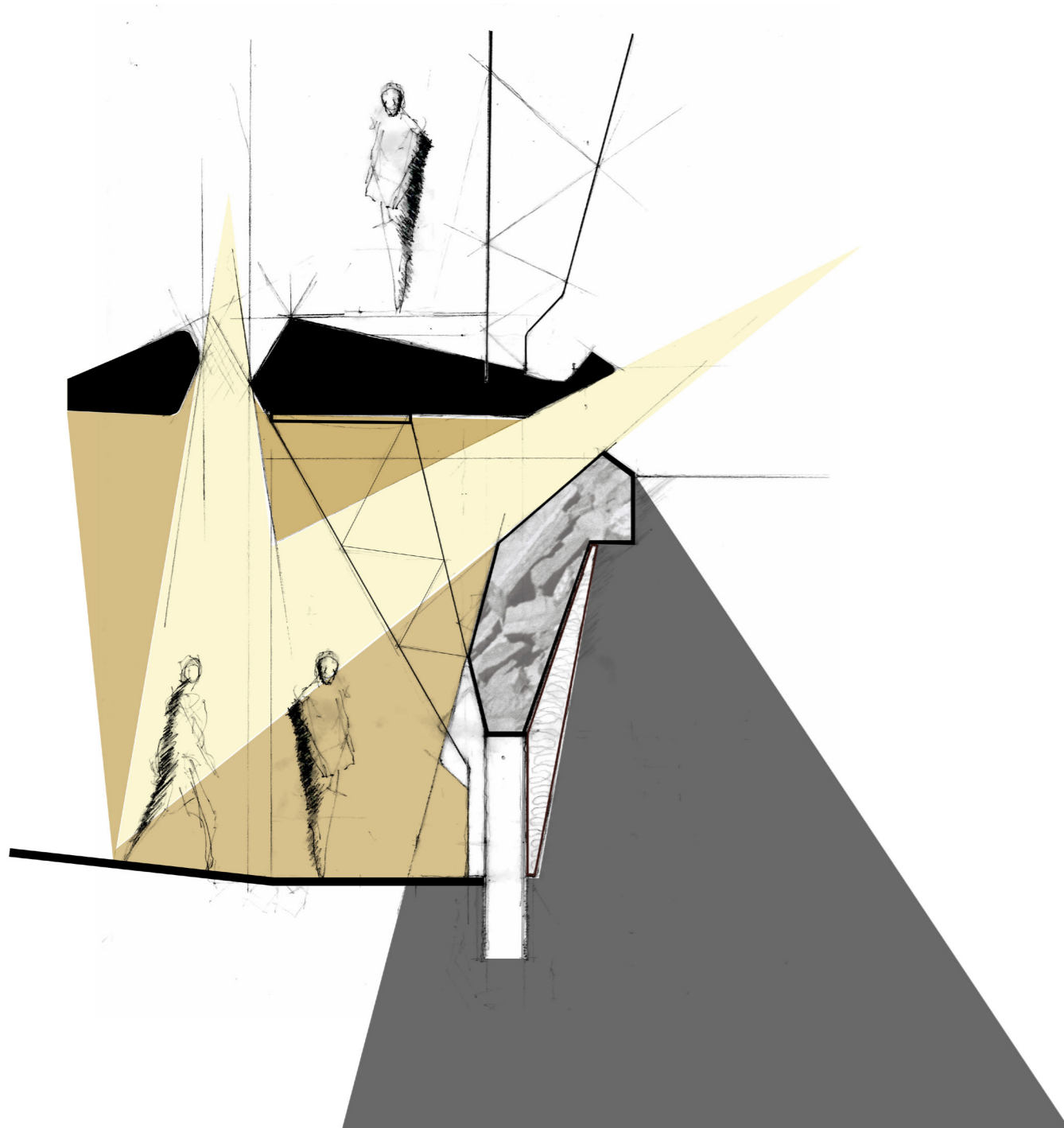
A collage of images determine the placeless attributes of the quarry - the flat bed of the site, its derelict existing structure and immense scale all contribute to the overwhelming and disorientating feeling of visiting its grounds. By layering images of this kind I was able to draw out the elements that detract from its place ; in this superimposition a simulacrum of my experience of the site visit was extracted. (Figure.12) (Author)

The identification of the quarry as a product of excavation and extraction - leads to an understanding of its topography as an artificial and mechanically induced edifice. It is in some respects the washed surface of mechanized measure that remains. Here Frampton alludes to the dogmatism of the modern condition that issues the destruction of undulating ground to rationalize design and build upon; fostering a 'placelessness' and mere appropriation of design on, instead of with site (Frampton, 1983, p.26). This notion absconds from a reciprocal built and natural interaction - diluting the architectural layer; it is with this understanding, that the levelled plane of the quarry bed, aids and abets the feelings of disconnection between people, place and the extended landscape. It is a product of modernist-like, placeless inducing praxis. This logic leverages a making and attributive architecture, anchored and inscribed into the facets of its material entity rather than a distanced formality, detached from its ground.

Stitching a panorama of site. Here I unfolded the face of the quarry as a 2-dimensional piece - the aim was to illustrate the extent of its grounds and in doing so draw out possible points of contact with its surfaces. What becomes apparent here is a swath of flat and disrupted topography - showing how the extraction of the mountains material resource redefined and subtracted a natural form into an artificial one. (Figure.13) (Author)



This explorative technical piece works abstractly with a portion of the quarry's ground. I have shown how surplus stone that is found on site could be used in an exposed manner, encased in a gabion system; in conjunction with a custom bent triangular steel extrusion, the combined technology roughly illustrates an intention to transfer vertical and lateral loads onto a point footing. The character of the spatial portion is represented below ground, showing the human scale and movement relative to space and light. Exposed steel trusses couple with the retaining system and sculptural concrete roofs seat on this structure. In deriving a learning from this process - the heavyweight elements of the space born from the material origins of site defined a direct constructional connection between site and space. By leaving the structural functions of the whole unit bare to the user, a natural, tactile relationship to the technology and thus the site was evolved. (Figure.14)(Author)



With this logic the notions implied of 'building with site' by Mario Botta in Frampton's voice, denote a 'cultivation' of site (Frampton, 1983, p.26). Herein the flat bed of the strand street quarry surfaces not only a measure of the territories placeless aura, but rather as an occupation of duality in possibility - to say that the gaze can be shifted from reading it as a vacancy toward cultivating its ground through the careful excavation, embedding and terracing - a resurfacing of its held matter. Herein there is reach for intervention to symbiotically inhabit, contain and enhance the constituent material culture of site - the material ghosted, living as city fabric, yet lost from its genesis. It is with this understanding that planes of structure in section posit spatial formations derived from poignant geological elements found on site expressing their continuity through direct structural and material assimilation (Fig. 14).

It is in track that the atmospheric constituents of place need also be attributive and formative of that which structurally resurfaces and embeds site - those conditions of climate and character of natural light for instance; are able to transform the internals of bounding envelope with reflections or direct character of the hosts genius loci. Lenses have the ability to render vistas of landscape transcending the visual story of a place in a built realm giving a located value to the built-site ligature.

In deepening this narrative, the spatial domain is therefore a binary, necessitating the functioning resistant architecture - the phenomenal threshold between human and site. Technique and technology come into frame, asserting a choreography that is essential to this form able to withstand the pressures of transformation across time. If work represents , factors and constructs its site, it retains a gravitas and relevance.

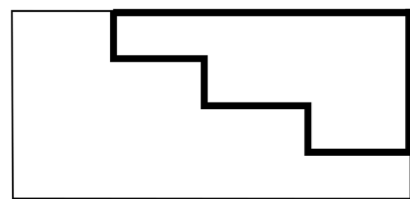
BUILDING THE GROUND

Cultivating and constructing the ground serves to underpin a series of site building conditions - these are notional points at which the building may meet the topography of the quarry and serve as a means for delineating the scenarios of possibility, they begin to show how the groundline is tested and serve as a clear depiction of the calculated dissolution of sites ground, the point of contact in manifesting the sculptural artefact. These basic conditions are adapted from (Talento, et al., 2020) and categorized as such; Filing - meeting the ground with building fill, earthen fill or water as a means of directly adjoining its character. Modification institutes a carving away or fashioning of topographic shelves into new form or retains their existing formations, emphasizing surface datums. Insertion - is an incising into the subsurface - setting structure into the ground. Attachment - is broken into horizontal and vertical - the former resides its footprint as placement on the topographic ledge, the latter can be understood as keying into strata, a suspension of structure.

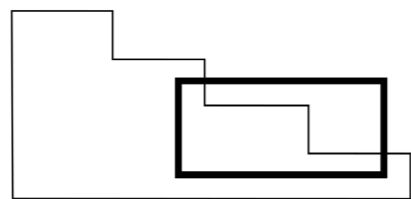
It is here that Toma Berlanda's Architectural topographies further discusses the nature of testing the groundline as a dynamic entity as an agent for engaging with the phenomenology residing in material place. Here an understanding is framed around that connection, '*the way in which a building is related to the ground loses any geometric abstraction and reveals itself as a significant evidence of approach to place*' (Berlanda, 2014, p. 2).

It is through capturing the rooted material essence of a ground for instance, that the form of the building is generated, it is not designed as a parallel component to its place of occupation in isolation from the landscape. It is with this logic that, the '*double and indivisible human/geographic connotation*', presences, and a case of this stature unpacked (Berlanda, 2014, p. 4).

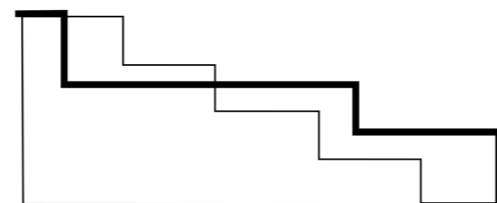
(Figure.15)(Author) + (Talento, et al., 2020)



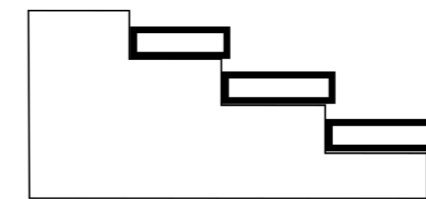
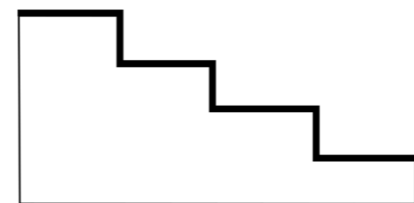
Filing



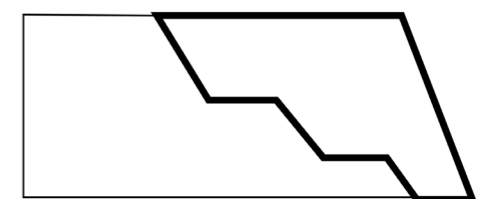
Insertion



Modification



Attachment



05_IGUALADA CEMETERY

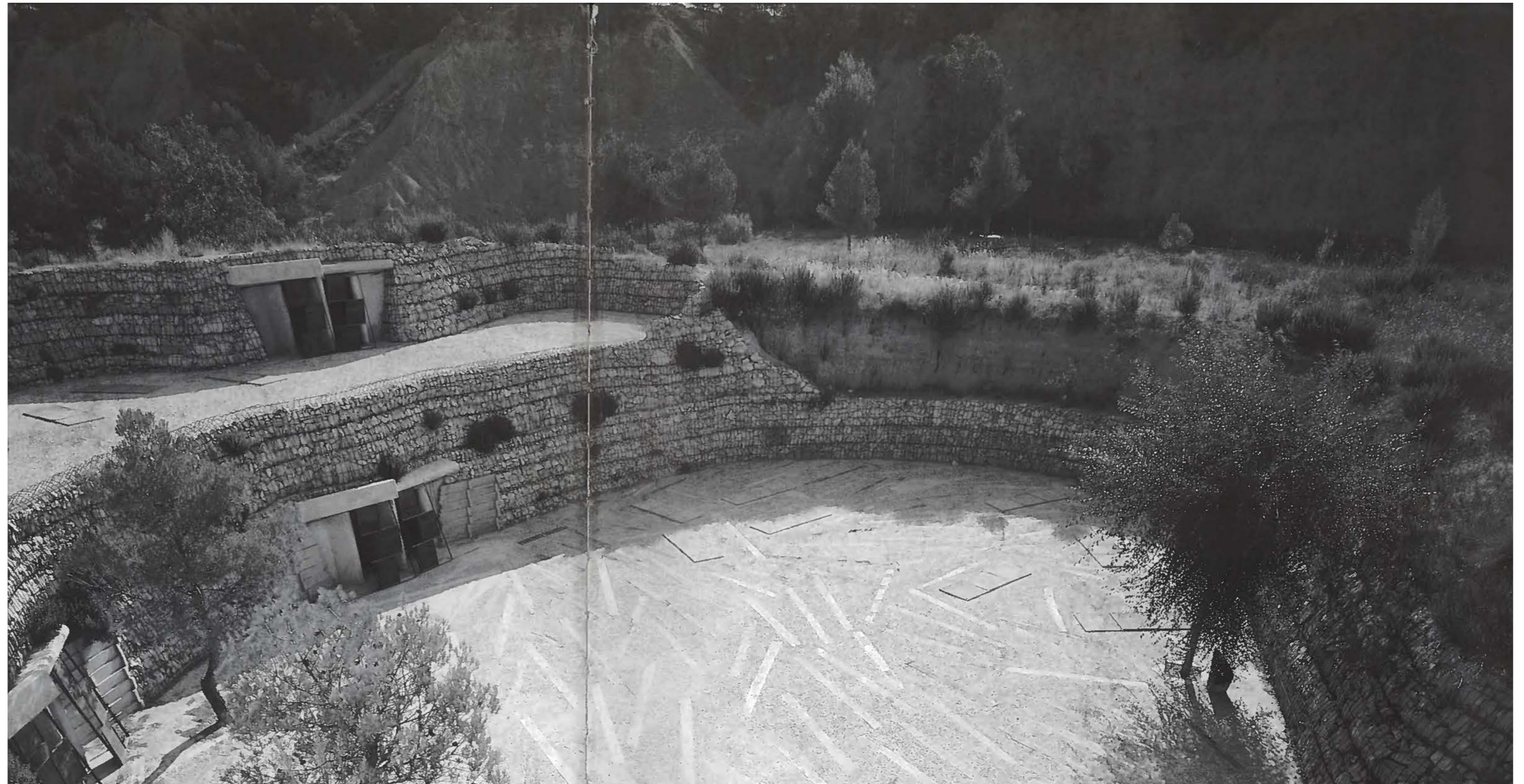


Quarried site (Figure.16) (Zabalbeascoa, 1996)

Siting and explorative technical exploration, point the trajectory of this inquiry into a case study that has been premised on similar topographic, technological and phenomenological roots. The Igualada Cemetery situates on the periphery of Barcelona - its footprint engulfed and intertwined with the quarried site it traces through (Zabalbeascoa, 1996, p.4). The determined traits of resistance are the part of the premise for its interrogation here.

As a means to get to grips with the constructional syntax of its architectural form, the generative processes of the architect need be unpacked. Enric Miralles, a Spanish architect, ideates his praxis from his youth as one based in 'curiosity' - this led him to find and uncover through drawing, a design process (Zabalbeascoa, 1996, p.5). It is sited that Miralles, held value in the ordering or syntax of material elements, "I like to accept the gravitational qualities of real materials and real construction... it is a question of the way these complex sorts of building materials are put together." (Miralles, et al., 2009, p.21).

Building and site meet (Figure.17)(Zabalbeascoa, 1996)



DRAWING GRAVITY

This attitude to physical matter bridges an application and method for engaging with site - Miralles stating a 'dialogue' with, instead of ideation toward site as a measure for an interstitial architecture that mediates between locus and building. Here parallels between Frampton's Critical Regionalism and Miralles's imposition of technique in relation to site emerge - where Frampton asserts notions of the Place - Form principle in drawing out the meaning of place and building, delivering the latter's phenomenological essence through introducing clearly defined 'bounded' spaces, Miralles poises his negotiation with site in the plan drawing (Frampton, 1983, p.25) (Miralles, et al., 2009, p.21).

Here he asserts the drawing of the 'horizontal section' as a mode transposing 'polysemic' drawings that are relative to and born out of the idiosyncratic datums of site - the logic in which concatenates drawings and design that stray from mimicry, or that which Frampton frames as a 'sentimentality' of a style or method of construction. Miralles positions an avoidance of the normal section, relating its flaws of defining and outlining as reductive of the conceptual range, 'this working method is more abstract, more conceptual than working on the section: a section has an archaic character, it involves highlighting things, as if we were still working with classical orders, the base, the capital' (Miralles, et al., 2009, p.23) (Frampton, 1983, p.26).



Plan developed freely with the hand in relation to site (Figure.18) (Zabalbeascoa,

Speculative detail (Right) (Author) generated from image below. Ideating the connective structural tissue with the landscape. The drawing illustrates stone used from site in a gabion mesh technology, the use of concrete as a sculptural formation and weathered steel frames inform the housing of the programs burial niches. Through drawing, the technical diagram has been used to show the rough three dimensional characteristics that embed in the topography of site. The aim was to show the most direct spatial circumstance of the exchange between user and those buried within the cemetery. The low entry way and tight volume speculatively symbolizes a connection to the ground and its residing dead. The thickness of the construction seems to ascribe value to protecting and nurturing the buried. There is a gravitas implied in the heaviness of the material shell - it frames a respectful experience in the function of celebrating and enshrining the dead.

By drawing up visible technologies of the burial niche photograph I began to extract an understanding of the symbiotic condition between site and building at the cemetery. While the connection between the two physical entities is revealed, it is evident that the site and building retain their own characteristics of earthly and artificial materials. This tension defines a sculptural spatiality that is interstitial to the landscape and the architecture.

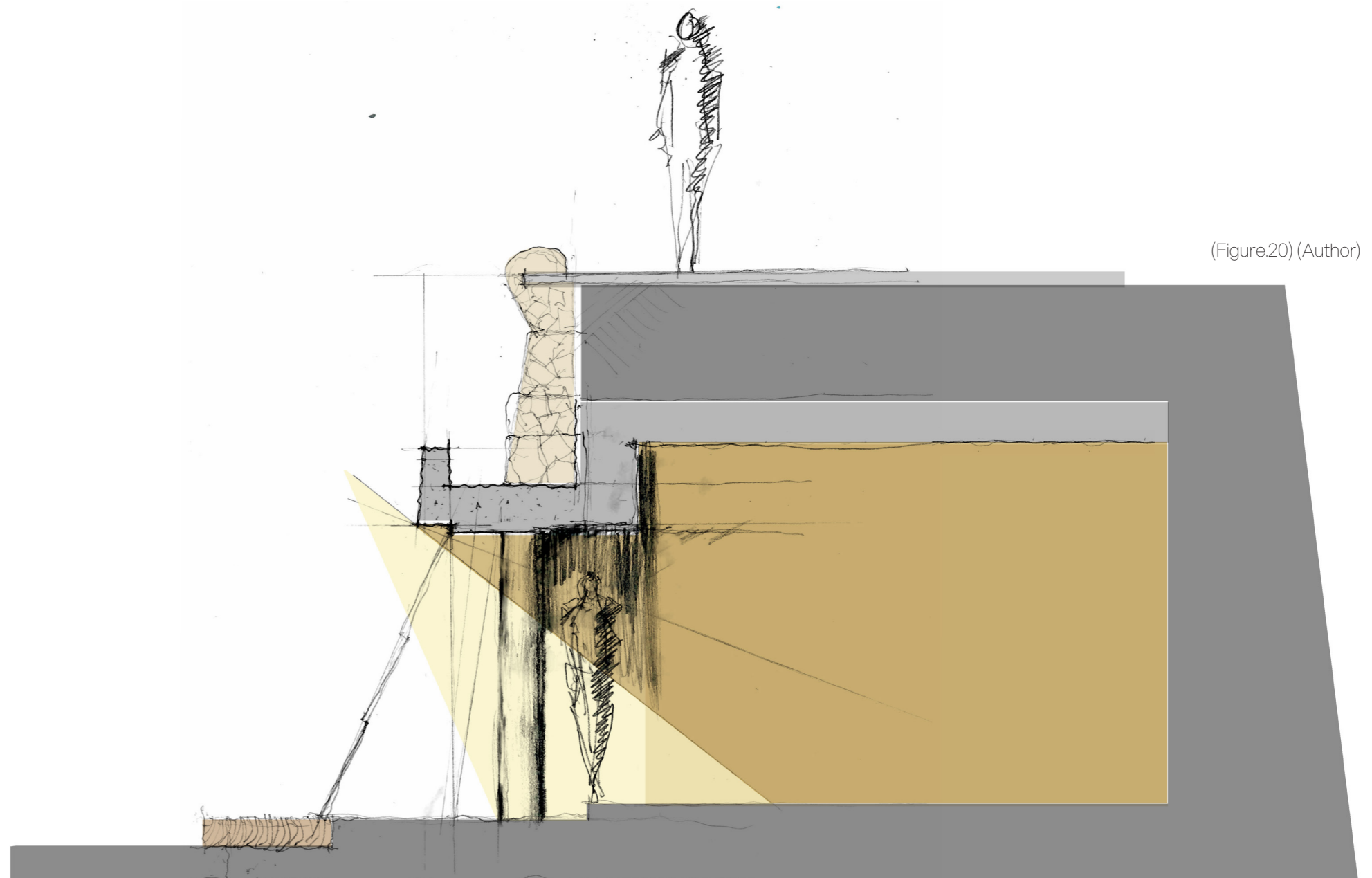
(Figure.19) (Zabalbeascoa, 1996)



While the plan is used by miralles inasmuch a tool of initiating the design with place, it is its superimposition that generates the three dimensional characteristics of the intended space, wherein the engagement with place, movement light and program becomes more evident (Miralles, et al., 2009, p.23). Herein a sort of remedy to placelessness is fostered through the generative method of design and its transposition onto and inscription into, the landscape. An enabled permeation of human engagement with the architecture and its embodied consideration of the dead and the living in relation to site is manifested.

The architecture functions as the spoken of dialogue in transcending time in a spatial sense - firstly through the relational exchange the living visitors have with moving through a spatial confluence that their departed counterparts reside within - providing this liminal platform of metaphysical interaction (Fig. 20). Materially spaces represent the natural dimension of time and transformation, the physical trace of which is discernible in the natural erosion of their surfaces, steel rusted and concrete washed with the sands of site.

(Figure.20) (Author)



It is a 'Nature and artifice' that miralles traverses in delivering the architecture of the cemetery a mutually inclusive arrangement of built and natural is evident here. While the architecture is built with the topography of its site, there is a clarity that it retains its own weight, there is not a complete dissolution of the built - this accentuation of site can be understood as the resurfacing - adding layer in built work to the landscape of the quarry it situates in, relaying material excavated out of its ground as a remembrance of its material resource. What develops here is an architecture that assimilates material from its genesis, while enhancing the characteristics of its datums. The factors of the extended contexts application in the built case of the cemetery - speculatively remain enigmatic, however the aforementioned engagement serves to elucidate a tensity between site and building rather than a total 'architectural contextualism' (Zabalbeascoa, 1996, p.9-10).

A depiction of the site-building ligature (Figure.21)(Zabalbeascoa,



ABSTRACTING MATERIAL & SPATIAL FUNCTION

The sculptural entry into modelling. I attempted to model the elements of the case study that best represent its material and functional essence. While this is an entirely subjective process I was able to draw out an understanding of the general spatial and material functions through a method of assemblage. This proved useful in defining and analysing the components of the structure while simultaneously generating a conceptual object for design. I took care to make and accentuate connections between materials and forms that define the way I see the cemetery's architecture. I have emphasized the use of authentic weighted materials - ranging from slate stone to copper, brass and timber - although not all of which are directly relevant to the actuality of the case, but rather serve as representational pieces in defining the speculative presence of the cemetery. (Figure.22) (Author)



Here, parallels between Miralles's design thinking and the methodologies of making in this inquiry are evinced through model form - the intents posit a joinery of the material componentry fundamental to the Igualada Cemetery and function as a method of uncovering a principle technological syntax of the stereotomic and tectonic going forward.

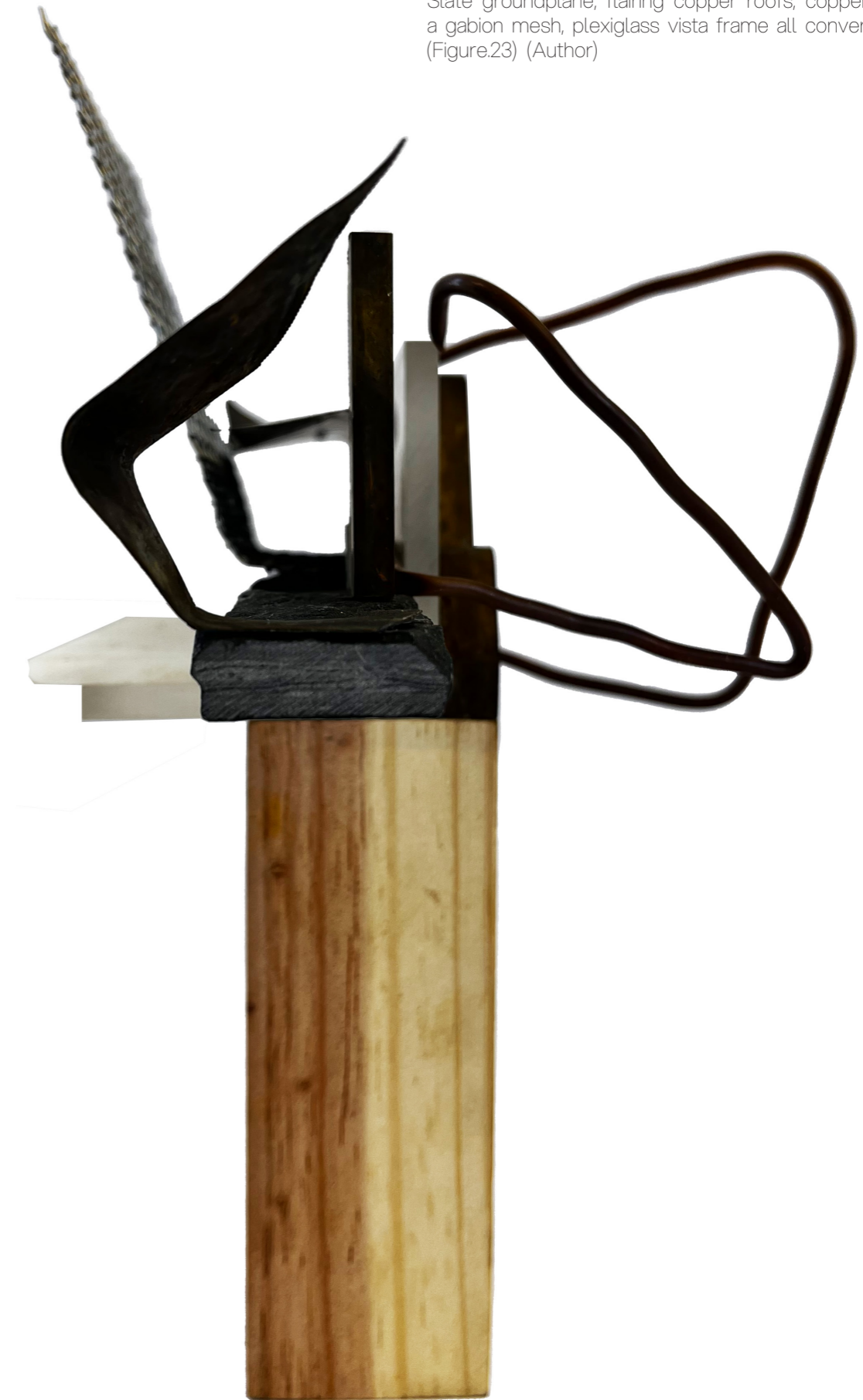
The the built ingredients of the case study are translated in what miralles termed as his interest in the 'gravitational' connection of materials (Miralles, et al., 2009, p.21). What arises out of this interaction of physical matter is the method of stereotomy - of carving into and away to reaveal a stereotomic form; the connective tissue that abuts that arrangement generates an integrated tectonic. Here the conception of the neologism Stereo-Tectonic is actuated - and in an attempt to show the distinctive case of their interaction, its meaning unpacked.

The premise of this making is to delineate a built situation whereby the weight and continuity of a structure holds little affinity towards a mutually exclusive interaction - that the stereotomic can define the tectonic and visa-versa. The separation of the two holds a lesser value in this lens as it deems to favour one for foundational volumetric stucture and the other as a membrane of aesthetic use. The clear concatenation of the two is something that seldom elucidates and that is where the dialogue of sculpture manifests - the understanding that a singularity of material can stand alone as an experiential device of communication , serves this understanding clarity - that in development of functional programmatic capacity the building can permit and act in a similar formal and phenomenological manner - estranged from a disjointed frame-foundation separation.

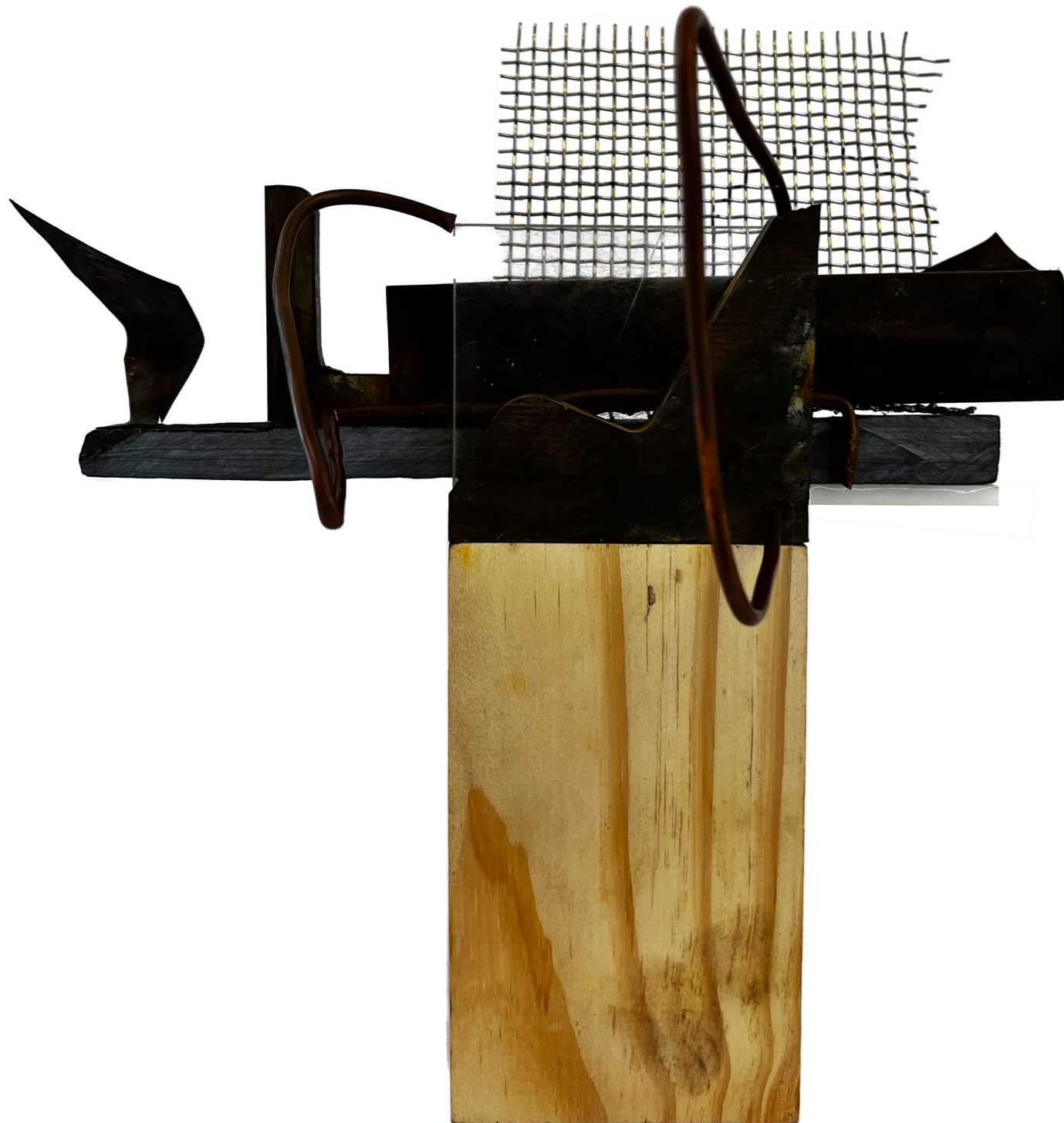
Herein an abstraction of the spatial and technological coupling condenses in a sculptural formation. Where stone is used from site at the cemetery to construct and retain parts of the quarry it couples - the stereotomic buttressing is evinced via a grated steel mesh, this flairs at an angle in an attempt to reflect the condition. Where the grate meets the ground a slate stone piece represents a linear groundplane, the walkable base - the slate also serves to show a ligament between the steel grate - a conceptual binding of the gabion, or stone housing. In accentuating the continuity of the foundation to frame and roof, copper wing-like flairs spring outward from the ground plane and float overhead, wrapping to hug the moving human, forming the overhead vertical and horizontal enclosure. This holding encasement symbolizes the upturned concrete roofs of the cemetery - it serves to illustrate their empirical weight as the extended stereo-tectonic and notion at their disposition for implying lightness through formal sculpting. By drawing thick masses of concrete to apex points - the volumetric space that resides is not encumbered by a feeling of mass - it is held with the same dense structural integrity intrinsic to concrete yet presences a lightness that results from its trimmed fashioning.

To further illustrate breaks and openings within this dense amalgamation, a plexiglass form abuts the horizontal area of the enclosure - pointedly transparent it necessitates the vista - the framing of site in apertures - the internalization of site. Copper tube members track through the gap between the plexiglass at the level of the slate groundplane - projecting obliquely - and concentrically looped - they frame and trace movement through the superimposed planes of the intervention. Adhered to the plexiglass a brass sectional form shows how structure dives up and below the datum of the entry of the cemetery - a further symbolism of movement.

Slate groundplane, flaring copper roofs, copper desire lines, a gabion mesh, plexiglass vista frame all converge as model. (Figure.23) (Author)



The optic-haptic release, grit, gridded texture, patina and transparency. (Figure.24) (Author)



In releasing the material constituents from their abstract spatial functions, the tactile value of their difference is sought to render the optic-haptic realm moving forward. Transparency, gridded translucency, gritted slate and layered patina of copper and brass begin to generate and unpack the phenomenological encryption of the piece as a textural and naturally illuminated entity.

What postulates from the ideation of a resistant place-form piece in the architecture of the cemetery is translated in a material formation that seeks that site building connection. The tactile range that comes into frame can be considered the resultant concentrated point or condition of experiential transference from built component to human. Here Steven Holl unpacks the agency of matter, the constitutive basis of materials which he assesses to hold intrinsic emotive qualities - enhanced when they interact and interlock in construction.

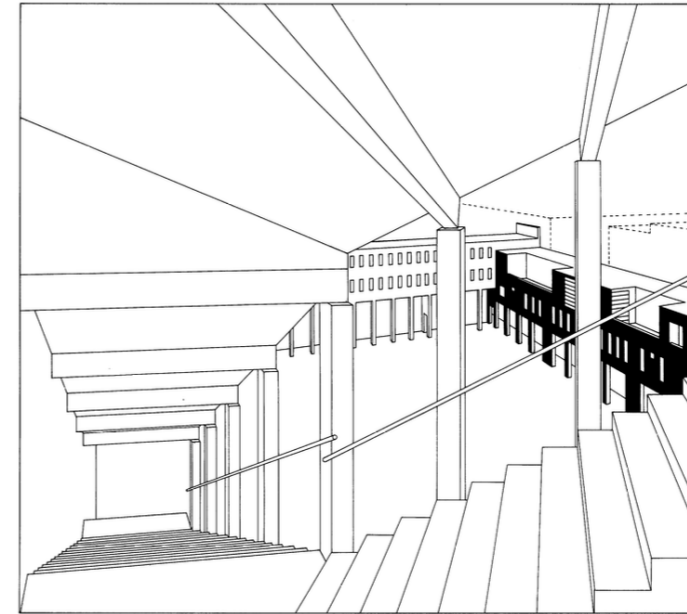
'Given an architectural idea, the relationships of construction materials impose a dimension that penetrates perception through matter to tactility. Matter interlocking with the perceiver's senses provides the detail that moves from acute sight to tactility.'
(Holl, 1988, p.17)

It transmutes the binding of the joint, the surfacing of the ground, through touch - insight into its formation and making - garnering experience of that process while presencing the function of the residual as its making intended. The formulation of these junctures are to be the expressive couplings and textures - while their visual decree is of value it is their fashioning that embodies more value in this frame. What Frampton alludes to as the 'scenographic' - can be understood as the two dimensional imaging and aesthetic placard face value of a space - one where the aforementioned tactile ingredients fizzle and become reductive of experience in the built - smooth and characterless surfaces, hidden detail joints are the antagonist (Frampton, 1983, p.27). Through the definitive exposure of making, the technology can emerge as resistant and give credence to experiential spatiality.

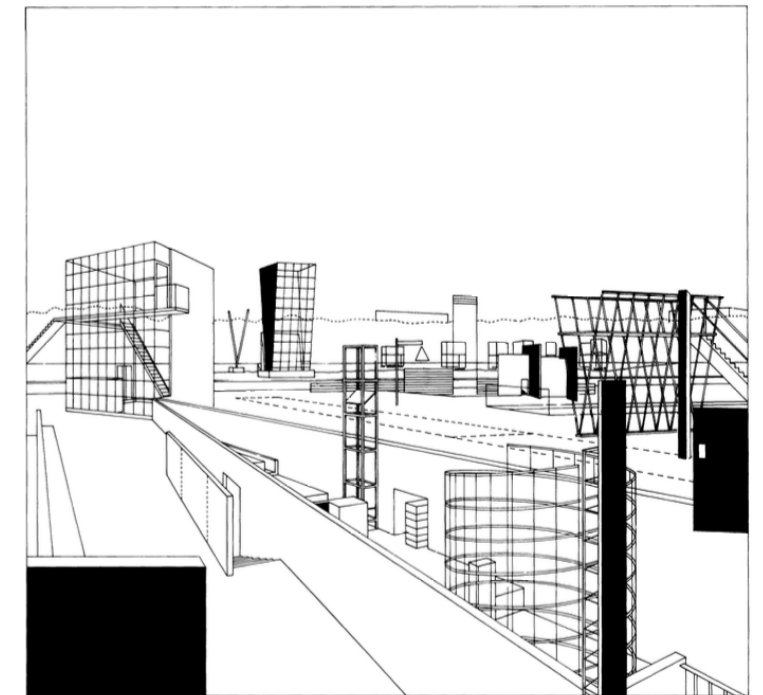
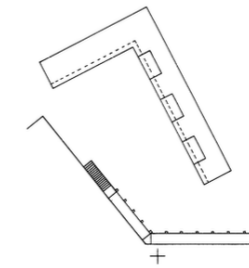
06_PERSPECTIVE TO PLAN [IDEA AND PHENOMENA]

As a springboard for the phenomenological ocular that comes into frame - the scale of the tactile range serves as a basis for assessing the rich expressive capability of the detail realm - it is the human engagement of touch and sight with this entity that has reach in translating the experience of the built. What holds value in this frame is the capacity the human eye-socket. It can define an architectural syntax from the outset - that is to say that the stereotectonic joinery that evinces expressive couplings, can be achieved through the simulation of a human lens experiencing a particular place.

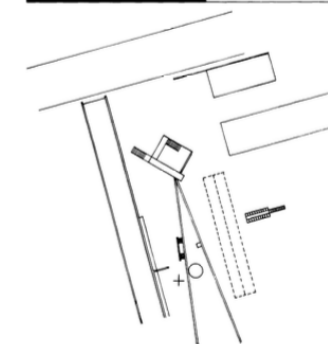
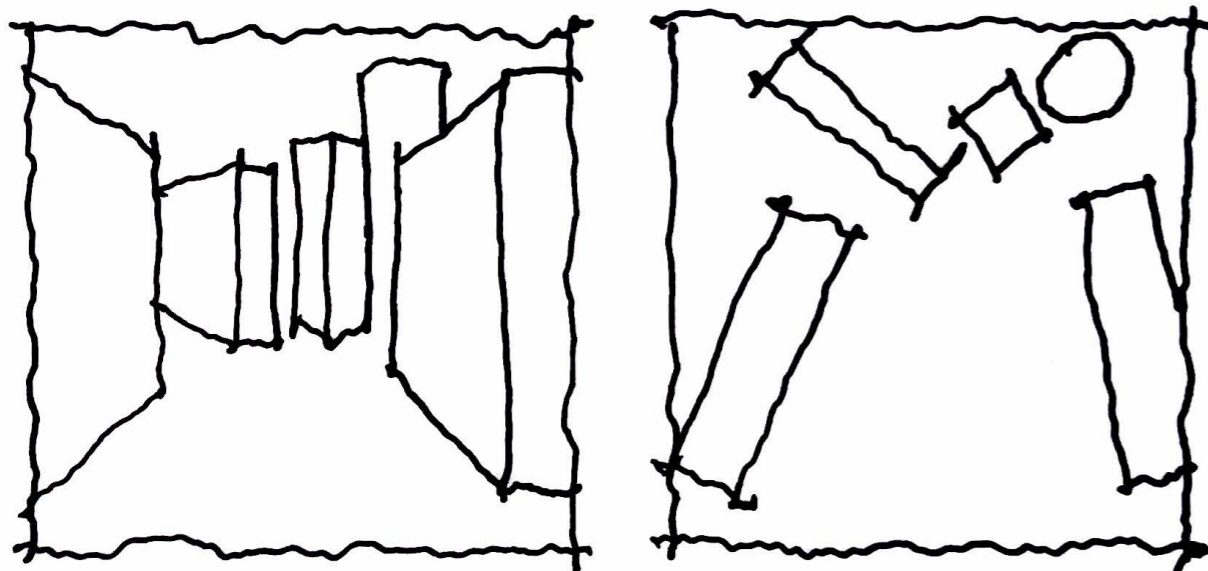
The rationale drawn out here, explicates from the human point of view in defining spatial characteristics - through perspective drawing Holl begins to initiate a means for drawing out space based in perspectival terms, that is from the standpoint of a subject - here the plan is avoided at first as it immediately restricts conception to an objective orthographic viewpoint - what the perspective generates is the notion of embodied experience within a given spatial realm - once translated into plan it gives nuanced value to the architecture through the eyes of the subject, transposing what lies beyond the field of view as conception '*spatial definition is ordered by angles of perception*' (Holl, 1988, p.9).



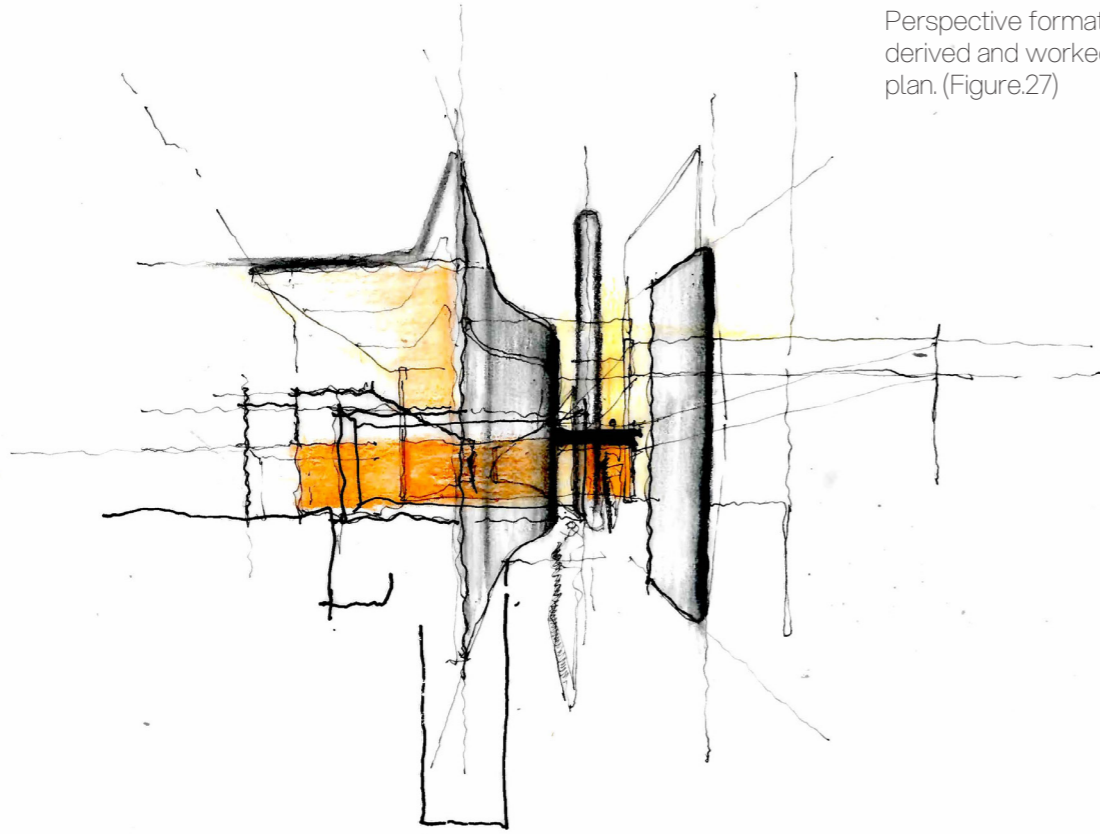
Porta Vittoria - a case wherein Holl demonstrates this technique. Perspective views are related back to a positional cross in plan. (Figure.26) (Holl, 1988)



Perspective to plan - what lies beyond spatial definition from point of view, reveals as conception in plan. (Figure.25) (Author, adapted from Holl)



Perspective formation is derived and worked back into plan. (Figure.27)



'The essence of a work of architecture is an organic link between concept and form' (Holl, 1989, p.10)

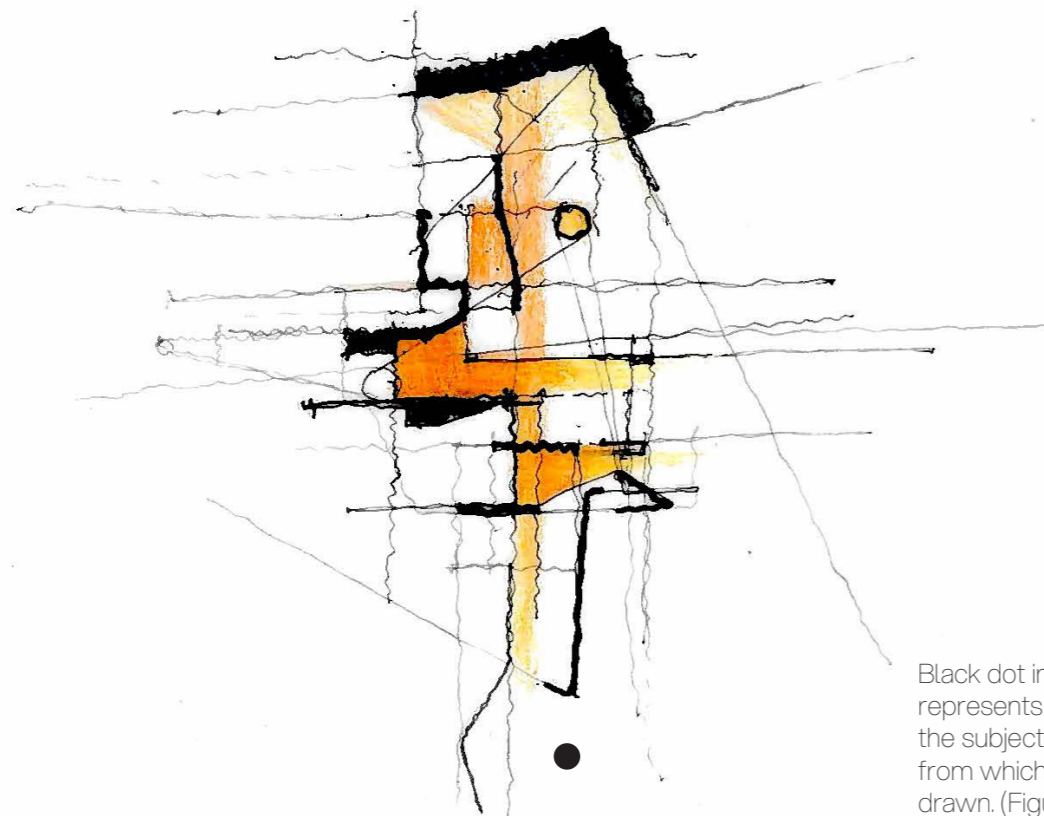
Here perspective formulates as a method of spatial conception - it defines a loose yet indicative syntax of the form of a built space and dually facilitates a means for expressing the essence through more structured planning. I have used this method as an intermediate to what Holl terms as the 'Idea and Phenomena'. It presents the idea from a subjective point of view on site, delineating a form that expresses a resultant phenomena - here a spectrum of warm light. It can thus be seen as both a tool of conception and formal expression in this trajectory. This is premised in the phenomena of parallax which assumes the directionally shifting human gaze as a means of experiencing and then generating spatial formations (Holl, 1989, p.10).

The perspective generated on site - delineates sweeping curvilinear forms - directive components that draw people into and below a groundplane - a series of horizontal screens, openings and positioning elements begin to determine an orientation (Fig. 27).

Relaying that into plan a variance of spatial planes function a range of visual engagements with exterior conditions, lenses open outward from a central spine. Here the aim has been to show how the method of drawing in 3-dimensional perspective from a subjective standpoint defines a formal representation of space in plan (Fig. 28).

The derived spatiality serves to operate as the experiential space between the horizon [the site] and the perceiver, intersecting the two. The viewer forms a subjective spatial understanding likened to their perception and grounded in the phenomena of parallax.

Compounding that process in the intended function of the plan an enhancement of perception of site and building, can be achieved in what Holl terms the 'spatial fields' (Holl, 1989, p.11). It is with a multi-directional functionality that a space has capacity to transmute character of place - in this scenario it is the site that embodies the place of the horizon - the architecture provides various points of visual contact with it through lens-like gaps. The plan illustrates the heavy quarry face as a displaced element from the structure - drawn as a thick abstract slice, it would circumscribe most of the plan at scale. It is giving visual agency to the site from within a space that amplifies and ligatures a phenomenological symbiosis.



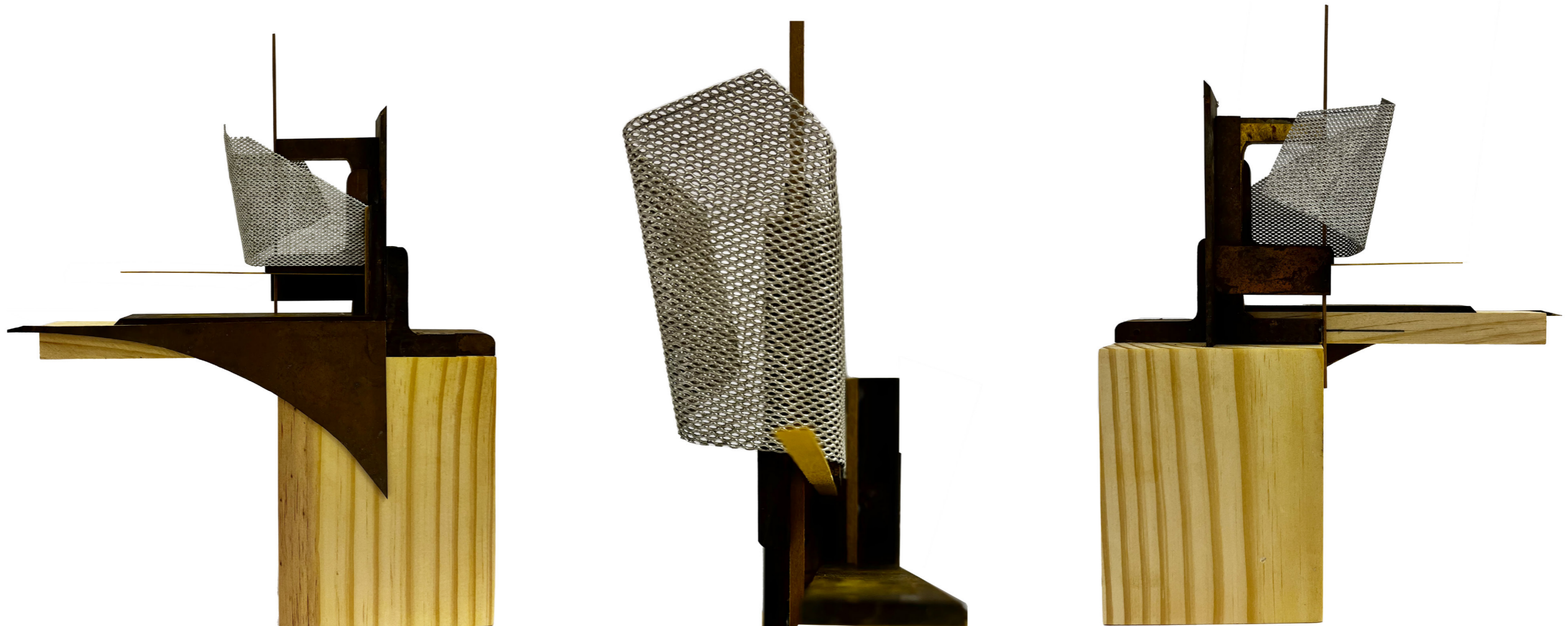
Black dot in plan represents the position of the subject in plan - the point from which the perspective is drawn. (Figure.28) (Author)

GENERATIVE PARALLAX OF THE MODEL

In shifting this approach into model form, the idea of making here was premised in evolving technological substance from a physical form- an alternate technique in generating dimensional design and technological cues from a perspectival endeavour.

By initiating the model from one point the constant shift of position or parallax is inevitable, as a result a material perspective begins to articulate manifold scenarios immediately as you build - revolving its dimensional frame infinite 'spatial definitions' present - counter to this, the perspective drawing needs to be transposed into plan configurations, its point of view altered to configure a new two dimensional frame in each instance (Fig. 29). Holl draws this revelation, '*An infinite number of perspectives projected from an infinite number of viewpoints could be said to make up the spatial field of the phenomena of a work of architecture.*' (Holl, 1989, p.11). It can be argued here that through making with principle architectural modes, the model functions in similar way albeit at a reduced material scale and level of phenomena.

Not only does the model amplify the technique of generating idiosyncratic formations, but it does so with a physical material - herein, notional drawn lines of material intent are replaced by real forms of material, that when viewed in perspective or orthographically begin to attribute an emotive material nature to plan or three dimensional space. It is also here that the tactile realm is once again activated - but what is perhaps more powerful in this case is that it evolves immediately from the idea into the phenomena, it is not mediated by the line drawing.



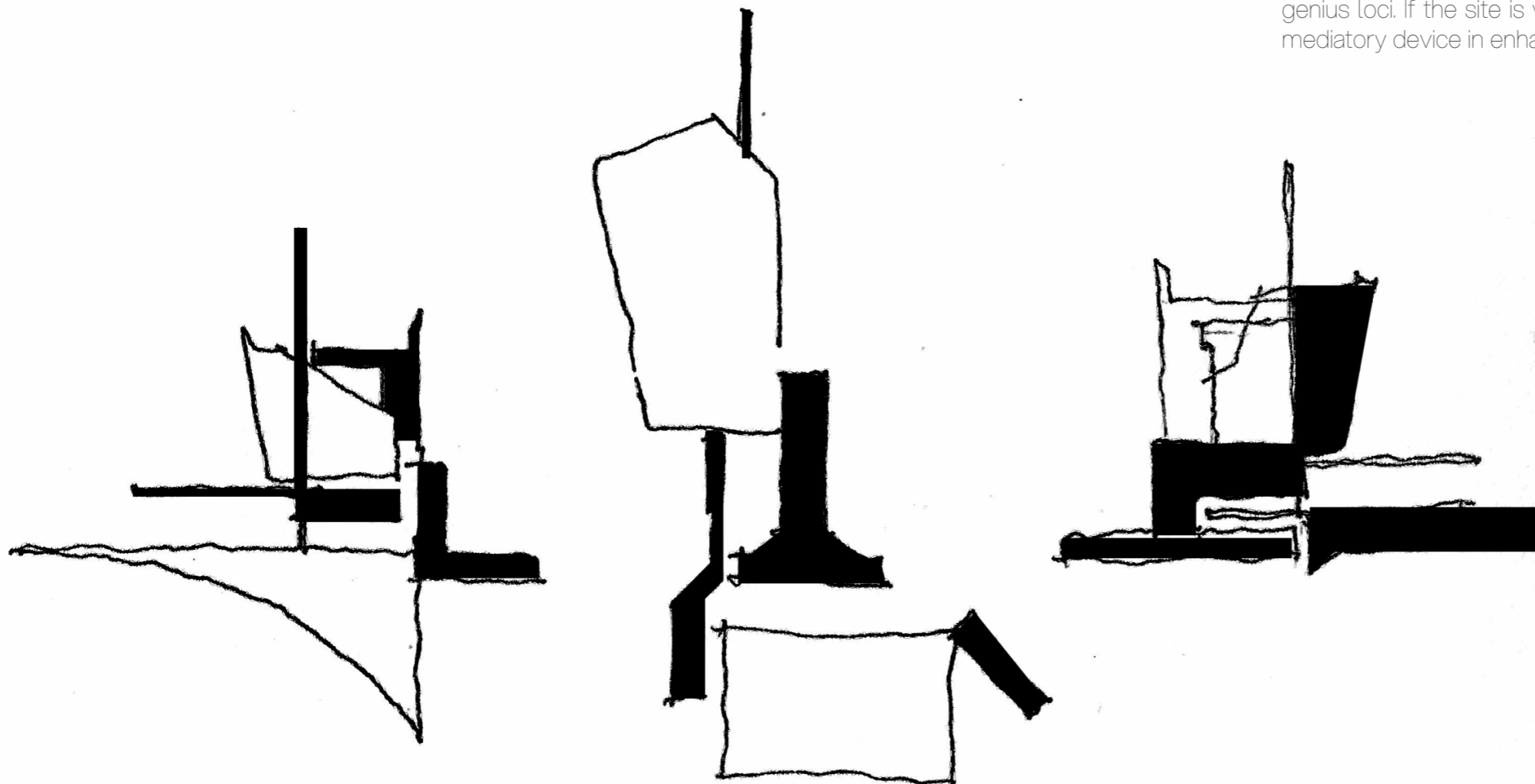
Revolutions of the model illustrate a combination of spatial orderings. (Figure.29) (Author)

Direct transpositions from the above model views generate a series of plan fragments. (Figure.30) (Author)

Herein the sought effect is a principle of syntax, again there is a basing in developing a joinery of the stereo-tectonic, but it is with the understanding of spatial planes, it is an attempt to be able to assemble the stereotomic in relation to a conventional horizontal axes and the tectonic in perpendicular, in the understanding that a simple revolution or shift of the viewpoint can incur a totally different transposition - further generative of an integrative stereo-tectonic.

It is through this interrogation of the point of view as a tool in deriving perspective drawing that the individual experience of a particular spatial circumstance emulates. Making surfaced as a fluid method for developing and constituting fragments of design, imbued with perspectival experience (Fig.30). Modelling emerges here as a method of defining and realizing small scale 'spatial fields' that derive a type of phenomena - able to be used as three dimensional objects in and of themselves - as spatial configurations. In duality the pieces function as unique matter for dimensional drawing - manifold in capacity for direct transposition, layering and ultimately a richer conceptualization.

It is with the logic of these generative methods that the understanding of choreography extrapolates. Merely posing the stereo-tectonic as a notion of the juncture between those rooted and those rising, is reductive. It requires a means of synthesis - the perspective drawing is pertinent in drawing out a subjective viewpoint, its transposition to plan unveils hidden conditions that lie beyond planes that constitute the point of view. This holds weight in defining what cannot be seen - thus intrinsically relative to a site that posits an enigmatic genius loci. If the site is what lies beyond, this method of spatial articulation serves as the mediatory device in enhancing and transcending the essence of its concealed matter.

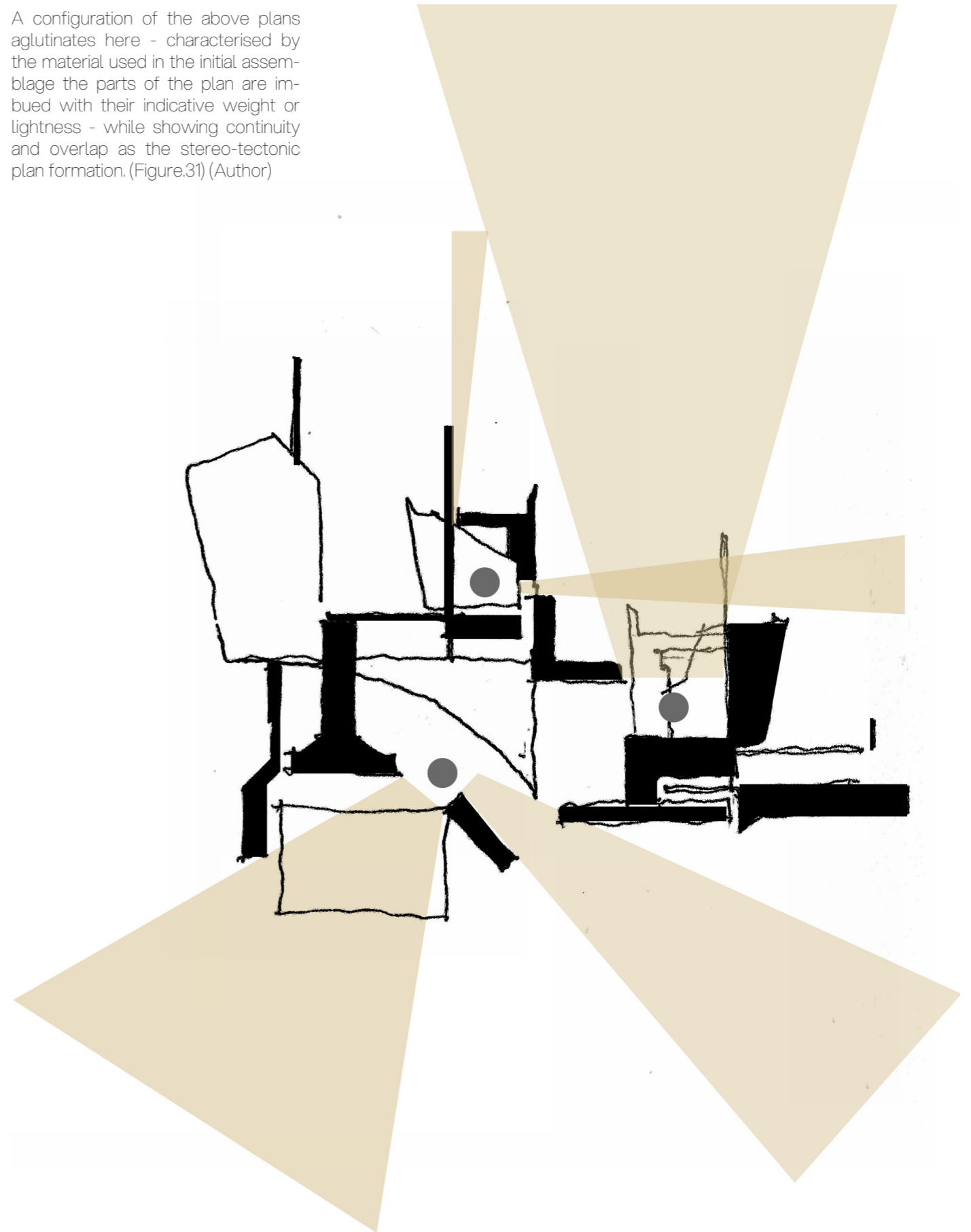


Where perspectival drawing is useful in developing an ordering in both the three dimensional and plan representation - the model here parallels, and defines an equally effective mode in articulating both delineations. Stripping away the line, the material is immediately present, its tactile value and density hold direct assimilation to the conventional masses associated with the stereotomic and the tectonic. While distinctions are made here between the two, the heavy weight brass and lightweight aluminium membrane and timber framework, the intent was to show their coupling and extensions and possibilities of continuity as a whole technology.

In combining both methods of actuating design both as drawing and as sculptural object- there is a confluence in technique - drawing up the model as a point of experience adds a tactual and immediately accessible cohesive group of elements (Fig. 31). As a catalytic elastic tool, the process goes back and forth between drawing and model, model and drawing. It is this expansion and contraction of scale design fragments that reveals unconventional and generative conceptual scenarios.

There is no gap between the conception and essence - traversing both mediums serves as a basis in critically finding the central spatial phenomena.

A configuration of the above plans aglutinates here - characterised by the material used in the initial assemblage the parts of the plan are imbued with their indicative weight or lightness - while showing continuity and overlap as the stereo-tectonic plan formation. (Figure.31) (Author)



This thread that has served to uncover a syntax of the site building ligature, the stereo-tectonic amalgamation and a material range that explicates the optic-haptic realm. In developing an experiential spatiality - a series of model pieces have been influential in surfacing territories of exploration and practices of engagement with place and material. The making of their assemblages have been tied to methodologies that generate sculptural objects - derived in conjunction with practices that have the capacity to actuate design drawings. In connection with the drawn line they act as scaled, object measures of process, revealing a physical joinery of architectural facets - from part to whole.

The nature of these material components has been based in the logics of resistance due to mass, structural connectivity and strength. The material palette of their unit holds value in its ability to transform and erode with time. This is achieved through the use of metals and stone which, oxidise, rust or flake given extended exposure to the natural elements. These material characteristics depict resistant, conceptual static space and the possibilities of movement within abstract enclosure - drawing metaphysical links to time in their gradual motion of weathering.

What becomes evident, are the scales of engagement the pieces have served to represent. From the penetration of the ground plane and portrayal of site, to the conceptual analysis of a case that embeds in the ground, to the representation of a stereo-tectonic unit and the joinery between that realizes this harmony at a digestible human scale.

It is at the core of this process that sculpture has been used as a tool to uncover, develop and project a method of design going forward. The line of drawing and the model have served to show how the embodied point of view holds weight in projecting conceptual work that imbues feeling. These techniques begin to define an architecture that functions as a mediatory space between the horizon of site and the human - they surface methodologies of making, intertwined with drawing, that extract a richness with potential to transcend phenomena across mediums.

07_SCULPTURAL SENTIMENT



Robert Morris Observatory (Figure.32)(Krauss, 1979)

In defining sculpture as a lens through which to generate an architecture of site, Rosalind Krauss begins to utter understandings, first of its ambiguity in the modernist movement as the position and outcome of 'not-architecture' and 'not-landscape' and later as an entity and practice that has a reach beyond a negative interstitial basing, in what is termed the 'expanded field'. This ideates its function as autonomous entity, without being bound by practices or conditions that it is not, and takes it into a territory of application in this track (Krauss, 1979).

First is to frame the dialectics of sculpture - Krauss, 'sculpture it would seem, is inseparable from the logic of the monument'. Here there is an understanding that the monument is a 'commemorative' delineation of place - residing there, it notions symbolism of the meaning or function of a particular territory. It is developed spatially as the pedestal or base and the sign - that which meets the site and that which presences a particular message or meaning of such. Herein, Krauss begins to critically assess this narrative that served as the underpinnings of the sculptural praxis for centuries, evincing an eventual failure of that particular condition. Krauss attributes this 'fade' in logic to the late 19th century where reproduction of sculptures assumed an irrelevance in their over production and loss of connection with their sites of origin; while marked with 'anti' structural ornamentation, clear aesthetic distractions masking their lacking function (Krauss, 1979 p.33-34).

In this condition Frampton's framing of placelessness draws connection here - the reproduction and siteless nature of these works penetrates the logic of the modernist platform, the narrative of defining works that are separate entities to site - this vein of sculptural production fosters detached making, imbuing monument as abstract, 'monument as pure marker or base, functionally placeless and largely self referential.' Herein modernist sculpture assumes a simulacrum of the 'nomadic' - it is through the idolization of the plinth, the sculpture reaches downward to occupy its foundation, folding inward, away from site (Krauss, 1979, p.34).

As Krauss notes, a shift in the early 1960s was evident, there was a condition where sculpture became defined in terms of the inverse, it was the object in relation to what it was not - whether the piece on or inside the building, not the building or the piece within the landscape not the landscape, it was the product of exclusion.

Here an antidote to this displaced position is defined - Krauss reverses the narrative of the exclusionary sculpture ideating that although its previous definition was based at the interstitial negative point, the outer fields could be reversed to their positive conditions of landscape and architecture. It is at this point that the expanded field is actuated and conceived - as the moment of 'problematizing' the opposing spheres of modernist categorized sculpture. Thus divulges a condition where a site grounded and born structure has potential to embody the sculpture - of functional capacity and phenomenological meaning (Krauss, 1979).

LAUSITZER SEENLAND LANDMARK - CULTURAL EDIFICE OF THE GERMAN LIGNITE BASIN

The Lower Lusatian Lignite Basin in Germany serves this inquiry well as a landscape defined and structured by mining practices - it is the extraction of material land and attempts to restitch those wounds through a transformation of the natural ground that posits a paralleled site condition to the Strand Street Quarry. Via a resurfacing of the landscape, whether through the filling of mined voids into lakes and or the regrowth of forestry in the remains of mined territory, a natural resurfacing was instituted. However, the degree to which the practices of healing the landscape were carried out, regarded little consideration for the generations of mining that had gone before - it served in some capacity as a covering or 'banalization' of the territory (Deshaies, 2020, p.12) . Herein the need to resurface and provide some form of cultural edifice , to translate the mechanized memory of the landscape was derived. It is through this physical resurfacing of the landscape in ecological terms and the unearthing of a metaphysical memory that a case of richness is found.

Landscape (Figure.33) (Stefan Giers)





The sculpture (Figure.34) (Stefan Giers) (Rovcom, 2021)

The 'Lausitzer Seenland Landmark comes to the fore as a site grounded sculptural piece. In looking to the architect of its realization, Stefan Giers - roots his method in relaying the enigmatic metaphysical genes of site in physical, 'tangible' architectures (Giers, 2008). This frames the generation of the work. The functional program as an observation tower, is set in the static realm of a motional landscape, a spatial mediator between the memory of mining practices that reconfigured its ground prior to its conception and making, and the current cultural cultivation of its surrounding lakeland. The patina and material integrity of its making are said to be keystones of past mining practices, symbolic of the tools and machinery used in the extraction process. It is an interstitial piece circumscribed by memory and physical change. It emerges as a measured success, a gravitational component in reconstituting a state of remembrance - traversing the line of sculpture and architecture - its form is imbued with a stark phenomenological tensity (Landschaft, 2014).

The case embodies the capacity of sculpture. As the mediatory center, a placed edifice it is not self-referential, rather intrinsically connected to its sites material culture. As a weathered object - it represents and defines movement of the past and present - a marked piece of rich experiential expulsion. It is the confluence of the architecture and the landscape that is the basis for its contemporary sculptural categorization. It is the continuity of its structure that gives credence to the logic of the integrated stereo-tectonic position.

The operative nature of translating experience to the human is well crafted here - the triangular extrusion has a backing corten steel wall plate which houses rhizomes of a steel staircase (Fig 36). The nature of the lens or point of view is interesting in this scenario as the two sides of sandwiched structure toward the rear of the sculpture begin to permit a series of visual engagements with the landscape and the feeling of its body as a spatial work. As the one climbs the tower, their image of the lakeland beyond is defined by distance relative to the rear of the structure. This either embodies the space with feelings of strength and weight when the user is backed up in the stairwell type enclosure, its encasement framing a particular view of the landscape - or fosters a condition of lightness in perception where the structure is less solid at its outer rim (Fig. 35). As movement projects outward to the edge of the staircase the view is no longer framed by the structure - here the sculpture falls into the background and an aglutinating phenomena between human the natural vista occurs (Brinkmann, 2008).

Levels of enclosure and engagement with landscape (Figure.35) (Stefan Giers) (Börner, 2008)



Stair matrix (Figure.36) (Stefan Giers) (Börner, 2008)



Framing stringers imbuing safety from height (Figure.37) (Stefan Giers) (Börner, 2008)

Relation to landlake (Figure.38) (Udo Meinel) (Brinkman, 2008)



There is a clear continuity of stereo-tectonic componentry. It is this singularity that is powerful in its ability to permit the movement and experience via a connected body of structure.

The vibration and tactile resonance of the space is defined by the whole of its structural parts, the 6mm corten steel plates that line the turret for instance are not separate to this movement but entangled in the structural system of the architecture. The floor plates here don't merely function as a bed, but rather do in synchronicity with welded hollow girders, stanchioned by steel ribs, part and parcel of the primary construction. This is framed as an experience of 'oscillation', for instance when a door of the structure is slammed - reverberations are felt and heard by the body of space and user, the footsteps of visitors ring out as the metaphysical kinetic - drawing consciousness to what is above and below. While this nuanced movement induces a sensorial realm to the fabric of the sculpture, there is a mitigation in form that prevents feelings of instability, the stairs framed in solid steel bounds, pose sanctuary from the height, hugging users at the outer viewing rim (Brinkmann, 2008).

This constructional assembly is premised on 'shipbuilding' practices - it is here that a connection to the contemporary function of the landscape is fashioned and embedded into the making and construction practice - the boats which traverse the lakeland of its surroundings utter as a source of method in its structural ordering (Brinkmann, 2008).

Turret view point (Figure.39) (Udo Meinel) (Brinkman 2008)



08_ BUILDING A STEREO-TECTONIC : REDESIGN OF ROMAN QUARRY

In converging this inquiry into a more structured technology of construction, this case is unpacked as a reflective conceptual analysis. Situated in St. Margarethen, Austria, a cultural edifice is revealed. Designed by Alleswirdgut Architektur, a matrix of lightweight and grounded structures enter and condense in a sandstone quarry forming an open air arena (Divisare, 2011). The site building conditions come into frame as the focus of this portion.

I draw links between the stereo-tectonic and its connection to a site that has very similar material and contextual traits to the Strand Street Quarry. The nature of movement, scale and spatial connection to the ground is represented through a physical model. The piece draws on a series of actual scenarios and agglomerates them into a sculptural continuity. I use diagrams that are introduced earlier to illustrate how the work deals with building the ground - how it connects with the harshness of the artificial form of the quarry and how it resurfaces, choreographs and centers a feeling of place with an architecture. It is the way in which the parts of the structure embed and travel through the site that is geared toward directing, delivering and concentrating the experience of the vast scale, topography and atmosphere of the quarry. It is the site-building ligature that translates this encounter, through fluid walkways, clear structural connections and raw materials. A sculptural push and pull between landscape and architecture emerges. The calculated dissolution and assimilation between structure and the sites attributes, derives a model that encapsulates the speculative feeling and function of the work.

I draw on previous methods of making to define the groundplane. Inverted stereotomy of casting plaster and chiselling serve as direct marks of the accompanied extractive processes that define the sites physical character. The act of making has been invaluable - realizing structural integrity at scale with clear reference to the constructional ordering and praxis of a built work.



Elevated walkway (Figure. 40) (Hertha Hernaus) (Seip, et al., 2013)



(Figure. 41) (Author)

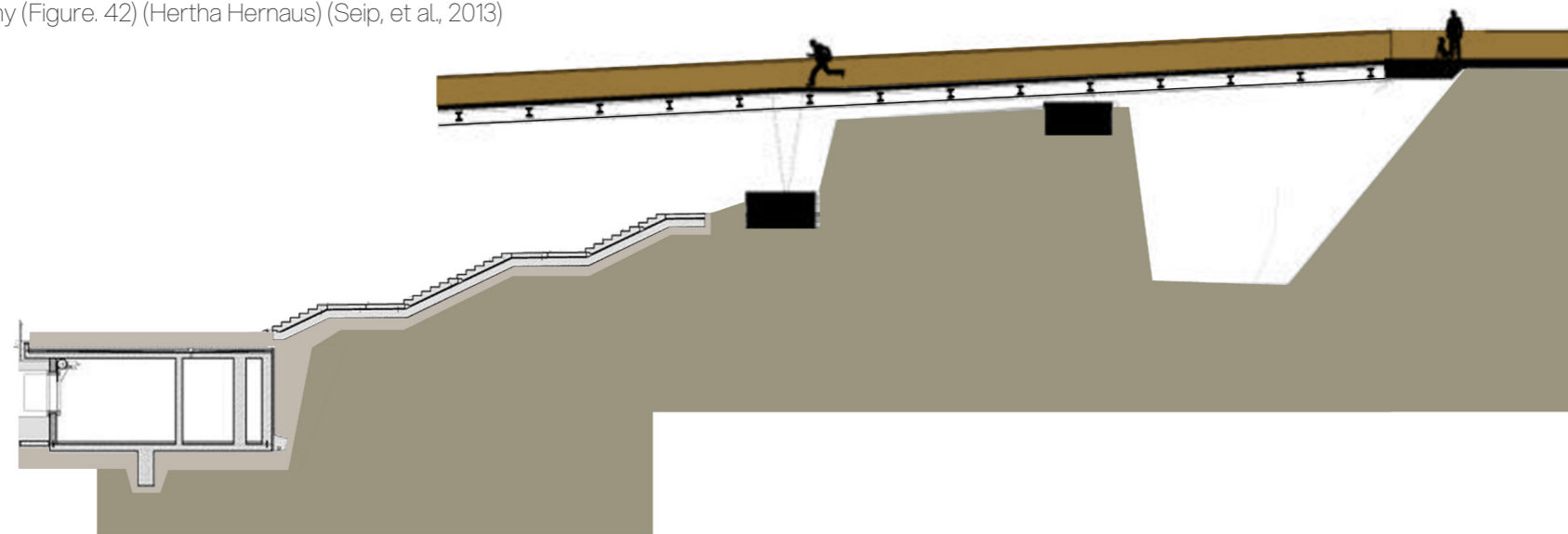


Sandstone topography (Figure. 42) (Hertha Hernaus) (Seip, et al., 2013)

Through defining a series of ground conditions, points of contact with the stone surfaces of the quarry were drawn out in an adapted sectional drawing and then refined and built. These load bearing devices are defined as point footings, compacted earth fills, retaining systems and direct material connections with topography - they accompany and support enclosure, stairways and elevated walkway systems. Narrowing in on these particular situations, simultaneously performs a physical analysis of the structural and spatial functionality and begins to develop a conceptual bed from which to design. While this approach parallels the methodologies carried out in Igualada Cemetery case study - there has been less of an abstraction in the modelling process - the representation of the model attaches clearly to the real attributes of the case. By evolving the making technique to produce a clearer translation, the combined abstract and realistic conceptual amalgamation provide a layering of nuanced intuitive expression and logically defined sculpture.

The attitude to topography at the Roman Opera Quarry is categorized here through the lenses of filling, insertion, modification and attachment (Talento, et al., 2020).

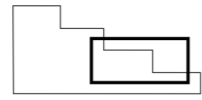
In beginning to clarify these instances of contact between structure and earth - there is also and emphasis based on the ordering of the stereo-tectonic. The floating walkway posits as a clear example of the intended structural joinery, form and function. It is pinned on slender round steel hollow sections which embed into footings inserted into rock; a sandwiched system is adjoined above laterally stiffened by large 300mm I sections. The whole unit is powerful in its ability to mimic the jarring topography and elevate its reflection in a more a refined movement route. This extends the ability of the stereo-tectonic system as a dynamic way of inserting a structure into to an undulating context - it has the ability to render the geometric character of the landscape through the structural parts and extend an accessible version of experience to the user.



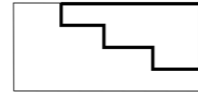
Adapted section (Figure. 43) (Author) (Divisare, 2011)



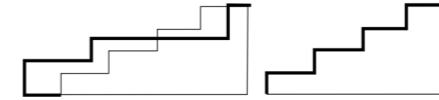
Insertion



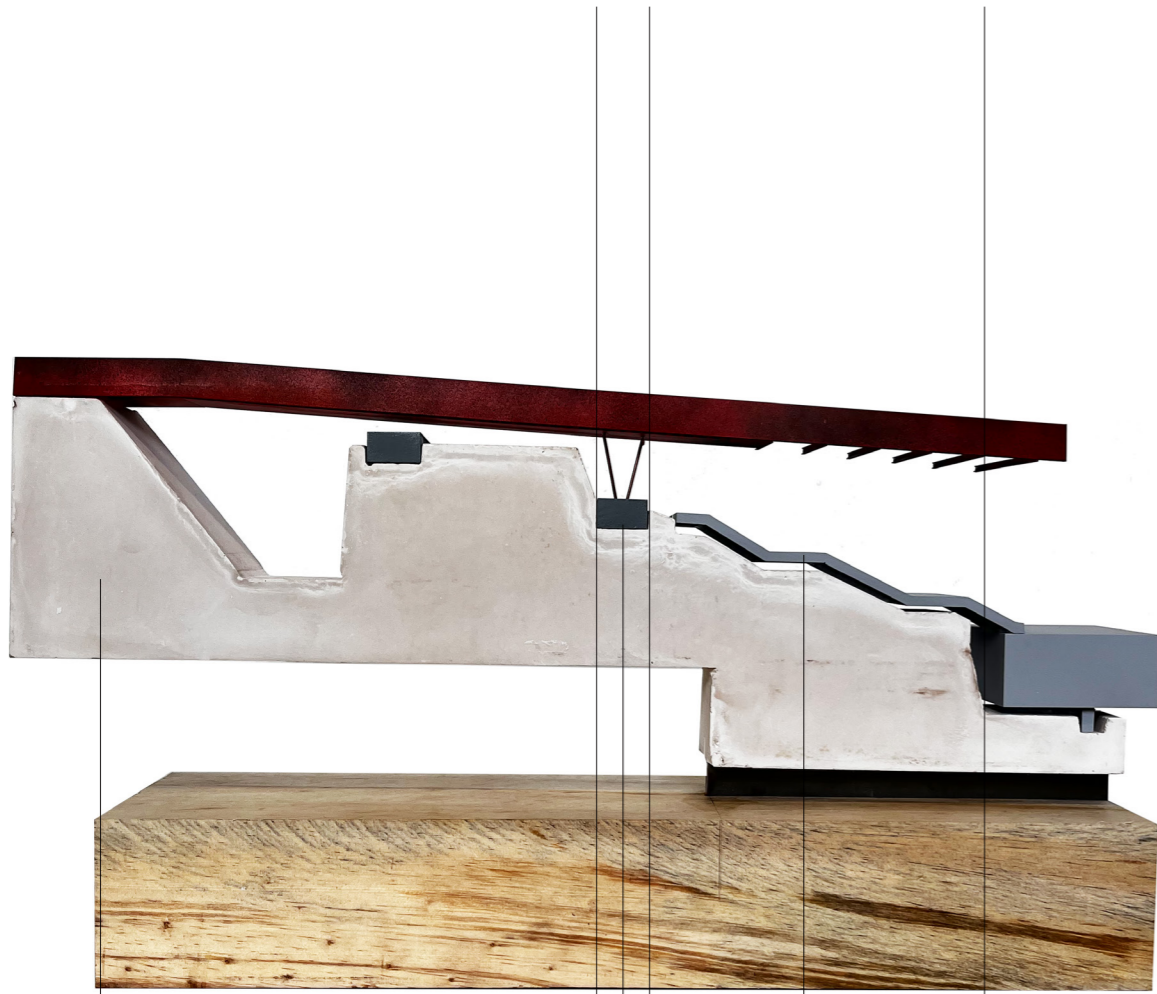
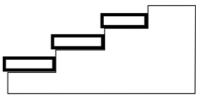
Filing



Modification



Attachment



Model + adapted diagrams (Figure. 44) (Author) (Talento, et al., 2020)

Topography (Plaster)

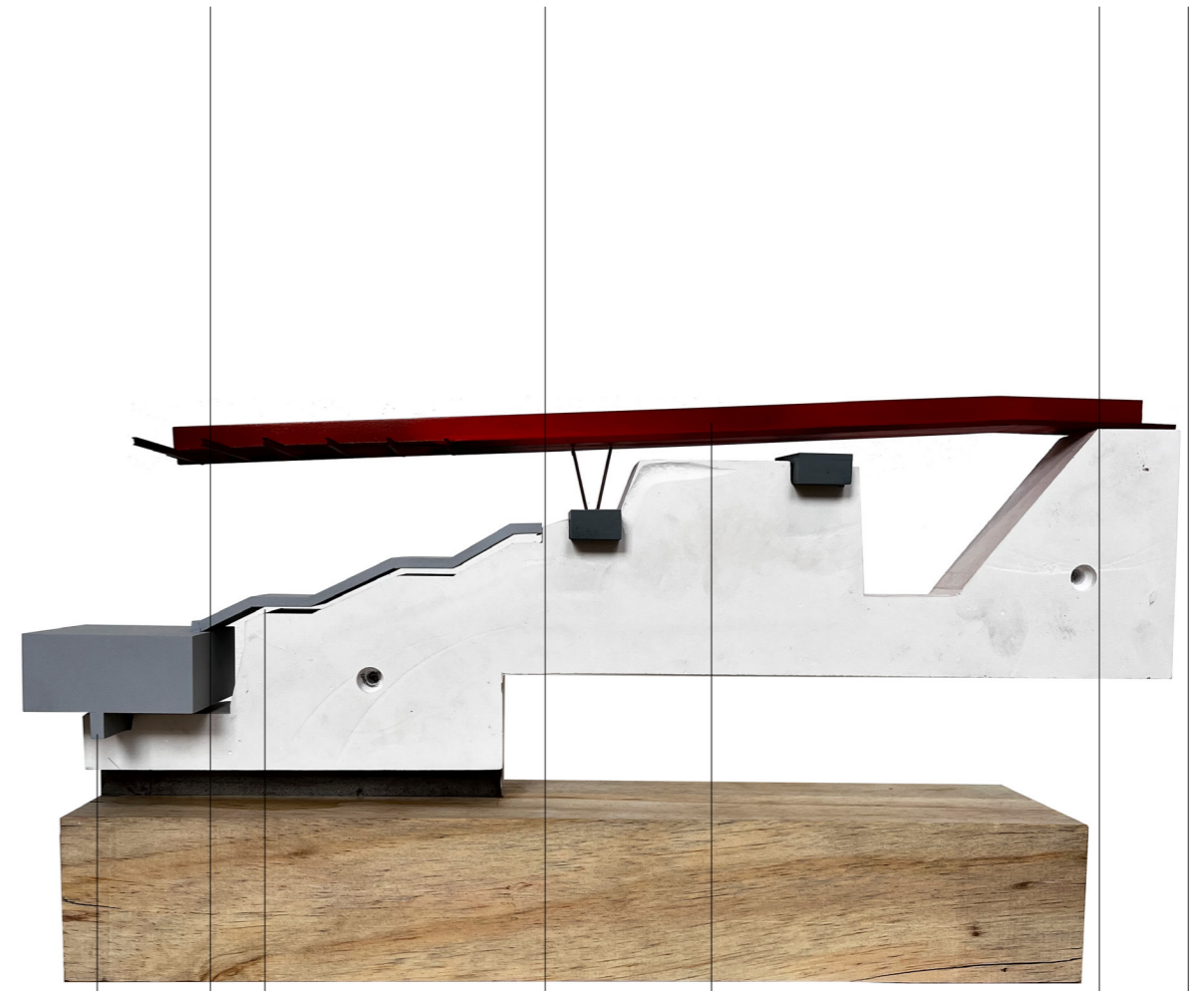
Concrete footing + circular steel hollow section (Plexiglass sprayed dark grey)

Concrete stairway (Proslab sprayed light grey)



Large 300mm I sections (Composite plastic sprayed black)

Point footing (Proslab sprayed light grey)



Compact earthen fill - shadow gap

Corten steel walkway (Plexiglass sprayed rust)

Refer to Fig. 44

The suspended walkway interacts with the ground through 'insertion' (Talento, et al., 2020). A concrete stereotomic footing breaks the surface of the rock and embeds just below the groundline datum - this is represented in the piece as a plexiglass block machined and inserted into the plaster ground. Its inscription into the landscape can be argued as a point of absorption; of the meaning of the place through physical contact - assimilating the jagged topography below into sculptural fluid replication of lighter tectonic structure above. The form of the walkway dives up and down representing the uneven ground and snakes obliquely in the horizontal axis further attaching aesthetic to the ranging angles of the quarry strata. The elevated path is derived in the model as a layered plexiglass floor plate which seats into a notch machined into the upright handrail.

Where the walkway seats on the rock ledge, this connection to the ground can be viewed as 'horizontal attachment' - a direct joint to the ground (Talento, et al., 2020). It follows the existing groundline entirely. This abutment is true to the topography and grounds the user in relation to the actual condition - this attitude to meeting the reality of the context is utilised appropriately where gradients are subtle. A clear condition is delineated in the model where the path reaches a plateau of a large rocky outcrop.

Where a stairway condition is reflected in the piece, the topography undergoes a subtle 'modification' (Talento, et al., 2020). This is illustrated as a stepped ramp, machined from proslab material. A connection to the plaster ground is raised - the shadow gap beneath defines a layer of compacted earthen fill. The combined system fashions the topography into a manageable gradient - this resurfacing of the groundline is functional in its ability to permit a smooth transition between vertically opposed planes of ground.

The stairway is met at the lower end of the topography by a ticket booth - this space is set into the ground - the physical exchange with the site can be categorized as a 'filling' (Talento, et al., 2020). The connection to the stairway is a shared compact earthen fill, and a larger retaining body of the same substrate, laterally stabilizing the inset concrete structure. Further load-bearing capacity is given to a point footing that provides a compressive stereotomic point of contact with the ground.

09_TRANSLATION FROM THEORETICAL EXPLORATION

In reaching a confluence of ideas generated through and paralleled with making and drawing methodologies, along with a critique of placeless inducing praxis, and of that of modernist sculpture, this trajectory has sought to actuate a contemporary and relevant induction between architecture and landscape as a sculptural entity. The line of inquiry has posited the logics of the place-form principle solidifying the site-building bond as a spatial body for the manifestation and projection of the physical and metaphysical experience.

There has been emphasis placed on the techniques that converge in methods for generating dialogue with site through drawing, those which are unencumbered by classic orders and those which develop freely through the hand in relation to site. These ideas nest and reveal through making, which has been pointedly abstracted as a generative tool. They have served to ideate material and technological assemblage as function, and then been released as syntactical, tactile ingredients for the making hand to feel and experience at a micro scale; the application scaleable across the dimensional spectrum. There has been an emphasis on regarding the point of view of the human as a means for spatial definition, and the methodologies drawn out of that - give traction to the analogue hand in making and drawing as that subject entity. The valorization of the human perspective in making has assumed the immediacy of translating idea to phenomena - expressing the sculptural object as a poignant tool in imbuing emotive qualities to conceptual design.

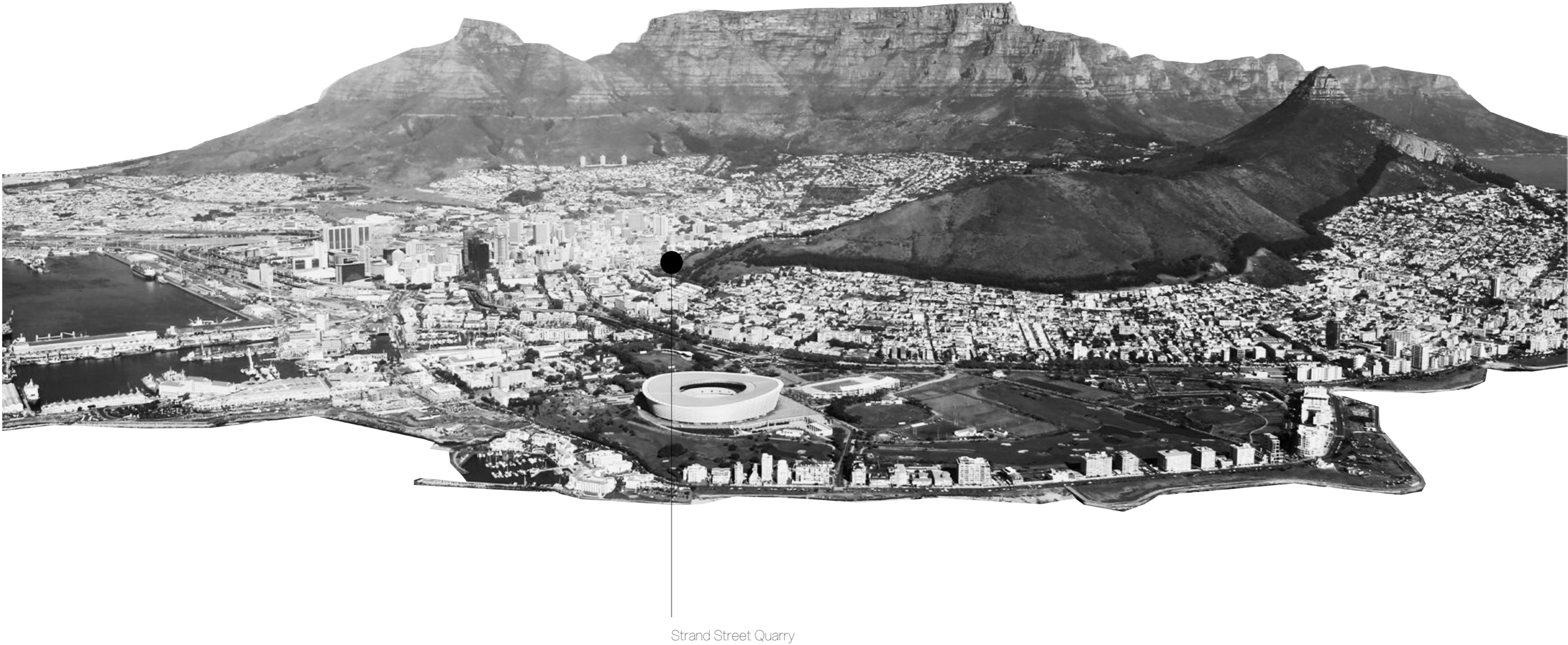
The stereo-tectonic has been conveyed through making, as a body of structure that has the ability to assume a continuity through shifting orientations and placements of heavy and light material facets - transcending enriched interactions with phenomena of mass, volume light and time through juxtaposing stronger contrast amongst components in the whole structure. The sculptural resurfacing manifests as the entry into a conception and crafting of the stereo-tectonic and emerges as the spatial, formal architecture. This nests in the logic of stereotomy and the physical act of subtractive shaping and carving - yet can be achieved as simulacrum in defining mock depth and mass where the reality of material would be structurally difficult to suspend or support.

The power of the connection between building and ground has been emphasized throughout and its realization serves to clarify how a mutually inclusive arrangement has the capacity to dynamically translate both the delicacies and harshness of site, through structure, into a refined sculptural experience. A concentrated fusion of these measures is the springboard and catalyst that reacts the resistant experiential proposal.

While there has been a stipulation of generative methods, the means of actuating design are not confined or restricted here, rather a series of configurations are revealed, expansive in their function and application. The model, drawing and photograph are all drawn out of as conceptual beds for exploration and define the mediums toward architectural translation. These techniques not only locate the spatial and architectural language of the proposal but prime the surface for a socially integrative insertion - one that draws on principles of assemblage and layered experience to reinterpret the physical tenure of site and relocate its place in the city through an engaging public landscape and fixed program.

010_DESIGN REALISATION

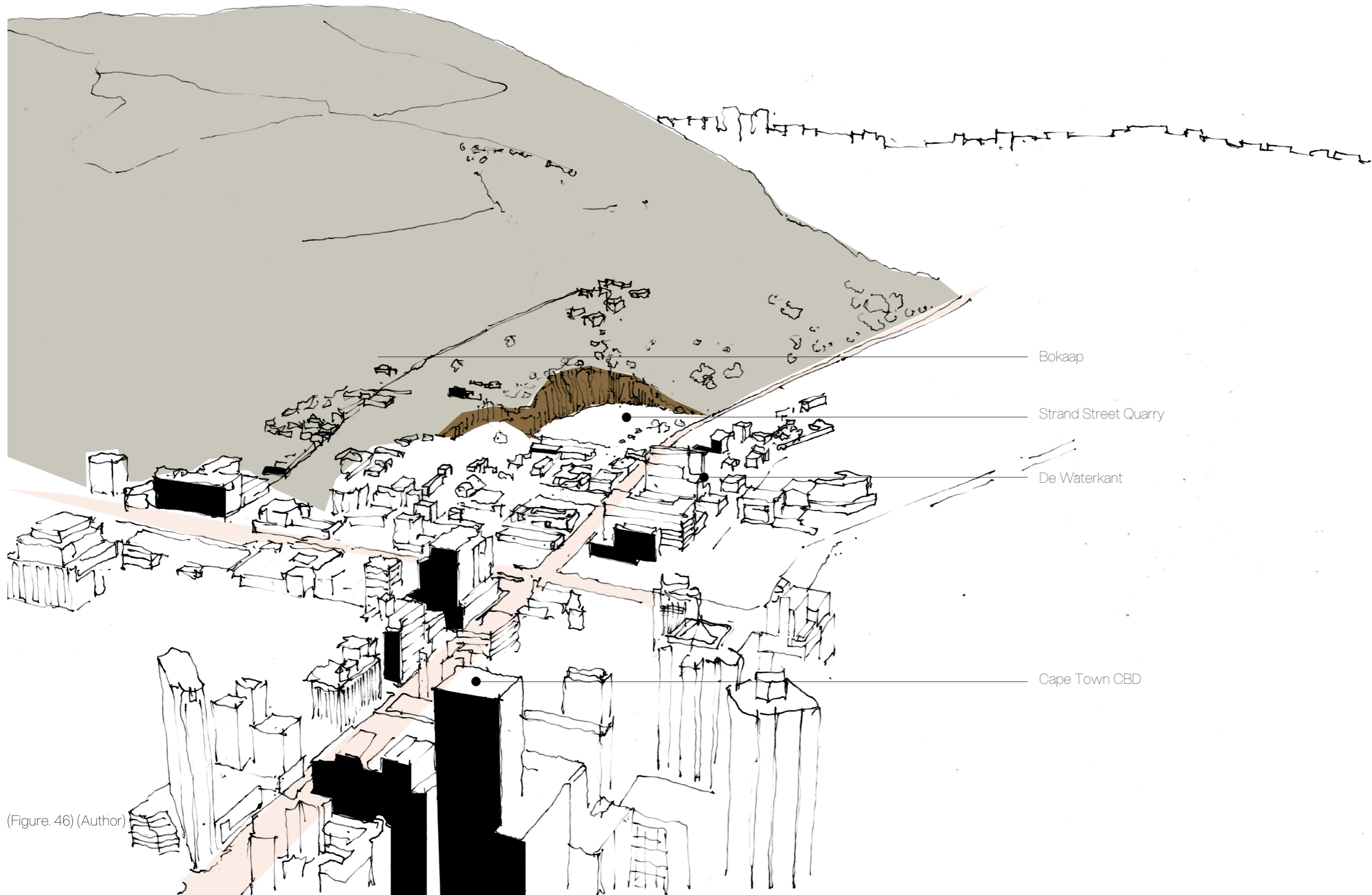
Programming the ground and site of the strand street quarry opens up the territory as a public landscape and museum for the people of cape town - to visit and experience conditions of the contemporary and old city. Resurfacing lost parts of its ground, the museum is conceptually derived and amplified spatially from the locus in which it embeds, making evident the enigmatic material of its source - the affective site presences overwhelming scale and void, stark rock formations and a tension in its value as a place. It is through the osmosis of these physical and metaphysical qualities that an embellished architectural character of exaggerated formal and spatial experience, and meaning is derived - ligatured with site as a located whole.



Strand Street Quarry

Locating Strand Street Quarry in the City Bowl (Figure. 45) (Author)(SA Art and Frames, 2023)

SITE LOCUS

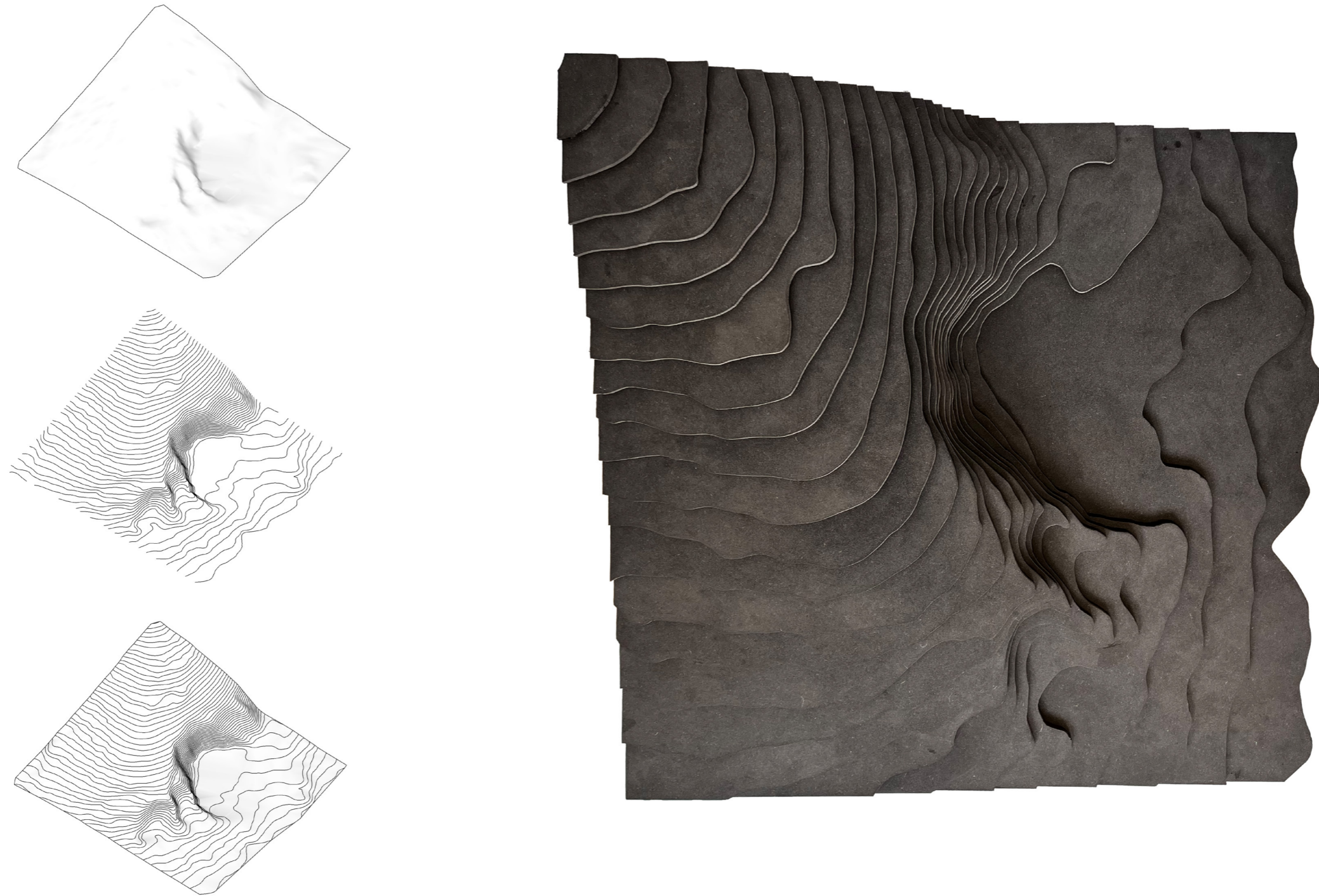


(Figure. 46) (Author)

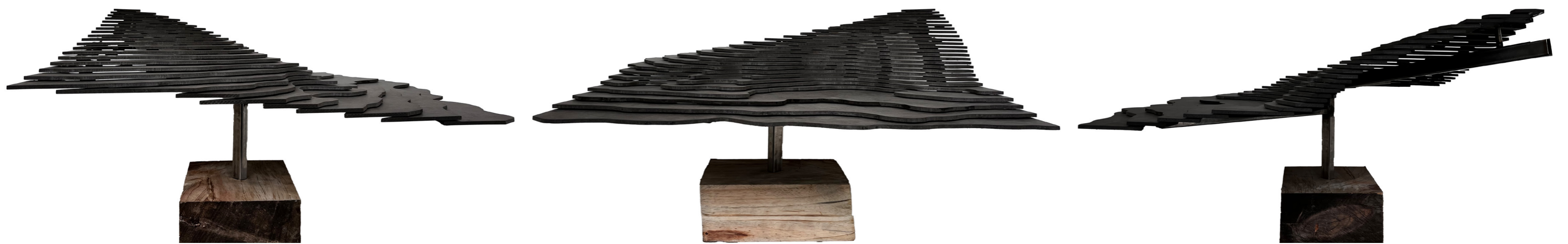


(Figure. 47) (Author)

DIGITAL TO PHYSICAL TOPOGRAPHY

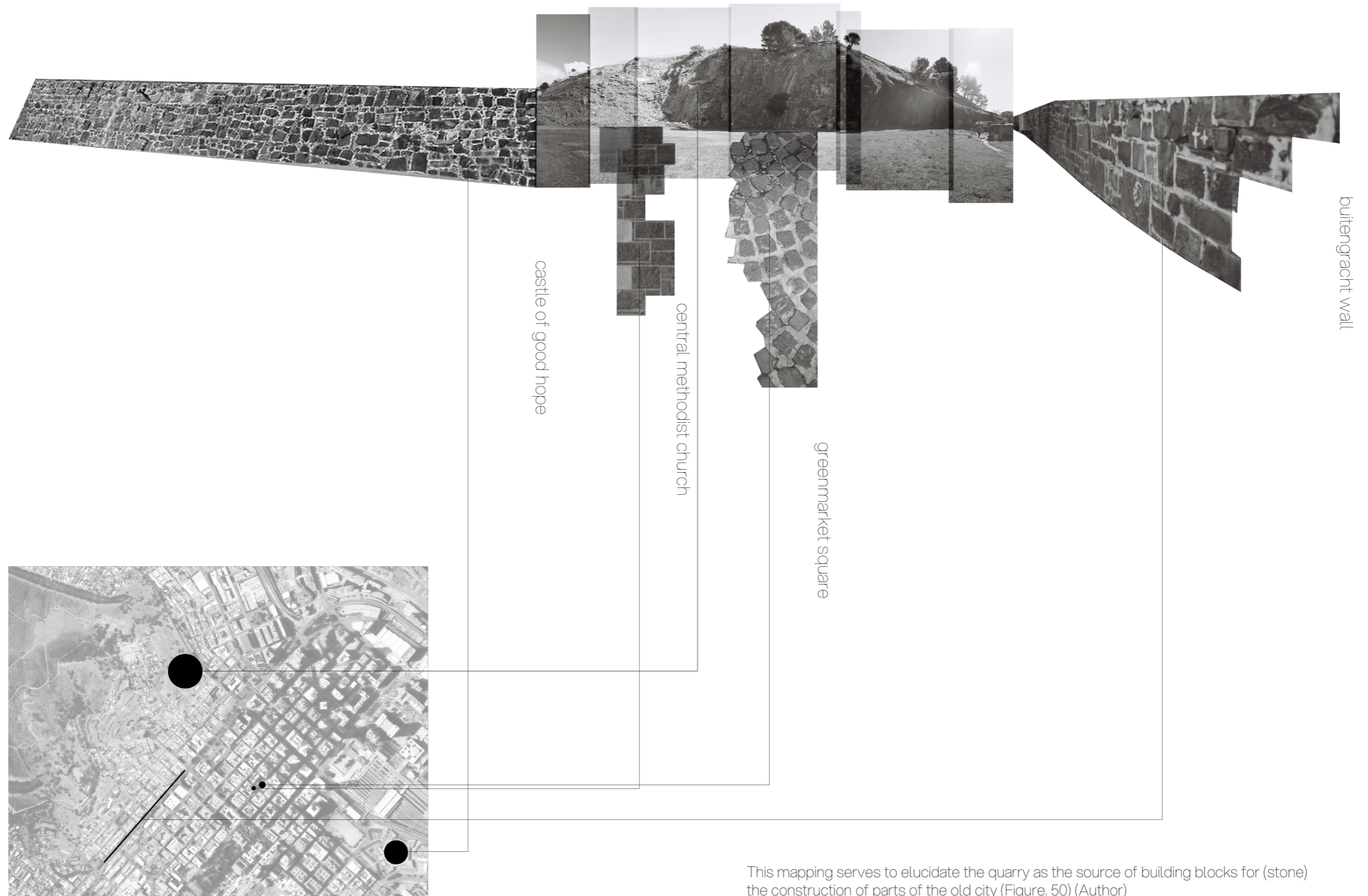


Digital surfacing of model formed the basis of crafting the layers of the physical model (Figure. 48) (Author)



Model serves as scale reference to site and base for building and landscape massing (Figure. 49) (Author)

MAPPING STONE



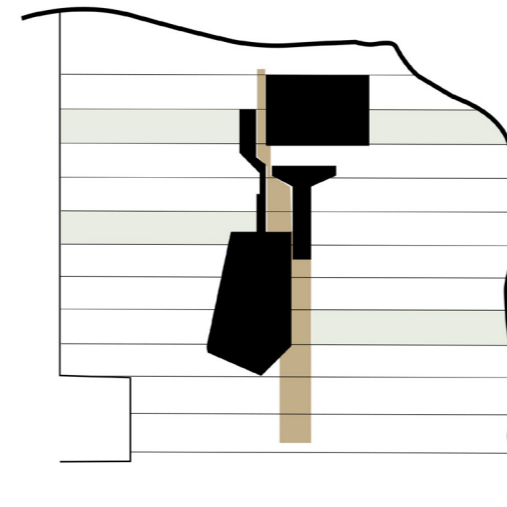
This mapping serves to elucidate the quarry as the source of building blocks for (stone) the construction of parts of the old city (Figure. 50) (Author)

SPATIALISING SITE - SCULPTING FROM LANDSCAPE [PLAN DIAGRAMS]

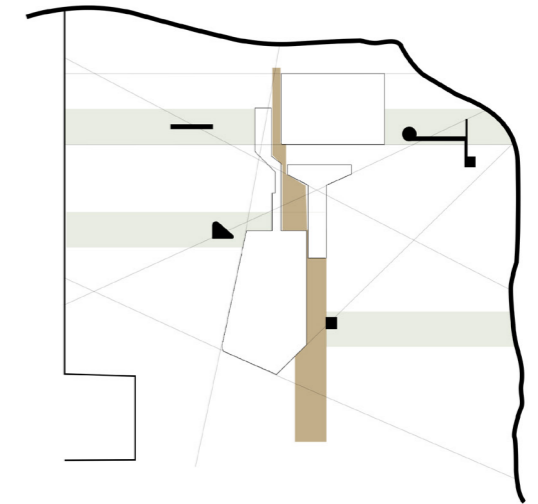


The boulevard is used to define my first movement through the site. Walking directly to the southwest face - the blacked out pause spaces illustrate breaks in that journey to photograph and capture the essence of site, they are conceptualized here as promenades. Here a system of movement through the site is defined on an axis perpendicular to Strand Street.

In order to spatialize a building at the core of the site, the boulevard is laid on the same axis as the main north south circulation and the promenades or pause spaces are now given shape as important programmatic pauses. This sculpting is derived from the intricate datums and strata of the quarry, with reference to peripheral elements of the landscape.

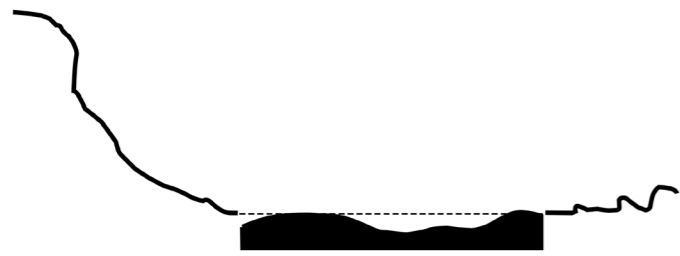


As a means to extend and distribute the nature of internalized program, a series of strips are released at points within the promenades, these travel outward across site and serve to engage experience with the landscape.

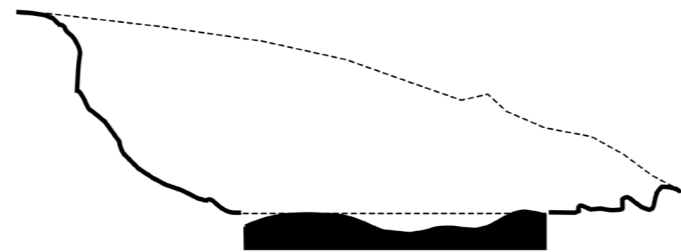


In order to engage the internal experience with that of the landscape, abstractions in the form of functional and symbolic follies are plotted in relation to the internal program, their siting is deduced by the guide of the strip in which they derive from, intercepted again and placed by the extended site datums.

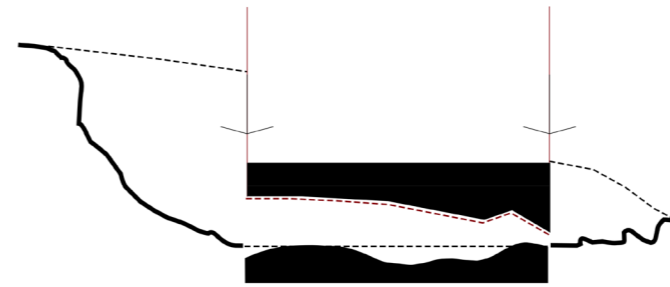
SECTION DIAGRAMS



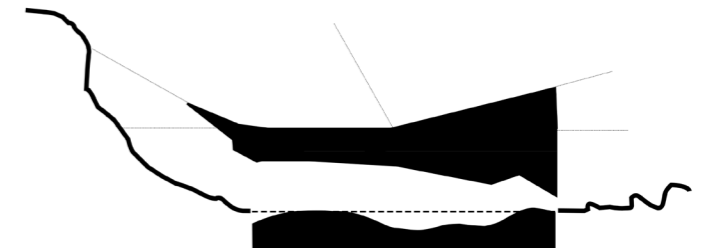
Reveal [hidden natural groundline of filled quarry bed



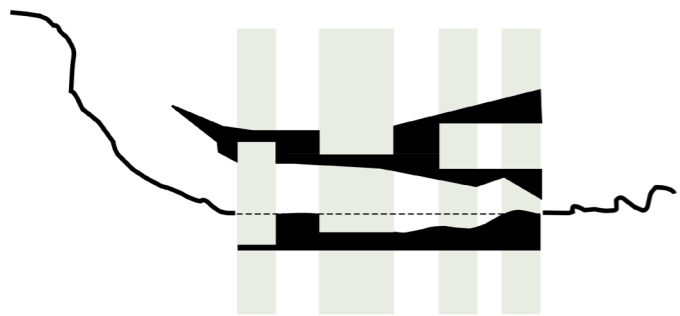
Recreate (ghosted groundline of mountain)



Vertically scale as suspended ground (replicate undulation as internal roof)



Shape exterior form from visual sectional datums - rock shelves and strata striations



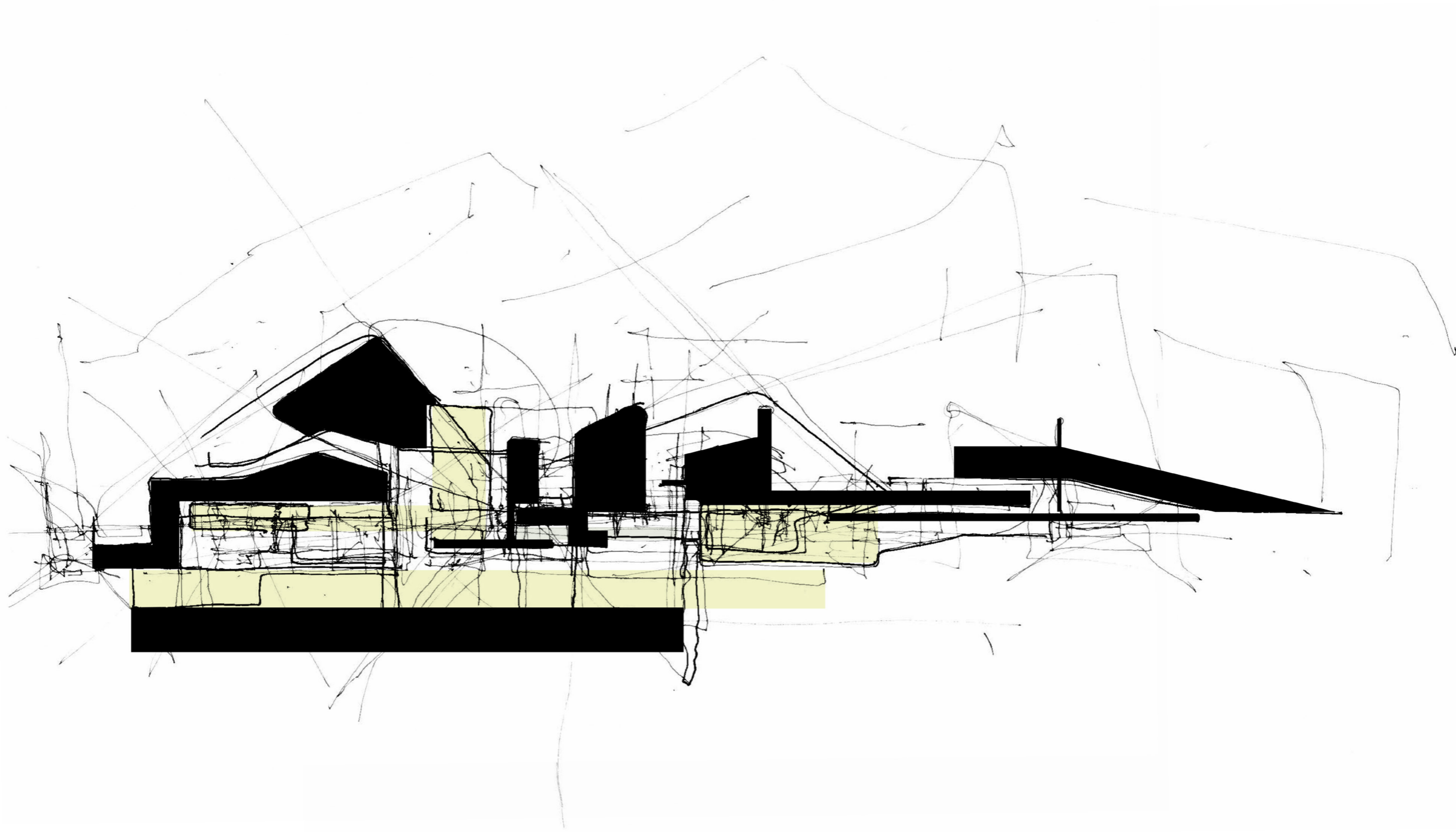
Define spatial pockets within both ground planes in relation to strong programmatic nodes

EXTRAPOLATING STRATA



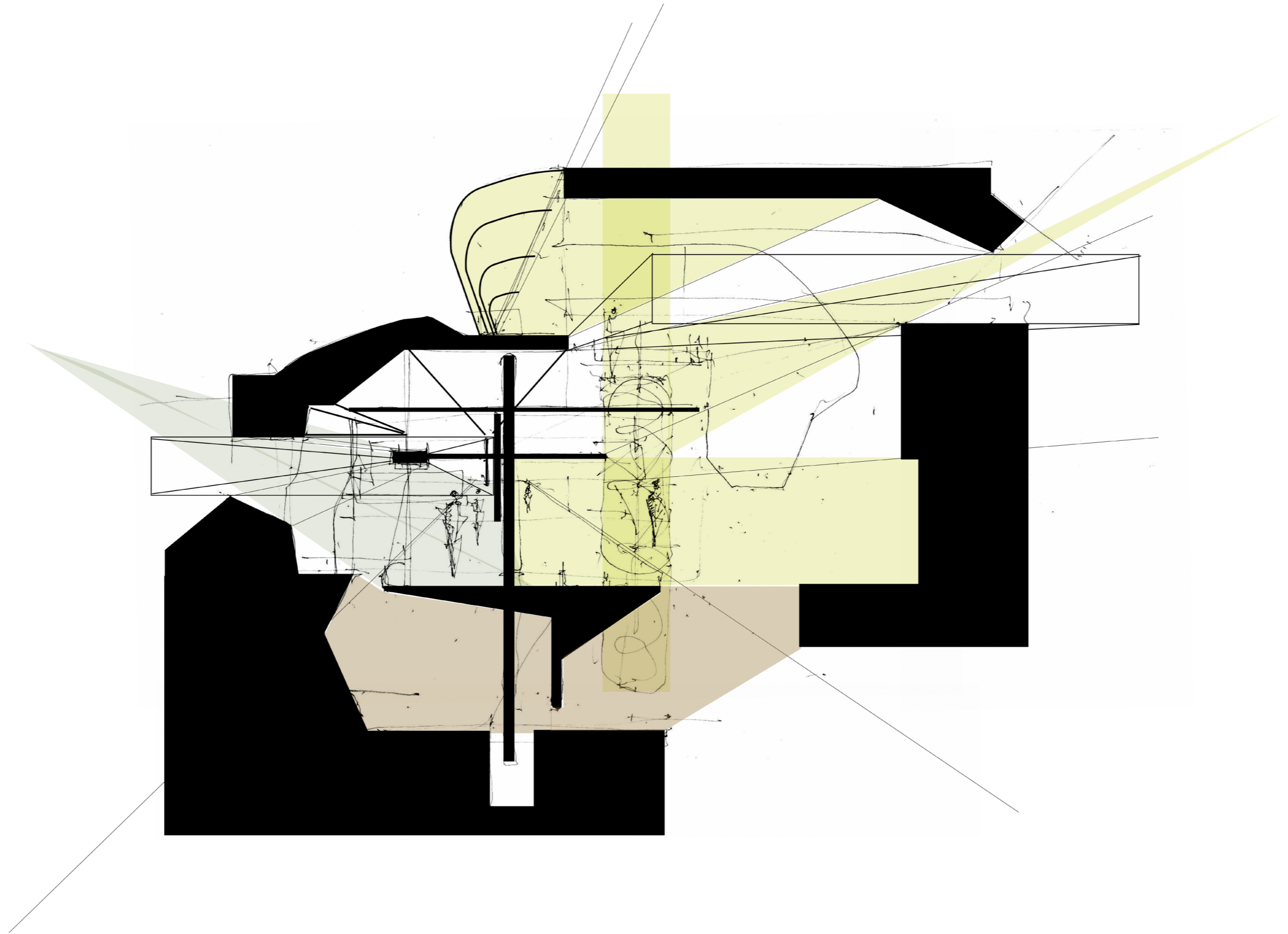
(Figure. 53) (Author) Here datums of rock strata are extrapolated and used to generate abstract sectional forms, both above and below the ground line. These are then overlaid with a 1200mm grid which gives a dimensional rationale to the generated section.

ENTERING THE CITY



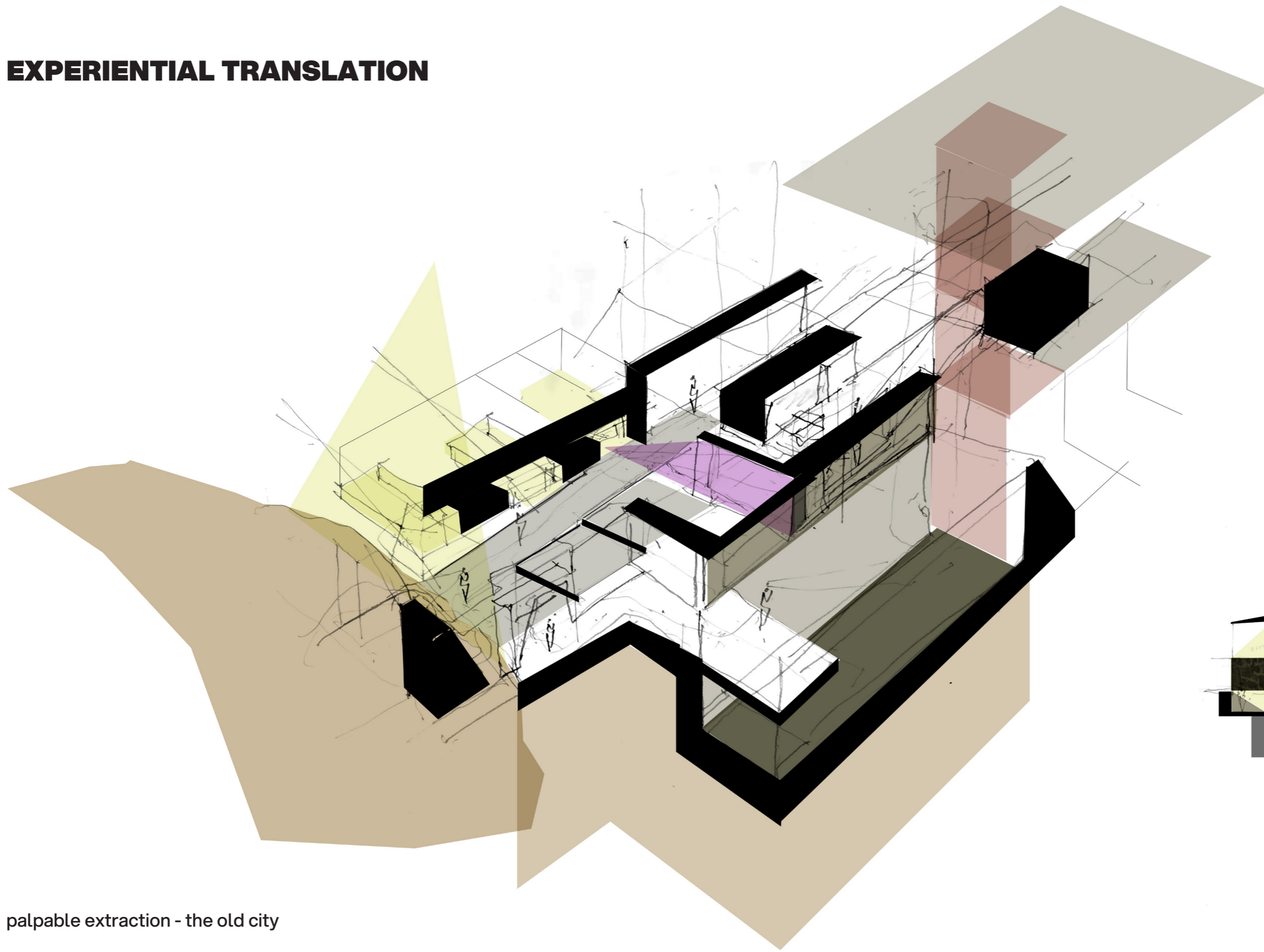
(Figure. 54)(Author)

DEPTH, MASS AND LIGHT



(Figure. 55)(Author)

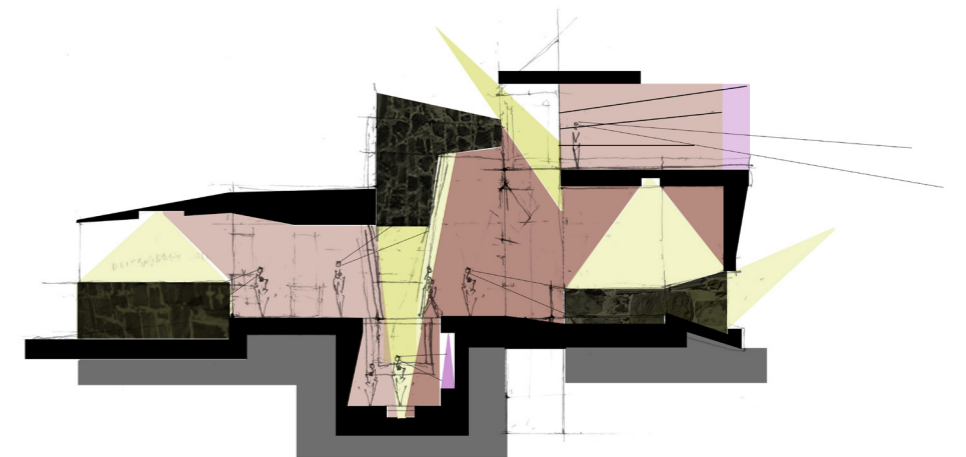
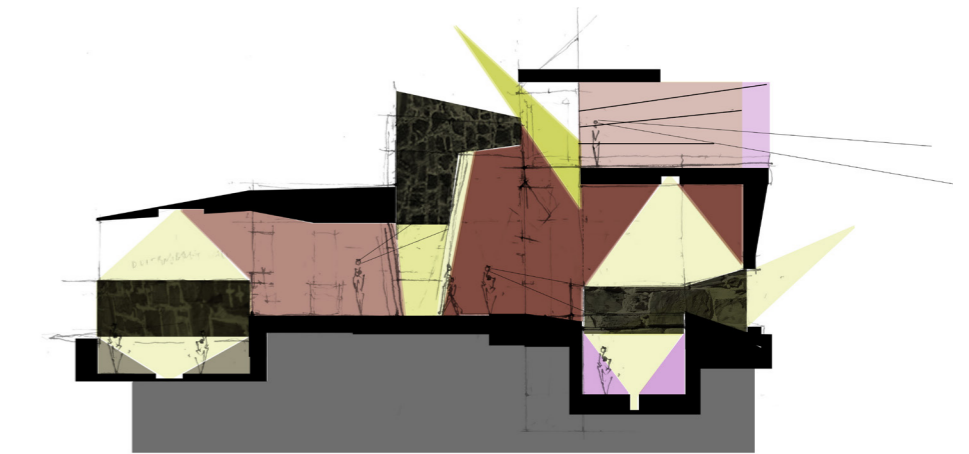
EXPERIENTIAL TRANSLATION

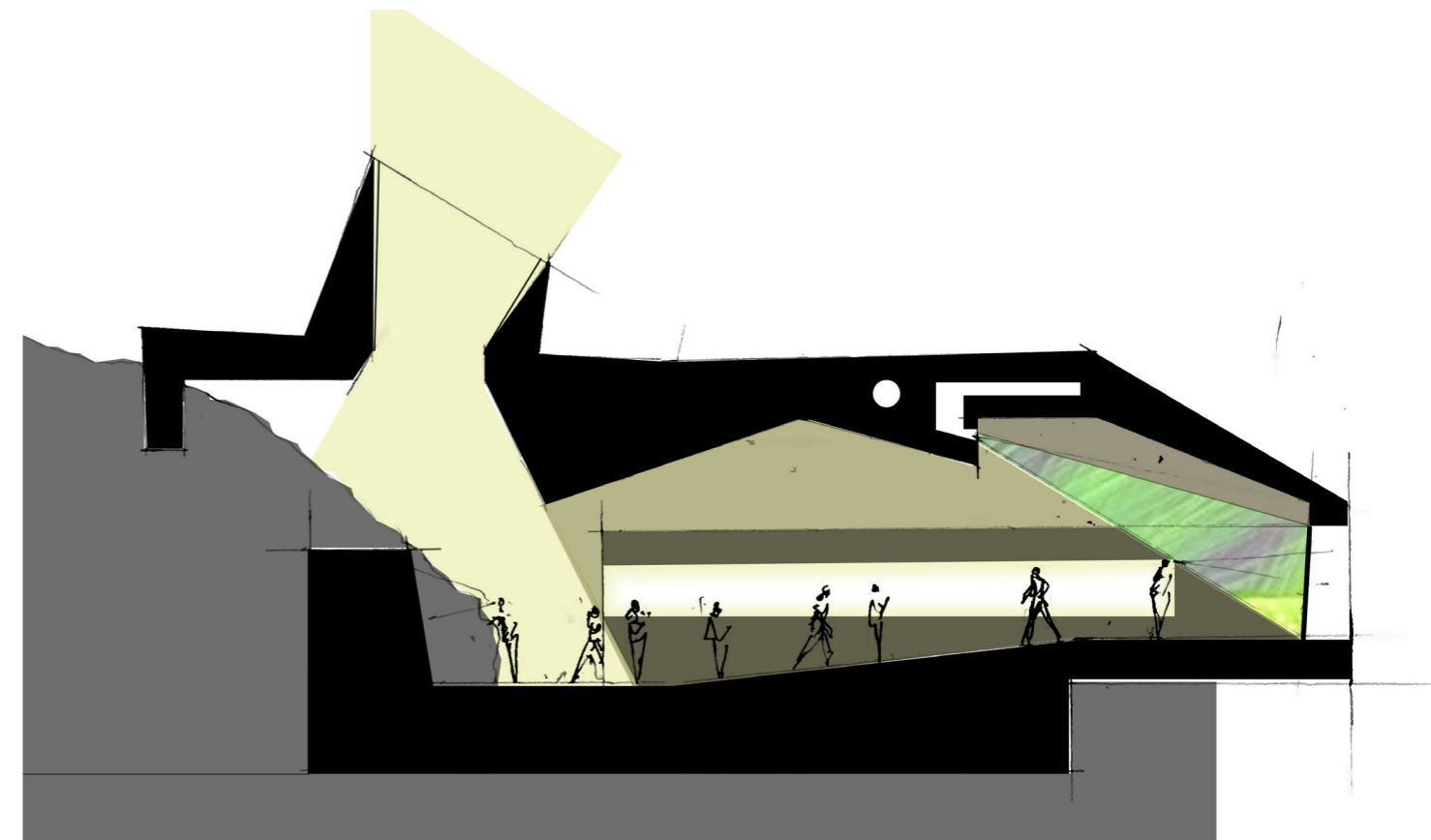
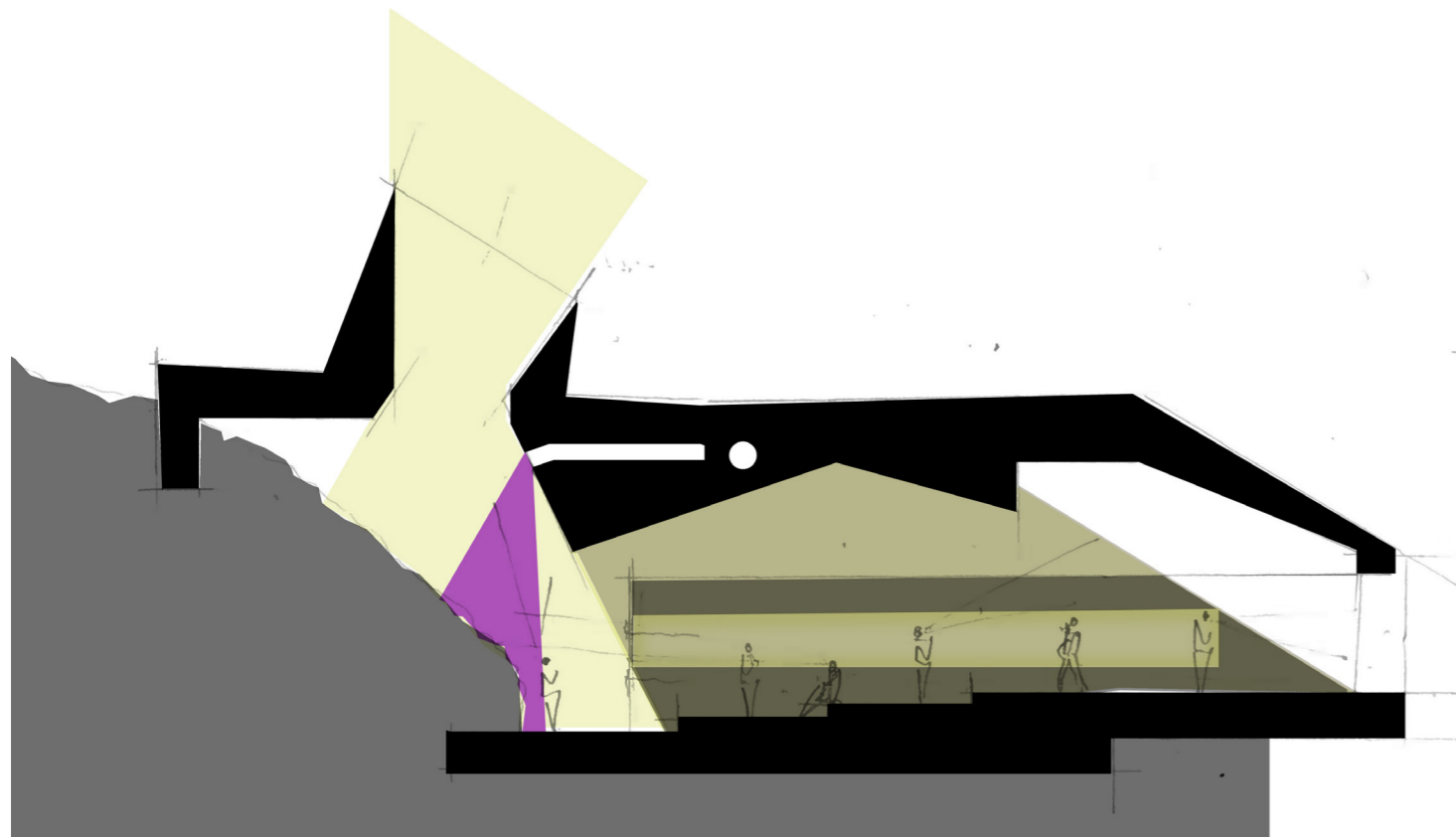


palpable extraction - the old city

Depth and volume represent built components of the old city through aesthetic likening to form and material. The castle of goodhope, buitengracht wall and green market square serve as representations. Masses stipple the section as monuments - their size dictates the volume of the depression immediately below in section - the user first has contact with the likened form of the sculpture derived from the image of the old city and then circulates below into the archival story of the element - at this point, confronted by the depleted ground of the quarry. The sculptures locate relative to their placement in the city and a roof terrace with flared lenses contacts the user with a view of the place in the flesh.

(Figure. 56-58)(Author)





material illumination and projection

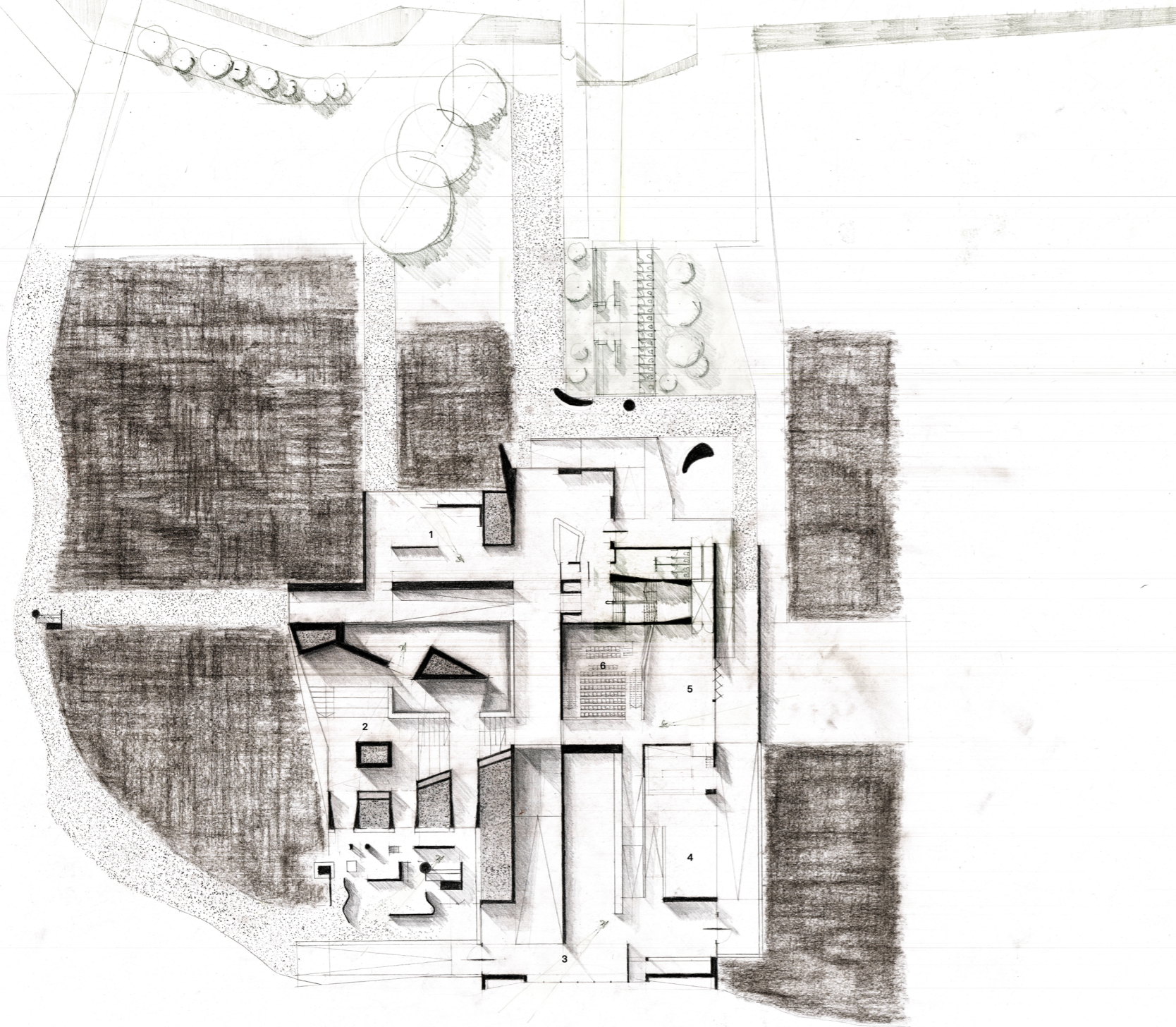
Engagement with the quarry face is drawn to a concentrated and optic and tactile point of contact. The user moves through the old city to the derivative material site. A cavernous roof defined from the ghosted mountains ground swoops overhead crafting a journey into the ground. At the rock face the a lightwell shards a natural beam onto the artefact of the terrain illuminating its value as a source of the old city. A thickened dividing mass houses dioramas of other quarries around the cape. Digital projections stream from the suspended ground above displaying interactive material of colonial and current mining practices. In a shifted plane , the rockface is projected onto, a terraced ground provides the user with a place to pause and experience displayed film and media.

(Figure. 59-60)(Author)



(Figure. 61)(Author) Site plan scale 1:1000, with scheme situated

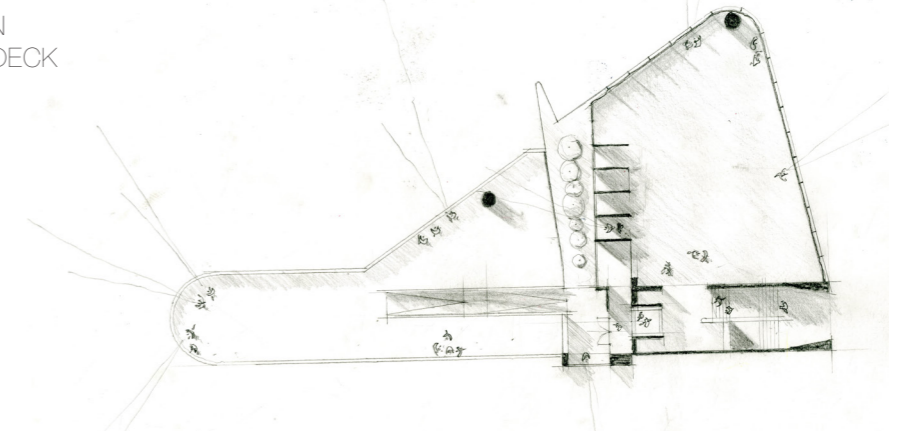
**MUSEUM FOR THE CITY
1:200 PLANS**



- KEY SPACES**
- 1. CONTEMPORARY VISION OF THE CITY
 - 2. THE OLD CITY, PALPABLE EXTRACTION
 - 3. THE SOURCE, MATERIAL ILLUMINATION AND PROJECTION
 - 4. CAFETERIA
 - 5. TEMPORARY EXHIBITION
 - 6. AUDITORIUM

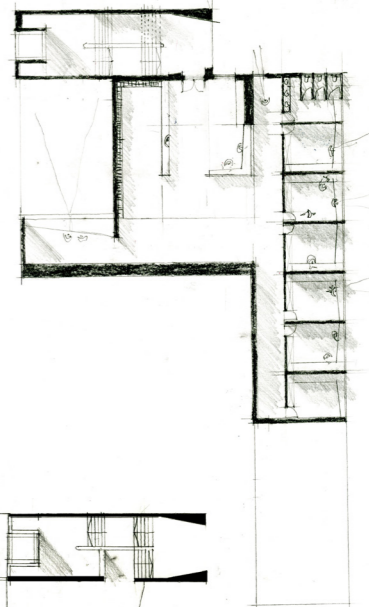
OBSERVATION
TOWER AND DECK
PLAN

SCALE 1:200



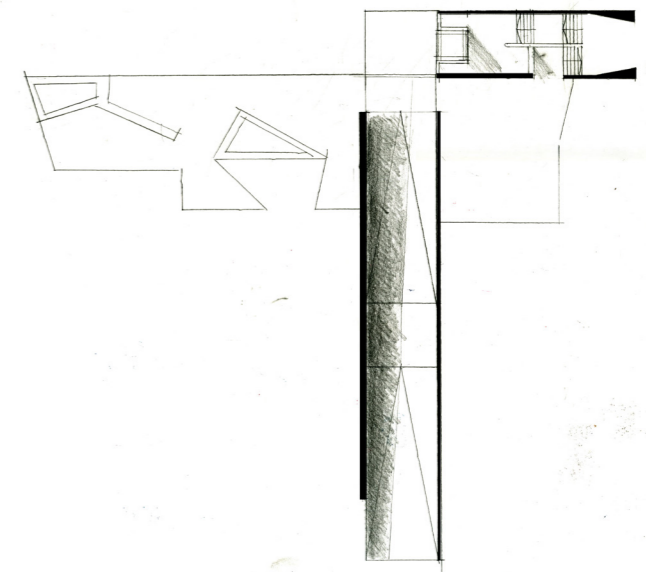
STAFF AND PROJECTION
MEZZANINE PLAN 1:200

SCALE 1:200



OLD CITY AND AUDITORIUM
BASEMENT PLAN

SCALE 1:200

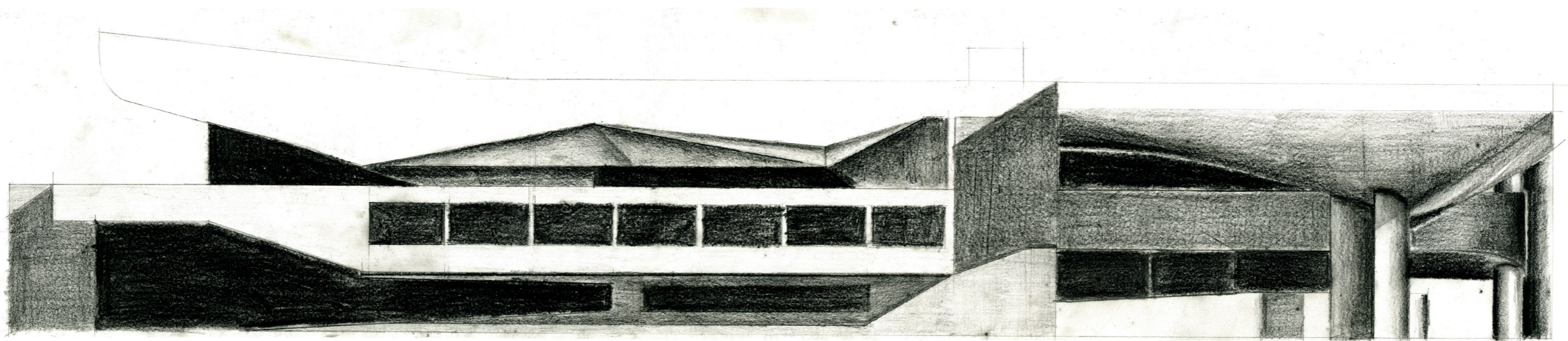




NORTH ELEVATION

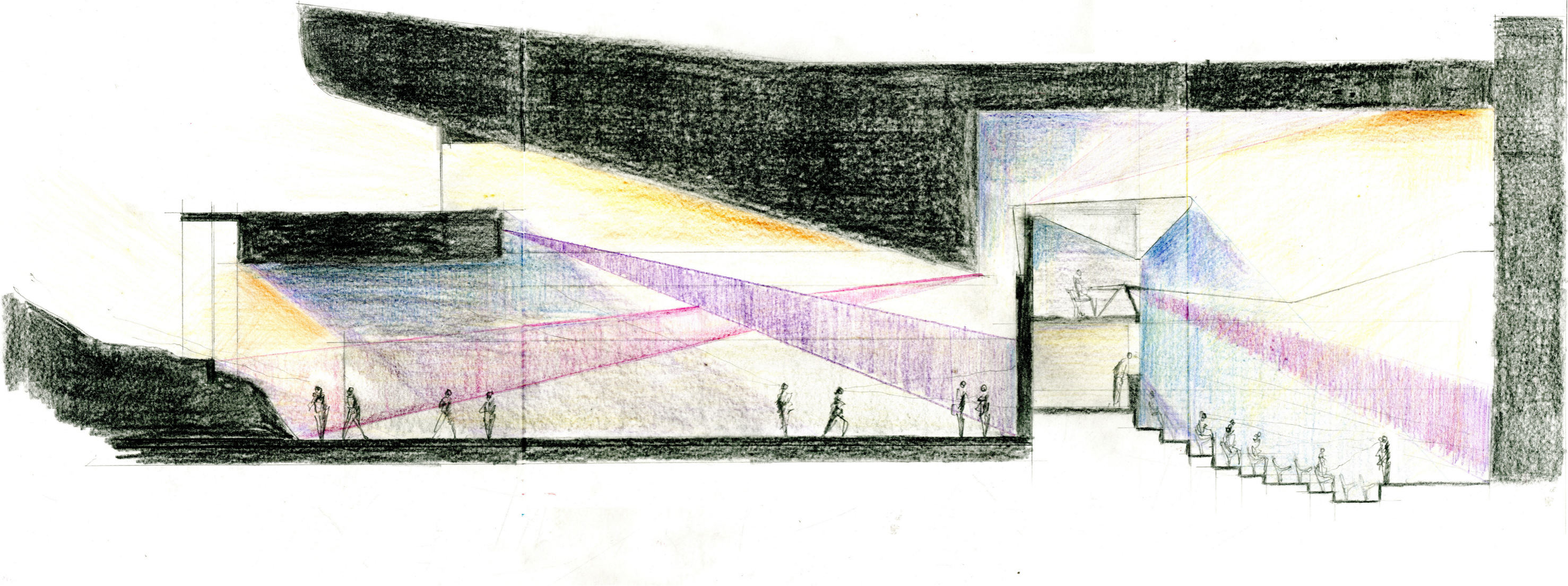
SCALE 1:100

(Figure. 66)(Author)



EAST ELEVATION
SCALE 1:100

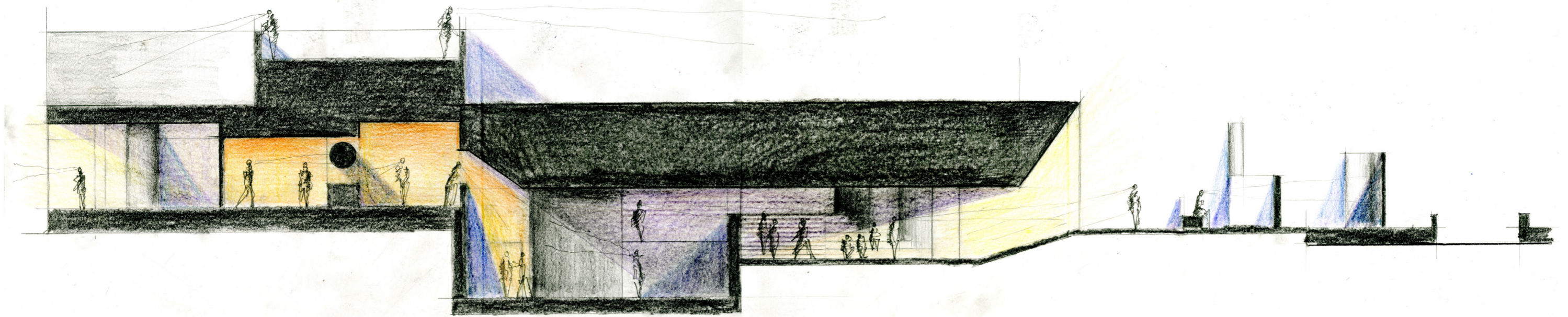
(Figure. 67)(Author)



THE SOURCE - MATERIAL ILLUMINATION AND PROJECTION

SCALE 1:100

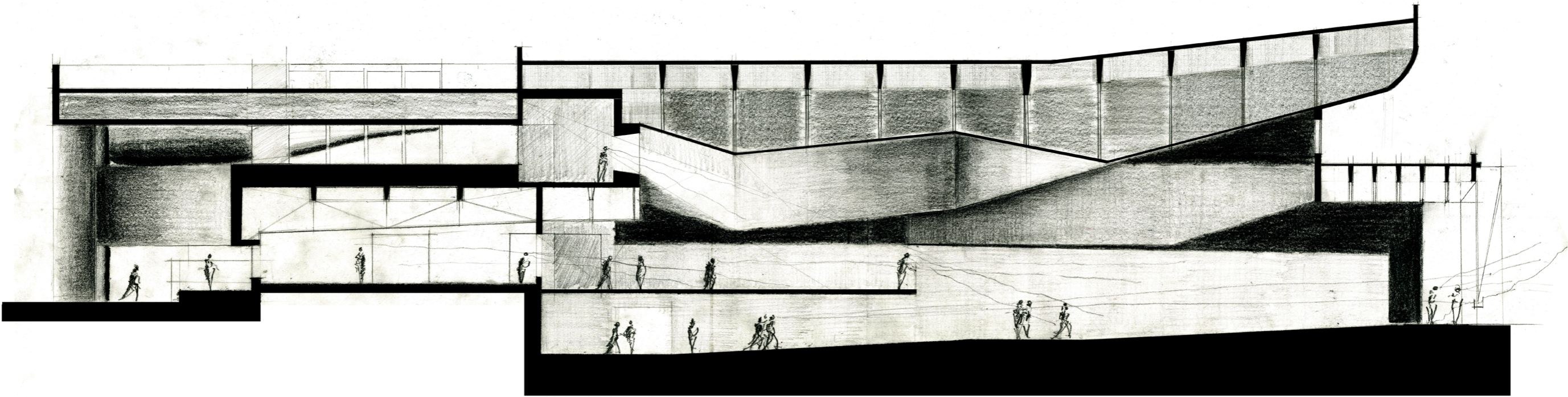
(Figure. 68)(Author)



THE OLD CITY - PALPABLE EXTRACTION

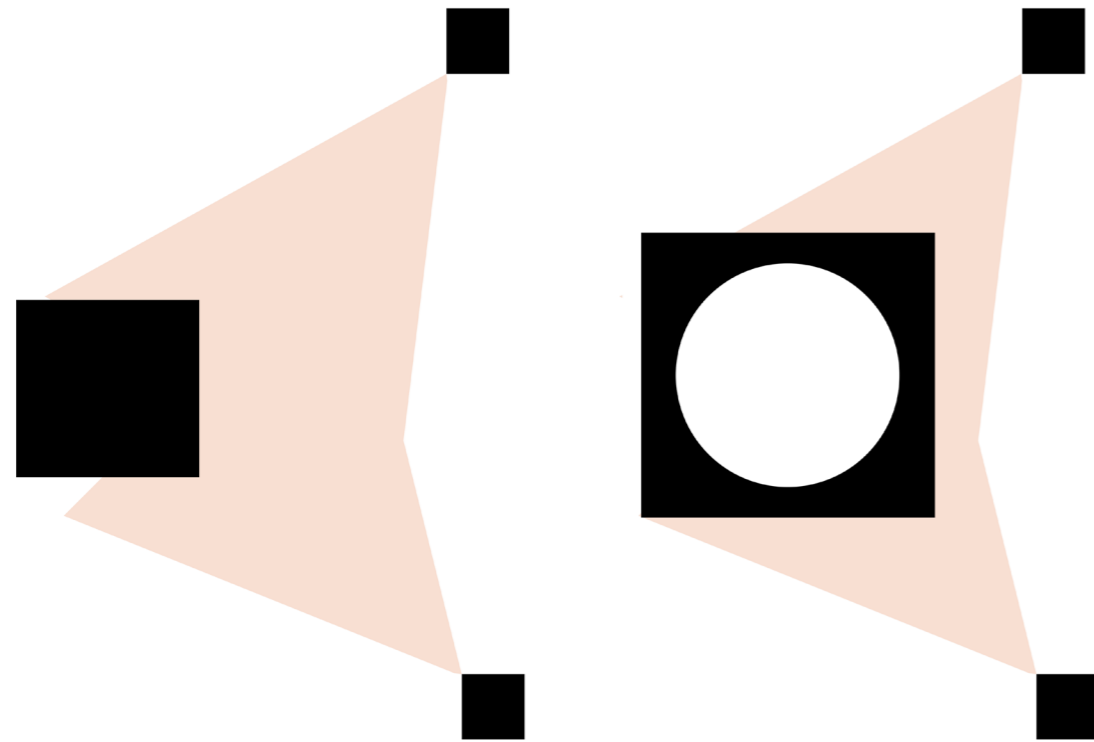
SCALE 1:100

(Figure. 69)(Author)

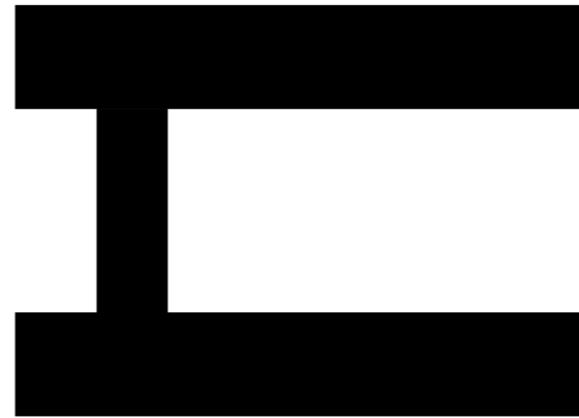


THE BOULEVARD
SCALE 1:100

(Figure. 70)(Author)



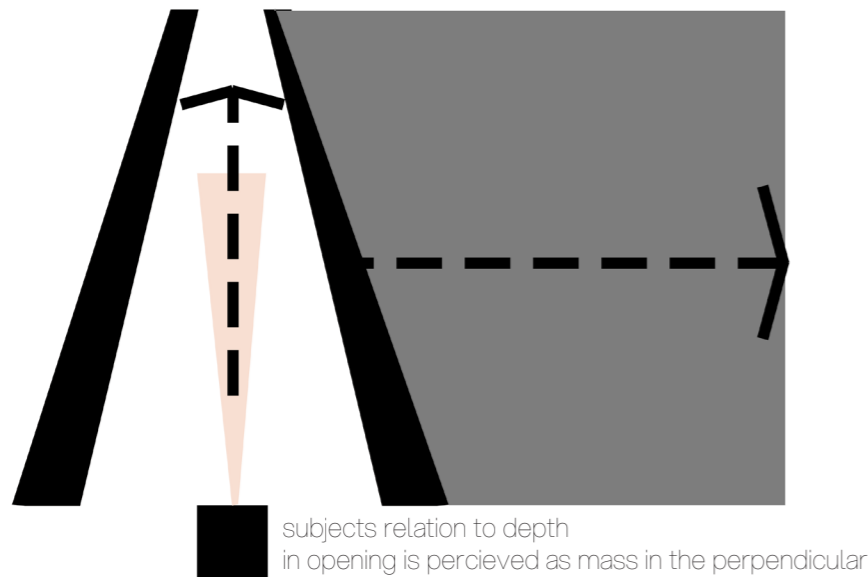
ACHIEVING THE STEREO-TECTONIC AS SIMULACRUM .



Loadbearing vertical elements = light-weight solid material where breadth and height assumes a reasonable supporting dimension



Where vertical elements are exaggerated in dimension, the inner core is hollowed out - whole perceived as mass.



subjects relation to depth in opening is perceived as mass in the perpendicular

Section



Light

Heavy

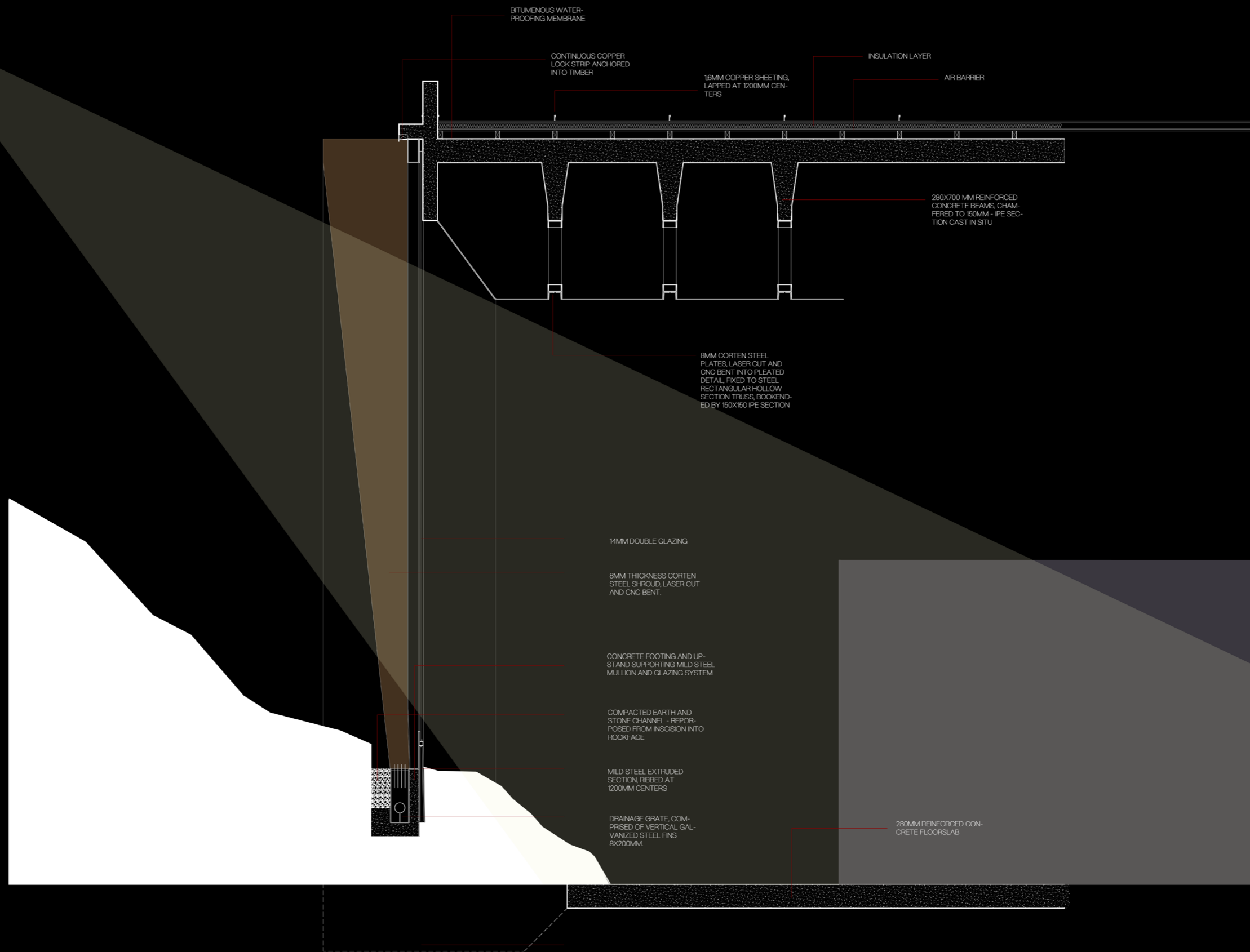
Perceived as heavy

Plan



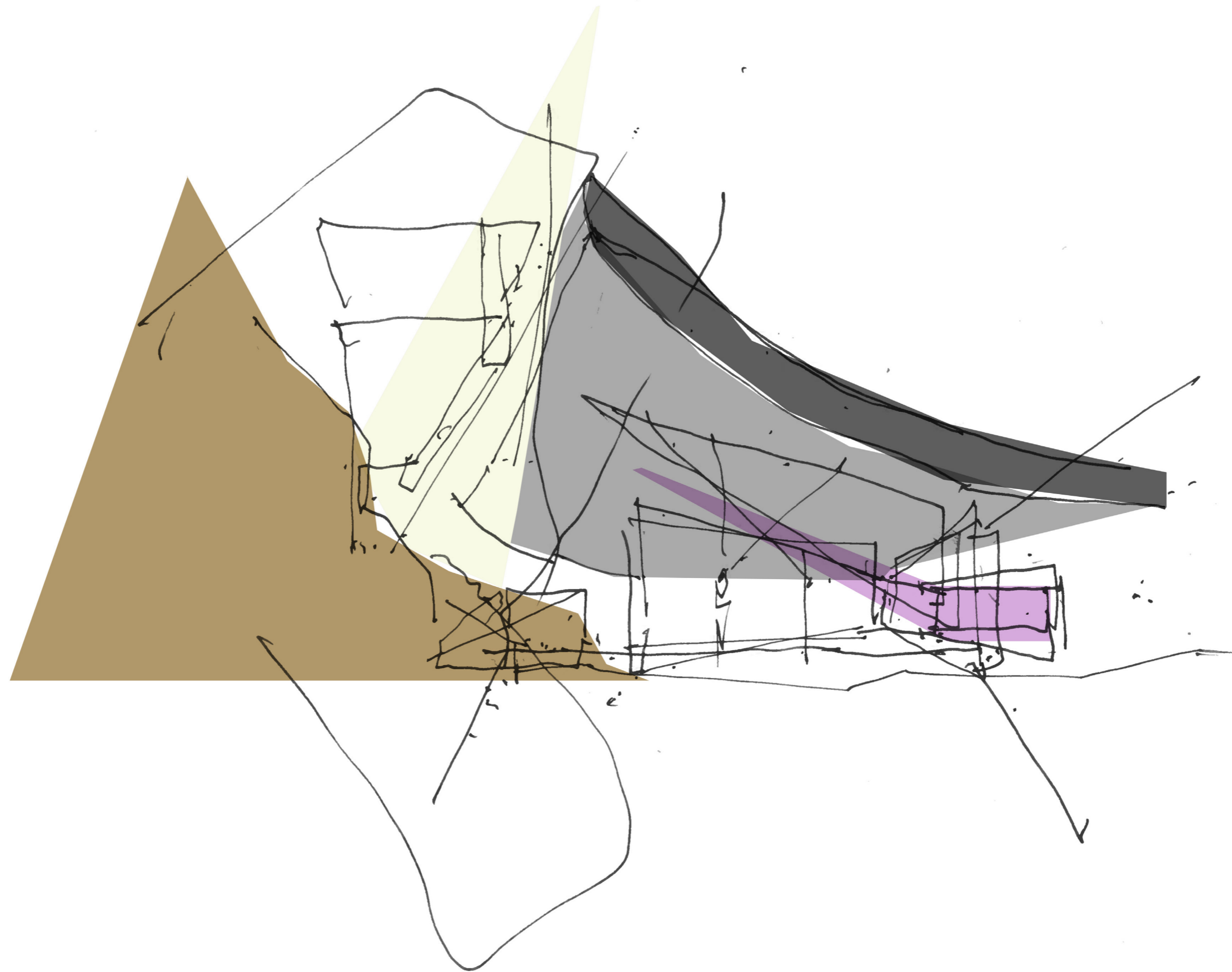
This logic operates in both plan and section - able to be transposed as the structural logic for walls, roofs and floor plates. It influences the ability of the making to inform spaces of exceeding depth and volume to contribute to the experience of the architecture.

(Figure. 71)(Author)

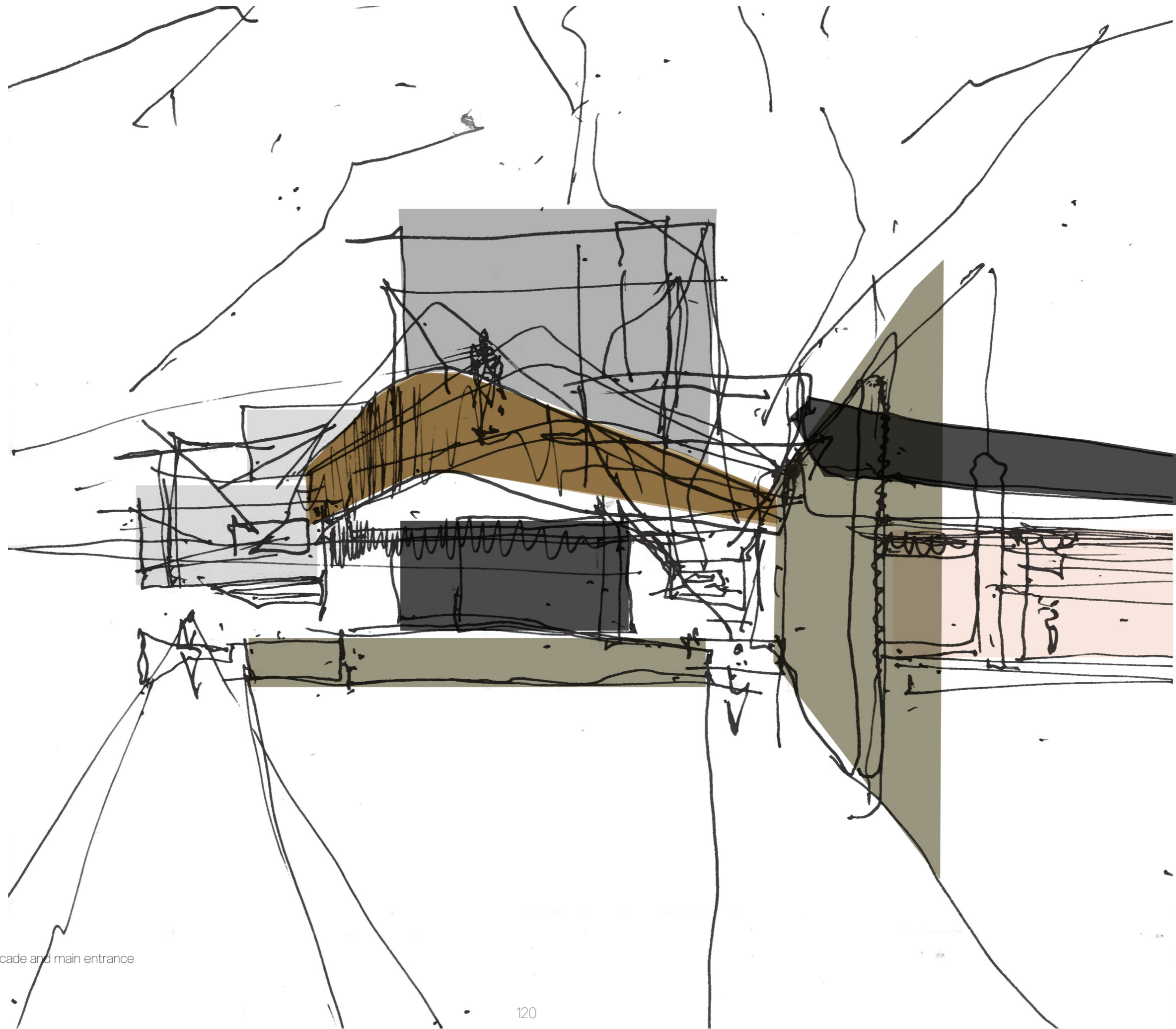


TECHNICAL SECTION 1:20

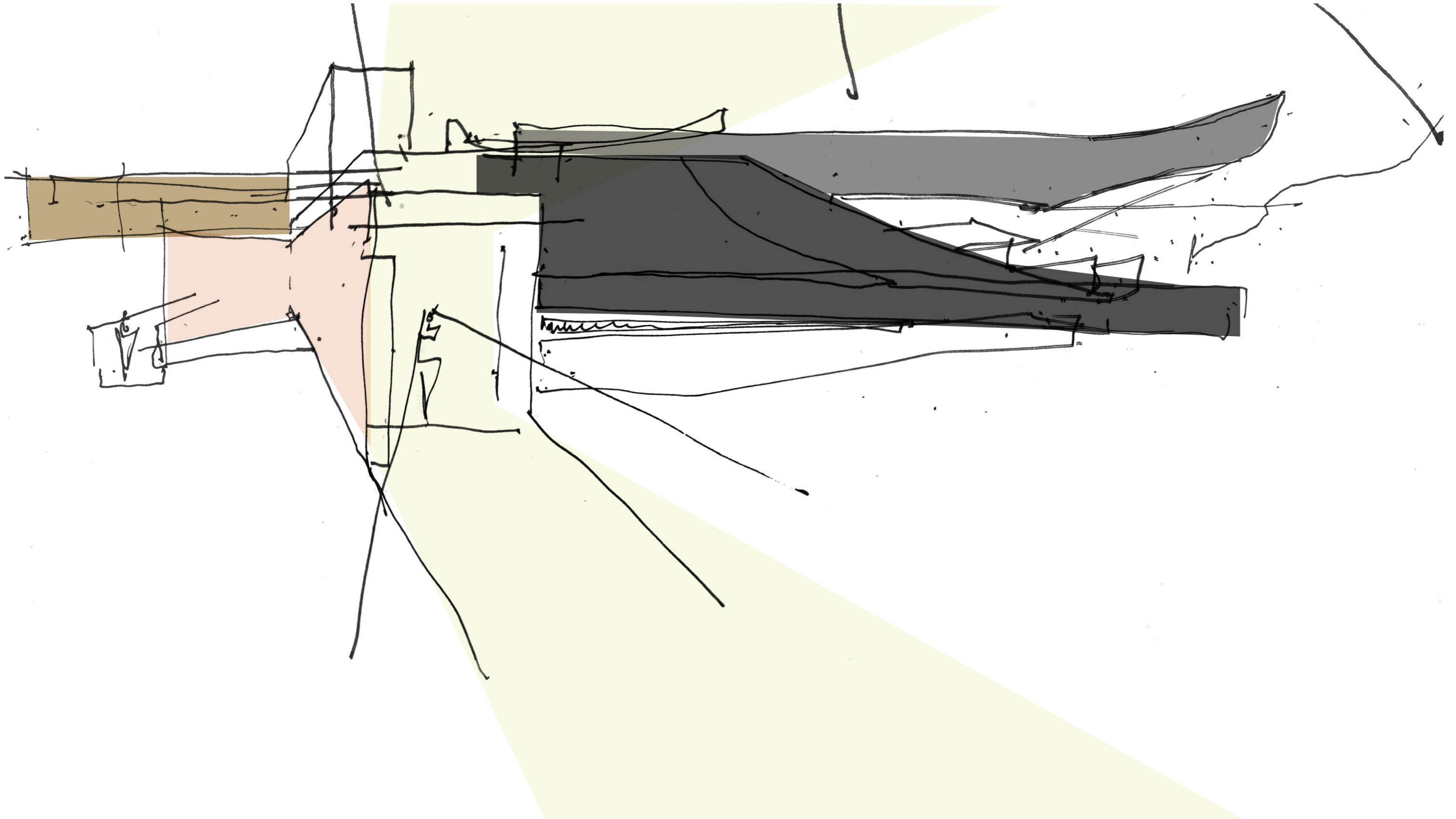
(Figure. 72)(Author)



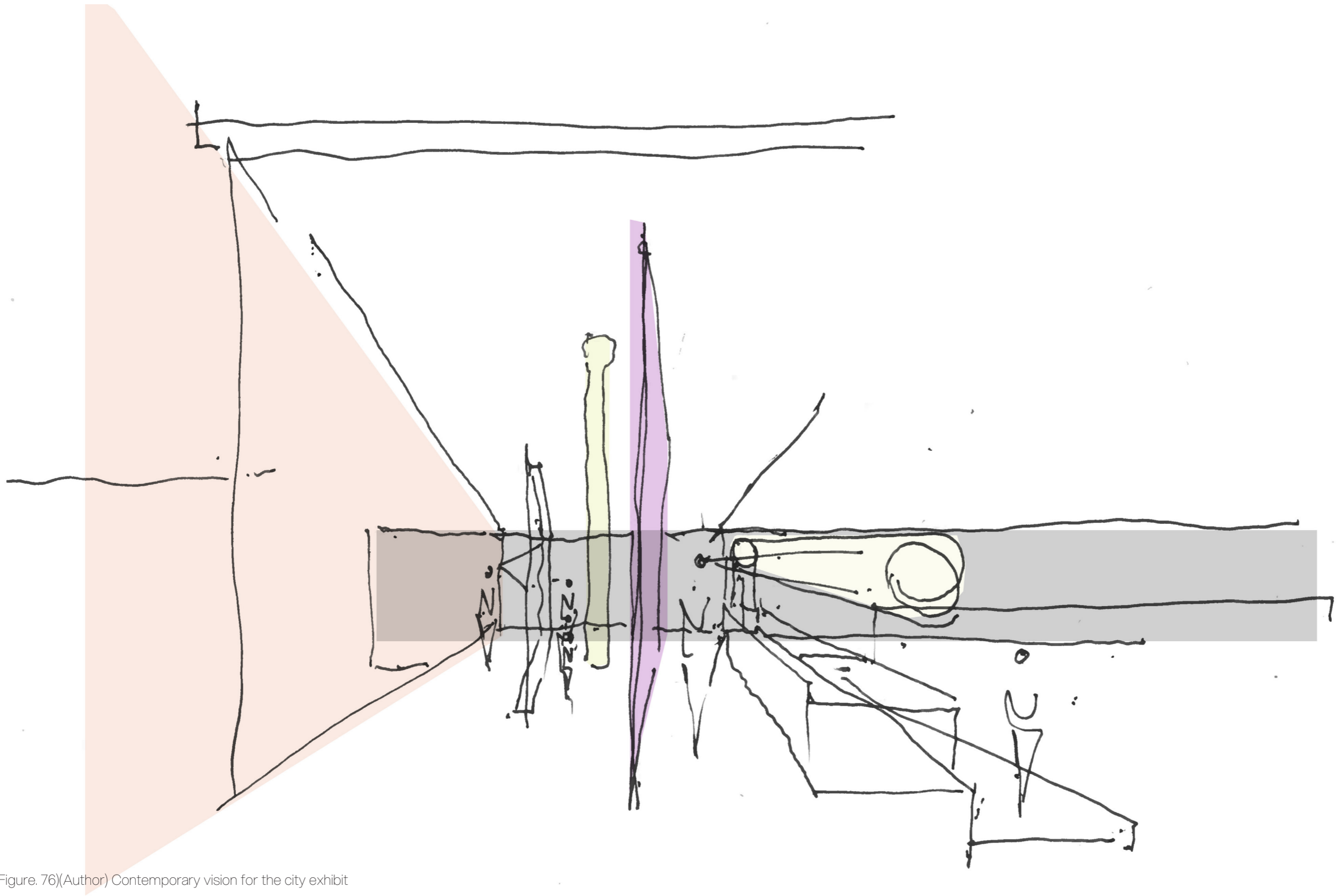
(Figure. 73)(Author) Quarry to building connection (the source)



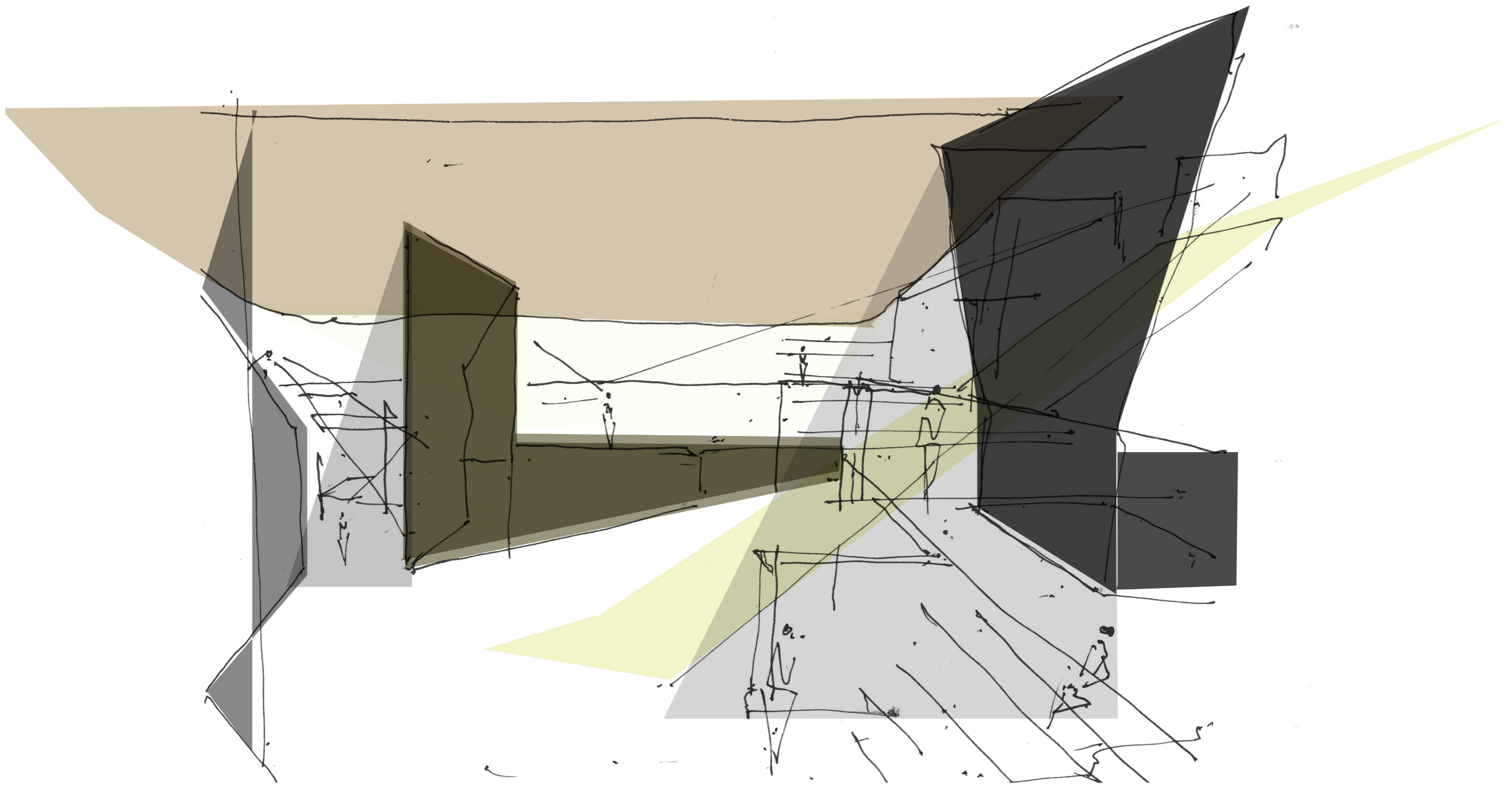
(Figure. 74)(Author) North facade and main entrance



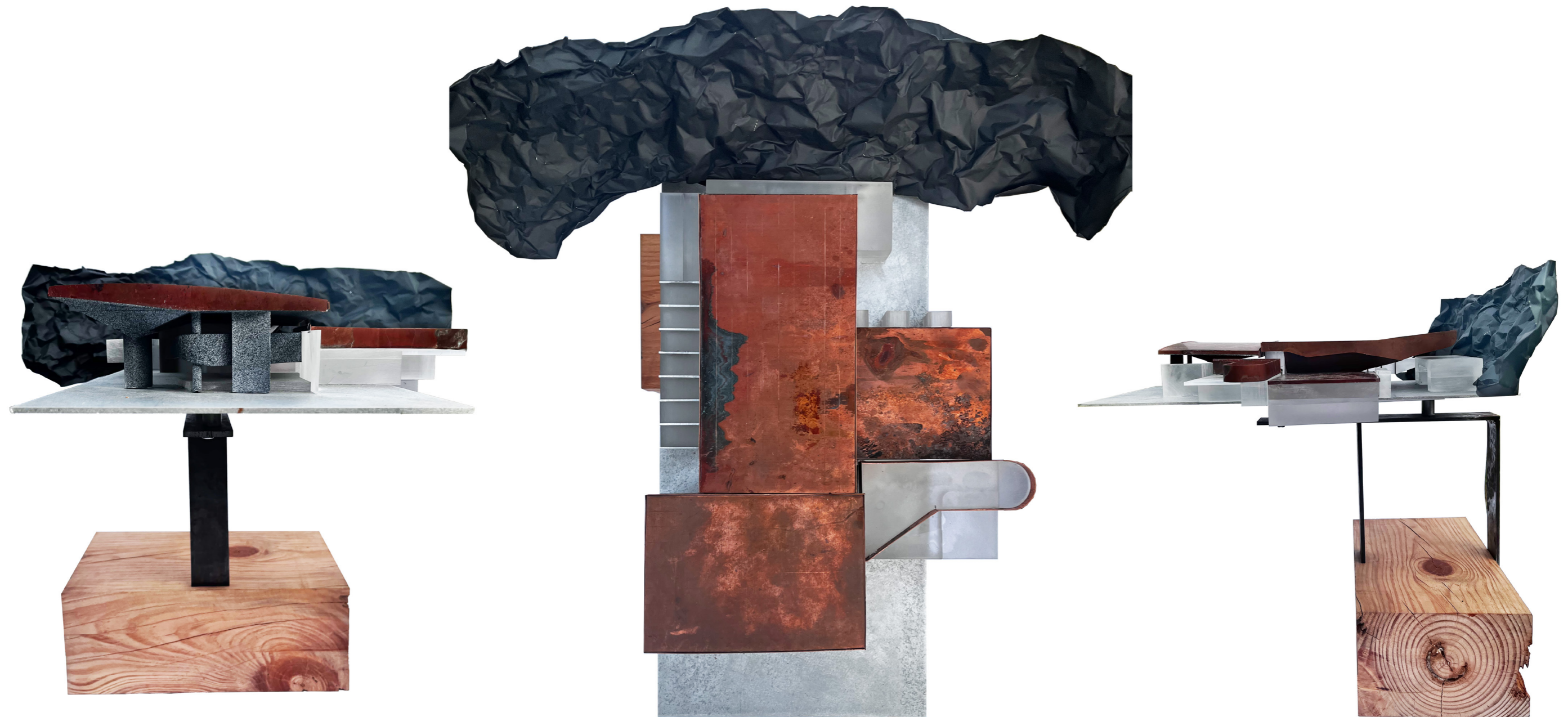
(Figure. 75)(Author) Roofscape from the west



(Figure. 76)(Author) Contemporary vision for the city exhibit



(Figure. 77)(Author) Old city - palpable extraction exhibit



(Figure. 78-80)(Author) Physical model showing roofscape and connection to quarry + three dimensional form of scheme

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PRE-SCREENING QUESTIONNAIRE OUTCOME LETTER

STU-EBE-2023-PSQ000658

2023/09/11

Dear Gabriel Chames,

Your Ethics pre-screening questionnaire (PSQ) has been evaluated by your departmental ethics representative. Based on the information supplied in your PSQ, it has been determined that you do not need to make a full ethics application for the research project in question.

You may proceed with your research project titled:

Stereo-Tectonic Choreography: A Sculptural Resurfacing of an Enigmatic Genius Loci

Please note that should aspect(s) of your current project change, you should submit a new PSQ in order to determine whether the changed aspects increase the ethical risks of your project. It may be the case that project changes could require a full ethics application and review process.

Regards,

Faculty Research Ethics Committee